1Door4Care - CHEO Integrated Treatment Centre: Parking Garage

ISSUED FOR SPC SUBMISSION 2023-08-16

VOLUME 5 - CIVIL









































SHEET LIST - CIVIL SHEET NAME SHEET NUMBER COVER PAGE C0000 COVER PAGE SHEET LIST SHEET LIST GENERAL NOTES AND DETAILS TYPICAL DETAILS AND NOTES PLAN C0002 C0003 TYPICAL DETAILS AND NOTES PLAN NORTH ARROW N C0004 TYPICAL DETAILS AND NOTES PLAN EXISTING CONDITIONS AND REMOVALS EXISTING CONDITIONS AND REMOVALS PLAN - PARKING CP0501 GARAGE EROSON AND SEDIMENT CONTROL EROSION AND SEDIMENT CONTROL - PARKING GARAGE CP0601 PROPOSED GRADING PLANS PROPOSED GRADING PLAN - PARKING GARAGE PROPOSED SERVICING PLANS PROPOSED SERVICING PLAN - PARKING GARAGE SECTION VIEWS



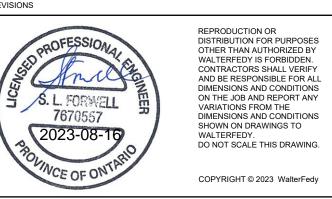




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1DOOR4CARE: CHEO INTEGRATED
TREATMENT CENTRE: PARKING GARAGE
401 SMYTH RD. OTTAWA, ON K1H8L1

SHEET LIST

SCALE:

DRAWN BY: DR RB

DRAWN BY: DR,RB

REVIEWED BY: RK

JOB NUMBER: 2021-0821-10

PLOT DATE: 2023.08.15

DRAWING NUMBER:

C0001

PLAN #: 18912 DEVELOPMENT #: D07-12-22-0170

GENERAL NOTES

- . PARKING GARAGE LEGAL BOUNDARY AND TOPOGRAPHICAL INFORMATION FROM SURVEY BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DATED MAY 7, 2021. 1D4C LEGAL BOUNDARY AND TOPOGRAPHICAL INFORMATION FROM SURVEY BY
- FAIRHALL MOFFATT & WOODLAND LIMITED DATED SEPTEMBER 17, 2018. . THIS SET OF PLANS SHALL NOT BE USED FOR CONSTRUCTION UNTIL STAMPED BY THE DESIGN ENGINEER AND APPROVED BY THE LOCAL MUNICIPALITY.
- 4. NO CHANGES ARE TO BE MADE WITHOUT THE APPROVAL OF THE DESIGN ENGINEER. 5. THIS PLAN NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE PERMISSION OF WALTERFEDY
- 6. THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS, AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES 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 WORK. THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM AND THOSE NOT LOCATED

AUTHORITY HAVING JURISDICTION. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DAMAGED AND/OR DISTURBED PROPERTY WITHIN THE MUNICIPAL

- PRIOR TO CONSTRUCTION. ANY AREA DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE CONSULTANT AND
- 8. ALL HEALTH AND SAFETY RELATED SIGNAGE MUST BE POSTED AT THE SITE AS REQUIRED BY APPLICABLE LAW AND BEST MANAGEMENT PRACTICES.
- 9. AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE CONSULTANT WITH A DIGITAL FILE OF AS-CONSTRUCTED DRAWINGS. THE DRAWINGS MUST REFLECT THE CONSTRUCTED STATE OF THE WORK SUBMISSION OF UNALTERED DESIGN DRAWINGS AND CONTRACT CHANGES WILL NOT BE ACCEPTED.

EROSION CONTROL NOTES

RIGHT-OF-WAY TO MUNICIPAL STANDARDS.

- . ALL EROSION CONTROL FENCING, TEMPORARY FILTRATION, AND MUD MATS MUST BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE CONSULTANT PRIOR TO COMMENCEMENT OF ANY AREA GRADING, EXCAVATING, OR DEMOLITION. CONTRACTOR TO NOTIFY CONSULTANT FOR INSPECTION.
- 2. ATTACH EROSION CONTROL FENCE TO EXISTING CHAINLINK FENCE WITHIN THE
- LIMITS OF THE SITE WHERE POSSIBLE. 3. EROSION CONTROL FENCING TO BE PLACED AROUND THE BASE OF ALL STOCKPILES. ALL STOCKPILES TO BE KEPT A MINIMUM OF 2.5m FROM PROPERTY LINES.
- 4. FILTER FABRIC TO BE TERRAFIX 270R OR APPROVED EQUIVALENT. 5 MUD MATS TO BE PROVIDED ON SITE AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES EXIT THE SITE. MUD MATS SHALL BE SUPPLIED AS INSTALLED AS PER THE DETAIL ON SHEET C4-1. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE ITS
- EFFECTIVENESS AT ALL TIMES. 6. ALL DITCH INLET CATCHBASINS, CATCHBASINS AND CATCHBASIN MANHOLES TO HAVE TEMPORARY FILTRATION INSTALLED AND MAINTAINED AS PER THE DETAIL ON
- . NO ALTERNATE METHODS OF EROSION CONTROL PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY CONSULTANT AND THE AUTHORITY HAVING JURISDICTION. 8. ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED

GROUND SURFACES HAVE BEEN RE-STABILIZED EITHER BY PAVING OR

- RESTORATION WITH VEGETATIVE GROUND COVER. 9 THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE PUBLIC
- ROADWAY AND SIDEWALKS AT THE END OF EACH WORK DAY OR AS DIRECTED BY THE CONSULTANT. 10. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED BY THE
- REQUIRED TO MEET THEIR INTENDED FUNCTION. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF ONE THIRD (1/3) THE STRUCTURE CAPACITY. 11. THE CONSULTANT SHALL MONITOR SITE DEVELOPMENT TO ENSURE ALL EROSION CONTROLS ARE INSTALLED AND MAINTAINED TO CITY OF OTTAWA REQUIREMENTS.

CONTRACTOR AFTER MAJOR RAINFALL EVENTS AND CLEANED OR REPLACED AS

- CONTRACTOR TO COMPLY WITH THE CONSULTANTS INSTRUCTIONS TO INSTALL, MODIFY, OR MAINTAIN EROSION CONTROL WORKS. . THIS PLAN TO BE READ IN CONJUNCTION WITH THE EXISTING CONDITIONS PLAN, SITE
- SERVICING PLAN, STORM WATER MANAGEMENT PLAN, LANDSCAPING PLAN, AND THE STORM WATER MANAGEMENT REPORT DATED AUGUST 2021.
- **GRADING NOTE:** MATCH EXISTING GRADES AT ALL PROPERTY LINES AND/OR LIMITS OF
- CONSTRUCTION EXCEPT WHERE PROPOSED GRADES ARE NOTED. MANAGEMENT OF EXCESS MATERIALS SHALL BE IN ACCORDANCE WITH OPSS 180. ENVIRONMENTALLY IMPACTED SOILS, WHERE AND WHEN ENCOUNTERED, SHALL BE
- DISPOSAL METHOD. SURPLUS MATERIAL OF ALL TYPES NOT REQUIRED FOR BACKFILL GRADING OR LANDSCAPING SHALL BECOME THE PROPERTY OF THE OWNER AND BE REMOVED FROM THE SITE AS DIRECTED BY THE CONSULTANT. THE COSTS OF ALL OFFSITE DISPOSAL SHALL BE BORNE BY THE CONTRACTOR UNLESS A SPECIFIC PROVISION IS MADE IN THE CONTRACT DOCUMENTS FOR PAYMENT FROM DISPOSAL OF A SPECIFIC

MANAGED ON SITE AS REQUIRED UNTIL SUCH TIME THAT LABORATORY TESTING

RESULTS HAVE CONFIRMED THE NATURE OF THE IMPACTS AND A SUITABLE

- SURPLUS MATERIAL MATERIALS TO BE REMOVED SHALL BE NEATLY SAW-CUT ALONG ITS LIMITS, IN ADVANCE OF THE REMOVAL. THE LIMITS OF REMOVAL SHALL BE AS NOTED ON THE PLANS UNLESS AN EXTENSION OR REDUCTION OF THE MATERIAL TO BE REMOVED IS APPROVED IN ADVANCE BY THE CONSULTANT. AS SUCH THE COSTS OF ANY OVER-EXCAVATION NOT APPROVED IN ADVANCE SHALL BE THE FINANCIAL RESPONSIBILITY OF THE CONTRACTOR. THIS RESPONSIBILITY SHALL ALSO EXTEND TO RESTORATION OR REPLACEMENT OF DISTURBED FEATURES AND SURFACES DUE
- TO UNAUTHORIZED EXCAVATION. 5. ALL FILL PLACED ON SITE SHALL BE COMPACTED TO A MINIMUM 95% SPMDD (UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER OR ON THE DRAWINGS AND IN THE SPECIFICATIONS). ALL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 300mm LIFTS EXCEPT WHERE UNDER PAVING, AND WALKS WHEN LAYERS SHALL BE 150mm MAX.

FOUNDATION WALL/BRICK LINE UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.

- MAXIMUM SLOPE IN GRASSED AREAS TO BE 3:1. SLOPES GREATER THAN 3:1 TO BE LANDSCAPED WITH LOW MAINTENANCE GROUND COVER. MINIMUM SLOPE IN
- GRASSED AREAS TO BE 1%. GRASS SWALES WITH A SLOPE LESS THAN 1% TO BE UNDERLAIN WITH A FRENCH DRAIN FINISH GRADE AT FOUNDATION WALLS TO BE MINIMUM 150mm BELOW THE TOP OF
- 8. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE ON ALL SURFACES TO THE APPROPRIATE OUTLET STRUCTURE. AREAS OF PONDING CAUSED BY CONSTRUCTION ERROR WILL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CONSULTANT AT THE CONTRACTORS EXPENSE
- SHOULD THE NATURE OF THE SOIL AT THE DEPTH INDICATED PROVE UNSATISFACTORY AS DETERMINED BY THE GEOTECHNICAL ENGINEER, THE EXCAVATION SHALL BE CARRIED DOWN TO SUCH A DEEPER LEVEL AS THE
- GEOTECHNICAL ENGINEER MAY REQUIRE UNTIL A SATISFACTORY BEARING STRATUM
- 9.1. THIS CONTRACTOR SHALL BE PAID THE COST OF SUCH EXTRA EXCAVATION AT THE UNIT PRICE ESTABLISHED IN THE CONTRACT
- 9.2. ALL EXTRA DEPTHS OF EXCAVATION AND FILLING MUST HAVE THEIR AREA AND VOLUME DOCUMENTED BY AN INDEPENDENT INSPECTION AND TESTING COMPANY OR THE CONSULTANT TO QUALIFY FOR PAYMENT.
- 9.3. QUANTITIES USED FOR PAYMENT OF EXCAVATION AND FILLING AT EXTRA DEPTHS TO BE DETERMINED BY THE CONSULTANT.

GENERAL SERVICING 1. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH THE REGULATIONS SET OUT BY

- THE MUNICIPALITY HAVING JURISDICTION. RIGID PIPE BEDDING: CLASS 'B' AS PER OPSD 802.030 (EARTH EXCAVATION, TYPE 1 OR 2 SOIL), OPSD 802.031 (EARTH EXCAVATION, TYPE 3 SOIL), OPSD 802.032 (EARTH
- EXCAVATION, TYPE 4 SOIL). 3. FLEXIBLE PIPE BEDDING: AS PER OPSD 802.010 (EARTH)
- 4. GRANULAR FILL SHALL BE DEPOSITED IN THE TRENCH, FOR THE FULL WIDTH OF THE TRENCH, COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY IN LAYERS NOT OVER 300mm DEPTH, EXCEPT WHERE UNDER PAVING, AND WALKS WHEN LAYERS SHALL BE 150mm MAX.
- . SITE SERVICING CONTRACTOR TO TERMINATE ALL SERVICES 1.0m FROM FOUNDATION WALL AND COORDINATE WITH THE GENERAL OR MECHANICAL CONTRACTOR AS REQUIRED TO FACILITATE THE CONNECTION.
- 6. WHEN BELL AND SPIGOT PIPE IS LAID, THE BELL END OF THE PIPE SHALL BE LAID
- 7. PIPE SHALL BE KEPT CLEAN AND DRY AS WORK PROGRESSES. THE TRENCH SHALL
- A REMOVABLE WATERTIGHT BULKHEAD SHALL BE INSTALLED DAILY AT THE OPEN END OF THE LAST PIPE LAID.
- AND THE PIPE IS BEDDED AND SECURED IN PLACE. 10. ALL PIPE ENDS SHALL BE THOROUGHLY CLEANED PRIOR TO THE INSTALLATION OF

9. PIPE SHALL NOT BE LAID UNTIL THE PRECEDING PIPE JOINT HAS BEEN COMPLETED

- GASKETS. ALL GASKETS TO BE LUBRICATED PRIOR TO BEING INSTALLED OR AS RECOMMENDED BY THE PIPE MANUFACTURER.
- 11. A TEMPORARY LOCATION MARKER 50x75mm SHALL BE PLACED AT THE END OF ALL CAPPED SERVICE CONNECTIONS. THE MARKER SHALL BE PLACED 300mm ABOVE THE PLUGGED END OF THE SERVICE PIPE, CUT AT LEAST 500mm ABOVE THE FINISHED
- GRADE, AND MARKED WITH BRIGHT PAINT. 12. ALL MANHOLES, BASINS, CHAMBERS ETC. TO BE INSTALLED LEVEL AND PLUMB TO THE SATISFACTION OF THE CONSULTANT.

STORM AND SANITARY SEWER

- 1. ALL SEWER MATERIALS TO COMPLY WITH CITY OF OTTAWA MS-22.15 REQUIREMENTS 2. THE SITE SERVICING CONTRACTOR SHALL PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. SPECIFICALLY, THE LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410 07 01 15 AND 407 07 25 AND IN ACCORDANCE WITH THE PLUMBING CODE. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS TO THE CITY OF OTTAWA. CONTRACTOR TO PROVIDE CONSULTANT MINIMUM 1 WEEK NOTICE OF SCHEDULING PRIOR TO
- COMPLETING TESTING ON SITE. POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS: SMOOTH PROFILES, TO OPSS 1841 AND CSA B182.2, WITH SEPARATE GASKET AND INTEGRAL BELL SYSTEM, IN 6.0m NOMINAL LENGTHS AS FOLLOWS:
- 3.1. 200mm OD AND LARGER: SDR35 PVC WITH 320 kPa STIFFNESS. . SUBSURFACE DRAINAGE PIPE AND FITTINGS: TO OPSS 405, PERFORATED PVC PIPE TO OPSS 1841 OR PE PIPE TO OPSS.MUNI 1840, TO CAN/CSA-B182.1; COMPLETE WITH
- KNITTED SOCK GEOTEXTILE AS REQUIRED (TERRAFIX 270R OR EQUIVALENT). MANHOLES AND CATCHBASIN MANHOLES TO BE PRECAST 1200mm DIAMETER WITH ALUMINUM STEPS AT 300mm SPACING AS PER OPSD 701.010 UNLESS SPECIFIED 6. CATCHBASINS TO BE 600mm SQUARE PRECAST AS PER OPSD 705.010. DOUBLE
- CATCHBASINS TO BE 600x1450mm PRECAST AS PER OPSD 705.020. . CATCHBASIN MANHOLES, CATCHBASINS, AND DOUBLE CATCHBASINS TO HAVE A MINIMUM 600mm DEEP SUMP.
- 8. STORM MANHOLES TO HAVE MINIMUM 300mm DEEP SUMP. 9. MANHOLE AND CATCHBASIN, FRAMES, GRATES, CASTINGS, LIDS TO BE AS PER OPSS
- 10. CAST IRON FRAMES AND COVERS OR GRATES- STORM SEWERS: TO OPSS 1850 AND OPSD 400.020, OPSD 401.010 (B, OPEN). 11. CAST IRON FRAMES AND COVERS OR GRATES - SANITARY SEWERS: TO OPSS 1850,

OPSD 401.010 (A, CLOSED).

12. ALL SANITARY MANHOLES LOCATED IN STORM WATER PONDING AREAS TO HAVE WATERTIGHT FRAME AND COVERS AS PER OPSD 401.030 STORM SEWERS AND SERVICES TO HAVE MINIMUM 2.0m COVER TO TOP OF PIPE WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED SEWER PIPE IN ACCORDANCE WITH APPLICABLE 'SEWER PIPE

INSULATION DETAIL' INDICATED IN DRAWING DETAILS.

