HILL RIDGE HOMES

CRANBERRY MARSH ESTATES

TOWN OF COLLINGWOOD

KEY PLAN

INDEX

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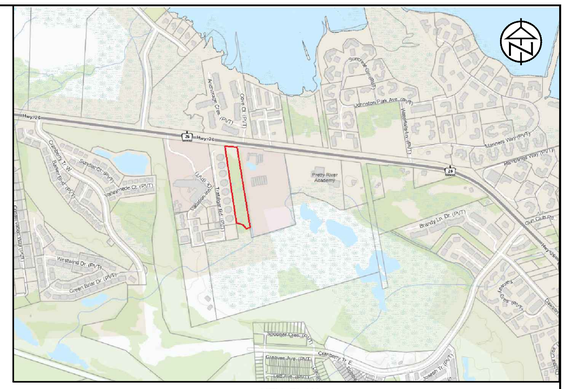
LEGEND

PROPERTY LINE
EXISTING CENTERLINE
PROPOSED CENTRELINE
EXISTING EDGE OF ASPHALT
PROPOSED EDGE OF ASPHALT
EXISTING EDGE OF SHOULDER
PROPOSED EDGE OF SHOULDER
EXISTING DITCH/DIRECTION OF FLOW
PROPOSED DITCH/DIRECTION OF FLOW
EXISTING SANITARY SEWER/SIZE/DIRECTION OF FLOW — 200ø SAN
PROPOSED SANITARY SEWER/SIZE/DIRECTION OF FLOW — 200ø SAN
EXISTING SANITARY SERVICE
PROPOSED SANITARY SERVICE — PLUG
EXISTING SANITARY FORCEMAIN/SIZE/DIRECTION OF FLOW — 200ø SAN F/M
EXISTING WATERMAIN/SIZE — 150ø W/M
PROPOSED WATERMAIN/SIZE — 150ø W/M
EXISTING WATER SERVICE
PROPOSED WATER SERVICE
EXISTING STORM SEWER/SIZE/DIRECTION OF FLOW — 375ø STM
PROPOSED STORM SEWER/SIZE/DIRECTION OF FLOW — 375ø STM
EXISTING CULVERT
PROPOSED SWALE LOCATION
PROPOSED CULVERT
PROPOSED JOINT HYDRO, BELL AND ROGERS
EXISTING GAS MAIN
PROPOSED GAS MAIN
EXISITNG FENCELINE
PROPOSED FENCELINE
EXISTING BUSHLINE
EXISTING CONTOUR — 179.00
EXISTING SPOT ELEVATION — × 179.00
PROPOSED SPOT ELEVATION — ×179.00
EXISTING GRADING DIRECTION
PROPOSED GRADING DIRECTION
PROPOSED SWALE LOCATION
EXISTING TEMPORARY BENCHMARK — TBM
EXISTING STANDARD IRON BAR — SIB
EXISTING BOREHOLE/NUMBER — BH9
EXISTING GAS VALVE — GAS
EXISTING HYDRO TRANSFORMER
EXISTING CABLE PEDESTAL
EXISTING BELL PEDESTAL
EXISTING BELL MAINTENANCE HOLE — BELL MH
EXISTING BELL POLE — BP
EXISTING HYDRO POLE — HP
EXISTING HYDRO GUY WIRE
PROPOSED LIGHT STANDARD — LS
EXISTING DECIDUOUS TREE
EXISTING CONIFEROUS TREE
EXISTING SANITARY MAINTENANCE HOLE/NUMBER — SAN MH17
PROPOSED SANITARY MAINTENANCE HOLE/NUMBER — SANMH1
EXISTING HYDRANT AND VALVE — HYD & WV
PROPOSED HYDRANT AND VALVE — HYD & WV
EXISTING WATER VALVE — WV
PROPOSED WATER VALVE — WV
PROPOSED CURB STOP VALVE — CSV
EXISTING STORM MAINTENANCE HOLE — STM MH
EXISTING CATCH BASIN — CBMH 18
TACTILE SURFACE INDICATORS
TRANSFORMER AND GROUNDING RODS
SWITCHGEAR
LIGHTING PEDESTAL
STOP SIGN — SS

TATHAM ENGINEERING

3RD SUBMISSION
CONTRACT No. 120181



KEY PLAN

GREENTREE GARDENS & EMPORIUM

COVE COURT

STM MH

CONSTRUCTION ENTRANCE AS PER "STONE MUD MAT DETAIL" SEE DRAWING ESC02

PROPOSED SILT FENCE (AS PER NVCA BSD-23 DRAFT)

TEMPORARY TOPSOIL STORAGE LOCATION
MAX HEIGHT 4.5m
MAX SIDE SLOPE 2:1
IF LEFT LONGER THAN 30 DAYS, VEGETATE WITH HYDROSEED AND MULCH

BUSHLINE

BOTTOM OF BANK (MATCH EXISTING)
3:1 MAX BOTTOM OF DITCH

BOTTOM OF DITCH

SBFC

PROPOSED TEMPORARY DRAINAGE SWALE. SEE DETAIL ON ESC02

ENVIRONMENTALLY PROTECTED AREA

DOUBLE ROW SEDIMENT FENCE AS PER LSRCA ESC-5

RFCD

THE KING'S HWY No. 26

9.0m X 4.5m
EXCAVATED SEDIMENT TRAP PER OPSD 219.220
CATCHMENT AREA = 0.74ha
BOTTOM ELEV. = 177.75
TRAP VOLUME = 40.5m³

ROCK FLOW CHECK DAM PER OPSD 219.210

PROPOSED SILT FENCE (AS PER NVCA BSD-23 DRAFT)

8.0m X 4.0m
EXCAVATED SEDIMENT TRAP PER OPSD 219.220
CATCHMENT AREA = 0.55ha
BOTTOM ELEV. = 178.35
TRAP VOLUME = 32.0m³

ROCK FLOW CHECK DAM PER OPSD 219.210

TOWN APPROVAL

GEORGAIN BAY HOTEL

LEGEND

- PROPOSED STRAW BALE FLOW CHECK (AS PER OPSD 219.210) — SBFC
- PROPOSED ROCK FLOW CHECK (AS PER OPSD 219.180) — RFCD
- PROPOSED HEAVY DUTY SILT FENCE (AS PER NVCA BSD-23 DRAFT)
- PROPOSED SWALE / DITCH — 0.5%
- EXISTING OVERLAND FLOW

DISCLAIMER AND COPYRIGHT

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

BENCHMARKS

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK No. 0011972U311 HAVING A PUBLISHED ELEVATION OF 181.032 METRES.

NOTES

LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY PATTEN & THOMSEN LTD, DATED, JANUARY 2, 2012 JOB No. 66-170-6

TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22
3.	3RD SUBMISSION	07/23

ENGINEER STAMP

LICENSED PROFESSIONAL ENGINEER
2023.07.28
D. M. CASULLO
PROVINCE OF ONTARIO

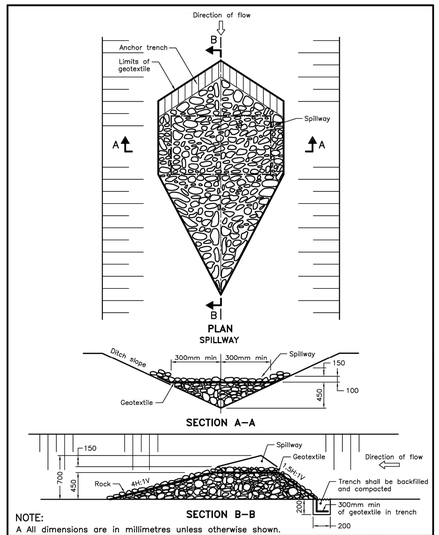
CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

TATHAM ENGINEERING

EROSION AND SEDIMENT CONTROL PLAN

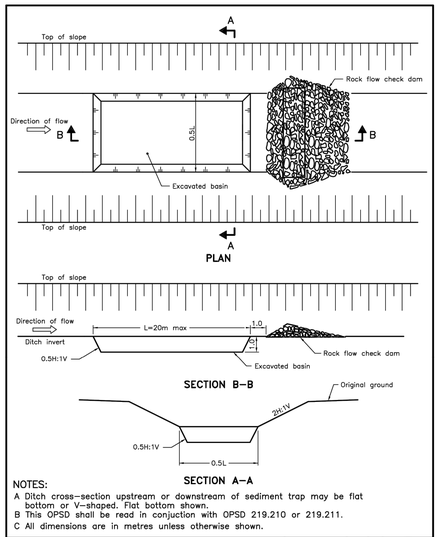
DESIGN: KG	FILE: 120181	DWG: ESC-1
DRAWN: KB/SBU/AP	DATE: MAR 2022	
CHECK: DC	SCALE: 1:500	

Drawing Name: 120181 - ESC01.dwg, Plotted: Aug 01, 2023



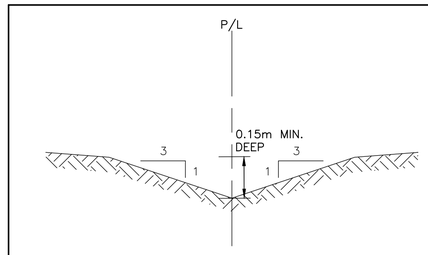
NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
TEMPORARY ROCK FLOW CHECK DAM V–DITCH		OPSD 219.210



NOTES:
A Ditch cross–section upstream or downstream of sediment trap may be flat bottom or V–shaped. Flat bottom shown.
B This OPSD shall be read in conjuction with OPSD 219.210 or 219.211.
C All dimensions are in metres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
SEDIMENT TRAP IN DITCH		OPSD 219.220



TEMPORARY SWALE DETAIL
NTS

STONE SIZE
THE STONE PAD SHALL BE A MIN. 450mm THICK. USE 50mmø STONE OR RECLAIMED CONCRETE EQUIVALENT FOR FIRST 10m FROM ADJACENT ROAD & 150mmø STONE FOR REMAINDER OF STONE PAD.

LENGTH
AS REQUIRED BUT NOT LESS THAN 20m.

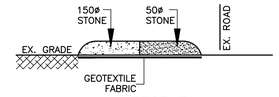
WIDTH
10m MIN. BUT NOT LESS THAN THE WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.

GEOTEXTILE FABRIC
TERRAFIX 270R OR APPROVED EQUIVALENT TO BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.

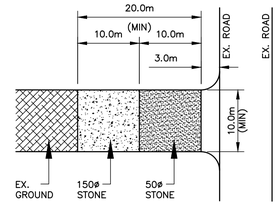
SURFACE WATER
ALL SURFACE WATER FLOWING OR DIRECTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.

MAINTENANCE
THE CONTRACTOR SHALL MAINTAIN THE ENTRANCE IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAY. THIS MAY REQUIRE PERIODIC DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT–OF–WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR. UPON OBSERVATION OF CONTINUOUS MUD TRACKING ONTO ADJACENT STREETS, THE STONE MAT IS TO BE FULLY REPLACED. INSPECTION AND REQUIRED MAINTENANCE AFTER EACH RAIN EVENT SHALL BE PROVIDED BY THE CONTRACTOR.

WASHING
WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

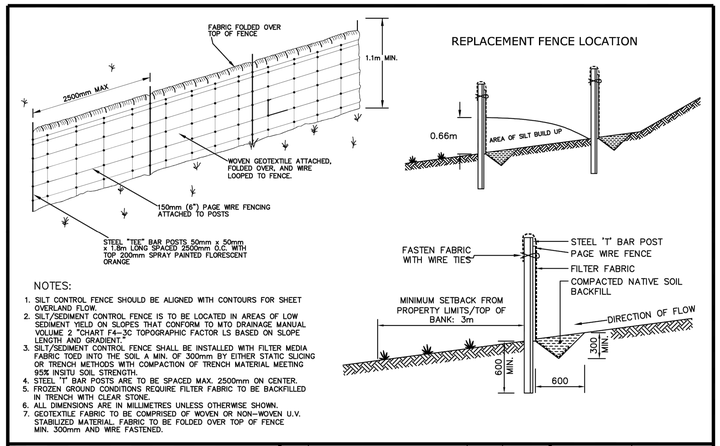


PROFILE



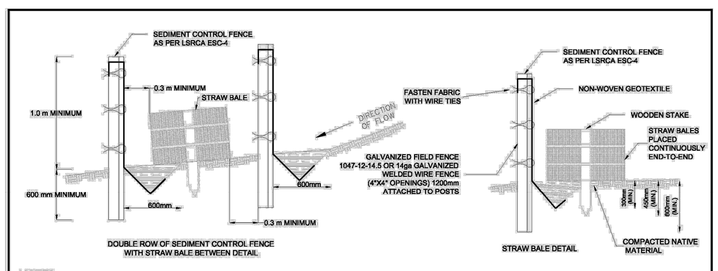
PLAN

STONE MUD MAT DETAIL
NTS



NOTES:
1. SILT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
2. SILT/SEDIMENT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTO DRAINAGE MANUAL VOLUME 2 "CHART F4–3C TOPOGRAPHIC FACTOR LS BASED ON SLOPE LENGTH AND GRADIENT."
3. SILT/SEDIMENT CONTROL FENCE SHALL BE INSTALLED WITH FILTER MEDIA FABRIC TOED INTO THE SOIL A MIN. OF 300mm BY EITHER STATIC SLICING OR TRENCH METHODS WITH COMPACTION OF TRENCH MATERIAL MEETING 95% INSITU SOIL STRENGTH.
4. STEEL "T" BAR POSTS ARE TO BE SPACED MAX. 2500mm ON CENTER.
5. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE.
6. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
7. GEOTEXTILE FABRIC TO BE COMPRISED OF WOVEN OR NON–WOVEN U.V. STABILIZED MATERIAL. FABRIC TO BE FOLDED OVER TOP OF FENCE MIN. 300mm AND WIRE FASTENED.

Nottawasaga Valley Conservation Authority					APR'D:	DATE: 03.03.06
TYPICAL DETAIL OF SILT/SEDIMENT FENCE					DRAWN: A.S.C	SCALE: NTS
	NO.	REVISION	APR'D	DATE	BSD-23 DRAFT	



NOTES:
1. SEDIMENT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
2. SEDIMENT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTO DRAINAGE MANUAL VOLUME 2 CHART F4-3C TOPOGRAPHIC FACTOR LS BASED ON SLOPE LENGTH AND GRADIENT.
3. SEDIMENT CONTROL FENCE SHALL BE INSTALLED WITH FILTER MEDIA FABRIC TIED INTO THE SOIL A MINIMUM OF 300 mm BY EITHER STATIC SLICING OR TRENCH METHODS WITH COMPACTION OF TRENCH MATERIAL MEETING 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
4. STEEL "T" BAR POSTS ARE TO BE SPACED A MAXIMUM DISTANCE OF 2000 mm ON CENTER.
5. STRAW BALES TO BE PLACED END-TO-END CONTINUOUSLY BETWEEN SEDIMENT CONTROL FENCES.
6. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE.
7. GEOTEXTILE FABRIC TO BE COMPRISED OF NON-WOVEN U.V. STABILIZED MATERIAL FABRIC TO BE FOLDED OVER TOP OF FENCE A MINIMUM OF 300 mm AND WIRE FASTENED.
8. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
9. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.

