

TOWNSHIP OF SEVERN

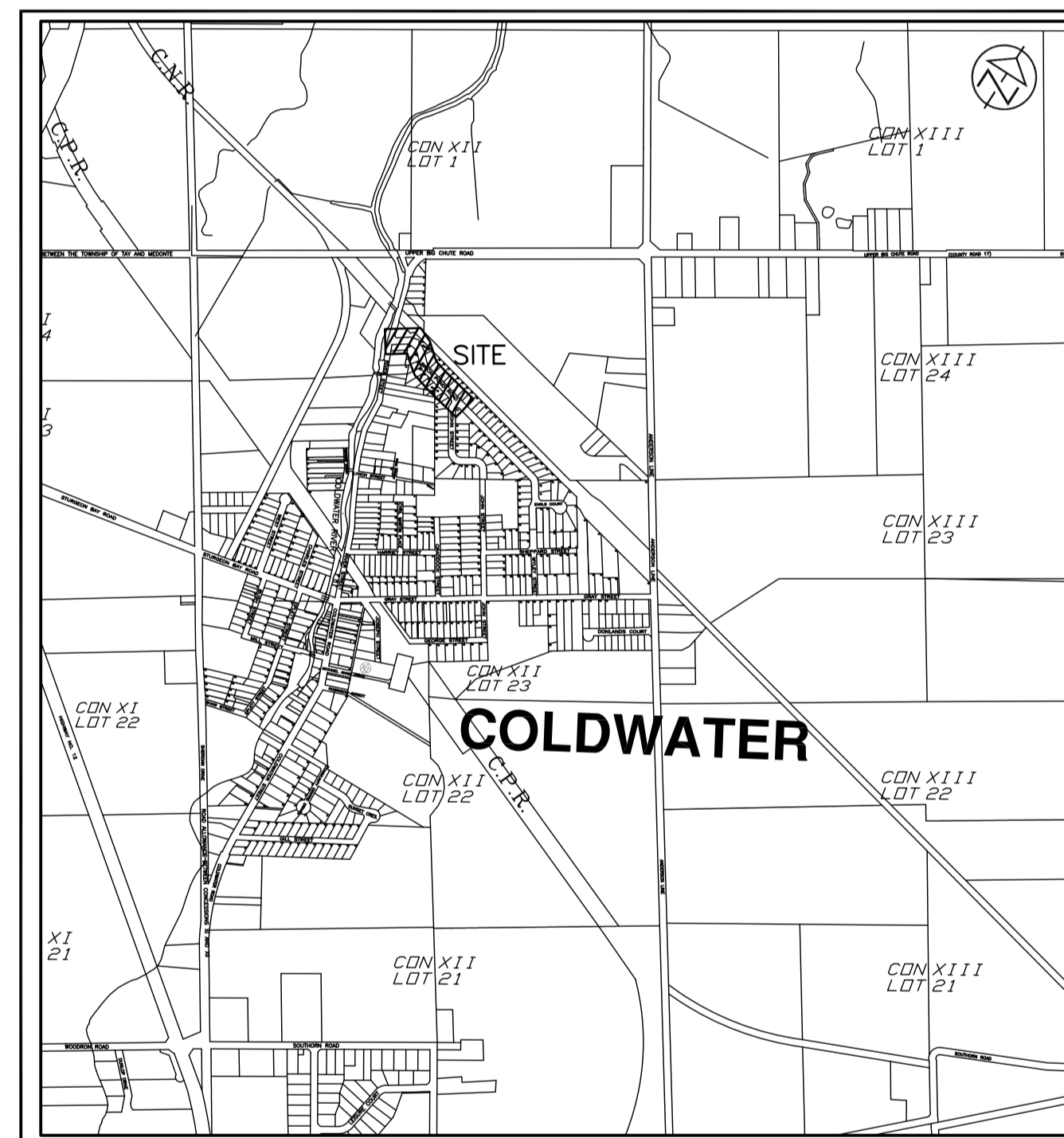
SANITARY SEWER REPLACEMENT - BRICK POND ROAD

ISSUED FOR TENDER



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KEY PLAN
N.T.S.

