

THE LOCATION OF ALL UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGES TO THEM.

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NO.	DATE	BY	DESCRIPTION
1	31. J. 18	GF	1ST SUBMISSION - TOWN OF MINTO
2		DRN	ZDP
3		CHK	0
4		REVISED	

PROPOSED DEVELOPMENT  
 PART OF PARK LOTS 6 & 12  
 (GEO. TOWN OF HARRISTON)  
 (GEO. TOWN OF MINTO)  
 COUNTY OF WELLINGTON

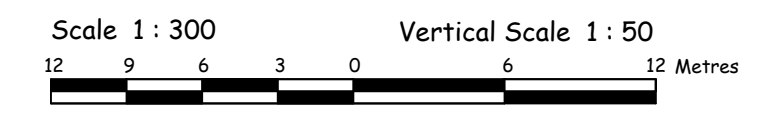
LOT GRADING, SANITARY AND STORM

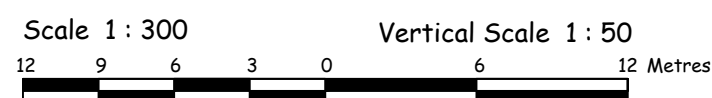
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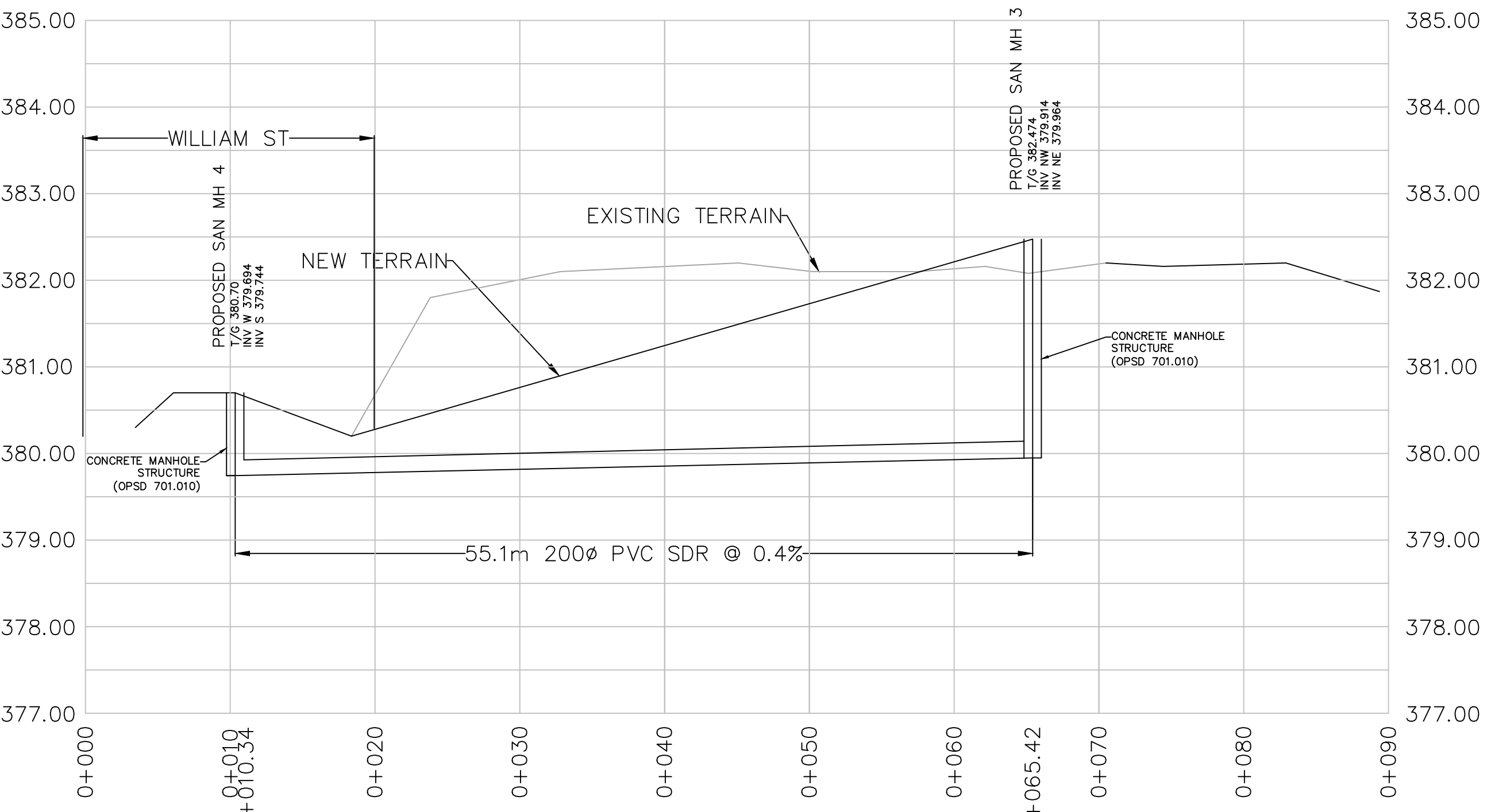
**WILSON - FORD**  
 Surveying & Engineering  
 120 KING ST. E., Box 294,  
 MOUNT FOREST ON, N0G 2L0  
 PHONE (519)323-2451

