

ELEV. $= 329.374 \, \text{m}$ Monument set in concrete walk of the bridge carrying Queen

ELEV. $= 328.138 \,\mathrm{m}$ Top nut of Fire Hydrant on the East side of James Street

roject Manager	Project No.
C. MOFFAT	48698-100
esign By TNH	Checked By JMD
rawn By TNH	Checked By JMD
urveyed By MTE OLS	Drawing No.
ate Jun.01/21	C2.1
cale 1:200	Sheet 2 of 3

CONSTRUCTION NOTES AND SPECIFICATIONS

- THESE PLANS ARE NOT FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY ENGINEER AND APPROVED BY THE TOWN OF ST.
- THESE PLANS ARE TO BE USED FOR SERVICING AND GRADING ONLY; ANY OTHER INFORMATION SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. THESE PLANS MUST NOT BE USED TO SITE THE
- NO CHANGES ARE TO BE MADE WITHOUT THE APPROVAL OF THE DESIGN ENGINEER.
- 1.4. THESE PLANS ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE PERMISSION OF MTE CONSULTANTS INC.
- 1.5.1. CHECK AND VERIFY ALL EXISTING CONDITIONS, LOCATIONS AND ELEVATIONS WHICH INCLUDES BUT IS NOT LIMITED TO THE BENCHMARK ELEVATIONS. EXISTING SERVICE CONNECTIONS AND EXISTING INVERTS. REPORT ALL DISCREPANCIES TO THE
- 1.5.2. OBTAIN ALL UTILITY LOCATES AND REQUIRED PERMITS AND

1.5. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST:

ENGINEER PRIOR TO PROCEEDING.

THE MOST RECENT REVISION.

LICENSES.

- 1.5.3. VERIFY THAT THE FINISHED FLOOR ELEVATIONS AND BASEMENT FLOOR ELEVATIONS (WHICH MAY APPEAR ON THIS PLAN)
- COMPLY WITH THE FINAL ARCHITECTURAL DRAWINGS. 1.5.4. CONFIRM ALL DRAWINGS USED FOR CONSTRUCTION ARE OF
- THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO EXISTING WORKS. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL DAMAGED AND/OR DISTURBED PROPERTY WITHIN THE MUNICIPAL RIGHT-OF-WAY TO THE TOWN OF ST.
- 1.7. ALL WORKS ON A MUNICIPAL RIGHT-OF-WAY WITH THE EXCEPTION OF WATERMAIN TAPPING. TO BE INSTALLED BY THE OWNER'S CONTRACTOR AT OWNER'S EXPENSE IN ACCORDANCE WITH THE TOWN OF ST. MARYS PROCEDURE FOR OFF-SITE WORKS BY PRIVATE CONTRACTOR. THE OWNER AND CONTRACTOR ARE ENSURE OFF-SITE WORKS PERMIT IS IN PLACE PRIOR CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL AFFECTED PROPERTY TO ORIGINAL CONDITION. ALL BOULEVARD AREAS SHALL BE RESTORED WITH 150mm TOPSOIL AND SOD.
- 1.8. ALL UNDERGROUND SERVICES ARE TO BE CONSTRUCTED IN FULL COMPLIANCE WITH THE ONTARIO PROVINCIAL BUILDING CODE (PART PLUMBING), THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) AND THE REQUIREMENTS OF THE TOWN OF ST MARYS; WHICH CODES AND REGULATIONS SHALL SUPERSEDE ALL OTHERS.
- 1.9. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE DEGREE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE. DIVISION , PART 1, SECTION 1.2.2, GENERAL REVIEW. FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
- 1.10. SANITARY AND STORM SEWERS AND SERVICES TO HAVE A MINIMUM 1.5m COVER TO TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT. CONTRACTOR SHALL INSTALL SHALLOW BURIED PIPE IN ACCORDANCE WITH APPLICABLE "SEWER PIPE INSULATION DETAIL" INDICATED IN DRAWING DETAILS, CONTACT DESIGN ENGINEER FOR "SEWER PIPE INSULATION DETAIL" IF REQUIRED.
- 1.11. PLAN TO BE READ IN CONJUNCTION WITH MTE DRAWINGS A1.1 AND
- 1.12. PLAN TO BE READ IN CONJUNCTION WITH SWM LETTER PREPARED BY MTE CONSULTANTS INC.
- DONALD W.J. McNEIL LTD., DATED APRIL 20, 1990.
- 1.14. EXISTING TOPOGRAPHIC INFORMATION TAKEN FROM TOPOGRAPHICAL URVEY PREPARED BY MIE CONSULTANTS INC. DATED MAY 13,

