NOTES:

1. ALL SANITARY SEWER CONNECTIONS TO MANHOLES WITHIN DEVELOPMENT AND TO EXISTING MANHOLES SHALL BE WITH KOR–'N'–SEAL ADAPTER.

2. CONTRACTOR SHALL OBTAIN APPROVED SERVICE CONNECTION PERMITS FROM FORT ERIE INFRASTRUCTURE SERVICES AT LEAST THREE DAYS PRIOR TO CONNECTING SERVICE LATERALS TO EXISTING WATERMAINS AND SEWERS.

No	REVISIONS	DATE	BY
3	ISSUED FOR RECORD DRAWINGS	JAN 19/18	SM
2	REVISED SAN AND STM SEWER GRADES	SEP 21/16	RKG
1	ISSUED FOR CONSTRUCTION	SEP 6/16	RKG

BENCHMARK:

VERY TOP OF FIRE HYDRANT OPPOSITE HOUSE #3748 RIVER TRAIL
ELEVATION: 174.062m

VERY TOP OF FIRE HYDRANT @ N.W. CORNER OF BAKER ROAD AND RIVER TRAIL
ELEVATION: 174.077m

DRAFTING: TH/RKG
DESIGN: RKG
CHECKED BY: RKG
APPROVED BY: RKG

FORT ERIE ONTARIO
Our Focus: Your Future

Associated Engineering
Suite 208 - 110A Hannover Drive, St. Catharines, Ontario, L2W 1A4
Ph: 905 346 0990 Fax: 905 346 0992
www.ae.ca

RIVER TRAIL ESTATES PHASE 2

IN THE TOWN OF FORT ERIE

CAD FILE: 20165021
DATE: SEP 2016
SCALE: 1:750
DWG No.: 5021-GSP
REV.: 3

NOTES:
1. ALL SANITARY SEWER CONNECTIONS TO MANHOLES WITHIN DEVELOPMENT AND TO EXISTING MANHOLES SHALL BE WITH KOR–'N'–SEAL ADAPTER.

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RIVER TRAIL ESTATES PHASE 2

IN THE TOWN OF FORT ERIE

CAD FILE 20165021
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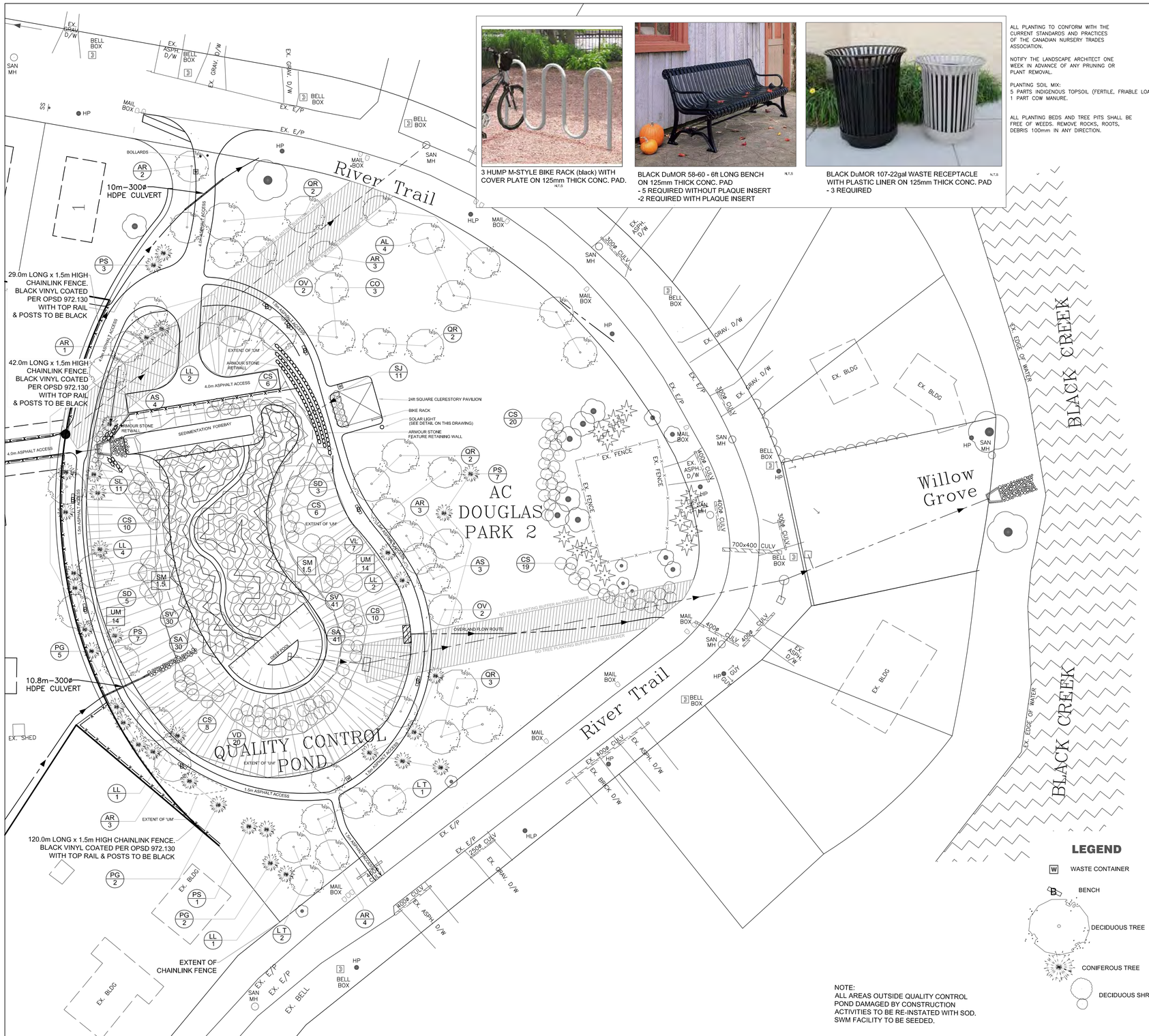