- 4. SANITARY SEWERS AND SERVICES TO HAVE A MINIMUM 2.5m COVER TO TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED SEWER PIPE IN ACCORDANCE WITH APPLICABLE 'SEWER PIPE
- INSULATION DETAIL' INDICATED IN DRAWING DETAILS. 15. ALL PIPES, TO BE INSTALLED FLUSH WITH THE INSIDE WALLS OF THE STRUCTURE AND PARGED TO A SMOOTH FINISH.
- 16. ALL SANITARY MANHOLES TO BE PRE-BENCHED OR BENCHED WITH 30MPa CONCRETE AS PER OPSD 701.021. BENCHING SHALL EXTEND TO THE SPRING LINE OF LARGEST PIPE IN THE MANHOLE AND SHALL HAVE A SLOPE OF 1:8.
- 7. CONTRACTOR TO SUPPLY AND PAY FOR CCTV INSPECTION OF ALL SEWER LINES AND STRUCTURES 18. ACCEPTANCE OF SEWER LINES AND STRUCTURES SHALL BE MADE AFTER THE
- CONSULTANT HAS REVIEWED THE CCTV DOCUMENTATION AND VIDEOS, AND EXPRESSED IN WRITING THAT THE SEWER LINES AND STRUCTURES ARE ACCEPTABLE.
- 19. IF CCTV INSPECTIONS SHOW ADDITIONAL CLEANING IS REQUIRED, CLEAN AND RE-INSPECT THE SEWER UNTIL ACCEPTED BY THE CONSULTANT
- 20. A MINIMUM OF ONE (1) AND MAXIMUM OF THREE (3) ADJUSTMENT UNITS SHALL BE INSTALLED ON EACH STRUCTURE TO A MINIMUM HEIGHT OF 75mm AND MAXIMUM OF 300mm. THE FIRST ADJUSTMENT UNIT SHALL BE LAID IN A FULL BED OF MORTAR AND ALIGNED WITH THE OPENING IN THE STRUCTURE. SUCCESSIVE ADJUSTMENT UNITS SHALL BE LAID PLUMB TO THE FIRST ADJUSTMENT UNIT AND SEALED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, FRAMES WITH GRATES OR COVERS SHALL BE SET IN A FULL BED OF MORTAR ON THE ADJUSTMENT UNITS AND SUPPORTED USING SHIMS. ROCKS, STONES AND DEBRIS WILL NOT BE PERMITTED FOR USE AS

WATERMAINS

- 1. ALL WATERMAIN MATERIALS TO COMPLY WITH CITY OF OTTAWA MS-19.15 REQUIREMENTS. . POLYVINYL CHLORIDE (PVC) PIPE: MANUFACTURED TO CAST IRON OD (CIOD);
- ASSEMBLY USING AN ELASTOMERIC GASKET CONFORMING TO ASTM D3139 AND CSA B137.3.. TO CSA B137.3. COMPLETE WITH TRACER WIRE. 2.1. 100 TO 300mm: TO AWWA C900, DR 18, IPEX OR APPROVED EQUAL. 3. MOLECULARLY ORIENTED POLYVINYL CHLORIDE (PVCO) PIPE: MANUFACTURED TO

COLOUR CODED BLUE. WITH INTEGRAL WALL THICKENED BELL DESIGNED FOR JOINT

CIOD: COLOUR CODED BLUE, BIAXIALLY ORIENTED, WITH INTEGRAL WALL THICKENED

- BELL DESIGNED FOR JOINT ASSEMBLY USING AN ELASTOMERIC GASKET CONFORMING TO ASTM D3139 AND CSA B137.3.1, COMPLETE WITH TRACER WIRE. 3.1. 100 TO 300mm: TO AWWA C909, PC 1620 kPa, BIONAX OR APPROVED EQUAL. 4. ALL WATER SERVICING TO HAVE MINIMUM 2.4m COVER.
- 5. ALL WATER SERVICING PROVIDING FIRE FLOWS MUST BE PRESSURE TESTED TO 200 PSI AS PER THE OBC PLUMBING CODE.
- 6. FITTINGS: FOR POLYVINYL CHLORIDE (PVC) AND MOLECULARLY ORIENTED POLYVINYL CHLORIDE (PVCO) PIPE SHALL BE EITHER:
- 6.1. GRAY IRON ACCORDING TO AWWA C110/A21.10. 6.2. DUCTILE IRON ACCORDING TO C110/A21.10 OR AWWA C153 AND SHALL BE

1500) AND STAR STARGRIP 4000, 4100P.

- CEMENT LINED ACCORDING TO AWWA C104/A21.4. INJECTION MOULDED POLYVINYL CHLORIDE, BLUE IN COLOUR AND ACCORDING
- TO AWWA C907 AND CSA B137.2. 6.4. PREFABRICATED POLYVINYL CHLORIDE, BLUE IN COLOUR AND ACCORDING TO AWWA C905 AND CSA B137.3.
- 7.1. FOR PVC PIPE AND FITTINGS: TO ASTM F1674 AND AWWA C111, SERRATED RING TYPE; FOR PUSH ON JOINTS UNIFLANGE (SERIES 1300, 1350 & 1360), EBAA (SERIES 1600, 2500 & 2800) OR CLOW (SERIES 300 & 350); OR WEDGE ACTION TYPE AS MANUFACTURED BY EBAA (SERIES 2000PV), OR UNIFLANGE (SERIES
- 7.2. FOR PVCO PIPE (AWWA C909) AND FITTINGS: SERRATED RING TYPE; FOR PUSH ON JOINTS UNIFLANGE (SERIES 1360), EBAA (SERIES 2500); WEDGE ACTION TYPE AS MANUFACTURED BY CLOW (SERIES 2000 TUF GRIP), STAR (STARGRIP 3500).
- 7.3. ALL MECHANICAL JOINTS IN TEMPORARY AND PERMANENT CONNECTIONS TO INCLUDE MECHANICAL JOINT RESTRAINTS. 7.4. WATERMAIN FITTINGS WHICH CHANGE DIRECTIONS VERTICALLY OR

HORIZONTALLY TO BE FULLY RESTRAINED BY MECHANICAL JOINT RESTRAINT OR

THRUST BLOCKS (OPSD 1103.01 AND 1103.02). THREADED ROD WILL NOT BE

THE CONTRACT DRAWINGS. ALL TEES TO HAVE MINIMUM 2.0m SOLID PIPE

LENGTH ON EACH RUN OF THE TEE, OR PROVIDE A THRUST BLOCK PER OPSD

7.5. WATERMAIN FITTINGS TO BE SUPPLIED WITH MECHANICAL JOINT RESTRAINTS. FOR WATERMAIN PIPE SIZES 150mmØ OR LESS ALL PIPE JOINTS TO BE RESTRAINED WITHIN 5.0m FROM ALL FITTINGS. IN EACH DIRECTION. UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWINGS. FOR WATERMAIN PIPE SIZES GREATER THAN 150mmØ ALL PIPE JOINTS TO BE RESTRAINED WITHIN 10.0m FROM ALL FITTING, IN EACH DIRECTION, UNLESS SHOWN OTHERWISE ON

- 8.1. T.W.U. OR R.W.U #10 GAUGE MIN. 7 STRANDS COPPER WIRE, MIN 60°C OR HIGHER, 600v OR APPROVED EQUIVALENT.
- PVC WATERMAIN SHALL HAVE TRACER WIRE STRAPPED TO TOP AT 5.0m INTERVALS. TRACER WIRE SHALL BE BROUGHT TO THE SURFACE AT ALL HYDRANTS AND CONNECTED TO THE LOWER FLANGE OF THE HYDRANT.
- 8.3. DO NOT CONNECT THE TRACER WIRE ON NON-METALLIC SYSTEMS TO NEW OR EXISTING METALLIC WATERMAIN PIPING AND/OR ASSOCIATED FITTINGS. 9. WATERMAIN VALVES, 100mm AND LARGER, SHALL BE AS PER AWWA C509-MUELLER A2362 OR APPROVED EQUIVALENT (OPEN LEFT) INCLUDING VALVE BOX AND
- CATHODIC PROTECTION. 10. HYDRANTS: CONFORM TO AWWA C502 FOR DRY-BARREL HYDRANTS, WITH TWO 63.5mm HOSE NOZZLES AT 180 DEGREES AND A 114.3mm PUMPER NOZZLE WITH A 100mm ULC APPROVED STORTZ CONNECTION; 32mm SQUARE OPERATING NUT, OPEN COUNTER-CLOCKWISE AND HAVE MECHANICAL JOINT END: COMPLETE WITH 150mm

LEAD. 150mm GATE VALVE. ANCHOR TEE. VALVE AND BOX PROVIDED IN

- ACCORDANCE WITH THE CITY OF OTTAWA. TO BE PROVIDED AS REQUIRED BY THE CITY OF OTTAWA MS-19.15
- 12. CHAMBERS FOR VALVES AND METERS TO BE PROVIDED IN ACCORDANCE WITH OPSS
- 12.1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR CHAMBER AND METER ASSEMBLY TO THE CONSULTANT FOR REVIEW.
- 12.2. COMPLETE WITH FACTORY INSTALLED GALVANIZED OR ALUMINUM MANHOLE

12.3. PROVIDE AND INSTALL ACCESS HATCH FRAME AND COVERS TO OPSD 402.030,

13. PETROLATUM TAPE SYSTEMS: TO BE COMPRISED OF THREE COMPONENTS; PASTE, MASTIC. AND TAPE THAT MEET AWWA C217-09. SUPPLIED BY DENSO NORTH AMERICA INC. OR PETRO COATING SYSTEMS LTD. OR RUSTROL SYSTEMS (INTERPROVINCIAL CORROSION CONTROL COMPANY LTD.). ONLY MATERIAL FROM SUPPLIERS LISTED SHALL BE USED. AT NO TIME SHALL MATERIALS FROM EITHER SYSTEM BE UTILISED WITH ONE AND OTHER.

CAST IN PLACE. ACCESS HATCH SHALL BE LOCKABLE.

- 13.1. ALL MECHANICAL JOINT RESTRAINTS TO BE WRAPPED WITH APPROVED PETROLEUM TAPE SYSTEM.
- 14. PROVIDE ADEQUATE SUMP BELOW CONNECTION, AND PUMPING IF REQUIRED. TO PREVENT CONTAMINATION OF NEW WATERMAIN WITH TRENCH GROUND WATER OR ANY OTHER FOREIGN MATTER.
- DISINFECTION BACTERIOLOGICAL ANALYSIS AND FLUSHING TO BE SUCCESSEULLY COMPLETED BY THE CONTRACTOR AND ACCEPTED BY THE CITY OF OTTAWA AND THE CONSULTANT PRIOR TO PERMANENT CONNECTION TO WATER DISTRIBUTION SYSTEM. REFER TO CONTRACT SPECIFICATIONS FOR REQUIREMENTS. 15.1. CONTRACTOR TO SUBMIT A WATERMAIN COMMISSIONING PLAN TO THE CITY OF

15. ALL WATERMAIN AND SERVICE COMMISSIONING, PRESSURE/LEAKAGE TESTING,

OTTAWA AND CONSULTANT AT LEAST TWO WEEKS PRIOR TO CHLORINE RESIDUAL & BACTERIOLOGICAL TESTING.

PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST:

CONSTRUCTION NOTES

- 1.1. CHECK AND VERIFY ALL DIMENSIONS AND EXISTING ELEVATIONS WHICH INCLUDES, BUT IS NOT LIMITED TO, THE BENCHMARK ELEVATIONS, EXISTING SERVICE CONNECTIONS AND EXISTING INVERTS.
- 1.2. OBTAIN ALL UTILITY LOCATES AND REQUIRED PERMITS AND LICENSES. 1.3. VERIFY THAT THE FINISHED FLOOR ELEVATIONS AND EXISTING FLOOR
- ELEVATIONS (WHICH MAY APPEAR ON THIS PLAN) COMPLY WITH THE FINAL ARCHITECTURAL DRAWINGS.
- 1.5. REPORT DISCREPANCIES IN EXISTING CONDITION INFORMATION IMMEDIATELY TO THE CONSULTANT.

2. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR DAMAGE TO EXISTING WORKS.

DAMAGE SHALL BE RECTIFIED TO THE SATISFACTION OF THE CONSULTANT AND

1.4. CONFIRM ALL DRAWINGS USED FOR CONSTRUCTION ARE OF THE MOST RECENT

- 3. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY SUPPORT AND/OR RELOCATION OF EXISTING UTILITIES DURING CONSTRUCTION. THE CONTRACTOR
- SHALL COORDINATE AND COMPLY WITH THE REQUIREMENTS OF ALL UTILITY COMPANIES WHEN CROSSING OR WORKING NEAR THEIR PLANT.

4. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL

- TEMPORARY BENCHMARKS ESTABLISHED FOR DESIGN PURPOSES, PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE
 - CONTRACT ADMINISTRATOR BEFORE COMMENCING WORK. 5. THE CONTRACTOR SHALL CONTACT THE CONSULTANT 48 HOURS PRIOR TO
 - COMMENCING WORK TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION. THE RIGHT-OF-WAY (INCLUDING THE BOULEVARD) IS NOT TO BE USED FOR ANY
 - CONSTRUCTION ACTIVITY UNTIL A WORK PERMIT HAS BEEN OBTAINED AS PER THE CITY OF OTTAWA REQUIREMENTS. 7. ALL WORK ON THE MUNICIPAL RIGHT-OF-WAY WILL BE INSTALLED BY THE SITE
 - CONTRACTOR UPON SUCCESSFUL APPLICATION FOR A WORK PERMIT BY THE 8. LIMIT CONSTRUCTION TO ACCEPTABLE TIMES WITHIN THE CITY OF OTTAWA NOISE

BYLAW. CONSTRUCTION HOURS ARE 6AM TO 10PM MONDAY TO SUNDAY WITHOUT

9. IF, FOR UNFORESEEN REASONS, THE OWNER AND/OR THEIR REPRESENTATIVE MUST ENCROACH ONTO PRIVATE LANDS TO UNDERTAKE ANY WORKS, THEY MUST OBTAIN WRITTEN PERMISSION FROM THE ADJACENT PROPERTY OWNERS PRIOR TO ENTERING UPON THE PRIVATE PROPERTY TO PERFORM ANY WORKS. COPIES OF THESE LETTERS OF CONSENT MUST BE SUBMITTED TO CITY OF OTTAWA ENGINEERING DEVELOPMENT DIVISION. PRIOR TO ANY WORK BEING PERFORMED. FAILURE TO COMPLY WITH THE ABOVE IS AT THE PROPERTY OWNER'S &

TRAFFIC, ACCESS, SAFETY

CONTRACTOR'S OWN RISK.

- PEDESTRIANS MUST BE ASSURED SAFE PASSAGE ALONG LANCASTER ROAD AT ALL TIMES. ALL PEDESTRIAN WALKWAYS MUST BE MAINTAINED AS LONG AS POSSIBLE AFTER WHICH TIME IT IS TEMPORARILY REPLACED BY A SUITABLE GRANULAR MATERIAL TO THE SATISFACTION OF THE CONSULTANT AND/OR CITY OF OTTAWA.
- 2. ON STREET PARKING WILL NOT BE PERMITTED FOR ANY CONSTRUCTION VEHICLES OR CONSTRUCTION STAFF. THE CONTRACTOR SHALL PROVIDE ADEQUATE PARKING FACILITIES ON SITE TO SUIT THE NATURE AND LOCATION OF THE WORK.
- FOR EMERGENCY RESPONSE, CONTRACTOR MUST MAINTAIN CONSTRUCTION
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNALS, DELINEATORS, MARKERS, AND BARRIERS, ALL SIGNS, ETC. SHALL CONFORM TO THE STANDARDS OF THE CITY OF OTTAWA AND THE MTO MANUAL OF UNIFORM TRAFFIC CONTROL

ACCESS FREE AND CLEAR OF DEBRIS, MATERIALS, VEHICLES, AND EQUIPMENT.

ALL REMOVALS TO BE IN ACCORDANCE WITH OPSS.MUNI 510.

CONTRACTOR IS READY TO REPLACE SIDEWALKS.

BEFORE NEW ASPHALT IS PLACED.

OF SCHEDULED ASPHALT PAVING.

ASPHALT MATERIAL TO BE PROVIDED AS PER OPSS 1150 AND INSTALLED AS PER

- WHERE NEW ASPHALT ABUTS EXISTING ASPHALT, EXISTING ASPHALT SHALL BE SAW CUT AND HAVE TACK COAT APPLIED AS PER OPSS 308 TO A CLEAN DRY FACE
- 3. SUBMIT ONE COPY OF THE PROPOSED ASPHALT MIX DESIGN FOR ANY PAVING MATERIALS DIRECTLY TO THE CONSULTANT A MINIMUM OF TWO WEEKS IN ADVANCE
- KISTING SIDEWALK ON THE RIGHT OF WAY IS NOT TO BE REMOVED UNTIL THE
- 2. CONCRETE SIDEWALK WITHIN THE RIGHT OF WAY SHALL BE AS PER OPSD 310.010
- 3. CONCRETE BARRIER CURB TO BE AS PER OPSD 600.110 32MPa @ 28 DAYS CONCRETE TO OPSS 353, 7±1.5% AIR ENTRAINMENT, 19mm MAX COURSE AGGREGATE. 60mm MAX SLUMP.
- 4. CONCRETE SIDEWALK TO BE AS PER DETAIL ON THIS SHEET 32MPa @ 28 DAYS CONCRETE TO OPSS 351, 7±1.5% AIR ENTRAINMENT, 19mm MAX COURSE
- AGGREGATE. 70±20mm SLUMP. . UNSHRINKABLE FILL: TO OPSS 1359, 28-DAY COMPRESSIVE STRENGTH: 0.4 - 0.7 MPa,
- MAXIMUM 25mm COURSE AGGREGATE SIZE. 6. SUBMIT ONE COPY OF ALL PROPOSED CONCRETE MIX DESIGNS DIRECTLY TO THE CONSULTANT A MINIMUM OF TWO WEEKS IN ADVANCE OF SCHEDULED CONCRETE

ALL GRANULAR BASE, SUBBASE, SUBGRADE AND BACKFILL TO BE PROVIDED AS PER OPSS.MUNI 1010 AND INSTALLED AS PER OPSS.MUNI 314.

