

GENERAL NOTES:

- STANDARD DRAWINGS AND SPECIFICATIONS OF THE TOWN OF OAKVILLE AND THE REGION OF HALTON SHOULD BE READ IN CONJUNCTION WITH THE INFORMATION HEREIN.
- MATERIAL SUBSTITUTIONS MUST HAVE PRIOR APPROVAL OF THE ENGINEER, TOWN OF OAKVILLE & REGION OF HALTON AND ANY OTHER REGULATORY AGENCIES HAVING JURISDICTION.
- NO BLASTING IS REQUIRED OR ALLOWED.
- COMPACTION OF GRANULAR BACKFILL AROUND CATCHBASINS AND MANHOLES TO BE 95% S.P.M.D.D. AND SHALL BE COMPACTED MECHANICALLY.
- SEWER BEDDING TO BE AS PER TOWN OF OAKVILLE STANDARDS.
- FILL AREAS GREATER THAN 0.3m WITHIN MUNICIPAL RIGHT-OF-WAY ARE SUBJECT TO COMPACTION TESTS TO ACHIEVE 100% S.P.M.D.D.
- SET MANHOLE AND CATCHBASIN TOPS FLUSH WITH HL8 ASPHALT AND ARE TO BE ADJUSTED TO FINAL GRADE PRIOR TO PLACING FINAL LIFT OF ASPHALT.
- TOWN OF OAKVILLE STANDARD 6-1 TO BE USED FOR CURB AND GUTTER WITHIN THE RIGHT-OF-WAY UNLESS OTHERWISE NOTED.
- TOWN OF OAKVILLE STANDARD 6-3 TO BE USED FOR ALL SIDEWALK WITHIN THE RIGHT-OF-WAY. SIDEWALK DEPRESSIONS TO BE INSTALLED AT INTERSECTIONS. INTERSECTION RADIUS TO BE 7.50m UNLESS OTHERWISE NOTED.
- PAVEMENT STRUCTURES ARE AS PER SOIL INVESTIGATION REPORT TO BRONTE GREEN CORPORATION "PROPOSED RESIDENTIAL DEVELOPMENT" BY SOIL ENGINEERS LTD., REFERENCE NO. 1611-5034(A), DATED APRIL 2017:
 - 40mm HL3 ASPHALT SURFACE COURSE
 - 50mm HL8 ASPHALT BINDER COURSE
 - 150mm GRANULAR 'A' BASE
 - 350mm - 50mm CRUSHER-RUN LIMESTONE GRANULAR SUB-BASE
- ANY ORGANIC MATERIAL OR TOPSOIL WITHIN FUTURE ROAD ALLOWANCES SHALL BE STRIPPED PRIOR TO CONSTRUCTION.
- ALL TRENCHES WITHIN EXISTING R.O.W. TO BE BACKFILLED WITH GRANULAR MATERIAL AND COMPACTED TO 95% S.P.M.D.D.
- ALL TRENCHES WITHIN A REGIONAL R.O.W. TO BE BACKFILLED WITH GRANULAR MATERIAL AND COMPACTED TO 98% S.P.M.D.D.
- SUBDRAINS TO BE INSTALLED AS PER TOWN OF OAKVILLE STD. 6-2 UNLESS OTHERWISE NOTED.
- ALL MATERIALS SHALL MEET OR EXCEED ONTARIO PROVINCIAL STANDARD AND TOWN STANDARD SPECIFICATIONS.
- WATERMANS AND SANITARY SEWERS TO CONFORM TO LATEST REGIONAL MUNICIPALITY OF HALTON SPECIFICATIONS AND REQUIREMENTS.
- REFER TO ONTARIO BUILDING CODE SECTION 7.2.4.4 REGARDING FITTINGS RESTRICTED IN USE.
- REFER TO ONTARIO BUILDING CODE SECTION 7.2.10.5 REGARDING SADDLE HUBS.
- REFER TO ONTARIO BUILDING CODE SECTION 7.3.5.4 REGARDING FROST PROTECTION OF SERVICES.
- REFER TO ONTARIO BUILDING CODE SECTION 7.3.5.7 REGARDING SPATIAL SEPARATION OF SERVICES

STORM SEWERS:

