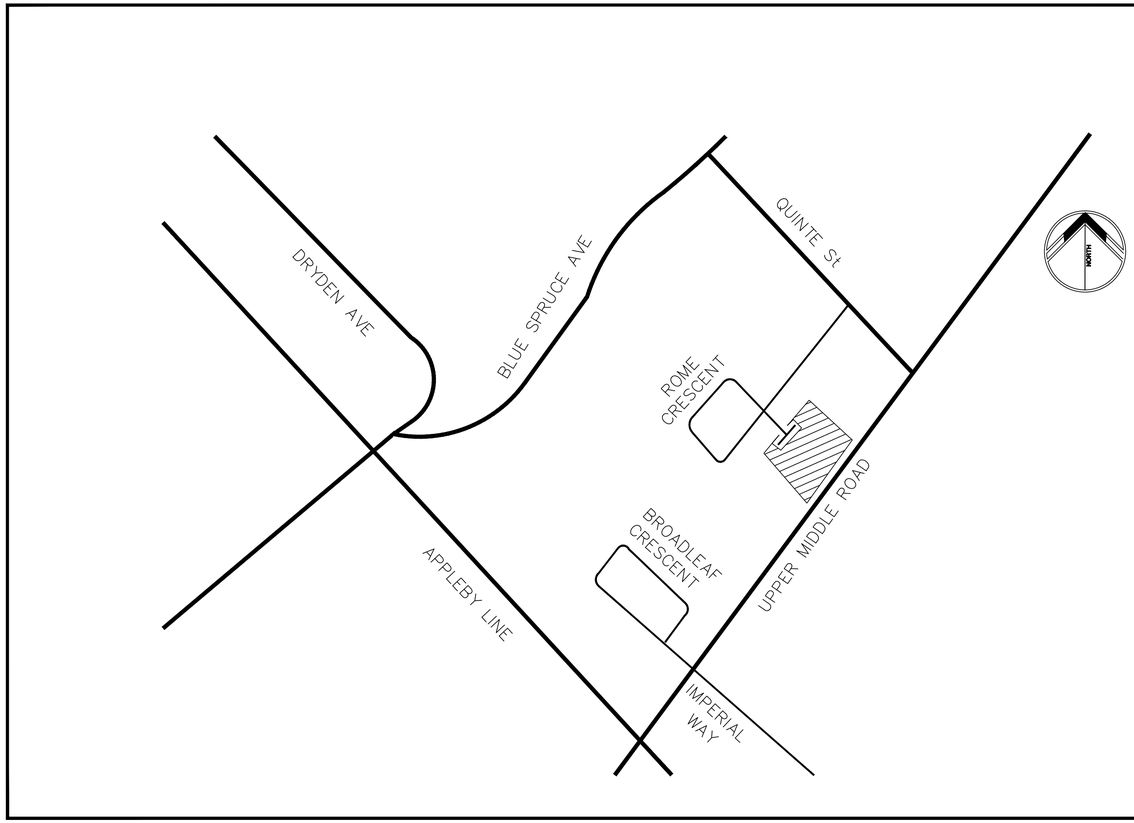
LIST OF DRAWINGS

DRWG. NO. & TITLE:

17213 - GEORGINA CT

1. Legend Abbreviations & General Notes
2. General Servicing Plan
3. Grading Plan
4. Notes and Details
5. Standard Drawings
6. Plan & Profile
7. Sections



PROPOSED RESIDENTIAL STREET EXTENSION

GEORGINA COURT
BURLINGTON, ONTARIO

ODAN·DETECH
CONSULTING ENGINEERS

The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

REGION OF HALTON

1151 Bronte Road
Oakville, ON L6M 3L1

Halton REGION

GARY CARR
REGIONAL CHAIR

JIM HARNUM
PUBLIC WORKS
COMMISSIONER

CITY OF BURLINGTON

426 BRANT STREET P. O. BOX 5013
BURLINGTON, ON, L7R 3Z6

City of Burlington

OWNER
Bloomfield Homes

ENGINEERS

THE ODAN/DETECH GROUP INC.
5230 South Service Road
Burlington, ON L7L 5K2

PROJECT NO.

17213 File: 17213 Set L
Town File No. 24T-18001/B

DATE

1st Submission - August 15, 2019

GENERAL NOTE:

1. ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH OCCUPATIONAL HEALTH & SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
2. ALL TRAFFIC SIGNS AS PER MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
3. EXISTING STRUCTURES ARE NOT TO BE DISTURBED NOR ENCROACHMENT ON ADJACENT PROPERTIES UNLESS INSTRUCTED BY THE ENGINEER.
4. SILT FENCES ARE TO BE INSTALLED AND MAINTAINED TO PREVENT SILT FROM FLOWING ONTO ADJACENT LANDS.
5. THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND UNDERGROUND AND ABOVE GROUND UTILITIES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED.BEFORE STARTING THE WORK THE CONTRACTOR SHALL CONFIRM OF THE EXACT LOCATION OF ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

ABBREVIATIONS

ABUTMENT	ABUT.
ACRES	AC.
ALLOWANCE	ALL'CE
AMERICAN SOCIETY FOR TESTING AND MATERIALS	A.S.T.M.
APPROVED	APP'D
ASBESTOS	ASB.
ASBESTOS CEMENT	A.C.
ASBESTOS CEMENT PIPE	A.C.P.
ASBESTOS CEMENT PRESSURE PIPE	A.C.P.P.
ASPHALT	ASPH.
AVENUE	AVE.
AVERAGE	AV.
AVERAGE ANNUAL DAILY TRAFFIC	A.A.D.T.
AZIMUTH	AZ
BACK FILL	B.FILL
BACK SIGHT OR BUS STOP	B.S.
BASEMENT	BSMT.
BEDDING	BED
BEGINNING OF CURVE	B.C.
BEGINNING OF VERTICAL CURVE	B.V.C.
BELL TELEPHONE	B.
BENCH MARK	B.M.
BOULEVARD	BLVD.
BUILDING	BLDG.
BUILDING LINE	B/L
CANADIAN NATIONAL RAILWAY	C.N.R.
CANADIAN PACIFIC RAILWAY	C.P.R.
CANADIAN STANDARD ASSOCIATION	C.S.A.
CAST IRON PIPE	C.I.P.
CATCH BASIN	C.B.
CENTRE LINE	C.L. OR C
CHAINAGE EQUATION	CH. EQ.
CHAIN LINK FENCE	C.L.F.
CHECKED	CHK'D.
CHORD	CH.
CLASS OR CLAY	CL.
CLAY PIPE	CL.P.
CLEAN OUT	C.O.
COMMERCIAL	COMM.
CONCESSION	CON.
CONCRETE	CONC.
CONCRETE MONUMENT	C.M.
CONCRETE PIPE	C.P.
CONSTRUCTION	CONST.
CORNER	COR.
CORRUGATED STEEL PIPE	C.S.P.
COURT	CT.
CRESCENT	CRES.
CROSS SECTION	X-SECT.
CUBIC	CU.
CUBIC FEET PER SECOND	C.F.S.
CULVERT	CULV.
CURB AND GUTTER	C.& G.
CURVE TO SPIRAL	C.S.
DEGREE OF CURVE	D.
DEPARTMENT	DEPT.
DIAMETER	DIA.
DISTANCE	DIST.
DITCH INLET	D.I.
DIVISION	DIV.
DRAWING	DWG.
DRIVE	DR.
DRIVEWAY	DWY.
DUCTILE IRON PIPE	D.I.P.
EACH	EA.
EARTH CUT OR END OF CURVE	E.C.
EARTH FILL	E.F.
EAST OR EXTERNAL	E.
EDGE OF PAVEMENT	E.O.P.
ELECTRIC	ELEC.
ELEVATION	EL.
END OF VERTICAL CURVE	E.V.C.
ENGINEER	ENG.
ENTRANCE	ENT.
ESTIMATE	EST.
EXCAVATION	EXC.
EXISTING	EX.
EXTRA STRENGTH	E.S.
FEET OR FOOT	FT.
FINAL MEASUREMENT	F.M.
FIRE HYDRANT	FH
FLOOR	FL.
FOOTING	FTG.
FORESIGHT	FS.
FOUNDATION	FND.
FRAME	FR.
FREEWAY	FRWY.
GALLONS PER MINUTE	G.P.M.
GALVANIZED	GAVL.
GAS	G.
GAUGE	GA.
GEODETIC BENCH MARK	G.B.M.
GRADE OR GRAVEL	GR.
HORIZONTAL	HOR.
HOT LAID	H.L.
HOT MIX	H.M.
HOUSE	HSE.
HYDRANT	HYD.
HYDRO	H.
INDUSTRIAL	IND.
INSIDE DIAMETER	I.D.
INSTRUMENT	INSTR.
INSULATED	INS.
INTERMEDIATE SIGHT	I.S.
INVERT	INV.
IRON BAR	I.B.
IRON PIPE	I.P.
LEFT	LT.
LENGHT	LEN.
LENGHT OF VERTICAL CURVE	L.V.C.
LIGHT STANDARD	L.S.
LINEAL FOOT	L.FT.
LOW POINT	L.P.
LOW WATER LEVEL	L.W.L.
MANHOLE(S)	MH
MAXIMUM	MAX
MILES PER HOUR	M.P.H.
MINISTRY OF TRANSPORTATION OF ONTARIO	M.T.O.
MINIMUM	MIN
MUNICIPAL	MUN.
NO PARKING	P̸
NORTH	N
NOT TO SCALE	N.T.S.
NUMBER	NO.
OBVERT	OBV.
ORIGINAL GROUND	O.G.
OUTSIDE DIAMETER	O.D.
PARKWAY	PKWY.
PART OR POINT	PT.
PAVEMENT	PAV.T
PERSONS PER ACRE	P.P.A.
PIPE	P
POINT OF COMPOUND CURVE	P.C.C.
POINT OF CURVE	P.C.
POINT OF INTERSECTION	P.I.
POUNDS PER SQURE INCH	P.S.I.
PROPERTY OR PROPOSED	PROP
PROPERTY LINE	P/L OR PL
PUMPING STATION	P.S.
QUANTITY	QTY.
RADIUS	R. OR RAD.
RAILWAY	RWY.
REGISTERED PLAN	R.P.
REINFORCED	REINF.
RESIDENTIAL	RES.
RETAINNING WALL	RET. W.
REVISION	REV.
RIGHT	RT.
RIGHT OF WAY	R.O.W.
ROAD	RD.
ROUND IRON BAR	R.I.B.
SAFE PASSING SIGHT DISTANCE	S.P.S.D.
SAFE STOPPING SIGHT DISTANCE	S.S.S.D.
SAND	SA.
SANITARY	SAN.
SECTION	SECT.
SEWAGE TREATMENT PLANT	S.T.P.
SEWER	SEW.
SHEET	SH.
SIDWALK	S/W
SIGNAL	SIG.
SOUTH OR SUPERELEVATION	S
SPECIFICATION	SPEC.
SPIRAL TO CURVE	S.C.
SPIRAL TO TANGENT	S.T.
SQUARE	SQ.
STANDARD(S)	STD.
STANDARD IRON BAR	S.I.B.
STANDARD STRENGTH	S.S.
STATION	STA.
STOP OR STREET	ST.
STOPPING SIGHT DISTANCE	S.S.D.
STORM	STM.
STOREY	STY.
STRUCTURE	STR.
STUCCO	STUC.
SUBDIVISION	SUBD.
TANGENT	TAN.
TANGENT TO SPIRAL	T.S.
TECHNICAL TO SPIRAL	TECH.
TELEGRAPH	T
TERRACE	TER.
TOWNSHIP	TWP.
TRAFFIC LIGHT	T.L.
TRANSFORMER	TRANS.
TURNING POINT	T.P.
TYPICAL	TYP.
VALVE	V.
VELOCITY	VEL.
VERTICAL	VERT.
VERTICAL POINT OF INTERSECTION	V.P.I.
VISIBILITY CURVE	V.C.
VITRIFIED PIPE	VT.P.
VOLUME	VOL.
WALKWAY	W/W
WATER LEVEL	W.L.
WATER OR WEST	W.
WATERMAIN	W/M
YARD	YD.

ROADWORK

4.6. SIDEWALKS

a. CONCRETE CURB AND GUTTER AS PER OPSD-600.040, MINIMUM 30MPA STRENGTH AND AIR ENTRAINMENT SHALL BE BETWEEN 5.5% AND 7.0%.

b. CURB DEPRESSIONS AT DRIVEWAYS AS PER OPSD-600.040

c. DRIVEWAY APRON COMPOSITION TO BE DETERMINED AT SITE PLAN STAGE.

d. ENTRANCES AS PER CITY OF BURLINGTON STANDARD S-119 AND OPSD 600.040.

e. REFER TO CITY OF BURLINGTON AMENDMENTS TO OPSS, C-2, C-2 AMENDMENTS TO ONTARIO PROVINCIAL STANDARD SPECIFICATIONS. SEE DRAWING 4 OF 5

REFERENCE POINTS

Symbol	Description
I.P.	IRON PIPE
R.I.B	ROUND IRON BAR
S.I.B.	5/8" SQUARE IRON BAR
S.I.B.	1" STANDARD IRON BAR
C.M.	CONC. MONUMENT
	BORE HOLE
	BENCH MARK

RAILWAYS

Symbol	Description
R.S.	RAILWAY SIGNAL WITH BELL OR LIGHTS
	SINGLE RAILWAY TRACK
	DOUBLE RAILWAY TRACK OR MORE

STORM AND SANITARY

Symbol	Description
	EXISTING STORM MANHOLE
	PROPOSED STORM MANHOLE
	EXISTING CATCHBASIN
	PROPOSED CATCHBASIN
	EXISTING DOUBLE CATCHBASIN
	PROPOSED DOUBLE CATCHBASIN
	PROPOSED STORMCEPTOR
	PROPOSED INLET CONTROL DEVICE (ICD)
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING SANITARY MANHOLE
	PROPOSED SANITARY MANHOLE
C.O.	PROPOSED CLEAN OUT
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	PROPOSED CULVERT
	EXISTING CULVERT
	DITCH CENTRE LINE AND DIRECTION OF FLOW
	EMERGENCY OVERLAND FLOW
	PROPOSED SUMP PUMP
	PROPOSED ROOF DRAIN

UTILITIES

Symbol	Description
H	HYDRO BURIED CABLES AND DUCTS
HYD.	HYDRO TRANSFORMER VAULT AND CHAMBER
B	BELL TELEPHONE BURIED CABLES AND DUCTS
B.T.	B.T.CO. MANHOLE
B.	BELL PEDESTAL
G	GAS MAINS
GH	GAS MAINS(HIGH PRESSURE)
G	GAS VALVE
B.	BELL TELEPHONE POLE
H.P.	HYDRO POLE
T.	TELEGRAPH POLE
L.S.	LIGHT STANDARD
T.L.	TRAFFIC LIGHT
	GUY AND ANCHOR
	EXISTING LIGHT STANDARD
	FUTURE LIGHT STANDARD
	PROPOSED LIGHT STANDARD
	PROPOSED LIGHT STANDARD PEDESTAL
	PROPOSED HYDRANT
	EXISTING HYDRANT

LENGENDS

a. REFER TO THE ABOVE LEGEND IF NOT SPECIFIED ON DRAWING(S).

b. DRAWING SPECIFIC LEGEND TO SUPERCEDE THE ABOVE OR BE ADDITIONAL INFORMATION.

c. DRAWING SPECIFIC CALLOUT(S) ON HATCH(ES) TO SUPERCEDE THE ABOVE MISCELLANEOUS ITEM HATCH(ES).

MISCELLANEOUS

Symbol	Description
	SWAMP
	EXISTING STUMP
	TRAFFIC FLOW
RET.W	RETAINING WALL
	STEEL HYDRO TOWER
	TRAFFIC SIGN
	STONE OR GABION
	LAKE OR RIVER BANK
	PROPOSED FENCE
C.L.F.	PROPOSED CHAIN LINK FENCE
W.F.	PROPOSED WOOD FENCE
S.F.	PROPOSED STEEL FENCE
P.&W.F.	PROPOSED POST AND WIRE FENCE
116.00	PROPOSED APRON ELEVATION (GROUND ELEVATION AT HIGHEST POINT AROUND BUILDING).
B.F.E. 113.80	PROPOSED BASEMENT FLOOR ELEVATION
	PROPOSED MUD MAT
	PROPOSED RETAINING WALL
	PROPOSED ASPHALT REMOVAL
	PROPOSED RIP-RAP
	PROPOSED PIPE INSULATION
	PROPOSED ROCK CUT
	PROPOSED ACCESS HATCH
	PROPOSED AREA OF EXPANSION
	PROPOSED PIPE REMOVAL
A / 2	CROSS-SECTION REFERENCE DRAWING NUMBER
	PROPOSED SUBDRAIN
	PROPOSED GEOGRID
100.00	EXISTING SPOT ELEVATION
(100.00)	PROPOSED ELEVATION
(100.00)T/C	PROPOSED TOP OF CURB ELEVATION
(100.00)G/L	PROPOSED GUTTER LINE ELEVATION
(100.00) HP	PROPOSED HIGH POINT
(100.00)	PROPOSED SWALE INVERT ELEVATION
[100.00]	PROPOSED ELEVATION BY OTHERS
1.0%	PROPOSED FLOW ARROW AND SLOPE
	PROPOSED FLOW ARROW
	PROPOSED SLOPE (3:1 OR HIGHER)
195.50	EXISTING CONTOUR
	PROPOSED SILT FENCE
	PROPOSED ENTRANCE LOCATION
	EXTENT OF MAX. PONDING (0.25m) 100 YEAR STORM.
	PROPOSED LIMIT OF CONSTRUCTION
	PROPERTY LINE
	PROPOSED LIMIT OF HEAVY DUTY ASPHALT
48	EXISTING LOT BY OTHERS
69 A=1.23	TRIBUTARY AREA INFORMATION
	TRIBUTARY AREA
STOP	STOP AND STREET NAME SIGN LOCATION
	PROPOSED WATER VALVE & BOX
	EXISTING WATER VALVE & BOX
	PROPOSED BLOW OFF VALVE
	PROPOSED WATER METER
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
	PROPOSED SIAMESE CONNECTION
	PROPOSED CAP FOR SANITARY, STORM, AND/OR WATER AS NOTED
	DENOTES ARMOR STONE RETAINING WALL

UTILITIES SUPPORT/RESTORATION OF DRIVEWAYS AND ROADS:

a. ALL SERVICES, UTILITIES AND CATCH BASIN LEADS SHALL BE SUPPORTED AS PER OPSD-1007.01 AND OPSD-1007.02.

b. ALL UTILITIES SHALL BE LOCATED, SUPPORTED AND PROTECTED TO THE SATISFACTION OF THE UTILITY COMPANY DURING THE CONSTRUCTION PERIOD.

c. ANY CUTS INTO DRIVEWAYS, ROADS, ETC. (ANY PAVED AREA (CONCRETE OR ASPHALT)), SHOULD BE RESTORED TO CITY OF BURLINGTON STANDARDS S-114, S-114A, AND S-114B.

d. ALL SERVICES AND/OR UTILITIES LOCATED ON CONCRETE SIDEWALKS OR CURBS TO BE ISOLATE FROM THE SIDEWALK OR CURB AS PER OPSD-310.040.