3 HUMP M-STYLE BIKE RACK (black) WITH COVER PLATE ON 125mm THICK CONC. PAD. N.T.S

BLACK DuMOR 58-60 - 6ft LONG BENCH ON 125mm THICK CONC. PAD
- 5 REQUIRED WITHOUT PLAQUE INSERT
-2 REQUIRED WITH PLAQUE INSERT N.T.S

BLACK DuMOR 107-22gal WASTE RECEPTACLE WITH PLASTIC LINER ON 125mm THICK CONC. PAD
- 3 REQUIRED N.T.S

ALL PLANTING TO CONFORM WITH THE CURRENT STANDARDS AND PRACTICES OF THE CANADIAN NURSERY TRADES ASSOCIATION.

NOTIFY THE LANDSCAPE ARCHITECT ONE WEEK IN ADVANCE OF ANY PRUNING OR PLANT REMOVAL.

PLANTING SOIL MIX:
5 PARTS INDIGENOUS TOPSOIL (FERTILE, FRIABLE LOAM)
1 PART COW MANURE.

ALL PLANTING BEDS AND TREE PITS SHALL BE FREE OF WEEDS. REMOVE ROCKS, ROOTS, DEBRIS 100mm IN ANY DIRECTION.

ALL PLANTING BEDS AND TREE PITS SHALL BE MULCHED WITH A MINIMUM DEPTH OF 100mm BARK CHIP MULCH CONTAINING CHIPS NO LARGER THAN 25mm IN ANY DIRECTION.

ALL PLANT MATERIAL SHALL BE INSTALLED AND SECURED AS PER THE DRAWINGS AND IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES.

ALL WORK TO BE PERFORMED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND IT MUST BE IN ACCORDANCE WITH ALL MUNICIPAL, AND PROVINCIAL BY–LAWS, CODES AND REQUIREMENTS.

REMOVE ALL STAKES AFTER 2 YEARS FROM SUBSTANTIAL COMPLETION

ALL HYDROSEEDING MUST BE SPRAYED ON 100mm TOPSOIL. EXISTING TOPSOIL MAY BE REUSED PROVIDED IT IS FROM THE TOP 200mm AND IT CONTAINS NO DEBRIS TO AREAS WHERE SOD DOES NOT CURRENTLY EXIST. TOPSOIL MUST BE FREE OF ANY DEBRIS AND HAVE A BALANCED PH LEVEL.
USE 1kg BONE MEAL PER 100 S_2M THOROUGHLY RAKED INTO TOPSOIL. ON BOTH EXISTING TOPSOIL AND NEW TOPSOIL.

ALL PLANT MATERIAL SHALL BE HAVE A TWO YEAR WARRANTY

•VERIFY LOCATION OF HYDRO POLE, GAS VALVE & BELL BOX.

