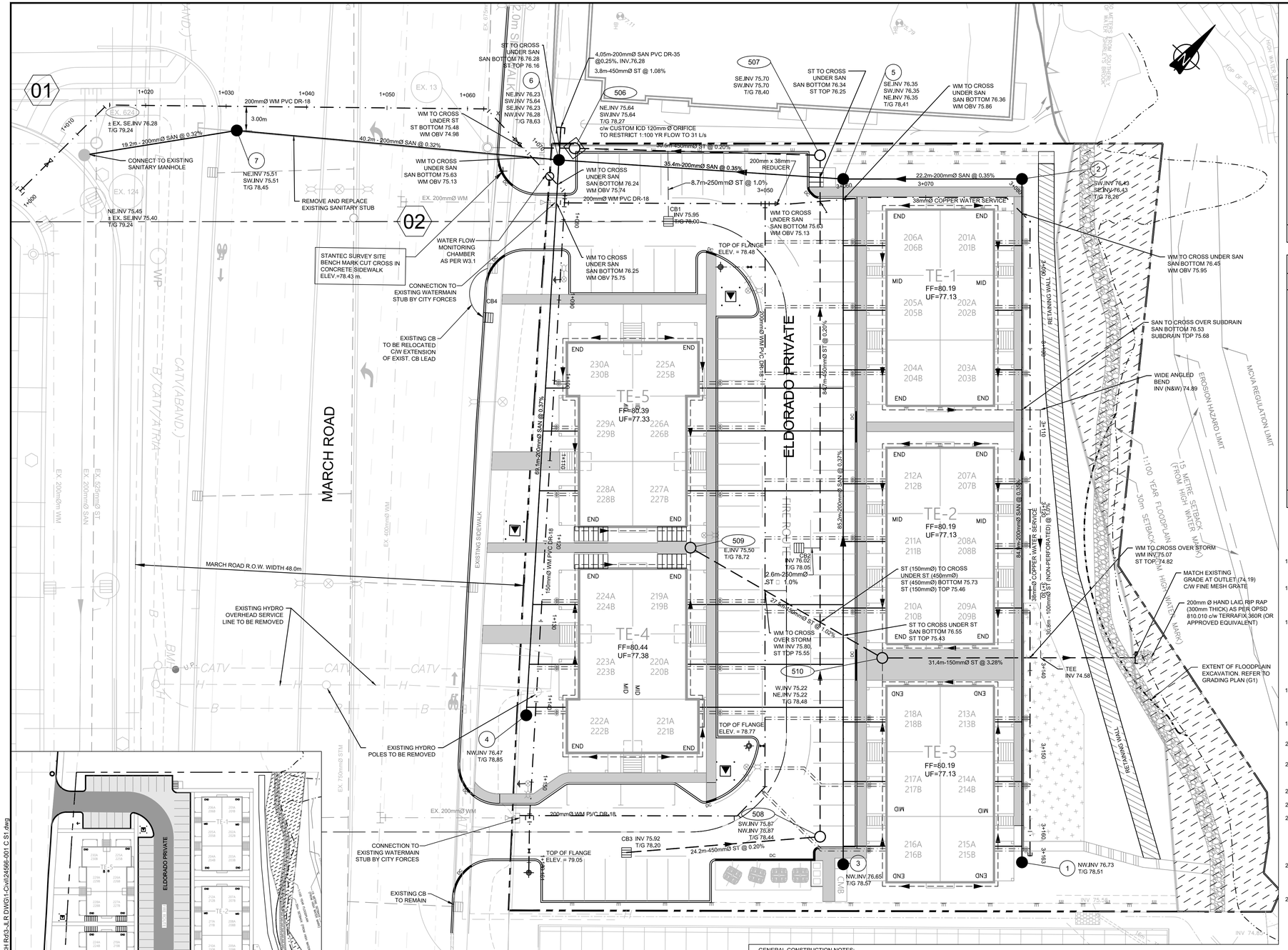
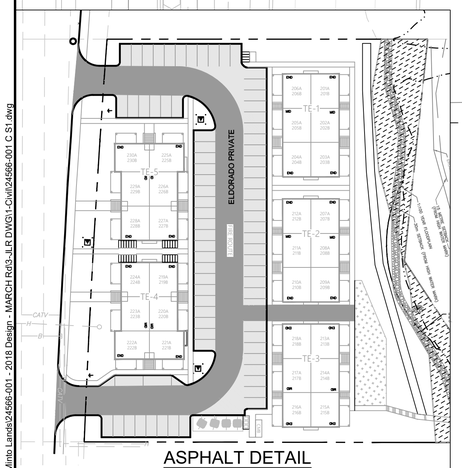