GENERAL NOTES

1. DRAWINGS ARE NOT TO BE SCALED.
2. DO NOT SITE BUILDINGS WITH THIS DRAWING.
3. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON THE SITE PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER BEFORE PROCEEDING.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS THE STANDARD CITY, REGION/COUNTY, MTO AND OPSD AND OPSS ARE TO CONSTITUTE PART OF THIS CONTRACT AND SITE PLAN DRAWINGS.
5. REFER TO CITY STANDARDS AND SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS AND MATERIALS.
6. EXISTING STRUCTURES ARE NOT TO BE DISTURBED, NOR ENCROACHMENT ON ADJACENT PROPERTIES UNLESS INSTRUCTED BY THE ENGINEER AND WITH WRITTEN PERMISSION FROM ADJACENT LAND OWNERS.
7. THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNERS CONTRACTOR FROM OBTAINING AND PAYING FOR, BUT NOT LIMITED TO THE FOLLOWING PERMITS, ROAD CUTS, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC. ALL RESTORATION AS PER CITY STANDARDS.
8. PRIOR TO CONSTRUCTION, THE ENGINEER IS TO BE NOTIFIED BY THE OWNER AND THE CONTRACTOR AS TO THE EXTENT OF THE CONSTRUCTION LIMITS THEY PROPOSE. THE CITY IS TO BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
9. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE SITE PLAN, LANDSCAPE PLAN, SITE ELECTRICAL PLANS, AND ANY OTHER PLANS OR DRAWINGS WHICH DEPICT WORKS THAT ARE PROPOSED FOR THIS SITE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION AND REMOVAL OF ALL NECESSARY SIGNAGE, DELINEATORS, MARKERS AND BARRIERS. ALL SIGNS, ETC. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS FOR THE CITY AND THE MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR ONTARIO.
11. THE CONTRACTOR SHALL ENDEAVOR TO PREVENT MUD TRACKING ONTO EXISTING RIGHT-OF-WAYS AND SHALL PROVIDE FOR CLEANUP AT HIS OWN EXPENSE AS DIRECTED BY THE CITY. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE TO CONTROL DUST ON THE PROJECT AND HE SHALL PROVIDE AT HIS OWN EXPENSE, CONTROLLING MEASURES AS DIRECTED BY THE CITY.
12. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES PRIOR TO AND DURING CONSTRUCTION. LOCATION OF EXISTING UTILITIES TO BE VERIFIED IN THE FIELD.
13. THE CONTRACTOR SHALL RECTIFY ALL DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER AND TO THE SATISFACTION OF THE CITY.
14. BLASTING WILL NOT BE ALLOWED.
15. ANY UTILITY RELOCATIONS DUE TO THIS DEVELOPMENT TO BE UNDERTAKEN AT THE EXPENSE OF THE OWNER/DEVELOPER.
16. ALL DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND THE PROPERTY OF THE ENGINEER WHICH MUST BE RETURNED AT THE COMPLETION OF WORK.
17. DRIVEWAYS SHALL BE SETBACK A MINIMUM CLEARANCE OF 1.0 m. FROM ALL ABOVEGROUND SERVICES OR OTHER OBSTRUCTIONS.
18. ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
19. CONSTRUCTION ACCESS SHALL BE CONSTRUCTED WITH A MIN. OF 450mm THICK CRUSHED STONE BASE FROM MUNICIPAL CURB OR EDGE OF PAVEMENT TO THE PROPERTY LINE TO THE SATISFACTION OF THE CITY. LOCATION SHALL BE AS PER THE CITY.
20. MINIMUM CLEARANCE OF 1.0m FROM ALL ABOVE GROUND SERVICES AND UTILITIES.
21. ALL WORKS WITHIN CITY RIGHT-OF-WAY TO BE PERFORMED BY CITY FORCES OR AN APPROVED CONTRACTOR AS PER CITY ACCEPTANCE, UNLESS OTHERWISE DIRECTED BY THIS ENGINEER. WORKS WITHIN THE MUNICIPAL RIGHT OF WAY REQUIRE MUNICIPAL CONSENT, CONTACT DOUG CONWAY 905-815-3338 OR DOUGLAS.CONWAY@BURLINGTON.CA
22. ALL EXISTING SEWERS ARE TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION INCLUDING SEWER INVERTS, MATERIAL TYPE, AND SIZE. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
23. ALL RELOCATION, RECONSTRUCTION AND RESTORATION TO BE PERFORMED TO THE SATISFACTION OF THE EXECUTIVE DIRECTOR OF CAPITAL WORKS.
24. A MINIMUM OF 150mm OF TOPSOIL AND No.1 GRADE NURSERY SOD WILL BE REQUIRED FOR IMPACTED AREAS
25. THE WORK PERFORMED UNDER APPROVAL OF THESE DRAWINGS SHALL HAVE A MINIMUM ONE YEAR GUARANTEE AND MAINTENANCE PERIOD THAT WILL STAY IN EFFECT UNTIL THE REGIONAL MUNICIPALITY OF HALTON HAS BEEN REQUESTED TO PERFORM ASSUMPTION INSPECTIONS, UNTIL THERE ARE NO DEFICIENCIES RECORDED. SURFACE ASPHALT TO BE GUARANTEED FOR MINIMUM ONE YEAR AFTER PLACEMENT TO THE SATISFACTION OF THE CITY OF BURLINGTON.
26. ALL WATER AND WASTEWATER DESIGN SHALL BE REFERENCED TO THE REGION'S WATER AND WASTEWATER LINEAR DESIGN MANUAL, JULY 2017 VERSION 3.01. AND APPROVED PRODUCT LIST.
27. TOTAL DEPTH OF MANHOLE ADJUSTMENT UNITS IS TO BE A MINIMUM OF 150MM TO A 300MM MAXIMUM.
28. RECOMMENDED COMPACTION LIFT HEIGHTS FOR WATER AND WASTEWATER MAIN INSTALLATION TO BE 200mm IN HEIGHT
29. THE INLET AND OUTLET SANITARY SEWER PIPES THAT JOIN THE MAINTENANCE HOLES (MANHOLES) SHALL HAVE GASKETTED FLEXIBLE WATER TIGHT CONNECTIONS.
30. Road Occupancy Permit (City of Burlington) is required for Georgina Court for any lane closures/restrictions. Contact Florin Patrau 905-335-7600 ext. 7838 or florin.patrau@burlington.ca for details

SERVICING NOTES

SANITARY

1. CONSTRUCTION OF SANITARY SEWERS & PRIVATE DRAINS SHALL BE IN ACCORDANCE WITH CITY OF BURLINGTON, REGION OF HALTON AND ONTARIO PROVINCIAL STANDARDS & SPECIFICATIONS.
2. ALL SANITARY SEWRS 200mmØ TO BE PVC SDR35 IN ACCORDANCE WITH CSA-B182.2, ASTM D-2779 AND ASTM D-3034 OR LATEST REVISIONS, RUBBER GASKET. SANITARY LATERALS SERVICES 125mmØ TO BE PVC SDR28. PIPES TO BE GREEN IN COLOUR.
3. FOR 1200mmØ MANHOLES, OPSD-701.010 IS TO BE USED. FOR 1500mmØ MANHOLES, OPSD-701.11 IS TO BE USED EXCEPT THE MANHOLE SHALL HAVE A MONOLITHIC BASE. THE BENCHING SHALL BE TO THE OBVERT OF THE PIPE TO PROVIDE A SMOOTH TRANSITION THROUGH THE MANHOLE. CONCRETE PIPE SHALL BE CONCRETE SUPPORTED TO THE FIRST JOINT AND FOR FLEXIBLE PIPE PROVIDE JOINT 600mm FROM MANHOLE WALL OR APPROVED WATERTIGHT PIPE CONNECTION IN MANHOLE OPENING, IN LIEU OF CONCRETE CRADLE.
4. FRAME AND COVER AS PER OPSD-401.010.5. BEDDING AS PER REGIONAL MUNICIPALITY OF HALTON AND AS PER OPSD-802.010, 802.030, 802.031 CLASS B, GRANULAR A COMPACTED TO 98% SPD. UNLESS OTHERWISE SPECIFIED.
6. PROVIDE WATER TIGHT COVERS FOR SANITARY MANHOLES LOCATED IN PONDING AREAS. EXISTING SEWER INVERTS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
7. MANHOLE SAFETY PLATFORMS ARE NOT PERMITTED IN HALTON.
8. ONLY SINGLE SANITARY SERVICE LATERALS ARE PERMITTED TO EACH HOUSE OUT OF THE SANITARY SEWER MAIN. PIPE IS TO BE GREEN IN COLOUR.
9. TOTAL DEPTH OF MANHOLE ADJUSTMENT UNITS AS PER CITY OF BURLINGTON STANDARD S-130.
10. SERVICE CONNECTIONS TO MAIN LINE SEWER SHALL BE AT A MAXIMUM OF 45 DEGREES FROM THE HORIZONTAL. INSTALLATION SHALL BE AS PER OPSD 1006.010 & 1006.020 AS AMENDED AND HALTON REGION STANDARD DRAWINGS RH 302.01 & 302.02.
11. ALL SANITARY SEWER MANHOLE LIDS ARE TO BE CAST WITH THE WORDS "DANGER" AND "SANITARY"
12. LATERAL CONNECTIONS FROM THE PROPERTY LINE TO THE MAIN SHALL BE GRAVITY FED. A 2% MINIMUM GRADE FOR LATERAL CONNECTIONS SHALL BE MAINTAINED.
13. ALL MANHOLES ARE TO BE WATERPROOFED AND TESTED TO CONFIRM THAT THEY ARE WATER TIGHT.WATERPROOFING SHALL BE INSTALLED ON THE EXTERIOR OF ALL MANHOLES. WATERPROOFING SHALL BE A NON-TOXIC, NON-FLAMMABLE, FAST CURING MATERIAL TO ANSI/NSF STANDARD 61, BARRIER MATERIALS.
15. ALL NEW WASTEWATER MAINS CONNECTING TO THE EXISTING SYSTEM SHALL BE PLUGGED AT THE CONNECTION POINT TO THE ACTIVE SYSTEM UNTIL WRITTEN APPROVAL FROM HALTON REGION HAS BEEN RECEIVED TO ACCEPT FLOWS.
16. SANITARY SEWERS ARE NOT PERMITTED TO ACCEPT ANY STORM DRAINAGE INCLUDING FOUNDATION, ROOF DRAINAGE AND WEEPING TILE CONNECTIONS.
17. TO REFLECT THAT THE ENGINEERING CONSULTANT WILL, ON-THEIR-OWN, POST-CONSTRUCTION, UNDERTAKE THE "CLOSED CIRCUIT TELEVISION INSPECTION (CCTV)" OF THE WASTEWATER MAINS (SANITARY SEWERS) WITHIN THE ROAD.THE USE OF HALTON REGION APPROVED CONTRACTORS WILL BE USED. DEFICIENCIES ARE TO BE CORRECTLY IMMEDIATELY. ONCE ALL THE WASTEWATER MAINS ARE CONSTRUCTED BY THE SERVICING CONTRACTOR, PASSED AIR & MANDREL TESTING AND THE CCTV REPORTS REVIEWED BY THE ENGINEERING CONSULTANT. THEN THE ENGINEERING CONSULTANT WILL PREPARE A LETTER TO THE REGION'S DEVELOPMENT PROJECT MANAGER CERTIFYING THE DEFICIENT FREE CONDITION OF THE WASTEWATER MAINS. PLEASE NOTE FOR THE FUTURE THAT THE WASTEWATER MAINS WILL ALSO BE CCTV'ED BY THE DEVELOPER/ENGINEERING CONSULTANT, JUST PRIOR TO ASSUMPTION OF THE WORKS BY THE REGION. BOTH ROUNDS OF CCTV INSPECTIONS AND REPORTS WILL BE MANAGED AND CERTIFIED IN WRITING AS DEFICIENT FREE BY THE DEVELOPER'S ENGINEER.

STORM

1) CONSTRUCTION OF SANITARY & STORM SEWERS & PRIVATE DRAINS SHALL BE IN ACCORDANCE WITH CITY OF BURLINGTON, REGION OF HALTON AND ONTARIO PROVINCIAL STANDARDS & SPECIFICATIONS.
2) ALL STORM SEWERS 450MMØ AND SMALLER TO BE PVC SDR35 IN ACCORDANCE WITH CSA-B182.2, ASTM D-2779, AND ASTM D-3034 OR LATEST REVISIONS. 525MMØ PIPE AND LARGER ARE TO BE CONCRETE IN ACCORDANCE WITH CSA A257.2, CLASS 65D OR LATEST REVISION. STORM LATERALS ARE TO BE 125MMØ PVC SDR28.
3) FOR 1200MMØ MANHOLES, OPSD-701.010 IS TO BE USED. FOR 1500MMØ MANHOLES, OPSD-701.011 IS TO BE USED, EXCEPT THE MANHOLE SHALL HAVE A MONOLITHIC BASE. THE BENCHING SHALL BE TO THE OBVERT OF THE PIPE, CONCRETE PIPE SHALL BE CONCRETE SUPPORTED TO THE FIRST JOINT AND FOR FLEXIBLE PIPE PROVIDE JOINT 600MM FROM MANHOLE WALL OR APPROVED WATERTIGHT PIPE CONNECTOR IN MANHOLE OPENING, IN LIEU OF CONCRETE CRADLE. FOR 1800MMØ MANHOLES, OPSD-701.012 IS TO BE USED.
4) FRAME AND COVER AS PER OPSD-401.010 FOR STORM, SHOULD BE CLOSED AND STAMPED "DANGER-STORM"
5) HIGH PREFORMANCE CLEAR STONE BEDDING AND BACKFILL FOR FLEXIBLE STORM SEWER CONNECTIONS AS PER CITY OF BURLINGTON STANDARD DRAWING S-188.
6) BEDDING AS PER OPSD-802.010, 802.030, 802.031 CLASS B, GRANULAR A COMPACTED TO 98% SPD.
7) CATCHBASIN MANHOLES AS PER MANHOLE SPECIFICATION. FRAME AND GRATE AS PER CATCHBASIN.
8) FOR MANHOLES GREATER THAN 5.0M DEPTH, SAFETY PLATFORMS AS PER OPSD-404.020 ARE TO BE INSTALLED.
9) CATCH BASINS:
10) CATCH BASIN CONNECTIONS TO BE 250MMØ, PVC SDR35 AS PER OPSD-708.010. A 375MMØ PIPE IS TO BE USED WHENEVER IT ACTS AS AN OUTLET FOR 2 OR MORE CATCHBASINS IN SERIES, UNLESS OTHERWISE NOTED.
11) SINGLE CATCH BASIN AS PER OPSD-705.010.
12) DOUBLE CATCH BASIN AS PER OPSD-705.020.
13) PVC PIPE MAY BE USED FOR CATCHBASIN CONNECTIONS IF THE COVER OVER THE OBVERT OF THE PIPE IS AT LEAST 0.8M. REINFORCED CONCRETE PIPE 140-D IS TO BE USED IF LESS THAN 0.8M OF COVER.
14) FRAME AND GRATE AS PER OPSD-400.020. IF IN PARKING AREA. FRAME AND GRATE AS PER CITY OF BURLINGTON DRAWING S-176 IF IN LANDSCAPE AREA.
15) ALL CATCHBASINS CONSTRUCTED IN FILL AREAS TO BE SUPPORTED IN 14 MPA CONCRETE.
16) ALL CATCHBASINS IN LANDSCAPE AREAS ARE TO BE SUMPLESS
17) DITCH INLETS PER OPSD 705.030

WATER

1. CONSTRUCTION OF WATERMAINS & PRIVATE SERVICES SHALL BE IN ACCORDANCE WITH REGION OF HALTON AND ONTARIO PROVINCIAL STANDARDS & SPECIFICATIONS.
2. WATERMAIN BETWEEN 100MMØ-300MMØ TO BE PVC DR18, CLASS 150, AS PER AWWA C-900.
3. MINIMUM COVER OVER WATERMAIN TO BE 1.7M.
4. BEDDING AS PER OPSD-802.030 OR OPSD-802.031, CLASS B, GRANULAR A AT 98% SPD, WITH A MINIMUM OF 150mm DEPTH.
5. MAXIMUM ALLOWABLE JOINT DEFLECTION SHALL BE 50% OF THE MANUFACTURER'S SPECIFICATION. JOINT DEFLECTION IS DISCOURAGED AND SHOULD BE AVOIDED AND BENDS INCORPORATED. PIPE BARREL BENDING/DEFLECTION IS NOT ALLOWED.
6. WATERMAINS SHALL HAVE A MINIMUM VERTICAL SEPARATION OF 0.5M AND HORIZONTAL SEPARATION OF 2.5M BETWEEN ANY WATERMAINS AND SANITARY/STORM MAIN, INCLUDING CONNECTION LATERALS, OR MANHOLE.
7. HYDRANTS TO BE INSTALLED AS PER REGION OF HALTON STD. RH 420.02 AND OPSD-1105.010.
8. ONLY MECHANICAL RESTRAINTS MAY BE USED.
9. STANDARD FIRE AND DOMESTIC SERVICE AS PER CITY OF BURLINGTON STANDARD S-130.
10. VALVE & VALVE BOXES AS PER REGION OF HALTON W3, OPSD-1101.020. SET ALL VALVES TO PROPOSED GRADES.
11. SERVICE LATERALS TO INDIVIDUAL UNITS ARE TO BE AS PER PLAN SIZE, WITH VALVE & BOX LOCATED AS PER PLAN. WATER METERS ARE TO BE LOCATED WHERE WATER SERVICES ENTER THE BUILDING.
12. AT CATCH BASINS PROVIDE 75MM EXTRUDED POLYSTYRENE INSULATION STYRA FOAM M1-40 FOR WATERMAIN.
13. ALL WATER METERS TO BE 25MM.FOLLOW AWWA C651-99 WATER QUALITY STANDARDS.
14. ALL WATER SERBVICE CONNECTION LATERALS ARE TO BE A MINIMUM OF 25mmØ SOFT COPPER TYPE "K" AS PER ASTM B88, UNLESS OTHERWISE NOTED.
15. TRACER WIRE TO BE PROVIDED FOR ALL PVC WATER MAIN AND SERVICES AS PER OBC 7.2.11.3 AND REGION OF HALTON STANDARDS AND REQUIREMENTS.
16. THRUST RESTRAINTS FOR WATER MAINS SHALL BE AS PER OBC 7.3.4.9 AND REGION OF HALTON STANDARDS AND REQUIREMENTS.
17. FOLLOW AWWA C651-99 WATER QUALITY STANDARDS.
18. ALL METALLIC COMPONENTS IN THE WATER DISTRIBUTION SYSTEM SHALL BE PROTECTED FROM CORROSION BY USING SACRIFICIAL ANODES AND PETROLATUM COATINGS, REQUIRED FOR ALL PIPES, FITTINGS AND SERVICES. REFER TO THE CORROSION PROTECTION SECTION IN THE REGION'S STANDARDS.
19. WATER SERVICE CURB BOXES ARE TO HAVE STAINLESS STEEL RODS AND STAINLESS STEEL COTTER PINS.
20. STAINLESS STEEL SERVICE SADDLES SHALL BE USED WHEN TAPPING SERVICES.
21. MINIMUM DEPTH OF COVER OVER WATERMAIN IS TO BE 1.7 METRES.
22. TRACER WIRE IS REQUIRED FOR ALL WATERMAINS AND WATER SERVICES. MINIUMUM 10 GUAGE TRACER WIRE IS REQUIRED. THE TRACER MUST BE TESTED FOR CONDUCTIVITY AND CONNECTIVITY. SHOULD THE TRACER WIRE NOT BE WORKING PROPERLY POST CONSTRUCTION THEN IT WILL BE REQUIRED TO BE REPLACED.
23. THE OPERATION OF THE EXISTING REGIONAL WATERMAIN DISTRIBUTION SYSTEM SHALL BE BY HALTON REGION STAFF ONLY.
24. THE PHYSICAL TAPPING OF THE REGION'S LIVE WATER DISTRIBUTION SYSTEM SHALL BE DONE BY HALTON REGION STAFF ONLY OR HALTON REGION'S APPROVED CONTRACTOR ONLY. TAPPING OF THE WATERMAIN MAY REQUIRE THE LIVE WATERMAIN PIPE ISOLATION AND PRESSURE DOWN. THE ENGINEERING CONSULTANT WILL WORK WITH THE REGION TO DETERMINE HOW MANY EXISTING PROPERTY OWNERS WILL BE AFFECTED BY THE WATERMAIN SHUT-DOWN, AND PROVIDE A LETTER TO THE NEIGHBOURS ADVISING OF THE NOTICE OF INTERRUPTION OF THEIR WATER SERVICES, WITH AS MUCH MULTIPLE DAY NOTICE AS POSSIBLE.
25. VALVE CHAMBER COVERS, IF REQUIRED, ARE TO BE CAST WITH THE WORDS "DANGER" AND "WATER".
26. THE USE OF POLYETHYLENE PIPE FOR THE REGION'S WATER DISTRIBUTION IS NOT APPROVED BY THE REGION OF HALTON

GRADING

1. THE GRADING PLAN IS TO BE READ WITH THE SITE SERVICES DRAWING AND THE SITE PLAN. FOR BUILDING DETAILS REFER TO THE LATEST REVISION OF THE SITE PLAN AS PER THE ARCHITECT.
2. ALL DRIVEWAY AND GRADING MATERIAL AND CONSTRUCTION METHODS MUST CONFORM TO CURRENT CITY OF BURLINGTON STANDARDS
3. CONTRACTOR TO RESTORE ALL DISTURBED AREAS (I.E. PUBLIC R.O.W., ADJACENT LANDS) WHICH HAVE BEEN DISTURBED DURING CONSTRUCTION TO PREVIOUS OR BETTER CONDITION.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES PRIOR TO AND DURING CONSTRUCTION. LOCATION OF EXISTING UTILITIES TO BE VERIFIED IN THE FIELD.
3. ALL DRIVEWAY AND GRADING MATERIAL AND CONSTRUCTION METHODS MUST CONFORM TO CURRENT CITY STANDARDS AND SPECIFICATIONS.
4. ALL FILL WITHIN THE SITE TO BE COMPACTED TO A MIN. OF 100% STD. PROCTOR DENSITY. THE SUITABILITY OF ALL FILL MATERIALS ARE TO BE CONFIRMED BY A RECOGNIZED SOILS CONSULTANT TO THE DIRECTOR OF ENGINEERING PRIOR TO INSTALLATION OF ANY ROAD BASE MATERIALS.
5. LANDSCAPE SHALL NOT ENCROACH ON BOULEVARD NOR SHALL BOULEVARD GRADES BE ALTERED.
6. SILT FENCE(S) PER OPSD 219.130 TO BE INSTALLED AND MAINTAINED TO PREVENT SILT FLOWING ONTO ADJACENT LANDS SILTATION CONTROL METHODS SUCH AS ENVIROFENCE OR APPROVED EQUAL SHALL BE ERECTED PRIOR TO ANY GRADING OR CONSTRUCTION AND SHALL BE MAINTAINED IN GOOD REPAIR THROUGHOUT THE CONSTRUCTION AND GRADING PHASES. THE LOCATION AND ERECTION OF THE SILTATION CONTROL METHODS TO BE APPROVED BY THE CITY. REFER TO SILT CONTROL DETAIL.
7. ANY CHANGES IN GRADES OR CATCH BASINS REQUIRE THE APPROVAL OF THE ODAN/DETECH GROUP INC AND THE CITY OF BURLINGTON.
8. ALL SODDING OF SIDE SLOPES (DITCHES) SHALL BE AS PER OPSD-218.01.
9. ALL LANDSCAPING TO BE INSTALLED AS SOON AS POSSIBLE OR PRIOR TO THE END OF THE FIRST GROWING SEASON. LANDSCAPING TO BE MAINTAINED UNTIL IT IS ESTABLISHED.
10. ALL CONNECTIONS WITH PAVED PORTIONS OF EXISTING ROADS TO BE BACKFILLEDWITH GRANULAR 'A' MATERIAL OR LATEST CITY SPECIFICATIONS AND COMPACTED TO 100 % SPD.
11. CONSTRUCTION ACCESS SHALL BE CONSTRUCTED WITH A MIN. OF 450MM THICK CRUSHED STONE BASE FROM MUNICIPAL CURB OR EDGE OF PAVEMENT TO THE PROPERTY LINE TO THE SATISFACTION OF THE CITY.
12. ALL CURBS ARE TO BE 150MM ABOVE THE PROPOSED GUTTER LINE (G/L) UNLESS NOTED OTHERWISE.
13. PAVEMENT GRADE (MIN. 0.5%, MAX. 7%).
14. DRAINAGE SWALES WITH GRADES (MIN. 1%, MAX. 7%).
15. SLOPES IN LANDSCAPE AREAS AND ON BERMS SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL.
16. THE SITE GRADING PLAN IS TO BE READ WITH THE SITE SERVICING DRAWING AND THE SITE PLAN.

