CENTRE LINE OF PAVEMENT

SCALE:

1:200 2022-09-08 PROJECT NO.: 2022-0171-10

SEE SHEET C4-1 FOR EROSION & SEDIMENT CONTROL PLAN

TO THE PVC MATERIAL

BE DRAINED IS TO BE LAID, AS NEARLY AS PRACTICAL, IN A STRAIGHT LINE IN A TRENCH AT A RIGHT ANGLE TO THE MAIN SEWER. SEWERS TO BE INSTALLED WITH A MINIMUM COVER OF 2.75m BELOW THE CENTRELINE OF THE ROAD AND MINIMUM 2.2m AT THE PROPERTY LINE BELOW THE FINAL ROAD GRADE OR AT SUCH HIGHER ELEVATION ONLY

AS MAY BE NECESSITATED BY THE ELEVATION OF THE MAIN SEWER. ON PRIVATE PROPERTY THE MINIMUM

COVER IS TO BE NO LESS THAN 1.2m STORM AND SANITARY FLOWS MUST BE SEPARATED WHEREVER POSSIBLE, AND THE INSTALLATION OF NEW COMBINED STORM AND SANITARY SEWERS IS NOT PERMITTED. REFER TO ITEM 'M' BELOW FOR DETAILS RESPECTING THE CONNECTION OF SEPARATE STORM AND SANITARY SEWERS FOR A DEVELOPMENT TO A

COMBINED MUNICIPAL SEWER. MINIMUM HORIZONTAL SEPARATION BETWEEN SEWERS AND WATERMAINS SHALL BE 2.5m. VERTICAL CLEARANCE BETWEEN SEWERS AND WATERMAINS THAT CROSS TO BE 500mm BETWEEN THE OUTSIDE OF THE WATERMAIN AND OUTSIDE OF THE SEWER. THE LENGTH OF WATER PIPE SHOULD BE CENTERED AT THE POINT OF CROSSING SUCH THAT JOINTS IN THE WATERMAIN WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER. CROSSING PERPENDICULAR IF POSSIBLE.

PROPOSED SANITARY AND STORM SEWERS SHALL BE EITHER; (a) PVC SDR 28 FOR 150mm DIAMETER AND SDR 35 FOR OTHER SIZES; (b) CLASS 3 CONCRETE (CSA A257.1-M92). RIBBED OR PROFILE PIPE IS NO LONGER PERMITTED FOR SANITARY OR STORM USE, INCLUDING PRIVATE DRAINS AND CATCH BASIN LEADS. IT IS RECOMMENDED THAT PVC PIPE NOT BE USED WHERE IT WILL BE EXPOSED TO CONTAMINATED SOILS AND IN INDUSTRIAL/HEAVY COMMERCIAL AREAS WHERE IT MAY COME INTO CONTACT WITH MATERIALS DETRIMENTAL

SEWER BEDDING, COVER AND BACKFILL FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010 WITH GRANULAR "A" FOR BOTH THE BEDDING AND COVER. REFERENCE HOWEVER SHOULD BE MADE TO THE OPSD STANDARDS FOR ALTERNATE BEDDING AND BACKFILL SPECIFICATIONS AS DETERMINED BY THE PROPOSED PIPE MATERIAL AND

MINIMUM SIZE OF STORM AND SANITARY DRAINS LOCATED WITHIN THE ROAD ALLOWANCE TO BE 150mm IN THE ORIGINAL CITY OF HAMILTON AND 125mm IN THE OTHER AREA MUNICIPALITIES NOW COMPRISING THE NEW CITY. NOTE: EXISTING SEWER TO BE REUSED MUST BE IN GOOD WORKING CONDITION AND OF ADEQUATE CAPACITY TO MEET THE REQUIREMENTS OF THE SITE. THE APPLICANT/OWNER OR THEIR CONTRACTOR IS RESPONSIBLE FOR HAVING THE SEWER TO BE REUSED VIDEO INSPECTED WHILE THE CITY OF HAMILTON SEWER INSPECTOR IS PRESENT. CONTACT PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT, DEVELOPMENT ENGINEERING DIVISION AT (905) 546-2424 X7860 TO ARRANGE FOR AN INSPECTION

