WASAGA RIVERWOODS HOMES

WASAGA RIVERWOODS

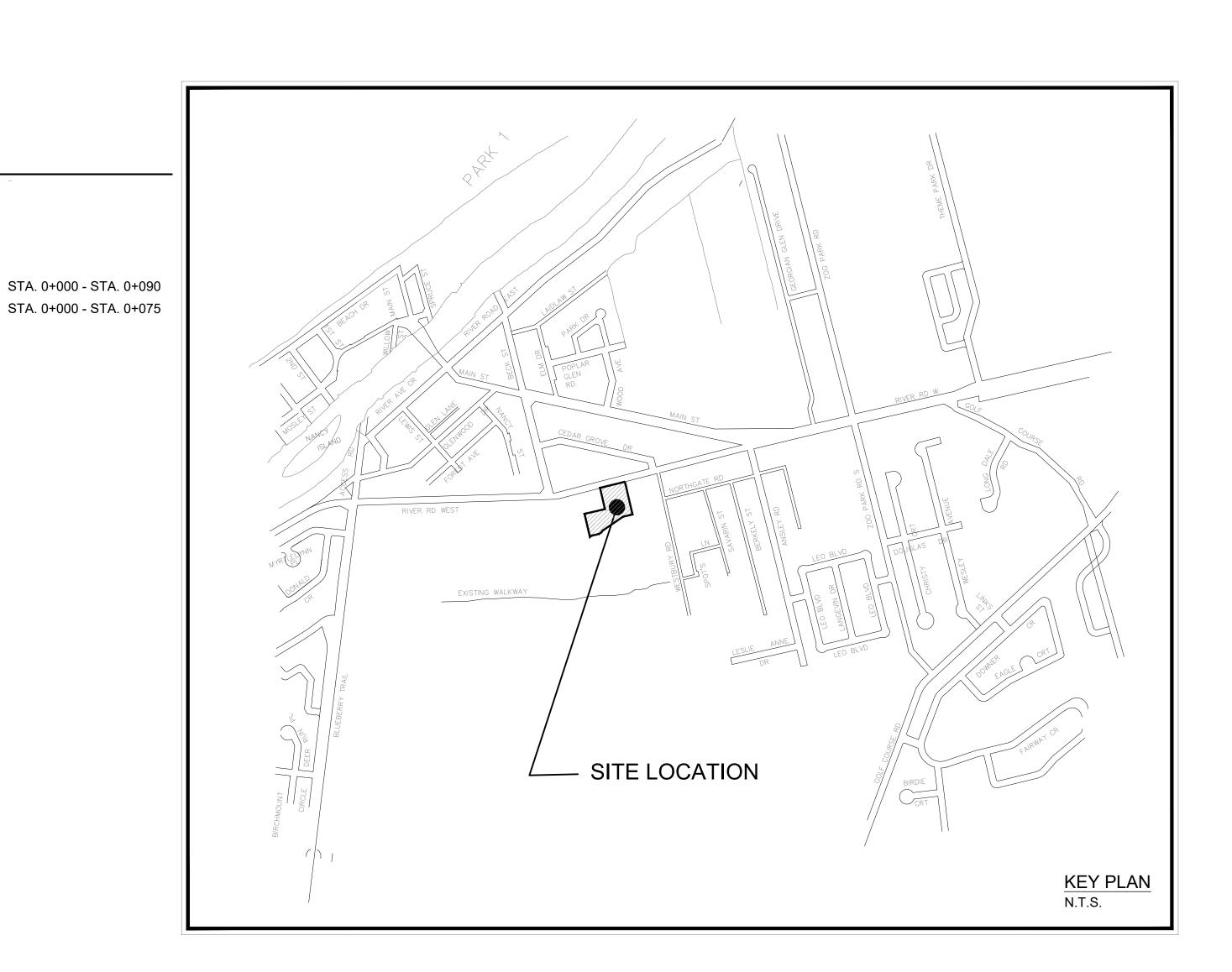
DRAWING INDEX

- C1 EXISTING CONDITIONS & REMOVALS
- C2 GRADING PLAN (1 OF 2)
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PARKING LOT STA. 0+000 - STA. 0+075 C7 POST DEVELOPMENT STORMWATER DRAINAGE PLAN C8 EROSION AND SEDIMENT CONTROL PLAN (1 OF 2)

