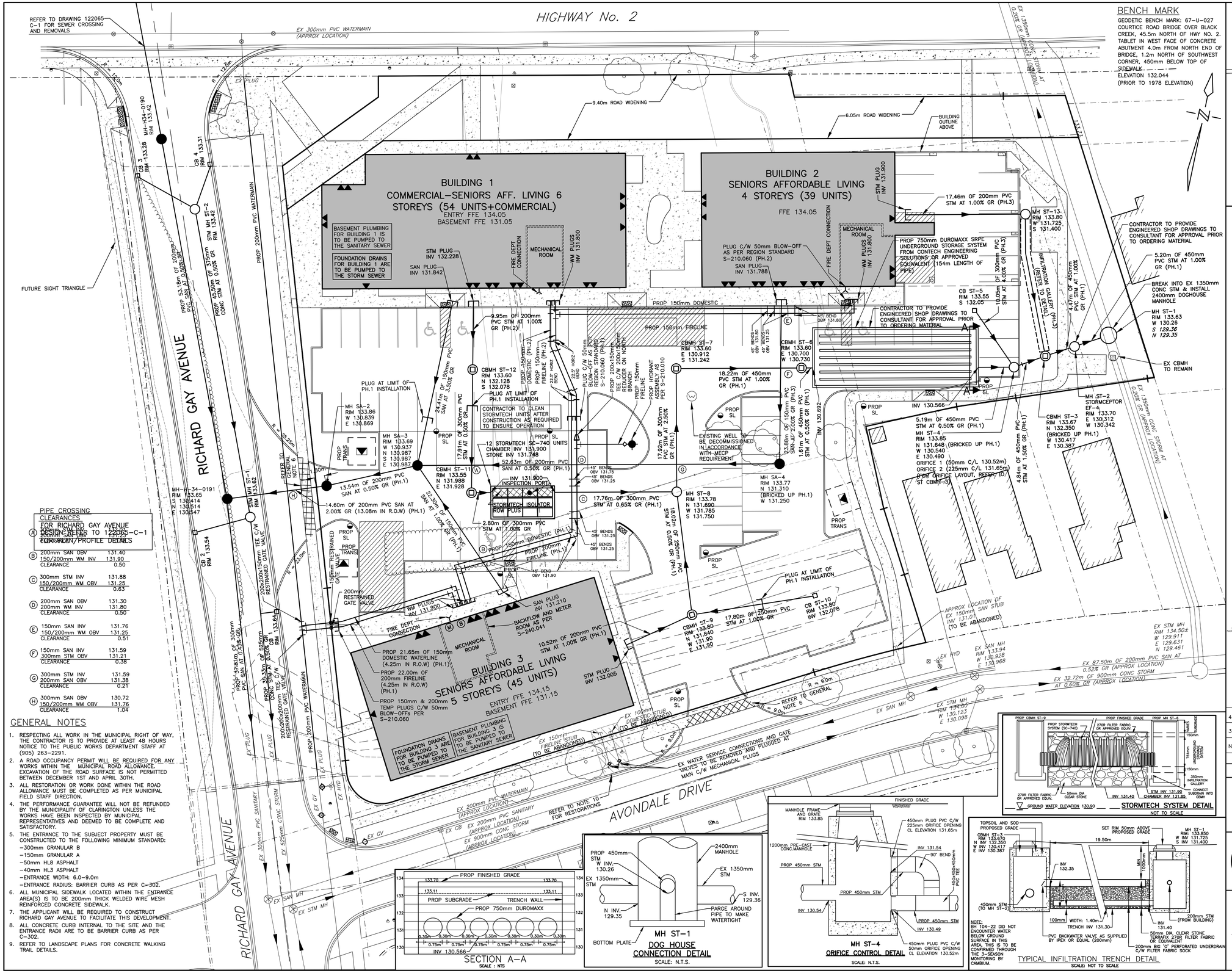
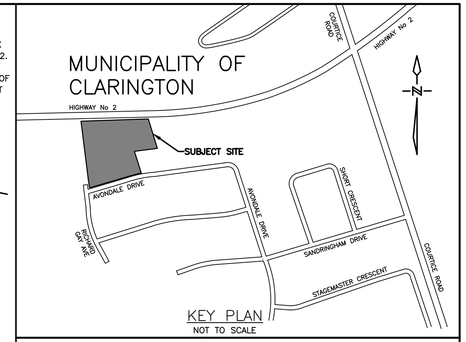


BENCH MARK

GEODETIC BENCH MARK: 67-U-027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
ELEVATION 132.044
(PRIOR TO 1978 ELEVATION)

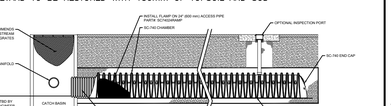


SITE SERVICING NOTES

1. A ROAD OCCUPANCY PERMIT WILL BE REQUIRED FOR ANY WORKS WITHIN THE MUNICIPAL RIGHT OF WAY.
2. ALL WORKS OR RESTORATION WITHIN THE MUNICIPAL RIGHT OF WAY SHALL BE COMPLETED AS PER MUNICIPALITY OF CLARINGTON FIELD STAFF DIRECTION.
3. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND SERVICES TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. CONCERNED UTILITIES TO BE GIVEN ADVANCED NOTICE FOR STAKE OUT. THE CONSULTANT ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITIES SHOWN ON THE DRAWINGS.
4. QUANTITIES, DIMENSIONS AND ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR COMMENCING CONSTRUCTION.
5. ALL SANITARY SEWER AND APPURTENANCES SHALL COMPLY WITH THE REGION OF DURHAM STANDARDS AND THE ONTARIO PLUMBING CODE.
   - SANITARY SEWER PIPES, 200mm TO BE CL DR28 PVC PIPE, CL P BEDDING
   - SANITARY MANHOLES AS PER OPSD 701.010 C/W GRATE AS PER OPSD 401.010
   - ALL TRENCHES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH REGION OF DURHAM STANDARDS.
6. ALL WATER MAINS AND APPURTENANCES SHALL COMPLY WITH THE REGION OF DURHAM STANDARDS AND THE ONTARIO PLUMBING CODE.
   - ALL WATER MAINS SHALL BE CONSTRUCTED A MINIMUM OF 1.80m BELOW FINISHED GRADE
   - ALL TRENCHES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH REGION OF DURHAM STANDARDS
   - 150mm WATERMAIN AND 200mm WATERMAIN TO BE DR18 PVC PIPE, CL P BEDDING
   - PROP HYDRANT ASSEMBLY AS PER S-210.010. HYDRANTS TO BE PAINTED RED.
   - DEFLECTIONS UNDER WATERMAIN AS PER REGION STANDARD S-200.070.
7. ALL STORM SEWERS AND APPURTENANCES SHALL COMPLY WITH THE MUNICIPALITY OF CLARINGTON STANDARDS AND THE ONTARIO PLUMBING CODE.
   - STORM SEWER PIPE 450mm AND SMALLER SHALL BE DR35 PVC PIPE, CL P BEDDING
   - STORM SEWER MANHOLES AND CATCH BASIN MANHOLES SHALL BE AS PER OPSD 701.010
   - CATCH BASINS SHALL BE AS PER OPSD 705.010
   - MANHOLE GRATES SHALL BE AS PER OPSD 401.010
   - CATCH BASIN GRATES SHALL BE AS PER OPSD 400.020
   - ALL TRENCHES SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH OPSD STANDARDS
   - CLEAR STONE BEDDING MATERIAL IS NOT TO BE USED IN ANY CASE AS PER THE GEOTECHNICAL REPORT RECOMMENDATIONS.
8. GENERALLY, A MINIMUM OF 0.25m SHALL BE PROVIDED BETWEEN THE OUTSIDE OF PIPE BARRELS AT THE POINT OF CROSSING FOR STORM AND SANITARY SEWERS. A MINIMUM OF 0.50m SHALL BE PROVIDED BETWEEN THE OUTSIDE OF PIPE BARRELS AT THE POINT OF CROSSING FOR ALL SEWERS CROSSING WATER MAINS.
9. THE PARKING LOT SHALL CONSIST OF THE FOLLOWING UNLESS OTHERWISE APPROVED BY THE ENGINEER (SEE GRADING PLAN 122065-SG-1):

LIGHT DUTY ASPHALT	HEAVY DUTY ASPHALT
-350mm GRANULAR 'B	-400mm GRANULAR 'B'
-150mm GRANULAR 'A'	-150mm GRANULAR 'A'
- 50mm HL8 ASPHALT	-90mm HL8 ASPHALT (2 LIFTS)
- 40mm HL3 ASPHALT	-40mm HL3 ASPHALT
-BARRIER CURB AS PER C-302	

10. AVONDALE DRIVE TO BE RESTORED WITH THE FOLLOWING UPON REMOVAL OF WATER SERVICES:
    - 300mm GRANULAR 'B'
    - 150mm GRANULAR 'A'
    - 50mm HL8 ASPHALT
    - 40mm HL3 ASPHALT
    - -CURB AND GUTTER SHALL BE RESTORED AS PER C-302
    - -BOULEVARD TO BE RESTORED WITH 150mm OF TOPSOIL AND SOD



GENERAL NOTES

1. RESPECTING ALL WORK IN THE MUNICIPAL RIGHT OF WAY, THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS NOTICE TO THE PUBLIC WORKS DEPARTMENT STAFF AT (905) 263-2291.
2. A ROAD OCCUPANCY PERMIT WILL BE REQUIRED FOR ANY WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE. EXCAVATION OF THE ROAD SURFACE IS NOT PERMITTED BETWEEN DECEMBER 1ST AND APRIL 30TH.
3. ALL RESTORATION OR WORK DONE WITHIN THE ROAD ALLOWANCE MUST BE COMPLETED AS PER MUNICIPAL FIELD STAFF DIRECTION.
4. THE PERFORMANCE GUARANTEE WILL NOT BE REFUNDED BY THE MUNICIPALITY OF CLARINGTON UNLESS THE WORKS HAVE BEEN INSPECTED BY MUNICIPAL REPRESENTATIVES AND DEEMED TO BE COMPLETE AND SATISFACTORY.
5. THE ENTRANCE TO THE SUBJECT PROPERTY MUST BE CONSTRUCTED TO THE FOLLOWING MINIMUM STANDARD:
   - -300mm GRANULAR B
   - -150mm GRANULAR A
   - -50mm HL8 ASPHALT
   - -40mm HL3 ASPHALT
   - -ENTRANCE WIDTH: 6.0-9.0m
   - -ENTRANCE RADIUS: BARRIER CURB AS PER C-302.
6. ALL MUNICIPAL SIDEWALK LOCATED WITHIN THE ENTRANCE AREA(S) IS TO BE 200mm THICK WELDED WIRE MESH REINFORCED CONCRETE SIDEWALK.
7. THE APPLICANT WILL BE REQUIRED TO CONSTRUCT RICHARD GAY AVENUE TO FACILITATE THIS DEVELOPMENT.
8. ALL CONCRETE CURB INTERNAL TO THE SITE AND THE ENTRANCE RADII ARE TO BE BARRIER CURB AS PER C-302.
9. REFER TO LANDSCAPE PLANS FOR CONCRETE WALKING TRAIL DETAILS.

PIPE CROSSING CLEARANCES

FOR RICHARD GAY AVENUE
DESIGN REFER TO 122065-C-1
200mm SAN INV
CLEARANCE

(A)	200mm SAN OBV	131.40
	150/200mm WM INV	131.90
	CLEARANCE	0.50
(B)	300mm STM INV	131.88
	150/200mm WM OBV	131.25
	CLEARANCE	0.63
(C)	200mm SAN OBV	131.30
	200mm WM INV	131.80
	CLEARANCE	0.50
(D)	150mm SAN INV	131.76
	150/200mm WM OBV	131.25
	CLEARANCE	0.51
(E)	150mm SAN INV	131.59
	300mm STM OBV	131.21
	CLEARANCE	0.38
(F)	300mm STM INV	131.59
	200mm SAN OBV	131.38
	CLEARANCE	0.21
(G)	300mm SAN OBV	130.72
	150/200mm WM OBV	131.76
	CLEARANCE	1.04

NO.	DATE	REVISION	BY
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REVISIONS

1697 HIGHWAY No 2, COURTICE, CLARINGTON

SITE SERVICING PLAN

D.G. BIDDLE & ASSOCIATES
CONSULTING ENGINEERS & PLANNERS
96 King Street East
Oshawa, Ontario, L1H 1B6
Phone: 905-576-8500
info@dgbiddle.com
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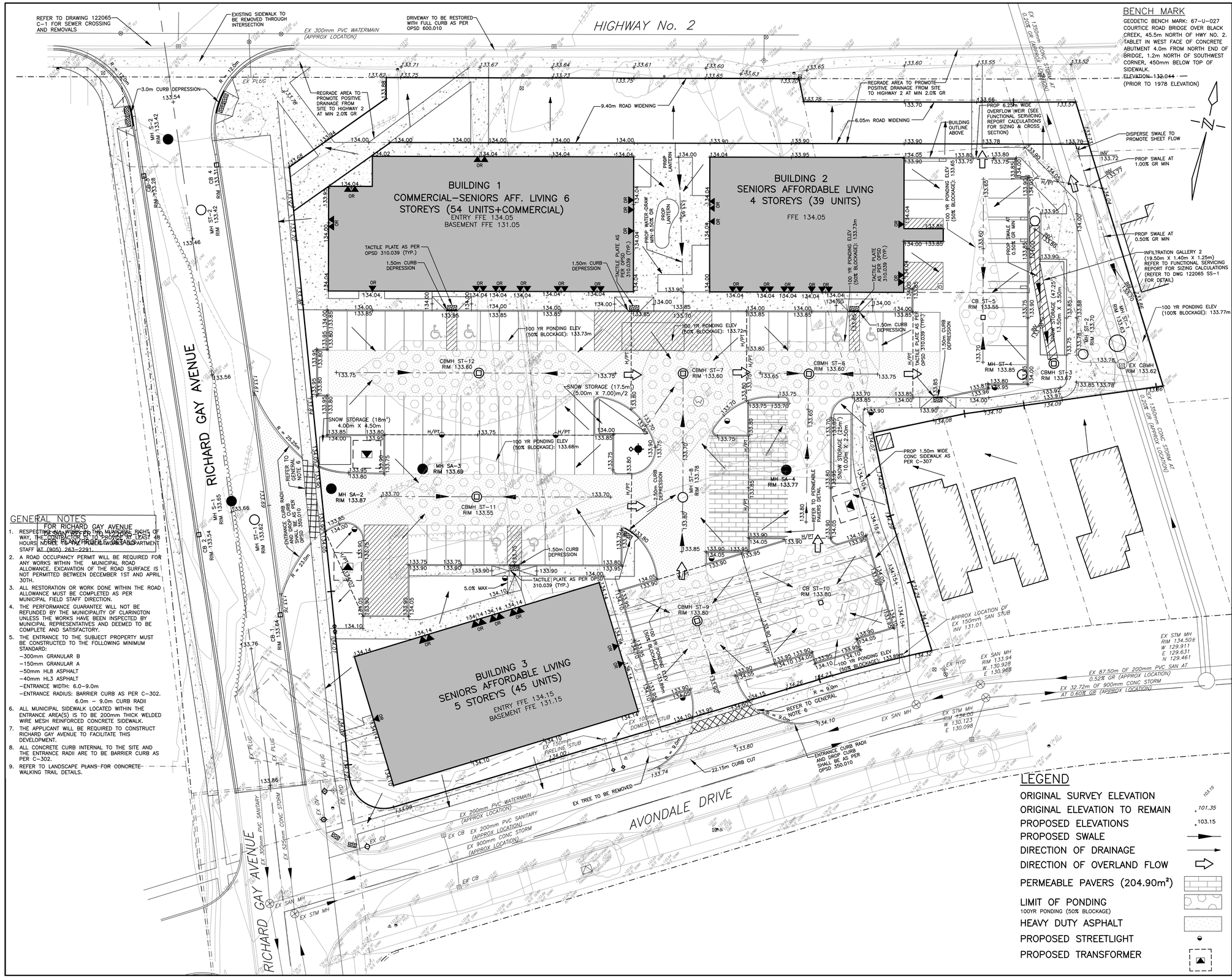
LICENSED PROFESSIONAL ENGINEER
M. B. CANSWELL
90561374
MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250
DRAWN BY:	B.B.
DESIGN BY:	M.H.
CHECKED BY:	M.B.C.
DATE:	OCTOBER 2022

PROJECT NO. 122065
DRAWING NO. SS-1

X:\STAFF\JOB FILES\122000\122065 1697 HIGHWAY 2, COURTICE\122065 DRAWINGS\122065 ENGINEERING DRAWINGS\122065-SS-SITE PLAN.DWG
27/03/2024



BENCH MARK

GEODETIC BENCH MARK: 67–U–027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
ELEVATION 132.044
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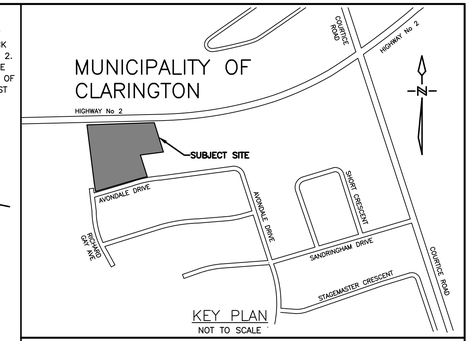
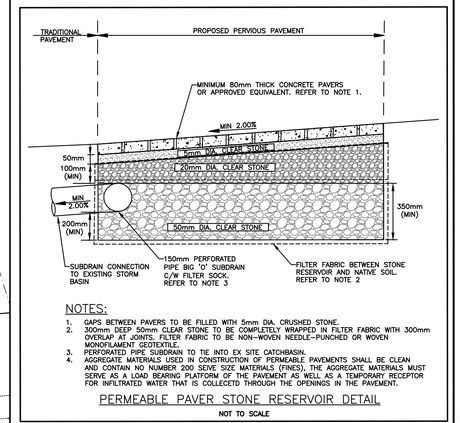


SITE GRADING NOTES

1. THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND SERVICES TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. CONCERNED UTILITIES TO BE GIVEN ADVANCED NOTICE FOR STAKE OUT. THE CONSULTANT ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITIES SHOWN ON THE DRAWINGS.
2. QUANTITIES, DIMENSIONS AND ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR COMMENCING CONSTRUCTION.
3. ALL SLOPES SHALL BE CONSTRUCTED AT 3:1 (MAXIMUM) UNLESS OTHERWISE NOTED ON THE DRAWINGS.
4. ALL SWALES SHALL BE CONSTRUCTED WITH 2% MINIMUM GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
5. ALL SLOPES, SWALES AND OPEN SPACE AREAS SHALL BE SODDED ON A MINIMUM OF 150mm OF TOPSOIL.
6. ALL DISTURBED AREAS WITHIN ABUTTING MUNICIPAL RIGHT OF WAYS SHALL BE SODDED ON A MINIMUM OF 300mm OF TOPSOIL.
7. THE PARKING LOT SHALL CONSIST OF THE FOLLOWING UNLESS OTHERWISE APPROVED BY THE ENGINEER:

LIGHT DUTY ASPHALT
- –350mm GRANULAR 'B'
- –150mm GRANULAR 'A'
- – 50mm HL8 ASPHALT
- – 40mm HL3 ASPHALT
- – BARRIER CURB AS PER C–302

HEAVY DUTY ASPHALT
- – 400mm GRANULAR 'B'
- – 150mm GRANULAR 'A'
- – 90mm HL8 ASPHALT (2 LIFTS)
- – 40mm HL3 ASPHALT



NOTES:
1. GAPS BETWEEN PAVERS TO BE FILLED WITH 5mm DIA. CRUSHED STONE.
2. 300mm DEEP 50mm CLEAR STONE TO BE COMPLETELY WRAPPED IN FILTER FABRIC WITH 300mm OVERLAP AT JOINTS. FILTER FABRIC TO BE NON–WOVEN NEEDLE–PUNCHED OR WOVEN MONOFILAMENT GEOTEXTILE.
3. PERFORATED PIPE SUBDRAIN TO TIE INTO EX SITE CATCHBASIN.
4. AGGREGATE MATERIALS USED IN CONSTRUCTION OF PERMEABLE PAVEMENTS SHALL BE CLEAN AND CONTAIN NO NUMBER 200 SEIVE SIZE MATERIALS (FINES), THE AGGREGATE MATERIALS MUST SERVE AS A LOAD BEARING PLATFORM OF THE PAVEMENT AS WELL AS A TEMPORARY RECEPTOR FOR INFILTRATED WATER THAT IS COLLECETD THROUGH THE OPENINGS IN THE PAVEMENT.

