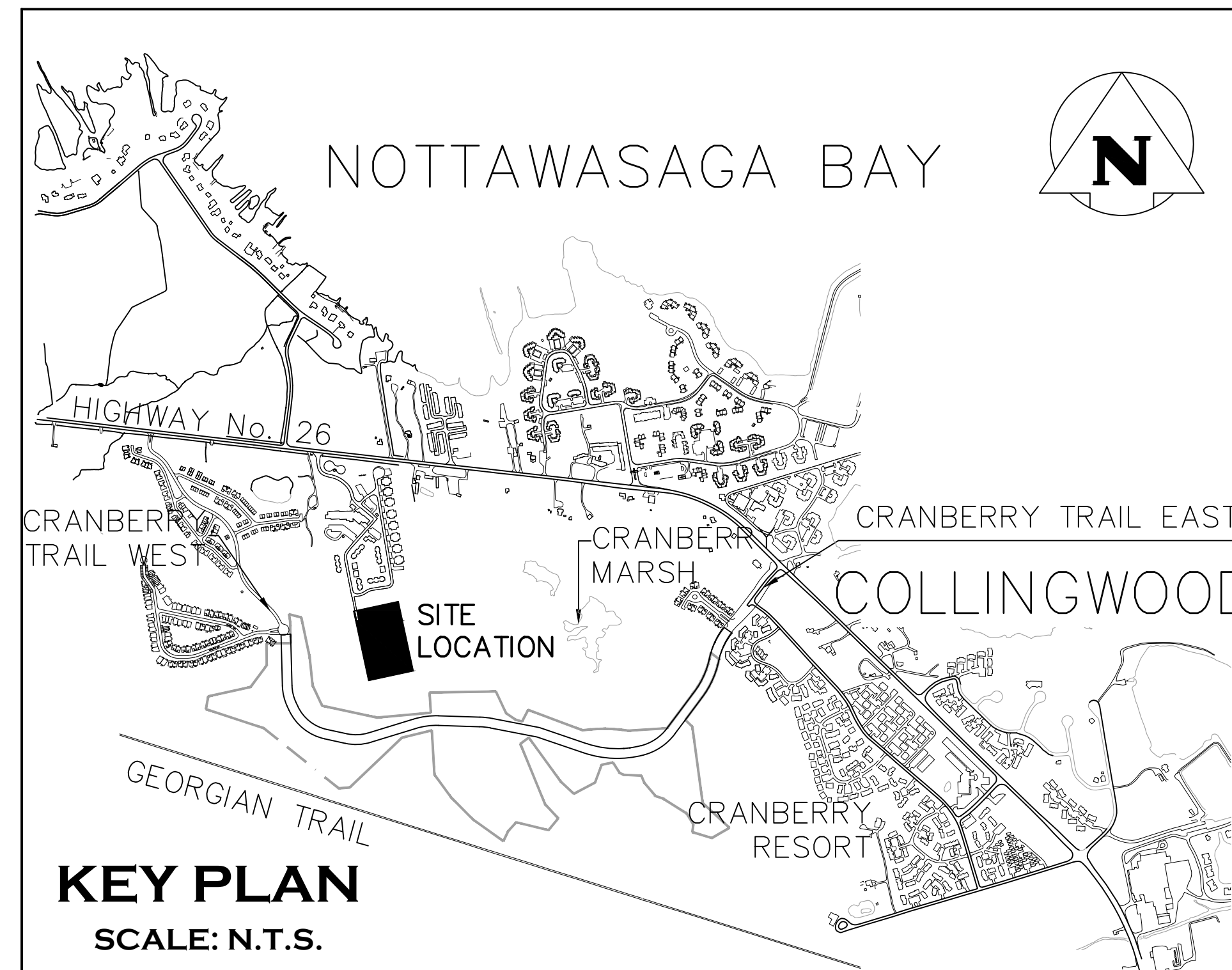


WYLDEWOOD CREEK

TOWN OF COLLINGWOOD

COUNTY OF SIMCOE




MUNICIPALITY

TOWN OF COLLINGWOOD
97 HURONTARIO STREET, P.O. BOX 157
COLLINGWOOD, ONTARIO, L9Y 3Z5

DEVELOPER

BRANDY LANE CORPORATION
4580 DUFFERIN STREET, SUITE 307
TORONTO, ONTARIO, M3H 5Y2

DEVELOPER'S ENGINEER



CROZIER
CONSULTING ENGINEERS

THE HARBOUREdge BUILDING,
40 HURON STREET, SUITE 301,
COLLINGWOOD, ON L9Y 4R3
705 446-3510 T
705 446-3520 F
WWW.CFCROZIER.CA
INFO@CFCROZIER.CA

LANDSCAPE ARCHITECT

HENSEL DESIGN GROUP INC.
372 PEEL STREET
COLLINGWOOD, ONTARIO, L9Y 3W4

ARCHITECT

CMV GROUP ARCHITECTS
247 SPADINA AVENUE, 4TH FLOOR
TORONTO, ONTARIO, M5T 3A8

DRAWING

DRAWING	TITLE
C100	COVER SHEET
C101	GENERAL SITE SERVICING PLAN
C102	OVERALL SITE GRADING PLAN
C103	PLAN & PROFILE STREET 'A' (STA. 0+000 – 0+288.22)
C104	CREEK GRADING PLAN AND DETAILS
C105	CULVERT CROSSING PLAN AND DETAILS
C106	SANITARY DRAINAGE PLAN
C107	STORM DRAINAGE PLAN
C108	EROSION AND SEDIMENT CONTROL PLAN
C109	CONSTRUCTION NOTES & STANDARD DETAILS
C110	COMPOSITE UTILITY PLAN

MASTER LEGEND

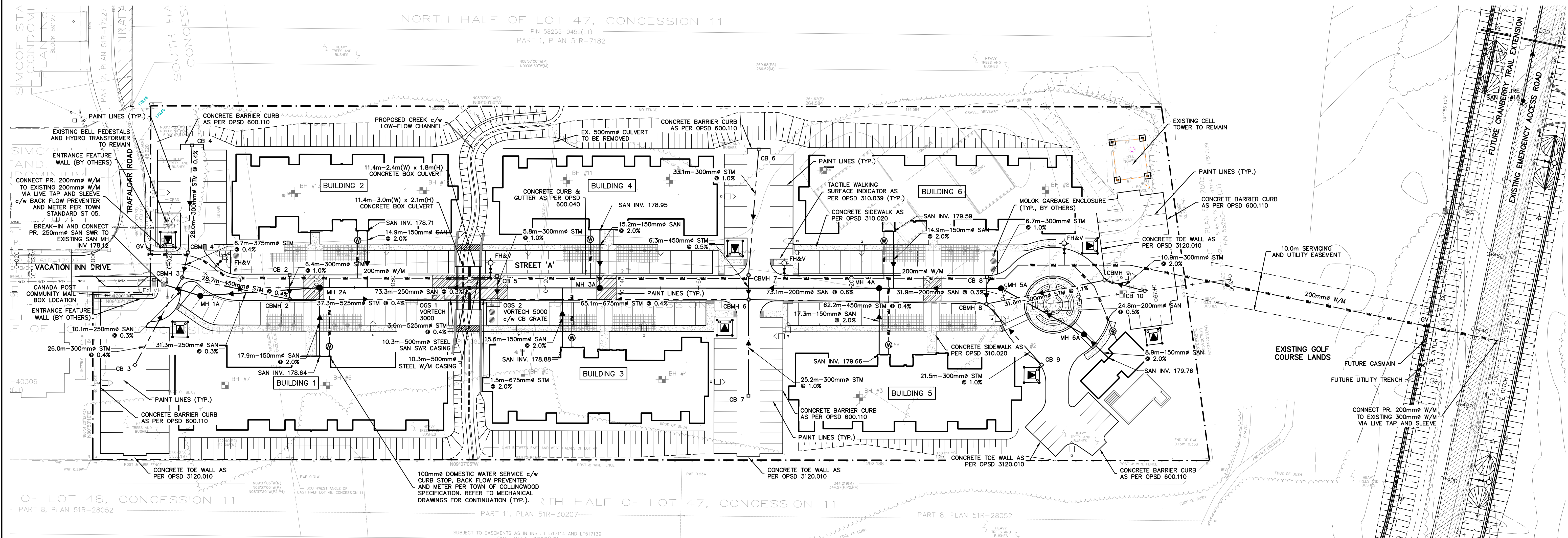
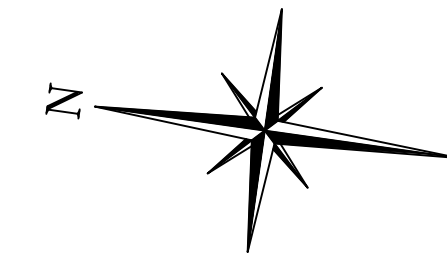
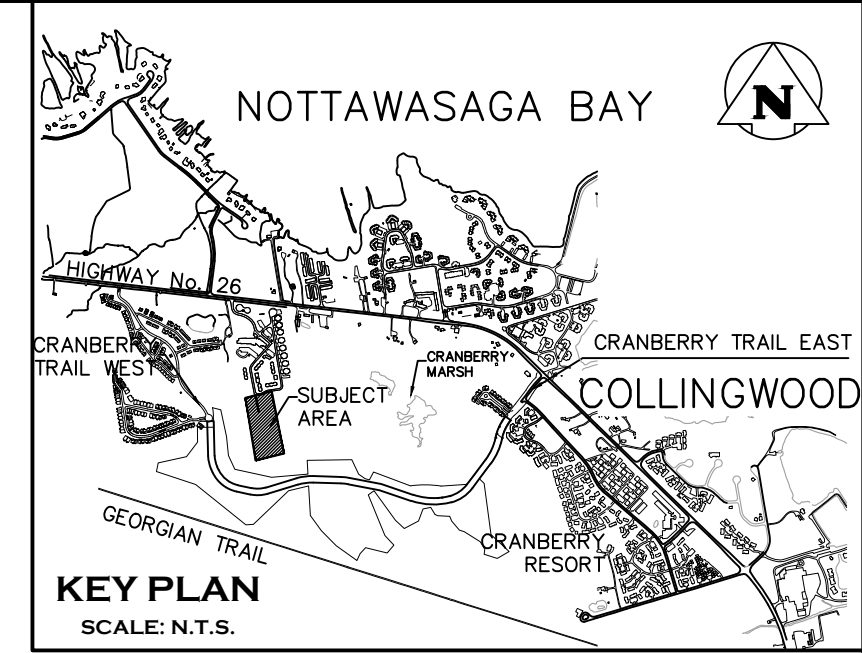
EXISTING FEATURES (EX.)