KEY PLAN N.T.S

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	NO.	SIZE	CONDITION
TREES CONIFEROUS:					
LL	LARIX LARICINA	LARCH	10	175CM	W.B.
PG	PICEA GLAUCA	WHITE SPRUCE	15	175CM	W.B.
PS	PINUS STROBUS	WHITE PINE	18	150CM	W.B.
TREES DECIDUOUS:					
AR	ACER RUBRUM	RED MAPLE	15	60MM CAL	W.B.
AS	ACER SACHHARUM	SUGAR MAPLE	7	60MM CAL	W.B.
AL	AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY	4	45MM CAL	W.B.
CO	CELTIS OCCIDENTALIS	COMMON HACKBERRY	3	45MM CAL	W.B.
LT	LIRODENDRON TULIPIFERA	TULIP TREE	3	60MM CAL	W.B.
OV	OSTRYA VIRGINIANA	IRONWOOD	4	45MM CAL	W.B.
QR	QUERCUS RUBRA	RED OAK	9	60MM CAL	W.B.
SHRUBS DECIDUOUS:					
CS	CORNUS SERICEA	RED OSIER DOGWOOD	79	40CM	B.R.
SD	SALIX DISCOLOR	PUSSY WILLOW	8	40CM	B.R.
SJ	SPIRAEA JAPONICA	LITTLE PRINCESS	11	50CM	CONTAINER
SL	SPIRAEA LATIFOLIA	MEADOWSWEET	11	50CM	CONTAINER
VD	VIBURNUM DENTATUM	ARROW WOOD	20	50CM	CONTAINER
VL	VIBURNUM LENTAGO	NANNYBERRY	7	100CM	B.R.
SV	SCIRPUS VALIDUS	SOFTSTEM BULLRUSH	71	10CM	POT
SA	SAGITTARIA LATIFOLIA	COMMON ARROWHEAD	71	10CM	POT

HYDRALICALLY SEEDED GROUND COVER:

LEGEND	BOTANICAL NAME	COMMON NAME	% OF MIX		
Seed	LOLIUM VAR.	PERENNIAL RYE GRASS	100	4488	SQ M HYDROSEED

KEY/sqm UPLAND GRASS & PLANT MIXTURE:

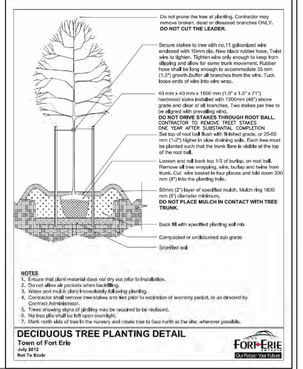
UM 1700	Festuca rubra	RED FESCUE	35
	Andropogon gerardi	BIG BLUESTEM	30
	Spartina perctinata	PRAIRIE CORDGRASS	20
	Glyceria striata	MANNA GRASS	5
	Elmyus hystix	BOTTLEBRUSH GRASS	5
	Fragaria canadensis	WILD STRAWBERRY	5

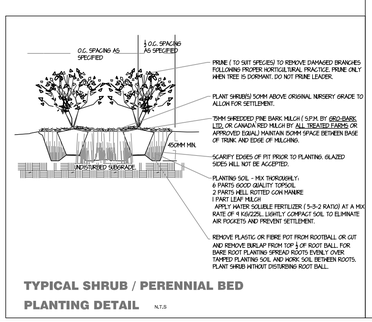
KEY/sqm SHORLINE FRINGE GRASS & PLANT MIXTURE:

SM 80	Calmagrolis canadensis	BLUEJOINT	10
	Leersia oryzoides	CUT GRASS	20
	Festuca rubra	RED FESCUE	40
	Myrica gale	SWEET GALE	15
	Impatiens spp.	JEWELWEED	15

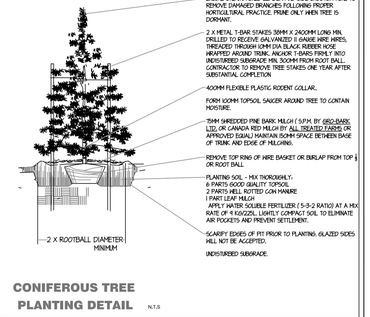
24' SQUARE CARNIVAL (Clerestory Square)
SHELTER (CAR24MR) WITH EVERGREEN ROOF AND ASH GRAY FRAME
N.T.S

"carmanah" SOLAR LIGHT N.T.S
CONCEPT





TYPICAL SHRUB / PERENNIAL BED PLANTING DETAIL N.T.S



CONIFEROUS TREE PLANTING DETAIL N.T.S

LEGEND

- W — WASTE CONTAINER
- B — BENCH
- DECIDUOUS TREE
- CONIFEROUS TREE
- DECIDUOUS SHRUBS

NOTE:
ALL AREAS OUTSIDE QUALITY CONTROL POND DAMAGED BY CONSTRUCTION ACTIVITIES TO BE RE-INSTATED WITH SOD.
SWM FACILITY TO BE SEEDED.