CURBING/SIDEWALKS/ASPHALT

1. PROPOSED CURB AND GUTTER ON TRAVELED ROADWAY AS PER CURRENT CITY STD. (SEE OPSD 600.040)
2. ALL REQUIRED CURB CUTTING AT ENTRANCE AND CURB DEPRESSIONS AT SIDEWALK CROSSINGS SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY AND AS PER CITY DRAWING
3. CURB CUTS WITHIN THE PUBLIC R.O.W. TO BE PERFORMED TO THE SATISFACTION OF THE SEWERS.
5. ALL PROPOSED ROAD CUTS TO BE PERFORMED AND RESTORED TO THE SATISFACTION OF THE CITY , AND IN ACCORDANCE WITH CITY STANDARDS & SPECIFICATIONS.
6. ALL CONCRETE CURB FROM EXISTING ROAD CURB TO STREET LINE SHALL BE AS PER CITY STD. ALL CONCRETE CURB HEIGHTS SHALL BE 150mm UNLESS OTHERWISE NOTED.
7. ALL CURBS ARE TO BE 150mm ABOVE THE PROPOSED GUTTER LINE (G/L) UNLESS NOTED ASPHALT, AND OTHER HARD SURFACES SUCH AS CONCRETE AND INTERLOCKING BRICK, IS REQUIRED TO BE INSTALLED IN THE DRIVEWAY APPROACHES BETWEEN THE BACK OF CURB AND PROPERTY LINE AS IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS OR CURRENT CITY STD.:
   - 40MM COMPACTED DEPTH OF HL3 ASPHALT - TOP COURSE
   - 50MM COMPACTED DEPTH OF HL8 ASPHALT - BINDER COURSE
   - 350MM COMPACTED (100% SPD) GRANULAR "A"

CONCRETE HEADWALL

1. ALL CONCRETE HEADWALLS SHALL BE AS PER OPSD 804.030, INCLUDING GRATE AS PER CITY OF BURLINGTON STANDARD S-175, FOR PIPE 450MM TO 1800MM DIAMETER.
2. ALL RIP-RAP FOR CONCRETE HEADWALLS AND CONCRETE SPILLWAYS TO BE D50 - 150MMØ, TO BE 600MM DEEP, 300MM OUTSIDE HEADWALL AND A LENGTH OF 2000MM. FILTER FABRIC TO BE MIRAFI P140 OR APPROVED EQUAL.

UTILITY / SERVICE ISOLATION

1. ALL SERVICES AND/OR UTILITIES LOCATED ON CONCRETE SIDEWALKS OR CURBS TO BE ISOLATED FROM THE SIDEWALK OR CURB AS PER OPSD-310.040.

UTILITY SUPPORTS AND TRENCHES

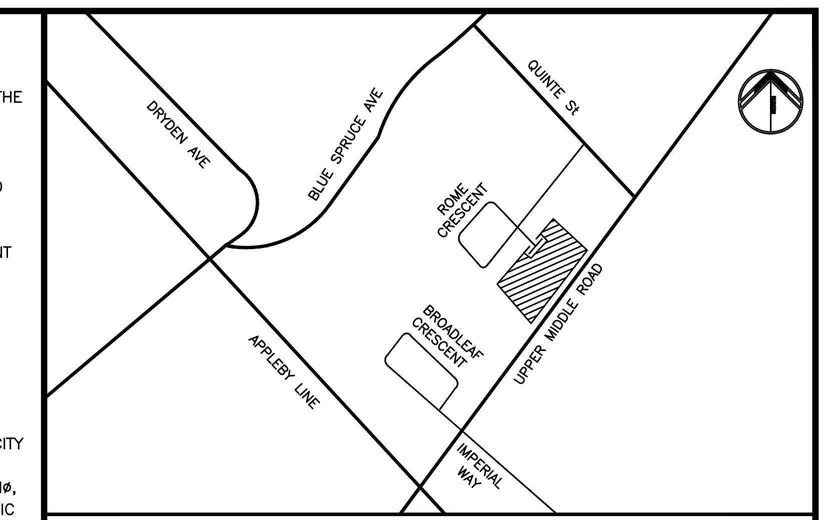
1. ALL SERVICES, UTILITIES AND CATCH BASIN LEADS SHALL BE SUPPORTED AS PER OPSD-1007.01 AND OPSD-1007.02
2. ALL UTILITIES SHALL BE LOCATED, SUPPORTED AND PROTECTED TO THE SATISFACTION OF THE UTILITY COMPANY DURING THE CONSTRUCTION PERIOD.

RESTORATION OF DRIVEWAYS & ROADS

1. ANY CUTS INTO DRIVEWAYS, ROADS, ETC...(ANY PAVED AREA(CONCRETE OR ASPHALT)), SHOULD BE RESTORED TO CITY STANDARDS OR IN LIEU OF CITY STANDARDS REFER TO RESTORATION DETAIL.
2. ASPHALT COMPOSITION SHALL BE AS PER THE DETAIL ON THIS DRAWING.

REFER TO REGION OF HALTON'S WATER AND WASTE WATER LINEAR MANUAL VER. 3.01, AND APPROVED PRODUCTS LIST PRIOR TO INSTALLING SERVICES

REFER TO DWG. SHEET 4 OF 7 FOR CONTINUATION OF NOTES



KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

NOTE :

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THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ARCHITECTS/ENGINEERS BEFORE PROCEEDING WITH THE WORKS.

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THIS DRAWING IS NOT TO BE SCALED.

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THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC...

EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY J.D.BARNES LAND SURVEYORS LTD. DATED FEBRUARY 16, 2017.

BENCH MARK:

ELEVATION SHOW ON THIS PLAN ARE RELATED TO CANADIAN GEODETIC VERTICAL DATUM, 1978. AND ARE DERIVED FROM THE CITY OF BURLINGTON BENCH MARKS. No.482 HAVING A PUBLISHED ELEVATION OF 143.042m. AND No.841 HAVING A PUBLISHED ELEVATION OF 139.273m

LOCAL BENCHMARK No. 1 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE UPPERMIDDLE READ. SOUTH WEST OF GRAVEL DRIVEWAY FOR HOUSE No. 5219, OPPOSITE FIRE HYDRANT. ELEVATION = 141.11m

LOCAL BENCHMARK No. 2 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE OF UPPERMIDDLE ROAD OPPOSITE THE PRODUCTION OF THE CHAINLINK FENCE ALONG SOUTHWEST BOUNDARY OF BLOCH 262.
ELEVATION = 141.19m

METRIC NOTE:

DISTANCES AND ELEVATIONS ON THIS PLAN ARE TYPICALLY SHOWN IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NO.	REVISIONS	DATE	BY
8.	AS PER CITY COMMENTS	AUG 15/19	DB
7.	AS PER CITY COMMENTS	FEB 14/19	DB
6.	ZBA & SPA SUBMISSION	JUN 21/18	DB
5.	REVISED S. PL/UMR WIDENING; REV. RETAINING WALL; FOR COORDINATION	JUN 21/18	DB
4.	FOR CLIENT REVIEW & COORDINATION	JUN 6/18	DB
3.	ZBA RESUBMISSION	MAR 29/18	DB
2.	ZBA & SPA SUBMISSION	OCT 27/17	DB
1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE:
0 5 10 15 20

DRAWING :

GENERAL SERVICING PLAN
GEORGINA COURT R.O.W.

CLIENT :

BLOOMFIELD DEVELOPMENTS

PROJECT :

PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

ODAN·DETECH CONSULTING ENGINEERS
The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SCALE :	PROJ. NO.:	DATE:	DESIGN BY:
1:150	17213	MARCH 17	D.B.
DRAWING NO:			DRAWN BY: J.M.K.
17213 - 1 G.dwg			CHECKED BY: D.C.S.
			APPROVED BY: D.C.S.
FILE NUMBER	ENGINEER		DRWG. NO.: 1 OF 7

LICENSED PROFESSIONAL ENGINEER
AUG 15/19
D. T. BANCROFT
100200672
PROVINCE OF ONTARIO

FUTURE PRIVATE LAND AND TOWNHOUSE CONDO DEVELOPMENT

BLOCK 6

C-1 PART 4r

C-2 PART 4l

D-1 PART 3r

D-2 PART 3l

E-2 PART 2

F-2 PART 1

F.F.E. 142.80m

F.F.E. 142.65m

F.F.E. 142.75m

F.F.E. 142.90m

BASEMENT 140.15

BASEMENT 140.25

GEORGINA COURT

ROME CRESCENT

PART 18

PART 5

LOT 10

LOT 11

LOT 1

LOT 2

LOT 3

LOT 4

LOT 5

LOT 6

LOT 7

PROP WAT INV=140.28
PROP SAN OBV=138.67

PROP 38.21m 200mmø PVC SAN @ 0.98%

SAN MH 2
RIM ELEV 141.96
OPSD 701.010
SW INV EL 138.40
NE INV EL 138.35

PROP 200mm PVC W/M

PROP FENCE REFER TO LANDSCAPE DWG

PROP 75mm P.E. W/M TO BE CONNECTED TO PROP 200mm PVC W/M

PROP WAT (DOMESTIC) INV=139.6
PROP SAN OBV=138.5

PROP 13.89m 200mm PVC SAN @ 1.31%

PROP CB3
RIM ELEV 141.82
N INV EL 140.66

PROP 11.84m 300mm PVC STM @ 0.42%

PROP 200mm PVC W/M TO BE CONNECTED TO EX 200mm W/M

PROP 75mm PVC W/M TO BE TAPPED TO EX 200mm W/M

EX HYD & VALVE TO BE REMOVED & RETURNED TO CITY

EX. SAN MH 1
RIM ELEV 141.58
RAISE TO RIM EL 142.00
NWEX INV EL 137.35
SE INV EL 138.00

SAN MH 3
RIM ELEV 142.05
OPSD 701.010
NW INV EL 137.66
SW INV EL 138.17
E INV EL 138.25

STM MH 1
RIM ELEV 142.09
OPSD 701.010
NW INV EL 140.57
S INV EL 140.60

PROP STM INV=140.58
PROP SAN OBV=137.83

PROP 16.26m 250mmø PVC SAN @ 1.00%

PROP CB1
RIM ELEV 141.85
NE INV EL 140.98

PROP 6.31m 200mm PVC STM @ 0.94% INSULATED AS PER DETAIL

STM. LEAD INV.
@ MAIN 140.92

PROP STM INV=140.94
EX SAN OBV=137.48

EX 46.91m 200mmø PVC SAN @ 1.04%

PROP 49.59m 300mm PVC STM @ 0.45%

PROP LIMIT OF CONSTRUCTION

EX CURB

PROP 2.09m 200mm PVC STM @ 0.85% INSULATED AS PER DETAIL

PROP CB2
RIM ELEV 141.81
SW INV EL 140.94

PROP STM INV=140.52
PROP WAT (DOMESTIC) OBV=140.01

EX. STM MH 1296
RIM ELEV 142.97
SW INV EL 140.05
NE INV EL 140.10
NW INV EL 140.47

EX EASEMENT

EX. CB 4

EX. CB 3

MH – (149)
RIM ELEV 143.00
SE INV EL 136.86
NE INV EL 136.67
SW INV EL 138.47
INV INV EL 139.61

EX 23.44m 200mm PVC SAN

EX 27.48m 750mm CONC STM

EX 40.77m 200mm PVC SAN

EX 66.62m 750mm CONC STM

EX. SAN MH 3

EX 88.48m 750mm CONC STM

EX 11.61m 200mm PVC SAN

EX 200mm PVC WATER

EX 200mm PVC WATER

EX. STM MH 1
RIM ELEV 141.04
SW INV EL 139.37
NE INV EL 139.40

EX. CB 5

150mm SUBDRAIN (TYP)

PROP 12.61m 200mm PVC STM @ 1.06%

PROP DI2
E LOWER RIM EL 140.90
W UPPER RIM EL 141.20
SE INV EL 140.13

PROP LIMIT OF CONSTRUCTION RESTORATION & LIMIT OF RESTORATION ON UMR TO REGION OF HALTON SATISFACTION

EX LIGHT STAND SUPPORT DURING EXCAVATION

EX 40.88m 600mm CONC STM @ 0.32%

EX 6.11m 675mm CONC STM @ 0.24%

RESERVE LINE

PROP LINE

EX RLCB 1

PROPERTY LINE

PROPOSED SWALE WITH 150mm SUBDRAIN

EXISTING SWALE TO BE LEFT UNDISTURBED

PROP 50mm P.E. W/M

PROP 14.96m 100mmø PVC SAN @ 1.00% LAT (TYP)

PROP 25mm COPPER WAT (TYP)

CONSTRUCTION NORTH

BOARD FENCE

CONCRETE BUS STOP AREA

CURB

0.1 DIA

EDGE OF ASPHALT

EXISTING PROPERTY LINE

(STREET WIDENING)

FOUNDATIONS TO BE 500mm ABOVE CURB AND OPENINGS TO BE 500mm ABOVE CURB

EXISTING SANITARY AND WATER SERVICES TO BE DISCONNECTED AT MAIN TO THE SATISFACTION OF THE REGION OF HALTON, CONTRACTOR TO LOCATE IN FIELD

CONTRACTOR TO VERIFY ALL INVERTS, SIZE, MATERIAL, AND LOCATION OF ALL SERVICES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ODAN/DETECH GROUP

ALL CATCH BASIN MANHOLES ARE TO BE SUMPED

ALL CATCH BASIN(S) LOCATED WITHIN LANDSCAPE ARES ARE TO BE SUMPLESS

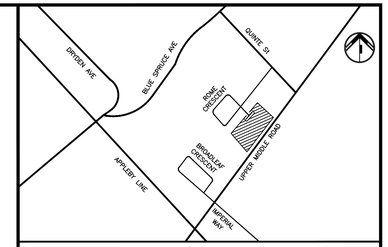
ALL CATCHBASINS WITHIN LANDSCAPE AREAS TO BE SUMPLESS AND HAVE BEEHIVE FRAME AND COVER AS PER CITY STANDARD S-176

CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS UPON COMPLETION OF ALL WORKS TO THE ODAN/DETECH GROUP

FOUNDATION DRAINS ARE NOT PERMITTED TO BE CONNECTED TO THE STORM SEWERS. THIS SITE HAS BEEN DESIGNED FOR STORM WATER MANAGEMENT - ALL FOUNDATIONS DRAINS SHALL BE PUMPED VIA A SUMP PUMP WHERE REQUIRED

SERVICING LEGEND:

- DENOTES EXISTING STORM MANHOLE
- DENOTES PROPOSED STORM MANHOLE
- DENOTES EXISTING CATCH BASIN
- DENOTES PROPOSED CATCHBASIN
- DENOTES PROPOSED STORMCEPTOR
- DENOTES PROPOSED INLET CONTROL DEVICE (ICD)
- DENOTES EXISTING STORM SEWER
- DENOTES PROPOSED STORM SEWER
- DENOTES EXISTING SANITARY MANHOLE
- DENOTES PROPOSED SANITARY MANHOLE
- DENOTES PROPOSED SANITARY SEWER
- DENOTES EXISTING SANITARY SEWER
- DENOTES PROPOSED HYDRANT
- DENOTES EXISTING HYDRANT
- DENOTES PROPOSED WATER VALVE & BOX
- DENOTES EXISTING WATER VALVE & BOX
- DENOTES PROPOSED WATER METER
- DENOTES EXISTING WATER MAIN
- DENOTES PROPOSED WATER MAIN
- DENOTES PROPOSED SIAMESE CONNECTION
- DENOTES PROPOSED CAP FOR SANITARY, STORM, AND/OR WATER AS NOTED
- DENOTES PROPOSED ENTRANCE LOCATION
- DENOTES PROPOSED HEAVY DUTY ASPHALT AREA
- DENOTES PROPOSED SUMP PUMP
- DENOTES PROPERTY LINE
- DENOTES ARMOR STONE RETAINING WALL
- DENOTES FENCE



KEY PLAN
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LOCAL BENCHMARK No. 1 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE UPPERMIDDLE READ. SOUTH WEST OF GRAVEL DRIVEWAY FOR HOUSE No. 5219, OPPOSITE FIRE HYDRANT. ELEVATION = 141.11m

LOCAL BENCHMARK No. 2 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE OF UPPERMIDDLE ROAD OPPOSITE THE PRODUCTION OF THE CHAINLINK FENCE ALONG SOUTHWEST BOUNDARY OF BLOCH 262.
ELEVATION = 141.19m

METRIC NOTE:

DISTANCES AND ELEVATIONS ON THIS PLAN ARE TYPICALLY SHOWN IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NO.	REVISIONS	DATE	BY
8.	AS PER CITY COMMENTS	AUG 15/19	DB
7.	AS PER CITY COMMENTS	FEB 14/19	DB
6.	ZBA & SPA SUBMISSION	JUN 21/18	DB
5.	REVISED S. PL/UMR WIDENING; REV. RETAINING WALL; FOR COORDINATION	JUN 21/18	DB
4.	FOR CLIENT REVIEW & COORDINATION	JUN 6/18	DB
3.	ZBA RESUBMISSION	MAR 29/18	DB
2.	ZBA & SPA SUBMISSION	OCT 27/17	DB
1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE:

0 5 10 15

DRAWING :

GENERAL SERVICING PLAN
GEORGINA COURT R.O.W.

CLIENT :

BLOOMFIELD DEVELOPMENTS

PROJECT :

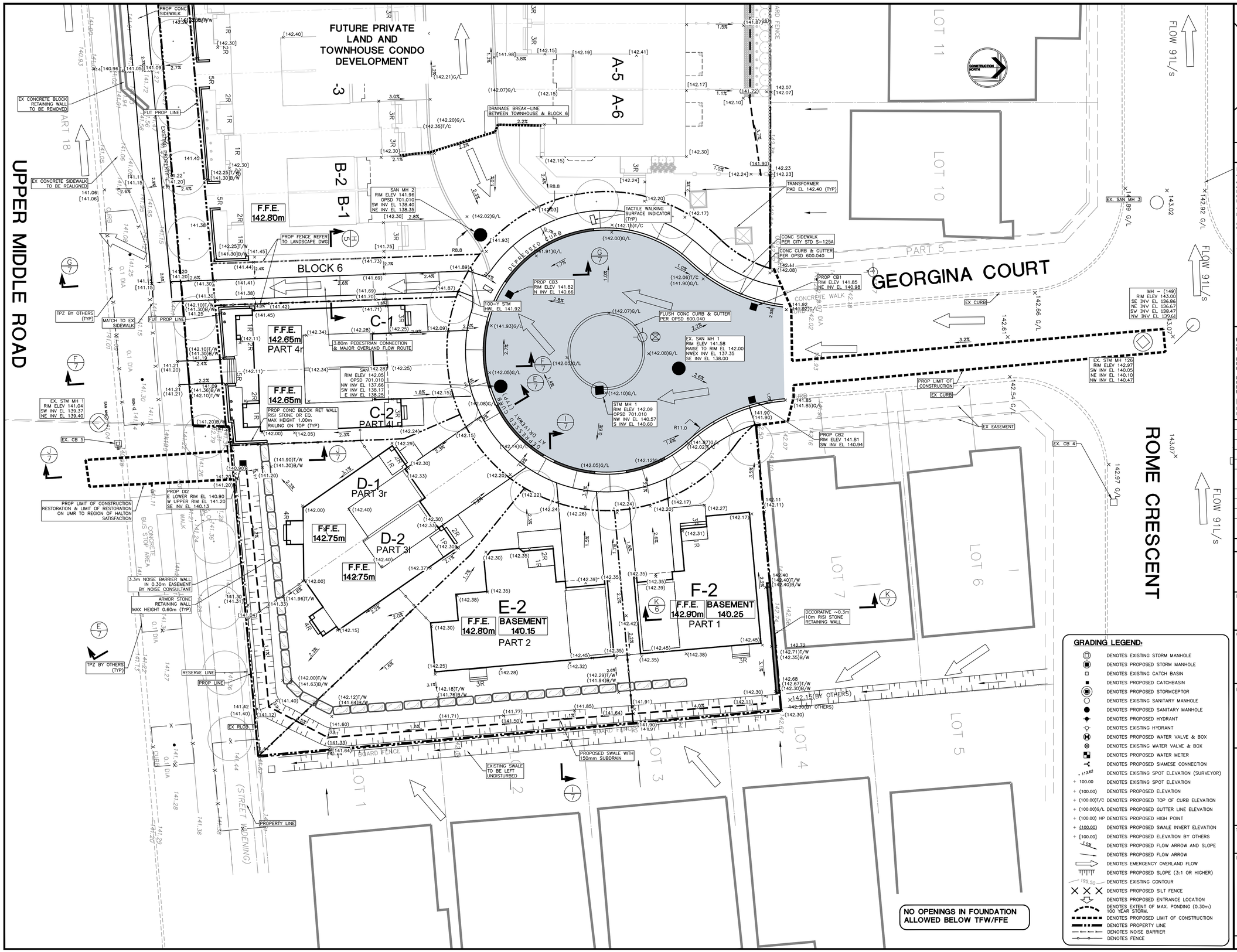
PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

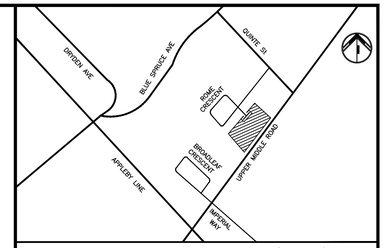
ODAN·DETECH CONSULTING ENGINEERS
The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SCALE :	PROJ. NO.:	DATE:	DESIGN BY:
1:150	17213	MARCH 17	D.B.
			DRAWN BY: J.M.K.
			CHECKED BY: D.C.S.
			APPROVED BY: D.C.S.
DRAWING NO: 17213 – 2 G.dwg			DRWG. NO.: 2 OF 7

LICENSED PROFESSIONAL ENGINEER — UG 15/18 — D. T. BANCROFT — 100200672 — PROVINCE OF ONTARIO

FILE NUMBER | ENGINEER





KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

NOTE :

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND UNDERGROUND AND ABOVE GROUND UTILITIES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING THE WORK THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ARCHITECTS/ENGINEERS BEFORE PROCEEDING WITH THE WORKS.

ALL DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND THE PROPERTY OF THE ENGINEER WHICH MUST BE RETURNED AT THE COMPLETION OF WORK.

THIS DRAWING IS NOT TO BE SCALED.

THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDINGS.

THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC...

EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY J.D.BARNES LAND SURVEYORS LTD. DATED FEBRUARY 16, 2017.

BENCH MARK:

ELEVATION SHOW ON THIS PLAN ARE RELATED TO CANADIAN GEODETIC VERTICAL DATUM, 1978. AND ARE DERIVED FROM THE CITY OF BURLINGTON BENCH MARKS, No.482 HAVING A PUBLISHED ELEVATION OF 143.042m. AND No.841 HAVING A PUBLISHED ELEVATION OF 139.273m

LOCAL BENCHMARK No. 1 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE UPPERMIDDLE READ. SOUTH WEST OF GRAVEL DRIVEWAY FOR HOUSE No. 5219, OPPOSITE FIRE HYDRANT. ELEVATION = 141.11m

LOCAL BENCHMARK No. 2 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE OF UPPERMIDDLE ROAD OPPOSITE THE PRODUCTION OF THE CHAINLINK FENCE ALONG SOUTHWEST BOUNDARY OF BLOCH 262. ELEVATION = 141.19m

METRIC NOTE:

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SCALE: 0 5 10 15

DRAWING :

GRADING PLAN
GEORGINA COURT R.O.W.