---XXX.X---	EX. CONTOUR
+XXX.XX	EX. GRADE
~~~~~	EX. TREELINE
=====	EX. WATERCOURSE
--->--->---	EX. DITCH
---XMX---XMX---	EX. WATERMAIN
---(W)---	EX. WATER SERVICE
---(FH)---	EX. FIRE HYDRANT & VALVE
---(SS)---	EX. SANITARY SEWER & MANHOLE
---(SFM)---	EX. SANITARY FORCEMAIN
---(S)---	EX. SANITARY SERVICE
---(SSM)---	EX. STORM SEWER & MANHOLE
□	EX. STORM CATCHBASIN
□□	EX. STORM DOUBLE CATCHBASIN
○	EX. STORM CATCHBASIN MANHOLE
○□	EX. STORM DOUBLE CATCHBASIN MANHOLE
---XGAS---	EX. GAS MAIN
---XB---	EX. BELL LINE
□	EX. BELL PEDESTAL
□	EX. CABLE TELEVISION PEDESTAL
○HP	EX. HYDRO POLE
○	EX. LIGHT STANDARD
+	EX. SIGN
▭	EX. BUILDING
⊕ BM#	EX. BENCHMARK NUMBER & LOCATION
⊕ BH#	EX. BOREHOLE NUMBER & LOCATION

PROPOSED FEATURES (PR.)

---	PR. PROPERTY LIMITS
+XXX.XX	PR. ELEVATION
+XXX.XX	PR. ELEVATION (MATCH EX. ELEVATION)
X.X%	PR. SWALE & SLOPE
--->---	PR. DITCH DRAINAGE
---(W)---	PR. WATERMAIN & VALVE
---(FH)---	PR. WATER SERVICE
---(FH)---	PR. FIRE HYDRANT & VALVE
---(W)---	PR. WATER VALVE CHAMBER
---(S)---	PR. WATER QUALITY TESTING STATION
---(SS)---	PR. SANITARY SEWER & MANHOLE
---(SFM)---	PR. SANITARY FORCEMAIN
---(S)---	PR. SANITARY SERVICE
---	PR. SANITARY CATCHMENT
○	CATCHMENT AREA ID
○	AREA (ha)
○	POPULATION (3.5 p.p.u.)
---	PR. STORM SEWER & MANHOLE
□	PR. CATCHBASIN
□□	PR. DOUBLE CATCHBASIN
○	PR. CATCHBASIN MANHOLE
○□	PR. DOUBLE CATCHBASIN MANHOLE
---	PR. STORM CATCHMENT
---	CATCHMENT AREA ID
○	RUNOFF COEFFICIENT
○	DRAINAGE AREA (ha)
---	PR. CURB CUT
□	PR. CANADA POST COMMUNITY MAIL BOX
⊕	PR. TRANSFORMER
SS	PR. STOP SIGN
NS	PR. NAME SIGN
NP	PR. NO PARKING SIGN
---	PR. FENCE
---	PR. BUILDING ENVELOPE
---	PR. LIGHT DUTY SILT FENCE
---	PR. HEAVY DUTY SILT FENCE
---	PR. STRAW BALE CHECK FLOW
---	PR. ROCK CHECK DAM
	PR. SLOPE (3:1 MAX.)
▭	PR. TREE PRESERVATION AREA
▭	PR. TOPSOIL STOCKPILE LOCATION

**PROJECT No.: 1535-4897**  
**1ST SUBMISSION**



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4. DO NOT SCALE THE DRAWINGS.
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**BENCHMARKS**

ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE RELATED TO TOWN OF COLLINGWOOD BENCH MARK NO. 00172U311 HAVING AN ELEVATION OF 181.032 METRES.

TOPOGRAPHIC SURVEY COMPLETED BY KRCMAR SURVEYORS LTD., DATED AUGUST 25, 2018.

No.	ISSUE	DATE: MM/DD/YYYY
1	ISSUED FOR 1st ENGINEERING SUBMISSION	02/04/2019

Town	Engineer	Project

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

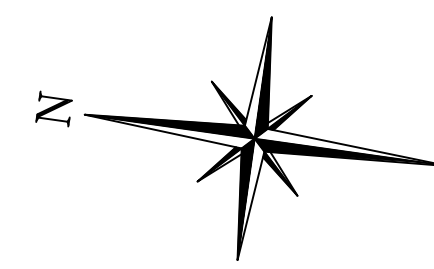
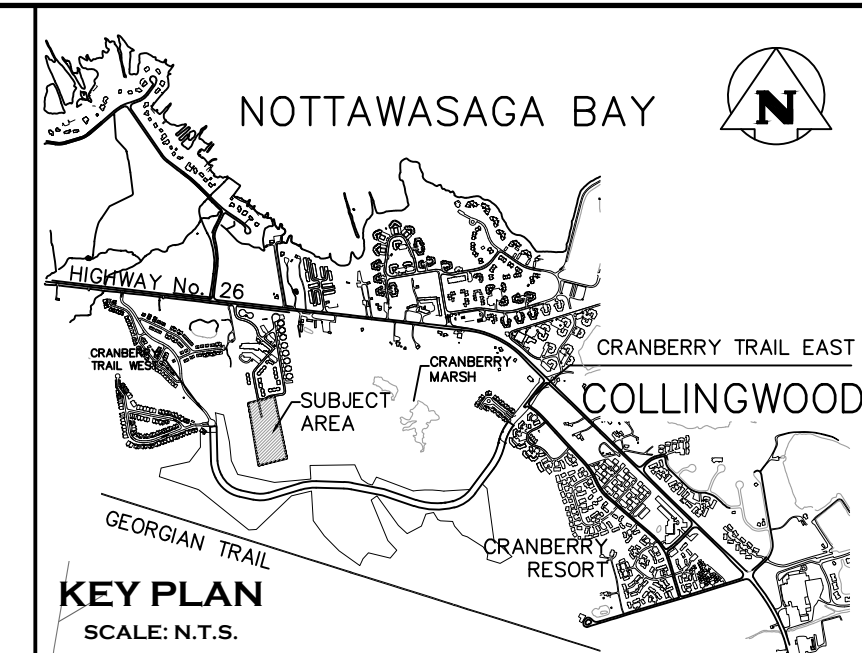
**WYLDEWOOD CREEK**  
**TOWN OF COLLINGWOOD**

**GENERAL SITE SERVICING PLAN**

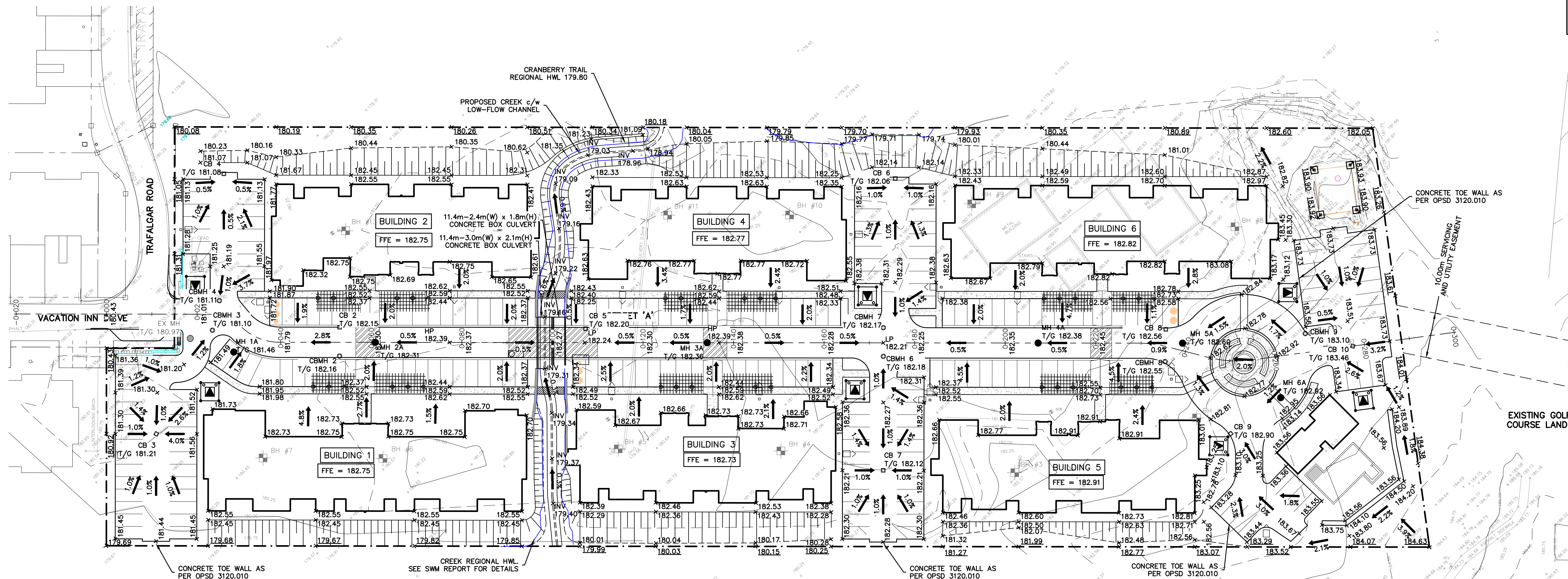
**CROZIER**  
CONSULTING ENGINEERS

THE HARBOUREGE BUILDING,  
40 HURON STREET, SUITE 301,  
COLLINGWOOD, ON L9Y 4R3  
705 446-3510 T  
705 446-3520 F  
WWW.CFCROZIER.CA  
INFO@CFCROZIER.CA

Drawn By: L.W.	Design By: L.W.	Project: <b>1535-4897</b>
Check By: K.M.	Check By: R.A.	Scale: 1:500 Drawing: <b>C101</b>



NOTE:  
ALL GRADE ELEVATIONS ARE  
BOTTOM OF CURB UNLESS  
OTHERWISE NOTED.