NO.	REVISION	DATE
1	SWM GUIDELINES UPDATE	06.2016

DOUBLE ROW SEDIMENT CONTROL FENCE

DATE: 06.2016
SCALE: NTS
LSRCA ESC-5

NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SEDIMENT AND EROSION CONTROL MEASURES THAT ARE DESIGNED TO CONTROL RUNOFF FROM SPECIFIC AREAS MUST BE INSTALLED PRIOR TO ANY DISTURBANCE OF THAT PART OF THE SITE. THE LOCATION OF ALL SILTATION AND EROSION CONTROL WORKS TO BE REVIEWED ON SITE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES MUST BE PRESENTED IN WRITING TO THE ENGINEER FOR APPROVAL OF THE TOWN AND NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.
3. THE CONTRACTOR SHALL HAVE MATERIALS AVAILABLE ON SITE TO REPAIR SEDIMENT AND EROSION CONTROL MEASURES IN THE EVENT OF UNFORESEEN CONDITIONS SUCH AS HIGH WATER, EXTREME RAINFALL EVENTS, ETC.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED, CLEANED AND MAINTAINED BY THE CONTRACTOR AFTER EACH STORM EVENT. ALL WORKS WILL BE INSPECTED BY THE ENGINEER BI–WEEKLY AND AFTER EACH MAJOR STORM EVENT.
5. CONSTRUCTION OF ALL SILTATION AND EROSION CONTROL WORK IS TO BE IN ACCORDANCE WITH THE FOLLOWING STEPS:
   - 5.1. INSTALL NEW OR MAINTAIN EXISTING STONE MUD MAT AS PER DETAIL.
   - 5.2. INSTALL SILT FENCE AS PER NVCA STANDARDS (BSD–23).
   - 5.3. INSTALL TEMPORARY CATCH BASIN SEDIMENT TRAPS ON ALL NEW AND EXISTING CATCH BASINS. SEDIMENT TRAPS TO BE RECTANGULAR BY LAYFIELD OR APPROVED EQUAL. ALL CATCH BASINS TO REMAIN SCREENED UNTIL BASE COURSE ASPHALT IS PLACED AND LOT GRADING IS COMPLETE.
6. ALL CONSTRUCTION VEHICLES TO ACCESS SITE USING THE DESIGNATED CONSTRUCTION ACCESS POINTS.
7. EROSION AND SEDIMENT CONTROL MEASURES TO BE REMOVED BY THE CONTRACTOR ONCE GROUND COVER IS ESTABLISHED AND LANDSCAPING IS COMPLETE AND APPROVED BY THE ENGINEER.
8. STOCKPILE LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.
9. PROVIDE FENCE OR APPROVED EQUAL ACROSS ALL CONSTRUCTION ACCESSES DURING PERIODS OF INACTIVITY.
10. CONSTRUCTION AREAS THAT EXCEED 30 DAYS OF INACTIVITY SHALL BE STABILIZED BY SEEDING IN ACCORDANCE WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY'S TECHNICAL DESIGN GUIDELINES, STANDARDS AND POLICIES FOR SILTATION AND EROSION CONTROL, CONSTRUCTION CONTROL REQUIREMENTS, NOTES 1, 2 AND 3 AND/OR AS DIRECTED BY THE TOWN. THIS IS TO INCLUDE STOCKPILES OF FILL AND TOPSOIL.

TOWN APPROVAL

BENCHMARKS

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK No. 0011972U311 HAVING A PUBLISHED ELEVATION OF 181.032 METRES.

NOTES

LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY PATTEN & THOMSEN LTD, DATED, JANUARY 2, 2012 JOB No. 66–170–6

TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22
3.	3RD SUBMISSION	07/23

ENGINEER STAMP

LICENSED PROFESSIONAL ENGINEER
2023.07.28
D. M. CASULLO
PROVINCE OF ONTARIO

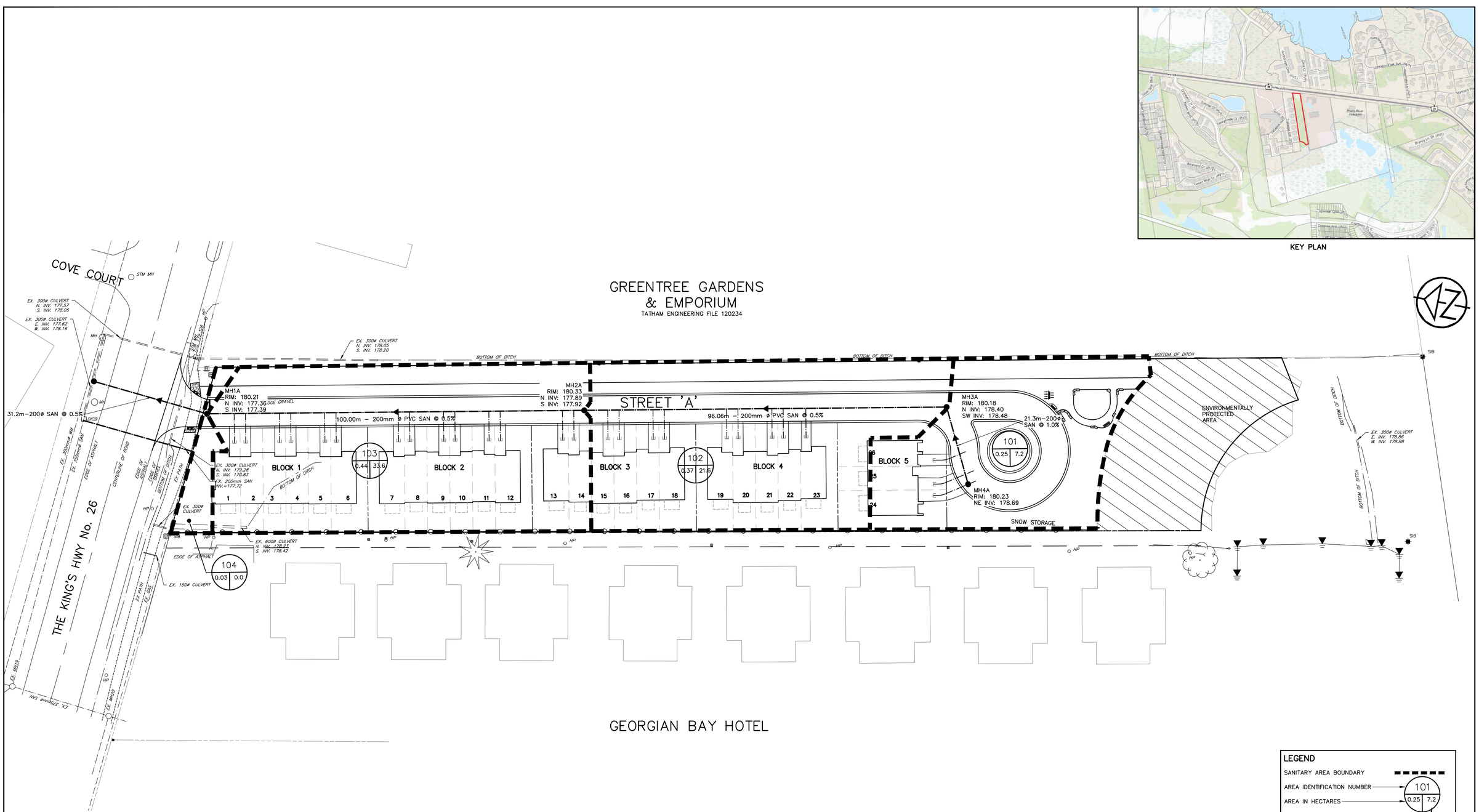
CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

EROSION AND SEDIMENT CONTROL DETAILS

TATHAM ENGINEERING

DESIGN: KG	FILE: 120181	DWG: ESC-2
DRAWN: KH/SBU/AP	DATE: MAR 2022	
CHECK: DC	SCALE: N.T.S.	

Drawing Name: 120181 – ESC01.dwg, Plotted: Aug 01, 2023



KEY PLAN

LEGEND

- SANITARY AREA BOUNDARY
- AREA IDENTIFICATION NUMBER → 101
- AREA IN HECTARES → 0.25 | 7.2
- POPULATION BASED ON 2.4 PERSONS PER UNIT

TOWN APPROVAL

DISCLAIMER AND COPYRIGHT

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

BENCHMARKS

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TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22
3.	3RD SUBMISSION	07/23

ENGINEER STAMP

LICENSED PROFESSIONAL ENGINEER
2023.07.28
D. M. CASULLO
PROVINCE OF ONTARIO

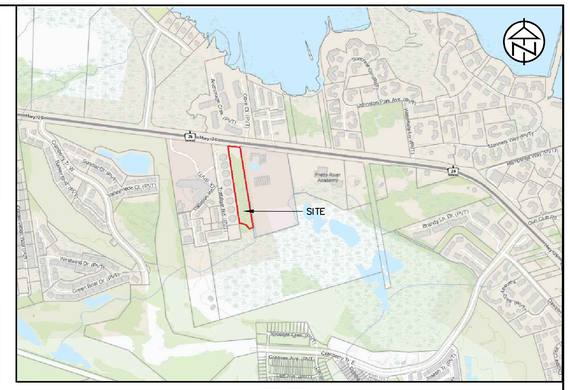
CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

TATHAM ENGINEERING

SANITARY DRAINAGE PLAN

DESIGN: KG	FILE: 120181	DWG:	
DRAWN: KH/SBU/AP	DATE: NOV 2021	**SAN-1**	
CHECK: DC	SCALE: 1:500		

Drawing Name: 120181 – SAN01.dwg, Plotted: Aug 01, 2023



LEGEND

AREA BOUNDARY	▬ ▬ ▬
AREA IDENTIFICATION NUMBER	101
AREA IN HECTARES	1.40
RUNNOFF COEFFICIENT	0.25
EXISTING MAJOR OVERLAND FLOW DIRECTION	⇨
EXISTING DITCH FLOW DIRECTION	▷

TOWN APPROVAL

KEY PLAN

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

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NOTES

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TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22
3.	3RD SUBMISSION	07/23

ENGINEER STAMP

LICENSED PROFESSIONAL ENGINEER
2023.07.28
D. M. CASULLO
PROVINCE OF ONTARIO

CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

PRE-DEVELOPMENT
DRAINAGE PLAN

TATHAM
ENGINEERING

DESIGN: KG	FILE: 120181	DWG:
DRAWN: KH/SBU/AP	DATE: DEC 2021	**DP-1**
CHECK: DC	SCALE: 1:500	

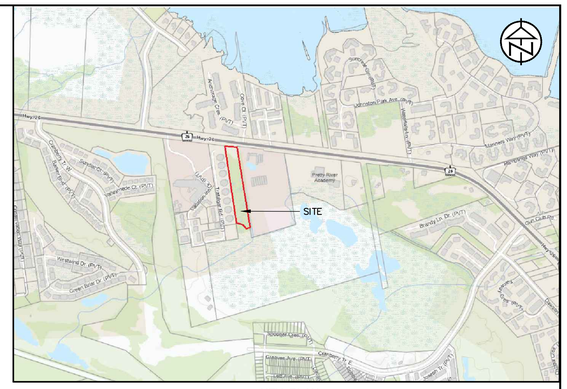
Drawing Name: 120181 – DP01.dwg, Plotted: Aug 01, 2023

GREENTREE GARDENS & EMPORIUM

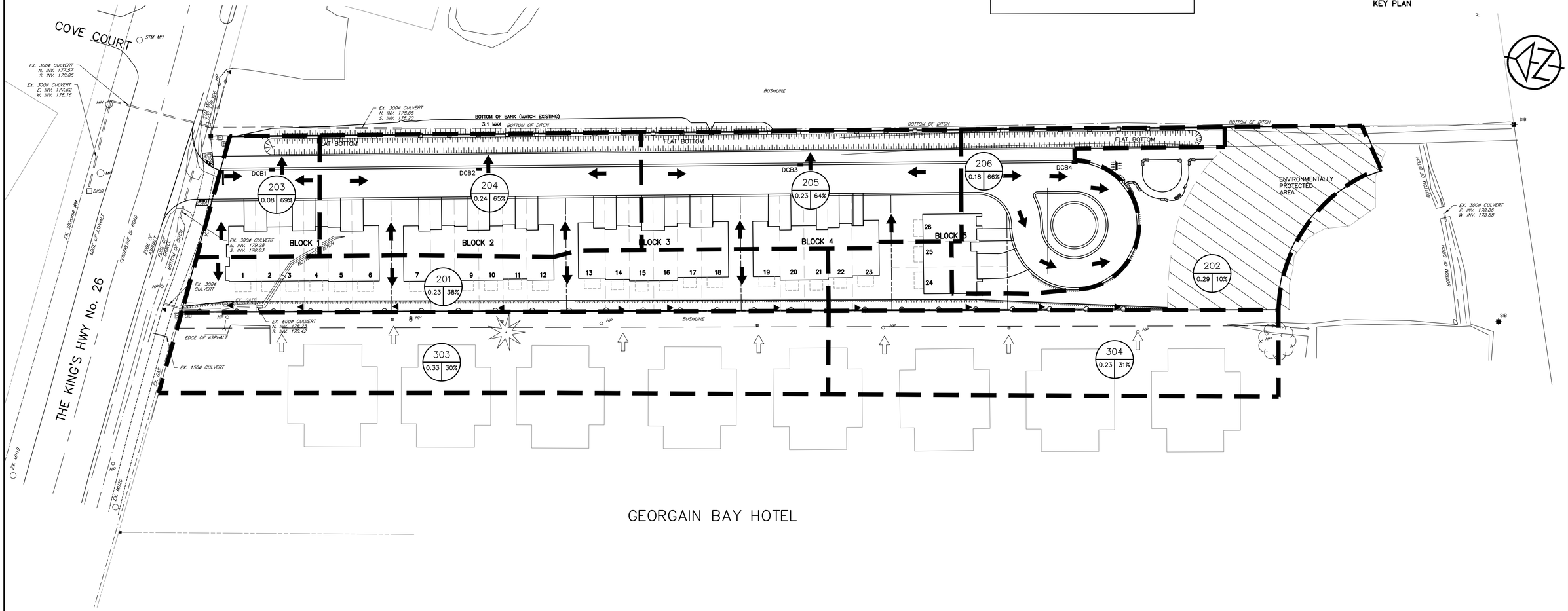
LEGEND

- AREA BOUNDARY
- AREA IDENTIFICATION NUMBER — 201
- AREA IN HECTARES — 1.40 | 65%
- CN VALUE/PERCENT IMPERVIOUS
- PROPOSED MAJOR OVERLAND FLOW DIRECTION
- EXISTING MAJOR OVERLAND FLOW DIRECTION
- PROPOSED FLOW DIRECTION