- MANHOLES TO BE AS PER O.P.S.D. 701.010 - 701.015 WITH COVER AND FRAME AS PER O.P.S.D.
- CONCRETE PIPE TO BE CLASS 65-D AS PER CSA A257-2, PVC SDR 35 OR RIBBED PVC CONFORMING TO CSA B.182.2 (MAX PVC = 600mm DIA).
- CATCHBASINS TO BE AS PER O.P.S.D. 705.01 FOR SINGLES AND 705.02 FOR DOUBLES. GRATES TO BE AS PER O.P.S.D. 400.11. CATCHBASINS LEADS TO BE 250mm DIA. FOR SINGLES AND 300mm DIA FOR DOUBLES AS PER CSA B182.2 SDR-35.
- ALL POLYVINYL CHLORIDE (PVC) PIPE SHALL MEET THE C.S.A. REQUIREMENTS AS NOTED WITHIN THE OPSS 1841, THE PIPE MATERIAL SHALL HAVE A CELL CLASSIFICATION OF 12454-B OR 12454-C OR ASTM STD. D-3034 AND OPSS 1841.
- SILT TRAPS WITH FILTER FABRIC TO BE INSTALLED ON ALL CATCHBASINS AS PER THE EROSION AND SEDIMENT CONTROL PLAN. TRAPS TO BE CLEANED REGULARLY BY THE CONTRACTOR. TRAPS ARE NOT TO BE REMOVED UNTIL CURBS ARE CONSTRUCTED AND BOULEVARDS ARE SODDED AND BACKYARDS ARE GRADED AND SODDED.
- RUBBER GASKETED JOINTS ARE TO BE USED ON ALL STORM SEWER.
- CONNECTIONS TO MAIN SEWERS SHALL BE ACHIEVED USING "Y" FITTINGS ONLY.
- THE AREA DRAIN SPECIFIED BY THE MECHANICAL ENGINEER IS AS FOLLOWS: ZURN Z-610-H-ADJ 12" [305] SQUARE TOP ADJUSTABLE FLOOR DRAIN, DURA-COATED CAST IRON BOTTOM OUTLET BODY, CLAMPING COLLAR, ADJUSTABLE LEVELING FRAME, WITH HEAVY-DUTY CAST IRON HINGED SLOTTED GRATE.

SANITARY SEWERS:

- MANHOLES AS PER O.P.S.D. 701.010 WITH FRAME AND COVER AS PER O.P.S.D. 401.01 TYPE 'B'.
- SEWER PIPE TO BE PVC SDR 35 CONFORMING TO CSA B.182.2 OPSS 1841, O.P.S.D. 806.040 AND 806.06.
- SAFETY PLATFORMS ARE NOT PERMITTED IN HALTON REGION.
- ALL SANITARY SEWER WORKS AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT REGION OF HALTON STANDARDS AND SPECIFICATIONS.

GEOTECHNICAL NOTES:

- THE SUBGRADE FOR UNDERGROUND SERVICES SHOULD CONSIST OF PROPERLY COMPACTED INORGANIC EARTH FILL OR SOUND NATIVE SOIL.
- A CLASS 'B' BEDDING CONSISTING OF COMPACTED 19-mm CRL OR EQUIVALENT IS RECOMMENDED FOR THE UNDERGROUND SERVICES CONSTRUCTION.
- WHERE THE SERVICES ARE CONSTRUCTED IN SATURATED SAND, A CLASS 'A' CONCRETE BEDDING SHOULD BE USED.
- PIPE JOINTS CONNECTING INTO MANHOLES AND CATCH BASINS SHOULD BE LEAK-PROOF, OR WRAPPED WITH A WATERPROOF MEMBRANE TO PREVENT SUBGRADE MIGRATION THROUGH LEAKAGE AT JOINTS RESULTING FROM INADVERTANT FAULTY INSTALLATION.
- OPENINGS TO SUBDRAINS AND CATCH BASINS SHOULD BE SHIELDED WITH A FABRIC FILTER TO PREVENT SILTING.
- IN ORDER TO PREVENT PIPE FLOATATION WHEN THE SEWER TRENCH IS DELUGED WITH WATER, A SOIL COVER OF NOT LESS THAN TWO TIMES THE DIAMETER OF THE PIPE SHOULD BE IN PLACE AT ALL TIMES AFTER COMPLETION OF THE PIPE INSTALLATION.
- THE ON-SITE INORGANIC SOILS ARE GENERALLY SUITABLE FOR TRENCH BACKFILL. THEY SHOULD BE SORTED FREE OF TOPSOIL INCLUSIONS AND DELETERIOUS MATERIAL.
- THE BACKFILL IN SERVICE TRENCHES OR BESIDE FOUNDATION WALLS SHOULD BE COMPACTED TO 95% SPDD AND INCREASED TO 98% SPDD BELOW CONCRETE SIDEWALK. IN THE ZONE WITHIN 1.0m BELOW THE PAVEMENT SUBGRADE, THE MATERIAL SHOULD BE COMPACTED TO 98% SPDD WITH THE WATER CONTENT AT 2% TO 3% DRIER THAN THE OPTIMUM.
- IN AREAS WHICH ARE INACCESSIBLE TO A HEAVY COMPACTOR, GRANULAR BACKFILL SHOULD BE USED FOR COMPACTION WITH A LIGHT WEIGHT COMPACTOR.

