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

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

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

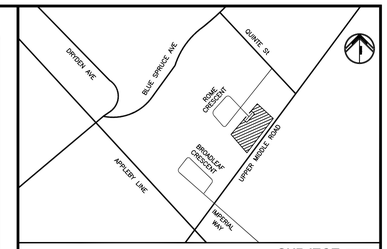
ALL CATCH BASIN MANHOLES ARE TO BE SUMPED

ALL CATCH BASIN(S) LOCATED WITHIN LANDSCAPE ARES ARE TO BE PROVIDED WITH GOSS TRAP(S)

EXISTING SANITARY AND WATER SERVICES TO BE DISCONNECTED AT MAIN CONTRACTOR TO LOCATE IN FIELD

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 LIMIT OF CONSTRUCTION
- DENOTES PROPOSED HEAVY DUTY ASPHALT AREA
- DENOTES PROPOSED SUMP PUMP



KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

NOTE :

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

BENCH MARK:

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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
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

CLIENT :

BLOOMFIELD DEVELOPMENTS

PROJECT :

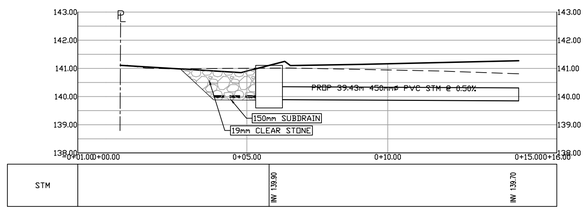
PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

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:
1:200	17213	MARCH 17	D.B.
			DRAWN BY: D.B.
DRAWING NO: 17213 – 1 B.dwg			CHECKED BY: M.H.
			APPROVED BY: J.K.
			DRWG. NO.: 1 OF 4

LICENSED PROFESSIONAL ENGINEER · D. E. BANCROFT · 100200672 · OCT. 27/17 · PROVINCE OF ONTARIO

FILE NUMBER | ENGINEER



SECTION A-A
PROPOSED STORMWATER QUALITY TRENCH
SCALE 1:100

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 +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

ROME CRESCENT

GEORGINA COURT

PRIVATE LANE

UPPER MIDDLE ROAD

EX SWM POND

LOT 14 LOT 13 LOT 12 LOT 11 LOT 10 LOT 6 LOT 5 LOT 7 LOT 4 LOT 8 LOT 3 LOT 2 LOT 1

BLOCK 263 BLOCK 262

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

EX. CB 3

EX. SAN MH 3

EX. STM MH 126
RIM ELEV 143.1
SW INV EL 140.05
NE INV EL 140.10
NW INV EL 140.47

EX. CB 4

PROP STM INV=140.94
EX SAN OBV=137.48

PROP CB1
RIM ELEV 141.85
NE INV EL 140.98

19mm CLEAR STONE TRENCH W/ 150mm SUBDRAIN

PROP DI
RIM ELEV 141.11
SE INV EL 139.90

DEPRESSED CURB (TYP.)

44.7m CONC TOE WALL MAX HEIGHT 0.55m

SAN MH 1
RIM ELEV 141.75
NE INV EL 138.78
SE INV EL 282.10

F.F.E. 142.40m
F.F.E. 142.40m
F.F.E. 142.70m
F.F.E. 142.70m
F.F.E. 142.70m
F.F.E. 142.70m

CHAIN LINK FENCE

STM MH 5
RIM ELEV 141.72
NW INV EL 139.70
SE INV EL 139.62
SW INV EL 139.62

NOTE: TOWNHOUSE FOUNDATION WALLS TO BE 300mm ABOVE CURB EL. TOWNHOUSE OPENINGS TO BE 500mm ABOVE CURB EL.

