

The position of existing above ground and underground utilities and facilities are not necessarily shown on the drawings, and where shown, the accuracy of the position of such utilities and facilities is not guaranteed. Before starting work, the contractor shall confirm the exact location of all existing utilities and facilities, and shall assume all liability for damage to them.

Drawings shall not be used for construction unless sealed and signed. All work to be performed in accordance with the Occupational Health & Safety Act 1990.

Any errors and/or omissions shall be reported to Pinestone Engineering Ltd. without delay.



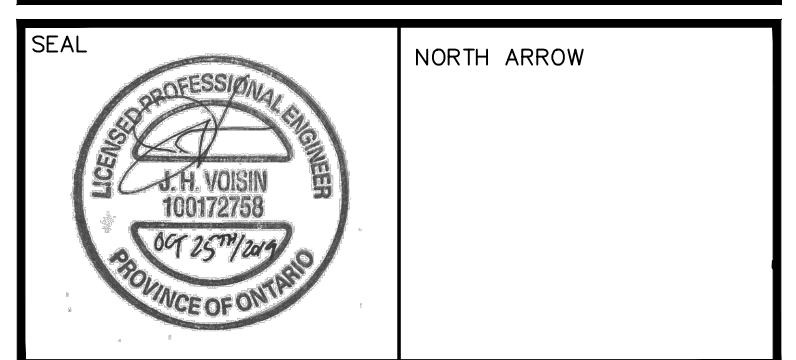
NOTES

1. TOPOGRAPHIC SURVEY AND LEGAL INFORMATION PROVIDED BY 'RUDY' MAAS SURVEYING LTD NOV 21, 2017.
2. SITE PLAN PROVIDED BY IAN S. MALCOM ARCHITECTS.
3. PARKING GARAGE GRADES BY OTHERS.

BENCHMARK

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO VCM 00119673109 HAVING AN ELEVATION OF 220.21.

NO.	YY.MM.DD	REVISION	BY
3	19.10.17	REVISED PER CITY COMMENTS	J.L.
2	19.06.13	REVISED PER LSRCA COMMENTS	J.L.
1	19.03.07	REVISED PER CITY COMMENTS	J.L.



DESIGN BY:	J.V.
DRAWN BY:	J.L.
CHECKED:	J.V.
DATE:	OCT. 2019
SCALE:	N.T.S.

PROJECT

185 DUNLOP STREET WATERFRONT CONDO DEVELOPMENT

DRAWING TITLE

DETAILS PLAN

PROJECT NO.	DRAWING NO.	REVISION
17-11338	DET-1	3

GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARD DRAWINGS (BSD) AND ONTARIO PROVINCIAL STANDARD DRAWINGS.
- ORDER OF PRECEDENCE OF STANDARD DRAWINGS FIRSTLY CITY OF BARRIE STANDARD DRAWINGS (BSD) AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD)
- LOCATION OF EXISTING SERVICES ARE NOT GUARANTEED. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- A RIGHT OF WAY ACTIVITY PERMIT IS REQUIRED FROM THE CITY OF BARRIE OPERATIONS DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY WORKS ON THE SITE.
- A SITE ALTERATION PERMIT IS REQUIRED FROM THE ENGINEERING DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS ON THE SITE. (IF ALTERATION IS GREATER THEN 0.5ha)
- NATIVE MATERIAL SUITABLE FOR BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DENSITY.
- GRANULAR MATERIAL USED FOR BACKFILL, SHALL BE PLACED IN LAYERS 150MM IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE CITY ENGINEERING DEPARTMENT.
- ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GR/ ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE CITY ENGINEERING DEPARTMENT.