ASPHALT DETAIL

N.T.S.

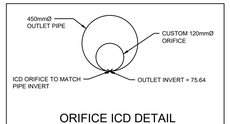
HEAVY DUTY ASPHALT

40mm - HL3 OR SUPERPAVE 12.5
50mm - HL8 OR SUPERPAVE 19.0
150mm - GRANULAR 'A'
400mm - GRANULAR 'B'

LIGHT DUTY ASPHALT

50mm - HL3 OR SUPERPAVE 12.5
150mm - GRANULAR 'A'
300mm - GRANULAR 'B'

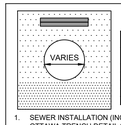
NOTE: LIGHT DUTY AND HEAVY DUTY PAVEMENT STRUCTURE TO BE IN ACCORDANCE WITH THE PRELIMINARY GEOTECHNICAL INVESTIGATION REPORT (APRIL 16, 2019) PREPARED BY PATERSON GROUP INC. (PG2234-2 REVISION 3).



ORIFICE ICD DETAIL

N.T.S.

NOTE:
1:100 YEAR RELEASE RATE 31 L/s
DESIGN HEAD: 2.64m



INSULATION REFERENCE TABLE	
EARTH COVER	REQUIRED INSULATION THICKNESS
2.0m - 1.8m	25mm
1.8m - 1.5m	50mm
1.5m - 1.2m	75mm
1.2m - 0.9m	100mm
0.9m - 0.6m	125mm

1. SEWER INSTALLATION (INCLUDING BEDDING AND COVER) TO BE PER CITY OF OTTAWA TRENCH DETAIL S6
2. INSULATION POINTS TO BE STAGGERED, WITH MINIMUM 0.3 OVERLAP
3. INSULATION TO BE CENTERED OVER PIPE WITH MINIMUM WIDTH OF 1.2m
4. INSULATION TO BE PROVIDED AT ALL SEWER LOCATIONS WHERE MINIMUM COVERAGE OF 2.0m IS NOT ACHIEVED.

INSULATION DETAIL

N.T.S.

Ponding Area	Top of Grade (m)	1:2 year Elevation (m)	1:2 year Depth (m)	1:5 year Elevation (m)	1:5 year Depth (m)	1:100 year Elevation (m)	1:100 year Depth (m)	1:100 year Ponding Volume (m^3)	1:100 year +20% Elevation (m)	1:100 year +20% Depth (m)	1:100 year +20% Ponding Volume (m^3)
CB1	78.00	76.65	No Ponding	77.18	No Ponding	78.31	0.31	49.70	78.34	0.34	49.76
CB2	78.05	76.67	No Ponding	77.21	No Ponding	78.34	0.29	45.52	78.36	0.31	45.53
CB3	78.20	76.65	No Ponding	77.19	No Ponding	78.32	0.12	4.33	78.35	0.15	4.33

REFER TO PLAN AND PROFILE DRAWING 02 FOR WATERMAIN ALONG ELDORADO PRIVATE.