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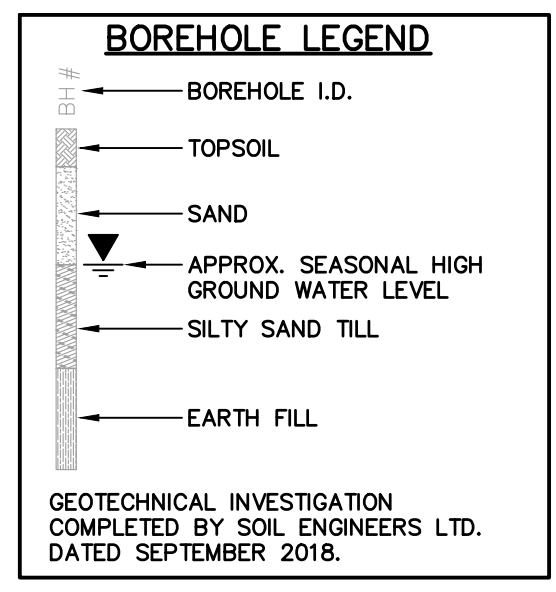
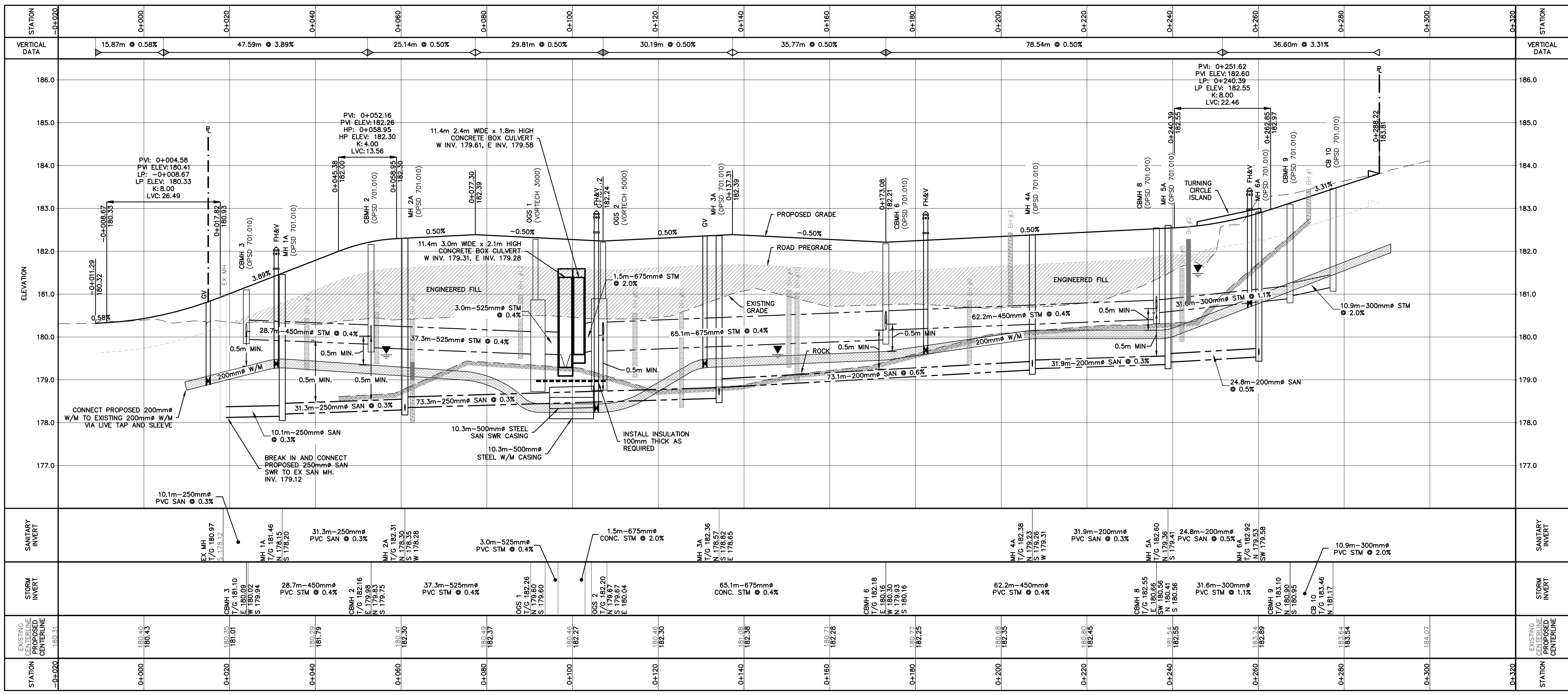
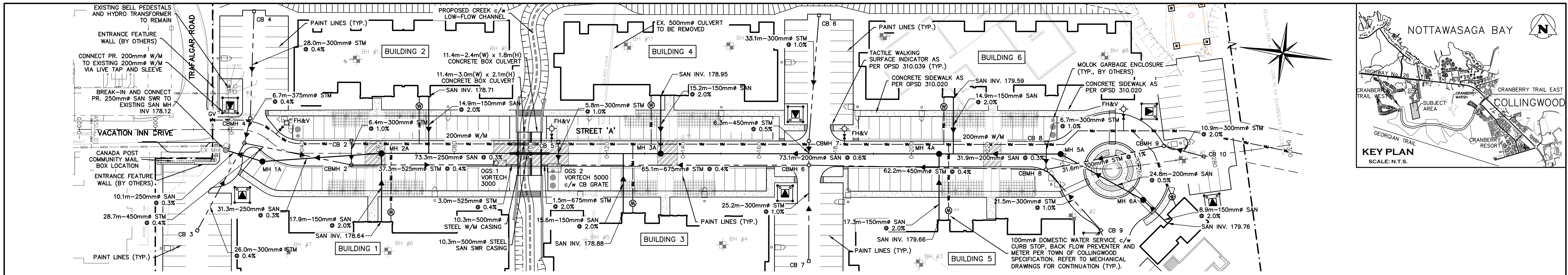
Engineer	Project
	WYLDEWOOD CREEK TOWN OF COLLINGWOOD
	OVERALL SITE GRADING PLAN

**PRELIMINARY**  
NOT TO BE USED FOR CONSTRUCTION

Drawn By	Design By	Project
L.W.	L.W.	1535-4897
Check By	Scale	Drawing
K.M.	1:500	C102

**CROZIER**  
 CONSULTING ENGINEERS

THE HARBOUREDGE BUILDING,  
 40 HURON STREET, SUITE 301,  
 COLLINGWOOD, ON L9Y 4R3  
 705 446-3510 F  
 705 446-3520 F  
 WWW.CROZIER.CA  
 INFO@CROZIER.CA



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TOPOGRAPHIC SURVEY COMPLETED BY KRCMAR SURVEYORS LTD., DATED AUGUST 25, 2018.

No.	ISSUE	DATE: MM/DD/YYYY
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**PRELIMINARY**  
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Project: **WYLDEWOOD CREEK TOWN OF COLLINGWOOD**

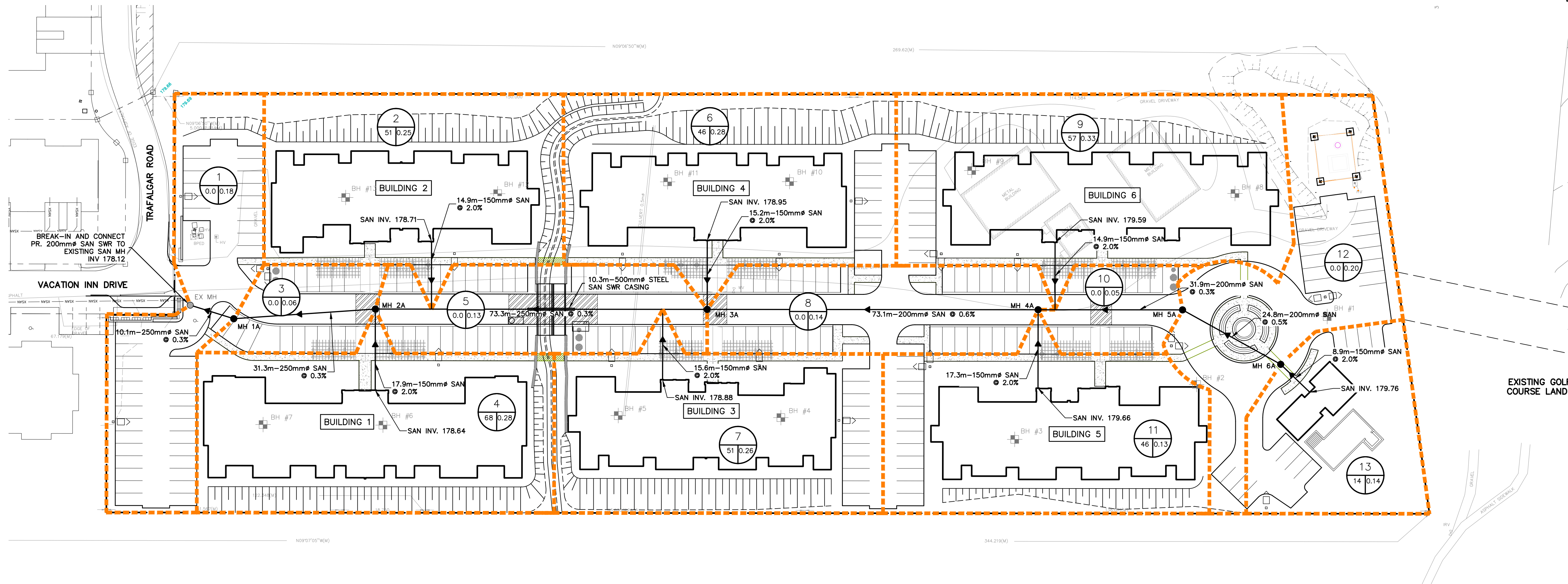
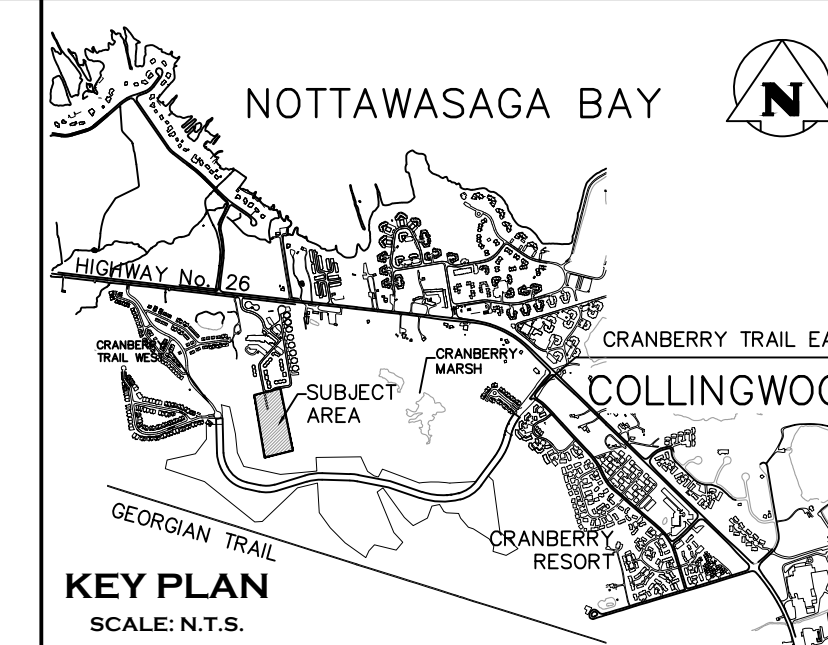
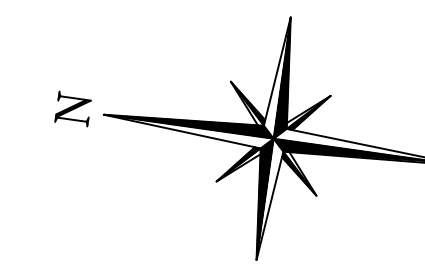
Drawing: **PLAN & PROFILE STREET 'A' (STA 0+000 - 0+288.22)**

**CROZIER CONSULTING ENGINEERS**

THE HARBOUREDGE BUILDING, 40 HURON STREET, SUITE 301, COLLINGWOOD, ON L9Y 4R3  
705 446-3510 T  
705 446-3520 F  
WWW.CROZIER.CA  
INFO@CROZIER.CA

Drawn By: L.W. Design By: L.W. Project: **1535-4897**

Check By: K.M. Check By: R.A. Scale: H 1:500 V 1:50 Drawing: **C103**



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TOPOGRAPHIC SURVEY COMPLETED BY KRCMAR SURVEYORS LTD., DATED AUGUST 25, 2018.

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Engineer	Engineer

**PRELIMINARY**  
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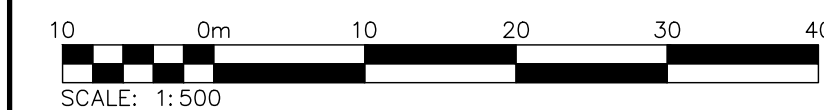
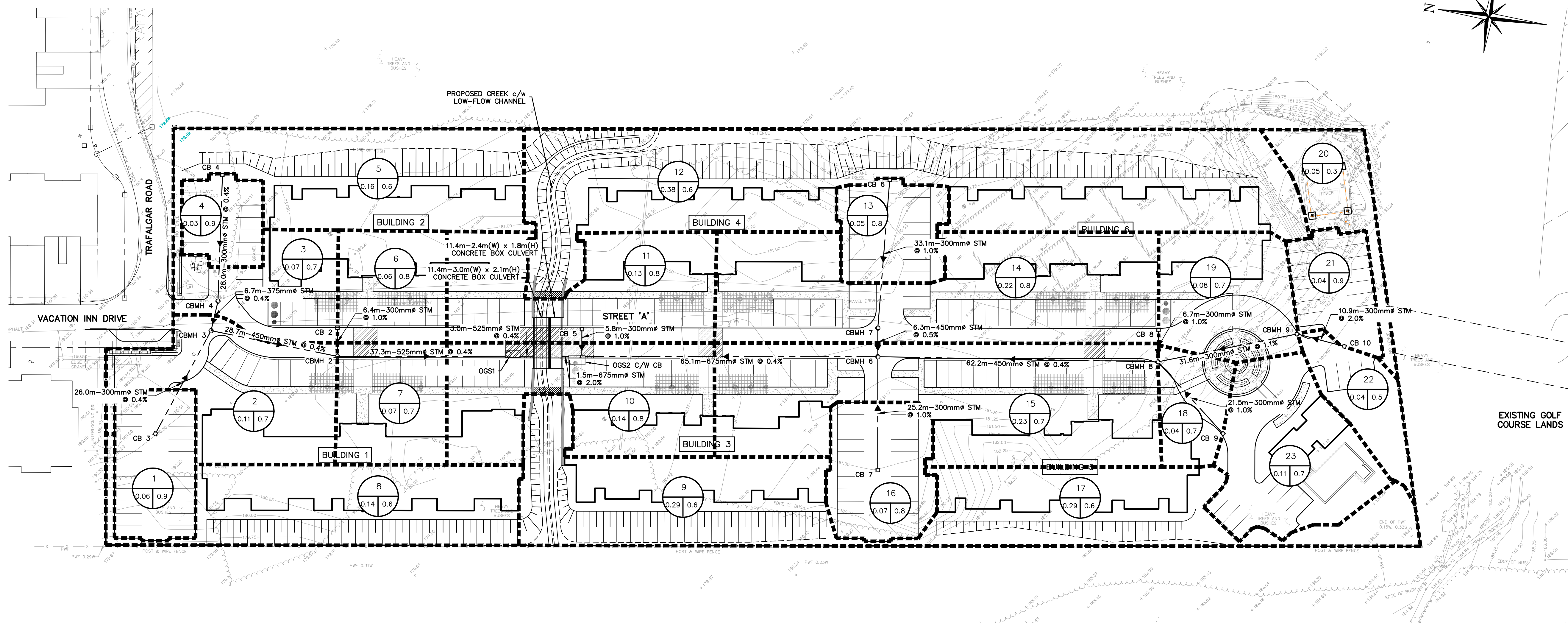
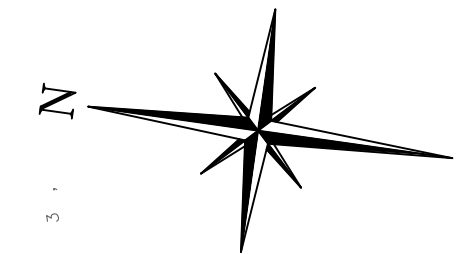
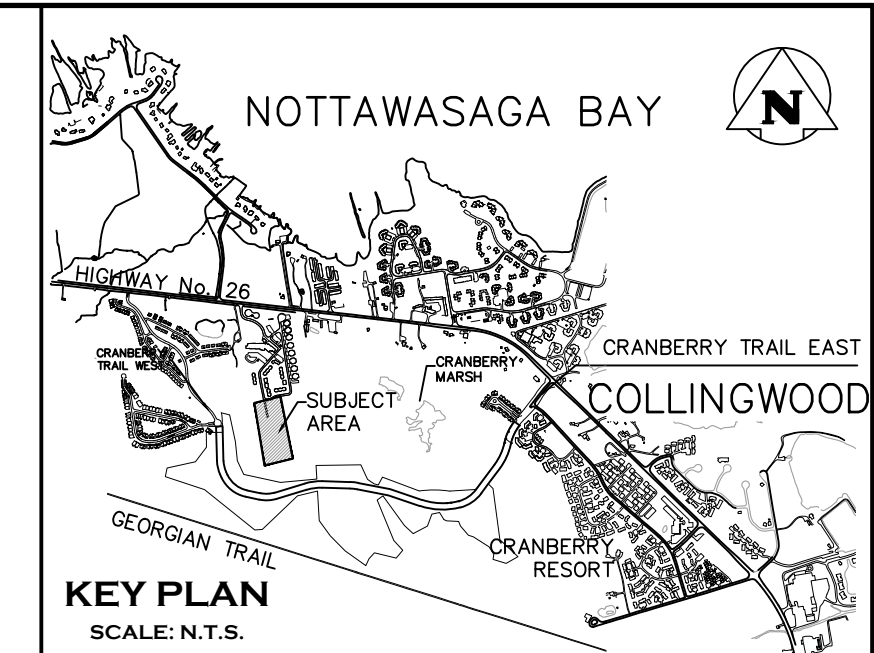
Project: **WYLDEWOOD CREEK TOWN OF COLLINGWOOD**

Drawing: **SANITARY DRAINAGE PLAN**

**CROZIER**  
CONSULTING ENGINEERS

THE HARBOUREDGE BUILDING,  
40 HURON STREET, SUITE 301,  
COLLINGWOOD, ON L9Y 4R3  
705 446-3510 T  
705 446-3520 F  
WWW.CROZIER.CA  
INFO@CROZIER.CA

Drawn By: L.W.	Design By: L.W.	Project: <b>1535-4897</b>
Check By: K.M.	Check By: R.A.	Scale: 1:500 Drawing: <b>C106</b>



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 TOPOGRAPHIC SURVEY COMPLETED BY KRCMAR SURVEYORS LTD., DATED AUGUST 25, 2018.

Town

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**PRELIMINARY**  
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Project

WYLDEWOOD CREEK  
TOWN OF COLLINGWOOD

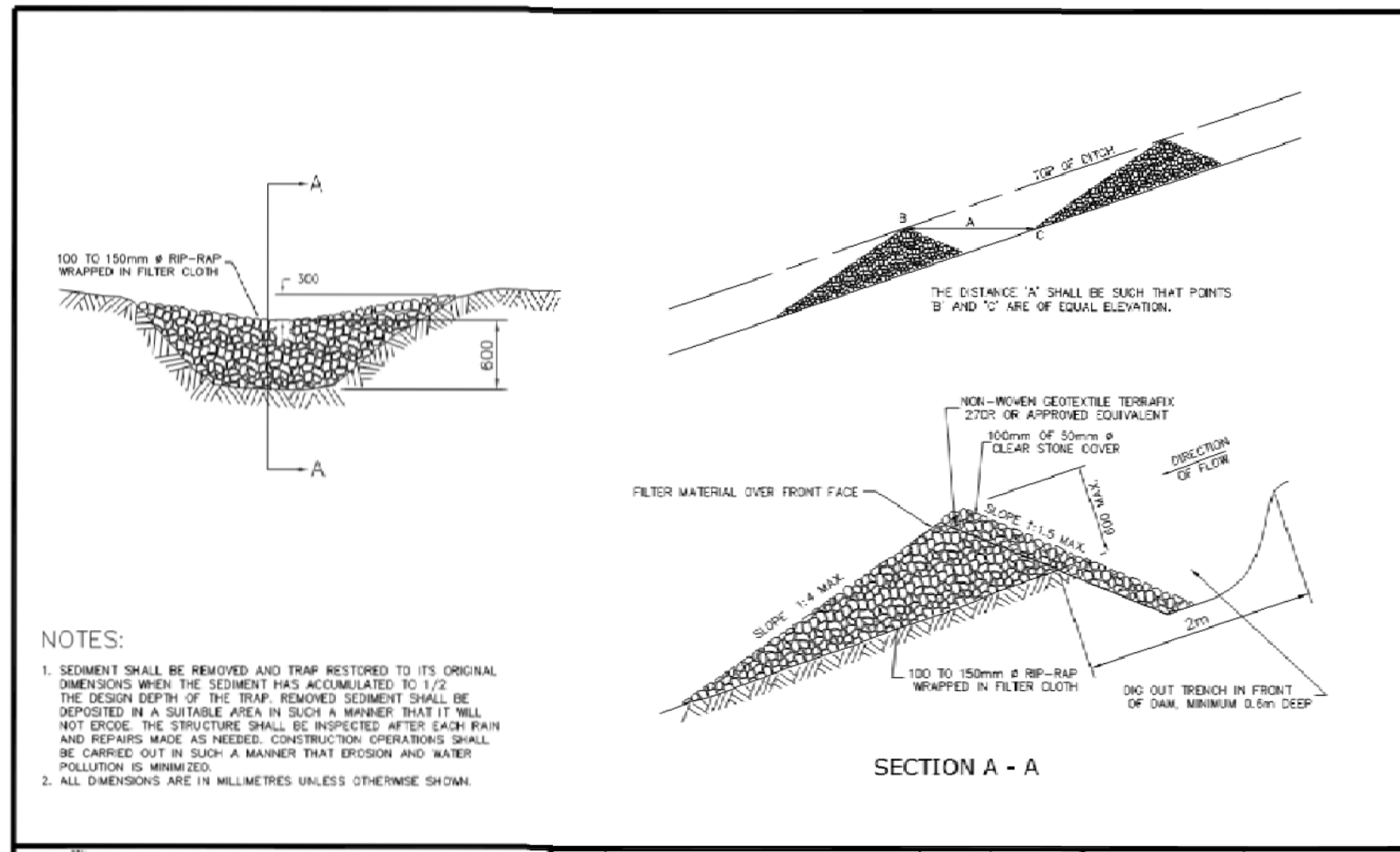
Drawing

STORM DRAINAGE PLAN

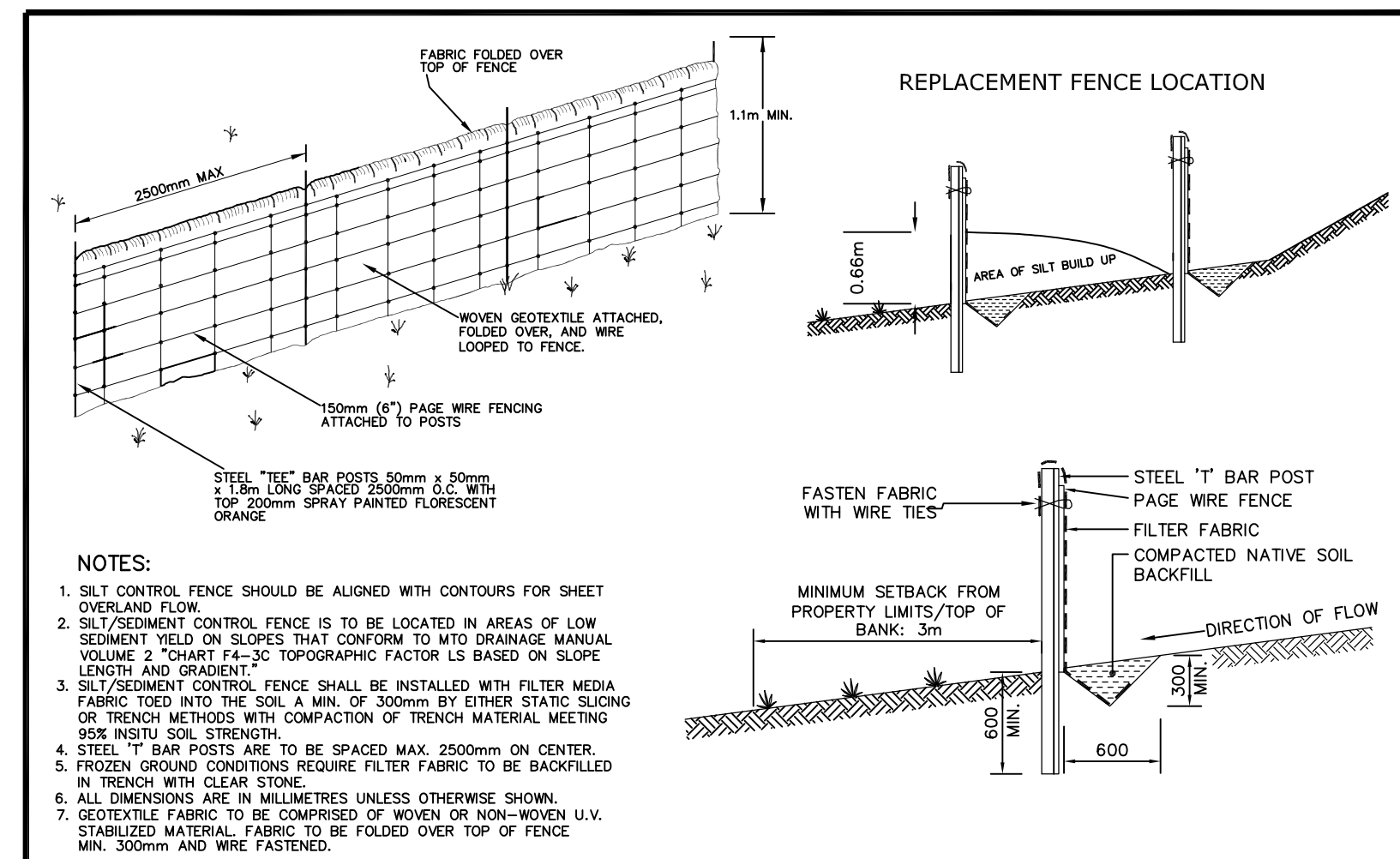


THE HARBOUREDGE BUILDING,  
40 HURON STREET, SUITE 301,  
COLLINGWOOD, ON L3Y 4R3  
705 446-3510 T  
705 446-3520 F  
WWW.CFCROZIER.CA  
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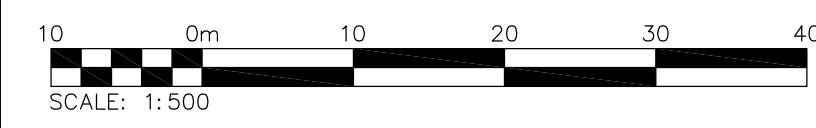
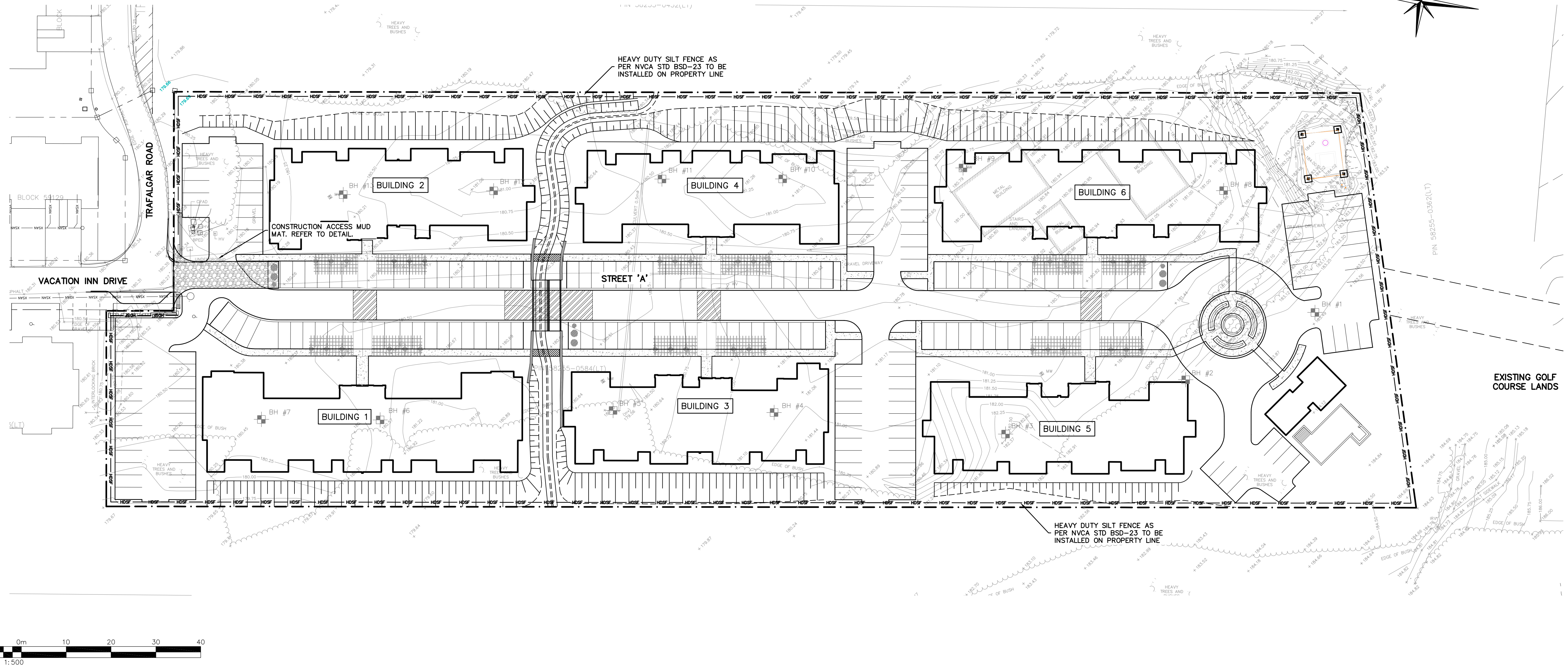
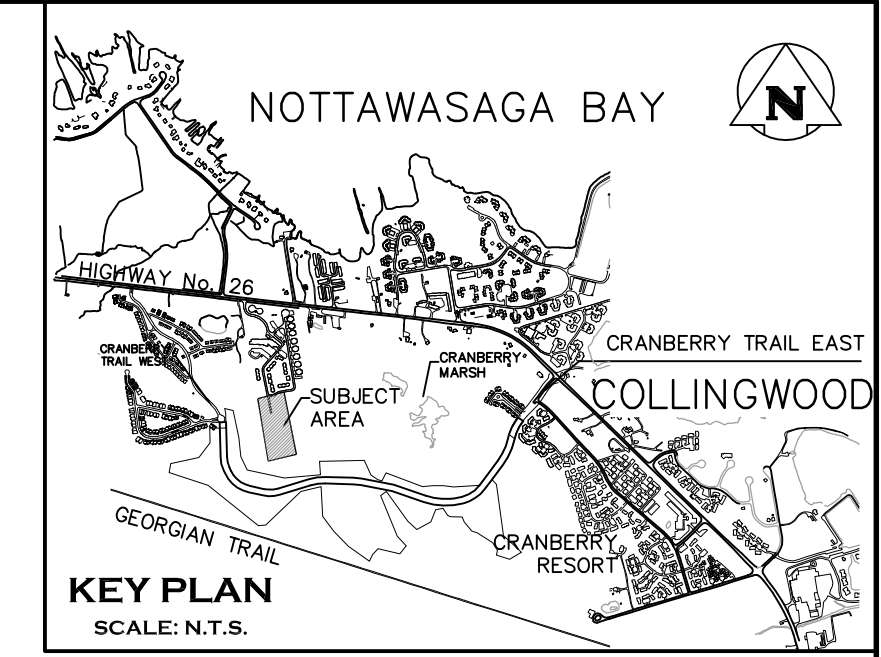
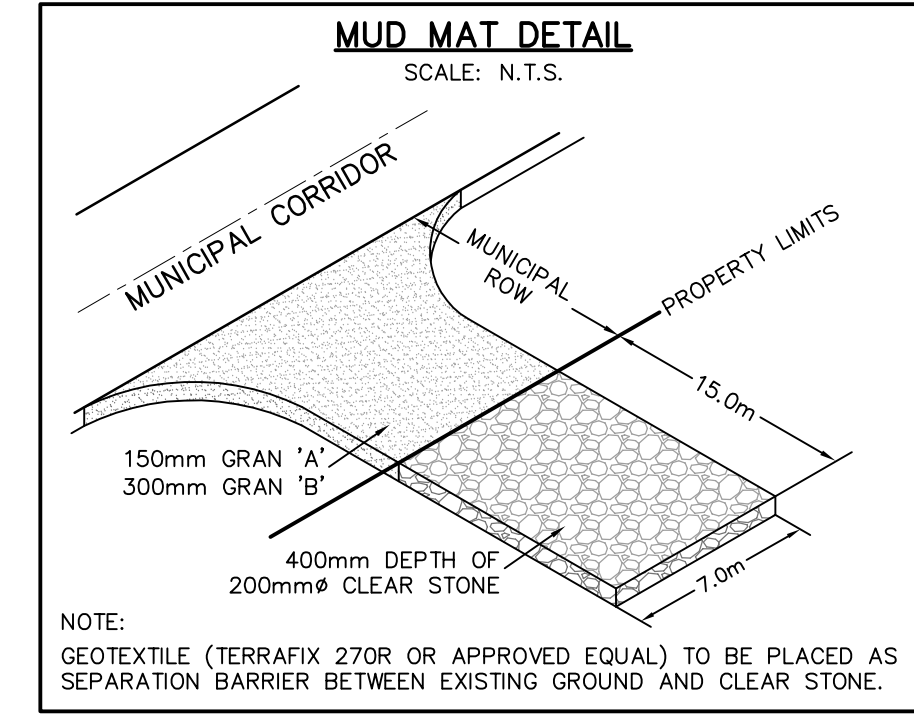
Drawn By	L.W.	Design By	L.W.	Project	1535-4897