- . COARSE GRANULAR FILL: MATERIAL AS SPECIFIED BELOW; COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY, UNLESS SPECIFIED OTHERWISE, IN LIFTS NOT EXCEEDING 300mm IN COMPACTED THICKNESS: MOISTURE CONTENT WITHIN PLUS OR MINUS 2% OF THE REQUIREMENTS OF ASTM D698.
- 2.1. GRANULAR 'B', TYPE 2 TO OPSS.MUNI 1010. 3 FINE GRANULAR FILL: MATERIAL AS SPECIFIED BELOW: COMPACTED TO 98%

3.1. GRANULAR 'A' TO OPSS.MUNI 1010.

- STANDARD PROCTOR MAXIMUM DRY DENSITY, UNLESS SPECIFIED OTHERWISE, IN LIFTS NOT EXCEEDING 150mm IN COMPACTED THICKNESS; MOISTURE CONTENT WITHIN PLUS OR MINUS 2% OF THE REQUIREMENTS OF ASTM D698.
- IN ACCORDANCE WITH THE CITY OF OTTAWA SITE ALTERATION BY-LAW; NO FILLING, PRE-GRADING OR TREE REMOVAL SHALL OCCUR, IN ADVANCE OF THE FINAL SITE PLAN ENGINEERING ACCEPTANCE. WITHOUT PERMIT. SHOULD THE DEVELOPER OR CONTRACTOR WISH TO PREPARE THE SITE FOR CONSTRUCTION PRIOR TO ENGINEERING ACCEPTANCE. AN APPLICATION FOR A SITE ALTERATION PERMIT MUST
- BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEERING AND CONSTRUCTION DIVISION FOR REVIEW AND APPROVAL. 2. ANY AREAS WHICH REQUIRE FILL IN EXCESS OF 0.30m ARE SUBJECT TO
- SPMDD AT ALL DEPTHS. . RETAINING WALLS TO BE DESIGNED BY OTHERS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PROPOSED RETAINING WALLS, SIGNED AND SEALED BY A OFESSIONAL ENGINEER CERTIFIED IN THE PROVINCE OF ONTARIO TO THE CONSULTANT PRIOR TO CONSTRUCTION. SHOP DRAWINGS TO BE APPROVED BY CONSULTANT IN ADVANCE

OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A CERTIFICATE OF COMPLETION

COMPLETED BY THE RETAINING WALL DESIGN ENGINEER BEFORE ACCEPTANCE OF THE

COMPACTION TESTS AND SUCH TESTS MUST SHOW A MINIMUM COMPACTION OF 95%

TOPSOIL TO BE PROVIDED AND INSTALLED AS PER OPSS 802. SOD TO BE PROVIDED

OF THE CONSULTANT.

AND INSTALLED AS PER OPSS 803. PAVEMENT MARKING & SIGNS

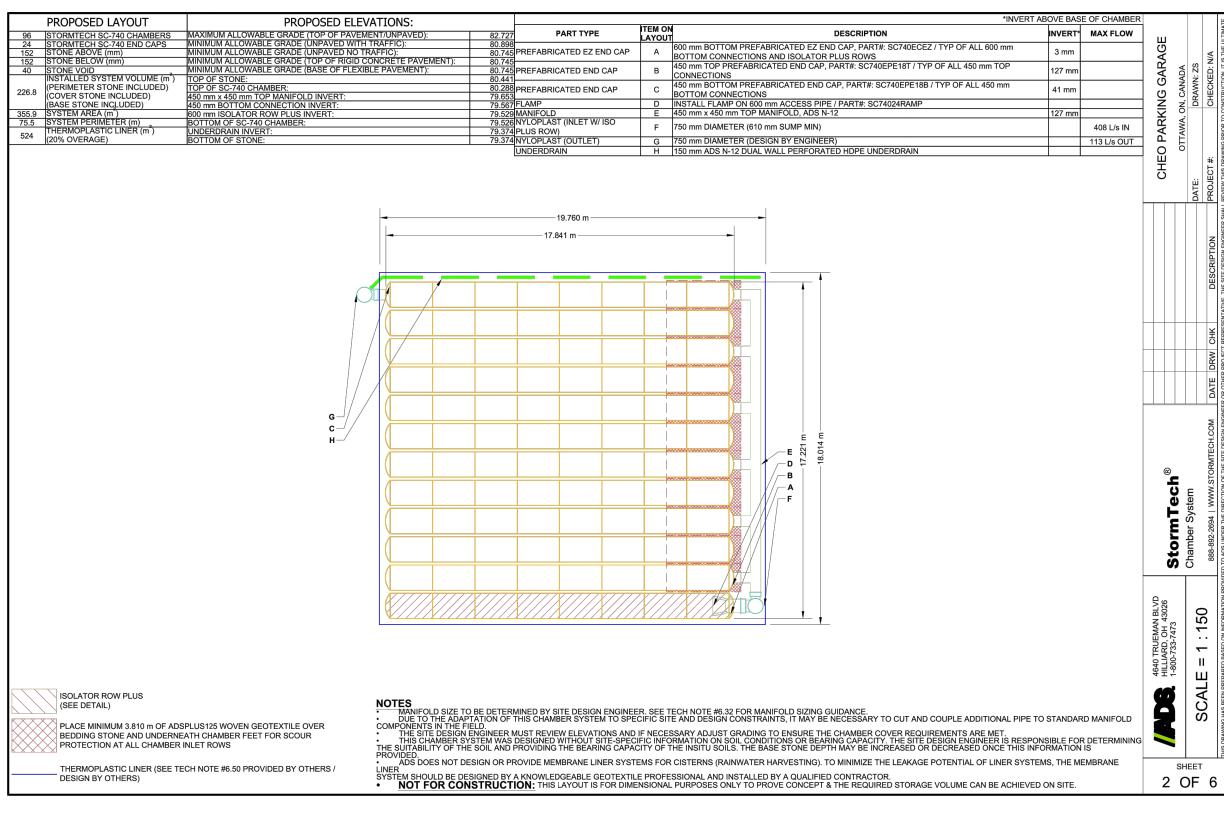
1. PAVEMENT MARKINGS TO BE LAID OUT AS PER THE DRAWINGS AND CONTRACTOR TO CONTACT CONSULTANT TO REVIEW LAYOUT PRIOR TO PAINTING ALL PAINT LINES.

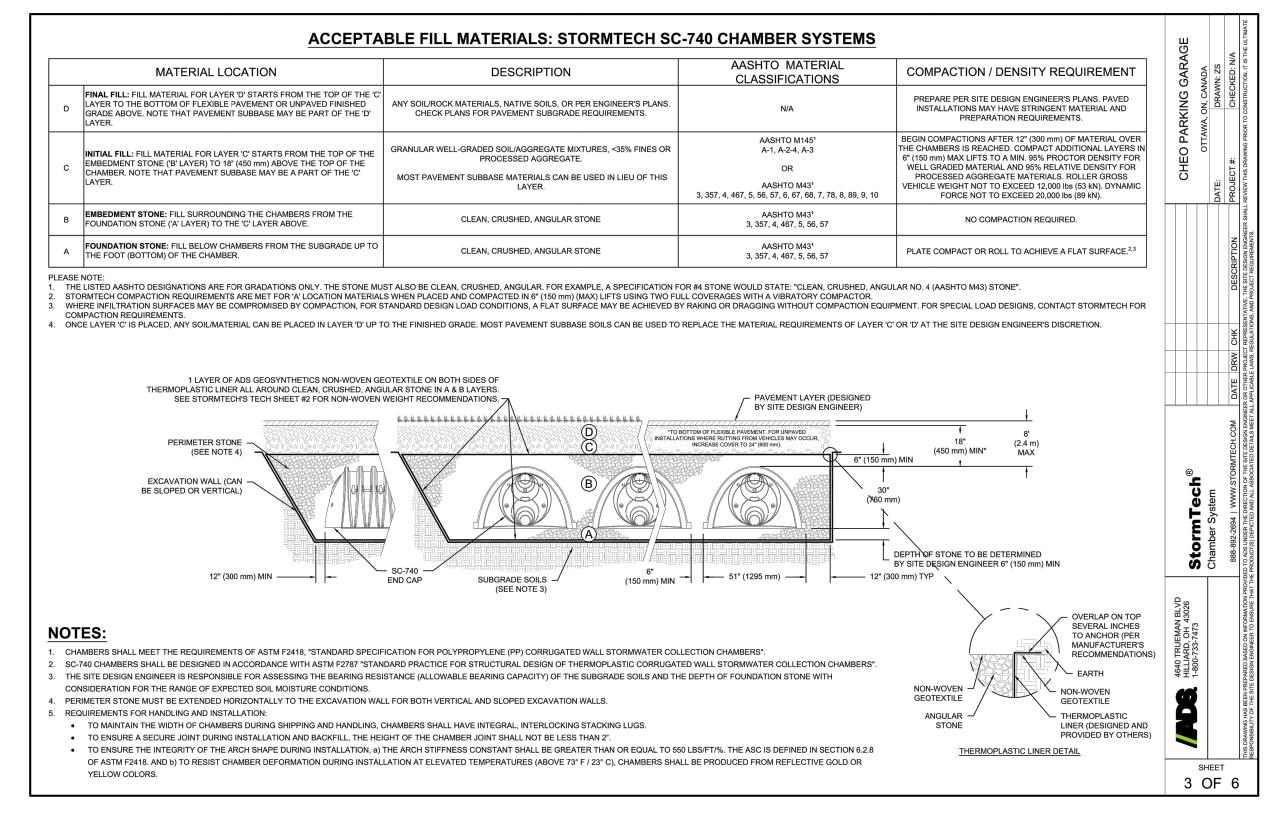
TO BE OF UNIFORM COLOR AND DENSITY WITH SHARP EDGES TO THE SATISFACTION

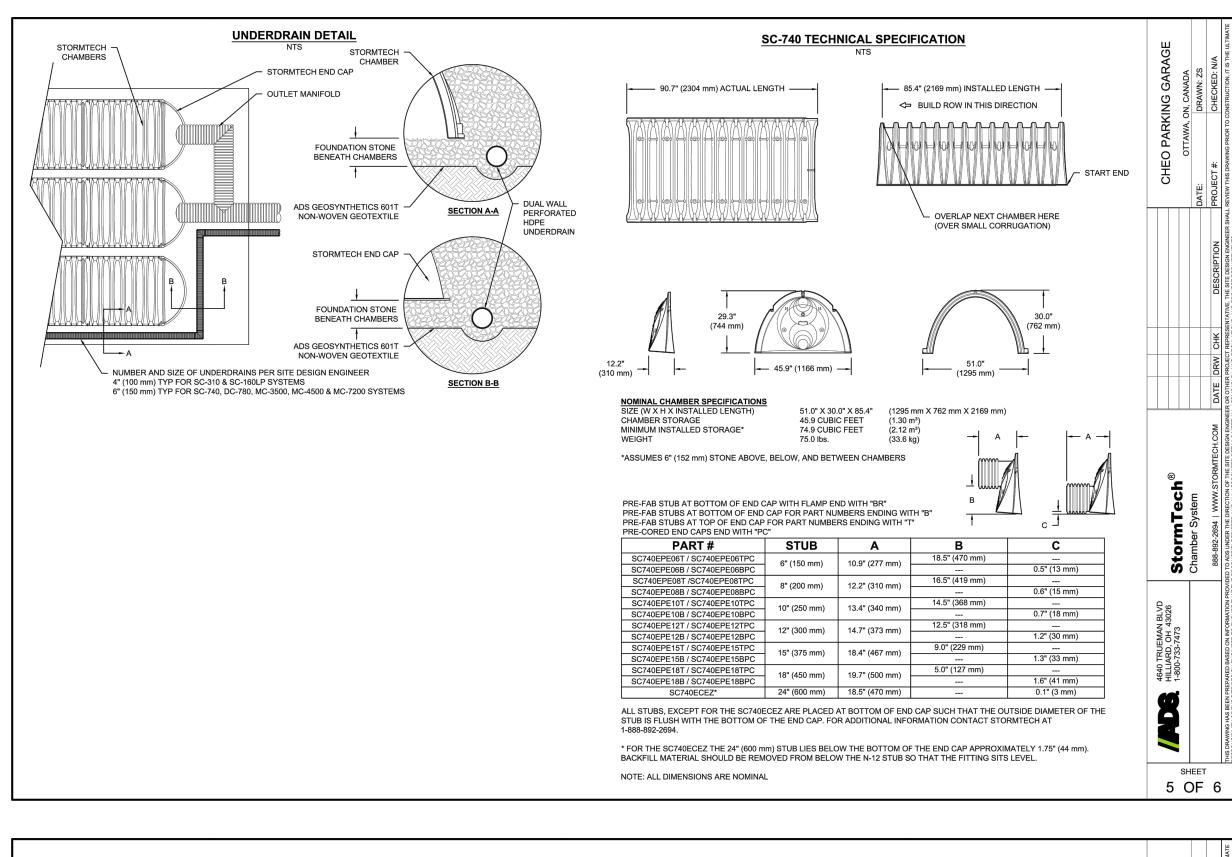
MINISTRY OF TRANSPORTATION ONTARIO OR U.S. FEDERAL 595B, YELLOW

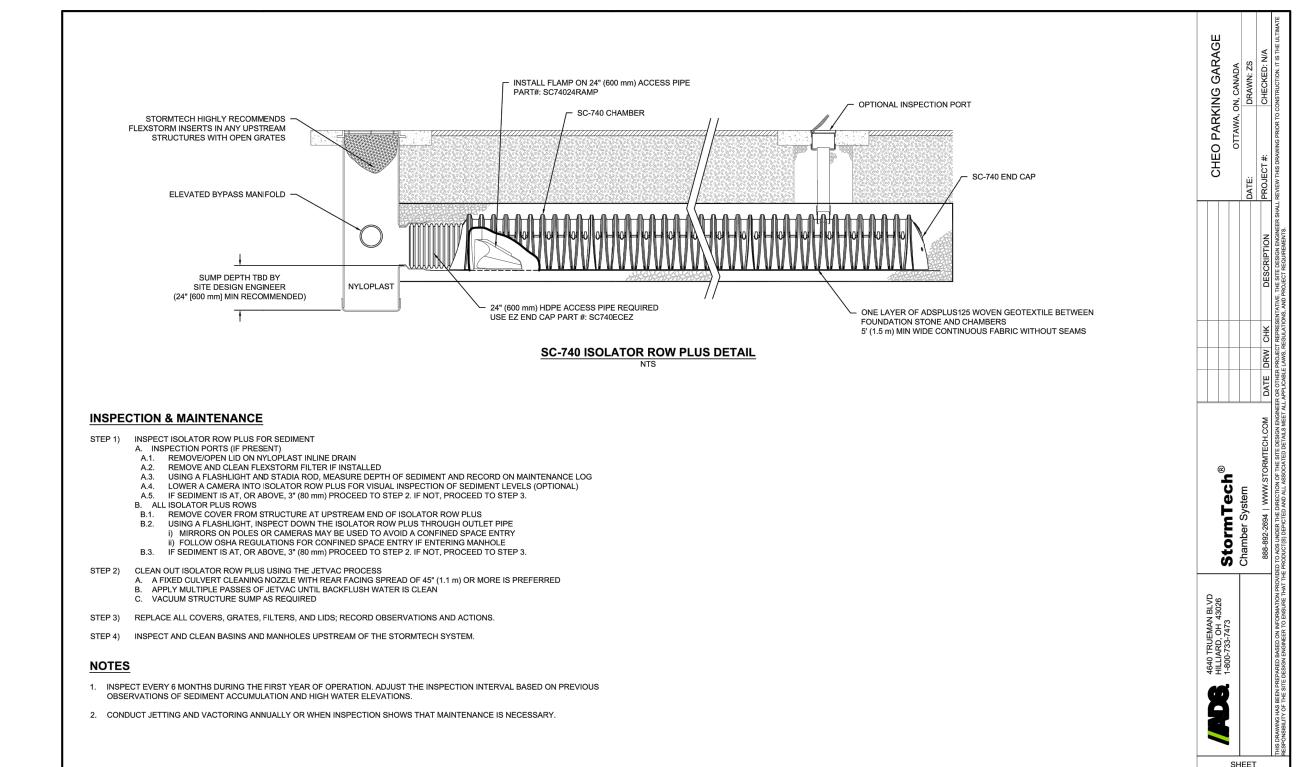
- . PAVEMENT MARKINGS TO BE 2.1. THERMOPLASTIC PAVEMENT MARKING MATERIAL TO CONFORM TO OPSS 1713
- AND APPLIED AS PER OPSS 710 WHITE - CGSB 1-GP-12C WHITE 513-301. YELLOW - SHALL MATCH EITHER THE YELLOW COLOUR CHIP OF THE
- 3. ALL EXISTING SIGNS, MAIL BOXES, POSTS, ETC., WHICH MUST BE REMOVED TO ACCOMMODATE CONSTRUCTION SHALL BE SALVAGED AND REINSTATED AS DIRECTED BY THE CONTRACT ADMINISTRATOR IN EQUAL OR BETTER CONDITION. THE CONTRACTOR SHALL MAKE GOOD ANY DAMAGE CAUSED TO SUCH FACILITIES AT HIS OWN EXPENSE. ALL EXISTING TRAFFIC CONTROL SIGNS MUST BE REINSTATED BY THE END OF EACH WORKING DAY, EXISTING STOP CONTROL SIGNS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION TO THE SATISFACTION OF THE

ROAD AUTHORITY AND THE CONTRACT ADMINISTRATOR.







