- 2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING
- CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS
- 3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION. 4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$2,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS
- 5. RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- 6. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDELL FACILITY.
- 7. ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
- 8. ALL ELEVATIONS ARE GEODETIC. THE SITE BENCHMARKS ARE THE FIRE HYDRANT TOP OF SPINDLE . BM NO.1 IS LOCATED APPROXIMATELY 105m FROM MERIVALE RD AND CLYDE AVE INTERSECTION, LOCATED ON THE EAST SIDE OF CLYDE AVE. BM NO.2 IS LOCATED AT THE EAST SIDE OF CLYDE AVE AND APPROXIMATELY 155m FROM BASELINE ROAD AND CLYDE AVE INTERSECTION.(BM NO. 1 ELEV = 95.96, BM NO. 2 ELEV = 96.25). REFER TO ANNIS, O'SULLIVAN, VOLLEBEKK LTD. TOPOGRAPHICAL PLAN OF SURVEY PART OF LOTS 18 AND 19, 20 AND 21 REGISTERED PLAN 30 CITY OF OTTAWA.
- 9. REFER TO GEOTECHNICAL INVESTIGATION REPORT PATERSON GROUP, REPORT PG5561-1, DATED FEBRUARY 23, 2021 FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE
- 10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
- 11. REFER TO THE STORMWATER MANAGEMENT REPORT R-2023-152, DATED OCTOBER 27TH, 2023 PREPARED BY NOVATECH. 12. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS
- (R10 AND R25). 13. PROVIDE LINE/PARKING PAINTING.
- 14. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
- 15. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.

## SEWER NOTES:

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. 2. SPECIFICATIONS:

2.	SPECIFICATIONS:			
	<u>ITEM</u>	SPEC. No.	REFERENCE	
	SANITARY/STORM/CATCHBASIN MANHOLE (1200Ø)	701.010	OPSD	
	STORM MANHOLE (1500Ø)	701.011	OPSD	
	STORM MANHOLE (1800Ø)	701.012	OPSD	
	CATCHBASIN (600x600)	705.010	OPSD	
	DOUBLE CATCH BASIN (600 X 1450)	705.020	OPSD	
	CATCHBASIN FRAME AND COVER	400.020	OPSD	
	STORM/SANITARY MH FRAME	S25	CITY OF OTTAWA	
	SANITARY COVER	S24	CITY OF OTTAWA	
	STORM COVER (CLOSED)	S24.1	CITY OF OTTAWA	
	STORM COVER (OPEN)	S28.1	CITY OF OTTAWA	
	SEWER TRENCH	S6 &S7	CITY OF OTTAWA	
	STORM SEWER < 450mmØ	PVC DR 35(UNLESS SPECIFIED OTHERWISE) CONC 65D (UNLESS SPECIFIED OTHERWISE)		
	STORM SEWER >= 450mmØ			
	SANITARY SEWER	PVC DR 35	CITY OF OTTAWA	
	CATCHBASIN LEAD	PVC DR 35		
	CATCHBASIN COVER	S19	CITY OF OTTAWA	
	ROAD SUBDRAIN (CONTINUOUS)	R1	CITY OF OTTAWA	
	WATERTIGHT FRAME & COVER	401.030	OPSD	