Check By	K.M.	Check By	R.A.	Scale	1:500
				Drawing	C107



		APPR'D:	DATE: 92.05.15
<b>TYPICAL ROCK CHECK DAM EROSION CONTROL DEVICE</b>		DRAMA: L.A.J.	SCALE: N.T.S.
NO.	REVISION	APPR'D	DATE
1	TRENCH ADDED AND FABRIC EXTENDED INTO IT		2003.02.19
<b>BSD-24 DRAFT</b>			



		APPR'D:	DATE: 03.03.06
<b>TYPICAL DETAIL OF SILT/SEDIMENT FENCE</b>		DRAMA: A.S.C.	SCALE: N.T.S.
NO.	REVISION	APPR'D	DATE
<b>BSD-23 DRAFT</b>			



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TOPOGRAPHIC SURVEY COMPLETED BY KRCMAR SURVEYORS LTD., DATED AUGUST 25, 2018.

Town	
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No.	ISSUE	DATE: MM/DD/YYYY
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**WYLDEWOOD CREEK**  
TOWN OF COLLINGWOOD

**EROSION AND SEDIMENT CONTROL PLAN**

		THE HARBOUREdge BUILDING, 40 HURON STREET, SUITE 301, COLLINGWOOD, ON L9Y 4R3 705 446-3510 T 705 446-3520 F WWW.CROZIER.CA INFO@CROZIER.CA	
		Drawn By: L.W. Check By: K.M.	Design By: L.W. Check By: R.A.

**CONSTRUCTION NOTES:**

**A) GENERAL – CONSTRUCTION**

- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF COLLINGWOOD STANDARDS (2009), OPSS AND OPSS. WHERE CONFLICT OCCURS, TOWN OF COLLINGWOOD STANDARDS (2009) TO GOVERN.
- TRENCH BACKFILL (OPSS 802.010 & 802.013) TO BE SELECT NATIVE MATERIAL OR IMPORTED SELECT SUBGRADE TO OPSS 1010. BACKFILL TO BE PLACED IN MAXIMUM 200mm THICK LIFTS AND COMPACTED TO 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- PIPE COVER AND BEDDING TO BE GRANULAR 'A' (MINIMUM 150mm DEPTH COMPACTED TO A MINIMUM 95% SPMDD).
- ALL TOPSOIL AND EARTH EXCAVATION TO BE STOCK PILED OR REMOVED TO AN APPROVED SITE AS DIRECTED BY ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK. THE DEVELOPER'S ENGINEER WILL CONFIRM ALL BENCH MARK ELEVATIONS AND HORIZONTAL ALIGNMENT FOR THE CONTRACTOR.
- ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY O.L.S. AT CONTRACTOR'S EXPENSE IF REMOVED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
- DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 AND 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION. CONTRACTOR RESPONSIBLE FOR OBTAINING M.O.E. PERMIT IF REQUIRED.
- ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
- DISTURBED AREAS OUTSIDE THE DEVELOPABLE LANDS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
- THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO-ORDINATE CONSTRUCTION ACCORDINGLY.
- ALL ROCK EXCAVATION PER OPSS-206.
- ALL EXCAVATION MUST BE CARRIED OUT IN FULL COMPLIANCE WITH MOST RECENT GUIDELINES OF OHSA. NATIVE SOILS ARE CLASSIFIED AS TYPE 3 SOIL.

**B) ROADS**

- SUBGRADE AND BOULEVARD MATERIAL TO BE COMPACTED TO A MINIMUM DRY DENSITY OF AT LEAST 95% SPMDD. SUBGRADE TO BE PROFF ROLLED AND CERTIFIED PRIOR TO PLACING GRANULAR 'B'.
- GRANULAR 'A' AND 'B' ROAD BASE TO BE COMPACTED TO 100% OF THE MATERIAL'S RESPECTIVE SPMDD AND PLACED IN MAX. 150mm LIFTS. REFER TO GEOTECHNICAL REPORT FOR FURTHER DETAILS.
- CONDO ROADWAYS TO BE CONSTRUCTED WITH MINIMUM 300mm GRANULAR 'B' TYPE 1, 150mm GRANULAR 'A', 50mm HLB BASE COURSE ASPHALT, & 40mm HL3 SURFACE COURSE ASPHALT.