RIVER ROAD WEST



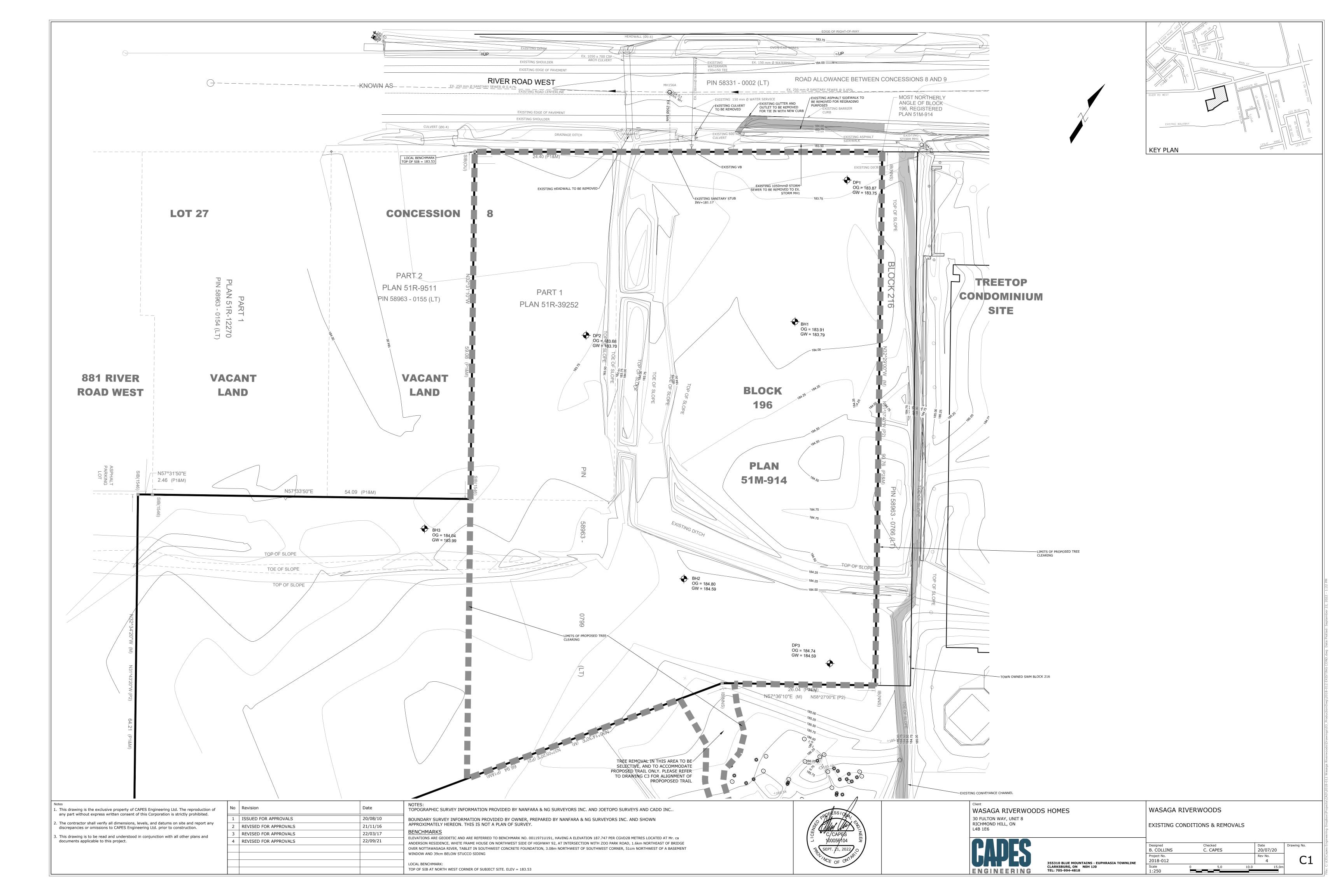
30 FULTON WAY, UNIT 8 RICHMOND HILL, ON

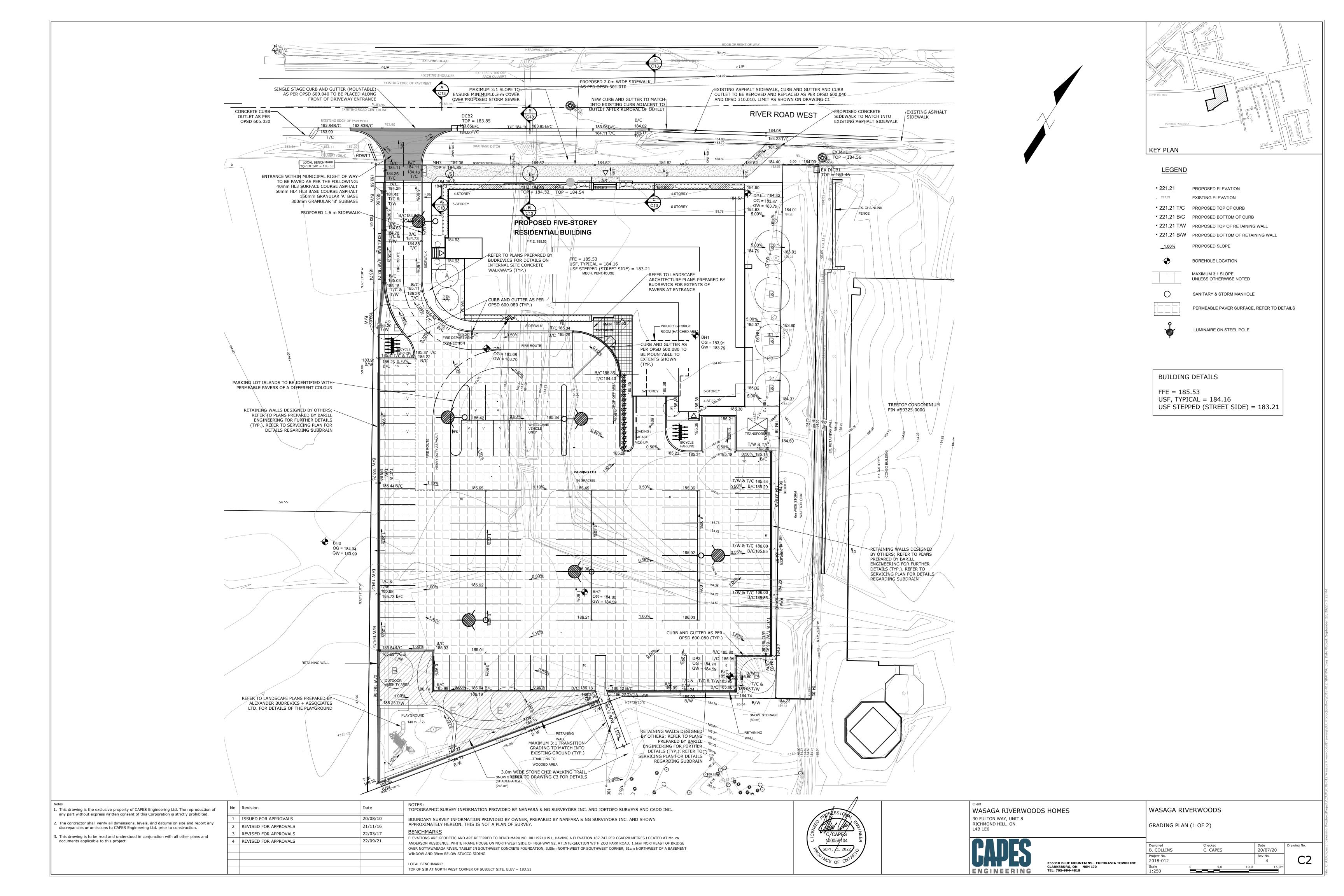
Project No. 2018-012

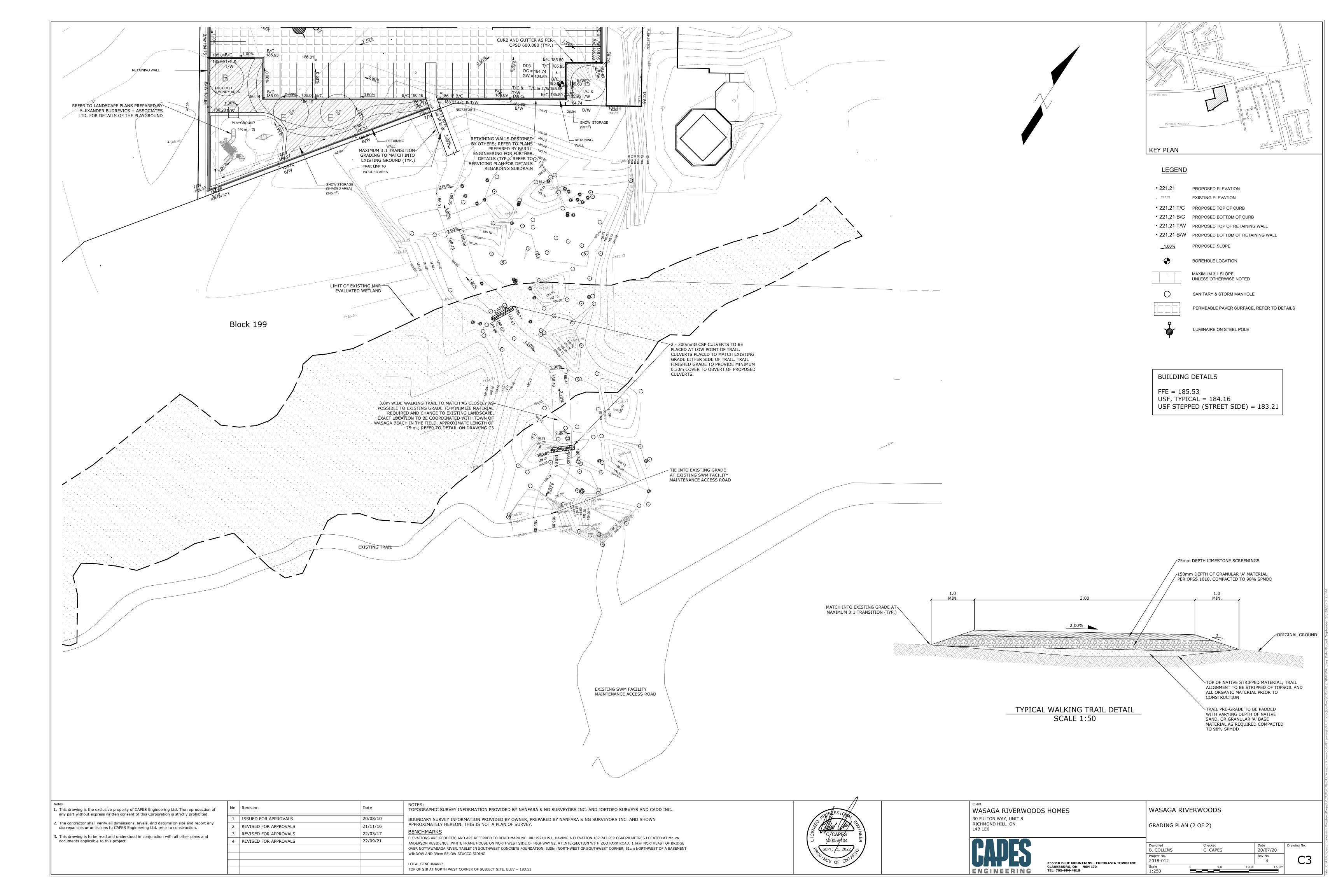
REVISED FOR APPROVALS - 22/09/21

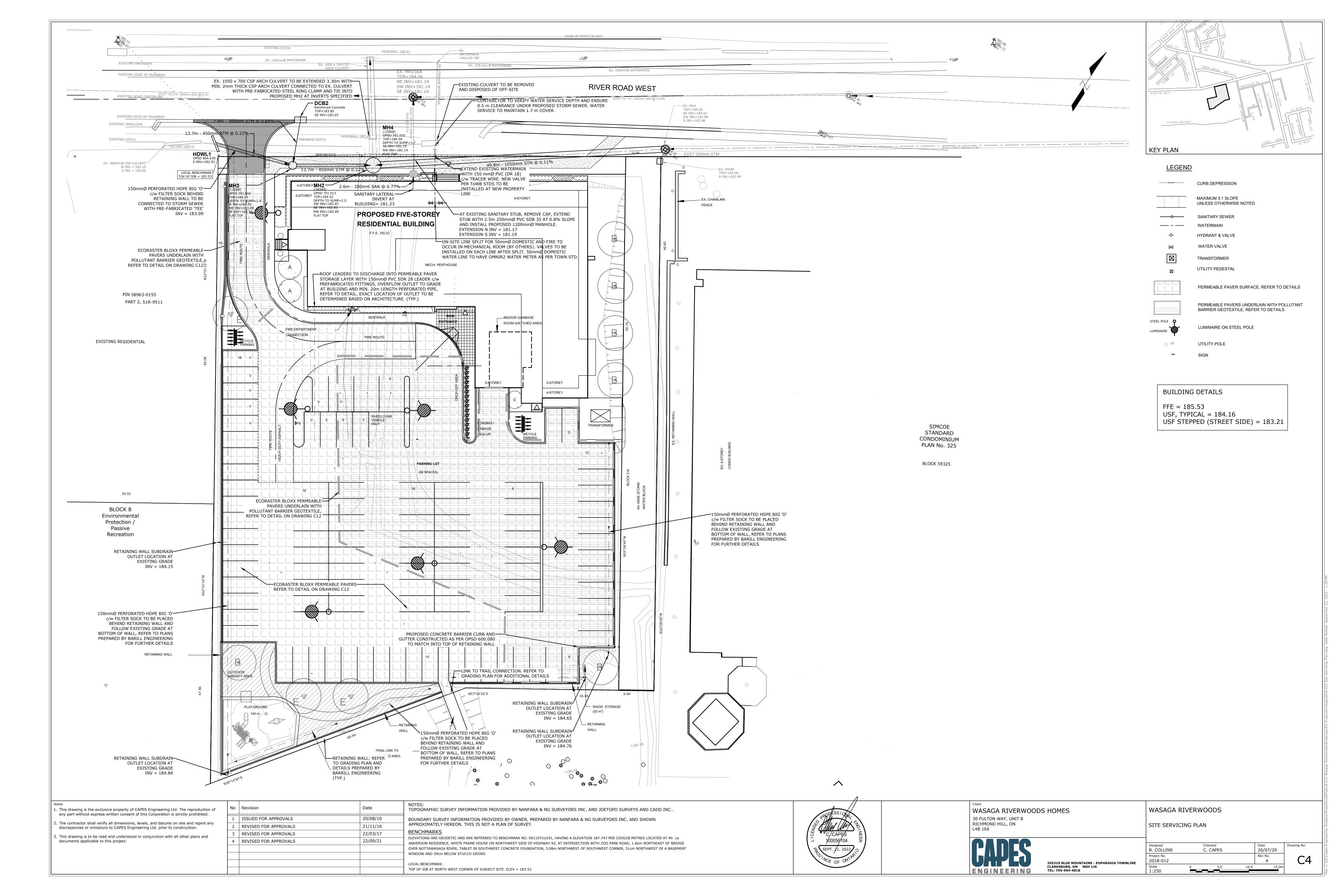






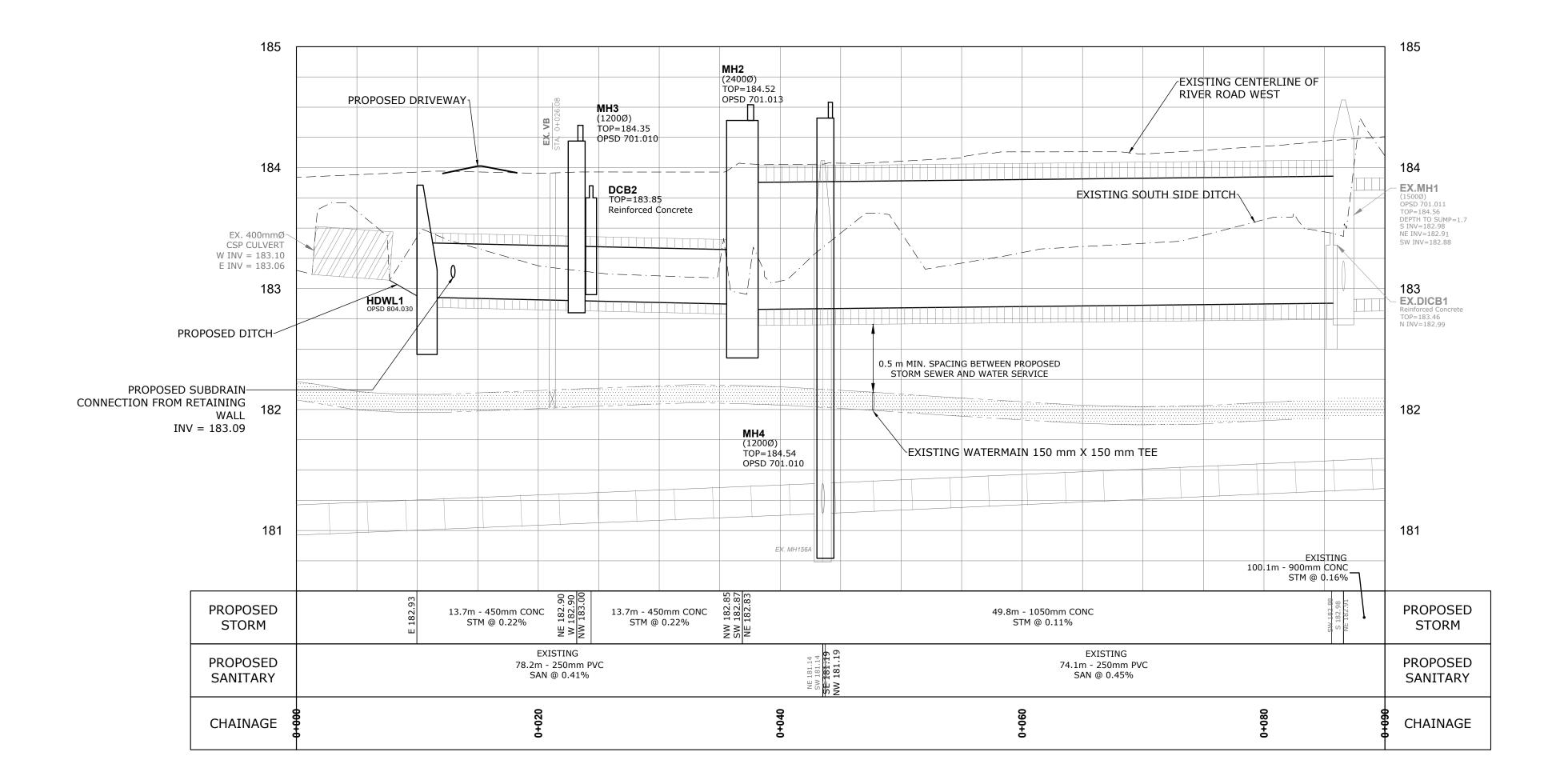






RIVER ROAD WEST EXISTING DITCH \circ UP ∘UP N INV = 182.85 EX. 1050 x 700 CSP ARCH CULVERT TO BE EXTENDED 3.30m WITH EXISTING EDGE OF PAVEMENT TOP=184.06 $\,\,\,\,\,\,$ MIN. 2mm THICK CSP ARCH CULVERT CONNECTED TO EX. CULVERT $\,\,\,\,\,\,\,\,\,\,\,\,$ NE INV=181.14 WITH PRE-FABRICATED STEEL RING CLAMP AND TIE INTO SW INV=181.14 EXISTING CULVERT TO BE REMOVED PROPOSED MH2 AT INVERTS SPECIFIED SE INV=181.14 AND DISPOSED OF OFF-SITE EVENTAGE DOAD CONTROLL CONTRACTOR TO VERIFY WATER SERVICE DEPTH AND ENSURE EX CONCRETE CURB OUTLET 0.5 m CLEARANCE UNDER PROPOSED STORM SEWER. WATER —EX. MH1 TOP=184.06 NE INV=184.53 Reinforced Concrete TOP=183.85 DEPTH TO SUMP=0.8 AS PER OPSD 605.030 SERVICE TO MAINTAIN 1.7 m COVER. -MATCH NEW CURB INTO EX. CURB 0.5m EAST OF OUTLET. EX. CURB TO BE SAW CUT AND OUTLET REMOVED SW INV=182.88 S INV=182.98 SE INV=183.05 ♀ DEPTH TO SUMP=3.7 49.8m - 1050mm STM @ 0.11% CONSTRUCTION, RIVER ROAD WEST EX. DICB1 TOP=183.46 N INV=182.99 4-STOREY EXTEND EXISTING WATERMAIN WITH 150 mmØ PVC SANITARY LATERAL— LOCAL BENCHMARK (DR 18) c/w TRACER WIRE. NEW VALVE PER ToWB INVERT AT ___ EX. CHAINLINK TOP OF SIB = 183.53 MH2 ----STDS TO BE INSTALLED AT NEW PROPERTY LINE BUILDING= 181.23 150mmØ PERFORATED HDPE BIG 'O'-TOP=184.52 DEPTH TO SUMP=2.0 SW INV=182.87 PROPOSED FIVE-STOREY —AT EXISTING SANITARY STUB, REMOVE CAP, EXTEND c/w FILTER SOCK BEHIND STUB WITH 2.5m 250mmØ PVC SDR 35 AT 0.8% SLOPE RETAINING WALL TO BE RESIDENTIAL BUILDING AND INSTALL PROPOSED 1200mmØ MANHOLE. CONNECTED TO STORM SEWER EXTENSION N INV = 181.17 WITH PRE-FABRICATED 'TEE F.F.E. 185.53 EXTENSION S INV = 181.19 INV = 183.09'ON-SITE LINE SPLIT FOR 50mmØ DOMESTIC AND FIRE TO OCCUR IN MECHANICAL ROOM (BY OTHERS). VALVES TO BE INSTALLED ON EACH LINE AFTER SPLIT. 50mmØ DOMESTIC WATER LINE TO HAVE OMNIR2 WATER METER A\$ PER TOWN STD. MECH. PENTHOUSE -ROOF LEADERS TO DISCHARGE INTO PERMEABLE PAVER STORAGE LAYER WITH 150mmØ PVC SDR 28 LEADER c/w PREFABRICATED FITTINGS, OVERFLOW OUTLET TO GRADE AT BUILDING AND MIN. 20m LENGTH PERFORATED PIPE, REFER TO DETAIL. EXACT LOCATION OF OUTLET TO BE DETERMINED BASED ON ARCHITECTURE. (TYP.) SIDEWALK — INDOOR GARBAGE

ROOM (HATCHED AREA)



FIRE ROUTE

FIRE DEPARTMENT .

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No	Revision	Date
1	ISSUED FOR APPROVALS	20/08/10
2	REVISED FOR APPROVALS	21/11/16
3	REVISED FOR APPROVALS	22/03/17
4	REVISED FOR APPROVALS	22/09/21

TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY NANFARA & NG SURVEYORS INC. AND JOETOPO SURVEYS AND CADD INC...

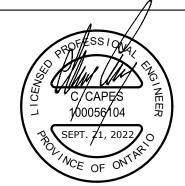
BOUNDARY SURVEY INFORMATION PROVIDED BY OWNER, PREPARED BY NANFARA & NG SURVEYORS INC. AND SHOWN APPROXIMATELY HEREON. THIS IS NOT A PLAN OF SURVEY.

BENCHMARKS

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO BENCHMARK NO. 0011971U191, HAVING A ELEVATION 187.747 PER CGVD28 METRES LOCATED AT Mr. ca
ANDERSON RESIDENCE, WHITE FRAME HOUSE ON NORTHWEST SIDE OF HIGHWAY 92, AT INTERSECTION WITH ZOO PARK ROAD, 1.6km NORTHEAST OF BRIDGE
OVER NOTTAWASAGA RIVER, TABLET IN SOUTHWEST CONCRETE FOUNDATION, 3.08m NORTHWEST OF SOUTHWEST CORNER, 51cm NORTHWEST OF A BASEMENT
WINDOW AND 39cm BELOW STUCCO SIDING

LOCAL BENCHMARK:

TOP OF SIB AT NORTH WEST CORNER OF SUBJECT SITE. ELEV = 183.53



WASAGA RIVERWOODS HOMES
30 FULTON WAY, UNIT 8
RICHMOND HILL, ON

CLARKSBURG, ON NOH 1J0 TEL: 705-994-4818



RIVER ROSTA. 0+00

Designed
B. COLLINS

Project No.
2018-012

WASAGA RIVERWOODS

PLAN AND PROFILE
RIVER ROAD WEST

PLAN AND PROFILE
RIVER ROAD WEST
STA. 0+000 - STA. 0+090

Designed Checked
B. COLLINS C. CAPE
Project No.

KEY PLAN

<u>LEGEND</u>

PROPOSED ELEVATION

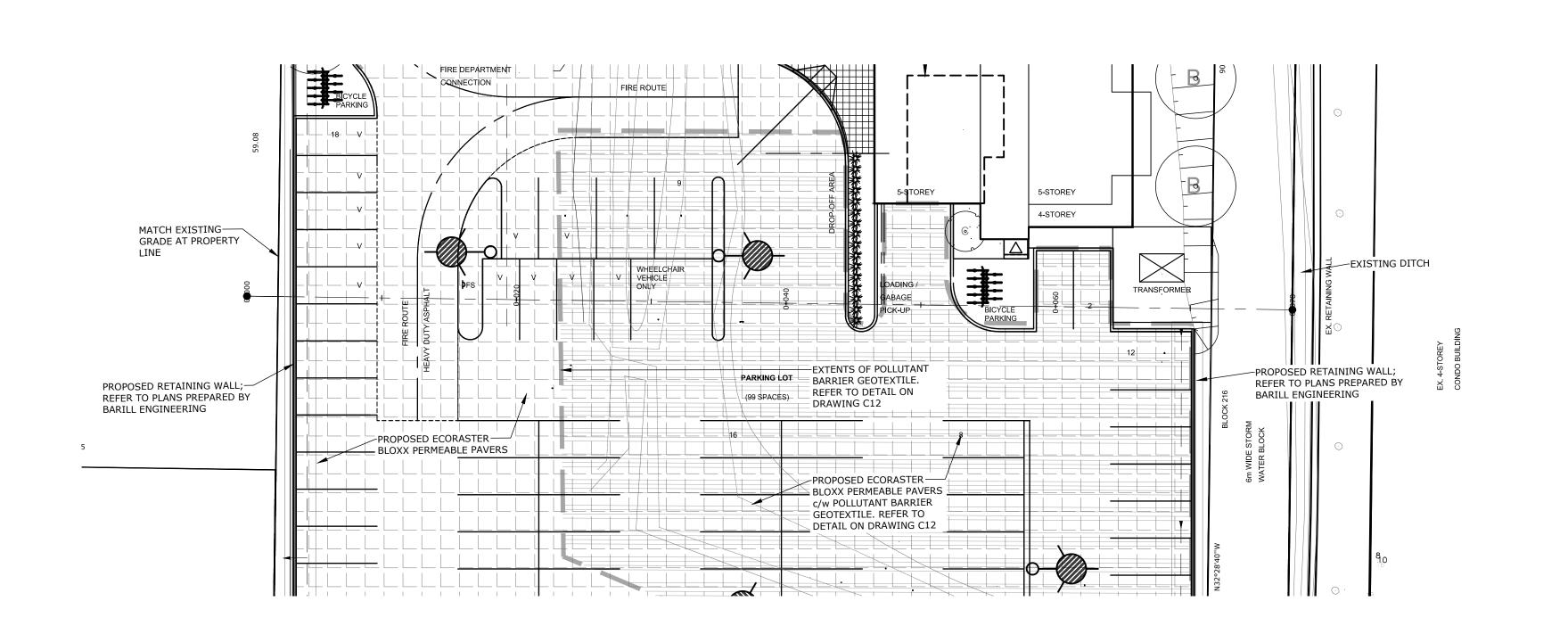
EXISTING ELEVATION

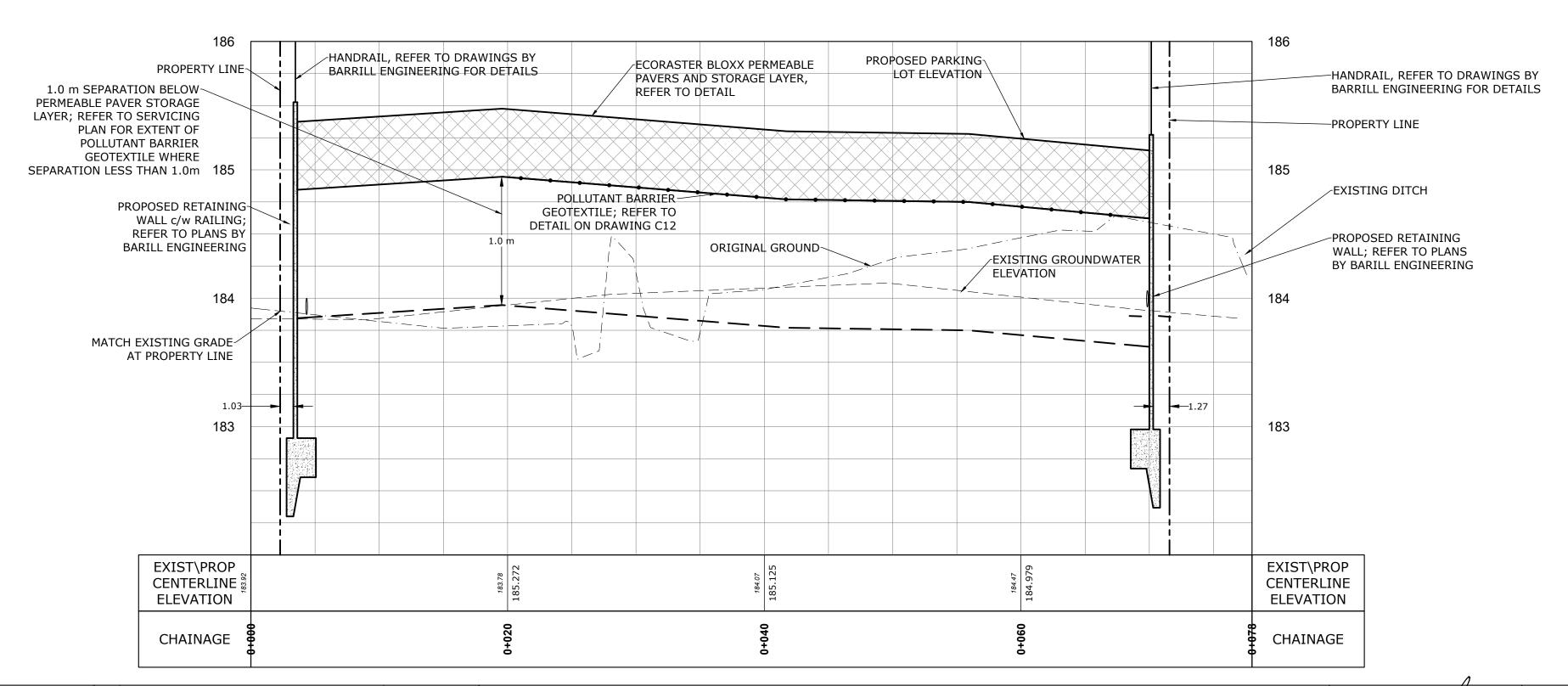
MAXIMUM 3:1 SLOPE UNLESS OTHERWISE NOTED

