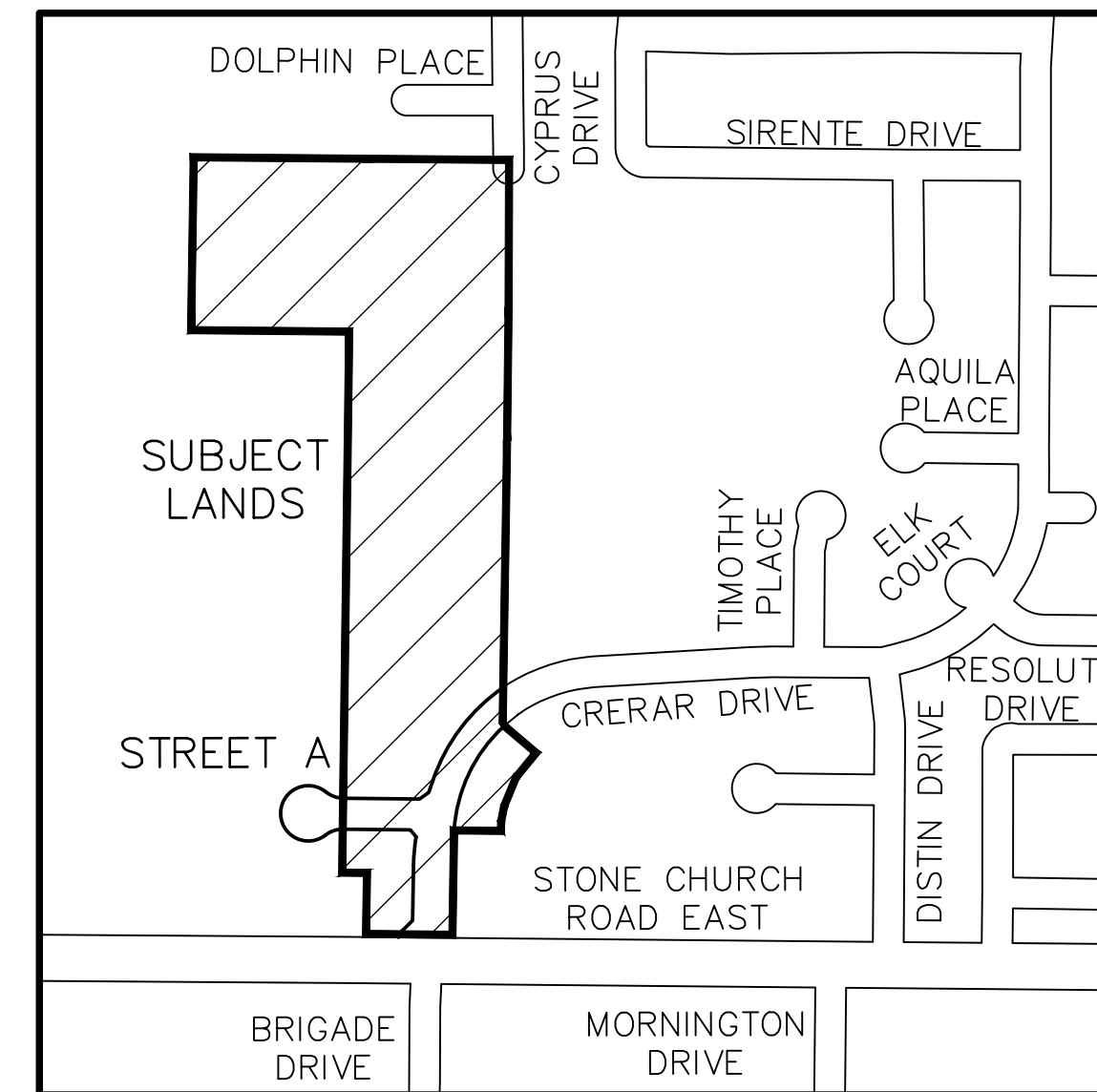


DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES

CITY OF HAMILTON

CITY FILE No.: UHOPA-21-005, ZAC-21-009, 25T-202104,
25CDM-2021005 & 25CDM-2021006



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**ISSUED FOR SECOND
RE-ZONING SUBMISSION**



S. LLEWELLYN & ASSOCIATES LIMITED
CONSULTING ENGINEERS

Tel. (905) 631-6978
email: info@sla.on.ca

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

GENERAL NOTES

- THIS/THESE PLAN(S) IS/ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SEALED BY THE ENGINEER AND INDICATED ISSUED FOR CONSTRUCTION ON THE DRAWING.
- THIS/THESE PLAN(S) IS/ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF S. LLEWELLYN AND ASSOCIATES LIMITED.
- INFORMATION REGARDING ANY EXISTING SERVICES AND/OR UTILITIES SHOWN ON THE APPROVED SET OF CONSTRUCTION DRAWINGS ARE FURNISHED AS THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE SEES FIT WITH THE UNDERSTANDING THAT THE OWNER AND HIS/HER AGENTS DISCLAIM ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR SHALL ASSUME LIABILITY FOR ANY DAMAGE TO EXISTING WORKS.
- EXISTING TOPOGRAPHIC AND LEGAL INFORMATION TAKEN FROM PLANS PREPARED BY A.T. MCLEAREN LIMITED, DATED NOVEMBER 09, 2018.
- THIS/THESE PLAN(S) TO BE READ IN CONJUNCTION WITH THE STORM WATER MANAGEMENT (SWM) REPORT PREPARED BY S. LLEWELLYN AND ASSOCIATES LIMITED, DATED DECEMBER 2018.
- THIS (THESE) PLAN(S) TO BE USED FOR SERVICING AND GRADING ONLY.
- MUNICIPAL APPROVAL OF THESE DRAWINGS IS FOR MATERIAL AND COMPLIANCE WITH CITY OF HAMILTON AND PROVINCIAL SPECIFICATIONS AND STANDARDS ONLY. APPROVAL AND INSPECTION OF THE WORKS BY THE CITY OF HAMILTON STAFF DOES NOT CERTIFY THE LINE AND GRADE OF THE WORKS NOR RELIEVE THE CONTRACTOR OF CERTIFICATION OF ALL WORKS BY THE OWNER'S ENGINEER.
- ALTERNATE MATERIALS MAY BE ACCEPTABLE PROVIDED WRITTEN APPROVAL HAS FIRST BEEN OBTAINED FROM THE CITY OF HAMILTON AND THE ENGINEER.
- THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S BONDED CONTRACTOR FROM THE REQUIREMENTS TO OBTAIN THE VARIOUS PERMITS/APPROVALS NORMALLY REQUIRED TO COMPLETE A CONSTRUCTION PROJECT, SUCH AS, BUT NOT LIMITED TO THE FOLLOWING:
 - ROAD OUT PERMITS
 - SEWER PERMITS
 - APPROACH APPROVAL PERMITS
 - RELOCATION OF SERVICES
 - COMMITTEE OF ADJUSTMENT
 - ENCROACHMENT AGREEMENTS
- PRIOR TO CONSTRUCTION THE CONTRACTOR MUST:
 - CHECK AND VERIFY ALL DIMENSIONS AND EXISTING ELEVATIONS WHICH INCLUDE BUT ARE NOT LIMITED TO THE BENCHMARK ELEVATIONS, EXISTING SERVICE CONNECTIONS, EXISTING INVERTS AND REPORT FINDINGS IN WRITING TO THE ENGINEER.
 - OBTAIN ALL UTILITY LOCATES AND REQUIRED PERMITS AND LICENSES.
 - VERIFY ALL FINISHED FLOOR ELEVATIONS AND BASEMENT FLOOR ELEVATIONS WHICH MAY APPEAR ON THESE PLANS COMPLY WITH THE FINAL ARCHITECTURAL DRAWINGS.
 - CONFIRM ALL DRAWINGS USED FOR CONSTRUCTION ARE OF THE MOST RECENT REVISION.
 - NOTIFY THE ENGINEER OF THE PROPOSED CONSTRUCTION SCHEDULE FOR COORDINATION OF NECESSARY INSPECTIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEER 48 HOURS PRIOR TO THE COMMENCING SITE WORKS TO ARRANGE FOR INSPECTION. THE ENGINEER SHALL DETERMINE THE EXTENT OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF THE UNDERGROUND SERVICE INSTALLATION AS MANDATED BY THE ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO MAKE SUITABLE ARRANGEMENTS FOR INSPECTION WILL LEAD TO POST CONSTRUCTION TESTING AND INSPECTION AS DETERMINED BY THE ENGINEER. THE COSTS OF WHICH INCLUDING ANY DELAYS IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR. FULL PAYMENT FOR UN-INSPECTED WORKS MAY BE WITHHELD UNTIL THE COMPLETION OF THE POST CONSTRUCTION INSPECTION AND TESTING TO THE SATISFACTION OF THE ENGINEER.
- INSPECTION BY THE OWNER'S ENGINEER IS FOR CERTIFICATION AND GENERAL CONFORMANCE PURPOSES AND DOES NOT CERTIFY LINE AND GRADE OR IMPLY AN ASSURANCE OF QUALITY CONTROL. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THE INSTALLATION OF THE WORKS TO PROPER LINE, GRADE AND QUALITY TO CURRENT INDUSTRY STANDARDS.
- ANY UTILITY RELOCATIONS AND RESTORATIONS DUE TO THE DEVELOPMENT TO BE UNDERTAKEN AT THE EXPENSE OF THE OWNER/DEVELOPER AND SHALL BE COORDINATED BY THE CONTRACTOR.
- ALL RESTORATIONS AND RECONSTRUCTIONS SHALL BE TO COMPLETED TO MATCH EXISTING CONDITIONS OR BETTER AND ARE TO BE PERFORMED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF HAMILTON.
- SERVICING CONTRACTOR TO MAINTAIN A "CONFINED TRENCH CONDITION" IN ALL SEWER AND WATERMAIN INSTALLATION TRENCHES.
- THE SITE SERVICING CONTRACTOR SHALL TERMINATE ALL SERVICES 1.0m FROM THE BUILDING FACE.
- NO BLASTING WILL BE PERMITTED.

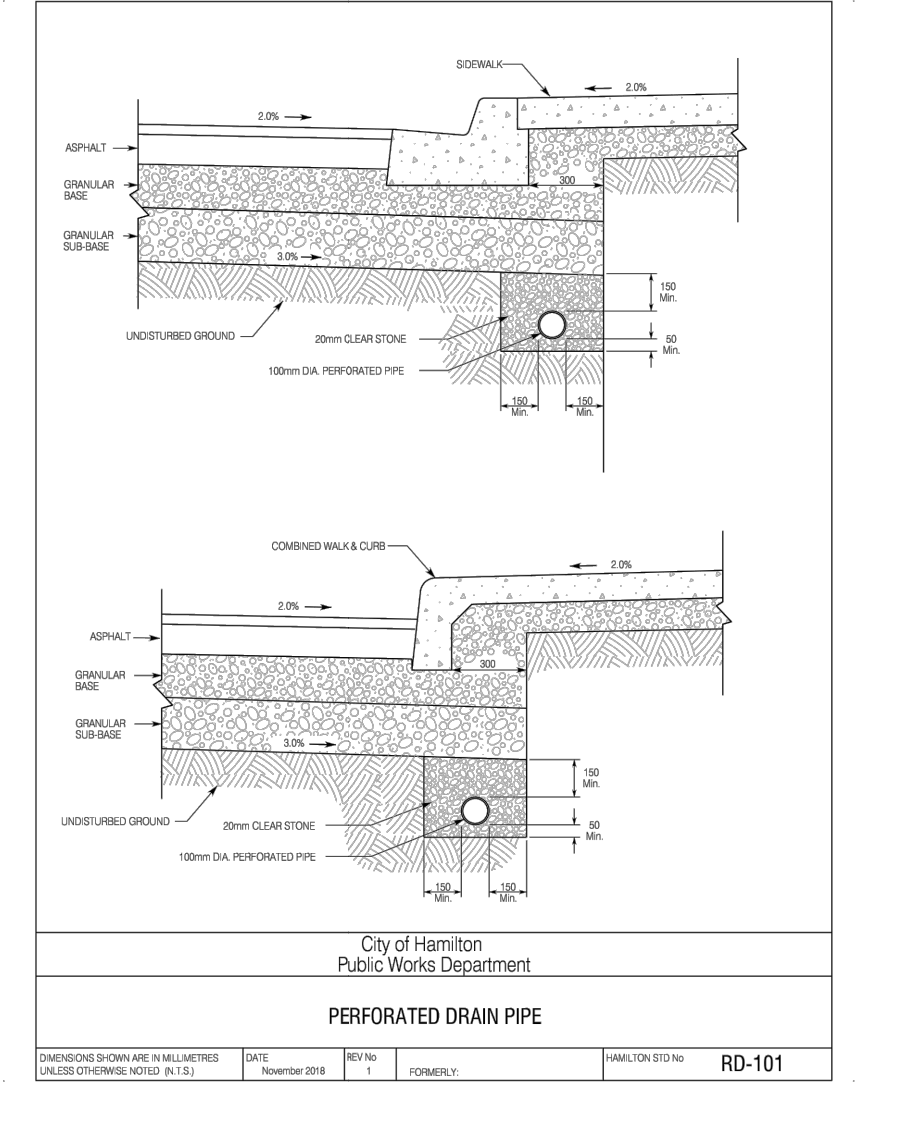
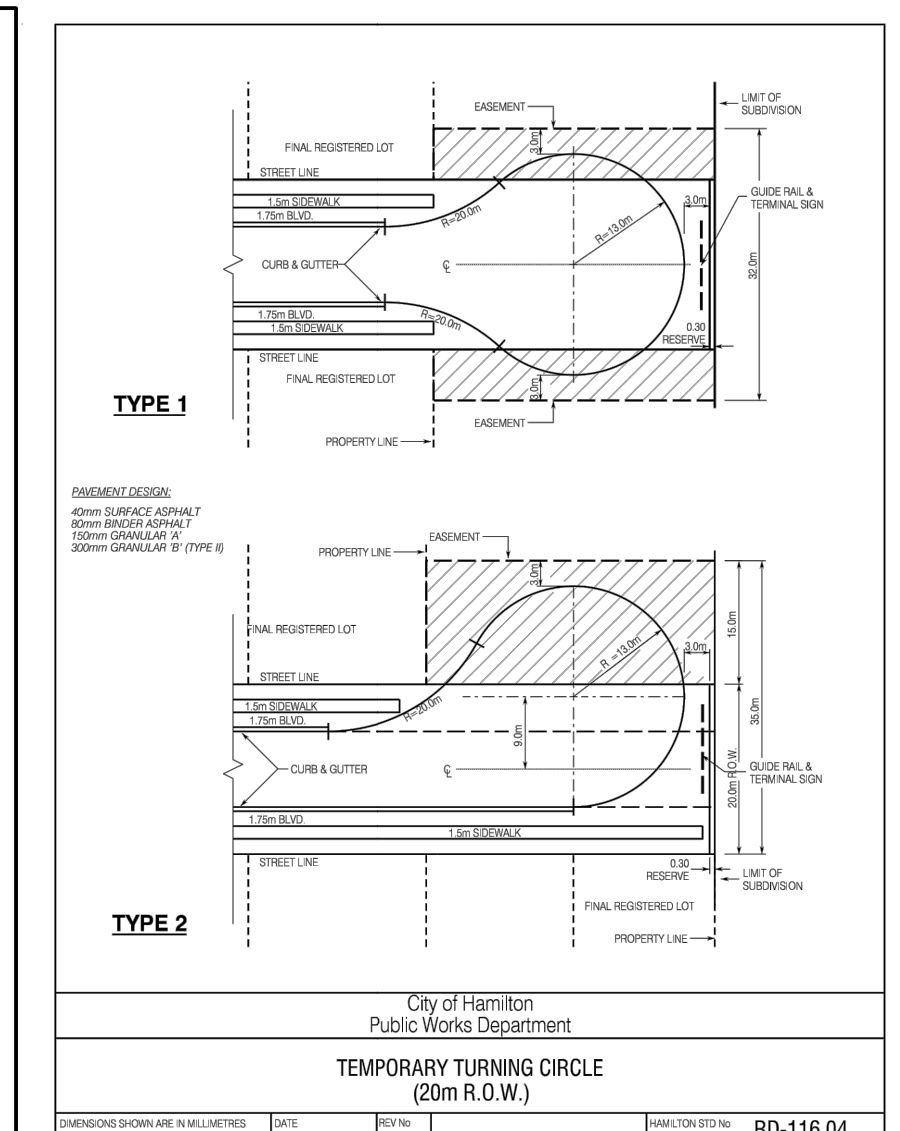
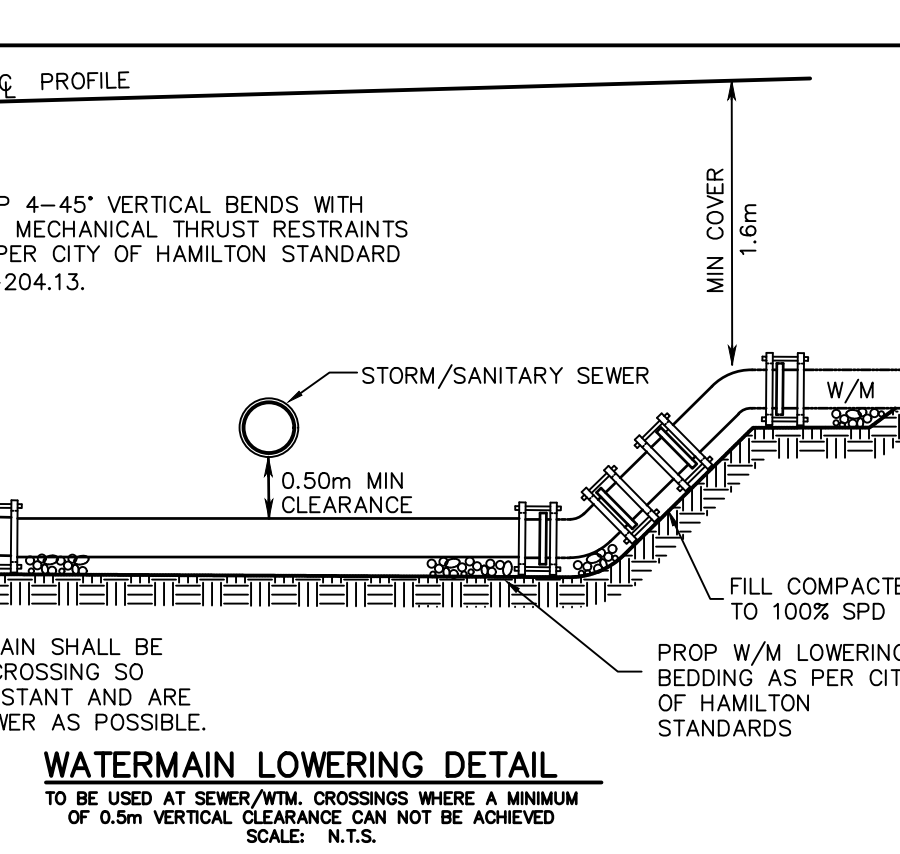
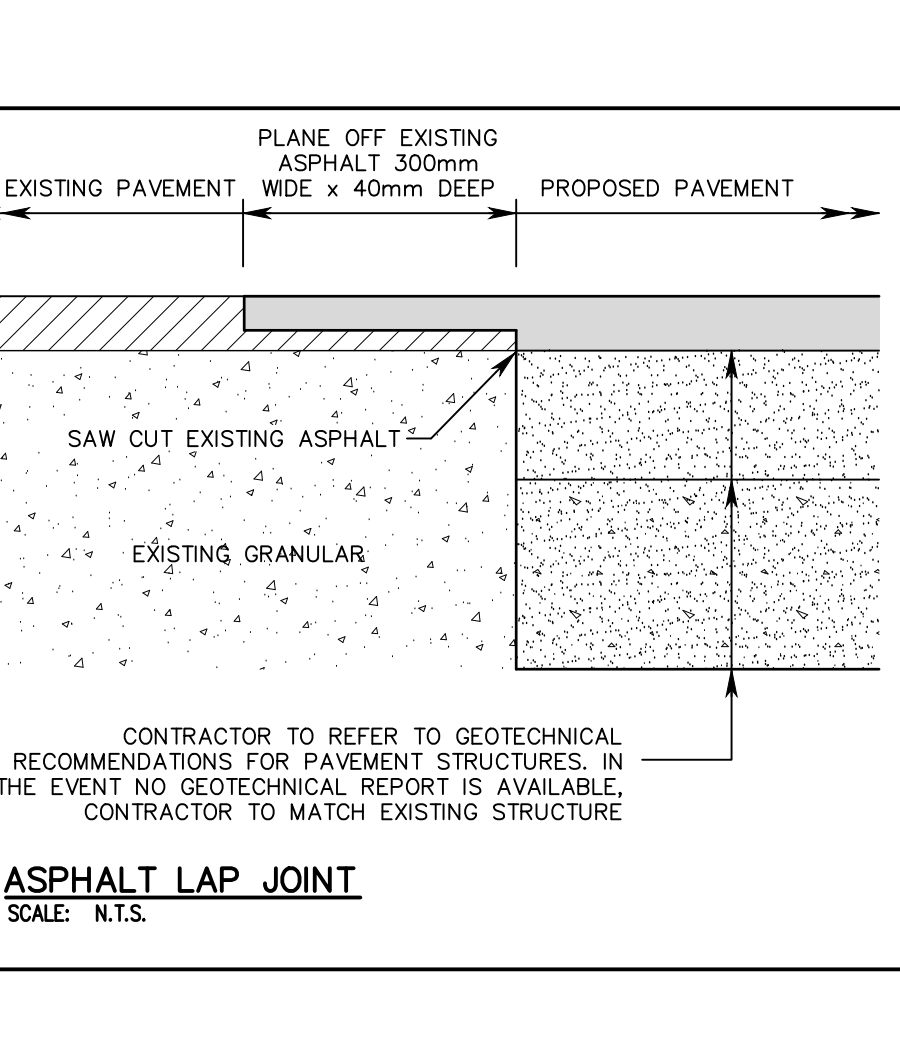
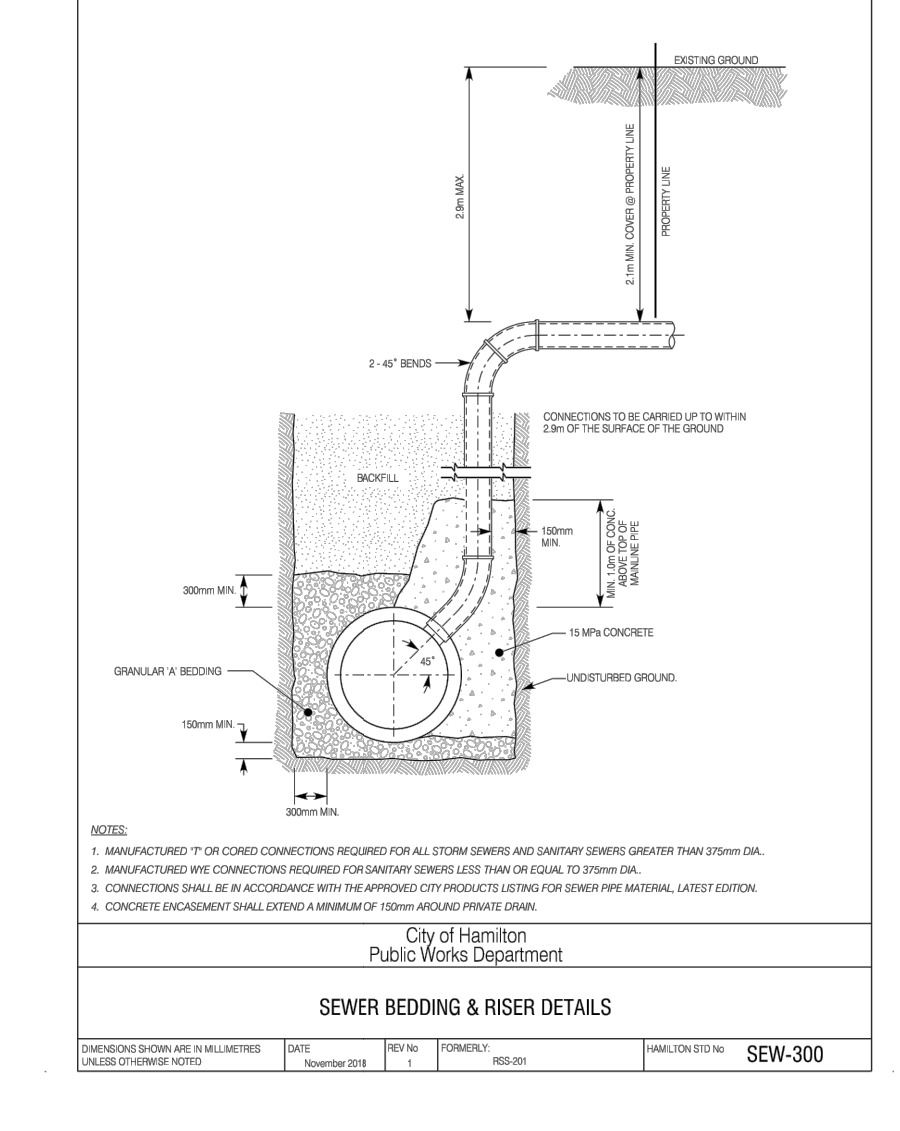
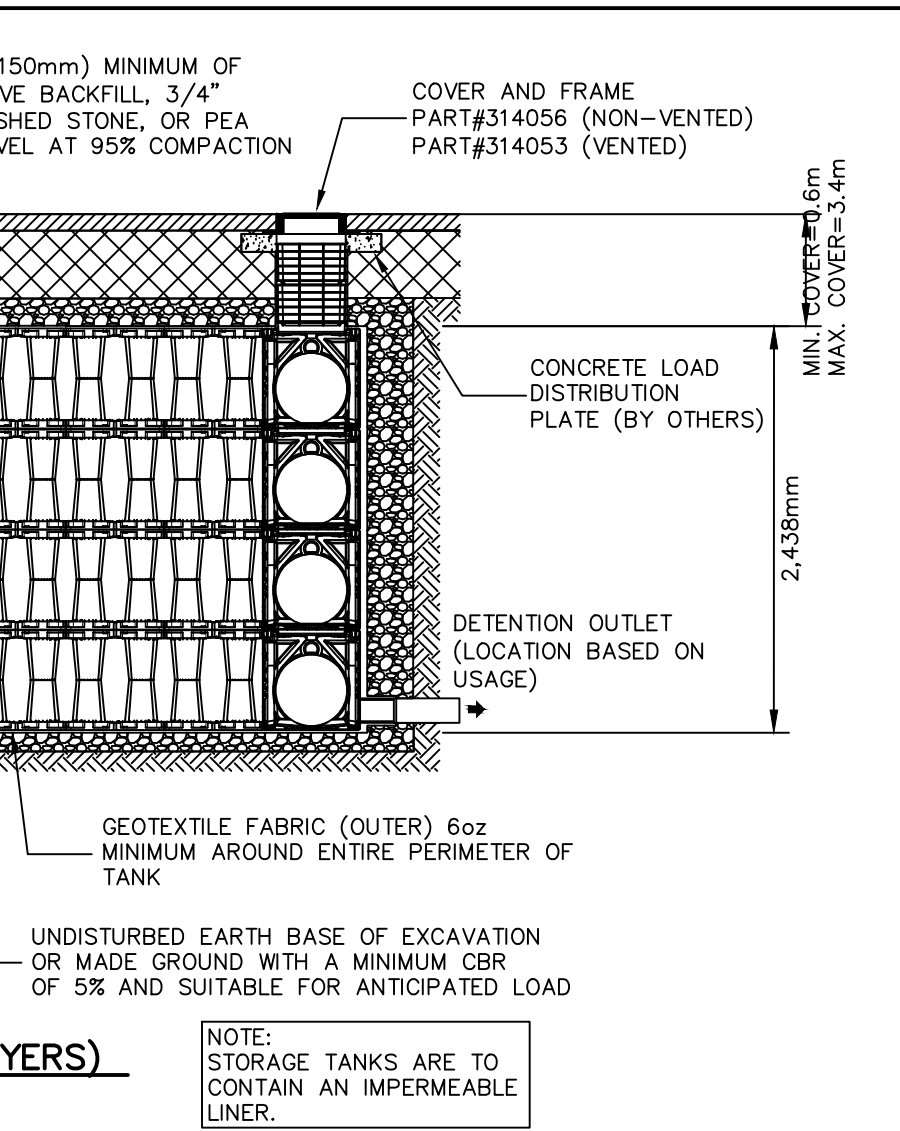
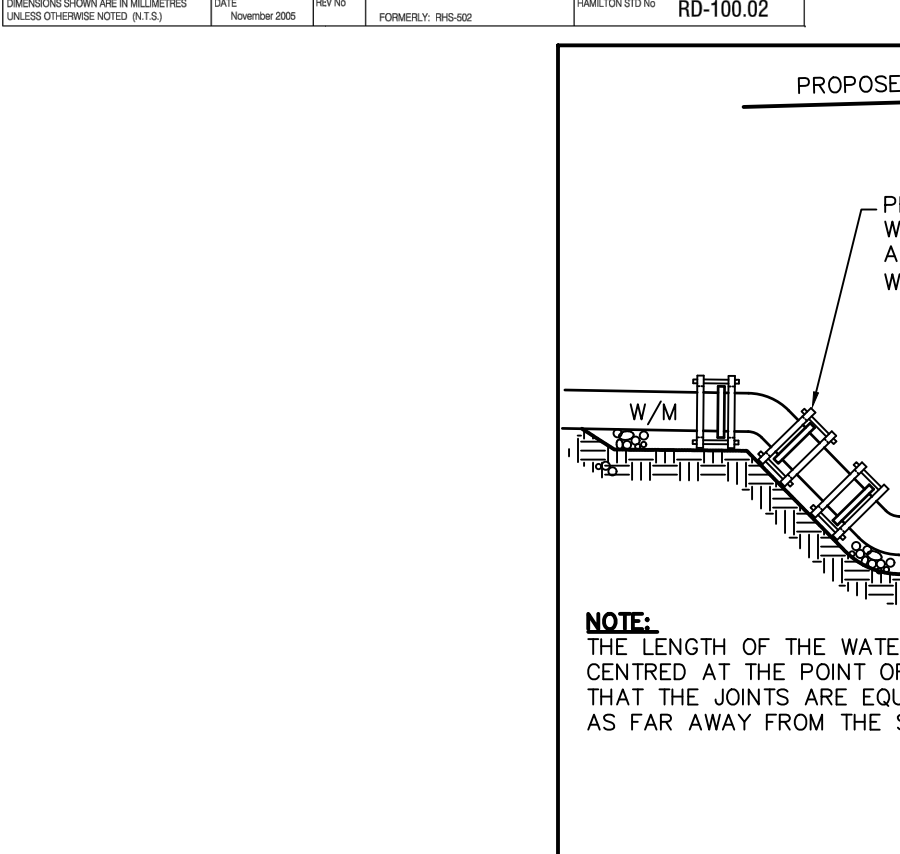
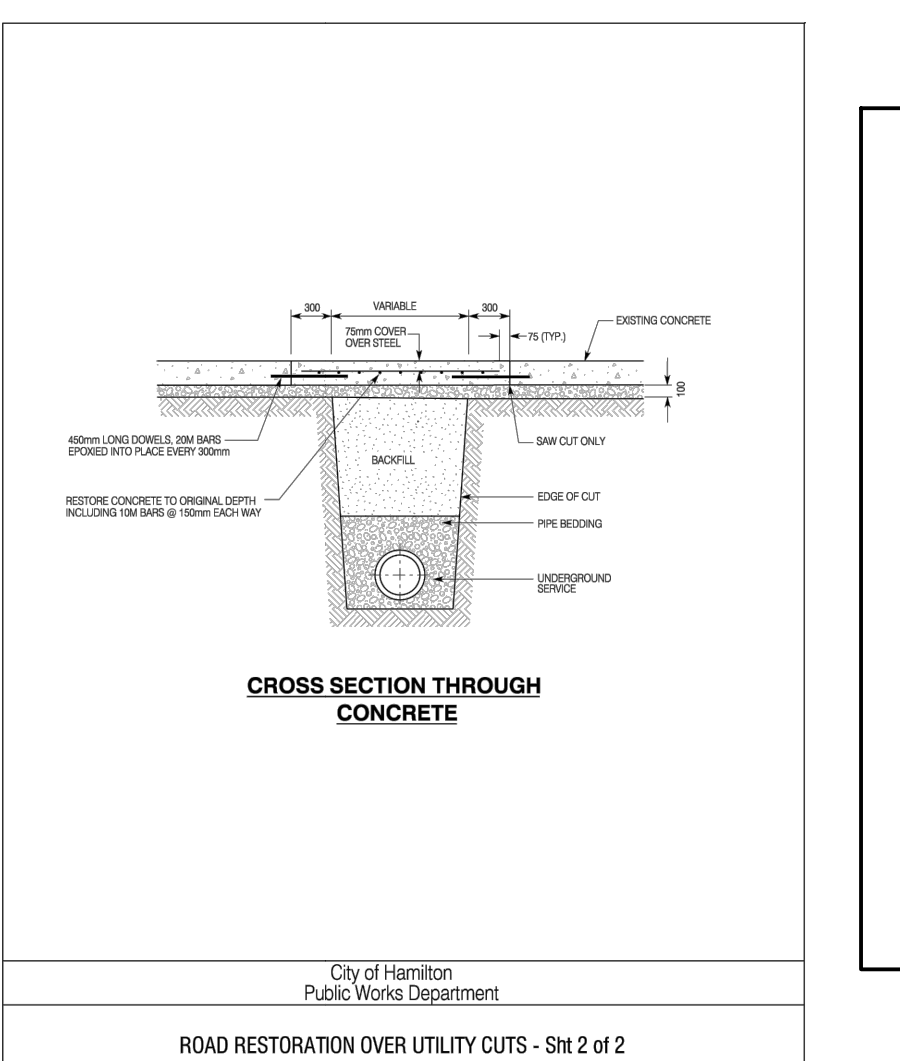
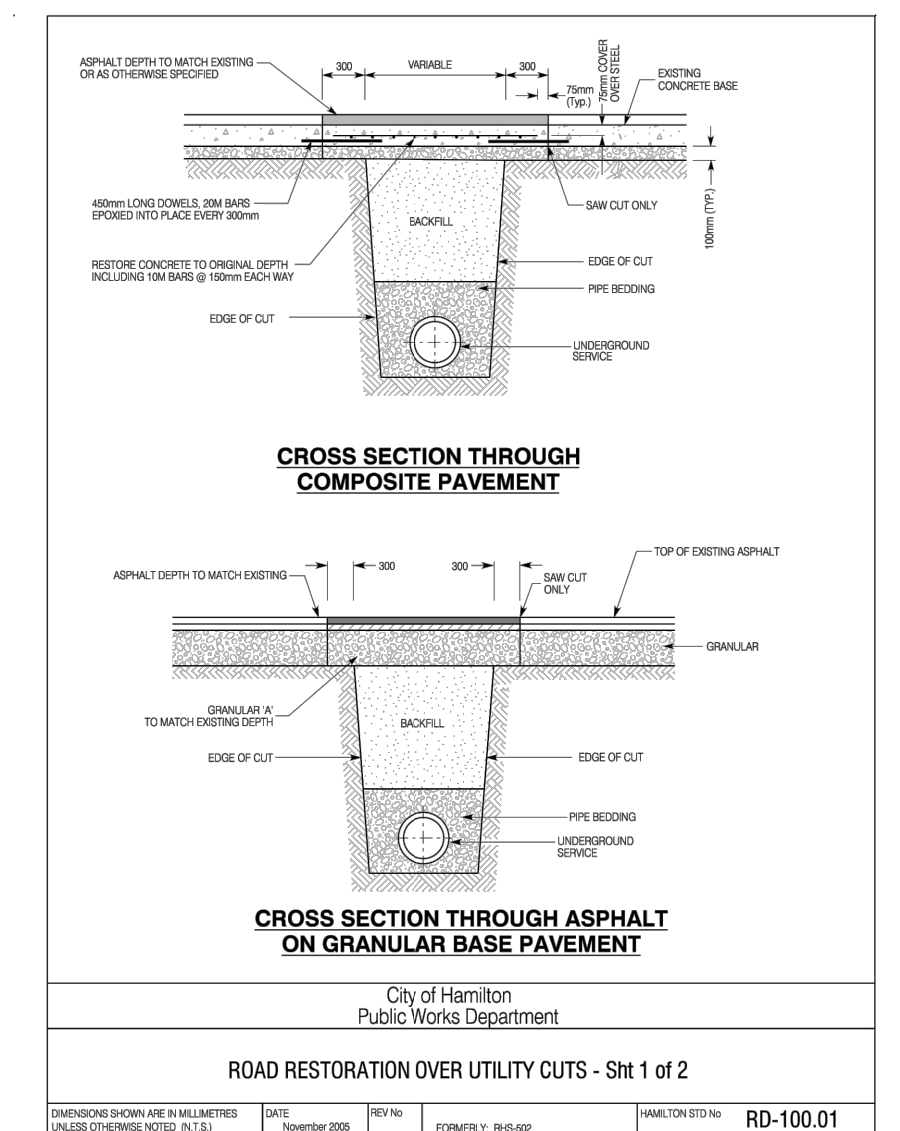
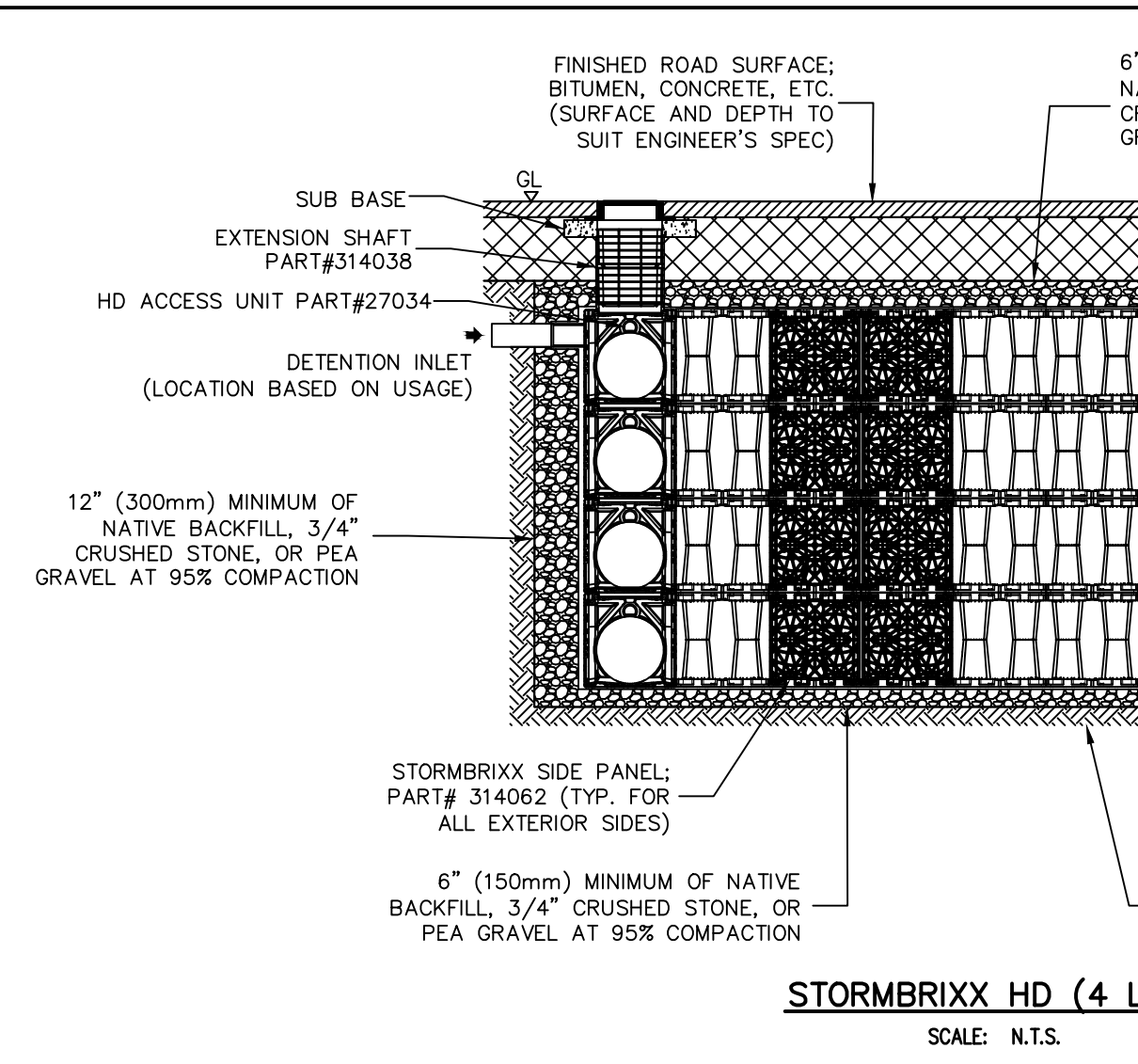
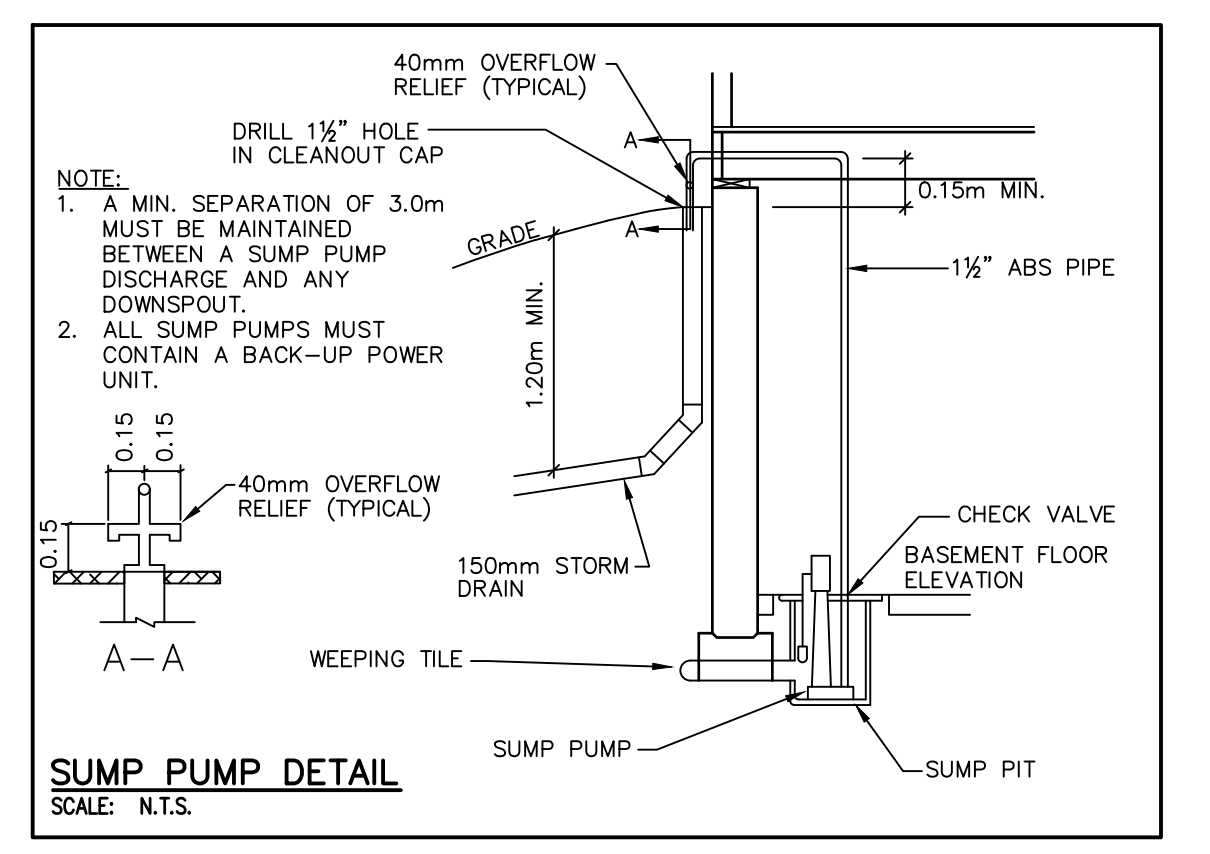
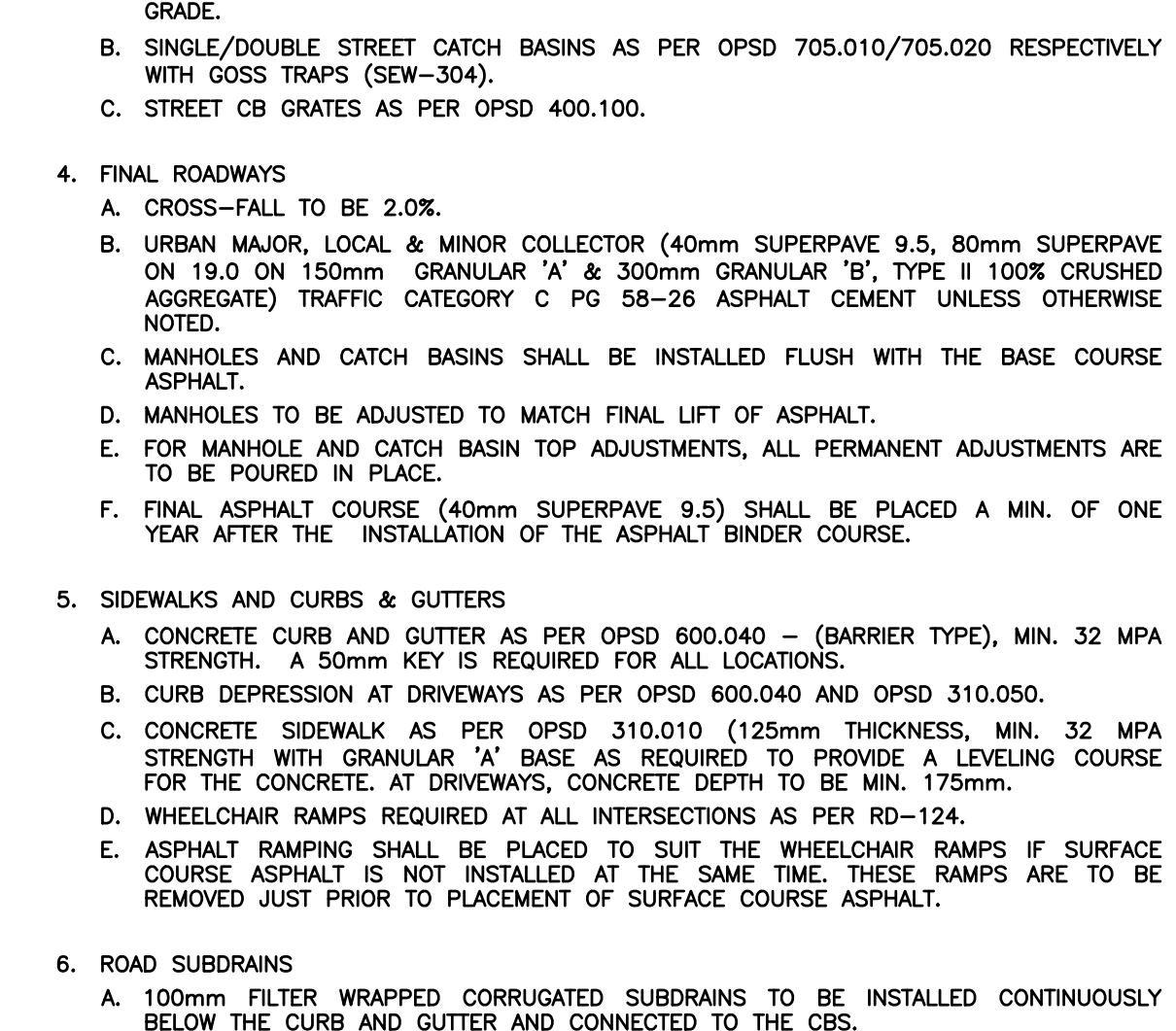
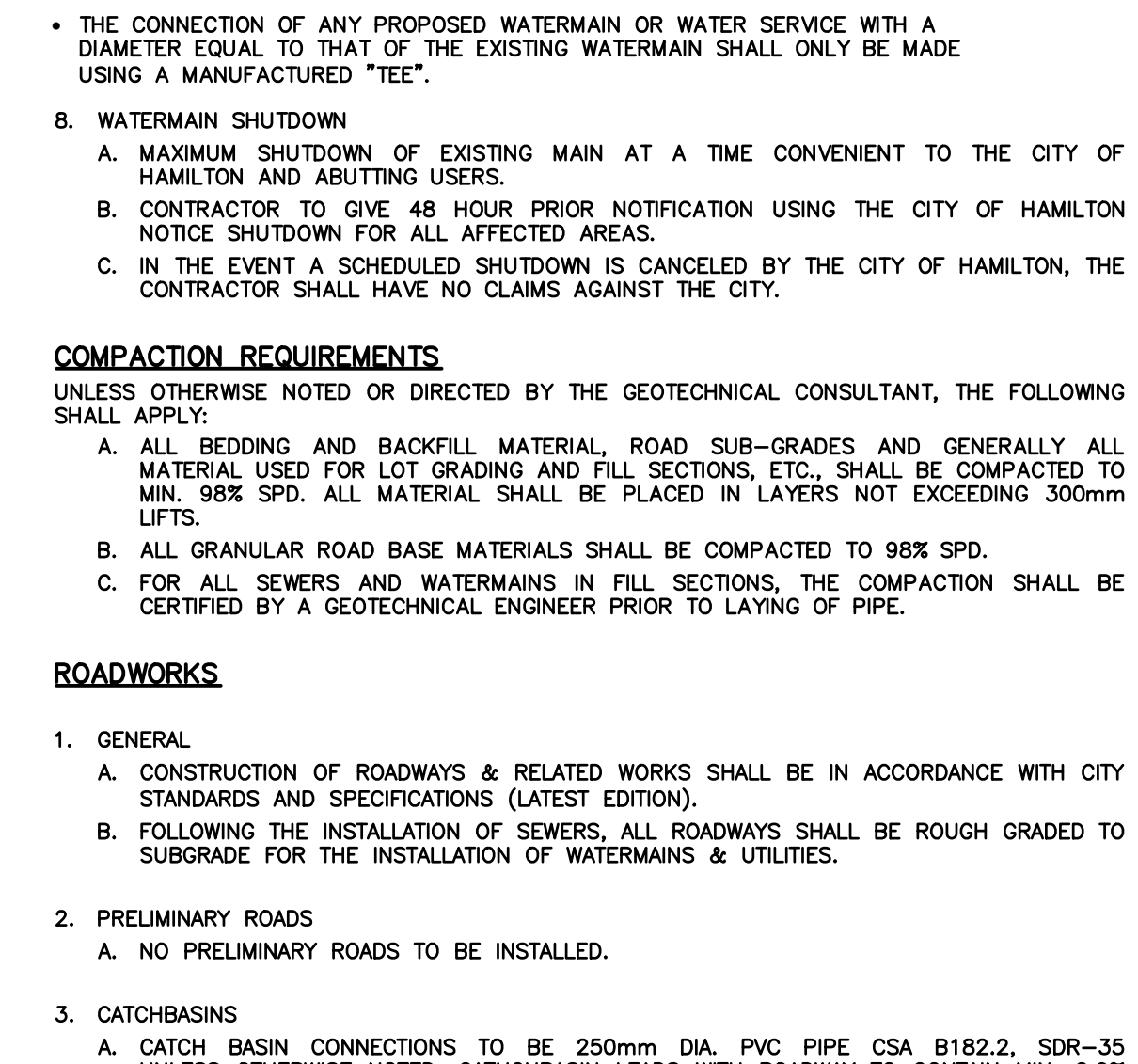
SEWERS

