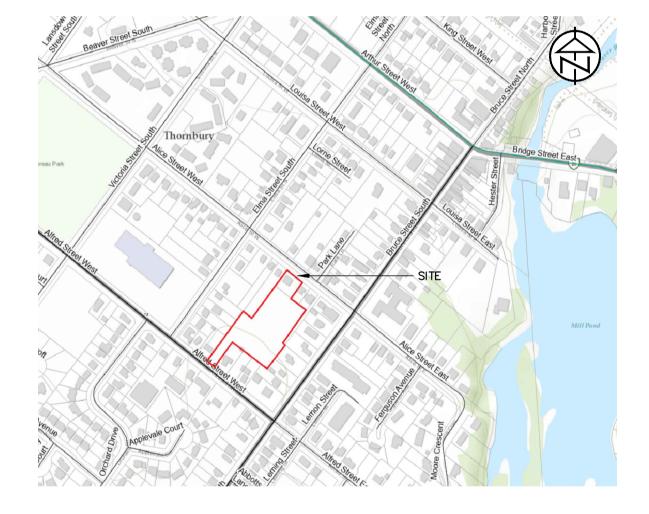
PHEASANT RUN REALTY HOLDING INC. 24 ALFRED STREET WEST TOWN OF THE BLUE MOUNTAINS LEGEND

KEY PLAN



INDEX

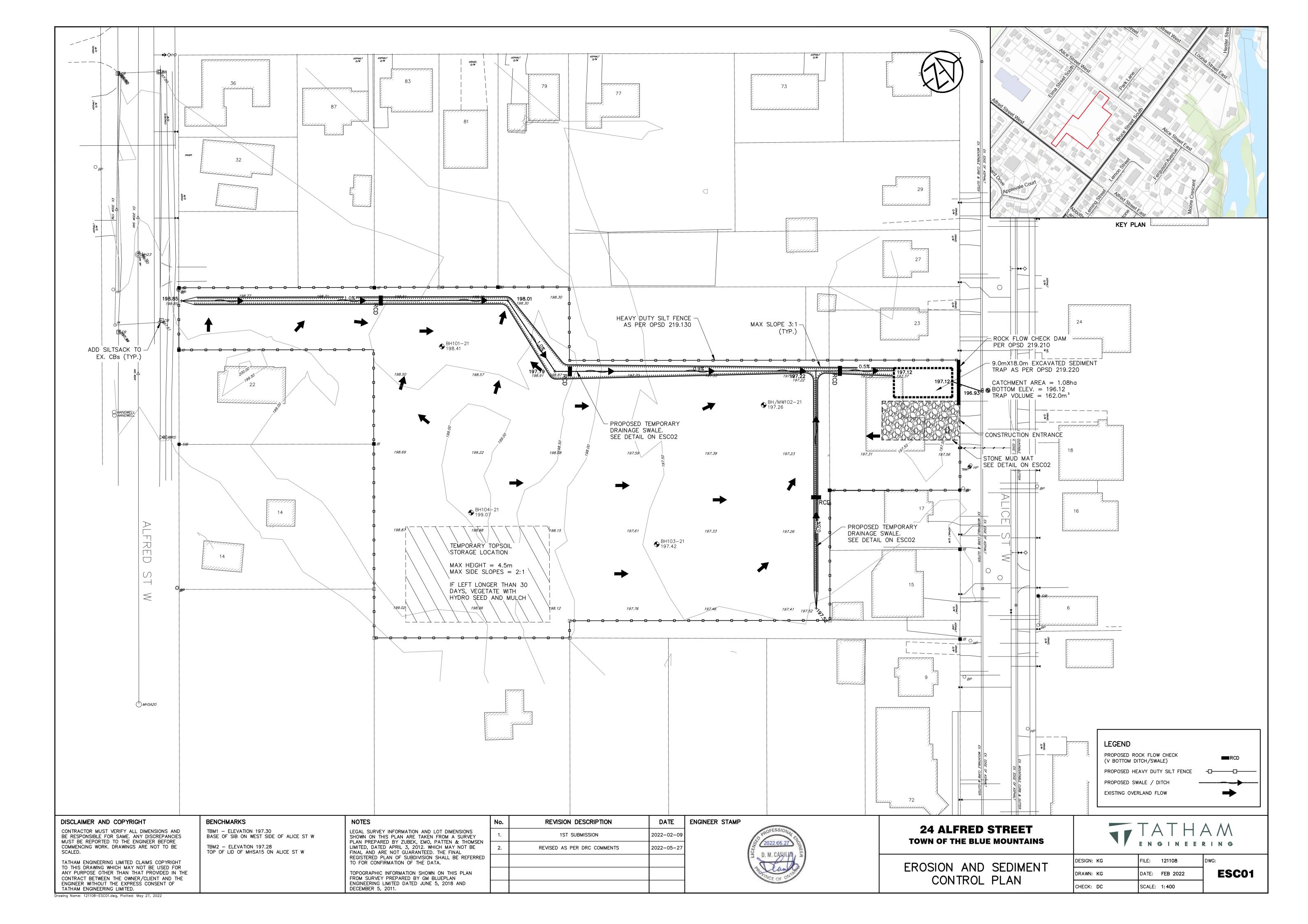
DWG NO.	DESCRIPTION		
-	TITLE PAGE AND INDEX		
ESC01	EROSION AND SEDIMENT CONTROL PLAN		
ESC02	EROSION AND SEDIMENT CONTROL DETAILS		
SG01	SITE GRADING PLAN		
SG02	SITE GRADING DETAILS		
SS01	SITE SERVICING PLAN		
SAN01	SANITARY DRAINAGE PLAN		
STM01	STORM DRAINAGE PLAN		
PP01	PLAN AND PROFILE - STREET A		
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ELO1	ELECTRICAL LAYOUT		
DE01	NOTES AND DETAILS		

TATHAM ENGINEERING

1ST SUBMISSION CONTRACT No. 121108

EXISTING CENTERLINE PROPOSED CENTRELINE _____ EXISTING EDGE OF ASPHALT PROPOSED EDGE OF ASPHALT EXISTING EDGE OF SHOULDER PROPOSED EDGE OF SHOULDER EXISTING DITCH/DIRECTION OF FLOW PROPOSED DITCH/DIRECTION OF FLOW 200Ø SAN EXISTING SANITARY SEWER/SIZE/DIRECTION OF FLOW PROPOSED SANITARY SEWER/SIZE/DIRECTION OF FLOW EXISTING SANITARY SERVICE PROPOSED SANITARY SERVICE 200¢ SAN F/M EXISTING SANITARY FORCEMAIN/SIZE/DIRECTION OF FLOW 150ø W/M EXISTING WATERMAIN/SIZE 150ø W/M PROPOSED WATERMAIN/SIZE EXISTING WATER SERVICE PROPOSED WATER SERVICE _____375ø STM EXISTING STORM SEWER/SIZE/DIRECTION OF FLOW 375ø STM PROPOSED STORM SEWER/SIZE/DIRECTION OF FLOW EXISTING CULVERT PROPOSED SWALE LOCATION PROPOSED CULVERT PROPOSED JOINT HYDRO, BELL AND ROGERS EXISTING GAS MAIN PROPOSED GAS MAIN EXISITNG FENCELINE PROPOSED FENCELINE EXISTING BUSHLINE ~~~~~~~ EXISTING CONTOUR 179.00 ——— EXISTING SPOT ELEVATION × 179.00 PROPOSED SPOT ELEVATION ×179.00 EXISTING GRADING DIRECTION PROPOSED GRADING DIRECTION PROPOSED SWALE LOCATION TBM EXISTING TEMPORARY BENCHMARK EXISTING STANDARD IRON BAR EXISTING BOREHOLE/NUMBER EXISTING GAS VALVE EXISTING HYDRO TRANSFORMER EXISTING CABLE PEDESTAL EXISTING BELL PEDESTAL EXISTING BELL MAINTENANCE HOLE O BELL MH EXISTING BELL POLE EXISTING HYDRO POLE O HP EXISTING HYDRO GUY WIRE PROPOSED LIGHT STANDARD EXISTING DECIDUOUS TREE EXISTING CONIFEROUS TREE SAN MH17 EXISTING SANITARY MAINTENANCE HOLE/NUMBER SANMH1 PROPOSED SANITARY MAINTENANCE HOLE/NUMBER EXISTING HYDRANT AND VALVE + HYD & WV PROPOSED HYDRANT AND VALVE →HYD & WV EXISTING WATER VALVE \bowtie wv PROPOSED WATER VALVE PROPOSED CURB STOP VALVE ► CSV O STM MH EXISTING STORM MAINTENANCE HOLE EXISTING CATCH BASIN ☐ CBMH 18 TACTILE SURFACE INDICATORS TRANSFORMER **SWITCHGEAR** LIGHTING PEDESTAL