TOWN APPROVAL



KEY PLAN



GEORGAIN BAY HOTEL

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NOTES

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TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22
3.	UPDATE TO IMPERVIOUS VALUES	01/23
4.	3RD SUBMISSION	07/23

ENGINEER STAMP

LICENSED PROFESSIONAL ENGINEER — 2023.07.28 — D. M. CASULLO — PROVINCE OF ONTARIO

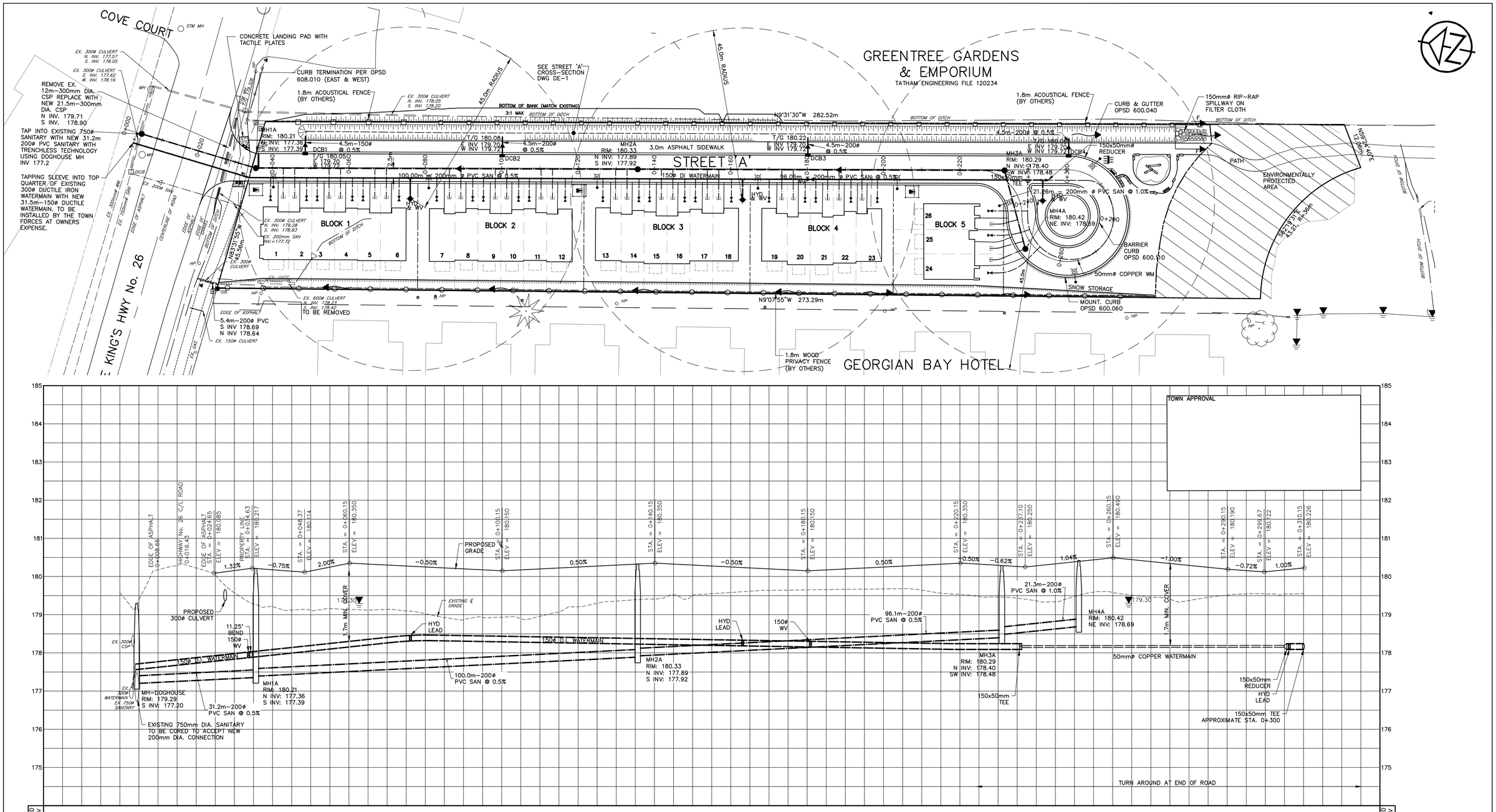
CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

TATHAM ENGINEERING

POST-DEVELOPMENT DRAINAGE PLAN

DESIGN: KG	FILE: 120181	DWG:	
DRAWN: KH/SBU/AP	DATE: FEB 2022		**DP-2**
CHECK: DC	SCALE: 1:500		

Drawing Name: 120181 – DP02.dwg, Plotted: Aug 01, 2023



DISCLAIMER AND COPYRIGHT

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

BENCHMARKS

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM BENCH MARK No. 0011972U311 HAVING A PUBLISHED ELEVATION OF 181.032 METRES.

NOTES

LEGAL SURVEY INFORMATION AND LOT DIMENSIONS SHOWN ON THIS PLAN ARE TAKEN FROM A SURVEY PLAN PREPARED BY PATTEN & THOMSEN LTD, DATED, JANUARY 2, 2012 JOB No. 66-170-6

TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	03/22
2.	2ND SUBMISSION	12/22
3.	3RD SUBMISSION	07/23

ENGINEER STAMP

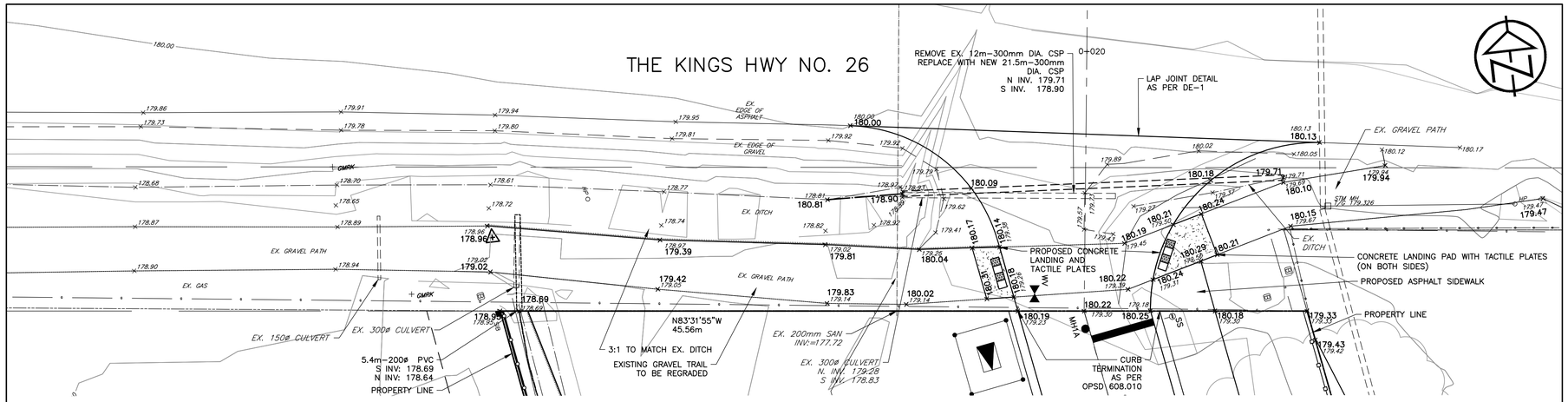
LICENSED PROFESSIONAL ENGINEER
2023.07.28
D. M. CASULLO
PROVINCE OF ONTARIO

CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

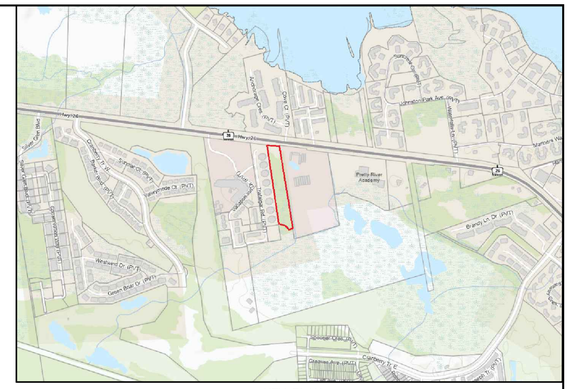
SITE SERVICING PLAN AND PROFILE

TATHAM ENGINEERING

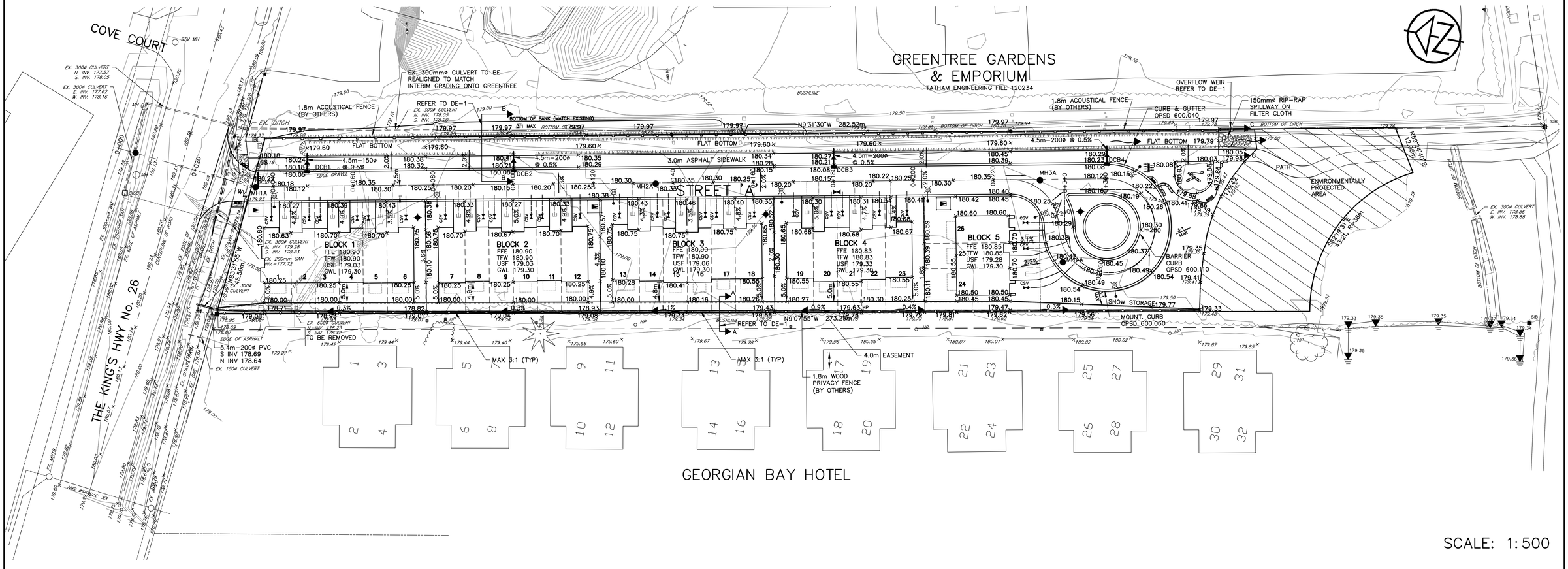
DESIGN: KG	FILE: 120181	DWG:	
DRAWN: KH/SBU/AP	DATE: MAR 2022		PP-1
CHECK: DC	SCALE: H-1:500 V-1:50		



GRADING WITHIN HWY#26 RIGHT OF WAY
SCALE: 1:150



KEY PLAN



GEORGIAN BAY HOTEL

SCALE: 1:500

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LICENSED PROFESSIONAL ENGINEER
2023.07.28
D. M. CASULLO
PROVINCE OF ONTARIO

TOWN APPROVAL

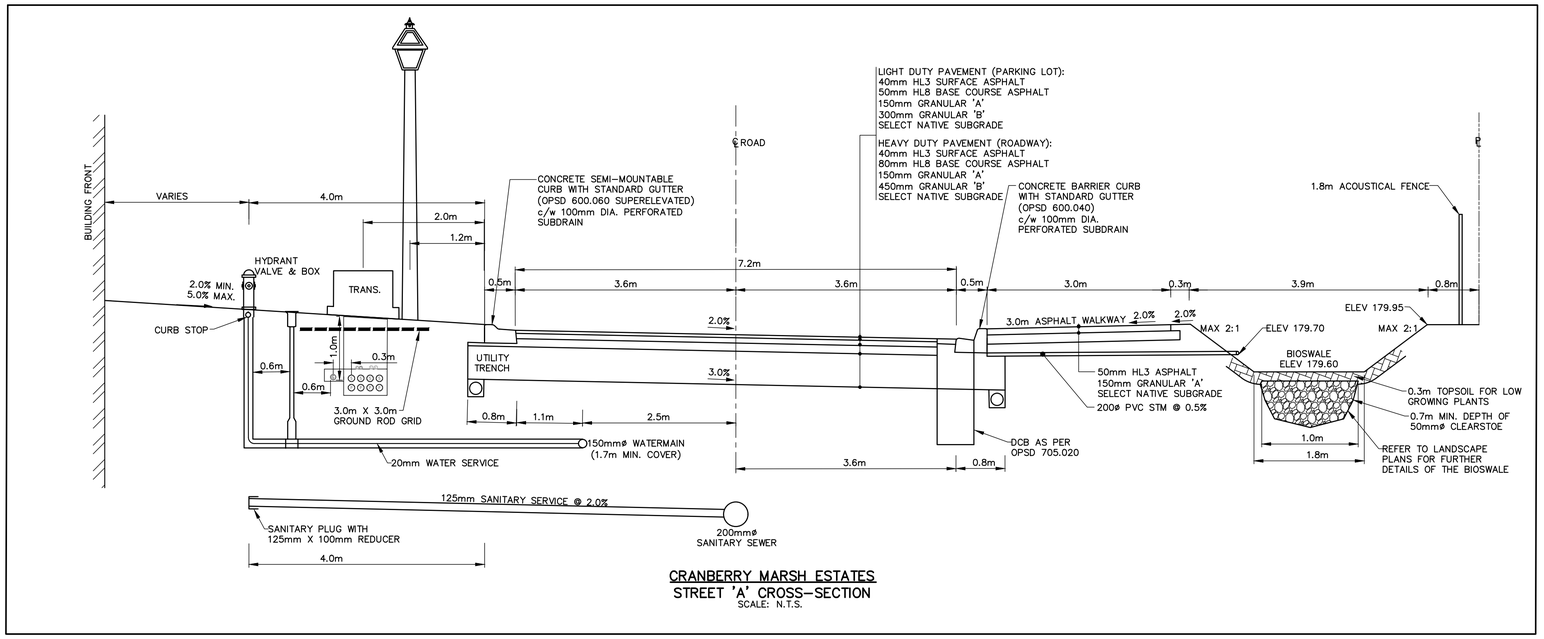
CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