PERMEABLE PAVER STONE RESERVOIR DETAIL
NOT TO SCALE

GENERAL NOTES FOR RICHARD GAY AVENUE

1. RESPECTING WORKS WITHIN THE MUNICIPAL RIGHT OF WAY, THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS NOTICE TO THE PUBLIC WORKS DEPARTMENT STAFF AT (905) 263–2291.
2. A ROAD OCCUPANCY PERMIT WILL BE REQUIRED FOR ANY WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE. EXCAVATION OF THE ROAD SURFACE IS NOT PERMITTED BETWEEN DECEMBER 1ST AND APRIL 30TH.
3. ALL RESTORATION OR WORK DONE WITHIN THE ROAD ALLOWANCE MUST BE COMPLETED AS PER MUNICIPAL FIELD STAFF DIRECTION.
4. THE PERFORMANCE GUARANTEE WILL NOT BE REFUNDED BY THE MUNICIPALITY OF CLARINGTON UNLESS THE WORKS HAVE BEEN INSPECTED BY MUNICIPAL REPRESENTATIVES AND DEEMED TO BE COMPLETE AND SATISFACTORY.
5. THE ENTRANCE TO THE SUBJECT PROPERTY MUST BE CONSTRUCTED TO THE FOLLOWING MINIMUM STANDARD:
   - –300mm GRANULAR B
   - –150mm GRANULAR A
   - –50mm HL8 ASPHALT
   - –40mm HL3 ASPHALT
   - –ENTRANCE WIDTH: 6.0–9.0m
   - –ENTRANCE RADIUS: BARRIER CURB AS PER C–302. 6.0m – 9.0m CURB RADII
6. ALL MUNICIPAL SIDEWALK LOCATED WITHIN THE ENTRANCE AREA(S) IS TO BE 200mm THICK WELDED WIRE MESH REINFORCED CONCRETE SIDEWALK.
7. THE APPLICANT WILL BE REQUIRED TO CONSTRUCT RICHARD GAY AVENUE TO FACILITATE THIS DEVELOPMENT.
8. ALL CONCRETE CURB INTERNAL TO THE SITE AND THE ENTRANCE RADII ARE TO BE BARRIER CURB AS PER C–302.
9. REFER TO LANDSCAPE PLANS FOR CONCRETE WALKING TRAIL DETAILS.

LEGEND

- ORIGINAL SURVEY ELEVATION 133.15
- ORIGINAL ELEVATION TO REMAIN +101.35
- PROPOSED ELEVATIONS +103.15
- PROPOSED SWALE
- DIRECTION OF DRAINAGE
- DIRECTION OF OVERLAND FLOW
- PERMEABLE PAVERS (204.90m²)
- LIMIT OF PONDING 100YR PONDING (50% BLOCKAGE)
- HEAVY DUTY ASPHALT
- PROPOSED STREETLIGHT
- PROPOSED TRANSFORMER

NO.	DATE	REVISION	BY
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REVISIONS

1697 HIGHWAY No 2, COURTICE, CLARINGTON

SITE GRADING PLAN

D.G. BIDDLE & ASSOCIATES
CONSULTING ENGINEERS & PLANNERS
96 King Street East
Oshawa, Ontario, L1H 1B6
Phone: 905–576–8500
info@dgbiddle.com
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LICENSED PROFESSIONAL ENGINEER
M. B. CANSWELL
90561374
MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250	PROJECT NO.	122065
DRAWN BY:	B.B.	DRAWING NO.	SG–1
DESIGN BY:	M.H.		
CHECKED BY:	M.B.C.		
DATE:	OCTOBER 2022		

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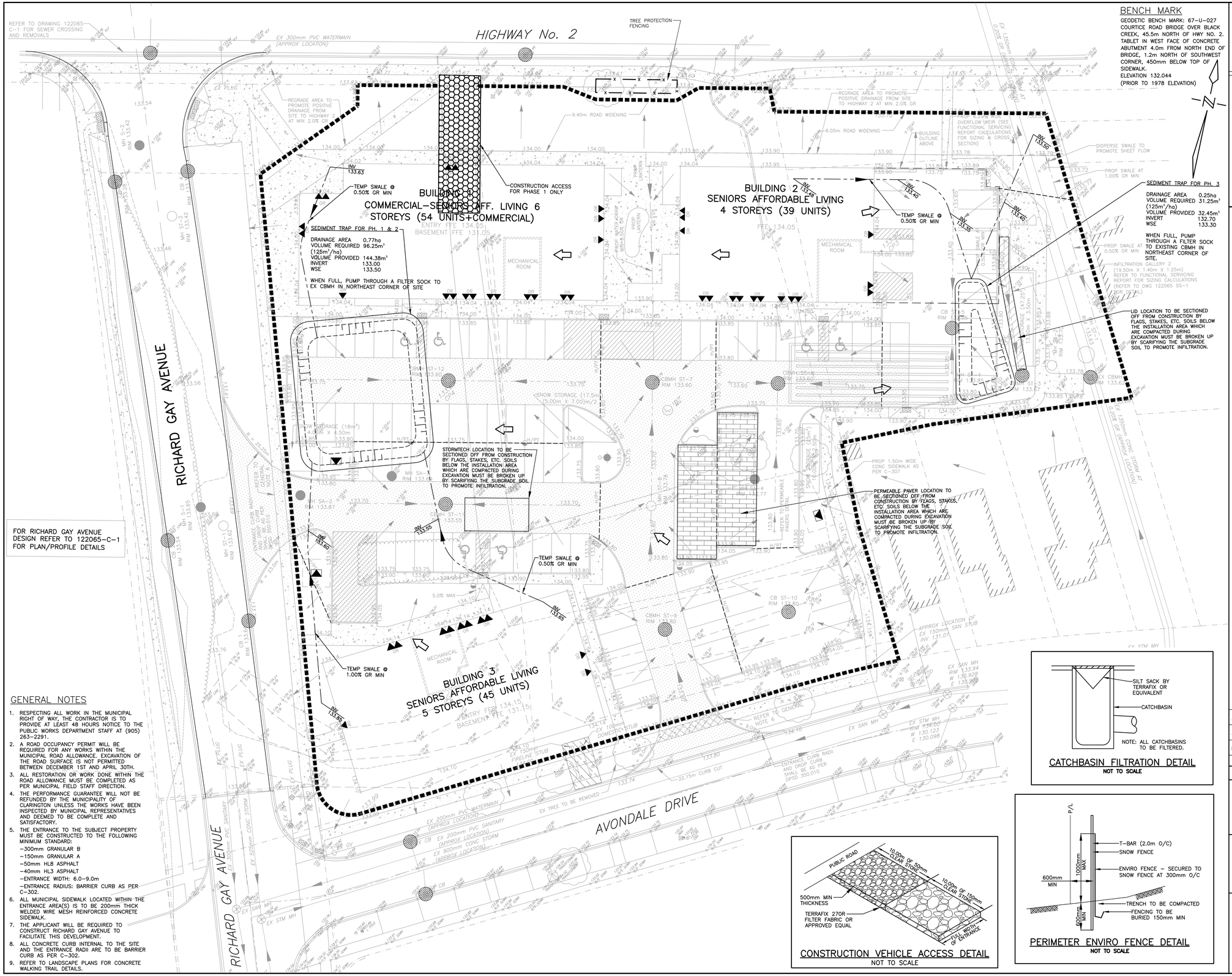
27/03/2024



BENCH MARK

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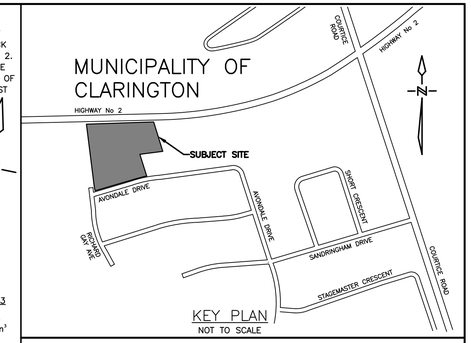

DUST CONTROL MEASURES:

A. PRE-GRADING PLANNING

1. THE SITE SERVICING FOR THE SITE SHALL BE SCHEDULED SUCH THAT THE OVERALL TIME THE AREAS ARE LEFT OPEN TO WIND THAT CREATE BLOWING DUST FROM THE EARTHWORK OPERATIONS IS MINIMIZED.
2. THE TOPSOIL STOCKPILE (IF APPLICABLE) SHALL BE STABILIZED WITHIN 30 DAYS OF STOCKPILING MATERIALS IN ACCORDANCE WITH CITY'S CRITERIA. ALL DISTURBED LANDS OUTSIDE THE PHASE OF WORK SHALL BE STABILIZED/VEGETATED.
3. THE CONTRACTOR SHALL APPLY WATER TO HAUL ROADS AND STOCKPILES (IF APPLICABLE) BY WAY OF WATER TRUCK.

B. WATERING (POST GRADING)

4. WITHIN AREAS WHERE EARTHWORKS AND OR UNDERGROUND MUNICIPAL SERVICING IS ON-GOING, WATER IS TO BE UTILIZED AT SUFFICIENT QUANTITY TO PREVENT VISIBLE EMISSIONS FROM EXTENDING MORE THAN 30m FROM THE POINT OF ORIGIN.

C. REDUCE VEHICLE SPEED

5. THE ON-SITE SPEED LIMIT FOR CONSTRUCTION VEHICLES SHALL BE MINIMIZED AND TO BE USED IN CONJUNCTION WITH WATERING TO PREVENT VISIBLE DUST EMISSIONS.

D. RESTRICT ACTIVITIES DURING HIGH WIND PERIODS

6. THE HIGH VISIBILITY OF CERTAIN WORKS AND THE CLOSE PROXIMITY AND POPULATION IMPACT SHOULD BE TAKEN INTO CONSIDERATION WHEN SCHEDULING DUST-PRODUCING WORK. APPROPRIATE DUST CONTROL MEASURES SHALL BE IN PLACE IN SUCH SITUATIONS.

E. ROAD CLEANING

7. SPILLAGE, EROSION OR MATERIALS "TRACKED OUT" ON A ROAD TO BE CLEANED USING MECHANICAL STREET SWEEPERS OR FLUSHER TRUCK AT LEAST BY THE END OF THE WORK DAY. HOWEVER, IF SPILLAGE EXTENDS MORE THAN 15m ALONG A PAVED PUBLIC ROADWAY, IT MUST BE CLEANED UP IMMEDIATELY.
8. IMPORTING AND EXPORTING OF MATERIALS ON AND OFF-SITE WILL BE SHUT DOWN DURING AND FOLLOWING INCLEMENT WEATHER UNTIL THE ROAD SURFACES HAVE BEEN CLEANED.

SEDIMENT CONTROL CONSTRUCTION SCHEDULE

1. INSTALL PERIMETER ENVIRO FENCE AND CONSTRUCTION VEHICLE ACCESS.
2. EXCAVATE PERIMETER SWALES AND SEDIMENT PONDS AS REQUIRED.
3. STRIP SITE OF TOPSOIL AND REMOVE OFF SITE OR STOCK PILE AND PROVIDE ENVIRO FENCE AROUND BOTTOM OF PILE.
4. INSTALL MINOR STORM SEWER SYSTEM ALONG WITH OTHER SERVICES.
5. INSTALL CATCHBASIN FILTRATION ON ALL CATCHBASINS AND CATCHBASIN.
6. SEDIMENT CONTROL MEASURES ARE TO BE MAINTAINED UNTIL ALL AREAS OF THE SITE HAVE BEEN STABILIZED WITH SOD OR ASPHALT.

LEGEND

- TREE PROTECTION FENCE (BY OTHERS) — x — x —
- PERIMETER ENVIRO FENCE
- DIRECTION OF OVERLAND FLOW
- CATCHBASIN FILTRATION
- CONSTRUCTION VEHICLE ACCESS 10.00x10.50x0.50m OF 150mmø CLEAR STONE
- PROPOSED TRANSFORMER

GENERAL NOTES

1. RESPECTING ALL WORK IN THE MUNICIPAL RIGHT OF WAY, THE CONTRACTOR IS TO PROVIDE AT LEAST 48 HOURS NOTICE TO THE PUBLIC WORKS DEPARTMENT STAFF AT (905) 263-2291.
2. A ROAD OCCUPANCY PERMIT WILL BE REQUIRED FOR ANY WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE. EXCAVATION OF THE ROAD SURFACE IS NOT PERMITTED BETWEEN DECEMBER 1ST AND APRIL 30TH.
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5. THE ENTRANCE TO THE SUBJECT PROPERTY MUST BE CONSTRUCTED TO THE FOLLOWING MINIMUM STANDARD:
   - 300mm GRANULAR B
   - 150mm GRANULAR A
   - 50mm HL8 ASPHALT
   - 40mm HL3 ASPHALT
   - ENTRANCE WIDTH: 6.0-9.0m
   - ENTRANCE RADIUS: BARRIER CURB AS PER C-302.
6. ALL MUNICIPAL SIDEWALK LOCATED WITHIN THE ENTRANCE AREA(S) IS TO BE 200mm THICK WELDED WIRE MESH REINFORCED CONCRETE SIDEWALK.
7. THE APPLICANT WILL BE REQUIRED TO CONSTRUCT RICHARD GAY AVENUE TO FACILITATE THIS DEVELOPMENT.
8. ALL CONCRETE CURB INTERNAL TO THE SITE AND THE ENTRANCE RADII ARE TO BE BARRIER CURB AS PER C-302.
9. REFER TO LANDSCAPE PLANS FOR CONCRETE WALKING TRAIL DETAILS.

CATCHBASIN FILTRATION DETAIL
NOT TO SCALE

CONSTRUCTION VEHICLE ACCESS DETAIL
NOT TO SCALE

PERIMETER ENVIRO FENCE DETAIL
NOT TO SCALE

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REVISIONS

1697 HIGHWAY No 2, COURTICE, CLARINGTON

EROSION AND SEDIMENT CONTROL PLAN

D.G. BIDDLE & ASSOCIATES
CONSULTING ENGINEERS & PLANNERS
96 King Street East
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Phone: 905-576-8500
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LICENSED PROFESSIONAL ENGINEER
M. B. CANSWELL
90561374
MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250
DRAWN BY:	B.B.
DESIGN BY:	M.H.
CHECKED BY:	M.B.C.
DATE:	OCTOBER 2022

PROJECT NO. 122065
DRAWING NO. ES-1

X:\STAFF\JOB FILES\122000\122065 1697 HIGHWAY 2, COURTICE\122065 DRAWINGS\122065-3D-SITE PLANNING

HIGHWAY No. 2

EX 300mm PVC WATERMAIN (APPROX LOCATION)

EX PLUG

DRAINAGE AREAS AND RUNOFF COEFFICIENTS WERE EXTRACTED FROM DRAWING 95075-2A-D3

0.79 / 0.65

0.09 / 0.45

0.14 / 0.50

EX 1350mm CONC STORM AT 0.20% GR (APPROX LOCATION)

EX 87.50m OF 200mm PVC SAN AT 0.52% GR (APPROX LOCATION)

EX 32.72m OF 900mm CONC STORM AT 0.60% GR (APPROX LOCATION)

APPROX LOCATION OF EX 150mm SAN STUB INV 131.01

EX 100mm DOMESTIC STUB

EX 150mm SANITARY SEWER

EX 200mm PVC WATERMAIN (APPROX LOCATION)

EX CB EX 200mm PVC SANITARY (APPROX LOCATION)

EX 900mm CONC STORM (APPROX LOCATION)

EX 300mm PVC SANITARY

EX 525mm CONC STORM

EX SAN MH

EX STM MH

EX STM MH
RIM 134.50±
W 129.911
E 129.631
N 129.461

EX SAN MH
RIM 133.94
W 130.928
E 130.968

EX STM MH
RIM 134.06
W 130.123
E 130.098

EX CB

EX GV

EX HYD

EX CO

EX PLUG

AVONDALE DRIVE

RICHARD GAY AVENUE

BENCH MARK

GEODETIC BENCH MARK: 67-U-027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
ELEVATION 132.044
(PRIOR TO 1978 ELEVATION)

MUNICIPALITY OF CLARINGTON

KEY PLAN
NOT TO SCALE

SUBJECT SITE
HIGHWAY No. 2
COURTICE ROAD
AVONDALE DRIVE
SHORT CRESCENT
SANDRINGHAM DRIVE
STAGEMASTER CRESCENT
DAFFORD DRIVE

LEGEND

- DRAINAGE BOUNDARY
- 0.25 / 0.90 — DRAINAGE AREA (ha) / RUN-OFF COEFFICIENT
- DIRECTION OF DRAINAGE

NOTE: THIS PLAN IS FOR STORM DRAINAGE AREAS ONLY

NO.	DATE	REVISION	BY
4.	03/27/2024	REVISED AS PER CONDITIONS OF APPROVAL COMMENTS	MH
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REVISIONS

1697 HIGHWAY No. 2, COURTICE, CLARINGTON

PRE-DEVELOPMENT STORM DRAINAGE PLAN

D.G. BIDDLE & ASSOCIATES
CONSULTING ENGINEERS & PLANNERS
96 King Street East
Oshawa, Ontario, L1H 1B6
Phone: 905-576-8500
info@dgbiddle.com
dgbiddle.com

LICENSED PROFESSIONAL ENGINEER
M. B. CARSWELL
90561374
MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250
DRAWN BY:	B.B.
DESIGN BY:	M.H.
CHECKED BY:	M.B.C.
DATE:	OCTOBER 2022

PROJECT NO. 122065

DRAWING NO. SD-1

X:\STAFF_DB FILES\122065\122065 1697 HIGHWAY 2, COURTICE\122065 DRAWINGS\122065-3D-SITE PLAN.DWG

HIGHWAY No. 2

EX 300mm PVC WATERMAIN (APPROX LOCATION)