- SANITARY AND STORM SEWERS**
 - CONSTRUCTION OF SANITARY & STORM SEWERS & PRIVATE DRAINS SHALL BE IN ACCORDANCE WITH CITY STANDARDS & SPECIFICATIONS (LATEST EDITION) AND MINISTRY OF ENVIRONMENT (MOEP) GUIDELINES (LATEST EDITION).
 - COVER AND BEDDING MATERIAL FOR CONCRETE PIPE SHALL BE GRANULAR 'A' MATERIAL AS PER OPSD 802.030 OR 802.033, CLASS 'B' BEDDING.
 - COVER AND BEDDING MATERIAL FOR PVC PIPE SHALL BE GRANULAR 'A' MATERIAL AS PER OPSD 802.010 OR 802.013.
 - PVC PIPE WILL REQUIRE SPECIAL CONSTRUCTION PROCEDURES AS PER CITY SPECIFICATIONS.
 - ALL SEWERS TO BE VIDEO INSPECTED AS PER OPSD 409.
 - ALL SEWERS TO BE FLUSHED PRIOR TO VIDEO INSPECTION.
 - MANHOLE FRAMES AND GRATES SHALL BE AS PER OPSD 401.010 (STORM-OPEN, SANITARY-CLOSED).
 - CATCHBASIN FRAMES AND GRATES SHALL BE AS PER OPSD 400.100 IN PAVED AREA AND BEEHIVE GRATES IN LANDSCAPED AREAS.
 - ALL REAR LOT CATCHBASINS SHALL BE AS PER OPSD 705.010 AND SUMPLESS WITH NO GOSS TRAPS.
 - SANITARY SEWERS 200mm to 375mm in DIAMETER SHALL BE PVC PIPE, CSA B182.2, SDR-35.
 - STORM SEWERS 250mm to 600mm in DIAMETER SHALL BE PVC PIPE, CSA B182.2, SDR-35.
 - STORM SEWERS GREATER THAN 600mm in DIAMETER SHALL BE CONCRETE PIPE, CSA A257.2 (AS SPECIFIED).
 - ALL PVC STORM SEWERS ARE TO BE TESTED FOR DEFLECTION (MANDREL PASSAGE) AFTER INSTALLATION AS PER OPSD 410. SANITARY SEWERS SHALL BE TESTED FOR DEFLECTION (MANDREL PASSAGE) AND LEAKAGE (LOW AIR PRESSURE METHOD) AS PER OPSD 410. PRIOR TO ASSUMPTION BY THE CITY, PIPE DEFLECTION TESTING SHALL BE REPEATED.
 - CLEANOUTS CAN ONLY BE PROVIDED FOR SEWERS CONTAINING A SIZE OF 150mm in DIAMETER OR SMALLER. CLEANOUTS SHALL BE PROVIDED AT EACH CHANGE IN PIPE ALIGNMENT (VERTICAL AND HORIZONTAL), AND AT ANY CHANGE IN PIPE SIZE OR MATERIAL.
- PRIVATE DRAINS**
 - PRIVATE DRAINS TO BE 150mm PVC PIPE, CSA B182.1 M-1983, SDR 28 AS PER FORM 500. STORM PIPE SHALL BE WHITE AND SANITARY SHALL BE ANY COLOUR OTHER THAN WHITE. WOOD MARKING AT END OF SANITARY PRIVATE DRAIN SHALL BE PAINTED RED.
 - PRIVATE DRAIN CONNECTIONS TO BE LOCATED 1.5m ON THE RIGHT SIDE OF THE CENTRELINE OF LOT OR AS DETAILED AND EXTENDED 1.0m BEYOND STREET LINE. THE STORM SERVICE SHALL BE INSTALLED TO THE NORTH OR EAST OF THE SANITARY SERVICE. AS PER DETAIL ON PLAN & PROFILE DRAWINGS.
 - 'D' DENOTES DUAL PRIVATE DRAIN CONNECTION (SANITARY & STORM). 'SA' DENOTES SINGLE SANITARY PRIVATE DRAIN. 'ST' DENOTES SINGLE STORM PRIVATE DRAIN.
 - COVER AND BEDDING MATERIAL FOR PRIVATE DRAINS SHALL BE GRANULAR 'A' INSTALLED AS PER OPSD 802.010 OR 802.013.
 - MINIMUM FALL FOR PRIVATE DRAINS TO BE 2.0%.
 - TOP OF SANITARY PRIVATE DRAINS AT STREET LINE TO BE 2.2M (MIN.) BELOW CENTERLINE ROAD ELEVATION AT THAT POINT OR AS DETAILED.
 - TOP OF STORM PRIVATE DRAINS AT STREET LINE TO BE 1.2M (MIN.) BELOW CENTERLINE ROAD ELEVATION AT THAT POINT OR AS DETAILED.
 - BUILDING RAINWATER LEADERS SHALL NOT BE CONNECTED TO THE STORM PRIVATE DRAIN BUT SHALL DISCHARGE ONTO THE GROUND SURFACE VIA SPLASH PADS.
 - SUMP PUMPS WITH CHECK VALVES SHALL BE INSTALLED IN EACH DWELLING TO PUMP THE BUILDING WEEPING TILES TO THE STORM PRIVATE DRAIN. THE SUMP OUTLET PIPE SHALL EXTEND A MINIMUM OF 150mm ABOVE THE PROPOSED GRADE AT THE DWELLING (BASEMENT CEILING) PRIOR TO DISCHARGING TO THE STORM PRIVATE DRAIN.

WATERMANS AND WATER SERVICES

- WATERMANS**
 - CONSTRUCTION OF WATERMANS & PRIVATE SERVICES SHALL BE IN ACCORDANCE WITH CITY STANDARDS & SPECIFICATIONS (LATEST EDITION) AND MINISTRY OF ENVIRONMENT (MOEP) GUIDELINES (LATEST EDITION).
 - TO BE INSTALLED TO A MINIMUM DEPTH OF 1.80m BELOW PROPOSED CENTERLINE ROAD GRADE ON ALL ROADS. ALL EXISTING WATERMAIN SHALL CONTAIN A MINIMUM DEPTH OF 1.6m.
 - PVC PIPE IN SIZES 100mm THROUGH 300mm SHALL BE CLASS 150 DR18 CONFORMING TO AWWA C900.
 - TRACER WIRE SHALL BE INSTALLED WITH PVC PIPE IN ACCORDANCE WITH FORM 400. IT SHALL BE 12 GAUGE TWY'S, TWU7'S OR RW80XKPE COATED COPPER AND SHALL BE POSITIONED ALONG THE TOP OF THE PIPE AND FASTENED AT 6 METRE INTERVALS. THE WIRE IS TO BE INSTALLED BETWEEN EACH VALVE AND/OR THE END OF THE NEW PVC WATERMAIN. JOINTS IN THE RISE BETWEEN VALVES ARE NOT PERMITTED. AT EACH GATE VALVE A LOOP WIRE IS TO BE BROUGHT UP INSIDE THE VALVE BOX TO THE CAP. THE TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT THE SECONDARY VALVE ON ALL FIRE HYDRANTS. THE TRACER WIRE SHALL ALSO BE CONNECTED TO THE CATHODIC PROTECTION SYSTEM AS REQUIRED.
 - MOLDED PVC FITTINGS FOR PIPE SIZES 100mm TO 300mm SHALL CONFORM TO AWWA C900 AND CERTIFIED TO CSA B137.2.
 - FABRICATED FITTINGS 250mm AND 300mm SHALL BE MANUFACTURED FROM SEGMENTS OF AWWA C900, CLASS 150 (DR18) PVC PIPE, BONDED TOGETHER AND OVER-WRAPPED WITH FIBREGLASS-REINFORCED POLYESTER TO MEET THE REQUIREMENTS OF CSA B137.3.
 - WHERE METAL FITTINGS ARE TO BE USED ON PVC MAINS SUFFICIENT CATHODIC PROTECTION AS PER FORM 400 AND MUST BE PROVIDED AS PER THE FOLLOWING REQUIREMENTS:
 - ONE (1) 5.4 kg ZINC ANODE WILL BE PROVIDED FOR EVERY 1000 m TRACER WIRE.
 - ONE (1) 5.4 kg ZINC ANODE IS TO BE INSTALLED ON ALL COPPER SERVICE CONNECTIONS, BY MEANS OF A SERVICE GROUND CLAMP, COATED WITH T.C. MASTIC OR WRAPPED WITH SCOTCHFIL ELECTRICAL PUTTY OR APPROVED EQUAL. THE ANODE IS TO BE PLACED AT LEAST 1.0 m AWAY FROM THE WATER SERVICE AND AS DEEP AS THE SERVICE AND WITHIN 1.0 m OF THE CURB STOP.
 - ONE (1) 10.8 kg ZINC ANODE IS TO BE INSTALLED ON EACH HYDRANT. IF PVC PIPE IS USED BETWEEN THE HYDRANT TEE OR ANCHOR TEE AND THE HYDRANT BOOT, TWO (2) 10.8 kg ZINC ANODES SHALL BE USED.
 - ONE (1) 5.4 kg ZINC ANODE IS TO BE INSTALLED ON EVERY VALVE, AND EVERY METALLIC FITTING CONNECTED TO A PVC WATERMAIN. FITTINGS INCLUDE BENDS, TEES, CROSSES, SLEEVES, REDUCERS, PLUGS, CAPS, JOINT RESTRAINTS AND COUPLINGS.
 - ONE (1) 14.5 kg MAGNESIUM ANODE IS TO BE CONNECTED TO THE FIRST LENGTH OF AN EXISTING METALLIC WATERMAIN PIPE WHEN CONNECTED TO A NEW PVC WATERMAIN.
- ALL SACRIFICIAL ZINC ANODES SHALL CONFORM TO ASTM B-418 TYPE II AND SHALL BE MADE OF HIGH GRADE ELECTROLYTIC ZINC, 99.99% PURE. MAGNESIUM ANODES SHALL CONFORM TO ASTM B-107-TYPE II. ALL ANODES CONNECTED TO NEW PIPE, FITTINGS OR TO EXISTING METALLIC WATERMANS, A CROWDER AND CA-15 OR EQUIVALENT CARTRIDGE SHALL BE USED. ALL THERMITE WELD CONNECTIONS TO BE COATED WITH T.C. MASTIC (TAPECOAT OF CANADA), ROYBOND 747 PRIMER AND ROYSTON HANDY CAP OR APPROVED EQUAL.
- BEDDING AND BACKFILL AS PER WM-200.01 AND WM-200.02 GRANULAR 'A' MATERIAL FOR MAINS AND SERVICES GREATER THAN 50mm.
- WATERMAIN DEFLECTION FOR PVC PIPE:**
 - MAXIMUM ALLOWABLE DEFLECTION OF 1.5 DEGREES PER JOINT UP TO 250mm DIAMETER (160mm PER 6.1m PIPE LENGTH) AND 1.2 DEGREES FOR 300mm DIAMETER (128mm PER 6.1m PIPE LENGTH) SHALL NOT BE EXCEEDED.
 - ALL JOINTS SHALL BE DEFLECTED AN EQUAL AMOUNT.
- MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMANS AND SEWERS SHALL BE 2.5m. VERTICAL SEPARATION BETWEEN WATERMANS AND SEWERS WHICH CROSS MUST BE 500mm UNDER AND 250mm ABOVE SEWERS BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF THE SEWER, WITH THE LENGTH OF WATER PIPE BEING CENTRED AT THE POINT OF CROSSING SUCH THAT JOINTS IN THE WATERMAIN WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, CROSSING PERPENDICULAR IF POSSIBLE.
- ALL EXISTING WATER METERS BEING ABANDONED AS PART OF THE PROPOSED DEVELOPMENT MUST BE LIFTED BY THE CITY OF HAMILTON (MUNICIPALITY) FIRE SERVICING CONTRACTOR SHOULD CONTACT THE WATER AND WASTEWATER SECTION, PUBLIC WORKS DEPARTMENT AT (905) 546-2424 X4426 TO ARRANGE FOR THE WORK.

- FLUSHING, SWABBING AND TESTING**
 - ALL NEW WATERMANS ARE TO BE SWABBED IN ACCORDANCE WITH CITY SPECIFICATIONS.
 - A REDUCED PRESSURE ZONE BACKFLOW PREVENTER (WATTS SERIES 909 OR APPROVED EQUAL) IS REQUIRED ON THE TEMPORARY SUPPLY LINES USED FOR FILLING AND FLUSHING OR SWABBING OF WATERMANS.
 - UPON COMPLETION OF INSTALLATION, THE CONTRACTOR SHALL PERFORM A PRESSURE TEST ON THE WATERMANS AS PER FORM 400. WATERMAIN IS TO BE TESTED PRIOR TO CONNECTION TO EXISTING WATERMANS USING TEMPORARY CAPS OR PLUGS. CLOSURES, WHERE REQUIRED, ARE TO BE SUPPLIED BY THE CONTRACTOR. THE CONTRACTOR WILL ALSO SUPPLY AND INSTALL ALL ADAPTOR PIECES IN ORDER TO CONNECT TO EXISTING WATERMANS.
- WATER SERVICES**
 - 'W' DENOTES WATER SERVICE CONNECTION. WATER SERVICE TO BE 25mm DIA. TYPE 'K' SOFT COPPER AS PER WM-207.01 OR AS DETAILED.
 - 'GRANULAR BEDDING AS PER WM-200.01 AND WM-200.02 TO BE GRANULAR 'D' AS PER FORM 600.
 - WATER SERVICES SHALL BE LOCATED 2.5m OFFSET FROM THE PRIVATE SANITARY DRAIN. AS PER DETAIL ON PLAN & PROFILE DRAWINGS.
- VALVES & VALVE BOXES**
 - ALL VALVE BOXES TO BE SET TO PROPOSED GRADES.
 - 100mm TO 300mm GATE VALVE & VALVE BOXES AS PER WM-202.
- ANCHOR BLOCKS**
 - FOR 100mm TO 300mm WATERMANS STANDARD CONCRETE ANCHOR BLOCKS AS PER WM-204.01.
- HYDRANTS**
 - TO BE INSTALLED WITH SECONDARY VALVES AS PER WM-203.01 OR WM-203.02 AS DETAILED. THEY SHALL OPEN COUNTER-CLOCKWISE (LEFT) AND HAVE A 'L' PAINTED ON THE BARREL SECTION. THE 100mm PUMPER STORZ CONNECTION SHALL FACE THE ROADWAY AND BE PAINTED BLACK.
 - ALL FIRE HYDRANTS SHALL CONFORM TO THE CITY OF HAMILTON (MUNICIPALITY) FIRE DEPARTMENT'S REQUIREMENTS AND SHALL BE OF SAME MANUFACTURE.
 - ALL EXISTING AND PROPOSED HYDRANTS WITHIN THE VICINITY OF THE PROPOSED WORKS WILL REQUIRE AN ANTI-TAMPERING DEVICE FOR THE ENTIRE DURATION OF CONSTRUCTION. A "MULLER HYDRANT-DEFENDER" SECURITY DEVICE OR APPROVED EQUIVALENT IS TO BE USED UNLESS OTHERWISE SPECIFIED BY THE CITY OF HAMILTON.
- DUCTILE IRON PIPE**
 - DUCTILE IRON PIPE IN SIZES 400mm AND LARGER SHALL BE PRESSURE CLASS 52, DUCTILE IRON CEMENT LINED, WITH TYTON AND/OR RESTRAINED JOINTS AS PER OPSD MUNI 441.05.02, WITH CEMENT LINED FITTINGS.
 - ALL PIPE AND MECHANICAL JOINTS OF PIPE SHALL BE PROTECTED WITH POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH THIS SPECIFICATION AND THE MANUFACTURER'S RECOMMENDATION. FIELD CUT PIPE SHALL BE KEPT TO A MINIMUM, AN APPROVED CORROSION PROTECTION TAPE SYSTEM (PRIMER, MASTIC AND TAPE) SHALL BE APPLIED TO ALL RESTRAINTS PRIOR TO THE INSTALLATION OF THE POLYETHYLENE ENCASEMENT TO THE SATISFACTION OF THE PROJECT MANAGER. POLYETHYLENE ENCASEMENT SHALL BE IN ACCORDANCE WITH ANSI/AWWA C105/A21.5 AND AS DESCRIBED IN THE CITY OF HAMILTON FORM 400 SPECIFICATIONS.
 - ANCHOR BLOCKS AND JOINT RESTRAINT SHALL BE USED AT ALL FITTING. ANCHOR BLOCKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND STANDARD WATERMAIN DRAWINGS. JOINT RESTRAINT SHALL BE SELECTED FROM THE APPROVED PRODUCTS LIST (ATTACHED IN FORM 400) AND INSTALLED IN ACCORDANCE WITH THE FOLLOWING:
 - RESTRAINED MECHANICAL JOINT FOR DUCTILE IRON PIPE WILL BE REQUIRED AT ALL FITTINGS AND SUITABLE LENGTH AS RECOMMENDED BY THE SUPPLIER.
 - RESTRAINTS SHALL BE SELECTED FROM THE CITY OF HAMILTON'S APPROVED PRODUCT LIST AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
 - ALL WATERMAIN JOINTS AND FITTINGS WITHIN ENGINEERED FILL SHALL BE RESTRAINED.
 - CLOSURE PIPE SHALL CONSISTS OF RESTRAINED MECHANICAL JOINT FITTINGS AND SOLID SLEEVE



CONDO PAVEMENT STRUCTURE		
PAVEMENT LAYER	FIRE LANE & CAR PARKING (mm)	RESIDENTIAL DRIVEWAYS (mm)
SURFACE LAYER	40mm HL3 ASPHALTIC CONCRETE	60mm HL3F ASPHALTIC CONCRETE
BINDER ASPHALT	60mm HL8 ASPHALTIC CONCRETE	
GRANULAR BASE	150mm OPSS GRANULAR 'A'	200mm OPSS GRANULAR 'A'
GRANULAR SUBBASE	350mm OPSS GRANULAR 'B' TYPE II	
TOTAL THICKNESS	600mm	260mm

CONTRACTOR TO REFER TO GEOTECHNICAL REPORT FOR FURTHER INFORMATION.

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

NOTES TO CONTRACTOR:

- CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING.
- ANY INCONSISTENCIES AND QUESTIONS FOUND ON THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING THE WORK.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS AND REPORT ALL FINDINGS TO THE ENGINEER. ONCE CONSTRUCTION HAS COMMENCED, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS.
- THE POSITIONS OF POLE LINES, CONDITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVER-GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWING, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
- ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR REVISED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED.
- OPERATION OF EXISTING WATERMAIN VALVES SHALL BE BY THE CITY OF HAMILTON STAFF ONLY.

DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

APPROVALS

STAMP: PROFESSIONAL ENGINEER, S. LLEWELLYN, 27-10300, Aug 13/2021, Province of Ontario

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THE CITY OF HAMILTON

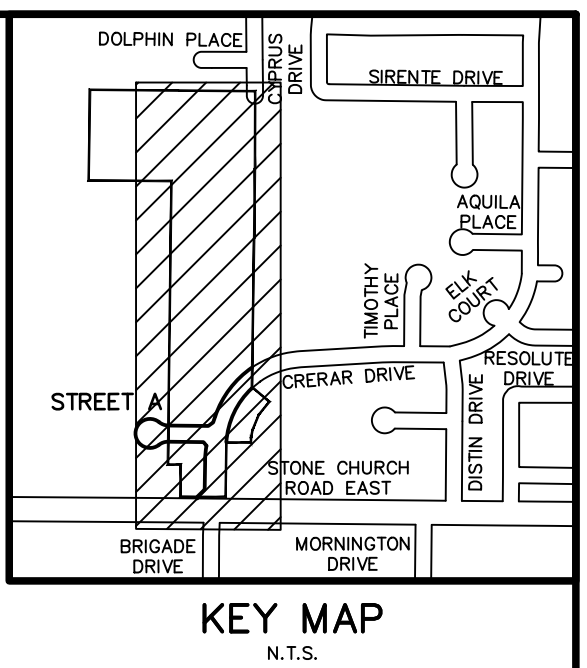
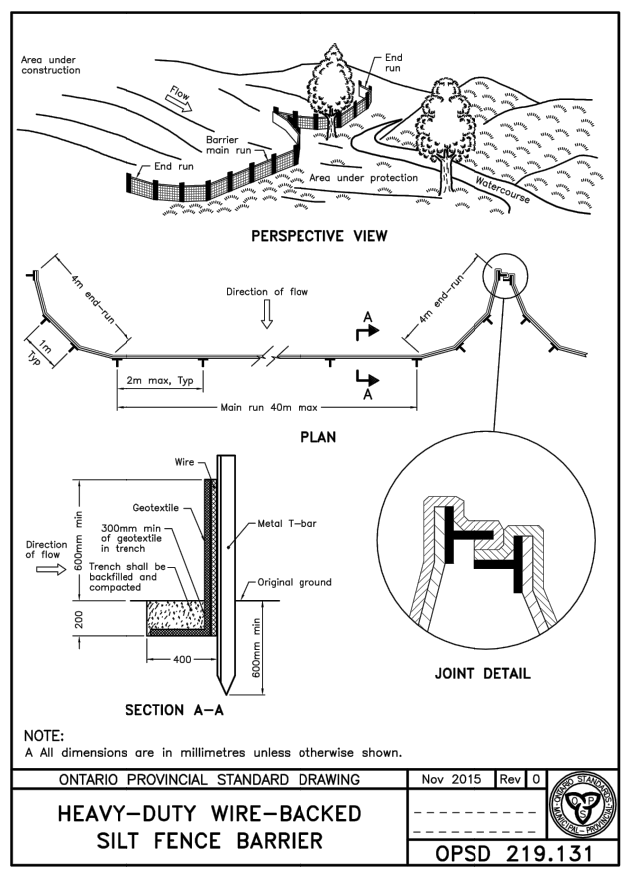
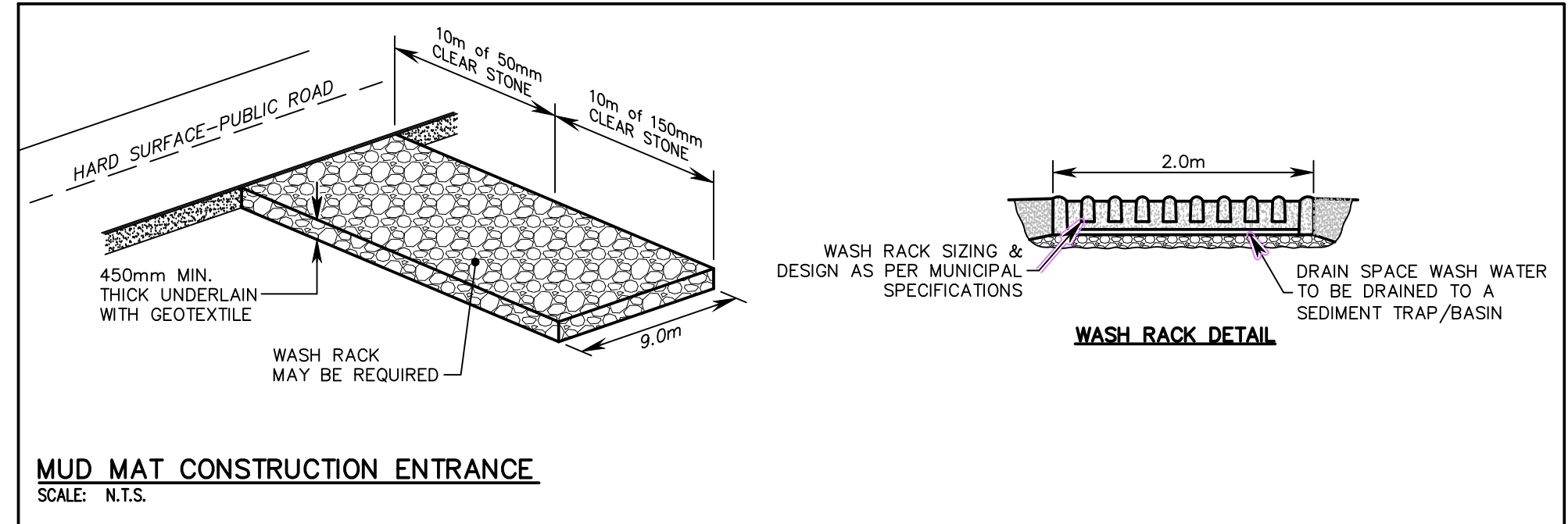
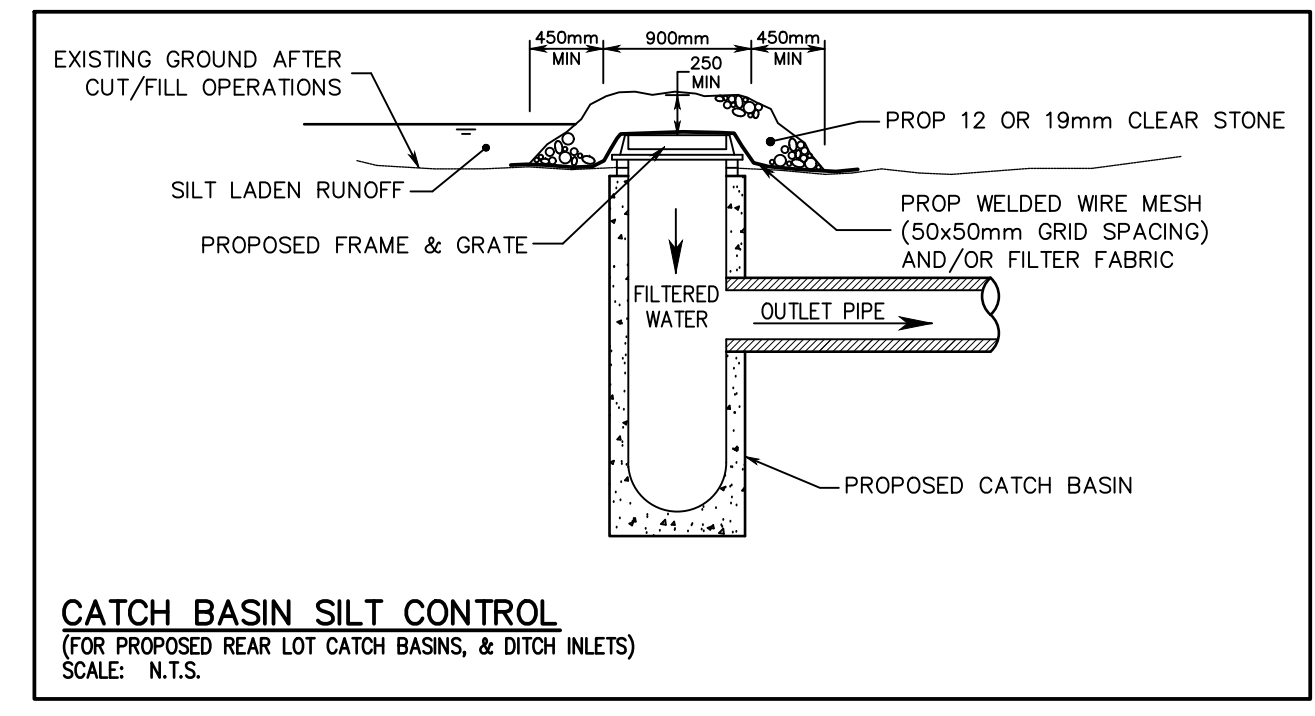
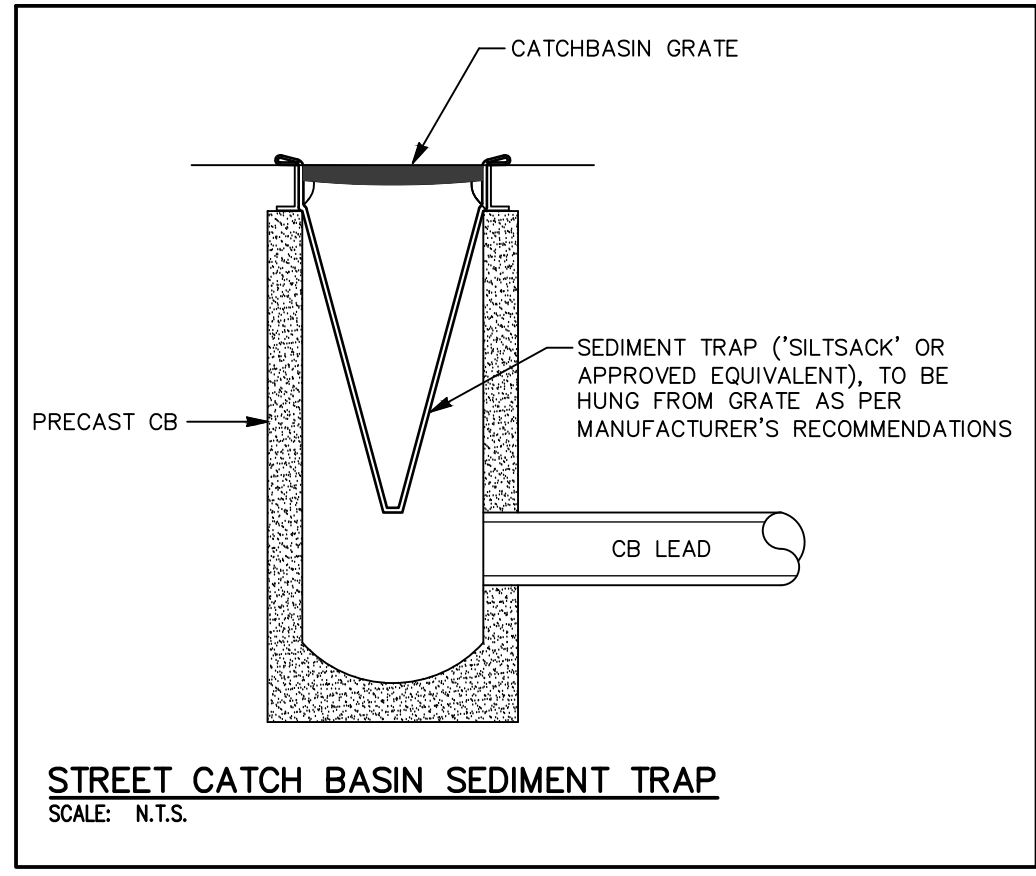
PROJECT NAME: DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES