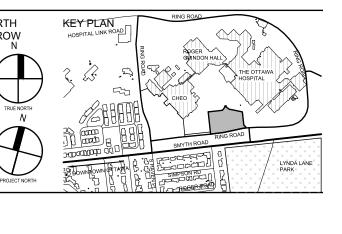








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AND BE RESPONSIBLE FOR

ON THE JOB AND REPORT ANY /ARIATIONS FROM THE DIMENSIONS AND CONDITIONS

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1DOOR4CARE: CHEO INTEGRATED TREATMENT CENTRE: PARKING GARA 401 SMYTH RD. OTTAWA, ON K1H8L1

TYPICAL DETAILS AND NOTES PLAN (SHEET 1 OF 3)

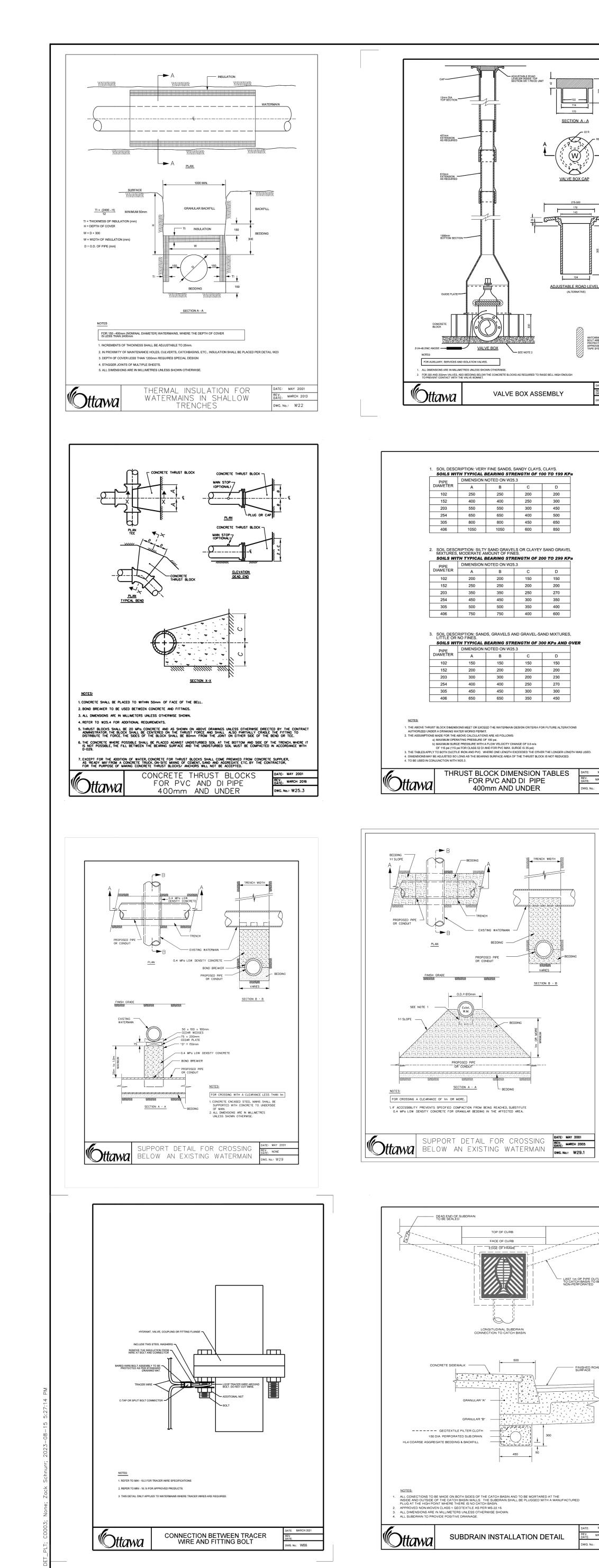
AS NOTED DRAWN BY: DR.RE REVIEWED BY: RK PLOT DATE: 2023.08.15

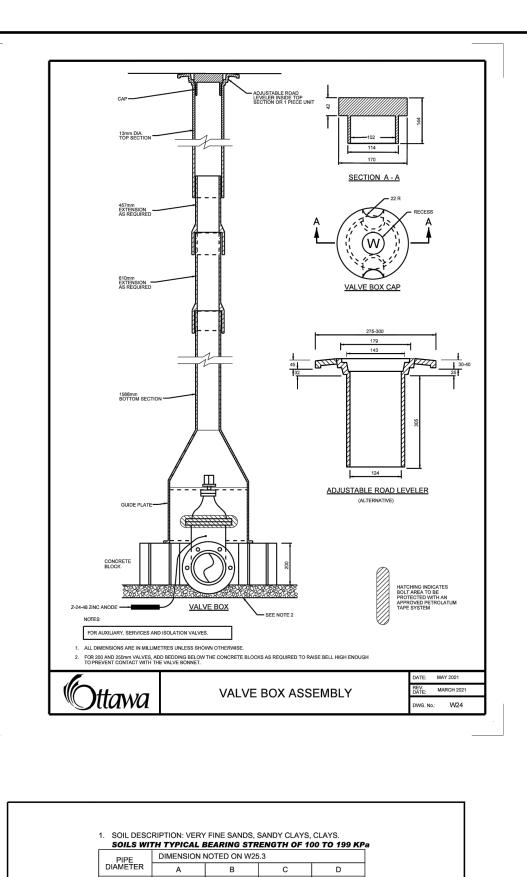
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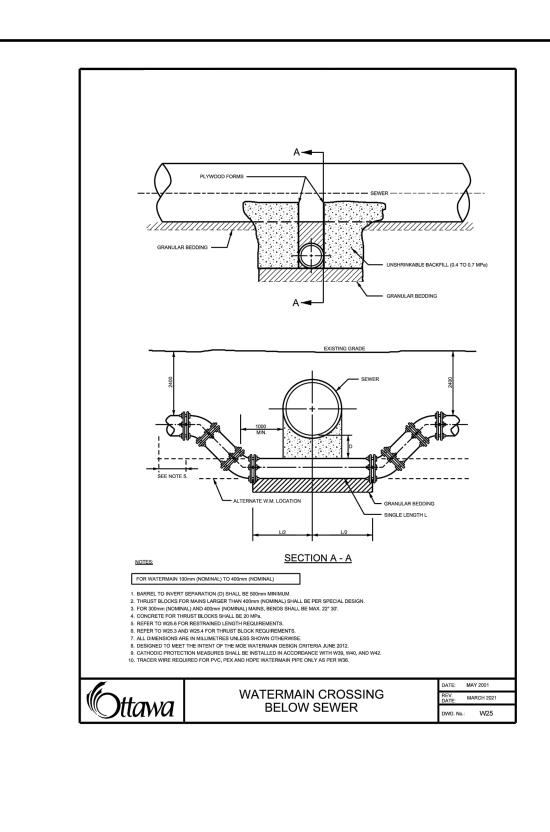
PLAN #: 18912

4 OF 6

DEVELOPMENT #: D07-12-22-0170







DEAD ENDS, CAPS PLUGS AND ISOLATION VALVES

HORIZONTAL BENDS

VERTICAL BENDS

1. ANY JOINT THAT FALLS WITHIN THE RECOMMENDED LENGTH (L) SHALL BE RESTRAINED. SEE DRAWING W25.6

REDUCERS

#8 RWU90 — TRACER WIRE —

DIRECT BURIED SPLICE DETAIL

1. ALL CONNECTIONS MUST BE WATERPROOFED.

5. ALL MATERIALS SHALL BE IN ACCORDANCE WITH MW-19.15.

7. TRACER WIRE SPLICES TO BE COMPLETED PER W47.

6. TRACER WIRE BOLT CONNECTIONS TO BE COMPLETED PER W55.

2. SPLICING OF MAIN TRACER WIRE IS NOT ALLOWED UNLESS SPECIFIED OR APPROVED.

4. FOR PVC TO DUCTILE IRON CONNECTIONS, THE TRACER MUST BE ATTACHED TO THE DUCTILE IRON PIPE BY CADWELD.

3. TRACER WIRE CONTINUITY OF CURRENT MUST BE TESTED AND VERIFIED.

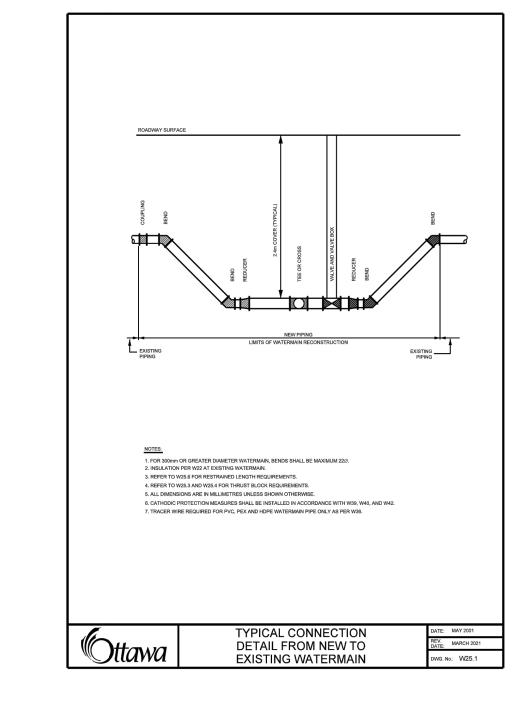


TABLE OF RESTRAINED LENGTHS FOR DI AND PVC WATERMAIN PIPE IN STANDARD GRANULAR 'A' EMBEDMENT IN SOILS OF BEARING CAPACITY OF 100 KPa AND OVER

 BEFORE CAPS AND EITHER SIDE OF VALVES - L
 5
 6
 9
 10
 12
 16

 TEES

 LENGTH ALONG THE BRANCH - L
 1
 1
 1
 1
 1
 1
 1
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 1

11.25, 22.5, AND 45 DEGREE BENDS 1 1.5 1.5 2 2 2.5

AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.

2. THE ASSUMPTIONS MADE FOR THE ABOVE CALCULATIONS ARE AS FOLLOWS:

a) MAXIMUM OPERATING PRESSURE OF 100 psi.

b) MAXIMUM SURGE PRESSURE WITH A FLOW VELOCITY CHANGE OF 0.6 m/s

OF 115 psi (115 psi For CLASS \$2 Di AND FOR PVC MAX. SURGE IS 35 psi)

3. FOR SOFTWARE CALCULATIONS A TEST PRESSURE OF 150 psi AND A SAFETY FACTOR OF 1.5 WAS USED WHICH RESULTS IN 225 psi MAXIMUM PRESSUR

400mm AND UNDER

TABLES OF RESTRAINED LENGTHS
FOR PVC AND DI PIPE

DATE: MAY 2001
REV. DATE: MAY 2001

TYPE 5 TRENCH BEDDING.
 DEPTH TO BURY 2.4 METRES EXCEPT FOR VERTICAL BENDS WHERE THE HIGH SIDE IS AT 1.8 METRES.
 EMBEDMENT MATERIAL GRANULAR Y. WITH CHARACTERISTICS OF ASTM D2487 GP.
 GP SOILS ARE DESCRIBED AS POORLY GRADED GRAVEL AND SAND-GRAVEL MIXES WITH LITTLE OR NO FINES.
 (LI) MUST BE OF SOLID PIPE WITHOUT JOINTS, FITTINGS, ETC.
 THE TABLES APPLY TO BOTH DUCTILE IRON AND PVC. WHERE ONE LENGTH EXCEEDED THE OTHER THE LONGER LENGTH WAS USED.
 RESTRAINED LENGTHS ARE IN METRES.

THE ABOVE RESTRAINED LENGTHS MEET OR EXCEED THE WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATIONS AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.

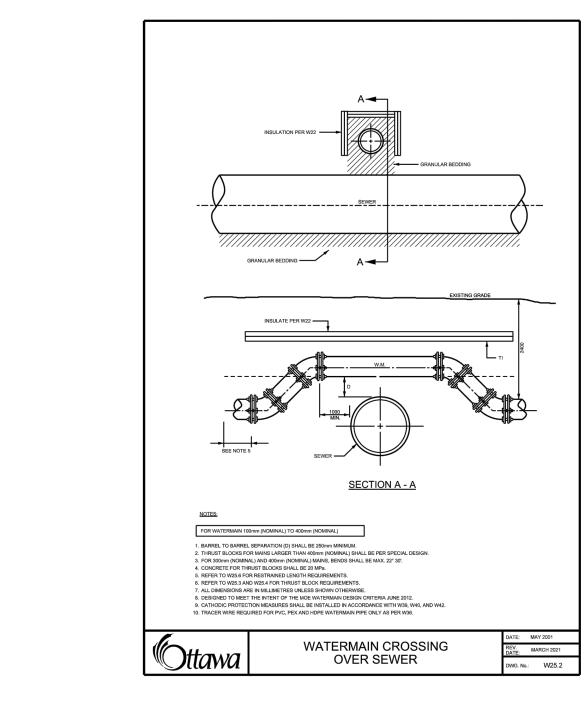
 LENGTH HIGH SIDE - LHS
 3
 4
 5
 6
 7
 9

 LENGTH LOW SIDE - LLS
 1.5
 2
 2.5
 3
 3.5
 4.5

DEAD ENDS, CAPS, PLUGS, VALVES

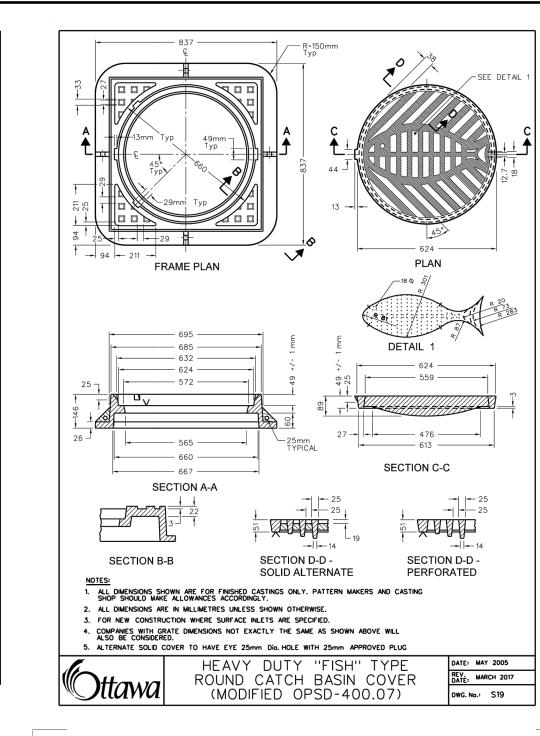
PIPE DIAMETER

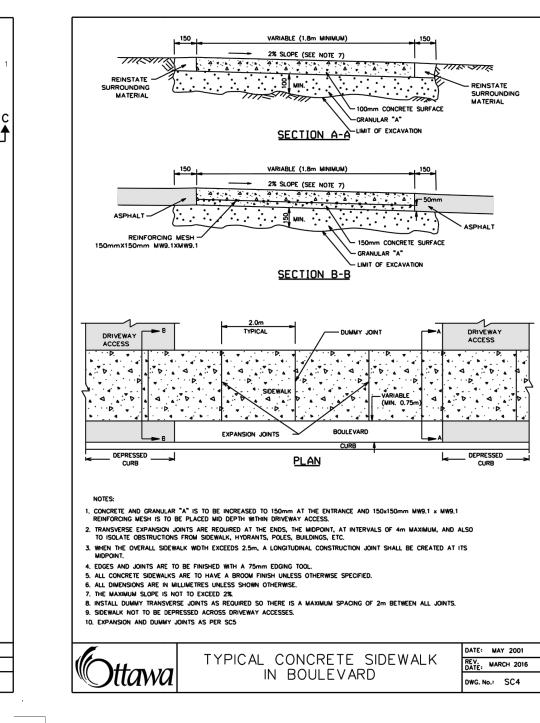
100mm 150mm 200mm 250mm 300mm 400mm

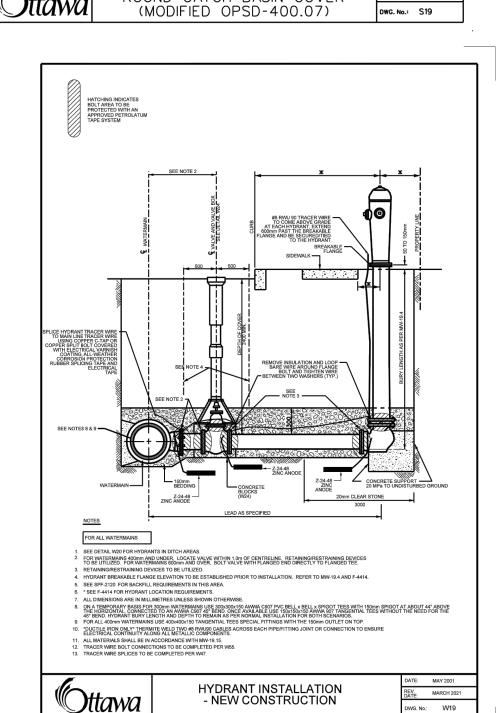


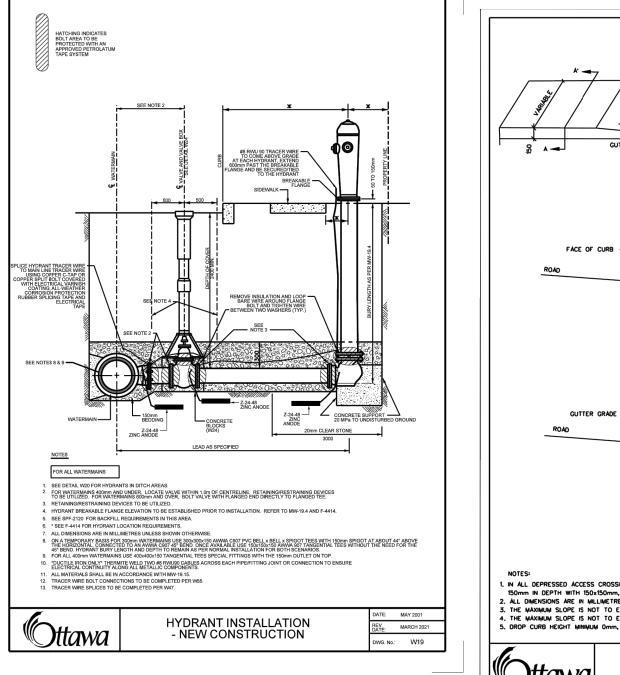
FOR WATERMAINS 400mm DIA OR LESS.