No	REVISIONS	DATE	BY
.8	REVISED PER M.O.E. COMMENTS	11.20.13	DM
.7	REVISED PER TOWN COMMENTS (JULY 22, 2013)	08.20.13	DM
.6	ISSUED to UCC FOR APPROVAL	07.31.13	DM
.5	ISSUED to UCC FOR APPROVAL	03.08.13	DM
.4	ISSUED to UCC FOR APPROVAL	07.10.12	DM
.3	ISSUED to UCC FOR APPROVAL	02.17.12	DM
.2	ISSUED to UCC FOR DISCUSSION	08.09.05	DM
0	ISSUED FOR DISCUSSION	04.20.05	DM

ALL DRAWINGS ARE PROPERTY OF ARCHITECT AND MUST BE RETURNED UPON REQUEST. DRAWINGS DONALD MARTIN LANDSCAPE ARCHITECT REPRODUCTION IN WHOLE OR IN PART IS FORBIDDEN WITHOUT PERMISSION OF ARCHITECT. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNTIL COUNTERSIGNED.

LANDSCAPE PLAN

FORT ERIE ONTARIO

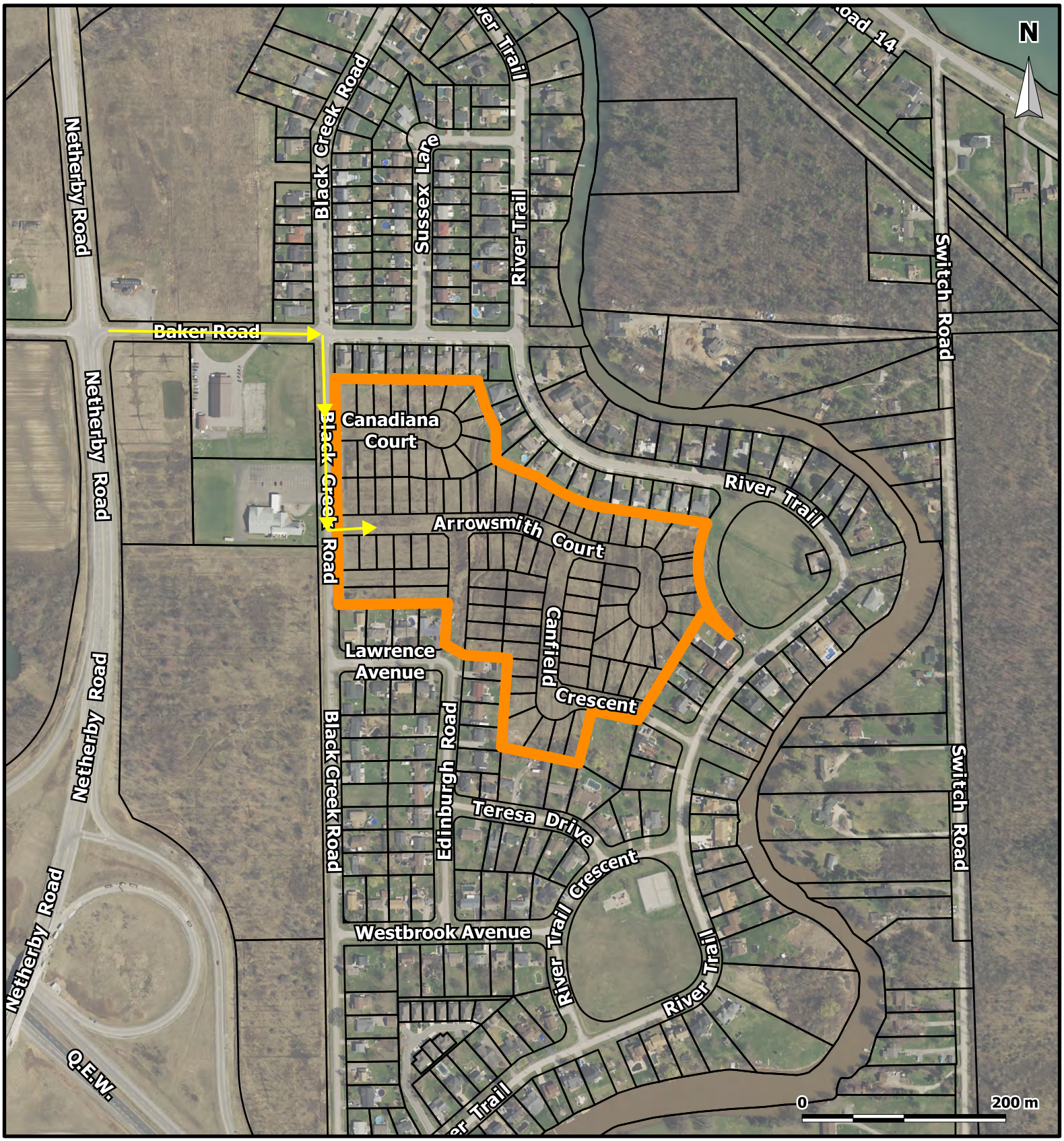
DONALD MARTIN LANDSCAPE ARCHITECT
4655 Fifth Avenue . Niagara Falls . Ontario
phone . fax 905 . 357 . 1947