SANITARY & STORM MANHOLE

× 221.21

C5





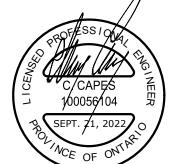
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4	REVISED FOR APPROVALS	22/09/21	ELEVATIONS ARE GEODETIC AND ARE REFERRED TO BENCHMARK NO. 0011 ANDERSON RESIDENCE, WHITE FRAME HOUSE ON NORTHWEST SIDE OF HI
			OVER NOTTAWASAGA RIVER, TABLET IN SOUTHWEST CONCRETE FOUNDAT
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WASAGA RIVERWOODS HOMES 30 FULTON WAY, UNIT 8 RICHMOND HILL, ON



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WASAGA RIVERWOODS PLAN AND PROFILE PARKING LOT

KEY PLAN

<u>LEGEND</u>

* 221.21 PROPOSED ELEVATION

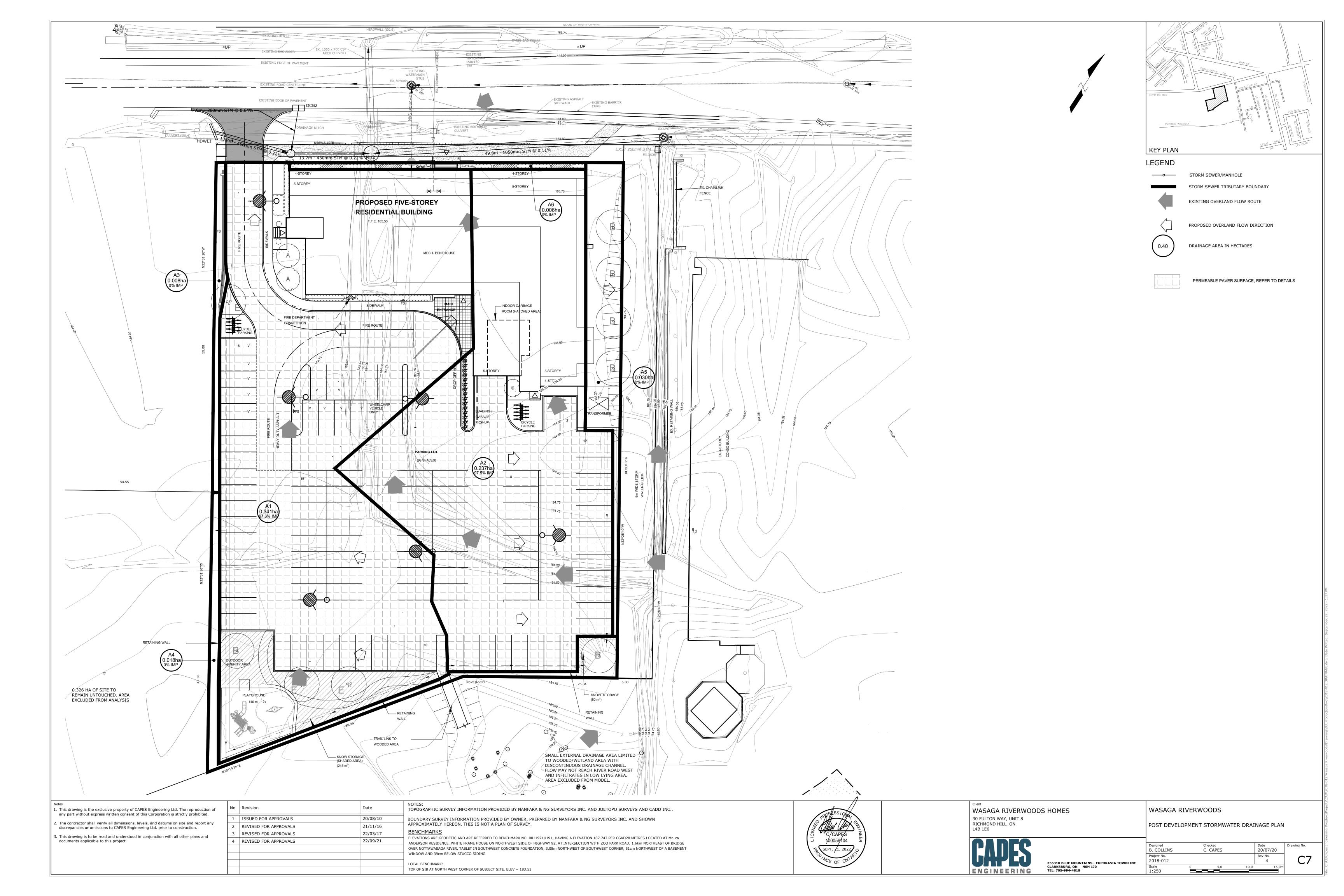
EXISTING ELEVATION

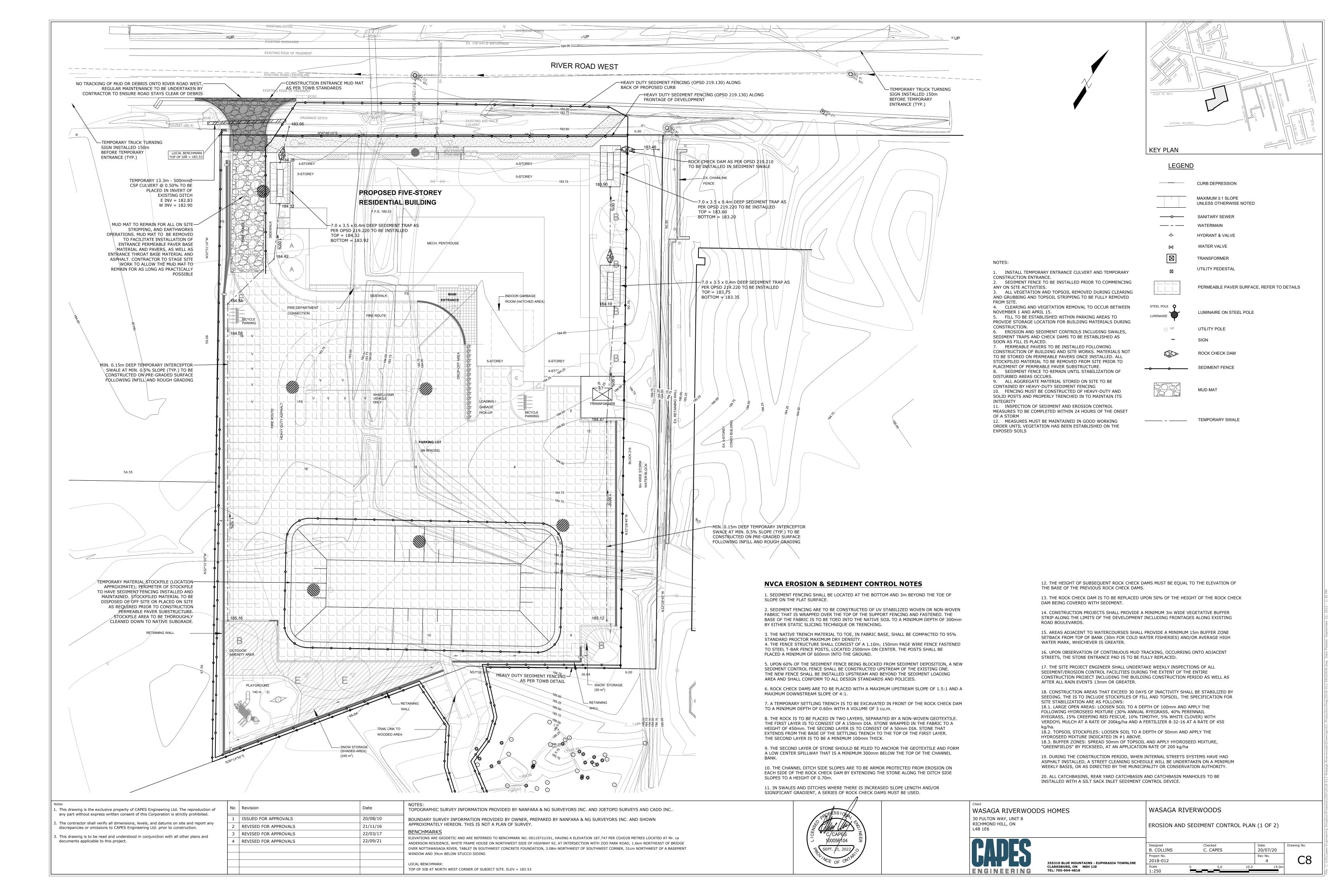
MAXIMUM 3:1 SLOPE UNLESS OTHERWISE NOTED

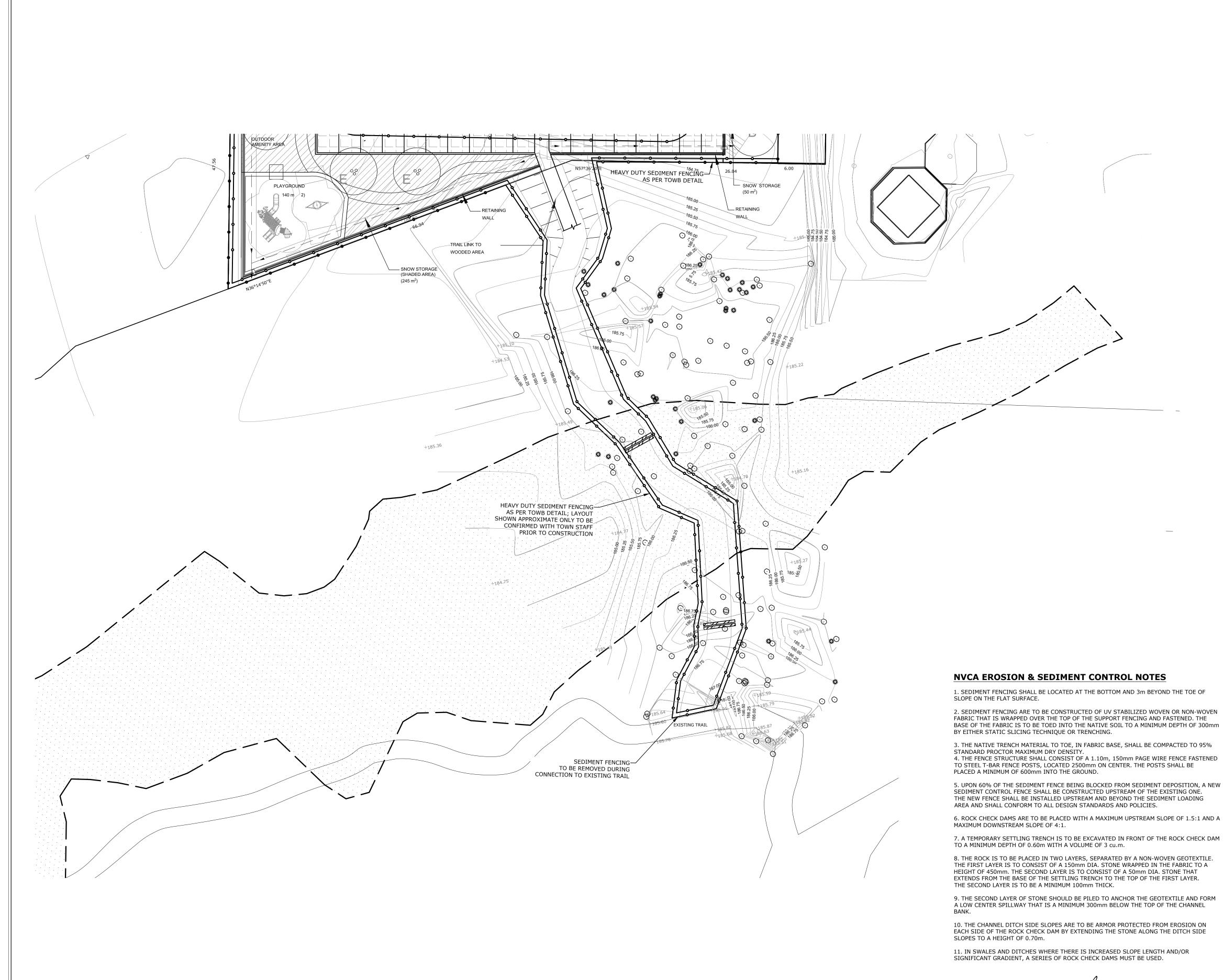
SANITARY & STORM MANHOLE

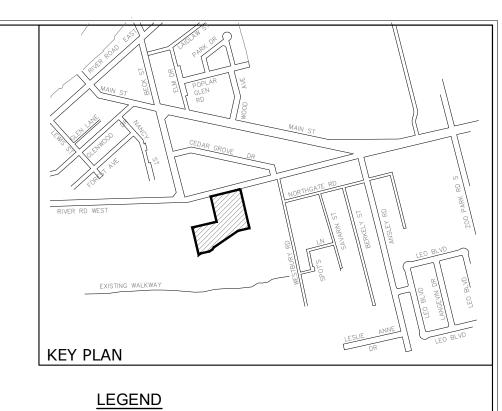
STA. 0+000 - STA. 0+075 B. COLLINS 2018-012

C. CAPES 20/07/20









CURB DEPRESSION

MAXIMUM 3:1 SLOPE

SANITARY SEWER

HYDRANT & VALVE

WATER VALVE

TRANSFORMER

UTILITY POLE

ROCK CHECK DAM

SEDIMENT FENCE

TEMPORARY SWALE

MUD MAT

SIGN

UTILITY PEDESTAL

LUMINAIRE ON STEEL POLE

PERMEABLE PAVER SURFACE, REFER TO DETAILS

WATERMAIN

UNLESS OTHERWISE NOTED

1. INSTALL TEMPORARY ENTRANCE CULVERT AND TEMPORARY CONSTRUCTION ENTRANCE. 2. SEDIMENT FENCE TO BE INSTALLED PRIOR TO COMMENCING ANY ON SITE ACTIVITIES. 3. ALL VEGETATION AND TOPSOIL REMOVED DURING CLEARING AND GRUBBING AND TOPSOIL STRIPPING TO BE FULLY REMOVED 4. CLEARING AND VEGETATION REMOVAL TO OCCUR BETWEEN NOVEMBER 1 AND APRIL 15. 5. FILL TO BE ESTABLISHED WITHIN PARKING AREAS TO PROVIDE STORAGE LOCATION FOR BUILDING MATERIALS DURING CONSTRUCTION. 6. EROSION AND SEDIMENT CONTROLS INCLUDING SWALES, SEDIMENT TRAPS AND CHECK DAMS TO BE ESTABLISHED AS SOON AS FILL IS PLACED. 7. PERMEABLE PAVERS TO BE INSTALLED FOLLOWING CONSTRUCTION OF BUILDING AND SITE WORKS. MATERIALS NOT TO BE STORED ON PERMEABLE PAVERS ONCE INSTALLED. ALL STOCKPILED MATERIAL TO BE REMOVED FROM SITE PRIOR TO PLACEMENT OF PERMEABLE PAVER SUBSTRUCTURE. 8. SEDIMENT FENCE TO REMAIN UNTIL STABILIZATION OF

SOLID POSTS AND PROPERLY TRENCHED IN TO MAINTAIN ITS 11. INSPECTION OF SEDIMENT AND EROSION CONTROL OF A STORM 12. MEASURES MUST BE MAINTAINED IN GOOD WORKING

ORDER UNTIL VEGETATION HAS BEEN ESTABLISHED ON THE

DISTURBED AREAS OCCURS. 9. ALL AGGREGATE MATERIAL STORED ON SITE TO BE CONTAINED BY HEAVY-DUTY SEDIMENT FENCING 10. FENCING MUST BE CONSTRUCTED OF HEAVY-DUTY AND MEASURES TO BE COMPLETED WITHIN 24 HOURS OF THE ONSET

NOTES:

EXPOSED SOILS

PROPOSED CULVERTS, REFER TO GRADING PLAN FOR ADDITIONAL INFORMATION

- 1. ACCESS FOR NEW TRAIL DEVELOPMENT TO BE FROM
- SUBJECT SITE ONLY. 2. OWNER/CONTRACTOR TO COORDINATE WITH TOWN STAFF TO CONFIRM EXACT TRAIL AND CULVERT LOCATIONS PRIOR TO INSTALLING SEDIMENT FENCE.
- 3. SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION EFFORTS. 4. CLEARING AND VEGETATION REMOVAL TO OCCUR
- BETWEEN NOVEMBER 1 AND APRIL 15.
- 5. CONTRACTOR TO CONSTRUCT TRAIL AND CULVERTS PER AGREED UPON LOCATION.
- 6. SEDIMENT FENCE TO REMAIN UNTIL STABILIZATION OF DISTURBED AREAS OCCURS.

12. THE HEIGHT OF SUBSEQUENT ROCK CHECK DAMS MUST BE EQUAL TO THE ELEVATION OF THE BASE OF THE PREVIOUS ROCK CHECK DAMS.

13. THE ROCK CHECK DAM IS TO BE REPLACED UPON 50% OF THE HEIGHT OF THE ROCK CHECK DAM BEING COVERED WITH SEDIMENT.

14. CONSTRUCTION PROJECTS SHALL PROVIDE A MINIMUM 3m WIDE VEGETATIVE BUFFER STRIP ALONG THE LIMITS OF THE DEVELOPMENT INCLUDING FRONTAGES ALONG EXISTING

15. AREAS ADJACENT TO WATERCOURSES SHALL PROVIDE A MINIMUM 15m BUFFER ZONE SETBACK FROM TOP OF BANK (30m FOR COLD WATER FISHERIES) AND/OR AVERAGE HIGH WATER MARK, WHICHEVER IS GREATER.