GENERAL NOTES – SANITARY SEWER

SANITARY SERVICE LATERALS

- SANITARY LATERAL CONNECTION TO BE LOCATED AT THE CENTRELINE OF THE LOT AND CAPPED.
- LOCATION OF LATERAL TO BE MARKED 2.0m PAST PROPERTY LINE WITH A 50 x 100mm WOOD MARKER, PAINTED GREEN, EXTENDING FROM SERVICE INVERT TO 300mm ABOVE GROUND LEVEL.
- PIPE TO BE MINIMUM 100 mm DIA. PVC SDR28, RUBBER GASKET TYPE JOINTS AND SHALL CONFORM TO C.S.A. (B-182.2.3.4) (COLOURED) FOR A RESIDENTIAL HOUSE AND 150mm MINIMUM DIA. PVC SDR28 FOR INDUSTRIAL/COMMERCIAL DEVELOPMENT.
- MINIMUM DEPTH OF LATERAL AT PROPERTY LINE SHALL BE 2.4m MEASURED FROM THE SEWER OBVERT TO FINISHED GROUND SURFACE ELEVATION UNLESS NOTED OTHERWISE.
- ALL CONNECTIONS TO NEW SANITARY MAINS SHALL BE PRE-MANUFACTURED, FABRICATED TEES. CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE MADE WITH APPROVED FACTORY MADE TEES OR INSERTA-TEES IN STRICT ACCORDANCE TO MANUFACTURES GUIDELINES.
- MINIMUM PIPE SLOPE TO BE 2.0%, MAXIMUM 8.0% (SEE OPSD-1006.010, 1006.020).

CITY OF BARRIE STANDARD		APR'D:	R.G.N.	DATE:	92.05.15
GENERAL NOTES SANITARY SEWERS	2.	OPSD NUMBERS REVISED	K.C.	2000.08.17	DRAWN: L.A.J. SCALE: N.T.S.
	1.	CHANGES TO B. TO G.	K.C.	95.04.24	
	NO.	REVISION	APR'D	DATE	

- GENERAL NOTES – SANITARY SEWER
- SANITARY SEWERS
- SANITARY SEWER TO BE LOCATED AT THE CENTRELINE OF THE ROAD.
 - SEWERS SHALL BE CONSTRUCTED WITH BEDDINGS AS PER OPSD-802.010. (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD-802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.
 - MAXIMUM DEFLECTION FROM COMBINED LIVE AND DEAD LOADING SHALL NOT EXCEED ANY C.S.A., O.P.S. OR MANUFACTURERS RECOMMENDED SPECIFICATIONS.
 - PVC, CONCRETE AND PROFILE WALL PVC SEWERS SHALL HAVE RUBBER GASKET TYPE JOINTS AND SHALL BE CERTIFIED TO CONFORM TO ALL APPLICABLE CURRENT C.S.A. SPECIFICATIONS.
 - CONCRETE SANITARY SEWERS SHALL HAVE A MINIMUM STRENGTH OF 50 N/m/mm CONFORMING TO CSA STANDARD A257.2-1982, CLASS 50-D (PREVIOUSLY C.S.A. STANDARD A257.2-1974, CLASS II).
 - MAINTENANCE HOLE TOPS (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE WHEN THE TOP LIFT OF ASPHALT IS PLACED. ALL ADJUSTMENT WILL BE ACCORDANCE WITH BSD-N2.
 - ALL CONNECTIONS TO NEW SANITARY MAINS SHALL BE PRE-MANUFACTURED, FABRICATED TEES. CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE MADE WITH APPROVED FACTORY MADE TEES OR INSERTA-TEES IN STRICT ACCORDANCE TO MANUFACTURES GUIDELINES.