MAINTENANCE HOLES ARE REQUIRED AT ALL CHANGES IN PIPE SIZE, CHANGES IN PIPE DIRECTION. ENDS OF PIPE RUNS, AND AS CLEANOUTS. MAXIMUM SPACING OF MAINTENANCE HOLES ID 120 m FOR PIPES 200 mm TO 1050 mm AND 150 m FOR PIPES 1200 mm AND LARGER. IN ACCORDANCE WITH THE "ONTARIO BUILDING CODE," A MAINTENANCE HOLE IS ALSO REQUIRED WITHIN THE FIRST 30 m AFTER THE PIPE EXITS THE BUILDING. A DROP STRUCTURE IS REQUIRED AT ALL MANHOLES WHERE THERE IS A DROP OF GREATER THAN 600 mm

BETWEEN THE INVERT OF THE UPSTREAM PIPE AND THE INVERT OF THE DOWNSTREAM PIPE AND IS TO BE AS PER OPSD 1003.010. GENERALLY THE SIZE OF THE DROP PIPE SHALL BE ONE SIZE SMALLER THAN THE CONNECTING SEWER. MINIMUM SIZE 200 mm. 10. CATCH BASINS WITHIN THE CITY OF HAMILTON, EXCLUDING THOSE WITHIN RESIDENTIAL REAR YARDS, MUST BE

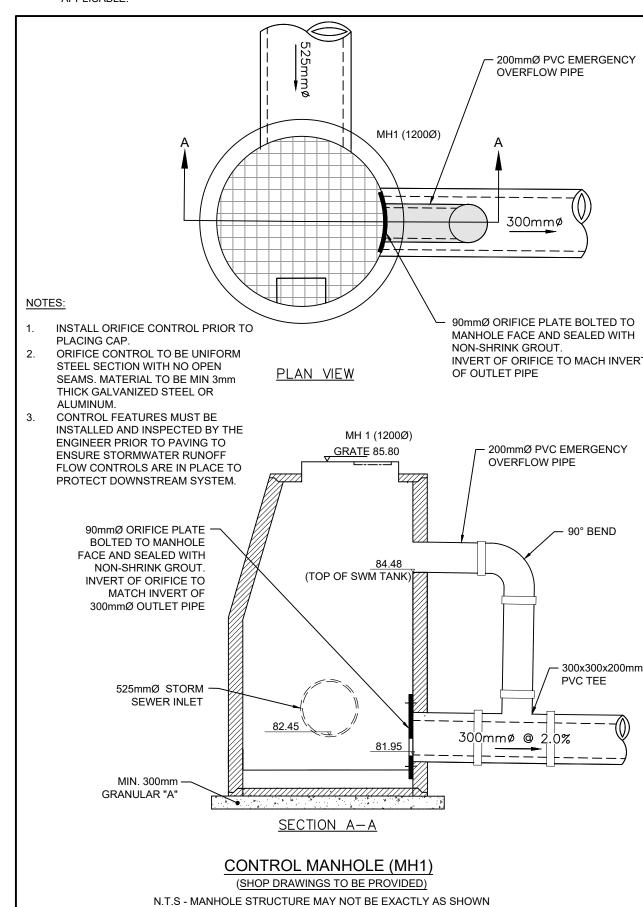
AS PER OPSD 705.010 (SINGLE) OR OPSD 705.020 (DOUBLE) AND MUST BE MODIFIED WITH A GOSS TRAP AS PER SEW-304. ALL PRIVATE PROPERTY CATCH BASINS ARE TO HAVE A MINIMUM LEAD SIZE OF 250 mm FOR A SINGLE AND 250 mm FOR A DOUBLE CATCH BASIN. RESIDENTIAL REAR YARD CATCH BASINS, i.e. SUBDIVISIONS ETC., ARE TO BE AS PER THE APPLICABLE OPSD STANDARD, BUT DO NOT REQUIRE THE GOSS TRAPS AND ARE TO BE 11. EVERY SEWER CONNECTION TO A CITY MAIN SEWER MUST BE MADE USING PROPER "T" OR "Y" FITTINGS.