SAN MH 2
RIM ELEV 142.11
SW INV EL 138.48
NE INV EL 138.35

F.F.E. 142.50m
F.F.E. 142.50m
F.F.E. 142.65m
F.F.E. 142.65m
F.F.E. 142.80m
F.F.E. 142.80m
F.F.E. 142.80m
F.F.E. 142.80m

STM MH 4
RIM ELEV 141.93
S INV EL 139.56
NW INV EL 139.60

7m RETAINING WALL SAME MAKE & MODEL AS EXISTING WALL

16m RETAINING WALL SAME MAKE & MODEL AS EXISTING WALL

PROP WATERMAIN & MAJOR OVERLAND FLOW ROUTE EASEMENT

STM MH 3 - OGS
RIM ELEV 141.47
STORMCEPTOR STC300
N INV EL 139.55
SW INV EL 139.53

PROP CB5
RIM ELEV 140.89
SE INV EL 139.61

EX. CB 6
RIM ELEV 140.95
TO BE RELOCATED
SW INV EL 139.46

EX. STM MH 3
RIM ELEV 141.25
NE INV EL 139.10
W INV EL 139.03
NE INV EL 139.43

STM MH 2
RIM ELEV 141.12
NE INV EL 139.50
SW INV EL 139.47

EX FIRE HYDRANT

EX. HEADWALL

MATCH TO EX. RETAINING WALL

TREE PROTECTION FENCING

EX. TREE TO REMAIN

EX. DCB

MATCH TO EX RETAINING WALL

EX CONCRETE BLOCK RETAINING WALL TO REMAIN

EX. STM MH 2
RIM ELEV 140.97
NE INV EL 139.23
SW INV EL 139.15

EX GRAVEL DRIVEWAY TO BE RE-SODDED PER CITY STD. S-121

EX CURB CUT TO BE FILLED

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

STM MH 1
RIM ELEV 142.09
NW INV EL 140.57
S INV EL 140.57

PROP CB3
RIM ELEV 141.82
N INV EL 140.66

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

12m RETAINING WALL SAME MAKE & MODEL AS EXISTING WALL

REMOVE EX SHED & DISPOSE OFF-SITE

DECORATIVE 10m RISI STONE RETAINING WALL

PROP CB2
RIM ELEV 141.81
SW INV EL 140.94

EX. SAN MH 1
RIM ELEV 141.58
NVEX INV EL 137.35
SE INV EL 138.00

F.F.E. 142.90m
F.F.E. 142.80m
F.F.E. 142.75m
F.F.E. 142.75m
F.F.E. 142.65m
F.F.E. 142.65m

PROP DI2
RIM ELEV 141.75
SE INV EL 140.13

DECORATIVE ARMOR STONE RETAINING WALL

EX RLCB 1

EX. CB 5

(STREET WIDENING)

ORDEN AVE
BLUE SPRUCE AVE
QUINTE ST
ROME CRESCENT
BROADLEAF CRESCENT
UPPER MIDDLE ROAD
APPLELEY LANE
IMPERIAL WAY

KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

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METRIC NOTE:

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NO.	REVISIONS	DATE	BY
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1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE: 0 5 10 15 20