CLIENT :

BLOOMFIELD DEVELOPMENTS

PROJECT :

PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

GRADING LEGEND:

- DENOTES EXISTING STORM MANHOLE
- DENOTES PROPOSED STORM MANHOLE
- DENOTES EXISTING CATCH BASIN
- DENOTES PROPOSED CATCHBASIN
- DENOTES PROPOSED STORMCEPTOR
- DENOTES EXISTING SANITARY MANHOLE
- DENOTES PROPOSED SANITARY MANHOLE
- DENOTES PROPOSED HYDRANT
- DENOTES EXISTING HYDRANT
- DENOTES PROPOSED WATER VALVE & BOX
- DENOTES EXISTING WATER VALVE & BOX
- DENOTES PROPOSED WATER METER
- DENOTES PROPOSED SIAMESE CONNECTION
- 113.62 DENOTES EXISTING SPOT ELEVATION (SURVEYOR)
- + 100.00 DENOTES EXISTING SPOT ELEVATION
- + (100.00) DENOTES PROPOSED ELEVATION
- + (100.00)T/C DENOTES PROPOSED TOP OF CURB ELEVATION
- + (100.00)G/L DENOTES PROPOSED GUTTER LINE ELEVATION
- + (100.00) HP DENOTES PROPOSED HIGH POINT
- + (100.00) DENOTES PROPOSED SWALE INVERT ELEVATION
- + [100.00] DENOTES PROPOSED ELEVATION BY OTHERS
- 1.0% DENOTES PROPOSED FLOW ARROW AND SLOPE
- DENOTES PROPOSED FLOW ARROW
- DENOTES EMERGENCY OVERLAND FLOW
- DENOTES PROPOSED SLOPE (3:1 OR HIGHER)
- 195.50 DENOTES EXISTING CONTOUR
- DENOTES PROPOSED SILT FENCE
- DENOTES PROPOSED ENTRANCE LOCATION
- DENOTES EXTENT OF MAX. PONDING (0.30m) 100 YEAR STORM.
- DENOTES PROPOSED LIMIT OF CONSTRUCTION
- DENOTES PROPERTY LINE
- DENOTES NOISE BARRIER
- DENOTES FENCE

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LICENSED PROFESSIONAL ENGINEER — D. T. BANCROFT — 100200672 — PROVINCE OF ONTARIO — OCT 15/19

FILE NUMBER | ENGINEER

CITY OF BURLINGTON AMENDMENTS TO ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS)

THE CITY HAS ADOPTED THE USE OF ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AS SHOWN IN THE QUOTED ITEMS WITH THE FOLLOWING REVISIONS:

1. OPSS.MUNI 206.0 GRADING
   PLAN QUANTITY MEASUREMENT PAYMENT AT THE CONTRACT PRICE FOR EACH ITEM SHALL BE FULL COMPENSATION TO DO THE WORK.
2. OPSS 351.0 SIDEWALK
   PREMOULDED BITUMINOUS FIBER EXPANSION JOINTS TO BE PLACED AT A MAXIMUM OF 30M INTERVALS. MEASUREMENT FOR PAYMENT AND OPSS 351.10 BASIS FOR PAYMENT AT THE CONTRACT PRICE FOR SIDEWALK PLACED SHALL BE FULL COMPENSATION FOR ALL LABOUR, EQUIPMENT, AND MATERIAL TO DO THE WORK AS OUTLINED. EXCAVATION SHALL BE PAID UNDER THE ITEM FOR "EXCAVATION" UNLESS OTHERWISE NOTED.
3. OPSS.MUNI 353 0 CURB, CURB AND GUTTER
   CURB LENGTHS
   ALL CONCRETE CURBS AND CURB RETURNS MORE THAN 30M IN LENGTH SHALL BE CONSTRUCTED WITH A HEAVY DUTY CURB MACHINE CAPABLE OF EXTRUDING A UNIFORM AND STRAIGHT CONCRETE CURB WITH 0 – 15MM SLUMP FOR THE DIFFERENT CITY OF BURLINGTON CURB STANDARDS.
   CURB MACHINES
   ALL CURB MACHINES MUST BE ABLE TO EXTRUDE THE CURB, CURB AND GUTTER WITH A SPECIFIED SLUMP NO MORE THAN 15MM. NO TAMPERING WITH THE SLUMP (ADDING WATER) IS ALLOWED DURING CONSTRUCTION OF THE CURB.
4. OPSS 405 – SUBDRAINS
   OPSS 405.05.06 GRANULAR BACKFILL
   MATERIALS FOR BACKFILLING SHALL BE 10 MM CLEAR STONE AND SHALL COMPLETELY SURROUND THE PIPE.
   OPSS 405.07.08.02(B) LAYING PIPE
   TREATMENT OF SUBDRAIN IN PROXIMITY OF TREES. THIS CLAUSE SHALL BE DELETED.
5. OPSS.MUNI 501 – COMPACTION
   WATER FOR COMPACTION AND DUST SUPPRESSION. MEASUREMENT FOR PAYMENT. OPSS.MUNI 501.10 BASIS OF PAYMENT WATER FOR COMPACTION AND DUST SUPPRESSION SHALL BE INCLUDED IN THE CONTRACT PRICE OF ITEMS FOR THE MATERIALS PLACED.
6. OPSS 802 – TOPSOIL
   OPSS 802.05 MATERIALS
   IN ADDITION TO THIS SPECIFICATION, ALL TOPSOIL SHALL BE SCREENED USING 35MM 1.5") SIZE THIS APPLIES TO ALL TOPSOIL WHETHER ACQUIRED FROM THE JOBSITE OR IMPORTED FROM OFFSITE. THE TOPSOIL SHALL BE A FERTILE, FRIABLE NATURAL LOAM CONTAINING NOT LESS THAN 4% OF ORGANIC MATTER FOR CLAY LOAMS AND NOT LESS THAN 2% FOR SANDY LOAMS WITH AN ACIDITY VALUE RANGING FROM PH 6.0 TO 7.5 AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHALL BE FREE OF ANY ADMIXTURES OF SUBSOIL, CLAY LUMPS AND FREE OF STONES, ROOTS AND OTHER EXTRANEOUS MATTER. IF THIS IS NOT ATTAINABLE FROM THE TOPSOIL ON SITE, THEN EITHER THIS TOPSOIL SHALL NOT BE USED OR IT SHALL BE MIXED WITH IMPORTED MATERIAL TO ATTAIN THE ABOVE–MENTIONED SPECIFICATION.
   PLACING OF TOPSOIL
   THE TOPSOIL SHALL BE ROLLED WITH A 50KG ROLLER FOR COMPACTION. THE FINISHED TOPSOIL SURFACE SHALL BE SMOOTH AND FIRM AGAINST FOOTPRINTS. MEASURE FOR PAYMENT AND OPSS 802.10 BASIS OF PAYMENT METHOD OF PAYMENT FOR TOPSOIL SHALL BE INCLUDED UNDER CONTRACT PRICE FOR QUOTED ITEMS FOR SOD AND SEED.
7. OPSS 803 – SODDING
   OPSS 803.08
   ALL SODDED AREAS SHALL BE GUARANTEED FOR 1 YEAR AFTER PLACEMENT.
   OPSS 803.09 MEASUREMENT FOR PAYMENT AND OPSS 803.10 BASIS OF PAYMENT
   THE PAYMENT OF SAD IN M2 SHALL INCLUDE SUPPLY AND PLACEMENT OF SAD AND TOPSOIL, FERTILIZER, GRADING, REMOVAL OF UNSUITABLE MATERIALS, CLEANING OUT WEEDED AREAS, PEGGING, ROLLING, WATERING AND MAINTENANCE.
8. OPSS.MUNI 804 – SEED & COVER
   OPSS.MUNI 804.05 MATERIAL
   CLAUSE OPSS.MUNI 804.05 OF THE OPSS FOR SEEDING SHALL BE SUPERSEDED BY THE FOLLOWING:
   SEED TO BE PREPARED WITH A MINIMUM 80MM OF TOPSOIL AND SEEDED WITH THIS MIXTURE AT A RATE OF 1KG PER 90M2 MECHANICALLY SOWN:
   60% CREEPING RED FESCUE
   25% KENTUCKY BLUEGRASS
   15% CANADA BLUEGRASS

9. ASPHALT

9.1 GENERAL
THE QUALITY CONTROL STAFF OR THEIR REPRESENTATIVE SHALL HAVE ACCESS WITHOUT ANY PRIOR NOTICE TO THE PREMISES OF THE ASPHALT PLANT FOR THE PURPOSE OF INSPECTION. ALL ASPHALT TICKETS SHALL BE ELECTRONICALLY PRINTED AND SUBMITTED IN NUMERICAL ORDER TO CONTRACT ADMINISTRATOR BY 9:00 AM THE MORNING FOLLOWING THE PLACEMENT OF ASPHALT. UNDER NO CIRCUMSTANCES WILL HAND WRITTEN TICKETS BE ACCEPTED. PAYMENT FOR ASPHALT CEMENT TO BE INCLUDED IN THE COST OF THE QUOTED ITEMS.

9.2 ASPHALT CEMENT
ASPHALT CEMENT SHALL CONFORM TO OPSS.MUNI. 1101
PERFORMANCE GRADED ASPHALT CEMENT (PGAC) MEANS AN ASPHALT BINDER SUPPLIED FROM MTO DSM #3.05.22 (DESIGNATED SOURCES FOR MATERIALS) AND MEETING REQUIREMENTS OF OPSS.MUNI. 1101. (EXAMPLE: PGAC 58–28) PERFORMANCE GRADED ASPHALT CEMENT WITH ELASTIC RECOVERY: MEANS A PERFORMANCE GRADED ASPHALT CEMENT WITH AN ADDITIONAL ELASTIC RECOVERY REQUIREMENT. MUST MEET REQUIREMENTS OF OPSS.MUNI. APPENDIX 11 01–B. (EXAMPLE: PGAC 58H–28)

9.3 ASPHALT AGGREGATES
ASPHALT AGGREGATES SHALL CONFORM TO OPSS 1001 AND OPSS.MUNI. 1003
USE OF STEEL SLAG OR BLAST FURNACE SLAG IN ASPHALT MIXTURES WILL NOT BE ALLOWED.

9.4 ASPHALT MIX DESIGNS
ASPHALT MIX DESIGNS SHALL CONFORM TO OPSS 1150, EXCEPT AS AMMENDED OR EXTENDED HEREIN.
MIX DESIGNS SHALL BE COMPLETED BY THE CONTRACTOR IN ACCORDANCE WITH OPSS 1150.04.01.02.02 (MIX DESIGN METHOD) A MINIMUM OF 14 BUSINESS DAYS PRIOR TO THE START OF PAVING OPERATION, THE PROPOSED MIX DESIGN AND JOB MIX FORMULA (JMF) SHALL BE SUBMITTED IN WRITING TO THE CONTRACT ADMINISTRATOR FOR APPROVAL. THE DOCUMENTS INCLUDED IN THE MIX DESIGN SUBMITTAL SHALL SHOW THE INFORMATION LISTED IN OPSS 1150.04.02.03

9.6 MIX TYPES AND DESIGN PROPERTIES
MIX TYPE PGAC NC CONTENT RAP (%), AIR VOIDS % STABILITY
HL–3 58–28 5.30 0 3.5 –4.5 10,000
HL–8 58–28 5.00 15 3.5 –4.5 10,000
HL–3 HS 58H–28 5.30 0 3.5 –4.5 12,000
HL–1 58H–28 5.20 0 3.5 –4.5 12,000
HDSC 58H–28 5.00 0 3.5 –4.5 12,000
HL–3F 58–28 5.80 15 4.0 – 5.0 5,800

NOTES:
HL–1: COARSE AGGREGATE FROM MTO DSM #3.05.22 (DESIGNATED SOURCES FOR MATERIALS)
HL–1, HL–3HS, HDSC: FINE AGGREGATES TO BE 100% CRUSHED LIMESTONE; MANUFACTURED SAND AND Y. CHIP PERMITTED. (MAX 10% LIMESTONE SCREENINGS)
HL–3: FINE AGGREGATE LIMESTONE SCREENINGS, MAXIMUM 15%.
HL–8: NO FINE AGGREGATE LIMESTONE SCREENINGS IF MIX CONTAINS RAP.

STOCKPILES OF RAP SHALL BE FREE OF ANY SLAG OR SLAG MATERIAL AND SHALL BE TESTED ON A REGULAR BASIS FOR ALC CONTENT. ALL STOCKPILES OF RECYCLED ASPHALT SHALL BE EXAMINED AND APPROVED FOR USE BY THE CITY'S QUALITY CONTROL STAFF.
HMA WITH RAP IS PERMITTED FOR USE FROM APRIL 1ST TO OCTOBER 31 ST ONLY.

9.7 PLACEMENT OF HOT MIX ON ROADS
ASPHALT PLACEMENT SHALL CONFORM TO OPSS 310, EXCEPT AS AMMENDED OR EXTENDED HEREIN.
THE CITY REQUIRES A MINIMUM 48 HOURS NOTICE PRIOR TO ANY PAVING.
QUALITY ASSURANCE TESTING WILL BE ARRANGED BY THE CITY AND ASPHALT ACCEPTANCE BASED ON OPSS 310.
A MATERIAL TRANSFER VEHICLE (MTV) MUST BE USED FOR ALL MAINLINE ROADWAY PAVING OPERATIONS, WITH EXCEPTION OF BASE REPAIRS. THE BID PRICE PER TONNE FOR PLACING HOT MIX ASPHALT SHALL INCLUDE ALL COSTS RELATED TO USE OF THE MATERIAL TRANSFER VEHICLE.
THE REQUIREMENTS OF OPSS 310.07.11 (LONGITUDINAL AND TRANSVERSE JOINTS) SHALL APPLY EXCEPT AMENDED HEREIN:
WHERE PROPOSED TOPLIFT ASPHALT PAVING ABUTS EXISTING PAVEMENT, A BUTT JOINT SHALL BE LAP JOINTS SHALL NOT BE ACCEPTED IN THE TOP COURSE OF PAVEMENT. EXISTING PAVEMENT SHALL BE SAW CUT OR MILLED TO THE DEPTH OF THE PROPOSED TOP LIFT PAVING THICKNESS AND THE FACE OF THE EXISTING PAVEMENT SHALL BE FLAT, SMOOTH AND CLEAN OF ANY DEBRIS. THE FACE OF EXISTING PAVEMENT SHALL HAVE SS–1 TACK COAT (OR EQUIVALENT) APPLIED PRIOR TO PAVING.

9.8 PRE–PAVE MEETINGS
PRIOR TO ANY PAVING WORKS, THE CONTRACTOR SHALL SCHEDULE A PRE–PAVE MEETING WITH THE CITY INSPECTOR TO REVIEW THE EXISTING SURFACE CONDITION. THE CITY INSPECTOR WILL NOTIFY THE CONTRACTOR IN WRITING OF ALL DEFICIENCIES. ALL DEFICIENCIES NOTED IN THE MEETING SHALL BE CORRECTED PRIOR TO PAVING. IF THE CONTRACTOR FAILS TO SCHEDULE A PREPAVE MEETING, THE CITY RESERVES THE RIGHT TO DENY THE PAVING WORK FROM TAKING PLACE.

9.9 PAVING EQUIPMENT – ROAD RIGHT–OF–WAY
THE REQUIREMENTS OF OPSS 310.07.07 SHALL APPLY EXCEPT AS MODIFIED HEREIN. HIGHWAY CLASS PAVERS AND ROLLERS SHALL BE USED TO ACCOMPLISH THE PLACEMENT AND COMPACTION OF HOT MIX ASPHALT PAVEMENT. EQUIPMENT SHALL BE APPROVED BY THE CITY OF BURLINGTONS' CONTRACT ADMINISTRATOR AND OPERATED BY AN EXPERIENCED, MANUFACTURER–TRAINED OPERATOR. TRACKLESS PAVERS ONLY WILL BE ALLOWED FOR PAVING WHEN USING GLASS GRID.

PAVING SPREADER SHALL HAVE A UNIFORMLY HEATED SCREED, FULLY FLOATING, HYDRAULICALLY OPERATED WITH GRADUAL VIBRATING CONTROLLER AND A MINIMUM WIDTH OF 3M EXTENDED TO 5M WITH AUTOMATIC GRADE AND SLOPE CONTROLS. THE SCREED SHOULD BE CAPABLE OF PRODUCING A DESIRABLE, SMOOTH SURFACE AND EVEN TEXTURE, FREE OF ANY MAT DEFECTS SUCH AS TEARING, SHOVING, GOUGING AND SEGREGATION. SPREADER SHALL BE CERTIFIED ANNUALLY BY THE MANUFACTURER BEFORE EACH PAVING SEASON. THE FOLLOWING PARAMETERS SHALL APPLY TO PAVING SPREADERS:
HOPPER CAPACITY: MINIMUM 12 TONNE
TRACK LENGTH: 3 METRES OR EQUIVALENT WITH RUBBER TIRES
OPERATING WEIGHT 16 TONNE
PAVING SPEED: 76M PER MINUTE

9.10 PAVING EQUIPMENT – PARKING LOTS
PLACEMENT OF HOT MIX ASPHALT PAVEMENT FOR PARKING LOTS SHALL BE ACCOMPLISHED BY USING AN APPROVED PAVER AND ROLLER BY THE CITY'S CONTRACT ADMINISTRATOR. THE PAVING SPREADER MUST HAVE A UNIFORMLY HEATED SCREED, FULLY FLOATING, HYDRAULICALLY OPERATED WITH GRADUAL VIBRATING CONTROLLERS AND A MINIMUM WIDTH OF 2.5M AND EXTENDED TO 4.0M WITH AN AUTOMATIC GRADE AND SLOPE CONTROLLER THE SCREED SHOULD BE CAPABLE OF PRODUCING A DESIRABLE, SMOOTH SURFACE AND EVEN TEXTURE, FREE FROM ANY MAT DEFECTS SUCH AS TEARING, SHOVING, GOUGING AND SEGREGATION. SCREED SHALL BE CERTIFIED ANNUALLY BY THE MANUFACTURER BEFORE THE START THE PAVING SEASON. HOPPER CAPACITY MUST BE MINIMUM 8 TONNES AND A MINIMUM RUBBER TRACK LENGTH OF 2.0M IS REQUIRED.

9.11 PLACEMENT OF HOT MIX FOR PEDESTRIAN AND BIKE PATHWAYS
MAINLINE PAVING OF PEDESTRIAN AND BIKE PATHWAYS MUST BE DONE USING A PAVING SPREADER. HAND WORK WILL ONLY BE ACCEPTED WHEN PATCHING AREAS LESS THAN 20M2 IN SIZE.

9.12 COMMERCIAL, INDUSTRIAL &MULTI–RESIDENTIAL DRIVEWAYS
COMMERCIAL DRIVEWAYS AFFECTED DURING CONSTRUCTION, SHALL BE REPAIRED/RESTORED. THE CONTRACTOR SHALL NOTIFY THE CITY IN ADVANCE OF DRIVEWAY PAVING WITH ENOUGH TIME TO ALLOW THE INSPECTOR TO MARK OUT THE PHYSICAL LOCATION OF THE FINAL REMOVAL LIMITS OF THE DRIVEWAY. THE FOLLOWING CITY OF BURLINGTON STANDARD DRAWINGS SHALL APPLY ACCORDINGLY.
S–110 – COMMERCIAL, INDUSTRIAL DRIVEWAY STANDARD ENTRANCE
S–111 – COMMERCIAL, INDUSTRIAL DRIVEWAY STANDARD RESTRICTED ACCESS ENTRANCE
S–112 – COMMERCIAL, INDUSTRIAL MULTI–RESIDENTIAL DRIVEWAY ENTRANCES

9.13 RESIDENTIAL DRIVEWAYS
RESIDENTIAL DRIVEWAYS AFFECTED DURING CONSTRUCTION, SHALL BE REPAIRED/RESTORED. THE CONTRACTOR SHALL NOTIFY THE CITY IN ADVANCE OF DRIVEWAY PAVING WITH ENOUGH TIME TO ALLOW THE INSPECTOR TO MARK OUT THE PHYSICAL LOCATION OF THE FINAL REMOVAL LIMITS OF THE DRIVEWAY. RESIDENTIAL DRIVEWAYS SHALL BE PAVED WITH 50MM OF HL3F, OR MATCH EXISTING DEPTH.

9. GRANULAR MATERIALS.
a) THE CONTRACTOR SHALL NOT CHANGE ANY SOURCE OF GRANULAR MATERIAL SUPPLYUNTIL HE HAS NOTIFIED THE CITY'S QUALITY CONTROL STAFF OR THIS REPRESENTATIVE IN WRITING AND HAS OBTAINED APPROVAL.
b) THE CONTRACT ADMINISTRATOR OR HIS REPRESENTATIVE SHALL HAVE ACCESS WITHOUT ANY PRIOR NOTICE TO THE PREMISES OF THE GRAVEL PIT OR QUARRY OPERATION FOR THE PURPOSE OF INSPECTION.
c) GRANULAR B AGGREGATES – THE USE OF SCREENINGS FOR GRANULAR "B" OR "C" FOR ROAD BASE IS NOT PERMITTED.
d) WHEN A FULL DEPTH GRANULAR "A" MATERIAL IS REQUIRED FOR ROAD BASE, ONLY GRANULAR "A" CRUSHED LIME STONE IS PERMITTED TO BE USED FOR ROAD BASE.
e) WHEN A COMPOSITE MATERIAL OF 19MM GRANULAR "A" AND 50MM CRUSHER RUN IS REQUIRED FOR ROAD BASE, EITHER GRANULAR "A" CRUSHED LIME STONE OR GRANULAR "A" PIT RUN MATERIAL WITH 80% CRUSHED PERCENTAGE ON TWO FACES IS PERMITTED ON TOP OF 50MM CRUSHED LIME STONE.
f) ALL GRANULAR TICKETS SHALL BE ELECTRONICALLY PRINTED AND SUBMITTED TO THE CONTRACT ADMINISTRATOR BY 9:00 O'CLOCK A.M. THE FOLLOWING DAY WITH THE TOTAL TONNAGE SUMMARIZED. NO LATE SUBMISSIONS WILL BE ACCEPTED.
g) ALL SUPPLIERS OF GRANULAR MATERIAL (QUARRIES, GRAVEL PITS) MUST SUPPLY DRY DENSITY VALUES (PROCTOR) TWICE A YEAR BEFORE ALLOWING THEIR MATERIAL TO BE USED ON CITY PROJECTS.
h) ALL RECYCLED MATERIAL USED FOR TRENCH BACKFILL MUST BE ACCOMPANIED WITH A PROCTOR VALUE PROVIDED BY THE SUPPLIER.