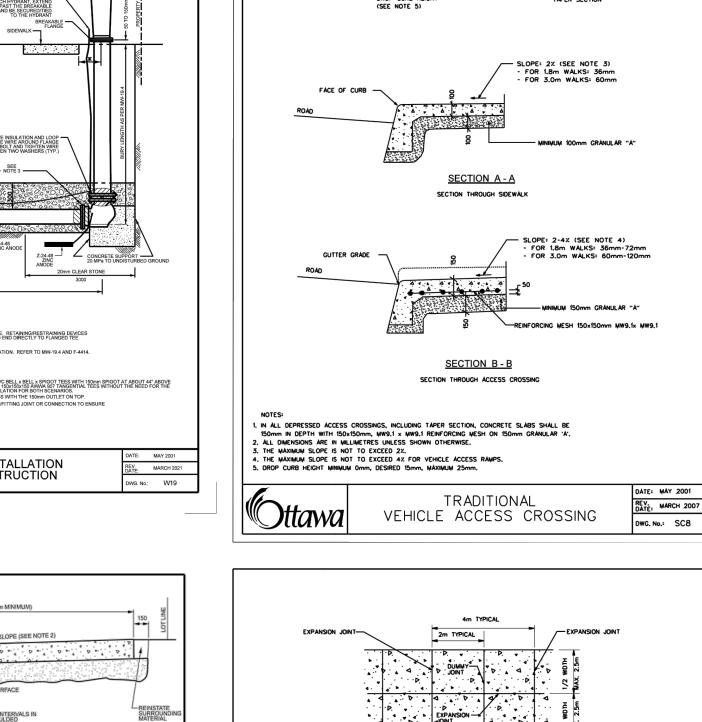
TEMPORARY SUPPORT FOR EXISTING WATERMAIN

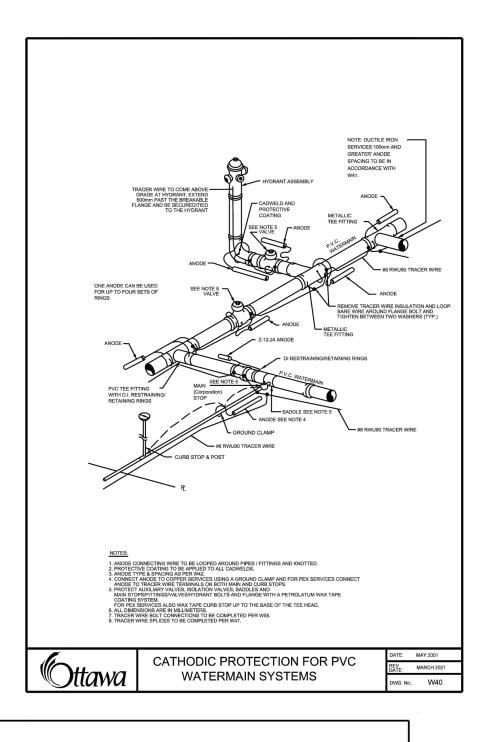


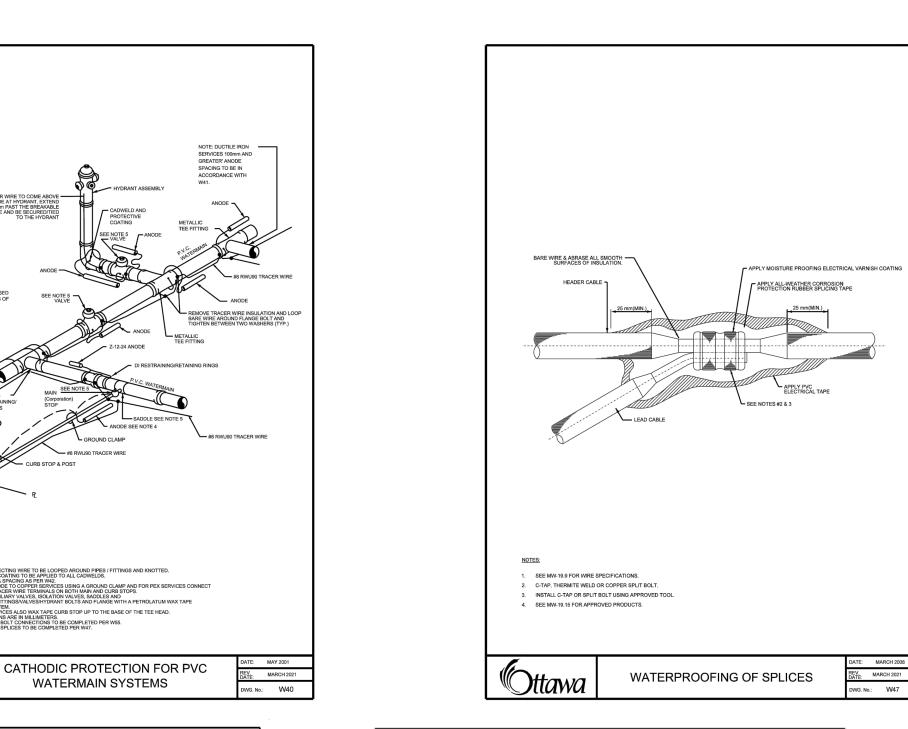


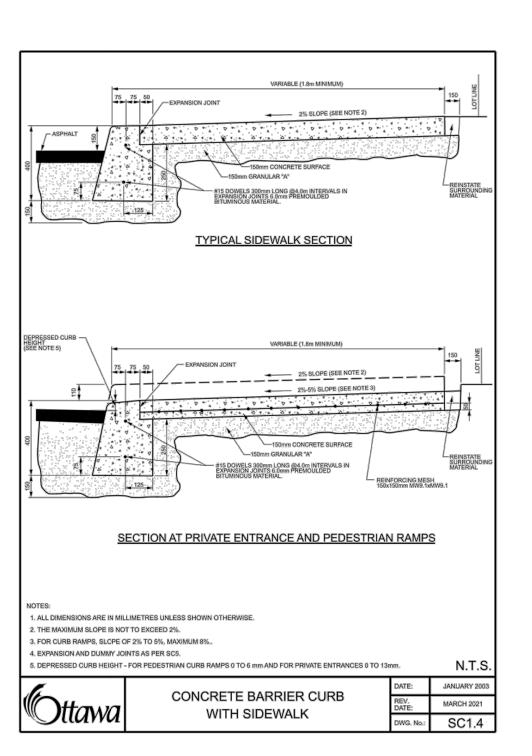


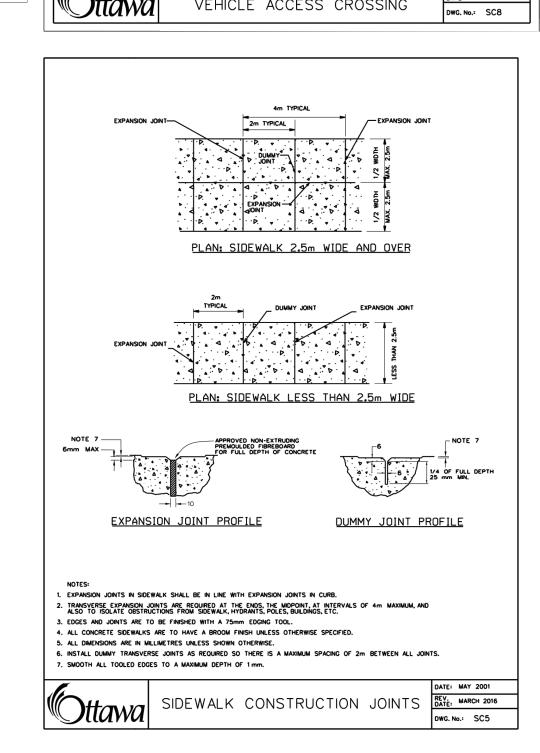


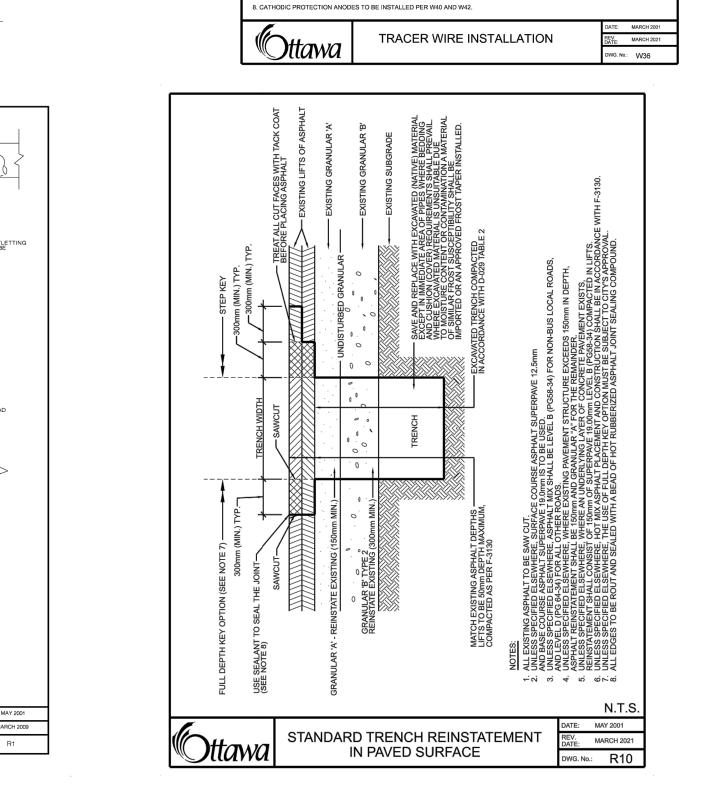


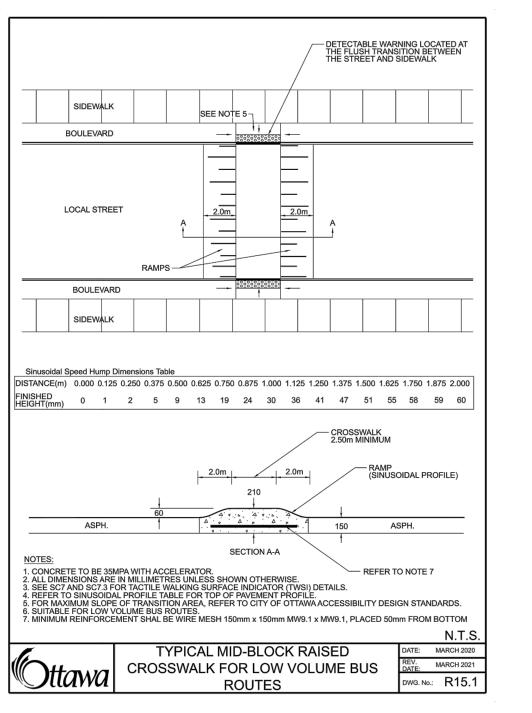


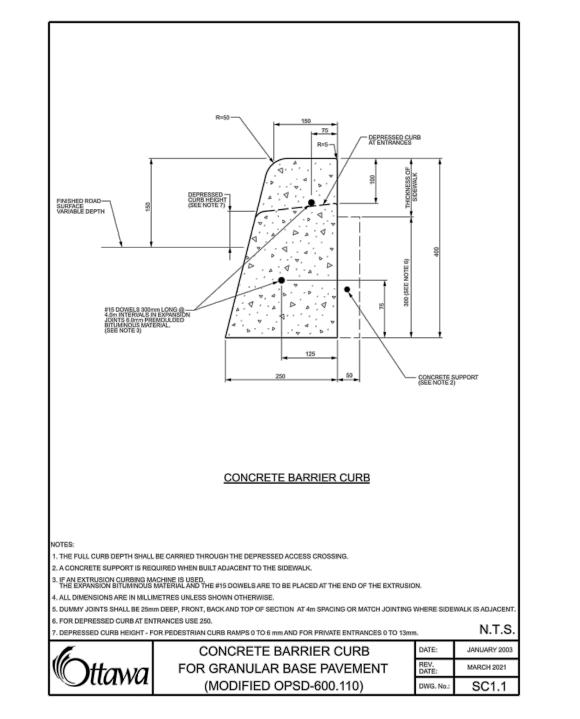


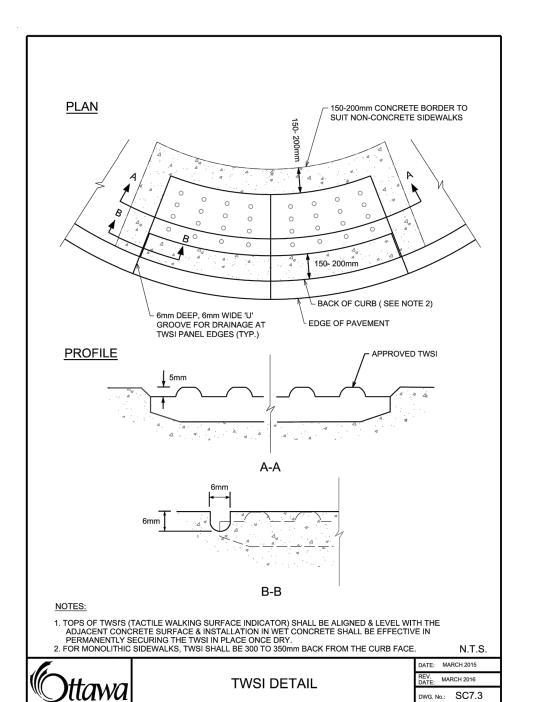


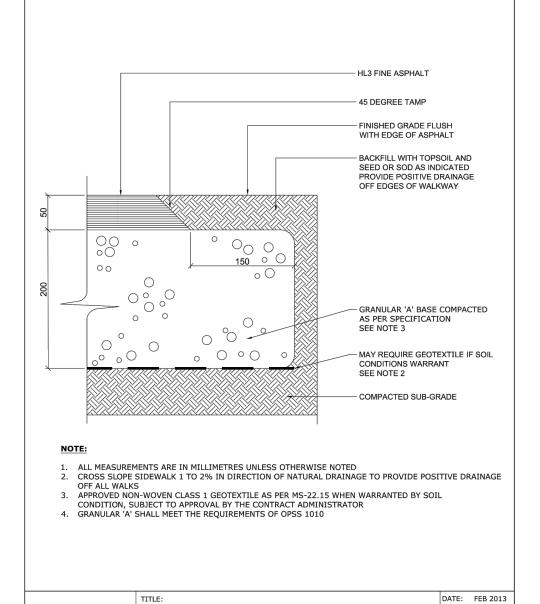












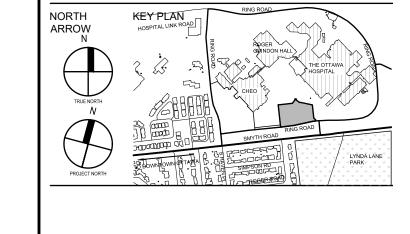
ASPHALT WALKWAY



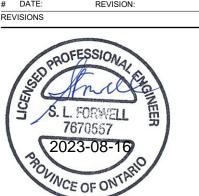




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1DOOR4CARE: CHEO INTEGRATED TREATMENT CENTRE: PARKING GARA 401 SMYTH RD. OTTAWA, ON K1H8L1