16. UPON OBSERVATION OF CONTINUOUS MUD TRACKING, OCCURRING ONTO ADJACENT STREETS, THE STONE ENTRANCE PAD IS TO BE FULLY REPLACED.

17. THE SITE PROJECT ENGINEER SHALL UNDERTAKE WEEKLY INSPECTIONS OF ALL SEDIMENT/EROSION CONTROL FACILITIES DURING THE EXTENT OF THE ENTIRE CONSTRUCTION PROJECT INCLUDING THE BUILDING CONSTRUCTION PERIOD AS WELL AS AFTER ALL RAIN EVENTS 13mm OR GREATER.

18. CONSTRUCTION AREAS THAT EXCEED 30 DAYS OF INACTIVITY SHALL BE STABILIZED BY SEEDING. THE IS TO INCLUDE STOCKPILES OF FILL AND TOPSOIL. THE SPECIFICATION FOR SITE STABILIZATION ARE AS FOLLOWS: 18.1. LARGE OPEN AREAS: LOOSEN SOIL TO A DEPTH OF 100mm AND APPLY THE FOLLOWING HYDROSEED MIXTURE (30% ANNUAL RYEGRASS, 40% PERENNAIL RYEGRASS, 15% CREEPING RED FESCUE, 10% TIMOTHY, 5% WHITE CLOVER) WITH VERDOYL MULCH AT A RATE OF 200kg/ha AND A FERTILIZER 8-32-16 AT A RATE OF 450

18.2. TOPSOIL STOCKPILES: LOOSEN SOIL TO A DEPTH OF 50mm AND APPLY THE HYDROSEED MIXTURE INDICATED IN #1 ABOVE. 18.3. BUFFER ZONES: SPREAD 50mm OF TOPSOIL AND APPLY HYDROSEED MIXTURE, "GREENFIELDS" BY PICKSEED, AT AN APPLICATION RATE OF 200 kg/ha

19. DURING THE CONSTRUCTION PERIOD, WHEN INTERNAL STREETS SYSTEMS HAVE HAD ASPHALT INSTALLED, A STREET CLEANING SCHEDULE WILL BE UNDERTAKEN ON A MINIMUM WEEKLY BASIS, OR AS DIRECTED BY THE MUNICIPALITY OR CONSERVATION AUTHORITY.

20. ALL CATCHBASINS, REAR YARD CATCHBASIN AND CATCHBASIN MANHOLES TO BE INSTALLED WITH A SILT SACK INLET SEDIMENT CONTROL DEVICE.

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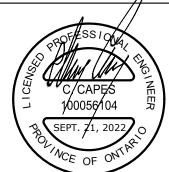
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TOP OF SIB AT NORTH WEST CORNER OF SUBJECT SITE. ELEV = 183.53



WASAGA RIVERWOODS HOMES 30 FULTON WAY, UNIT 8 RICHMOND HILL, ON

EROSION AND SEDIMENT CONTROL PLAN (2 OF 2)

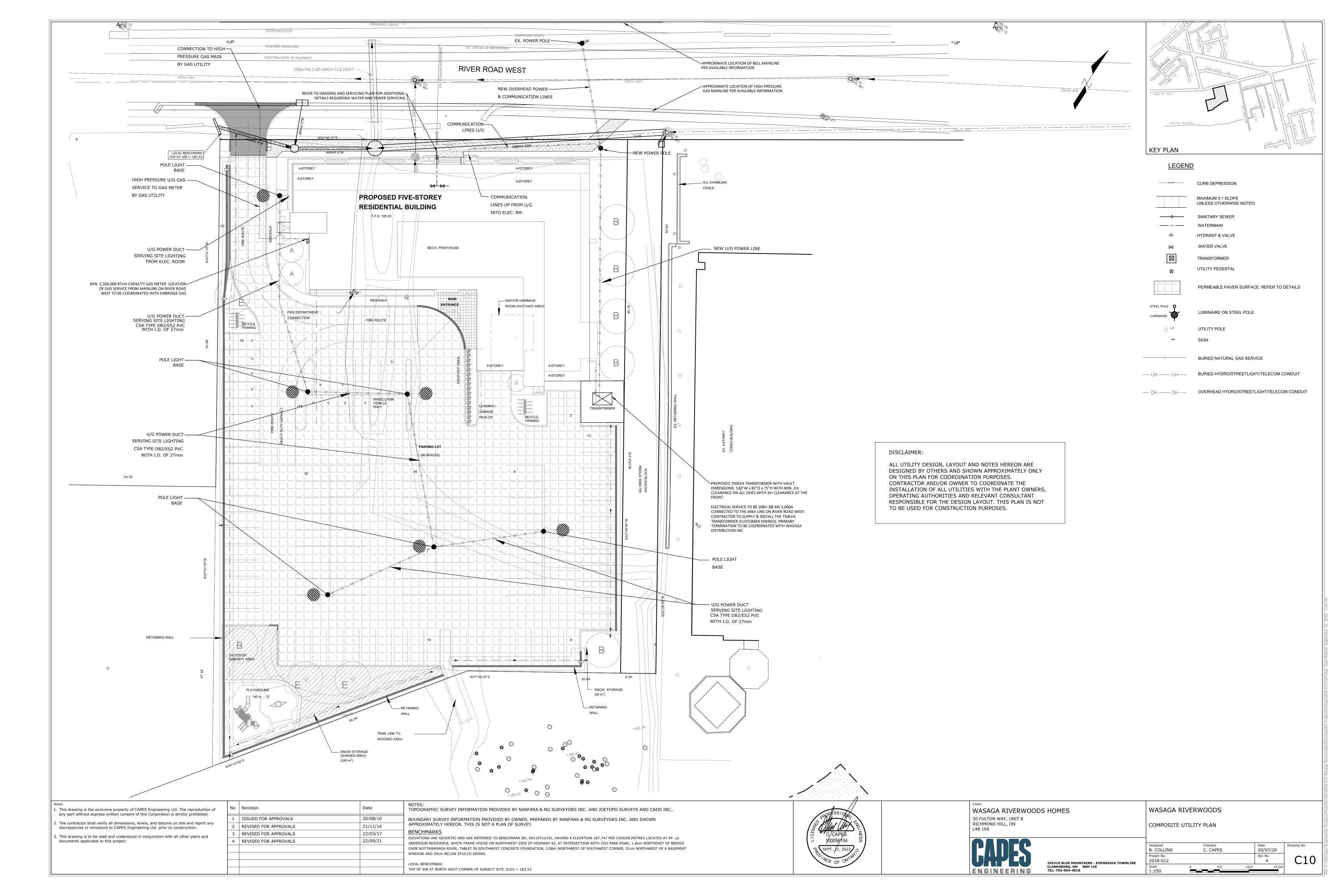
WASAGA RIVERWOODS



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B. COLLINS C. CAPES 2018-012

20/07/20



CLEAR STONE WRAPPED IN FILTER FABRIC MAY BE SUBSTITUTED FOR PIPE BEDDING MATERIAL IF APPROVED BY THE ENGINEER. DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 AND 518. THE OWNER IS RESPONSIBLE FOR OBTAINING DEWATERING PERMITS AS REQUIRED TO MAINTAIN DRY TRENCH CONDITIONS. UNDERGROUND UTILITITES TO BE VERIFIED IN THE FIELD BY THE

CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. HYDRO POLES TO BE SUPPORTED AND PROTECTED BY THE CONTRACTOR DURING CONSTRUCTED AS DIRECTED BY WASAGA DISTRIBUTION INC. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH UTILITIES WHICH MAY ALSO BE UNDER CONSTRUCTION.

B. EXISTING GAS MAIN TO BE PROTECTED IN ACCORDANCE WITH ENBRIDGE GAS ALL EXISTING PAVED PRIVATE ENTRANCES TO BE REINSTATED WITH 50mm HL3 SURFACE COURSE AND 150mm GRANULAR 'A' BASE TO LIMITS OF

D. ALL EXISTING GRAVEL OR GRASSED PRIVATE ENTRANCES TO BE REINSTATED WITH 150mm GRANULAR 'A' BASE TO LIMITS OF CONSTRUCTION AND 50mm . ALL COMMERCIAL ENTRANCES TO BE REINSTATED WITH 50mm HL3 SURFACE

COURSE, MATCH EXISTING ASPHALT BASE COURSE(S), 150mm GRANULAR 'A' BASE AND 150mm GRANULAR 'B' SUBBASE TO LIMITS OF CONSTRUCTION. JOINTS WITH EXISTING ASPHALT TO BE SAW CUT PRIOR TO PLACING NEW ASPHALT; DENSO REINSTATEMENT TAPE SHALL BE USED AT THE JOINT OF SURFACE ASPHALT. SURFACE ASPHALT JOINTS TO HAVE MIN. 0.5m WIDE

3. ALL BOULEVARDS AND DISTURBED AREAS TO HAVE 150mm SCREENED TOPSOIL AND NURSERY SOD UNLESS OTHERWISE NOTED 4. PAVED BOULEVARD AREAS TO BE REINSTATED WITH 50mm HL3 SURFACE COURSE ASPHALT AND 150mm GRANULAR 'A' WHERE NOTED 5. ACCESS TO BUSINESS AND RESIDENTIAL PROPERTIES MUST BE MAINTAINED

16. THE CONTRACTOR MUST GIVE MIN. 48 HOURS NOTICE TO THE TOWN OF WASAGA BEACH PUBLIC WORKS DEPARTMENT THROUGH THE TOWN ENGINEER FOR OFFICIALS TO BE PRESENT FOR THE OPERATION OF VALVES, TESTING DISINEECTION AND CONNECTION OF WATERMAIN AND TESTING OF SEWERS . EARTH FILL MATERIAL UP TO AND INCLUDING SUBGRADE TO BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). GRANULAR

ASPHALT TO BE COMPACTED TO 92% MAXIMUM RELATIVE DENSITY. 8 MINIMUM VERTICAL SEPARATION OF 150mm BETWEEN SEWERS AT CROSSINGS THE CONTRACTOR MUST OBTAIN A ROAD OCCUPATION PERMIT FROM PUBLIC WORKS PRIOR TO INSTALLATION OF PROPOSED DRIVEWAY AND/OR ANY

CONSTRUCTION WORKS WITHIN THE EXISTING MUNICIPAL RIGHT-OF-WAY. O. ALL DISTURBED AREAS SHALL BE REINSTATED TO EXISTING CONDITION OR

ALL MATERIALS SHALL BE CSA CERTIFIED AND IN ACCORDANCE WITH

PVC PIPE INSTALLATION TO INCLUDE 12awg TWH SOLID PLASTIC COVERED TRACER WIRE, TWU 75'C 600V OR APPROVED EQUAL. TRACER

WIRE CONTINUITY MUST BE TESTED & CERTIFIED BY PUBLIC WORKS

OPSS-442. CATHODIC PROTECTION IS TO BE CAD WELDED ON WITH

THRUST PROTECTION SHALL BE PROVIDED USING MECHANICAL JOINT

MASTIC TAPE. FOR CURB STOPS, 7LB ZINC ANODES CAN BE TWISTED ON

CLASS 'B' BEDDING AS PER OPSD-802.030 (RIGID PIPE) OR BEDDING AS

CATHODIC PROTECTION (S-12 ZINC ANODE @ 30.0m SPACING ON

DUCTILE IRON PIPE AND AT ALL METAL RESTRAINTS. FITTINGS.

PER OPSD-802.010 (FLEXIBLE PIPE) USING GRANULAR 'A'.

THE CURB STOP AND RETURN TO PUBLIC WORKS YARD.

APPURTENANCES, ETC.) TO BE PROVIDED IN ACCORDANCE WITH

ALL WATERMAIN TO HAVE MINIMUM 1.7m COVER OR APPROVED

EQUIVALENT FROST PROTECTION WITH INSULATION.

BEDDING AND BACKFILL IN ACCORDANCE WITH OPSS-401.

THE TOWN APPROVED MATERIALS LIST

APPROVED MATERIAL AND PRODUCT LIST

BUTTON TWIST NUT.

SEDIMENT & EROSION CONTROL NOTES:

. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED, AFTER WHICH. THEY SHALL BE FULLY REMOVED BY THE CONTRACTOR 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. 2. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND

EROSION CONTROL MEASURES. SUCH MEASURES MUST BE PRESENTED IN WRITING FOR APPROVAL OF THE TOWN ENGINEER AND THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY. THE CONTRACTOR SHALL HAVE MATERIALS AVAILABLE ON-SITE TO REPAIR SEDIMENT AND EROSION CONTROL MEASURES IN THE EVENT OF UNFORESEEN CONDITIONS: HIGH WATER, EXTREME RAINFALL EVENTS

ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED THE ENGINEER BI-WEEKLY AND AFTER EACH MAJOR STORM EVENT. INSPECTION REPORTS TO BE FORWARDED TO THE TOWN ENGINEER BI-WEEKLY. AREAS THAT ARE UNDEVELOPED FOR AN EXTENDED PERIOD OF TIME SHALL BE REVEGETATED WITH TOPSOIL AND HYDRAULIC SEED AND MULCH AS DIRECTED BY THE TOWN.

ALL MATERIALS SHALL BE CSA CERTIFIED AND IN ACCORDANCE WITH THE TOWN APPROVED MATERIALS LIST. . CLASS 'B' BEDDING AND COVER AS PER OPSD-802.030 (RIGID PIPE) OR EMBEDMENT AS PER OPSD-802.010 (FLEXIBLE PIPE) USING GRANULAR 'A'. USE SELECT NATIVE MATERIAL COMPACTED TO 95% MAXIMUM DRY DENSITY FOR COVER MATERIAL IF APPROVED BY THE TOWN ENGINEER CATCHBASINS & MANHOLES TO BE BACKFILLED WITH SELECT NATIVE

CATCHBASIN LEADS; - 300mm DIA. FOR SINGLE AND DOUBLE CATCHBASIN FRAMES AND COVERS PER OPSD 400.020.

MATERIAL AND COMPACTED TO 95% MAXIMUM DRY DENSITY

STEPS AS PER OPSD-405.010 HOLLOW CIRCULAR ALUMINUM.

OT CATCHBASIN LEAD:	V INSPECTED. S SHALL BE CONCRETE	
TOWN OF WA	SAGA BEACH	OF WASAGA
GENERAI	OT S	
DRAWN: MRT	SCALE: N.T.S.	CORPORATED
DESIGN: MJP	PLOT: 1=1	STD.DWG.No.
CHECKED: MJP	DATE: APRIL 2021	SID.DWG.NO.

ALL MATERIALS SHALL BE CSA CERTIFIED AND IN ACCORDANCE WITH

2. BEDDING AS PER OPSD-802.010 USING GRANULAR 'A' COMPACTED TO 95% MAXIMUM DRY DENSITY. USE SELECTED SITE MATERIAL FOR BACKFILL COMPACTED TO 95% MAXIMUM DRY DENSITY. 3. SANITARY SERVICE LATERALS COMPLETE WITH CLEANOUT TO BE

5. MH'S PER OPSD-701.010 WITH FROST STRAPS PER OPSD 701.100 WITH "QUICK ANCHORED" BOLTS.

MH BENCHING PER OPSD-701.021 AND STEPS PER OPSD-405.010 SANITARY SEWER TESTING SHALL INCLUDE INFILTRATION, EXFILTRATION,

DEFLECTION (MANDREL) AND CCTV. SANITARY MAINTENANCE HOLES SHALL BE PROVIDED WITH DENSO

GATE VALVES TO BE LEFT HAND OPENING COMPLETE WITH SLIDE TYPE VALVE BOXES 125mmø WITH LIDS MARKED WATER AS PER TOWN WATER SERVICES COMPLETE WITH MAIN STOP TO BE AS PER TOWN APPROVED MATERIAL AND PRODUCT LIST.

10. WHERE RESIDENTIAL WATER SERVICES ARE TO BE ABANDONED, EXPOSE

ALL WATERMAINS AND SERVICES SHALL BE BACKFILLED WITH APPROVED SITE MATERIAL ALL BACKELL SHALL BE COMPACTED TO 95% MAXIMUM. DENSITY AS PER OPSS 514. ALL GRANULAR ROAD BASE SHALL BE COMPACTED TO 100% MAXIMUM DRY DENSITY. EXISTING SERVICE LOCATIONS TO BE VERIFIED IN THE FIELD. HYDRANT TO BE AS PER TOWN APPROVED MATERIAL AND PRODUCT LIST WITH MECHANICAL JOINT ENDS, WITH 2-50mm PORTS AND FACTORY INSTALLED STORZ FITTING PER OPSD-1105.010

MAIN STOP, CLOSE AND DISCONNECT SERVICE PIPE, AND SALVAGE

4. TESTING CONNECTION TO THE MUNICIPAL WATER SYSTEM SHALL BE PER MINIMUM VERTICAL SEPARATION 500mm BETWEEN WATERMAINS AND

SEWERS. MINIMUM HORIZONTAL SEPARATION OF 2.5m BETWEEN WATERMAINS AND SEWERS. 3. WATERMAINS SHALL BE SWABBED, FLUSHED, DISINFECTED AND TESTED

IN ACCORDANCE WITH OPSS 441 WITH TOWN OFFICIALS PRESENT DISINFECTING OF WATERMAINS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C651 SPECIFICATIONS.