DRAWING :
GRADING PLAN

CLIENT :
BLOOMFIELD DEVELOPMENTS

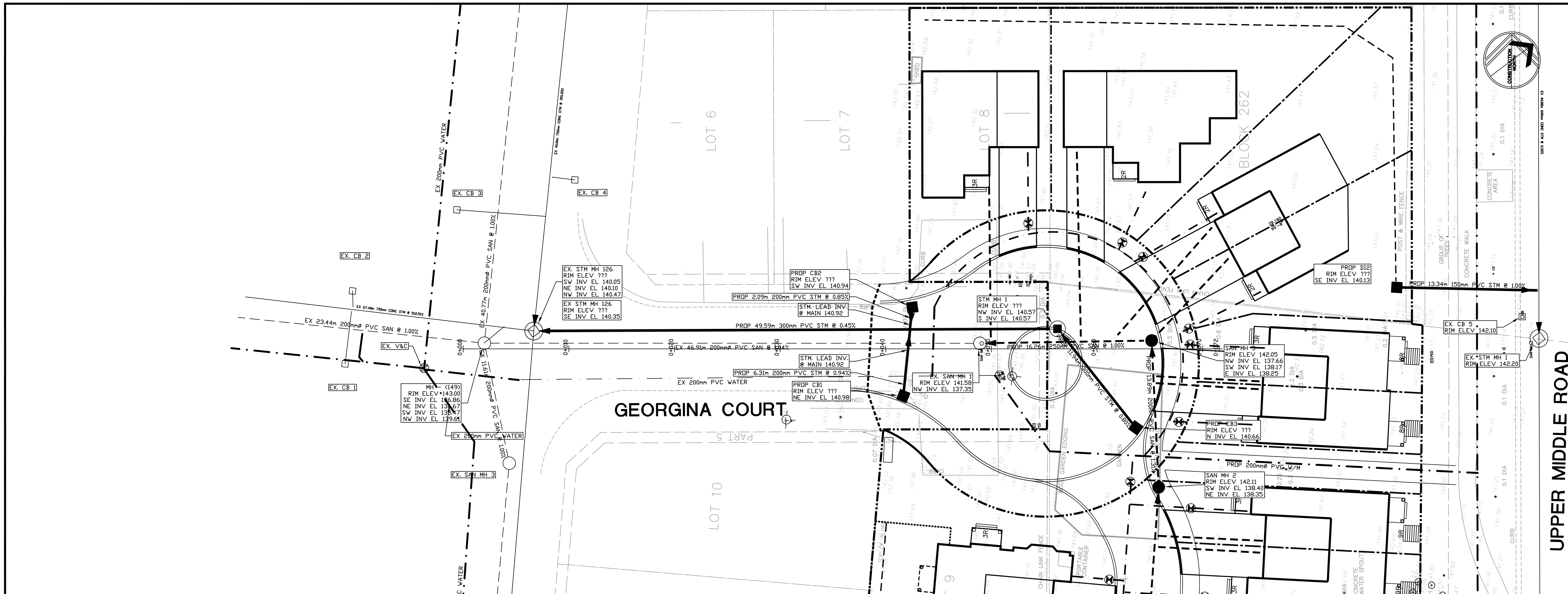
PROJECT :
PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

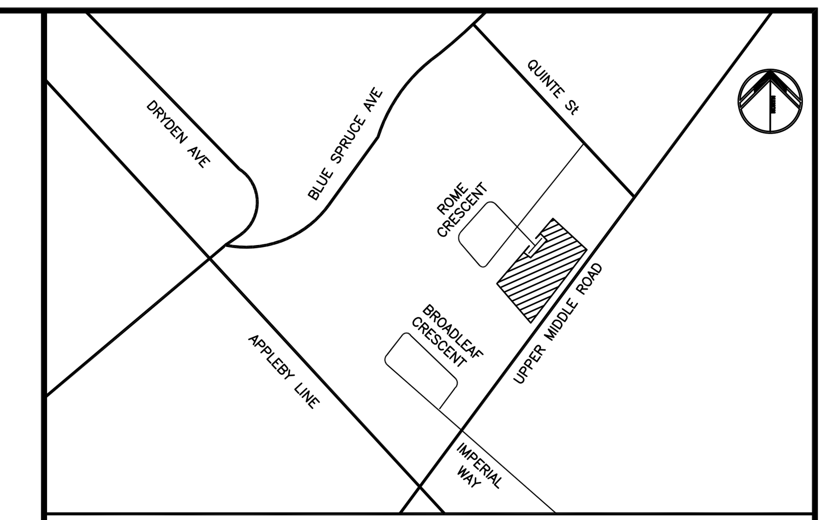
ODAN•DETECH CONSULTING ENGINEERS
The Odan/Detech Group Inc. P: (905) 632-3811 F: (905) 632-3363
5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SCALE :	PROJ. NO.:	DATE:	DESIGN BY:
1:200	17213	MARCH 17	D.B.
DRAWING NO: 17213 – 2B.dwg			DRAWN BY: D.B.
			CHECKED BY: M.H.
			APPROVED BY: J.K.
			DRWG. NO.: 2 OF 4

LICENSED PROFESSIONAL ENGINEER OCT. 27/17 D. T. BANCROFT 100200672 PROVINCE OF ONTARIO

FILE NUMBER | ENGINEER





KEY PLAN
Scale : N.T.S.