DESIGN GF DRAWN ZDP  
 PROJECT No. 8780  
 DRAWING: 2 OF 4



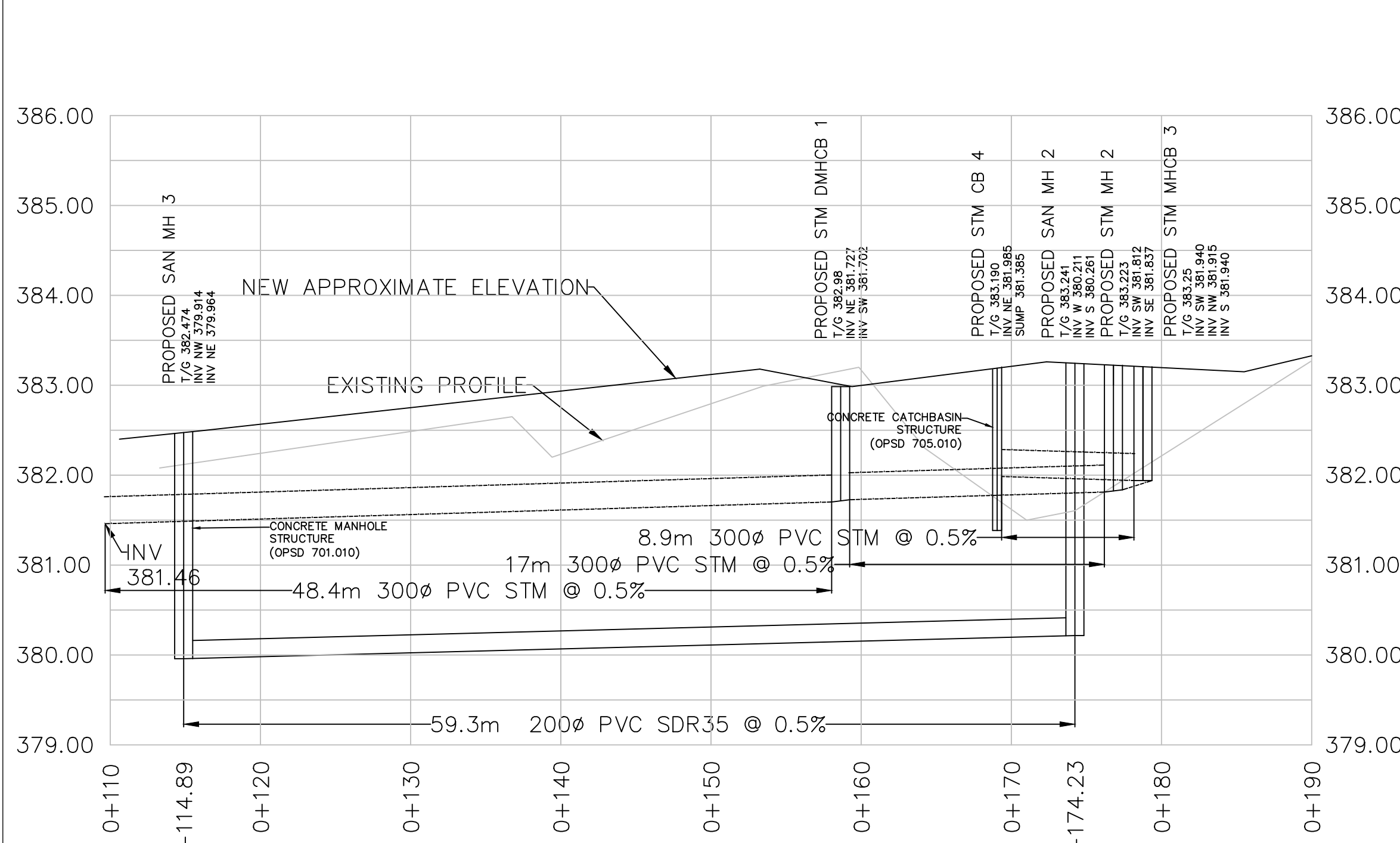
Scale 1 : 300 Vertical Scale 1 : 50  


# EMERGENCY ACCESS WILLIAM TO SAN MH 3



Scale 1 : 300 Vertical Scale 1 : 50  


# EMERGENCY ACCESS CUL DE SAC TO SAN MH 3



### GENERAL NOTES:

- PRIOR TO STARTING WORKS, CONTRACTOR MUST ENSURE THAT ALL NECESSARY APPROVALS ARE IN PLACE FROM TOWNSHIP OF WELLINGTON NORTH, AND ALL OTHER EXTERNAL AGENCIES, AS REQUIRED.
- ALL WORKS SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATION OF TOWN OF MINTO, OPSD/OPSS, AND MOECC.
- FOR ALL CONSTRUCTION DETAILS NOT SHOWN ON THE DRAWING, REFERENCE SHALL BE MADE TO THE DESIGN STANDARDS OF TOWN OF MINTO.
- ALL RESTORATIONS AND RELOCATION SHALL BE COMPLETED TO THE SATISFACTION OF THE DIRECTION OF THE ENGINEER AND TOWN OF MINTO. ALL AREAS WITHIN THE PUBLIC RIGHT-OF-WAYS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER. GRAZED AREA MUST BE PROVIDED WITH 200 mm TOPSOIL AND SODDED FROM PROPERTY TO BACK OF CURB AND TO THE SATISFACTION OF THE DIRECTOR OF ENGINEERING.
- THE LOCATION OF THE UTILITIES IS APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY CONSULTING THE CONCERNED UTILITY COMPANIES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION FROM DAMAGE DURING CONSTRUCTION.
- ALL DIMENSION, ELEVATIONS, AND OTHER INFORMATION SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES FOUND MUST BE REPORTED IMMEDIATELY TO THE ENGINEER PRIOR TO CONSTRUCTION.
- UTILITY SUBMISSIONS TO THE TOWNSHIP ARE REQUIRED FOR ALL NEW UTILITIES, ALONG WITH SIGN-OFFS OBTAINED FROM PUBLIC WORKS BEFORE PROCEEDING WITH ANY UTILITY INSTALLATIONS.
- UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE FOLLOWING REQUIREMENTS SHALL APPLY TO THE WORKS:

### SEWER PIPE BEDDING:

- STORM AND SANITARY SEWER BEDDING SHALL BE AS PER OPSD-802.010 FOR FLEXIBLE PIPES AND OPSD-820.030 CLASS "B" FOR RIGID CIRCULAR PIPES.
- STORM AND SANITARY SEWER BEDDING IN WATER BEARING SAND AND SILT (WET TRENCH CONDITION) SHALL BE CONSIST OF HL6 STONE BEDDING OR 20 mm CRUSHER - RUN LIMESTONE WRAPPED IN FILTER CLOTH AS DETAILED IN DRAWING No. 1201-MP11 THE NECESSITY FOR IMPLEMENTING THESE MEASURES CAN BE ASSESSED AT THE TIME OF THE TRENCH EXCAVATION BY THE GEOTECHNICAL ENGINEER.
- ALL SERVICES AND STRUCTURES LOCATED IN TRENCH CUT SHALL BE SUPPORTED BY THE COMPACTED GRANULAR TO UNDISTURBED OR STRUCTURALLY COMPACTED GROUND.
- CCTV INSPECTION OF NEW SANITARY SERVICES REQUIRED POST INSTALLATION AND PRIOR TO ROADWAY RESTORATION.

### CATCHBASINS:

- ALL SINGLE AND DOUBLE CATCHBASINS SHALL BE PRE CAST AS PER OPSD-705.010 AND 705.020, RESPECTIVELY.
- ALL STREET CATCHBASINS FRAMES AND COVERS SHALL BE AS PER 400.110.
- ALL CATCHBASIN LEADS SHALL BE PVC SHALL BE SDR-35, 250 mm, 300 mm FOR DOUBLE.
- SQUARE PRE CAST CONCRETE CATCHBASIN ADJUSTERS SHALL BE USED IN LIEU OF BRICKING.
- ALL MANHOLE AND CATCHBASIN EXCAVATION SHALL BE BACKFILLED WITH GRANULAR "B" COMPACTED TO 100% PROCTOR DENSITY DOWN TO 1.0 m BELOW FINISHED GRADE AND TO 98% PROCTOR DENSITY THEREAFTER.

### SERVICE LATERALS:

- ALL PVC LATERAL SEWER PIPES SHALL BE 125 mm, WITH A PRESSURE RATING OF DR25 AND COMPLY WITH A.W.W.A. SPECIFICATIONS C900.
- ALL WATER SERVICE SHALL BE 25 mm DIAMETER TYPE "K" COPPER CONNECTION UNLESS OTHERWISE SPECIFIED.
- CURB STOPS IN DRIVEWAYS WILL NEED PVC SLEEVES.

