

MANHOLE PROPOSED

■ CATCHBASIN PROPOS

s.i.b. STANDARD IRON BAR

CATCHBASIN EXISTING

<u>0</u>-sтм.—

STORM SEWER

COMBINED SEWER

The location and extent of all existing utilities are not necessarily shown on this plan, and where shown, are to be considered

of construction, and shall assume all liabilities for damage to them or delays resulting from their actual extent and location.

approximate only. All Contractors shall inform themselves of the exact location and extent of all existing services prior to the start

SSUED FOR APPROVAL

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REGIONAL APPROVAL

REGION DESIGN OF WATER &/OR WASTEWATER SERVICES APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFIRMING TO HALTON REGION STANDARDS & SPECIFCATIONS & LOCATION APPROVAL FROM AREA MUNICIPALITY.

The Applicant Should be aware that the approval of water system on private property is responsibility of the Local Municipality. Regardless, the Applicant must ensure that the Region of Halton's Standards and Specifications are met. (the Design Criteria, Standard Drawings & Specifications manual may be obtained thru the Infrastructure Management Group at (905-825-6032) Furthermore, all water quality tests must be completed to the Region of Halton's Specification, before the

GENERAL NOTES

- 1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
- 2. THE LOCATION OF ALL UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THESE DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE LOCATION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME
- 3. ALL AREAS DISTURBED BY THE CONTRACTOR DURING THE CONSTRUCTION OF THE WORKS SHOWN HER SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER AS DETERMINED BY PLANNING AND PUBLIC WORKS DEPARTMENT. ALL GRASS AND VEGETATION COVERED AREAS SHALL BE RESTORED BY PLACING 100MM OF TOPSOIL AND NO. 1 NURSERY SOD TO ESTABLISH A GRASS COVER TO THE SATISFACTION OF
- 4. TOWN OF HALTON HILLS AND REGION OF HALTON STANDARD DRAWINGS AND O.P.S.D. WITH REGIONAL AMENDMENTS FOR SANITARY SEWERS AND WATERMAINS SHALL CONSTITUTE PART OF THE ENGINEERING
- 5. ALTERNATIVE MATERIALS MAY BE ACCEPTABLE, PROVIDED APPROVAL HAS FIRST BEEN OBTAINED FROM THE TOWN ENGINEER AND/OR THE REGIONAL COMMISSIONER OF PLANNING AND PUBLIC WORKS.
- 7. ANY AREAS WITHIN R.O.W. WHICH REQUIRE FILL IN EXCESS OF 0.30M ARE SUBJECT TO COMPACTION
- TESTS AND SUCH TESTS MUST SHOW A MIN. COMPACTION OF 98% S.P.D. AT ALL DEPTHS.
- 8. MANHOLE AND VALVE CHAMBER COVERS ARE TO BE SET FLUSH WITH BASE COURSE ASPHALT AND ADJUSTED TO FINAL GRADE PRIOR TO INSTALLING TOP LIFT OF ASPHALT.
- 9. ALL TRENCHES WITHIN EXISTING RIGHT-OF-WAY ARE TO BE BACKFILLED IN ACCORDANCE WITH OBC DIV.B7.3.5.1 AND TOWN OF HALTON HILLS REQUIREMENTS.
- 10. ALL WATERMAIN AND SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND PECIFICATIONS (OPSS) AS AMENDED BY
- THE REGIONAL MUNICIPALITY OF HALTON. 11. THE LOCATION OF ALL EXISTING WATERMAIN, SANITARY SEWER, UTILITIES AND SERVICES ARE
- APPROXIMATE. THE CONTRACTOR MUST VERIFY THE LOCATION, VERIFY SIZE AND ELEVATION IN THE FIELD PRIOR TO CONSTRUCTION.