PROPERTY LINE

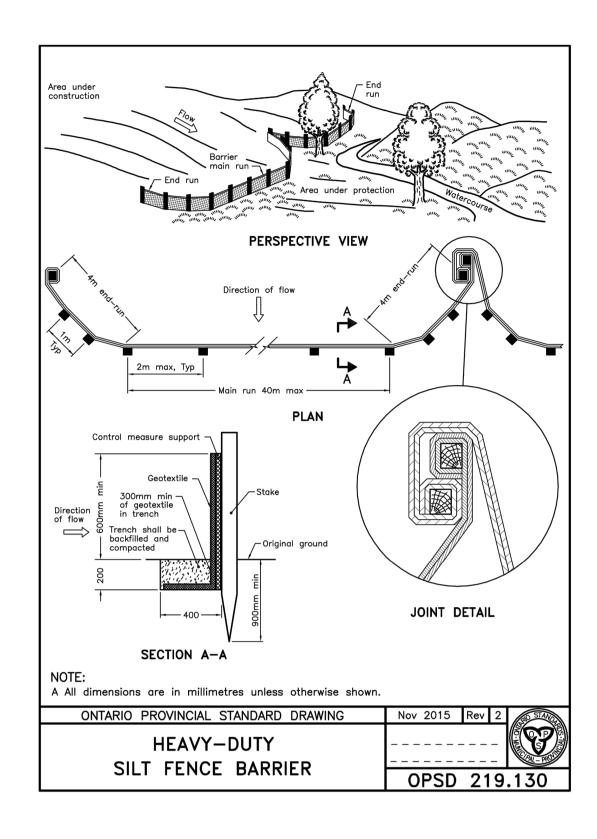


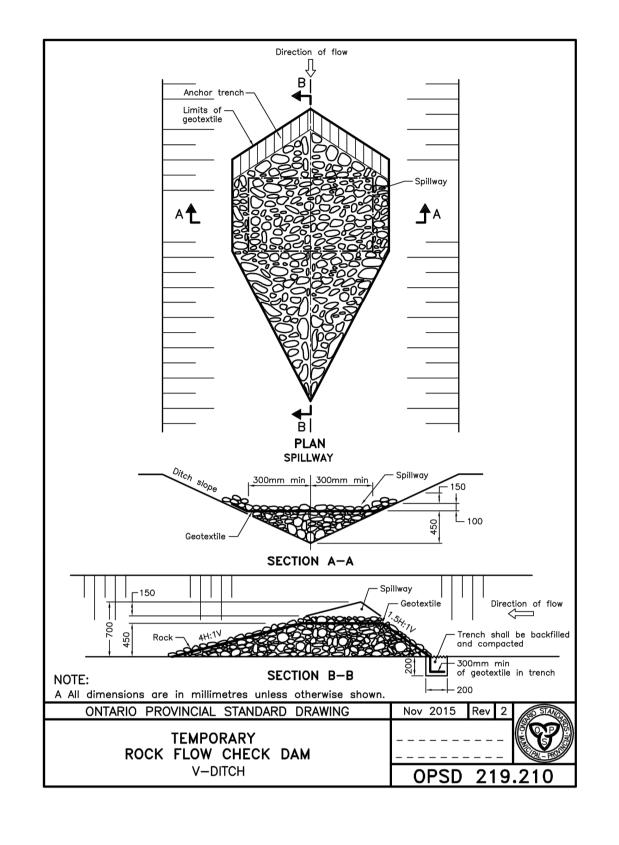
NOTES

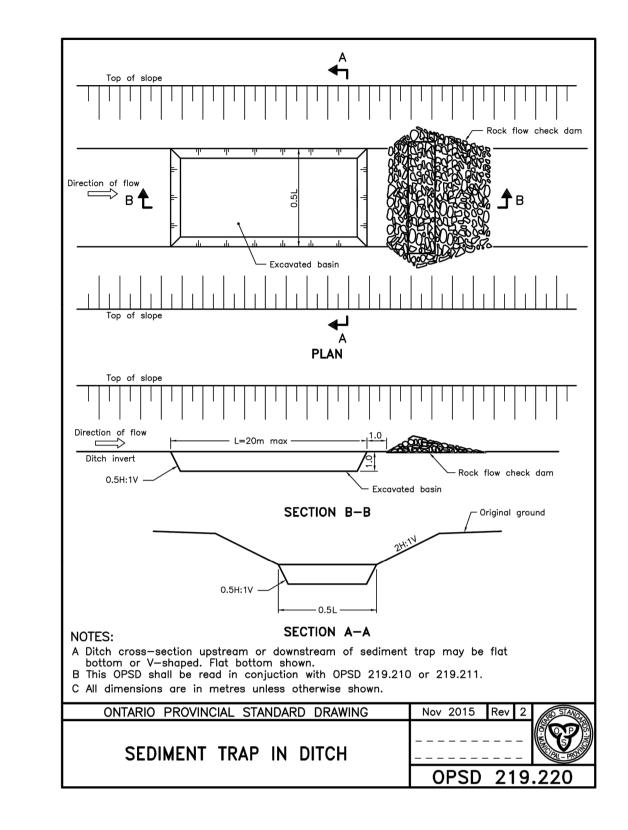
- 1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SEDIMENT AND EROSION CONTROL MEASURES THAT ARE DESIGNED TO CONTROL RUNOFF FROM SPECIFIC AREAS MUST BE INSTALLED PRIOR TO ANY DISTURBANCE OF THAT PART OF THE SITE. THE LOCATION OF ALL SILTATION AND EROSION CONTROL WORKS TO BE REVIEWED ON SITE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER.
- 2. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES MUST BE PRESENTED IN WRITING TO THE ENGINEER FOR APPROVAL BY THE TOWN OF THE BLUE MOUNTAINS.
- 3. THE CONTRACTOR SHALL HAVE MATERIALS AVAILABLE ON SITE TO REPAIR SEDIMENT AND EROSION CONTROL MEASURES IN THE EVENT OF UNFORESEEN CONDITIONS SUCH AS HIGH WATER, EXTREME RAINFALL EVENTS, ETC.
- 4. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED, CLEANED AND MAINTAINED BY THE CONTRACTOR AFTER EACH STORM EVENT. ALL WORKS WILL BE INSPECTED BY THE ENGINEER BI-WEEKLY AND AFTER EACH MAJOR STORM EVENT.
- 5. CONSTRUCTION OF ALL SILTATION AND EROSION CONTROL WORK IS TO BE IN ACCORDANCE WITH THE FOLLOWING STEPS:
- 5.1. INSTALL NEW OR MAINTAIN EXISTING STONE MUD MAT AS PER DETAIL. 5.2. INSTALL SILT FENCE AS PER TOWN OF THE BLUE MOUNTAINS STANDARDS (OPSD
- 5.3. INSTALL TEMPORARY CATCH BASIN SEDIMENT TRAPS ON ALL NEW AND EXISTING CATCH BASINS. SEDIMENT TRAPS TO BE RECTANGULAR CBST BY LAYFIELD OR APPROVED EQUAL. ALL CATCH BASINS TO REMAIN SCREENED UNTIL BASE COURSE
- 6. ALL CONSTRUCTION VEHICLES TO ACCESS SITE USING THE DESIGNATED CONSTRUCTION ACCESS POINTS.
- 7. EROSION AND SEDIMENT CONTROL MEASURES TO BE REMOVED BY THE CONTRACTOR ONCE GROUND COVER IS ESTABLISHED AND LANDSCAPING IS COMPLETE AND APPROVED BY THE ENGINEER.
- 8. STOCKPILE LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.

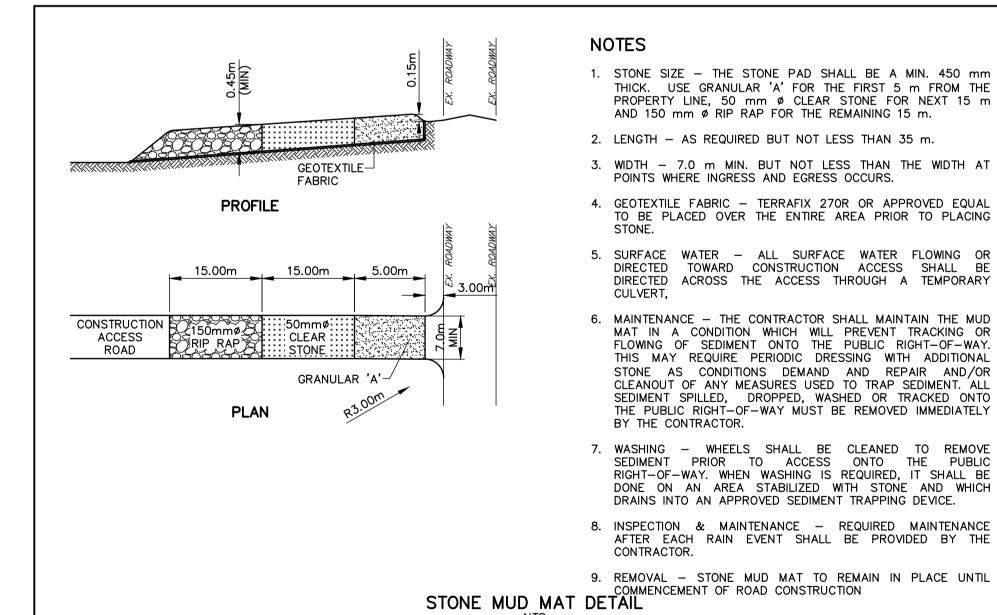
ASPHALT IS PLACED AND LOT GRADING IS COMPLETE.

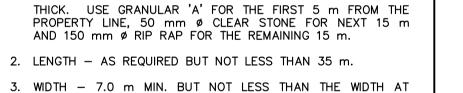
- 9. PROVIDE FENCE OR APPROVED EQUAL ACROSS ALL CONSTRUCTION ACCESSES DURING PERIODS OF INACTIVITY.
- 10. CONSTRUCTION AREAS THAT EXCEED 30 DAYS OF INACTIVITY SHALL BE STABILIZED BY SEEDING IN ACCORDANCE WITH TOWN STANDARDS. THIS IS TO INCLUDE STOCKPILES OF FILL AND TOPSOIL.







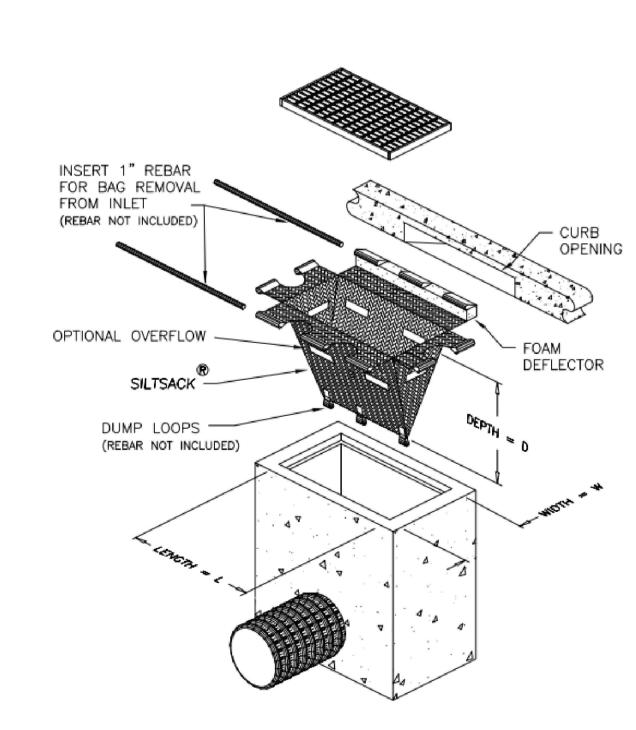




- 4. GEOTEXTILE FABRIC TERRAFIX 270R OR APPROVED EQUAL TO BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING
- 5. SURFACE WATER ALL SURFACE WATER FLOWING OR DIRECTED TOWARD CONSTRUCTION ACCESS SHALL BE DIRECTED ACROSS THE ACCESS THROUGH A TEMPORARY 6. MAINTENANCE - THE CONTRACTOR SHALL MAINTAIN THE MUD
- MAT IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
- 7. WASHING WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ACCESS ONTO THE PUBLIC RIGHT—OF—WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- 8. INSPECTION & MAINTENANCE REQUIRED MAINTENANCE AFTER EACH RAIN EVENT SHALL BE PROVIDED BY THE

STONE MUD MAT DETAIL

NTS 9. REMOVAL - STONE MUD MAT TO REMAIN IN PLACE UNTIL



TYPICAL SILTSACK CONSTRUCTION DETAIL

DISCLAIMER AND COPYRIGHT

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE

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BENCHMARKS

TBM1 - ELEVATION 197.30 LEGAL SURVEY INFORMATION AND LOT DIMENSIONS BASE OF SIB ON WEST SIDE OF ALICE ST W SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY ZUBEK, EMO, PATTEN & THOMSEN TBM2 - ELEVATION 197.28 LIMITED, DATED APRIL 3, 2012. WHICH MAY NOT BE TOP OF LID OF MHSA15 ON ALICE ST W FINAL AND ARE NOT GUARANTEED. THE FINAL REGISTERED PLAN OF SUBDIVISION SHALL BE REFERRED

TO FOR CONFIRMATION OF THE DATA. TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN FROM SURVEY PREPARED BY GM BLUEPLAN ENGINEERING LIMITED DATED JUNE 5, 2018 AND DECEMBER 5, 2011.

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	2022-02-09
2.	REVISED AS PER DRC COMMENTS	2022-05-27