TATHAM ENGINEERING

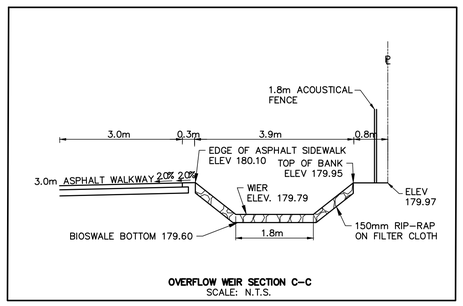
SITE GRADING PLAN

DESIGN: KH	FILE: 120181	DWG: SG-1
DRAWN: KH/SBU/AP	DATE: OCT 2021	
CHECK: DC	SCALE: AS NOTED	

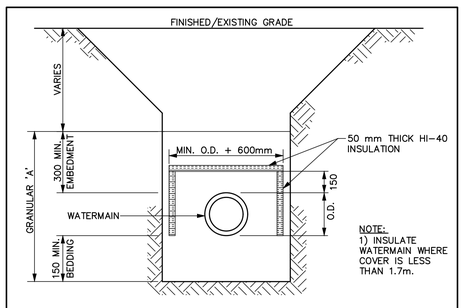
Drawing Name: 120181 - SG01.dwg, Plotted: Aug 02, 2023



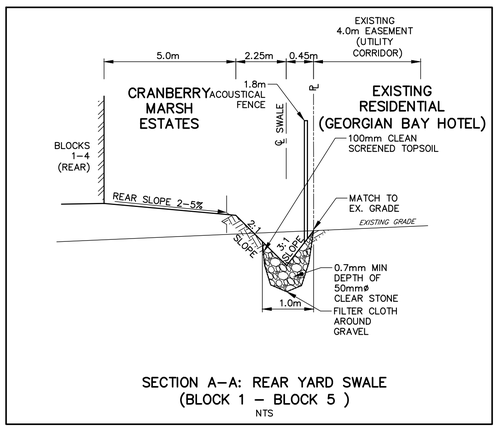
CRANBERRY MARSH ESTATES
STREET 'A' CROSS-SECTION
SCALE: N.T.S.



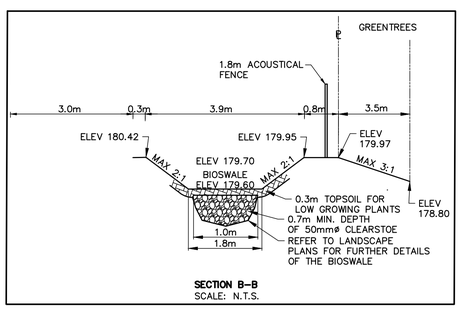
OVERFLOW WEIR SECTION C-C
SCALE: N.T.S.



TYPICAL WATERMAIN INSULATION DETAIL
NTS



SECTION A-A: REAR YARD SWALE
(BLOCK 1 - BLOCK 5)
NTS



SECTION B-B
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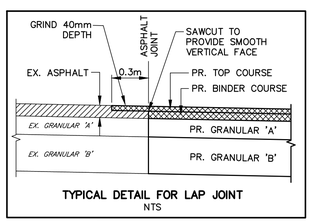

TYPICAL DETAIL FOR LAP JOINT
NTS

GENERAL - CONSTRUCTION

A) ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF COLLINGWOOD STANDARDS, O.P.S.D. AND O.P.S.S. WHERE CONFLICT OCCURS, TOWN OF COLLINGWOOD STANDARD TO GOVERN.
B) TRENCH BACKFILL TO OPSD 802.010 TO BE SELECT NATIVE MATERIAL OR IMPORTED SELECT SUBGRADE TO OPSS 1010. BACKFILL TO BE PLACED IN MAXIMUM 200 mm THICK LIFTS AND COMPACTED TO 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
C) PIPE BEDDING TO BE GRANULAR 'A' PIPE COVER TO BE GRANULAR 'B' MAX. AGGREGATE SIZE 25mm FOR RIGID PIPE AND GRANULAR 'A' FOR FLEXIBLE PIPE. (MINIMUM BEDDING DEPTH 150 mm, MINIMUM COVER 300mm, COMPACTED TO A MINIMUM 95% SPMDD).
D) CLEAR STONE WRAPPED IN FILTER FABRIC CAN BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE ENGINEER.
E) ALL TOPSOIL AND EARTH EXCAVATION TO BE STOCK PILED OR REMOVED TO OPSS 180. MANAGEMENT AND DISPOSAL OF EXCESS MATERIAL TO AN APPROVED SITE AS DIRECTED BY ENGINEER.
F) THE OWNER'S ENGINEER SHALL PROVIDE BENCH MARK ELEVATIONS AND HORIZONTAL ALIGNMENT REFERENCE FOR THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK.
G) ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY O.L.S. AT CONTRACTOR'S EXPENSE IF REMOVED DURING CONSTRUCTION.
H) ALL MAINTENANCE HOLE AND CATCHBASINI FRAMES AND COVERS TO BE SET TO BASE COURSE HL8 ASPHALT ELEVATION AND RAISED PRIOR TO PLACEMENT OF FINAL COURSE HL3 ASPHALT.
I) THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
J) DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 AND 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION.
K) ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
L) ALL DISTURBED AREAS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
M) THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION OF ALL EXISTING FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO-ORDINATE CONSTRUCTION ACCORDINGLY.
N) ALL SIGNAGE TO BE LAWFULLY ERECTED AND MAINTAINED IN ACCORDANCE TO THE TOWN SIGN BY-LAW.
O) CLEARING, GRUBBING AND REMOVAL OF SURFACE BOULDERS TO OPSS 201.
P) GRADING TO OPSS 206.
Q) COMPACTING TO OPSS 501.
R) DUST SUPPRESSANTS TO OPSS 506.
S) TREE REMOVALS AND/OR TRANSPLANTS TO BE COMPLETED OUTSIDE OF MIGRATORY BIRDS NESTING SEASON FROM APRIL 1ST TO AUGUST 31ST. REMOVALS MAY TAKE PLACE DURING THIS RESTRICTED TIME ONLY IF THE REQUIREMENTS OF MIGRATING BIRDS CONVENTION ACT ARE MET AND NESTING ACTIVITY IS ROUTINELY MONITORED BY QUALIFIED INDIVIDUALS (I.E. WILDLIFE BIOLOGIST).

SANITARY SEWERS

A) MAINTENANCE HOLES TO OPSD 701.010 AND 701.030.
B) BENCHING TO OPSD - 701.021.
C) STEPS TO OPSD - 405.010.
D) FROST STRAPS SHALL BE INSTALLED ON ALL MAINTENANCE HOLE AS PER OPSD - 701.100
E) FRAMES AND COVERS TO OPSD - 401.030 (WATER TIGHT COVER).
F) PIPE SUPPORT AT MAINTENANCE HOLES AS PER OPSD 708.020.
G) ALL MAINTENANCE HOLES, UNLESS EXPRESSLY IDENTIFIED ARE 1200 mm DIAMETER WITH WATER TIGHT INSERTS.
H) GENERAL INSTALLATION AND TESTING OF SEWERS AND APPURTENANCES TO BE IN ACCORDANCE WITH O.P.S.S. 407, 408, 409 (CCTV), 410, 421 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
I) SERVICE CONNECTIONS TO BE 125 mm DIA., TERMINNATED WHERE SPECIFIED ON THE DRAWING COMPLETE WITH PLUG AND MARKED WITH A 38mm X 89mm POST PAINTED GREEN FROM THE INVERT OF THE SERVICE TO 600 mm ABOVE GRADE.
J) SERVICE CONNECTION TO OPSD 1006.020, GRANULAR A BEDDING AND EMBEDMENT.
K) RIGID BOARD INSULATION (HI-40) REQUIRED FOR FROST PROTECTION OF SEWER WITH LESS THAN 1.2 m MINIMUM COVER. INSULATION TO BE MINIMUM 50 mm THICK AND HAVE A MINIMUM WIDTH OF 1.2m.

WATER MAINS

A) THRUST BLOCKS TO OPSD-1103.010 AND 1103.020 WHERE SUITABLE SOILS ARE ENCOUNTERED.
B) MINIMUM COVER ON WATER MAIN AND SERVICES TO BE 1.7 m.
C) GATE VALVES, BENDS AND FITTINGS TO BE CONNECTED WITH ROMAC GRIP RING RESTRAINING CLAMP.
D) CLEARANCE BETWEEN WATER MAINS AND SEWERS TO BE A MINIMUM OF 0.5m VERTICAL WHERE WATER MAIN IS BELOW SEWER OR 2.5m MINIMUM HORIZONTAL SEPARATION. WHERE WATER MAIN IS ABOVE SEWER, THE MINIMUM SEPARATION TO BE 150 mm (BEDDING MATERIAL).
E) GENERAL INSTALLATION AND TESTING OF WATER MAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH O.P.S.S. 701 AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
F) ALL WORK ON TOWN PROPERTY AND ON TOWN OF COLLINGWOOD WATER DEPARTMENT (TCWD) WATER MAINS MUST BE UNDERTAKEN BY TCWD OR AN APPROVED CONTRACTOR WITH TCWD INSPECTION, ALL AT DEVELOPER'S COST.
H) SERVICE CONNECTIONS TO OPSD-1104.010, 100 mm GRANULAR 'A' EMBEDMENT AND COVER OVER PIPE. TERMINATE WHERE SPECIFIED ON DRAWING C/W CURB STOP AND BOX, TESTING TAIL TO SURFACE ATTACHED TO A 38mm x 89mm MARKER POST PAINTED BLUE FROM THE INVERT OF THE SERVICE TO 600 mm ABOVE GRADE. I) ALL SERVICES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH TOWN STANDARDS.
I) WATER MAIN SERVICES - 20mm TYPE K COPPER, MAIN STOPS TO 201-A3H3, 3/4", BALL STYLE. AWWA THREAD BY COMPRESSION CAMBRIDGE BRASS. CURB STOPS TO 203-H3H3, 3/4" BALL STYLE WITH DRAIN, COMPRESSION JOINT CAMBRIDGE BRASS. SERVICE BOXES TO NUMBER 7, D-1 CLOW OR MUELLER WITH 24" BLACK RODS STRAIGHT OR OTHERWISE NOTED ON DRAWINGS.
J) ALL WATER TESTING AND WATER MAIN CHLORINATION WILL BE CONDUCTED BY TCWD AT THE DEVELOPER'S COST. WATER MAINS ARE NOT TO BE CONNECTED TO THE EXISTING WATER MAINS UNTIL BACTERIOLOGICAL TESTING HAS BEEN SUCCESSFULLY COMPLETED. NEW WATER MAINS CAN NOT BE CONNECTED TO EXISTING MAINS UNTIL THEY HAVE PASSED BACTERIOLOGICAL TESTING AND AS SUCH A TEMPORARY BACKFLOW PREVENTOR WILL NEED TO BE INSTALLED BETWEEN THE LIVE TAP AND THE NEW SERVICE TO FACILITATE ADEQUATE PROTECTION OF THE EXISTING WATER MAIN. IT SHOULD BE NOTED THAT THIS TESTING TAKES APPROXIMATELY A WEEK TO COMPLETE AND MUST BE CONDUCTED BY TCWD. A WORK PLAN FOR THIS WORK MUST BE SUBMITTED TO TCWD FOR APPROVAL.
K) AS A GENERAL PRINCIPAL EACH PROPERTY SHALL HAVE ONE SERVICE AND ONE METER.
L) NO WATER VALVES ARE TO BE OPERATED WITHOUT TCWD APPROVAL.

STORM SEWERS

A) CATCH BASINS AND DOUBLE CATCH BASINS TO OPSD 705.010 AND 705.020 C/W 600 mm SUMP. REAR LOT CATCH BASINS AND DITCH INLET CATCH BASINS TO OPSD 705.010 WITHOUT SUMP.
B) CATCH BASINS AND DOUBLE CATCH BASINS FRAMES AND GRATES TO OPSD 400.020. REAR LOT CATCH BASIN FRAMES AND GRATES TO OPSD 400.120.
C) CATCH BASIN LEADS - 250 mm DIA. SINGLE AND 300 mm DIA. DOUBLE. CATCH BASIN CONNECTIONS TO OPSD 708.010 AND OPSD 708.030.
D) PIPE SUPPORT AT CB'S TO OPSD 708.020. CATCH BASINS AND INLET STRUCTURES FITTED WITH SEDIMENT TRAPS DURING CONSTRUCTION ACTIVITIES, AND CLEANED OUT AS REQUIRED PRIOR TO ASSUMPTION OF THE WORK.
E) HEADWALLS TO BE INSTALLED IN ACCORDANCE WITH OPSD 804.030 (PIPE LESS THAN 900 mm DIA.) OR OPSD 804.040 (AS SPECIFIED), C/W GRATING IN ACCORDANCE WITH OPSD 804.050.