### WATERMAINS:

- WATERMAINS AND APPURTENANCES SHALL BE AS PER THE TOWN OF MINTO SPECIFICATION.
- WATERMAINS SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 235, DR-18, CONFORMING TO AWWA C-900, CSA B137.3.
- WATERMAINS SHALL HAVE A MINIMUM COVER 2.0 m BELOW ROAD CENTERLINE.
- MINIMUM VERTICAL SEPARATION/CROSSING WITH SEWER SHALL BE 0.5 m. IF SEPARATION IS 0.5m, 50mm X 60mm STYROFORM INSULATION IS REQUIRED TO BE INSTALLED.
- MINIMUM HORIZONTAL SEPARATION/CLEARANCE WITH PARALLEL SEWER SHALL BE 2.5 m.
- MINIMUM CURVATURE OF PIPE DEFLECTION SHALL BE AS PER FOLLOWING GUIDELINES:  
 100 mm - R = 30.0 m;  
 150 mm - R = 43.0 m;  
 200 mm - R = 57.0 m;  
 300 mm - R = 83.0 m;  
 400 mm - R = 100.0 m.
- ALL WATERMAIN BEDDING SHALL BE CLEAN SAND FILL 150 mm BELOW TO 150 mm ABOVE OVERT. CLASS "E" AND CLASS "F" WITH RESTRAINED JOINTS FOR UNSTABLE GROUNDS.
- CATHODE PROTECTION SHALL BE PROVIDED ON ALL BURIED METAL PIPES AND FITTINGS. THE TYPE OF ANODE TO BE USED IN ACCORDANCE WITH ENGINEERING DESIGN CRITERIA. TOWNSHIP OF WELLINGTON NORTH BACK FLOW PREVENTER OPERATION IN ACCORDANCE WITH CSA - B64.5 OR AWWA C510.
- TRACER WIRE SHALL BE INSTALLED ON ALL PVC AS PER STANDARD AND SHALL BE No. 12 AWG COPPER CLAS STEEL BREAK LOAD 450 LB. (CANADIAN WIRE STRANDED T.W.V. 75C 600V OR APPROVED EQUIVALENT).
- VALVES SHALL BE PROVIDED AT THE END OF ALL PERMANENT AND TEMPORARY DEAD ENDS.
- ALL TEES HORIZONTAL BENDS, AND RESTRAINTS SHALL BE PROVIDED WITH THRUST BLOCKING AS PER STANDARD. ALL VERTICAL BENDS SHALL BE PROVIDED AS PER OPSD-1103.020 OR AS SPECIFIED.
- ALL PLUGGED TEES AND CROSSING SHALL BE PROVIDED WITH THRUST BLOCKING.
- ALL PIPE FITTINGS SHALL BE CAST IRON, CEMENT LINED MECHANICAL JOINTS, SHORT BODY CONFORMING TO AWWA C110 APPROVED. PRESSURE RATING 1035 kpa. IRON FITTING OR AWWA C135 FOR DUCTILE IRON FITTINGS, FITTINGS SHALL BE SUPPLIED WITH MECHANICAL JOINT TYPE ENDS AWWA C111.
- ALL VALVE BOXES SHALL BE 100 mm SLIDING TYPE BOX WITH 750 mm TOP SECTION AND 2,000 mm LENGTH LOWER SECTION AS REQUIRED COMPLETE WITH GUIDE PLATE. VALVE BOXES SHALL BE MUELLER A-769, OR BIBBY VB 3100, SCREW TYPE.

### PAVEMENT DESIGN:

- RESIDENTIAL ROADWAY (ASPHALT WIDTH = 8.5)  
 300 mm - COMPACTED DEPTH (GRAN "B")  
 150 mm - COMPACTED DEPTH (GRAN "A")  
 40 mm - COMPACTED DEPTH HL-3  
 50 mm - COMPACTED DEPTH HL-4
- DRIVEWAYS  
 200mm - COMPACTED DEPTH (GRAN "A")  
 300 mm - COMPACTED DEPTH (GRAN "A") WITHIN ROW  
 50 mm - COMPACTED DEPTH HL-3 MODIFIED FINE
- SUBGRADE OF APPROVED FILL MATERIAL SHALL BE COMPACTED TO DRY DENSITY NOT LESS THAN 100% OF THE STANDARD PROCTOR DENSITY DOWN TO 1.0 m BELOW GRADE. COMPACTIONS BELOW 1.0 m SHALL BE COMPACTED TO 98% PROCTOR DENSITY. COMPACTION SOIL DENSITY TESTS SHALL BE CONDUCTED TO ENSURE ADEQUATE COMPACTION AND STABILITY OF THE FILL AND TEST RESULTS SHALL BE SUBMITTED BY A GEOTECHNICAL ENGINEER. ALL TOPSOIL AND ORGANIC MATERIAL WITHIN THE ROAD ALLOWANCE SHALL BE STRIPPED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- HL3 AND HL4 ASPHALT PAVEMENT SHALL BE COMPACTED TO 97% MARSHAL DENSITY (100% SPMD). SPMD DENOTES STANDARD PROCTOR MAXIMUM DRY DENSITY, ASTM-D698
- MINIMUM 500mm WIDE MILLED ASPHALT LAP JOINTS ARE REQUIRED.

### GRADING:

- MAXIMUM SLOPE FOR GRADE SHALL BE 3:1 (HORIZONTAL TO VERTICAL), MINIMUM SLOPE SHALL BE 2.0%.
- PRIOR TO COMMENCEMENT OF SITE GRADING AND, SITE ALTERNATION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND OPERATIONAL. THE CONTRACTOR SHALL MAINTAIN ALL WORKS UNTIL SERVING CONSTRUCTION IS COMPLETE TO THE SATISFACTION OF THE ENGINEER.
- TYPICAL LOT DRAINAGE IS SPLIT TO BOTH FRONT AND TO BACK CONSISTENT WITH MUNICIPAL STANDARD G1.