ENGINEER STAMP

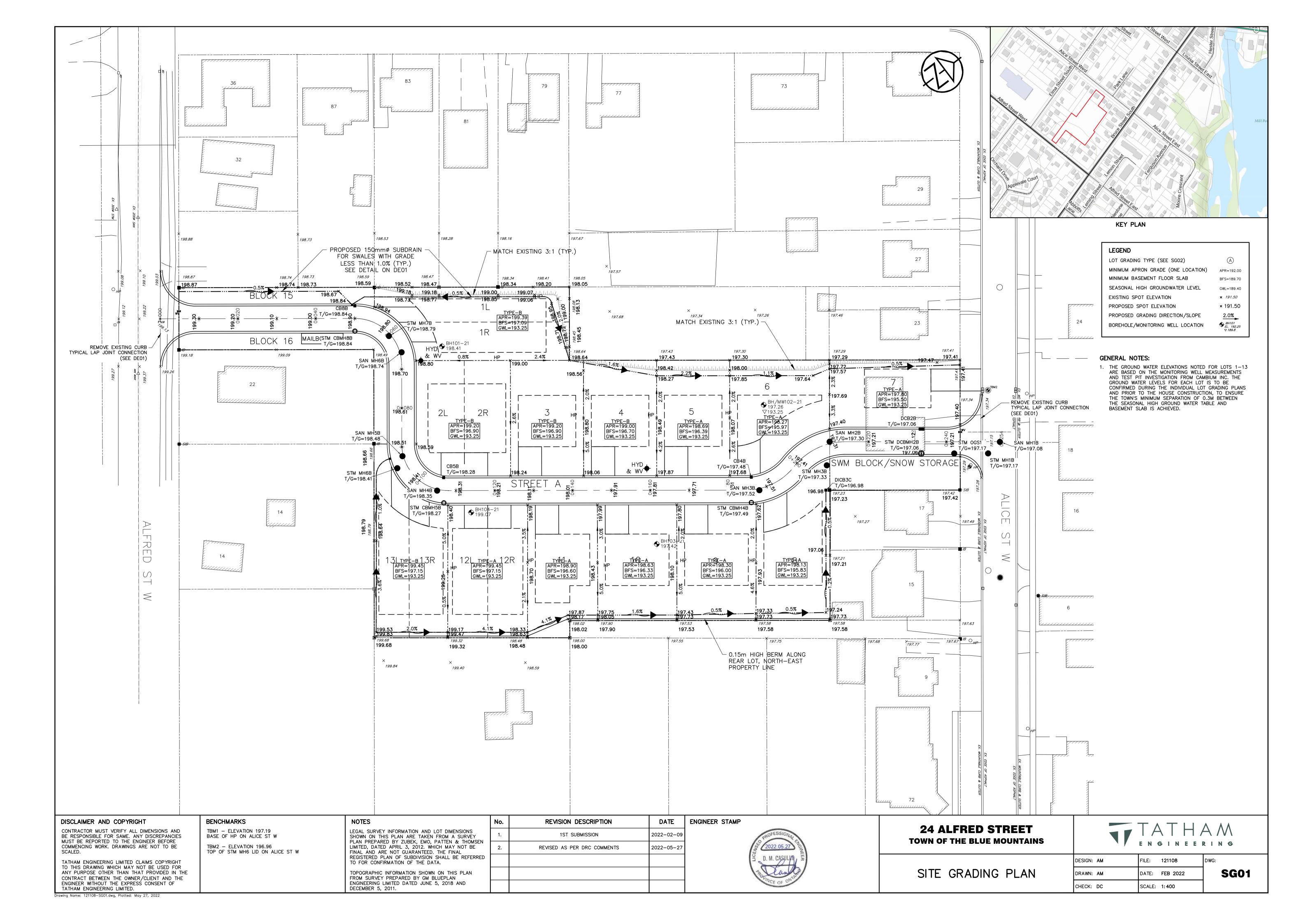


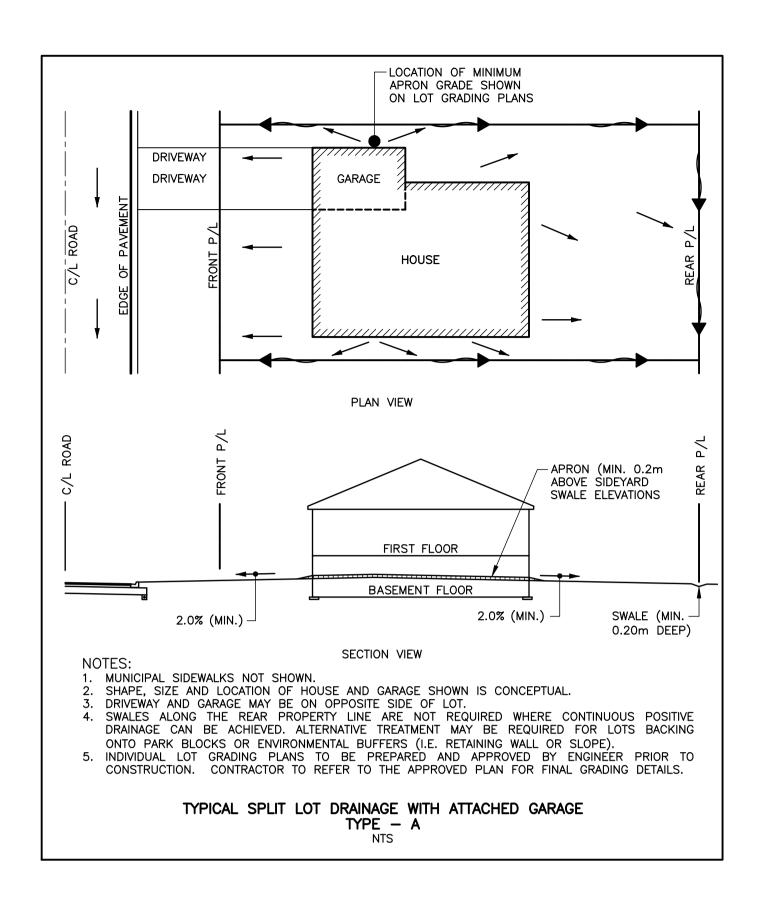
24 ALFRED STREET TOWN OF THE BLUE MOUNTAINS

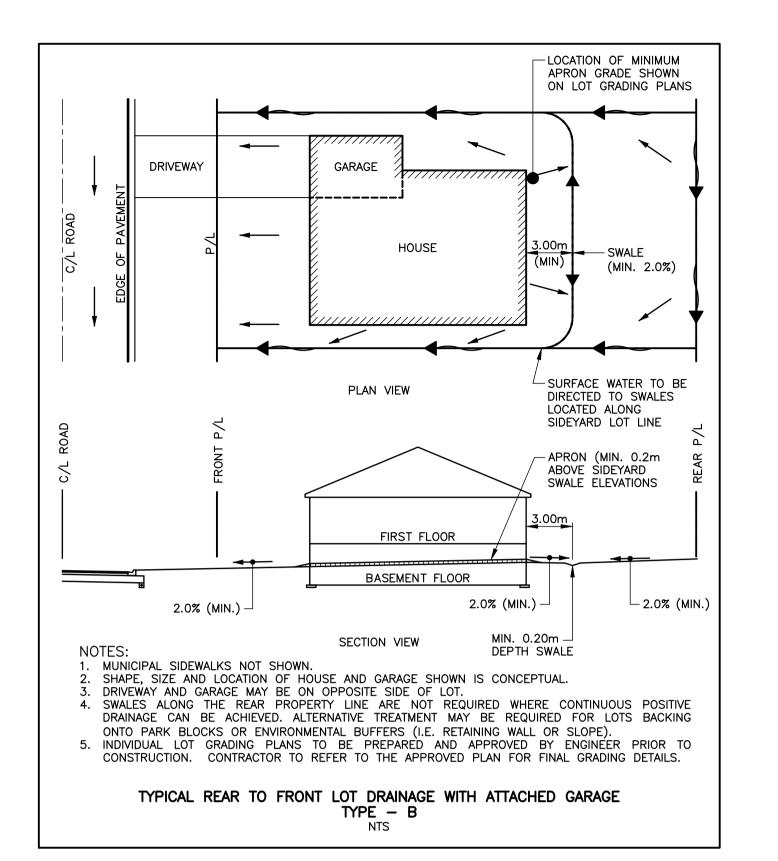
EROSION AND SEDIMENT CONTROL DETAILS

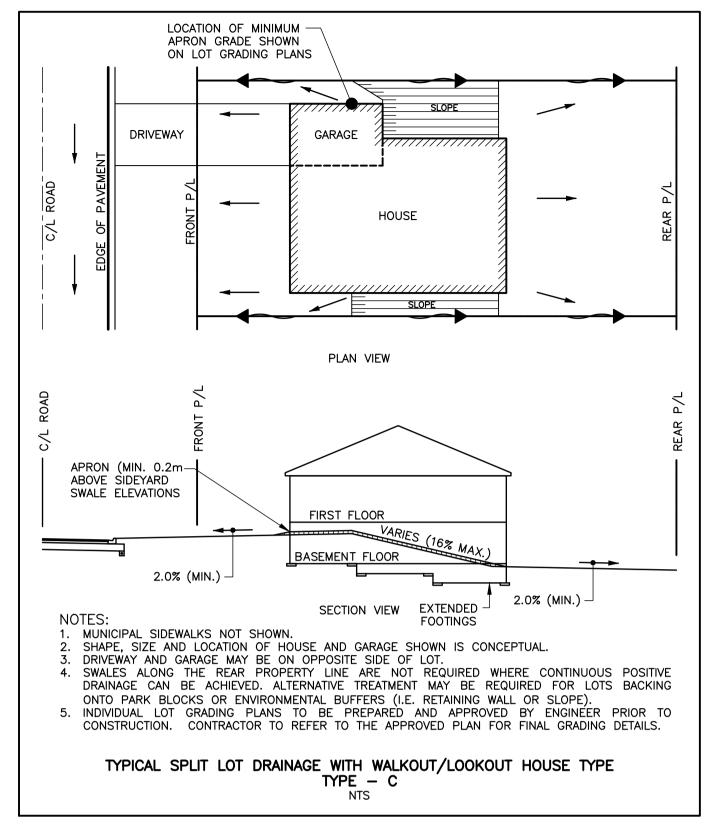


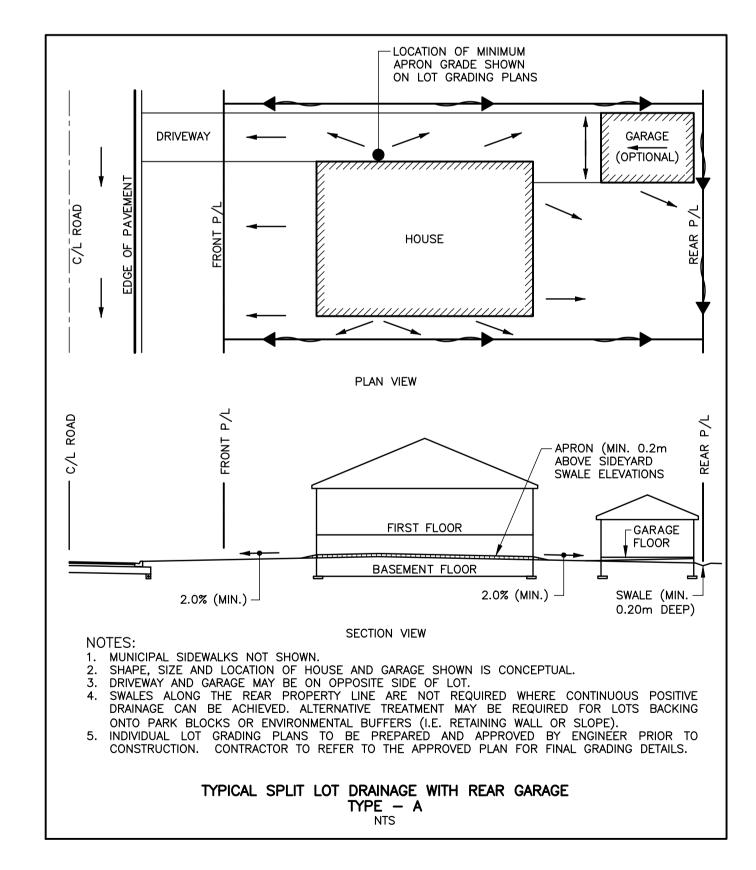
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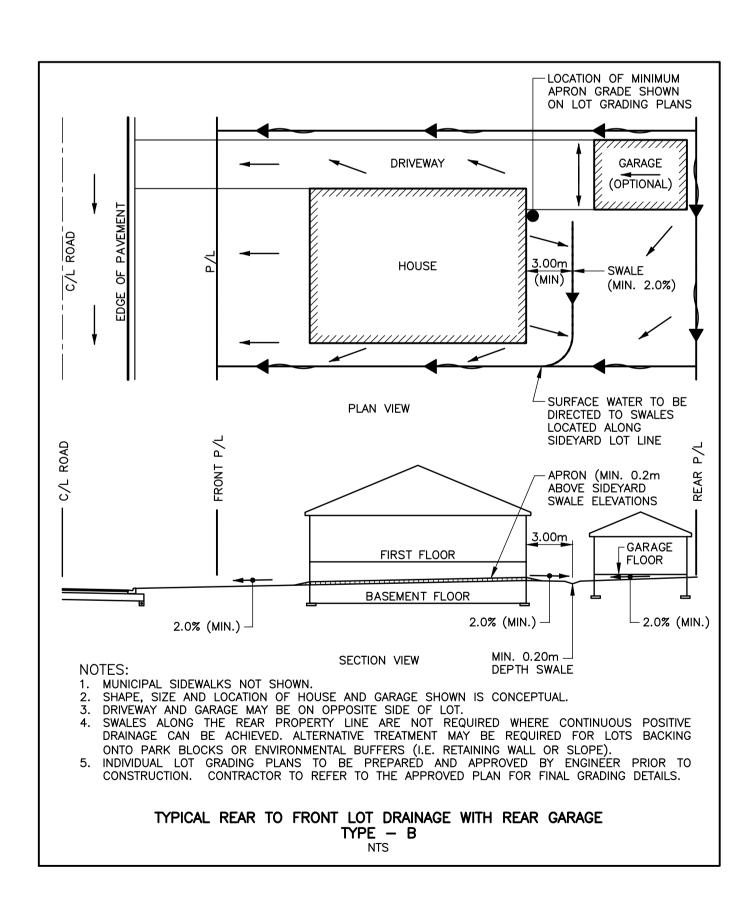