SUBJECT LANDS

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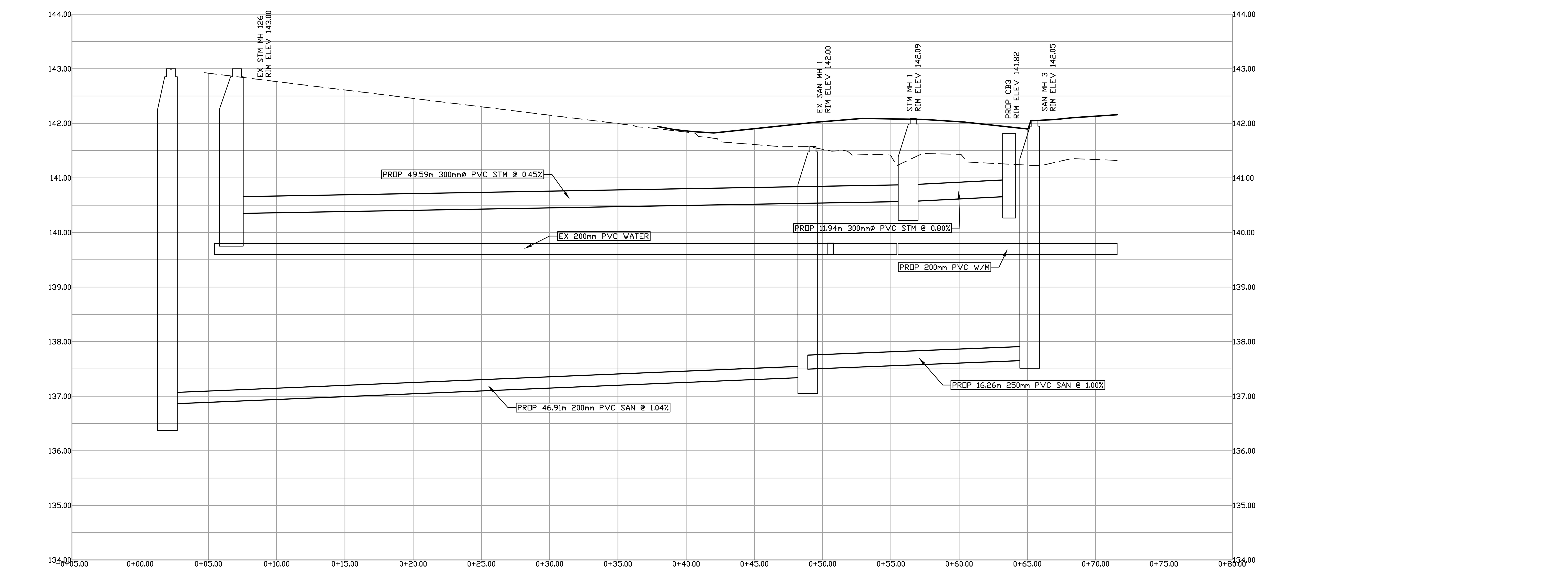
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ELEVATION = 141.19m

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Station	Ex Surface - Surface (20) ELEVATION	Prop Surf - Surface (21) ELEVATION
-0+005.00		
0+000.00		
0+005.00	142.92	
0+010.00	142.77	
0+015.00	142.61	
0+020.00	142.46	
0+025.00	142.30	
0+030.00	142.15	
0+035.00	142.00	
0+040.00	141.84	141.86
0+045.00	141.61	141.90
0+050.00	141.52	142.03
0+055.00	141.41	142.08
0+060.00	141.43	142.03
0+065.00	141.23	141.90
0+070.00	141.34	142.13
0+075.00		
0+080.00		

SAN: EX 46.91m 200mm PVC SAN @ 1.04% | INV 137.50 | PROP 16.26m 250mm PVC SAN @ 1.00% | INV 137.66

STM: INV 140.35 | PROP 49.59m 300mm PVC STM @ 0.45% SDR 35 ASTM D-3034 CSA B182.2 BEDDING AS PER OPSD 802.010 | INV 140.57 | INV 140.57 | INV 140.66 | PROP 11.94m 300mm PVC STM @ 0.80% SDR 35 ASTM D-3034 CSA B182.2 BEDDING AS PER OPSD 802.010