WATERMAIN TABLE - Sta. 1+000.00 TO 1+161.26 PVC DR-18 CL.150

SIZE	STATION ALONG WM	DETAIL	FINISHED GRADE	TOP OF WM
150mmØ	1+077.91	200 x 200 x 200 x 150 CROSS	78.34	75.72
	1+080.0	-	78.35	75.73
	1+090.0	-	78.64	75.80
	1+100.0	-	78.76	75.86
	1+110.0	-	78.78	75.94
	1+120.0	-	78.76	76.00
	1+130.0	-	78.81	76.07
	1+140.0	-	78.85	76.14
	1+150.0	-	78.87	76.21
	1+154.46	200 x 150 x 200 x 150 CROSS INCL. HYDRANT LEAD	78.68	76.24
	1+158.56	150 HYDRANT VALVE AND VALVE BOX	78.73	76.24
	1+160.0	-	78.73	76.24
	1+161.26	HYDRANT	78.90	76.24

NOTE: ALL WM TO BE CONSTRUCTED AT MINIMUM 2.4m BELOW FINISHED GRADE. OTHERWISE PROVIDE THERMAL INSULATION. SEE GENERAL CONSTRUCTION NOTES 11,12,13

WATERMAIN TABLE - Sta. 3+050.00 TO 3+051.6 PVC DR-18 CL.150, Sta. 3+051.6 TO 3+163.0 38mmØ COPPER TYPE 'K'

SIZE	STATION ALONG WM	DETAIL	FINISHED GRADE	TOP OF WM
150/38mmØ	3+050.0	200 x 200 x 200 TEE	78.25	75.62
	3+051.49	200 x 38 REDUCER	78.28	75.62
	3+053.19	HORIZONTAL BEND	78.31	75.45
	3+056.84	WM CROSSING UNDER ST	78.37	75.45
	3+059.73	WM CROSSING UNDER SAN	78.37	75.45
	3+060.0	-	78.37	75.45
	3+063.13	HORIZONTAL BEND	78.55	75.45
	3+070.0	-	78.57	75.58
	3+079.98	HORIZONTAL BEND	78.36	75.72
	3+080.0	-	78.36	75.85
	3+082.78	WM CROSSING UNDER SAN	78.39	75.99
	3+084.19	HORIZONTAL BEND	78.29	75.99
	3+090.0	-	78.39	75.99
	3+100.0	-	78.34	75.90
	3+107.61	WM CROSSING OVER SUBDRAIN	78.20	75.76
	3+110.0	-	78.20	75.76
	3+120.0	-	78.30	75.90
	3+130.0	-	78.51	76.08
	3+138.42	WM CROSSING OVER STORM	78.48	76.08
	3+140.0	-	78.42	76.02
	3+150.0	-	78.55	76.02
	3+160.0	-	78.55	76.02
	3+163.0	WM CAP	78.46	76.02

NOTE: ALL WM TO BE CONSTRUCTED AT MINIMUM 2.4m BELOW FINISHED GRADE, OTHERWISE PROVIDE THERMAL INSULATION. SEE GENERAL CONSTRUCTION NOTES 11,12,13