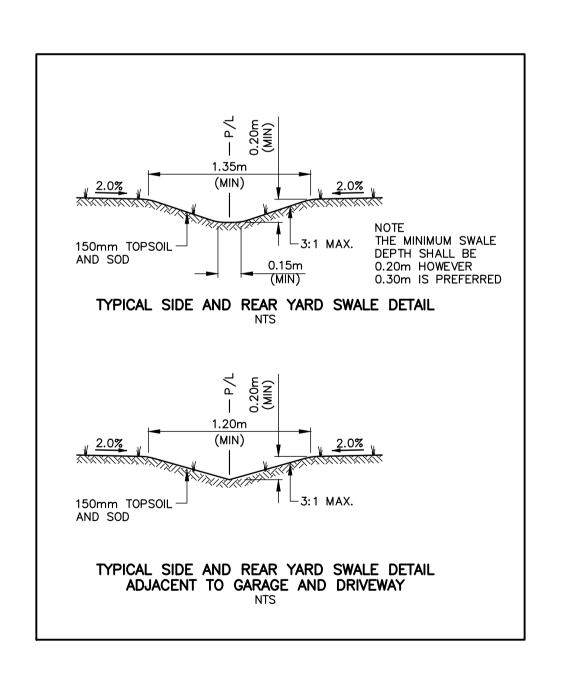












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BENCHMARKS

TBM1 — ELEVATION 197.19
BASE OF HP ON ALICE ST W

TBM2 — ELEVATION 196.96
TOP OF STM MH6 LID ON ALICE ST W

LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY ZUBEK, EMO, PATTEN & THOMSEN LIMITED, DATED APRIL 3, 2012. WHICH MAY NOT BE FINAL AND ARE NOT GUARANTEED. THE FINAL REGISTERED PLAN OF SUBDIVISION SHALL BE REFERRED

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TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN FROM SURVEY PREPARED BY GM BLUEPLAN ENGINEERING LIMITED DATED JUNE 5, 2018 AND DECEMBER 5, 2011.

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ENGINEER STAMP

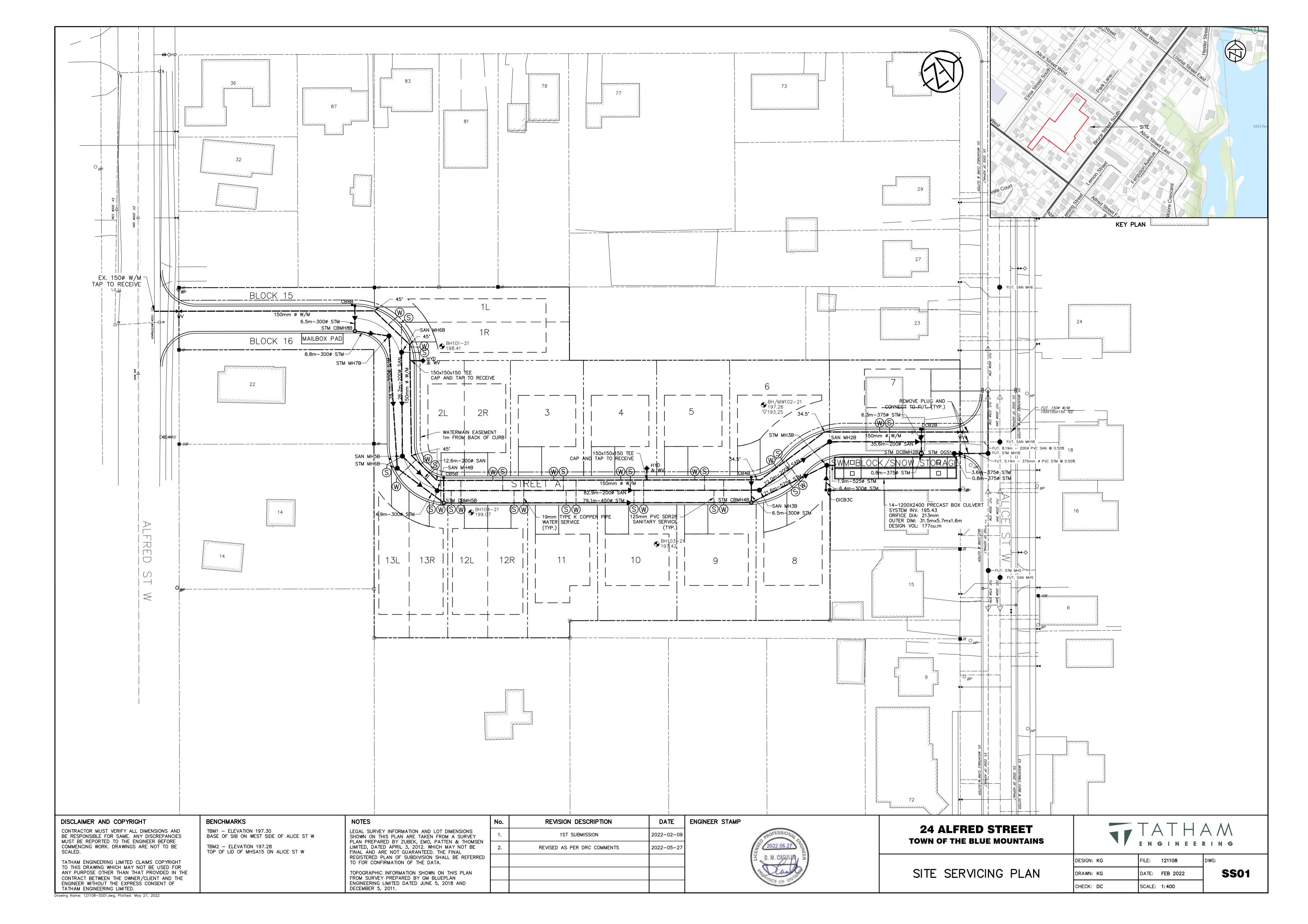


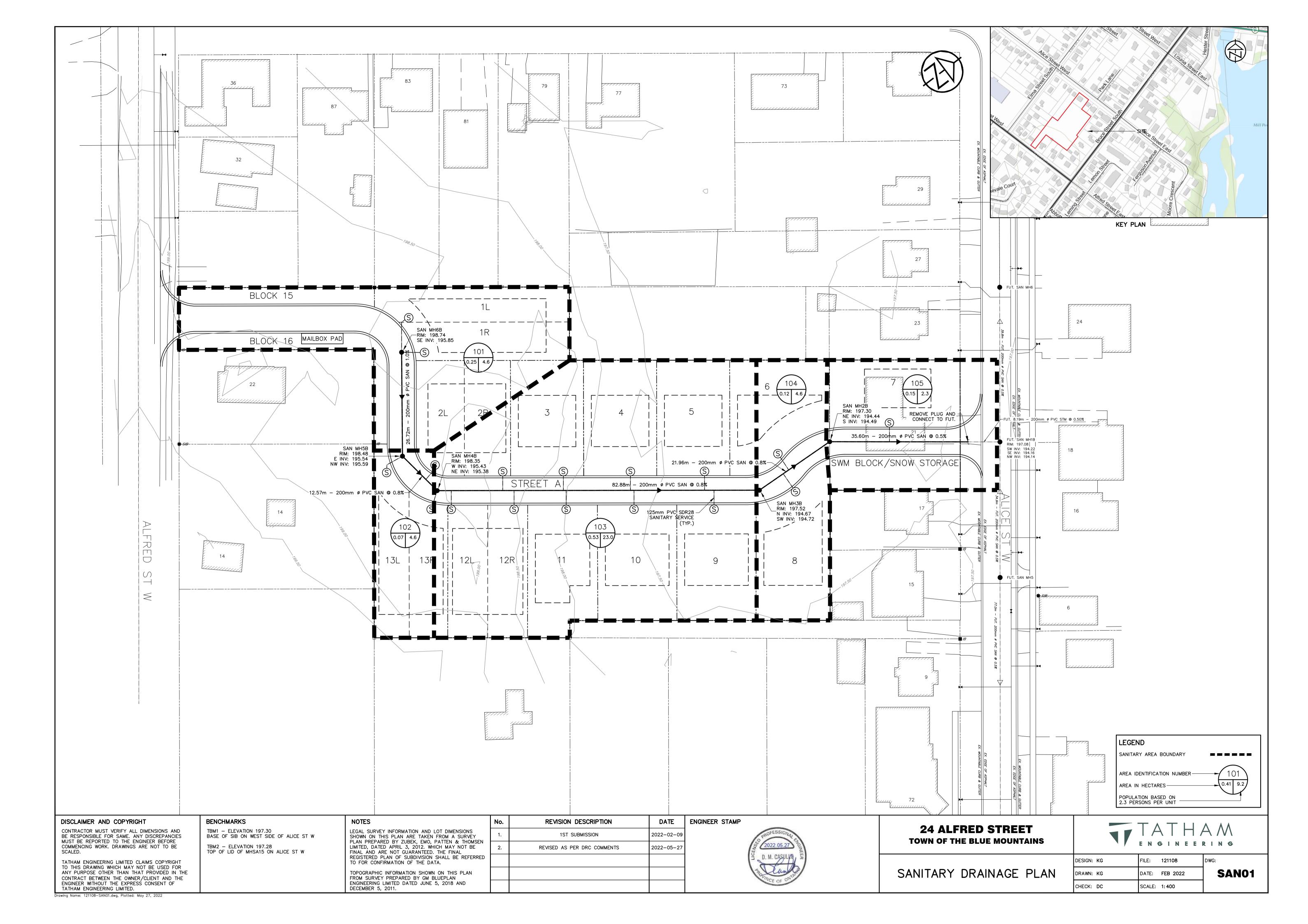
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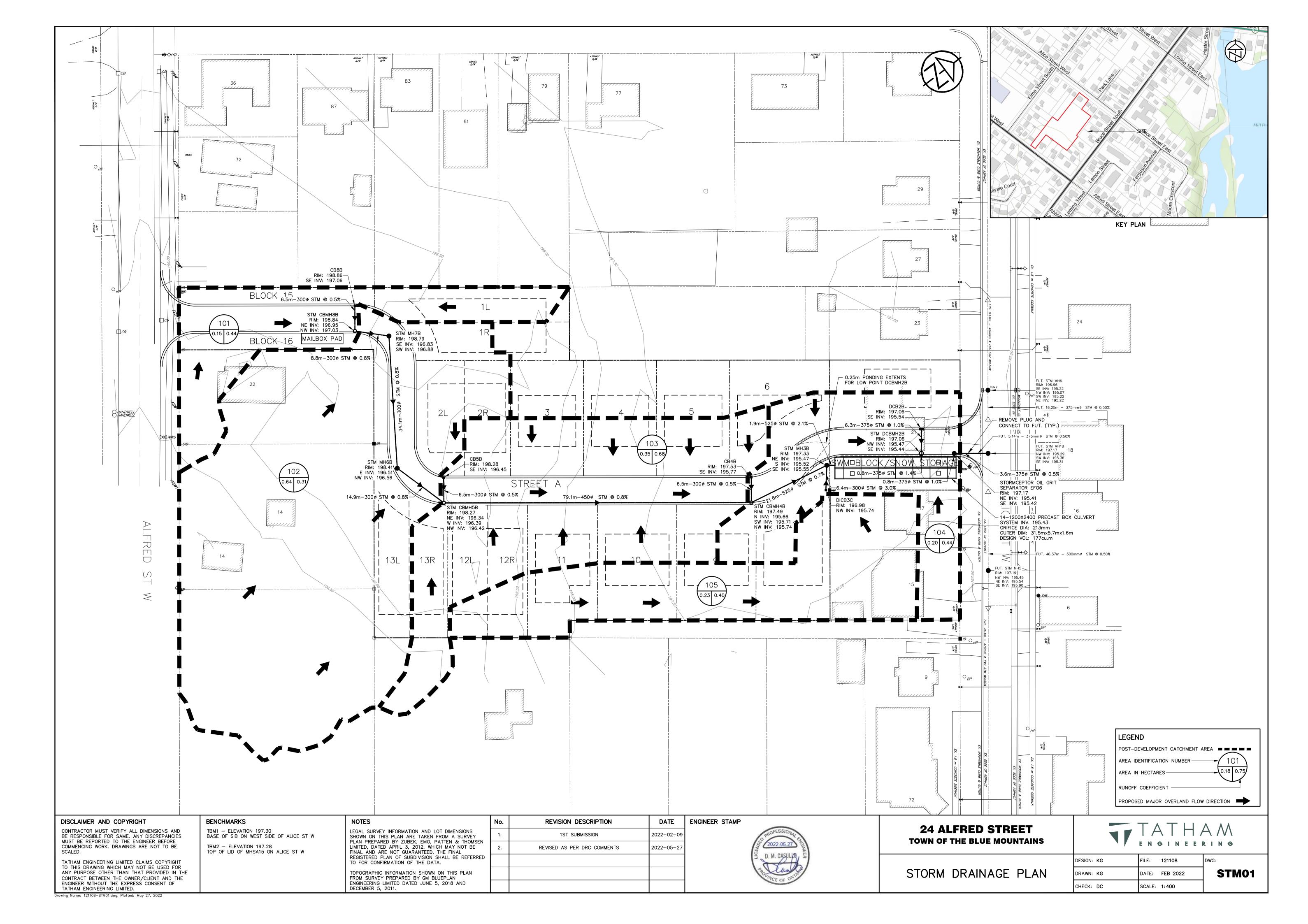