TITLE: GENERAL NOTES & DETAILS PLAN

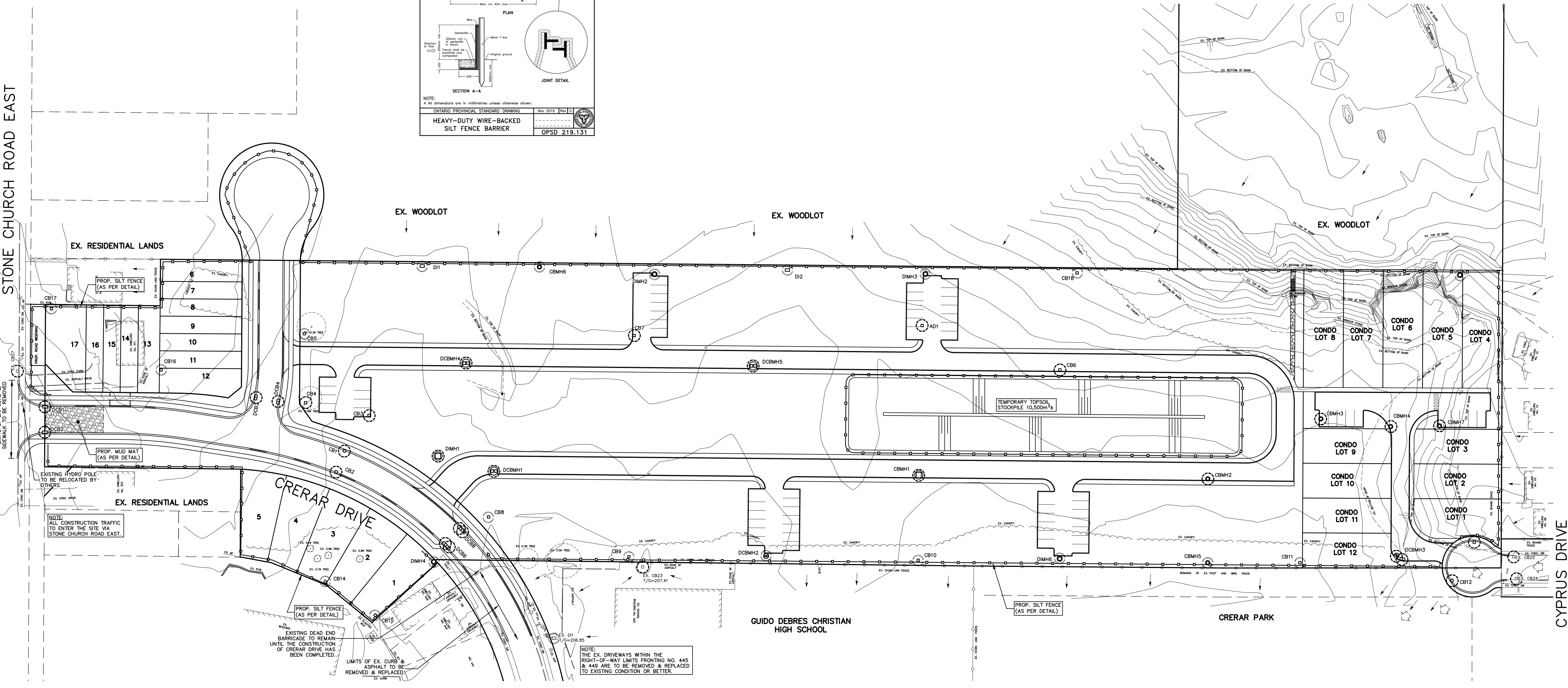
PROJECT No.	DRAWING No.	SHEET No.
19062	GEN-1	1

- GENERAL NOTES:**
1. EROSION AND SEDIMENTATION FACILITIES TO BE INSTALLED PRIOR TO ANY AREA GRADING OPERATIONS.
 2. MUD MAT SHALL BE INSTALLED AS PER EROSION & SEDIMENT CONTROL GUIDELINE FOR URBAN CONSTRUCTION (2006).
 3. SILTATION CONTROL FENCING SHALL BE INSTALLED AS PER OPSD 219.130.
 4. SITE INSPECTIONS OF THE EROSION CONTROL MEASURES BY THE DEVELOPER'S CONSULTANT ARE TO BE CONDUCTED WEEKLY AND AFTER ANY SUBSTANTIAL STORM EVENT (>13mm). INSPECTION MUST INCLUDE AN ASSESSMENT OF THE PROPOSED FACILITIES/CONTROLS AND RECOMMENDED CORRECTIVE MEASURES (IF REQUIRED). COPIES OF THE REPORTS ARE TO BE FORWARDED TO THE CITY OF HAMILTON AND HAMILTON CONSERVATION AUTHORITY ON A MONTHLY BASIS.
 5. ALL EROSION CONTROL MEASURES (INCLUDING SILT FENCE, INTER-CEPTOR SWALES, ETC.) ARE TO BE MAINTAINED AS REQUIRED BY THE DEVELOPER'S CONSULTANT.
 6. THE MEASURES AS PROPOSED MAY BE MODIFIED AT THE DISCRETION OF THE DEVELOPER'S CONSULTANT TO SUIT THE PROPOSED CONSTRUCTION PROGRAMS. THE GENERAL INTENT OF THE PROPOSED EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. THE HAMILTON CONSERVATION AUTHORITY IS TO BE NOTIFIED IF ANY SIGNIFICANT PROPOSED AMENDMENTS TO THE PLAN AND/OR EROSION AND SEDIMENT CONTROL MEASURES ON-SITE FOR REVIEW/APPROVAL PRIOR TO THEIR IMPLEMENTATION.
 7. UPON COMPLETION OF GRADING OPERATIONS THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITH MULCH AND BIRDSFOOT TREFLOID SEED MIX AS PER OPS-804 UNLESS FINAL CONSTRUCTION IS SCHEDULED TO COMMENCE WITHIN 30 DAYS OF THE COMPLETION OF THE GRADING OPERATIONS.
 8. IF TOPSOIL STOCKPILE REMAINS FOR MORE THAN 30 DAYS, IT SHALL BE STABILIZED BY MULCHING, VEGETABLE COVER, TARPS OR OTHER MEANS.
 9. DESIGNATED ENTRANCE FOR ALL CONSTRUCTION TRAFFIC TO BE INSTALLED WITH MUD CONTROL DEVICES AS PER MUD MAT DETAIL. MUD CONTROL DEVICES TO BE INSTALLED PRIOR TO START OF CONSTRUCTION AND ARE TO BE MAINTAINED IN GOOD WORKING ORDER UNTIL GRADING WORKS ARE COMPLETED.
 10. CONTRACTOR TO CONTACT THE DEVELOPER'S CONSULTANT PRIOR TO CONSTRUCTION TO DETERMINE THE NEED FOR MODIFICATIONS TO THE CONSTRUCTION SCHEDULE. CONTRACTOR IS NOT TO REMOVE ANY EROSION OR SEDIMENT CONTROL FACILITIES UNTIL DIRECTED TO DO SO BY THE ENGINEER.

- SEDIMENTATION AND EROSION CONTROL SCHEDULE**
1. PRIOR TO THE START OF GRADING OPERATIONS THE CONTRACTOR SHALL:
 - 1.1. INSTALL ALL PERIMETER SILTATION CONTROL FENCING AND TREE PROTECTION HOARDING AS SHOWN OR AS DIRECTED BY THE DEVELOPER'S CONSULTANT, AND
 2. DURING THE GRADING OPERATIONS SHALL:
 - 2.1. MAINTAIN ALL SEDIMENTATION AND EROSION CONTROL FENCING AND CONSTRUCTION ENTRANCE TO THE SATISFACTION OF THE DEVELOPER'S CONSULTANT, CITY OF HAMILTON AND THE CONSERVATION AUTHORITY.
 - 2.2. INSTALL ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURE AS DIRECTED BY THE DEVELOPER'S CONSULTANT.
 - 2.3. INSTALL SEDIMENT CONTROL FENCING AROUND THE BASE OF ALL SOIL STOCKPILES. SOIL STOCKPILES THAT ARE TO REMAIN FOR MORE THAN 30 DAYS SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS OR OTHER APPROVED MEANS, AND
 - 2.4. UPON COMPLETION OF GRADING OPERATIONS THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITH MULCH AND BIRDSFOOT TREFLOID SEED MIX AS PER OPS-804 UNLESS FINAL CONSTRUCTION IS SCHEDULED TO COMMENCE WITHIN 30 DAYS OF THE COMPLETION OF THE GRADING OPERATIONS.
 3. DURING THE CONSTRUCTION OF SERVICES THE CONTRACTOR SHALL:
 - 3.1. MAINTAIN ALL SEDIMENTATION AND EROSION CONTROL FENCING AND CONSTRUCTION ENTRANCE TO THE SATISFACTION OF THE DEVELOPER'S CONSULTANT, CITY OF HAMILTON AND THE CONSERVATION AUTHORITY, AND
 - 3.2. INSTALL ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURE AS DIRECTED BY THE DEVELOPER'S CONSULTANT.
 - 3.3. PROVIDE, INSTALL AND MAINTAIN THE APPROVED TEMPORARY SILT CONTROL MEASURES (i.e. PLACING FILTER FABRIC UNDER THE GRATES) AT ALL CATCHBASIN, DITCH INLETS AND REAR LOT CATCHBASINS AS THE STRUCTURES ARE INSTALLED. UPON COMPLETION OF THE INITIAL INSPECTION, THE CONTRACTOR SHALL REMOVE THE FILTER FABRIC AND INSTALL LONG TERM CONTROL MEASURES BY WAY OF SILT SACKS ETC. AS DETAILED ON THE PLAN.
 - 3.4. UPON COMPLETION OF THE SERVICING AND PRIOR TO THE FINAL GRADING OF THE ROAD BASE, THE CONTRACTOR SHALL DECOMMISSION THE CONSTRUCTION ENTRANCE.



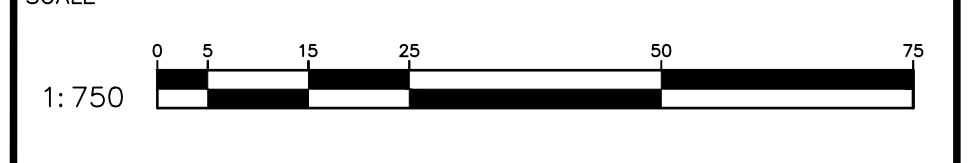
- LEGEND:**
- □ EXISTING SINGLE/DOUBLE CATCHBASIN
 - □ PROPOSED SINGLE/DOUBLE CATCHBASIN
 - □ PROPOSED CATCHBASIN & DITCH INLET MANHOLE/ TOTAL CAPTURE CATCHBASIN
 - EXISTING DIRECTION OF SHEET FLOW
 - PROPOSED SEDIMENT CONTROL AT ROAD CATCHBASINS
 - PROPOSED SEDIMENT CONTROL AT DITCH INLETS & CATCHBASINS IN LANDSCAPED AREAS
 - PROPOSED SILTATION CONTROL FENCE



1.	AUG/21	CD	RE-ZONING COMMENTS
NO.	DATE	BY	REVISIONS

- NOTES TO CONTRACTOR:**
1. CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING.
 2. ANY INCONSISTENCIES AND OMISSIONS FOUND ON THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING THE WORK.
 3. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS AND REPORT ALL FINDINGS TO THE ENGINEER. ONCE CONSTRUCTION HAS COMMENCED, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS.
 4. THE POSITIONS OF POLE LINES, CONDUITS, WATERMANS, SENERS AND OTHER UNDERGROUND AND OVER-GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWING, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
 5. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR REVISED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED.
 6. OPERATION OF EXISTING WATERMAIN VALVES SHALL BE BY THE CITY OF HAMILTON STAFF ONLY.

DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020



APPROVALS

STAMP
 LIC. PROFESSIONAL ENGINEER
 S. LLEWELLYN
 2710300
 Aug 13/2021
 PROVINCE OF ONTARIO

S. LLEWELLYN & ASSOCIATES LIMITED
 CONSULTING ENGINEERS

Tel. (905) 631-6978
 Fax (905) 631-8927
 email: info@sla.on.ca

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME
**DICENZO CONSTRUCTION COMPANY LIMITED
 LAVITA ESTATES**

TITLE
**SEDIMENT, EROSION CONTROL
 & REMOVALS PLAN**

PROJECT No.	DRAWING No.	SHEET No.
19062	ESC-1	3

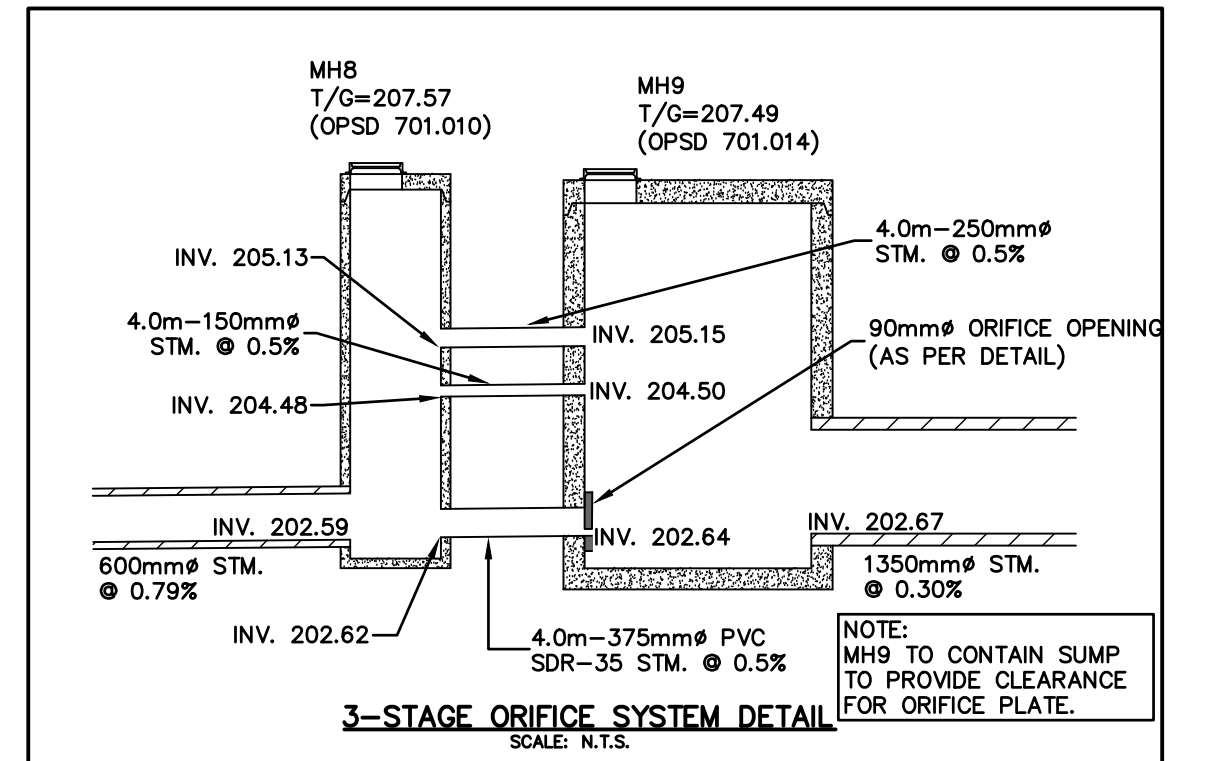
STORM SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	NOTES
CBM1	OPSD 701.013 (2400mm Dia.)	208.69	N.INV.=203.25	S.INV.=203.22	(c/w OPSD 702.040)
CBM2	OPSD 701.010 (1200mm Dia.)	208.56	N.INV.=204.96	S.INV.=204.93	
CBM3	OPSD 701.010 (1200mm Dia.)	210.50	NE.INV.=206.33	S.INV.=206.30	
CBM4	OPSD 701.010 (1200mm Dia.)	210.21	N.INV.=207.30	S.INV.=206.82	
CBM5	OPSD 701.010 (1200mm Dia.)	209.38	N.INV.=207.47	S.INV.=207.44	
CBM6	OPSD 701.010 (1200mm Dia.)	208.55	S.INV.=205.80	N.INV.=205.77	
CBM7	OPSD 701.010 (1200mm Dia.)	210.70	N.INV.=207.60	S.INV.=207.55	
DCBM1	OPSD 701.013 (2400mm Dia.)	207.27	N.INV.=202.75	SE.INV.=202.72	
DCBM2	OPSD 701.011 (1500mm Dia.)	207.49	S.INV.=205.28	SE.INV.=205.22	
DCBM3	OPSD 701.011 (1500mm Dia.)	209.66	NE.INV.=207.96	W.INV.=207.36	
DCBM4	OPSD 701.013 (2400mm Dia.)	207.60	N.INV.=203.08	S.INV.=203.05	
DCBM5	OPSD 701.013 (2400mm Dia.)	208.23	N.INV.=203.43	S.INV.=203.40	
DMH1	OPSD 706.030 (2400mm Dia.) (TYPE A, HORIZ. GRATE)	207.33	SW.INV.=202.74	E.INV.=202.71	
DMH2	OPSD 706.010 (1500mm Dia.) (TYPE A, 31 GRATE)	208.55	N.INV.=205.42	E.INV.=205.14	
DMH3	OPSD 706.010 (1500mm Dia.) (TYPE A, 31 GRATE)	208.75	N.INV.=207.36	SE.INV.=206.78	
DMH4	OPSD 706.010 (1500mm Dia.) (TYPE B, 61 GRATE)	207.46	SE.INV.=205.60	N.INV.=205.55	
DMH5	OPSD 706.010 (1500mm Dia.) (TYPE A, HORIZ. GRATE)	213.70		E.INV.=210.80	
DMH6	OPSD 706.010 (1500mm Dia.) (TYPE A, 31 GRATE)	208.55	N.INV.=206.39	W.INV.=206.09	
EX. MH9	OPSD 701.013 (2400mm Dia.)	207.50	SW.INV.=202.12	E.INV.=201.89	
MH1	OPSD 701.012 (1800mm Dia.)	207.47	SW.INV.=202.57	NE.INV.=202.30	(c/w OPSD 702.040)
MH2	OPSD 701.013 (2400mm Dia.)	207.92	SW.INV.=203.05	NE.INV.=202.98	(c/w OPSD 702.040)
MH3	OPSD 701.013 (2400mm Dia.)	208.22	SW.INV.=203.83	NE.INV.=203.40	
MH4	OPSD 701.012 (1800mm Dia.)	208.13	NW.INV.=203.73	E.INV.=203.67	
MH5	OPSD 701.011 (1500mm Dia.)	208.17	W.INV.=204.00	SE.INV.=203.94	
MH6	OPSD 701.010 (1200mm Dia.)	208.52	S.INV.=204.46	NE.INV.=204.43	
MH7	OPSD 701.010 (1200mm Dia.)	208.11		N.INV.=204.87	
MH8	OPSD 701.010 (1200mm Dia.)	207.57	NW.INV.=202.62	SE.INV.=202.59	(c/w OPSD 702.040)

STORM SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	NOTES
MH9	OPSD 701.014 (3000mm Dia.)	207.49	N.INV.=202.87	SE.INV.=202.84	(c/w OPSD 702.040)
MH10	OPSD 701.014 (3000mm Dia.)	208.20	NW.INV.=208.04	E.INV.=202.89	(c/w OPSD 702.040)
MH11	OPSD 701.014 (3000mm Dia.)	208.37	NW.INV.=203.37	S.INV.=203.28	(c/w OPSD 702.040)
MH12	OPSD 701.014 (3000mm Dia.)	208.88	NW.INV.=203.73	S.INV.=203.61	(c/w OPSD 702.040)
MH13	OPSD 701.014 (3000mm Dia.)	208.15	E.INV.=203.14	S.INV.=203.04	(c/w OPSD 702.040)
MH14	OPSD 701.014 (3000mm Dia.)	208.95	NW.INV.=203.92	S.INV.=203.40	(c/w OPSD 702.040)
MH15	OPSD 701.010 (1200mm Dia.)	209.97	NW.INV.=205.58	S.INV.=205.49	(c/w OPSD 702.040)
MH16	OPSD 701.010 (1200mm Dia.)	210.27	N.INV.=206.10	SE.INV.=206.00	
MH17	OPSD 701.010 (1200mm Dia.)	211.00		S.INV.=207.83	
OGS1	HYDROSTORM HS-10	207.44	NW.INV.=202.70	S.INV.=202.70	
OGS2	HYDROSTORM HS-10	207.95	W.INV.=202.86	NE.INV.=202.83	(c/w OPSD 702.040)

CATCHBASIN TABLE				
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES OUT	
CB1	OPSD 705.010	207.87	SE.INV.=206.42	
CB2	OPSD 705.010	207.87	SE.INV.=206.42	
CB3	OPSD 705.010	207.75	E.INV.=206.30	
CB4	OPSD 705.010	208.15	NW.INV.=206.70	
CB5	OPSD 705.010	208.40	NE.INV.=206.36	
CB6	OPSD 705.010	209.19	S.INV.=207.74	
CB7	OPSD 705.010	208.15	N.INV.=206.70	
CB8	OPSD 705.010	207.19	W.INV.=205.74	
CB9	OPSD 705.010	207.44	N.INV.=205.99	
CB10	OPSD 705.010	208.46	S.INV.=207.01	
CB11	OPSD 705.010	209.40	S.INV.=207.95	
CB12	OPSD 705.010	209.90	N.INV.=208.45	
CB13	OPSD 705.010	209.95	NE.INV.=205.50	
CB14	OPSD 705.010	207.37	NW.INV.=205.92	
CB15	OPSD 705.010	207.32	N.INV.=205.82	
CB16	OPSD 705.010	208.91	E.INV.=207.46	
CB17	OPSD 705.010	209.15	E.INV.=207.70	
CB18	OPSD 705.010	209.85	S.INV.=208.40	
DCB1	OPSD 705.020	208.05	E.INV.=206.60	
DCB2	OPSD 705.020	208.05	W.INV.=206.60	
DCB3	OPSD 705.020	207.95	NE.INV.=206.50	
DCB4	OPSD 705.020	207.95	SW.INV.=206.50	
DCB5	OPSD 705.020	207.27	NW.INV.=205.82	
DCB6	OPSD 705.020	207.27	NW.INV.=205.82	
DCB7	OPSD 705.020	207.27	SE.INV.=206.82	
DCB8	OPSD 705.020	207.27	SE.INV.=206.82	
DCB9	OPSD 705.020	208.66	SW.INV.=208.12	
D1	OPSD 705.040 (TYPE A, HORIZ. GRATE)	207.95	N.INV.=206.41	
D2	OPSD 705.040 (TYPE A, HORIZ. GRATE)	208.40	S.INV.=206.75	

SANITARY SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	
EX. MH9A	OPSD 701.010 (1200mm Dia.)	207.66	SW.INV.=203.48	E.INV.=203.43	
MH1A	OPSD 701.010 (1200mm Dia.)	207.52	SW.INV.=203.77	NE.INV.=203.74	
MH2A	OPSD 701.010 (1200mm Dia.)	207.85	SW.INV.=204.07	NE.INV.=204.04	
MH3A	OPSD 701.010 (1200mm Dia.)	208.25	SW.INV.=204.79	NE.INV.=204.40	
MH4A	OPSD 701.010 (1200mm Dia.)	208.47	S.INV.=205.03	NE.INV.=205.00	
MH5A	OPSD 701.010 (1200mm Dia.)	208.17		N.INV.=205.22	
MH6A	OPSD 701.010 (1200mm Dia.)	208.17	W.INV.=205.05	SE.INV.=205.02	
MH7A	OPSD 701.010 (1200mm Dia.)	208.37	N.INV.=205.21	E.INV.=205.11	
MH8A	OPSD 701.010 (1200mm Dia.)	207.69	NW.INV.=204.64	SE.INV.=204.55	
MH9A	OPSD 701.010 (1200mm Dia.)	207.40	N.INV.=204.81	S.INV.=204.75	
MH10A	OPSD 701.010 (1200mm Dia.)	208.25	N.INV.=205.32	S.INV.=205.29	
MH11A	OPSD 701.010 (1200mm Dia.)	209.02	NW.INV.=205.85	S.INV.=205.82	
MH12A	OPSD 701.010 (1200mm Dia.)	209.95	NW.INV.=206.28	S.INV.=206.20	
MH13A	OPSD 701.010 (1200mm Dia.)	210.15	NW.INV.=206.36	SE.INV.=206.33	
MH14A	OPSD 701.010 (1200mm Dia.)	210.27	N.INV.=206.49	E.INV.=206.40	
MH15A	OPSD 701.010 (1200mm Dia.)	210.43	E.INV.=206.77	S.INV.=206.68	
MH16A	OPSD 701.010 (1200mm Dia.)	208.84		W.INV.=207.00	
MH17A	OPSD 701.010 (1200mm Dia.)	208.49	N.INV.=205.29	S.INV.=205.26	
MH18A	OPSD 701.010 (1200mm Dia.)	208.37	N.INV.=205.36	S.INV.=205.33	
MH20A	OPSD 701.010 (1200mm Dia.)	208.38	N.INV.=205.92	S.INV.=205.89	
MH21A	OPSD 701.010 (1200mm Dia.)	209.03	NW.INV.=206.50	S.INV.=206.47	
MH22A	OPSD 701.010 (1200mm Dia.)	210.39		S.INV.=207.58	

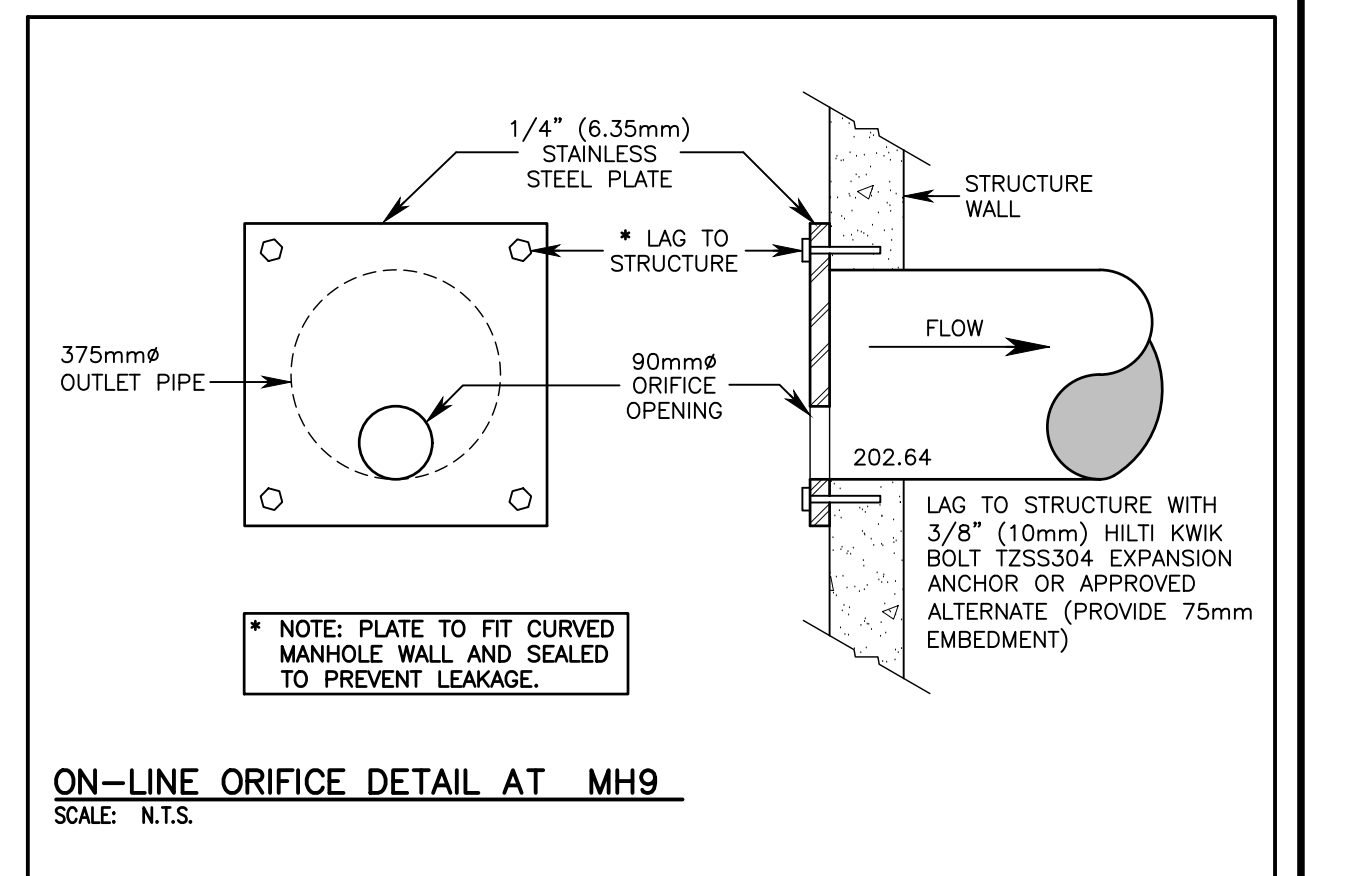
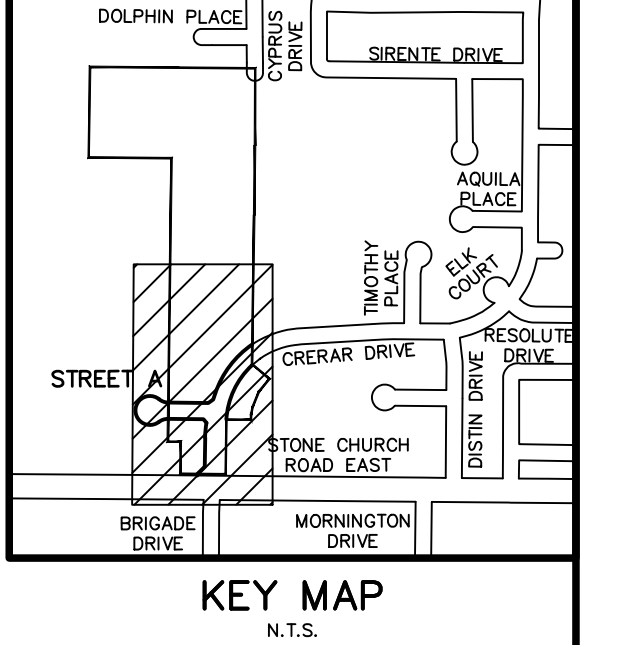
VALVE CHAMBER SCHEDULE			
STRUCTURE	STRUCTURE TYPE	TOP OF GRATE	NOTES
VC1	WM-232	208.33	
CV1	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	207.40	
CV2	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	208.33	
CV3	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	210.11	



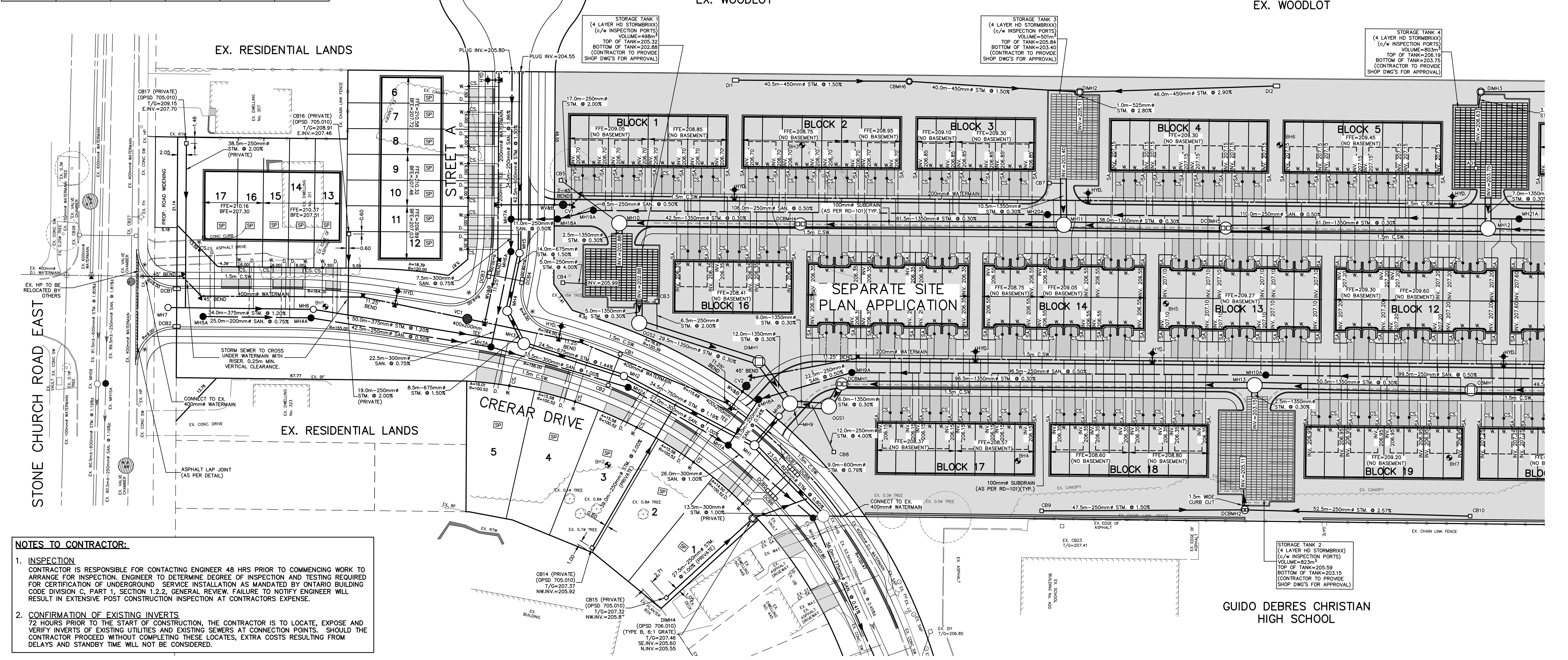
LEGEND:

- EXISTING STORM/SANITARY MANHOLE
- EXISTING SINGLE/DOUBLE CATCHBASIN
- EXISTING/PROPOSED WATER VALVE
- EXISTING/PROPOSED VALVE CHAMBER
- PROPOSED CHECK VALVE ASSEMBLY IN CHAMBER
- EXISTING/PROPOSED HYDRANT
- PROPOSED STORM/SANITARY MANHOLE
- PROPOSED SINGLE/DOUBLE CATCHBASIN
- PROPOSED CATCHBASIN & DITCH INLET MANHOLE/ TOTAL CAPTURE CATCHBASIN
- EXISTING/PROPOSED LIGHT STANDARD
- EXISTING/PROPOSED TRANSFORMER/VAULT
- PROPOSED 150mm ϕ SANITARY SERVICE
- PROPOSED 150mm ϕ STORM & SANITARY SERVICE
- PROPOSED 25mm ϕ WATER SERVICE c/w CURB STOP
- SUMP PUMP (AS PER DETAIL)
- SEWER CROSSING
- BOREHOLE
- ROAD RESTORATION
- ASPHALT LAP JOINT (AS PER DETAIL)
- DRIVEWAY & CURB DEPRESSION
- WHEELCHAIR RAMP TO BE CONSTRUCTED AS PER RD-124-03

- NOTE:**
- CONC. BARRIER CURB & GUTTER AS PER OPSD 600.040 ALONG CRERAR DRIVE & STREET A.
 - CONC. BARRIER CURB AS PER OPSD 600.110 WITHIN CONDO BLOCK.
 - 1.5m CONC. SIDEWALK AS OPSD 310.010.
 - PROPOSED DRIVEWAY APRONS AS PER RD-108.
 - EXISTING DRIVEWAY APRONS WITHIN ROW LIMITS ARE TO MATCH TO EXISTING CONDITION OR BETTER, AS PER RD-108 AND/OR RD-109.
 - ALL EXISTING SERVICE LATERALS ARE TO BE MAINTAINED TO EXISTING CONDITION OR BETTER. ANY RESTORATION AND/OR ADJUSTMENTS TO THE EXISTING SERVICE LATERALS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY OF HAMILTON. RESTORATION OF ANY DAMAGED EXISTING SERVICES SHALL BE COMPLETED AT ENTIRELY THE OWNER'S COSTS.