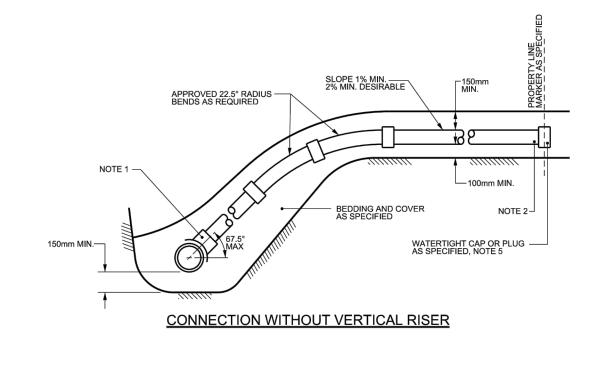
- 2. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION (REFER TO DETAIL)
- 3. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0% (2.0% PREFERRED) 4. ALL STORM AND SANITARY LATERALS SHALL BE EQUIPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14,1 OR S14.2.
- 5. A MINIMUM OF 150 mm OF OPSS GRANULAR A SHOULD BE PLACED FOR BEDDING FOR SEWER OR WATER PIPES WHEN PLACED ON SOIL SUBGRADE. IF THE BEDDING IS PLACED ON BEDROCK, THE THICKNESS OF THE BEDDING SHOULD BE INCREASED TO 300 mm FOR SEWER PIPES. THE BEDDING SHOULD EXTEND TO THE SPRING LINE OF THE PIPE. COVER MATERIAL, FROM THE SPRING LINE TO A MINIMUM OF 300 mm ABOVE THE OBVERT OF THE PIPE SHOULD CONSIST OF OPSS GRANULAR A (CONCRETE OR PSM PVC PIPES) OR SAND (CONCRETE PIPE). THE BEDDING AND COVER MATERIALS SHOULD BE PLACED IN MAXIMUM 225 mm THICK LIFTS AND COMPACTED TO 95% OF THE SPMDD. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED
- 6. WHERE HARD SURFACE AREAS ARE CONSIDERED ABOVE THE TRENCH BACKFILL, THE TRENCH BACKFILL MATERIAL WITHIN THE FROST ZONE (ABOUT 1.8 m BELOW FINISHED GRADE) SHOULD MATCH THE SOILS EXPOSED AT THE TRENCH WALLS TO REDUCE THE POTENTIAL DIFFERENTIAL FROST HEAVING. THE TRENCH BACKFILL SHOULD BE PLACED IN MAXIMUM 300 mm THICK LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF THE SPMDD.
- 7. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
- 8. ALL STORM MANHOLES MANHOLES WITH PIPE SIZES LESS THAN 900mm ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL STORM MANHOLES WITH PIPE SIZES 900mm AND LARGER ARE TO BE BENCHED.
- 9. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS 200mm OR GREATER IN DIAMETER PRIOR TO BASE COURSE ASPHALT TO ENSURE THAT THEY ARE CLEAN AND OPERATIONAL. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES AND RE CCTV PRIOR TO ACCEPTANCE. OBTAIN APPROVAL FROM THE CITY'S SEWER OPERATIONS. PROVIDE THE CCTV INSPECTION AND REPORT TO THE ENGINEER FOR
- REVIEW AND APPROVAL. 10. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL APPLICABLE SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
- 11. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16, 410.07.16.04 AND 407.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
- 12. ALL CATCHBASINS AND CATCHBASIN MANHOLES TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS EXTENDING IN TWO DIRECTIONS AT THE SUBGRADE LEVEL. SUBDRAIN IS TO BE PROVIDED AT THE TRANSITIONS BETWEEN DIFFERENT PAVEMENT COMPOSITIONS. THE SUBGRADE SURFACE SHOULD BE SHAPED TO PROMOTE WATER FLOW TO THE
- 11. ALL WORKS SHALL BE PERFORMED AS APPLICABLE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD SPECIFICATIONS, AND IN PARTICULAR O.P.S.S. 407 AND 410.

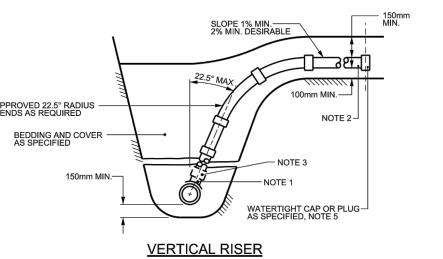
## **WATERMAIN NOTES:**

1. SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

SPECIFICATIONS:							
<u>ITEM</u>	SPEC. No.	REFERENCE					
WATERMAIN TRENCHING	W17	CITY OF OTTAWA					
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA					
THERMAL INSULATION BY OPEN STRUCTURES	W23	CITY OF OTTAWA					
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA					
WATERMAIN CROSSING ABOVE SEWER	W25.2	CITY OF OTTAWA					
HYDRANT	WSD-24	CITY OF OTTAWA					
VALVE AND VALVE BOX	WSD-19	CITY OF OTTAWA					
WATERMAIN	PVC DR 18						

- PVC DR 18 WATERMAIN 3. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE
- PERFORMED BY CITY OFFICIALS. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED, ANY WATERMAIN WITH LESS THAN 2.4m COVER TO BE INSULATED PER THE SEWER AND WATERMAIN NOTES AND DETAIL
- 4. PROVIDE MINIMUM CLEARANCE, BETWEEN OUTSIDE OF PIPES, AT ALL CROSSINGS AS PER CITY DETAILS W25 AND W25.2. WATERMAIN MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.25m OVER AND 0.50m UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
- 5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE
- 6. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS CITY OF OTTAWA STANDARD DETAILS WSD-39, 40, 41, 42, 43 AND
- 8. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.