EX PLUG

9.40m ROAD WIDENING

6.05m ROAD WIDENING

EX 1350mm CONC STORM AT 0.20% GR (APPROX LOCATION)

BENCH MARK

GEODETIC BENCH MARK: 67-U-027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
ELEVATION 132.044
(PRIOR TO 1978 ELEVATION)

BUILDING 1
COMMERCIAL-SENIORS AFF. LIVING 6 STOREYS (54 UNITS+COMMERCIAL)
ENTRY FFE 134.05
BASEMENT FFE 131.05
MECHANICAL ROOM

BUILDING 2
SENIORS AFFORDABLE LIVING
4 STOREYS (39 UNITS)
FFE 134.05
MECHANICAL ROOM

BUILDING 3
SENIORS AFFORDABLE LIVING
5 STOREYS (45 UNITS)
ENTRY FFE 134.15
BASEMENT FFE 131.15
MECHANICAL ROOM

RICHARD GAY AVENUE

AVONDALE DRIVE

EX 200mm PVC WATERMAIN (APPROX LOCATION)

EX CB EX 200mm PVC SANITARY (APPROX LOCATION)

EX 900mm CONC STORM (APPROX LOCATION)

EX 150mm FIRELINE STUB

EX 100mm DOMESTIC STUB

EX HYD

EX GV

EX SAN MH

EX STM MH

EX CB

EX 525mm CONC STORM

EX 300mm PVC SANITARY

APPROX LOCATION OF EX 150mm SAN STUB INV 131.01

EX STM MH
RIM 134.50±
W 129.911
E 129.631
N 129.461

EX SAN MH
RIM 133.94
W 130.928
E 130.968

EX 87.50m OF 200mm PVC SAN AT 0.52% GR (APPROX LOCATION)

EX 32.72m OF 900mm CONC STORM AT 0.60% GR (APPROX LOCATION)

EX STM MH
RIM ~~134.00~~
W 130.123
E 130.098

0.13	0.37	
0.08	0.90	
0.06	0.90	
0.09	0.90	
0.09	0.90	
0.06	0.90	
0.09	0.83	
0.03	0.54	
0.07	0.90	
0.006	0.57	
0.03	0.90	
0.03	0.90	
0.06	0.90	
0.03	0.37	
0.02	0.34	
0.005	0.55	
0.02	0.37	
0.04	0.45	
0.05	0.45	
0.02	0.32	
0.03	0.25	

MUNICIPALITY OF CLARINGTON

COURTICE ROAD
HIGHWAY No 2
SUBJECT SITE
AVONDALE DRIVE
HIGHDALE DRIVE
SHORT CRESCENT
SANDRINGHAM DRIVE
STAGEMASTER CRESCENT
RICHARD GAY AVE

KEY PLAN
NOT TO SCALE

LEGEND

DRAINAGE BOUNDARY

0.25 / 0.90 DRAINAGE AREA (ha) / RUN-OFF COEFFICIENT

OVERLAND FLOW DIRECTION

NOTE: THIS PLAN IS FOR STORM DRAINAGE AREAS ONLY

NO.	DATE	REVISION	BY
4.	03/27/2024	REVISED AS PER CONDITIONS OF APPROVAL COMMENTS	MH
3.	01/31/2024	REVISED AS PER REGION COMMENTS	MH

REVISIONS

1697 HIGHWAY No. 2, COURTICE, CLARINGTON

POST-DEVELOPMENT STORM DRAINAGE PLAN

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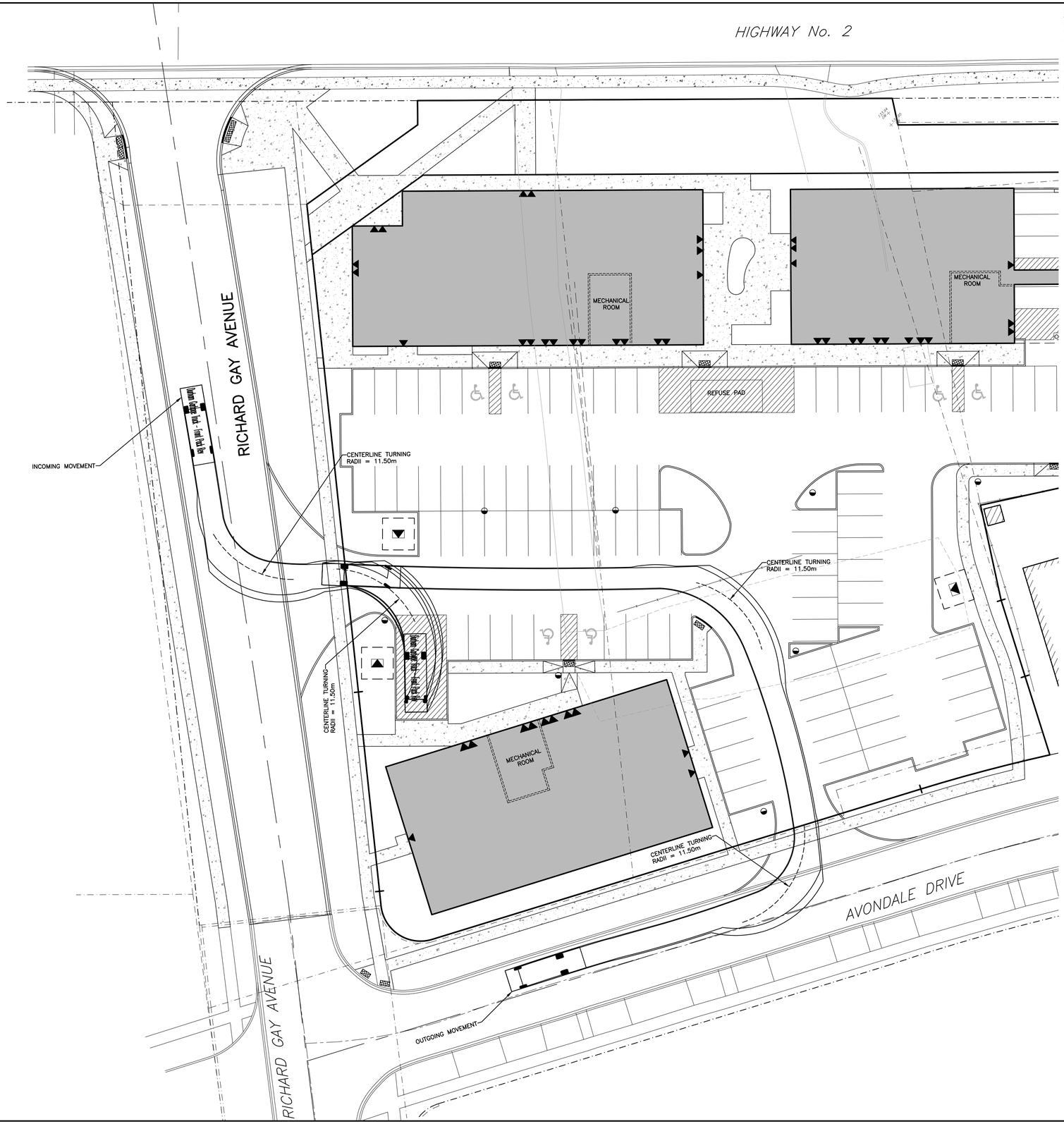
LICENSED PROFESSIONAL ENGINEER
M. B. CARSWELL
90561374
MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250
DRAWN BY:	B.B.
DESIGN BY:	M.H.
CHECKED BY:	M.B.C.
DATE:	OCTOBER 2022

PROJECT NO. 122065

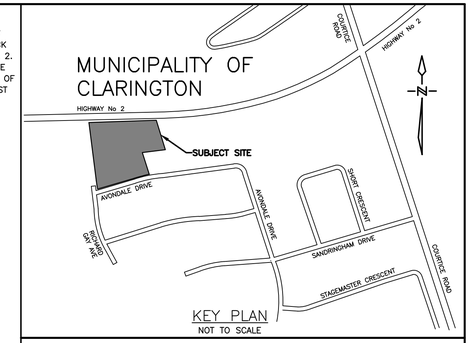
DRAWING NO. SD-2

X:\STAFF\JSR FILES\122000\122065 1697 HIGHWAY 2, COURTICE\122065 DRAWINGS\122065 ENGINEERING DRAWINGS\122065-3D-SITE PLAN.DWG

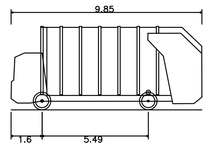


BENCH MARK

GEODETIC BENCH MARK: 67–U–027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
ELEVATION 132.044
(PRIOR TO 1978 ELEVATION)



KEY PLAN
NOT TO SCALE



Durham Garbage Truck – Front Pack Rev	
Overall Length	9.850m
Overall Width	2.770m
Overall Body Height	4.310m
Min Body Ground Clearance	0.321m
Track Width	2.600m
Lock–to–lock time	6.00s
Curb to Curb Turning Radius	11.500m

NO.	DATE	REVISION	BY
4.	03/27/2024	REVISED AS PER CONDITIONS OF APPROVAL COMMENTS	MH
3.	01/31/2024	REVISED AS PER REGION COMMENTS	MH

REVISIONS

1697 HIGHWAY No. 2, COURTICE, CLARINGTON

TRUCK TURNING PLAN

D.G. BIDDLE & ASSOCIATES
CONSULTING ENGINEERS & PLANNERS
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Oshawa, Ontario, L1H 1B6
Phone: 905–576–8500
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LICENSED PROFESSIONAL ENGINEER
M. B. CARSWELL
90561374
MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250
DRAWN BY:	G.P.W.
DESIGN BY:	M.H.
CHECKED BY:	M.B.C.
DATE:	OCTOBER 2022

PROJECT NO. 122065
DRAWING NO. TT–1

X:\STAFF\JOB FILES\122065\122065 1697 HIGHWAY 2, COURTICE\122065 DRAWINGS\122065 ENGINEERING DRAWINGS\122065–TRUCK TURNING PLAN.DWG

HIGHWAY No. 2

RICHARD GAY AVENUE

AVONDALE DRIVE

MECHANICAL ROOM

MECHANICAL ROOM

REFUSE PAD

MECHANICAL ROOM

CENTERLINE TURNING RADII = 11.50m

CENTERLINE TURNING RADII = 11.50m

CENTERLINE TURNING RADII = 11.50m

CENTERLINE TURNING RADII = 11.50m

OUTGOING MOVEMENT

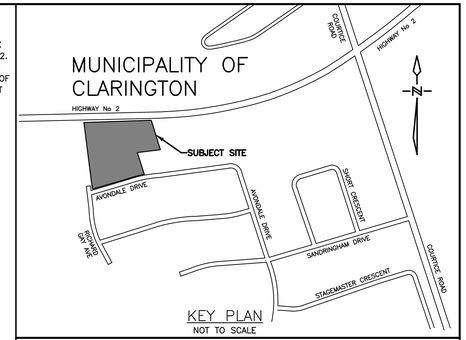
INCOMING MOVEMENT

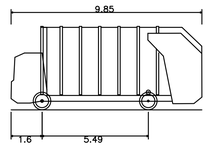
Durham Garbage Truck - Front Pack Rev

Durham Garbage Truck - Front Pack Rev

BENCH MARK

GEODETIC BENCH MARK: 67-U-027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
ELEVATION 132.044
(PRIOR TO 1978 ELEVATION)





Durham Garbage Truck – Front Pack Rev	
Overall Length	9.850m
Overall Width	2.770m
Overall Body Height	4.310m
Min Body Ground Clearance	0.321m
Track Width	2.600m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	11.500m

NO.	DATE	REVISION	BY
4.	03/27/2024	REVISED AS PER CONDITIONS OF APPROVAL COMMENTS	MH
3.	01/31/2024	REVISED AS PER REGION COMMENTS	MH

REVISIONS

1697 HIGHWAY No. 2, COURTICE, CLARINGTON

TRUCK TURNING PLAN

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LICENSED PROFESSIONAL ENGINEER
M. B. CARSWELL
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MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250
DRAWN BY:	G.P.W.
DESIGN BY:	M.H.
CHECKED BY:	M.B.C.
DATE:	OCTOBER 2022

PROJECT NO. 122065

DRAWING NO. TT-2

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HIGHWAY No. 2

HIGHWAY No. 2

RICHARD GAY AVENUE

MECHANICAL ROOM

MECHANICAL ROOM

REFUSE PAD

Durham Garbage Truck - Side Pack

CENTERLINE TURNING RADII = 13.00m

CENTERLINE TURNING RADII = 13.00m

MECHANICAL ROOM

CENTERLINE TURNING RADII = 13.00m

CENTERLINE TURNING RADII = 13.00m

Durham Garbage Truck - Side Pack

INCOMING MOVEMENT

OUTGOING MOVEMENT

AVONDALE DRIVE

RICHARD GAY AVENUE

BENCH MARK

GEODETIC BENCH MARK: 67-U-027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
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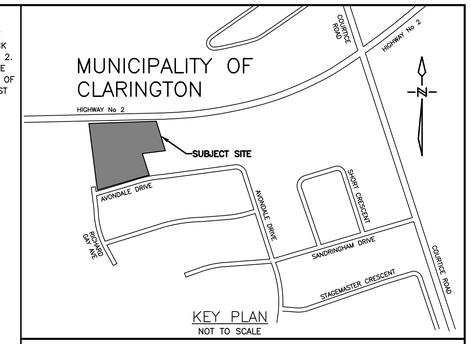
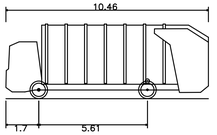


KEY PLAN
NOT TO SCALE



Durham Garbage Truck – Side Pack	
Overall Length	10.460m
Overall Width	2.980m
Overall Body Height	3.850m
Min Body Ground Clearance	0.321m
Track Width	2.600m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	13.000m

NO.	DATE	REVISION	BY
4.	03/27/2024	REVISED AS PER CONDITIONS OF APPROVAL COMMENTS	MH
3.	01/31/2024	REVISED AS PER REGION COMMENTS	MH

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1697 HIGHWAY No. 2, COURTICE, CLARINGTON

TRUCK TURNING PLAN

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90561374
MAR 27/24
PROVINCE OF ONTARIO

SCALE:	1:250
DRAWN BY:	G.P.W.
DESIGN BY:	M.H.
CHECKED BY:	M.B.C.
DATE:	OCTOBER 2022

PROJECT NO. 122065

DRAWING NO. TT-3

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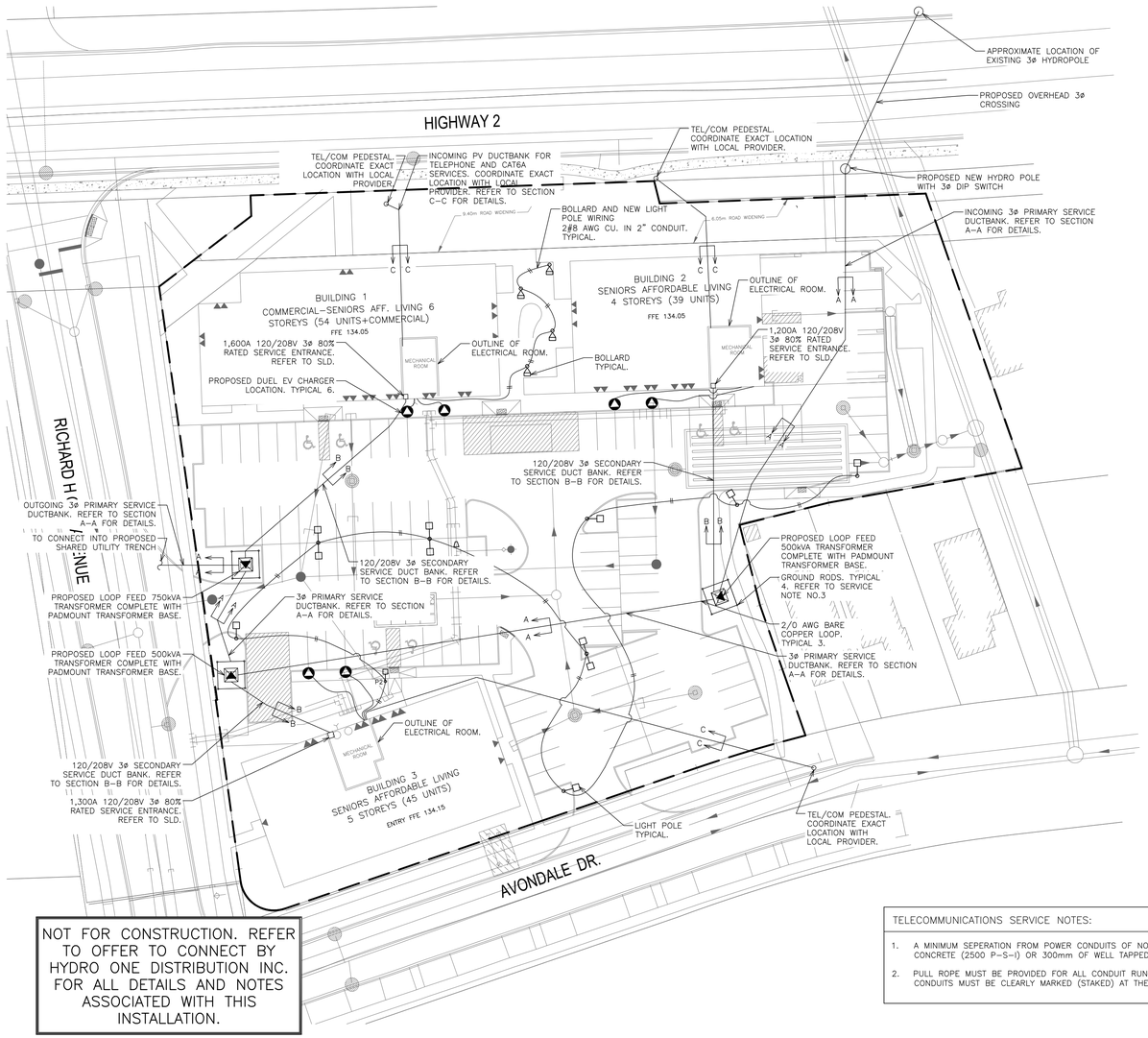
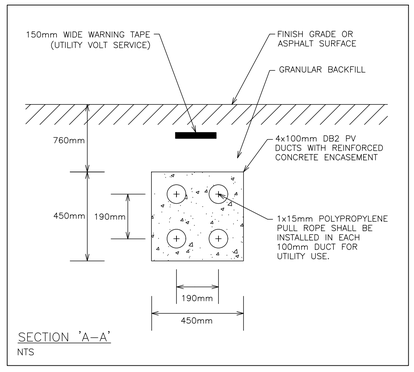
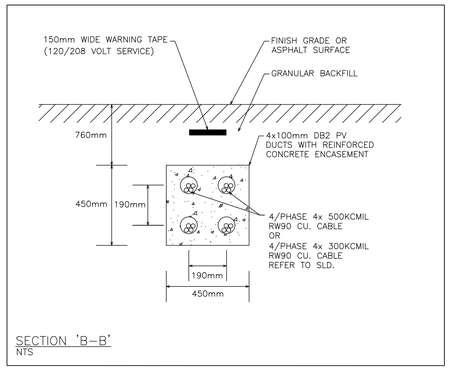


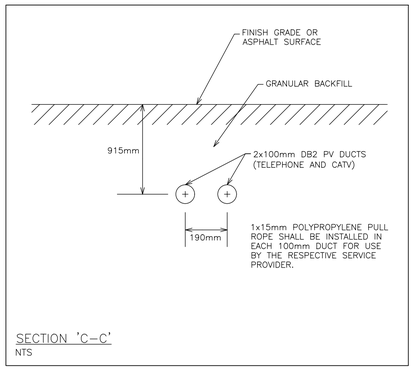
NOT FOR CONSTRUCTION. REFER TO OFFER TO CONNECT BY HYDRO ONE DISTRIBUTION INC. FOR ALL DETAILS AND NOTES ASSOCIATED WITH THIS INSTALLATION.