- SELECT SUBGRADE MATERIAL, OR IMPORTED GRANULAR MATERIAL APPROVED BY THE ENGINEER, COMPACTED TO 98% SPMDD TO BE USED AS FILL IN ALL AREAS WHERE PROPOSED PIPE INVERTS ARE HIGHER THAN EXISTING GRADE OR AS INSTRUCTED BY THE ENGINEER.
- ALL GRANULARS AND ASPHALT MATERIALS AND PLACEMENT TO BE IN ACCORDANCE WITH OPSS 314 AND OPSS 310.
- JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT WITH MIN. 1.0m LAP JOINT PRIOR TO PLACING NEW ASPHALT AND TACK COAT APPLIED TO EXISTING ASPHALT.
- STOP SIGNS AND STREET SIGNS TO TOWN STANDARDS (DETAIL DWG No. 401).
- REINSTATEMENT OF ALL DISTURBED BOULEVARDS TO INCLUDE REGRADING, 150mm TOPSOIL AND SOD TO OPSS 802 AND 803.
- 100mm Ø PIPE SUBDRAINS SHALL BE PROVIDED UNDER EDGE OF PAVEMENT ON LOWER (GUTTER) SIDE OF THE ROAD.
- ALL SUBDRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSS 405. SUBDRAIN TO BE INSTALLED IN GRANULAR 'A' TRENCH AND CONNECTED TO EACH CB OR CBMH.
- SUBDRAINS TO BE PERFORATED OTHER THAN THE 2m SECTION IMMEDIATELY UPSTREAM OF ALL STRUCTURES WHICH SHALL BE NON-PERFORATED.

**C) SANITARY SEWERS**

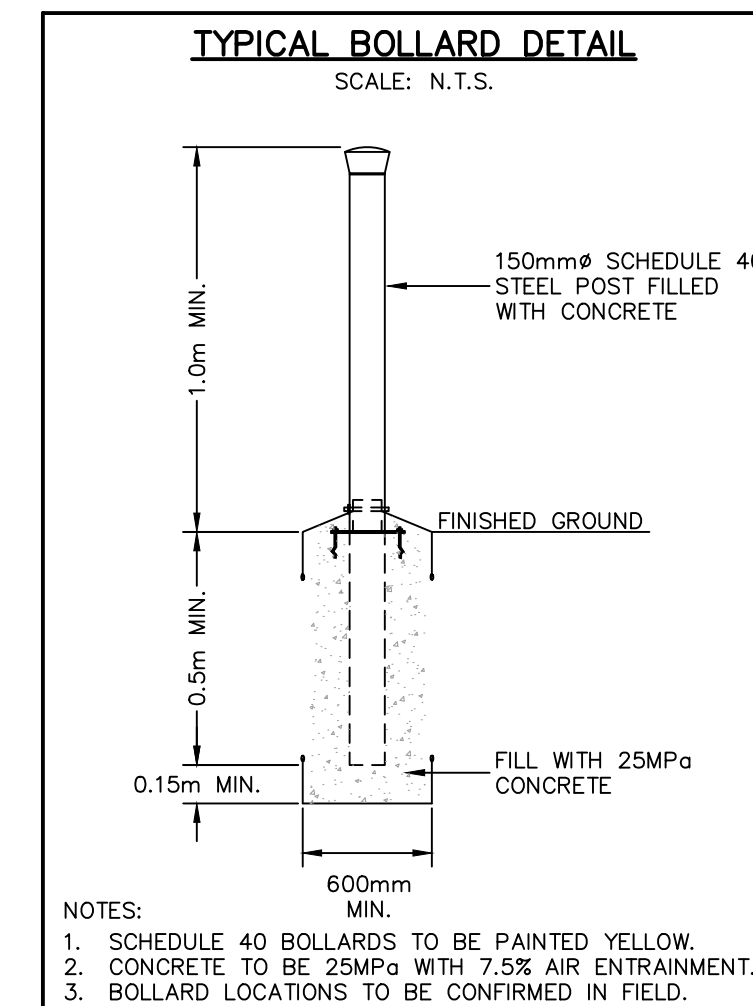
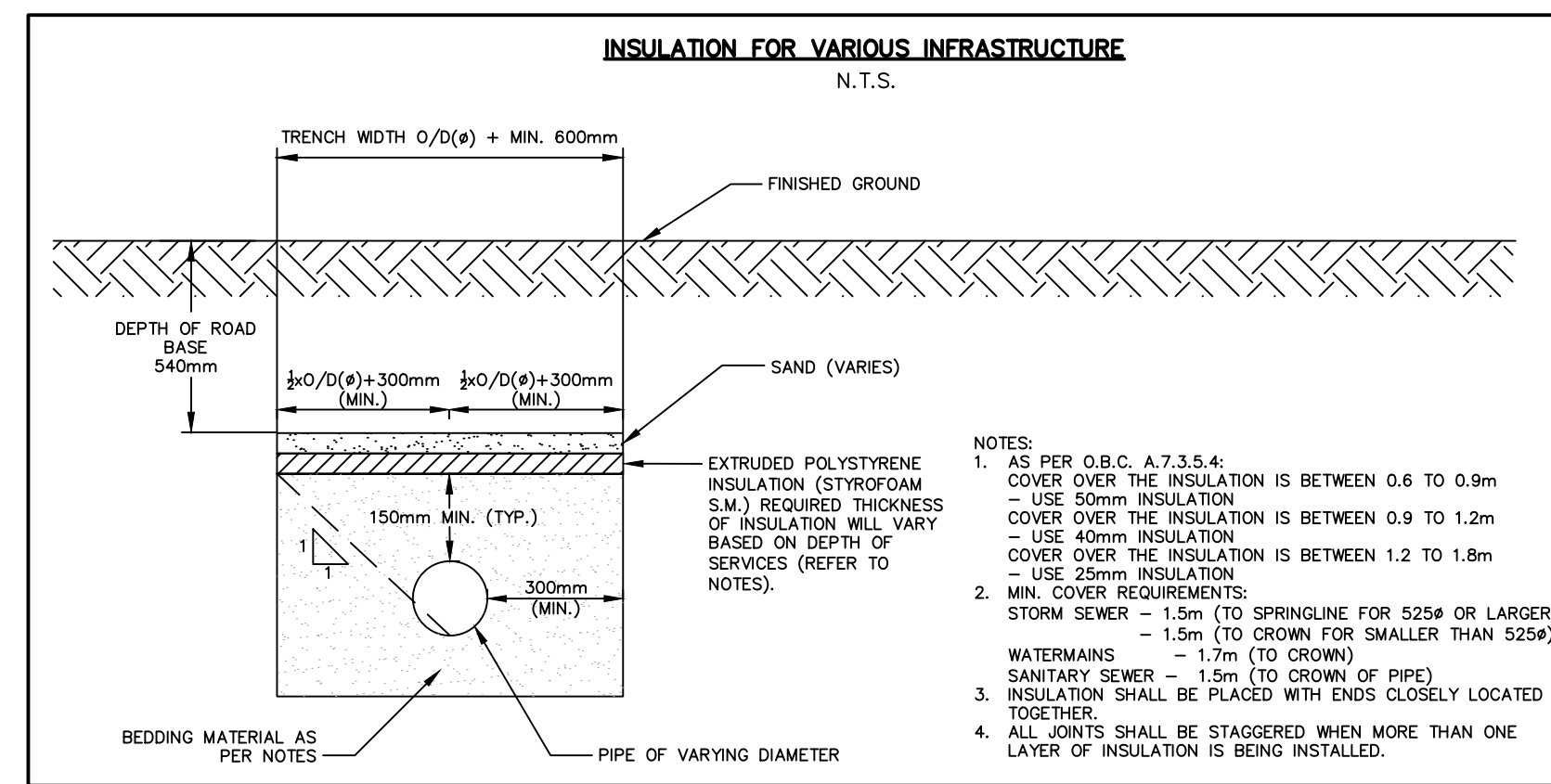
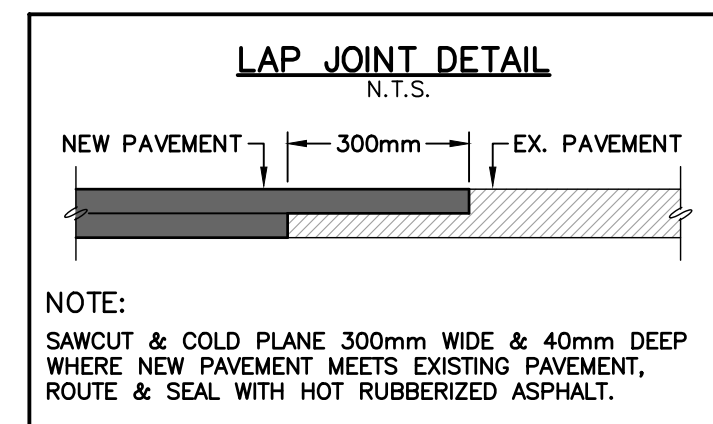
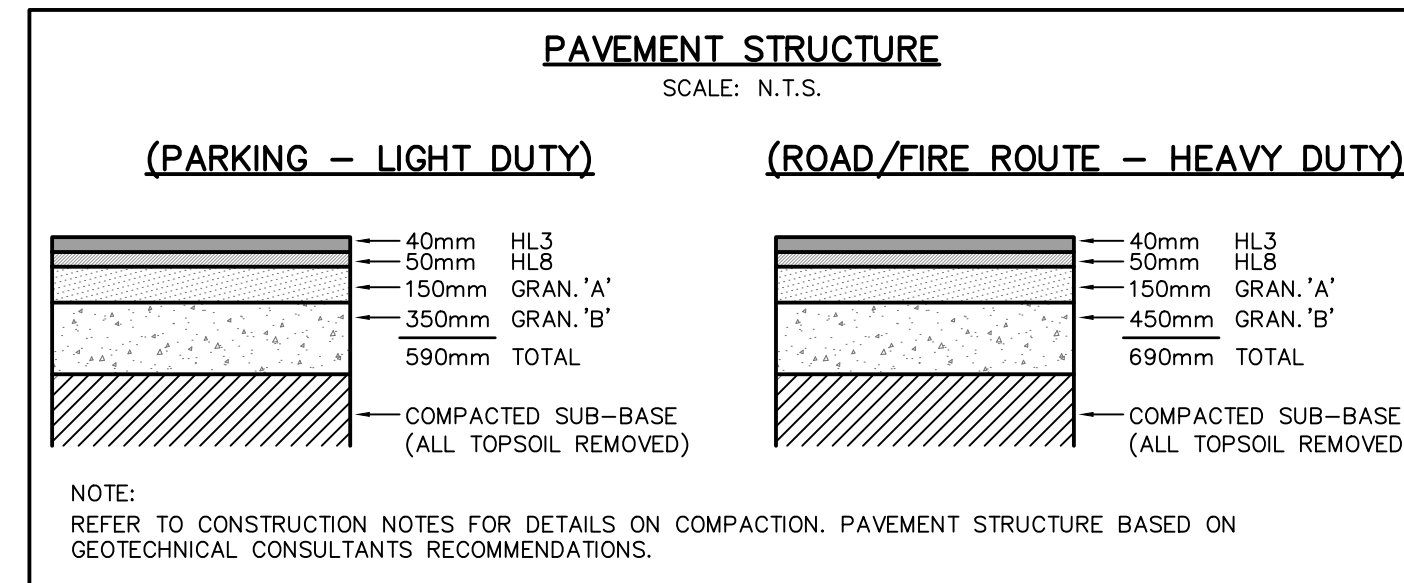
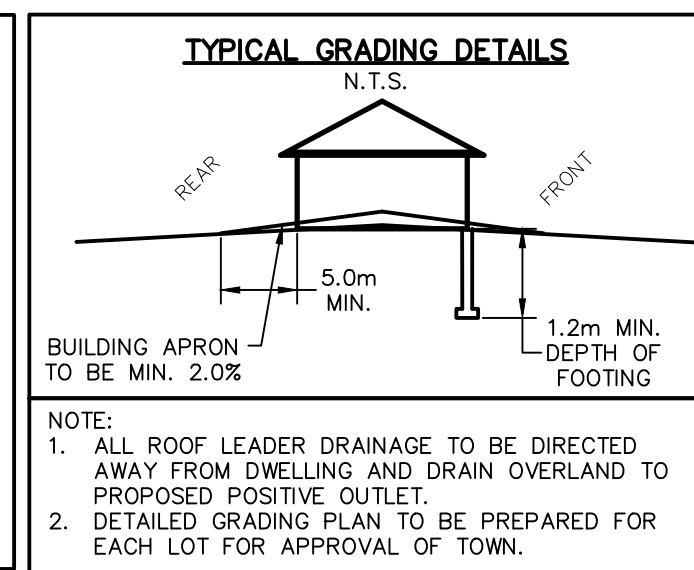
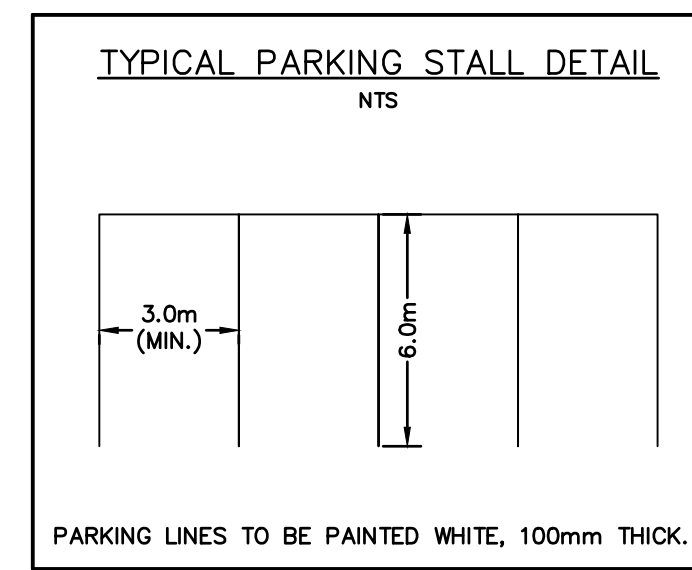
- M.H.'S TO OPSS – 701.010, 701.030, & 704.010.
- BENCHING TO OPSS – 701.021.
- STEPS TO OPSS – 405.010.
- BACKFILL AND EMBEDMENT TO OPSS – 802.010 CLASS 'B', GRANULAR 'A' BEDDING.
- TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
- FRAMES AND COVERS TO OPSS – 401.01 TYPE 'A' (CLOSED COVER).
- SERVICE CONNECTIONS TO OPSS – 1006.020 (125mm), GRANULAR 'A' BEDDING, TERMINATE AT SERVICING CORRIDOR LIMITS, 125 x 100 REDUCER, PLUG AND 2x4 MARKER POST PAINTED GREEN. MINIMUM GRADE TO BE 2.0%.
- RADIUS BENDS TO BE USED ON SANITARY SEWER CONNECTIONS WHERE THE ANGLE OF CONNECTION BETWEEN THE SERVICE AND SEWER EXCEEDS 90°.
- BACKFILL AND EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- MANHOLES FRAMES TO BE SET TO BASE COURSE ASPHALT ELEVATION AND RAISED BY ADDING RISER RINGS PRIOR TO PLACING SURFACE COURSE ASPHALT.
- PIPE SUPPORT AT MAINTENANCE HOLES AS PER OPSS 708.020.
- ALL MAINTENANCE HOLES, UNLESS EXPRESSLY IDENTIFIED ARE 1200mm Ø.
- GENERAL INSTALLATION AND TESTING OF SEWERS AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 407, 408, 409 (CCTV), 410, 421 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
- SANITARY SEWER – SDR 35 PVC.
- SANITARY SERVICE – SDR 28 PVC – 125mm PER OPSS 1006.020 SEWER SERVICE CONNECTION FOR FLEXIBLE PIPE.
- FROST STRAPS PER OPSS 701.100.
- CLAY SEEPAGE PLUGS (0.5m THICK) TO BE PLACED ALONG PIPE BETWEEN MANHOLES.

**D) WATERMAINS**

- BACKFILL AND EMBEDMENT TO OPSS – 802.010 CLASS 'B', GRANULAR 'A' EMBEDMENT.
- TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL AS APPROVED BY ENGINEER OR IMPORTED GRANULAR MATERIAL.
- THRUST BLOCKS TO OPSS – 1103.010 AND 1103.020 WHERE SUITABLE SOILS ARE ENCOUNTERED.