15. WATERMAIN SERVICES TO BE 19mmØ PEX c/w CURB STOP AS PER CITY STANDARD DRAWING W26, WHERE SERVICES CROSS SEWERS, SERVICES TO BE INSTALLED IN ACCORDANCE WITH CITY STANDARD DRAWING W38.
16. A COIL OF SERVICE PIPE, 15m IN LENGTH SHALL BE INSTALLED, AND CAPPED AT THE TERMINATION OF EACH WATER SERVICE. THE COIL SHALL BE PROTECTED BY PLYWOOD BEFORE BACKFILLING AND SHALL BE MARKED BY A 2"x4" EXTENDING APPROXIMATELY 300mm ABOVE THE GROUND SURFACE.
17. 200mmØ SANITARY SEWERS SHALL BE PVC DR-35, 450mmØ STORM SEWERS SHALL BE CONCRETE 100-D AND 150mmØ STORM SEWERS SHALL BE PVC DR-35. STORM SEWERS TO BE INSULATED WHERE MINIMUM COVERAGE OF 2.0m IS NOT ACHIEVED (REFER TO INSULATION DETAIL). SANITARY AND STORM SERVICES TO BE IN ACCORDANCE WITH CITY STANDARD DRAWING S11.1 AND PROVIDED WITH 0.3m MINIMUM VERTICAL CLEARANCE TO WATERMAIN. REFER TO WATERMAIN TABLE FOR CROSSING DETAILS.
- SANITARY SERVICE TO BE 135mmØ PVC SDR-28
- STORM SERVICE TO BE TO BE 100mmØ PVC SDR-28
18. ALL STORM & SANITARY MAINTENANCE HOLES TO BE 1200mmØ UNLESS OTHERWISE NOTED AS PER OPSD 701.010 c/w FRAME AND COVERS AS PER CITY STANDARD DRAWINGS S24 AND S24.1. SANITARY MAINTENANCE HOLES TO HAVE WATERTIGHT COVERS AS PER OPSD 401.030.
19. ALL ONSITE CATCH BASINS TO BE 600x600mm PRECAST CONCRETE PER OPSD 705.010 c/w FRAME AND COVER AS PER CITY STANDARD DRAWING S19.
20. STREET CATCH BASIN LEADS TO BE PVC DR-35 INSTALLED WITH 1% GRADIENT MINIMUM, UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.
21. 6m SUBDRAIN STUBS, WRAPPED IN FILTER SOCK, TO BE INSTALLED ON EITHER SIDE OF EACH STREET CATCH BASIN, APPROXIMATELY 300mm BELOW THE SUBGRADE LEVEL.
22. SERVICES TO BE TERMINATED 1.0m FROM BUILDING WALL (TYPICAL).
23. CONCRETE CURB TO BE BARRIER TYPE AS PER CITY STANDARD DRAWING SC1.1.
24. CONCRETE SIDEWALKS AND WALKWAYS TO BE CONSTRUCTED AS PER CITY OF OTTAWA DETAIL SC2 (OR SC1.4) AND SC4. ASPHALT SIDEWALKS AND WALKWAYS TO BE CONSTRUCTED AS PER CITY OF OTTAWA DETAIL SC20, EXCEPT FOR SNOW CLEARING ROUTE BETWEEN TE-2 AND TE-3. SNOW CLEARING ROUTE SHALL BE HEAVY DUTY ASPHALT IN ACCORDANCE WITH GEOTECHNICAL REPORT (REFER TO ASPHALT DETAIL).
25. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE SITE BENCHMARK(S) HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION DEPICTED ON THIS PLAN.
26. EXCAVATION FOR THE INSTALLATION OF SERVICES ALONG OR IN PROXIMITY OF A BUILDING OR A STRUCTURE IS TO BE CONTAINED WITHIN A TRENCH BOX WIDTH AND IS TO ENSURE NO CONFLICT WITH ANY FUTURE FOOTINGS. SERVICE TRENCHES SHALL BE BACKFILLED WITH GRANULAR 'A' COMPACTED TO 100% SPMDD WHERE ADJACENT TO A BUILDING FOR THE SECTION PARALLEL TO THE UNIT PLUS 5.0m PAST THE FRONT AND REAR OF THE UNIT. SELECT SUBGRADE MATERIAL, COMPACTED TO 100% SPD TO 1.0m BELOW EXISTING GRADE FOR FULL TRENCH WIDTH OF DISTURBED AREA SHALL BE USED FOR BACKFILL, INCLUDING ALONG ANY SEWERS AND WATERMAINS ADJACENT TO A BUILDING OR OTHER STRUCTURE.
27. BUILDER TO INSTALL BACKWATER VALVES ON SANITARY AND STORM SERVICE LATERALS IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL DRAWINGS S14, S14.1 & S14.2.
28. PAVEMENT DESIGN TO BE IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT (APRIL 16, 2019) PREPARED BY PATERSON GROUP INC. (PG2234-2 REVISION 3) :