WAT: INV 139.60 | INV 139.60 | INV 139.60 | PROP 40.58m 200mm PVC WATERMAIN DR 18 CSA B137.3 AWWA C900 | INV 139.60

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1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE: 0 5 10 15 20

DRAWING : **PLAN-PROFILE**

CLIENT : **BLOOMFIELD DEVELOPMENTS**

PROJECT :

PROPOSED RESIDENTIAL DEVELOPMENT
5219 UPPER MIDDLE ROAD
BURLINGTON ONTARIO

ODAN·DETECH
CONSULTING ENGINEERS

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5230 SOUTH SERVICE ROAD, BURLINGTON, ONTARIO, L7L 5K2

SCALE :	PROJ. NO.:	DATE:	DESIGN BY:
H: 1:200 V: 1:50	17213	OCT. 2017	D.B.

DRAWN BY: D.B.
CHECKED BY: M.H.
APPROVED BY: J.K.

DRAWING NO: 17213 – 3B.dwg

LICENSED PROFESSIONAL ENGINEER OCT. 27/17 D. T. BANCROFT 100200672 PROVINCE OF ONTARIO

FILE NUMBER | ENGINEER

DRWG. NO.: 3 OF 4

GENERAL NOTES

1) Do not site buildings with these drawings.
2) This drawing is to be read in conjunction with the site grading plan, site servicing plan and the site plan prepared by JOE MILCIC ARCHITECT.
3) Existing structures are not to be disturbed, nor encroachment on adjacent properties unless instructed by the engineer.
4) Drawings are not to be scaled.
5) 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...
6) Unless otherwise noted on the drawings, the standard City of Burlington, Region of Halton, and OPSD drawings are to constitute part of this contract.
7) All dimensions to be checked and verified on the site prior to any construction. Any discrepancies to be reported to the engineer before proceeding.
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 of Burlington and the Region of Halton are to be notified by the contractor prior to construction.
9) 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 of Burlington, Region of Halton, and the MTO Manual of Uniform Traffic Control Devices.

CITY OF BURLINGTON NOTES

1) Construction of sanitary & storm sewers & private drains shall be in accordance with Region and City standards.
2) The contractor shall rectify all disturbed areas to original condition or better and to the satisfaction of the City.
3) OPSD's and City of Burlington and Region of Halton standard drawings and specifications constitute part of the site plan drawings.
4) Driveways shall be setback a minimum clearance of 1.0m from all above ground services and other obstructions.
5) Appropriate construction details should be provided for retaining walls higher than 1.0m. Details shall be designed and sealed by a professional engineer upon approval. Handrail is required when height exceeds 0.60m.
6) Pavement grade (min. 1.0%, max 5%)
7) Drainage swales with grades (min. 1.0%, max. 5%)
8) Slopes in landscape areas and on berms shall not exceed 3 horizontal to 1 vertical.
9) Frost collars are to be provided on curb stops and valve boxes when located within the limits of the driveway.
10) 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.
11) Silt fence(s) to be installed and maintained to prevent silt flowing onto adjacent lands. Silt fence(s) to be enviofence or approved equal, installed as per manufacture's specifications.
12) Driveway entrance and internal roads shall be constructed with heavy duty asphalt from the back of the municipal curb or edge of pavement to the property line in accordance with the following specifications:

    40mm compacted depth of HL3 asphalt – top course
    50mm compacted depth of HL8 asphalt – binder course
    150mm compacted depth of 20mm crusher run limestone – granular "A" base
    300mm compacted depth of 50mm crusher run limestone – granular "B" Type II sub-base

    following specifications shall apply for light duty area (Parking):

    40mm compacted depth of HL3 asphalt – top course
    40mm compacted depth of HL3 asphalt – binder course
    150mm compacted depth of 20mm crusher run limestone – granular "A" base
    200mm compacted depth of 50mm crusher run limestone – granular "B" Type II sub-base