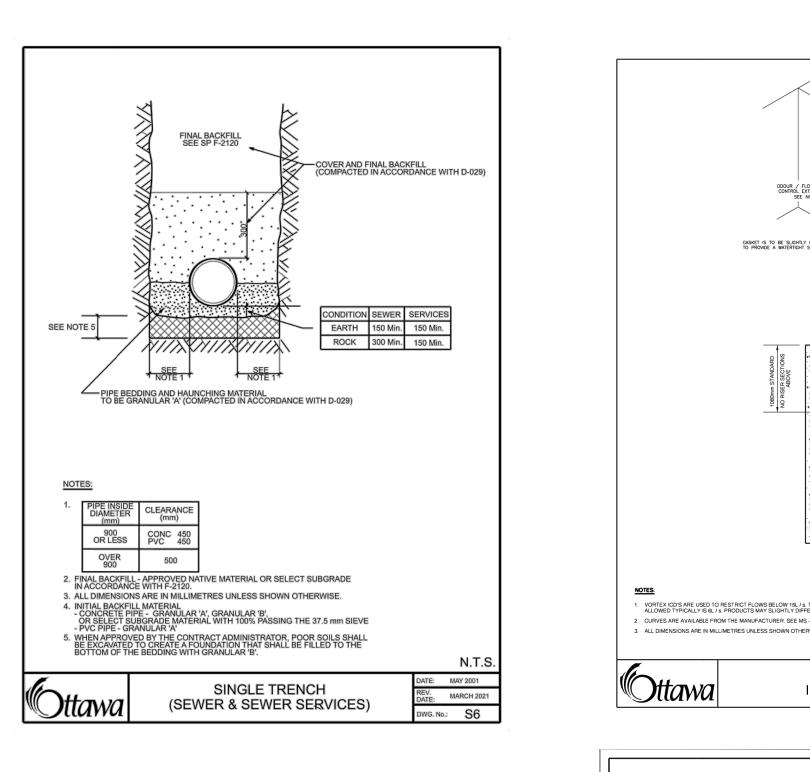
TYPICAL DETAILS AND NOTES PLAN (SHEET 2 OF 3)

SCALE: AS NOTED DRAWN BY: DR,RB REVIEWED BY: RK JOB NUMBER: 2021-0821-10

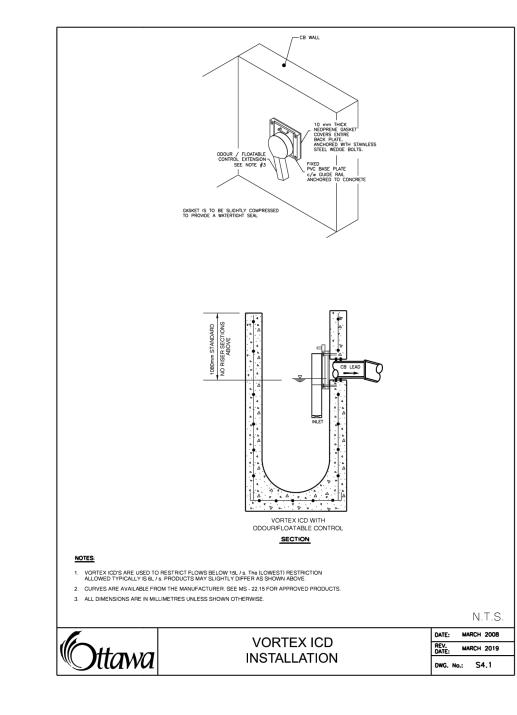
REV: FEB 2016

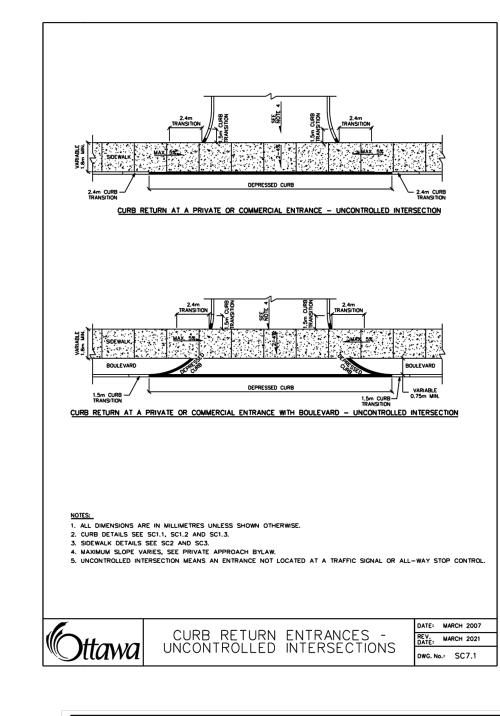
DWG No: SC20

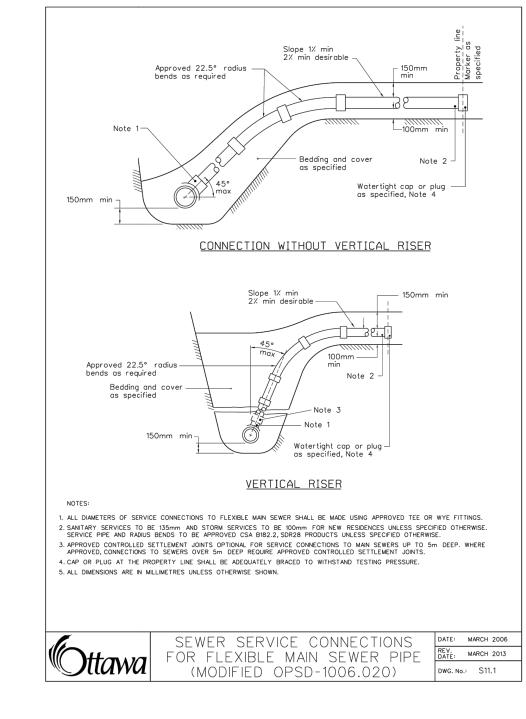
PLOT DATE: 2023.08.15 DRAWING NUMBER:

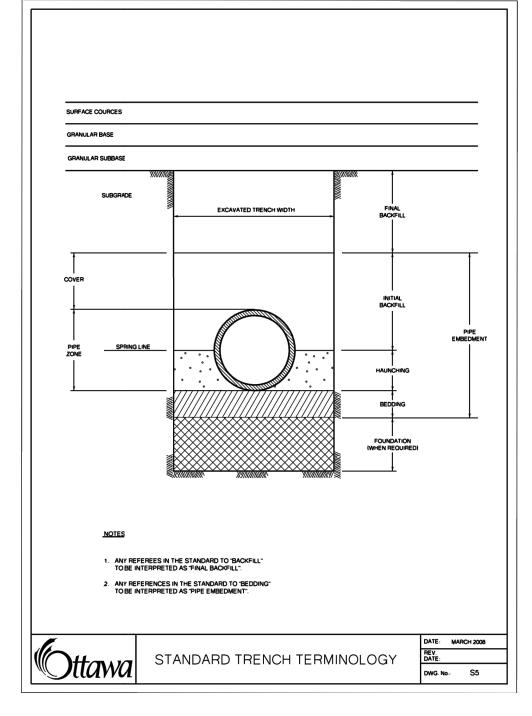


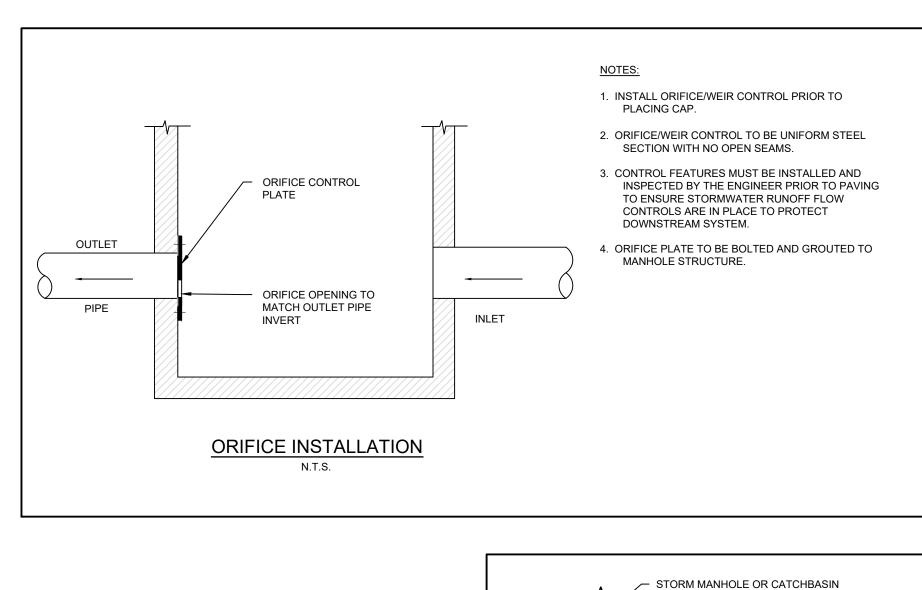
— SEE NOTE 2

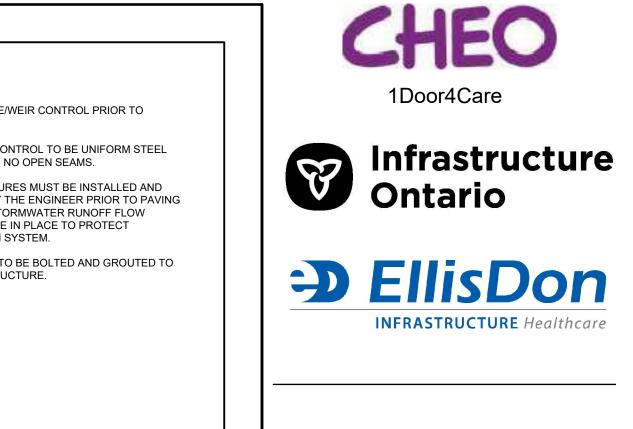












PROVIDE FLAT SURFACE ON MANHOLE

WALL TO ALLOW ORIFICE CAP TO SIT

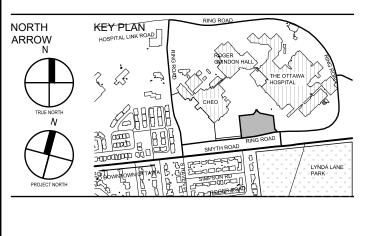
LOCATION

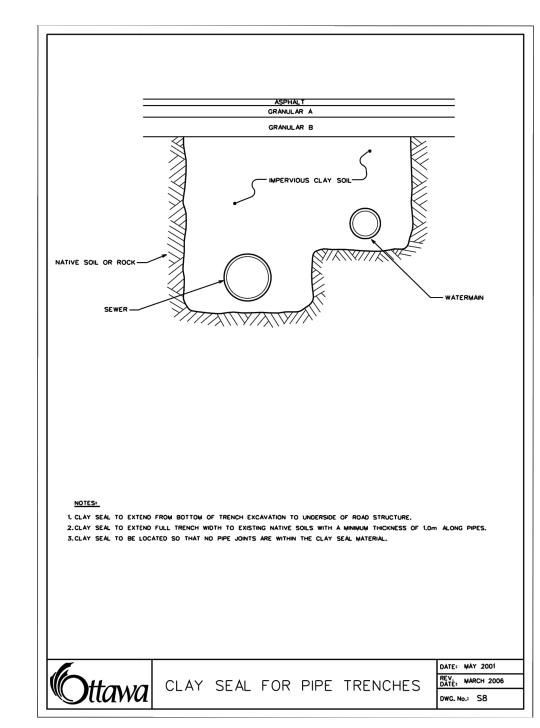
FLUSH WITH MANHOLE WALL

LAG CAP TO MANHOLE WALL WITH 1.5"-3/8 dia. STAINLESS

STEEL LAG BOLTS







CONCRETE FOOTING

CONCRETE FOUNDATION WALL

SEE NOTE 1 STORM CLEANOUT

STORM BACKWATER VALVE

FOUNDATION DRAIN BACKWATER

VALVE INSTALLATION

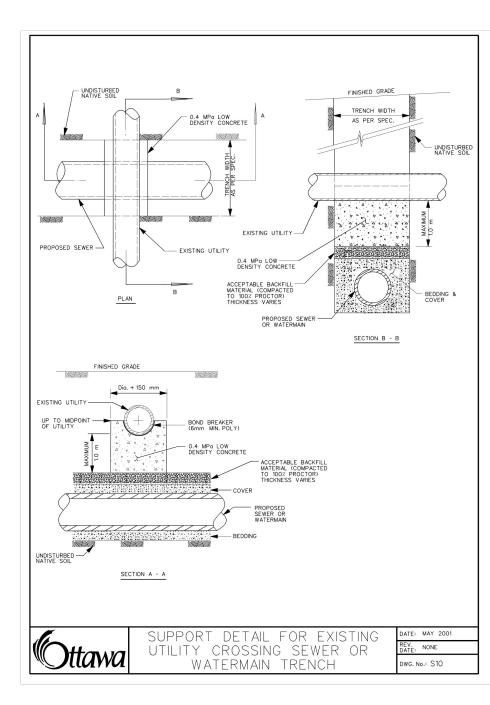
JOINTS BETWEEN THE SLEEVE AND THE BACKWATER VALVE AND THE FLOOR SHALL BE WATERTIGHT.

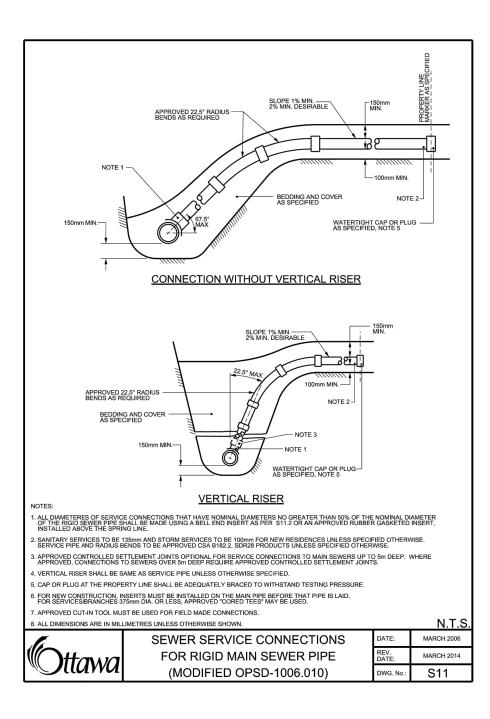
FLOW DIRECTION
FROM FOUNDATION DRAIN

SEE NOTE 1

CLEANOUT FOR SANITARY SEWER (OR SANITARY VALVE)
BACKWATER VALVE)
SEE DETAIL S 14.1

COMPONENTS GENERALLY LOC, ALONG FRONT SIDE OF HOUSE





COMPONENTS GENERALLY LOCATED ALONG FRONT SIDE OF HOUSE

RISER AND CLEANOUT THREADED CAP CLEANOUT

NORMALLY OPEN FLAP

SANITARY BACKWATER VALVE

2. JOINTS BETWEEN CLEANOUT AND THE BACKWATER VALVE AND THE FLOOR SLAB SHALL BE SEALED.

SANITARY BACKWATER

VALVE INSTALLATION TYPE 2

CONCRETE FOOTING

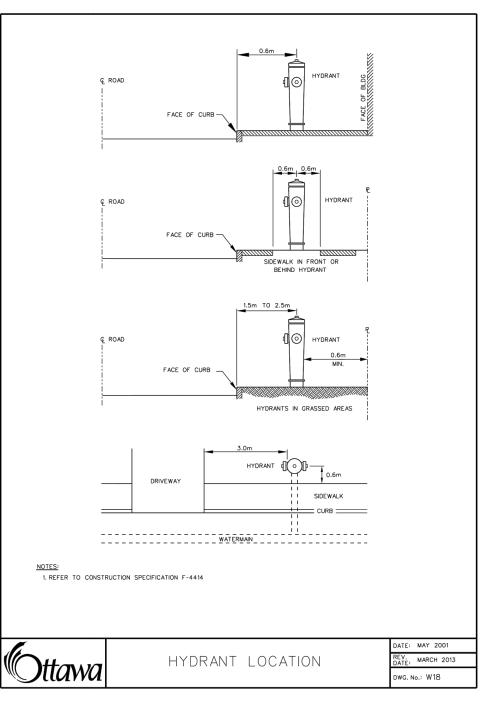
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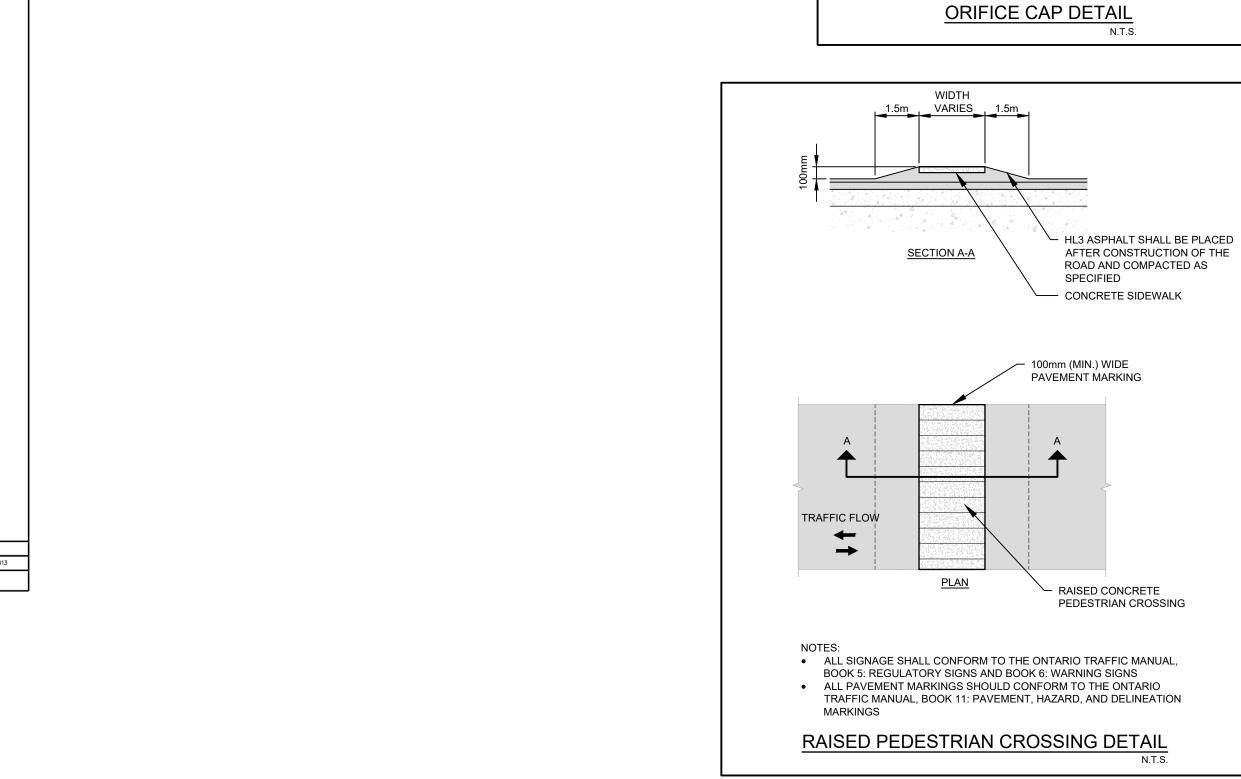
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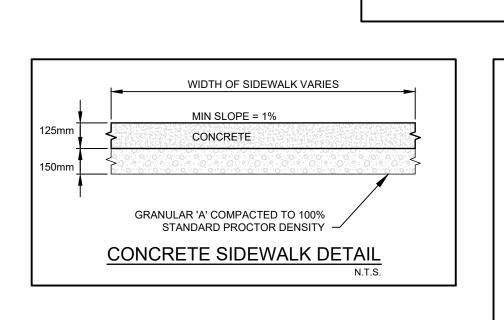
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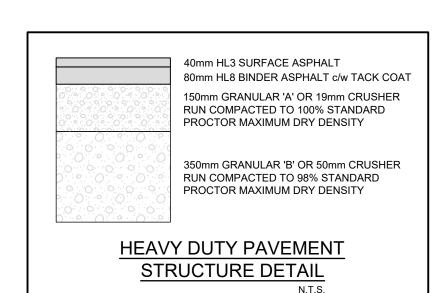
CONCRETE FOOTING