SECTION 'A-A'
NTS



SECTION 'B-B'
NTS



SECTION 'C-C'
NTS

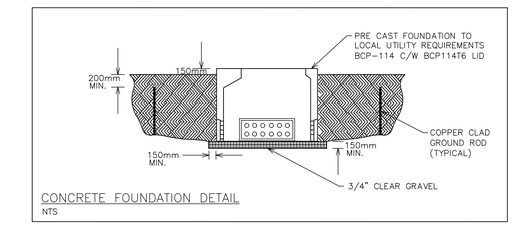
GENERAL REQUIREMENTS FOR SITE ELECTRICAL WORK

1. ALL EQUIPMENT MUST BE APPROVED BY AN ACCREDITED APPROVAL AGENCY, OR ACCEPTED THROUGH FIELD EVALUATION OR BY AN INSPECTOR UNDER THE PROVISION OF RULE 2-024 OF THE CURRENT ONTARIO ELECTRICAL SAFETY CODE.
2. AT EACH DISTRIBUTION POINT, CIRCUIT BREAKERS, FUSES AND SWITCHES SHALL BE MARKED, ADJACENT THERETO, IN A CONSPICUOUS AND LEGIBLE MANNER TO INDICATE CLEARLY WHICH INSTALLATION OR PORTION OF INSTALLATION THEY PROTECT OR CONTROL AND THE MAXIMUM RATING OF OVERCURRENT DEVICE THAT IS PERMITTED. RULE 2-100(3).
3. RACEWAYS ENTERING A BUILDING AND FORMING PART OF AN UNDERGROUND SERVICE SHALL BE SEALED AND SHALL:
   A) ENTER THE BUILDING ABOVE GROUND WHERE PRACTICABLE; OR
   B) BE SUITABLY DRAINED; OR
   C) BE INSTALLED IN SUCH A WAY THAT MOISTURE AND GAS WILL NOT ENTER THE BUILDING. RULE 6-300(6).
4. WHERE WARNING TAPE IS USED TO COMPLY WITH RULE 12-012(11) AS SHOWN ON DRAWING SE-1, THE TAPE MUST BE BURIED APPROXIMATELY HALFWAY BETWEEN THE INSTALLATION AND GRADE LEVEL, COVERING THE WIDTH OF THE RACEWAYS OR CABLES INSTALLED.
5. A MINIMUM WORKING SPACE OF 1m WITH SECURE FOOTING SHALL BE PROVIDED AND MAINTAINED ABOUT ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, CONTROL PANELS, AND MOTOR CONTROL CENTRES WHICH ARE ENCLOSED IN METAL. RULE 2-308.
6. ALL OVERCURRENT PROTECTION SHALL BE CAPABLE OF INTERRUPTING THE AVAILABLE FAULT CURRENT. RULE 14-012.
7. EVERY PANELBOARD SHALL BE PROTECTED ON THE SUPPLY SIDE BY OVERCURRENT DEVICES HAVING A RATING NOT GREATER THAN THAT OF PANELBOARD. RULE 14-606(1)
8. THE RATING OR SETTING OF OVERCURRENT DEVICES SHALL NOT EXCEED THE ALLOWABLE APACITY OF THE CONDUCTORS THAT THEY PROTECT. RULE 14-104.
9. RULE 14-102 REQUIRES GROUND FAULT PROTECTION ON GROUNDED CIRCUITS MORE THAN 150 VOLTS TO GROUND AND 1000 AMPERES OR MORE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SWITCHGEAR MANUFACTURER TO CO-ORDINATE THE GROUND FAULT SENSING METHOD WITH EACH PARTICULAR GROUNDING ARRANGEMENT.

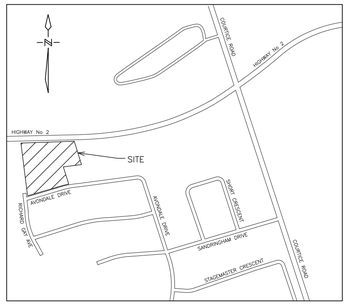
NOTES:
1. TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.
2. ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.
3. CONTRACTOR TO COORDINATE EXACT LENGTH OF SECONDARY RUNS ON SITE AND PROVIDE CONDUCTORS TO SUIT. CONTRACTOR TO PROVIDE CONDUCTOR SIZES C/W LENGTH OF RUN TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. ELECTRICAL SCOPE OF WORK: THE CONTRACTOR IS ASSUMED TO BE OF MASTER ELECTRICIAN EXPERIENCE AND SHALL PROVIDE ANY APPLICABLE SINGLE LINE DIAGRAMS, PANEL SCHEDULES AND CIRCUIT PLAN DESIGNS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THIS PRICE SHALL BE INCLUDED IN THE CONTRACTORS BASE BID PRICE. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO INCLUDE THIS COST INTO THE BASE BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT IN PRICING THE ABOVE ITEMS IN THERE BID.
5. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE ACQUIRED BY CONTRACTOR.
6. REFER TO DRAWING SL-1 FOR SITE LIGHTING SCHEDULE AND DETAILS. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE AQUIRED BY CONTRACTOR.
7. CONFIRM THE FOLLOWING INSTRUCTIONS WITH LOCAL AUTHORITY PRIOR TO COMMENCEMENT OF WORK.
8. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A PRECAST CONCRETE FOUNDATION, BASE AND LID EQUAL TO BROOKLIN CONCRETE PRODUCTS CAT.NOS. BCP 114, BCP 114B AND BCP 114T6. THE BASE SHALL BE INSTALLED ON A 150mm BED OF 19mm CLEAR GRAVEL SET ON LEVEL UNDISTURBED OR COMPACTED EARTH. THE GRAVEL BED SHALL EXTEND 150mm BEYOND THE EDGES OF THE PRECAST CONCRETE BASE. THE SURFACE AREA AROUND THE TOP OF THE PRECAST CONCRETE FOUNDATION SHALL BE RESTORED TO THE ORIGINAL SITE CONDITION.
9. A CONTINUOUS LENGTH OF 2/0 AWG STRANDED COPPER GROUND WIRE SHALL BE INSTALLED A MINIMUM OF 400mm BELOW GRADE AROUND THE PRECAST CONCRETE FOUNDATION AND CONNECT TO FOUR (4) 19mm X 300mm GALVANIZED STEEL GROUND RODS BY FIVE (5) BURNDY CAT. NO. GRC3426 GROUND ROD CONNECTORS. TWO (2) 10'-0" COILS OF 2/0 AWG GROUND WIRE SHALL BE LEFT ABOVE THE PRECAST CONCRETE LID FOR CONNECTION TO THE PADMOUNT TRANSFORMER.
10. ELECTRICAL CONTRACTOR TO PROVIDE ALL GROUNDING, CABLE LUGS, ETC. TRANSFORMER AND FINAL CONNECTIONS BY LOCAL UTILITY

TELECOMMUNICATIONS SERVICE NOTES:

1. A MINIMUM SEPERATION FROM POWER CONDUITS OF NOT LESS THAN 100mm OF CONCRETE (2500 P-S-I) OR 300mm OF WELL TAPPED EARTH IS REQUIRED.
2. PULL ROPE MUST BE PROVIDED FOR ALL CONDUIT RUNS AND THE ENDS OF CONDUITS MUST BE CLEARLY MARKED (STAKED) AT THE PROPERTY LINE.



CONCRETE FOUNDATION DETAIL
NTS



KEY PLAN
N.T.S.

SERVICE SIZE CALCULATIONS:
BUILDING 1 – COMMERICAL/SENIORS AFF. LIVING

TOTAL ESTIMATED DEMAND ——— 456,706W

SERVICE SIZE = 1,268A @ 120/208V 3ϕ
OR
1,600A @ 80% (FUSED MAIN)

SERVICE SIZE CALCULATIONS:
BUILDING 2 – SENIORS AFF. LIVING

TOTAL ESTIMATED DEMAND ——— 333,006W

SERVICE SIZE = 925A @ 120/208V 3ϕ
OR
1,200A @ 80% (FUSED MAIN)

SERVICE SIZE CALCULATIONS:
BUILDING 3 – SENIORS AFF. LIVING

TOTAL ESTIMATED DEMAND ——— 358,906W

SERVICE SIZE = 1,011A @ 120/208V 3ϕ
OR
1,300A @ 80% (FUSED MAIN AT 1,250A)

NO.	REVISION	DATE	BY	APPROVED
4.	REVISED AS PER CONDITIONS OF APPROVAL	MAR 26	F.K.	G.V.W.O
3.	RE-ISSUED FOR SPA	JAN 26	F.K.	G.V.W.O
2.	RE-ISSUED FOR SPA	NOV 01	B.P.	G.V.W.O
1.	ISSUED FOR SPA	DEC 07	A.L.	G.V.W.O

REVISIONS

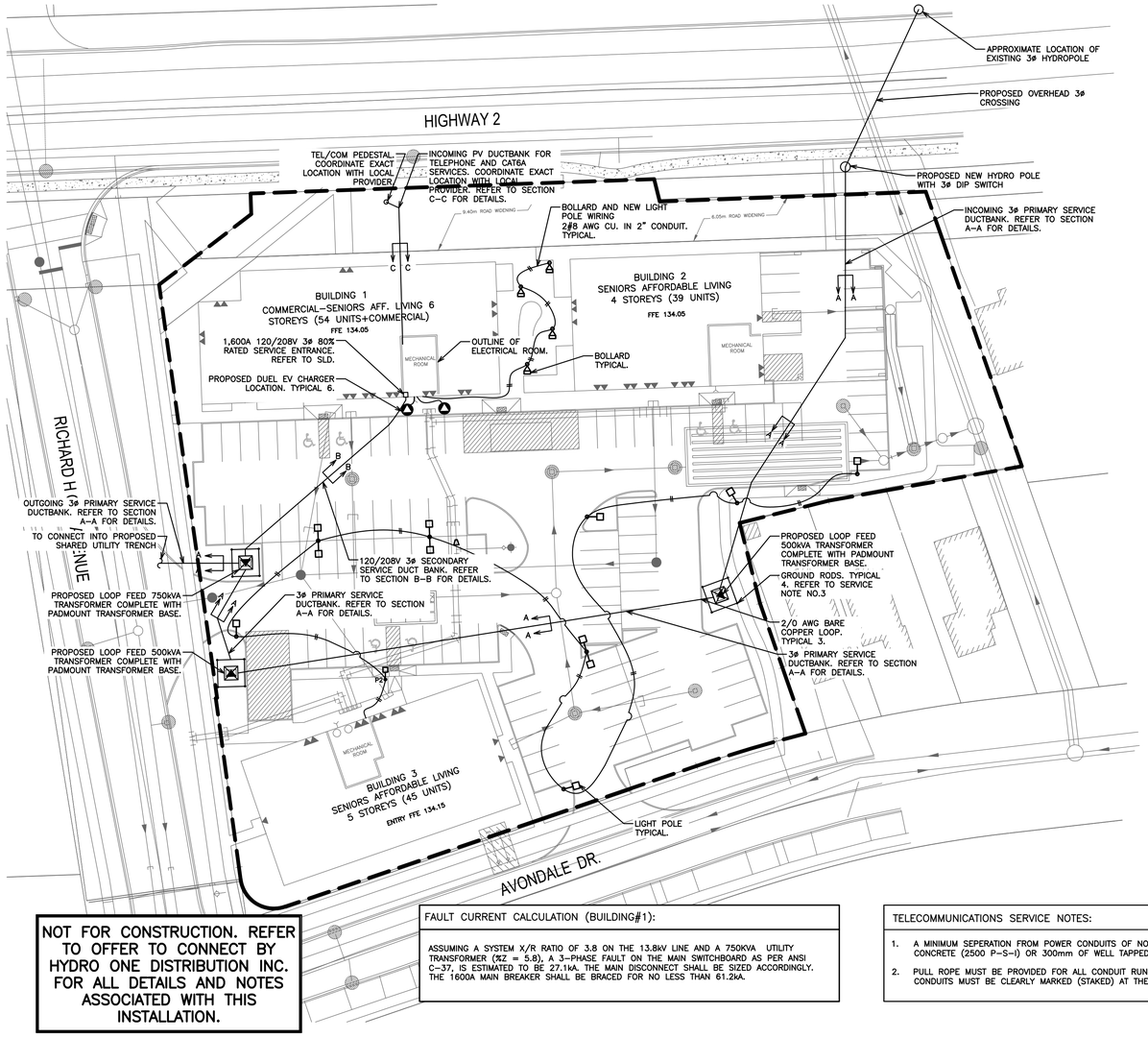
1697 DURHAM REGIONAL HIGHWAY 2, COURTICE
RICHARD H. GAY HOLDINGS

SITE SERVICING
SITE ELECTRICAL

D.G.Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
03/27/24
PROVINCE OF ONTARIO

SCALE:	1:400	PROJECT NO.	122065
DRAWN BY:	A.L.	DRAWING NO.	SE-1
DESIGN BY:	A.L.		
CHECKED BY:	G.V.W.O	CAD FILE:	122065 SE
DATE:	MARCH 2024	PLOT DATE:	03/26/2024
		SUBMISSION:	COND.APRVL.



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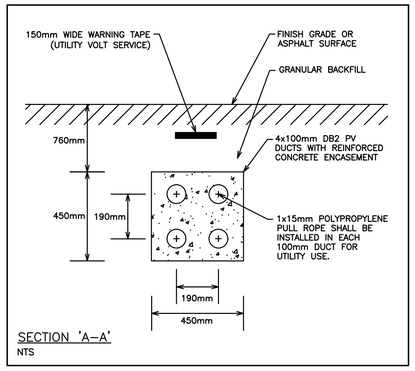
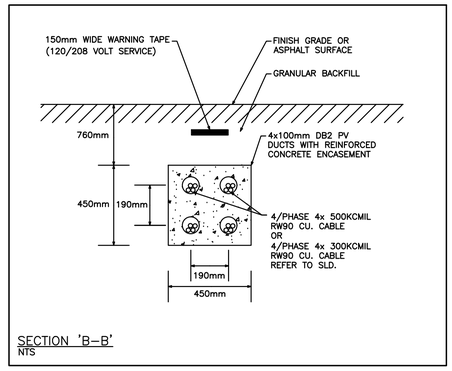
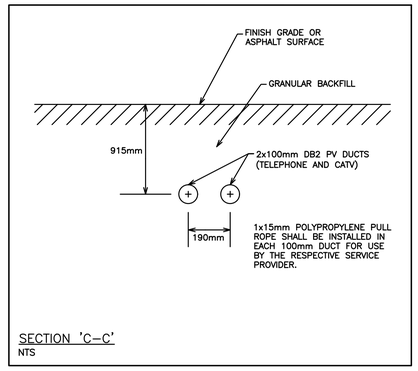


SECTION 'A-A'
NTS



SECTION 'B-B'
NTS



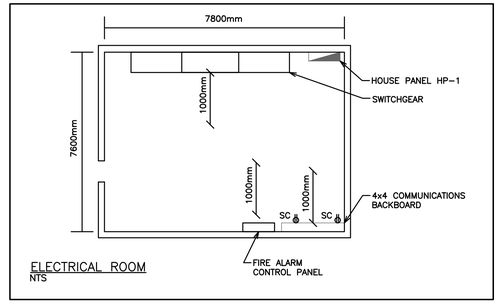
SECTION 'C-C'
NTS

FAULT CURRENT CALCULATION (BUILDING#1):

ASSUMING A SYSTEM X/R RATIO OF 3.8 ON THE 13.8kV LINE AND A 750KVA UTILITY TRANSFORMER (%Z = 5.8), A 3-PHASE FAULT ON THE MAIN SWITCHBOARD AS PER ANSI C-37, IS ESTIMATED TO BE 27.1kA. THE MAIN DISCONNECT SHALL BE SIZED ACCORDINGLY. THE 1600A MAIN BREAKER SHALL BE BRACED FOR NO LESS THAN 61.2kA.

TELECOMMUNICATIONS SERVICE NOTES:

1. A MINIMUM SEPERATION FROM POWER CONDUITS OF NOT LESS THAN 100mm OF CONCRETE (2500 P-S-I) OR 300mm OF WELL TAPPED EARTH IS REQUIRED.
2. PULL ROPE MUST BE PROVIDED FOR ALL CONDUIT RUNS AND THE ENDS OF CONDUITS MUST BE CLEARLY MARKED (STAKED) AT THE PROPERTY LINE.

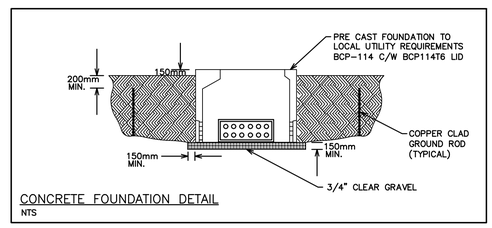


ELECTRICAL ROOM
NTS

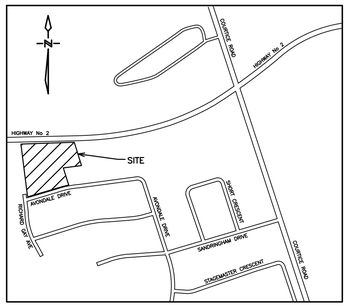
GENERAL REQUIREMENTS FOR SITE ELECTRICAL WORK

1. ALL EQUIPMENT MUST BE APPROVED BY AN ACCREDITED APPROVAL AGENCY, OR ACCEPTED THROUGH FIELD EVALUATION OR BY AN INSPECTOR UNDER THE PROVISION OF RULE 2-024 OF THE CURRENT ONTARIO ELECTRICAL SAFETY CODE.
2. AT EACH DISTRIBUTION POINT, CIRCUIT BREAKERS, FUSES AND SWITCHES SHALL BE MARKED, ADJACENT THERETO, IN A CONSPICUOUS AND LEGIBLE MANNER TO INDICATE CLEARLY WHICH INSTALLATION OR PORTION OF INSTALLATION THEY PROTECT OR CONTROL AND THE MAXIMUM RATING OF OVERCURRENT DEVICE THAT IS PERMITTED. RULE 2-100(3).
3. RACEWAYS ENTERING A BUILDING AND FORMING PART OF AN UNDERGROUND SERVICE SHALL BE SEALED AND SHALL:
   A) ENTER THE BUILDING ABOVE GROUND WHERE PRACTICABLE; OR
   B) BE SUITABLY DRAINED; OR
   C) BE INSTALLED IN SUCH A WAY THAT MOISTURE AND GAS WILL NOT ENTER THE BUILDING. RULE 6-300(6).
4. WHERE WARNING TAPE IS USED TO COMPLY WITH RULE 12-012(11) AS SHOWN ON DRAWING SE-1, THE TAPE MUST BE BURIED APPROXIMATELY HALFWAY BETWEEN THE INSTALLATION AND GRADE LEVEL, COVERING THE WIDTH OF THE RACEWAYS OR CABLES INSTALLED.
5. A MINIMUM WORKING SPACE OF 1m WITH SECURE FOOTING SHALL BE PROVIDED AND MAINTAINED ABOUT ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, CONTROL PANELS, AND MOTOR CONTROL CENTRES WHICH ARE ENCLOSED IN METAL. RULE 2-308.
6. ALL OVERCURRENT PROTECTION SHALL BE CAPABLE OF INTERRUPTING THE AVAILABLE FAULT CURRENT. RULE 14-012.
7. EVERY PANELBOARD SHALL BE PROTECTED ON THE SUPPLY SIDE BY OVERCURRENT DEVICES HAVING A RATING NOT GREATER THAN THAT OF PANELBOARD. RULE 14-606(1)
8. THE RATING OR SETTING OF OVERCURRENT DEVICES SHALL NOT EXCEED THE ALLOWABLE APACITY OF THE CONDUCTORS THAT THEY PROTECT. RULE 14-104.
9. RULE 14-102 REQUIRES GROUND FAULT PROTECTION ON GROUNDED CIRCUITS MORE THAN 150 VOLTS TO GROUND AND 1000 AMPERES OR MORE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SWITCHGEAR MANUFACTURER TO CO-ORDINATE THE GROUND FAULT SENSING METHOD WITH EACH PARTICULAR GROUNDING ARRANGEMENT.