- SERVICE CONNECTIONS TO OPSS – 1104.010, 100mm GRANULAR 'A' EMBEDMENT AND COVER OVER PIPE. TERMINATE AT SERVICING CORRIDOR LIMITS C/W CURB STOP AND BOX.
- HYDRANTS TO OPSS – 1105.010 DRAIN PLUGS SHALL BE INSTALLED WHERE HIGH WATER TABLE IS ENCOUNTERED.
- BACKFILL AND EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
- MINIMUM COVER ON WATERMAIN AND SERVICES TO BE 1.7m.
- GATE VALVES, BENDS AND HYDRANT LEADS AND FITTINGS TO BE CONNECTED WITH ROLMAC GRIPPER RING RESTRAINING GLANDS.
- CLEARANCE BETWEEN WATERMANS AND SEWERS TO BE AS PER MOE GUIDELINES, MINIMUM 0.5m VERTICAL SEPARATION WHERE SEWER IS ABOVE WATERMAIN & 2.5m MINIMUM HORIZONTAL SEPARATION.
- ALL SERVICES TO BE DIRECT TAPPED.
- FOLLOWING TESTING, CONTRACTOR SHALL OPERATE EACH WATER SERVICE TO VERIFY FULL FLOW AND PRESSURE AT THE CURB STOP TO THE SATISFACTION OF THE ENGINEER.
- GENERAL INSTALLATION AND TESTING OF WATERMAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 701 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS. COMPLETE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH REQUIREMENTS OF AWWA STANDARD C651-99. REFER TO DETAIL ON DWG 110 FOR TYPICAL TEMPORARY CONNECTION. ALL WATERMAIN TESTING & CHLORINATION WILL BE CONDUCTED BY CPU AT CONTRACTORS COST. WATERMANS ARE NOT TO BE CONNECTED TO EXISTING WATERMANS UNTIL BACTERIOLOGICAL TESTING HAS BEEN SUCCESSFULLY COMPLETED & CERTIFIED BY CPU.
- COMPLETE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH REQUIREMENTS OF O. REG. 459/00 & SATISFACTION OF CPU.
- WATERMAIN CLASS 52 OR PRESSURE CLASS 350 CEMENT LINED DUCTILE IRON. CONDUCTIVITY CONNECTORS TO BE USED ON ALL JOINTS.
- SINGLE WATERMAIN SERVICES – 19mm Ø TYPE 'K' SOFT COPPER PIPE.
- FOR DOUBLE WATER SERVICE, THE COMMON WATER SERVICE & MAIN STOP TO BE 25mm Ø TYPE 'K' SOFT COPPER. SPLITTER FITTING SHOULD BE 'U' TYPE & LOCATED OUTSIDE OF DRIVEWAYS.
- MAIN STOPS TO 301-A4H4, BALL STYLE. AWWA THREAD BY COMPRESSION CAMBRIDGE BRASS.
- CURB STOPS TO 203-H4H4, BALL STYLE WITH DRAIN. COMPRESSION JOINT BY CAMBRIDGE BRASS.
- A CURB STOP & EXTENSION SERVICE BOX & MAIN STOP MUST BE INSTALLED ON EACH SERVICE USING COMPRESSION JOINT FITTINGS.
- ALL CURB STOPS FOR SERVICES WITHIN ASPHALT TO BE LOCATED IN VALVE BOXES INSTALLED FLUSH TO FINISHED GRADE OF ASPHALT. CAP FOR VALVE BOX TO BE MARKED WITH 'W' & PAINTED BLUE.
- SERVICE BOXES TO NUMBER 7, D-I CLOW OR MUELLER, 24" BLACK RODS STRAIGHT C/W CAP PAINTED BLUE.
- ALL SERVICES SHALL BE METERED. METERS TO BE COMPLETE WITH REMOTE READOUT OR RADIO READ AS DETERMINED BY THE CPU.
- HYDRANTS – CENTURY NUMBER 1, OPEN LEFT (O/L), 2 HOSE, 33B PLUMBER PORT. 6" MJ BASE, SELF-DRAINING YELLOW BASE WITH SILVER BONNET AND PORTS.
- VALVES – RESILIENT SEATED, RSGV MECHANICAL JOINT, OPEN LEFT CLOW OR MUELLER WITH 5-SL-48 SLIDING VALVE BOX C/W CAP PAINTED BLUE.
- MECHANICAL JOINT DUCTILE FITTINGS – AWWA/ANSI C153/A21.53.
- HYDRANTS TO BE INSTALLED C/W HYDRANT MARKER STAKES PER TOWN & CPU STANDARD "FLEX STAKE HYDRANT MARKER MODEL FHV804, 48" LONG, COLOUR YELLOW WITH REFLECTIVE HYDRANT GRAPHIC ON BOTH SIDES". MARKER TO BE POSITIONED ON THE RIGHT PORT AS VIEWED FROM STREET.