CITY OF BARRIE STANDARD		4.	NOTE 'B' – "ENGINEERING"	B.R.	2002.10.28	APR'D:	R.G.N.	DATE:	92.05.15
GENERAL NOTES SANITARY SEWERS	3.	NOTE 'B' OPSD NUMBER REVISION	K.C.	2000.03.18	DRAWN: L.A.J. SCALE: N.T.S.				
	2.	NOTE 'F' CHANGED	K.C.	98.03.30					
	1.	CHANGES TO B. TO G.	K.C.	95.04.24					
NO.	REVISION	APR'D	DATE	BSD-N3					

PARKING LOT/DRIVEWAY NOTES

- EXISTING SOILS AND GRANULAR MATERIALS TO BE REMOVED TO THE LIMITS SHOWN ON THE DRAWINGS AND ANY SURPLUS IS TO BE DISPOSED OFF-SITE AT A LOCATION CHOSEN BY, AND PAID FOR, BY THE CONTRACTOR.
- PROPOSED SUB-GRADE TO BE INSPECTED AND PROOF-ROLLED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACEMENT OF GRANULAR "B". DEFICIENT AREAS ARE TO BE SUB-EXCAVATED AND REPLACED WITH GRANULAR "B" AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- THE GRANULAR SUB-BASE IS TO BE INSPECTED AND PROOF-ROLLED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACEMENT OF THE GRANULAR "A".
- THE GRANULAR BASE IS TO BE INSPECTED AND PROOF-ROLLED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER AND APPROVED PRIOR TO PLACEMENT OF THE ASPHALT.
- CONTRACTOR TO PROVIDE SAMPLES OF GRANULAR MATERIALS AND THE ASPHALT MIX DESIGNS TO THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
- GRANULAR MATERIALS TO BE UNIFORMLY COMPACTED TO MINIMUM 100% STANDARD PROCTOR MAXIMUM DRY DENSITY. HOT LAID

GENERAL NOTES - WATERMAIN

- CONTRACTORS SHALL INFORM THE CITY OF BARRIE WATER OPERATIONS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THEIR INTENTIONS TO PERFORM WORK ON WATER INFRASTRUCTURE.
- OPERATION OF HYDRANTS AND VALVES ON THE POTABLE WATER SYSTEM BY OTHER THAN QUALIFIED WATER OPERATIONS STAFF IS PROHIBITED BY CURRENT BY-LAW. CITY SERVICE FEES ARE PER THE CURRENT FEES BY-LAW. THE CITY'S WATER OPERATIONS STAFF WILL SWAB, PRESSURE TEST, CHLORINATE AND FLUSH ALL NEW WATERMANS.
- MINIMUM COVER OVER WATERMAIN SHALL BE 1.7m. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAIN AND SEWERS SHALL BE 2.5m WHERE WATERMAIN CONFLICTS WITH SEWER PIPES, DEFLECT WATERMAIN HORIZONTALLY OR VERTICALLY WHILE PROVIDING A MINIMUM OF 0.5m CLEARANCE BETWEEN WATERMAIN AND SEWERS. MAINTAIN MINIMUM DEPTH OF COVER AT ALL TIMES.
- WATERMAIN SHALL BE INSTALLED IN BEDDING AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD 802.030 OR 802.031 CLASS 'B' (GRANULAR 'A' BEDDING MATERIAL, GRANULAR 'A' OR SELECT NATIVE COVER MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF WATER OPERATIONS. ALTERNATIVE EMBEDMENT MATERIAL - SAND MEETING GRADATION REQUIREMENTS OF OPSS MUNI 1004.05.07 COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY IS PERMISSIBLE WHERE NOTED IN STANDARD DETAILS. GEOTECHNICAL CERTIFICATION OF MATERIAL AND COMPACTION TESTING MUST BE PROVIDED EVERY 150 METRES. THE COMPACTION TESTING MUST INCLUDE THE ENTIRE EMBEDMENT ENVELOPE (HAUNCHES, BEDDING, TOP OF PIPE AND COVER).
- COPPER WATER MAINS AND SERVICES 25mm TO 50mm IN DIAMETER SHALL BE EMBEDDED IN SAND 100mm ABOVE AND BELOW TO CONFORM TO OPSS MUNI 1004.05.07.
- RESTRAINING WILL BE REQUIRED ON ALL HYDRANTS. THRUST BLOCKS, AS PER OPSD 1103.010 AND 1103.020. RESTRAINING DEVICES MAY BE REQUIRED IN ADDITION TO STANDARD CONCRETE THRUST BLOCKING WHERE SOIL CONDITIONS WARRANT AT THE CITY'S DISCRETION.
- NEW WATERMANS TO BE PVC DR18 CL150 MINIMUM, DUCTILE IRON CL52 AS PER THE APPROVED MANUFACTURERS PRODUCTS FOR LINEAR WATER SYSTEMS LIST.
- TRACING WIRE SHALL BE #12 AWG HIGH STRENGTH COPPER CLAD (H5-CSS) AND SHALL BE INSTALLED ON THE TOTAL LENGTH OF ALL WATERMAIN AND BROUGHT UP AT EACH HYDRANT AND CONNECTED TO FLANGE BOLT. ALL SPLICES TO UTILIZE CONNECTORS AS PER THE APPROVED MANUFACTURERS PRODUCTS FOR LINEAR WATER SYSTEMS LIST.
- ALL WATER SERVICES SHALL BE MINIMUM 25mm TYPE 'K' COPPER OR 25mm CROSS-LINKED POLYETHYLENE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF WATER OPERATIONS. WATER SERVICE SADDLES SHALL BE USED WHEN TAPPING INTO PVC WATERMAIN.
- SERVICE TAPPINGS SHALL BE PLACED AT A MINIMUM SEPARATION OF 1.0m AND A MINIMUM OF 0.6m FROM JOINTS. (ENDS OF PIPE)
- RISER PIPES ARE TO BE INSTALLED AS PER BSD-510, AND REMOVED AS DIRECTED. SWABBING SCHEDULE TO BE SUPPLIED BY A WATER OPERATIONS FIELD REPRESENTATIVE. ALL RISERS ARE TO BE RESTRAINED OR THRUST BLOCKED.
- ALL NEW CURB STOPS AND BOXES TO BE LOCATED AT PROPERTY LINE AND OUT OF DRIVEWAYS AND SIDEWALKS.