1.13. LEGAL INFORMATION TAKEN FROM PLAN OF SURVEY PREPARED BY

- 1.15. CONTRACTOR TO OBTAIN WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNER PRIOR TO ENTERING UPON NEIGHBOURING LANDS TO UNDERTAKE ANY WORK. COPIES OF THESE LETTERS OF CONSENT SHALL BE SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS FOR APPROVAL PRIOR TO ANY WORK BEING PERFORMED. FAILURE TO COMPLY WITH THE ABOVE IS AT CONTRACTOR'S OWN
- 1.16. SITE SERVICING CONTRACTOR TO TERMINATE ALL SERVICES 1 METRE FROM FOUNDATION WALL.
- 1.18. MAXIMUM GRASSED SLOPE TO BE 3:1. SLOPES GREATER THAN 3:1

TO BE LANDSCAPED WITH LOW MAINTENANCE GROUND COVER.

1.17. FILTER FABRIC TO BE TERRAFIX 270R OR APPROVED EQUAL.

- 1.19. 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 TOWN OF ST MARYS AND THE MTO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- 1.20. 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 HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO
- 1.21. CONTRACTOR TO MAINTAIN A 'CONFINED TRENCH CONDITION' IN ALL SEWER AND SERVICE TRENCHES.
- 1.22. FOLLOWING COMPLETION OF PROPOSED WORKS AND PRIOR TO OCCUPANCY INSPECTION, ALL STORM AND SANITARY SEWERS ARE TO BE FLUSHED, AND ALL CATCHBASIN AND CATCHBASIN MANHOLE SUMPS ARE TO BE CLEANED OF DEBRIS AND SILT.

SANITARY SEWERS

- PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. BEDDING MATERIAL AND COVER MATERIAL TO BE GRAN. TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR
- SANITARY SEWERS 150mm AND SMALLER SHALL BE POLYVINYL CHLORIDE (PVC) PIPE DR28 ASTM-D3034 WITH INTEGRAL BELL AND SPIGOT UTILIZING FLEXIBLE ELASTOMERIC SEALS.
- 2.3. FACTORY FABRICATED WYES SHALL BE USED FOR ALL SERVICE CONNECTIONS.SANITARY SEWERS AND SERVICES TO HAVE MINIMUM 1.5m COVER ON TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT, CONTRACTOR SHALL INSTALL SHALLOW BURIED PIPE IN ACCORDANCE WITH APPLICABLE "SEWER PIPE INSULATION DETAIL INDICATED IN DRAWING DETAILS. INSULATION SHALL BE RIGID EXTRUDED POLYSTYRENE (EPS) BOARD, WITH A THICKNESS SUFFICIENT TO PROVIDE AN RSI-1.76 (R10) INSULATING FACTOR (TYPICALLY 50-65mm). INSULATION BOARD WIDTH SHALL BE 1.8m FOR UP TO 200mm NOMINAL PIPE DIAMETER, 2.4m FOR 201mm-800mm DIAMETER AND 3.0m FOR 801mm-1400mm. ALL JOINTS SHALL BE TIGHTLY BUTTED TOGETHER (TAPE OR OTHERWISE SECURE JOINTS TO RESIST MOVEMENT DURING BACKFILL PLACEMENT), RIGID EPS BOARD SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 140kPa (20psi), AND A MAXIMUM WATER ABSORPTION RATE OF 2.0% BY VOLUME. ACCEPTABLE PRODUCTS ARE DOW STYROFOAM-SM OR -HI (FULL LINE), OWENS CORNING FOAMULAR (200, 250, OR HIGHER), PLASTISPAN HD-M28
- 2.4. CONTRACTOR RESPONSIBLE FOR TESTING OF SANITARY SEWERS IN ACCORDANCE WITH OPSS 410.

OR OTHER ENGINEER-APPROVED EQUIVALENT.