BENCHMARK NOTE:
CITY OF HAMILTON BENCHMARK No. 21-03.
WEST FACE NORTHWEST CORNER OF 89 STONE CHURCH ROAD ON THE SOUTHEAST CORNER OF STONE CHURCH ROAD AND WEST 5TH STREET. PLAQUE IS SET ON THE SECOND ROW OF BLOCKS UP FROM THE GROUND, 0.3m IN FROM THE CORNER, No. 929.
ELEVATION=222.73m

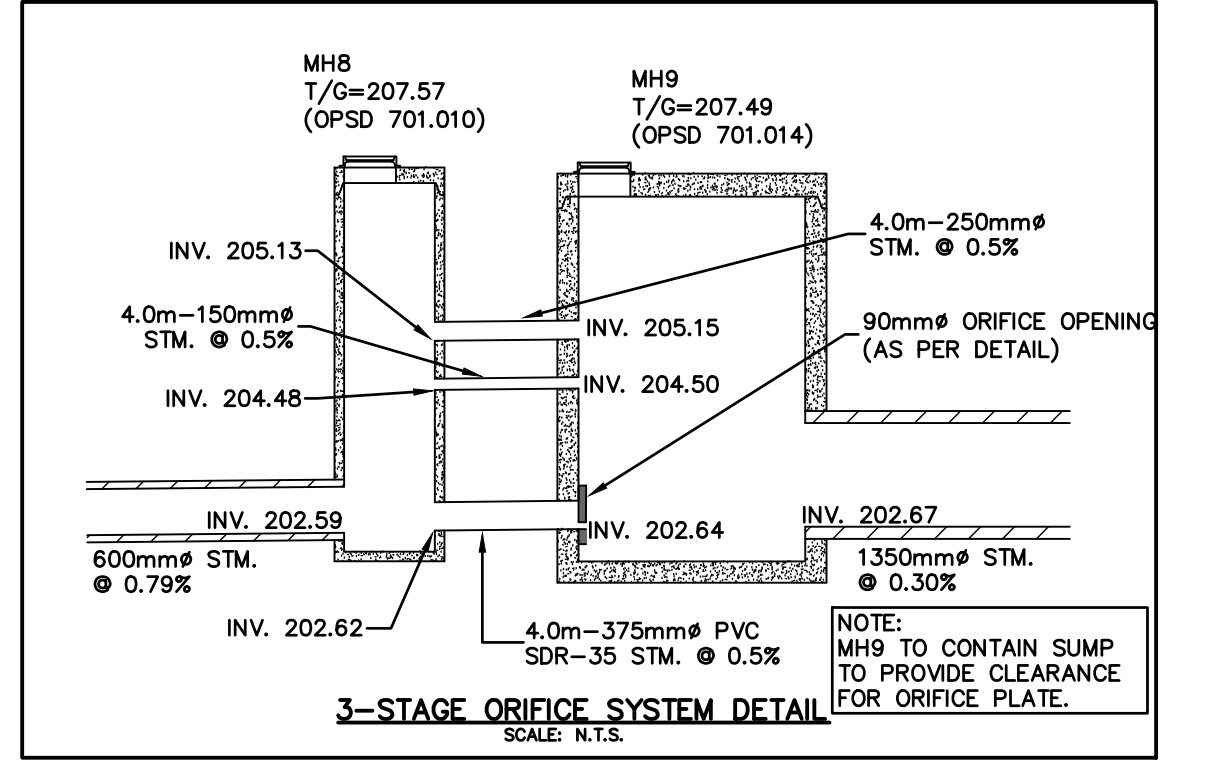


STORM SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	NOTES
CBM1	OPSD 701.013 (2400mm Dia.)	208.69	N.INV.=203.25	S.INV.=203.22	(G/W OPSD 702.040)
CBM2	OPSD 701.010 (1200mm Dia.)	208.56	N.INV.=204.96	S.INV.=204.93	
CBM3	OPSD 701.010 (1200mm Dia.)	210.50	NE.INV.=206.33	S.INV.=206.30	
CBM4	OPSD 701.010 (1200mm Dia.)	210.21	N.INV.=207.30	SW.INV.=206.82	
CBM5	OPSD 701.010 (1200mm Dia.)	208.38	N.INV.=207.47	S.INV.=207.44	
CBM6	OPSD 701.010 (1200mm Dia.)	208.55	S.INV.=205.80	N.INV.=205.77	
CBM7	OPSD 701.010 (1200mm Dia.)	210.70	N.INV.=207.60	S.INV.=207.55	
DCBM1	OPSD 701.013 (2400mm Dia.)	207.27	N.INV.=202.75	SE.INV.=202.72	
DCBM2	OPSD 701.011 (1500mm Dia.)	207.49	N.INV.=205.28	N.INV.=205.22	
DCBM3	OPSD 701.011 (1500mm Dia.)	209.66	NE.INV.=207.96	W.INV.=207.36	
DCBM4	OPSD 701.013 (2400mm Dia.)	207.60	N.INV.=203.08	S.INV.=203.05	
DCBM5	OPSD 701.013 (2400mm Dia.)	208.23	N.INV.=203.43	S.INV.=203.40	
DMH1	OPSD 706.030 (2400mm Dia.) (TYPE A, HORIZ. GRATE)	207.33	SW.INV.=202.74	E.INV.=202.71	
DMH2	OPSD 706.010 (1500mm Dia.) (TYPE A, 31 GRATE)	208.55	N.INV.=205.42	E.INV.=205.14	
DMH3	OPSD 706.010 (1500mm Dia.) (TYPE A, 31 GRATE)	208.75	N.INV.=207.38	SE.INV.=206.78	
DMH4	OPSD 706.010 (1500mm Dia.) (TYPE B, 61 GRATE)	207.46	SE.INV.=205.60	N.INV.=205.55	
DMH5	OPSD 706.010 (1500mm Dia.) (TYPE A, HORIZ. GRATE)	213.70		E.INV.=210.80	
DMH6	OPSD 706.010 (1500mm Dia.) (TYPE A, 31 GRATE)	208.55	N.INV.=206.39	W.INV.=206.09	
EX. MH9	OPSD 701.013 (2400mm Dia.)	207.50	SW.INV.=202.12	E.INV.=201.89	
MH1	OPSD 701.012 (1800mm Dia.)	207.47	SW.INV.=202.57	NE.INV.=202.30	(G/W OPSD 702.040)
MH2	OPSD 701.011 (1500mm Dia.)	207.92	SW.INV.=203.05	NE.INV.=202.98	(G/W OPSD 702.040)
MH3	OPSD 701.013 (2400mm Dia.)	208.22	SW.INV.=203.83	NE.INV.=203.40	
MH4	OPSD 701.012 (1800mm Dia.)	208.13	NW.INV.=203.73	E.INV.=203.67	
MH5	OPSD 701.011 (1500mm Dia.)	208.17	W.INV.=204.00	SE.INV.=203.94	
MH6	OPSD 701.010 (1200mm Dia.)	208.52	S.INV.=204.46	NE.INV.=204.43	
MH7	OPSD 701.010 (1200mm Dia.)	208.11		NW.INV.=204.87	
MH8	OPSD 701.010 (1200mm Dia.)	207.57	NW.INV.=202.62	SE.INV.=202.59	(G/W OPSD 702.040)

STORM SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	NOTES
MH9	OPSD 701.014 (3000mm Dia.)	207.49	N.INV.=202.87	SE.INV.=202.84	(G/W OPSD 702.040)
MH10	OPSD 701.014 (3000mm Dia.)	208.20	SW.INV.=203.04	E.INV.=202.89	(G/W OPSD 702.040)
MH11	OPSD 701.014 (3000mm Dia.)	208.37	W.INV.=203.37	S.INV.=203.28	(G/W OPSD 702.040)
MH12	OPSD 701.014 (3000mm Dia.)	208.88	NW.INV.=203.73	N.INV.=203.29	(G/W OPSD 702.040)
MH13	OPSD 701.014 (3000mm Dia.)	208.15	E.INV.=203.14	S.INV.=203.04	(G/W OPSD 702.040)
MH14	OPSD 701.014 (3000mm Dia.)	208.95	N.INV.=203.92	S.INV.=203.40	(G/W OPSD 702.040)
MH15	OPSD 701.010 (1200mm Dia.)	209.97	NW.INV.=205.58	S.INV.=205.49	(G/W OPSD 702.040)
MH16	OPSD 701.010 (1200mm Dia.)	210.27	N.INV.=206.10	SE.INV.=206.00	
MH17	OPSD 701.010 (1200mm Dia.)	211.00		S.INV.=207.83	
OGS1	HYDROFORM HS-10	207.44	NW.INV.=202.70	S.INV.=202.70	
OGS2	HYDROFORM HS-10	207.95	W.INV.=202.86	NE.INV.=202.83	(G/W OPSD 702.040)

CATCHBASIN TABLE				
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES OUT	
CB1	OPSD 705.010	207.87	SE.INV.=206.42	
CB2	OPSD 705.010	207.87	NW.INV.=206.42	
CB3	OPSD 705.010	207.75	E.INV.=206.30	
CB4	OPSD 705.010	208.15	NW.INV.=206.70	
CB5	OPSD 705.010	208.40	NW.INV.=206.38	
CB6	OPSD 705.010	209.19	S.INV.=207.74	
CB7	OPSD 705.010	208.15	NW.INV.=206.70	
CB8	OPSD 705.010	207.19	W.INV.=205.74	
CB9	OPSD 705.010	207.44	NW.INV.=205.99	
CB10	OPSD 705.010	208.46	S.INV.=207.01	
CB11	OPSD 705.010	209.40	S.INV.=207.95	
CB12	OPSD 705.010	209.90	NW.INV.=208.45	
CB13	OPSD 705.010	209.95	NE.INV.=208.50	
CB14	OPSD 705.010	207.37	NW.INV.=205.92	
CB15	OPSD 705.010	207.32	NW.INV.=205.87	
CB16	OPSD 705.010	208.91	E.INV.=207.46	
CB17	OPSD 705.010	209.15	S.INV.=207.70	
CB18	OPSD 705.010	209.85	S.INV.=208.40	
DCB1	OPSD 705.020	208.05	E.INV.=206.60	
DCB2	OPSD 705.020	208.05	W.INV.=206.60	
DCB3	OPSD 705.020	207.95	NE.INV.=206.50	
DCB4	OPSD 705.020	207.95	SW.INV.=206.50	
DCB5	OPSD 705.020	207.27	NW.INV.=205.82	
DCB6	OPSD 705.020	207.27	NW.INV.=205.82	
DCB7	OPSD 705.020	207.27	S.INV.=206.82	
DCB8	OPSD 705.020	207.27	SE.INV.=206.82	
DCB9	OPSD 705.020	208.66	SW.INV.=208.12	
D1	OPSD 705.040 (TYPE A, HORIZ. GRATE)	207.95	N.INV.=206.41	
D2	OPSD 705.040 (TYPE A, HORIZ. GRATE)	208.40	S.INV.=206.75	

SANITARY SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	
EX. MH9A	OPSD 701.010 (1200mm Dia.)	207.66	SW.INV.=203.48	E.INV.=203.43	
MH1A	OPSD 701.010 (1200mm Dia.)	207.52	SW.INV.=203.77	NE.INV.=203.74	
MH2A	OPSD 701.010 (1200mm Dia.)	207.85	SW.INV.=204.07	NE.INV.=204.04	
MH3A	OPSD 701.010 (1200mm Dia.)	208.25	SW.INV.=204.79	NE.INV.=204.40	
MH4A	OPSD 701.010 (1200mm Dia.)	208.47	S.INV.=205.03	NE.INV.=205.00	
MH5A	OPSD 701.010 (1200mm Dia.)	208.17		NW.INV.=205.22	
MH6A	OPSD 701.010 (1200mm Dia.)	208.17	W.INV.=205.05	SE.INV.=205.02	
MH7A	OPSD 701.010 (1200mm Dia.)	208.37	W.INV.=205.21	E.INV.=205.11	
MH8A	OPSD 701.010 (1200mm Dia.)	207.69	N.INV.=204.64	SE.INV.=204.55	
MH9A	OPSD 701.010 (1200mm Dia.)	207.40	N.INV.=204.81	S.INV.=204.75	
MH10A	OPSD 701.010 (1200mm Dia.)	208.25	NW.INV.=205.32	S.INV.=205.29	
MH11A	OPSD 701.010 (1200mm Dia.)	209.02	NW.INV.=205.85	S.INV.=205.82	
MH12A	OPSD 701.010 (1200mm Dia.)	209.95	NW.INV.=206.28	S.INV.=206.20	
MH13A	OPSD 701.010 (1200mm Dia.)	210.15	SW.INV.=206.38	SE.INV.=206.33	
MH14A	OPSD 701.010 (1200mm Dia.)	210.27	NW.INV.=206.49	E.INV.=206.40	
MH15A	OPSD 701.010 (1200mm Dia.)	210.43	E.INV.=206.77	S.INV.=206.68	
MH16A	OPSD 701.010 (1200mm Dia.)	208.84		W.INV.=207.00	
MH17A	OPSD 701.010 (1200mm Dia.)	208.49	NW.INV.=205.29	S.INV.=205.26	
MH18A	OPSD 701.010 (1200mm Dia.)	208.37	NW.INV.=205.36	S.INV.=205.33	
MH20A	OPSD 701.010 (1200mm Dia.)	208.38	NW.INV.=205.92	S.INV.=205.89	
MH21A	OPSD 701.010 (1200mm Dia.)	209.03	NW.INV.=206.50	S.INV.=206.47	
MH22A	OPSD 701.010 (1200mm Dia.)	210.39		S.INV.=207.58	

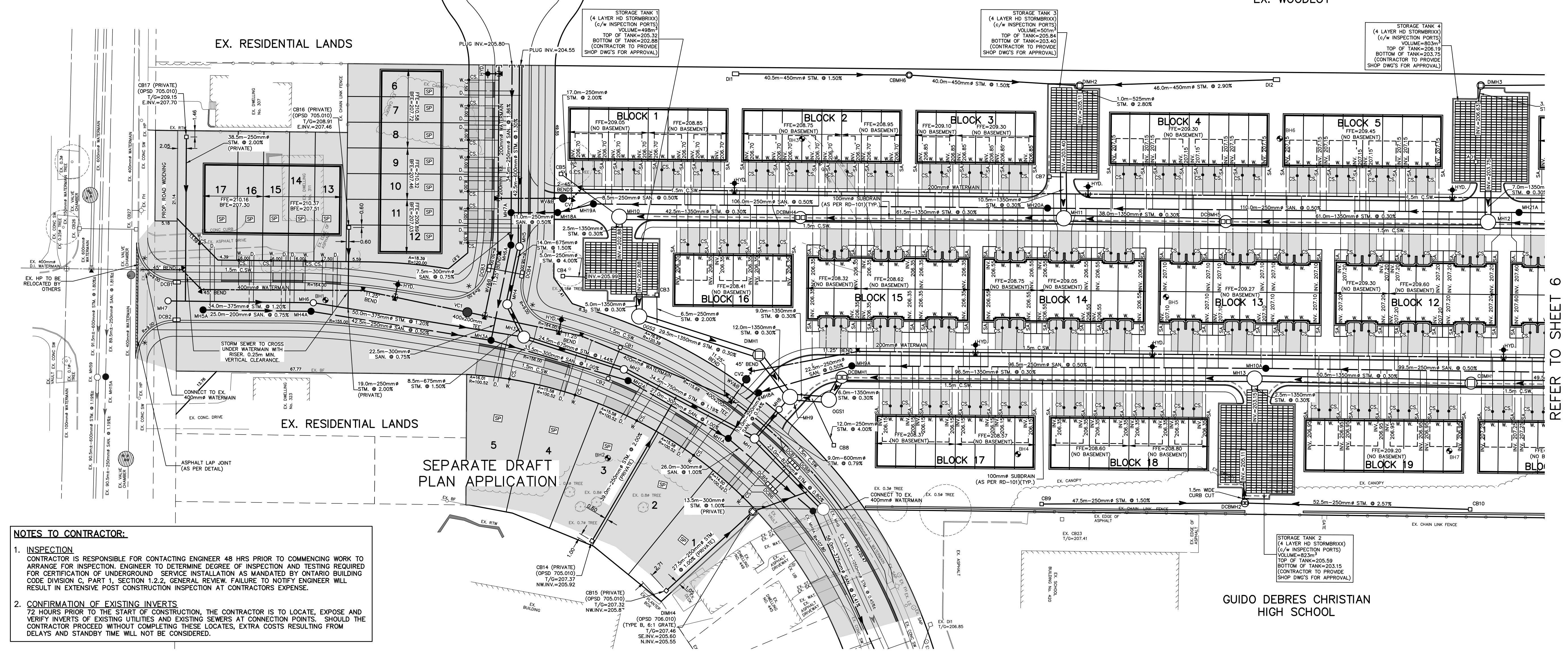
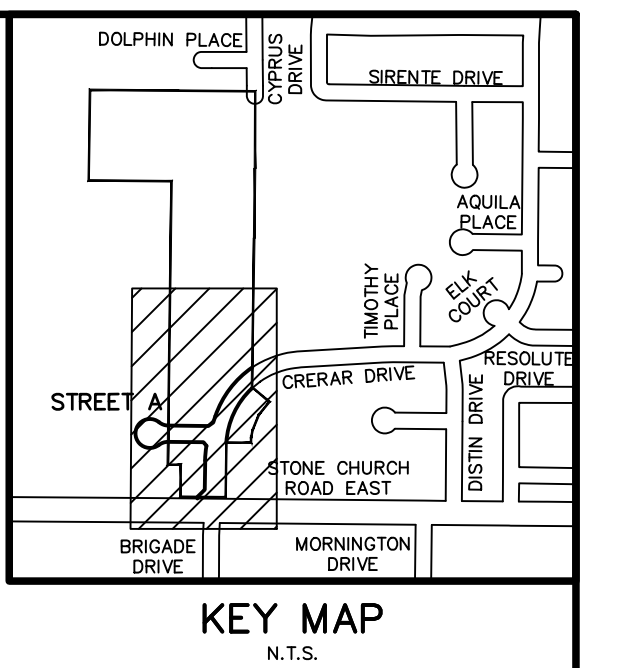
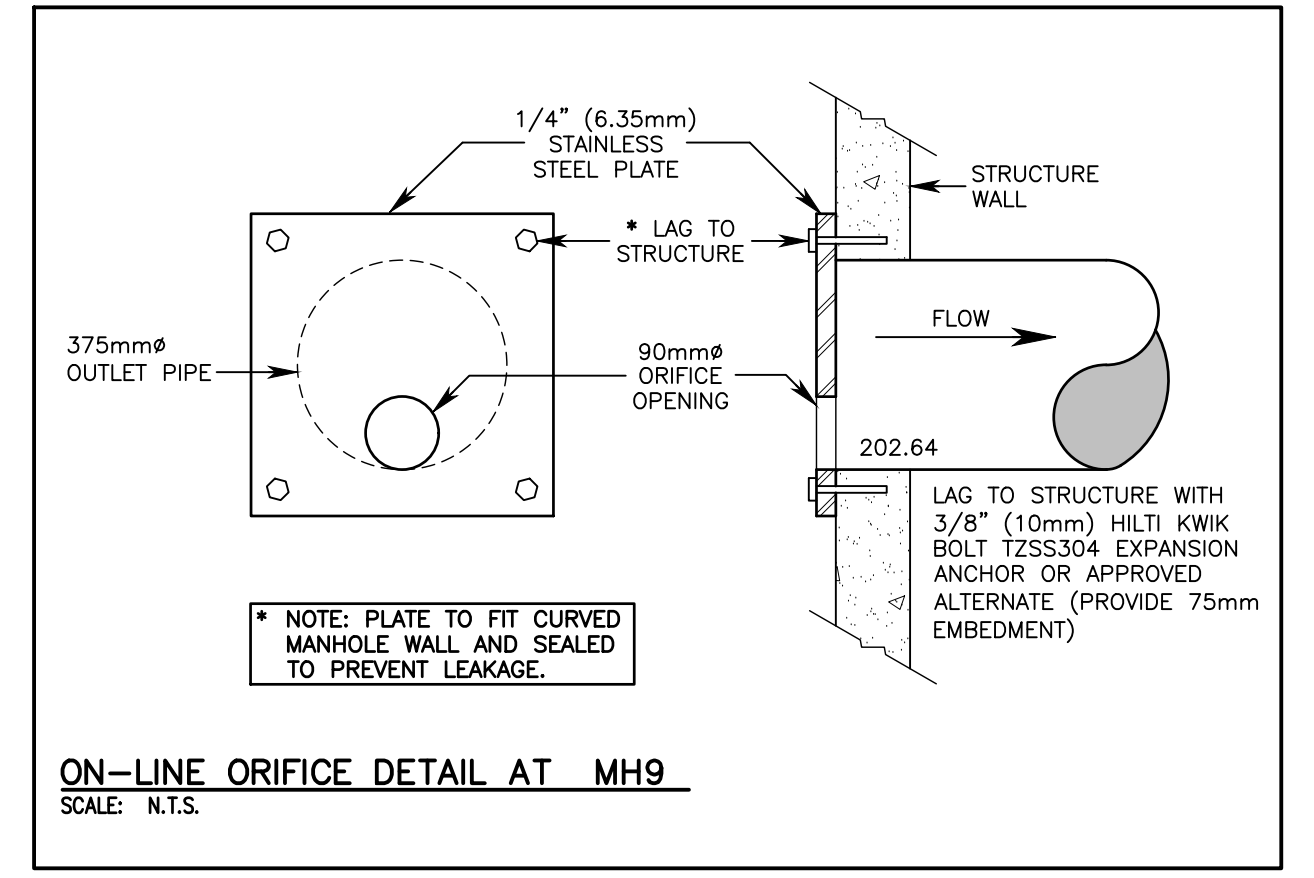


VALVE CHAMBER SCHEDULE		
STRUCTURE	STRUCTURE TYPE	TOP OF GRATE
VC1	MM-232	208.33
CV1	OPSD 1101.010 (1500mm)	207.40
m	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	208.33
CV3	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	210.11

- LEGEND:**
- EXISTING STORM/SANITARY MANHOLE
 - EXISTING SINGLE/DOUBLE CATCHBASIN
 - EXISTING/PROPOSED WATER VALVE
 - EXISTING/PROPOSED VALVE CHAMBER
 - PROPOSED CHECK VALVE ASSEMBLY IN CHAMBER
 - EXISTING/PROPOSED HYDRANT
 - PROPOSED STORM/SANITARY MANHOLE
 - PROPOSED SINGLE/DOUBLE CATCHBASIN
 - PROPOSED CATCHBASIN & DITCH INLET MANHOLE/ TOTAL CAPTURE CATCHBASIN
 - EXISTING/PROPOSED LIGHT STANDARD
 - EXISTING/PROPOSED TRANSFORMER/Vault
 - PROPOSED 150mm SANITARY SERVICE
 - PROPOSED 150mm STORM & SANITARY SERVICE
 - PROPOSED 25mm WATER SERVICE c/w CURB STOP
 - SUMP PUMP (AS PER DETAIL)
 - SEWER CROSSING
 - BOREHOLE
 - ROAD RESTORATION
 - ASPHALT LAP JOINT (AS PER DETAIL)
 - DRIVEWAY & CURB DEPRESSION
 - WHEELCHAIR RAMP TO BE CONSTRUCTED AS PER RD-124-03

BENCHMARK NOTE:
CITY OF HAMILTON BENCHMARK NO. 21-03.
WEST FACE, NORTHWEST CORNER OF 89 STONE CHURCH ROAD ON THE SOUTHEAST CORNER OF STONE CHURCH ROAD AND WEST 5TH STREET. PLAQUE IS SET ON THE SECOND ROW OF BLOCKS UP FROM THE GROUND, 0.3m IN FROM THE CORNER, No. 929. ELEVATION=222.73m

- NOTE:**
- CONC. BARRIER CURB & GUTTER AS PER OPSD 600.040 ALONG CREARER DRIVE & STREET A.
 - CONC. BARRIER CURB AS PER OPSD 600.110 WITHIN CONDO BLOCK.
 - 1.5m CONC. SIDEWALK AS PER OPSD 310.010.
 - PROPOSED DRIVEWAY APRONS AS PER RD-108.
 - EXISTING DRIVEWAY APRONS WITHIN ROW LIMITS ARE TO MATCH TO EXISTING CONDITION OR BETTER. AS PER RD-108 AND/OR RD-109.
 - ALL EXISTING SERVICE LATERALS ARE TO BE MAINTAINED TO EXISTING CONDITION OR BETTER. ANY RESTORATION AND/OR ADJUSTMENTS TO THE EXISTING SERVICE LATERALS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY OF HAMILTON. RESTORATION OF ANY DAMAGED EXISTING SERVICES SHALL BE COMPLETED AT ENTIRELY THE OWNER'S COSTS.



- NOTES TO CONTRACTOR:**
- INSPECTION**
CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
 - CONFIRMATION OF EXISTING INVERTS**
72 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO LOCATE, EXPOSE AND VERIFY INVERTS OF EXISTING UTILITIES AND EXISTING SEWERS AT CONNECTION POINTS. SHOULD THE CONTRACTOR PROCEED WITHOUT COMPLETING THESE LOCATIONS, EXTRA COSTS RESULTING FROM DELAYS AND STANDBY TIME WILL NOT BE CONSIDERED.

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

- NOTES TO CONTRACTOR:**
- CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING.
 - ANY INCONSISTENCIES AND OMISSIONS FOUND ON THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING THE WORK.
 - PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS AND REPORT ALL FINDINGS TO THE ENGINEER. ONCE CONSTRUCTION HAS COMMENCED, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS.
 - THE POSITIONS OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVER-GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWINGS, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
 - ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR REVISED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED.
 - OPERATION OF EXISTING WATERMAIN VALVES SHALL BE BY THE CITY OF HAMILTON STAFF ONLY.

DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE: 1:500

APPROVALS

S. LLEWELLYN & ASSOCIATES LIMITED
CONSULTING ENGINEERS

Tel: (905) 631-6978
Fax: (905) 631-8927
email: info@slan.ca

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME: DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES

GENERAL PLAN OF SERVICES (SHEET 2 OF 3)		
PROJECT No.	DRAWING No.	SHEET No.
19062	GPS-2	5

STORM SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	NOTES
CBM1	OPSD 701.013 (2400mm Dia.)	208.69	N.INV.=203.25	S.INV.=203.22	(c/w OPSD 702.040)
CBM2	OPSD 701.010 (1200mm Dia.)	209.56	N.INV.=204.96	S.INV.=204.93	
CBM3	OPSD 701.010 (1200mm Dia.)	210.50	NE.INV.=206.33	S.INV.=206.30	
CBM4	OPSD 701.010 (1200mm Dia.)	210.21	N.INV.=207.30	SW.INV.=206.82	
CBM5	OPSD 701.010 (1200mm Dia.)	209.38	N.INV.=207.47	S.INV.=207.44	
CBM6	OPSD 701.010 (1200mm Dia.)	208.55	S.INV.=205.80	N.INV.=205.77	
CBM7	OPSD 701.010 (1200mm Dia.)	210.70	N.INV.=207.60	S.INV.=207.55	
DCBM1	OPSD 701.013 (2400mm Dia.)	207.27	N.INV.=202.75	SE.INV.=202.72	
DCBM2	OPSD 701.011 (1500mm Dia.)	207.49	N.INV.=205.28	N.INV.=205.66	
DCBM3	OPSD 701.011 (1500mm Dia.)	209.66	NE.INV.=207.96	W.INV.=207.36	
DCBM4	OPSD 701.013 (2400mm Dia.)	207.60	N.INV.=203.08	S.INV.=203.05	
DCBM5	OPSD 701.013 (2400mm Dia.)	208.23	N.INV.=203.43	S.INV.=203.40	
DMH1	OPSD 706.030 (2400mm Dia.) (TYPE A, HORIZ. GRATE)	207.33	SW.INV.=202.74	E.INV.=202.71	
DMH2	OPSD 706.010 (1500mm Dia.) (TYPE A, 3:1 GRATE)	208.55	N.INV.=205.42	S.INV.=205.17	
DMH3	OPSD 706.010 (1500mm Dia.) (TYPE A, 3:1 GRATE)	208.75	N.INV.=207.36	SE.INV.=206.78	
DMH4	OPSD 706.010 (1500mm Dia.) (TYPE B, 6:1 GRATE)	207.46	SE.INV.=205.60	N.INV.=205.55	
DMH5	OPSD 706.010 (1500mm Dia.) (TYPE A, HORIZ. GRATE)	213.70		E.INV.=210.80	
DMH6	OPSD 706.010 (1500mm Dia.) (TYPE A, 3:1 GRATE)	208.55	N.INV.=206.39	W.INV.=206.09	
EX. MH9	OPSD 701.013 (2400mm Dia.)	207.50	SW.INV.=202.12	E.INV.=201.89	
MH1	OPSD 701.012 (1800mm Dia.)	207.47	SW.INV.=202.57	NE.INV.=202.30	(c/w OPSD 702.040)
MH2	OPSD 701.011 (1500mm Dia.)	207.92	SW.INV.=203.05	NE.INV.=202.98	(c/w OPSD 702.040)
MH3	OPSD 701.013 (2400mm Dia.)	208.22	SW.INV.=203.83	NE.INV.=203.40	
MH4	OPSD 701.012 (1800mm Dia.)	208.13	NW.INV.=203.73	E.INV.=203.67	
MH5	OPSD 701.011 (1500mm Dia.)	208.17	W.INV.=204.00	SE.INV.=203.94	
MH6	OPSD 701.010 (1200mm Dia.)	208.52	S.INV.=204.46	NE.INV.=204.43	
MH7	OPSD 701.010 (1200mm Dia.)	208.11		N.INV.=204.87	
MH8	OPSD 701.010 (1200mm Dia.)	207.57	NW.INV.=202.62	SE.INV.=202.59	(c/w OPSD 702.040)

STORM SEWER TABLE					
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT	NOTES
MH9	OPSD 701.014 (3000mm Dia.)	207.49	N.INV.=202.87	SE.INV.=202.64	(c/w OPSD 702.040)
MH10	OPSD 701.014 (3000mm Dia.)	208.20	SW.INV.=206.04	E.INV.=202.89	(c/w OPSD 702.040)
MH11	OPSD 701.014 (3000mm Dia.)	208.37	W.INV.=203.37	S.INV.=203.28	(c/w OPSD 702.040)
MH12	OPSD 701.014 (3000mm Dia.)	208.88	W.INV.=203.73	N.INV.=203.61	(c/w OPSD 702.040)
MH13	OPSD 701.014 (3000mm Dia.)	208.15	E.INV.=203.14	S.INV.=203.04	(c/w OPSD 702.040)
MH14	OPSD 701.014 (3000mm Dia.)	208.95	N.INV.=203.92	S.INV.=203.40	(c/w OPSD 702.040)
MH15	OPSD 701.010 (1200mm Dia.)	209.97	NW.INV.=205.58	S.INV.=205.49	(c/w OPSD 702.040)
MH16	OPSD 701.010 (1200mm Dia.)	210.27	N.INV.=206.10	SE.INV.=206.00	
MH17	OPSD 701.010 (1200mm Dia.)	211.00		SE.INV.=207.83	
OGS1	HYDROSTORM HS-10	207.44	NW.INV.=202.70	S.INV.=202.70	
OGS2	HYDROSTORM HS-10	207.95	W.INV.=202.86	NE.INV.=202.83	(c/w OPSD 702.040)

NOTES TO CONTRACTOR:

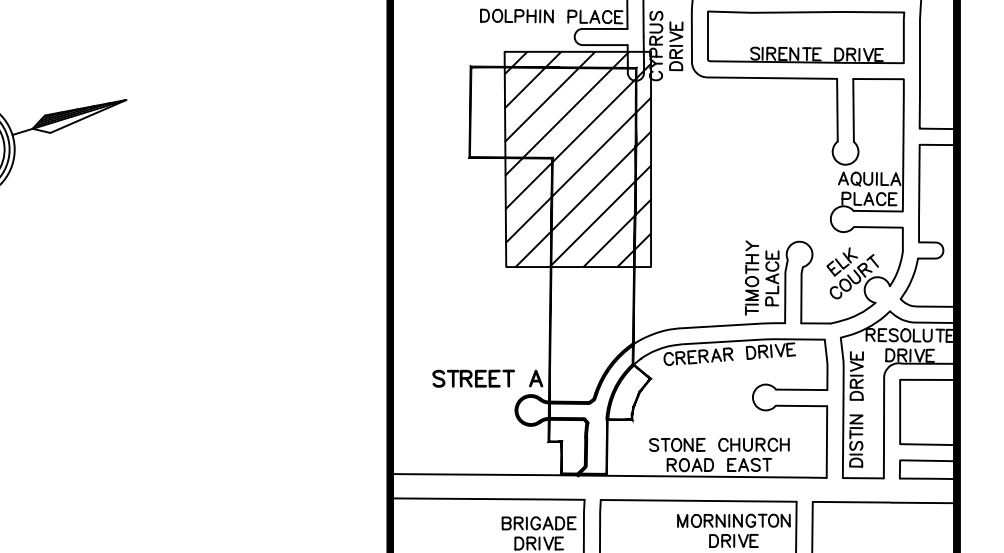
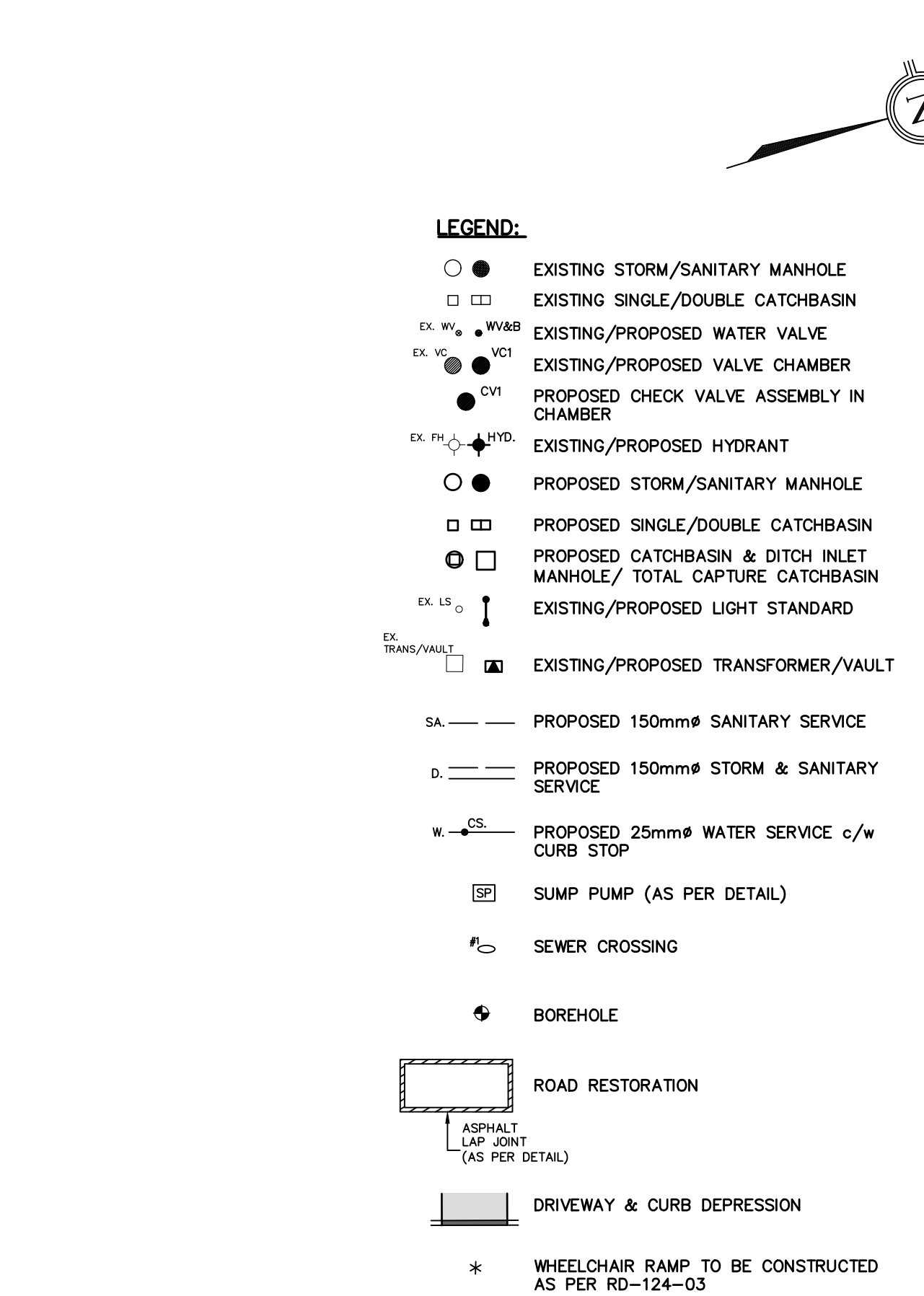
1. **INSPECTION**
CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTOR'S EXPENSE.

2. **CONFIRMATION OF EXISTING INVERTS**
72 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO LOCATE, EXPOSE AND VERIFY INVERTS OF EXISTING UTILITIES AND EXISTING SEWERS AT CONNECTION POINTS. SHOULD THE CONTRACTOR PROCEED WITHOUT COMPLETING THESE LOCATES, EXTRA COSTS RESULTING FROM DELAYS AND STANDBY TIME WILL NOT BE CONSIDERED.

CATCHBASIN TABLE				
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES OUT	
CB1	OPSD 705.010	207.87	SE.INV.=206.42	
CB2	OPSD 705.010	207.87	NW.INV.=206.42	
CB3	OPSD 705.010	207.75	E.INV.=206.30	
CB4	OPSD 705.010	208.15	NW.INV.=206.70	
CB5	OPSD 705.010	208.40	NE.INV.=206.36	
CB6	OPSD 705.010	209.19	S.INV.=207.74	
CB7	OPSD 705.010	208.15	NW.INV.=206.70	
CB8	OPSD 705.010	207.19	W.INV.=205.74	
CB9	OPSD 705.010	207.44	NW.INV.=205.99	
CB10	OPSD 705.010	208.46	S.INV.=207.01	
CB11	OPSD 705.010	208.40	S.INV.=207.95	
CB12	OPSD 705.010	209.90	NW.INV.=208.45	
CB13	OPSD 705.010	209.95	NE.INV.=208.50	
CB14	OPSD 705.010	207.37	NW.INV.=205.92	
CB15	OPSD 705.010	207.32	SW.INV.=205.60	
CB16	OPSD 705.010	208.91	E.INV.=207.46	
CB17	OPSD 705.010	208.15	E.INV.=207.70	
CB18	OPSD 705.010	209.85	S.INV.=208.40	
DCB1	OPSD 705.020	208.05	E.INV.=206.60	
DCB2	OPSD 705.020	208.05	W.INV.=206.60	
DCB3	OPSD 705.020	207.95	NE.INV.=206.50	
DCB4	OPSD 705.020	207.95	SW.INV.=206.50	
DCB5	OPSD 705.020	207.27	NW.INV.=205.82	
DCB6	OPSD 705.020	207.27	SW.INV.=205.82	
DCB7	OPSD 705.020	207.27	SE.INV.=205.82	
DCB8	OPSD 705.020	207.27	SE.INV.=205.82	
DCB9	OPSD 705.020	208.66	SW.INV.=208.12	
D1	OPSD 705.040 (TYPE A, HORIZ. GRATE)	207.95	N.INV.=206.41	
D2	OPSD 705.040 (TYPE A, HORIZ. GRATE)	208.40	S.INV.=206.75	

VALVE CHAMBER SCHEDULE		
STRUCTURE	STRUCTURE TYPE	TOP OF GRATE
VC1	WM-232	208.33
CV1	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	207.40
CV2	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	208.33
CV3	OPSD 1101.010 (1500mm) c/w 200mm PRATT CHECK VALVE, SERIES 9001	210.11

SANITARY SEWER TABLE				
STRUCTURE NAME	STRUCTURE TYPE	TOP OF GRATE	PIPES IN	PIPES OUT
EX. MHA	OPSD 701.010 (1200mm Dia.)	207.66	SW.INV.=203.48	E.INV.=203.43
MHA	OPSD 701.010 (1200mm Dia.)	207.52	SW.INV.=203.77	NE.INV.=203.74
MHA2	OPSD 701.010 (1200mm Dia.)	207.85	SW.INV.=204.07	NE.INV.=204.04
MHA3	OPSD 701.010 (1200mm Dia.)	208.25	SW.INV.=204.79	NE.INV.=204.40
MHA4	OPSD 701.010 (1200mm Dia.)	208.47	S.INV.=205.03	NE.INV.=205.00
MHA5	OPSD 701.010 (1200mm Dia.)	208.17		NW.INV.=205.22
MHA6	OPSD 701.010 (1200mm Dia.)	208.17	W.INV.=205.05	SE.INV.=205.02
MHA7	OPSD 701.010 (1200mm Dia.)	208.37	NW.INV.=205.21	E.INV.=205.11
MHA8	OPSD 701.010 (1200mm Dia.)	207.69	NW.INV.=204.64	SE.INV.=204.55
MHA9	OPSD 701.010 (1200mm Dia.)	207.40	N.INV.=204.81	S.INV.=204.75
MH10A	OPSD 701.010 (1200mm Dia.)	208.25	NW.INV.=205.32	S.INV.=205.29
MH11A	OPSD 701.010 (1200mm Dia.)	209.02	NW.INV.=205.85	S.INV.=205.82
MH12A	OPSD 701.010 (1200mm Dia.)	209.95	NW.INV.=206.28	SE.INV.=206.20
MH13A	OPSD 701.010 (1200mm Dia.)	210.15	W.INV.=206.36	SE.INV.=206.33
MH14A	OPSD 701.010 (1200mm Dia.)	210.27	NW.INV.=206.49	E.INV.=206.40
MH15A	OPSD 701.010 (1200mm Dia.)	210.43	E.INV.=206.77	S.INV.=206.68
MH16A	OPSD 701.010 (1200mm Dia.)	208.84		W.INV.=207.00
MH17A	OPSD 701.010 (1200mm Dia.)	211.10		S.INV.=207.71
MH18A	OPSD 701.010 (1200mm Dia.)	208.49	NW.INV.=205.29	S.INV.=205.26
MH19A	OPSD 701.010 (1200mm Dia.)	208.37	NW.INV.=205.36	S.INV.=205.33
MH20A	OPSD 701.010 (1200mm Dia.)	208.38	NW.INV.=205.92	S.INV.=205.89
MH21A	OPSD 701.010 (1200mm Dia.)	209.03	NW.INV.=206.50	S.INV.=206.47
MH22A	OPSD 701.010 (1200mm Dia.)	210.39		S.INV.=207.58



- NOTE:**
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BENCHMARK NOTE:
CITY OF HAMILTON BENCHMARK NO. 21-03. WEST FACE, NORTHWEST CORNER OF 89 STONE CHURCH ROAD ON THE SOUTHEAST CORNER OF STONE CHURCH ROAD AND WEST 5TH STREET. PLAQUE IS SET ON THE SECOND ROW OF THE BLOCKS UP FROM THE GROUND, 0.3m IN FROM THE CORNER, NO. 929. ELEVATION=222.73m

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

NOTES TO CONTRACTOR:

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- OPERATION OF EXISTING WATERMAIN VALVES SHALL BE BY THE CITY OF HAMILTON STAFF ONLY.