11. CONCRETE
THE REQUIREMENTS OF OPSS.MUNI 904, OPSS.MUNI 1002, OPSS.MUNI 1303, OPSS.MUNI1350, AND OPSS 1212, 1301, 1302, 1305, 1306, 1308, 1315 AND SHALL APPLY EXCEPT AS MODIFIED:
a) SLAG CEMENT IS NOT PERMITTED IN CONCRETE MIX ON HOT AND WINDY DAYS OR AFTER NOVEMBER 1ST. THE CITY WILL ACCEPT A MAXIMUM OF 25% OF SLAG BY MASS IN THE TOTAL QUANTITY OF PORTLAND CEMENT IN THE MIX DESIGN. NO FLY
REVISED MARCH 2017 COB OPSS AMENDMENTS
ASH IS PERMITTED IN ANY CONCRETE MIX DESIGN SUPPLIED TO ANY CITY OF BURLINGTON PROJECTS.
b) CRUSHED PERCENTAGE FOR COARSE AGGREGATE SHALL NOT BE LESS THAN 80%, SHALL BE FRACTURED ON TWO FACES, AND MUST MEET A.C.!. GRADATION.
c) APPROVED CONCRETE MIX DESIGN BY TYPE "A" CERTIFIED LAB SHALL BE SUBMITTED TWO WEEKS PRIOR TO STRUCTURAL POURS OVER 10M3 INCLUDING THE CEMENT CONTENT.
d) ALL CONCRETE PLANTS SHALL BE APPROVED BY THE CONTRACT ADMINISTRATOR OR HIS REPRESENTATIVE.
e) THE CONTACT ADMINISTRATOR OR HIS REPRESENTATIVE SHALL HAVE ACCESS WITHOUT PRIOR NOTICE TO PREMISES OF THE CONCRETE PLANT FOR THE PURPOSE OF INSPECTION.
f) PRICES FOR PREPARATION AND PLACEMENT OF CONCRETE IN HOT AND COLD WEATHER INCLUDING CONCRETE, LABOUR AND MATERIALS FORMS SHALL BE INCLUDED IN THE UNIT COST ITEMS.
g) OPSS.MUNI1350.05.02 PERFORMANCE REQUIREMENTS FOR CONCRETE
THE FOLLOWING TABLE FOR CEMENT CONTENT SHALL APPLY TO CONCRETE MIXES UNLESS OTHERWISE SPECIFIED:

CLASS OF CONCRETE	30 MPA @ 28 DAYS
CEMENT CONTENT	TYPE 10 (325 KG/M3)
COARSE AGGREGATE	19 MM NOMINAL MAXIMUM SIZE
AIR CONTENT	6.5% +1–1%
MAXIMUM SLUMP	80MM

12. STORM SEWERS
THE REQUIREMENTS OF OPSS.MUNI 517, OPSS.MUNI 518, OPSS.MUNI 904, OPSS.MUNI 905, OPSS.MUNI 1002, OPSS.MUNI 1004, OPSS.MUNI 1303, OPSS.MUNI 1350, OPSS.MUNI 1440, OPSS.MUNI 1820 OPSS.MUNI 410, OPSS.MUNI 501, OPSS.MUNI 510, AND OPSS 407, 408, 503, 504, 506, 507, 514, 515,516,538,565,570,1301, 1302, 1351, 1810, , 1830, 1840, 1841, 1850, SHALL APPLY EXCEPT AS MODIFIED HEREIN:
a) NO ASBESTOS PIPE WILL BE ACCEPTED.
b) ALL POLYVINYL CHLORIDE AND HIGH DENSITY POLYETHYLENE PIPES HAVE TO BE ACCOMPANIED BY A CERTIFICATE INDICATING THAT THE PRODUCT IS PRODUCED AS PER ASTM D 2321, D 2412, F 405, F 667–82, CGSR 41–G P–29M AND REVISED MARCH 2017 COB OPSS AMENDMENTS CGSB 41–GP–25, CSA B 182.2, B 182.3, B 182.4, ASTM 0 3034, 679, F 794 AND UNI–B–5, B–6 AND B–9. MAXIMUM SIZE PLASTIC PIPE ALLOWED: 450 MM.
c) THE CONTRACT ADMINISTRATOR OR HIS REPRESENTATIVE SHALL BE ALLOWED ACCESS TO PIPE PRODUCTION FACILITIES WITHOUT PRIOR NOTICE AND WILL BE PROVIDED WITH TESTING FACILITIES AND PIPE SPECIMENS FREE OF CHARGE. HE SHALL ALSO HAVE ACCESS TO ANY TEST RECORDS THAT HE MAY REQUIRE.
d) ALL CONCRETE PIPE AND CONCRETE BOX CULVERT MANUFACTURING COMPANIES SHALL BE APPROVED BY A PREQUALIFICATION COMMITTEE THAT INCLUDES THE MTO, MOE, MEA AND OCPA AND SHALL BE INSPECTED AND APPROVED BY AN INDEPENDENT CONSULTING ENGINEER REPORTING TO THE PRE–QUALIFICATION COMMITTEE.
e) ALL THE TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY ON THE TRAVELLED PORTION OF THE ROAD AND 95% STANDARD PROCTOR DENSITY ON THE UNTRAVELLED PORTION OF THE ROAD.

f) THE INSTALLATION OF ALL PROPOSED STORM SEWER WORKS, SHALL BE PAID FOR IN THE COST OF THE TENDERED ITEMS AND SHALL INCLUDE THE FOLLOWING:
i) ALL LABOUR, MATERIALS, EQUIPMENT THAT MAY BE REQUIRED TO COMPLETE THE PROPOSED WORK IN ITS ENTIRETY TO OPSS AND CITY OF BURLINGTON SPECIFICATIONS.
ii) EXCAVATION OF ROCK OR ANY OTHER MATERIALS THAT MAY BE ENCOUNTERED AND ALL NECESSARY RESTORATION OF DISTURBED AREAS TO THEIR ORIGINAL CONDITION.

REGION OF HALTON AMENDMENTS TO OPSD

ABBREVIATIONS
100.010 TO 100.060
1. HALTON REGION'S "A GUIDE FOR THE PRODUCTION OF ENGINEERING CONTRACT DRAWINGS" TAKE PRECEDENCE OVER THE ABBREVIATIONS IN THIS SECTION.
101.010 TO 104.010
1. ADDITIONAL REQUIREMENTS TO BE FOUND IN HALTON REGION'S "A GUIDE FOR THE PRODUCTION OF ENGINEERING CONTRACT DRAWINGS".

LIGHT DUTY BARRIERS
219.100 TO 219.110
1. NOT PERMITTED IN HALTON REGION.

HEAVY DUTY SILT FENCE BARRIERS
219.130
1. NOT PERMITTED IN HALTON REGION. REFER TO RH 200.040

SITE ENTRANCES
301.010 TO 01.030
1. HALTON REGION REQUIRES A 10m RADIUS ON FARM ENTRANCES.

CONCRETE SIDEWALK
310.010 TO 310.020
1. DUMMY JOINTS ARE NOT PERMITTED IN THE REGION OF HALTON. ALL CONTRACTION JOINTS SHALL BE SAW CUT.

FRAMES AND GRATES
400.001 TO 400.081
1. NOT PERMITTED IN HALTON REGION.
400.090
1. PERMITTED ONLY FOR RETROFITTING EXISTING CATCHBASINS. THE WORD "SAN", "STORM", OR "WATER" TO BE CAST INTO LID IN ADDITION TO "DANGER". THE MINIMUM LETTER SIZE SHALL BE 75mm (3 INCHES) IN HEIGHT.
400.100 TO 400.110
1. NOT PERMITTED FOR USES ON REGIONAL ROADS.
401.010
1. THE WORD "SAN", "STORM", OR "WATER" TO BE CAST INTO LID IN ADDITION TO "DANGER". THE MINIMUM LETTER SIZE SHALL BE 75mm (3 INCHES) IN HEIGHT.
401.020
1. NOT PERMITTED IN HALTON REGION.
401.030
2. THE WORD "SAN", "STORM", OR "WATER" TO BE CAST INTO LID IN ADDITION TO "DANGER". THE MINIMUM LETTER SIZE SHALL BE 75mm (3 INCHES) IN HEIGHT.
401.040 TO 401.050
1. NOT PERMITTED IN HALTON REGION.
401.060
1. THE WORD "SAN", "STORM", OR "WATER" TO BE CAST INTO LID IN ADDITION TO "DANGER". THE MINIMUM LETTER SIZE SHALL BE 75mm (3 INCHES) IN HEIGHT.

SECTION FRAMES AND GRATES
402.010 TO 402.021
1. NOT PERMITTED IN HALTON REGION.
402.030
1. NOT PERMITTED IN HALTON REGION. REFER TO RH 405.010.
404.010 TO 404.022
1. NOT PERMITTED IN HALTON REGION.
405.010
1. NOT PERMITTED IN HALTON REGION.
406.010
1. NOT PERMITTED IN HALTON REGION.

CURBS AND GUTTERS
600.070 TO 600.090
1. NOT PERMITTED IN HALTON REGION.
600.110
1. NOT PERMITTED IN HALTON REGION.

CURBS AND GUTTERS, CATCH BASINS AND MANHOLES
701.010 TO 701.015
1. IN ALL WASTEWATER MANHOLES, BENCHING IS TO BE TO OBVERT OF PIPE.
2. SAFETY PLATFORMS ARE NOT ALLOWED IN HALTON REGION.
701.021
1. IN ALL WASTEWATER MANHOLES, BENCHING IS TO BE TO OBVERT OF PIPE.MAXIMUM SIZE.
2. HOLE IN WALL CHART SHALL APPLY TO BOTH PRE–CAST AND CAST–IN–PLACE RISER SECTIONS.
704.010 TO 704.011
1. TOTAL DEPTH OF MANHOLE ADJUSTMENT UNITS IS TO BE A MINIMUM 150mm TO 300mm MAXIMUM.

CULVERTS AND DRAINS
802.010 TO 802.054
1. COVER MATERIAL TO BE 300mm GRANULAR "A" WITH COMPACTION AT 95% S.P.D.
2. WHEN USING UNSHRINKABLE BACKFILL, THE FILL IS PLACED ON TOP OF COVER MATERIAL.

FENCING, GUIDE RAILS
913.130
1. NOT PERMITTED IN HALTON REGION.

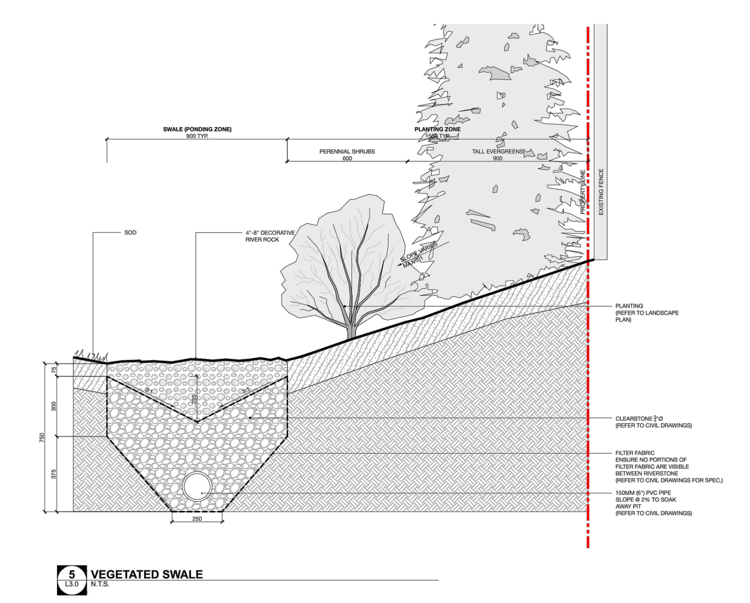
SANITARY SEWERS, MANHOLES AND CATCHBASINS
1003.010
1. TEE DROP STRUCTURES ARE NOT PERMITTED IN HALTON REGION.
1003.020
1. IN ALL WASTEWATER MANHOLES, BENCHING IS TO BE TO OBVERT OF PIPE.
2. OBVERT OF THE DROP PIPE TO MEET OBVERT OF THE RECEIVING SEWER.
3. UNSHRINKABLE FILL IS TO BE USED INSTEAD OF CONCRETE.
4. NOTE 2 DOES NOT APPLY.
1003.030 TO 1003.031
1. PERMITTED ONLY WHEN PRE–APPROVED BY HALTON REGION.
1006.010
1. BACKFILL AROUND RISER SHALL BE 25 MM MAXIMUM SIZE CLEAR STONE OR UNSHRINKABLE FILL. BEDDING AS SPECIFIED TO BE AS PER OPSD 802.030, 802.031, 802.032 AND 802.033.
1006.020
1. BACKFILL AROUND RISER SHALL BE 25 MM MAXIMUM SIZE CLEAR STONE OR UNSHRINKABLE FILL.
2. BEDDING AS SPECIFIED TO BE AS PER OPSD 802.010, 802.013 AND 802.014.

WATERMAINS
1100.010
1. NOT PERMITTED IN HALTON REGION.
1100.011
1. NOT PERMITTED IN HALTON REGION.
1101.010
1. NOT PERMITTED IN HALTON REGION.
1101.020
1. NOT PERMITTED IN HALTON REGION.
1103.010
1. NOT PERMITTED IN HALTON REGION.
1103.020 TO 1103.021
1. NOT PERMITTED IN HALTON REGION.
1104.010
1. PLASTIC SERVICES ARE NOT PERMITTED IN HALTON REGION. NOTE 1 DOES NOT APPLY.
2. THE MINIMUM COVER TO WATER SERVICE AT PROPERTY LINE TO BE 1.7
3. BEDDING TO BE GRANULAR "A", 19MM CRUSHER RUN LIMESTONE
4. SOLDERED JOINTS ARE NOT ALLOWED BEFORE THE METER OR BETWEEN THE WATERMAIN AND THE CURB STOP.
5. SERVICE ROD AND COTTER PIN ARE TO BE STAINLESS STEEL.
6. IN AREAS OF HIGH WATER OR WET SAND THE CURB STOP AND BOX MUST BE WRAPPED WITH A GEOTEXTILE TO 300 MM ABOVE THE CONNECTION.

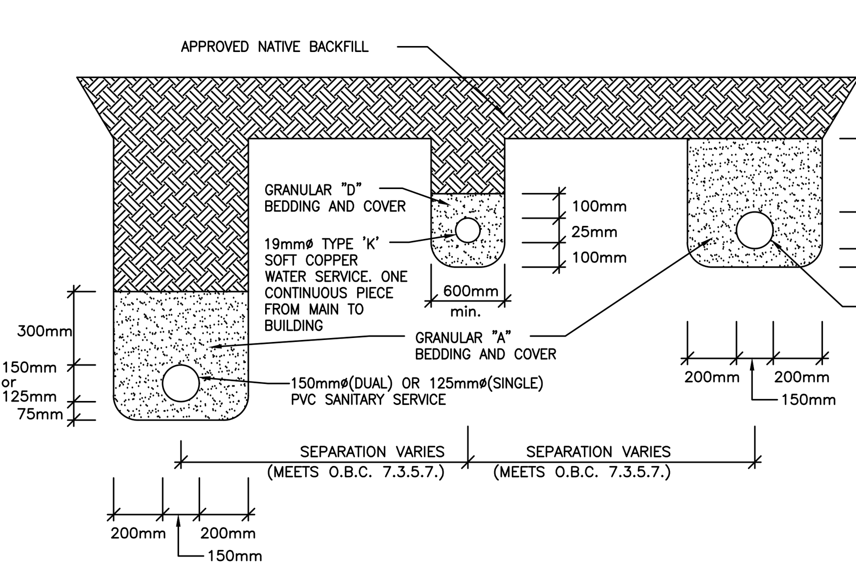
SECTION WATERMAINS
1104.020
1. MINIMUM COVER TO WATER SERVICE AT PROPERTY LINE TO BE 1.7m.
2. BEDDING TO BE GRANULAR "A", 19MM CRUSHER RUN LIMESTONE
3. IN AREAS OF HIGH WATER OR WET SAND THE CURB STOP AND BOX MUST BE WRAPPED WITH A GEOTEXTILE TO 300 MM ABOVE THE CONNECTION.
4. LARGER SERVICE BOX (BUFFALO BOX) IS ONLY ALLOWABLE SERVICE BOX.
5. SOLDERED JOINTS ARE NOT ALLOWED BEFORE THE METER OR BETWEEN THE WATERMAIN AND THE CURB STOP.
6. SERVICE ROD AND COTTER PIN ARE TO BE STAINLESS STEEL.
7. CONCRETE SUPPORT BLOCK REQUIRED UNDER MAIN STOP.
1104.030
1. NOT PERMITTED IN HALTON REGION.
1105.010
1. A HYDRANT ANCHOR TEE WITH THE 150 MM MECHANICAL JOINT SECONDARY GATE VALVE BOLTED TO THE ANCHOR TEE IS REQUIRED.
2. ALL JOINTS ARE TO BE MECHANICAL RESTRAINED FOR THE ENTIRE LENGTH OF THE HYDRANT LATERAL
3. CONCRETE THRUST BLOCKS NOT PERMITTED IN HALTON. NOTE 1 & NOTE A DO NOT APPLY.
4. CLEAR STONE BEDDING IS TO BE USED FOR THE ENTIRE LATERAL TRENCH.
5. DISTANCE FROM FINISHED GRADE TO GROUND FLANGE TO BE 0 TO 50mm.
6. GROUND FLANGE TO BARREL VALVE MUST BE 1.7m.
7. HYDRANT EXTENSIONS MUST BE MADE FROM THE BOTTOM OF THE HYDRANT, AT THE BOOT, AS TO NOT AFFECT THE LENGTH OF THE OPERATING ROD.
1107.010 TO 1107.030
1. NOT PERMITTED IN HALTON REGION.
1108.010
2. NOT PERMITTED IN HALTON REGION.

CATHODIC PROTECTION
1109.010 TO 1109.011
1. 10 GAUGE COPPER WIRE MUST BE USED
2. FOR ANY JUNCTION MADE IN THE SERVICE PIPE BETWEEN MAIN STOP AND CURB STOP, COUPLINGS WILL NOT BE PERMITTED UNLESS THE SERVICE LENGTH EXCEEDS 20m. AN ANODE SHALL BE INSTALLED ON EACH LENGTH SEPARATED BY A COUPLING.

WATERPROOFING OF SPLICES
1109.025
1. TO BE USED FOR SPLICING OF TRACER WIRE WHERE PERMITTED.



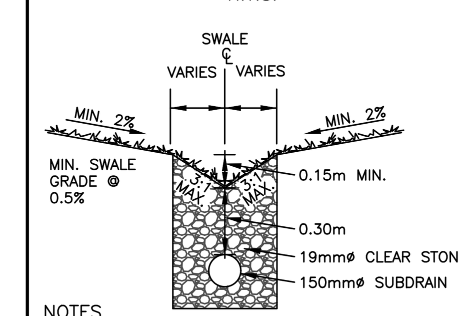
DETAIL SHOWN FOR REFERENCE.
SEE LANDSCAPING DRAWING L3 FOR DETAILS



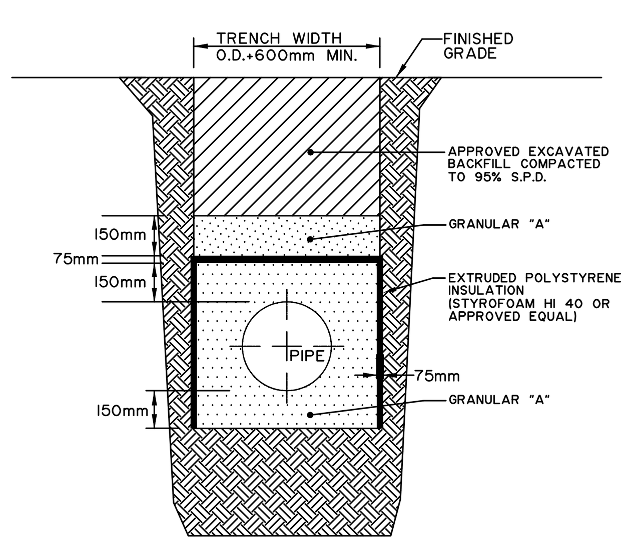
SERVICE LOCATIONS AND SERVICE TRENCH DETAILS
N.T.S.

NOTES:
1) RISERS REQUIRED WHERE DEPTH TO TOP OF MAIN SEWER EXCEEDS 4000mm.
2) CONNECTIONS MADE AT MAIN SEWER SHALL BE MADE WITH FACTORY TEES OR "Y" AS REQUIRED UNDER OBC.
3) MINIMUM SLOPE OF 2.0%
4) BEDDING AND COVER MATERIAL FOR SANITARY, WATER, AND STORM TO BE COMPACTED TO 100% SPD.

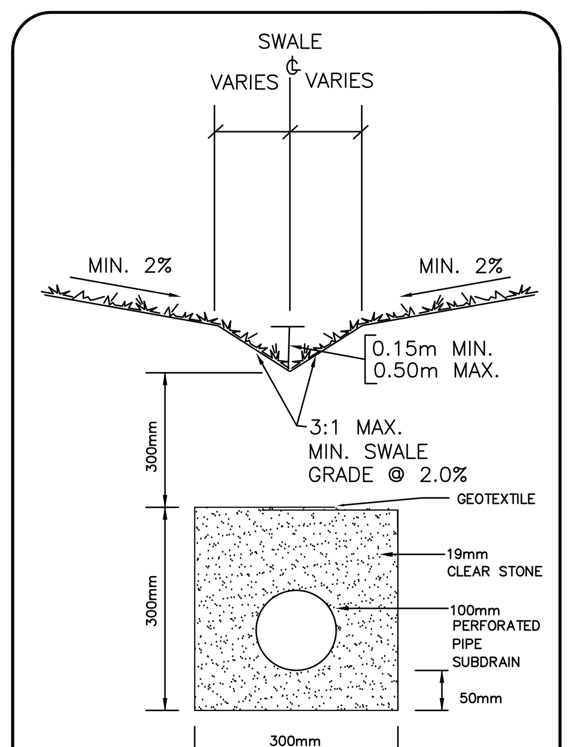
TYPICAL SWALE SECTION
N.T.S.