- 13. UNLESS OTHERWISE NOTED, ALL NEW SANITARY SEWERS ARE TO BE PVC SDR 35 ASTM D3034 WITH GRANULAR 'A' BEDDING AND COVER AS PER OPSD 802.010 WITH GRANULAR 'B' BACKFILL.
- 14. UNLESS OTHERWISE NOTED, ALL EXISTING SANITARY LATERALS ARE TO BE REPLACED WITH PVC SDR28, 125MM DIA. CONNECTIONS FOR SINGLE FAMILY AND SEMI-DETACHED DWELLINGS AND 150MM
- DIA. CONNECTIONS FOR ALL OTHERS, AND ARE TO BE REPLACED FROM THE NEW SEWER MAIN TO EXISTING LATERALS AT THE PROPERTY LINE. 15. UNLESS OTHERWISE NOTED, ALL THE EXISTING SANITARY MANHOLES ARE TO BE EITHER REMOVED OF
- BROKEN DOWN 1.0M BELOW ROAD GRADE AND BACKFILLED WITH NON-SHRINK BACKFILL TO SUBGRADE. THE AFFECTED AREA SHALL BE COMPLETELY RESTORED. FRAMES AND COVERS ARE TO E SALVAGED AND RETURNED TO THE REGIONAL STORES, 1179 BRONTE RD., OAKVILLE.
- 16. WATERMAIN MATERIAL IS TO BE EITHER DUCTILE IRON PRESSURE CLASS 350 AS PER AWWA C-150 OR PVC SDR-18 CL-150 AS PER AWWA C-900.
- 17. UNLESS OTHERWISE NOTED, ALL EXISTING WATER SERVICES ARE TO BE REPLACED WITH A MIN. 25MI DIA. COPPER FOR RESIDENTIAL DWELLINGS AND 25MM DIA. COPPER FOR INDUSTRIAL AND COMMERCIA PREMISES AS PER OPSD 1104.010. UNLESS OTHERWISE NOTED, SERVICES ARE TO BE REPLACED FROM THE MAIN TO THE PROPERTY LINE WITH A NEW CURB STOP AND SERVICE BOX AT THE
- 18. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS AND BLOW OFFS REQUIRED FOR TESTING THE NEW WATERMAIN.
- 19. MAXIMUM ALLOWABLE PIPE JOINT DEFLECTION OF THE WATERMAIN SHALL BE 50% OF THE
- MANUFACTURER'S SPECIFICATIONS. PIPE BARREL DEFLECTION IS STRICTLY PROHIBITED.
- 20. ALL PVC STORM PIPES SHALL BE CERTIFIED TO CAN/CSA B182.2 OR CAN/CSA B182.4.
- 21. ALL CONCRETE STORM PIPES SHALL BE CERTIFIED TO CSA SERIES A257. 22. FROST PROTECTION SHALL BE PROVIDED AS PER OBC DIV. B7.3.5.4., AND THE MINIMUM COVER
- SHALL BE 1.2M.
- 23. CORROSION PROTECTION IS REQUIRED FOR ALL METALLIC PIPE, VALVES, FITTINGS SERVICES AND HYDRANTS. CATHODIC PROTECTION (ZINC ANODE) AS PER THE DETAILS IN THE REGIONAL DESIGN SPECIFICATIONS OR 8 MIL MEDIUM DENSITY PÓLYETHYLENE ENCASEMENT AS PER AWWA C-105
- 24. AFTER REMOVING VALVE BOXES AND HYDRANTS, BACKFILL WITH COMPACTED GRANULAR 'A'. WHERE EXISTING VALVE CHAMBERS ARE TO BE ABANDONED. ALL VALVES WITHIN THE CHAMBER ARE TO BE LEFT IN PLACE AND THE CHAMBER IS TO BE BROKEN DOWN TO 1.0M BELOW FINAL GRADE AND BACKFILLED WITH NON-SHRINK WITH NON-SHRINK BACKFILL TO SUBGRADE. THE AFFECTED AREA SHALL BE COMPLETELY RESTORED. ALL HYDRANTS SHOWN FOR REMOVAL SHALL BE RETURNED TO REGIONAL STORES AT 1179 BRONTE RD., OAKVILLE. UNLESS OTHERWISE NOTED, ALL VALVES WHICH ARE SHOWN FOR REMOVAL SHALL BE DISPOSED OF BY CONTRACTOR.
- 25. EXISTING WATERMAIN IS TO BE EITHER REMOVED OR PLUGGED AND ABANDONED AS REQUIRED 26. HYDRANTS ARE TO BE INSTALLED SUCH THAT THE LOWER ROD/STEM LENGTH SHALL NOT EXCEED
- 1.7M MEASURED FROM THE BREAK-OFF FLANGE.
- 27. REGIONAL MUNICIPALITY OF HALTON APPROVED MECHANICAL RESTRAINTS ARE TO BE USED ON ALL STANDARD BENDS, VALVES, FITTINGS AND HYDRANTS. REFER TO TABLE.