ROAD AND PARKING

A) SUBGRADE AND ALL GRANULAR 'A' BOULEVARD MATERIAL TO BE COMPACTED TO A MINIMUM DRY DENSITY OF AT LEAST 95% SPMDD. SUBGRADE TO BE PROOF ROLLED AND CERTIFIED PRIOR TO PLACING GRANULAR 'B'.
B) GRANULAR 'A' AND 'B' BASE TO BE COMPACTED TO 100% OF THE MATERIAL'S RESPECTIVE SPMDD.
C) LIGHT DUTY PAVEMENT TWO LIFTS TOTAL 90mm (50mm HL8 AND 40mm HL3), 150mm GRANULAR 'A', 300mm GRANULAR 'B'. HEAVY DUTY PAVEMENT TWO LIFTS TOTAL 120mm (80mm HL8 AND 40mm HL3), 150 mm GRANULAR 'A', 450mm GRANULAR 'B', ALL SUBDRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSS 405.
D) CONCRETE SEMI-MOUNTABLE CURB WITH STANDARD GUTTER TO OPSD 600.060 INCLUDING SUPERELEVATED. CONCRETE BARRIER CURB WITH STANDARD GUTTER TO OPSD 600.040. CONCRETE BARRIER CURB TO OPSD 600.110
E) SELECT SUBGRADE MATERIAL, OR IMPORTED GRANULAR MATERIAL APPROVED BY THE ENGINEER, COMPACTED TO 98% S.P.M.D.D. TO BE USED AS FILL IN ALL AREAS WHERE PROPOSED PIPE INVERTS ARE HIGHER THAN EXISTING GRADE OR AS INSTRUCTED BY THE ENGINEER.
F) ALL GRANULARS AND ASPHALT MATERIALS AND PLACEMENT TO BE IN ACCORDANCE WITH OPSS 314 AND OPSS 310
G) JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT PRIOR TO PLACING NEW ASPHALT AND TACK COAT APPLIED TO EXISTING ASPHALT. ASPHALT JOINT WITH HIGHWAY No. 26 TO BE COMPLETE WITH LAP JOINT, SEE DETAIL THIS PAGE.
H) REINSTATEMENT OF ALL DISTURBED BOULEVARDS TO INCLUDE REGRADING, MINIMUM 150mm TOPSOIL AND SOD TO OPSS.MUNI 802 AND 803.
I) ALL FIRE ROUTE SIGNAGE TO BE AS PER TOWN OF COLLINGWOOD BY-LAW 96-37.
J) ENTRANCE AS PER OPSD 350.010, SIDEWALKS TO OPSD 310.050 AND 310.010.

MATERIALS

A) SANITARY SEWER SDR-35 PVC, SANITARY SERVICES - SDR 28 PVC
B) WATER MAIN - DUCTILE IRON CLASS 52, OR PRESSURE CLASS 350 CEMENT LINED. CONDUCTIVITY CONNECTORS TO BE USED ON ALL JOINTS.
C) WATER SERVICE CONNECTIONS TO BE TYPE 'K' COPPER PIPE.
D) VALVES - RESILIENT SEATED, RSGV, MECHANICAL JOINT, OPEN LEFT CLOW OR MUELLER WITH 5 SL-48 SLIDING VALVE BOX, TO AWWA C504.
E) MECHANICAL JOINT DUCTILE FITTINGS - AWWA/ANSI C153/A21.53.
F) RESTRAINER - ROMAC GRIPPER RING FOR PIPE SIZES UP TO 300 mm AND SIGMA ONE-LOCK FOR PIPE SIZES GREATER THAN 300 mm.
G) LIVE TAP SADDLES - EPOXY COATED c/w STAINLESS STEEL BOLTS.
H) LIVE TAP VALVE - RESILIENT SEATED RSGV, LIVE TAPE VALVE, OPEN LE.
I) FILTER FABRIC - TERRAFIX 270R OR APPROVED EQUAL.
J) PERFORATED SUBDRAINS - 100mm DIA. BIG 'O' WITH GEOTEXTILE FILTER SOCK OR APPROVED EQUAL UNLESS NOTED OTHERWISE.
K) ALL SPECIFIED AGGREGATES TO OPSD 1010.
L) INSULATION - STRYROFOAM HI-40.
M) ALL HYDRANTS SHALL BE, CANADA VALVE, CENTURY NO. 1 OPEN LEFT WITH 2 CSA HOSE PORTS, ONE STORZ 4"PUMPER PORT, AND A BREAK AWAY TYPE 6"MJ BASE.

TOWN APPROVAL

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TOPOGRAPHIC SURVEY COMPLETED BY TATHAM ENGINEERING OCTOBER, 2022.

No.	REVISION DESCRIPTION	DATE
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LICENSED PROFESSIONAL ENGINEER
2023.07.28
D. M. CASULLO
PROVINCE OF ONTARIO

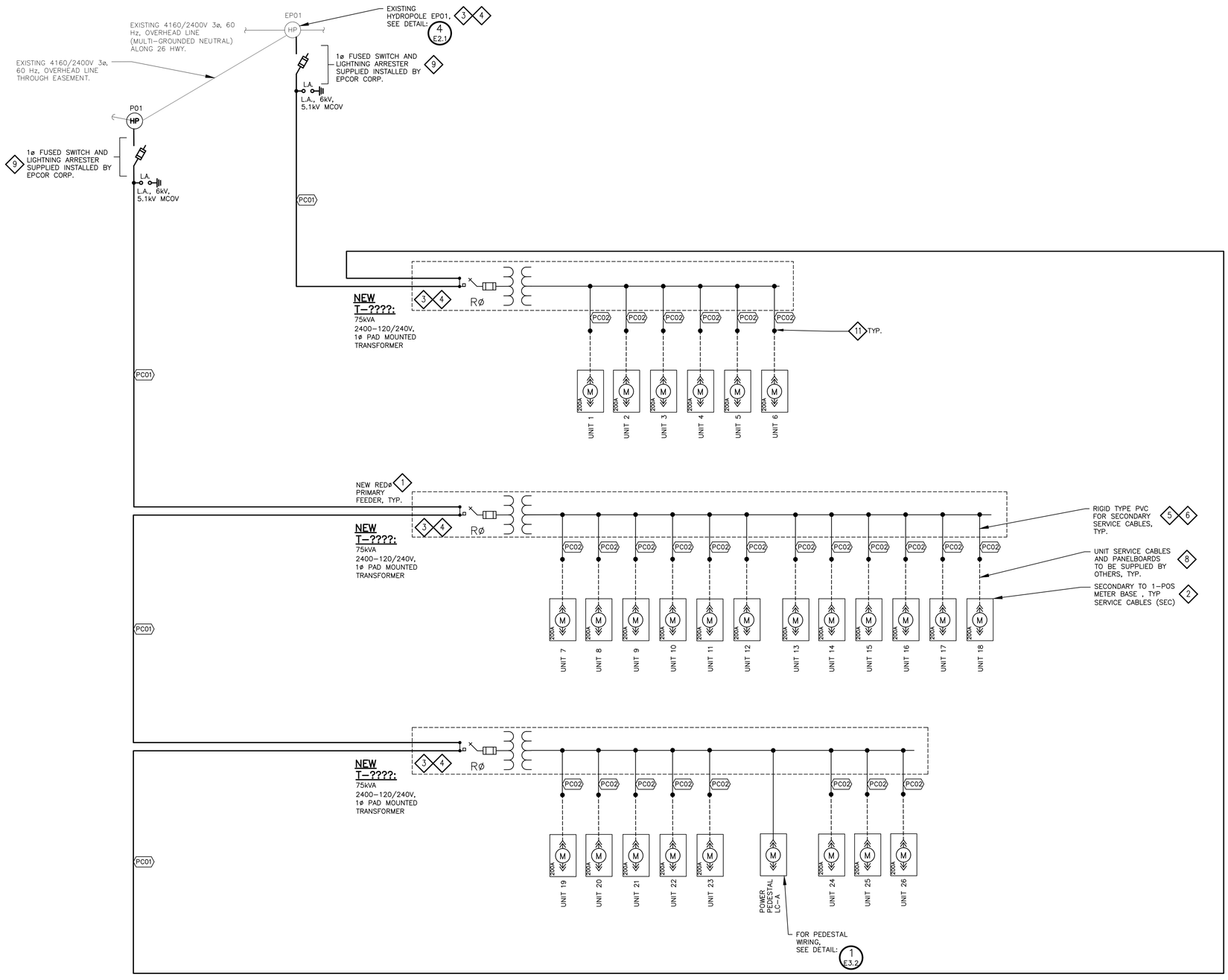
CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

TATHAM ENGINEERING

DETAILS & NOTES

DESIGN: KG/SBU	FILE: 120181	DWG:
DRAWN: KH/SBU	DATE: NOV 2021	**DE-1**
CHECK: DC	SCALE: 1:500	

Drawing Name: 120181 - DE01.dwg, Plotted: Aug 02, 2023



	PRIMARY CABLE DESCRIPTION	INSTALLATION
12 PC01	LOOP FEEDER: 1C#1/0 AWG Cu CLASS B STRANDED, 15kV RATED, TRXLPE, 100% CONCENTRIC NEUTRAL, IN UNDERGROUND DUCTBANK, COMPLIES WITH CSA C68.3, LATEST ISSUE.	1-103mmø TYPE DB2 DIRECT BURIED DUCT(S) WITH SAND BEDDING ALL AROUND.
12 PC02	3C#4/0, Al, TYPE USEI90, CLASS 'B' STRANDED, 600V RATED, 2-CONDUCTOR + 100% NEUTRAL, XLPE INSULATION PVC JACKET	1-103mmø TYPE DB2 DIRECT BURIED DUCT(S) WITH SAND BEDDING ALL AROUND.

SINGLE LINE DIAGRAM NOTES:

1. PC01: PRIMARY LOOP FEEDER CABLE: 1C#1/0AWG IN 103mmø PVC DUCT. REFER TO EPCOR'S "GENERAL CONTRACTOR REQUIREMENTS AND MATERIAL SPECIFICATIONS" FOR PRIMARY CABLE SPECIFICATIONS.
2. 1-POSITION 200A RATED METER BASE: HYDEL ENTERPRISES EK400RO SERIES, THOMAS AND BETTS MICROELECTRIC BS2-TCV, EATON CULTER-HAMMER LM2 120 AMP, LINE/LOAD CABLES UP TO 250MCM CU/AL, WEATHERPROOF RATED (EEMAC 3R). REFER TO EPCOR'S "GENERAL CONTRACTOR REQUIREMENTS AND MATERIAL SPECIFICATIONS".
3. EPCOR TO SUPPLY AND INSTALL NEW TRANSFORMER. CONTRACTOR TO PROVIDE CONCRETE VAULT AND GROUNDING GRID. PER EPCOR STANARDS.
4. ALL PRIMARY AND SECONDARY CABLE TERMINATIONS INSIDE EACH TRANSFORMER AND AT HYDRO POLES WILL BE PERFORMED BY EPCOR.
5. EXPOSED SECTIONS OF CONDUIT (ABOVE GRADE) FOR SECONDARY FEEDER CABLES MUST BE RIGID PVC.
6. POC2: SECONDARY SERVICE CABLES FOR 1-POSITION 200A METER BASES: 3C@4/0AWG Al. USEI90. REFER TO EPCOR'S "GENERAL CONTRACTOR REQUIREMENTS AND MATERIAL SPECIFICATIONS" FOR SECONDARY CABLE SPECIFICATIONS.
7. TYPICAL FOR TOWNHOUSE UNITS WITH 200A SERVICE
8. MAXIMUM ELECTRICAL SERVICES TO EACH UNIT: 200AMP MAX., 120/240VAC, 1-PHASE, 60HZ. SERVICE CABLES TO ENTER UNIT (VIA UNDERGROUND) BY OTHERS DURING THIS CONTRACT. CONTRACTOR TO COORDINATE LOCATION OF METERS WITH CONTRACTOR INSTALLING UNIT PANELBOARDS PRIOR TO INSTALLING SERVICE CABLES TO METER BASES.
9. EPCOR TO RE-FRAME EXISTING EP01 HYDRO POLE TO ACCOMIDATE NEW 1ø PRIMARY RISER.
10. CONTRACTOR TO PROVIDE 20m OF ADDITIONAL PRIMARY CABLE AT BASE OF POLE, INCLUDES CONDUITS AND CABLE GUARDS AT POLE FOR PRIMARY RISER. EPCOR TO COMPLETE TERMINATIONS OF PRIMARY CABLES. ALL WORK TO BE DONE TO EPCORS STANDARDS.
11. TERMINATE SECONDARY ELECTRICAL SERVICE AT LOT LINE ON DRIVEWAY SIDE OF LOT PER EPCOR STANDARDS. SECURE 1m OF SECONDARY CABLE TO 2" X 4" X 8' WOOD MARKER STAKE. SECONDARY SPLICE AND CONNECTION TO METER BASE BY OTHERS. COORDINATE DRIVEWAY AND METER BASE LOCATIONS WITH DEVELOPER.
12. REFER TO EPCOR GENERAL CONTRACTOR INFORMATION, AS PROVIDED ON THEIR WEBPAGE: www.epcor.com

1 E1.1 SINGLE LINE DIAGRAM – 2400V

– EXCEPT FOR STREETLIGHT SYSTEM, ALL ELECTRICAL EQUIPMENT AND CABLES TO BE OWNED AND OPERATED BY EPCOR.

ACCEPTED FOR CONSTRUCTION EPCOR

per .....

Date: .....