LEGEND

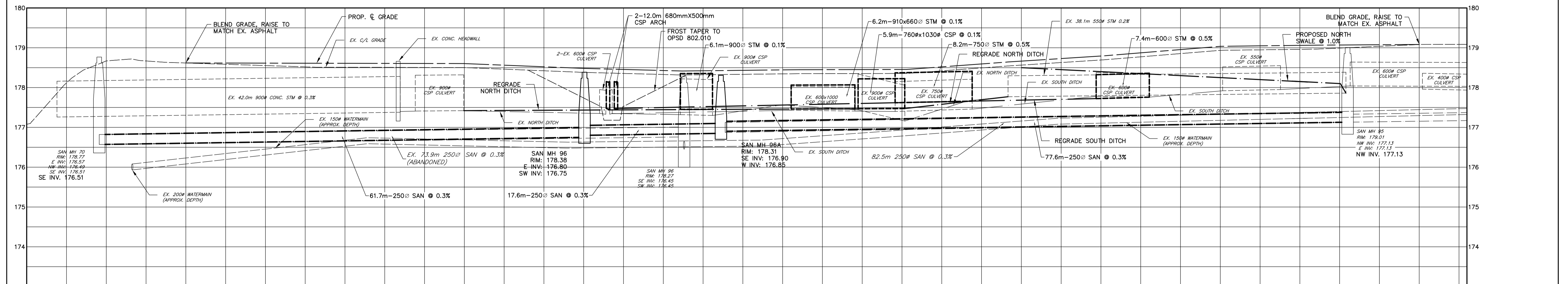
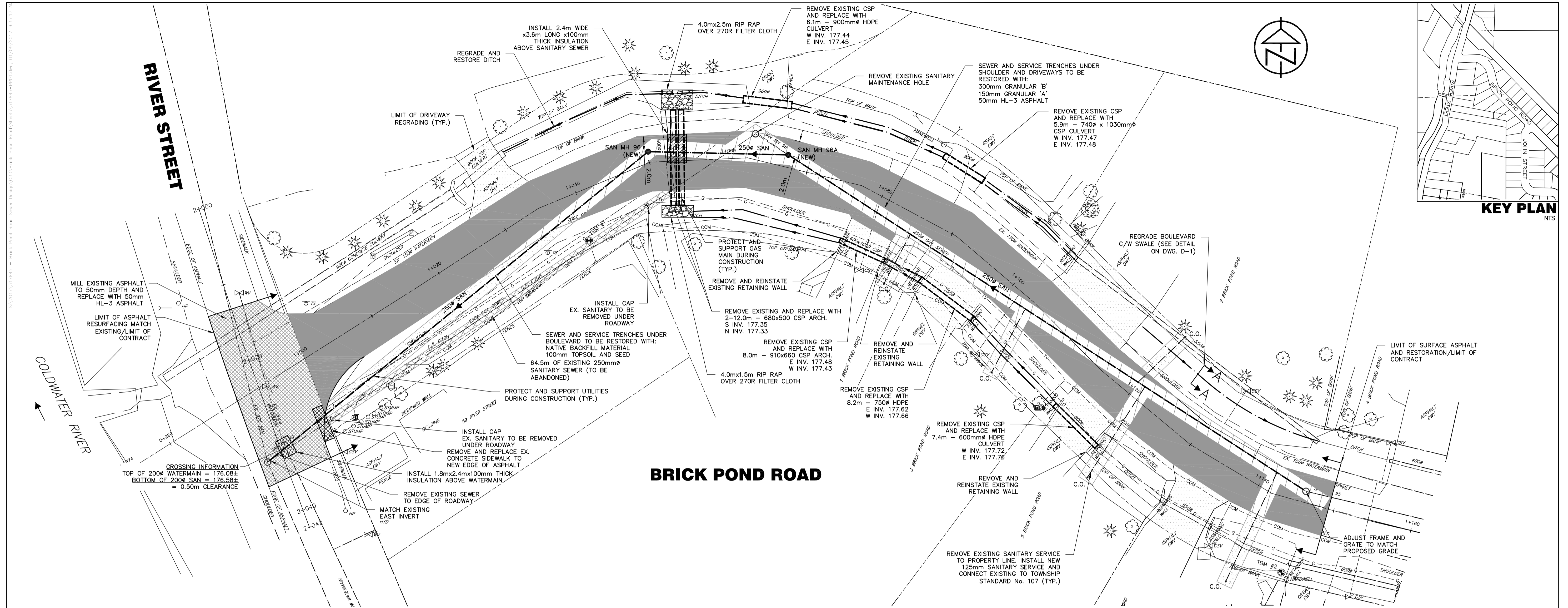
	EXISTING GAS MAIN
	EXISTING UNDERGROUND COMMUNICATION
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	EXISTING HYDRO
	EXISTING PROPERTY LINE
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	EXISTING GAS MARKER
	EXISTING STANDARD IRON BAR
	EXISTING TRAFFIC SIGN
	EXISTING DECIDUOUS TREE
	PROPOSED DITCH
	PROPOSED CULVERT
	PROPOSED SANITARY MAINTENANCE HOLE / NUMBER
	PROPOSED SANITARY SEWER