### SUBDRAINS AND ROOF DRAINAGE:

- ROOF DRAINAGE SYSTEM SHALL NOT CONNECTED TO THE STORM SEWER SYSTEM UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING

### CURBING:

- SEMI-MOUNTABLE CURB AS PER OPSD 600.060, WITH TERMINATION CONSISTENT WITH OPSD 608.010.

### SIDEWALK: FUTURE

- CONCRETE SIDEWALK 1.5 m WIDE, 125 mm IN DEPTH AS PER OPSD STANDARD, WHERE CROSSING DRIVEWAYS, SIDEWALK SHALL BE 200 mm IN DEPTH. EXPANSION JOINT MATERIAL IS TO BE BITUMINOUS IMPREGNATED FIBREBOARD.

### EROSION & SEDIMENT CONTROL:

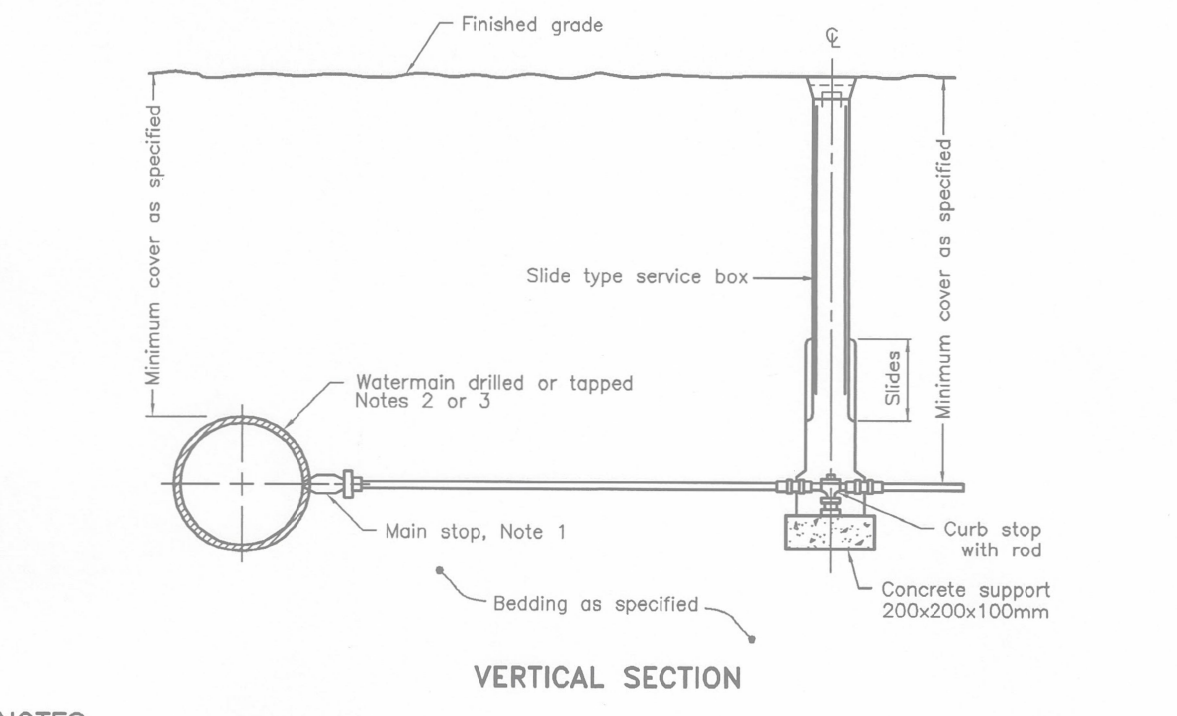