SADDLES MAY ONLY BE USED WHERE APPROVED BY THE DIRECTOR OF DEVELOPMENT, PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT. FOR PROPOSED SEWERS THAT ARE GREATER THAN OR EQUAL TO 300 mm, A MANHOLE MUST BE PROVIDED AT THE JUNCTION WITH THE MAIN SEWER. FOR SEWERS LESS THAN 300 mm, CONNECTION SHOULD BE MADE

DIRECTLY TO THE MAIN SEWER AND NOT TO A MANHOLE. EXISTING STORM AND SANITARY SERVICES THAT ARE NO LONGER IN USE ARE TO BE REMOVED UP TO THE PROPERTY LINE. THE SECTION OF THE SERVICE WITHIN THE PROPERTY MAY BE REMOVED OR PLUGGED AT BOTH ENDS WITH A MINIMUM 300 mm OF 0.5 MPa CONCRETE

WATERMAINS / SERVICES

- 1. CONSTRUCTION OF WATERMAINS AND PRIVATE SERVICES SHALL BE IN ACCORDANCE WITH THE CITY OF HAMILTON CONSTRUCTION AND SPECIFICATIONS MANUAL (LATEST EDITION) AND MINISTRY OF ENVIRONMENT (MOE) GUIDELINES (LATEST EDITION).
- 2. WATERMAINS & SERVICES TO BE INSTALLED WITH A MINIMUM DEPTH OF COVER OF 1.6m.
- WATERMAIN BEDDING AND COVER MATERIAL TO BE INSTALLED AS PER WM-200.01 WITH GRANULAR "A" FOR BOTH BEDDING AND COVER. BEDDING AND COVER FOR SMALL DIAMETER SERVICES (i.e. 50mm AND UNDER) TO BE AS PER WM-200.01 WITH GRANULAR "D" FOR BOTH BEDDING AND COVER.
- 4. HORIZONTAL SEPARATION BETWEEN SEWER DRAINS AND WATERMAINS OR WATER SERVICES SHALL BE A MINIMUM OF 2.5m. VERTICAL SEPARATION BETWEEN SEWER DRAINS AND WATERMAINS SHALL BE A MINIMUM 0.5m PER MINISTRY OF ENVIRONMENT (MOE) GUIDELINES.
- 5. ALL VALVE BOXES TO BE SET TO PROPOSED BOULEVARD GRADES.
- . WATER SERVICES ARE TO BE INSTALLED PERPENDICULAR TO THE PROPOSED WATERMAIN AND STRAIGHT INTO THE BUILDING.
- 10. A WATER METER MUST BE INSTALLED ON ALL DOMESTIC WATER SERVICES AT THE SERVICE POINT OF ENTRY TO THE BUILDING. INTERNAL WATER METER INSTALLATIONS TO BE AS PER WM-210 AND THE METER IS TO BE
- 11. PVC WATERMAIN AND SERVICE LATERALS MUST BE INSTALLED WITH CATHODIC PROTECTION, TRACER WIRE ETC. AS PER STANDARD FORM 400, PAGES 10 & 11.
- 12. ALL SYSTEM COMPONENTS ARE TO BE EITHER TO CITY OF HAMILTON STANDARDS OR ONTARIO PROVINCIAL STANDARD DRAWING (OPSD). WHERE A CITY STANDARD EXISTS, IT SHALL BE USED IN PLACE OF THE OPSD
- 13. ANCHOR OR THRUST BLOCKS ARE TO BE INSTALLED AT ALL WATER SERVICE ELBOWS, TEES PLUGS ETC. FOR 300mm DIAMETER WATER SERVICES AND SMALLER, ANCHOR BLOCKS ARE TO BE AS PER WM-204.01. FOR WATER SERVICES GREATER THAN 300mm, ANCHOR BLOCKS ARE TO BE AS PER WM-204.02 TO WM-204.13 AS