. ANTI-TAMPERING DEVICES ARE TO BE INSTALLED ON ALL FIRE HYDRANTS FOLLOWING COMPLETION OF ALL WATER SYSTEM TESTING BY THE TOWN, ANTI-TAMPERING DEVICES ARE TO BE REMOVED FROM ALL

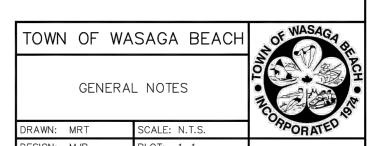
FIRE HYDRANTS AT END OF WARRANTY PERIOD, PRIOR TO MUNICIPAL

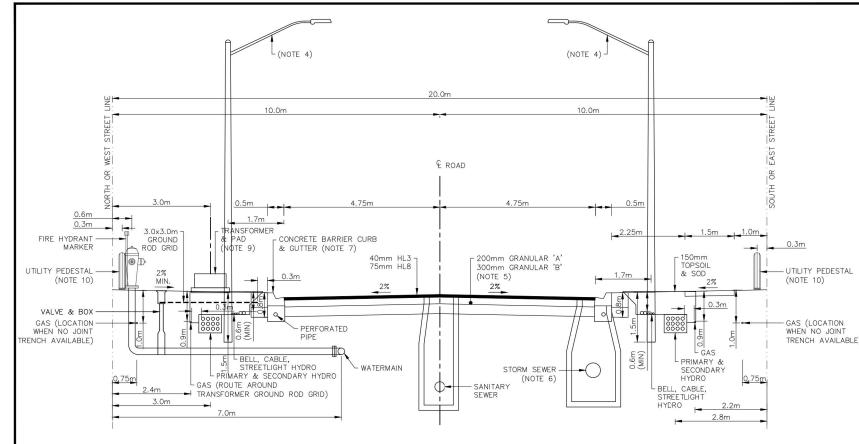
HE TOWN APPROVED MATERIALS LIST.

INSTALLED PER TOWN STD. DWG No. 4. LOT SERVICE LOCATIONS TO BE VERIFIED BY CONTRACTOR.

FRAMES AND COVERS PER OPSD-401.010 TYPE 'A'.

PETROLIUM TAPE (OR APPROVED EQUIVALENT) AROUND THE OUTSIDE OF





TOPSOIL TO BE REMOVED TO ITS FULL DEPTH ALONG ENTIRE WIDTH OF ROAD ALLOWANCE BY CONTRACTOR. BOULEVARD TO BE FULLY SODDED WITH 150mm TOPSOIL. ROAD CROSSING DEPTHS FOR UTILITIES:

STREET LIGHTS - CREE RSW LED LUMINAIRE MOUNTED ON STRESSCRETE CLASS C 9.14m DIRECT BURIED POLE AS PER WHERE SELECTED NATIVE SAND IS TO BE USED IN LIEU OF GRANULAR 'B' ROAD BASE, INCREASE GRANULAR 'A'

IN AREAS OF HIGH GROUND WATER TABLE, AN INFILTRATING STORM SEWER SYSTEM MUST BE CONSIDERED PER D.P.S.D. 600.040 - EXISTING ROAD IMPROVEMENTS, O.P.S.D. 600.070 (TWO STAGE) - NEW ROAD CONSTRUCTION. ALL DRIVEWAYS TO INCLUDE APRON PAVING 2.75m BEHIND CURB AND ALL DRIVEWAY EDGING/CURBING SHALL BE FLUSH WITH DRIVEWAY PER THE TOWN ENGINEERING STANDARDS.
TRANSFORMERS INCLUDE 3 m x 3 m GROUND ROD GRID REQUIRING 0.3m MIN CLEARANCE FROM BACK OF CURB.
UTILITY PEDESTALS TO BE 0.3m FROM PROPERTY LINE OR BESIDE HYDRO TRANSFORMERS WHERE APPLICABLE. TOWN OF WASAGA BEAC CROSS-SECTION COLLECTOR ROAD ON 20m R.O.W. AWN: MRT

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discrepancies or omissions to CAPES Engineering Ltd. prior to construction. . This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project

The contractor shall verify all dimensions, levels, and datums on site and report any

No	Revision	Date
1	ISSUED FOR APPROVALS	20/08/10
2	REVISED FOR APPROVALS	21/11/16
3	REVISED FOR APPROVALS	22/03/17
4	REVISED FOR APPROVALS	22/09/21

FINE FESCUE/KENTUCKY BLUEGRASS NURSERY SOD CLAY: 1-20% 0 - 30%MATERIAL: 4-6% - SUB-GRADE

TRANSMITTER &

TOUCH PAD

VALVE WITH

DRAIN PORT

* AFTER WATER METER PACKAGE INSTALLATION IS COMPLETE/INSPECTED, THE OWNER/INSTALLER IS

RESPONSIBLE TO CONTACT PUBLIC WORKS DEPT. TO CO-ORDINATE INSTALLATION OF THE 'FLEXNET'

. METERS SHALL BE 'SENSUS' AS OUTLINED IN TABLE 1 BELOW c/w FLEXNET REMOTE TOUCH PAD &

WORKING SPACE AROUND THE METER SHALL ALLOW MIN. 600mm ACCESS FOR MAINTENANCE PURPOSES.

RAWN: MRT

SIGN: MJP/GER

TOWN OF WASAGA BEAC

TYPICAL WATER

METER INSTALLATION

19mmø TO 50mmø

SCALE: N.T.S.

ALL LAWN WATERING SYSTEMS SHALL INLUDE A BACKFLOW PREVENTION DEVICE IN ACCORDANCE WITH

ALLOW REASONABI

BALL

SENSUS (TYP.)

VALVE WITH

WORKING ROOM

DRAIN PORT

(TYP.)

HYDRO

<u>PLAN</u>

SECTION

NOTES:

1. DATA TRANSMITTER TO BE LOCATED ADJACENT TO THE HYDRO ELECTRIC METER.

THE ONTARIO BUILDING CODE AND TOWN OF WASAGA BEACH STANDARDS.

ALL PIPE AND APPURTENANCES TO BE SIZED AS REQUIRED FOR SERVICE DIA. 'D'

DATA TRANSMITTER PH. No. (705) 429-2540

SERVICE | SENSUS METER | METER

25ø

38ø

50ø

ON DEMAND REQUIREMENTS

SIZE 'M' (mm) | MODEL

EXISTING 19¢ | IPERL

METERS SHALL BE INSTALLED IN A HORIZONTAL POSITION

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

PROVIDE SUPPORT FOR THE METER AND RELATED COMPONENTS.

IPERL

OMNIR2

OMNIR2

TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY NANFARA & NG SURVEYORS INC. AND JOETOPO SURVEYS AND CADD INC.

OUTSIDE WALL

BALL VALVE WITH

DRAIN PORT

DRAIN PORT

(TYP.)

DRAIN PORT HOLE

(FACING DOWN)

1. SOD MUST FINE FESCUE/KENTUCKY BLUEGRASS AS SPECIFIED BY THE NURSERY SOD TOPSOIL MUST BE TESTED AND AN AGRONOMY REPORT PREPARED BY AN ACCREDITED LABORATORY CONFIRMING THE SUITABILITY OF THE TOPSOIL AND

RECOMMENDATIONS FOR FERTILIZATION. TOPSOIL MUST BE COMPLETELY CLEAR OF ALL STONES IN EXCESS OF 25mm, DEBRIS 4. THE SUB-GRADE MUST BE GRADED TO ENSURE CONSISTENT TOPSOIL THICKNESS AND 5. A PRE-SOD INSPECTION IS RECOMMENDED TO BE COMPLETED BY THE TOWN ENGINEER PRIOR TO THE PLACEMENT OF TOPSOIL

D	TOWN OF WA	SAGA BEACH	OF WASAGA DA
IS,	TOPSOIL & SOD	NOT SO	
	DRAWN: MRT	SCALE: N.T.S.	ORPORATED
	DESIGN: MJP	PLOT: 1=1	STD.DWG.No.9C
	CHECKED: MJP	DATE: APRIL 2021	31D.DWG.NO.9C

OUTSIDE WALL

TOUCH PAD AN

TRANSMITTER

FINISHED GRADE

- DRAIN PORT HOLE

(FACING DOWN)

GEOTECHNICAL NOTES

1. The investigation has disclosed that beneath either a peat layer or a veneer of topsoil, the site is underlain by a stratum of very loose to dense, generally compact fine sand. The sand is weathered to depths ranging from 0.6 to 2.1 m below the prevailing ground surface.

2. Groundwater was encountered at depths ranging from 0.3 to 0.8 m below the prevailing ground surface upon completion of the 3. The yield of groundwater from the fine sand is expected to be appreciable and persistent. 4. The geotechnical findings which warrant special consideration

are presented below: a) The topsoil and peat will generate volatile gases under anaerobic conditions and is unsuitable for engineering applications. If possible, the peat should be stripped from the project site; for the environmental as well as the geotechnical well-being of the future development, the topsoil should not be buried over 1.2 m below the proposed finished grade, or below any structure. If using the topsoil for planting and sodding purposes, it must be assessed by a fertility analysis

b) The sound natural soil is suitable for normal spread and strip footing construction. Due to the presence of topsoil, peat and weathered soil, the footing subgrade must be inspected by a geotechnical engineer, or a geotechnical technician under the supervision of a geotechnical engineer, or a building inspector who has geotechnical experience, to ensure that its condition is

compatible with the design of the foundation. c) For shallow basement construction, perimeter subdrains and dampproofing of the foundation walls will be required. All the subdrains must be encased in a fabric filter to protect them against blockage by silting and must be connected to a positive outlet. As noted, groundwater occurs at shallow depths; therefore, floor subdrains will be required for basement basement level must be placed at least 0.5 m above the detected

d) For slab-on-grade construction, any loose and weathered sand must be subexcavated, sorted and properly recompacted, or the wet material should be drained and surface densified by a vibratory e) A Class 'B' bedding, consisting of compacted 20-mm

Crusher-Run Limestone, is recommended for the construction of the underground services. The stone immersion technique and thickening of the Crusher-Run Limestone bedding will likely be required for sewer subgrade stabilization. In areas where extensive dewatering is required, a Class 'A' concrete bedding may be necessary. f) Excavations within a depth of 0.3 m below the groundwater in wet sand may require stabilization by vigorous pumping from

closely spaced sump-wells. Deep excavations in water-bearing

must be consulted to determine whether the following

sand will require the use of a well-point dewatering system to stabilize the excavation. a) In-ground services to be constructed in water-bearing sand must consist of pipes with leak-proof joints, or the joints must be wrapped with a waterproof membrane. The recommendations appropriate for the project described in Section 2.0 are presented herein. One must be aware that the subsurface conditions may vary between boreholes. Should this become apparent during construction, a geotechnical engineer

recommendations require revision.

The foundations should be placed beneath the peat, topsoil layer and weathered soil onto the sound natural soil. A Maximum Allowable Soil Pressure (SLS) of 150 kPa and a Factored Ultimate Soil Bearing Pressure (ULS) of 250 kPa, respectively, can be used for the design of the normal spread and strip foundations. As a general guide, the recommended soil pressures and suitable ounding levels, based on the borehole findings, are presented

BH 2 - 1.0 m or + BH 3 - 2.0 m or + BH 4 - 1.2 m or +

BH 1 - 1.0 m or +

2. As noted, groundwater at the time of investigation was encountered at depths ranging from 0.3 to 0.8 m. Therefore, the subgrade should be protected immediately after exposure by a concrete mud-slab. This will prevent construction disturbance and costly rectification

3. Due to the occurrence of shallow groundwater throughout the entire site, it is recommended that engineered fill should be considered to raise the grade of the site, and that the basement level should is placed at least 0.5 m above the detected groundwater level. To provide a dry floor, subdrains consisting of ilter-wrapped weepers must be installed beneath the floor slabs and connected to a positive outlet. A vapour barrier must be placed in the granular base of the floor above the crown of the

4. The recommended soil pressures (SLS) for normal foundations incorporate a safety factor of 3 against shear failure of the underlying soils. The total and differential settlements of the foundations are estimated to be 25 mm and 15 mm, respectively. 5. The footing subgrade should be inspected by a geotechnical engineer, or a geotechnical technician under the supervision of a geotechnical engineer, or a building inspector who has geotechnical experience, to ensure that the revealed conditions are compatible

with the foundation design requirements. 5. Foundations exposed to weathering or in unheated areas should be protected against frost action by a minimum of 1.4 m of earth cover, or must be properly insulated. 7. The foundations must meet the requirements specified by the Ontario Building Code 2012, and the buildings must be designed to resist a minimum earthquake force using Site Classification 'D'

Engineered Fill

1. The existing weathered soil can be replaced and/or upgraded to engineered fill status; where earth fill is required to raise the site, or where extended footings are necessary, it is generally economical to place engineered fill for normal footing, slab-on-grade, sewer and road construction. 2. The engineering requirements for a certifiable fill for road construction, municipal services, and footings designed with a

Maximum Allowable Soil Pressure (SLS) of 150 kPa and a Factored Ultimate Soil Bearing Pressure (ULS) of 250 kPa are presented a) All of the peat and topsoil must be removed, and the subgrade must be inspected and proof-rolled prior to any fill placement. The weathered sand must be subexcavated and recompacted, or the

wet sand should be drained and surface densified by a vibratory roller achieving a 95% or + Standard Proctor dry density. b) Inorganic soils must be used, and they must be uniformly compacted in lifts 20 cm thick to 98% or + of their maximum Standard Proctor dry density up to the proposed grade and/or payement subgrade. The soil moisture must be properly controlled on the wet side of the optimum. If the foundations are to be built soon after the fill placement, the densification process for the engineered fill must be increased to 100% of the maximum Standard Proctor compaction. If imported fill is to be used, the hauler is responsible for its

environmental quality and must provide a document to certify that the material is free of hazardous contaminants d) If the engineered fill is to be left over the winter months, adequate earth cover, or equivalent, must be provided for protection against frost action.

e) The engineered fill must extend over the entire graded area; the engineered fill envelope and finished elevations must be clearly and accurately defined in the field, and they must be precisely documented by qualified surveyors. Foundations partially on engineered fill must be reinforced by two 15-mm steel reinforcing bars in the footings and upper section of the foundation walls, or designed by a structural engineer, to properly distribute the stress induced by the abrupt differential settlement (estimated to be $15\pm$ mm) between the natural soils and engineered fill. f) The engineered fill must not be placed during the period from late November to early April, when freezing ambient temperatures occur either persistently or intermittently. This is to ensure that the fill is free of frozen soils, ice and snow. a) Where the ground is wet due to subsurface water seepage, an

appropriate subdrain scheme must be implemented prior to the fill placement, particularly if it is to be carried out on sloping ground or a bank. In places, the subgrade may require stabilization by a Crusher-Run Limestone mat. h) Where the fill is to be placed on a bank steeper than 1 vertical:3 horizontal, the face of the bank must be flattened to 3+

so that it is suitable for safe operation of the compactor and the required compaction can be obtained. i) The fill operation must be inspected on a full-time basis by a technician under the direction of a geotechnical engineer. The footing and underground services subgrade must be inspected by the geotechnical consulting firm that inspected the engineered fill placement. This is to ensure that the foundations are placed within the engineered fill envelope, and the integrity of the fill has not been compromised by interim construction, environmental degradation and/or disturbance by the footing

k) Any excavations carried out in certified fill must be reported to the geotechnical consultant who inspected the fill placement in order to document the locations of excavation and/or to inspect reinstatement of the excavated areas to engineered fill status. If construction on the engineered fill does not commence within a period of 2 years from the date of certification, the condition of the engineered fill must be assessed for re-certification. Despite stringent control in the placement of the engineered ill, variations in soil type and density may occur in the engineered fill. Therefore, the strip footings and upper section of the foundation walls constructed on the engineered fill may require continuous reinforcement with steel bars, depending on the uniformity of the soils in the engineered fill and the thickness of the engineered fill underlying the foundations. Should the footing and/or walls require reinforcement, the required number and size of reinforcing bars must be assessed by considering the uniformity as well as the thickness of the engineered fill beneath the foundations. In sewer construction, the engineered fill is considered to have the same structural proficiency as a natural inorganic

base, 20 cm thick, consisting of 20-mm Crusher-run Limestone, or

Slab-On-Grade

1. The sound natural soil is suitable for the slab-on-grade construction; the weathered soil must be subexcavated and properly recompacted to at least 98% of its maximum Standard Proctor dry density. The slab should be constructed on a granular

excavation.

equivalent, compacted to its maximum Standard Proctor dry 2. The topsoil and peat must be stripped for slab-on-grade

3. A Modulus of Subgrade Reaction of 25 MPa/m is recommended for the design of the floor slab. 4. The ground around the building must be graded to direct water away from the structure to minimize the frost heave phenomenon generally associated with the disclosed soil.

1. Perimeter subdrains and dampproofing of the foundation walls will be required in order to provide a dry basement. Foundations exposed to weathering, or in unheated areas, should be protected against frost action by a minimum of 1.4 m of earth cover. All the subdrains should be encased in a fabric filter to prevent blockage by silting.

2. The foundation walls should be shielded by a polyethylene slip-membrane for protection against soil adfreezing. The membrane will allow vertical movement of the heaving soil (due to frost) without imposing structural distress on the foundations. The recommended measures are schematically illustrated in Diagram 1 found in the Geotechnical Report 3. The membrane will allow vertical movement of the heaving soil (due to frost) without imposing structural distress on the

4. The necessity to implement this scheme should be further assessed by a geotechnical consultant at the time of construction.

Underground Services

1. The subgrade for the underground services should consist of natural soil or compacted organic-free earth fill. Where topsoil, peat and badly weathered soil are encountered, these materials must be subexcavated and replaced with properly compacted bedding material.