DESIGN CD CHK'D SL DATE
DRAWN CD CHK'D NOV. 2020

SCALE: 1:500

APPROVALS

STAMP: S. LLEWELLYN & ASSOCIATES LIMITED CONSULTING ENGINEERS, Aug 13/2021

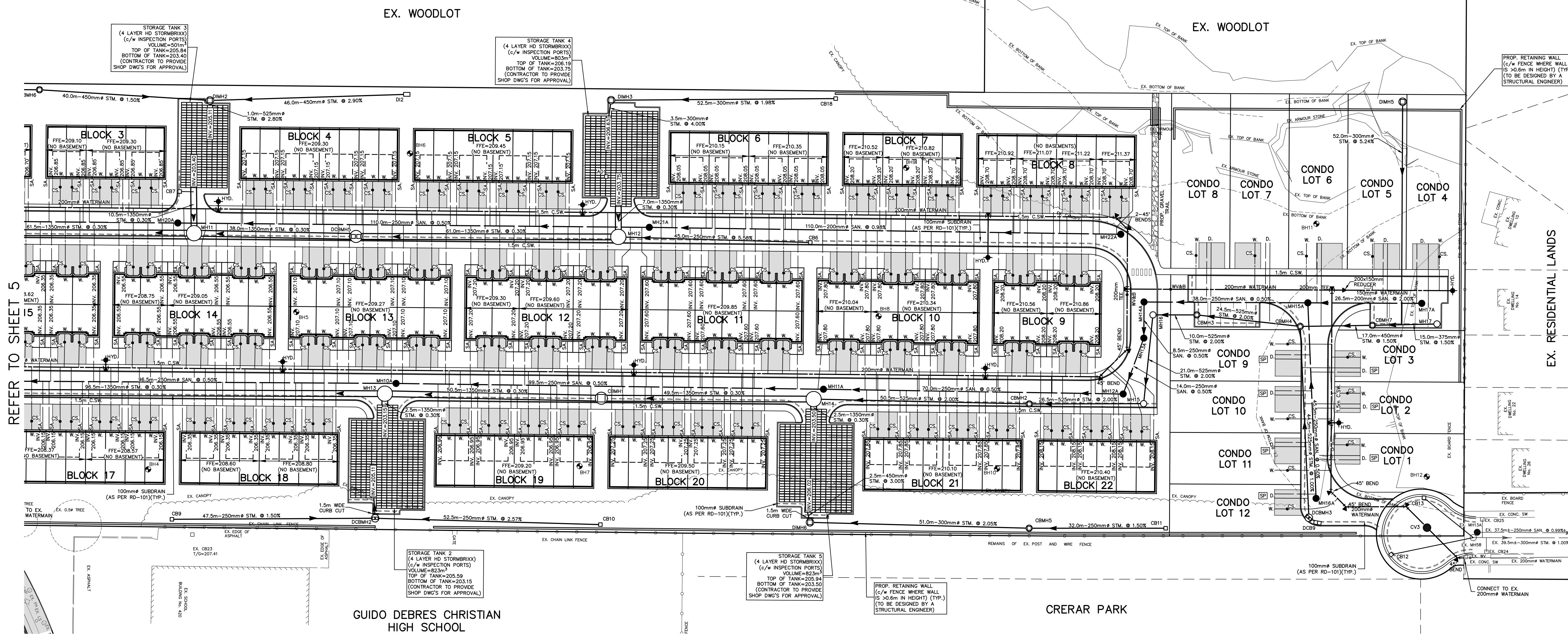
S. LLEWELLYN & ASSOCIATES LIMITED CONSULTING ENGINEERS
Tel: (905) 631-6978
Fax: (905) 631-8927
email: info@sla.on.ca
3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME: DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES

TITLE: GENERAL PLAN OF SERVICES (SHEET 3 OF 3)

PROJECT No. 19062 DRAWING No. GPS-3 SHEET No. 6



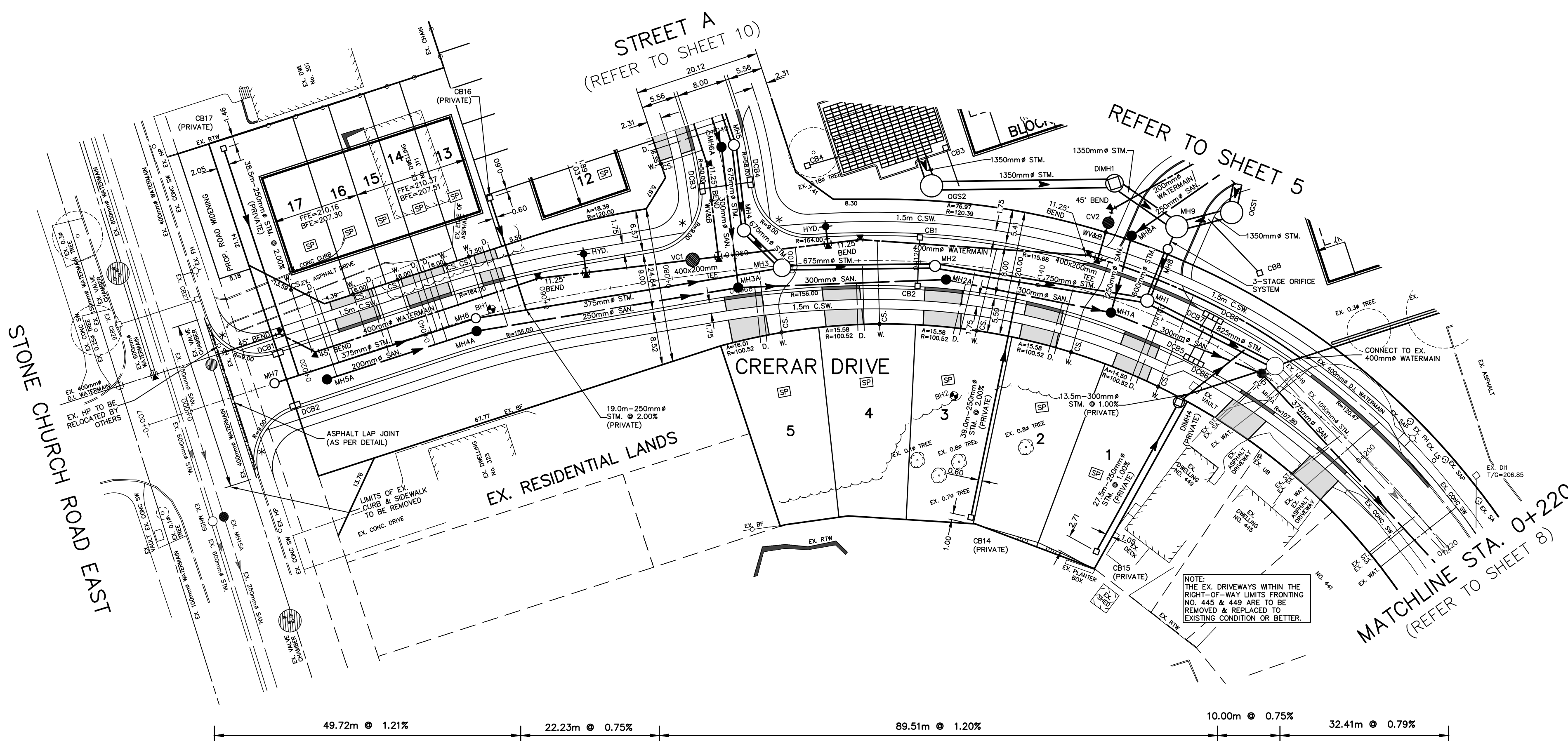
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- CONFIRMATION OF EXISTING INVERTS**
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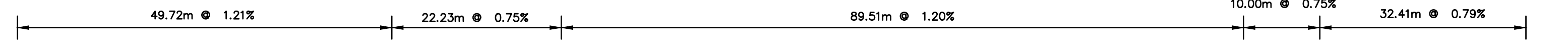
NOTE:

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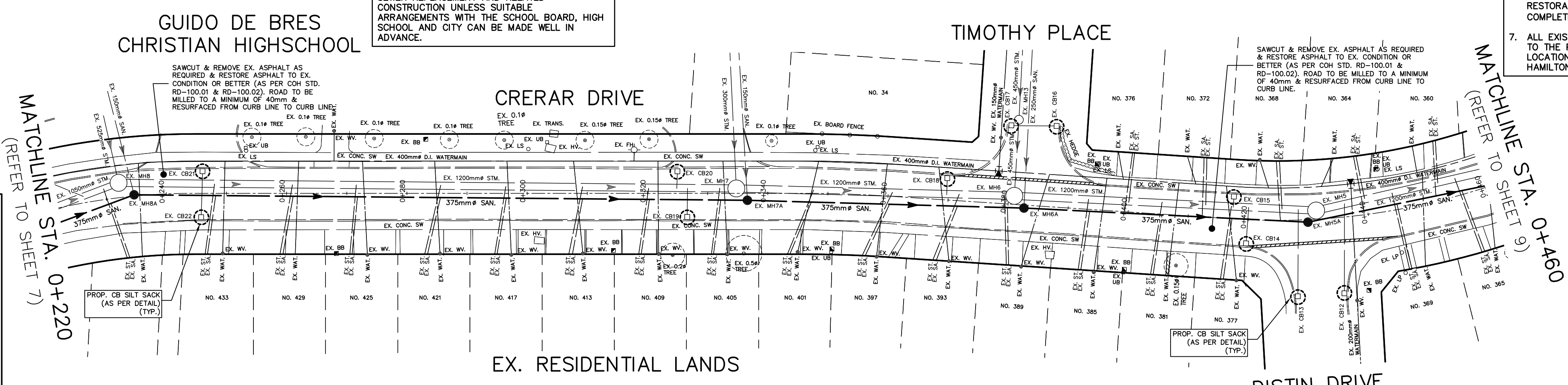
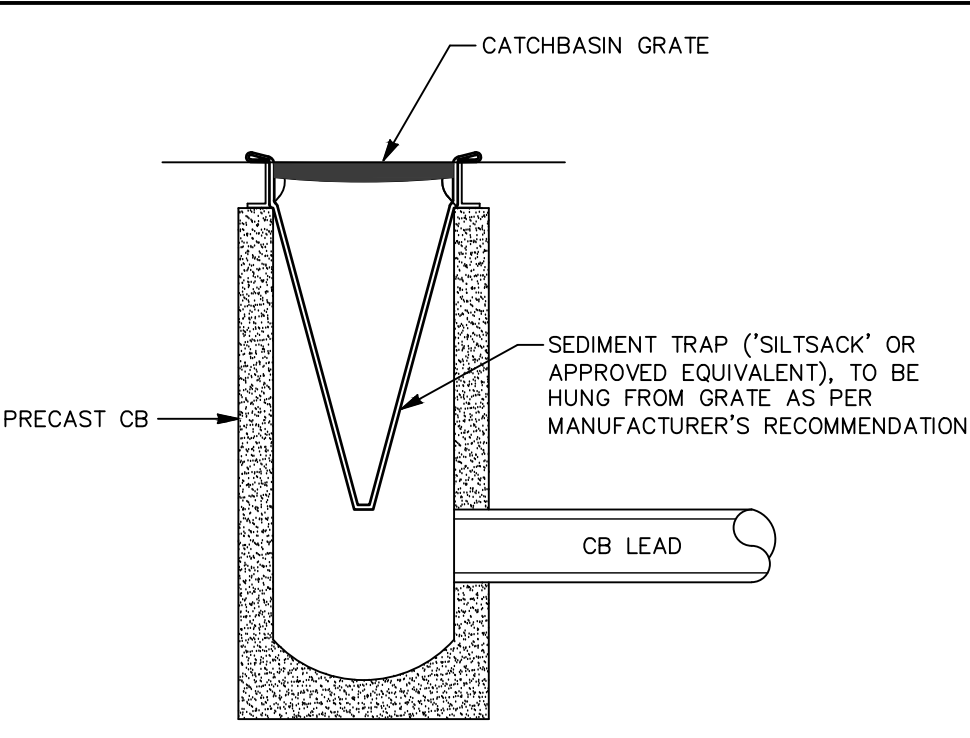
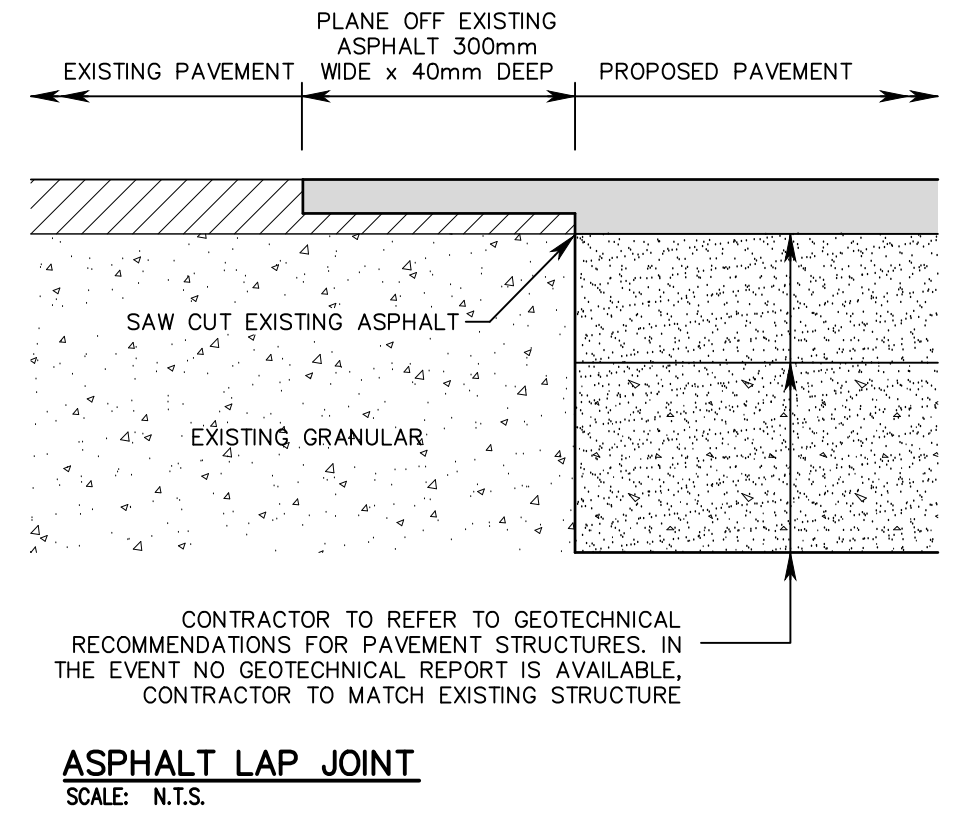


- LEGEND:**
- EXISTING STORM/SANITARY MANHOLE
 - EXISTING SINGLE/DOUBLE CATCHBASIN
 - EX. W.V. EX. V.C.I. EX. P.H. EX. HYD.
 - EXISTING/PROPOSED WATER VALVE
 - EXISTING/PROPOSED VALVE CHAMBER
 - PROPOSED CHECK VALVE ASSEMBLY IN CHAMBER
 - EXISTING/PROPOSED HYDRANT
 - PROPOSED STORM/SANITARY MANHOLE
 - PROPOSED SINGLE/DOUBLE CATCHBASIN
 - PROPOSED CATCHBASIN & DITCH INLET MANHOLE/ TOTAL CAPTURE CATCHBASIN
 - EX. L.S. ○ EXISTING/PROPOSED LIGHT STANDARD
 - EX. TRANS/Vault
 - EXISTING/PROPOSED TRANSFORMER/Vault
 - SA — PROPOSED 150mm# SANITARY SERVICE
 - D — PROPOSED 150mm# STORM & SANITARY SERVICE
 - W — CS — PROPOSED 25mm# WATER SERVICE c/w CURB STOP
 - SP — SUMP PUMP (AS PER DETAIL)
 - ⊕ — SEWER CROSSING
 - ⊕ — BOREHOLE
 - ▭ ROAD RESTORATION
 - ▭ ASPHALT LAP JOINT (AS PER DETAIL)
 - ▭ DRIVEWAY & CURB DEPRESSION
- * WHEELCHAIR RAMP TO BE CONSTRUCTED AS PER RD-124-03



CHAINAGE	SANITARY SEWER	STORM SEWER	PROP. C OF ROAD GRADE
0+000 PW 0+005.3			208.03
0+020	205.22#E 25.0m-200mm# PVC SDR 35 SAN. @ 0.75% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	204.87#N 34.0m-375mm# PVC SDR 35 STM. @ 1.20% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	208.02
0+040	205.03#E 25.0m-200mm# PVC SDR 35 SAN. @ 0.75% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	204.45#E 204.45#E 204.45#E	208.18
0+060	205.00#E 42.5m-250mm# PVC SDR 35 SAN. @ 1.00% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	204.82#E 50.0m-375mm# PVC SDR 35 STM. @ 1.20% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	208.43
0+080	204.79#W 204.85#W 204.85#W 204.40#E	203.83#SW 203.54#W 203.40#E	208.45
0+100	204.07#SW 33.5m-300mm# PVC SDR 35 SAN. @ 1.00% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	204.38#SW 24.5m-675mm# CONC. STM. @ 1.44% CSA A257.2 CL 100-D BEDDING PER OPSD 802.033, CLASS B SELECT NATIVE BACKFILL	208.19
0+120	204.07#SW 27.0m-300mm# PVC SDR 35 SAN. @ 1.00% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	203.98#SW 34.5m-750mm# CONC. STM. @ 1.19% CSA A257.2 CL 100-D BEDDING PER OPSD 802.033, CLASS B SELECT NATIVE BACKFILL	207.95
0+140	203.37#SW 204.48#W 203.74#E	203.92#SW 203.30#E	207.71
0+160	203.48#SW 26.0m-300mm# PVC SDR 35 SAN. @ 1.00% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	203.30#E 23.0m-825mm# CONC. STM. @ 0.80% CSA A257.2 CL 100-D BEDDING PER OPSD 802.033, CLASS B SELECT NATIVE BACKFILL	207.47
0+180	203.48#SW 56.0m-375mm# PVC SDR 35 SAN. @ 0.41% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	202.12#SW 201.89#E	207.38
0+200			207.45
0+220			207.43

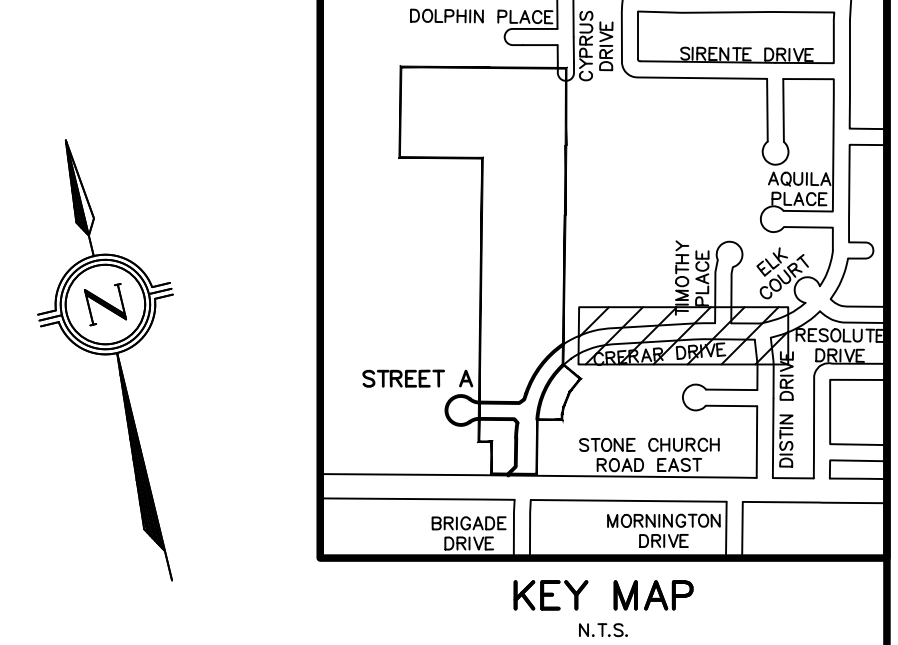
1.	AUG/21	CD	RE-ZONING COMMENTS
NO.	DATE	BY	REVISIONS
<p>NOTES TO CONTRACTOR:</p> <ol style="list-style-type: none"> CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING. ANY INCONSISTENCIES AND OMISSIONS FOUND ON THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING THE WORK. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS AND REPORT ALL FINDINGS TO THE ENGINEER. ONCE CONSTRUCTION HAS COMMENCED, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS. THE POSITIONS OF POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVER-GROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWING, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR REVISED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED. OPERATION OF EXISTING WATERMAIN VALVES SHALL BE BY THE CITY OF HAMILTON STAFF ONLY. 			
DESIGN	CD	CHK'D	SL
DATE	NOV. 2020		
DRAWN	CD	CHK'D	
SCALE	<p>HORIZ. 1:500 VERT. 1:100</p>		
<p>APPROVALS</p>			
<p>S. LLEWELLYN & ASSOCIATES LIMITED CONSULTING ENGINEERS</p> <p>3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8</p> <p>Tel: (905) 631-6978 Fax: (905) 631-8927 email: info@slae.on.ca</p>			
<p>THE CITY OF HAMILTON</p>			
PROJECT NAME			
<p>DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES</p>			
TITLE			
<p>CRERAR DRIVE PLAN & PROFILE STA. -0+007 TO 0+220</p>			
PROJECT No.	19062	DRAWING No.	CRERAR-1
SHEET No.	7		



NOTES TO CONTRACTOR:

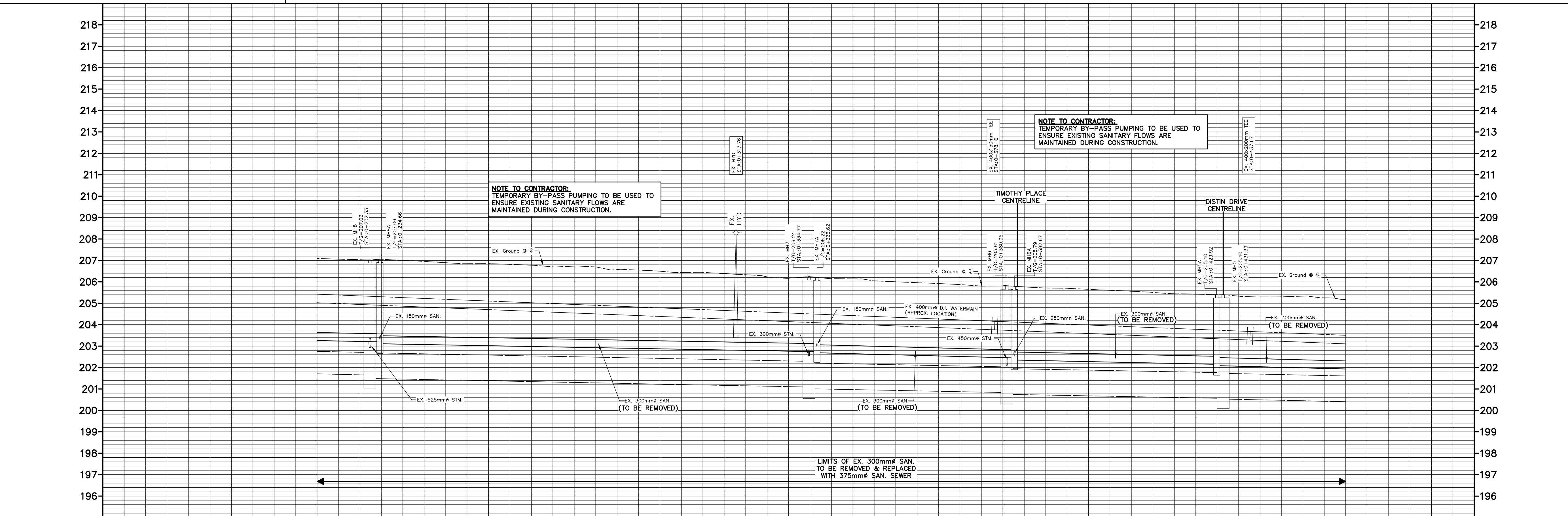
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- LEGEND:**
- EXISTING STORM/SANITARY MANHOLE
 - EXISTING SINGLE/DOUBLE CATCHBASIN
 - EXISTING WATER VALVE
 - EXISTING VALVE CHAMBER
 - EXISTING HYDRANT
 - EXISTING LIGHT STANDARD
 - EXISTING TRANSFORMER/VAULT
 - EXISTING SANITARY SERVICE
 - EXISTING STORM SERVICE
 - EXISTING WATER SERVICE
 - EXISTING BELL/UTILITY BOX
 - BOREHOLE
 - ROAD RESTORATION
 - ASPHALT LAP JOINT (AS PER DETAIL)

BENCHMARK NOTE:
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PROP. ϕ OF ROAD GRADE	PROP. ϕ OF ROAD GRADE
207.01	205.17
206.85	205.30
206.74	205.45
206.50	205.30
206.33	205.17
206.15	205.00
205.96	204.85
205.81	204.70
205.65	204.55
205.45	204.40
205.30	204.25
205.17	204.10

STORM SEWER	STORM SEWER
EX. 53.5m ϕ -1050mm ϕ STM. @ 0.45%	EX. 38.5m ϕ -1200mm ϕ STM. @ 0.445%
EX. 102.5m ϕ -1200mm ϕ STM. @ 0.39%	
EX. 46.0m ϕ -1200mm ϕ STM. @ 0.39%	
EX. 50.0m ϕ -1200mm ϕ STM. @ 0.38%	

SANITARY SEWER	SANITARY SEWER
56.0m-375mm ϕ PVC SDR 35 SAN. @ 0.41% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	40.5m-375mm ϕ PVC SDR 35 SAN. @ 0.52% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL
102.0m-375mm ϕ PVC SDR 35 SAN. @ 0.36% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	47.5m-375mm ϕ PVC SDR 35 SAN. @ 0.52% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL

CHAINAGE	CHAINAGE
0+220	0+460

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE
 HORIZ. 1:500
 VERT. 1:100

APPROVALS

STAMP
 PROFESSIONAL ENGINEER
 S. LLEWELLYN
 2718880
 Aug. 13/2021
 PROVINCE OF ONTARIO

S. LLEWELLYN & ASSOCIATES LIMITED
 CONSULTING ENGINEERS
 Tel. (905) 631-6978
 Fax (905) 631-8927
 email: info@sla.on.ca
 3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME	DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES		
TITLE	CRERAR DRIVE PLAN & PROFILE STA. 0+220 TO 0+460		
PROJECT No.	DRAWING No.	SHEET No.	
19062	CRERAR-2	8	

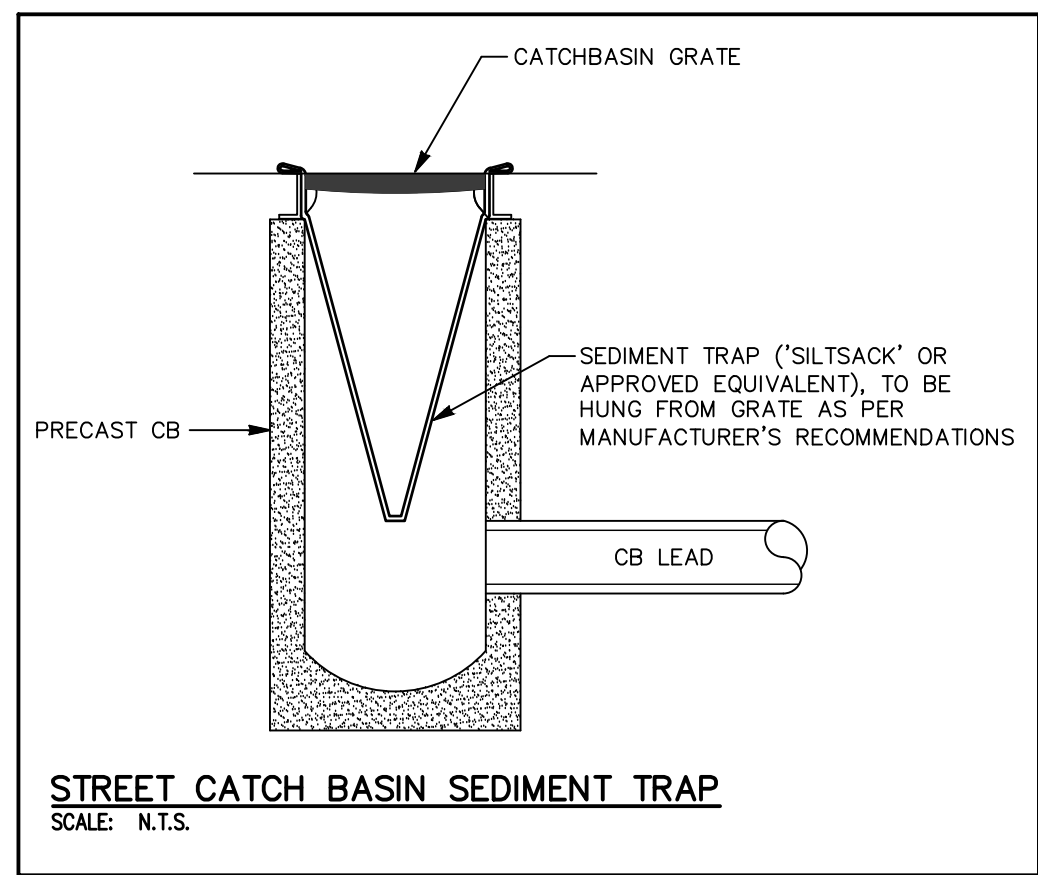
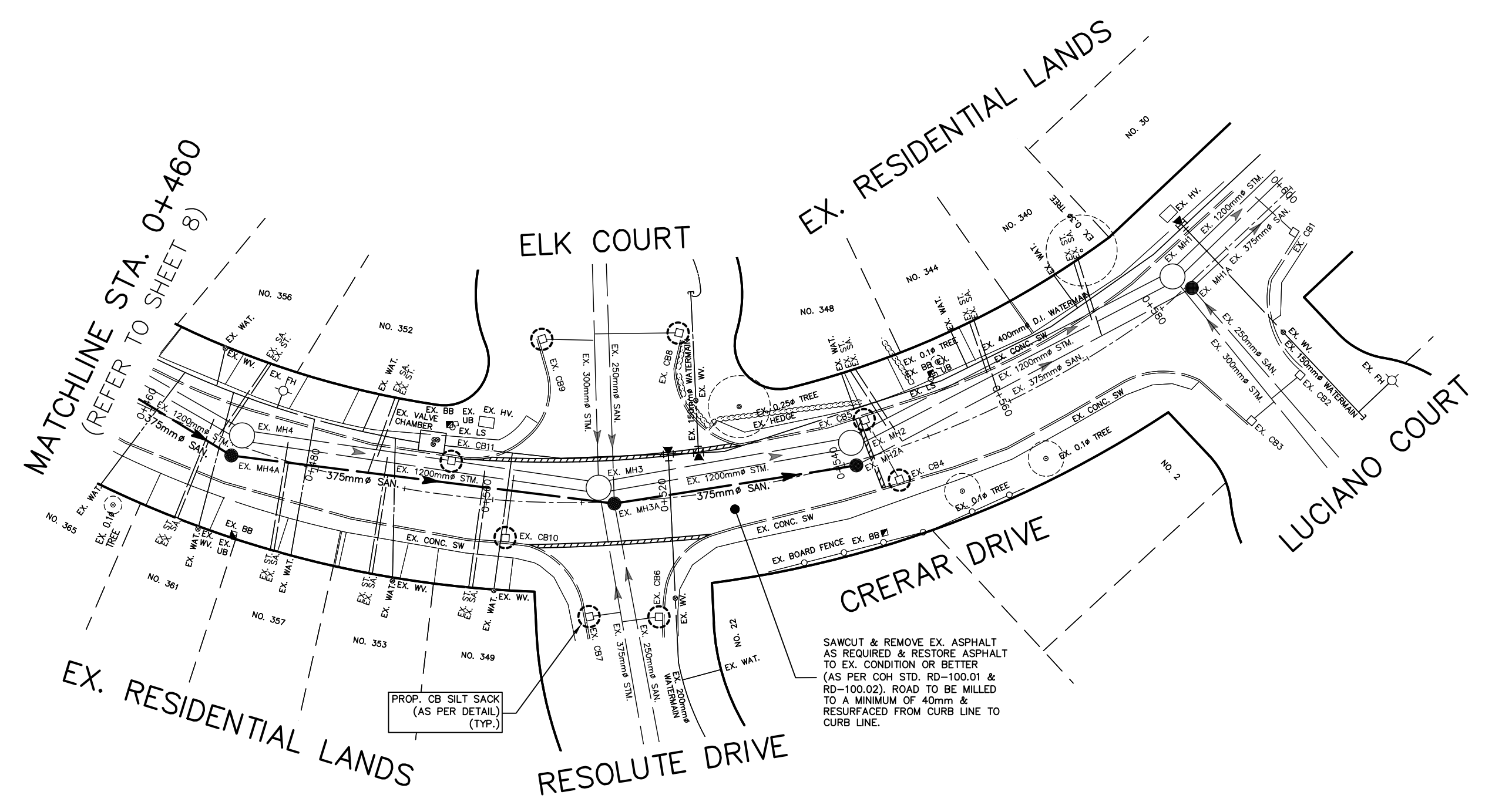
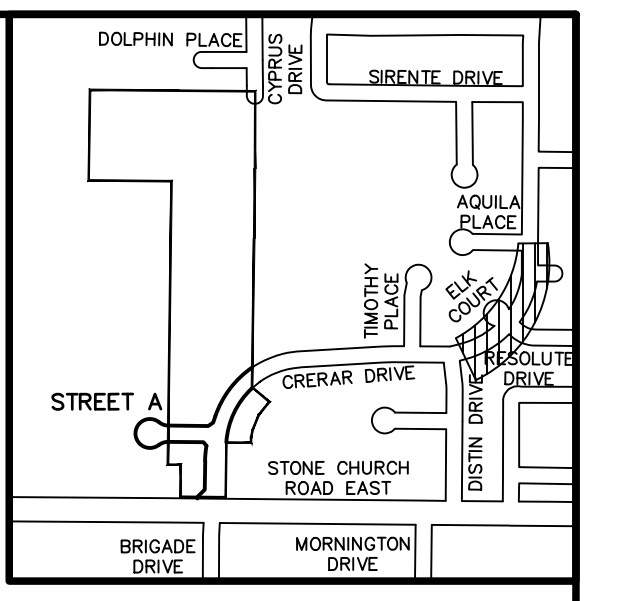
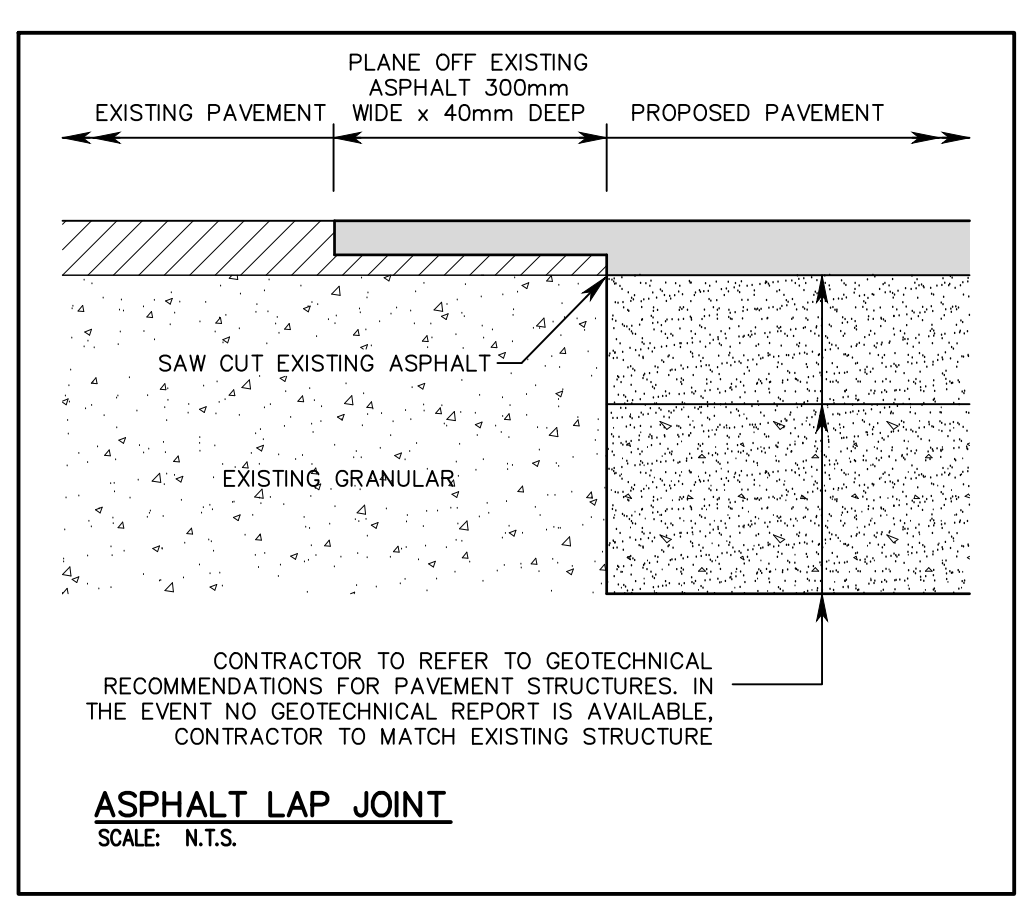
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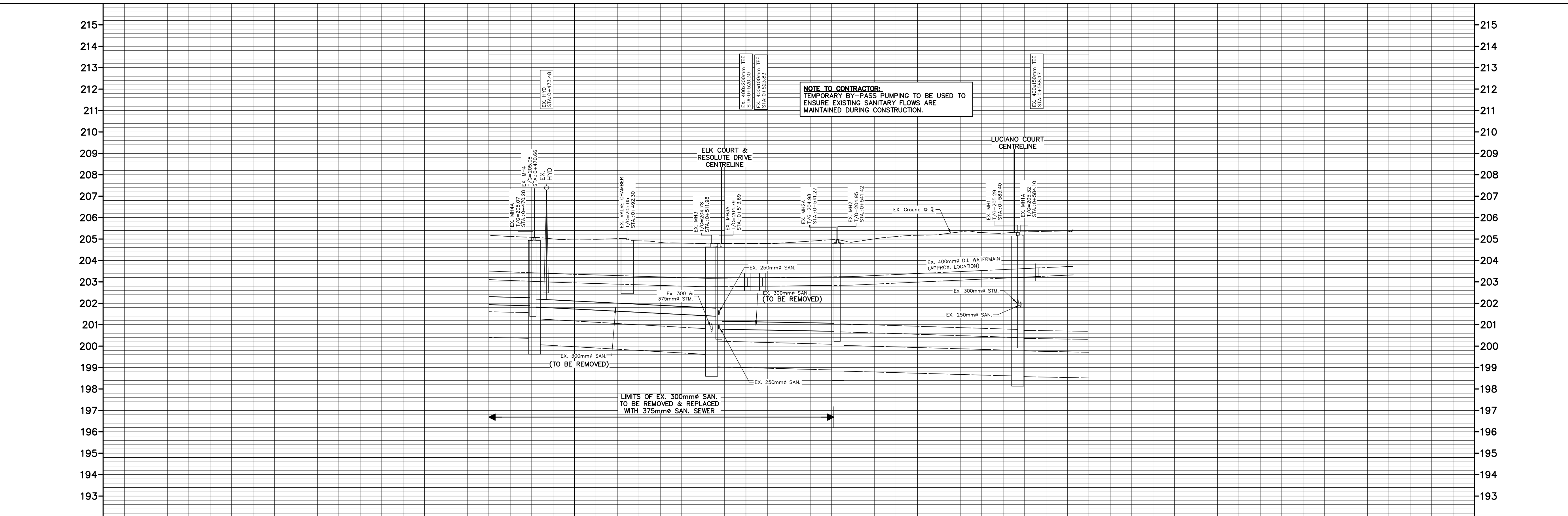
NOTE:

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- LEGEND:**
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 - EXISTING SINGLE/DOUBLE CATCHBASIN
 - EX. W.V. EXISTING WATER VALVE
 - EX. V.C. EXISTING VALVE CHAMBER
 - EX. FH. EXISTING HYDRANT
 - EX. L.S. EXISTING LIGHT STANDARD
 - EX. TRANS/VAULT EXISTING TRANSFORMER/VAULT
 - EX. S.A. EXISTING SANITARY SERVICE
 - EX. ST. EXISTING STORM SERVICE
 - EX. WAT. EX. W.V. EXISTING WATER SERVICE
 - EX. B.B. EX. U.B. EXISTING BELL/UTILITY BOX
 - BOREHOLE
 - ROAD RESTORATION
 - ASPHALT LAP JOINT (AS PER DETAIL)



NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE

HORIZ. 1:500

VERT. 1:100

APPROVALS

STAMP

S. LLEWELLYN & ASSOCIATES LIMITED
 CONSULTING ENGINEERS

Aug. 13/2021

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3J8

Tel: (905) 631-6978
 Fax: (905) 631-8927
 email: info@la.on.ca

THE CITY OF HAMILTON

PROP. ϕ OF ROAD GRADE	PROP. ϕ OF ROAD GRADE
205.17	206.00
204.84	204.84
204.79	204.79
204.97	204.97
205.19	205.19
205.27	205.27

STORM SEWER	STORM SEWER
EX. 38.5m ϕ -1200mm ϕ STM. @ 0.44%	EX. 40.5m ϕ -1200mm ϕ STM. @ 1.18%
EX. 29.0m ϕ -1200mm ϕ STM. @ 0.55%	EX. 41.0m ϕ -1200mm ϕ STM. @ 0.59%
EX. 30.0m ϕ -1200mm ϕ STM. @ 0.40%	

SANITARY SEWER	SANITARY SEWER
40.5m-375mm ϕ PVC SDR 35 SAN. @ 0.52% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	43.5m-375mm ϕ PVC SDR 35 SAN. @ 1.01% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL
27.5m-375mm ϕ PVC SDR 35 SAN. @ 0.36% BEDDING PER OPSD 802.013 SELECT NATIVE BACKFILL	EX. 42.5m ϕ -375mm ϕ SAN. @ 0.63%
EX. 27.5m ϕ -375mm ϕ SAN. @ 0.27%	

CHAINAGE	CHAINAGE
0+460	0+600
0+480	
0+500	
0+520	
0+540	
0+560	
0+580	

PROJECT NAME		
DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES		
TITLE		
CRERAR DRIVE PLAN & PROFILE STA. 0+460 TO 0+600		
PROJECT No.	DRAWING No.	SHEET No.
19062	CRERAR-3	9