C.C. Tatham & Associates Ltd.
Consulting Engineers

Collingwood Bracebridge Orillia Barrie Ottawa

CCTA FILE No. 317845



CHANGING C/L ELEV	PROPOSED C/L ELEV	CHANGING C/L ELEV	PROPOSED C/L ELEV
178.62	178.62	178.62	178.62
178.61	178.61	178.61	178.61
178.56	178.56	178.56	178.56
178.43	178.43	178.43	178.43
178.45	178.45	178.45	178.45
178.59	178.59	178.59	178.59
178.87	178.87	178.87	178.87
179.06	179.06	179.06	179.06
179.09	179.09	179.09	179.09

LEGEND

CONTRACT DRAWINGS
 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 SCALED.
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TBM INFORMATION

TBM #1 NAIL AND WASHER IN HYDRO POLE ON SOUTH SIDE OF BRICK POND ROAD AT REAR OF HOUSE #59 OFF RIVER STREET. ELEVATION 178.496m.
 TBM #2 NAIL AND WASHER IN HYDRO POLE ON SOUTH SIDE OF BRICK POND ROAD BETWEEN HOUSE 7 AND 9. ELEVATION 178.845m.
 TBM #3 NAIL AND WASHER IN HYDRO POLE ON NORTH SIDE OF BRICK POND ROAD BETWEEN HOUSE 16 AND 18. ELEVATION 179.527m.

NOTE: UNDERGROUND UTILITY INFORMATION PROVIDED BY MULTIVIEW AND MUST BE CONFIRMED IN THE FIELD.

NO.	REVISIONS	DATE	INITIAL
2	ISSUED FOR TENDER	AUG. 2017	BWL
1	ISSUED FOR TOWNSHIP REVIEW	AUG. 2017	BWL

APPROVED

VILLAGE OF COLDWATER
 SANITARY SEWER REPLACEMENT
 TOWNSHIP OF SEVERN

PLAN & PROFILE
BRICK POND ROAD
 STA. 1+000 TO 1+160

C.C. Tatham & Associates Ltd.
 Consulting Engineers
 Collingwood Bracebridge Orillia Barrie Ottawa

SCALE: HORIZ. 1:250 VERT. 1:50
 DESIGN: BWL CHECKED: TCC
 DRAWN: SMM DATE: AUGUST 2017

JOB NO. 317845
 DWG. **PP-1**

1. STANDARDS AND DRAWINGS

- A. THE NOTES ON THIS SHEET APPLY TO ALL WORKS UNDER THIS CONTRACT UNLESS OTHERWISE NOTED ON THE PLAN AND PROFILE DRAWINGS AND/OR SPECIFIC DETAIL DRAWINGS.
- B. THE STANDARDS OF THE TOWNSHIP OF SEVERN, ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS (OPSS) AND THE ONTARIO PROVINCIAL STANDARDS DRAWINGS (OPSD) CONSTITUTE PART OF THE PLANS OF THIS CONTRACT.
- C. ORDER OF PRECEDENCE OF STANDARDS IS FIRSTLY TOWNSHIP OF SEVERN AND SECONDLY ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.
- D. THE STANDARD DRAWINGS INCLUDED WITH THESE PLANS ARE PROVIDED FOR CONVENIENCE ONLY AND ARE NOT TO BE CONSTRUED TO BE A COMPLETE SET FOR THE PURPOSE OF THE CONTRACT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL RELEVANT STANDARD DRAWINGS AND SPECIFICATIONS AS REQUIRED FOR THIS CONTRACT.

2. MEASUREMENTS

- A. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- B. ALL DIMENSIONS ARE IN METRES, EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES, UNLESS SPECIFIED OTHERWISE.