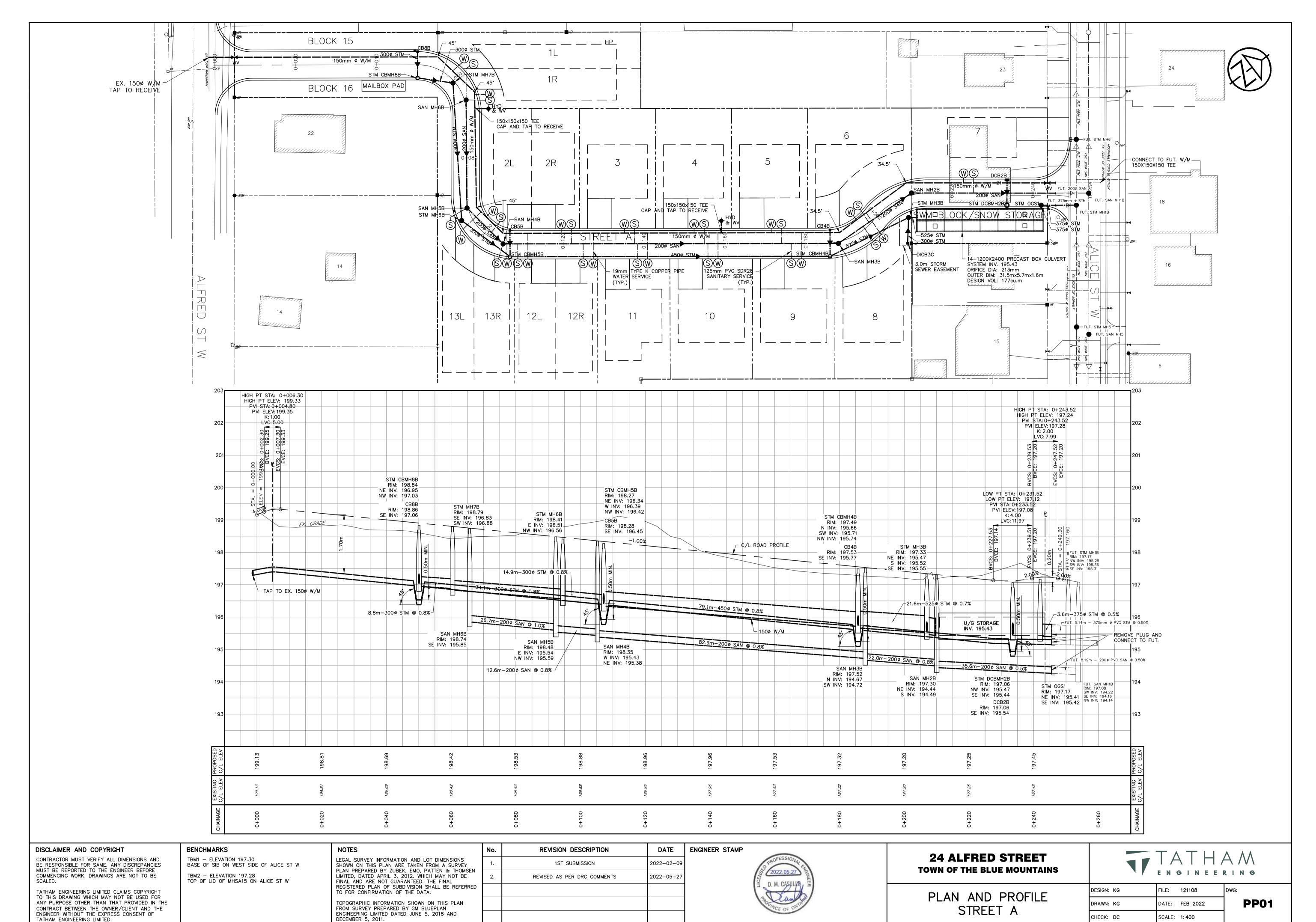
SITE GRADING DETAILS

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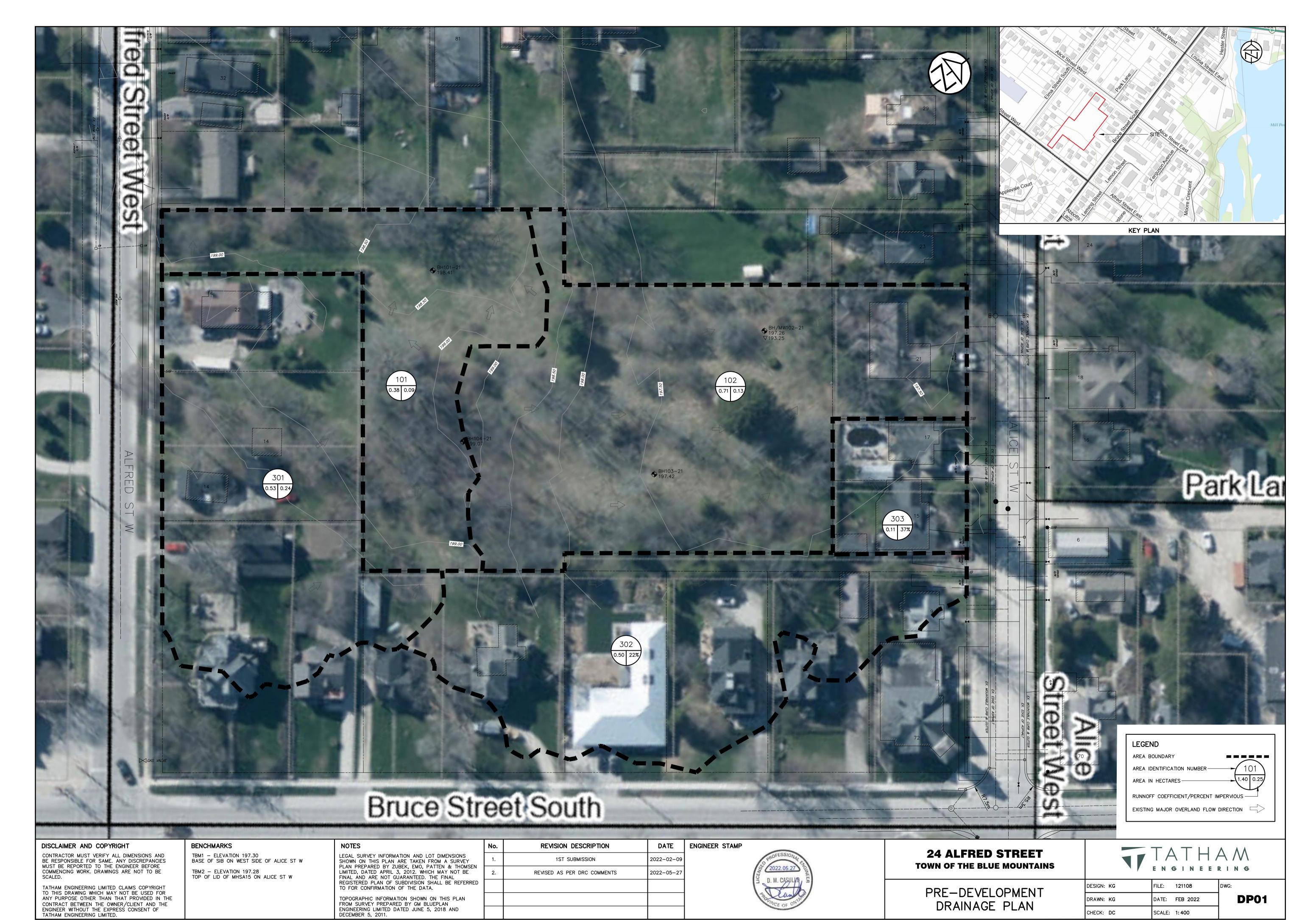




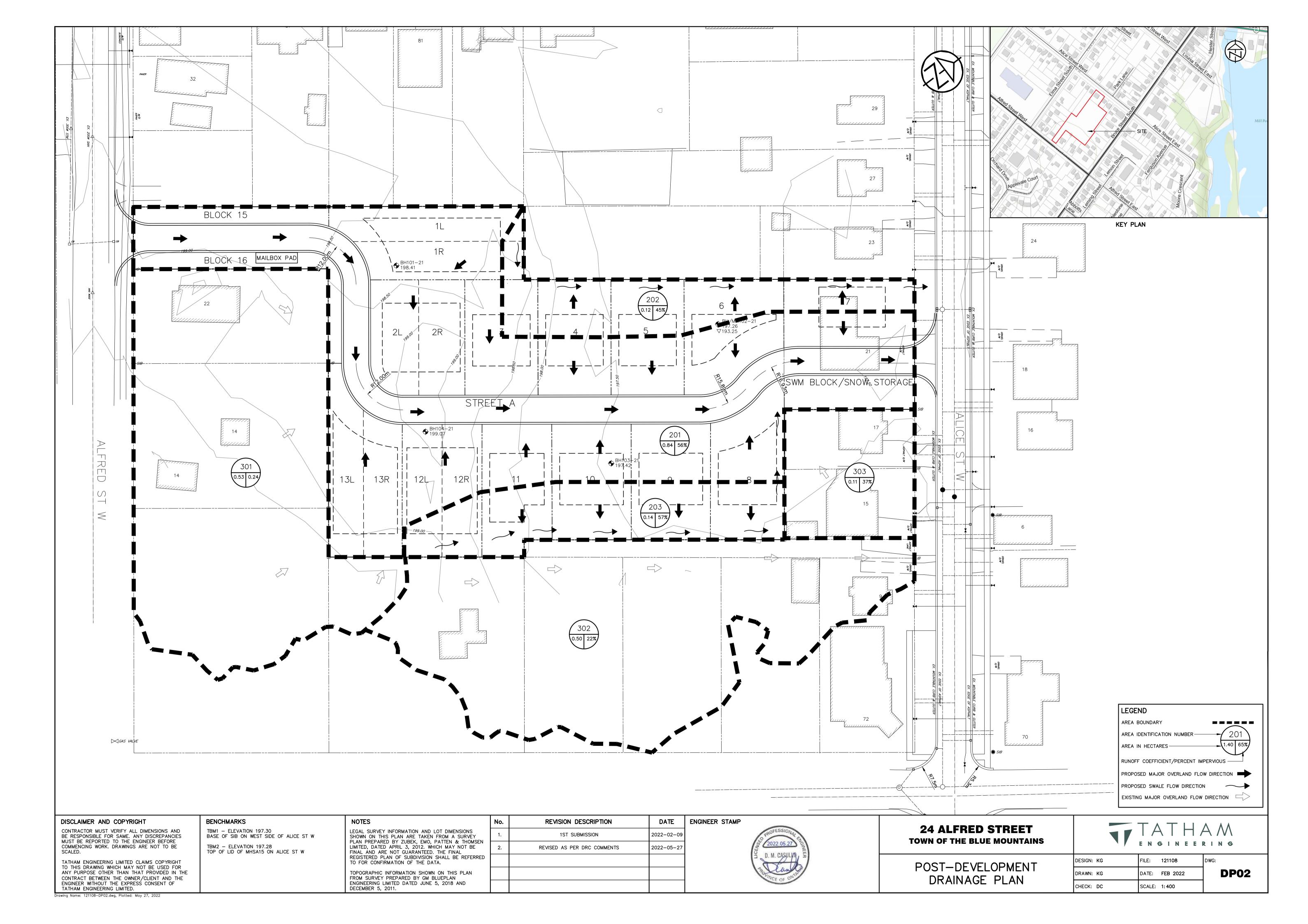


TATHAM ENGINEERING LIMITED.