BEFORE STARTING WORK

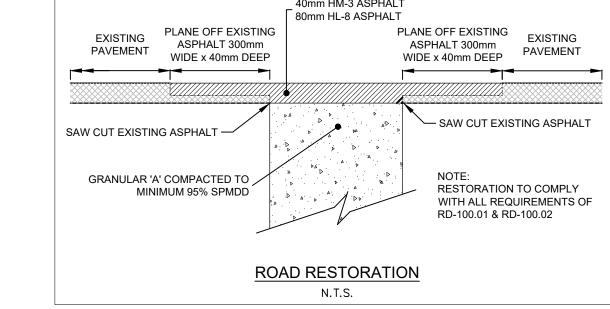
- 1. THE POSITION OF THE POLE LINES, CONDUITS, WATERMAINS, SEWERS, AND OTHER UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE
- ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. 2. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ALL BENCHMARKS, EXISTING INVERTS, DIMENSIONS,
- ENGINEER. 3. ALL EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE LOCATED, MARKED AND PROTECTED. ANY UTILITIES DAMAGED OR DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

AND GRADES MUST BE CHECKED BY THE CONTRACTOR AND ANY DISCREPANCIES REPORTED TO THE

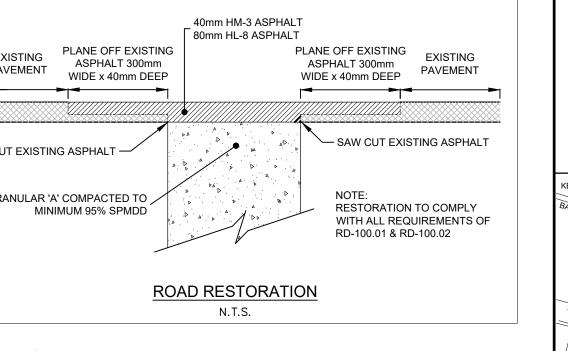
- 4 AT LEAST TWO DIFFERENT BENCHMARKS MUST BE REFERRED TO AT ALL TIMES REPRODUCED PLANS SHALL AT NO TIMES BE SCALED AND ASSUMED ACCURATE
- 6. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CONSULTING ENGINEER 72 HOURS PRIOR TO COMMENCING THE SITE WORKS TO REQUEST INSPECTION. THE CONSULTING ENGINEER SHALL DETERMINE THE EXTENT OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION ON THE UNDERGROUND SERVICE INSTALLATION AS MANDATED BY THE ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2, GENERAL REVIEW FAILURE TO MAKE SUITABLE ARRANGEMENTS FOR INSPECTION WILL FAD TO POST CONSTRUCTION TESTING AND INSPECTION AS DETERMINED BY THE ENGINEER. ALL COSTS ASSOCIATED WITH ANY REQUIRED POST CONSTRUCTION TESTING AND INSPECTION SHALL BE BORNE BY THE CONTRACTOR, INCLUDING ANY DELAYS TO CONSTRUCTION, NECESSARY REWORK AND RESTORATION OF DISTURBED WORKS. FINAL CERTIFICATION OF THE WORKS WILL BE WITHHELD UNTIL ALL POST CONSTRUCTION INSPECTION OF THE UNINSPECTED WORKS IS COMPLETE TO THE SATISFACTION OF THE CONSULTING ENGINEER. FULL PAYMENT FOR UN-INSPECTED WORKS MAY BE WITHHELD UNTIL.