3. GENERAL

- A. NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE PLACED IN LAYERS 200mm IN DEPTH MAXIMUM AND COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- B. GRANULAR MATERIAL, USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- C. BEDDING, COVER AND BACKFILL OR EMBEDMENT AND BACKFILL TO CONFORM TO OPSD 802.010, 802.013, 802.030, 802.031, 802.032 AND 802.033 AS APPLICABLE BASED ON PIPE MATERIAL AND SOIL CONDITIONS. EMBEDMENT, BEDDING AND COVER MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. BACKFILL MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 98% OF THE MATERIAL'S SPMDD.
- D. ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE TOWN ENGINEER. DISTURBED GRASS AREAS ARE TO BE RESTORED WITH MINIMUM 100mm TOPSOIL AND SOD
- E. DRIVEWAY CULVERTS DISTURBED DURING CONSTRUCTION TO BE REMOVED AND REPLACED WITH MINIMUM 400mmØ (UNLESS OTHERWISE SPECIFIED) HDPE BOSS 2000 CULVERT BY ARITEC OR APPROVED EQUIVALENT. CULVERT HEADWALL MATERIALS DISTURBED/REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL CONDITION OR GREATER.
- F. EXISTING SERVICES AND UTILITIES SHOWN ON THESE CONTRACT DRAWINGS ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES DURING CONSTRUCTION.
- G. EXISTING SERVICES AND UTILITIES SHOWN ON THE CONTRACT DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE AND THEIR LOCATIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS THEY WISH WITH THE UNDERSTANDING THAT THE OWNER DISCLAIMS ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- H. TRAFFIC CONTROL AND SIGNAGE DURING CONSTRUCTION SHALL CONFORM TO MUNICIPAL REQUIREMENTS AND THE MOST CURRENT ONTARIO CONSTRUCTION REGULATIONS INCLUDING REGULATION No. 213 UNDER OHSA AND REFERENCE TO MTO TEMPORARY CONDITIONS MANUAL BOOK No. 7. TRAFFIC CONTROL PLANS TO BE PROVIDED BY THE CONTRACTOR AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
- I. THE CONTRACTOR IS RESPONSIBLE FOR LAYOUT. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF, AND FOR THE COST OF REPLACING BENCHMARKS AND SURVEY BARS.
- J. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM EXISTING GRADES AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE COMMENCING WORK.
- K. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY SUPPORT OF EXISTING SEWER, WATERMAIN AND UTILITIES AT ALL CROSSINGS.
- L. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING, TEMPORARILY STORING AND REINSTATING EXISTING ROAD SIGNS. SIGNS THAT ARE DAMAGED AS A RESULT OF CONSTRUCTION WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