NOTES:
1. TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.
2. ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.
3. CONTRACTOR TO COORDINATE EXACT LENGTH OF SECONDARY RUNS ON SITE AND PROVIDE CONDUCTORS TO SUIT. CONTRACTOR TO PROVIDE CONDUCTOR SIZES C/W LENGTH OF RUN TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. ELECTRICAL SCOPE OF WORK: THE CONTRACTOR IS ASSUMED TO BE OF MASTER ELECTRICIAN EXPERIENCE AND SHALL PROVIDE ANY APPLICABLE SINGLE LINE DIAGRAMS, PANEL SCHEDULES AND CIRCUIT PLAN DESIGNS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THIS PRICE SHALL BE INCLUDED IN THE CONTRACTORS BASE BID PRICE. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO INCLUDE THIS COST INTO THE BASE BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT IN PRICING THE ABOVE ITEMS IN THERE BID.
5. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE ACQUIRED BY CONTRACTOR.
6. REFER TO DRAWING SL-1 FOR SITE LIGHTING SCHEDULE AND DETAILS. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE AQUIRED BY CONTRACTOR.
7. CONFIRM THE FOLLOWING INSTRUCTIONS WITH LOCAL AUTHORITY PRIOR TO COMMENCEMENT OF WORK.
8. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A PRECAST CONCRETE FOUNDATION, BASE AND LID EQUAL TO BROOKLIN CONCRETE PRODUCTS CAT.NOS. BCP 114, BCP 114B AND BCP 114T6. THE BASE SHALL BE INSTALLED ON A 150mm BED OF 19mm CLEAR GRAVEL SET ON LEVEL UNDISTURBED OR COMPACTED EARTH. THE GRAVEL BED SHALL EXTEND 150mm BEYOND THE EDGES OF THE PRECAST CONCRETE BASE. THE SURFACE AREA AROUND THE TOP OF THE PRECAST CONCRETE FOUNDATION SHALL BE RESTORED TO THE ORIGINAL SITE CONDITION.
9. A CONTINUOUS LENGTH OF 2/0 AWG STRANDED COPPER GROUND WIRE SHALL BE INSTALLED A MINIMUM OF 400mm BELOW GRADE AROUND THE PRECAST CONCRETE FOUNDATION AND CONNECT TO FOUR (4) 19mm X 300mm GALVANIZED STEEL GROUND RODS BY FIVE (5) BURNDY CAT. NO. GRC3426 GROUND ROD CONNECTORS. TWO (2) 10'-0" COILS OF 2/0 AWG GROUND WIRE SHALL BE LEFT ABOVE THE PRECAST CONCRETE LID FOR CONNECTION TO THE PADMOUNT TRANSFORMER.
10. ELECTRICAL CONTRACTOR TO PROVIDE ALL GROUNDING, CABLE LUGS, ETC. TRANSFORMER AND FINAL CONNECTIONS BY LOCAL UTILITY



CONCRETE FOUNDATION DETAIL
NTS



KEY PLAN
N.T.S.

SERVICE SIZE CALCULATIONS:
BUILDING 1 - COMMERICAL/SENIORS AFF. LIVING

ESTIMATED SERVICE DEMAND
TYPICAL 2-BEDROOM TENANT SUITES

FIRST 45m²	3,500W
SECOND 45m²	1,500W
ELECTRIC RANGE	6,000W
DISHWASHER	1,500W
ELECTRIC WATER HEATER (25%x4,500W)	1,125W
ELECTRIC CLOTHES DRYER/WASHER	1,000W
AIR HANDLING UNIT	2,500W
UNIT ELECTRICAL DEMAND	17,125W
UNIT ELECTRICAL DEMAND LESS A/C	14,625W

SERVICE SIZE $\frac{17,125W}{208Vx\sqrt{3}}$ = 48A (60A PANEL)

COMMERCIAL SPACE 101

ELECTRICAL DEMAND (493m²x25W/m²)	12,325W
MISCELLANEOUS	40,000W
TOTAL ESTIMATED DEMAND	52,325W

SERVICE SIZE $\frac{52,325W}{208Vx\sqrt{3}}$ = 146A (200A PANEL)

AMMENITY SPACE 108

ELECTRICAL DEMAND (128m²x25W/m²)	3,200W
MISCELLANEOUS	20,000W
TOTAL ESTIMATED DEMAND	23,200W

SERVICE SIZE $\frac{23,200W}{208Vx\sqrt{3}}$ = 65A (100A PANEL)

AMMENITY SPACE 109

ELECTRICAL DEMAND (109m²x25W/m²)	2,725W
MISCELLANEOUS	20,000W
TOTAL ESTIMATED DEMAND	22,725W

SERVICE SIZE $\frac{22,725W}{208Vx\sqrt{3}}$ = 64A (100A PANEL)

ESTIMATED SUITES DEMAND

1 SUITES (14,625Wx1.0x1)	14,625W
2 SUITES (14,625Wx0.65x2)	19,013W
2 SUITES (14,625Wx0.40x2)	11,700W
15 SUITES (14,625Wx0.25x15)	54,844W
30 SUITES (14,625Wx0.10x30)	43,875W
AIR HANDLING UNITS (2,500Wx50)	125,000W
SUITES TOTAL	269,056W

ESTIMATED BUILDING DEMAND

ELEVATOR LOADS (72,000Wx0.75)	54,000W
GARBAGE TRISORTER (7,200Wx0.75)	5,400W
BUILDING MISCELLANEOUS (30,000W)	30,000W
TOTAL ESTIMATED DEMAND	456,706W

SERVICE SIZE = 1,268A @ 120/208V 3ϕ
OR
1,600A @ 80% (FUSED MAIN)

NO.	REVISION	DATE	BY	APPROVED
4.	REVISED AS PER CONDITIONS OF APPROVAL	MAR 26	F.K.	G.V.W.O
3.	RE-ISSUED FOR SPA	JAN 26	F.K.	G.V.W.O
2.	RE-ISSUED FOR SPA	NOV 01	B.P.	G.V.W.O
1.	ISSUED FOR SPA	DEC 07	A.L.	G.V.W.O

REVISIONS

1697 DURHAM REGIONAL HIGHWAY 2, COURTICE
RICHARD H. GAY HOLDINGS

SITE SERVICING - BLD 1
SITE ELECTRICAL

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consulting engineers and planners
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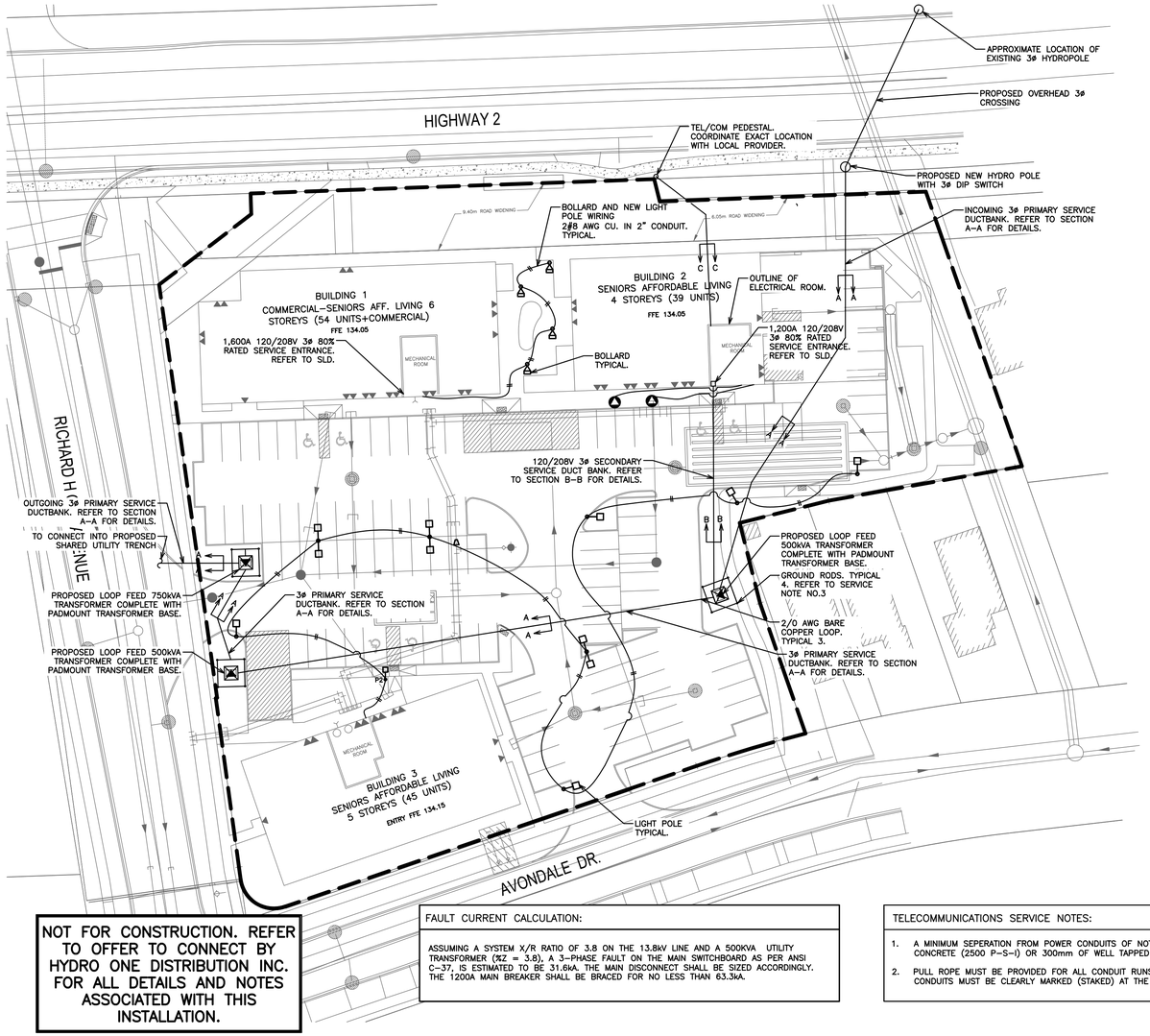
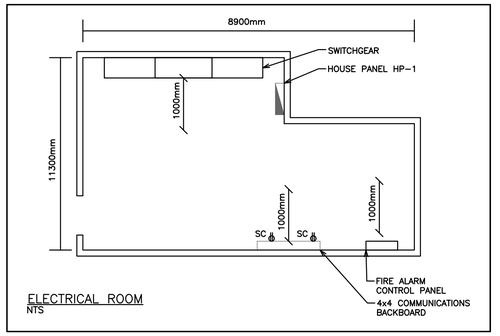
PHONE (905)576-8500 · FAX (905)576-9730
INFO@DGBIDDLE.COM

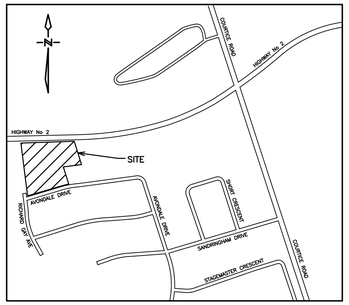
LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
03/27/24
PROVINCE OF ONTARIO

SCALE:	1:400	PROJECT NO.	122065
DRAWN BY:	A.L.	DRAWING NO.	SE-2
DESIGN BY:	A.L.		
CHECKED BY:	G.V.W.O	CAD FILE:	122065 SE
DATE:	MARCH 2024	PLOT DATE:	03/26/2024
		SUBMISSION:	COND.APRVL





ELECTRICAL ROOM
NTS



KEY PLAN
N.T.S.

GENERAL REQUIREMENTS FOR SITE ELECTRICAL WORK

1. ALL EQUIPMENT MUST BE APPROVED BY AN ACCREDITED APPROVAL AGENCY, OR ACCEPTED THROUGH FIELD EVALUATION OR BY AN INSPECTOR UNDER THE PROVISION OF RULE 2-024 OF THE CURRENT ONTARIO ELECTRICAL SAFETY CODE.
2. AT EACH DISTRIBUTION POINT, CIRCUIT BREAKERS, FUSES AND SWITCHES SHALL BE MARKED, ADJACENT THERETO, IN A CONSPICUOUS AND LEGIBLE MANNER TO INDICATE CLEARLY WHICH INSTALLATION OR PORTION OF INSTALLATION THEY PROTECT OR CONTROL AND THE MAXIMUM RATING OF OVERCURRENT DEVICE THAT IS PERMITTED. RULE 2-100(3).
3. RACEWAYS ENTERING A BUILDING AND FORMING PART OF AN UNDERGROUND SERVICE SHALL BE SEALED AND SHALL:
   A) ENTER THE BUILDING ABOVE GROUND WHERE PRACTICABLE; OR
   B) BE SUITABLY DRAINED; OR
   C) BE INSTALLED IN SUCH A WAY THAT MOISTURE AND GAS WILL NOT ENTER THE BUILDING. RULE 6-300(6).
4. WHERE WARNING TAPE IS USED TO COMPLY WITH RULE 12-012(11) AS SHOWN ON DRAWING SE-1, THE TAPE MUST BE BURIED APPROXIMATELY HALFWAY BETWEEN THE INSTALLATION AND GRADE LEVEL, COVERING THE WIDTH OF THE RACEWAYS OR CABLES INSTALLED.
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6. ALL OVERCURRENT PROTECTION SHALL BE CAPABLE OF INTERRUPTING THE AVAILABLE FAULT CURRENT. RULE 14-012.
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8. THE RATING OR SETTING OF OVERCURRENT DEVICES SHALL NOT EXCEED THE ALLOWABLE APACITY OF THE CONDUCTORS THAT THEY PROTECT. RULE 14-104.
9. RULE 14-102 REQUIRES GROUND FAULT PROTECTION ON GROUNDED CIRCUITS MORE THAN 150 VOLTS TO GROUND AND 1000 AMPERES OR MORE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SWITCHGEAR MANUFACTURER TO CO-ORDINATE THE GROUND FAULT SENSING METHOD WITH EACH PARTICULAR GROUNDING ARRANGEMENT.

SERVICE SIZE CALCULATIONS:
BUILDING 2 – SENIORS AFF. LIVING

ESTIMATED SERVICE DEMAND
TYPICAL 2-BEDROOM TENANT SUITES

FIRST 45m²	3,500W
SECOND 45m²	1,500W
ELECTRIC RANGE	6,000W
DISHWASHER	1,500W
ELECTRIC WATER HEATER (25%x4,500W)	1,125W
ELECTRIC CLOTHES DRYER/WASHER	1,000W
AIR HANDLING UNIT	2,500W
UNIT ELECTRICAL DEMAND	17,125W
UNIT ELECTRICAL DEMAND LESS A/C	14,625W

SERVICE SIZE 17,125W / 208Vx√3 = 48A (60A PANEL)

AMMENITY SPACE

ELECTRICAL DEMAND (30m²x25W/m²)	750W
MISCELLANEOUS	15,000W
TOTAL ESTIMATED DEMAND	15,750W

SERVICE SIZE 15,750W / 208Vx√3 = 44A (60A PANEL)

ESTIMATED SUITES DEMAND

1 SUITES (13,625Wx1.0x1)	13,625W
2 SUITES (13,625Wx0.65x2)	17,713W
2 SUITES (13,625Wx0.40x2)	10,900W
15 SUITES (13,625Wx0.25x15)	51,094W
18 SUITES (13,625Wx0.10x18)	24,525W
AIR HANDLING UNITS (2,500Wx38)	95,000W
SUITES TOTAL	212,856W

ESTIMATED BUILDING DEMAND

LAUNDRY ROOM	15,000W
ELEVATOR LOADS (72,000Wx0.75)	54,000W
GARBAGE TRISORTER (7,200Wx0.75)	5,400W
BUILDING MISCELLANEOUS (20,000W)	30,000W
TOTAL ESTIMATED DEMAND	333,006W

SERVICE SIZE = 925A @ 120/208V 3ϕ
OR
1,200A @ 80% (FUSED MAIN)

NOTES:
1. TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.
2. ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.
3. CONTRACTOR TO COORDINATE EXACT LENGTH OF SECONDARY RUNS ON SITE AND PROVIDE CONDUCTORS TO SUIT. CONTRACTOR TO PROVIDE CONDUCTOR SIZES C/W LENGTH OF RUN TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. ELECTRICAL SCOPE OF WORK: THE CONTRACTOR IS ASSUMED TO BE OF MASTER ELECTRICIAN EXPERIENCE AND SHALL PROVIDE ANY APPLICABLE SINGLE LINE DIAGRAMS, PANEL SCHEDULES AND CIRCUIT PLAN DESIGNS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THIS PRICE SHALL BE INCLUDED IN THE CONTRACTORS BASE BID PRICE. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO INCLUDE THIS COST INTO THE BASE BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT IN PRICING THE ABOVE ITEMS IN THERE BID.
5. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE ACQUIRED BY CONTRACTOR.
6. REFER TO DRAWING SL-1 FOR SITE LIGHTING SCHEDULE AND DETAILS. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE AQUIRED BY CONTRACTOR.
7. CONFIRM THE FOLLOWING INSTRUCTIONS WITH LOCAL AUTHORITY PRIOR TO COMMENCEMENT OF WORK.
8. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A PRECAST CONCRETE FOUNDATION, BASE AND LID EQUAL TO BROOKLIN CONCRETE PRODUCTS CAT.NOS. BCP 114, BCP 114B AND BCP 1147G. THE BASE SHALL BE INSTALLED ON A 150mm BED OF 19mm CLEAR GRAVEL SET ON LEVEL UNDISTURBED OR COMPACTED EARTH. THE GRAVEL BED SHALL EXTEND 150mm BEYOND THE EDGES OF THE PRECAST CONCRETE BASE. THE SURFACE AREA AROUND THE TOP OF THE PRECAST CONCRETE FOUNDATION SHALL BE RESTORED TO THE ORIGINAL SITE CONDITION.
9. A CONTINUOUS LENGTH OF 2/0 AWG STRANDED COPPER GROUND WIRE SHALL BE INSTALLED A MINIMUM OF 400mm BELOW GRADE AROUND THE PRECAST CONCRETE FOUNDATION AND CONNECT TO FOUR (4) 19mm X 300mm GALVANIZED STEEL GROUND RODS BY FIVE (5) BURNDY CAT. NO. GRC3426 GROUND ROD CONNECTORS. TWO (2) 10'-0" COILS OF 2/0 AWG GROUND WIRE SHALL BE LEFT ABOVE THE PRECAST CONCRETE LID FOR CONNECTION TO THE PADMOUNT TRANSFORMER.
10. ELECTRICAL CONTRACTOR TO PROVIDE ALL GROUNDING, CABLE LUGS, ETC. TRANSFORMER AND FINAL CONNECTIONS BY LOCAL UTILITY

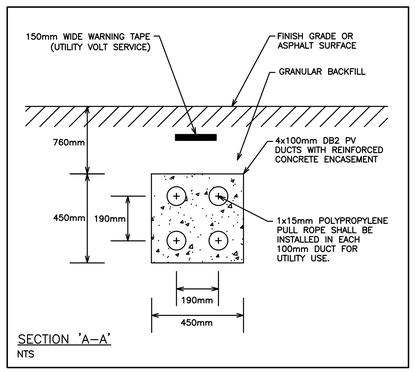
NOT FOR CONSTRUCTION. REFER TO OFFER TO CONNECT BY HYDRO ONE DISTRIBUTION INC. FOR ALL DETAILS AND NOTES ASSOCIATED WITH THIS INSTALLATION.