PROJECT NAME:
RIVER TRAIL ESTATES PHASE 2

OWNER:
ROYAL NIAGARA DEVELOPMENT CORP.
2267 ISLINGTON AVENUE
TORONTO, ONTARIO
M9W 3W7

AC DOUGLAS PARK 2
LANDSCAPE PLAN

DESIGN: D.M.	DRAFTING: D.M.
DATE: 04.15.05	SCALE: 1 : 400
DRAWING No: 99022LAND	SHEET No. L-1 / REV. .8



RIVER TRAIL ESTATES 2 - CONSTRUCTION ACCESS ROUTE

Subject Lands - River Trail Estates Phase 2 Subdivision

Construction Access Route

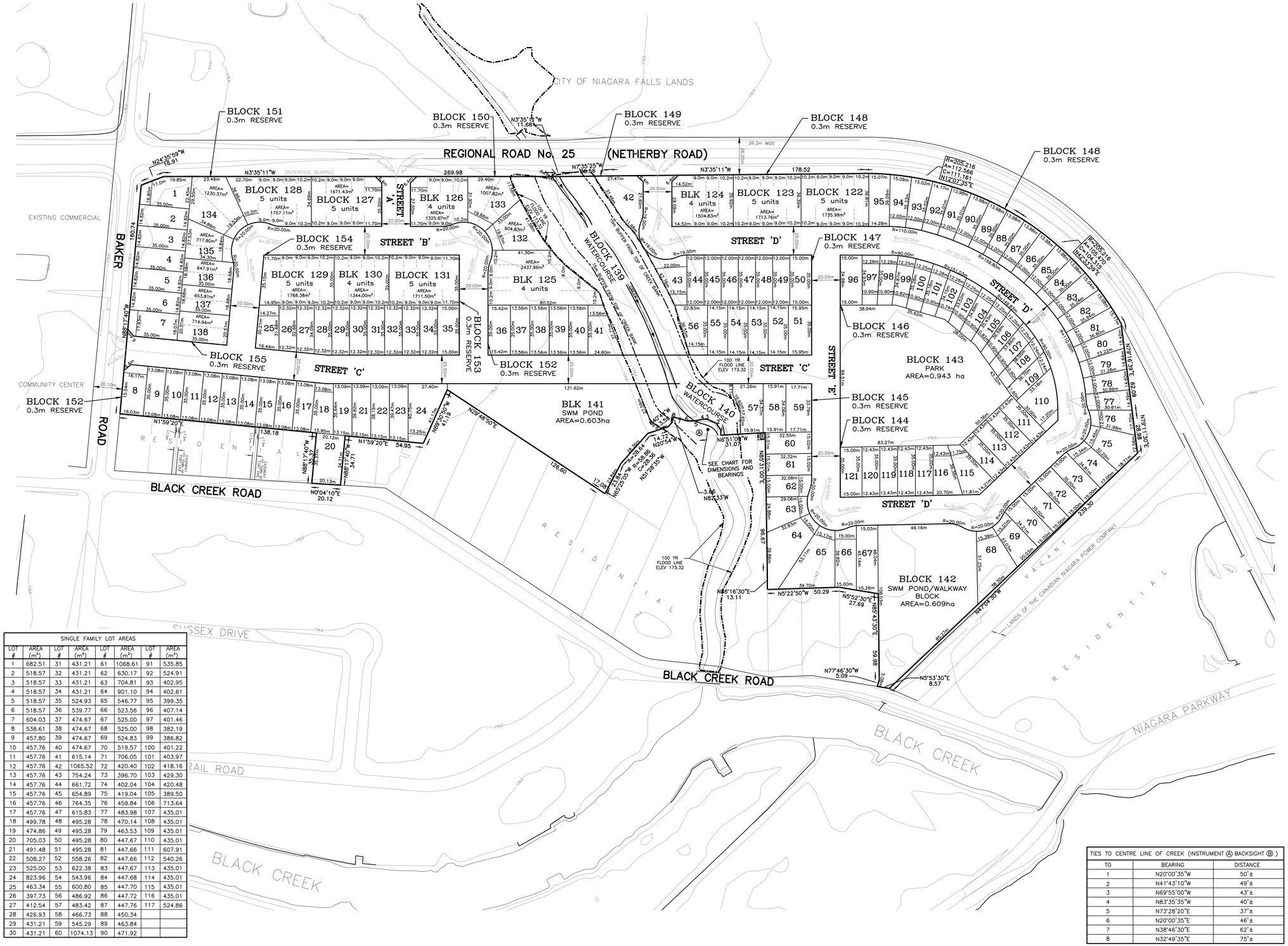
PLAN 59M451 IN THE TOWN OF FORT ERIE, REGIONAL MUNICIPALITY OF NIAGARA

Planning & Development Services
Map created February 5, 2019

FORT ERIE ONTARIO Our Focus: Your Future

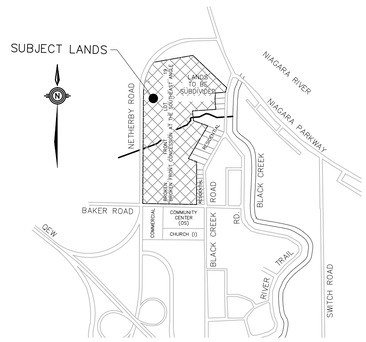
BLACK CREEK SIGNATURE

DRAFT PLAN OF SUBDIVISION
TOWN OF FORT ERIE



SINGLE FAMILY LOT AREAS							
LOT #	AREA (m²)	LOT #	AREA (m²)	LOT #	AREA (m²)	LOT #	AREA (m²)
1	682.51	31	431.21	61	1068.61	91	535.85
2	518.57	32	431.21	62	630.17	92	524.91
3	518.57	33	431.21	63	704.81	93	402.95
4	518.57	34	431.21	64	901.10	94	402.61
5	518.57	35	524.93	65	546.77	95	399.35
6	518.57	36	539.77	66	523.56	96	407.14
7	604.03	37	474.67	67	525.00	97	401.46
8	538.61	38	474.67	68	525.00	98	382.19