4. ROADS

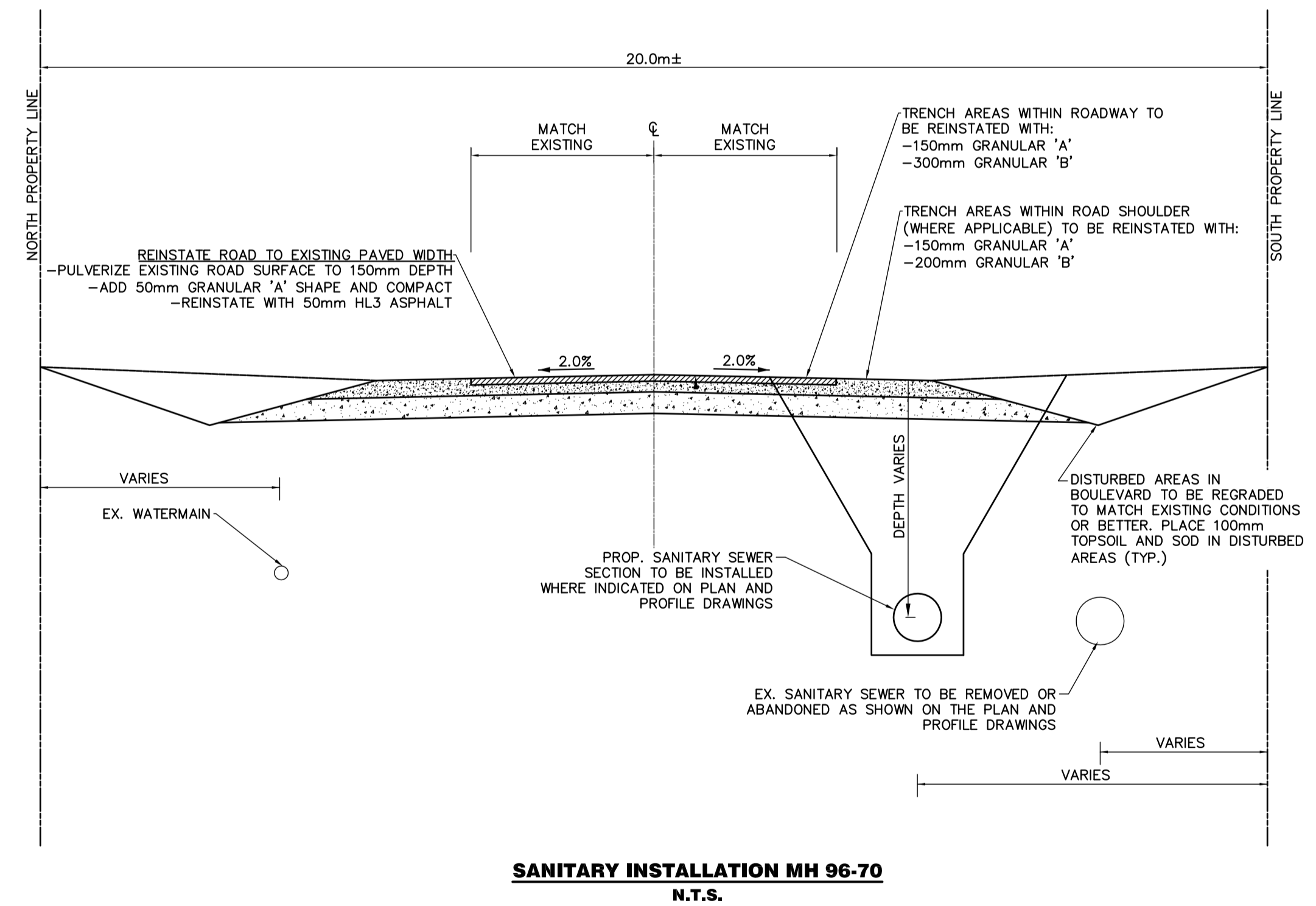
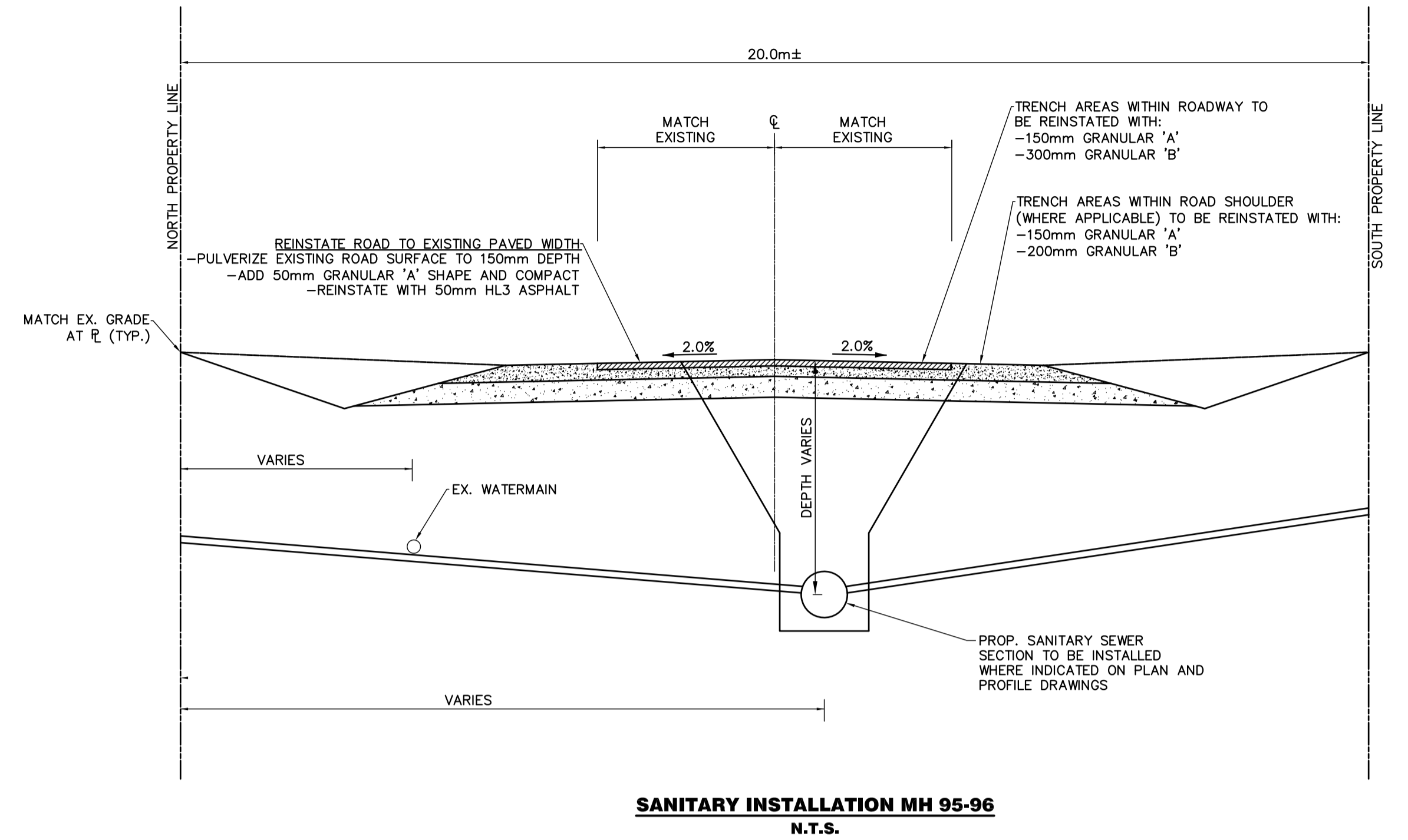
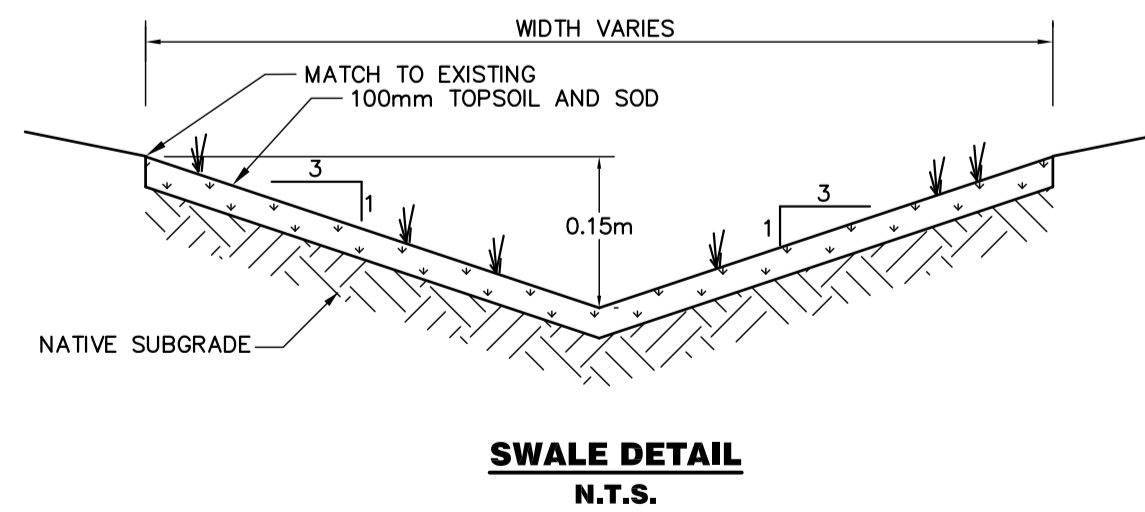
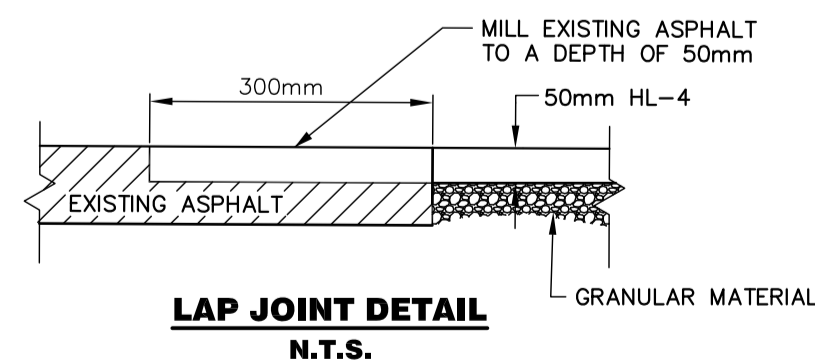
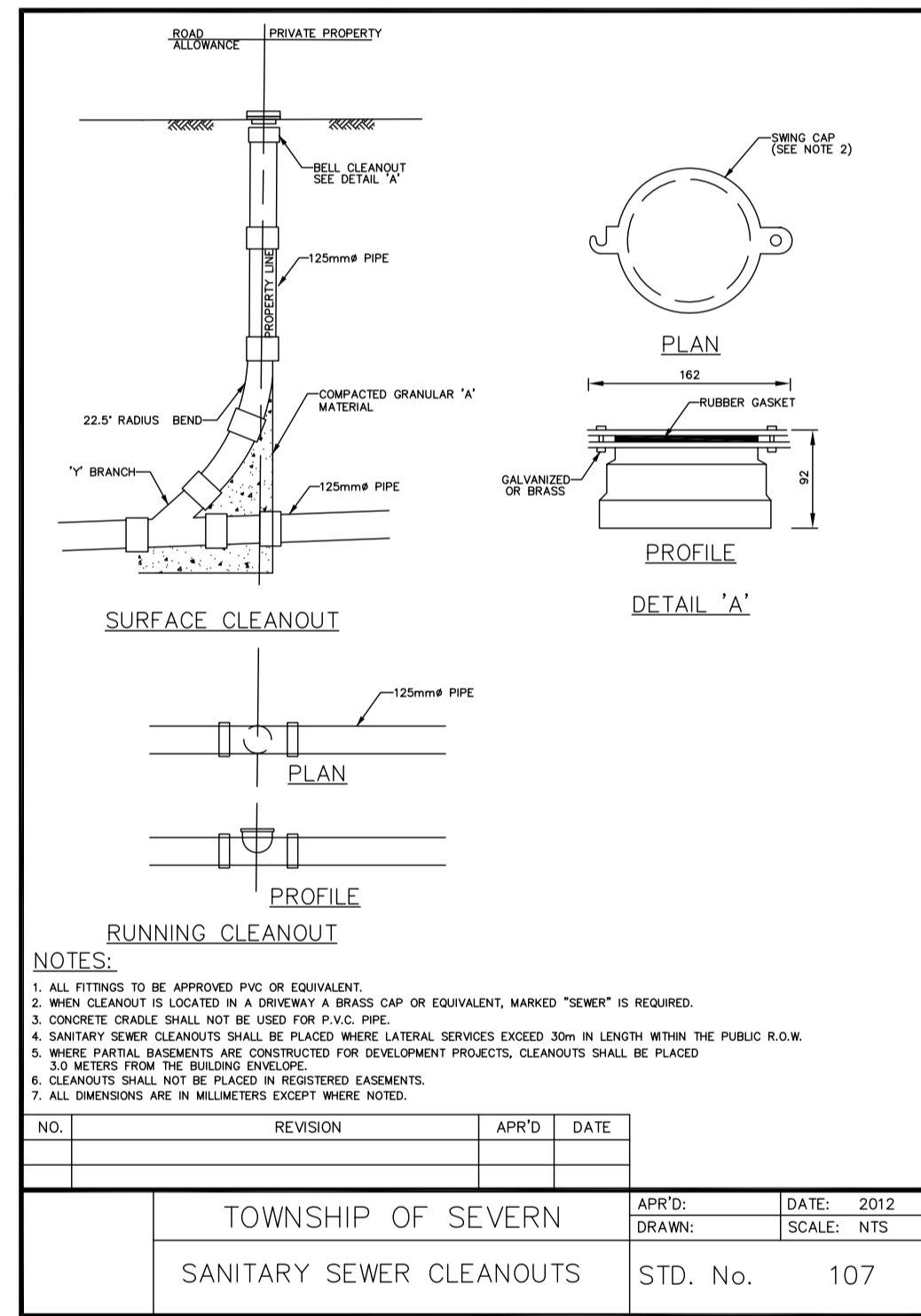
- A. ADJUSTMENT UNITS MUST BE CERTIFIED TO MEET ALL PERTINENT OPS, CSA, ASTM AND MTO-DSM LIST, OR OTHER INDUSTRY GUIDELINES FOR MATERIALS, PERFORMANCE AND USE AS APPLICABLE.
- B. ADJUSTMENT UNITS AND JOINTS WILL BE SEALED IN COMPLIANCE WITH MANUFACTURER'S SPECIFICATIONS AND GUIDELINES. PARGING IS NOT PERMITTED ON THE INSIDE OF ANY ADJUSTMENT UNITS.