13) All interior curbs shall be barrier as per OPSD–600.110. Curb within Right of Way to be Barrier Curb as per OPSD–600.010 or OPSD–600.040 as shown on drawings.
14) All sanitary sewer, storm sewer, and watermain on private property is to be done in accordance with the Ontario Building Code.
15) No blasting is permitted on the City right–of–way.
16) Existing sewer connections which are not to be used shall be securely capped off with a mechanical cap at the property line and main sewer to prevent infiltration.
17) The reinstatement of asphalt roadways, concrete sidewalks and curbs of the City road allowance is to be done to the City of Burlington's satisfaction.
18) Existing driveways which are not to be used are to be removed. Any curb cuts which are to be replaced are to be constructed of full height curb and gutter to City standards.
19) The property is to be graded so that surface drainage is directed away from the building.
20) All trees, shrubs and other landscaping features, both existing and proposed, are to be kept a minimum of 1 metre clear of the centreline of swales.
21) The Owner and/or Contractor is required to obtain a "Road Cut Permit" from the City of Burlington before commencing any work on the City road allowance.
22) The new driveway shall be constructed so that it does not block the drainage.
23) Contractor to verify depth of cover over the existing sanitary sewer.
24) Rebench existing manholes as directed by the City Engineer.
25) All disturbed areas in the Right of Way's shall be reinstated with 100mm topsoil and Canada No. 1 sod, unless otherwise noted.
26) All sidewalks within the Right of Way to be as per City of Burlington Standard S–121. Sidewalk through driveway entrances must be 150mm thick.

SITE SERVICING NOTES

A. SANITARY & STORM SEWERS

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 sanitary sewers to be PVC SDR28 in accordance with CSA–B182.2, ASTM D–2779 and ASTM D–3034 or latest revisions, rubber gasket. All sanitary laterals to be a minimum of 2 percent from building to main. Sanitary laterals for dual services are to be 150mmø PVC SDR28 from main to 'Y' connection reducer to 125mmø PVC SDR28 as per S–1858. Sanitary laterals for single services are to be 125mmø PVC SDR28.
3) 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.
4) 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.
5) Frame and cover as per OPSD–401.010.
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) Provide water tight covers for sanitary manholes located in ponding areas.
   Existing sewer inverts to be confirmed on site prior to construction.
9) For manholes greater than 5.0m depth, safety platforms as per OPSD–404.020 are to be installed.
10) CATCH BASINS
    1) 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.
    2) Single catch basin as per OPSD–705.010.
    3) Double catch basin as per OPSD–705.020.
    4) 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.
    5) 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.
    6) All catchbasins constructed in fill areas to be supported in 14 MPa concrete.

B. WATERMAIN AND WATER SERVICES

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 SDR18, Class 150, AS PER AWWA C–900.
3) Minimum cover over watermain to be 1.7m.
4) Bedding as per OPSD–802.010, OPSD–802.030 or OPSD–802.031, Class B, Granular A at 98% SPD.
5) For watermain deflection
   i) maximum allowable deflection of 3 degrees shall not be exceeded
   ii) each joint shall be deflected an equal amount.
6) Watermains shall have a minimum vertical separation of 0.5m and horizontal separation of 2.5m between any sewer 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 Region of Halton RH 409.01.
10) Valve & valve boxes as per OPSD–1101.020. Set all valves to proposed grades.
11) Service laterals to individual units are to be 25mmø Type "K" Soft Copper, with valve & box located 2.0m from face of building. 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 25 mm.
14) Follow AWWA C651–99 Water Quality Standards.

C. UTILITY SUPPORTS AND TRENCHES

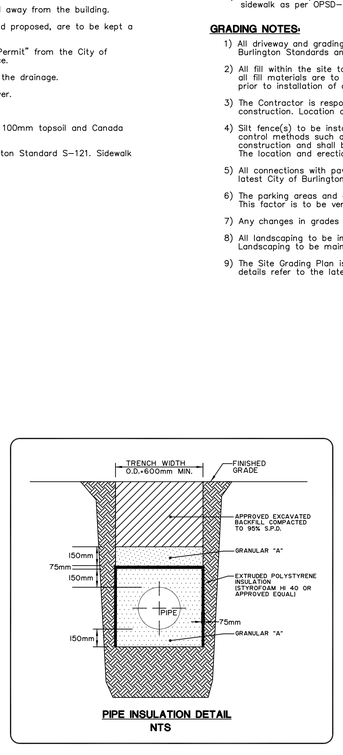
1) All services, utilities, and catchbasin leads are to be supported as per OPSD–1007.010 and OPSD–1007.020.