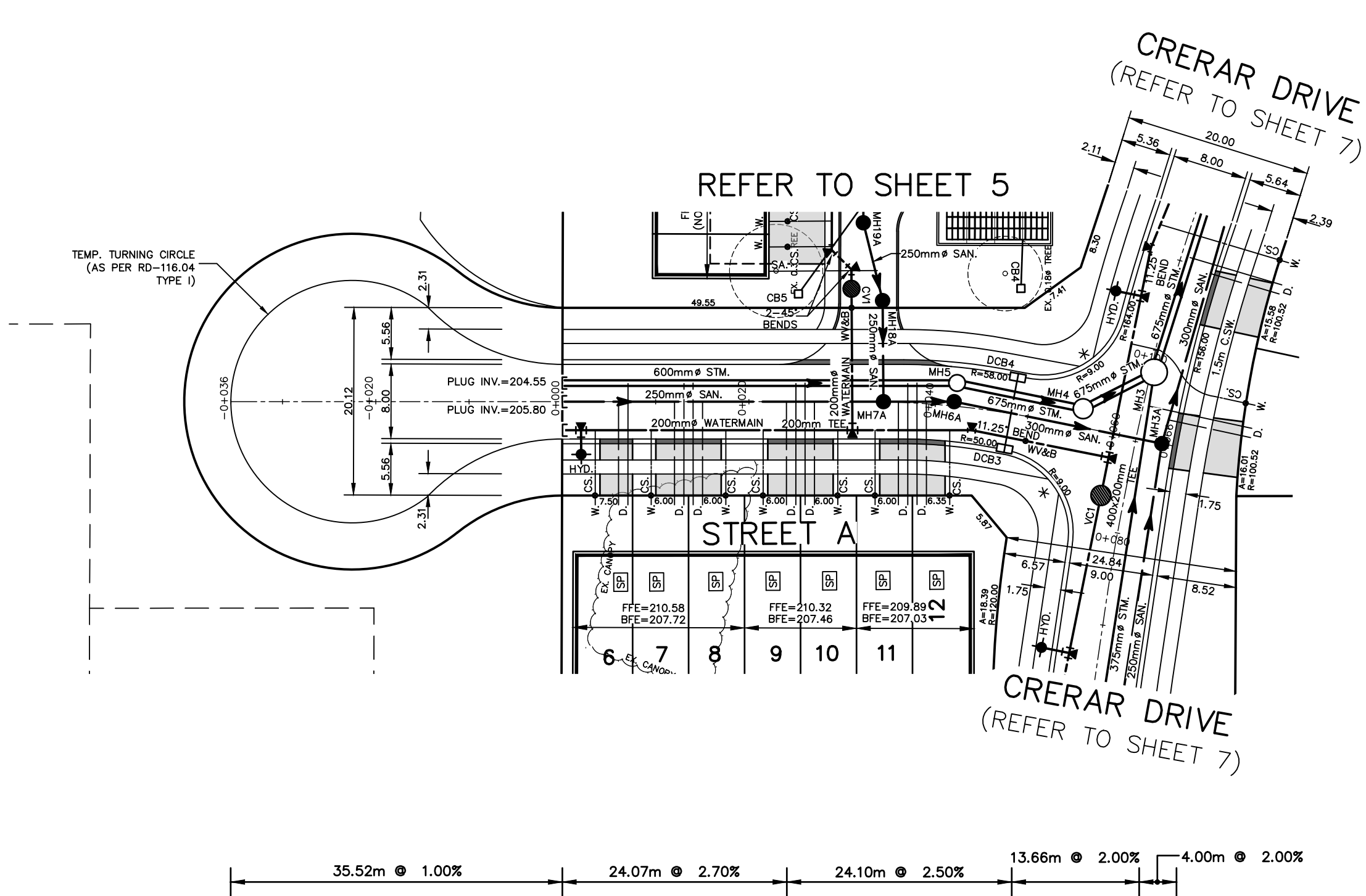
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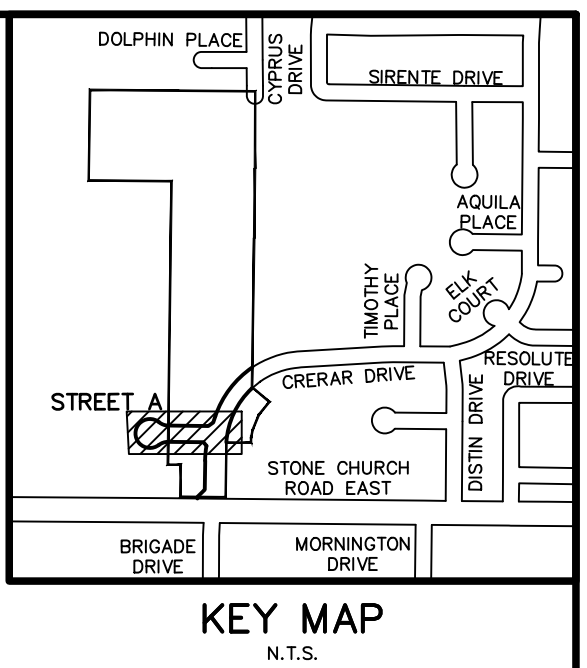
NOTE:

- CONC. BARRIER CURB & GUTTER AS PER OPSD 600.040 ALONG CRERAR DRIVE & STREET A.
- CONC. BARRIER CURB AS PER OPSD 600.110 WITHIN CONDO BLOCK.
- 1.5m CONC. SIDEWALK AS PER OPSD 310.010.
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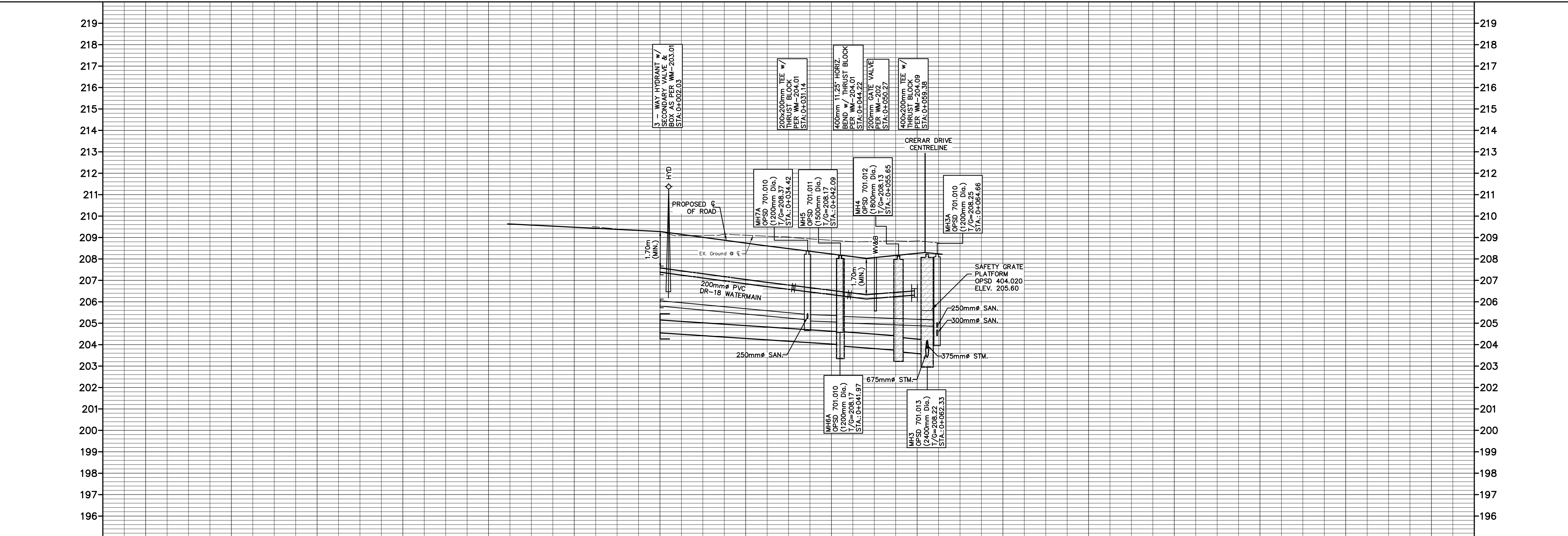
BENCHMARK NOTE:
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WEST FACE, NORTHWEST CORNER OF 89 STONE CHURCH ROAD ON THE SOUTHEAST CORNER OF STONE CHURCH ROAD AND WEST 5TH STREET. PLAQUE IS SET ON THE SECOND ROW OF BLOCKS UP FROM THE GROUND, 0.3m IN FROM THE CORNER, NO. 929.
ELEVATION=222.73m



- LEGEND:**
- EXISTING STORM/SANITARY MANHOLE
 - EXISTING SINGLE/DOUBLE CATCHBASIN
 - EXISTING/PROPOSED WATER VALVE
 - EXISTING/PROPOSED VALVE CHAMBER
 - PROPOSED CHECK VALVE ASSEMBLY IN CHAMBER
 - EXISTING/PROPOSED HYDRANT
 - PROPOSED STORM/SANITARY MANHOLE
 - PROPOSED SINGLE/DOUBLE CATCHBASIN
 - PROPOSED CATCHBASIN & DITCH INLET MANHOLE/ TOTAL CAPTURE CATCHBASIN
 - EXISTING/PROPOSED LIGHT STANDARD
 - EXISTING/PROPOSED TRANSFORMER/VAULT
 - PROPOSED 150mm ϕ SANITARY SERVICE
 - PROPOSED 150mm ϕ STORM & SANITARY SERVICE
 - PROPOSED 25mm ϕ WATER SERVICE c/w CURB STOP
 - SUMP PUMP (AS PER DETAIL)
 - SEWER CROSSING
 - BOREHOLE
 - ROAD RESTORATION
 - ASPHALT LAP JOINT (AS PER DETAIL)
 - DRIVEWAY & CURB DEPRESSION
 - * WHEELCHAIR RAMP TO BE CONSTRUCTED AS PER RD-124-03



35.52m @ 1.00% 24.07m @ 2.70% 24.10m @ 2.50% 13.66m @ 2.00% 4.00m @ 2.00%



PROP. C OF ROAD GRADE	PROP. C OF ROAD GRADE
209.64	209.64
209.48	209.48
209.28	209.28
209.11	209.11
208.74	208.74
208.63	208.63
208.87	208.87
208.23	208.23
208.03	208.03
208.14	208.14
208.26	208.26
208.30	208.30
208.40E	208.40E
208.22	208.22

1.	AUG/21	CD	RE-ZONING COMMENTS
NO.	DATE	BY	REVISIONS

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SCALE
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VERT. 1:100

APPROVALS

STAMP
S. LLEWELLYN
LIC. PROFESSIONAL ENGINEER
10300
Aug 13/2021
PROVINCE OF ONTARIO

S. LLEWELLYN & ASSOCIATES LIMITED
CONSULTING ENGINEERS
3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8
Tel: (905) 631-8978
Fax: (905) 631-8927
email: info@sla.on.ca

THE CITY OF HAMILTON

PROJECT NAME
DICENZO CONSTRUCTION COMPANY LIMITED
LAVITA ESTATES

TITLE
STREET A
PLAN & PROFILE
STA. -0+036 TO 0+066

PROJECT No.	DRAWING No.	SHEET No.
19062	STREET A-1	10

GENERAL GRADING NOTES:

- ALONG ADJOINING PROPERTIES GRADE TO MEET EXISTING OR PROPOSED ELEVATIONS WITH SLOPED SLOPES (MIN. 3H TO 1V) AND/OR RETAINING WALLS AS SPECIFIED.
- ALL RETAINING WALLS, WALKWAYS, CURBS ETC., SHALL BE PLACED A MIN. 0.45m OFF THE PROPERTY LINE. ALL WALLS 1.0m OR HIGHER SHALL BE DESIGNED BY A P.ENG.
- SHOULD A RETAINING WALL BE REQUIRED, THE TOP OF WALL ELEVATIONS SHALL BE SET 150mm ABOVE THE PROPOSED SIDE YARD SWALES.
- RETAINING WALLS 0.6m IN HEIGHT OR GREATER REQUIRE CONSTRUCTION OF A FENCE OR GUARD RAIL AT THE TOP OF THE WALL. GUARDS FOR RETAINING WALLS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF EXTERIOR GUARDS AS CONTAINED IN THE ONTARIO BUILDING CODE.
- SLOPES OF SWALES FOR BOTH "BACK TO FRONT" AND "SPLIT" DRAINAGE SHALL BE NO LESS THAN 2.0% GRADE AND NO GREATER THAN 33% GRADE (3:1 SLOPES).
- BACK TO FRONT DRAINAGE SHALL ONLY BE PERMITTED WHERE THE COMBINED SIDE YARD SETBACK IS 2.0m, OR MORE, PROVIDING A MINIMUM 2.0m BETWEEN THE FOUNDATION WALLS FOR DRAINAGE SWALES. A 1.2m SETBACK IS REQUIRED ON THE GARAGE SIDE OF THE LOT.
- WHEN MATCHING TO EXISTING PROPERTIES WHERE A 2.0% GRADE CANNOT BE ACHIEVED, A 1.5% GRADE IS PERMITTED PROVIDED A 150mm SUBDRAIN IS INSTALLED BELOW THE BOTTOM OF THE SWALE AND DRAINED TO A SUITABLE OUTLET, (WITH A MINIMUM 0.3m COVER OVER THE SUBDRAIN), OR OTHER MITIGATION MEASURES.
- MINIMUM GRADE FOR A WRAP-AROUND SWALE IN THE BACKYARD SHALL BE 1.0%.
- UNLESS OTHERWISE NOTED, THE GROUND BETWEEN THE PROPOSED ELEVATIONS ON THE SIDE LOTS SHALL BE GRADED AS A STRAIGHT LINE.
- TOP OF FOUNDATION WALLS FOR BUILDING SHALL BE 150mm (MIN.) ABOVE FINISHED GRADE.
- DRIVEWAYS SLOPES SHALL NOT BE LESS THAN 2.0% AND NOT MORE THAN 7.0%. REVERSED SLOPED DRIVEWAY IN NEW DEVELOPMENTS ARE NOT PERMITTED.
- GARAGE FLOOR ELEVATION TO BE SET MIN. 0.3m HIGHER THAN BACK OF WALK, UNLESS OTHERWISE SPECIFIED.
- ALL FILL PLACED ON LOTS SHALL BE COMPACTED TO A MINIMUM 95% SPD (UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER). ALL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm LIFTS.

- FOR DELINEATION OF TREE PROTECTION ZONES, BUFFERS REMOVALS AND PROTECTION SCHEMATICS, ETC., REFER TO TREE PROTECTION PLAN.
- LOT GRADING FOR ALL LOTS IN THE SUBDIVISION SHALL CONFORM STRICTLY WITH THIS PLAN. ANY CHANGES, UNLESS APPROVED PRIOR CONSTRUCTION BY THE CITY, SHALL RESULT IN NON-ACCEPTANCE OF THE SUBDIVISION BY THE CITY.
- IF GRADING IS REQUIRED ON LANDS ADJACENT TO THE DEVELOPMENT WHICH ARE NOT OWNED BY THE DEVELOPER, THEN THE DEVELOPER MUST OBTAIN WRITTEN PERMISSION FROM THE ADJACENT PROPERTY OWNER TO ALLOW THE DEVELOPER TO GRADE ON THE ADJACENT LANDS, OTHERWISE RETAINING WALLS MUST BE USED.
- THE WRITTEN PERMISSION REQUIRED FROM THE ADJACENT LANDOWNER SHALL BE OBTAINED PRIOR TO ENTERING THE LANDS. SHOULD PERMISSION NOT BE OBTAINED OR IS WITHDRAWN PRIOR TO COMMENCING THE WORK, THEN THE DEVELOPER SHALL LIMIT THEIR ACTIVITIES TO THE LIMITS OF THE DEVELOPMENT SITE.
- DRIVEWAY AND DRIVEWAY APPROACHES SHALL BE LOCATED SUCH THAT HYDRO VAULTS AND OTHER STREET FURNITURE ARE A MIN. OF 1.2m FROM THE PROJECTIONS OF THE OUTSIDE GARAGE WALLS.

BACKYARD GRADING NOTES:

- DEFINITION: "REQUIRED BACK YARD" SHALL MEAN THE LESSER OF THE DISTANCE REGULATED BY THE ZONING BY-LAW OR 6m.
- THE MAXIMUM SLOPE IN THE REQUIRED BACK YARD SHALL BE 5%, EXCEPT AS SET OUT IN ITEMS BELOW.
- THE 5% RESTRICTION SHALL NOT APPLY TO THE SIDE OF A SWALE ALONG THE SIDES OR BACK OF THE LOT, PROVIDING THE TOTAL WIDTH OF THE SWALE SHALL NOT EXCEED ONE (1) METRE ON EACH LOT.
- WHERE THE 5% RESTRICTION ON THE BACKYARD GRADES RESULTS IN ELEVATION DIFFERENCES BETWEEN DIFFERENT PROPERTIES, RETAINING WALLS SHALL BE CONSTRUCTED ALONG THE SIDES AND THE BACK OF THE LOT. SLOPES WITH A MAXIMUM OF THREE HORIZONTAL TO ONE VERTICAL MAY REPLACE THE WALLS WHERE THE DIFFERENCE IN ELEVATION IS LESS THAN 0.3m.
- GENERALLY, SLOPES SHALL BE PLACED ON THE LOWER LOT, WHEREAS RETAINING WALLS SHALL BE PLACED ON THE HIGHER LANDS.
- THE 5% RESTRICTION DOES NOT PRECLUDE RETAINING WALLS IN THE REQUIRED BACKYARDS PROVIDING THE TERRACES ARE MAINTAINED TO THE 5% GRADE AS SET OUT IN ITEM (2) ABOVE, PROVIDING THE SLOPES ARE STABLE FOR THE SOILS OF THE AREA (MINIMUM 3H:1V).

ROOFWATER LEADERS:

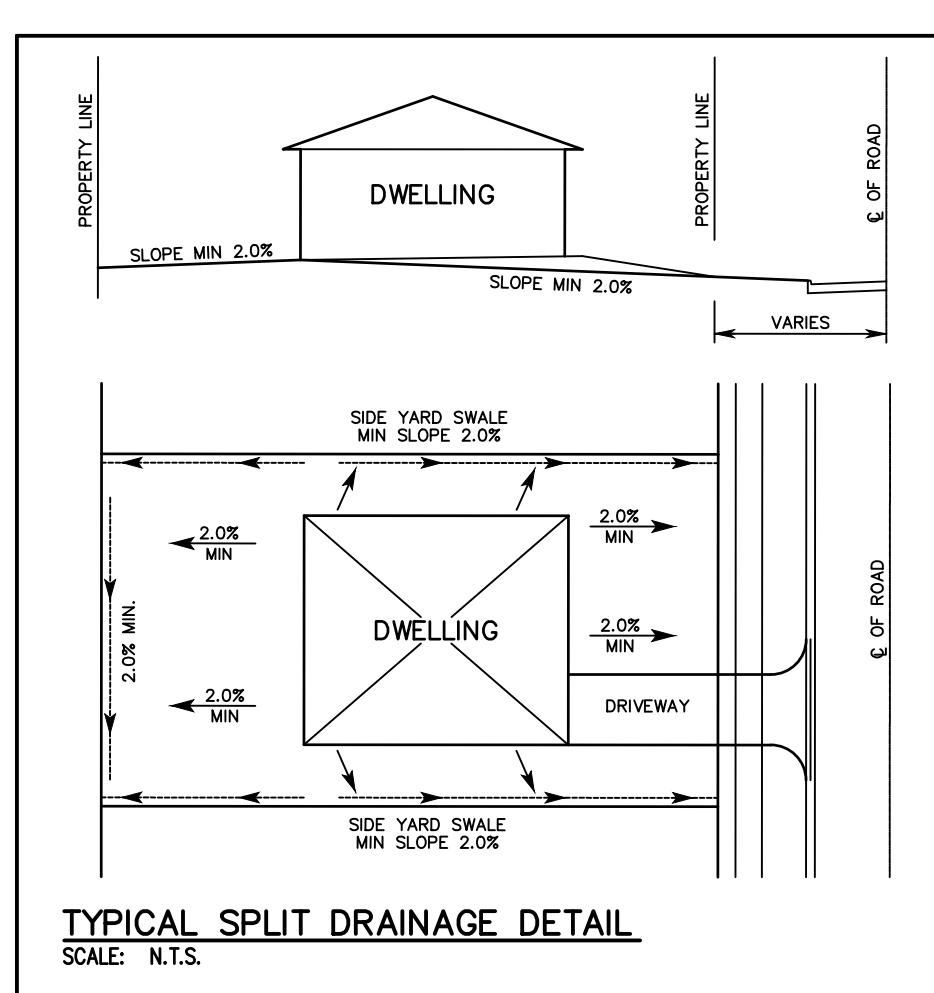
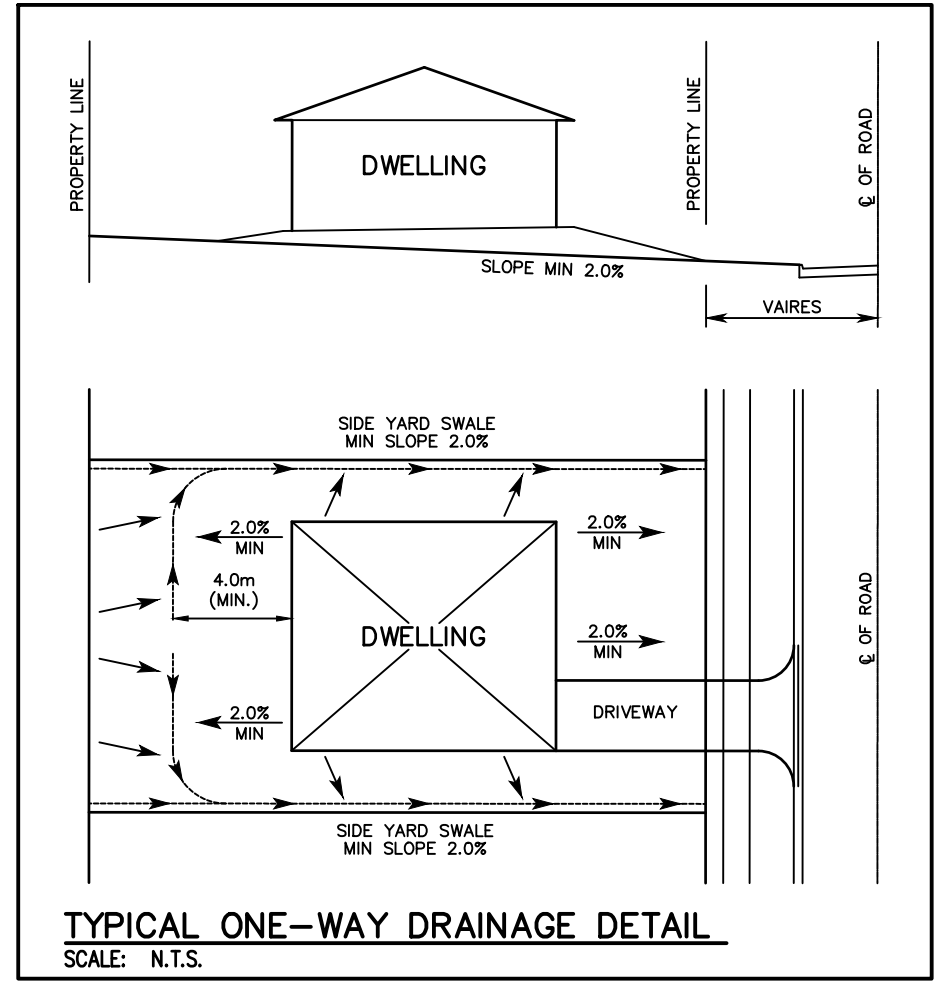
- ALL ROOFWATER LEADERS SHALL DISCHARGE ONTO SPLASH PADS AND THEN TO GRASSED OR LANDSCAPED AREAS A MIN. OF 0.6m FROM THE BUILDING FACE.

GRADING ON ADJACENT LANDS NOT OWNED BY THE SUBDIVIDER:

- THE SUBDIVIDER IS REQUIRED TO OBTAIN PERMISSION TO CARRY OUT THE GRADING REQUIRED HEREIN ON THE ADJACENT LANDS. IF SUCH PERMISSION TO GRADE ON THE LANDS ADJACENT TO THE PROPERTY IS NOT OBTAINED BY THE SUBDIVIDER OR IF PERMISSION IS WITHDRAWN PRIOR TO CARRYING OUT THE REQUIRED GRADING ON ADJACENT LANDS, THE SUBDIVIDER IS REQUIRED TO CONSTRUCT RETAINING WALLS, AT THEIR EXPENSE, WITHIN THE SUBDIVISION WITH THE TOP OF WALL ELEVATIONS TO MATCH THE APPROVED GRADING PLAN.

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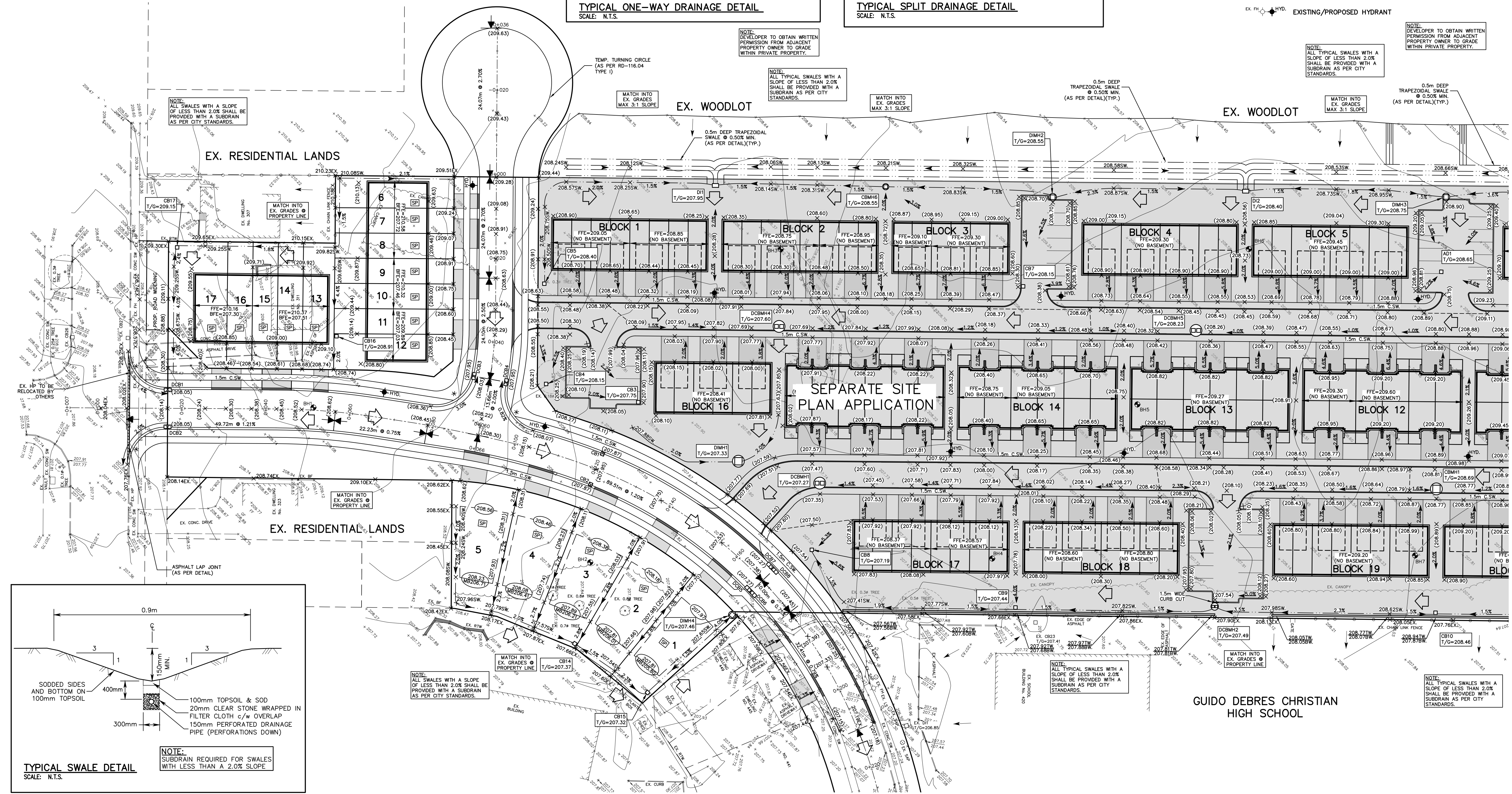
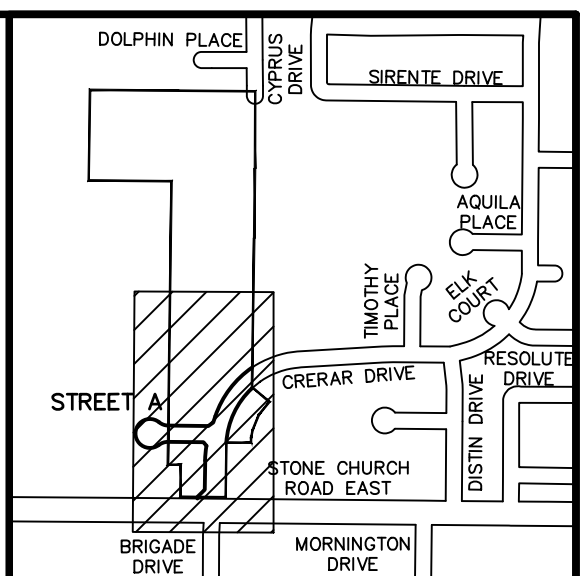
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- FINISHED FLOOR ELEVATION
- BASEMENT FLOOR ELEVATION
- NUMBER OF STEP RISERS REQUIRED
- PROPOSED EMBANKMENT
- PROPOSED DIRECTION OF SHEET FLOW
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- PROPOSED FRONT APRON ELEVATION
- PROPOSED REAR APRON ELEVATION
- PROPOSED MINIMUM BASEMENT ELEVATION
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NOTE:

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DRAWN	CD	CHK'D		NOV. 2020



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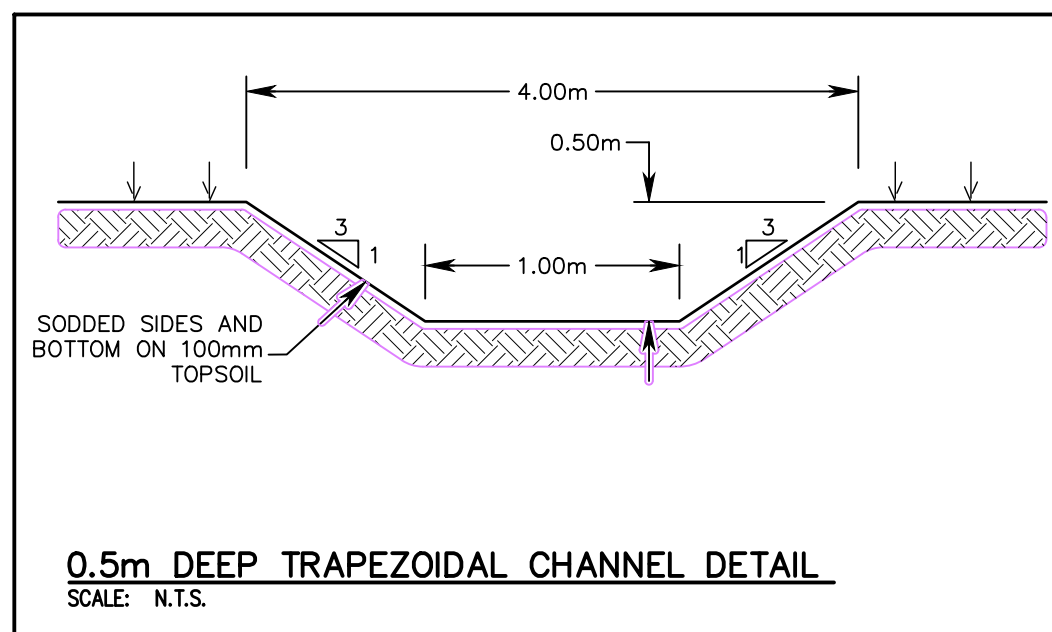
3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME: **DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES**

TITLE: **GRADING PLAN (SHEET 1 OF 3)**

PROJECT No.	DRAWING No.	SHEET No.
19062	GRAD-1	11

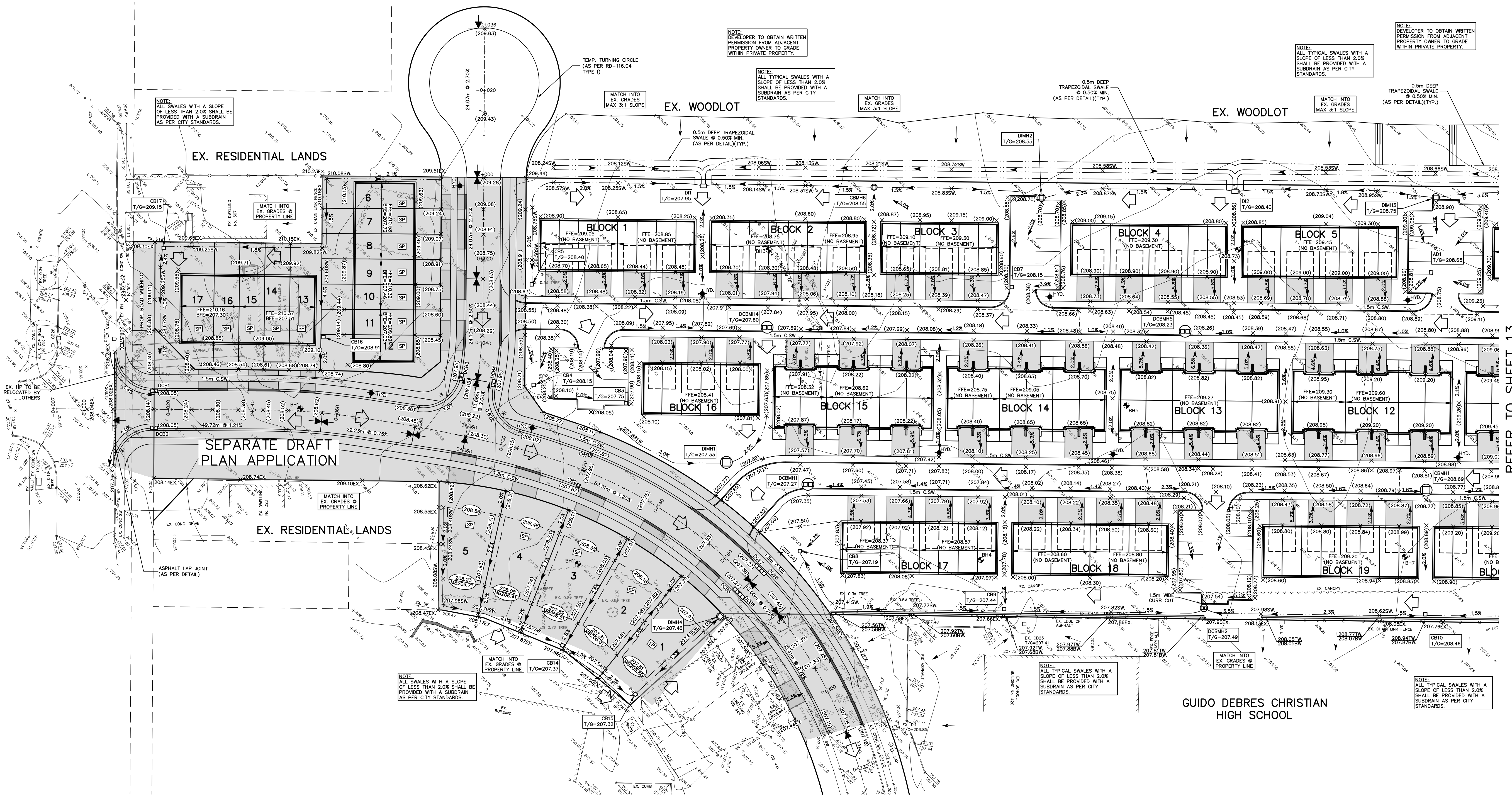
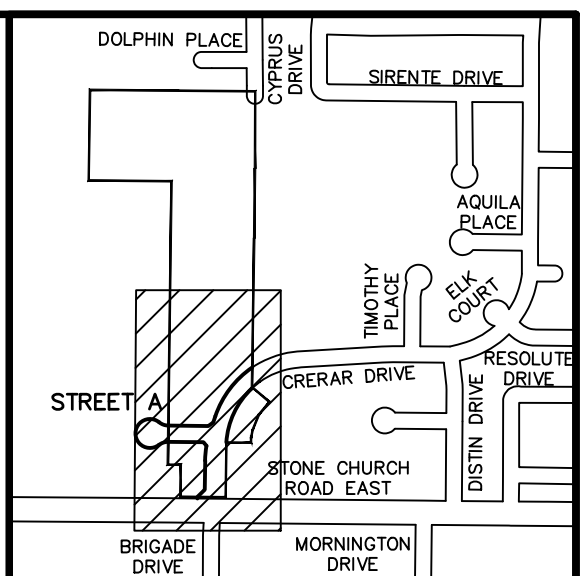


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LEGEND:

- (208.00) EXISTING GROUND ELEVATION
- × (208.00) PROPOSED FINISHED GROUND ELEVATION
- × (208.00EX) PROPOSED ELEVATION TO MATCH EXISTING
- (208.00SW) DRAINAGE SWALE WITH FLOW DIRECTION AND PROPOSED SWALE ELEVATION
- (208.00TW) PROPOSED TOP OF WALL ELEVATION
- (208.00BW) PROPOSED BOTTOM OF WALL ELEVATION
- ML=208.00 MAIN LEVEL ELEVATION
- FFE=208.00 FINISHED FLOOR ELEVATION
- BFE=208.00 BASEMENT FLOOR ELEVATION
- ⊕ NUMBER OF STEP RISERS REQUIRED
- 3.1 (TOP) PROPOSED EMBANKMENT
- (2.0%) PROPOSED DIRECTION OF SHEET FLOW
- (1.0%) EXISTING DIRECTION OF SHEET FLOW
- (EMERG) EMERGENCY OVERLAND FLOW ROUTE
- (208.00) PROPOSED FRONT APRON ELEVATION
- (208.00) PROPOSED REAR APRON ELEVATION
- (208.00) PROPOSED MINIMUM BASEMENT ELEVATION
- EXISTING SINGLE/DOUBLE CATCHBASIN
- EXISTING SINGLE/DOUBLE CATCHBASIN
- PROPOSED CATCHBASIN & DITCH INLET MANHOLE/ TOTAL CAPTURE CATCHBASIN
- ⊕ EXISTING/PROPOSED LIGHT STANDARD
- ⊕ EXISTING/PROPOSED TRANSFORMER/VAULT
- ⊕ EXISTING/PROPOSED HYDRANT
- ⊕ SUMP PUMP (AS PER DETAIL)
- ⊕ BOREHOLE
- ⊕ WHEELCHAIR RAMP TO BE CONSTRUCTED AS PER RD-124-03
- ▭ DRIVEWAY & CURB DEPRESSION



BENCHMARK NOTE:
CITY OF HAMILTON BENCHMARK NO. 21-03, WEST FACE, NORTHWEST CORNER OF 89 STONE CHURCH ROAD ON THE SOUTHEAST CORNER OF STONE CHURCH ROAD AND WEST 5TH STREET. PLAQUE IS SET ON THE SECOND ROW OF BLOCKS UP FROM THE GROUND, 0.3m IN FROM THE CORNER, NO. 929. ELEVATION=222.73m

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

- NOTES TO CONTRACTOR:**
1. CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING.
 2. ANY INCONSISTENCIES AND OMISSIONS FOUND ON THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING WORK.
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 6. OPERATION OF EXISTING WATERMAIN VALVES SHALL BE BY THE CITY OF HAMILTON STAFF ONLY.

DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020



APPROVALS

STAMP: S. LLEWELLYN & ASSOCIATES LIMITED CONSULTING ENGINEERS. Aug 13/2021.