2. A Class 'B' bedding, consisting of compacted 20-mm Crusher-Run Limestone, is recommended for the construction of the underground services. Where water-bearing sand occurs, the sewer joints should be leak-proof, or wrapped with an appropriate waterproof membrane, to prevent subgrade migration. If subgrade stabilization is required, the stone immersion technique may be applied. In areas where more extensive dewatering is required for sewer construction, a Class 'A' bedding should be considered. 3. In order to prevent pipe floatation when the sewer trench is deluged with water, a soil cover with a thickness equal to the diameter of the pipe should be in place at all times after completion of the pipe installation. 4. Openings to subdrains and catch basins should be shielded with a fabric filter to prevent blockage by silting.

Trench Backfilling

1. The on-site inorganic soil is suitable for trench backfill. In the zone within 1.0 m below the pavement subgrade, the backfill should be compacted to at least 98% of its maximum Standard Proctor dry density with the moisture content 2% to 3% drier than the optimum. In the lower zone, a 95% or + Standard Proctor compaction is considered to be adequate; however, the material must be compacted on the wet side of the optimum. 2. The narrow trenches should be cut at 1 vertical:2 or +

horizontal so that the backfill can be effectively compacted. Otherwise, soil arching will prevent the achievement of proper compaction. The lift of each backfill layer should either be limited to a thickness of 20 cm, or the thickness should be determined by test strips.

trench backfilling and exercise caution as described below: • When construction is carried out in freezing winter weather, allowance should be made for these following conditions. Despite stringent backfill monitoring, frozen soil layers may inadvertently be mixed with the structural trench backfill. Should the in situ soil have a water content on the dry side of the optimum, it would be impossible to wet the soil due to the freezing condition, rendering difficulties in obtaining uniform and proper compaction. Furthermore, the freezing condition will prevent flooding of the backfill when it is required, such as in a narrow vertical trench section, or when the trench box is removed. The above will invariably cause backfill settlement that may become evident within 1 to several years, depending on the depth of the trench which has been backfilled.

3. One must be aware of the possible consequences during

In areas where the underground services construction is carried out during winter months, prolonged exposure of the trench walls will result in frost heave within the soil mantle of the walls. This may result in some settlement as the frost recedes, and repair costs will be incurred prior to final surfacing of the new pavement and the slab-on-grade construction

• To backfill a deep trench, one must be aware that future settlement is to be expected, unless the side of the cut is flattened to at least 1 vertical: 1.5 + horizontal, and the lifts of the fill and its moisture content are stringently controlled; i.e., lifts should be no more than 20 cm (or less if the backfilling conditions dictate) and uniformly compacted to achieve at least 95% of the maximum Standard Proctor dry density, with the moisture content on the wet

side of the optimum • It is often difficult to achieve uniform compaction of the backfill in the lower vertical section of a trench which is an open cut or is stabilized by a trench box, particularly in the sector close to the trench walls or the sides of the box. These sectors must be

void left after the removal of the box will be filled by the backfill. It is necessary to backfill this sector with sand, and the compacted backfill must be flooded for 1 day, prior to the placement of the backfill above this sector, i.e., in the upper sloped trench section. This measure is necessary in order to prevent consolidation of inadvertent voids and loose backfill which will compromise the compaction of the backfill in the upper section. In areas where

hackfilled with sand. In a trench stabilized by a trench box, the

Garages, Driveways and Interlocking Stone Pavement

seepage collars should be provided.

groundwater movement is expected in the sand fill mantle,

1. The driveways at the entrances to the garages should be

backfilled with non-frost-susceptiblegranular material, with a frost taper at a slope of 1 vertical: 1 horizontal. 2. Interlocking stone pavement in areas which are sensitive to frost-induced ground movement, such as entrances, must be constructed on a free-draining, non-frost-susceptible granular material such as Granular 'B'. This material must extend to 1.4 m below the slab or pavementsurface and be provided with positive drainage such as weeper subdrains connected to manholes or catch basins. Alternatively, the sidewalks and the interlocking stone pavement should be properly insulated with 50-mm Styrofoam, or equivalent, as approved by a geotechnical engineer. 3. The grading around the structures must be sloped such that surface runoff is directed away from the structures.

Pavement Design

1. Based on the borehole findings, the recommended pavement design for local roads is presented below:

Asphalt Surface - 40 mm HL-3 Asphalt Binder - 50 mm (Local) or 75 mm (Collector) HL-4 Granular Base - 150 mm Granular 'A' or equivalent Granular Sub-base - 300 mm Granular 'B' or equivalent

2. In preparation of the subgrade, the subgrade surface should be proof-rolled; any soft subgrade, organics and deleterious materials within 1.0 m below the underside of the granular sub-base should be subexcavated and replaced by properly compacted organic-free earth fill or granular material.

3. All the granular bases should be compacted to their maximum Standard Proctor dry density. 4. In the zone within 1.0 m below the payement subgrade, the backfill should be compacted to at least 98% of its maximum Standard Proctor dry density, with the water content 2% to 3% drier than the optimum. In the lower zone, a 95% or + Standard Proctor compaction is considered adequate. 5. The road subgrade will suffer a strength regression if water is

allowed to infiltrate prior to paving. The following measures should therefore be incorporated in the construction procedures and road If the road construction does not immediately follow the trench backfilling, the subgrade should be properly crowned and smooth-rolled to allow interim precipitation to be properly drained • Lot areas adjacent to the roads should be properly graded to

prevent the ponding of large amounts of water during the interim construction period. • Curb subdrains will be required. The subdrains should consist of filter-sleeved weepers to prevent blockage by silting. • If the roads are to be constructed during the wet seasons and extensively soft subgrade occurs, the granular sub-base may require thickening. This can be assessed during construction.

Soil Parameters

Fine sand unit weight - 20.5 kN/m3 Fine sand estimated bulk factor (loose) - 1.25, (compacted) - 1.00 Fine Sand Active Ka - 0.33 Fine Sand At Rest K0 - 0.45 Passive Kp - 3.00

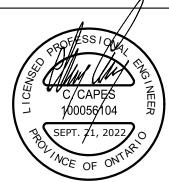
1. The recommended soil parameters for the project design are

1. Excavation should be carried out in accordance with Ontario Regulation 213/91 2. Excavations in excess of 1.2 m should be sloped at 1 vertical: 1 horizontal for stability. 3. For excavation purposes, the types of soils are classified

Sand above groundwater - 3 Sand below groundwater - 4

4. The groundwater yield from the sand will be appreciable and persistent. When excavating into the water-bearing sand at a shallow depth, groundwater should be controlled by vigorous pumping from closely spaced sump-wells at a depth of 0.3 m or less below the groundwater level. For excavation deeper than 0.3 m below the groundwater level, a well-point dewatering system will

5. Prospective contractors must be asked to assess the in situ subsurface conditions by digging test pits to at least 0.5 m below the intended bottom of excavation in order to determine the appropriate dewatering measures for subgrade stabilization.



WASAGA RIVERWOODS HOMES 30 FULTON WAY, UNIT 8 RICHMOND HILL, ON

L4B 1E6

STANDARD DETAILS

WASAGA RIVERWOODS

B. COLLINS

355310 BLUE MOUNTAINS - EUPHRASIA TOWNLINE

2018-012

C. CAPES 20/07/20

BOUNDARY SURVEY INFORMATION PROVIDED BY OWNER, PREPARED BY NANFARA & NG SURVEYORS INC. AND SHOWN ELEVATIONS ARE GEODETIC AND ARE REFERRED TO BENCHMARK NO. 0011971U191, HAVING A ELEVATION 187.747 PER CGVD28 METRES LOCATED AT Mr. ca ANDERSON RESIDENCE, WHITE FRAME HOUSE ON NORTHWEST SIDE OF HIGHWAY 92, AT INTERSECTION WITH ZOO PARK ROAD, 1.6km NORTHEAST OF BRIDGE

OVER NOTTAWASAGA RIVER, TABLET IN SOUTHWEST CONCRETE FOUNDATION, 3.08m NORTHWEST OF SOUTHWEST CORNER, 51cm NORTHWEST OF A BASEMENT WINDOW AND 39cm BELOW STUCCO SIDING

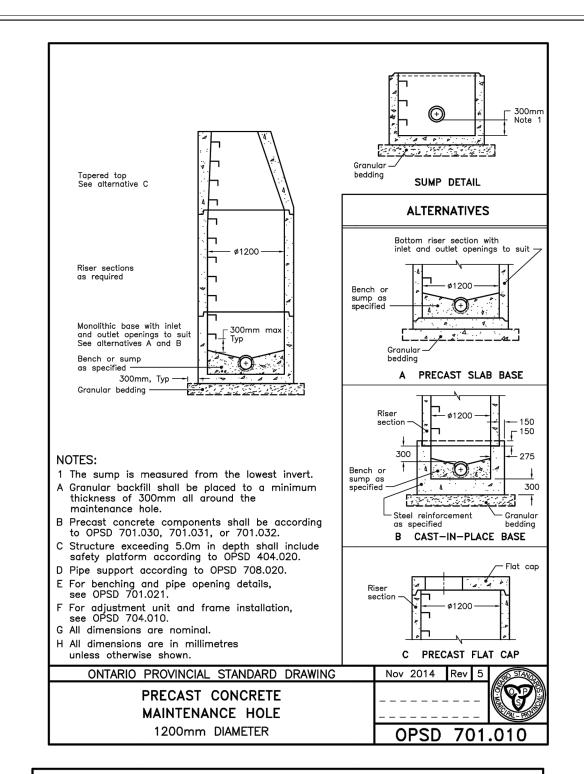
APPROXIMATELY HEREON. THIS IS NOT A PLAN OF SURVEY.

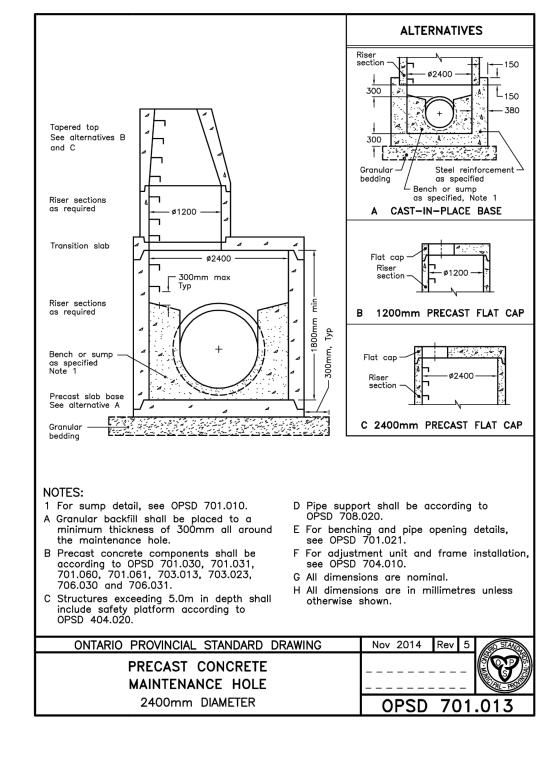
TOP OF SIB AT NORTH WEST CORNER OF SUBJECT SITE. ELEV = 183.53

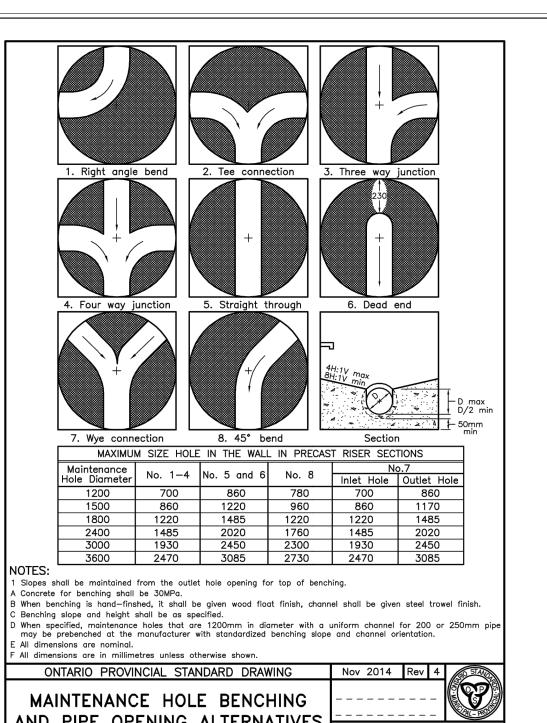
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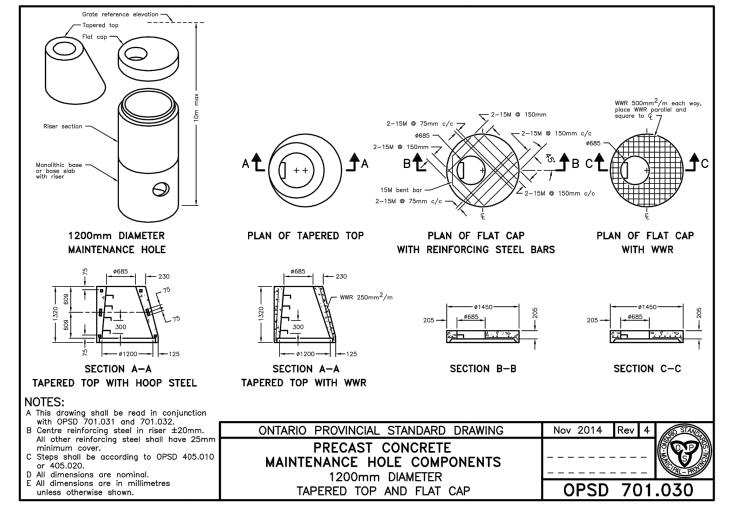
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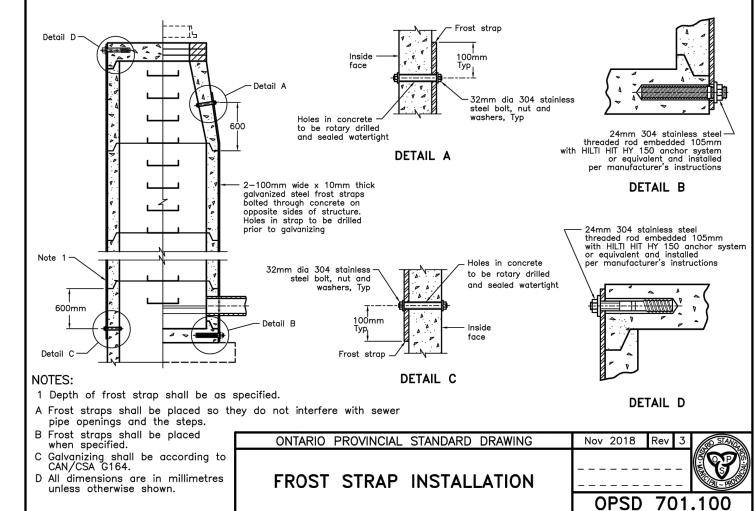