Drawing Name: 121108-PP01.dwg, Plotted: May 27, 2022



Drawing Name: 121108—DP01.dwg, Plotted: May 27, 2022



GENERAL

ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF THE BLUE MOUNTAINS STANDARDS, OPSD AND OPSS. WHERE

THE CONTRACTOR IS RESPONSIBLE FOR THE DETAILED LAYOUT OF

- CONFLICT OCCURS, TOWN STANDARDS TO GOVERN. THE OWNER'S ENGINEER SHALL PROVIDE BENCHMARK ELEVATIONS 13. SURFACE ASPHALT SHALL BE COMPLETED IN A SINGLE AND HORIZONTAL REFERENCE ALIGNMENT FOR THE CONTRACTOR.
- THE CONTRACTOR SHALL OBTAIN A ROAD OCCUPANCY PERMIT FROM PUBLIC WORKS PRIOR TO THE COMMENCEMENT OF
- ALL SIGNAGE MUST COMPLY WITH TOWN BYLAW 2012-110. A SIGN PERMIT SHALL BE OBTAINED FROM THE CBO WHERE APPLICABLE. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF, AND FOR THE COST OF REPLACING, LAYOUT STAKES, BENCHMARKS
- AND SURVEY BARS, IF DISTURBED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION OF ALL EXISTING FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO-ORDINATE CONSTRUCTION ACCORDINGLY.
- ENGINEERED FILL COMPACTED TO 98% SPMDD TO BE USED AS FILL IN ALL AREAS WHERE PROPOSED PIPE INVERTS ARE HIGHER THAN EXISTING GRADE AND WITHIN BUILDING ENVELOPES, OR AS INSTRUCTED BY THE ENGINEER.
- ROCK EXCAVATION TO BE IN ACCORDANCE WITH OPSS 515. EXCAVATION AND GRADING TO BE IN ACCORDANCE WITH
- OPSS.MUNI 206 AND OPSS.MUNI 510 THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND FOR OBTAINING INFORMATION IN REGARD TO EXACT LOCATION OF BURIED UTILITIES. THIS SHALL INCLUDE EXCAVATION OF INSPECTION HOLES IF NECESSARY. THE CONTRACTOR MUST EXERCISE NECESSARY CARE IN CONSTRUCTION OPERATIONS INCLUDING, IF NECESSARY, HAND DIGGING TO SAFEGUARD UTILITIES FROM DAMAGE. THE CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF UTILITY POLES AS MAY BE REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR IS LIABLE FOR ALL DAMAGE TO UTILITIES OCCURRING WITHIN OR OUTSIDE THE CONTRACT LIMITS CAUSED BY
- THEIR OPERATIONS. 10. THE CONTRACTOR IS TO SUBMIT SAMPLES AND A GRADATION ANALYSIS OF THE PROPOSED GRANULAR MATERIALS FOR APPROVAL BY THE ENGINEER PRIOR TO COMMENCING WORK.
- COMPACTING TO OPSS.MUNI 501 (METHOD A). 12. TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL CONFORM TO MUNICIPAL REQUIREMENTS AND THE MOST CURRENT 8. DROP STRUCTURES AT MAINTENANCE HOLES TO OPSD 1003.020. ONTARIO CONSTRUCTION REGULATIONS INCLUDING REGULATION NO. 9. INSULATION TO BE INSTALLED OVER STORM SEWER MAINS WITH 213 UNDER OHSA AND REFERENCE TO MTO TEMPORARY
- CONDITIONS MANUAL BOOK NO. 7. 13. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER AND/OR CALCIUM CHLORIDE AS REQUIRED FOR COMPACTION AND/OR DUST
- 4. CLEAR, GRUB AND DISPOSE ALL SCRUB, BUSHES, AND TREES IN ACCORDANCE WITH OPSS.MUNI 180 AND OPSS 201 AS REQUIRED TO INSTALL WORKS. LIMITS TO BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING.
- 15. STRIP AND DISPOSE ALL TOPSOIL WITHIN ROADWAY CONSTRUCTION 2 IN ACCORDANCE WITH OPSS.MUNI 510. 16. EXCESS OR UNSUITABLE MATERIALS TO BE DISPOSED OF BY THE
- CONTRACTOR IN ACCORDANCE WITH OPSS.MUNI 180 AT AN APPROVED LOCATION AS PART OF THE WORK 7. FOR THE DURATION OF THE CONTRACT, MATERIAL THAT BECOMES 5. CONTAMINATED DUE TO CONTRACTOR'S ACTIVITY SHALL BE
- REMOVED AND REPLACED AT NO EXTRA COST TO THE CONTRACT. 8. DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS.MUNI 517 AND OPSS.MUNI 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION.
- 19. ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL AREA.
- 20. ALL PIPE HANDLING AND INSTALLATION MUST BE IN STRICT COMPLIANCE WITH MANUFACTURERS INSTALLATION GUIDES. ALL PVC PIPE TO BE COVERED WHILE STORED ON SITE.
- 21. PIPE DEFLECTIONS SHALL NOT EXCEED MANUFACTURER'S SPECIFICATIONS
- 22. RIGID PIPE BEDDING, COVER AND BACKFILL TO OPSD 802.030 OR OPSD 802.031 CLASS B WITH GRANULAR 'A' FOR BEDDING AND COVER MATERIAL. BACKFILL SHALL BE PLACED IN LIFTS, A MAXIMUM OF 200 mm THICK.
- 23. FLEXIBLE PIPE EMBEDMENT AND BACKFILL TO OPSD 802.010 WITH GRANULAR 'A' FOR EMBEDMENT MATERIAL. 24. RIGID PIPE BEDDING, COVER AND BACKFILL AND FLEXIBLE PIPE EMBEDMENT AND BACKFILL MATERIAL TO BE COMPACTED TO A
- PROCTOR MAXIMUM DRY DENSITY (SPMDD). MINIMUM BEDDING DEPTH 150mm, MINIMUM COVER 300 mm 25. CLEAR STONE WRAPPED IN FILTER FABRIC MAY BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE ENGINEER. 26. TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL. WHERE NATIVE

DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD

- MATERIAL IS CONSIDERED BY THE ENGINEER TO BE UNSUITABLE, TRENCH BACKFILL SHALL BE IMPORTED SELECT SUBGRADE MATERIAL FROM A LICENSED PIT OR QUARRY. 27. ALL IMPORTED FILL MATERIAL MUST MEET THE REQUIREMENTS IN TABLE 1 AND/OR TABLE 8 OF O.REG. 153/04 (AMENDED MARCH
- 2021) AND MUST BE CAPABLE OF PERFORMING AS ENGINEERED 28. ALL DISTURBED AREAS TO BE REINSTATED TO PREVIOUS
- CONDITION OR BETTER.
- 29. GENERAL INSTALLATION AND TESTING OF SEWERS. WATERMAIN AND A APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 407, OPSS 408, OPSS.MUNI 409, OPSS.MUNI 410, OPSS.MUNI 421, AND OPSS.MUNI 441 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS
- 30. ALL STRUCTURES ARE 1200 mm DIA. UNLESS OTHERWISE NOTED. 31. FROST STRAPS SHALL BE INSTALLED ON ALL MAINTENANCE HOLES AS PER OPSD 701 100
- 32. STEPS IN ALL STRUCTURES TO OPSD 405.010.
- 33. PIPE SUPPORT AT ALL STRUCTURES TO OPSD 708.020 34. THE CONTRACTOR SHALL MAKE THEIR OWN ARRANGEMENTS FOR
- THE SUPPLY OF TEMPORARY WATER AND POWER. 35. WATER VALVE BOXES, MAINTENANCE HOLE AND CATCH BASIN FRAME AND GRATES TO BE SET TO BASE COURSE ASPHALT ELEVATION AND RAISED PRIOR TO THE PLACEMENT OF SURFACE
- COURSE ASPHALT 36. REMOVE AND DISPOSE OF ORGANIC MATERIAL WITHIN THE EXISTING RIGHT OF WAY AND/OR AS REQUIRED TO COMPLETE THE WORK.

ROADS

- JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT AS DIRECTED BY ENGINEER PRIOR TO PLACING NEW ASPHALT AND TACK COAT APPLIED TO EXISTING ASPHALT. WHERE EXISTING ASPHALT IS THICKER THAN 75 mm, A 500 mm WIDE BY 40 mm DEEP LAP JOINT SHALL BE GROUND INTO EXISTING ASPHALT,
- OTHERWISE A BUTT JOINT SHALL BE USED TACK COAT TO BE APPLIED TO ENTIRE SURFACE OF BASE COURSE ASPHALT AT THE TIME OF PLACEMENT OF SURFACE COURSE ASPHALT. APPLICATION RATE SHALL BE 0.35 kg/m
- IF ASPHALT SURFACES SETTLE IN EXCESS OF 20 mm OR DIFFERENTIALLY DURING THE WARRANTY PERIOD, THE ENGINEER SHALL ORDER THE AREA CUT OUT AND REPLACED AT NO EXTRA COST TO THE CONTRACT GENERAL AGGREGATES TO OPSS.MUNI 1001 AND OPSS.MUNI 1010.
- SUBGRADE AND BOULEVARD MATERIAL TO BE COMPACTED TO A MINIMUM DRY DENSITY OF 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). SUBGRADE TO BE PROOF ROLLED, INSPECTED AND CERTIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING GRANULAR 'B'. ALL GRANULAR AND ASPHALT MATERIAL TO BE PLACED IN
- ACCORDANCE WITH OPSS.MUNI 314 AND OPSS.MUNI 310. GRANULAR 'A' AND 'B' TO BE COMPACTED TO 100% OF EACH MATERIAL'S SPMDD.
- 8. ASPHALT TO BE COMPACTED TO A MINIMUM OF 92% OF THE MATERIAL'S MAXIMUM RELATIVE DENSITY.
- CONCRETE MOUNTABLE CURB AS PER OPSD 600.100 10 CURB TERMINATIONS IN ACCORDANCE WITH OPSD 608 010.

. 100 mm DIAMETER PIPE SUBDRAINS SHALL BE PROVIDED ON

BOTH SIDES OF THE ROAD IN ACCORDANCE WITH OPSS.MUNI 405

- AND OPSD 216.021, UNWRAPPED TRENCH, GRANULAR 'A'
- 12. SUBDRAINS TO BE PERFORATED, COMPLETE WITH FILTER SOCK, OTHER THAN THE 2.0 m SECTION IMMEDIATELY UPSTREAM OF ALL STRUCTURES WHICH SHALL BE NON-PERFORATED.

MOBILIZATION PAVEMENT MARKINGS

- PAVEMENT MARKINGS REQUIRE 2 APPLICATIONS OF PAINT FOR NEW ASPHALT. THE SECOND APPLICATION SHALL NOT BE APPLIED UNTIL THE FIRST IS TACK FREE. PAVEMENT MARKINGS SHALL ONLY BE APPLIED WHEN TEMPERATURE IS ABOVE 10 DEGREES CELSIUS, THE PAVEMENT IS
- ENGINEER. WORK TO BE IN ACCORDANCE WITH OPSS 532, OPSS 1712, OPSS 1713 AND OPSS 1714 AND THE ONTARIO TRAFFIC MANUAL BOOK 11, MINISTRY OF TRANSPORTATION OF ONTARIO.