3. WATERMAINS

- 3.1. PIPE BEDDING FOR RIGID PIPE TO BE CLASS "B" AS PER OPSD 802.030. PIPE BEDDING FOR FLEXIBLE PIPE TO BE AS PER OPSD 802.010. BEDDING MATERIAL AND COVER MATERIAL TO BE GRAN. "A". TRENCH BACKFILL TO BE NATIVE MATERIAL REPLACED IN 300mm LIFTS AND COMPACTED TO 95% STANDARD PROCTOR
- WATER SERVICE CONNECTIONS 50mm AND SMALLER, SHALL BE MUNICIPEX PLASTIC TUBING WITH #8 TRACER WIRE. MUNICIPEX TUBING SHALL MEET CSA B137.5 AND ALL PIPE SHALL BE NEW.
- 3.3. ALL METALLIC FITTINGS (EXCLUDING CURB/MAIN STOP AND BRASS FITTINGS) AND APPURTENANCES INCLUDING SADDLES, VALVES, TEES, BENDS, ETC. ARE TO BE WRAPPED WITH AN APPROVED PETROLATUM SYSTEM CONSISTING OF PASTE, MASTIC AND TAPE. PARTICULAR ATTENTION SHALL BE PAID TO ANODE INSTALLATION. CONTRACTOR TO REFER TO THE MOST RECENT EDITION OF AREA MUNICIPALITIES DESIGN GUIDELINES AND SUPPLEMENTAL SPECIFICATIONS FOR MUNICIPAL SERVICES FOR WRAPPING DETAILS.
- ALL UNDERGROUND SERVICE LINE VALVES AND FITTINGS SHALL BE IN ACCORDANCE WITH AWWA C-800 AND MODEL NUMBERS SHALL BE STAMPED ON ALL VALVES AND MATERIALS.
- CURB STOPS SHALL BE MUELLER MODEL No. H-15209 "E.Z. Turn", FORD MODEL No. B-44-333 P.J. BALL VALVE, OR CAMBRIDGE BRASS SUCCESSOR c/w No. 8 SERVICE BOX AND STAINLESS STEEL ROD.
- 3.6. ALL SERVICE SADDLES SHALL BE STAINLESS STEEL BROAD BAND SERVICE SADDLES. THE BAND WIDTH IS TO BE EQUAL TO OR GREATER TO THE DIAMETER OF THE WATERMAIN.
- WATER CONNECTIONS MAY BE PLACED IN THE SAME TRENCH WITH A STORM OR SANITARY CONNECTION ONLY IF A MINIMUM VERTICAL SEPARATION OF 500mm IS MAINTAINED BETWEEN THE WATER SERVICE AND ANY OTHER PIPE, IN ACCORDANCE WITH SECTION 7.3.5.7.(2)(a)(i) OF THE ONTARIO BUILDING CODE
- 3.8. ALL WATERMAINS AND SERVICES TO HAVE MINIMUM 1.7m COVER ON TOP OF PIPE. WHERE COVER TO TOP OF PIPE IS DEFICIENT. CONTRACTOR INSULATED WATERMAIN OR SERVICE PIPE SHALL BE URECON U.I.P PRE INSULATED PIPE WITH A MINIMUM 50mm INSULATION WITH A COUNTER WOUND POLYETHYLENE JACKET.
- THE TOWN OF ST MARYS TO SUPPLY WATER METER. CONTRACTOR TO INSTALL CHAMBER, METER, ALL VALVES, PIPING AND REMOTE METER READOUT AT LOCATION ON BUILDING EXTERIOR ACCEPTABLE TO MUNICIPALITY.
- 3.10. ALL WATERMAIN TO BE PRESSURE TESTED IN ACCORDANCE WITH OPSS 441 AND SHALL BE IN ACCORDANCE WITH AWWA C651-14 FOR DISINFECTION AND CONNECTION TO WATERWORKS SYSTEM. ALL TESTING AND DISINFECTION TO BE COMPLETED UNDER THE SUPERVISION OF THE TOWN OF ST. MARYS.