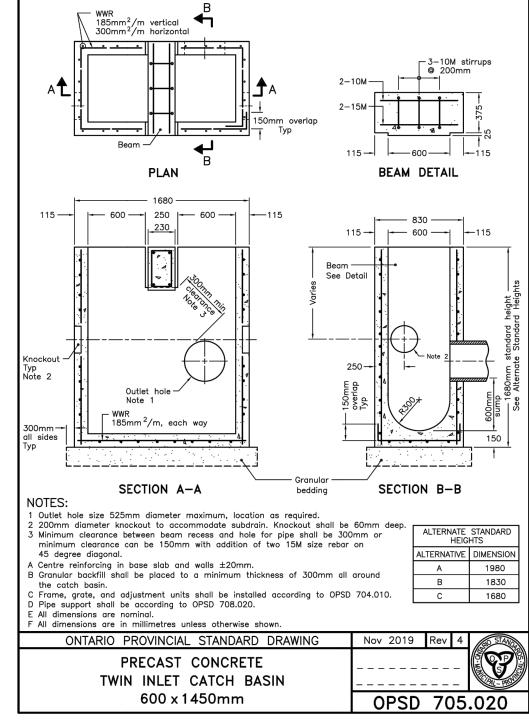


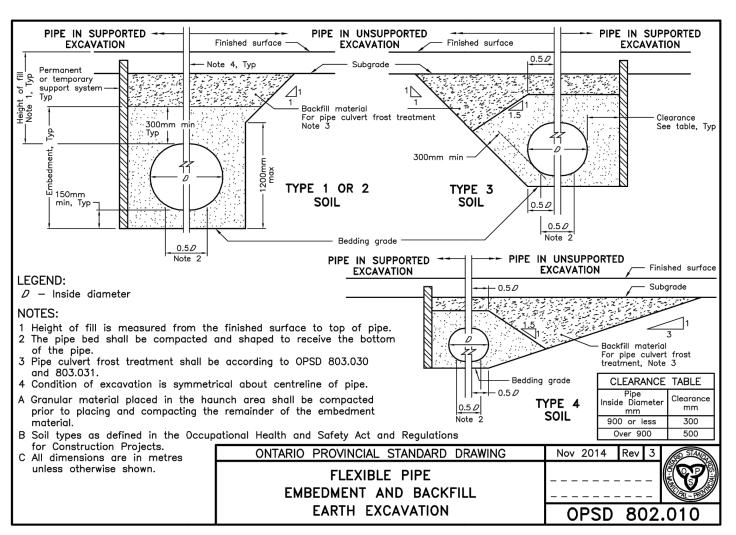


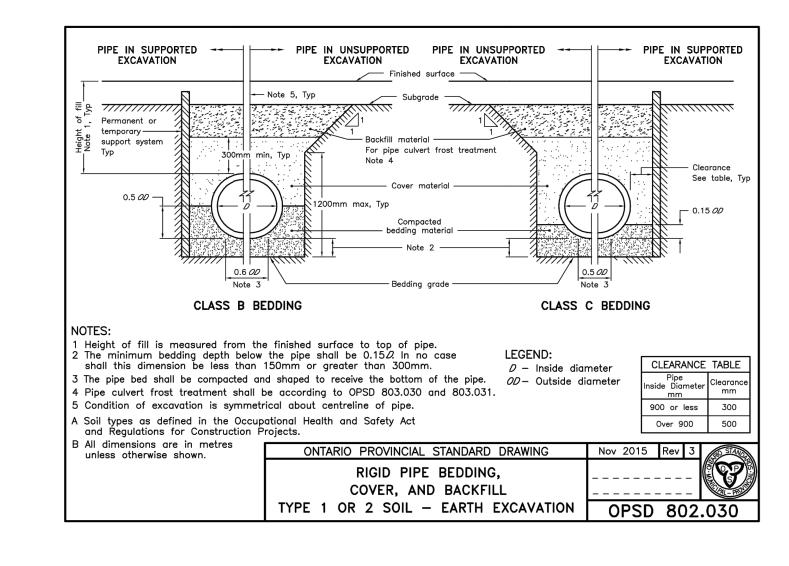
AND PIPE OPENING ALTERNATIVES



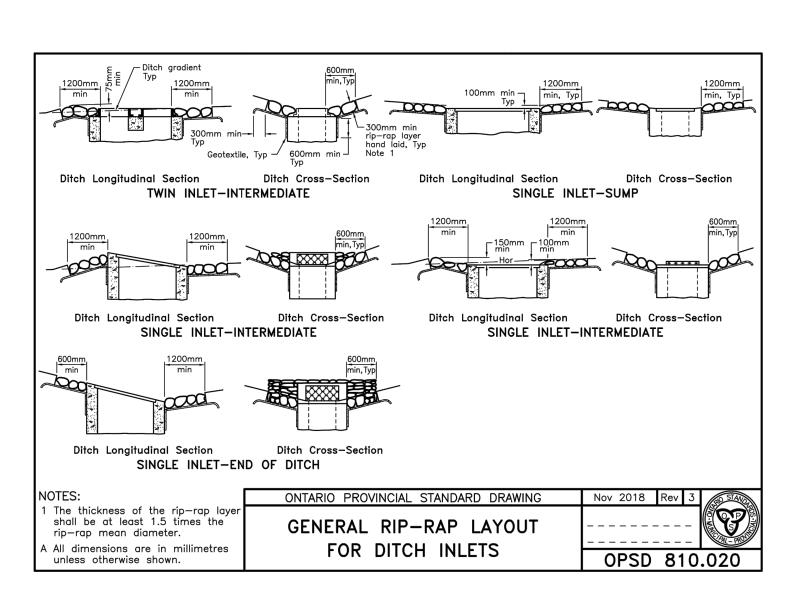


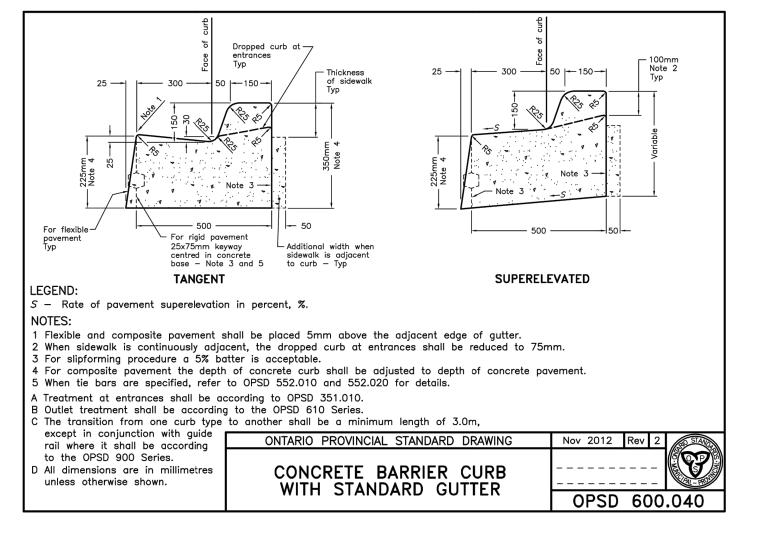


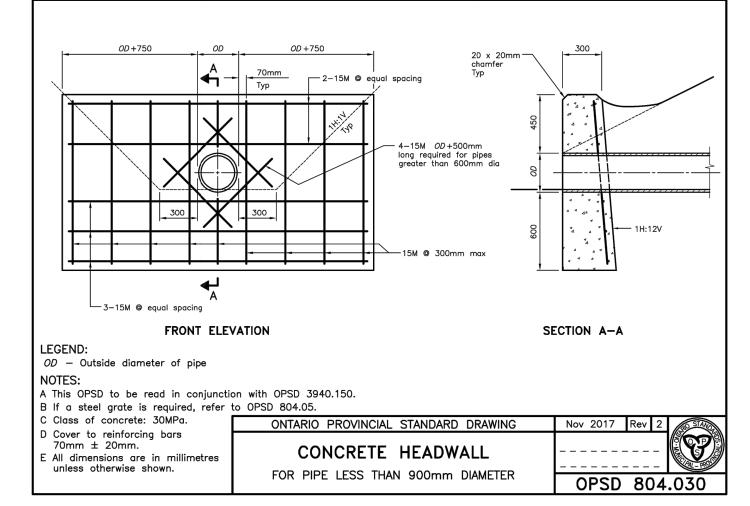


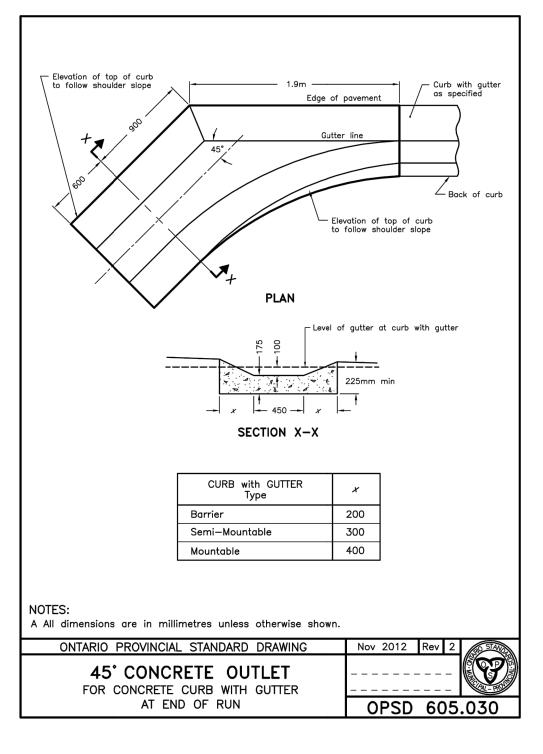


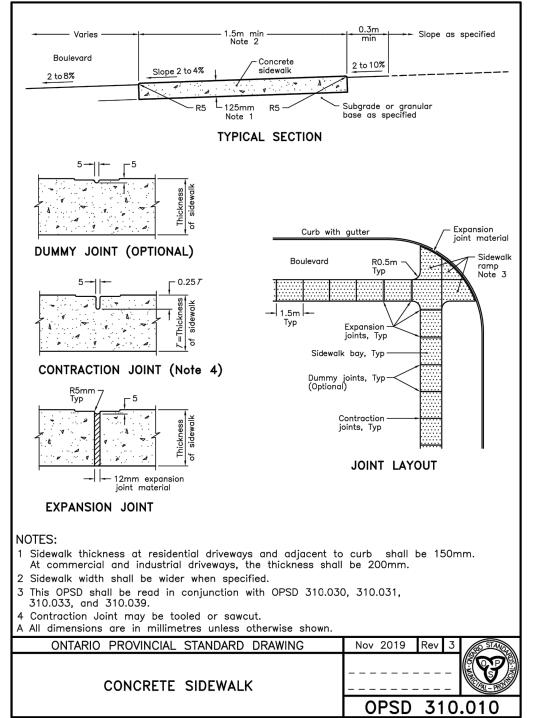
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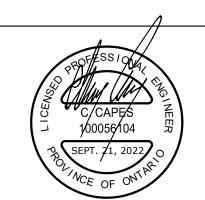
No	Revision	Date
1	ISSUED FOR APPROVALS	20/08/10
2	REVISED FOR APPROVALS	21/11/16
3	REVISED FOR APPROVALS	22/03/17
4	REVISED FOR APPROVALS	22/09/21

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TOP OF SIB AT NORTH WEST CORNER OF SUBJECT SITE. ELEV = 183.53

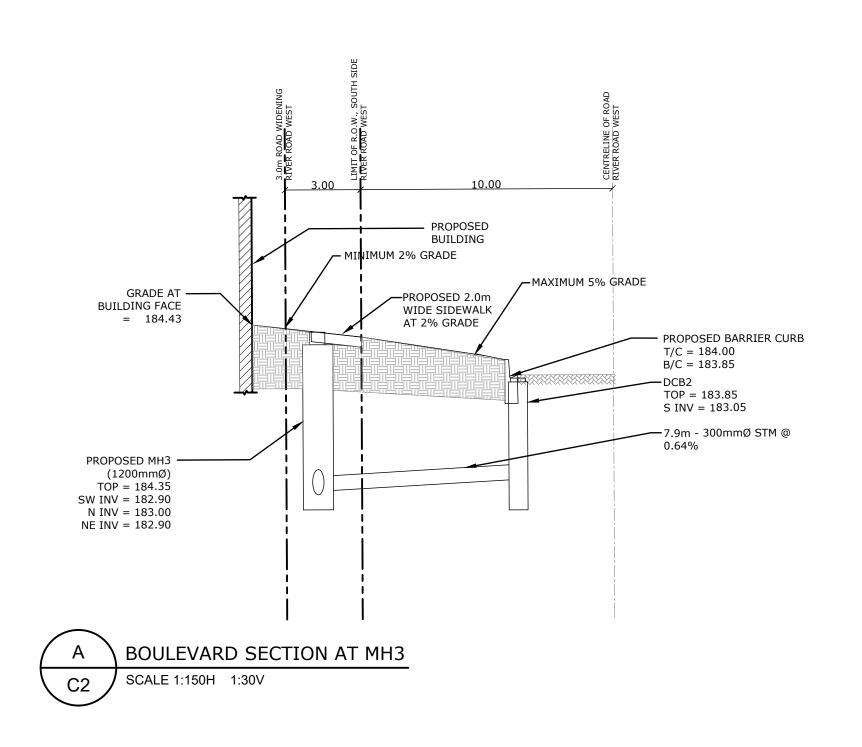


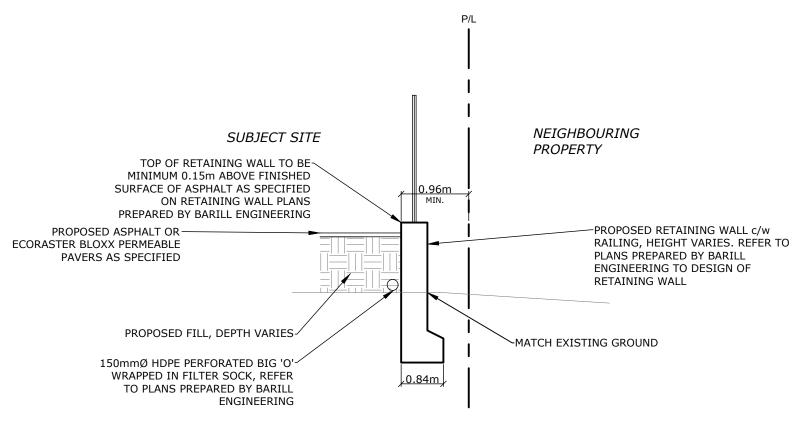
WASAGA RIVERWOODS HOMES 30 FULTON WAY, UNIT 8 RICHMOND HILL, ON

WASAGA RIVERWOODS STANDARD DETAILS

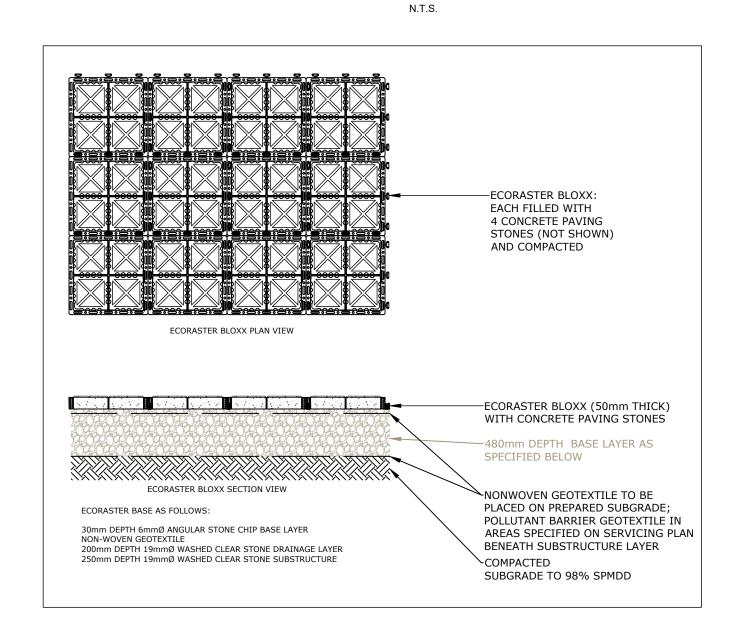


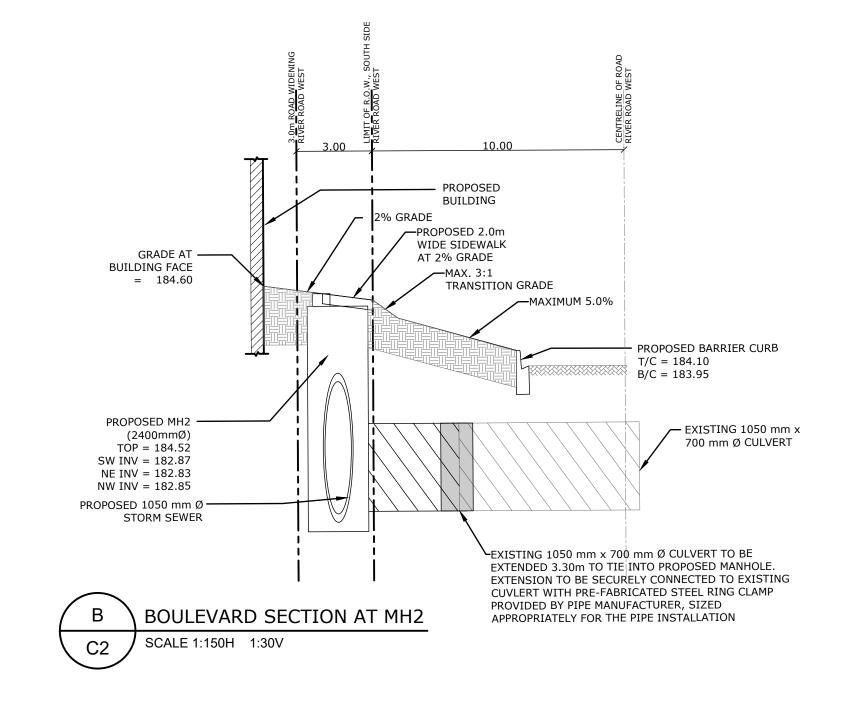
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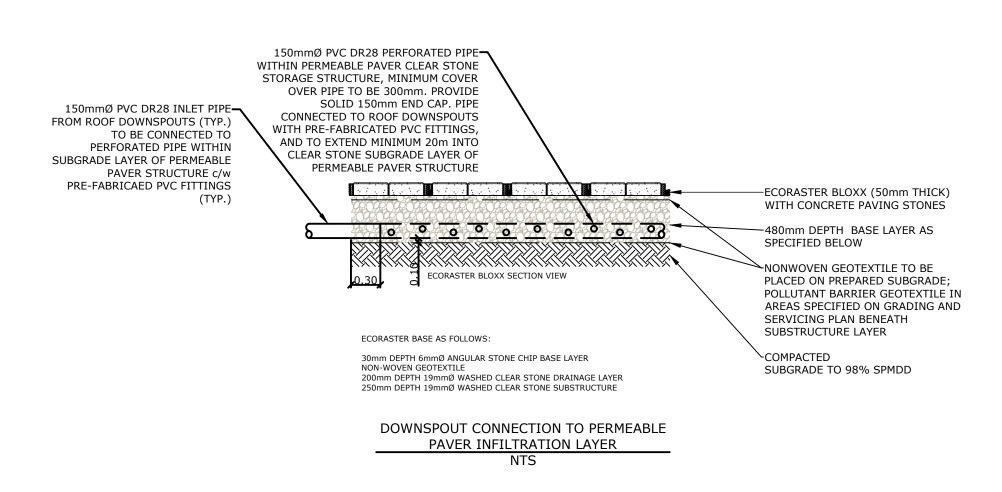