PERFECTLY DRY AND UPON THE AUTHORIZATION OF THE

- PRECAST MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSD 701.010, OPSD 701.012, C/W BENCHING TO OPSD 701.021. FRAMES AND GRATES TO OPSD 401.010 (TYPE A), CLOSED COVER. MATERIALS 'A' CLOSED COVER.
- 2. CATCH BASINS, DOUBLE CATCH BASINS AND REAR LOT CATCH BASINS TO OPSD 705.010 AND 705.020. ROADSIDE CATCH BASINS TO HAVE A SUMP. REAR LOT CATCH BASINS TO BE
- 3. MAINTENANCE HOLE AND CATCH BASIN MAINTENANCE HOLE STEPS TO OPSD 405,010. MAINTENANCE HOLE FRAMES AND GRATES TO OPSD 401.010 TYPE
- CATCH BASIN AND CATCH BASIN MAINTENANCE HOLE FRAMES AND GRATES TO OPSD 400.020. FRAME AND GRATES TO BE INSTALLED IN THE CURB LINE TO OPSS 610.010. CATCH BASIN LEADS - 300 mm DIAMETER SINGLE AND 375 mm
- DIAMETER DOUBLE. CATCH BASIN CONNECTIONS TO OPSD 708.010 AND OPSD 708.030. 7. STUBS FOR PVC STORM SEWERS TO BE MIN. 1.0m LONG COMPLETE WITH PRE-MANUFACURED CAP. STUBS FOR CONCRETE STORM SEWERS TO BE MIN. 1 PIPE LENGTH (+/-2.44m)
- COMPLETE WITH PRE-MANUFACTURED CAP LESS THAN 1.5m DEPTH OF COVER AS NOTED ON THE DRAWINGS. MINIMUM DEPTH OF COVER BETWEEN 1.3 TO 1.5m REQUIRES 50mm INSULATION.

- PRECAST MAINTENANCE HOLES SHALL BE IN ACCORDANCE WITH OPSD 701.010 C/W BENCHING TO OPSD 701.021. FRAMES AND GRATES TO OPSD 401.010 (TYPE 'A'), CLOSED COVER. KOR-N-SEAL GASKETS TO BE USED AT ALL MAINTENANCE HOLE CONNECTIONS.
- 3. MAINTENANCE HOLE STEPS TO OPSD 405.010. MAINTENANCE HOLE STRUCTURES EXCEEDING 5.0m IN DEPTH TO INCLUDE SAFETY PLATFORM TO OPSD 404.020 DROP STRUCTURES AT MAINTENANCE HOLES TO OPSD 1003.020.
- 6. RESIDENTIAL SERVICE CONNECTIONS TO OPSD 1006.020, 125 mm DIAMETER, GRANULAR 'A' EMBEDMENT (MIN. 150 mm BEDDING AND 300 mm COVER). RADIUS BENDS TO BE USED ON ALL SEWER CONNECTIONS WHERE 14. LIVE TAP SADDLES TO BE EPOXY COATED COMPLETE WITH THE ANGLE OF CONNECTION BETWEEN THE SERVICE AND SEWER
- EXCEEDS 90°. 8. RESIDENTIAL SERVICE CONNECTIONS TO BE TERMINATED AT THE PROPERTY LINE WITH A WATER TIGHT CAP, 125 mm x 100 mm REDUCER. CAP SUITABLY BRACED TO WITHSTAND TEST PRESSURES AND AN 38mm x 89mm MARKER PLACED FROM THE INVERT OF THE CONNECTION TO 600 mm ABOVE FINISHED GRADE PAINTED GREEN. MINIMUM GRADE OF SERVICE TO BE 2%, MAXIMUM GRADE TO BE 8%. TERMINATE AT AN ELEVATION AT LEAST 2.8 m BELOW PROPOSED GRADE AT PROPERTY LINE.

- ALL WATERMAIN AND SERVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF THE BLUE MOUNTAINS WATER SERVICES STANDARDS AND SHALL CONFORM TO NFPA24. ALL WORK ON EXISTING WATERMAIN TO BE COORDINATED WITH THE TOWN. TOWN TO BE PROVIDED WITH PRELIMINARY SCHEDULE AND
- 48 HOURS NOTICE MINIMUM GROUND COVER OVER WATERMAIN, SERVICE LATERALS AND HYDRANT LEADS TO BE 1.7m AT ALL POINTS. MAXIMUM 4. INSULATION TO BE INSTALLED OVER WATERMAIN OR SERVICES WITH LESS THAN 1.7m DEPTH OF COVER AS NOTED ON THE DRAWINGS OR MINIMUM AS FOLLOWS:
- i) DEPTH OF COVER BETWEEN 1.4 TO 1.7m REQUIRES 50mm INSULATION. ii) DEPTH OF COVER BETWEEN 1.2 TO 1.7m REQUIRES 100mm INSULATION

5. WATERMAIN NOT TO BE INSTALLED WITH LESS THAN 1.2 METRES

- DEPTH OF COVER. . CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE A MINIMUM OF 0.50 m VERTICAL OR 2.5 m HORIZONTAL. 7. PIPE RESTRAINTS TO BE PROVIDED AT ALL CHANGES IN PIPE DIRECTION, TERMINATIONS AND ANY LOCATION WHERE THRUST PRESSURES MAY OCCUR. WATER VALVES SHALL BE RESTRAINED ON EITHER SIDE TO THE SAME STANDARD THAT A DEAD END WOULD BE. WHERE SOIL CONDITIONS ARE SUSPECT, SUCH AS IN DISTURBED SOILS OR SOILS WITH BEARING STRENGTH OF LESS THAN 200 kPa, SIGMA SLCS SHALL BE USED. IN LIEU OF THRUST BLOCKS PIPE RESTRAINTS FOR PVC SHALL BE PER TOWN STANDARDS, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S
- SPECIFICATIONS (SEE CHART). THREADED ROD IN JOINT RESTRAINT IS NOT PERMISSIBLE. CONTRACTOR SHALL PROVIDE CATHODIC PROTECTION ON THE WATER DISTRIBUTION SYSTEM. IN DETERMINING THE MODE OF PROTECTION, AN ELECTRICAL RESISTIVITY OF 3500 OHM-CM SHOULD BE USED.
- 9. RESIDENTIAL SERVICE CONNECTIONS TO OPSD 1104.010, 25 mm DIAMETER, 300 mm DEPTH GRANULAR 'A' EMBEDMENT. 10. RESIDENTIAL SERVICE CONNECTIONS TO TERMINATE AT PROPERTY LINE COMPLETE WITH CURB STOP VALVE, TESTING TAIL TO SURFACE CAPPED OR CRIMPED AND A 38mm x 89mm MARKER FROM THE INVERT OF THE SERVICE TO 600 mm ABOVE GRADE PAINTED BLUE.

11. ALL WATER SERVICES TO INCLUDE THE INSTALLATION OF AN

- INDIVIDUAL PRV WITHIN FACH BUILDING. PRV TO BE SUPPLIED. AND INSTALLED BY THE BUILDER DURING HOUSE CONSTRUCTION. 12. HYDRANTS TO BE INSTALLED TO OPSD 1105.010. 13. HYDRANTS TO BE PAINTED CHROME YELLOW AND INCLUDE A FLEXSTAKE HYDRANT MARKER MODEL FHV804, 1.2 m LONG, COLOUR YELLOW WITH REFLECTIVE GRAPHIC ON BOTH SIDES AT THE TOP OF THE MARKER. MARKER TO BE POSITIONED ON THE RIGHT PORT AS VIEWED FROM THE STREET. A FIRE HYDRANT MARKER POST AND SIGN SHALL BE INSTALLED 0.3 m BEHIND EACH HYDRANT. THE SIGN SHALL BE REFLECTIVE WITH A RED
- (OR APPROVED EQUAL). THE SIGN SHALL BE MOUNTED 1.5 m ABOVE GRADE 14. ALL PVC WATERMAIN TO HAVE TRACER WIRE BETWEEN HYDRANTS AND OTHER CONDUCTING APPURTENANCES. CONTRACTOR SHALL TEST ALL TRACER WIRE TO CONFIRM CONNECTIVITY. 15. TRACER WIRE TO BE 10 GAUGE, MULTI-STRAND SHALL BE PLACED ON TOP AND ATTACHED IN TWO PLACES ON EACH LENGTH OF PVC

HYDRANT ON A WHITE BACKGROUND AND MEASURE 0.3 \times 0.3 m

OR PE PIPE. ALL CONNECTIONS SHALL BE MADE WITH "DRYCONN WATERPROOF CONNECTORS" OR APPROVED EQUAL. 16. ALL SERVICES SHALL BE METERED INCLUDING IRRIGATION AND OTHER EXTERIOR USES. METERS TO BE NEPTUNE T-10, COMPLETE

17. VERTICAL CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE A

- MINIMUM OF 0.5m WHEN WATERMAIN IS BELOW THE SEWERS, HORIZONTAL CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE A MINIMUM OF 2.5n 18. THE COMPLETE WATER SYSTEM, INCLUDING RESIDENTIAL SERVICE
 - CONNECTIONS TO THE PROPERTY LINE AND HYDRANTS SHALL BE TESTED IN ACCORDANCE WITH THE TOWN'S WATERMAIN COMMISSIONING PROTOCOL. CONTRACTOR TO PROVIDE DETAILED WRITTEN WATERMAIN COMMISSIONING PROTOCOL FOR APPROVAL PRIOR TO COMMENCING TESTING OPERATIONS. CONNECTIONS TO EXISTING MAINS SHALL NOT BE MADE UNTIL WRITTEN AUTHORIZATION IS PROVIDED BY THE ENGINEER AND THE TOWN 19. DURING CHLORINATION OR DECHLORINATION, CONTRACTOR SHALL OPERATE EACH SERVICE TO VERIFY FULL FLOW AND PRESSURE AT
 - CURB STOP TO SATISFACTION OF THE ENGINEER. 20. WATERMAINS ARE NOT TO BE CONNECTED TO THE EXISTING WATERMAIN UNTIL BACTERIOLOGICAL TESTING HAS BEEN SUCCESSFULLY PASSED AND AUTHORIZED BY ENGINEER. 21. EXISTING WATER SERVICES THAT ARE TO BE ABANDONED MUST BE CAPPED AT MAIN INCLUDING MAIN STOP REMOVED, PLUG INSERTED

TOWN OF COLLINGWOOD OR THE MUNICIPALITY OF MEAFORD.

TO TOWN STANDARDS AND REINSTATEMENT OF ALL DISTURBED AREAS TO EXISTING CONDITION OR BETTER. 22. WATER VALVES TO BE OPERATED BY TOWN STAFF ONLY. 23. ALL WATER USED IN COMMISSIONING AND TESTING TO BE POTABLE AND SUPPLIED FROM THE TOWN OF THE BLUE MOUNTAINS, THE

ALL MATERIAL TO COMPLY WITH CSA, OPSS AND TOWN STANDARDS. SANITARY SEWER - PVC DR 35. SANITARY SERVICE CONNECTIONS - PVC SDR 28.

STORM SEWER - PVC SDR 35 OR CONCRETE 65-D. ALL SEWERS TO BE JOINED WITH A GASKETED BALL AND SPIGOT SYSTEM. NON-REINFORCED CONCRETE PIPE MAY BE USED FOR SIZES UP TO AND INCLUDING 375 mm DIA. REINFORCED CONCRETE PIPE MAY BE USED FOR ALL SIZES OF SEWER STORM SERVICE CONNECTIONS - PVC SDR 28, COLOUR WHITE. CULVERTS - GALVANIZED CORRUGATED STEEL PIPE. MIN. WALL THICKNESS 2.0 mm UNLESS OTHERWISE NOTED. ALL CULVERTS TO HAVE END PROTECTION TO OPSD 810.010 (BOTH ENDS), TYPE B – COMPLETE WITH FILTER FABRIC. PERFORATED SUBDRAIN - BIG 'O' WITH GEOTEXTILE FILTER SOCK

OR APPROVED EQUAL. 8. ALL CHEMICALS AND MATERIALS USED IN THE ALTERATION OR OPERATION OF THE DRINKING WATER SYSTEM THAT COME IN CONTACT WITH WATER WITHIN THE SYSTEM SHALL MEET ALL APPLICABLE STANDARDS SET BY BOTH THE AMERICAN WATER WORKS ASSOCIATION ("AWWA") AND THE AMERICAN NATIONAL STANDARDS INSTITUTE ("ANSI") SAFETY CRITERIA STANDARDS NSF/60, NSF/61 AND NSF372.