COMPACTION REQUIREMENTS

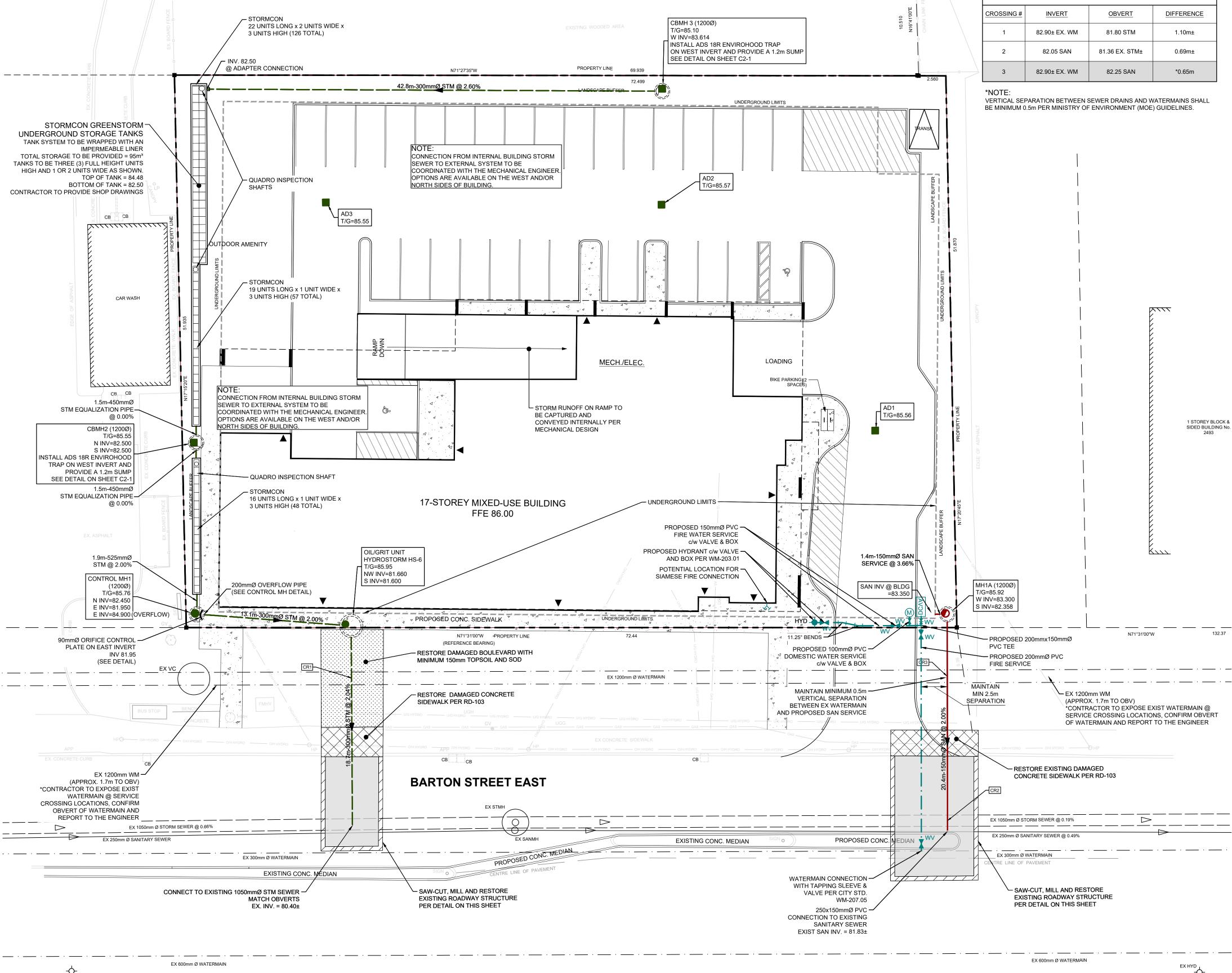
- A. ALL BEDDING AND BACKFILL MATERIAL, ROAD SUB-GRADES AND GENERALLY ALL
- MATERIALS USED FOR LOT GRADING AND FILL SECTIONS, ETC., SHALL BE COMPACTED TO MIN. 95% SPD (UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER). ALL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm LIFTS.
- ALL GRANULAR ROAD BASE MATERIALS SHALL BE COMPACTED TO 95% SPD. FOR ALL SEWERS AND WATERMAINS IN FILL SECTIONS, THE COMPACTION SHALL BE CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO LAYING OF PIPE.