- 50mm Ø WATERMAIN LOOP – TYPE 'K' COPPER.
- ALL VALVES TO BE OPERATED BY THE CPU OR TOWN. CONTRACTOR TO PROVIDE MIN. 48hr NOTIFICATION FOR REQUEST.
- HYDRANTS ARE TO BE 1.67m (5'6") LONG. MAKE-UP PIECES, IF REQUIRED, ARE TO BE INSTALLED BELOW THE HYDRANT.
- ALL WATERMAIN FITTINGS TO BE LEAD FREE.
- MECHANICAL JOINT RESTRAINTS TO BE USED DURING TRANSITION OF WATERMAIN INSTALLATION IN NATIVE SOILS TO ENGINEER FILL. MECHANICAL JOINT RESTRAINTS TO BE MEGA-LUG OR APPROVED EQUAL. REFER TO DWG 103 FOR LIMITS OF MECHANICAL JOINT RESTRAINTS. FINAL LIMITS TO BE FIELD DECISION.

**E) STORM SEWERS**

- MH TO OPSS 701.010 AND DCBMH TO OPSS – 701.011, 701.012, C/W SUMP UNLESS NOTED OTHERWISE.
- STEPS TO OPSS 405.010.
- M.H. FRAMES AND GRATES TO OPSS – 401.01 OPEN COVER.
- DCBMH TO OPSS – 705.030, 705.040.
- DCBMH FRAMES AND GRATES TO OPSS – 400.020.
- PIPE SUPPORT AT DCBMH'S TO OPSS – 708.020.
- DCB LEADS – 300mm Ø DOUBLE TO OPSS – 708.010, 708.030.
- PROTECTION DURING CONSTRUCTION TO OPSS – 808.010.
- BACKFILL AND EMBEDMENT TO OPSS – 802.010 (FLEXIBLE PIPE) CLASS 'B', GRANULAR 'A' EMBEDMENT OR OPSS – 802.030, 802.031 AND 802.032 (RIGID PIPE) GRANULAR 'A' EMBEDMENT.
- BACKFILL AND EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD.
- MAIN SEWERS OVER 450mm Ø SHALL BE CONCRETE PIPE (OPSS 1820), PIPE INSTALLED BENEATH THE ROADWAYS SHALL BE REINFORCED PER CSA A257.2, CLASS 50-D. MAIN SEWERS 450mm Ø AND UNDER SHALL BE PVC PIPE (OPSS 410), MIN. PIPE STIFFNESS SHALL BE 320 kPa. PIPE INSTALLED WITHIN LANDSCAPED AREAS CAN BE NON-REINFORCED PER CSA A257.1 CLASS 3. ALL PIPE TO BE JOINED WITH A GASKETTED BELT AND SPIGOT SYSTEM.
- FROST STRAPS PER OPSS 701.100.



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 2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.  
 3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.  
 4. DO NOT SCALE THE DRAWINGS.  
 5. ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

**BENCHMARKS**  
 ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE RELATED TO TOWN OF COLLINGWOOD BENCH MARK NO. 00172U311 HAVING AN ELEVATION OF 181.032 METRES.  
 TOPOGRAPHIC SURVEY COMPLETED BY KRCMAR SURVEYORS LTD., DATED AUGUST 25, 2018.

Town	No.	ISSUE	DATE: MM/DD/YYYY
	1	ISSUED FOR 1st ENGINEERING SUBMISSION	02/04/2019

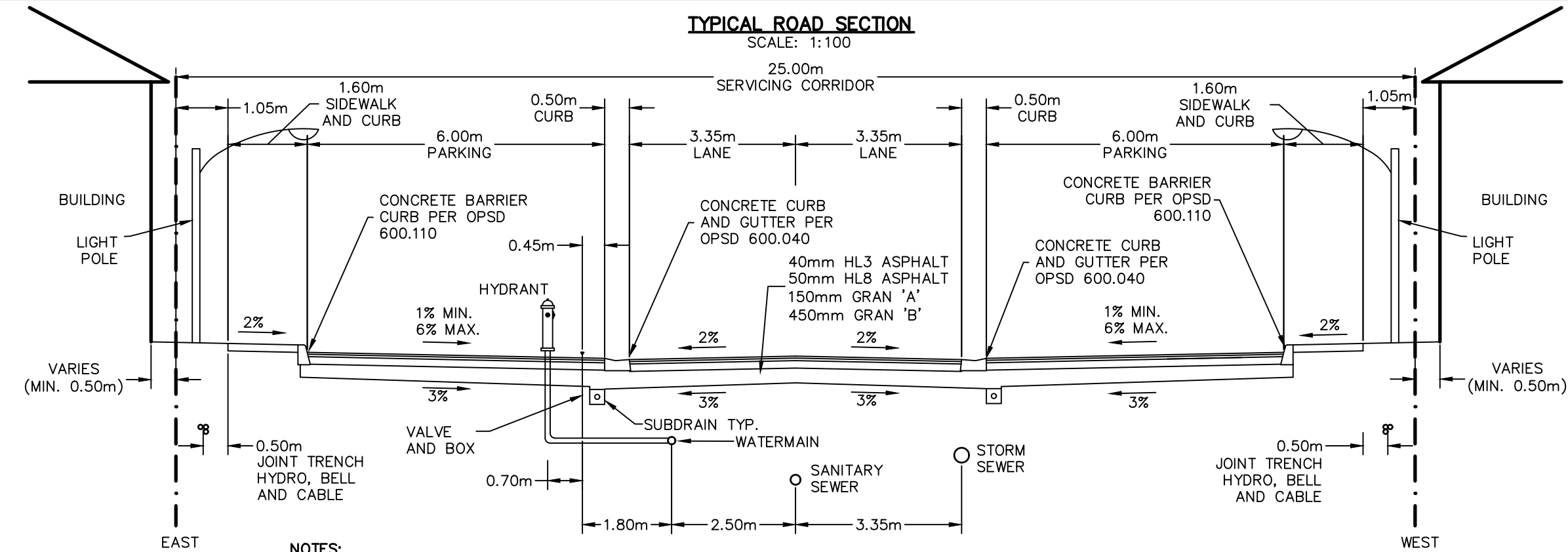
Engineer	Engineer	Project

**PRELIMINARY**  
 NOT TO BE USED FOR CONSTRUCTION

**WYLDEWOOD CREEK TOWN OF COLLINGWOOD**  
 CONSTRUCTION NOTES AND STANDARD DETAILS

THE HARBOUREDGE BUILDING, 40 HURON STREET, SUITE 301, COLLINGWOOD, ON L9Y 4R3  
 705 446-3510 T  
 705 446-3520 F  
 WWW.CROZIER.CA  
 #CROZIER

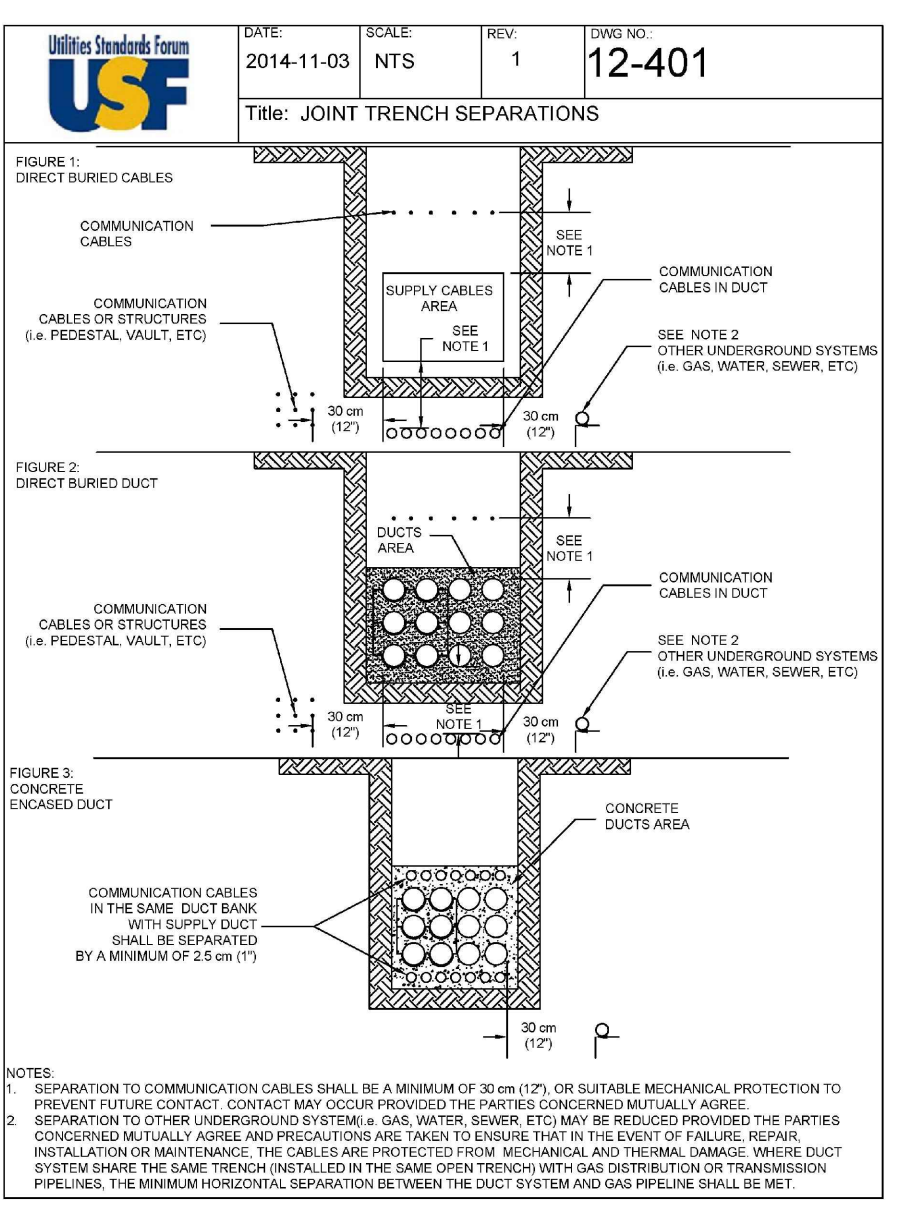
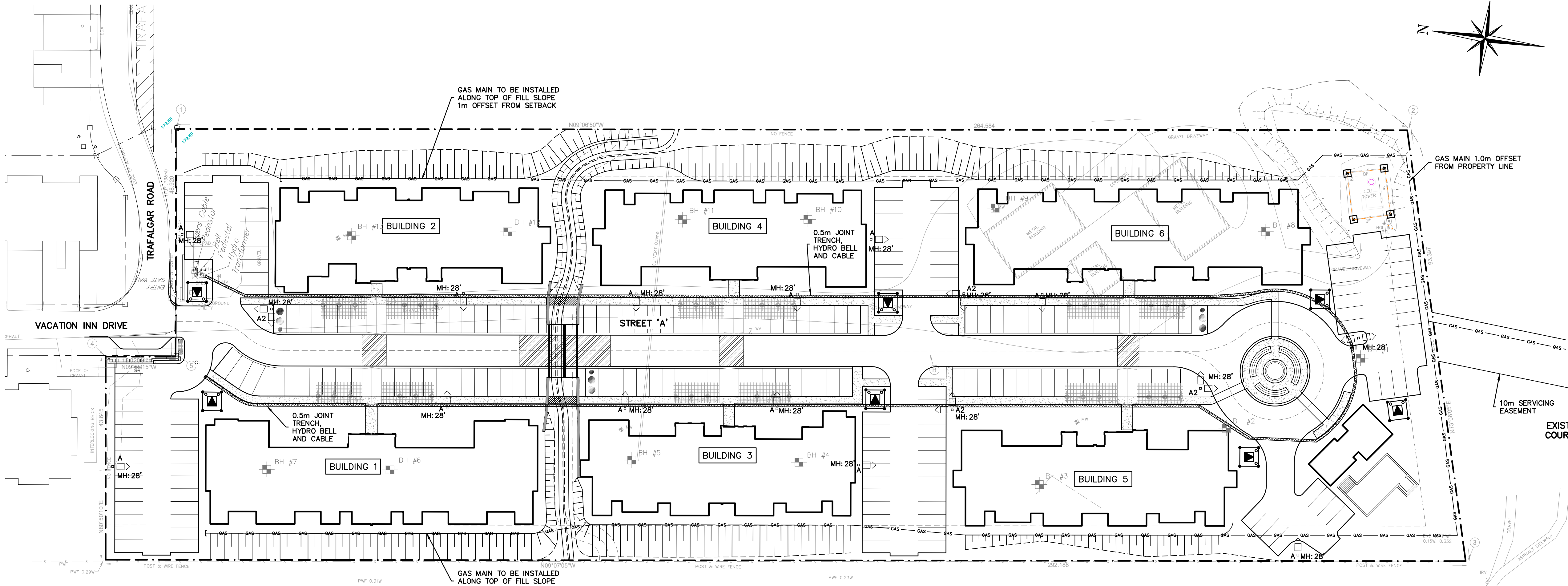
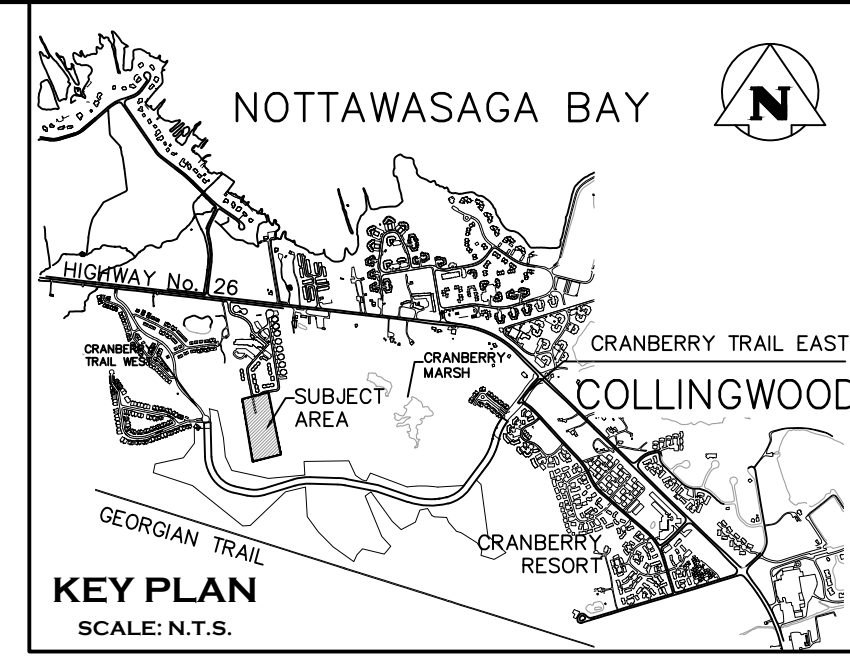
Drawn By	L.W.	Design By	L.W.	Project	1535-4897
Check By	K.M.	Check By	R.A.	Scale	AS NOTED
				Drawing	C109



- NOTES:**
- COVER ON STORM, SANITARY AND WATERMAIN AS PER DESIGN CRITERIA, UTILITY CORRIDOR SHALL HAVE MINIMUM COVER OF 1.2m.