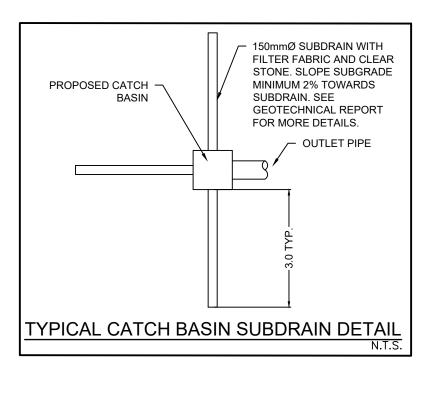
SANITARY BACKWATER VALVE

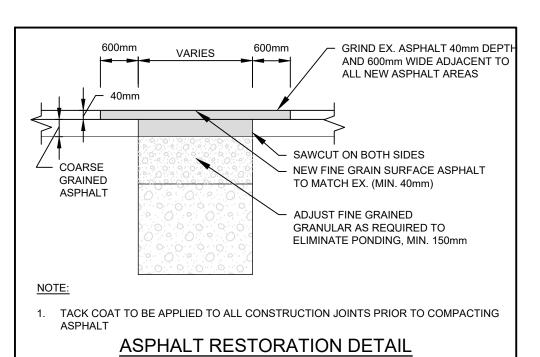




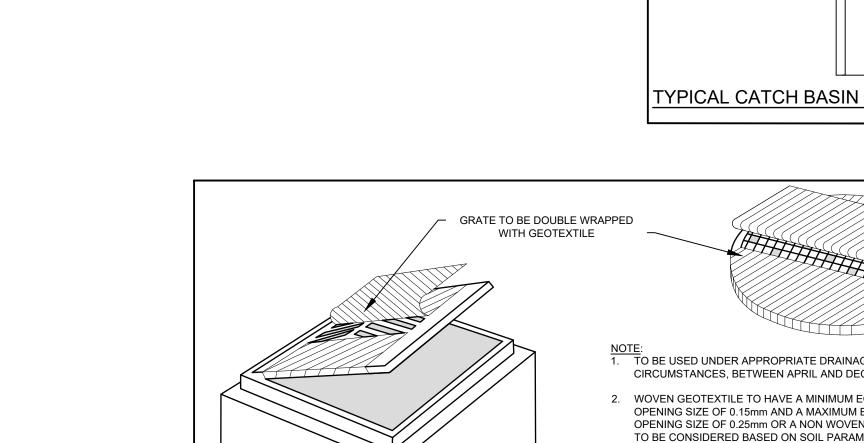


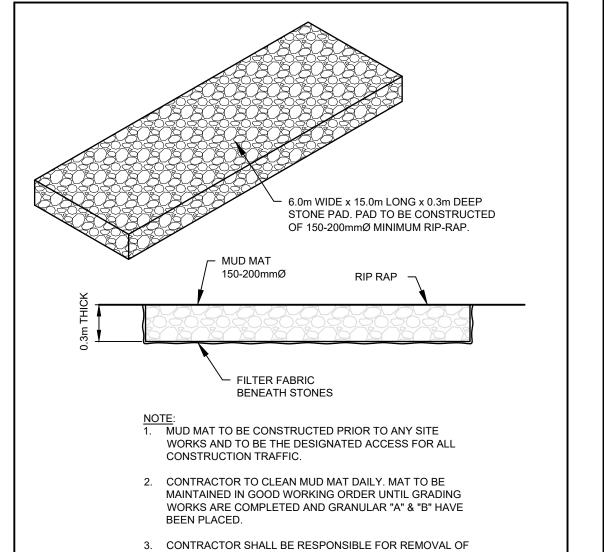






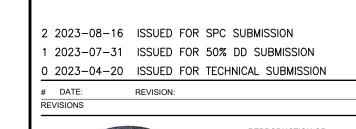
N.T.S.

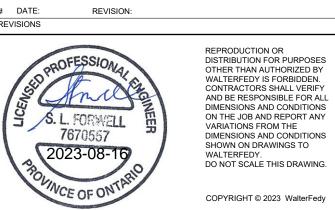




ANY MUD/SEDIMENT TRACKED ON TO MUNICIPAL ROADS.

CONSTRUCTION MUD MAT DETAIL

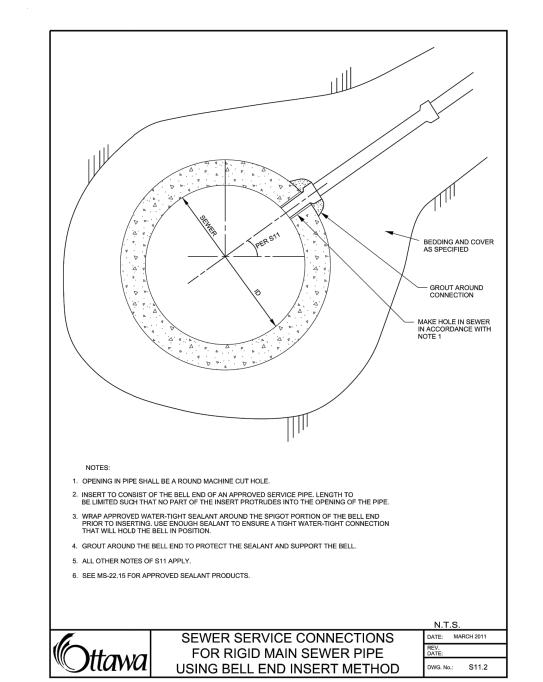




1DOOR4CARE: CHEO INTEGRATED TREATMENT CENTRE: PARKING GARA 401 SMYTH RD. OTTAWA, ON K1H8L1

TYPICAL DETAILS AND NOTES PLAN (SHEET 3 OF 3)

SCALE: AS NOTED DRAWN BY: DR,RB REVIEWED BY: RK JOB NUMBER: 2021-0821-10 PLOT DATE: 2023.08.15 DRAWING NUMBER: C0004



COVER AND FINAL BACKFILL - (COMPACTED IN ACCORDANCE TO D-029)

2. | CONDITION | SEWER | SERVICES | EARTH | 150 Min. | 150 Min. | ROCK | 300 Min. | 150 Min. |

PIPE INSIDE CLEARANCE (mm)

150 TO 900 CONC 450 PVC 450

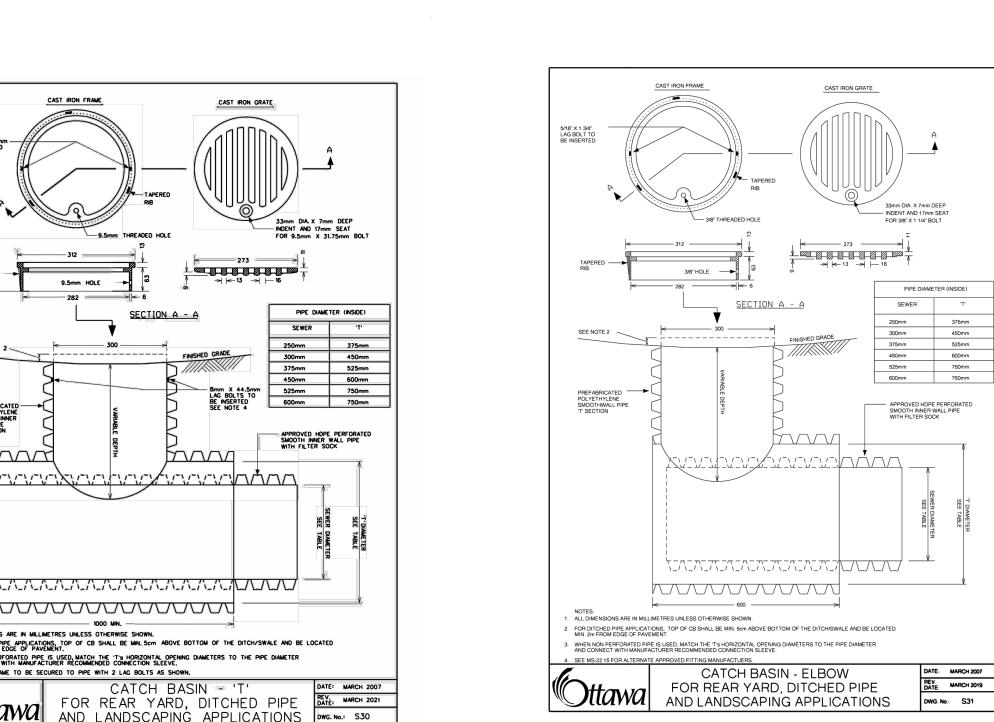
FINAL BACKFILL - APPROVED NATIVE MATERIAL OR SELECT SUBGRADE IN ACCORDANCE WITH F-2120.

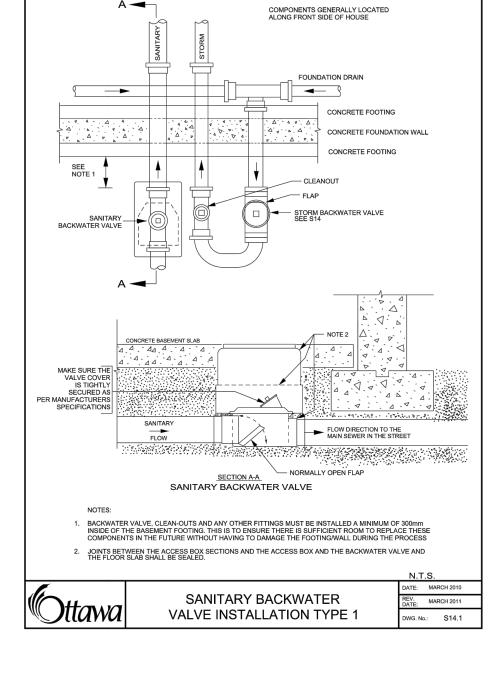
6. INITIAL BACKFILL: CONCRETE PIPE - GRANULAR 'A' OR GRANULAR 'B'
WITH 100% PASSING THE 37.5mm SIEVE
PVC PIPE - GRANULAR 'A'

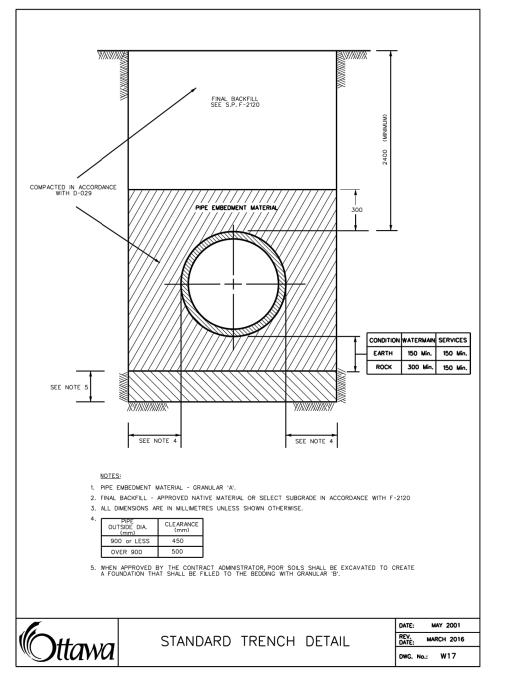
4. WHEN APPROVED BY THE CONTRACT ADMINISTRATOR, POOR SOILS SHALL BE EXCAVATED TO CREATE A FOUNDATION THAT SHALL BE FILLED TO THE BOTTOM OF THE BEDDING WITH GRANULAR BY.

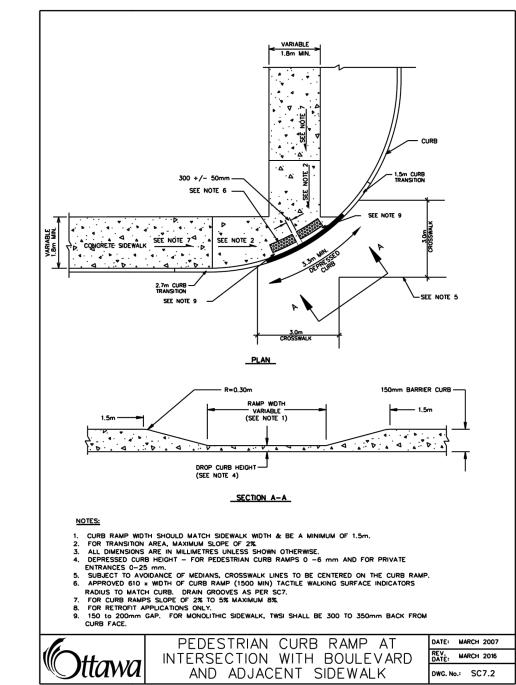
5. SEE S11.3 FOR TYPICAL SINGLE, SEMI-DETACHED AND TOWNHOUSE LOT SERVICING

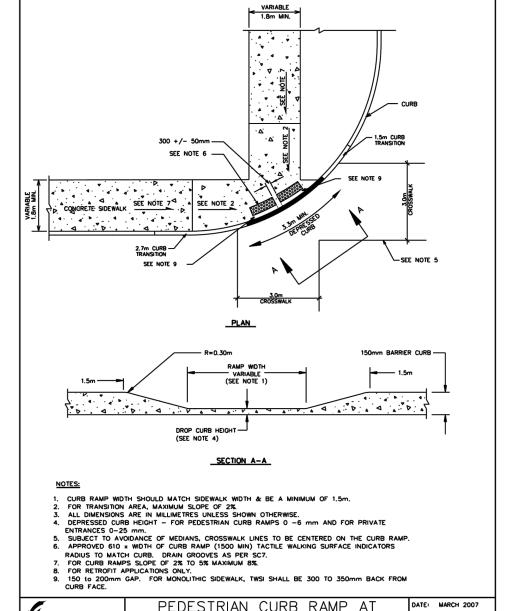
(SEWERS & SEWER SERVICES)