9	457.80	39	474.67	69	524.83	99	386.82
10	457.76	40	474.67	70	519.57	100	401.22
11	457.76	41	615.14	71	706.05	101	403.97
12	457.76	42	1065.52	72	420.40	102	418.16
13	457.76	43	754.24	73	396.70	103	429.30
14	457.76	44	661.72	74	402.04	104	420.48
15	457.76	45	654.89	75	419.04	105	389.50
16	457.76	46	764.35	76	459.84	106	713.64
17	457.76	47	615.83	77	483.98	107	435.01
18	499.78	48	495.28	78	470.14	108	435.01
19	474.86	49	495.28	79	463.53	109	435.01
20	705.03	50	495.28	80	447.67	110	435.01
21	491.48	51	495.28	81	447.66	111	607.91
22	508.27	52	558.26	82	447.66	112	540.26
23	525.00	53	622.38	83	447.67	113	435.01
24	823.96	54	543.96	84	447.68	114	435.01
25	463.34	55	600.80	85	447.70	115	435.01
26	397.73	56	486.92	86	447.72	116	435.01
27	412.54	57	483.42	87	447.76	117	524.86
28	426.93	58	466.73	88	450.34		
29	431.21	59	545.29	89	463.84		
30	431.21	60	1074.13	90	471.92		

TIES TO CENTRE LINE OF CREEK (INSTRUMENT Ⓐ BACKSIGHT Ⓑ)		
TO	BEARING	DISTANCE
1	N20°00'35"W	50'±
2	N41°43'10"W	49'±
3	N69°55'00"W	43'±
4	N83°35'35"W	40'±
5	N73°28'20"E	37'±
6	N20°00'35"E	46'±
7	N38°46'30"E	62'±
8	N32°49'35"E	75'±



KEY PLAN
(N.T.S.)