STORM SEWER NOTES

- 1. MAIN LINE PVC PIPE AS PER DR 35 CSA B182,2-06 CERTIFIED ASTM D3034-04a, F679-03. PVC PIPE TO BE AS PER DR28 CSA B182.2-06 CERTIFIED ASTM D3034-04a
- 2. BEDDING FOR FLEXIBLE PIPE SHALL BE AS PER OPSD 802.010, 802.013 OR 802.014
- 3. ULTRA-RIB PIPE IS NOT PERMITTED WITHIN THE MUNICIPAL RIGHT OF WAY. 4. MAINTENANCE HOLES AS PER OPSD, 701.010 (1200mm), 701.011 (1500mm), 701.012-1(1800mm)
- 701.013 (2400mm). FRAME AND COVER AS PER OPSD 401.010 TYPE B OPEN (STORM). 5. BENCHING SHALL BE AS PER OPSD 701.021.
- 6. DROP STRUCTURES TO BE AS PER OPSD 1003.01 (EXTERNAL AND 1003.01-2(INTERNAL)
- 7. SINGLE CTACHBASINS SHALL BE AS PER OPSD 705.02 COMPLETE WITH GOSS TRAP.
- 8. SERVICE CONNECTION AND UTILITY CUTS TO BE BACKFILLED WITH UNSHRINKABLE FILL. 9. CATCHBASINS LEAD TO BE 200mm PVC DR35 FOR SINGLE CATCHBASINS AND 250mm FOR DOUBLE
- CATCHBASINS UNLESS OTHERWISE SPECIFIED. 10. STORM SEWER LESS THAN 375mm TO BE PVC AND EQUAL OR GREATER THAN 375mm TO BE CONC.
- 11. THE BACKFILLING UNDER THE EXISTING ROAD AND PARKING AREAS WILL BE GRANULAR 'A' WITH 100% SPD COMPACTION.

SANITARY SEWER NOTES

- 1. SANITARY MANHOLES AS PER O.P.S.D 701.010 WITH FRAMES AND COVERS AS PER O.P.S.D. 401.01 TYPE "A" UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 2. BENCHING IN MANHOLES TO BE AS PER O.P.S.D. 701.021 AS AMENDED BY THE REGION OF HALTON. BENCHING IN SANITARY MANHOLES TO BE TO THE OBVERT OF THE PIPE.
- 3. SAFETY PLATFORMS AS PER O.P.S.D. 404.020 TO BE INSTALLED ONLY IN MANHOLES WHERE DEPTHS
- EXCEED 10.0M AS DIRECTED BY THE REGION AND AS INDICATED ON THE PROFILE DRAWINGS. 4. ALL PVC SANITARY PIPES SHALL BE CERTIFIED TO CAN/CSA B181.2, CAN/CSA B182.2 OR CAN'CSA
- 5. SANITARY SERVICE CONNECTIONS TO BE 125MM DIA FOR SINGLE RESIDENTIAL CONNECTIONS AND 150MM
- DIA FOR DUAL RESIDENTIAL AND SINGLE NON-RESIDENTIAL CONNECTIONS. SANITARY SERVICE CONNECTIONS TO BE MINIMUM 2% GRADE AND SHALL BE NON-WHITE IN COLOUR.
- 6. SERVICES TO BE MIN. 2.15M AND MAX. 2.75M DEEP AT PROPERTY LINE. RISERS SHALL BE USED WHERE NOTED AS PER OPSD 1006.01.
- 7. CLASS "B" BEDDING ON ALL SEWERS AND CONNECTIONS TO BE AS PER O.P.S.D. 1005.02 UNLESS NOTE
- 8. GRANULAR BACKFILL AROUND MANHOLES SHALL BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM
- 9. THE BACKFILLING UNDER THE EXISTING ROAD AND PARKING AREAS WILL BE GRANULAR 'A' WITH 100% SPD COMPACTION.

RESIDENTIAL DEVELOPMENT 16-18 MILL STREET

SITE SERVICING PLAN

CIVIL ENGINEERS

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1:200 SS1 SITE PLAN APPLICATION