- C. MORTAR IS USED FOR LEVELING OF PRECAST UNITS ONLY. THE MAXIMUM THICKNESS OF MORTAR WILL BE 10mm TO FILL ALL VOIDS CREATED BY IRREGULARITIES IN THE PRECAST UNITS TO ENSURE AN EVEN SURFACE ONLY.
- D. THE ROAD PAVEMENT RESTORATION STRUCTURE WITHIN DISTURBED AREA SHALL CONSIST OF THE FOLLOWING:
-50mm HL3 ASPHALT
-150mm GRANULAR 'A'
-300mm GRANULAR 'B'
- E. GRANULARS SHALL HAVE A CROSSFALL 2%, COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY. THE MATERIAL SHALL BE APPROVED BY A SOILS CONSULTANT.
- F. ASPHALT SHALL HAVE A CROSSFALL OF 2%, COMPACTED TO A MINIMUM OF 97% MAXIMUM BULK DENSITY. MIX DESIGN AND THE MATERIAL SHALL BE APPROVED BY THE ENGINEER.
- G. SURFACE COURSE ASPHALT WITHIN PROJECT LIMITS SHALL NOT BE RESTORED UNTIL ACCEPTANCE OF CCTV INSPECTION OF SANITARY SEWER.
- H. LAP JOINTS TO BE USED PER DETAIL ON THIS DRAWING AT ALL ROAD CUTS JOINING EXISTING ROADWAYS.
- I. ALL DRIVEWAYS SHALL BE REINSTATED TO MATCH EXISTING AT PROPERTY LINE AND SHALL CONSIST OF THE FOLLOWING:
ASPHALT - MINIMUM 150mm GRANULAR 'A', 50mm HL3 ASPHALT
GRANULAR - MINIMUM 150mm GRANULAR 'A'