D. UTILITY ISOLATION IN SIDEWALKS

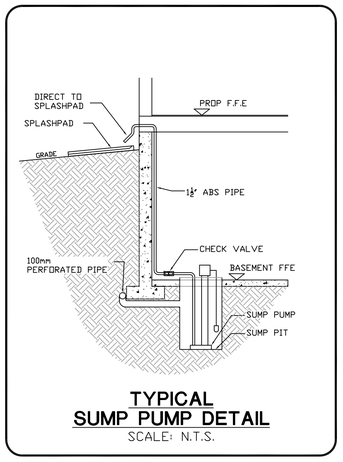
1) All services and/or utility structures located on concrete sidewalks shall be isolated from the sidewalk as per OPSD–310.040.

GRADING NOTES:

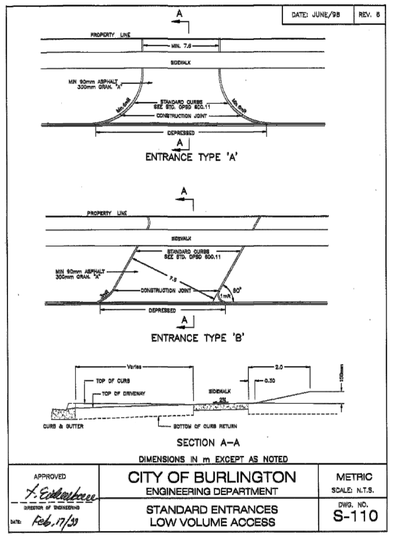
1) All driveway and grading material and construction methods must conform to current City of Burlington Standards and Specifications.
2) All fill within the site to be compacted to a min. of 98% Std. Proctor Density. The suitability of all fill materials are to be confirmed by a recognized Soils Consultant to the Director of Engineering prior to installation of any road base materials or buildings.
3) 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.
4) Silt fence(s) to be installed and maintained to prevent silt flowing onto adjacent lands siltation control methods such as enviofence 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 of Burlington.
5) All connections with paved portions of existing roads to be backfilled with granular material or latest City of Burlington Specifications and compacted to 100% SPD.
6) The parking areas and driveway have been designed according to a frost susceptibility factor of 5. This factor is to be verified by a soils consultant.
7) Any changes in grades or catch basins require the approval of the Director of Engineering.
8) 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.
9) The Site Grading Plan is to be read with the Site Servicing Drawing and the Site Plan. For building details refer to the latest revision of the site plan by Joe Milcic Architect.



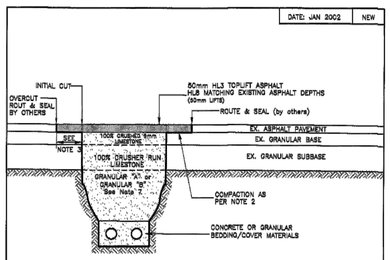
PIPE INSULATION DETAIL
NTS



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



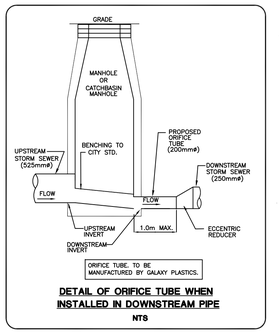
APPROVED	CITY OF BURLINGTON	METRIC
DIRECTOR OF ENGINEERING	ENGINEERING DEPARTMENT	SCALE: N.T.S.
DATE: Feb. 17/99	STANDARD ENTRANCES LOW VOLUME ACCESS	DWG. NO. S–110