City of BARRIE STANDARD DETAIL	GENERAL NOTES - WATERMAIN		REV No.	DATE: MAY 2015	APPROVED DATE: May 29, 2015 <i>[Signature]</i> DIRECTOR OF ENGINEERING
			2	SCALE: N.T.S.	
			BSD-500		

GENERAL NOTES – STORM SEWER

STORM SEWER

- STORM SEWER TO BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER.
- PLACE ALL CATCH BASIN LATERALS AT 2% GRADE UNLESS OTHERWISE NOTED. PIPE SIZE MINIMUM 250mm DIA. SINGLE, 300mm DIA. DOUBLE.
- STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD-802.010 (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD-802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.
- MAINTENANCE HOLE TOPS (FRAMES) AND CATCH BASIN (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE WHEN THE TOP LIFT OF ASPHALT IS PLACED. ALL ADJUSTMENT WILL BE ACCORDANCE WITH BSD-N2.
- STORM SEWER TO BE LOCATED OFFSET 3.0m SOUTH OR EAST OF CENTRELINE UNLESS OTHERWISE SPECIFIED.
- ALL CONNECTIONS TO THE STORM MAIN SHALL BE MADE WITH A STORM MANHOLE OR APPROVED FACTORY TEE CONNECTION AS PER OPSD-708.01 OR 708.03.
- PIPE MATERIAL TO BE REINFORCED CONCRETE WITH A MINIMUM STRENGTH OF 50 N/m/mm CERTIFIED TO C.S.A. STANDARD A247.2-1982, CLASS 50-D (PREVIOUSLY C.S.A. STANDARD A257.2-1974, CLASS II) OR PVC CERTIFIED TO C.S.A. STANDARDS 182.2 AND 182.4.
- STORM SEWER TO BE MINIMUM 300mm DIAMETER WITH JOINTS CONFORMING TO C.S.A. STANDARD A257.3.
- ALL PIPE BEDDING MUST CONFORM TO OPSD, MAXIMUM COVER TABLE. NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH OF COVER GREATER THAN 6 METRES UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF ENGINEERING.
- ALL PIPE HANDLING INSTALLATIONS MUST BE IN STRICT COMPLIANCE WITH MANUFACTURES INSTALLATION GUIDES AND THE O.C.P.A. OR UNIBELL GUIDELINES.
- SUMP PUMP DISCHARGE PIPING IN BOULEVARD:
IN THE EVENT OF OVERACTIVE SUMP PUMP ACTIVITY, A 150mm DIAMETER PVC DR-28 SEWER MAY BE INSTALLED, WHEN SO DIRECTED BY THE DIRECTOR OF ENGINEERING, ALONG THE FRONTAGES OF DESIGNATED LOTS, WITH AN OFFSET OF 0.6m FROM BACK OF CURB. THIS SEWER IS TO BE CAPPED AT THE UPSTREAM END AND IS TO OUTLET INTO THE NEAREST CATCHBASIN DOWNSTREAM. DEPTH OF SEWER IS TO BE EQUAL TO SUBDRAIN DEPTH. NOT TO BE DIRECTLY CONNECTED TO FOUNDATION DRAINS.