FAULT CURRENT CALCULATION:

ASSUMING A SYSTEM X/R RATIO OF 3.8 ON THE 13.8kV LINE AND A 500KVA UTILITY TRANSFORMER (%Z = 3.8), A 3-PHASE FAULT ON THE MAIN SWITCHBOARD AS PER ANSI C-37, IS ESTIMATED TO BE 31.6kA. THE MAIN DISCONNECT SHALL BE SIZED ACCORDINGLY. THE 1200A MAIN BREAKER SHALL BE BRACED FOR NO LESS THAN 63.3kA.

TELECOMMUNICATIONS SERVICE NOTES:

1. A MINIMUM SEPERATION FROM POWER CONDUITS OF NOT LESS THAN 100mm OF CONCRETE (2500 P-S-I) OR 300mm OF WELL TAPPED EARTH IS REQUIRED.
2. PULL ROPE MUST BE PROVIDED FOR ALL CONDUIT RUNS AND THE ENDS OF CONDUITS MUST BE CLEARLY MARKED (STAKED) AT THE PROPERTY LINE.



SECTION 'A-A'
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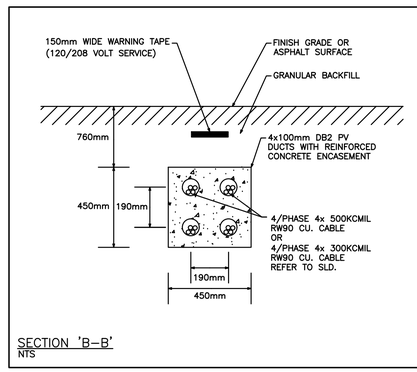

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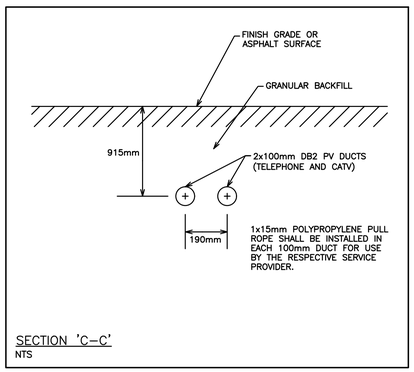

SECTION 'C-C'
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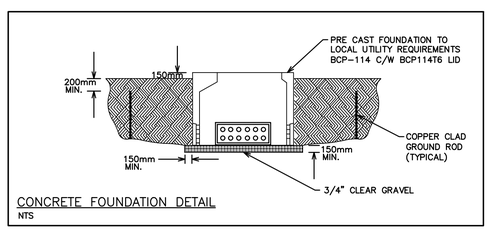

CONCRETE FOUNDATION DETAIL
NTS

NO.	REVISION	DATE	BY	APPROVED
4.	REVISED AS PER CONDITIONS OF APPROVAL	MAR 26	F.K.	G.V.W.O
3.	RE-ISSUED FOR SPA	JAN 26	F.K.	G.V.W.O
2.	RE-ISSUED FOR SPA	NOV 01	B.P.	G.V.W.O
1.	ISSUED FOR SPA	DEC 07	A.L.	G.V.W.O

REVISIONS

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SITE SERVICING – BLD 2
SITE ELECTRICAL

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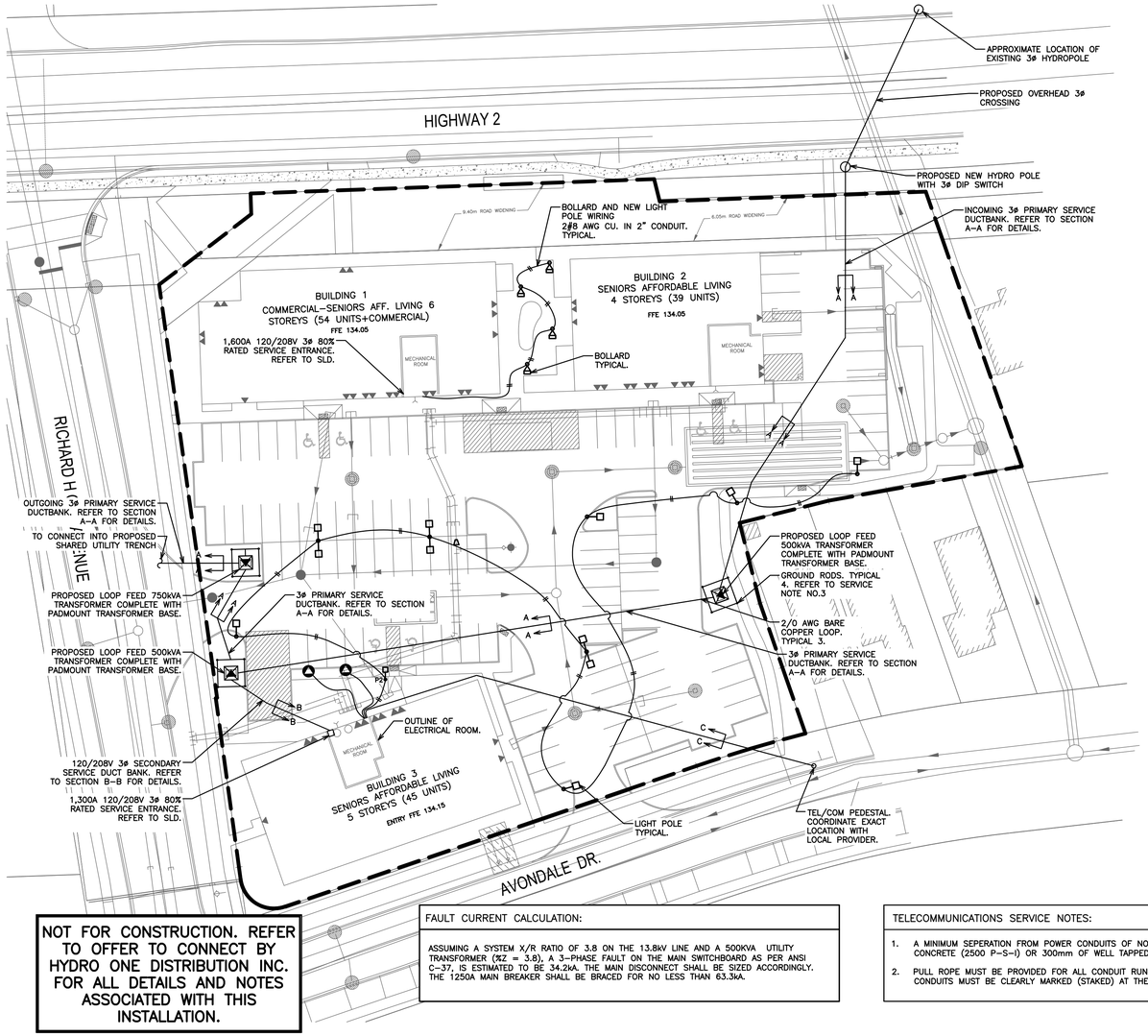
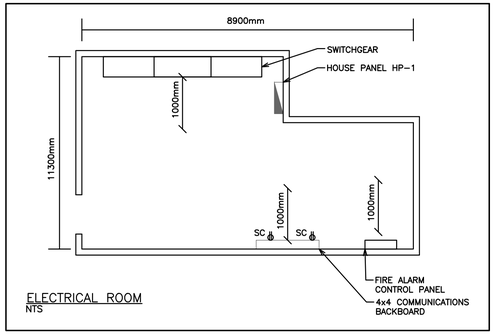
PHONE (905)576-8500 • FAX (905)576-9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
03/27/24
PROVINCE OF ONTARIO

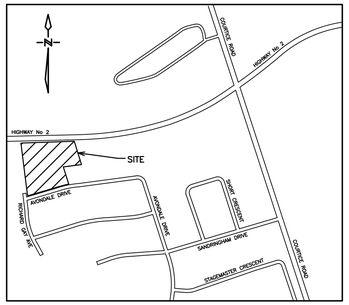
SCALE:	1:400	PROJECT NO.	122065
DRAWN BY:	A.L.	DRAWING NO.	SE-3
DESIGN BY:	A.L.		
CHECKED BY:	G.V.W.O	CAD FILE:	122065 SE
DATE:	MARCH 2024	PLOT DATE:	03/26/2024
		SUBMISSION:	COND.APRVL



NOT FOR CONSTRUCTION. REFER TO OFFER TO CONNECT BY HYDRO ONE DISTRIBUTION INC. FOR ALL DETAILS AND NOTES ASSOCIATED WITH THIS INSTALLATION.



ELECTRICAL ROOM
NTS



KEY PLAN
N.T.S.

GENERAL REQUIREMENTS FOR SITE ELECTRICAL WORK

1. ALL EQUIPMENT MUST BE APPROVED BY AN ACCREDITED APPROVAL AGENCY, OR ACCEPTED THROUGH FIELD EVALUATION OR BY AN INSPECTOR UNDER THE PROVISION OF RULE 2–024 OF THE CURRENT ONTARIO ELECTRICAL SAFETY CODE.
2. AT EACH DISTRIBUTION POINT, CIRCUIT BREAKERS, FUSES AND SWITCHES SHALL BE MARKED, ADJACENT THERETO, IN A CONSPICUOUS AND LEGIBLE MANNER TO INDICATE CLEARLY WHICH INSTALLATION OR PORTION OF INSTALLATION THEY PROTECT OR CONTROL AND THE MAXIMUM RATING OF OVERCURRENT DEVICE THAT IS PERMITTED. RULE 2–100(3).
3. RACEWAYS ENTERING A BUILDING AND FORMING PART OF AN UNDERGROUND SERVICE SHALL BE SEALED AND SHALL:
   A) ENTER THE BUILDING ABOVE GROUND WHERE PRACTICABLE; OR
   B) BE SUITABLY DRAINED; OR
   C) BE INSTALLED IN SUCH A WAY THAT MOISTURE AND GAS WILL NOT ENTER THE BUILDING. RULE 6–300(6).
4. WHERE WARNING TAPE IS USED TO COMPLY WITH RULE 12–012(11) AS SHOWN ON DRAWING SE–1, THE TAPE MUST BE BURIED APPROXIMATELY HALFWAY BETWEEN THE INSTALLATION AND GRADE LEVEL, COVERING THE WIDTH OF THE RACEWAYS OR CABLES INSTALLED.
5. A MINIMUM WORKING SPACE OF 1m WITH SECURE FOOTING SHALL BE PROVIDED AND MAINTAINED ABOUT ELECTRICAL EQUIPMENT SUCH AS SWITCHBOARDS, PANELBOARDS, CONTROL PANELS, AND MOTOR CONTROL CENTRES WHICH ARE ENCLOSED IN METAL. RULE 2–308.
6. ALL OVERCURRENT PROTECTION SHALL BE CAPABLE OF INTERRUPTING THE AVAILABLE FAULT CURRENT. RULE 14–012.
7. EVERY PANELBOARD SHALL BE PROTECTED ON THE SUPPLY SIDE BY OVERCURRENT DEVICES HAVING A RATING NOT GREATER THAN THAT OF PANELBOARD. RULE 14–606(1)
8. THE RATING OR SETTING OF OVERCURRENT DEVICES SHALL NOT EXCEED THE ALLOWABLE APACITY OF THE CONDUCTORS THAT THEY PROTECT. RULE 14–104.
9. RULE 14–102 REQUIRES GROUND FAULT PROTECTION ON GROUNDED CIRCUITS MORE THAN 150 VOLTS TO GROUND AND 1000 AMPERES OR MORE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SWITCHGEAR MANUFACTURER TO CO–ORDINATE THE GROUND FAULT SENSING METHOD WITH EACH PARTICULAR GROUNDING ARRANGEMENT.

SERVICE SIZE CALCULATIONS:
BUILDING 3 – SENIORS AFF. LIVING

ESTIMATED SERVICE DEMAND
TYPICAL 2–BEDROOM TENANT SUITES

FIRST 45m²	3,500W
SECOND 45m²	1,500W
ELECTRIC RANGE	6,000W
DISHWASHER	1,500W
ELECTRIC WATER HEATER (25%x4,500W)	1,125W
ELECTRIC CLOTHES DRYER/WASHER	1,000W
AIR HANDLING UNIT	2,500W
UNIT ELECTRICAL DEMAND	16,125W
UNIT ELECTRICAL DEMAND LESS A/C	13,625W

SERVICE SIZE $\frac{17,125W}{208Vx\sqrt{3}}$ = 45A (60A PANEL)

AMMENITY SPACE

ELECTRICAL DEMAND (30m²x25W/m²)	750W
MISCELLANEOUS	15,000W
TOTAL ESTIMATED DEMAND	15,750W

SERVICE SIZE $\frac{15,750W}{208Vx\sqrt{3}}$ = 44A (60A PANEL)

ESTIMATED SUITES DEMAND

1 SUITES (13,625Wx1.0x1)	13,625W
2 SUITES (13,625Wx0.65x2)	17,713W
2 SUITES (13,625Wx0.40x2)	10,900W
15 SUITES (13,625Wx0.25x15)	51,094W
26 SUITES (13,625Wx0.10x26)	35,425W
AIR HANDLING UNITS (2,500Wx46)	115,000W
SUITES TOTAL	243,756W

ESTIMATED BUILDING DEMAND

LAUNDRY ROOM	15,000W
ELEVATOR LOADS (72,000Wx0.75)	54,000W
GARBAGE TRISORTER (7,200Wx0.75)	5,400W
BUILDING MISCELLANEOUS (20,000W)	25,000W
TOTAL ESTIMATED DEMAND	358,906W

SERVICE SIZE = 1,011A @ 120/208V 3ϕ
OR
1,300A @ 80% (FUSED MAIN AT 1,250A)

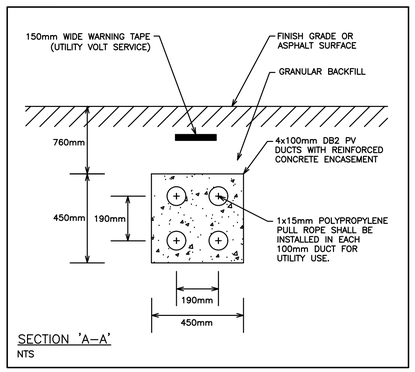
NOTES:
1. TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.
2. ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.
3. CONTRACTOR TO COORDINATE EXACT LENGTH OF SECONDARY RUNS ON SITE AND PROVIDE CONDUCTORS TO SUIT. CONTRACTOR TO PROVIDE CONDUCTOR SIZES C/W LENGTH OF RUN TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
4. ELECTRICAL SCOPE OF WORK: THE CONTRACTOR IS ASSUMED TO BE OF MASTER ELECTRICIAN EXPERIENCE AND SHALL PROVIDE ANY APPLICABLE SINGLE LINE DIAGRAMS, PANEL SCHEDULES AND CIRCUIT PLAN DESIGNS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THIS PRICE SHALL BE INCLUDED IN THE CONTRACTORS BASE BID PRICE. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO INCLUDE THIS COST INTO THE BASE BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT IN PRICING THE ABOVE ITEMS IN THERE BID.
5. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE ACQUIRED BY CONTRACTOR.
6. REFER TO DRAWING SL–1 FOR SITE LIGHTING SCHEDULE AND DETAILS. COORDINATE ALL INCOMING SERVICES WITH LIGHTING POLES, CONDUITS, GAS AND SITE SERVICES AS PER RELATED CIVIL DRAWINGS TO BE AQUIRED BY CONTRACTOR.
7. CONFIRM THE FOLLOWING INSTRUCTIONS WITH LOCAL AUTHORITY PRIOR TO COMMENCEMENT OF WORK.
8. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A PRECAST CONCRETE FOUNDATION, BASE AND LID EQUAL TO BROOKLIN CONCRETE PRODUCTS CAT.NOS. BCP 114, BCP 114B AND BCP 11416. THE BASE SHALL BE INSTALLED ON A 150mm BED OF 19mm CLEAR GRAVEL SET ON LEVEL UNDISTURBED OR COMPACTED EARTH. THE GRAVEL BED SHALL EXTEND 150mm BEYOND THE EDGES OF THE PRECAST CONCRETE BASE. THE SURFACE AREA AROUND THE TOP OF THE PRECAST CONCRETE FOUNDATION SHALL BE RESTORED TO THE ORIGINAL SITE CONDITION.
9. A CONTINUOUS LENGTH OF 2/0 AWG STRANDED COPPER GROUND WIRE SHALL BE INSTALLED A MINIMUM OF 400mm BELOW GRADE AROUND THE PRECAST CONCRETE FOUNDATION AND CONNECT TO FOUR (4) 19mm X 300mm GALVANIZED STEEL GROUND RODS BY FIVE (5) BURNDY CAT. NO. GRC3426 GROUND ROD CONNECTORS. TWO (2) 10'–0" COILS OF 2/0 AWG GROUND WIRE SHALL BE LEFT ABOVE THE PRECAST CONCRETE LID FOR CONNECTION TO THE PADMOUNT TRANSFORMER.
10. ELECTRICAL CONTRACTOR TO PROVIDE ALL GROUNDING, CABLE LUGS, ETC. TRANSFORMER AND FINAL CONNECTIONS BY LOCAL UTILITY

FAULT CURRENT CALCULATION:

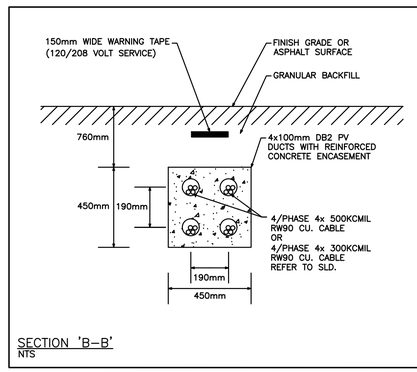
ASSUMING A SYSTEM X/R RATIO OF 3.8 ON THE 13.8kV LINE AND A 500KVA UTILITY TRANSFORMER (%Z = 3.8), A 3–PHASE FAULT ON THE MAIN SWITCHBOARD AS PER ANSI C–37, IS ESTIMATED TO BE 34.2kA. THE MAIN DISCONNECT SHALL BE SIZED ACCORDINGLY. THE 1250A MAIN BREAKER SHALL BE BRACED FOR NO LESS THAN 63.3kA.