EPCOR
43 Stewart Road,
Collingwood, Ontario
L9Y 3Z5

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 2022
2.	ISSUED TO EPCOR FOR REVIEW	MAR 2023
3.	2ND SUBMISSION	JULY 2023

ENGINEER STAMP

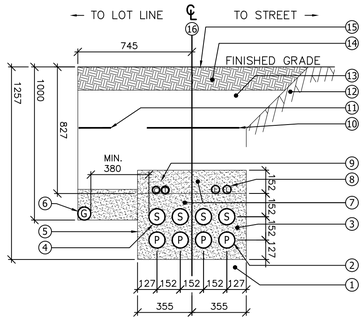
LICENSED PROFESSIONAL ENGINEER
S. R. S. TAYLOR
100518503
28JULY'23
PROVINCE OF ONTARIO

CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

TATHAM ENGINEERING

SINGLE LINE DIAGRAM

DESIGN: RJW	FILE: 120181	DWG:
DRAWN: RJW	DATE: OCT 2021	**E1.1**
CHECK: SRT	SCALE: AS SHOWN	



GENERAL NOTES - JOINT TRENCH

1. CLEAR UNDISTURBED SOIL OR 100mm SCREENED SAND BEDDING COMPACTED TO 98% STANDARD PROCTOR MATERIAL DRY DENSITY (SPMDD)
2. PRIMARY SERVICE 103mmø PVC TYPE DBII DUCT (TRANSFORMER SIDE) C/W CABLE. RED PHASE AT STREET SIDE, THEN WHITE PHASE, BLUE PHASE (ACCORDINGLY). UNUSED POSITIONS MAY BE USED AS SECONDARY SERVICE DUCTS.
3. CLEAR SCREENED COMPACTED SAND. MAINTAIN SEPARATION BETWEEN DUCTS BY USE OF PVC DUCT SPACERS TO MAINTAIN UNIFORM DUCT CLEARANCES.
4. TWO ROWS OF 103mmø PVC TYPE DBII SECONDARY SERVICE DUCTS C/W USEI90 CABLES
5. OUTLINE OF TRENCH EXCAVATION. ALL TRENCHING TO BE IN CONFORMANCE WITH CONSTRUCTION SAFETY ASSOCIATION OF ONTARIO "TRENCHING SAFETY" GUIDELINES
6. GAS LINE; SIZE AND ROUTING BY GAS UTILITY. MAINTAIN MINIMUM 305mm CLEARANCE TO ALL ELECTRICAL EQUIPMENT, CABLES, PEDESTALS, GROUNDING RODS, WATER VALVES AND FIRE HYDRANTS
7. CLEAR SCREENED, FROST FREE, SAND BEDDING COMPACTED TO 98% SPMDD.
8. STREET LIGHTING SERVICE DUCTS 53mmø PVC TYPE DBII DUCT(S). MINIMUM 600mm COVER.
9. CABLE TELEVISION AND TELEPHONE UTILITY SERVICE CABLES AND/OR DUCTS. MINIMUM 600mm COVER.
10. ELECTRICAL WARNING TAPE, ½ WAY BETWEN TOP DUCTS AND GRADE
11. GAS LINE WARNING TAPE, AS REQUIRED BY UTILITY
12. UNDISTRUBED SOIL OR ENGINEERED BACKFILL
13. COMPACTED FROST- AND DEBRIS- FREE NATIVE BACKFILL TO TOWN REQUIREMENTS, COMPACTED TO 98% SPMDD
14. TOPSOIL
15. NEW TOPPING AS SPECIFIED BY OTHERS
16. INSTALLATION REFERENCE POINT - CENTRE-LINE OF POWER UTILITY TRENCH

ALL ELECTRICAL POWER CABLE TO BE INSTALLED IN CONFORMANCE WITH EPCOR. STANDARDS AND LATEST EDITIONS OF ONTARIO ELECTRICAL SAFETY CODE AND CSA STANDARD CAN3-C22.3

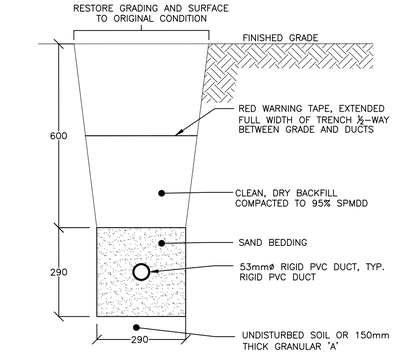
PROVIDE LARGE UTILITY "SWEEP" FITTINGS FOR ALL DUCT BENDS

LEGEND

- CABLE TELEVISION UTILITY
- TELEPHONE UTILITY
- MUNICIPAL LIGHTING
- GAS UTILITY
- (S) SECONDARY DUCT
- (P) PRIMARY DUCT
- WARNING TAPE.
- 240 METRIC DIMENSION IN MM

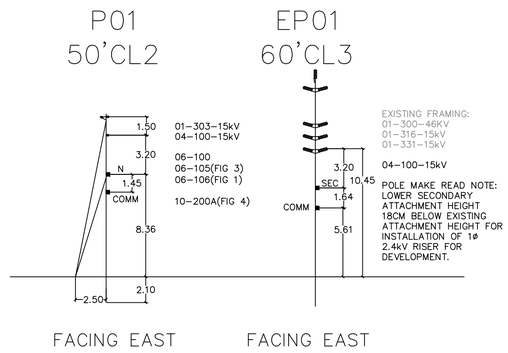
2 E2.1 JOINT TRENCH DETAIL WITH GAS - JOINT TRENCH PROFILE

- SCALE: NTS

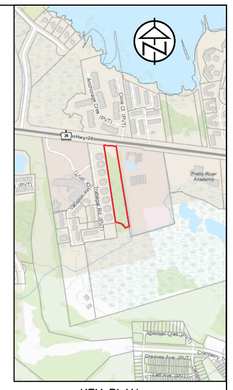


3 E2.1 PEDESTAL SECONDARY DUCTBANK

- NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm). DUCTBANK NOTES
- GLUE ALL PVC JOINTS



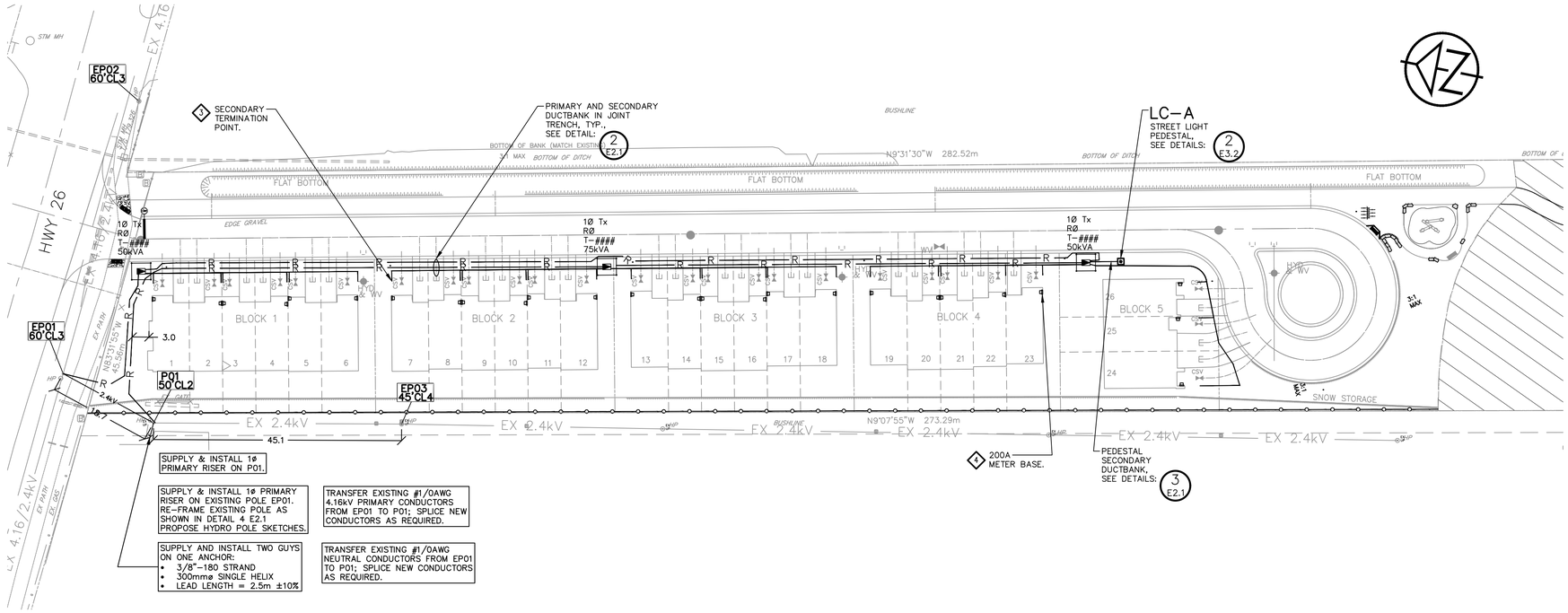
4 E2.1 PROPOSED HYDRO POLE SKETCHES 1 2



KEY PLAN

NOTES:

1. USF STANDARD NUMBERS LISTED FOR REFERENCE ONLY. OTHER USF STANDARDS MAY APPLY TO THIS WORK.
2. SOILS TESTING HAS NOT BEEN CONDUCTED FOR THIS PROJECT. THE DESIGN OF THE ANCHORS IS BASED ON SOIL CLASSIFICATION 4 AS DESCRIBED IN USF TABLE 06-04. THE SOIL CLASSIFICATION IS TO BE CONFIRMED BY THE INSTALLER/CONTRACTOR DURING CONSTRUCTION. IF SOIL OF A DIFFERENT CLASSIFICATION IS ENCOUNTERED, THE INSTALLER MUST CONTACT TATHAM ENGINEERING LIMITED. FOR FURTHER DIRECTION/INVESTIGATION.
3. TERMINATE SECONDARY DUCTS AND CABLES AT SAME OFFSET IN BOULEVARD AS THE SANITARY AND WATER SERVICES. PROVIDE 2"x4"x8' WOOD MARKER POST FOR DEMARCATION POINT OF SECONDARY DUCTS AND CABLES. PROVIDE ADDITIONAL 1.0m OF CABLE ABOVE GRADE FOR FUTURE SPLICE AND FROST LOOP.
4. CONTRACTOR TO COORDINATE FINAL METER BASE LOCATIONS WITH BUILDERS.



1 E2.1 ELECTRICAL SITE PLAN - POWER LAYOUT

- SCALE 1:500

STANDARD ELECTRICAL LEGEND

- R — PROPOSED "RED" PRIMARY LOOP FEEDER CABLE AND 103mmø CONDUIT (RIGID TYPE DBII). REFER TO USF DUCTBANK DETAILS.
- PROPOSED SECONDARY CABLE AND 103mmø CONDUIT (RIGID TYPE DBII). REFER TO USF DUCTBANK DETAILS.
- EX 4.16/2.4kV — EXISTING 4.16/2.4kV POWER LINE
- EXISTING POLE MOUNT TRANSFORMER
- EX EP01 55'CL3 — EXISTING UTILITY POLE WITH TAG NUMBER
- EXISTING GUY WIRE
- TYP. — TYPICAL
- 1ø Tx RØ T-#### 50kVA — TRANSFORMER ACCESS SIDE — PROPOSED 1PH POWER TRANSFORMER TAG NUMBER AND GROUNDING GRID
- 1-POSITION 200A METER BASE, TYP.

ACCEPTED FOR CONSTRUCTION EPCOR

per .....

Date: .....

EPCOR
43 Stewart Road,
Collingwood, Ontario
L9Y 3Z5

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 2022
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ENGINEER STAMP

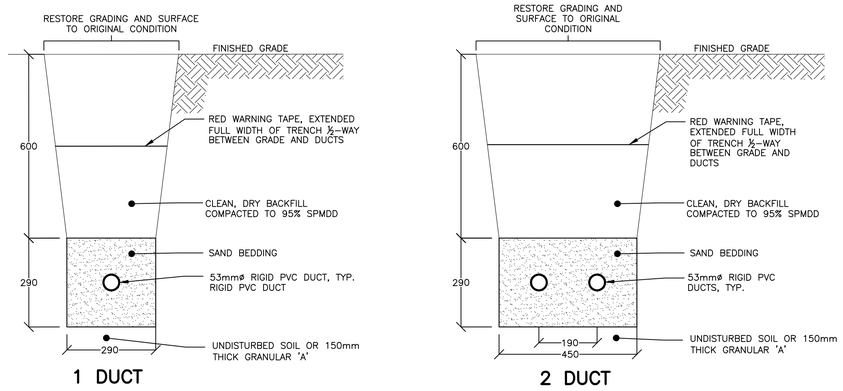
LICENSED PROFESSIONAL ENGINEER
S. R. S. TAYLOR
100518503
28JULY'23
PROVINCE OF ONTARIO

CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

SITE PLAN - POWER LAYOUT

TATHAM ENGINEERING

DESIGN: RJW	FILE: 120181	DWG:
DRAWN: RJW	DATE: OCT 2021	**E2.1**
CHECK: SRT	SCALE: AS SHOWN	

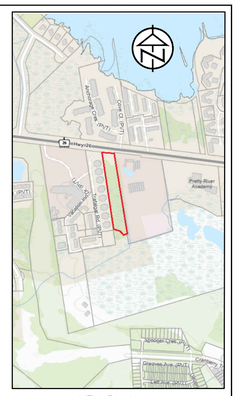


2 / E3.1 STREETLIGHT ONLY DUCTBANK – NON-JOINT TRENCH

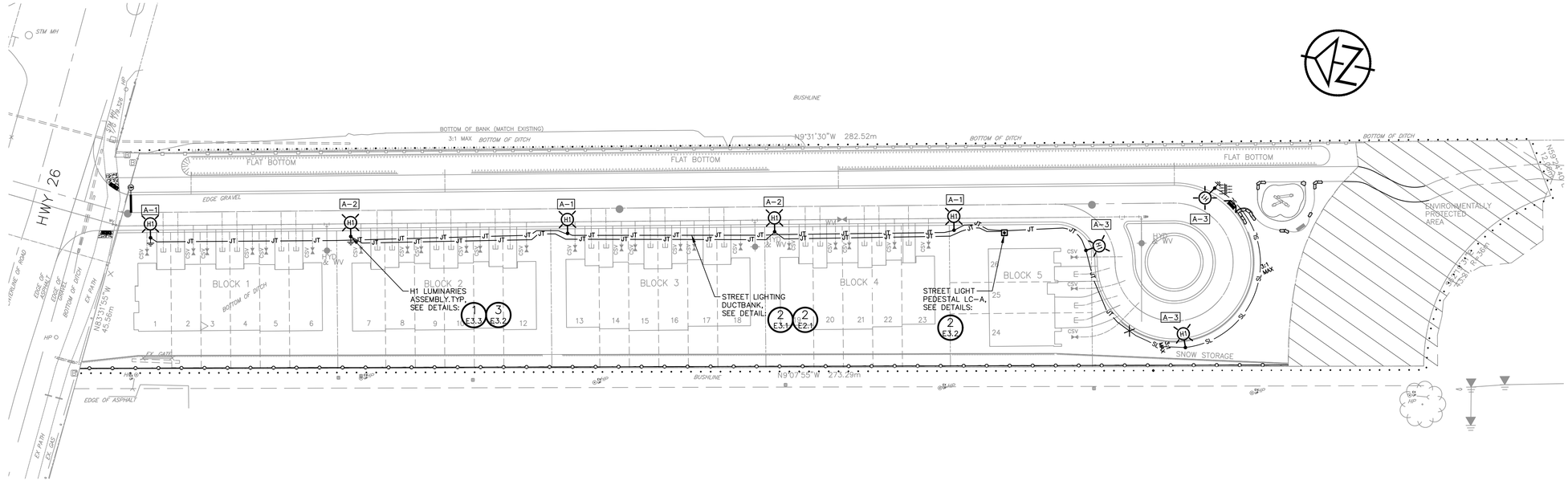
- NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm). DUCTBANK NOTES:
- PROVIDE FISH ROPE IN EACH SPARE (S) DUCT
- GLUE ALL PVC JOINTS

ELECTRICAL LEGEND

(H1)	PROPOSED LUMINAIRE. REFER TO SPECIFCATIONS ON E3.3
	INDICATES GROUND ROD TO BE INSTALLED AT EACH END OF CIRCUIT LIGHT POLE LOCATION
LP–A	PROPOSED STREET LIGHT PEDESTAL WITH TAG
SL	PROPOSED STREET LIGHT CABLE(S) AND 53mmø CONDUIT (PVC TYPE DB2). STREET LIGHT ONLY DUCTBANK.
JT	PROPOSED STREET LIGHT CABLE(S) AND 53mmø CONDUIT (PVC TYPE DB2), IN JOINT TRENCH WITH HYDRO, GAS AND COMMUNICATIONS.