CAR ONLY PARKING AREAS (LIGHT DUTY ASPHALT)
- 50mm WEAR COURSE - HL-3 OR SUPERPAVE 12.5 LEVEL C
- 150mm BASE - OPSS GRANULAR 'A' COMPACTED TO 100% SPMCC
- 300mm (MIN.) SUBBASE - OPSS GRANULAR 'B', TYPE II COMPACTED TO 100% SPMDD

LOCAL ROADWAYS (HEAVY DUTY ASPHALT)
- 40mm WEAR COURSE - HL-3 OR SUPERPAVE 12.5 LEVEL C
- 50mm BINDER COURSE - HL-8 OR SUPERPAVE 19.0 LEVEL C
- 150mm BASE - OPSS GRANULAR 'A' COMPACTED TO 100% SPMCC
- 400mm (MIN.) SUBBASE - OPSS GRANULAR 'B', TYPE II COMPACTED TO 100% SPMDD

ASPHALT CEMENT IS TO BE MINIMUM PERFORMANCE GRADE (PG) 58-34.

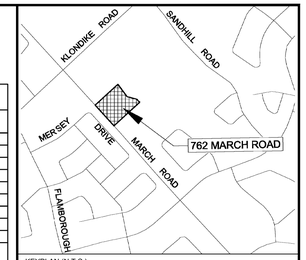
SUBGRADE - EITHER IN SITU SOILS OR OR OPSS GRANULAR 'B' TYPE I OR II MATERIAL PLACED OVER IN SITU SOILS.

REQUIREMENT FOR ADDITIONAL GRANULAR 'B' AND/OR GEOTEXTILE TO BE CONFIRMED ON SITE BY GEOTECHNICAL ENGINEER.

29. THE CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AS SHOWN, INCLUDING HANDICAPPED PARKING SYMBOLS.

GENERAL CONSTRUCTION NOTES:

1. ALL MATERIAL (SANITARY, STORM & WATERMAIN) AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS AND SPECIFICATIONS, OPSD, AND OPSS.
2. SERVICING DESIGN DRAWINGS TO BE READ IN CONJUNCTION WITH THE SITE SERVICING REPORT (APRIL 2019) PREPARED BY J.L. RICHARDS & ASSOCIATES LIMITED (24566-001) AS WELL AS THE GEOTECHNICAL INVESTIGATION REPORT (DECEMBER 11, 2018) PREPARED BY PATERSON GROUP INC. (PG2234-2R2).
3. UNLESS OTHERWISE NOTED AL DIMENSIONS FROM STREET LINE ARE TO THE CENTRELINE OF SEWER OF MAINTENANCE HOLE.
4. THE INSIDE DIAMETER OF PIPES ARE REFERRED TO IN PLAN VIEW.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATES FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL AND REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION AND ALL ASSOCIATED WORKS TO THE SATISFACTION OF THE ENGINEER AND CITY OF OTTAWA.
7. ALL CONNECTIONS TO EXISTING WATERMAIN STUBS TO BE COMPLETED BY CITY OF OTTAWA FORCES. CONTRACTOR TO PROVIDE EXCAVATION,BACKFILLING, COMPACTION AND REINSTATEMENT, IN ACCORDANCE WITH CURRENT CITY SPECIFICATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE, VIA EXCAVATION, THE EXACT LOCATION AND ELEVATION OF THE EXISTING WATERMAINS, SEWERS AND UNDERGROUND STRUCTURES AS REQUIRED FOR ALL CONNECTIONS, RELOCATIONS AND BLANKINGS.
9. CLAY DYKES TO BE AS PER CITY OF OTTAWA DETAIL S8 AND RECOMMENDATIONS (AT LEAST 1.5m LONG IN TRENCH DIRECTION) OF THE GEOTECHNICAL INVESTIGATION REPORT (DECEMBER 11, 2018) PREPARED BY PATERSON GROUP INC. (PG2234-2R2).
10. ALL WATERMAINS SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
11. WATERMAINS CROSSING BELOW OR OVER A SEWER SHALL BE IN ACCORDANCE WITH CITY STANDARD DRAWING W25 AND W25.2.
12. PROVIDE A MINIMUM OF 2.4m COVER ON ALL WATERMAINS AND WATER SERVICES. OTHERWISE PROVIDE THERMAL INSULATION AS PER CITY STANDARD DRAWING W22 (IN SHALLOW TRENCHES) AND W23 (AT OPEN STRUCTURES).
13. WATERMAIN THRUST BLOCKS TO BE CONSTRUCTED PER CITY STANDARD DRAWINGS W25.3 AND W25.4. THRUST BLOCKS ARE REQUIRED AT ALL BENDS, TEES, PLUGS, DEAD END CAPS, VALVES, REDUCES OR OTHER FITTINGS WHERE CHANGES OCCUR IN PIPE DIAMETER OR DIRECTION ALL IN ACCORDANCE WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
14. AT ALL CONNECTION POINTS, REINSTATE SURFACES TO EXISTING CONDITION OR BETTER.
-ASPHALT RESTORATION SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DRAWING No. R10.
-THICKNESS OF GRANULARS AND ASPHALT LAYERS SHALL MATCH EXISTING.
-BOULEVARDS SHALL BE REINSTATED WITH MINIMUM 100mm TOPSOIL AND SOD.