BLACK CREEK SIGNATURE
DRAFT PLAN OF SUBDIVISION

LEGAL DESCRIPTION

PART OF LOT Z ADJOINING CROSS CONCESSION
PART OF BROKEN FRONT LOT 19
BROKEN FRONT CONCESSION AT THE SOUTHEAST ANGLE
GEOGRAPHIC TOWNSHIP OF WILLOUGHBY, NOW IN THE
TOWN OF FORT ERIE
REGIONAL MUNICIPALITY OF NIAGARA

OWNER'S CERTIFICATE

BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, I HEREBY AUTHORIZE UPPER CANADA CONSULTANTS TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION FOR APPROVAL.

9136916 CANADA LTD.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE CORRECTLY AND ACCURATELY SHOWN.

MARK GILMORE, O.L.S.

REQUIREMENTS OF SECTION 51(17) OF THE PLANNING ACT

(a) SEE PLAN	(e) SEE PLAN	(i) CLAY LOAM
(b) SEE PLAN	(f) SEE PLAN	(j) SEE PLAN
(c) SEE PLAN	(g) SEE PLAN	(k) FULL SERVICES
(d) SEE PLAN	(h) MUNICIPAL WATER	(l) SEE PLAN

LAND USE SCHEDULE

LAND USE	LOT/BLOCK	Nº OF UNITS	AREA(ha)	%AREA
SINGLE FAMILY RESIDENTIAL	1–121	121	6.074	41.22
STREET TOWNS	BLOCK 122–131	46	1.702	11.55
SEMI UNITS	132–138	14	0.588	3.99
WATER COURSE	BLOCK 139, 140		0.905	6.14
STORMWATER MANAGEMENT	BLOCK 141, 142		1.212	8.22
PARK	BLOCK 143		0.943	6.40
0.3m RESERVE	BLOCK 144–155		0.037	0.25
ROADWAY			3.276	22.23
TOTAL	155	181	14.737	100
DEVELOPABLE AREA = 12.687ha		DENSITY	14.27 Units/ha	

REV.#	DESCRIPTION	DATE	BY
2	REVISED DAYLIGHT TRIANGLES	JUN 6/16	T.A.
1	REVISED FOR FINAL APPROVAL	FEB 9/15	T.A.
0	ISSUED FOR APPROVAL		

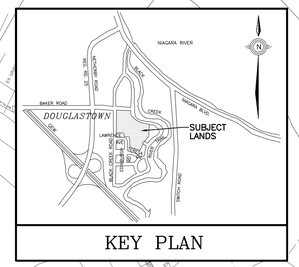
DRAWN BY: T.A.	DATE: JUNE 6, 2016
SCALE: 1:1250	DRAWING: 0508–DP

UPPER CANADA CONSULTANTS
ENGINEERS/PLANNERS
261 Martindale Rd. Unit 1
St. Catharines, Ontario
L2W 1A1
Phone:(905)688–9400
Fax: (905)688–5274

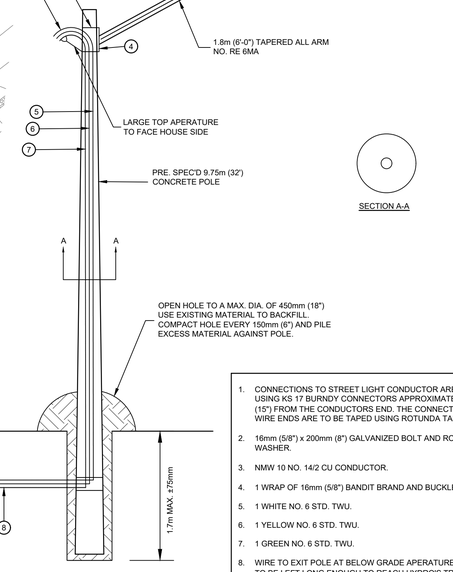
Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Lum. Watts	Lumens/Lamp	LLF	Filename	Arm	Description
—●—	22	erl1_05a140-120-277v_tcm	SINGLE	41	N.A.	0.850	erl1_05a140-120-277v	6	Type 1
—●—	6	erl1_05d140-120-277v_tcm	SINGLE	41	N.A.	0.850	erl1_05d140-120-277v	6	Type IV