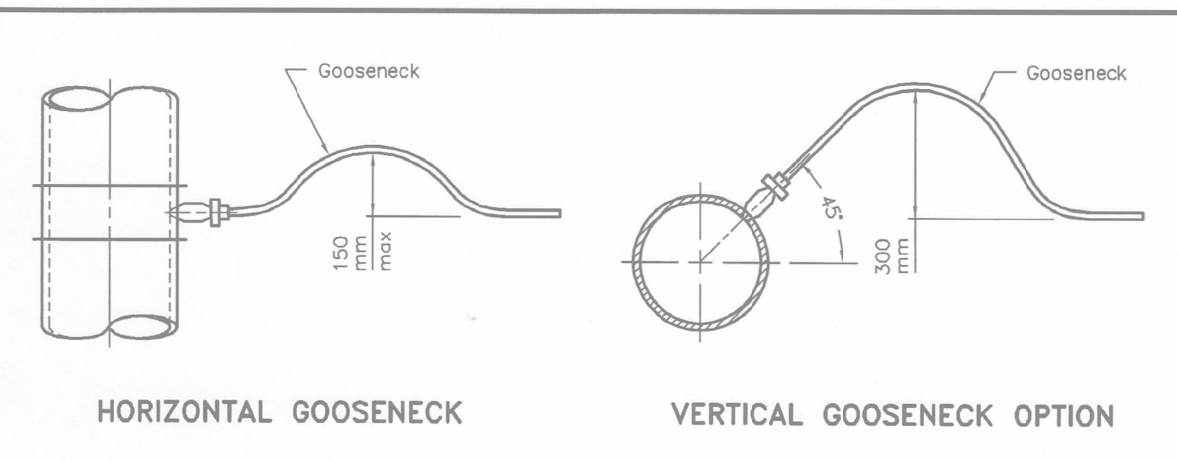
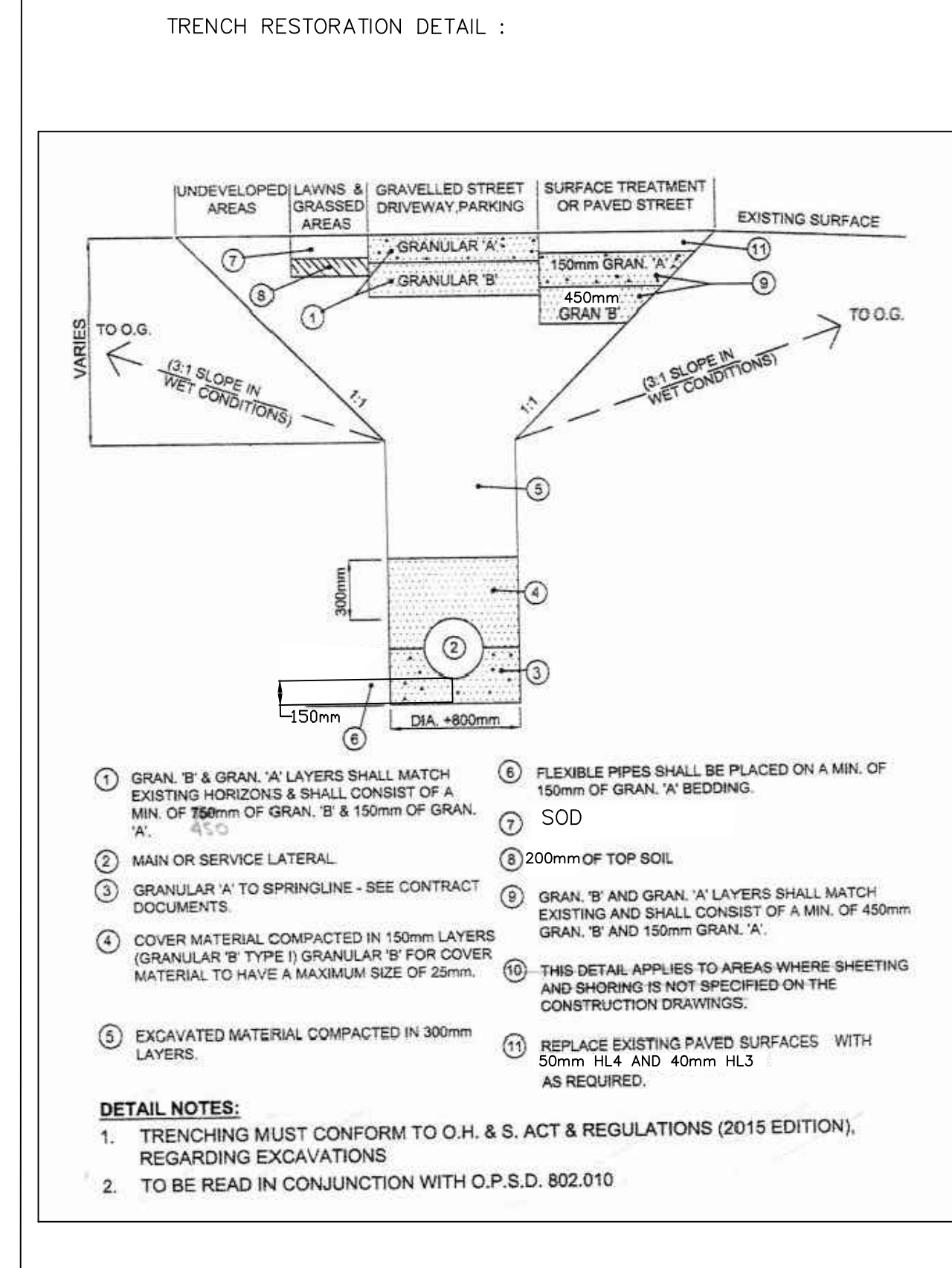
- INSTALL SEDIMENT FENCE AROUND THE SITE LIMIT - TERRAFIX 360R OR EQUIVALENT.
- INSTALL MUD MAT FOR CONSTRUCTION ACCESS POINT.
- INSTALL SEDIMENT TRAPS, PROTECTION ON EXISTING STREET CATCHBASINS.
- PROVIDE SEDIMENT CONTROL ON EXISTING DOUBLE INLET CATCHBASIN.
- INSTALL CUT-OFF SWALE ALONG SITE PERIMETER.
- CLEAR ALL EXISTING TREES WITHIN SITE LIMITS.
- STRIP TOPSOIL AND REMOVE OFF-SITE. NO TOPSOIL STOCKPILING ON SITE.