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

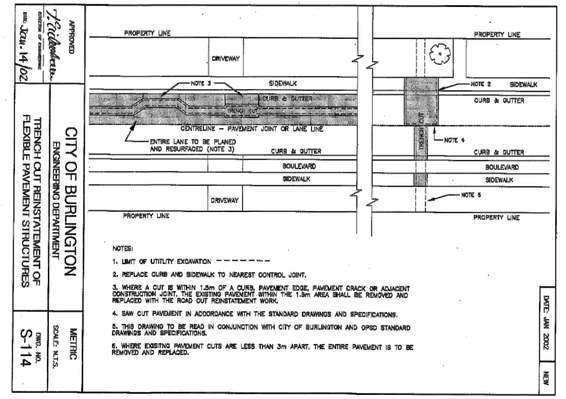


DETAIL OF ORIFICE TUBE WHEN INSTALLED IN DOWNSTREAM PIPE
NTS

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

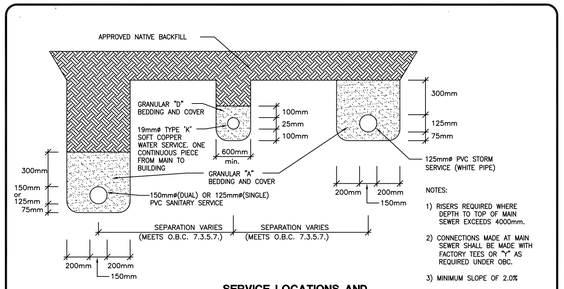
NOTE:
1) SUBDRAIN TRENCH TO BE WRAPPED WITH NON WOVEN CLASS 1 GEOTEXTILE F.O.S. 75 TO 150mm MINIMUM THICKNESS
2) OUTLET SUBDRAINS TO CB, MH'S OR DOWN EMBANKMENTS WHERE EVER POSSIBLE.

APPROVED	CITY OF BURLINGTON	METRIC
DIRECTOR OF ENGINEERING	ENGINEERING DEPARTMENT	SCALE: N.T.S.
DATE: Jan. 14/02	TRENCH CUT REINSTATEMENT OF FLEXIBLE PAVEMENT STRUCTURES	DWG. NO. S–114



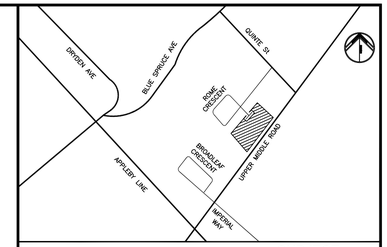
NOTES:

1. LIMIT OF UTILITY EXCAVATION – – – – – – – –
2. REPLACE CURB AND SIDEWALK TO NEAREST CONTROL JOINT.
3. WHERE A CUT IS WITHIN 1.5m OF A CURB, PAVEMENT EDGE, PAVEMENT CRACK OR ADJACENT CONSTRUCTION JOINT, THE EXISTING PAVEMENT WITHIN THE 1.5m AREA SHALL BE REMOVED AND REPLACED WITH THE ROAD CUT REINSTATEMENT WORK.
4. SAW CUT PAVEMENT IN ACCORDANCE WITH THE STANDARD DRAWINGS AND SPECIFICATIONS.
5. THIS DRAWING TO BE READ IN CONJUNCTION WITH CITY OF BURLINGTON AND OPSD STANDARD DRAWINGS AND SPECIFICATIONS.
6. WHERE EXISTING PAVEMENT CUTS ARE LESS THAN 3m APART, THE ENTIRE PAVEMENT IS TO BE REMOVED AND REPLACED.



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.



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
2.	ZBA & SPA SUBMISSION	OCT 27/17	DB
1.	ISSUED FOR ARCH/CLIENT REVIEW & COORDINATION	OCT 12/17	DB

SCALE:

DRAWING :

NOTES & DETAILS PLAN

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	OCT. 17	D.B.
			DRAWN BY: D.B.
DRAWING NO: 17213 – 4B.dwg			CHECKED BY: M.H.
			APPROVED BY: J.K.
			DRWG. NO.: 4 OF 4

LICENSED PROFESSIONAL ENGINEER
OCT. 27/17
D. T. BANCROFT
100200672
PROVINCE OF ONTARIO

FILE NUMBER | ENGINEER