NOTES
1. MINIMUM SWALE GRADE TO BE 1.5%.
2. SUBDRAIN IS REQUIRED WHERE SWALE GRADES ARE LESS THAN 2% AND MUST BE CONNECTED TO A STORM SEWER OR PRIVATE REAR LOT CATCH BASIN

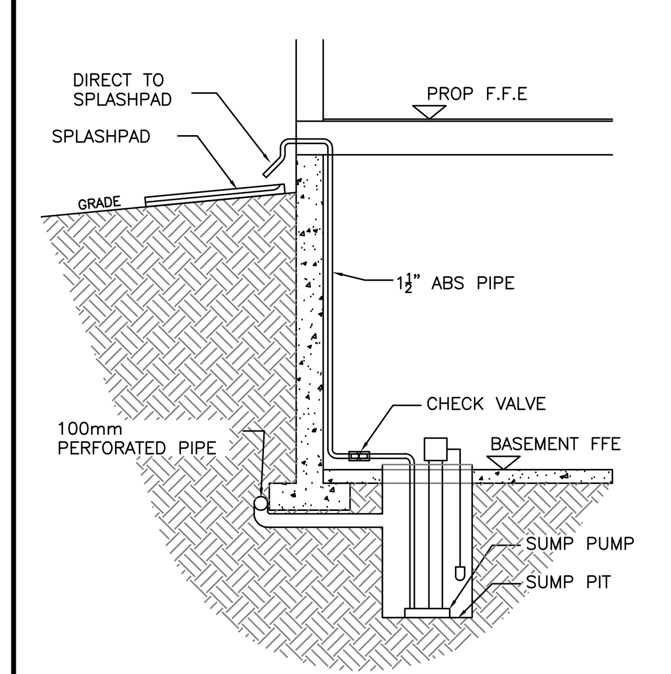


PIPE INSULATION DETAIL
NTS

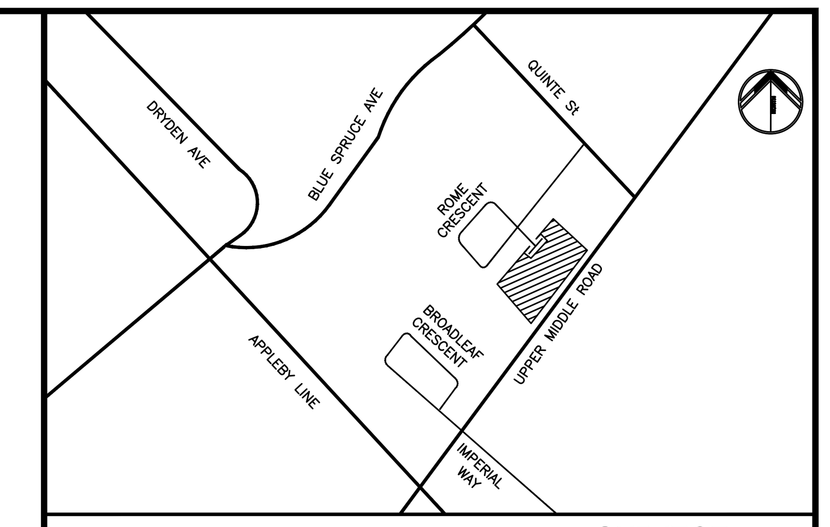


TYPICAL SWALE WITH SUBDRAIN DETAIL
SUBDRAIN IS TO BE PLACED UNDER SWALES @ 1.5% AND LESS
SCALE : NTS

NOTE:
1) SUBDRAIN TRENCH TO BE WRAPPED WITH NON WOVEN CLASS 1 GEOTEXTILE F.O.S. 75 TO 150mm MINIMUM THICKNESS
2) OUTLET SUBDRAINS TO CB, MH'S OR DOWN EMBANKMENTS WHERE EVER POSSIBLE.



TYPICAL SUMP PUMP DETAIL
SCALE: N.T.S.



KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

NOTE :
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THIS DRAWING IS NOT TO BE SCALED.
THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDINGS.
THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC...
EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY J.D.BARNES LAND SURVEYORS LTD. DATED FEBRUARY 16, 2017.

BENCH MARK:
ELEVATION SHOW ON THIS PLAN ARE RELATED TO CANADIAN GEODETIC VERTICAL DATUM, 1978. AND ARE DERIVED FROM THE CITY OF BURLINGTON BENCH MARKS. No.482 HAVING A PUBLISHED ELEVATION OF 143.042m. AND No.841 HAVING A PUBLISHED ELEVATION OF 139.273m
LOCAL BENCHMARK No. 1 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE UPPERMIDDLE READ. SOUTH WEST OF GRAVEL DRIVEWAY FOR HOUSE No. 5219, OPPOSITE FIRE HYDRANT. ELEVATION = 141.11m
LOCAL BENCHMARK No. 2 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE OF UPPERMIDDLE ROAD OPPOSITE THE PRODUCTION OF THE CHAINLINK FENCE ALONG SOUTHWEST BOUNDARY OF BLOCH 262.
ELEVATION = 141.19m

METRIC NOTE:
DISTANCES AND ELEVATIONS ON THIS PLAN ARE TYPICALLY SHOWN IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NO.	REVISIONS	DATE	BY
8.	AS PER CITY COMMENTS	AUG 15/19	DB
7.	AS PER CITY COMMENTS	FEB 14/19	DB
6.	ZBA & SPA SUBMISSION	JUN 21/18	DB
5.	REVISED S. PL/UMR WIDENING; REV. RETAINING WALL; FOR COORDINATION	JUN 21/18	DB
4.	FOR CLIENT REVIEW & COORDINATION	JUN 6/18	DB
3.	ZBA RESUBMISSION	MAR 29/18	DB
2.	ZBA & SPA SUBMISSION	OCT 27/17	DB
1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE:

DRAWING :
NOTES & DETAILS PLAN
GEORGINA COURT R.O.W.

CLIENT :
BLOOMFIELD DEVELOPMENTS

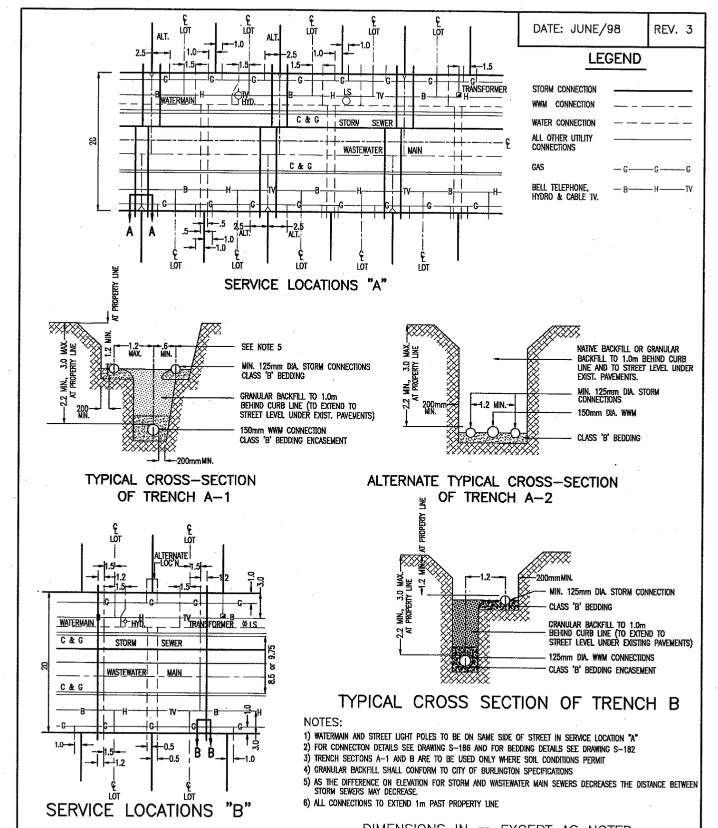
PROJECT :
PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

ODAN·DETECH CONSULTING ENGINEERS

The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SCALE :	PROJ. NO.:	DATE:	DESIGN BY:
AS NOTED	17213	MARCH 17	D.B.
DRAWING NO:			DRAWN BY: D.B.
17213 – 4 G.dwg			CHECKED BY: D.C.S.
			APPROVED BY: D.C.S.
FILE NUMBER	ENGINEER		DRWG. NO.: 4 OF 7

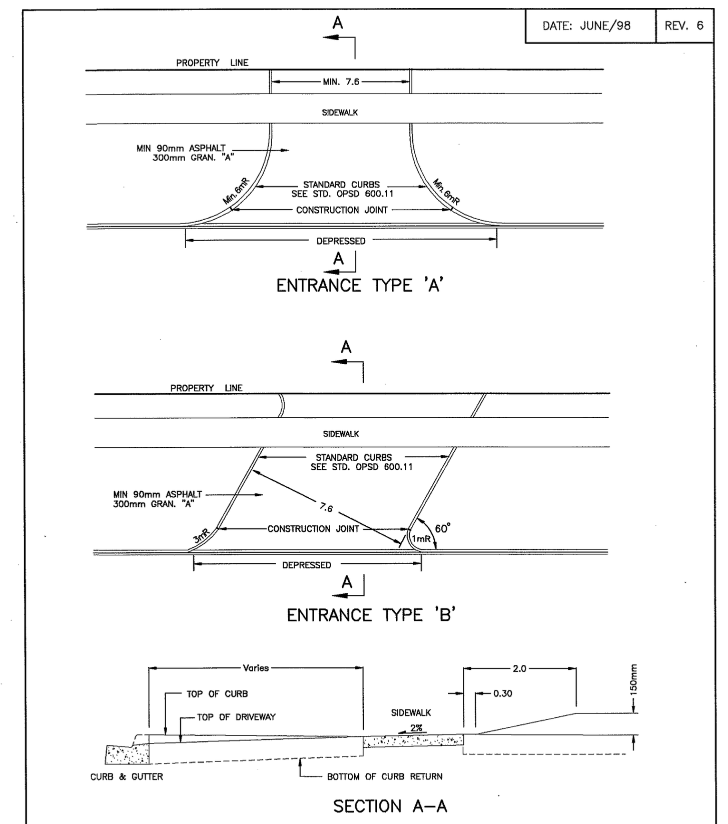
LICENSED PROFESSIONAL ENGINEER
AUG 15/19
D. T. BANCROFT
100200672
PROVINCE OF ONTARIO



NOTES:
1) WATERMAIN AND STREET LIGHT POLES TO BE ON SAME SIDE OF STREET IN SERVICE LOCATION "A"
2) FOR CONNECTION DETAILS SEE DRAWING S-186 AND FOR BEDDING DETAILS SEE DRAWING S-182
3) TRENCH SECTIONS A-1 AND B ARE TO BE USED ONLY WHERE SOIL CONDITIONS PERMIT
4) GRANULAR BACKFILL SHALL CONFORM TO CITY OF BURLINGTON SPECIFICATIONS
5) AS THE DIFFERENCE ON ELEVATION FOR STORM AND WASTEWATER MAIN SEWERS DECREASES THE DISTANCE BETWEEN STORM SEWERS MAY DECREASE.
6) ALL CONNECTIONS TO EXTEND 1m PAST PROPERTY LINE

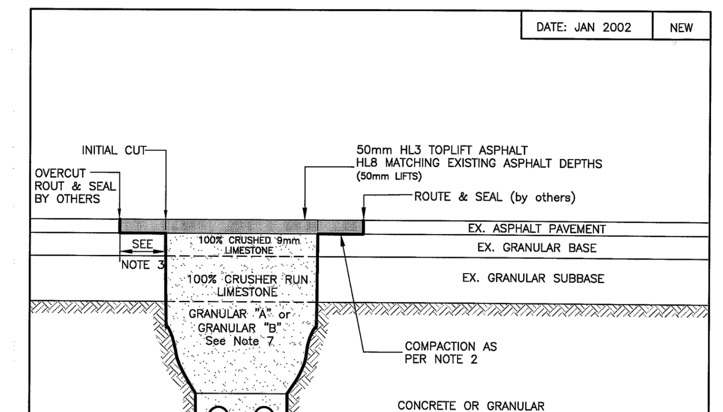
DIMENSIONS IN m EXCEPT AS NOTED

APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Feb. 17/99	RESIDENTIAL SERVICE LOCATIONS	DWG. NO. S-185



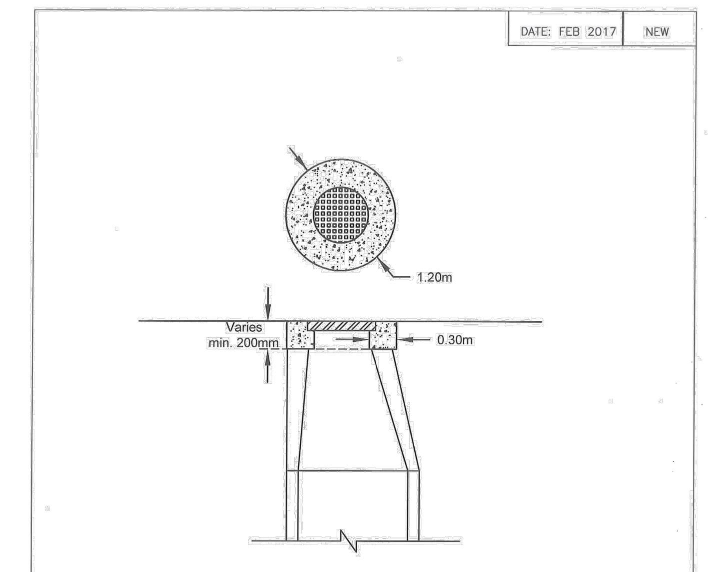
DIMENSIONS IN m EXCEPT AS NOTED

APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Feb. 17/99	STANDARD ENTRANCES LOW VOLUME ACCESS	DWG. NO. S-110



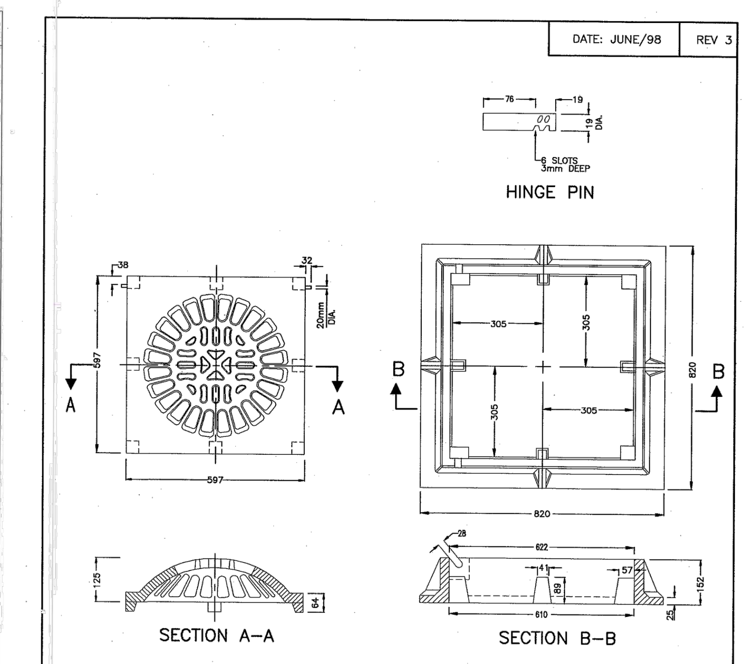
NOTES:
1. TACK COAT AND SEAL ALL VERTICAL ASPHALT SURFACES
2. COMPACT ALL GRANULAR MATERIAL TO AT LEAST 100% OF ITS STANDARD PROCTOR DENSITY.
3. MINIMUM STEP JOINT WIDTH FROM UNDISTURBED EDGE OF EXCAVATION 300mm FOR EXCAVATIONS LESS THAN 1.5m DEPTH 600mm FOR EXCAVATIONS GREATER THAN 1.5m DEPTH
4. OVERCUT AND PLACEMENT OF GRANULAR BASE/SUBBASE AND ASPHALT TO BE DONE AFTER PLACEMENT AND COMPACTION OF TRENCH BACKFILL.
5. ASPHALT OVERCUT AND RESTORATION TO BE COMPLETED BETWEEN APRIL 1 AND OCTOBER 31.
6. THIS DRAWING TO BE READ IN CONJUNCTION WITH CITY OF BURLINGTON AND OPSD STANDARD DRAWINGS AND SPECIFICATIONS
7. UNSHRINKABLE FILL SHALL BE USED WHERE DIRECTED BY THE CITY INSPECTOR.

APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Feb. 6/02	FLEXIBLE PAVEMENT EXCAVATION REINSTATEMENT	DWG. NO. S-114A



1. Cored maintenance hole "adjustment" shall be 200mm-300mm thick.
2. Cored maintenance hole "rebuild" shall be greater than 300mm thick.
3. Concrete shall be 30MPa high early strength (20MPa at 24hrs). Mix design shall be pre-approved by Contract Administrator.
4. Concrete shall be cured with white pigmented curing compound meeting requirements of OPSS 1315 and applied at a rate of 0.2L/m²
5. Traffic Control shall be in place and conform to MTO Book 7 and to contract conditions.
6. If distance from top of precast to top of pavement is less than 200mm the City shall be notified prior to forming.

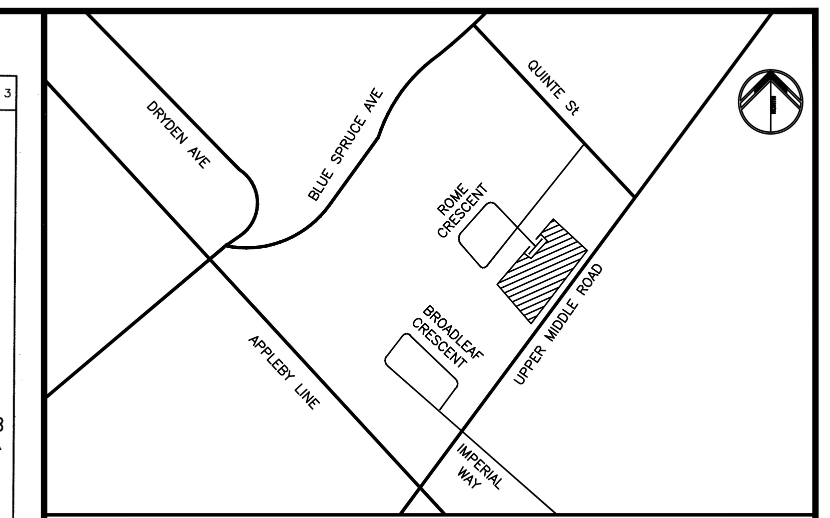
APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
MANAGER OF DESIGN AND CONSTRUCTION DATE:	CORED MAINTENANCE HOLE ADJUSTMENT & REBUILD	DWG. NO. S-120



NOTES:
1) ALLOWABLE TOLERANCE: DIMENSIONS 300mm OR LESS + 3mm DIMENSIONS OVER 300mm UP TO AND INCLUDING 900mm +6mm
2) THE INITIALS OR MARK OF THE MANUFACTURER ARE TO BE DISTINCTLY CAST IN RAISED LETTERS ON BOTH FRAME AND COVER
3) STEEL FOR HINGE PINS TO BE AS PER ASTM DESIGNATION A-7 OR EQUIVALENT
4) CAST IRON TO CONFORM TO ASTM DESIGNATION A-48-74 CLASS 30-C

DIMENSIONS IN mm EXCEPT AS NOTED

APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Feb. 17/99	BEEHIVE CATCHBASIN FRAME and COVER	DWG. NO. S-176



KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

NOTE :

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THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ARCHITECTS/ENGINEERS BEFORE PROCEEDING WITH THE WORKS.

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THIS DRAWING IS NOT TO BE SCALED.

THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDINGS.

THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC...

EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY J.D.BARNES LAND SURVEYORS LTD. DATED FEBRUARY 16, 2017.