KEY PLAN



1 / E3.1 ELECTRICAL SITE PLAN – LIGHTING LAYOUT

– SCALE 1:500

DISCLAIMER AND COPYRIGHT

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

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per .....

Date: .....

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43 Stewart Road,
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ENGINEER STAMP

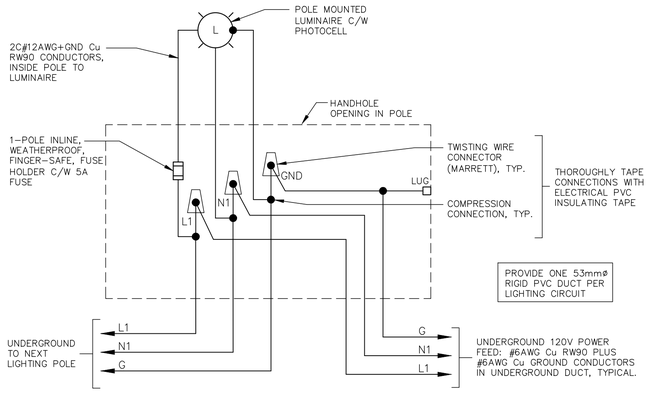
LICENSED PROFESSIONAL ENGINEER
S. R. S. TAYLOR
100518503
28JULY'23
PROVINCE OF ONTARIO

CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

SITE PLAN – LIGHTING LAYOUT

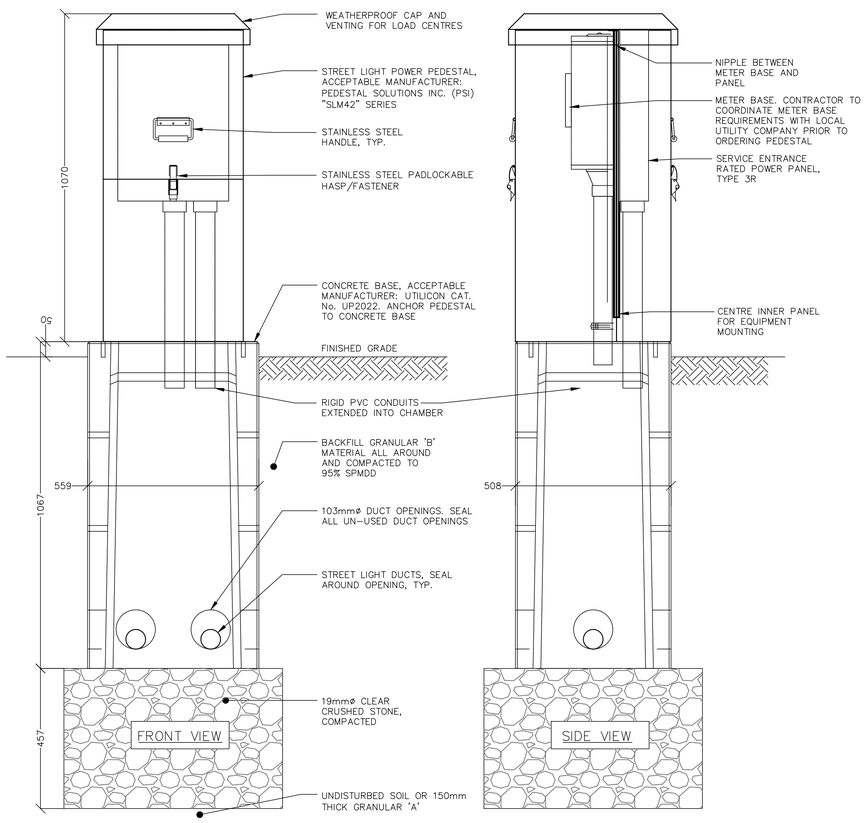
TATHAM ENGINEERING

DESIGN: RJW	FILE: 120181	DWG:
DRAWN: RJW	DATE: OCT 2021	**E3.1**
CHECK: SRT	SCALE: AS SHOWN	



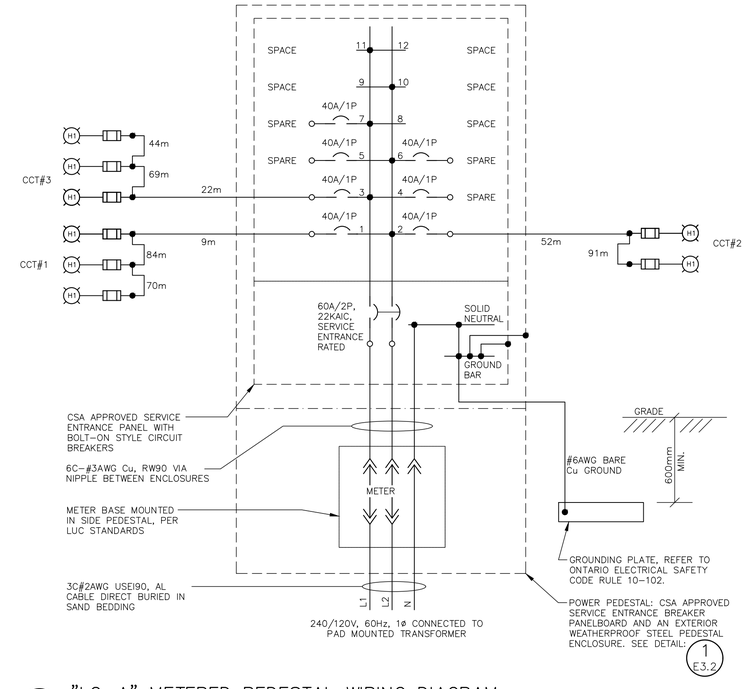
3 E3.2 TYPICAL WIRING DETAIL FOR STREET LIGHT

– NTS



1 E3.2 "LC-A" SERVICE ENTRANCE POWER PANEL PEDESTAL INSTALLATION DETAIL

– NTS, DIMENSIONS SHOWN IN MILLIMETERS (mm)



2 E3.2 "LC-A" METERED PEDESTAL WIRING DIAGRAM

– NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)

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LIGHTING DETAILS – SHEET 1

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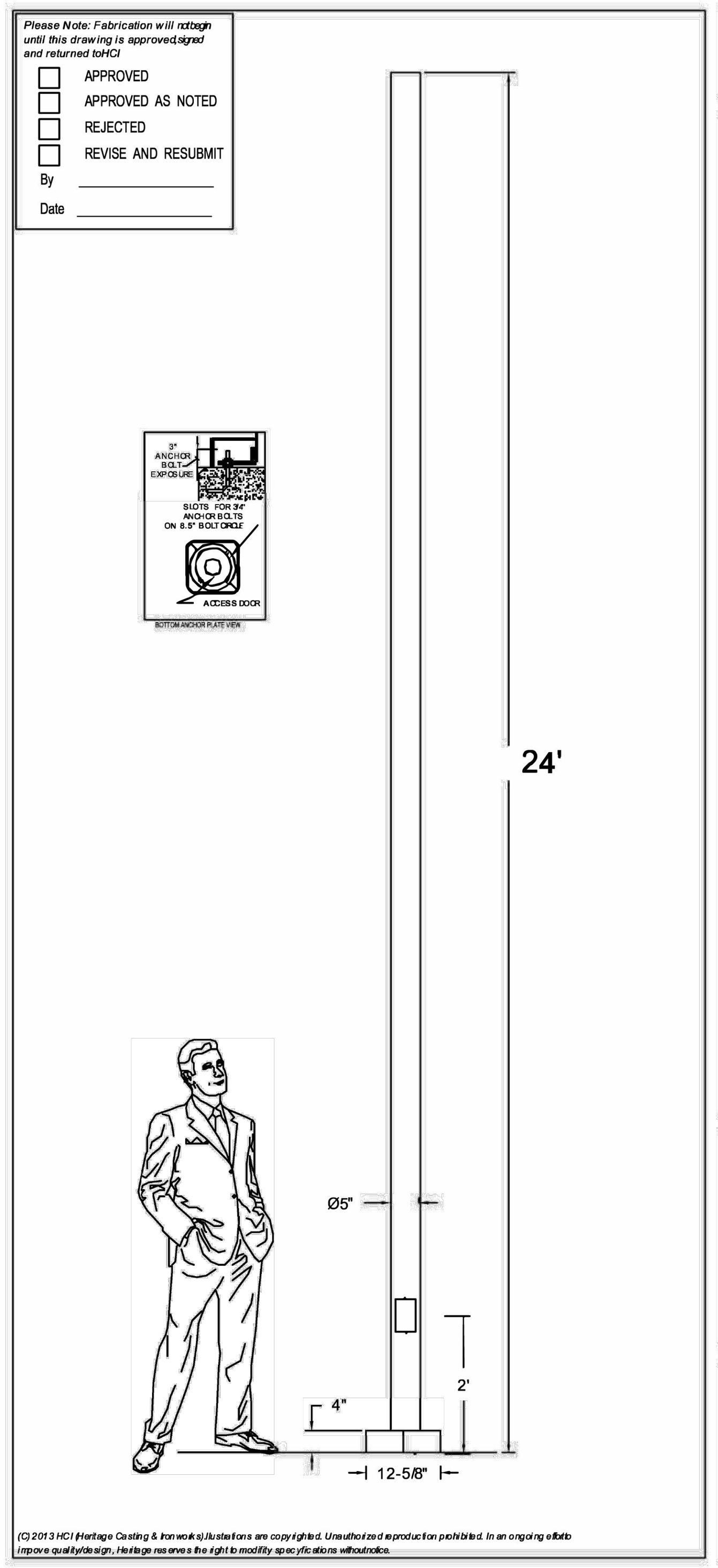
DRAWN: RJW	DATE: OCT 2021	
CHECK: SRT	SCALE: AS SHOWN	



H1 Pole

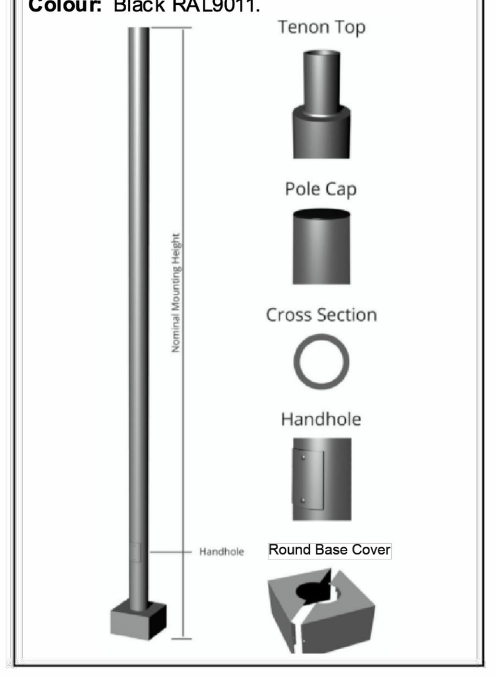
Pole Material: Ø5"O.D. x .226 wall extruded aluminum welded to aluminum base plate.

Base Cover : Two piece **square** cast aluminum base cover attached to pole with stainless steel screws.

Anchor Bolts: 4 galvanized 19mm (3/4") x 609.6mm (24") long. Anchorbolts and template are supplied by HCI. **(B.C. 8.5")**

Finish: Electrostatically applied, thermoset polyester powder-coat finish.

Colour: Black RAL9011.



Sales: KIM Designer: HOWARD
Date: NOV 2022 Drawing No: 13225-V1
Model: P424-2-5PC-24-RAL9011
Project: Hill Ridge Homes

Please Note: Fabrication will not begin until this drawing is approved, signed and returned to HCI

HCI Heritage Casting & Ironworks
1280 Fewster Drive, Mississauga, Ontario, Canada L4W 1A4
Tel: (905) 238-2648 Fax: (905) 238-9060
Toll Free Canada & USA 1-800-267-3175
E: sales@hcilighting.com WEB: www.hcilighting.com

HCI LIGHTING
HERITAGE CASTING & IRONWORKS LTD.

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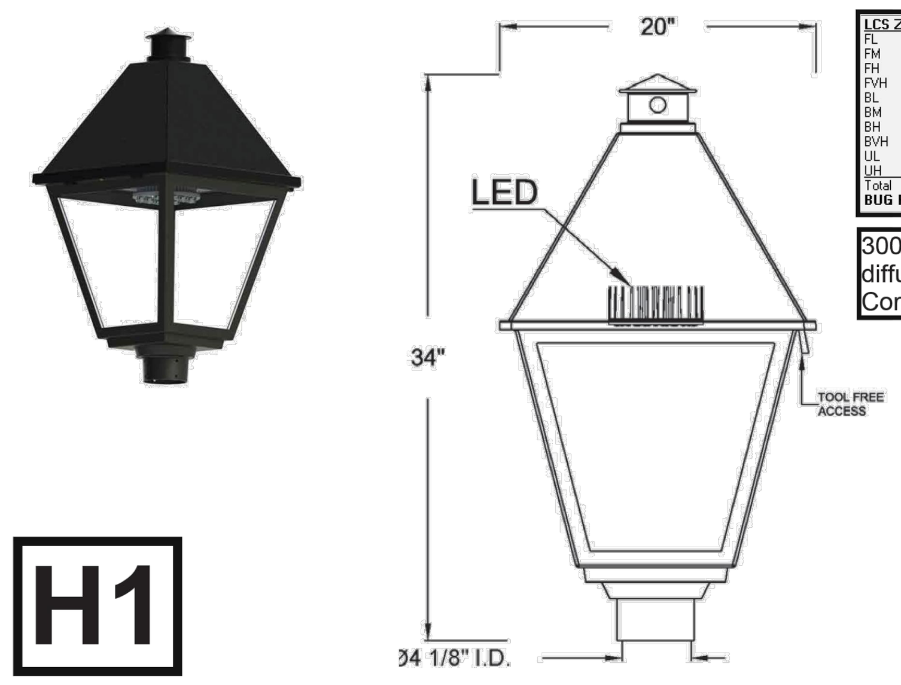