### BENCHMARK NOTES:

- UNDERLYING LEGAL FABRIC SHOWN ON DRAFT REFERENCE PLAN PREPARED BY WILSON - FORD. DIMENSIONS SHOWN HEREON ARE ROUNDED TO 1 DECIMAL.
- ELEVATIONS SHOWN HEREON ARE GEODETIC, DERIVED FROM GNSS OBSERVATIONS.
- SITE BENCHMARK = DERIVED FROM TOP OPERATING NUT OF FIRE HYDRANT AT NORTH-WEST CORNER OF WILLIAM STREET AND GEORGE STREET HAVING AN ELEVATION OF 381.817 METRES.
- UNDERGROUND INFRASTRUCTURE DATA FROM AS-CONSTRUCTED PLANS PREPARED BY TRITON ENGINEERING.

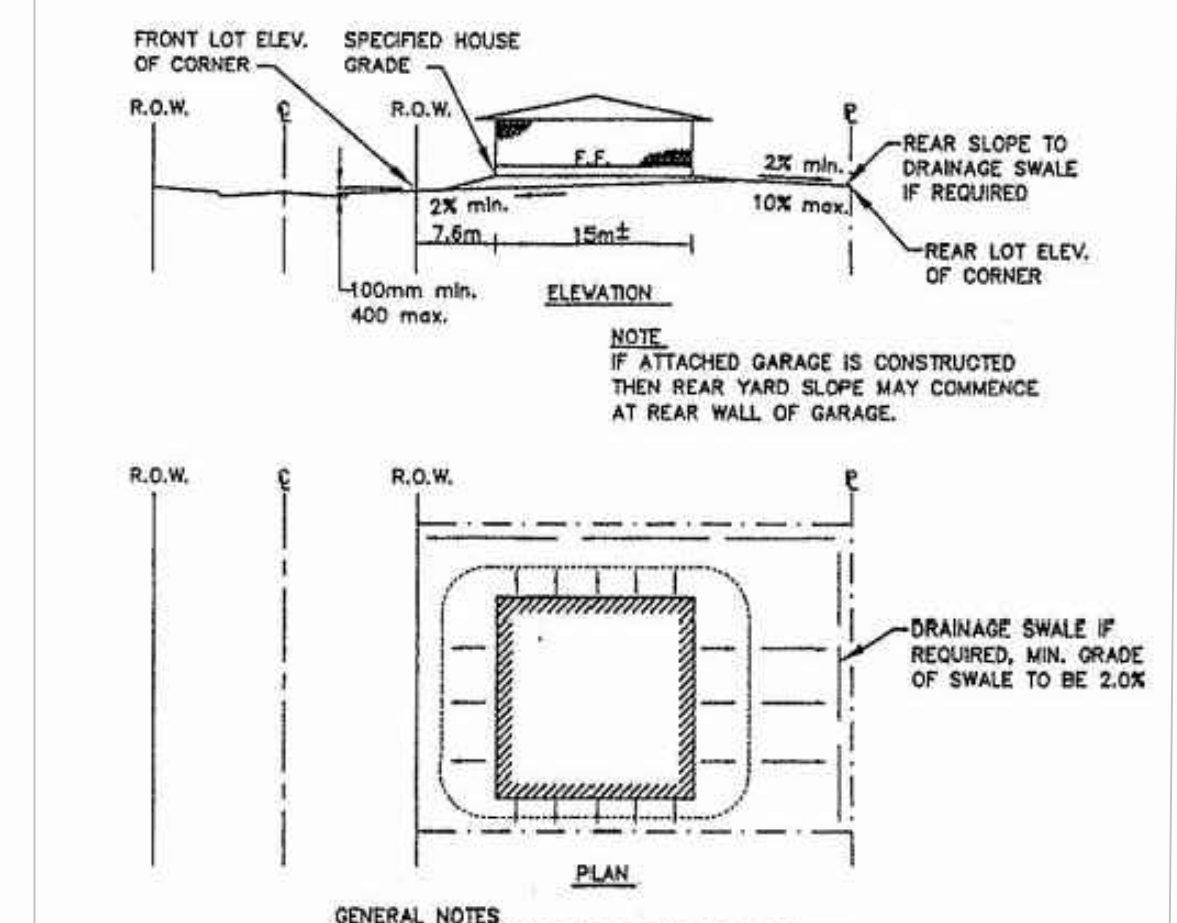
### BOULEVARDS & TREES:

- ALL BOULEVARDS TO HAVE MINIMUM 200mm TOPSOIL BEFORE SODDING PLUS SOD CONSISTENT WITH TOWNSHIP STANDARDS.
- TREES TO BE PLANTED AS SHOWN AND IN ACCORDANCE WITH TOWNSHIP STANDARDS.