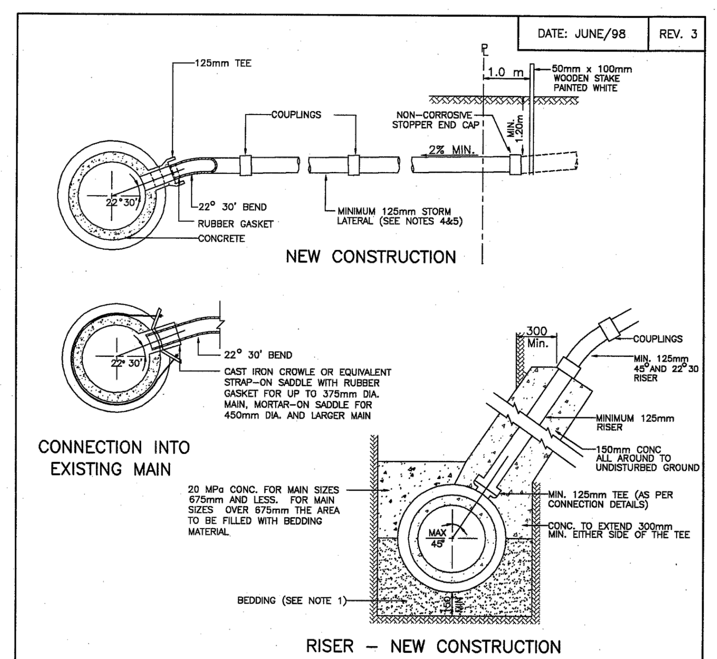
BENCH MARK:
ELEVATION SHOW ON THIS PLAN ARE RELATED TO CANADIAN GEODETIC VERTICAL DATUM, 1978. AND ARE DERIVED FROM THE CITY OF BURLINGTON BENCH MARKS. No.482 HAVING A PUBLISHED ELEVATION OF 143.042m. AND No.841 HAVING A PUBLISHED ELEVATION OF 139.273m

LOCAL BENCHMARK No. 1 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE UPPERMIDDLE READ. SOUTH WEST OF GRAVEL DRIVEWAY FOR HOUSE No. 5219, OPPOSITE FIRE HYDRANT. ELEVATION = 141.11m

LOCAL BENCHMARK No. 2 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE OF UPPERMIDDLE ROAD OPPOSITE THE PRODUCTION OF THE CHAINLINK FENCE ALONG SOUTHWEST BOUNDARY OF BLOCH 262.
ELEVATION = 141.19m

METRIC NOTE:
DISTANCES AND ELEVATIONS ON THIS PLAN ARE TYPICALLY SHOWN IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

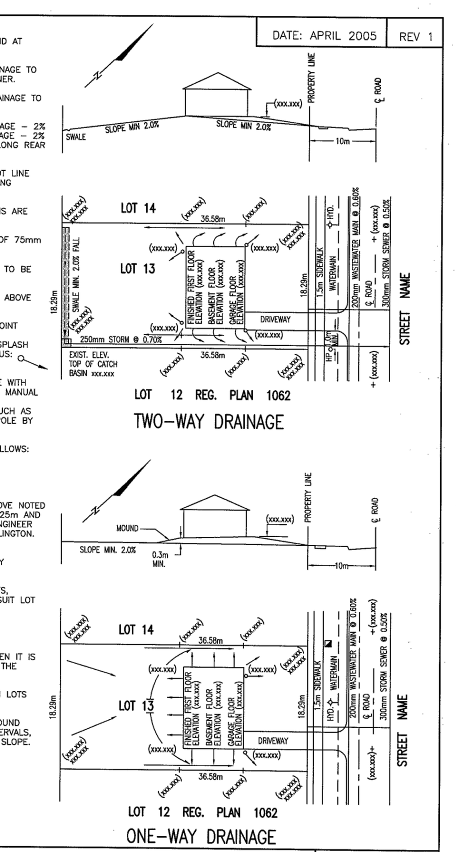
NO.	REVISIONS	DATE	BY
8.	AS PER CITY COMMENTS	AUG 15/19	DB
7.	AS PER CITY COMMENTS	FEB 14/19	DB
6.	ZBA & SPA SUBMISSION	JUN 21/18	DB
5.	REVISED S. PL/UMR WIDENING; REV. RETAINING WALL; FOR COORDINATION	JUN 21/18	DB
4.	FOR CLIENT REVIEW & COORDINATION	JUN 6/18	DB
3.	ZBA RESUBMISSION	MAR 29/18	DB
2.	ZBA & SPA SUBMISSION	OCT 27/17	DB
1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB



NOTE:
1) BEDDING TO BE CLASS 'B' UNLESS NOTED OTHERWISE ON PLAN AND PROFILE DRAWINGS
2) FOR RISER DETAIL CONCRETE TO BE 20 MPa
3) FOR TYPICAL LATERAL LOCATIONS SEE STD. S-185
4) THE MAXIMUM NUMBER OF CONNECTIONS PER LENGTH OF PIPE SHALL BE: FOR 250mm DIA. – 300mm DIA. :1 FOR 375mm DIA.–525mm DIA. :2
5) LATERAL MATERIAL TO BE EITHER CLASS 2 CONC. PIPE OR WHITE S.D.R. 28 P.V.C. PIPE, MANUFACTURED IN ACCORDANCE AND APPROVED BY C.S.A.
6) CONNECTIONS INTO CONCRETE MAIN TO BE MANUFACTURED TEE'S OR A CORED OPENING WITH TEE'S MANUFACTURED IN ACCORDANCE AND APPROVED BY C.S.A.

DIMENSIONS IN mm EXCEPT AS NOTED

APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Feb. 17/99	RESIDENTIAL STORM CONNECTION	DWG. NO. S-183



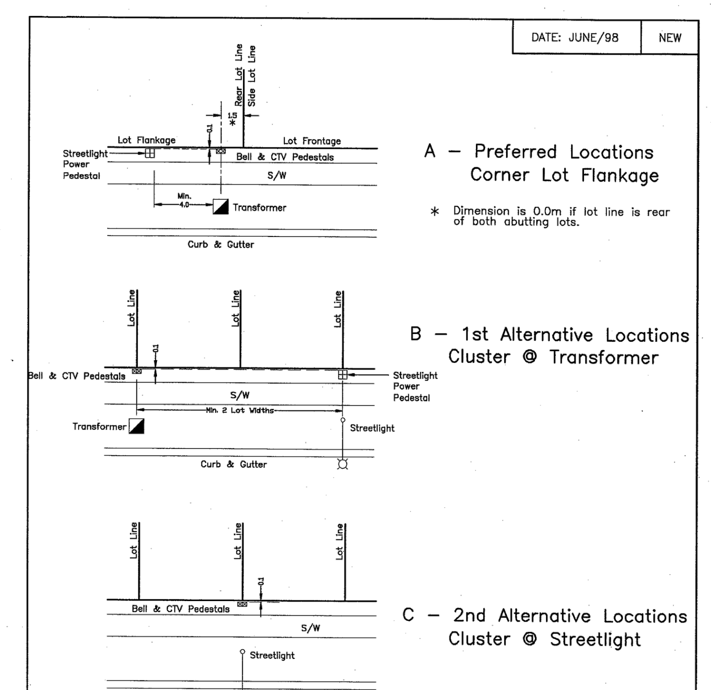
REQUIREMENTS
1. HOUSE ELEVATION DENOTES ELEVATION OF GROUND AT FRONT OF HOUSE
1a. HOUSE ELEVATION FOR LOT WITH ONE WAY DRAINAGE TO BE MINIMUM .5m ABOVE THE HIGH FRONT LOT CORNER.
1b. HOUSE ELEVATION FOR LOTS WITH TWO WAY DRAINAGE TO BE MINIMUM .4m ABOVE HIGH FRONT LOT CORNER.
2. MINIMUM SIDE YARD SLOPE WITH ONE WAY DRAINAGE – 2%
2a. MINIMUM SIDE YARD SLOPE WITH TWO WAY DRAINAGE – 2%
2b. MINIMUM SLOPE WITH TWO WAY DRAINAGE AND ALONG REAR YARD – 2%
3. SWALE AREA TO BE MINIMUM .6m FROM REAR LOT LINE AND IDENTIFIED WITH SHADING AND ARROWS INDICATING DIRECTION OF FLOW.
4. WITH REAR YARD DRAINAGE BEEHIVE CATCH BASINS ARE REQUIRED AT A MAXIMUM INTERVAL OF 60m
5. TOP OF CATCH BASIN FRAME TO BE A MINIMUM OF 75mm BELOW GROUND LEVEL
6. SHOW BENCH MARK USED (CITY OF BURLINGTON) TO BE SUPPLIED BY THE CONSULTING ENGINEER
7. HEIGHT OF MOUND AROUND HOUSE MINIMUM .2m ABOVE ANY SWALE
8. MINIMUM DRIVEWAY WIDTH TO BE 3.0m AT ANY POINT
9. DOWNSPOUTS TO DISCHARGE ONTO GROUND VIA SPLASH PAD. LOCATION OF DOWNSPOUTS TO BE SHOWN THUS:
10. WEEPING TILE DISCHARGE TO BE IN ACCORDANCE WITH THE CITY OF BURLINGTON STORM DRAINAGE CRITERIA MANUAL
11. DRIVEWAY TO CLEAR ABOVE GROUND UTILITIES SUCH AS HYDRANT, HYDRO TRANSFORMER, OR STREET LIGHT POLE BY 1.0m MINIMUM
12. SLOPES AND SLOPE HEIGHTS SHOULD BE AS FOLLOWS:

HEIGHT	SLOPE
0m–.6m	2:1
.6m–1.25m	3:1
ABOVE 1.25m	4:1

13. RETAINING WALLS WILL BE USED WHERE THE ABOVE NOTED SLOPES CANNOT BE OBTAINED. RETAINING WALLS 1.25m AND HIGHER WILL BE REVIEWED AND APPROVED BY AN ENGINEER AND BE TO THE SATISFACTION OF THE CITY OF BURLINGTON.
14. SEMI-DETACHED DWELLINGS TO EMPLOY TWO-WAY DRAINAGE WHEREVER POSSIBLE
15. HOUSE STYLES SUCH AS BACKSLPITS, WALK-OUTS, SIDESPLITS AND FRONTSPLITS ARE TO BE USED TO SUIT LOT GRADING
16. MAXIMUM DRIVEWAYS SLOPES – NORMAL 8% – REVERSE 5%
17. REVERSE DRIVEWAYS TO BE PERMITTED ONLY WHEN IT IS PROVEN THAT A 100 YEAR DESIGN WILL NOT CAUSE THE DRIVEWAY TO FLOOD
18. REVERSE DRIVEWAYS WILL NOT BE PERMITTED ON LOTS WITH A ONE-WAY DRAINAGE PATTERN
19. GRADING PLANS TO SHOW PROPOSED ABOVE GROUND UTILITIES, CENTRELINE ROAD ELEVATIONS AT 20m INTERVALS, CENTRELINE % SLOPE AND LOCATION OF CHANGE IN SLOPE.

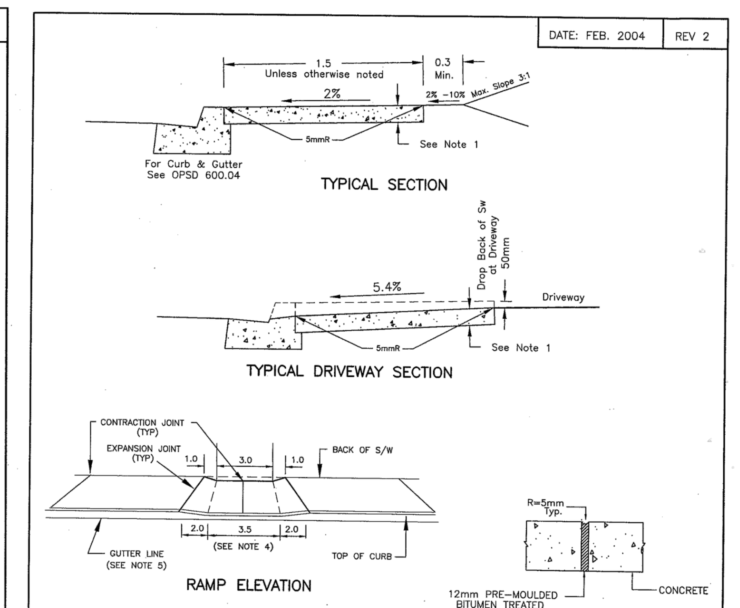
LEGEND
(XXX.XXX) DENOTES PROPOSED ELEVATION
XXX.XXX DENOTES EXISITNG ELEVATION

APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: May 6/05	LOT GRADING STANDARD FOR SUBDIVISION LOTS	DWG. NO. S-119



NOTES
1. Bell, Cablenet and City streetlight power pedestals to be 0.1m from streetline.
2. Bell and Cablenet pedestals to be located side to side parallel to roadway.
3. Pedestals to be located in clusters with above ground services.
4. Number of Bell and Cablenet pedestals to be minimized, generally at 60m to 80m intervals.
5. Maximum of 2 aboveground utility installations per lot frontage..
6. Above ground utilities to be minimum 1m from driveways.
7. Oversize pedestals (OPI, transformers etc.) to be located on lot flankage or open space blocks.
8. New site plan installations – Locate aboveground pedestals in front of the new development.
9. No aboveground plant to be installed within 4.0m of the door side of the transformer. (Door side is such that a worker opening the door faces oncoming traffic.)

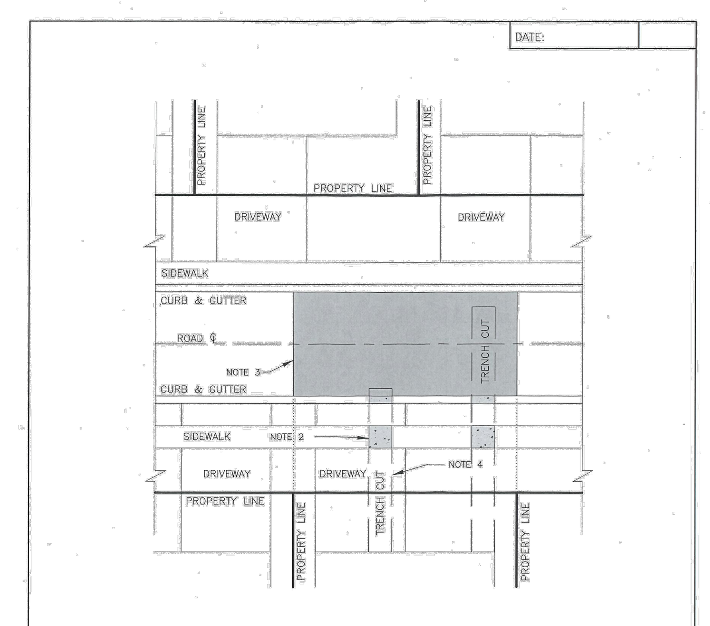
Original Signed By	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Feb. 17/99	UTILITY PEDESTAL LOCATIONS	DWG. NO. S-117



NOTES:
1) SIDEWALK THICKNESS – 125mm RESIDENTIAL DRIVEWAYS and PEDESTRIAN RAMPS – 150mm COMMERCIAL AND INDUSTRIAL DRIVEWAYS – 200mm
2) EXPANSION JOINTS TO BE 30.0m c/c MAX.
3) CONTRACTION JOINTS TO BE 2.5m c/c MAX.
4) SINGLE DRIVEWAY – 3.0m MIN. WIDTH FLARING TO 3.5m DOUBLE DRIVEWAY – 5.5m MIN. WIDTH FLARING TO 6.0m
5) JOINTS IN S/W TO LINE UP WITH JOINTS IN CURB & GUTTER
6) ALL JOINTS TO BE PERPENDICULAR TO THE LINE OF THE SIDEWALK.
7) FOR SIDEWALK RAMP DETAIL REFER TO DRAWING S-123
8) WHERE SIDEWALKS ARE NARROWED TO LESS THAN 1.5m WIDTH, THE BACK OF THE SIDEWALK IS TO BE DROPPED AS DIRECTED BY THE ENGINEER

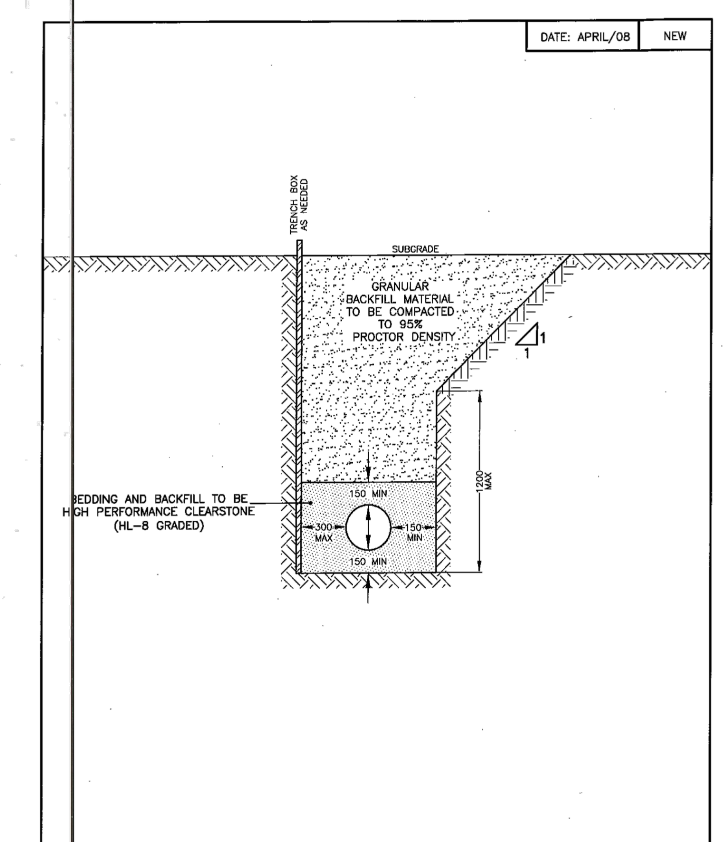
DIMENSIONS IN m EXCEPT AS NOTED

APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Oct. 14/04	SIDEWALK ADJACENT TO CURB and GUTTER (STANDARD HEIGHT CURB)	DWG. NO. S-125 A



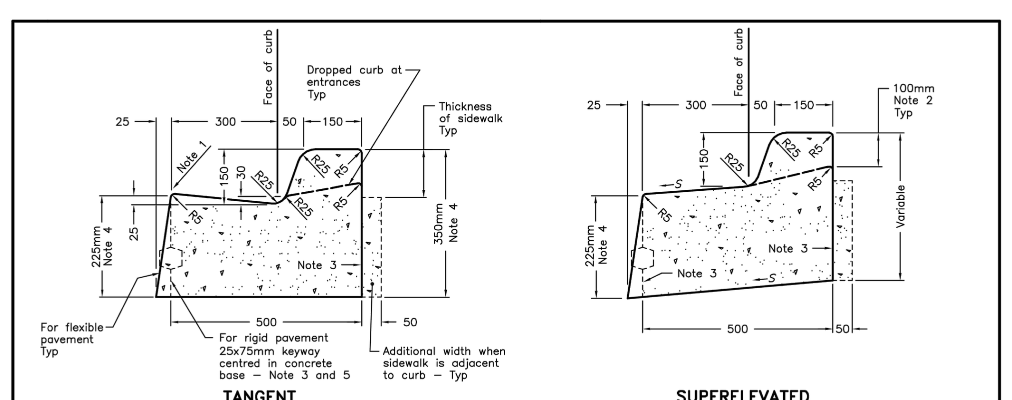
NOTES:
1. LIMIT OF TRENCH EXCAVATION
2. REPLACE CURB AND SIDEWALK TO NEAREST CONTROL JOINT.
3. SAW CUT PAVEMENT IN ACCORDANCE WITH THE STANDARD DRAWINGS AND SPECIFICATIONS. ALL EDGES TO BE SEALED WITH HOT RUBBERIZED ASPHALT JOINT SEALING COMPOUND.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH CITY OF BURLINGTON AND OPSD STANDARD DRAWINGS AND SPECIFICATIONS.
5. RATES ARE BASED ON CURRENT YEAR RATES & FEES AND CURRENT YEAR RESURFACING CONTRACT. THIS INCLUDES ROAD CUT/ SERVICE FEE, ASPHALT MILLING, CRACK SEALING, HL3 ASPHALT, TACK COAT, CURB & GUTTER (PROVISIONAL), SIDEWALK (PROVISIONAL).

APPROVED	CITY OF BURLINGTON CAPITAL WORKS DEPARTMENT	METRIC SCALE: N.T.S.
DATE: July 12/17	PAVEMENT REINSTATEMENT POLICY OF TRENCH CUTS FOR UTILITY AND SERVICES ON LOCAL AND ARTERIAL ROADS (COLLECTOR ROADS WILL BE ON A SITE SPECIFIC REVIEW)	DWG. NO. S-114-B



DIMENSIONS IN mm EXCEPT AS NOTED

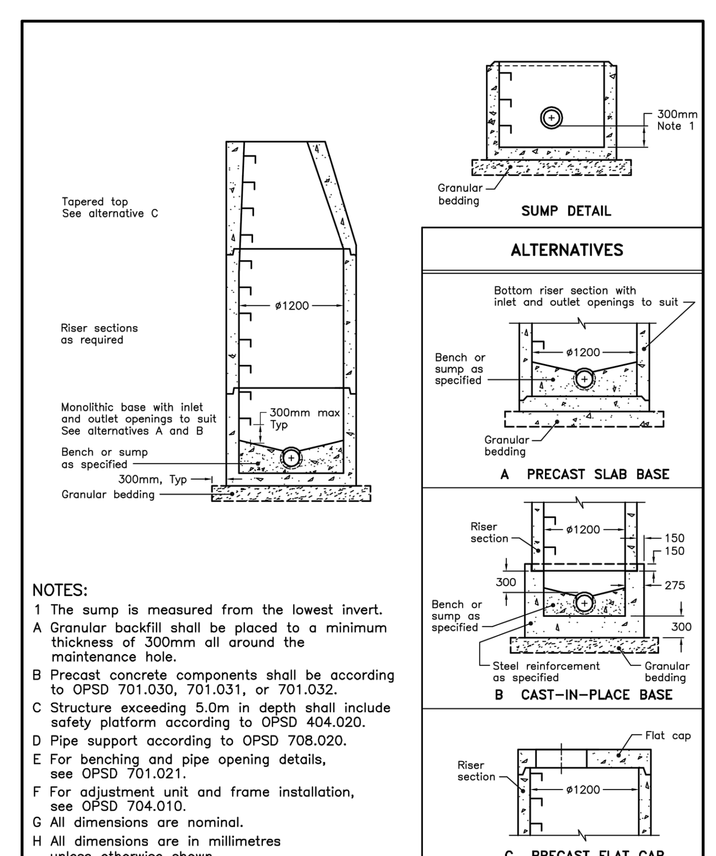
APPROVED	CITY OF BURLINGTON ENGINEERING DEPARTMENT	METRIC SCALE: N.T.S.
DIRECTOR OF ENGINEERING DATE: Mar. 18/09	FLEXIBLE STORM PIPE ROADWAY INSTALLATION	DWG. NO. S-188



LEGEND:
S – Rate of pavement superelevation in percent, %.