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ARROWSMITH COURT	Illuminance	Fc	0.75	2.5	0.2	3.75	12.50
CANADIAN COURT	Illuminance	Fc	0.84	2.5	0.3	2.80	8.33
CANFIELD CR	Illuminance	Fc	0.69	2.4	0.1	6.90	24.00
EDINBURGH RD	Illuminance	Fc	0.67	2.3	0.2	3.35	11.50

SYMBOL	LEGEND
SL1	NOTE: SEE COMPLETE N.F. HYDRO STANDARD REQUIREMENTS FOR EQUIPMENT AND MATERIALS. STREETLIGHT POLE/LUMINAIRE 41W LED 120V COBRAHEAD LUMINAIRE ON DIRECT BURIED CONCRETE POLE. LUMINAIRE: GENERAL ELECTRIC #ERL1-0-05-A1-40-A-GRAY-RIL IES TYPE 1 POLE: STRESSCRETE TEC 9.75m (32ft.) E-375-APR-G
SL4	SAME AS ABOVE HOWEVER IES TYP 4 FOR SL4, SL5, SL14, SL15, SL16 & SL25



KEY PLAN



TYPICAL POLE DETAIL
"SECTION A-A"
N.T.S.

SECTION A-A

1. CONNECTIONS TO STREET LIGHT CONDUCTOR ARE TO BE MADE USING KS 17 BURNDY CONNECTORS APPROXIMATELY 375mm (15") FROM THE CONDUCTORS END. THE CONNECTIONS AND WIRE ENDS ARE TO BE TAPED USING ROTUNDA TAPE ONLY.
2. 16mm (5/8") x 200mm (8") GALVANIZED BOLT AND ROUND WASHER.
3. NMW 10 NO. 14/2 CU CONDUCTOR.
4. 1 WRAP OF 16mm (5/8") BANDIT BRAND AND BUCKLE.
5. 1 WHITE NO. 6 STD. TWU.
6. 1 YELLOW NO. 6 STD. TWU.
7. 1 GREEN NO. 6 STD. TWU.
8. WIRE TO EXIT POLE AT BELOW GRADE APERATURE. CONDUCTORS TO BE LEFT LONG ENOUGH TO REACH HYDRO'S TRENCH AND FASTENED TO THE POLE ABOVE GROUND.

NORTH

Do not scale drawings. Report any discrepancies to the Engineer before proceeding. Drawings must be sealed by the Engineer prior to the use for any building permit applications and/or government approval. Seals must be signed by the Engineer before drawings are used for any construction. These drawings are "PRELIMINARY – NOT FOR CONSTRUCTION" unless specifically marked as an issue for construction. All drawings and related documents remain the property of MPC CONSULTING ENGINEERING.

REVISIONS.

1	ISSUED FOR APPROVAL	12/30/16

REFERENCE DRAWINGS

SEAL

REGISTERED PROFESSIONAL ENGINEER
12/30/16
A.A. MIKOLAJEWSKI
PROVINCE OF ONTARIO

mpc ENGINEERING CONSULTING
MIKOLAJEWSKI PeWER . CONTROL CONSULTING ENGINEERING
189 WALL ROAD
NIAGARA-ON-THE-LAKE, ONTARIO
L0S 1J0
TEL (905) 4.. 82.3
FAX (905) 4.. 1173
sam@mpcconsultwng.com
35 DODGE DRIVE
KITCHENER, ONTARIO
N2G 3W5
TEL (519) 74.. 797
FAX (519) 74.. 8312

PROJECT TITLE.

RIVER TRAIL
ESTATES
(PHASE 2)

BLACK CREEK ROAD
FORT ERIE, ONTARIO

DRAWING TITLE.

PHOTOMETRIC
LIGHTING
SITE PLAN -
ELECTRICAL

SCALE: 1:750	SET No.
DWG. BY: D.A.A.	PROJECT NUMBER 201631
CHECK BY: A.A.M.	CAD FILE NUMBER 2017-528
DATE / REV.	DRAWING No.
DATE / PRINT: DEC/30/2016	EL-1
CAD PLOT SCALE: 1:1	1 OF 8