TELECOMMUNICATIONS SERVICE NOTES:

1. A MINIMUM SEPERATION FROM POWER CONDUITS OF NOT LESS THAN 100mm OF CONCRETE (2500 P–S–I) OR 300mm OF WELL TAPPED EARTH IS REQUIRED.
2. PULL ROPE MUST BE PROVIDED FOR ALL CONDUIT RUNS AND THE ENDS OF CONDUITS MUST BE CLEARLY MARKED (STAKED) AT THE PROPERTY LINE.



SECTION 'A–A'
NTS



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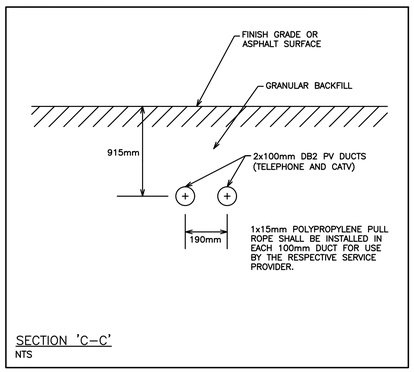

SECTION 'C–C'
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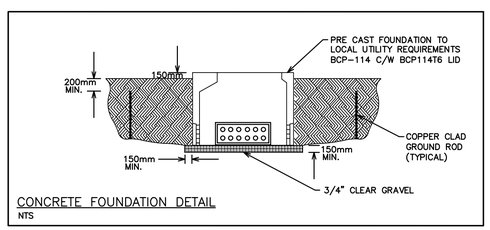


CONCRETE FOUNDATION DETAIL
NTS

NO.	REVISION	DATE	BY	APPROVED
4.	REVISED AS PER CONDITIONS OF APPROVAL	MAR 26	F.K.	G.V.W.O
3.	RE–ISSUED FOR SPA	JAN 26	F.K.	G.V.W.O
2.	RE–ISSUED FOR SPA	NOV 01	B.P.	G.V.W.O
1.	ISSUED FOR SPA	DEC 07	A.L.	G.V.W.O

REVISIONS

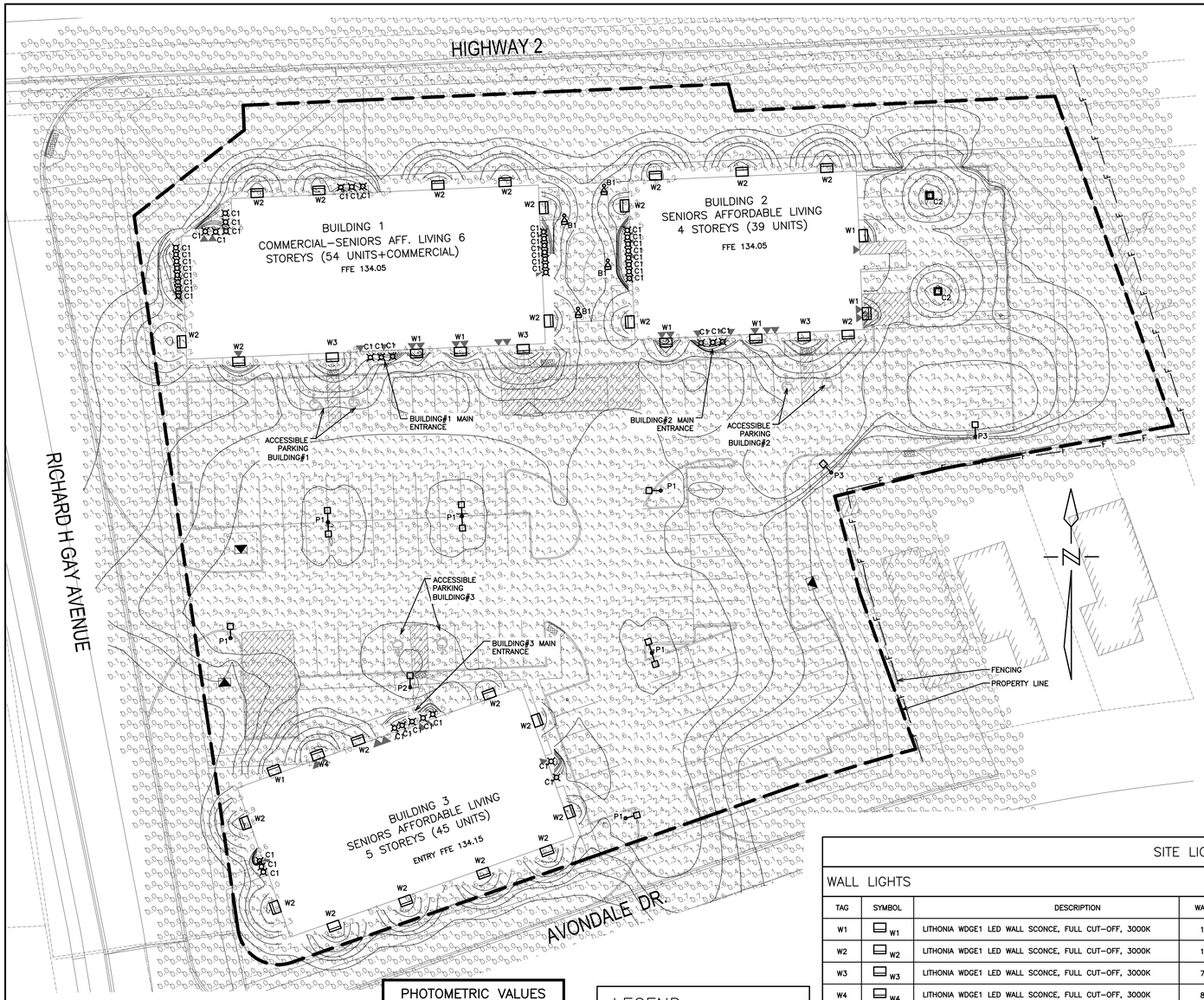
1697 DURHAM REGIONAL HIGHWAY 2, COURTICE
RICHARD H. GAY HOLDINGS

SITE SERVICING – BLD 3
SITE ELECTRICAL

D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST • OSHAWA,ON L1H 1B6
PHONE (905)576–8500 • FAX (905)576–9730
INFO@DGBIDDLE.COM

LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
03/27/24
PROVINCE OF ONTARIO

SCALE:	1:400	PROJECT NO.	122065
DRAWN BY:	A.L.	DRAWING NO.	SE–4
DESIGN BY:	A.L.		
CHECKED BY:	G.V.W.O	CAD FILE:	122065 SE
DATE:	MARCH 2024	PLOT DATE:	03/26/2024
		SUBMISSION:	COND.APRVL



PHOTOMETRIC VALUES MODELED AT 1.5m ABOVE FINISHED GRADE.

BOLLARD – LED–STATIC

GARDCO – SFC LED

LEGEND

	CANOPY LIGHTS
	POLE LIGHTS
	GARAGE LIGHTS
	BOLLARD LIGHTS
	WALL LIGHTS
1.5	PHOTOMETRIC VALUES (SHOWN IN FOOTCANDLES)
	ISOMETRIC LIGHT CURVES

POLE SCHEDULE

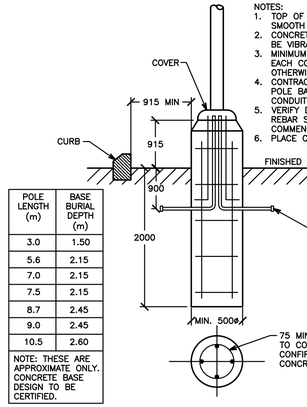
TAG	MANUFACTURER	DESCRIPTION	HEIGHT	MODEL NUMBER	NOTES
A	DYNAPOLE	4" STRAIGHT, SQUARE, STEEL POLE, BLACK	6 m	SSS4–20	REFER TO LIGHT POLE BASE DETAIL

LITHONIA – DSX1 LED

LITHONIA – DSX1 LED

LITHONIA – WDGE LED

GOHTAM – EVO4 LED



POLE LENGTH (m)	BASE BURIAL DEPTH (m)
3.0	1.50
5.6	2.15
7.0	2.15
7.5	2.15
8.7	2.45
9.0	2.45
10.5	2.60

NOTE: THESE ARE APPROXIMATE ONLY. CONCRETE BASE DESIGN TO BE CERTIFIED.

LIGHT POLE BASE DETAIL
NOT TO SCALE

NOTES:
1. TOP OF FOUNDATION SHALL BE TROWELLED SMOOTH AND LEVEL
2. CONCRETE STRENGTH 20 MPA AND SHALL BE VIBRATED
3. MINIMUM OF TWO SLEEVES REQUIRED FOR EACH CONCRETE FOUNDATION UNLESS OTHERWISE INDICATED
4. CONTRACTOR TO VERIFY OPENING SIZE IN POLE BASE PLATE PRIOR TO SETTING CONDUIT SLEEVES
5. VERIFY DEPTH, CONCRETE QUALITY AND REBAR SIZE FOR CONCRETE BASE PRIOR TO COMMENCEMENT OF WORK.
6. PLACE CONCRETE IN PRE AUGERED HOLES

SITE LIGHTING SCHEDULE

WALL LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MODEL NUMBER	MOUNTING HEIGHT
W1	W1	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	10 W	WDGE1 LED P1 30K 80CRI VF SRM DBLXD	2.75m AFG
W2	W2	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	10 W	WDGE1 LED P1 30K 80CRI VF SRM DBLXD	3.66m AFG
W3	W3	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	71 W	WDGE3 LED P3 30K 70CRI R4 SRM DBLXD	3.66m AFG
W4	W4	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	88 W	WDGE3 LED P4 30K 80CRI RFT SRM DBLXD	3.66m AFG

POLE LIGHTS

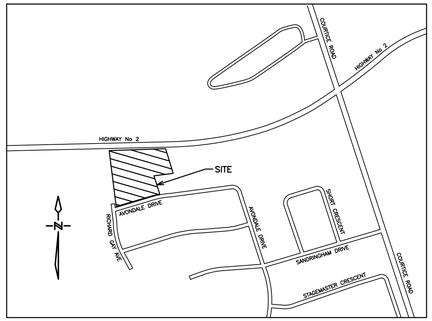
TAG	SYMBOL	DESCRIPTION	POLE	WATTAGE	MODEL NUMBER	MOUNTING HEIGHT
P1	P1	D–SERIES SIZE 1 LED AREA LUMINAIRE, FULL CUT–OFF, 3000K	A	51 W	DSX1 LED P1 30K 80CRI T3M MVOLT SPA DBLXD	7.00m AFG
P2	P2	D–SERIES SIZE 1 LED AREA LUMINAIRE, FULL CUT–OFF, 3000K	A	124 W	DSX1 LED P4 30K 80CRI T3M MVOLT SPA DBLXD	7.00m AFG
P3	P3	D–SERIES SIZE 1 LED AREA LUMINAIRE, FULL CUT–OFF, 3000K	A	51 W	DSX1 LED P1 30K 80CRI BLC4 MVOLT SPA DBLXD	7.00m AFG

CANOPY & GARAGE LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MOUNTING	MODEL NUMBER
C1	C1	GOTHAM LED ROUND DOWNLIGHT, FULL CUT–OFF, 3000K	9 W	RECESSED	EVO4 30/10 AR MD LD 120 GZ1 NLT
C2	C2	SLENDERFORM LED CANOPY, SFC GEN2, 4000K	38 W	RECESSED	SFC–5W–48L–250–NW–G2

BOLLARD LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MODEL NUMBER	HEIGHT
B1	B1	D–SERIES ROUND, LED–STATIC, SYMMETRIC 16 LEDS, 4000K	28 W	DSX1 LED 16C 530 40K SYM	1.00m AFG



KEY PLAN
NOT TO SCALE

PRELIMINARY
NOT FOR CONSTRUCTION

STANDARD ABREVIATIONS

AFG	ABOVE FINISHED GRADE
CTE	CONNECT TO EXISTING
C/W	COMPLETE WITH

NUMERIC SUMMARY

LOCATION	AVERAGE	MAXIMUM	MINIMUM	AVG/MIN	MAX/MIN
ACCESSIBLE PARKING BUILDING#1	4.07	14.10	0.50	8.14	28.20
ACCESSIBLE PARKING BUILDING#2	3.44	8.70	0.90	3.82	9.67
ACCESSIBLE PARKING BUILDING#3	4.05	5.20	2.80	1.45	1.86
GENERAL PARKING	1.54	14.10	0.03	51.33	470.00
BUILDING#1 MAIN ENTRANCE	23.20	35.40	12.10	1.92	2.93
BUILDING#2 MAIN ENTRANCE	38.73	53.80	10.30	3.76	5.22
BUILDING#3 MAIN ENTRANCE	19.33	23.60	11.90	1.62	1.98

SITE LIGHTING NOTES

1. ALL NEW OUTSIDE LIGHTS TO BE CONTROLLED BY BUILDING PHOTOCELL AT HIGH LEVEL AND TIME SWITCH. COORDINATE CONTROLS AND POWER REQUIREMENTS WITH BUILDING DISTRIBUTION DRAWINGS.
2. THIS DRAWING INDICATES ALL PROPOSED OUTDOOR LIGHTING FIXTURES FOR THIS PROPOSED DEVELOPMENT. THE LIGHTING DESIGN IS IN ACCORDANCE WITH THE APPLICABLE LIGHTING ZONE AS ESTABLISHED BY THE PLANNING DEPARTMENT, AND DESIGNED WITH AN AVERAGE TO MINIMUM RATIO IN ACCORDANCE WITH THE ILLUMINATING ENGINEERING SOCIETY GUIDELINES. THIS LIGHTING DESIGN WILL NOT CREATE ANY OBJECTIONABLE GLARE FOR ADJACENT PROPERTIES.
3. CONTRACTOR TO BE RESPONSIBLE FOR LOCATION OF ALL EXISTING UNDERGROUND & OVERHEAD UTILITIES. VARIOUS UTILITIES CONCERNED TO BE GIVEN REQUIRED ADVANCE NOTICE PRIOR TO ANY DIGGING, FOR STAKE OUT. THE CONSULTANT ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF EXISTING UTILITIES AS INDICATED ON THIS DRAWING.
4. CONTRACTOR TO REVIEW LIGHT FIXTURE SHOP DRAWINGS WITH CLIENT AND ENGINEER PRIOR TO COMMENCEMENT OF WORK FOR FINAL APPROVAL.
5. FINAL LOCATIONS OF WALL MOUNTED LIGHTING TO BE APPROVED BY ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK.
6. PHOTOMETRIC VALUES ARE SHOWN IN FOOTCANDLES WITH ISOMETRIC LIGHT CURVES
7. ALL LIGHT FIXTURES TO BE FULL CUT–OFF, DOWNLIGHTING ONLY, DARK SKY COMPLIANT.

NO.	DATE	REVISION	BY
5.	MAR 26	REVISED AS PER CONDITIONS OF APPROVAL	F.K.
4.	JAN 26	RE–ISSUED FOR SPA	F.K.
3.	NOV 1	RE–ISSUED FOR SPA	B.P.
2.	OCT 20	ISSUED FOR COORDINATION	F.K.
1.	DEC 07	ISSUED FOR SPA	A.L.

REVISIONS

1697 DURHAM REGIONAL HIGHWAY NO.2, COURTICE

SITE LIGHTING PHOTOMETRIC PLAN

D.G. Biddle & Associates Limited
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info@dgbiddle.com

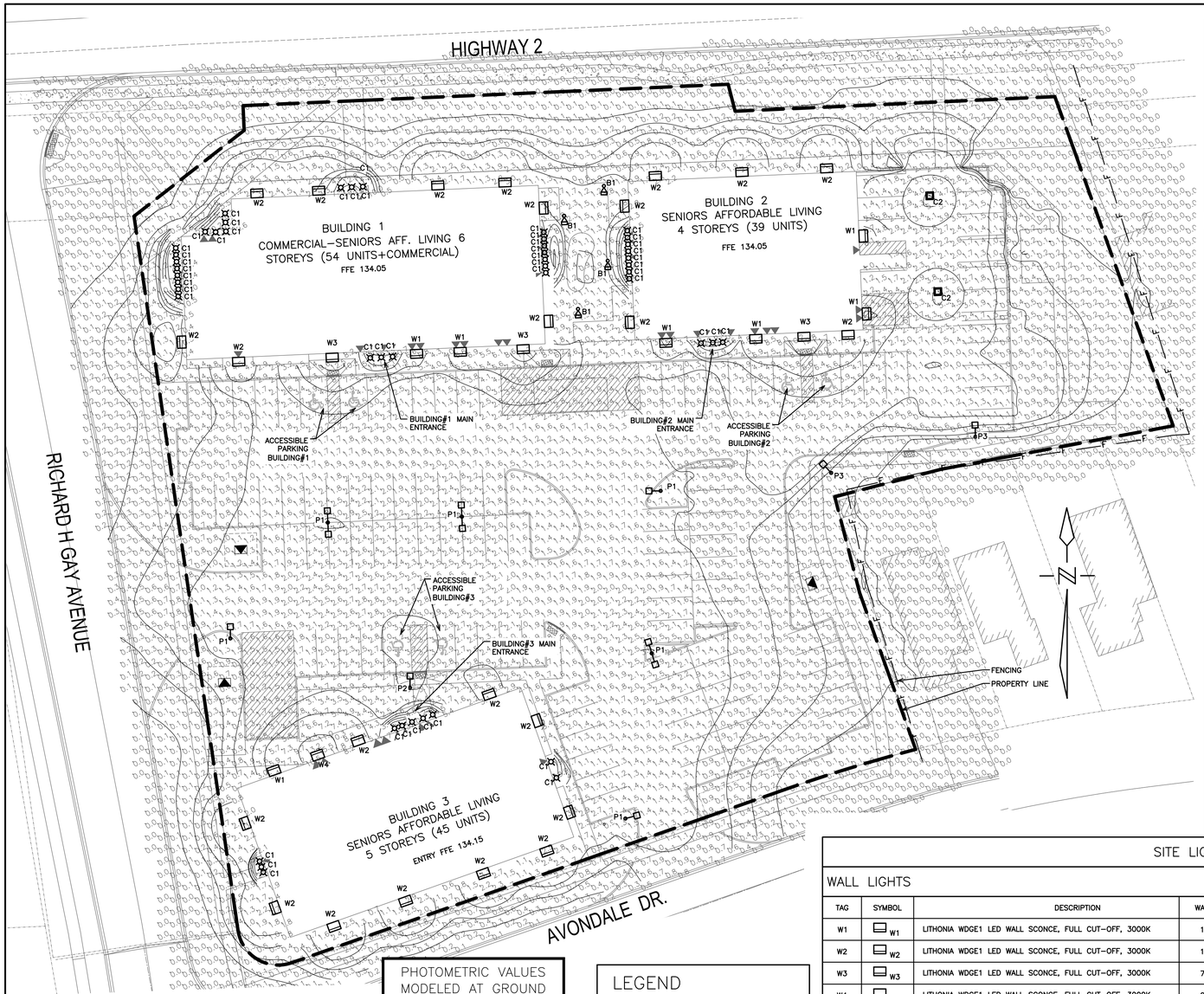
LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
03/27/24
PROVINCE OF ONTARIO

SCALE:	1:300
DRAWN BY:	B.P.
DESIGN BY:	B.P./S.D.
CHECKED BY:	G.V.W.O.
DATE:	MARCH 2024

PROJECT NO. 122065

DRAWING NO. SL–1

X:\STAFF\JOB FILES\122000\122065 1697 HIGHWAY 2, COURTICE\122065 DRAWINGS\122065 ELECTRICAL\122065 SITE LIGHTING\122065 SL SITE LIGHTING.DWG



PHOTOMETRIC VALUES MODELED AT GROUND LEVEL

BOLLARD – LED–STATIC

GARDCO – SFC LED

LEGEND

	CANOPY LIGHTS
	POLE LIGHTS
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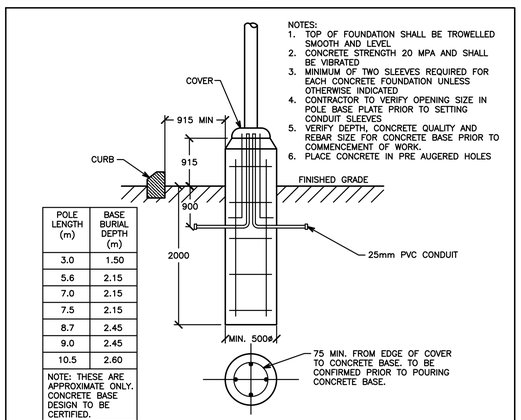

POLE LENGTH (m)	BASE BURIAL DEPTH (m)
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7.0	2.15
7.5	2.15
8.7	2.45
9.0	2.45
10.5	2.60

NOTE: THESE ARE APPROXIMATE ONLY. CONCRETE BASE DESIGN TO BE CERTIFIED.