CITY OF BARRIE STANDARD		4.	NOTE 'K' – SUMP PUMP DISCHARGE PIPING	B.R.	2003.01.07	APR'D:	R.G.N.	DATE:	92.05.15
GENERAL NOTES STORM SEWERS	3.	NOTE 'Y' & 'C' – "DIRECTOR OF ENGINEERING"	B.R.	2002.10.28	DRAWN: L.A.J. SCALE: N.T.S.				
	2.	NOTE 'C' OPSD NUMBER REVISION	K.C.	2000.03.16					
	1.	NOTE 'D' CHANGED	K.C.	98.03.30					
NO.	REVISION	APR'D	DATE	BSD-N5					



The position of existing above ground and underground utilities and facilities are not necessarily shown on the drawings, and where shown, the accuracy of the position of such utilities and facilities is not guaranteed. Before starting work, the contractor shall confirm the exact location of all existing utilities and facilities, and shall assume all liability for damage to them.

Drawings shall not be used for construction unless sealed and signed. All work to be performed in accordance with the Occupational Health & Safety Act 1990.

Any errors and/or omissions shall be reported to Pinestone Engineering Ltd. without delay.



KEY MAP

LEGAL
PLAN OF SURVEY OF PART OF DUNLOP STREET REGISTERED PLAN 2 AND PART OF WATER LOTS 25 TO 30 (INCLUSIVE) AND PART OF THE WATER LOT IN FRONT OF POYNTEZ STREET CITY OF BARRIE COUNTY OF SIMCOE

NOTES

- TOPOGRAPHIC SURVEY AND LEGAL INFORMATION PROVIDED BY RUDY MAK SURVEYING LTD NOV 21, 2017.
- SITE PLAN PROVIDED BY IAN S. MALCOM ARCHITECTS.
- PARKING GARAGE GRADES BY OTHERS.

BENCHMARK

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO VCM 00119673109 HAVING AN ELEVATION OF 220.21.

NO.	YY.MM.DD	REVISION	BY
3	19.10.17	REVISED PER CITY COMMENTS	J.L.
2	19.06.13	REVISED PER LSRCA COMMENTS	J.L.
1	19.03.07	REVISED PER CITY COMMENTS	J.L.

SEAL 	NORTH ARROW
----------	-----------------

DESIGN BY:	J.V.
DRAWN BY:	J.L.
CHECKED:	J.V.
DATE:	OCT. 2019
SCALE:	N.T.S.

PROJECT
185 DUNLOP STREET WATERFRONT CONDO DEVELOPMENT

DRAWING TITLE
STANDARD NOTES AND DETAILS PLAN

PROJECT NO. 17-11338	DRAWING NO. DET-2	REVISION 3
--------------------------------	-----------------------------	----------------------