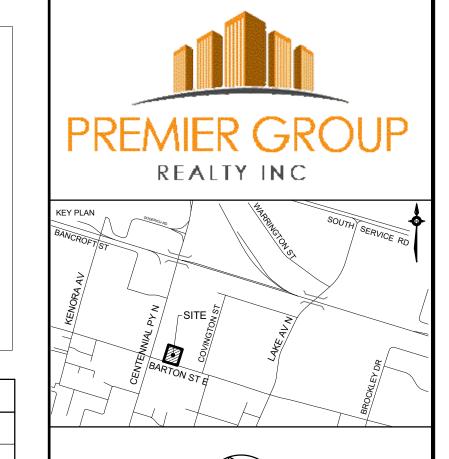


SEE SHEET C4-1 FOR EROSION & SEDIMENT CONTROL PLAN



SEWER CROSSING TABLE





ISSUANCE 2022.12.12 ISSUED FOR REZONING

LEGEND

PROPOSED SANITARY SEWER/SERVICE PROPOSED STORM SEWER/SERVICE PROPOSED WATERMAIN/SERVICE ——— EXISTING SANITARY SERVICE · ─ — — — EXISTING STORM SERVICE EXISTING WATERMAIN **₩** PROPOSED WATERMAIN VALVE

PROPOSED WATER METER PROPOSED STORM MANHOLE MHA PROPOSED SANITARY MANHOLE CV PROPOSED DOUBLE CHECK VALVE ASSEMBL

PROPOSED BACKFLOW PREVENTOR PROPOSED STORM AREA DRAIN EXISTING CATCHBASIN □ EX CB EXISTING STORM MANHOLE O EX MH EXISTING SANITARY MANHOLE

-**Ó**− EX HYD EXISTING FIRE HYDRANT SERVICE CROSSING LOCATION

TOPO SURVEY INFORMATION: TOPOGRAPHIC SURVEY OBTAINED BY A.T. McLAREN LTD. DWG NO. 36450, DATED SEPTEMBER 24, 2020.

ELEV. = 85.971m MONUMENT #0772010003 ROUND IRON BAR WITH BRASS CAP MONUMENT IS LOCATED 27m WEST OF THE CENTRELINE OF LINCOLN ROAD AND 26m NORTH OF HAZELWOOD DRIVE, NORTHEAST CORNER OF EASTDALE PARK.

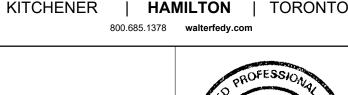
PREMIER GROUP REALITY INC

12 CHIAVATTI DRIVE, MARKHAM, ON

2481 BARTON STREET EAST HAMILTON, ON

GENERAL SERVICING PLAN

WALTERFEDY





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CALE: 1:200 2022-09-08 PROJECT NO.: 2022-0171-10







ISSUANCE 2022.12.12 ISSUED FOR REZONING

<u>LEGEND</u>

HEAVY DUTY SILT FENCE CATCHBASIN SILT SACK EXISTING DRAINAGE ARROW/SLOPE

PROPOSED OVERLAND FLOW ROUTE EXISTING GROUND CONTOURS MH PROPOSED STORM MANHOLE

PROPOSED SANITARY MANHOLE PROPOSED STORM AREA DRAIN EXISTING CATCHBASIN ■ EX CB

EXISTING STORM MANHOLE

TOPO SURVEY INFORMATION:

TOPOGRAPHIC SURVEY OBTAINED BY A.T. McLAREN LTD. DWG NO. 36450, DATED SEPTEMBER 24, 2020. BENCHMARK: ELEV. = 85.971m

MONUMENT #07720100034 ROUND IRON BAR WITH BRASS CAP MONUMENT IS LOCATED 27m WEST OF THE CENTRELINE OF LINCOLN ROAD AND 26m NORTH OF HAZELWOOD DRIVE, NORTHEAST CORNER OF EASTDALE PARK.

PREMIER GROUP REALITY INC.

12 CHIAVATTI DRIVE, MARKHAM, ON

2481 BARTON STREET EAST HAMILTON, ON

EROSION AND SEDIMENT CONTROL PLAN

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SEDIMENT TRAP -("SILTSACK" OR APPROVED EQUIVALENT) TO BE HUNG FROM CATCHBASIN GRATE AS PER MANUFACTURER'S RECOMMENDATIONS CATCH BASIN SEDIMENT TRAP