S. LLEWELLYN & ASSOCIATES LIMITED CONSULTING ENGINEERS
Tel: (905) 631-6978
Fax: (905) 631-8927
email: info@slae.ca
3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

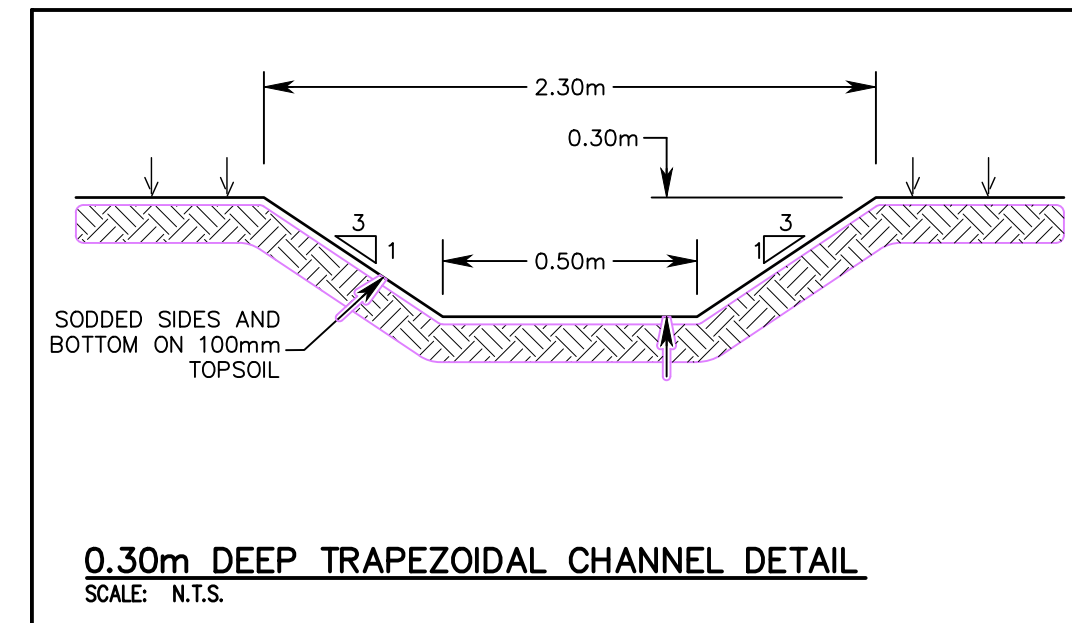
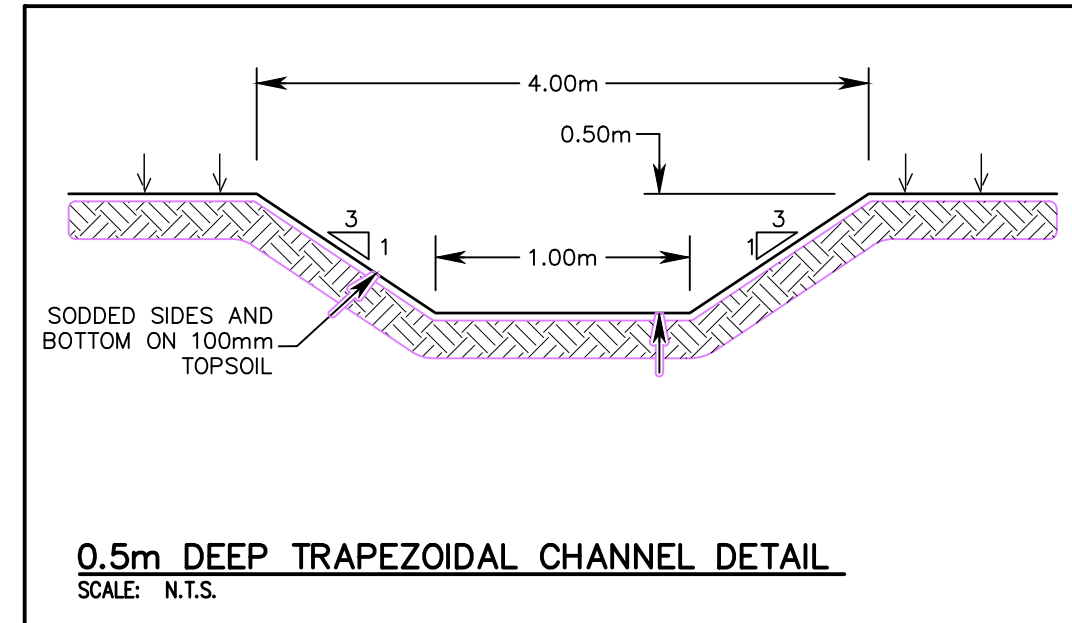
THE CITY OF HAMILTON

PROJECT NAME: DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES

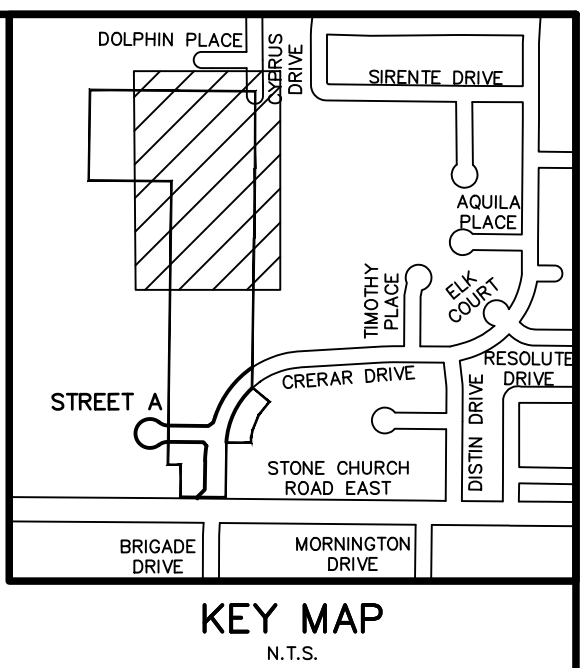
TITLE: GRADING PLAN (SHEET 2 OF 3)

PROJECT No. 19062	DRAWING No. GRAD-2	SHEET No. 12
-------------------	--------------------	--------------

- NOTE:**
1. CONC. BARRIER CURB & GUTTER AS PER OPSD 600.040 ALONG CRERAR DRIVE & STREET A.
 2. CONC. BARRIER CURB AS PER OPSD 600.110 WITHIN CONDO BLOCK.
 3. 1.5m CONC. SIDEWALK AS OPSD 310.010.
 4. PROPOSED DRIVEWAY APRONS AS PER RD-108.
 5. EXISTING DRIVEWAY APRONS WITHIN ROW LIMITS ARE TO MATCH TO EXISTING CONDITION OR BETTER. AS PER RD-108 AND/OR RD-109.
 6. ALL EXISTING SERVICE LATERALS ARE TO BE MAINTAINED TO EXISTING CONDITION OR BETTER. ANY RESTORATION AND/OR ADJUSTMENTS TO THE EXISTING SERVICE LATERALS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY OF HAMILTON. RESTORATION OF ANY DAMAGED EXISTING SERVICES SHALL BE COMPLETED AT ENTIRELY THE OWNER'S COSTS.

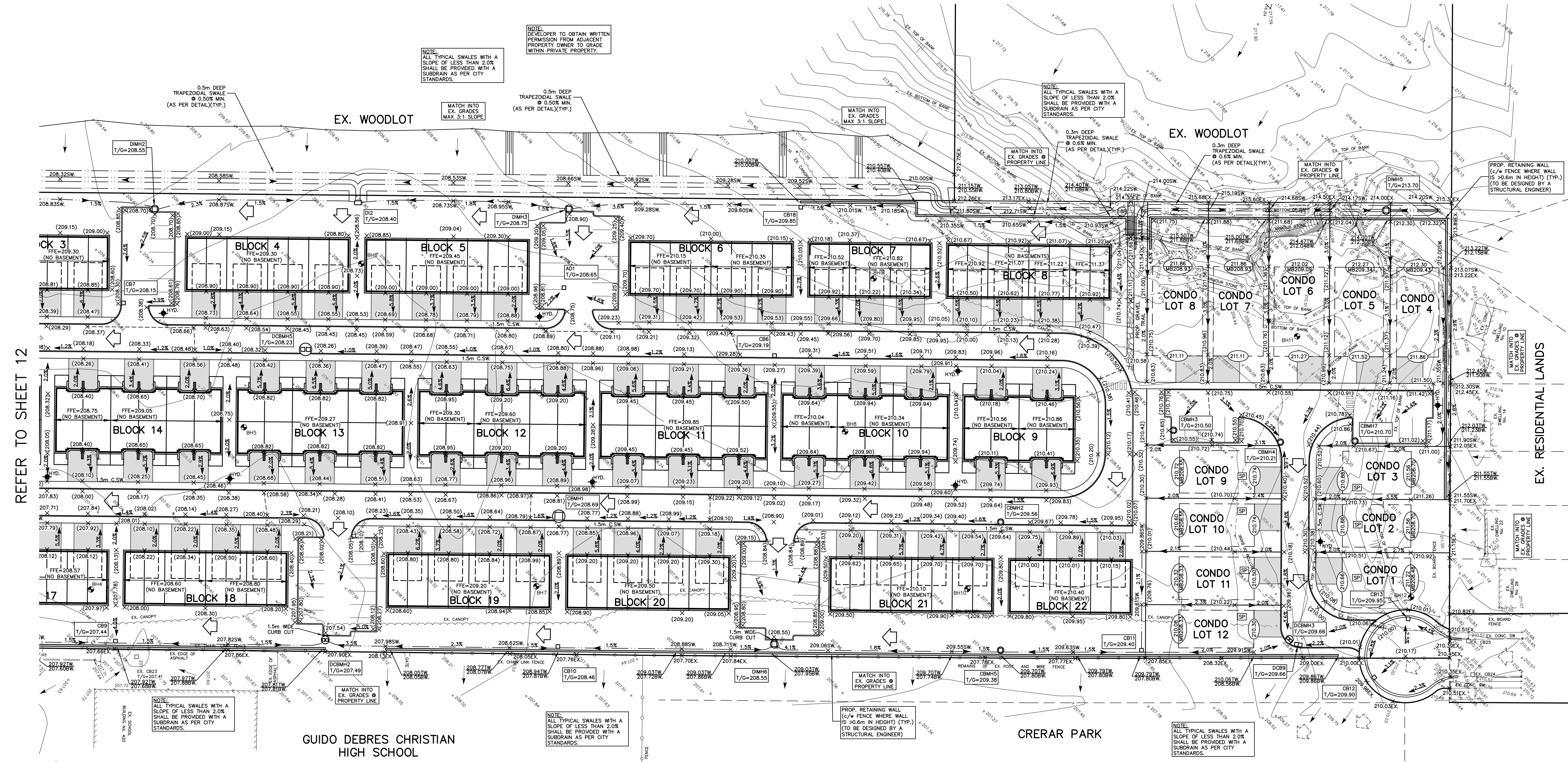


- LEGEND:**
- EXISTING GROUND ELEVATION
 - PROPOSED FINISHED GROUND ELEVATION
 - PROPOSED ELEVATION TO MATCH EXISTING
 - DRAINAGE SWALE WITH FLOW DIRECTION AND PROPOSED SWALE ELEVATION
 - PROPOSED TOP OF WALL ELEVATION
 - PROPOSED BOTTOM OF WALL ELEVATION
 - MAIN LEVEL ELEVATION
 - FINISHED FLOOR ELEVATION
 - BASEMENT FLOOR ELEVATION
 - NUMBER OF STEP RISERS REQUIRED
 - PROPOSED EMBANKMENT
 - PROPOSED DIRECTION OF SHEET FLOW
 - EXISTING DIRECTION OF SHEET FLOW
 - EMERGENCY OVERLAND FLOW ROUTE
 - PROPOSED FRONT APRON ELEVATION
 - PROPOSED REAR APRON ELEVATION
 - PROPOSED MINIMUM BASEMENT ELEVATION
 - EXISTING SINGLE/DOUBLE CATCHBASIN
 - PROPOSED SINGLE/DOUBLE CATCHBASIN
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 - SUMP PUMP (AS PER DETAIL)
 - BOREHOLE
 - WHEELCHAIR RAMP TO BE CONSTRUCTED AS PER RD-124-03
 - DRIVEWAY & CURB DEPRESSION



- NOTES TO CONTRACTOR:**
1. **INSPECTION**
 CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2. GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
 2. **CONFIRMATION OF EXISTING INVERTS**
 72 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO LOCATE, EXPOSE AND VERIFY INVERTS OF EXISTING UTILITIES AND EXISTING SEWERS AT CONNECTION POINTS. SHOULD THE CONTRACTOR PROCEED WITHOUT COMPLETING THESE LOCATES, EXTRA COSTS RESULTING FROM DELAYS AND STANDBY TIME WILL NOT BE CONSIDERED.

BENCHMARK NOTE:
 CITY OF HAMILTON BENCHMARK NO. 21-03. WEST FACE, NORTHWEST CORNER OF 89 STONE CHURCH ROAD ON THE SOUTHEAST CORNER OF STONE CHURCH ROAD AND WEST 5TH STREET. PLAQUE IS SET ON THE SECOND ROW OF BLOCKS UP FROM THE GROUND, 0.3m IN FROM THE CORNER. NO. 929. ELEVATION=222.73m



NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE: 1:500

APPROVALS

S. LLEWELLYN & ASSOCIATES LIMITED
 CONSULTING ENGINEERS
 Tel: (905) 631-6978
 Fax: (905) 631-8927
 email: info@sl.ca

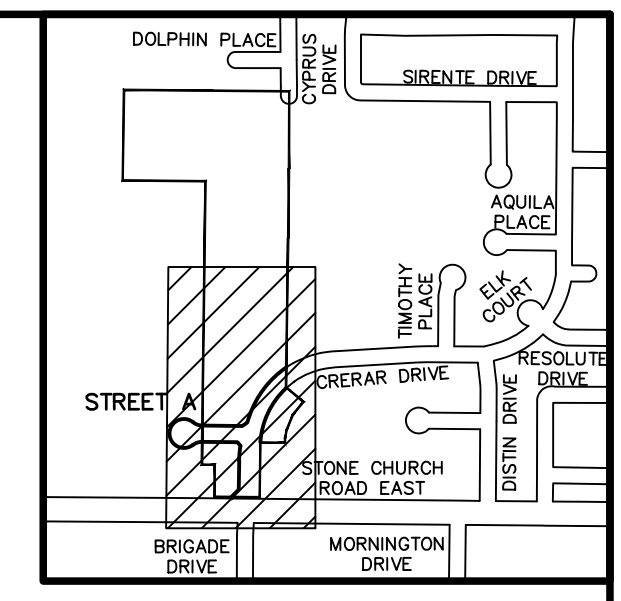
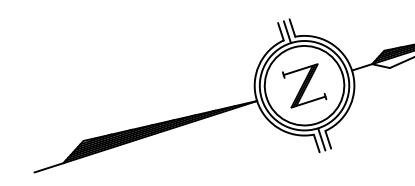
3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME
**DICENZO CONSTRUCTION COMPANY LIMITED
 LAVITA ESTATES**

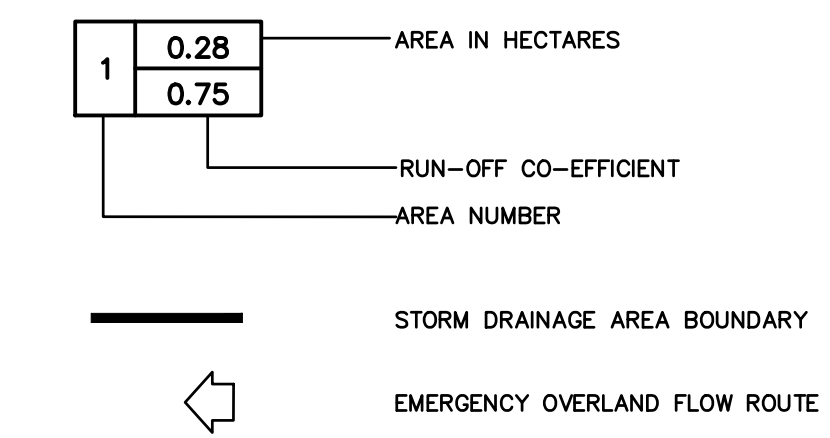
TITLE
**GRADING PLAN
 (SHEET 3 OF 3)**

PROJECT No. 19062	DRAWING No. GRAD-3	SHEET No. 13
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KEY MAP
N.T.S.

LEGEND:



NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020



APPROVALS

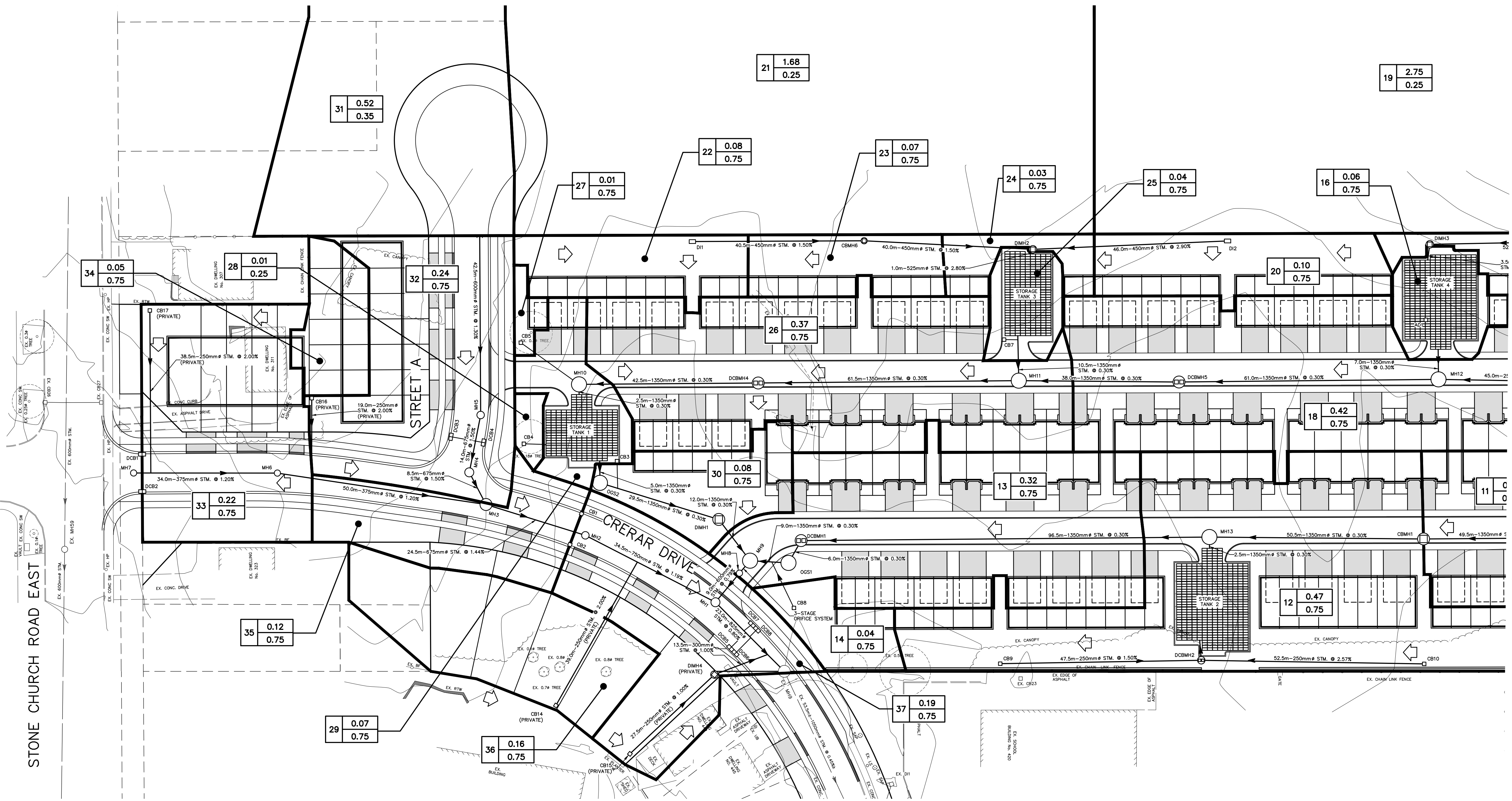
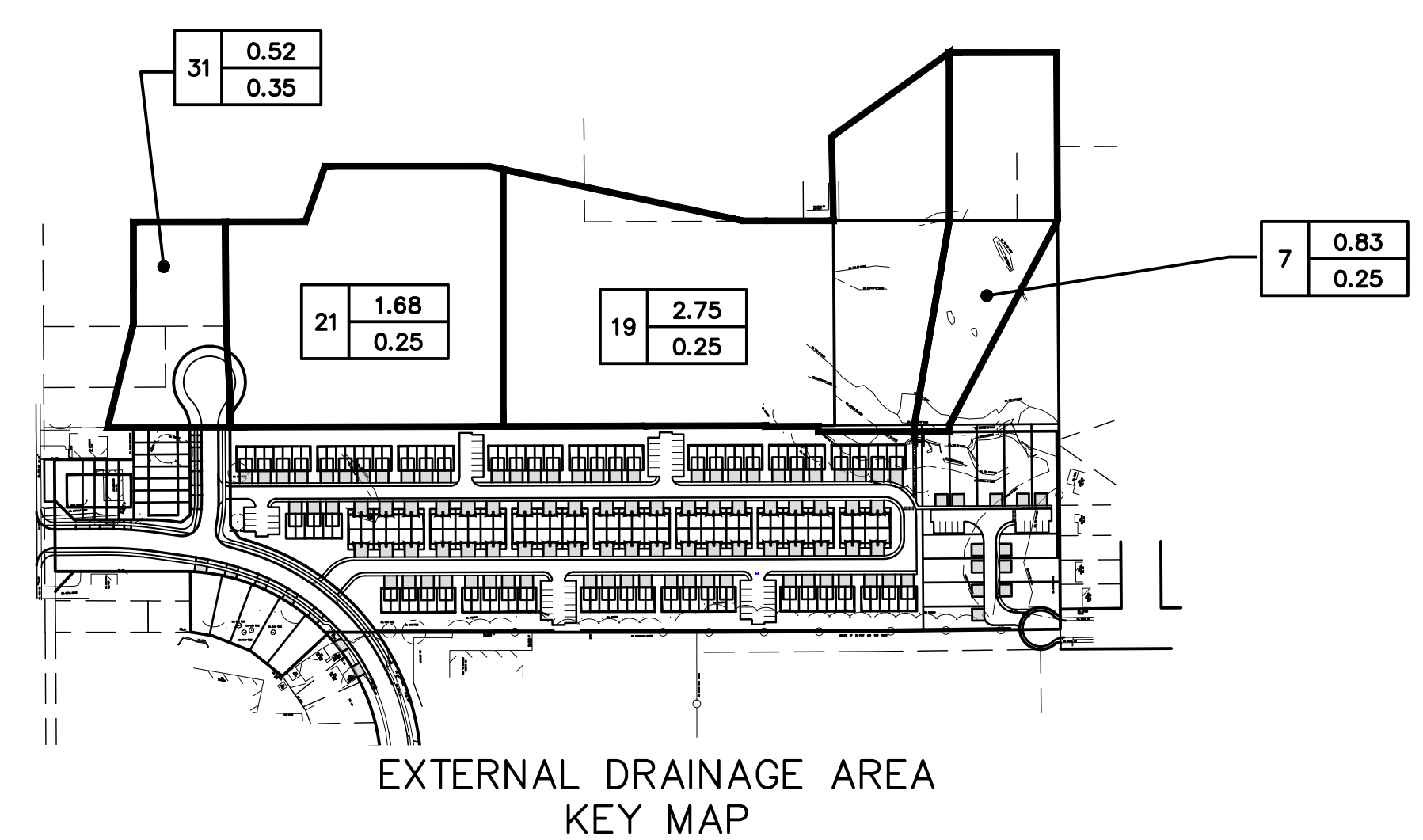
S. LLEWELLYN & ASSOCIATES LIMITED
 CONSULTING ENGINEERS
 Tel: (905) 631-6978
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 3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

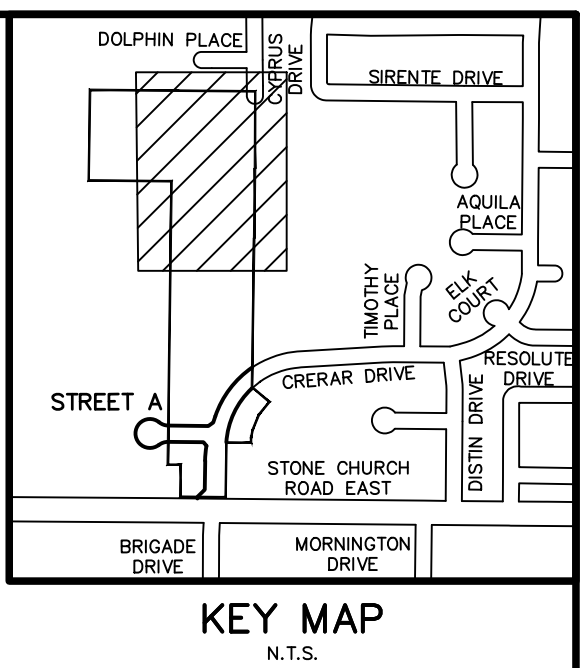
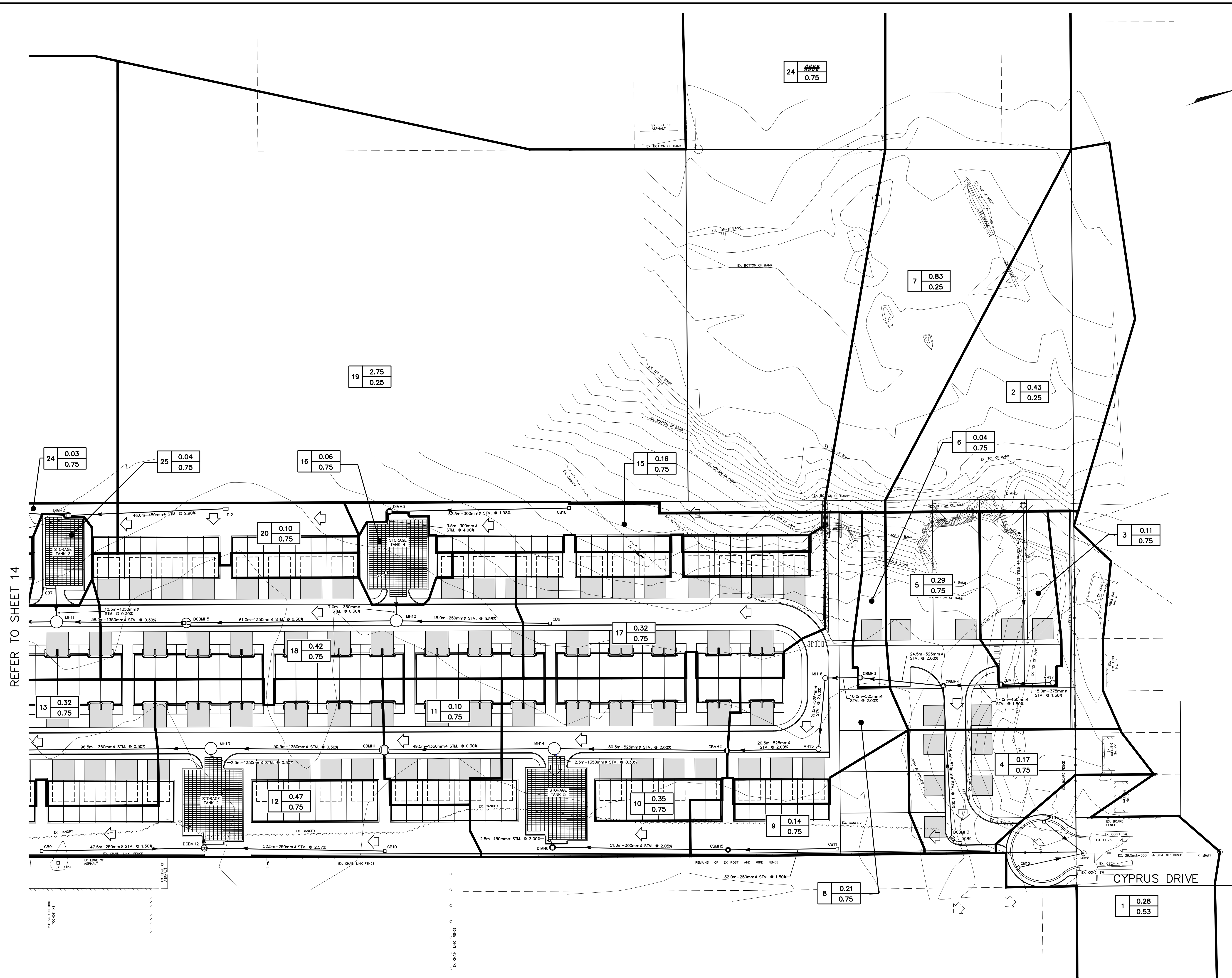
PROJECT NAME
 DICENZO CONSTRUCTION COMPANY LIMITED
 LAVITA ESTATES

TITLE
 INTERIM STORM DRAINAGE AREA PLAN
 (SHEET 1 OF 2)

PROJECT No.	DRAWING No.	SHEET No.
19062	INT. STM-1	14



REFER TO SHEET 15



- LEGEND:**
- 1 0.28
 0.75 AREA IN HECTARES
 - RUN-OFF CO-EFFICIENT
 - AREA NUMBER
 - STORM DRAINAGE AREA BOUNDARY
 - ← EMERGENCY OVERLAND FLOW ROUTE

REFER TO SHEET 14

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE: 1:500

APPROVALS

S. LLEWELLYN & ASSOCIATES LIMITED
 CONSULTING ENGINEERS

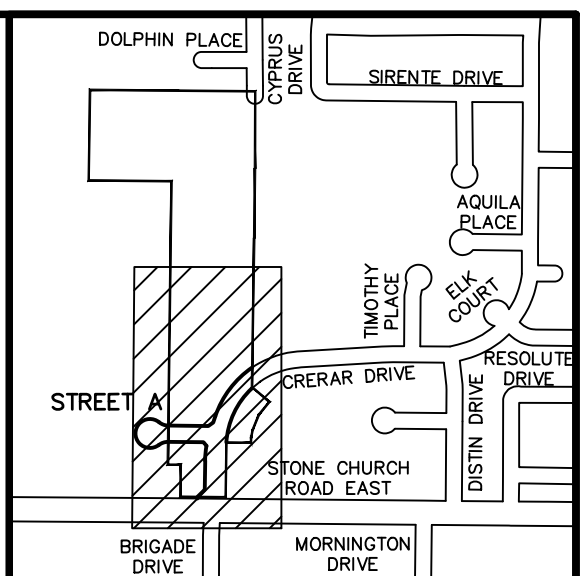
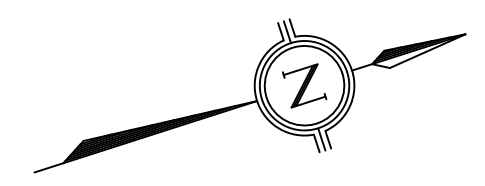
Tel. (905) 631-6978
 Fax (905) 631-6927
 email: info@sla.on.ca

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

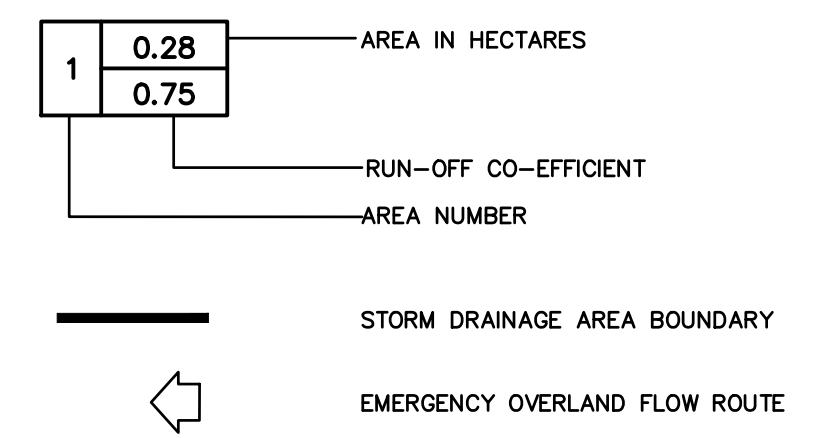
PROJECT NAME
DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES
TITLE
INTERIM STORM DRAINAGE AREA PLAN (SHEET 2 OF 2)
PROJECT No. 19062 DRAWING No. INT. STM-2 SHEET No. 15

S:\19062\Working\Current\19062-Interim Storm Drainage Area Plan.dwg
 Plotted: August 13, 2021 9:52:13 AM By: Colin Dougan



KEY MAP
N.T.S.

LEGEND:

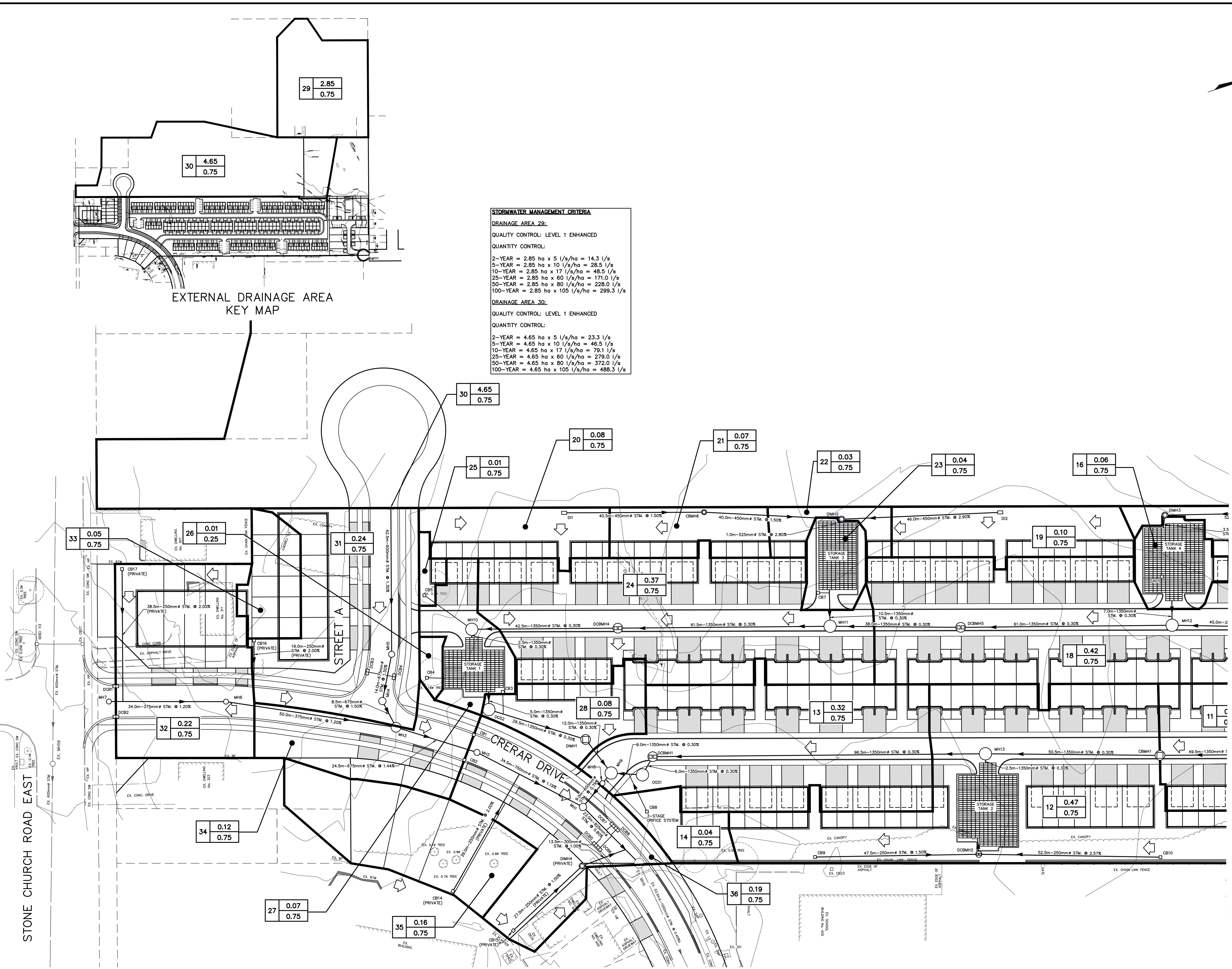


STORMWATER MANAGEMENT CRITERIA

DRAINAGE AREA 29:
 QUALITY CONTROL: LEVEL 1 ENHANCED
 QUANTITY CONTROL:
 2-YEAR = 2.85 ha x 5 l/s/ha = 14.3 l/s
 5-YEAR = 2.85 ha x 10 l/s/ha = 28.5 l/s
 10-YEAR = 2.85 ha x 17 l/s/ha = 48.5 l/s
 25-YEAR = 2.85 ha x 60 l/s/ha = 171.0 l/s
 50-YEAR = 2.85 ha x 80 l/s/ha = 228.0 l/s
 100-YEAR = 2.85 ha x 105 l/s/ha = 299.3 l/s

DRAINAGE AREA 30:
 QUALITY CONTROL: LEVEL 1 ENHANCED
 QUANTITY CONTROL:
 2-YEAR = 4.65 ha x 5 l/s/ha = 23.3 l/s
 5-YEAR = 4.65 ha x 10 l/s/ha = 46.5 l/s
 10-YEAR = 4.65 ha x 17 l/s/ha = 79.1 l/s
 25-YEAR = 4.65 ha x 60 l/s/ha = 279.0 l/s
 50-YEAR = 4.65 ha x 80 l/s/ha = 372.0 l/s
 100-YEAR = 4.65 ha x 105 l/s/ha = 488.3 l/s

EXTERNAL DRAINAGE AREA
KEY MAP



REFER TO SHEET 17

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

NOTES TO CONTRACTOR:

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE
1:500

APPROVALS

STAMP
S. LLEWELLYN & ASSOCIATES LIMITED
CONSULTING ENGINEERS
Aug 13/2021

3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

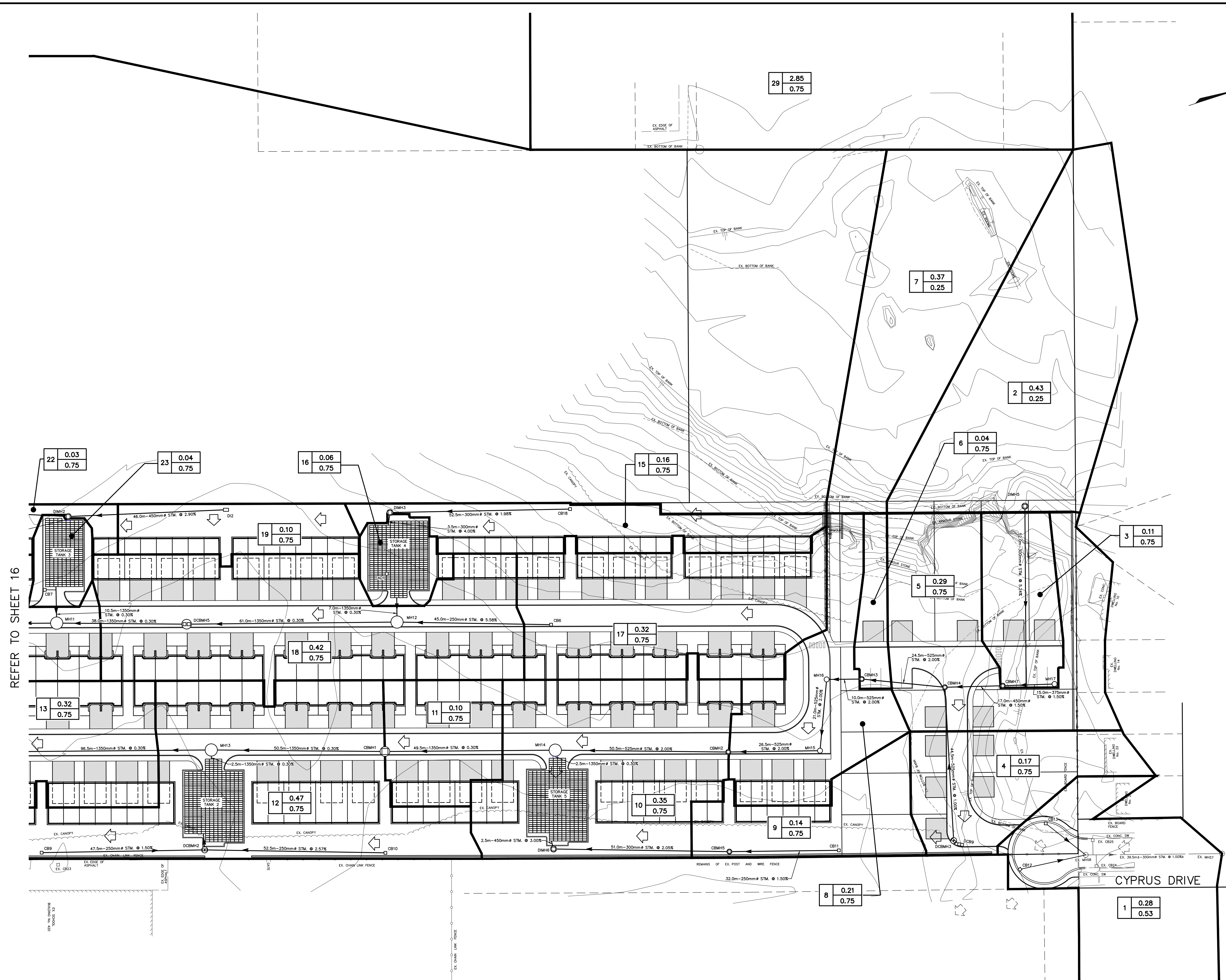
THE CITY OF HAMILTON

PROJECT NAME
DICENZO CONSTRUCTION COMPANY LIMITED
LAVITA ESTATES

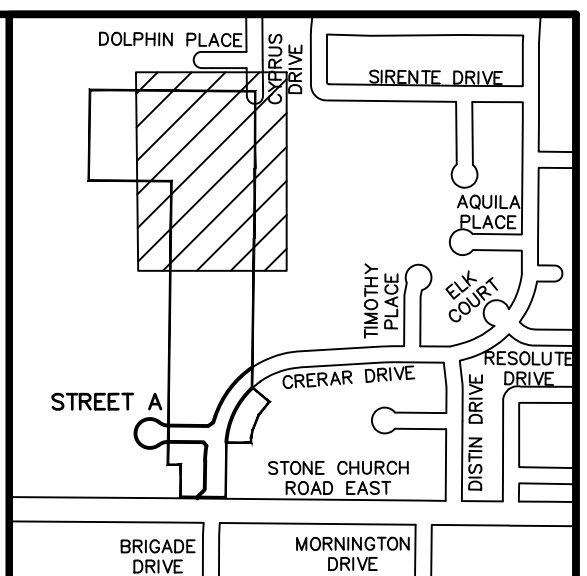
TITLE
ULTIMATE STORM DRAINAGE AREA PLAN
(SHEET 1 OF 2)

PROJECT No.	DRAWING No.	SHEET No.
19062	STM-1	16

S:\19062\Working\Current\19062-Ultimate Storm Drainage Area Plan.dwg
 Plotted: August 13, 2021 9:52:42 AM By: Colin Dougan



REFER TO SHEET 16



KEY MAP
N.T.S.