5. SANITARY SEWER

- A. THE PIPE DIAMETERS SHOWN ON THE DRAWINGS ARE THE NOMINAL DIAMETERS OF THE PROPOSED PIPES.
- B. SANITARY SEWERS FOR FLEXIBLE PIPES INSTALLED VIA OPEN TRENCH SHALL BE CONSTRUCTED WITH EMBEDMENT AND BACKFILL AS PER OPSD-802.010 (GRANULAR 'A' EMBEDMENT MATERIAL) UNLESS OTHERWISE APPROVED BY THE ENGINEER. IN WET AREAS BEDDING AND EMBEDMENT MATERIAL TO BE 9.5mm CLEAR LIMESTONE WRAPPED IN AN APPROVED GEOTEXTILE (TERRAFIX 270R OR APPROVED EQUAL).
- C. ALL PIPE HANDLING AND INSTALLATION MUST BE IN STRICT COMPLIANCE WITH MANUFACTURER'S INSTALLATION GUIDES AND THE O.C.P.A. OR UNIBELL GUIDELINES.
- D. PRECAST MAINTENANCE HOLES SHALL BE 1200mm DIAMETER UNLESS OTHERWISE SPECIFIED, AND SHALL BE IN ACCORDANCE WITH OPSD 701.010, 701.011, AND 701.012 WHERE APPLICABLE. ADJUSTABLE MAINTENANCE HOLE FRAMES AS PER TOWNSHIP SPECIFICATIONS AND CERTIFIED TO CSA STANDARDS A257.4. COVER SHALL BE IN ACCORDANCE WITH OPSD 401.010, TYPE 'A' COVER SHALL HAVE THE WORD "SANITARY" ON IT.
- E. BENCHING SHALL BE TO OPSD 701.021.
- F. FOR OPEN TRENCH INSTALLATIONS THE CONTRACTOR SHALL USE INSTALLATION METHODS, INCLUDING REMOVABLE TRENCH BOX AS NECESSARY, IN ORDER TO MINIMIZE DISTURBANCE AND IMPACTS ON THE ROADWAY AND EXISTING FEATURES IN THE BOULEVARD (i.e. TREES, FENCING, UTILITIES, ETC.)
- G. EXISTING SANITARY SEWERS AND SANITARY SERVICES ARE LIVE AND THE CONTRACTOR SHALL MAINTAIN SANITARY SEWAGE FLOWS FOR THE DURATION OF CONSTRUCTION INCLUDING TEMPORARY MEASURES TO MAINTAIN OPERATION OF THE SEWERS AS NECESSARY.
- H. WHERE REPLACEMENT OF THE SEWER IS PROPOSED, EXISTING SERVICES ARE TO BE REMOVED TO PROPERTY LINE. NEW 125mm SERVICE TO BE INSTALLED AND CONNECTED TO EXISTING AT PROPERTY LINE TO TOWNSHIP STANDARDS No. 107.

6. MATERIALS

- A. INSULATION - 100mm STYROFOAM H1-40 OR APPROVED EQUAL.
- B. GEOTEXTILE SHALL BE TERRAFIX 270R OR APPROVED EQUIVALENT.
- C. PIPE MATERIAL FOR SEWERS INSTALLED VIA OPEN TRENCH UP TO AND INCLUDING 600MM DIA. TO BE PVC SDR 35 CERTIFIED TO C.S.A. STANDARDS B182.2 AND B182.4.
- D. PIPE MATERIAL FOR SANITARY SERVICE LATERALS TO BE PVC DR 28 CERTIFIED TO C.S.A. STANDARDS B.182.2.
- E. SERVICE CONNECTIONS TO NEW PVC SEWER TO BE MADE WITH PRE-MANUFACTURED PVC DR 28 SERVICE TEE CERTIFIED TO C.S.A. STANDARD B.182.2.
- F. SERVICE CONNECTIONS TO EXISTING SEWER TO BE MADE WITH PVC SDR35 SERVICE SADDLE CERTIFIED TO C.S.A. STANDARD B.182.2.



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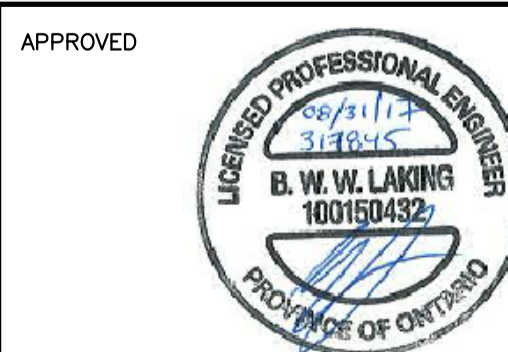
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VILLAGE OF COLDWATER
SANITARY SEWER REPLACEMENT
TOWNSHIP OF SEVERN

NOTES AND DETAILS

C.C. Tatham & Associates Ltd.
Consulting Engineers
Collingwood Bracebridge Orillia Barrie Ottawa

SCALE: AS NOTED
JOB NO. 317845

DESIGN: BWL
CHECKED: TOC
DRAWN: SMM
DATE: AUGUST 2017

DWG. **DE-1**