  - MINIMUM PAVEMENT AND ROAD STRUCTURE DESIGN AS PER TOWN DESIGN CRITERIA OR AS PER GEOTECHNICAL INVESTIGATION RECOMMENDATION.
  - TREES TO BE PLACED IN LOCATIONS AS PER APPROVED LANDSCAPE PLAN.
  - ACTIVELY GROWING NURSERY SOD TO BE LAID ON 150mm TOPSOIL PROPERLY GRADED AND ROLLED.
  - HYDRANTS AND WATERMANS TO BE ON OPPOSITE SIDE OF ROAD FROM ELECTRICAL TRANSFORMER.
  - SUBDRAINS TO BE INSTALLED AS PER OPSD 216.021.
  - ALL SERVICE LOCATIONS SHOWN ARE FOR GUIDELINE PURPOSES ONLY AND MAY DEVIATE AS PER THE DIRECTION OF THE TOWN WHEN STANDARD LOCATION CANNOT BE ACHIEVED.
  - GAS MAIN TO BE INSTALL IN THE REAR OF THE BUILDINGS.
  - ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.

**COMPOSITE UTILITY PLAN  
FOR INFORMATION PURPOSES ONLY**

THIS PLAN HAS BEEN PREPARED BY C.F. CROZIER & ASSOCIATES INC. TO CONSOLIDATE THE DESIGNS COMPLETED BY THE RESPECTIVE UTILITIES. OUR FIRM HAS REVIEWED EACH UTILITY DESIGN TO CONFIRM IT COMPLIES WITH THE APPLICABLE MUNICIPAL GUIDELINES AND ROAD STANDARDS AND TO CONFIRM THERE ARE NO CONFLICTS WITH THE PROPOSED CIVIL SERVICING AND DRAINAGE SYSTEMS. WE HAVE NOT CHECKED NOR ACCEPT RESPONSIBILITY FOR THE ACCURACY AND VERACITY OF EACH UTILITY DESIGN. ANY USE WHICH A THIRD PARTY MAKES OF THIS PLAN, OR ANY RELIANCE ON OR DECISIONS BASED ON IT, ARE THE RESPONSIBILITIES OF SUCH THIRD PARTIES. IT IS RECOMMENDED THAT DURING CONSTRUCTION THE THIRD PARTY REFERENCE OR MAKE USE OF THE APPROVED FOR CONSTRUCTION PLANS PREPARED BY EACH RESPECTIVE UTILITY.



- NOTE:**
- SEPARATION TO COMMUNICATION CABLES SHALL BE A MINIMUM OF 30 mm (1 1/4") OR SUITABLE MECHANICAL PROTECTION TO PREVENT FUTURE CONTACT. CONTACT MAY OCCUR PROVIDED THE PARTIES CONCERNED MUTUALLY AGREE.
  - SEPARATION TO OTHER UNDERGROUND SYSTEMS (GAS, WATER, SEWER, ETC) MAY BE REDUCED PROVIDED THE PARTIES CONCERNED MUTUALLY AGREE AND PRECAUTIONS ARE TAKEN TO ENSURE THAT IN THE EVENT OF FAILURE, REPAIR, INSULATION OR MAINTENANCE, THE CABLES ARE PROTECTED FROM MECHANICAL AND THERMAL DAMAGE. WHERE DUCT SYSTEM SHARE THE SAME TRENCH (INSTALLED IN THE SAME OPEN TRENCH WITH GAS DISTRIBUTION OR TRANSMISSION LINES), THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE DUCT SYSTEM AND GAS PIPELINE SHALL BE MET.
- NOTE:**
- FOR ELECTRICAL DESIGN OF PRIMARY AND SECONDARY POWER SYSTEM SEE EPOR.
  - FOR STREET LIGHT LIGHTING DESIGN SEE C.F. CROZIER AND ASSOCIATES (DWG. E300-E301)
  - FOR TELECOMMUNICATION (CABLE, TELEPHONE) SEE ROGERS AND BELL RESPECTIVELY.
  - FOR NATURAL GAS SERVICING SEE ENBRIDGE.



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**PRELIMINARY**  
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Project: **WYLDEWOOD CREEK TOWN OF COLLINGWOOD**

Drawing: **COMPOSITE UTILITY PLAN**

**CROZIER CONSULTING ENGINEERS**

THE HARBOUREDGE BUILDING,  
40 HURON STREET, SUITE 301,  
COLLINGWOOD, ON L9Y 4R3  
705 446-3510 T  
705 446-3520 F  
WWW.CROZIER.CA  
INFO@CROZIER.CA

Drawn By: L.W. Design By: L.W. Project: **1535-4897**

Check By: K.M. Check By: R.A. Scale: 1:500 Drawing: **C110**