GEOTECHNICAL NOTES (CONTINUED):

- EXCAVATION SHOULD BE CARRIED OUT IN ACCORDANCE WITH ONTARIO REGULATION 213/91. THE TYPE OF SOILS ARE CLASSIFIED IN TABLE 5:

TABLE 5 - CLASSIFICATION OF SOILS FOR EXCAVATION

MATERIAL	TYPE
GLACIAL TILL	2
EXISTING EARTH FILL AND DRAINED SAND	3
SATURATED SOIL	4

- WHERE SLOPED EXCAVATION IS NOT FEASIBLE, A BRACED SHORING WILL BE REQUIRED. THE OVERBURDEN LOAD AND THE SURCHARGE FROM ANY ADJACENT STRUCTURES SHOULD ALSO BE CONSIDERED IN THE DESIGN OF SHORING.

WATERMAIN:

- 150mm DIA. TO 300mm DIA. WATERMAIN TO BE PVC CL.235 (DR-18) WITH GASKETED JOINTS PER AWWA C-900, C-905 & C-907..
- MINIMUM HORIZONTAL SEPARATION OF 2.5m BETWEEN WATERMANS AND SEWERS. A 0.5m SEPARATION BETWEEN WATERMANS AND SEWERS MUST BE MAINTAINED AT ALL CROSSING LOCATIONS.
- BEDDING TO BE SUITABLE GRANULAR 'A' MATERIAL WITH MINIMUM 150mm DEPTH AND SHALL CONFORM TO OPSS 514
- ALL WATERMAIN WILL BE SUBJECT TO PRESSURE TESTING AND FIRE FLOW TESTING AS DIRECTED BY HALTON REGION
- SACRIFICIAL ANODES SHALL CONFORM TO ASTM B-418 TYPE II AND SHALL BE MADE OF HIGH GRADE ELECTROLYTIC ZINC, 99.99% PURE.
- ALL METALLIC WATERMANS, FITTING, HYDRANTS AND RESTRAINERS TO HAVE ONE ZINC ANODE PER LENGTH OF PIPE IN SIZES ACCORDING TO THE FOLLOWING TABLE AND INSTALLED IN ACCORDANCE WITH REGION OF HALTON STANDARD DRAWING RH 420.01 AND RH 420.02.

PIPE / FITTING SIZE (mm)	ZINC ANODE SIZE (KG)
150	2.7
200	5.5
300	11
400	11
450	11
HYDRANT	11

COPPER SERVICE (mm)	ZINC ANODE SIZE (KG)
20	2.7 (< 13m IN LENGTH) 5.5 (< 26m IN LENGTH) 11 (> 26m IN LENGTH)
25	5.5 (< 26m IN LENGTH) 11 (> 26m IN LENGTH)
32, 38, 50	5.5