KEYPLAN (N.T.S.)

LEGEND

- EXISTING CATCH BASIN & LEAD
- PROPOSED CATCH BASIN & LEAD
- PROPOSED STORM MAINTENANCE HOLE c/w ICD
- PROPOSED WATERMAIN, VALVE & HYDRANT
- EXISTING WATERMAIN, VALVE & HYDRANT
- EXISTING SANITARY SEWER & MAINTENANCE HOLE
- EXISTING STORM SEWER & MAINTENANCE HOLE
- (2) PROPOSED SANITARY SEWER & MAINTENANCE HOLE
- (502) PROPOSED STORM SEWER & MAINTENANCE HOLE
- (01) DRAWING NUMBER
- DC DEPRESSED CURB
- PERFORATED PIPE c/w FILTER SOCK
- PROPERTY LINE
- CMB COMMUNITY MAIL BOX
- AMENITY AREA
- NON-DEVELOPABLE AREA
- CREEK PATHWAY

No.	ISSUE / REVISION	DD/MM/YY
04	ISSUED TO CITY FOR REVIEW - 3rd SUBMISSION	12/06/19
03	ISSUED FOR MUNICIPAL CONSENT	29/05/19
02	ISSUED TO CITY FOR REVIEW - 2nd SUBMISSION	15/04/19
01	ISSUED TO CITY FOR REVIEW - 1st SUBMISSION	19/12/18

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VERIFY SHEET SIZE AND SCALES. BAR TO THE RIGHT IS 25mm IF THIS IS A FULL SIZE DRAWING. 0 25mm

SCALE: 1:250

CLIENT:
minto Communities

CONSULTANT: www.jlrichards.ca
J.L.Richards ENGINEERS-ARCHITECTS-PLANNERS

CONSULTANT:

PROFESSIONAL STAMP
LICENSED PROFESSIONAL ENGINEER M. K. L. DALRYMPLE June 12/19 PROVINCE OF ONTARIO

PROFESSIONAL STAMP
LICENSED PROFESSIONAL ENGINEER June 12, 2019 A. WILLIAMS 100218983 PROVINCE OF ONTARIO

PROJECT:
MINTO COMMUNITIES INC.
MORGAN'S CREEK
STAGE 1
762 MARCH ROAD

DRAWING:
SITE SERVICING PLAN

DESIGN:	AW
DRAWN:	SP
CHECKED:	LD
JLR #:	24566-001

DRAWING #: S1

PLOT DATE: Wednesday, June 12, 2019 3:05:50 PM
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