- LEGEND:**
- 1 0.28
 0.75 AREA IN HECTARES
 - RUN-OFF CO-EFFICIENT
 - AREA NUMBER
 - STORM DRAINAGE AREA BOUNDARY
 - ⇐ EMERGENCY OVERLAND FLOW ROUTE

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

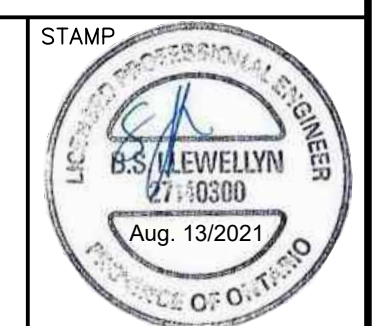
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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE
1:500

APPROVALS



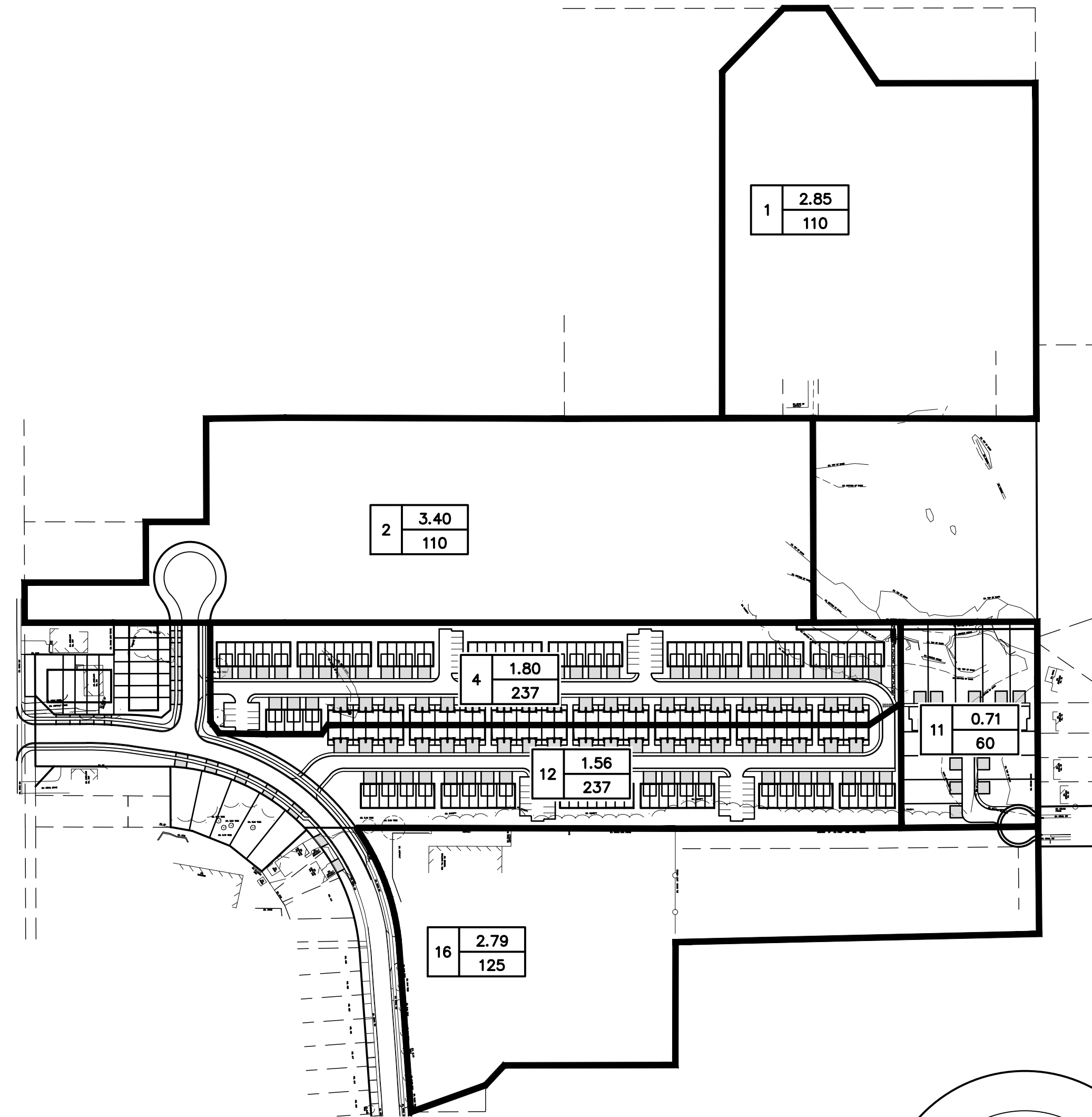
S. LLEWELLYN & ASSOCIATES LIMITED
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 Tel. (905) 631-6978
 Fax (905) 631-6927
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 3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME
DICENZO CONSTRUCTION COMPANY LIMITED
LAVITA ESTATES

TITLE
ULTIMATE STORM DRAINAGE AREA PLAN
 (SHEET 2 OF 2)

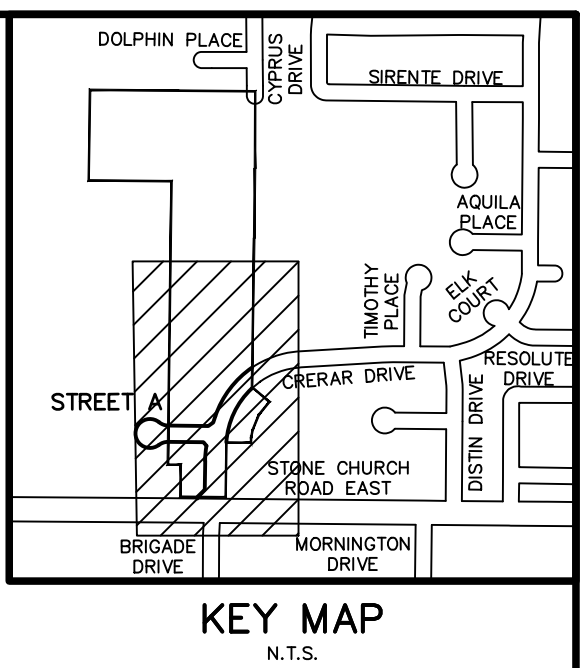
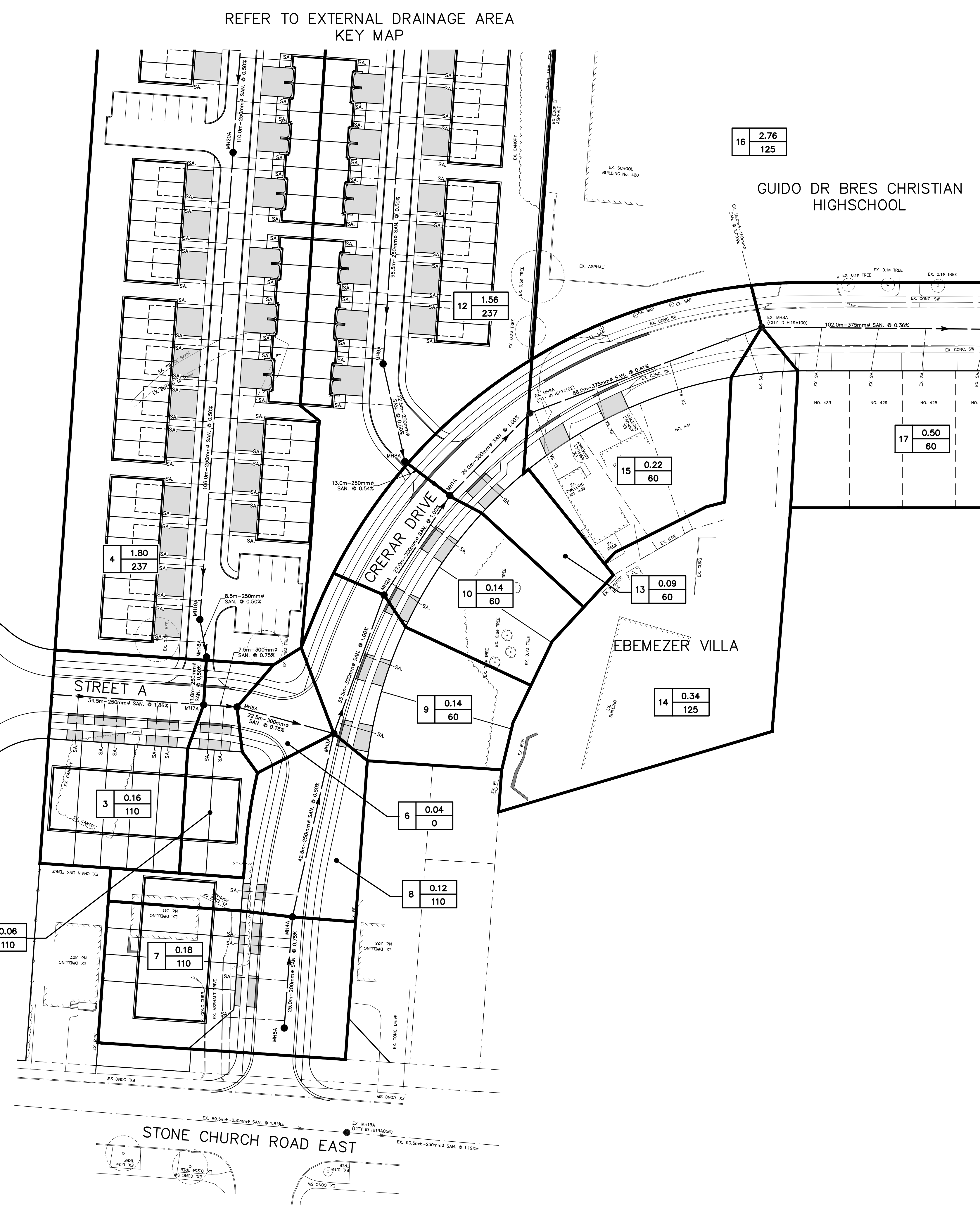
PROJECT No. 19062	DRAWING No. STM-2	SHEET No. 17
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EXTERNAL DRAINAGE AREA KEY MAP

LEGEND:

- 1 2.85 110 AREA IN HECTARES
- PERSONS PER HECTARE
- AREA NUMBER
- SANITARY DRAINAGE AREA BOUNDARY



REFER TO SHEET 19

NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE: 1:500

APPROVALS

STAMP: S. LLEWELLYN & ASSOCIATES LIMITED CONSULTING ENGINEERS, Aug 13/2021

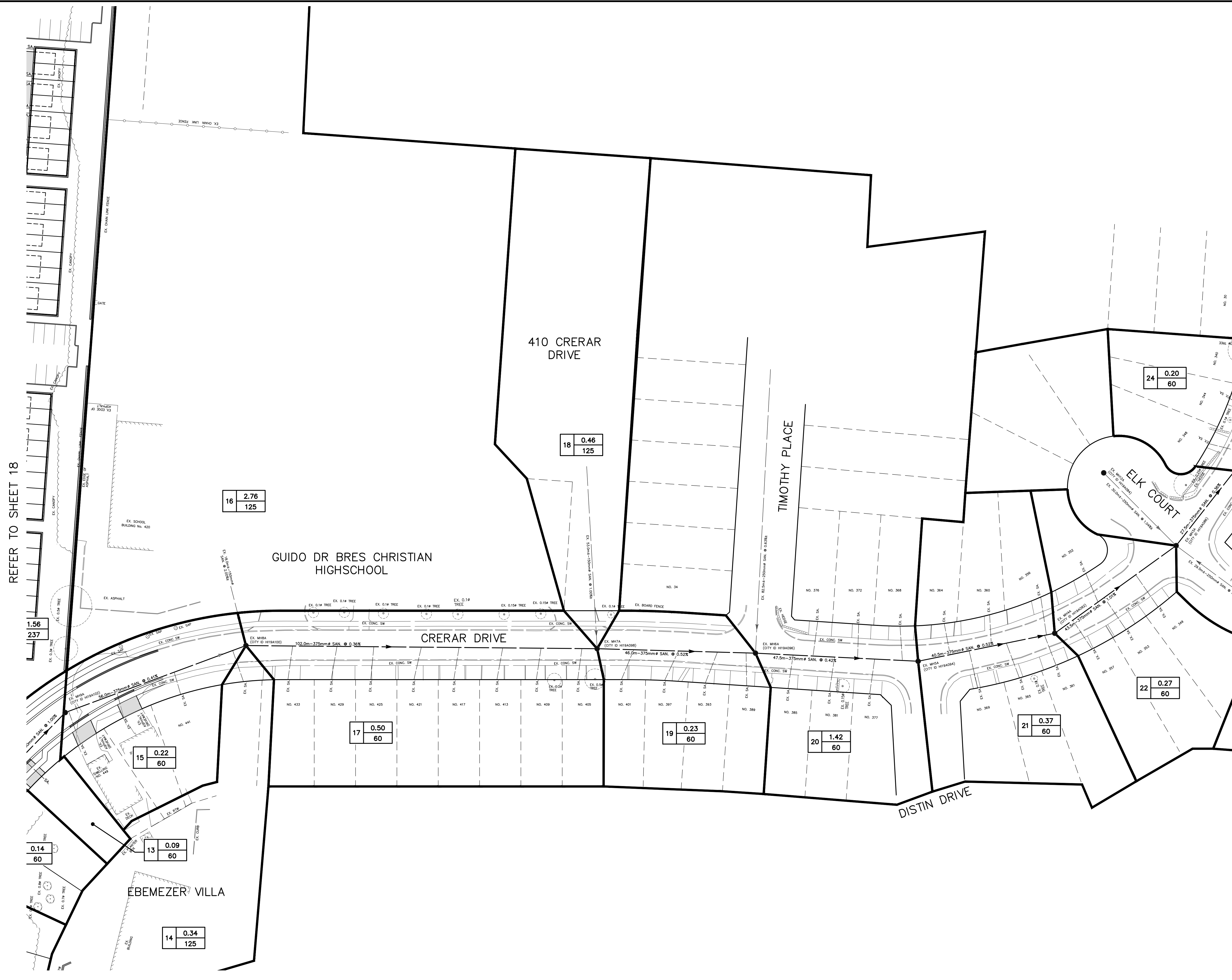
S. LLEWELLYN & ASSOCIATES LIMITED
 CONSULTING ENGINEERS
 Tel: (905) 631-6978
 Fax: (905) 631-8927
 email: info@sla.on.ca
 3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME: **DICENZO CONSTRUCTION COMPANY LIMITED LAVITA ESTATES**

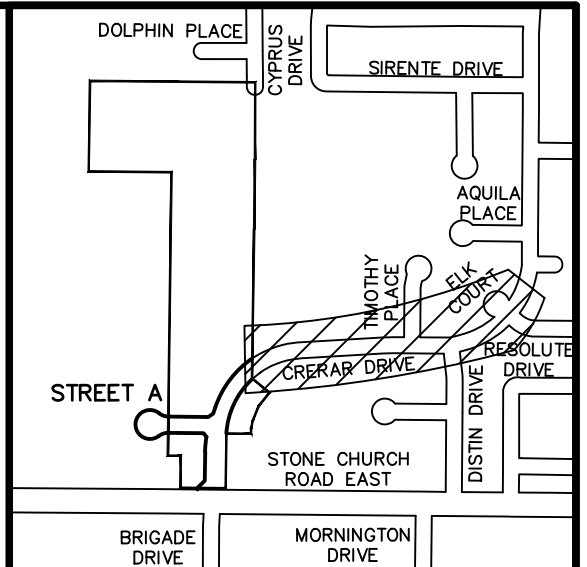
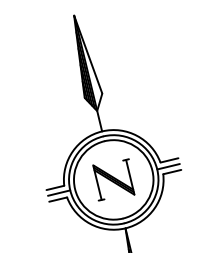
TITLE: **SANITARY DRAINAGE AREA PLAN (SHEET 1 OF 3)**

PROJECT No.	DRAWING No.	SHEET No.
19062	SANDAP-1	18

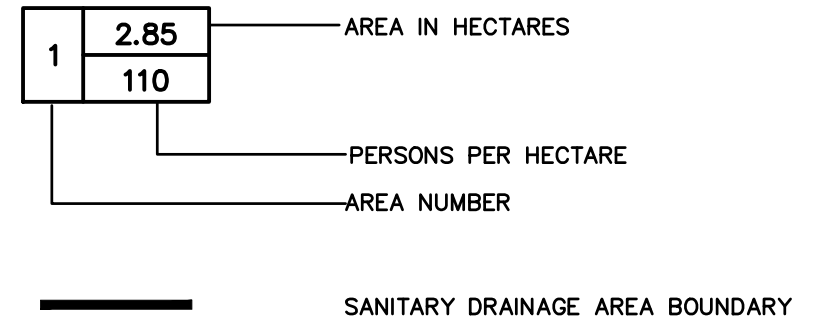


REFER TO SHEET 18

REFER TO SHEET 20



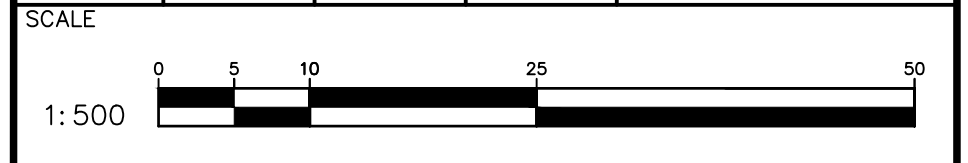
LEGEND:



NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

- NOTES TO CONTRACTOR:
- CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING.
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 - ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REVISED, OR REVERSED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED.
 - OPERATION OF EXISTING WATERMAIN VALVES SHALL BE BY THE CITY OF HAMILTON STAFF ONLY.

DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020



APPROVALS

STAMP

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 CONSULTING ENGINEERS

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THE CITY OF HAMILTON

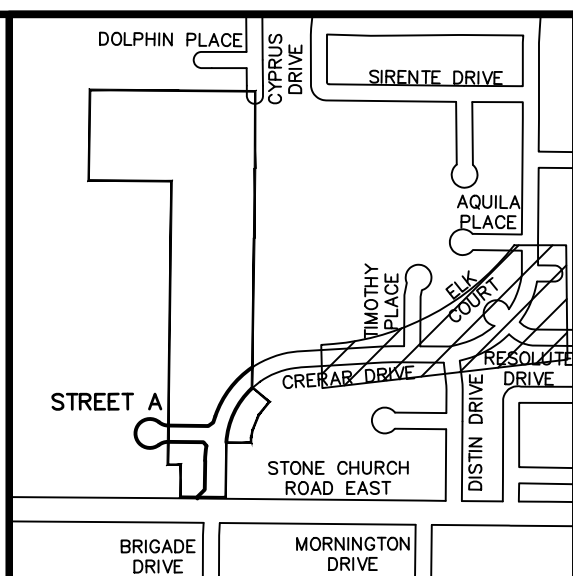
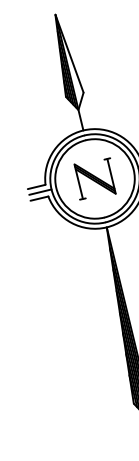
PROJECT NAME
 DICENZO CONSTRUCTION COMPANY LIMITED
 LAVITA ESTATES

TITLE
 SANITARY DRAINAGE
 AREA PLAN
 (SHEET 2 OF 3)

PROJECT No.	DRAWING No.	SHEET No.
19062	SANDAP-2	19

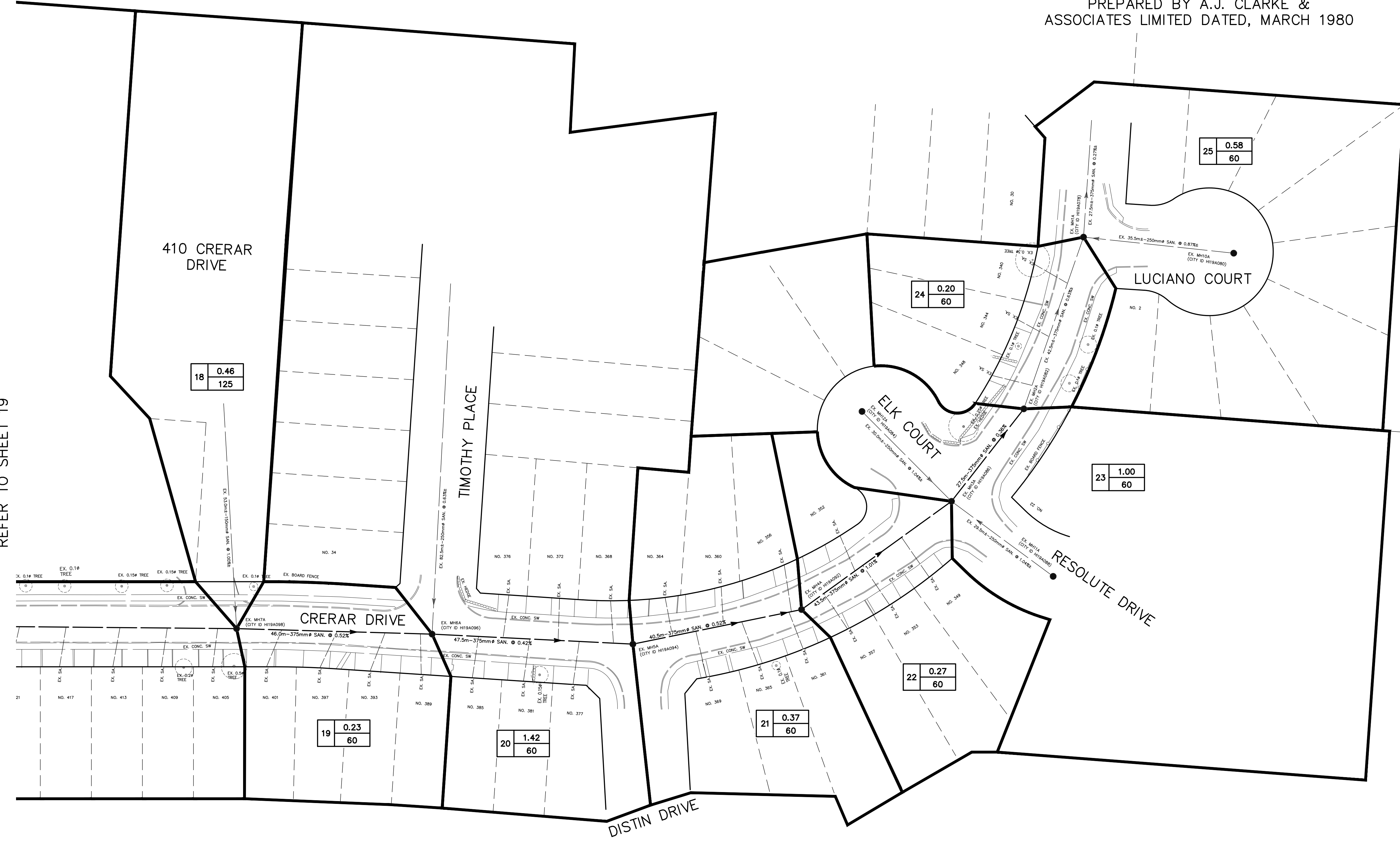
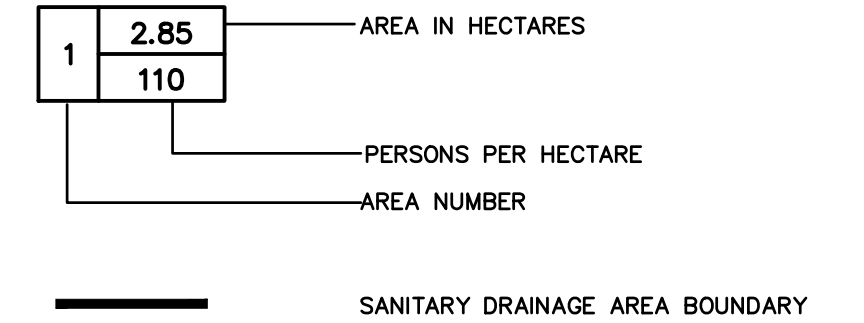
REFER TO SHEET 19

REFER TO AQUILA PLACE (PHASE 1)
 SANITARY DRAINAGE AREA PLAN
 PREPARED BY A.J. CLARKE &
 ASSOCIATES LIMITED DATED, MARCH 1980



KEY MAP
N.T.S.

LEGEND:



NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE
 1:500

APPROVALS

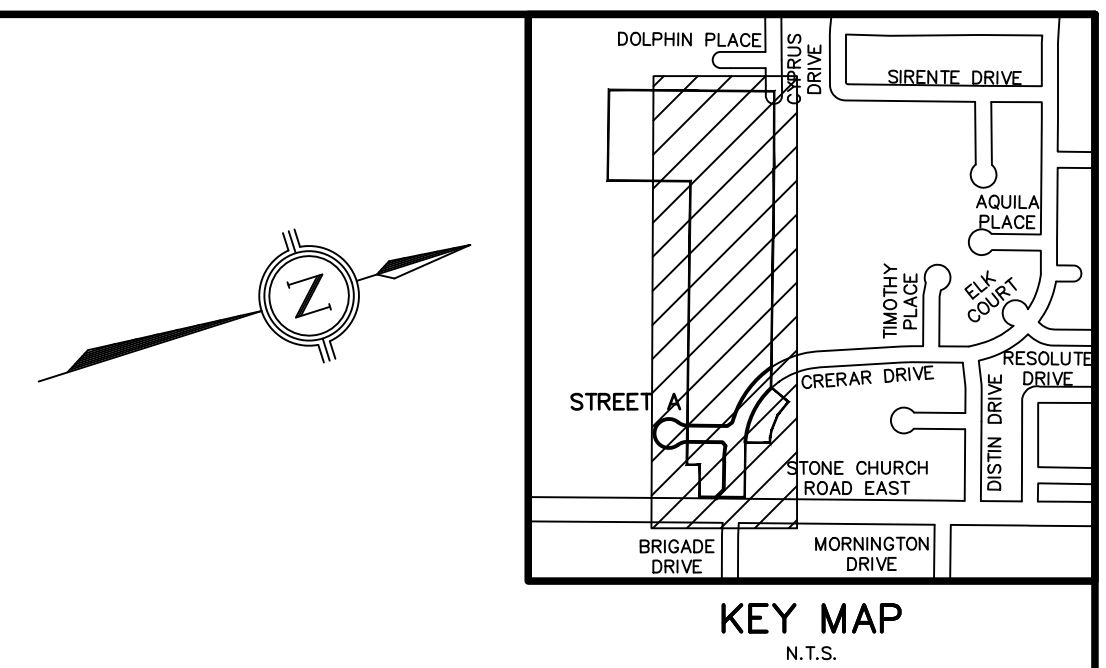
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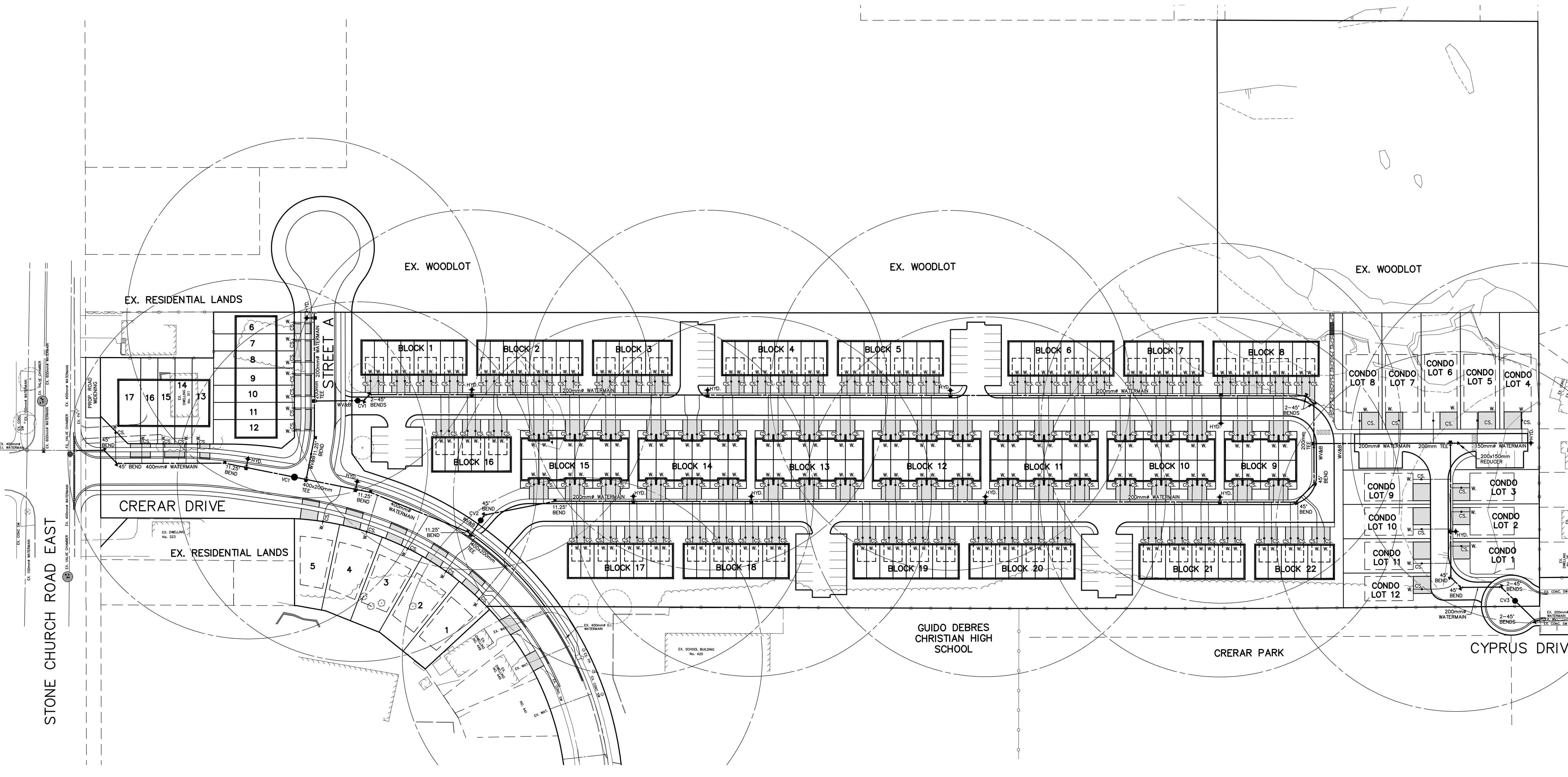
PROJECT NAME
 DICENZO CONSTRUCTION COMPANY LIMITED
 LAVITA ESTATES

TITLE
 SANITARY DRAINAGE AREA PLAN
 (SHEET 3 OF 3)

PROJECT No. 19062	DRAWING No. SANDAP-3	SHEET No. 20
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- LEGEND:**
- EX. VC1 ● EXISTING/PROPOSED WATER VALVE
 - CV1 ● PROPOSED CHECK VALVE ASSEMBLY IN CHAMBER
 - EX. WVC ● EXISTING/PROPOSED VALVE CHAMBER
 - EX. HYD ● EXISTING/PROPOSED HYDRANT
 - W-4CS ● PROPOSED 25mm Ø WATER SERVICE c/w CURB STOP
 - FIRE HYDRANT COVERAGE AREA (63m RADIUS)



NO.	DATE	BY	REVISIONS
1.	AUG/21	CD	RE-ZONING COMMENTS

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DESIGN	CD	CHK'D	SL	DATE
DRAWN	CD	CHK'D		NOV. 2020

SCALE: 1:750

APPROVALS

STAMP

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THE CITY OF HAMILTON

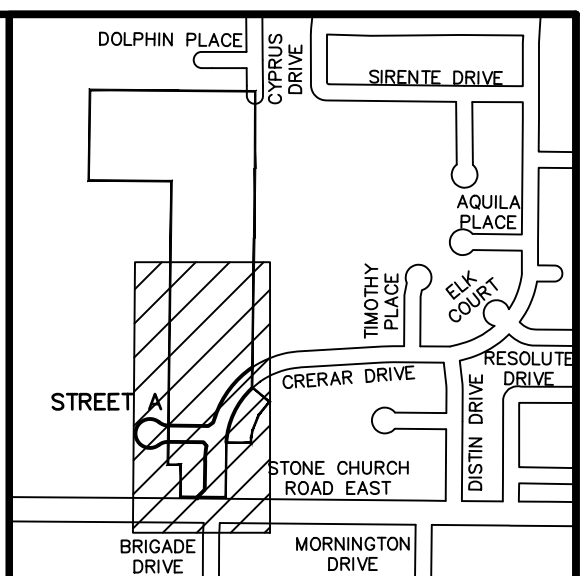
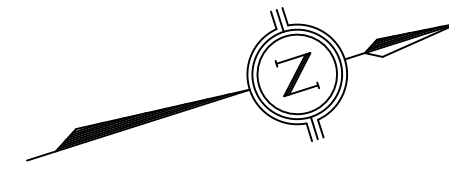
PROJECT NAME
**DICENZO CONSTRUCTION COMPANY LIMITED
 LAVITA ESTATES**

TITLE
WATER DISTRIBUTION PLAN

PROJECT No.	DRAWING No.	SHEET No.
19062	WDP-1	21

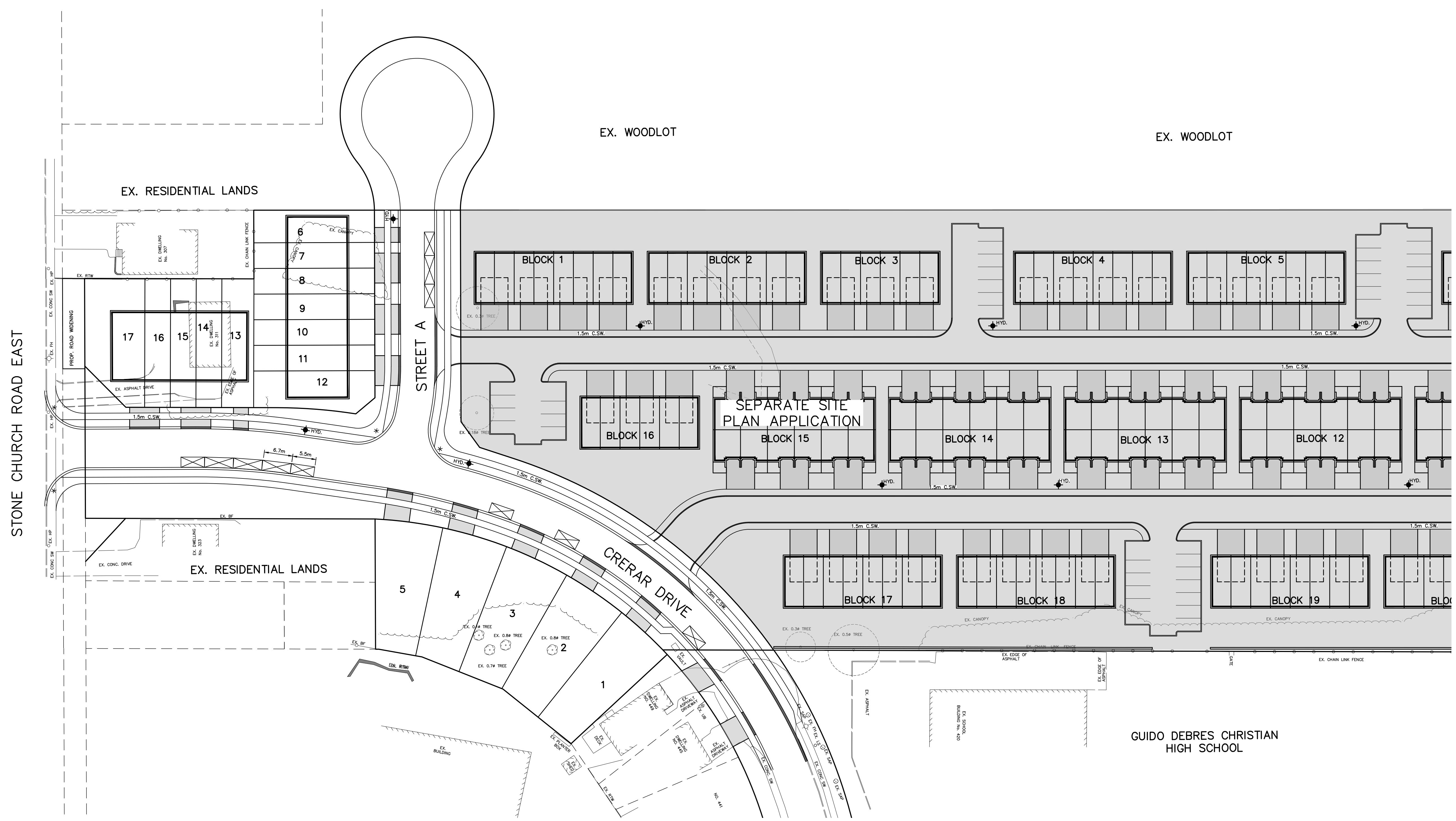
NO. OF FREEHOLD UNITS = 17
ON-STREET PARKING REQUIRED = 40% OF 17 = 7
NO. OF PARKING SPACES PROVIDED = 11

- NOTES:**
- PARKING STALLS ARE 2.4m WIDE BY 5.5m LONG.
 - PARKING STALLS WHERE SHOWN AS PARALLEL PARKING ARE 2.4m WIDE BY 6.7m LONG.
 - ALL PARKING STALLS SHALL BE A MINIMUM OF 0.5m FROM DRIVEWAY OR CURB CUTS.
 - A MINIMUM OF 9m FROM AN INTERSECTION, AS MEASURED FROM THE POINT OF INTERSECTION FORMED BY THE PROJECTION OF THE CURB LINES OR EDGES OF PAVEMENT WHERE THERE IS NO CURB.
 - PARKING SPACES ARE NOT PERMITTED:
 - ACROSS FROM A "T" INTERSECTION;
 - WITHIN 1m OF A BUS STOP;
 - WITHIN 3m OF A FIRE HYDRANT;
 - ALONG SCHOOL FRONTAGES;
 - ALONG PARK FRONTAGES;
 - IN FRONT OF A MIDBLOCK PEDESTRIAN WALKWAY OR TRAIL WHICH CONTINUES ON THE OPPOSITE SIDE OF THE STREET;



KEY MAP
N.T.S.

- LEGEND:**
- EX. HYD. (Symbol) EXISTING/PROPOSED HYDRANT
 - EX. LS. (Symbol) EXISTING/PROPOSED LIGHT STANDARD
 - EX. TRANS./VAULT (Symbol) EXISTING/PROPOSED TRANSFORMER/VAULT
 - (Symbol) DRIVEWAY & CURB DEPRESSION
 - (Symbol) WHEELCHAIR RAMP TO BE CONSTRUCTED AS PER RD-124-03
 - (Symbol) PARKING STALL
 - (Symbol) PROPOSED COMMUNITY MAILBOX

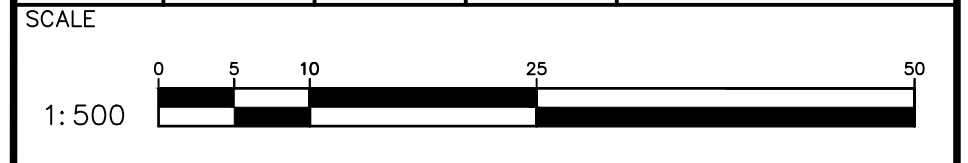


NO.	DATE	BY	REVISIONS
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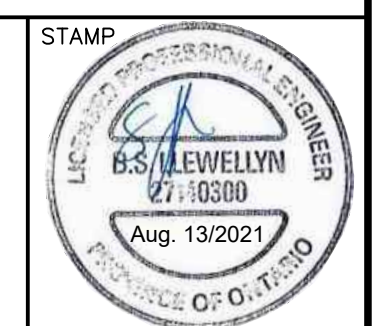
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APPROVALS



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3228 South Service Road, Suite #105 East Wing, Burlington, Ont., L7N 3H8

THE CITY OF HAMILTON

PROJECT NAME
DICENZO CONSTRUCTION COMPANY LIMITED
LAVITA ESTATES

TITLE
PARKING PLAN

PROJECT No. 19062	DRAWING No. PARK-1	SHEET No. 22
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