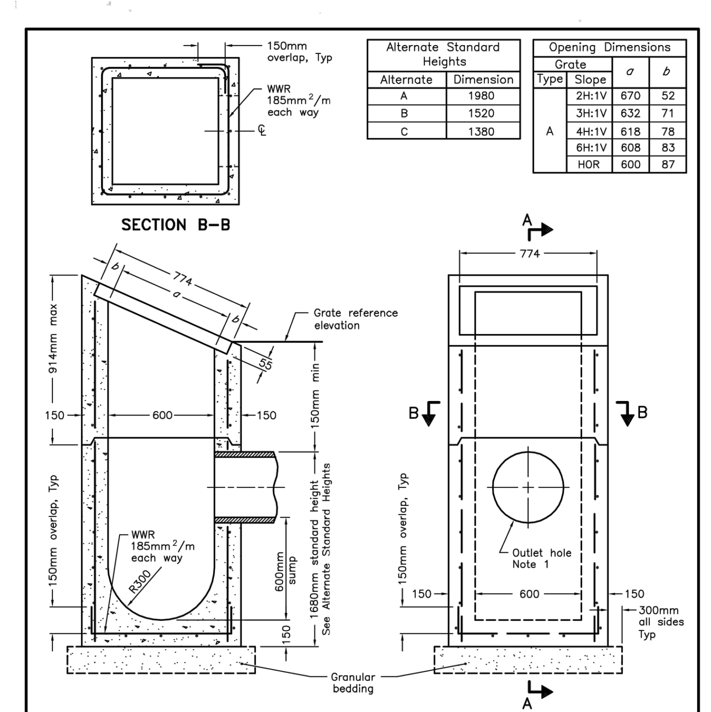
NOTES:
1 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.
2 When sidewalk is continuously adjacent, the dropped curb at entrances shall be reduced to 75mm.
3 For slipforming procedure a 5% batter is acceptable.
4 For composite pavement the depth of concrete curb shall be adjusted to depth of concrete pavement.
5 When tie bars are specified, refer to OPSD 552.010 and 552.020 for details.
A Treatment at entrances shall be according to OPSD 351.010.
B Outlet treatment shall be according to the OPSD 610 Series.
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING — Nov 2012 Rev 2
CONCRETE BARRIER CURB WITH STANDARD GUTTER — OPSD 600.040



NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING — Nov 2014 Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER — OPSD 701.010

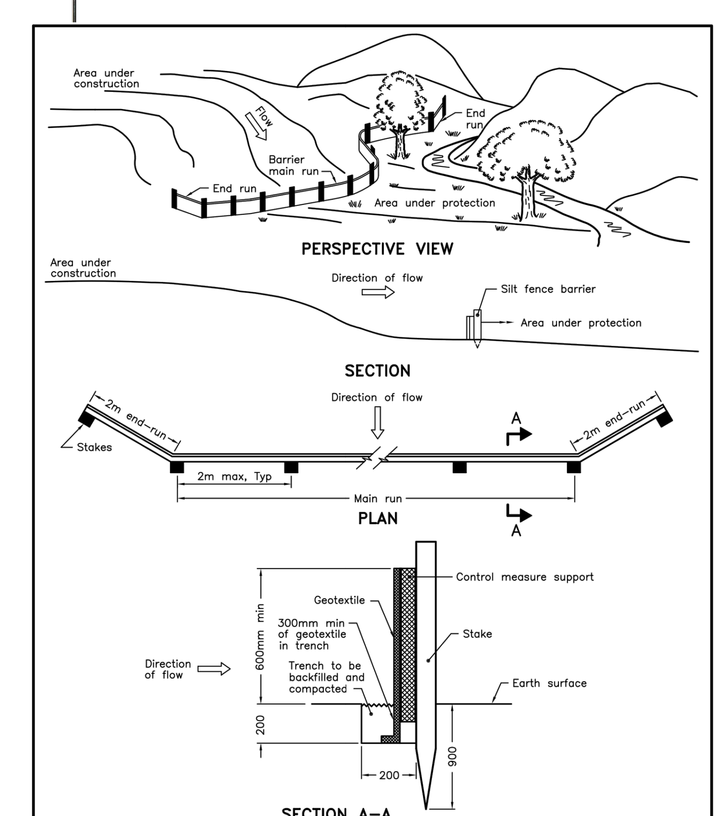


Alternate Standard Heights	
Alternate	Dimension
A	1980
B	1520
C	1380

Opening Dimensions			
Grate			
Type	Slope	a	b
A	2H:1V	670	52
	3H:1V	632	71
	4H:1V	618	78
	6H:1V	608	83
	HOR	600	87

NOTES:
1 Outlet hole size 525mm maximum diameter, location as required.
A Where inlet is placed across ditch and is accessible to vehicular traffic, grating slope shall be 6H:1V or flatter.
B Center reinforcing in wall and slab ±25mm.
C Granular backfill shall be placed to a minimum thickness of 300mm all around the ditch inlet.
D Grating shall be according to OPSD 403.010.
E Pipe support shall be according to OPSD 708.020.
F All dimensions are nominal.
G All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING — Nov 2014 Rev 3
PRECAST CONCRETE DITCH INLET 600 x 600mm — OPSD 705.030



NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING — Nov 2006 Rev 1
HEAVY-DUTY SILT FENCE BARRIER — OPSD 219.130

SCALE:

DRAWING :
OPSD AND CITY STANDARDS

CLIENT :
BLOOMFIELD DEVELOPMENTS

PROJECT :
PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

ODAN·DETECH CONSULTING ENGINEERS
The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

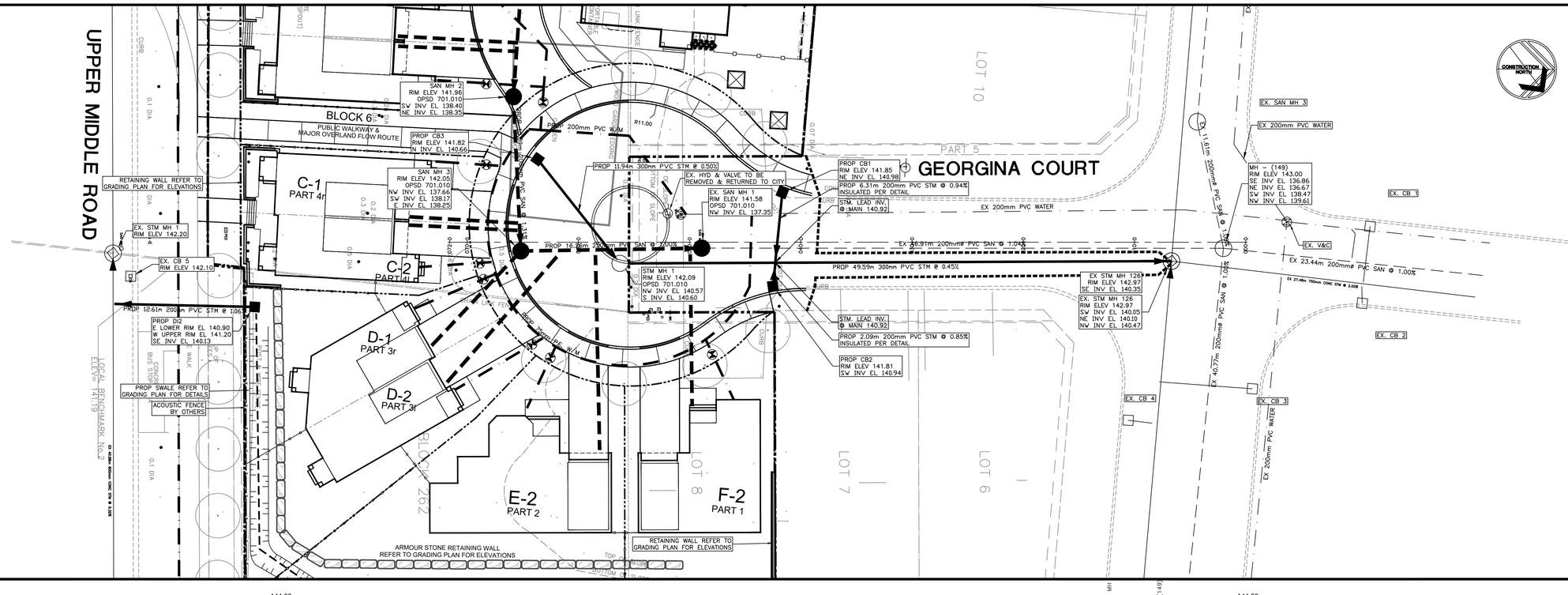
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AS NOTED	17213	MARCH 17	D.B.

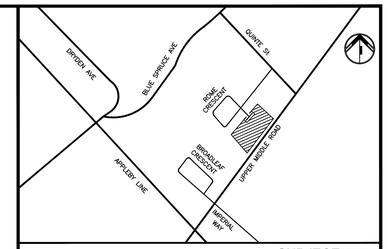
DRAWING NO: 17213 – 5 G.dwg

LICENSED PROFESSIONAL ENGINEER — AUG 15/19 — D. T. BANCROFT 100200672 — PROVINCE OF ONTARIO

DRAWN BY: D.B.
CHECKED BY: D.C.S.
APPROVED BY: D.C.S.
DRWG. NO.: 5 OF 7

FILE NUMBER | ENGINEER





KEY PLAN Scale : N.T.S.

SUBJECT LANDS

NOTE :

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND UNDERGROUND AND ABOVE GROUND UTILITIES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING THE WORK THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ARCHITECTS/ENGINEERS BEFORE PROCEEDING WITH THE WORKS.

ALL DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND THE PROPERTY OF THE ENGINEER WHICH MUST BE RETURNED AT THE COMPLETION OF WORK.

THIS DRAWING IS NOT TO BE SCALED.

THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDINGS.

THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC...

EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY J.D.BARNES LAND SURVEYORS LTD. DATED FEBRUARY 16, 2017.

BENCH MARK:

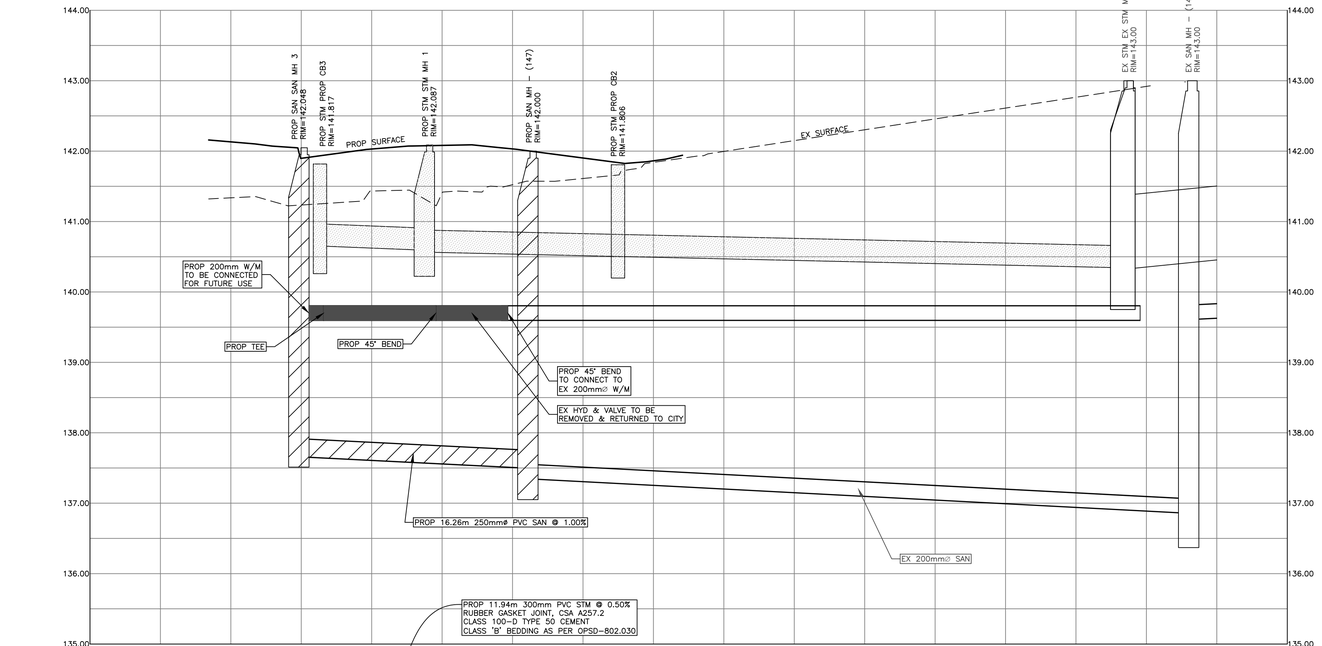
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LOCAL BENCHMARK No. 2 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE OF UPPERMIDDLE ROAD OPPOSITE THE PRODUCTION OF THE CHAINLINK FENCE ALONG SOUTHWEST BOUNDARY OF BLOCH 262.
ELEVATION = 141.19m

METRIC NOTE:

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LEGEND:

- DENOTES EXISTING STORM MANHOLE
- DENOTES PROPOSED STORM MANHOLE
- DENOTES EXISTING CATCH BASIN
- DENOTES PROPOSED CATCHBASIN
- DENOTES PROPOSED STORMCEPTOR
- DENOTES PROPOSED INLET CONTROL DEVICE (ICD)
- DENOTES EXISTING STORM SEWER
- DENOTES PROPOSED STORM SEWER
- DENOTES EXISTING SANITARY MANHOLE
- DENOTES PROPOSED SANITARY MANHOLE
- DENOTES PROPOSED SANITARY SEWER
- DENOTES EXISTING SANITARY SEWER
- DENOTES PROPOSED HYDRANT
- DENOTES EXISTING HYDRANT
- DENOTES PROPOSED WATER VALVE & BOX
- DENOTES EXISTING WATER VALVE & BOX
- DENOTES PROPOSED WATER METER
- DENOTES EXISTING WATER MAIN
- DENOTES PROPOSED WATER MAIN
- DENOTES PROPOSED SIAMESE CONNECTION
- DENOTES PROPOSED CAP FOR SANITARY, STORM, AND/OR WATER AS NOTED
- DENOTES PROPOSED ENTRANCE LOCATION
- DENOTES PROPOSED HEAVY DUTY ASPHALT AREA
- DENOTES PROPOSED SUMP PUMP
- DENOTES PROPERTY LINE
- DENOTES ARMOR STONE RETAINING WALL
- DENOTES FENCE

NO.	REVISIONS	DATE	BY
8.	AS PER CITY COMMENTS	AUG 15/19	DB
7.	AS PER CITY COMMENTS	FEB 14/19	DB
6.	ZBA & SPA SUBMISSION	JUN 21/18	DB
5.	REVISED S. PL/UMR WIDENING; REV. RETAINING WALL; FOR COORDINATION	JUN 21/18	DB
4.	FOR CLIENT REVIEW & COORDINATION	JUN 6/18	DB
3.	ZBA RESUBMISSION	MAR 29/18	DB
2.	ZBA & SPA SUBMISSION	OCT 27/17	DB
1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE: 0 5 10 15 20

DRAWING :

PLAN AND PROFILE

CLIENT :

BLOOMFIELD DEVELOPMENTS

PROJECT :

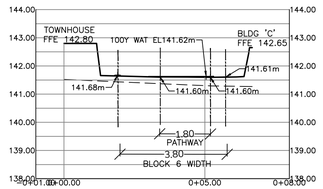
PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
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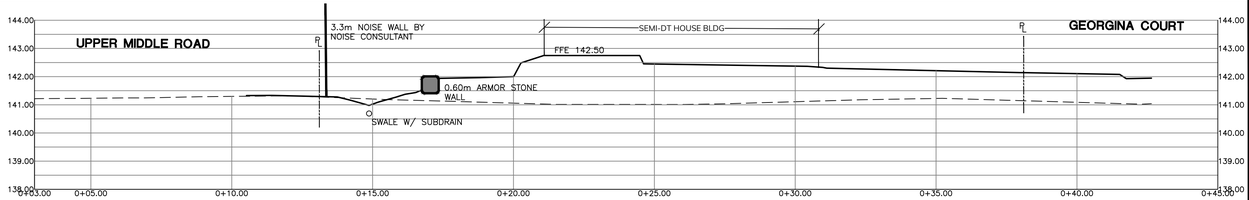
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			DRAWN BY:
DRAWING NO: 17213 – 6G.dwg			CHECKED BY: D.C.S.
			APPROVED BY: D.C.S.
			DRWG. NO.: 6 OF 7

LICENSED PROFESSIONAL ENGINEER AUG 15/19 D. T. BANCROFT 100200672 PROVINCE OF ONTARIO

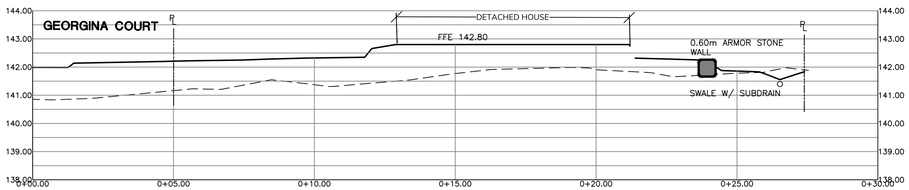
FILE NUMBER | ENGINEER



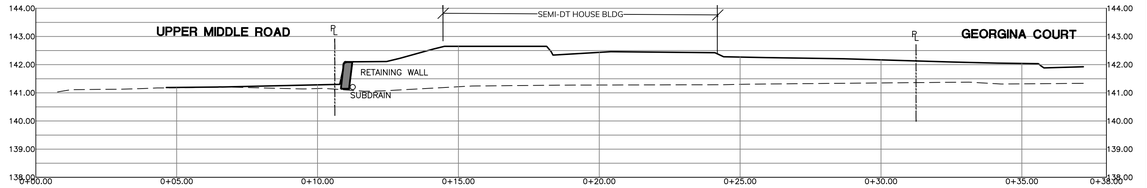
SECTION H-H
MAJOR OVERLAND FLOW CHANNEL GRADING
SCALE 1:100



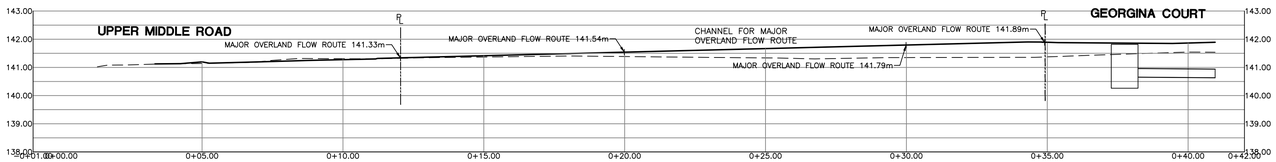
SECTION E-E
SOUTH PROPERTY LINE GRADING
SCALE 1:100



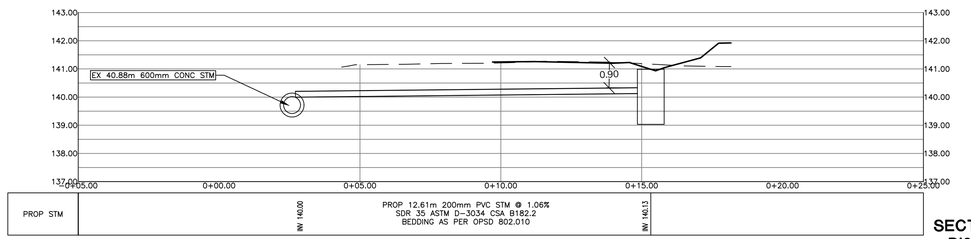
SECTION I-I
EAST PROPERTY LINE GRADING
SCALE 1:100



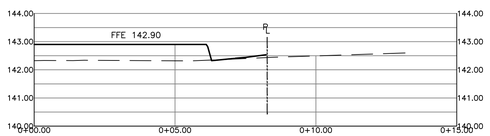
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SOUTH PROPERTY LINE GRADING
SCALE 1:100



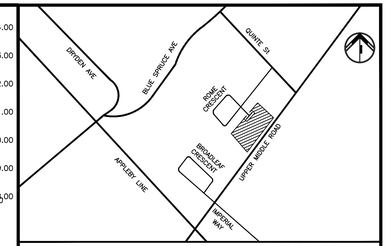
SECTION G-G
MAJOR OVERLAND FLOW ROUTE CHANNEL
SCALE 1:100



SECTION J-J
DI2 LEAD
SCALE 1:100



SECTION K-K
LOT F GRADING
SCALE 1:100



KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

NOTE :

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND UNDERGROUND AND ABOVE GROUND UTILITIES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING THE WORK THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE ARCHITECTS/ENGINEERS BEFORE PROCEEDING WITH THE WORKS.

ALL DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND THE PROPERTY OF THE ENGINEER WHICH MUST BE RETURNED AT THE COMPLETION OF WORK.

THIS DRAWING IS NOT TO BE SCALED.

THIS PLAN MUST NOT BE USED TO SITE THE PROPOSED BUILDINGS.

THE APPROVAL OF THIS PLAN DOES NOT EXEMPT THE OWNER'S CONTRACTOR FROM OBTAINING, BUT NOT LIMITED TO THE FOLLOWING PERMITS: ROAD CUT, SEWER PERMITS, RELOCATION OF SERVICES, ENCROACHMENT AGREEMENTS, APPROACH APPROVAL PERMITS, ETC..

EXISTING TOPOGRAPHICAL INFORMATION SUPPLIED BY J.D.BARNES LAND SURVEYORS LTD. DATED FEBRUARY 16, 2017.

BENCH MARK:

ELEVATION SHOW ON THIS PLAN ARE RELATED TO CANADIAN GEODETIC VERTICAL DATUM, 1978. AND ARE DERIVED FROM THE CITY OF BURLINGTON BENCH MARKS. No.482 HAVING A PUBLISHED ELEVATION OF 143.042m. AND No.841 HAVING A PUBLISHED ELEVATION OF 139.273m

LOCAL BENCHMARK No. 1 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE UPPERMIDDLE READ. SOUTH WEST OF GRAVEL DRIVEWAY FOR HOUSE No. 5219, OPPOSITE FIRE HYDRANT. ELEVATION = 141.11m

LOCAL BENCHMARK No. 2 CUT CROSS ON CONCRETE SIDEWALK ON THE NORTH SIDE OF UPPERMIDDLE ROAD OPPOSITE THE PRODUCTION OF THE CHAINLINK FENCE ALONG SOUTHWEST BOUNDARY OF BLOCH 262. ELEVATION = 141.19m

METRIC NOTE:

DISTANCES AND ELEVATIONS ON THIS PLAN ARE TYPICALLY SHOWN IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NO.	REVISIONS	DATE	BY
8.	AS PER CITY COMMENTS	AUG 15/19	DB
7.	AS PER CITY COMMENTS	FEB 14/19	DB
6.	ZBA & SPA SUBMISSION	JUN 21/18	DB
5.	REVISED S. PL/UMR WIDENING; REV. RETAINING WALL; FOR COORDINATION	JUN 21/18	DB
4.	FOR CLIENT REVIEW & COORDINATION	JUN 6/18	DB
3.	ZBA RESUBMISSION	MAR 29/18	DB
2.	ZBA & SPA SUBMISSION	OCT 27/17	DB
1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE:

DRAWING :

SECTIONS
GEORGINA COURT R.O.W.

CLIENT :

BLOOMFIELD DEVELOPMENTS

PROJECT :

PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

ODAN•DETECH CONSULTING ENGINEERS
The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SCALE :	PROJ. NO.:	DATE:	DESIGN BY:
1:100	17213	MARCH 17	D.B.

DRAWN BY: D.B.
CHECKED BY: D.C.S.
APPROVED BY: D.C.S.
DRWG. NO.: 7 OF 7

DRAWING NO: 17213 – 7G.dwg

LICENSED PROFESSIONAL ENGINEER
AUG 15/19
D. T. BANCROFT
100200672
PROVINCE OF ONTARIO

FILE NUMBER | ENGINEER