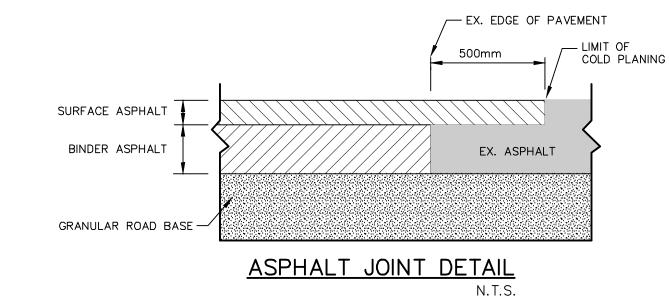
4. EROSION AND SEDIMENT CONTROL

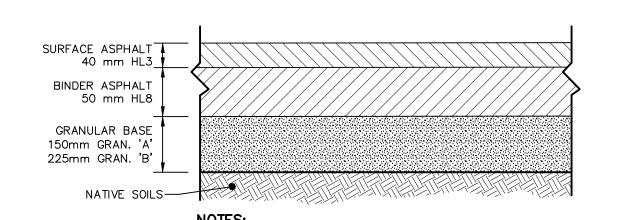
- 4.1. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AS SHOWN PRIOR TO CONSTRUCTION AND MAINTAIN IN GOOD CONDITION UNTIL CONSTRUCTION IS COMPLETED AND ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE COVER.
- 4.2. ALL SEDIMENT CONTROL FENCING TO BE INSTALLED PRIOR TO ANY AREA GRADING, EXCAVATING OR DEMOLITION COMMENCING.
- EROSION CONTROL FENCING TO BE INSTALLED AROUND BASE OF ALL STOCKPILES. ALL STOCKPILES TO BE KEPT 2.5m MINIMUM FROM PROPERTY LINE.
- EROSION PROTECTION TO BE PROVIDED AROUND ALL STORM AND SANITARY MHs AND CBs.
- 4.5. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS SITE DEVELOPMENT PROGRESSES. CONTRACTOR TO PROVIDE ALL ADDITIONAL EROSION CONTROL STRUCTURES.
- 4.6. EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN RESTABILIZED.
- 4.7. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE ENGINEER AND THE TOWN
- 4.8. CONTRACTOR TO CLEAN ROADWAY AND SIDEWALKS OF SEDIMENTS RESULTING FROM CONSTRUCTION TRAFFIC FROM THE SITE EACH
- CONTRACTOR MUST REMOVE EROSION AND SEDIMENTATION FENCING PRIOR TO COMPLETION OF PROJECT. CONTRACTOR TO HAVE EROSION AND SEDIMENTATION FENCE INSPECTED WHEN VEGETATION HAS ESTABLISHED. BUT PRIOR TO FENCE BECOMING OVERGROWN. ENGINEER'S REPRESENTATIVE TO DETERMINE IF VEGETATION HAS REACHED THE CRITICAL POINT AND WILL THEN INSTRUCT CONTRACTOR TO REMOVE FENCE.

5. MAINTENANCE RECOMMENDATIONS

- REMOVE SEDIMENT AND CONTAMINANTS AND REINSTATE STORMWATER MANAGEMENT FACILITY ACCORDING TO THE DESIGN OUTLINED ON THIS PLAN.
- EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY AND ANY DAMAGE REPAIRED IMMEDIATELY. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF 1/3 THE HEIGHT OF THE FENCE.
- OWNER'S REPRESENTATIVE TO MONITOR EROSION CONTROL STRUCTURES TO ENSURE FENCING IS INSTALLED AND MAINTENANCE IS PERFORMED TO CITY REQUIREMENTS.

SCHEDULE "A" - DRAWING "C"





ASPHALT PAVEMENT STRUCTURE DETAIL

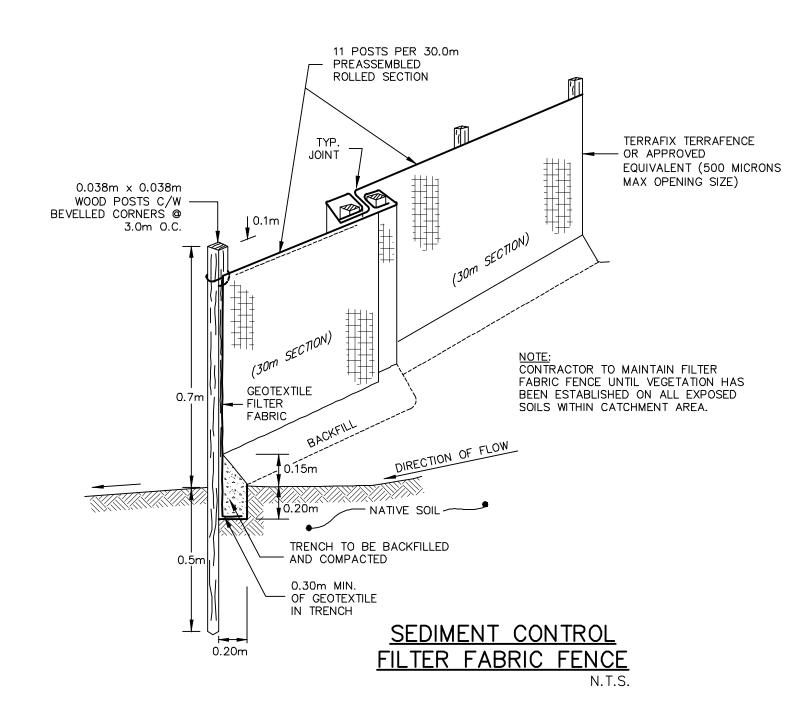
ST. MARYS ENGINEERING DESIGN GUIDELINES AND