LCS Zone		Lumens	%Lamp	%Lum
FL	(0-30)	375.2	12.5	16.5
FM	(30-60)	1191.2	39.7	52.3
FH	(60-80)	632.0	21.1	27.8
FVH	(80-90)	27.6	0.9	1.2
BL	(0-30)	8.3	0.3	0.4
BM	(30-60)	22.6	0.8	1.0
BH	(60-80)	19.4	0.6	0.9
BVH	(80-90)	0.4	0.0	0.0
UL	(90-100)	0.0	0.0	0.0
UH	(100-180)	0.0	0.0	0.0
Total		2276.7	75.9	100.0
BUG Rating		B0-U0-G1		

3000K CCT with no side shield diffuser meets criteria for Dark Sky Compliance

H1

SL20-2500L-3000K-120V-IES III (3)-DIM-HSS-PEC-FI-FTG(TOP)-9011 BLACK

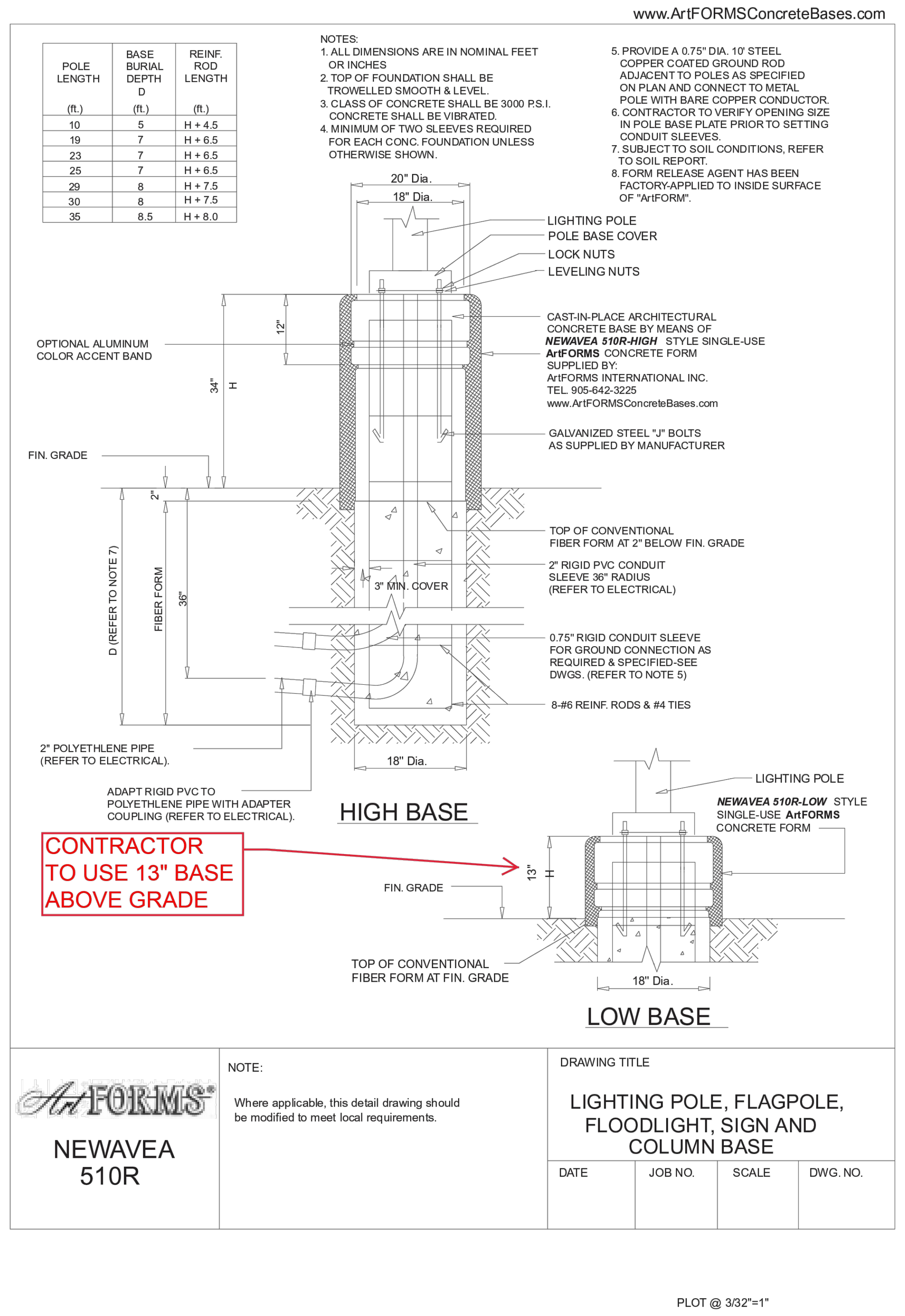
PRODUCT	LUMENS	CCT	VOLTAGE	OPTICS	OPTIONS	FITTER	FINIALS
SL20	Max 23,000 LUMENS	3000K 4000K 5000K 6000K =10% Variance	120v-277v Step down transformer 347V 480V	IES TYPE II (2) III (3) IV (4) V (5)	**DIM** Dimming control **HSS** House side shield **PEC** Integrated locking photocell	N/A	FI FJ

DIFFUSER TYPE
- **CAC** Clear acrylic
- **FAC** Frosted acrylic
- **WAC** White acrylic
- **CPC** Clear polycarbonate
- **WPC** White polycarbonate
- **CTG** Clear tempered glass
- **FTG** Flat tempered glass

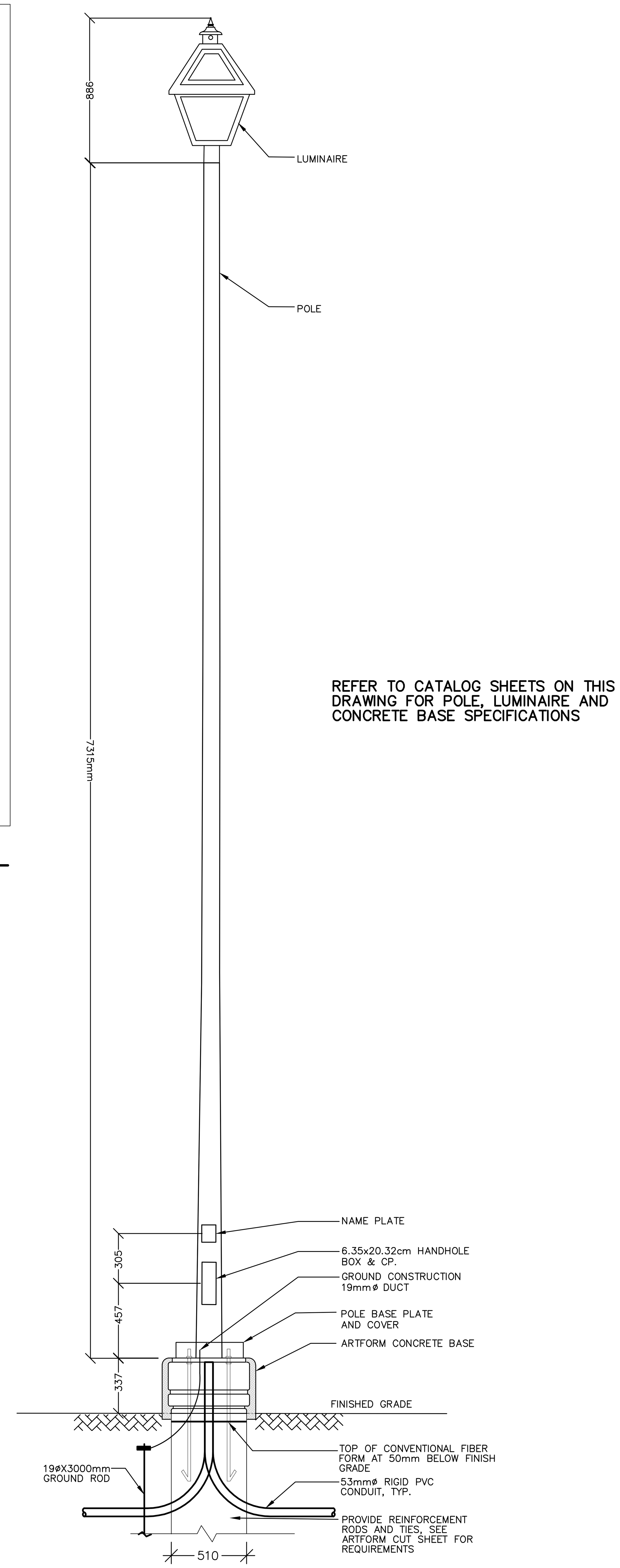
Color
- Standard RAL
- 6005 Green
- 7012 Grey
- 8019 Bronze
- 9011 Black/Txt
- 9016 White
- Custom RAL

LED Light — cULus LISTED — 7 YEAR WARRANTY — ETL LISTED — MADE IN CANADA / FABRIQUÉ AU CANADA

HCI Lighting Heritage
www.Hcilighting.com I 1.905.238.2648



1 E3.3 H1 POLE, LUMINAIRE AND CONCRETE BASE CATALOG SPECIFICATION SHEETS
—NTS



REFER TO CATALOG SHEETS ON THIS DRAWING FOR POLE, LUMINAIRE AND CONCRETE BASE SPECIFICATIONS

2 E3.3 LUMINAIRE TYPE H1 INSTALLATION DETAIL
—NTS

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100518503
28JULY'23
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CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

LIGHTING DETAILS – SHEET 2

TATHAM ENGINEERING

DESIGN: RJW	FILE:	120181	DWG:	E3.3
DRAWN: RJW	DATE:	OCT 2021		
CHECK: SRT	SCALE:	AS SHOWN		

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts
H1	8	H1	Single	HCI-SL20 Series	0.950	2500	20

1 E4.1 PHOTOMETRIC LUMINAIRE SCHEDULE

–NTS

REFER TO DRAWING E3.3 FOR DETAILED POLE AND LUMINAIRE SPECIFICATIONS

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
01-RW- Roadway	Illuminance	Lux	5.06	15.2	0.8	6.33
07-PA-Pathway	Illuminance	Lux	2.01	9.1	1.0	2.01
08-CU-Culdesac	Illuminance	Lux	6.06	15.0	0.7	8.66
09-TP-Property Line	Illuminance	Lux	0.00	0.0	0.0	N.A.

2 E4.1 ILLUMINATION SUMMARY (LUX)

–NTS

Table 11–1: Lighting Design Criteria for Streets

Road:	Local
Pedestrian Conflict Area:	Low
Pavement Classification:	R3
Average Luminance Values:	0.3 cd/sq. m
Average Illuminance Values:	4.5 Lux
Uniformity Ratio Max (Avg/Min):	6.0:1 (MAX.)

Table 11–2: Recommended Design Criteria for Walkways Within Road Right of Way

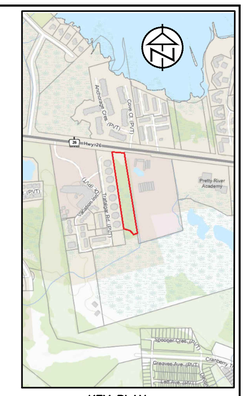
Condition:	Low Pedestrian Activity
Average Illuminance Values:	2.0 Lux
Uniformity Ratio Max (Avg/Min):	5.0:1

Table 17–2. Recommended Maintained Illuminance Values for Parking Lots basic requirements; not for security lighting)

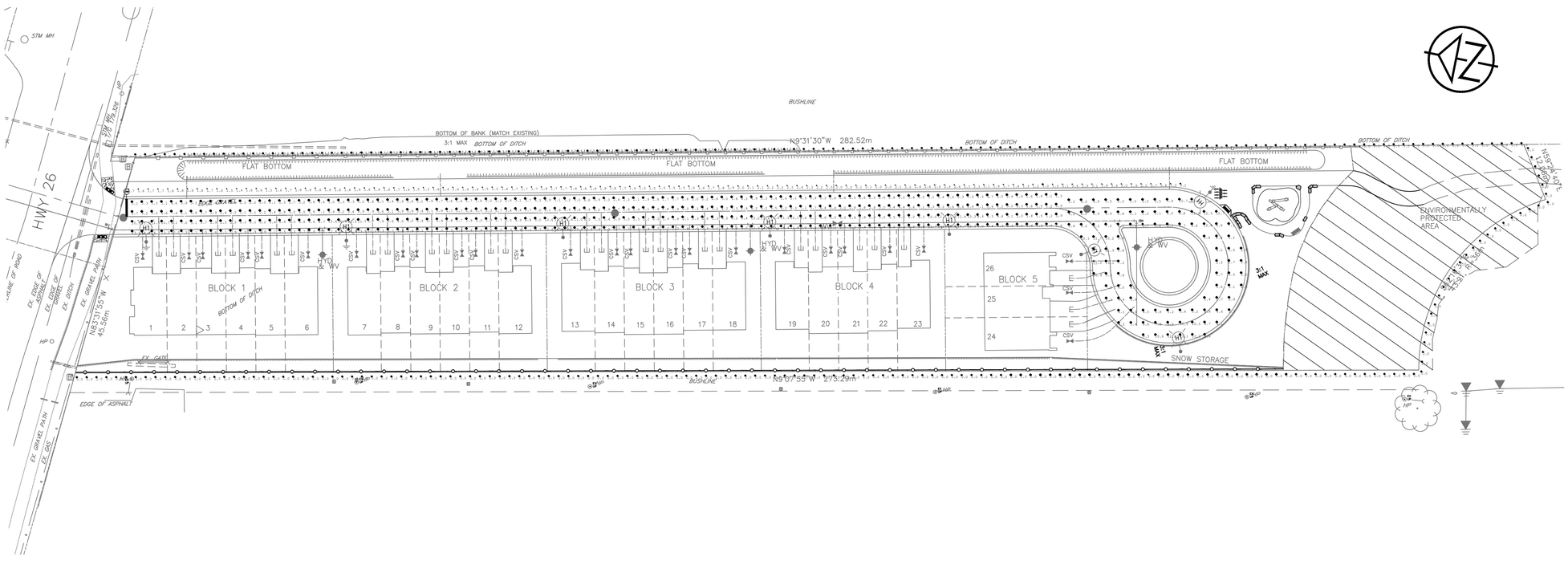
Minimum Illuminance Values:	2.0 Lux
Uniformity Ratio Max (Max/Min):	20.0:1

3 E4.1 IES RP8–21 TARGET VALUES

–NTS



KEY PLAN



3 E4.1 ELECTRICAL SITE PLAN – PHOTOMETRIC LAYOUT (UNITS SHOWN IN LUX)

– SCALE 1:500

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CRANBERRY MARSH ESTATES
TOWN OF COLLINGWOOD

SITE PLAN – PHOTOMETRIC LAYOUT

TATHAM ENGINEERING

DESIGN: RJW	FILE: 120181	DWG: E4.1
DRAWN: RJW	DATE: OCT 2021	
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