TYPICAL EDGE OF PARKING LOT c/w RETAINING WALL







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BENCHMARKS

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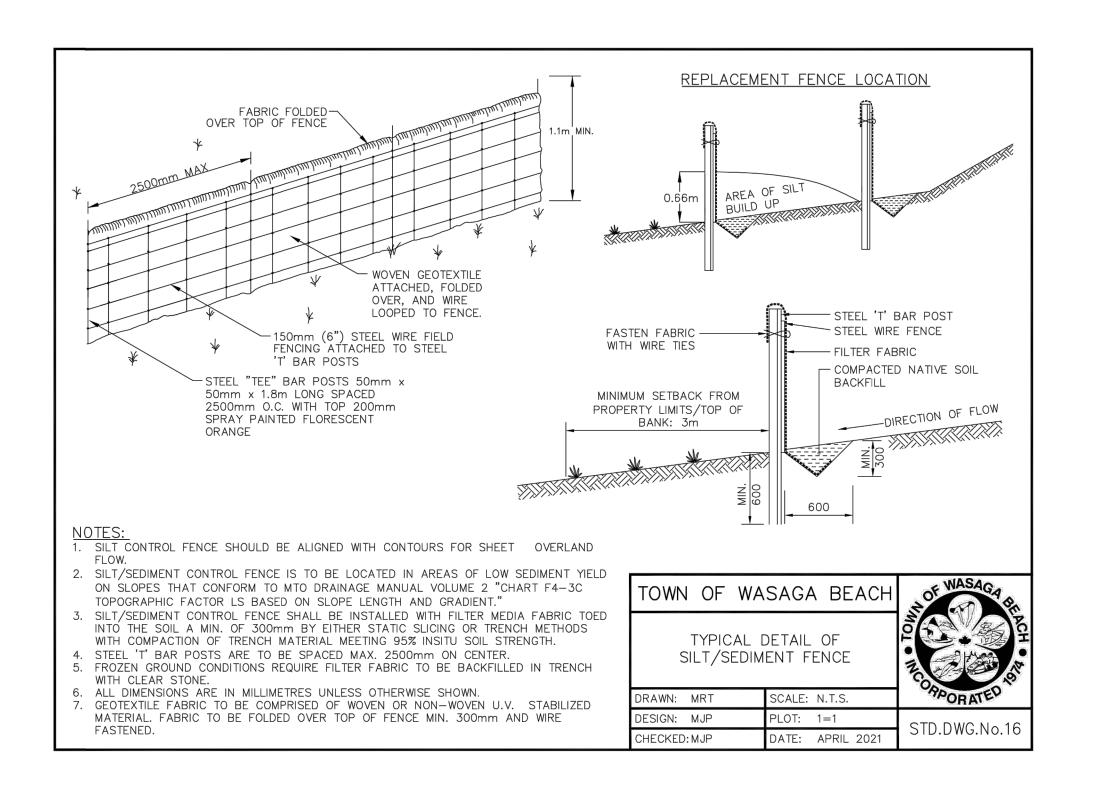
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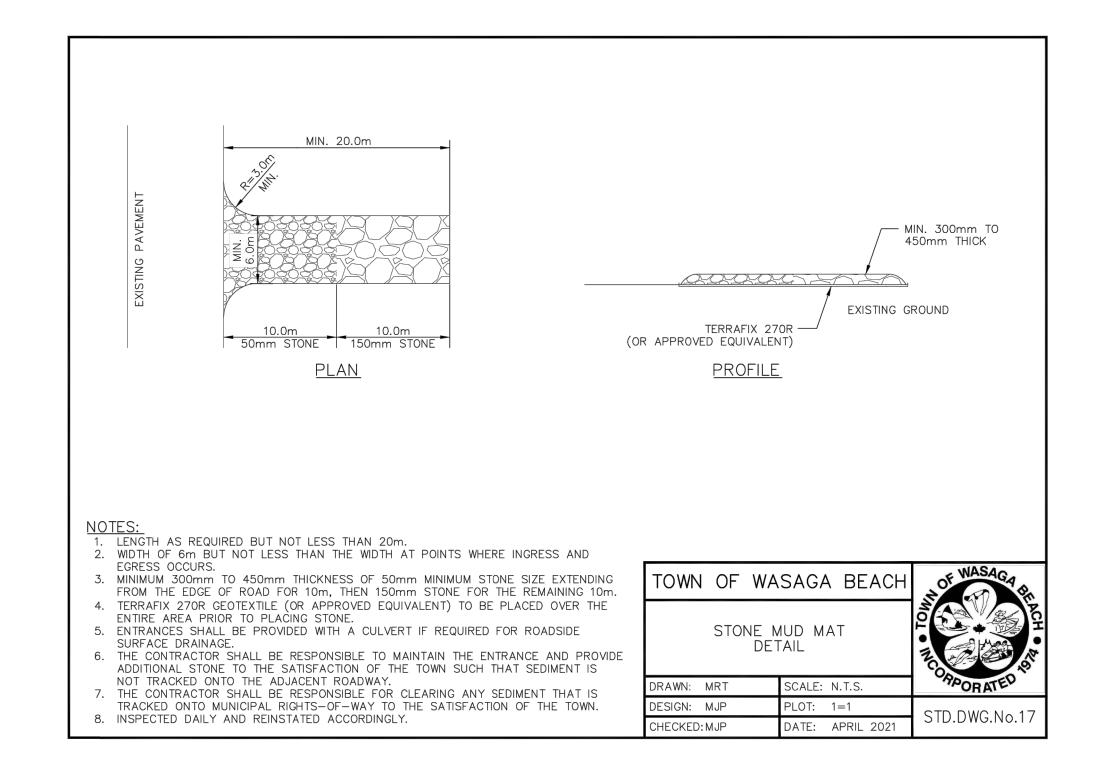
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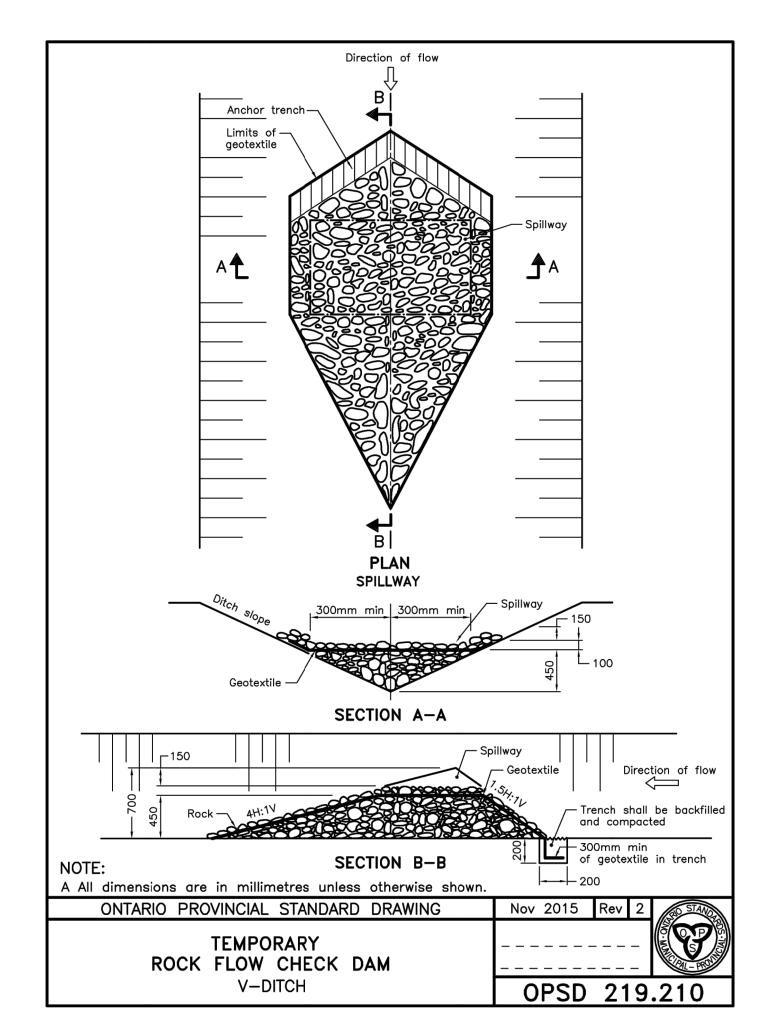


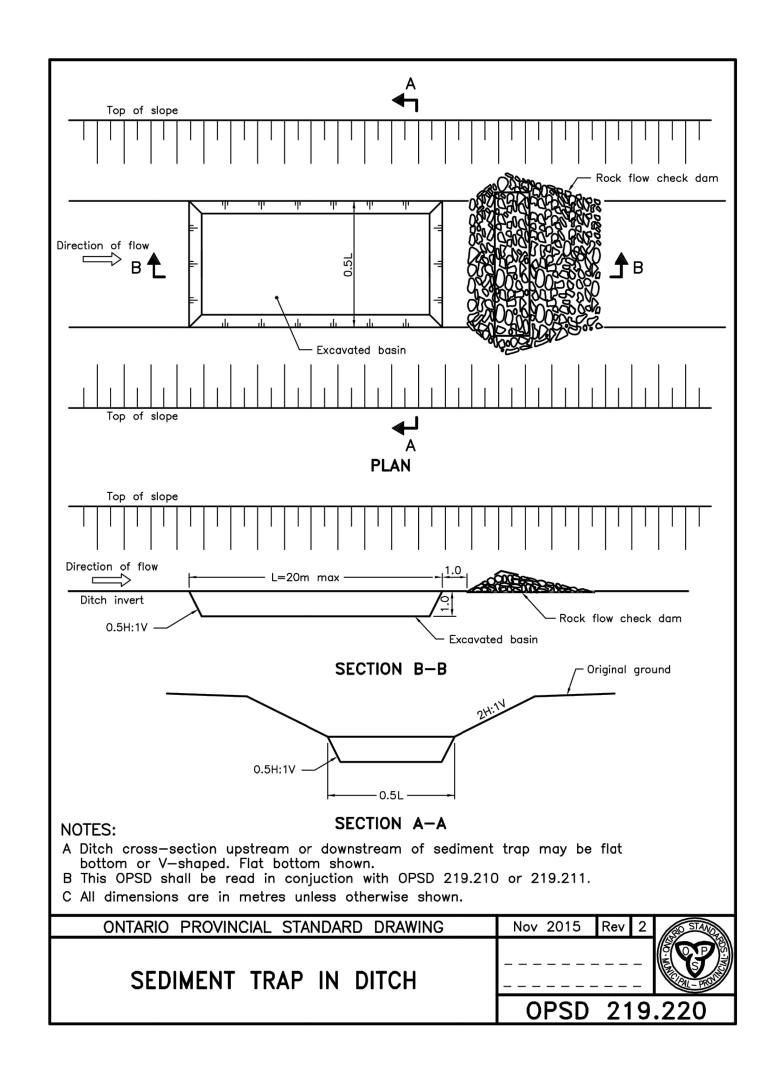
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355310 BLUE MOUNTAINS - EUPHRASIA TOWNLINE CLARKSBURG, ON NOH 1J0 TEL: 705-994-4818









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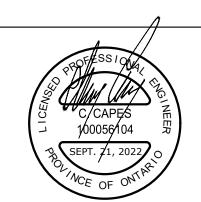
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WASAGA RIVERWOODS HOMES
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355310 BLUE MOUNTAINS - EUPHRASIA TOWNLINE CLARKSBURG, ON NOH 1J0 TEL: 705-994-4818 STANDARD DETAILS

Designed Checke
B. COLLINS C. CA

NVCA EROSION & SEDIMENT CONTROL NOTES

BY EITHER STATIC SLICING TECHNIQUE OR TRENCHING.

STANDARD PROCTOR MAXIMUM DRY DENSITY.

MAXIMUM DOWNSTREAM SLOPE OF 4:1.

SLOPES TO A HEIGHT OF 0.70m.

PLACED A MINIMUM OF 600mm INTO THE GROUND.

SLOPE ON THE FLAT SURFACE.

1. SEDIMENT FENCING SHALL BE LOCATED AT THE BOTTOM AND 3m BEYOND THE TOE OF

2. SEDIMENT FENCING ARE TO BE CONSTRUCTED OF UV STABILIZED WOVEN OR NON-WOVEN FABRIC THAT IS WRAPPED OVER THE TOP OF THE SUPPORT FENCING AND FASTENED. THE

BASE OF THE FABRIC IS TO BE TOED INTO THE NATIVE SOIL TO A MINIMUM DEPTH OF 300mm

3. THE NATIVE TRENCH MATERIAL TO TOE, IN FABRIC BASE, SHALL BE COMPACTED TO 95%

TO STEEL T-BAR FENCE POSTS, LOCATED 2500mm ON CENTER. THE POSTS SHALL BE

AREA AND SHALL CONFORM TO ALL DESIGN STANDARDS AND POLICIES.

TO A MINIMUM DEPTH OF 0.60m WITH A VOLUME OF 3 cu.m.

THE SECOND LAYER IS TO BE A MINIMUM 100mm THICK.

THE BASE OF THE PREVIOUS ROCK CHECK DAMS.

DAM BEING COVERED WITH SEDIMENT.

WATER MARK, WHICHEVER IS GREATER.

AFTER ALL RAIN EVENTS 13mm OR GREATER.

HYDROSEED MIXTURE INDICATED IN #1 ABOVE.

SITE STABILIZATION ARE AS FOLLOWS:

4. THE FENCE STRUCTURE SHALL CONSIST OF A 1.10m, 150mm PAGE WIRE FENCE FASTENED

5. UPON 60% OF THE SEDIMENT FENCE BEING BLOCKED FROM SEDIMENT DEPOSITION, A NEW SEDIMENT CONTROL FENCE SHALL BE CONSTRUCTED UPSTREAM OF THE EXISTING ONE. THE NEW FENCE SHALL BE INSTALLED UPSTREAM AND BEYOND THE SEDIMENT LOADING

6. ROCK CHECK DAMS ARE TO BE PLACED WITH A MAXIMUM UPSTREAM SLOPE OF 1.5:1 AND A

7. A TEMPORARY SETTLING TRENCH IS TO BE EXCAVATED IN FRONT OF THE ROCK CHECK DAM

8. THE ROCK IS TO BE PLACED IN TWO LAYERS, SEPARATED BY A NON-WOVEN GEOTEXTILE.

9. THE SECOND LAYER OF STONE SHOULD BE PILED TO ANCHOR THE GEOTEXTILE AND FORM

A LOW CENTER SPILLWAY THAT IS A MINIMUM 300mm BELOW THE TOP OF THE CHANNEL

10. THE CHANNEL DITCH SIDE SLOPES ARE TO BE ARMOR PROTECTED FROM EROSION ON EACH SIDE OF THE ROCK CHECK DAM BY EXTENDING THE STONE ALONG THE DITCH SIDE

12. THE HEIGHT OF SUBSEQUENT ROCK CHECK DAMS MUST BE EQUAL TO THE ELEVATION OF

13. THE ROCK CHECK DAM IS TO BE REPLACED UPON 50% OF THE HEIGHT OF THE ROCK CHECK

14. CONSTRUCTION PROJECTS SHALL PROVIDE A MINIMUM 3m WIDE VEGETATIVE BUFFER

STRIP ALONG THE LIMITS OF THE DEVELOPMENT INCLUDING FRONTAGES ALONG EXISTING

15. AREAS ADJACENT TO WATERCOURSES SHALL PROVIDE A MINIMUM 15m BUFFER ZONE

SETBACK FROM TOP OF BANK (30m FOR COLD WATER FISHERIES) AND/OR AVERAGE HIGH

16. UPON OBSERVATION OF CONTINUOUS MUD TRACKING, OCCURRING ONTO ADJACENT

CONSTRUCTION PROJECT INCLUDING THE BUILDING CONSTRUCTION PERIOD AS WELL AS

18. CONSTRUCTION AREAS THAT EXCEED 30 DAYS OF INACTIVITY SHALL BE STABILIZED BY SEEDING. THE IS TO INCLUDE STOCKPILES OF FILL AND TOPSOIL. THE SPECIFICATION FOR

VERDOYL MULCH AT A RATE OF 200kg/ha AND A FERTILIZER 8-32-16 AT A RATE OF 450

19. DURING THE CONSTRUCTION PERIOD, WHEN INTERNAL STREETS SYSTEMS HAVE HAD ASPHALT INSTALLED, A STREET CLEANING SCHEDULE WILL BE UNDERTAKEN ON A MINIMUM WEEKLY BASIS, OR AS DIRECTED BY THE MUNICIPALITY OR CONSERVATION AUTHORITY.

20. ALL CATCHBASINS, REAR YARD CATCHBASIN AND CATCHBASIN MANHOLES TO BE

17. THE SITE PROJECT ENGINEER SHALL UNDERTAKE WEEKLY INSPECTIONS OF ALL SEDIMENT/EROSION CONTROL FACILITIES DURING THE EXTENT OF THE ENTIRE

18.1. LARGE OPEN AREAS: LOOSEN SOIL TO A DEPTH OF 100mm AND APPLY THE FOLLOWING HYDROSEED MIXTURE (30% ANNUAL RYEGRASS, 40% PERENNAIL RYEGRASS, 15% CREEPING RED FESCUE, 10% TIMOTHY, 5% WHITE CLOVER) WITH

18.2. TOPSOIL STOCKPILES: LOOSEN SOIL TO A DEPTH OF 50mm AND APPLY THE

"GREENFIELDS" BY PICKSEED, AT AN APPLICATION RATE OF 200 kg/ha

INSTALLED WITH A SILT SACK INLET SEDIMENT CONTROL DEVICE.

18.3. BUFFER ZONES: SPREAD 50mm OF TOPSOIL AND APPLY HYDROSEED MIXTURE,

STREETS, THE STONE ENTRANCE PAD IS TO BE FULLY REPLACED.

11. IN SWALES AND DITCHES WHERE THERE IS INCREASED SLOPE LENGTH AND/OR

SIGNIFICANT GRADIENT, A SERIES OF ROCK CHECK DAMS MUST BE USED.

THE FIRST LAYER IS TO CONSIST OF A 150mm DIA. STONE WRAPPED IN THE FABRIC TO A

HEIGHT OF 450mm. THE SECOND LAYER IS TO CONSIST OF A 50mm DIA. STONE THAT

EXTENDS FROM THE BASE OF THE SETTLING TRENCH TO THE TOP OF THE FIRST LAYER.

Designed Checked Date 20/07/20

B. COLLINS C. CAPES 20/07/20

Project No. Rev No. 4

C14

Scale