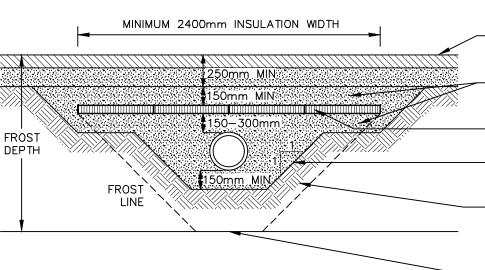
-ASPHALT CONSTRUCTION IN ACCORDANCE WITH THE TOWN OF

-A GEOTECHNICAL INVESTIGATION IS REQUIRED TO PROVIDE THE

SUPPLEMENTAL SPECIFICATIONS FOR MUNICIPAL SERVICES.

PAVEMENT STRUCTURE BASED ON SITE CHARACTERISTICS.





SEWER PIPE INSULATION DETAIL FOR SEWER PIPES HAVING LESS THAN 1400mm COVER AND MINIMUM 615mm COVER

N.T.S.

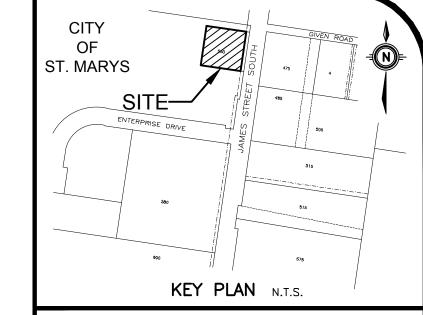
PAVEMENT STRUCTURE (ASPHALT AND/OR GRANULAR), OR SELECT NATIVE MATERIAL AND TOPSOIL, AS SPECIFIED ON

GRANULAR 'A' BEDDING & BACK FILL BELOW AND ABOVE PIPE AND INSULATION BOARD, COMPACTED TO MINIMUM 95% SPMDD

RIGID EPS-INSULATION BOARD PER SPECIFICATION NOTES (MINIMUM R10-THICKNESS, TYPICALLY 50-65mm) NOTE: TRENCH SIDE-SLOPES IN AREAS OF PIPE INSULATION TO BE MAXIMUM 1:1 SLOPE, NO VERTICAL SECTIONS ALLOWED UNLESS INDICATED IN DETAIL

NATIVE SOILS - WHERE NATIVE SOIL IS SOFT AND/OR OF ORGANIC CONTENT, REMOVE TO DEPTH OF SUITABLE SOILS AND REPLACE WITH GRANULAR-B2 MATERIAL COMPACTED TO 95% SPMDD, OR CONSTRUCT IN ACCORDANCE WITH WRITTEN DIRECTION FROM GEOTECHNICAL CONSULTANT

FROST DEPTH - PROTECT SOIL ZONE UNDER PIPE FROM FREEZING REFER TO OPSD 3400.011 FOR SPECIFIC LOCAL FROST DEPTH



ELEV. $= 329.374 \, \text{m}$ Monument set in concrete walk of the bridge carrying Queen Street East over CNR tracks, 2.6m east of the track C/L, 4.85m north of centerline of Queen St. (AKA - BM#01019890454 in the Town of St. Marys)

SITE BENCHMARK ELEV. = 328.138 mTop nut of Fire Hydrant on the East side of James Street to the North of the subject lands and as shown on the drawings.

NOTE TO CONTRACTOR :

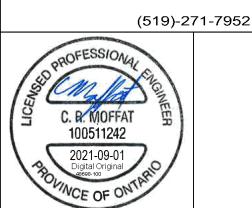
DO NOT SCALE DRAWINGS.

CONTRACTORS MUST CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED OR REUSED WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

THE OWNER/ARCHITECT/CONTRACTOR IS ADVISED THAT MITE CONSULTANTS INC. CANNOT CERTIFY ANY COMPONENT OF THE SITE WORKS NOT INSPECTED DURING CONSTRUCTION. arGamma is the responsibility of the general contractor to NOTIFY M.T.F. CONSULTANTS INC. PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR INSPECTION.

RE-ISSUED FOR APPROVA CRM 2021-08-0 ISSUED FOR APPROVAL BY YYYY-MM-D REVISION





550 JAMES STREET SOUTH

Scale

RAEZOR'S EDGE GENERAL CONTRACTOR 43 RIDGEWOOD CRESCENT **PROJECT**

550 JAMES STREET DEVELOPMENT

DRAWING CONSTRUCTION **NOTES & DETAILS**

Project Manager ⊃roject No. 48698-100 C. MOFFAT Checked By Design By Drawn By Checked By Surveyed By Drawing No. MTE OLS Jun.01/21