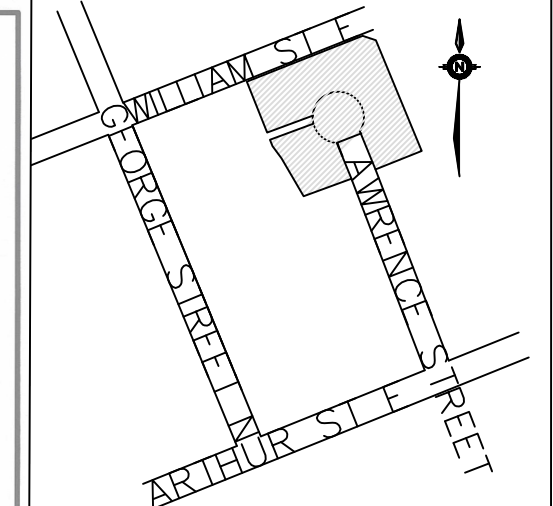
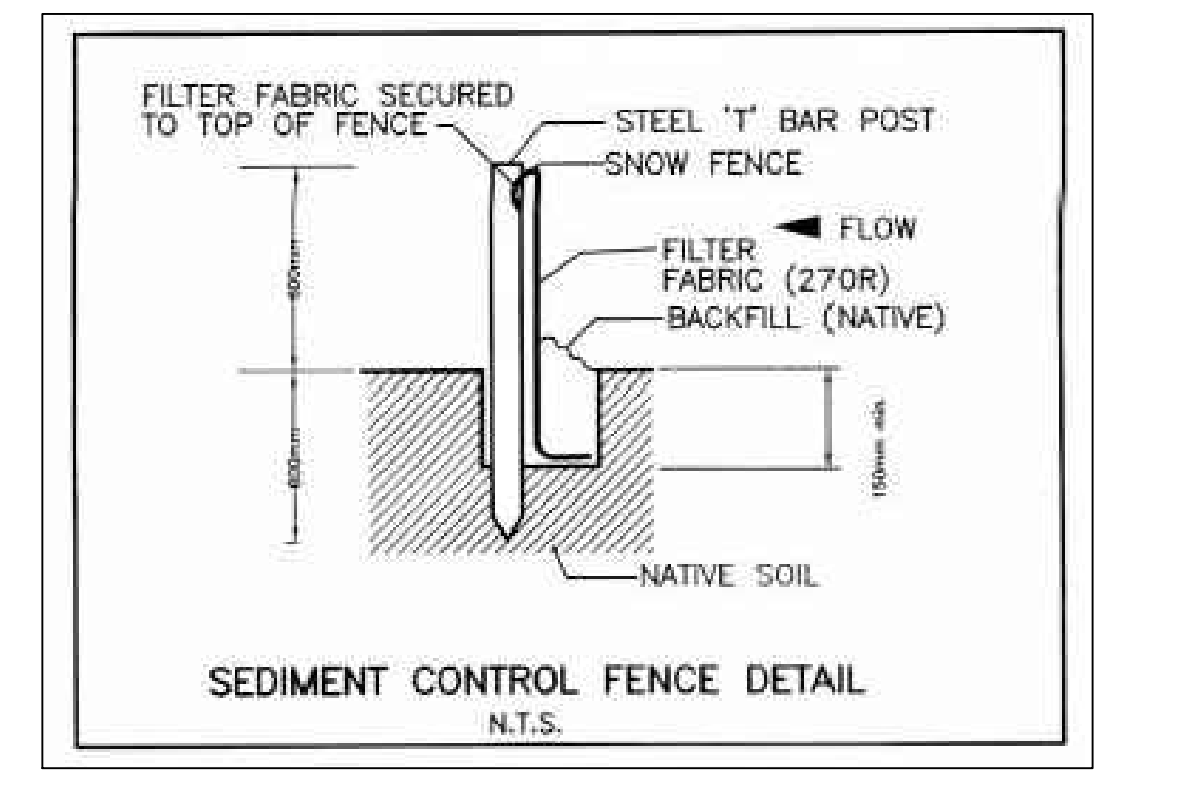


- NOTES:
- For plastic service pipes, install main stop at 15' above horizontal with a minimum 1.2m long gooseneck.
  - Direct tap ductile iron pipe with approved tool with standard AWWA inlet thread.
  - Service connections to plastic watermains shall be made using service saddles or factory made tees.
  - Couplings shall not be permitted unless the service length exceeds 20m between the main stop and curb stop.
  - All water services shall be installed 90° to the longitudinal axis of the watermain.
  - Backfill material within 500mm of service box shall be native or imported, as specified.
- A When specified, the vertical gooseneck option shall be used.

ONTARIO PROFESSIONAL STANDARD DRAWING  
 WATER SERVICE CONNECTION  
 19 and 25mm DIAMETER SIZES  
 Nov 2013 Rev 3  
 OPSD 1104.010



- GENERAL NOTES:
- SPECIFIED HOUSE GRADE SHALL BE 450mm MIN. ABOVE HIGH FRONT LOT CORNER.
  - DRIVEWAYS ARE NOT TO BE USED AS AN OUTLET FOR ANY SIDEYARD SWALES.



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1ST SUBMISSION - TOWN OF MINTO  
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LOT GRADING, SANITARY AND STORM  
 PART OF PARK LOTS 6 & 12  
 (GEO. TOWN OF HARRISTON)  
 COUNTY OF WELLINGTON

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 120 KING ST. E., Box 294,  
 MOUNT FOREST ON, N0G 2L0  
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DESIGN	DRAWN
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PROJECT No.8780	
DRAWING: 3 OF 4	