- ANODES ARE NOT REQUIRED WITHIN VALVE-CHAMBERS, DRAIN CHAMBERS OR AIR RELEASE CHAMBER.
- WELD CONNECTIONS TO BE COATED WITH "TC MASTIC" OR APPROVED EQUIVALENT.
- FOR ALL ANODES CONNECTED TO NEW PIPE, FITTINGS OR TO EXISTING METALLIC WATERMANS, A CADWELDER AND CA-15 OR EQUIVALENT CARTRIDGE SHALL BE USED. ANODE INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
- WHERE NEW PIPE IS TO BE CONNECTED TO EXISTING DUCTILE IRON OR CAST IRON PIPE A 14.5 KG MAGNESIUM ANODE IS TO BE CONNECTED TO THE FIRST LENGTH OF EXISTING PIPE, AS PER REGION OF HALTON STANDARD DRAWING RH 420.01.
- VALVES TO OPEN LEFT (COUNTER CLOCKWISE) AND HAVE A STANDARD 50mm SQUARE OPERATION NUT.
- ALL PLUGS, CAPS, TEES & HYDRANTS AND BENDS WILL HAVE APPROVED MECHANICAL THRUST RESTRAINTS. CONCRETE THRUST BLOCKS SHALL ONLY BE USED IN SPECIAL CIRCUMSTANCES WITH THE APPROVAL OF THE REGION OF HALTON.
- WATERMAIN INSTALLATION WITHIN EXISTING R.O.W. SHALL BE BACKFILLED WITH GRANULAR 'A'.
- GATE VALVES CONFORMING TO AWWA C500 AND THE REGION OF HALTON SPECIFICATIONS SHALL BE PROVIDED ON WATERMANS UP TO AND INCLUDING 300mm DIA.
- WATERMAIN FITTINGS TO HAVE MECHANICAL JOINTS.
- VERTICAL OR HORIZONTAL PIPE DEFLECTION TO BE IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS.
- TRACER WIRE SHALL BE INSTALLED ON ALL NEW PVC AND POLYETHYLENE PIPE. A SOLID GAUGE TWU COPPER WIRE SHALL BE INSTALLED ALONG THE TOP OF THE PIPE STRAPPED TO THE PIPE AT 6m INTERVALS. THE WIRE SHALL BE INSTALLED BETWEEN EACH VALVE AND/OR THE END OF THE NEW PVC WATERMAIN. JOINTS IN THE WIRE ARE NOT PERMITTED. AT EACH VALVE, A LOOP OF WIRE IS TO BE BROUGHT UP INSIDE THE VALVE BOX TO THE TOP OF THE BOX AS PER HALTON STD DRAWING RH 4-4.04 OR RH 400.05
- HYDRANTS TO BE INSTALLED SUCH THAT THE LOWER ROD STEM SHALL NOT EXCEED 1.7m MEASURED FROM THE BREAKOFF FLANGE.
- ALL HYDRANTS AS PER O.P.S.D. 1105.010 AND RH400.02 TO HAVE STEAMER CONNECTIONS.
 - STORZ PUMPER CONNECTIONS
 - TWO (2) 63.5mm (2 1/2") WITH CSA STANDARD THREAD, 63.5mm I.D., 79.4mm O.D., 5 THREADS PER 25mm, 31.75mm SQUARE OPERATING NUT; AND
 - ONE (1) 100mm (4") STORZ PUMPER CONNECTION AS PER CAN/ULC #S-520, 31.75mm SQUARE OPERATING UNIT, AND STORE CAP PAINTED GLOSS BLACK.
- MINIMUM DEPTH OF COVER OVER WATERMAIN SHALL BE 1.70m MEASURED FROM THE ROAD CENTRELINE ELEVATION.
- MINIMUM SEPARATION DISTANCE BETWEEN THE EDGE OF DRIVEWAY AND FACE OF FIRE HYDRANT IS 1.0m.

SHORING NOTES:

- TIEBACKS ENCRDACHING ALONG ANY TOWN R.O.W. ARE TO BE DE-STRESSED DURING THE BUILD-BACK OF THE PERMANENT STRUCTURE. TO BE CONFIRMED WITH SHORING ENGINEER PRIOR TO DE-STRESSING.

BENCHMARK
ELEVATIONS ARE GEODETIC AND REFERRED TO THE TOWN OF OAKVILLE BENCHMARK 101 HAVING AN ORTHOMETRIC ELEVATION OF 115.838 METRES. ELEVATION OF BENCHMARK ESTABLISHED AT THE IRON BAR SOUTH OF CONCRETE PAD AS SHOWN ON THE TOPOGRAPHIC SURVEY BY J.D. BARNES WITH A GEODETIC ELEVATION OF 126.53.

No.	REVISION	DATE	BY
8	NOTE TO FILE RESUBMISSION	2023-09-13	AM
7	NOTE TO FILE RESUBMISSION	2023-07-18	JO
6	ISSUED FOR TENDER	2023-04-12	JO
5	NOTE TO FILE	2023-03-10	JO
4	FINAL SPA SUBMISSION	2022-09-13	JO
3	THIRD SPA SUBMISSION	2022-05-24	JO
2	SECOND SPA SUBMISSION	2022-02-08	JO
1	FIRST SPA SUBMISSION	2021-09-29	JO

**CAIVAN BRONTE GREEN,
BLOCK C/BLOCK 451**



**REGIONAL MUNICIPALITY OF HALTON
TOWN OF OAKVILLE**

MUNICIPAL PLANNING No. ##### REGION No. ####
SITE PLAN SP.1530.015/01

MUNICIPAL	REGIONAL
APPROVED IN PRINCIPAL SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO TOWN STANDARDS AND SPECIFICATIONS.	DESIGN OF SANITARY AND WATER SERVICES APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO HALTON REGION STANDARDS & SPECIFICATIONS & LOCATION APPROVAL FROM AREA MUNICIPALITY.
SIGNED _____ DATE _____ MANAGER OF DEVELOPMENT ENGINEERING	SIGNED _____ DATE _____ LEGISLATIVE & PLANNING SERVICES DEPARTMENT

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GENERAL NOTES

DESIGNED: J.M.	CHECKED: A.M.	PROJECT No.: 21-696
DRAWN: J.M.	DATE: SEPTEMBER 2021	SHEET No.:
SCALE: AS SHOWN	DRAWING No.:	GEN-1