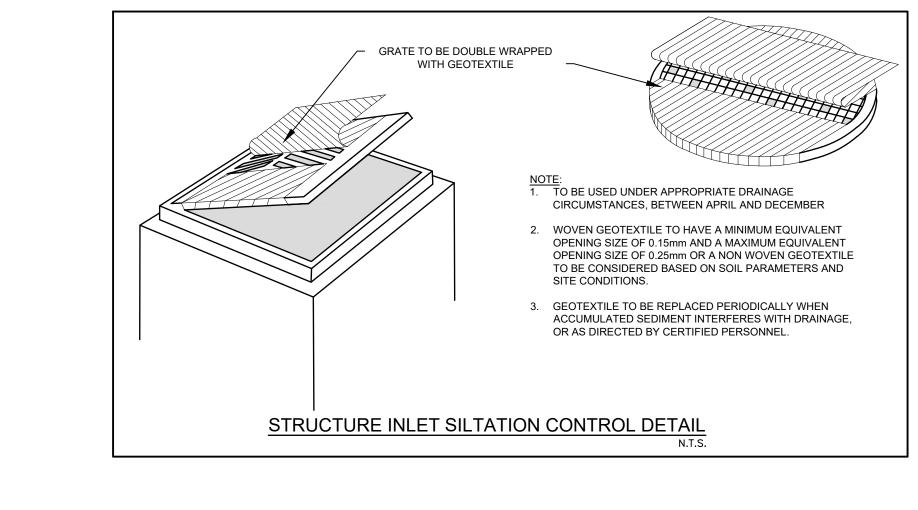


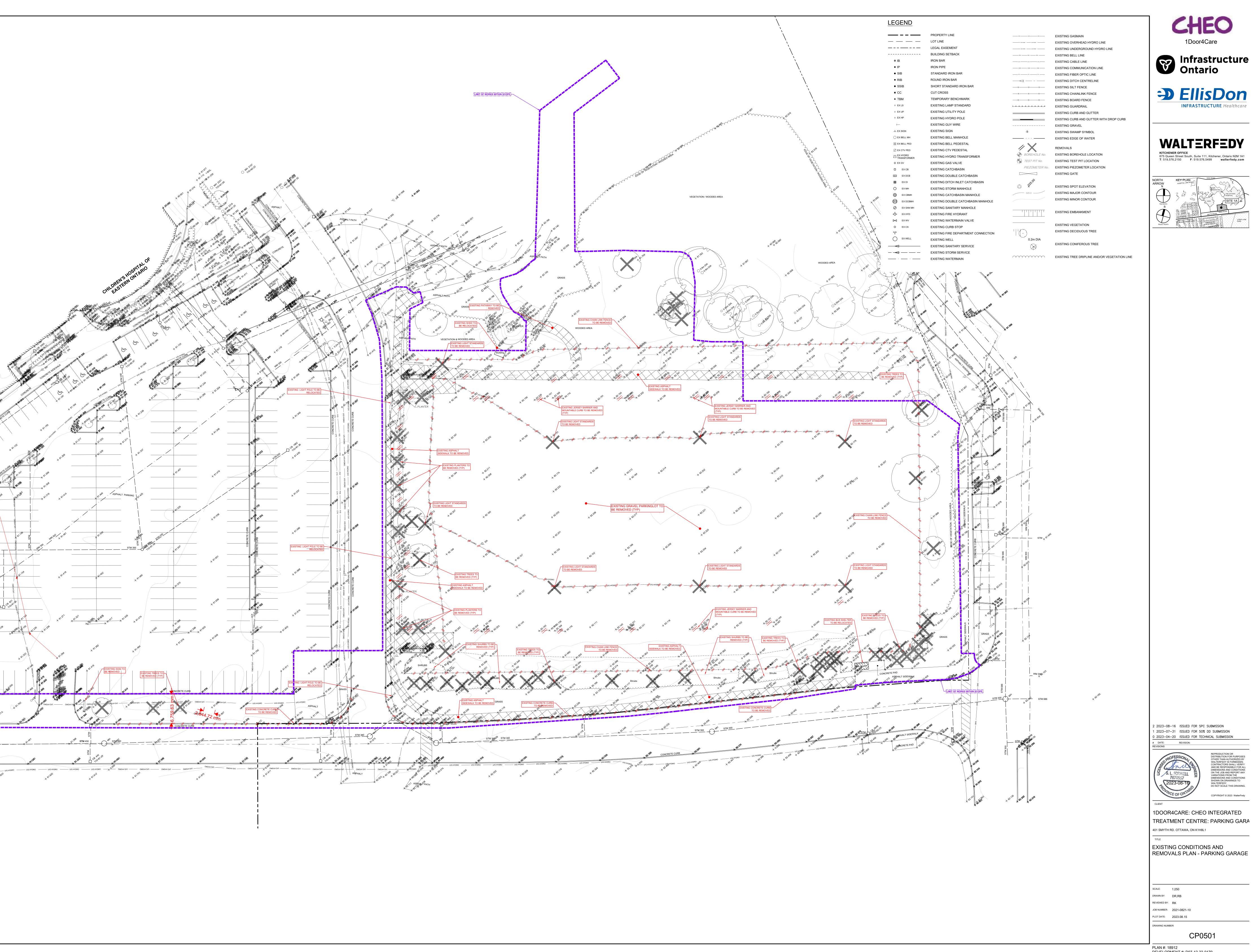


















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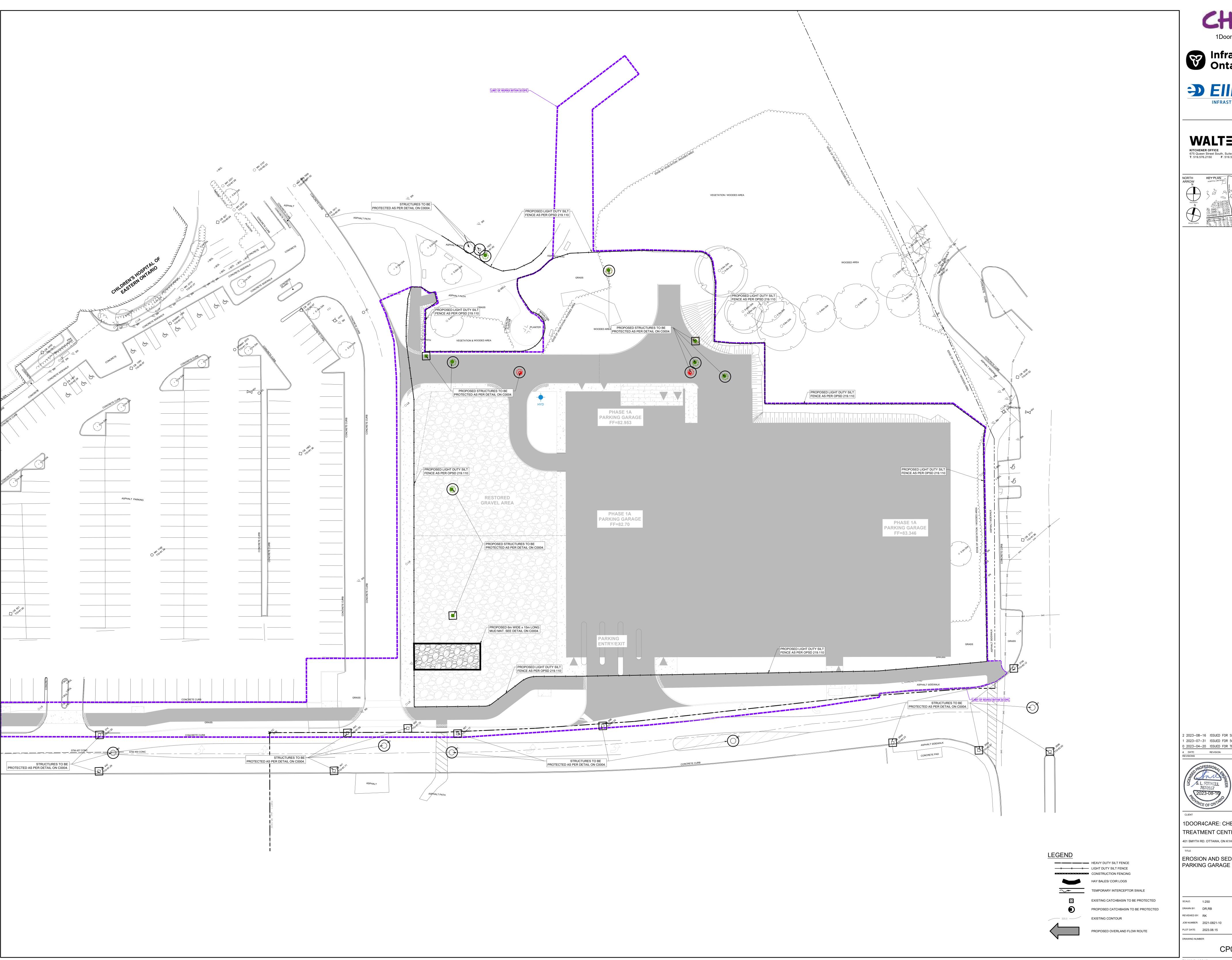


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TREATMENT CENTRE: PARKING GARA 401 SMYTH RD. OTTAWA, ON K1H8L1

EXISTING CONDITIONS AND

JOB NUMBER: 2021-0821-10 PLOT DATE: 2023.08.15









KITCHENER OFFICE
675 Queen Street South, Suite 111, Kitchener, Ontario N2M 1A1
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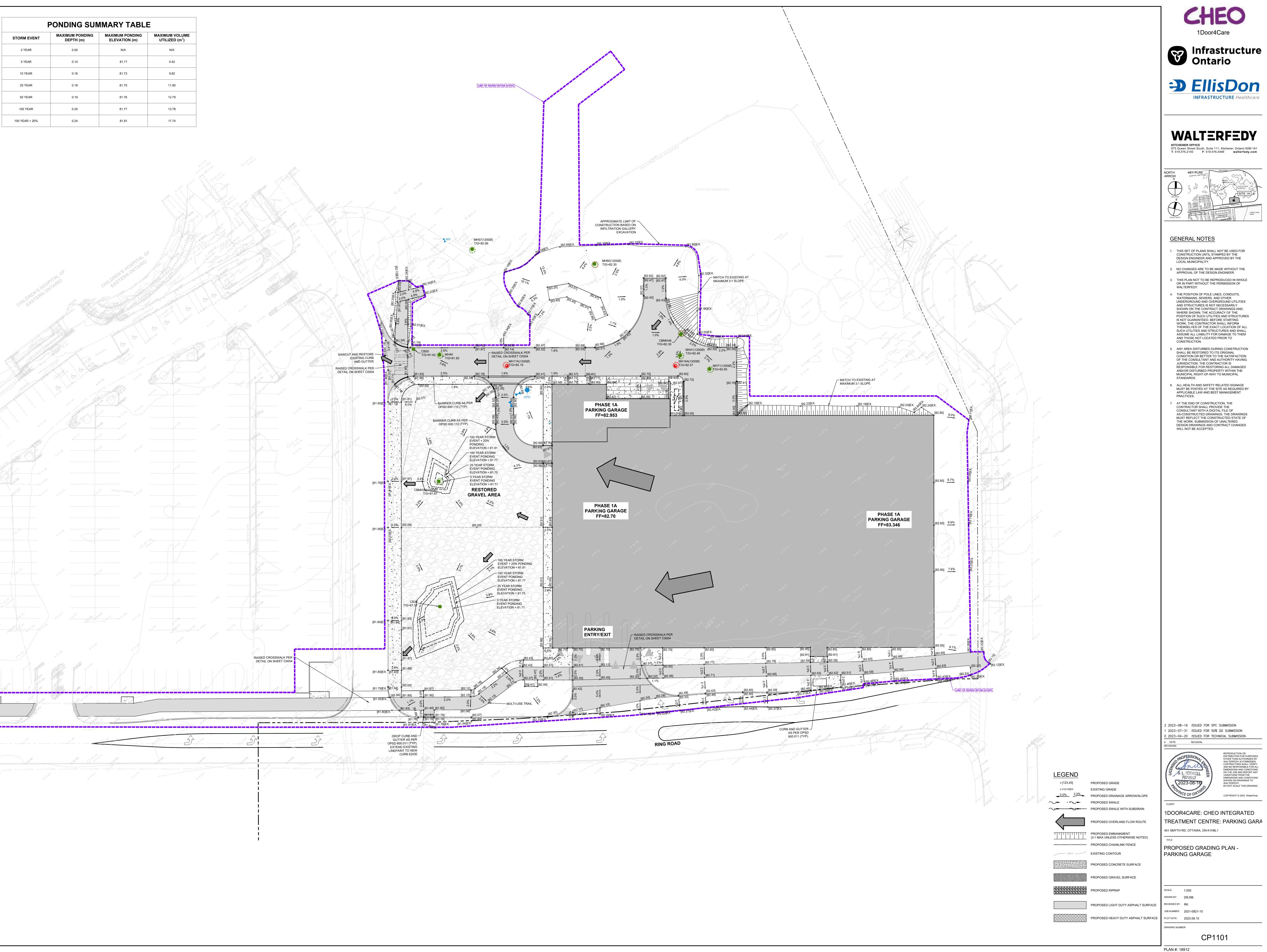
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EROSION AND SEDIMENT CONTROL -

SCALE: 1:250 DRAWN BY: DR,RB

REVIEWED BY: RK JOB NUMBER: 2021-0821-10 PLOT DATE: 2023.08.15

PLAN #: 18912 DEVELOPMENT #: D07-12-22-0170







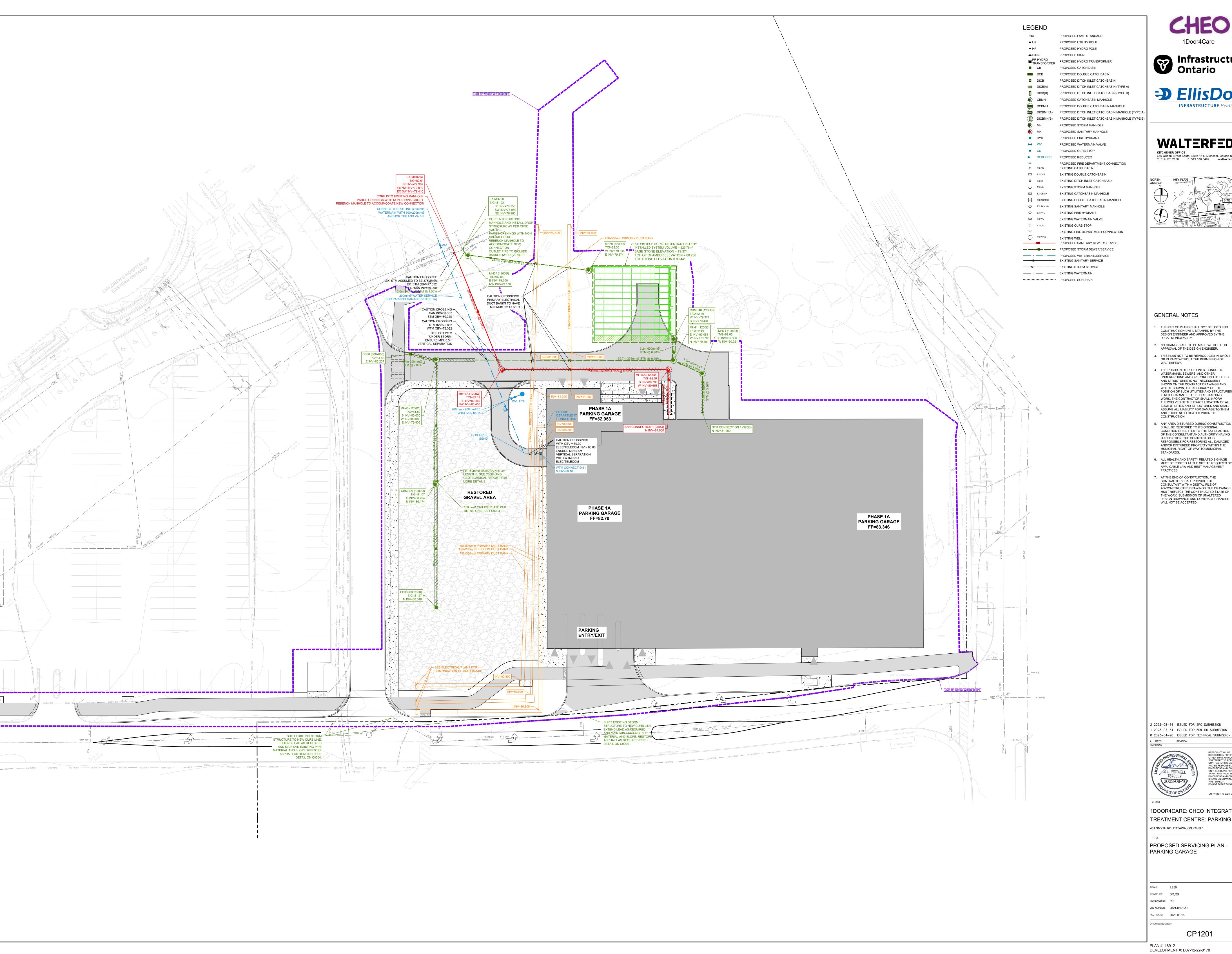
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TREATMENT CENTRE: PARKING GARA

DEVELOPMENT #: D07-12-22-0170

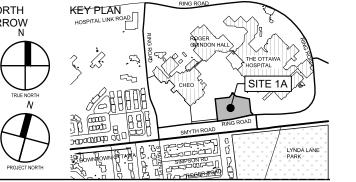








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GENERAL NOTES

1. THIS SET OF PLANS SHALL NOT BE USED FOR CONSTRUCTION UNTIL STAMPED BY THE DESIGN ENGINEER AND APPROVED BY THE LOCAL MUNICIPALITY.

- 2. NO CHANGES ARE TO BE MADE WITHOUT THE APPROVAL OF THE DESIGN ENGINEER.
- THIS PLAN NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE PERMISSION OF WALTERFEDY.
- WATERMAINS, SEWERS, AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES 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 WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM AND THOSE NOT LOCATED PRIOR TO CONSTRUCTION.
- JURISDICTION. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DAMAGED AND/OR DISTURBED PROPERTY WITHIN THE MUNICIPAL RIGHT-OF-WAY TO MUNICIPAL STANDARDS. 6. ALL HEALTH AND SAFETY RELATED SIGNAGE
- MUST BE POSTED AT THE SITE AS REQUIRED BY APPLICABLE LAW AND BEST MANAGEMENT
- CONTRACTOR SHALL PROVIDE THE CONSULTANT WITH A DIGITAL FILE OF AS-CONSTRUCTED DRAWINGS. THE DRAWINGS MUST REFLECT THE CONSTRUCTED STATE OF THE WORK. SUBMISSION OF UNALTERED DESIGN DRAWINGS AND CONTRACT CHANGES WILL NOT BE ACCEPTED.

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PROPOSED SERVICING PLAN -

SCALE: 1:250 DRAWN BY: DR,RB

CP1201