9. WATERMAIN – PVC DR 18. 10. WATER SERVICE CONNECTIONS TO BE TYPE K COPPER PIPE. 11. WATER SERVICE FITTINGS SHALL BE:

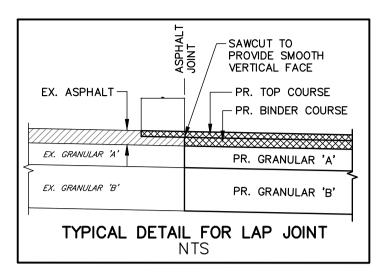
- B MUELLER H25008 MAIN STOP CURB STOP B MUELLER H25209 SERVICE SADDLE - B ROBAR 2706 DOUBLE STRAP TAPPING SADDLE - B ROBAR 6906 SERVICE BOXES - MUELLER A-726, STAINLESS STEEL RODS

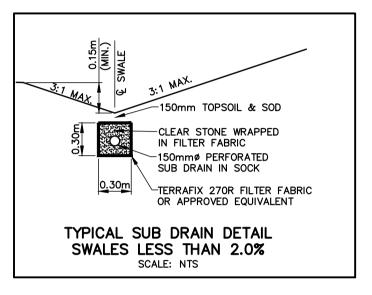
12. PIPE RESTRAINERS - SIGMA C-900. 13. HYDRANTS - CANADA VALVE, OPEN LEFT, WITH STORTZ CONNECTIONS ON ALL STEAMER PORTS. HYDRANT SETS SHALL BE INSTALLED NOT LESS THAN 0.9 m FROM THE CENTER OF THE VALVE TO THE CENTER OF THE HYDRANT. TRACER WIRE SHALL BE ATTACHED TO THE OUTSIDE OF THE VALVE BOX AND WIRE BROUGHT INTO VALVE BOX UNDER CAP.

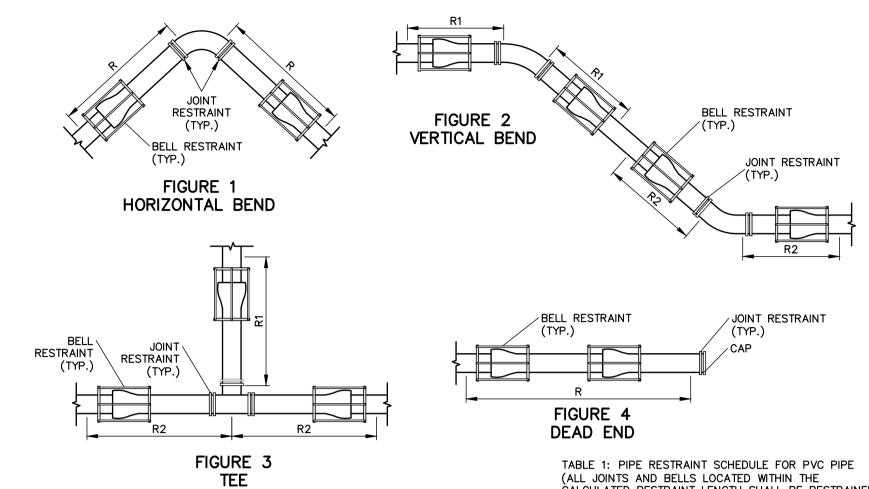
STAINLESS STEEL BOLTS. 15. MECHANICAL JOINT DUCTILE FITTINGS TO AWWA/ANSI C153/A21.53. INCLUDING PROTECTO-CAPS, CAT NO. 175P190 OR APPROVED

16. ISOLATION VALVES TO BE RESILIENT SEAT GATE VALVES WITH MECHANICAL JOINTS, OPEN LEFT, CLOW. VALVE BOXES TO BE 5-SL-48 SLIDING OR MUELLER MVB COMPOSITE COMPLETE WITH GUIDE PLATE AND DUCTILE ADJUSTABLE TOP AND LID OR APPROVED EQUAL. CAPS TO BE PAINTED BLUE. 17. ALL WATERMAIN FASTNERS (STAINLESS BOLTS) TO BE COMPLETE

WITH ZINC CAPS. 18. BLOWOFFS IN ACCORDANCE WITH OPSD 1104.030, MIN 50mm DIA. 19. ALL SPECIFIED AGGREGATES TO OPSD 1010. 20. FILTER FABRIC - TERRAFIX 270R OR APPROVED EQUAL 21. INSULATION - STYROFOAM HIGHLOAD 40 EXTRUDED POLYSTYRENE FOAM INSULATION, 50mm THICK SHEETS.







CHARACTERISTICS USED TO CALCULATE RESTRAINT LENGTH:

PIPE MATERIAL: ML (SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS) SAFETY FACTOR: TRENCH TYPE: 5 (PIPE BEDDED IN COMPACT GRANULAR MATERIAL)

DEPTH OF BURY: 1.8m (6 ft) TEST PRESSURE: 1035 kPa (150 p.s.i.)

PROGRAM: SIGMA IRON - RESTRAINT LENGTH CALCULATOR 1.0

TABLE 2: PIPE RESTRAINT SCHEDULE FOR PVC TEES (ALL JOINTS AND BELLS LOCATED WITHIN THE CALCULATED RESTRAINT LENGTH SHALL BE RESTRAINED

WITH APPROVED BELL AND JOINT RESTRAINTS)					
TEES					
NOMINAL PIPE DIA.	BRANCH PIPE DIA.	RESTRAINT 1 LENGTH (m)	RESTRAINT 2 LENGTH (m)		
150	150	4.6	3.0		
200	150	2.4	3.0		
150	200	9.8	3.0		
200	200	7.9	3.0		
300	150	0.3	3.0		
300	200	4.0	3.0		
300	300	14.3	3.0		

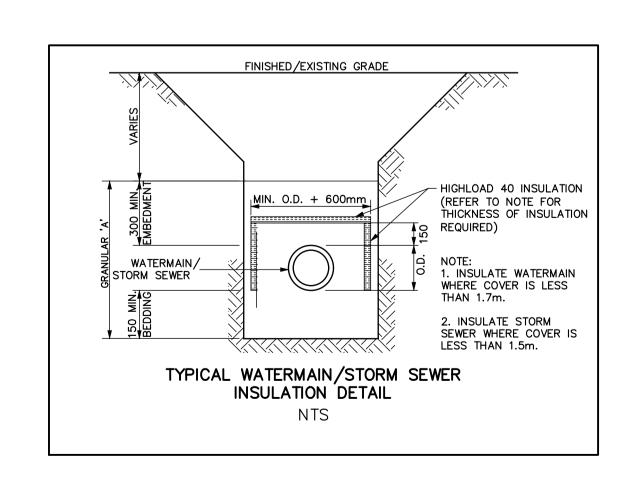
CALCULATED RESTRAINT LENGTH SHALL BE RESTRAINED WITH APPROVED BELL AND JOINT RESTRAINTS) HORIZONTAL

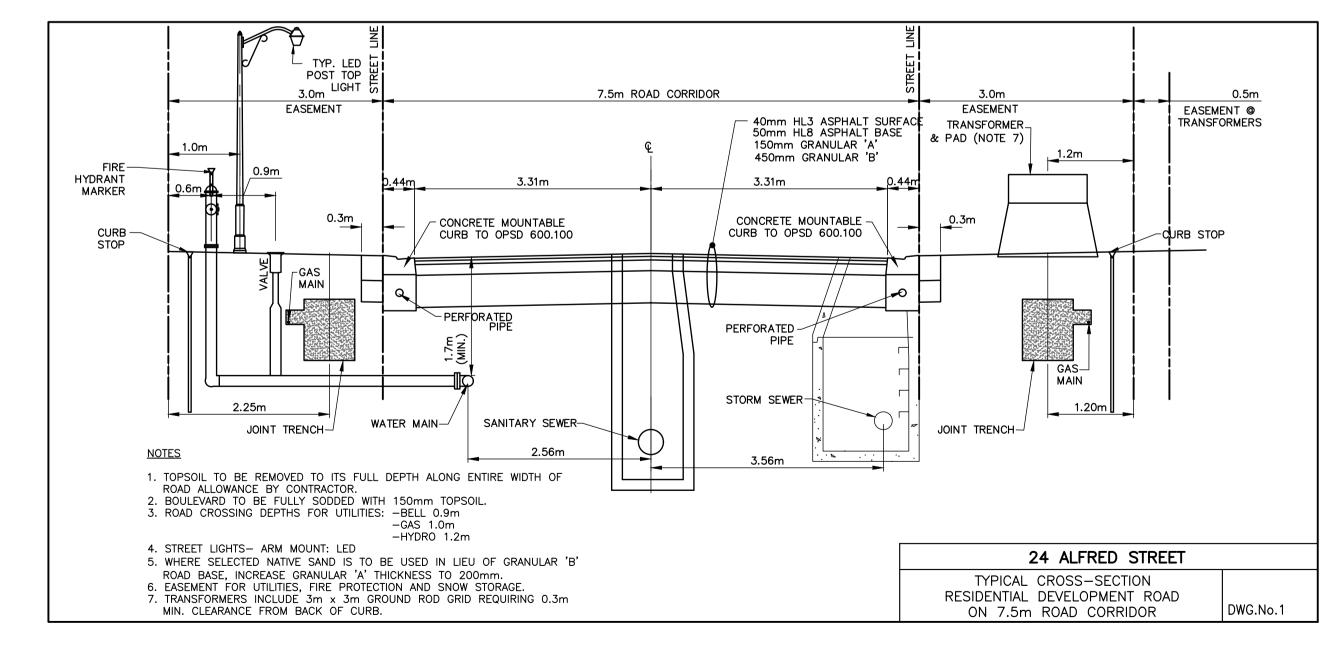
		BEND	VERTICAL BEND		(NO BEND ANGLE)
PIPE DIA.	BEND ANGLE	RESTRAINT LENGTH (m)	RESTRAINT 1 LENGTH (m)	RESTRAINT 2 LENGTH (m)	RESTRAINT LENGTH (m)
150ø	90°	3.7	ı	1	
	45°	1.6	4.9	1.5	11.6
	22.5*	0.9	2.5	0.9	
	11*	0.6	1.3	0.6	
200ø	90°	4.6	ı	ı	
	45°	2.2	6.1	2.2	15.0
	22.5°	0.9	3.1	1.0	
	11*	0.6	1.6	0.6	
300ø	90.	6.4	ı	ı	
	45°	2.8	8.9	2.8	21.4
	22.5*	1.5	4.3	1.5	
	11*	0.9	3.4	0.9	

1. CONTRACTOR TO REPORT IN WRITING TO THE ENGINEER ANY CHANGES TO SOIL OR SITE CHARACTERISTIC THAT MAY ALTER THE

PIPE RESTRAINT CALCULATION. 2. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THRUST RESTRAINT REQUIREMENTS WITH THE PIPE AND RESTRAINT

MANUFACTURERS 3. VALVES TO BE RESTRAINED AS IF THEY ARE DEAD ENDS.





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CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE

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BENCHMARKS

TBM1 - ELEVATION 197.19 BASE OF HP ON ALICE ST W

TBM2 - ELEVATION 196.96 TOP OF STM MH6 LID ON ALICE ST W

WITH RADIO READ

NOTES

LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY ZUBEK, EMO, PATTEN & THOMSEN LIMITED, DATED APRIL 3, 2012. WHICH MAY NOT BE FINAL AND ARE NOT GUARANTEED. THE FINAL REGISTERED PLAN OF SUBDIVISION SHALL BE REFERRED TO FOR CONFIRMATION OF THE DATA.

TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN FROM SURVEY PREPARED BY GM BLUEPLAN ENGINEERING LIMITED DATED JUNE 5, 2018 AND DECEMBER 5, 2011.

REVISION DESCRIPTION DATE 1ST SUBMISSION 2022-02-09 REVISED AS PER DRC COMMENTS 2022-05-27 **ENGINEER STAMP**



24 ALFRED STREET **TOWN OF THE BLUE MOUNTAINS**

DESIGN: KG NOTES AND DETAILS

FILE: 121108 DRAWN: KG DATE: **FEB 2022** CHECK: DC SCALE: 1:400

DE01

TATHAM ENGINEERING LIMITED. awing Name: 121108—DE01_update.dwg, Plotted: May 27, 2022