LIGHT POLE BASE DETAIL
NOT TO SCALE

NOTES:
1. TOP OF FOUNDATION SHALL BE TROWELLED SMOOTH AND LEVEL
2. CONCRETE STRENGTH 20 MPA AND SHALL BE VIBRATED
3. MINIMUM OF TWO SLEEVES REQUIRED FOR EACH CONCRETE FOUNDATION UNLESS OTHERWISE INDICATED
4. CONTRACTOR TO VERIFY OPENING SIZE IN POLE BASE PLATE PRIOR TO SETTING CONDUIT SLEEVES
5. VERIFY DEPTH, CONCRETE QUALITY AND REBAR SIZE FOR CONCRETE BASE PRIOR TO COMMENCEMENT OF WORK.
6. PLACE CONCRETE IN PRE AUGERED HOLES

SITE LIGHTING SCHEDULE

WALL LIGHTS

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POLE LIGHTS

TAG	SYMBOL	DESCRIPTION	POLE	WATTAGE	MODEL NUMBER	MOUNTING HEIGHT
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P2	P2	D–SERIES SIZE 1 LED AREA LUMINAIRE, FULL CUT–OFF, 3000K	A	124 W	DSX1 LED P4 30K 80CRI T3M MVOLT SPA DBLXD	7.00m AFG
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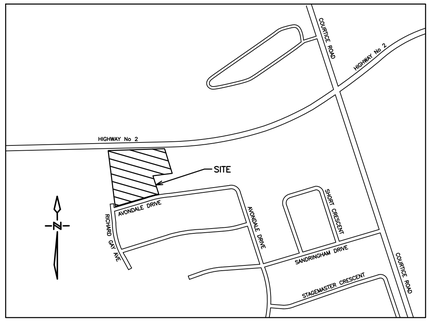
CANOPY & GARAGE LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MOUNTING	MODEL NUMBER
C1	C1	GOTHAM LED ROUND DOWNLIGHT, FULL CUT–OFF, 3000K	9 W	RECESSED	EVO4 30/10 AR MD LD 120 GZ1 NLT
C2	C2	SLENDERFORM LED CANOPY, SFC GEN2, 4000K	38 W	RECESSED	SFC–5W–48L–250–NW–G2

BOLLARD LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MODEL NUMBER	HEIGHT
B1	B1	D–SERIES ROUND, LED–STATIC, SYMMETRIC 16 LEDS, 4000K	28 W	DSX1 LED 16C 530 40K SYM	1.00m AFG



KEY PLAN
NOT TO SCALE

PRELIMINARY
NOT FOR CONSTRUCTION

STANDARD ABREVIATIONS

AFG	ABOVE FINISHED GRADE
CTE	CONNECT TO EXISTING
C/W	COMPLETE WITH

NUMERIC SUMMARY

LOCATION	AVERAGE	MAXIMUM	MINIMUM	AVG/MIN	MAX/MIN
ACCESSIBLE PARKING BUILDING#1	4.41	8.90	2.60	1.70	3.42
ACCESSIBLE PARKING BUILDING#2	4.28	6.60	2.30	1.86	2.87
ACCESSIBLE PARKING BUILDING#3	3.05	3.30	2.70	1.13	1.22
GENERAL PARKING	1.66	8.90	0.10	16.60	89.00
BUILDING#1 MAIN ENTRANCE	21.47	23.70	20.00	1.07	1.19
BUILDING#2 MAIN ENTRANCE	21.00	26.00	16.40	1.28	1.59
BUILDING#3 MAIN ENTRANCE	27.07	32.00	24.50	1.10	1.31

SITE LIGHTING NOTES

1. ALL NEW OUTSIDE LIGHTS TO BE CONTROLLED BY BUILDING PHOTOCELL AT HIGH LEVEL AND TIME SWITCH. COORDINATE CONTROLS AND POWER REQUIREMENTS WITH BUILDING DISTRIBUTION DRAWINGS.
2. THIS DRAWING INDICATES ALL PROPOSED OUTDOOR LIGHTING FIXTURES FOR THIS PROPOSED DEVELOPMENT. THE LIGHTING DESIGN IS IN ACCORDANCE WITH THE APPLICABLE LIGHTING ZONE AS ESTABLISHED BY THE PLANNING DEPARTMENT, AND DESIGNED WITH AN AVERAGE TO MINIMUM RATIO IN ACCORDANCE WITH THE ILLUMINATING ENGINEERING SOCIETY GUIDELINES. THIS LIGHTING DESIGN WILL NOT CREATE ANY OBJECTIONABLE GLARE FOR ADJACENT PROPERTIES.
3. CONTRACTOR TO BE RESPONSIBLE FOR LOCATION OF ALL EXISTING UNDERGROUND & OVERHEAD UTILITIES. VARIOUS UTILITIES CONCERNED TO BE GIVEN REQUIRED ADVANCE NOTICE PRIOR TO ANY DIGGING, FOR STAKE OUT. THE CONSULTANT ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF EXISTING UTILITIES AS INDICATED ON THIS DRAWING.
4. CONTRACTOR TO REVIEW LIGHT FIXTURE SHOP DRAWINGS WITH CLIENT AND ENGINEER PRIOR TO COMMENCEMENT OF WORK FOR FINAL APPROVAL.
5. FINAL LOCATIONS OF WALL MOUNTED LIGHTING TO BE APPROVED BY ARCHITECT AND OWNER PRIOR TO COMMENCEMENT OF WORK.
6. PHOTOMETRIC VALUES ARE SHOWN IN FOOTCANDLES WITH ISOMETRIC LIGHT CURVES
7. ALL LIGHT FIXTURES TO BE FULL CUT–OFF, DOWNLIGHTING ONLY, DARK SKY COMPLIANT.

NO.	DATE	REVISION	BY
5.	MAR 26	REVISED AS PER CONDITIONS OF APPROVAL	F.K.
4.	JAN 26	RE–ISSUED FOR SPA	F.K.
3.	NOV 1	RE–ISSUED FOR SPA	B.P.
2.	OCT 20	ISSUED FOR COORDINATION	F.K.
1.	DEC 07	ISSUED FOR SPA	A.L.

REVISIONS

1697 DURHAM REGIONAL HIGHWAY NO.2, COURTICE

SITE LIGHTING PHOTOMETRIC PLAN

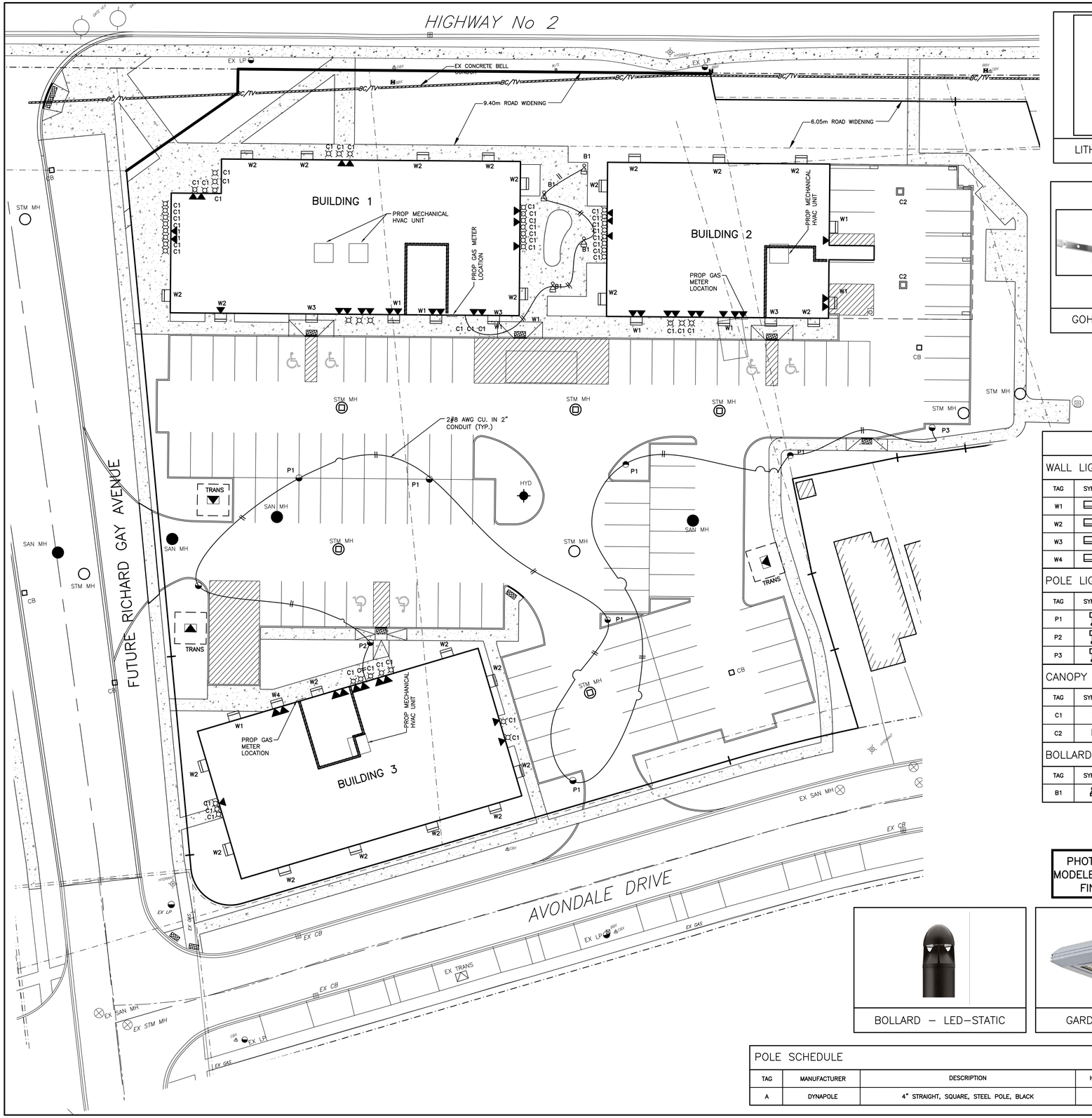
D.G. Biddle & Associates Limited
consulting engineers and planners
96 KING STREET EAST OSHAWA,ON L1H 1B6
PHONE (905)576-8500 • FAX (905)576-9730
info@dgbiddle.com

LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
03/27/24
PROVINCE OF ONTARIO

SCALE:	1:300
DRAWN BY:	B.P.
DESIGN BY:	B.P./S.D.
CHECKED BY:	G.V.W.O.
DATE:	MARCH 2024

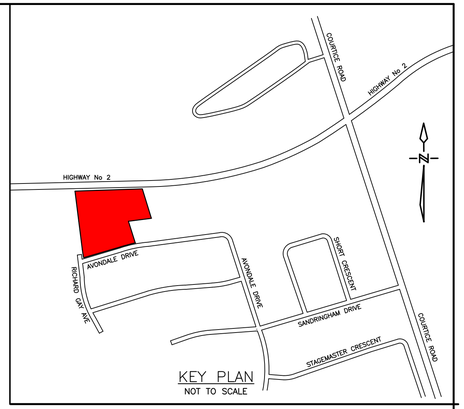
PROJECT NO. 122065
DRAWING NO. SL–2

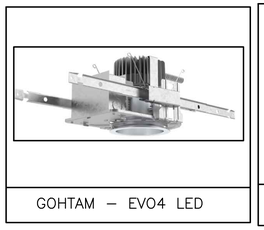
X:\STAFF\JOB FILES\122000\122065 1697 Highway 2, COURTICE\122065 DRAWINGS\122065 ELECTRICAL\122065 SITE LIGHTING\122065 SL SITE LIGHTING.DWG



LITHONIA – WDGE LED

LITHONIA – DSX1 LED





GOHTAM – EVO4 LED

LITHONIA – DSX1 LED

BENCH MARK

GEODETIC BENCH MARK: 67–U–027
COURTICE ROAD BRIDGE OVER BLACK CREEK, 45.5m NORTH OF HWY NO. 2. TABLET IN WEST FACE OF CONCRETE ABUTMENT 4.0m FROM NORTH END OF BRIDGE, 1.2m NORTH OF SOUTHWEST CORNER, 450mm BELOW TOP OF SIDEWALK.
ELEVATION 132.044
(PRIOR TO 1978 ELEVATION)

LEGEND

SITE TRANSFORMER
SITE STREET LIGHT
SITE MAILROOM LOCATION
EX BELL PEDESTAL

SITE LIGHTING SCHEDULE

WALL LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MODEL NUMBER	MOUNTING HEIGHT
W1	W1	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	10 W	WDGE1 LED P1 30K 80CRI VF SRM DBLXD	2.75m AFG
W2	W2	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	10 W	WDGE1 LED P1 30K 80CRI VF SRM DBLXD	3.66m AFG
W3	W3	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	71 W	WDGE3 LED P3 30K 70CRI R4 SRM DBLXD	3.66m AFG
W4	W4	LITHONIA WDGE1 LED WALL SCONCE, FULL CUT–OFF, 3000K	88 W	WDGE3 LED P4 30K 80CRI RFT SRM DBLXD	3.66m AFG

POLE LIGHTS

TAG	SYMBOL	DESCRIPTION	POLE	WATTAGE	MODEL NUMBER	MOUNTING HEIGHT
P1	P1	D–SERIES SIZE 1 LED AREA LUMINAIRE, FULL CUT–OFF, 3000K	A	51 W	DSX1 LED P1 30K 80CRI T3M MVOLT SPA DBLXD	7.00m AFG
P2	P2	D–SERIES SIZE 1 LED AREA LUMINAIRE, FULL CUT–OFF, 3000K	A	124 W	DSX1 LED P4 30K 80CRI T3M MVOLT SPA DBLXD	7.00m AFG
P3	P3	D–SERIES SIZE 1 LED AREA LUMINAIRE, FULL CUT–OFF, 3000K	A	51 W	DSX1 LED P1 30K 80CRI BLC4 MVOLT SPA DBLXD	7.00m AFG

CANOPY & GARAGE LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MOUNTING	MODEL NUMBER
C1	C1	GOTHAM LED ROUND DOWNLIGHT, FULL CUT–OFF, 3000K	9 W	RECESSED	EVO4 30/10 AR MD LD 120 GZ1 NLT
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BOLLARD LIGHTS

TAG	SYMBOL	DESCRIPTION	WATTAGE	MODEL NUMBER	HEIGHT
B1	B1	D–SERIES ROUND, LED–STATIC, SYMMETRIC 16 LEDS, 4000K	28 W	DSX1 LED 16C 530 40K SYM	1.00m AFG

PHOTOMETRIC VALUES MODELED AT 1.5m ABOVE FINISHED GRADE.

BOLLARD – LED–STATIC

GARDCO – SFC LED

LEGEND

C1	CANOPY LIGHTS
P1	POLE LIGHTS
C2	GARAGE LIGHTS
B1	BOLLARD LIGHTS
W1	WALL LIGHTS
1.5	PHOTOMETRIC VALUES (SHOWN IN FOOTCANDLES)
	ISOMETRIC LIGHT CURVES

POLE SCHEDULE

TAG	MANUFACTURER	DESCRIPTION	HEIGHT	MODEL NUMBER	NOTES
A	DYNAPOLE	4" STRAIGHT, SQUARE, STEEL POLE, BLACK	6 m	SSS4–20	REFER TO LIGHT POLE BASE DETAIL

NO.	DATE	REVISION	BY
3.	03/27/2024	REVISED AS PER CONDITIONS OF APPROVAL COMMENTS	MH
2.	01/26/2024	REVISED AS PER 2ND SUBMISSION COMMENTS	MH

REVISIONS

1697 HIGHWAY No 2, COURTICE, CLARINGTON

UTILITY COORDINATION PLAN

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Oshawa, Ontario, L1H 1B6
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dgbiddle.com

LICENSED PROFESSIONAL ENGINEER
G. V. W. OSBORNE
100136545
03/27/24
PROVINCE OF ONTARIO

SCALE:	1:250	PROJECT NO.	122065
DRAWN BY:	M.J.H.	DRAWING NO.	UC–1
DESIGN BY:	M.J.H.		
CHECKED BY:	M.B.C.		
DATE:	OCTOBER 2023		

X:\STAFF\JOB FILES\122000\122065 1697 HIGHWAY 2, COURTICE\122065 DRAWINGS\122065 ENGINEERING DRAWINGS\122065–UCP PLAN.DWG
27/03/2024