- SANITARY SERVICES TO BE 135mm AND STORM SERVICES TO BE 100mm FOR NEW RESIDENCES UNLESS SPECIFIED OTHERWISE SERVICE PIPE AND RADIUS BENDS TO BE APPROVED CSA B182.2. SDR28 PRODUCTS UNLESS SPECIFIED OTHERWISE.

STORM SEWER

1. SIDE SLOPE OF SWALE - MIN. 1.5%, MAX. 3:1.

8. MAXIMUM REAR YARD WATER DEPTH IS 300mm.

1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2.0m COVER AND ALL WATERMAIN WITH

POLYSTYRENE INSULATION AS PER OPSD

2. THE THICKNESS OF INSULATION SHALL BE THE

EQUIVALENT OF 25mm FOR EVERY 300mm

REDUCTION IN THE REQUIRED DEPTH OF

T = THICKNESS OF INSULATION (mm)

W = WIDTH OF INSULATION (mm)

W = D + 300 (1000 min.)

 $D = O.D OF PIPE (mm)^{\prime}$ 

COVER WITH 50mm MINIMUM (SEE TABLE)

LESS THAN 2.4m OF COVER WITH EXPANDED

LONGITUDINAL SLOPE OF SWALE WITHOUT PERFORATED PIPE 1.5% MIN.

7. GEOTEXTILE SHALL BE APPROVED NON-WOVEN CLASS 1 OR AS SPECIFIED.

**SEWER & WATERMAIN INSULATION NOTES:** 

3. LONGITUDINAL SLOPE OF SWALE WITH PERFORATED PIPE 0.5% MIN. WITH 1% OR GREATER PREFERRED

4. UNDER DRIVEWAYS NON PERFORATED PIPE TO BE USED WITH 75mm BEDDING AND BACKFILLED WITH APPROVED NATIVE MATERIAL.

9. A STANDARD CATCHBASIN NO DEEPER THAN 2.4m OR A CATCHBASIN MAINTENANCE HOLE. STANDARD FRAMES C/W PERFORATED NTS.

NTS.

PERFORATED PIPE INSTALLATION

FOR REAR YARD AND

LANDSCAPING APPLICATIONS

SEWER / WATER

2000-1700 / 2400-2100

1700-1400 / 2100-1800

1400-1100 / 1800-1500

BACKFILL AS SPECIFIED

BEDDING AS SPECIFIED

ti INSULATION

BEDDING AS SPECIFIED

NOTE: BEDDING TO BE 300mm IN PRESENCE OF BEDROCK

**INSULATION DETAIL FOR SHALLOW** SEWERS & WATERMAIN

6. CB ELBOW TO BE AT UPPER ENDS OF PERFORATED PIPE AND LOCATED 1m OFF REAR YARD AND SIDE YARD PROPERTY LINES.

5. CB "T" TO BE SPACED ABOUT EVERY 20 TO 25m AND LOCATED 1m OFF REAR YARD AND SIDE YARD PROPERTY LINES.

		•					
3. APPI APPI	3. APPROVED CONTROLLED SETTLEMENT JOINTS OPTIONAL FOR SERVICE CONNECTIONS TO MAIN SEWERS UP TO 5m DEEP. WHERE APPROVED, CONNECTIONS TO SEWERS OVER 5m DEEP REQUIRE APPROVED CONTROLLED SETTLEMENT JOINTS.						
4. VER	4. VERTICAL RISER SHALL BE SAME AS SERVICE PIPE UNLESS OTHERWISE SPECIFIED.						
5. CAP OR PLUG AT THE PROPERTY LINE SHALL BE ADEQUATELY BRACED TO WITHSTAND TESTING PRESSURE. 6. FOR NEW CONSTRUCTION, INSERTS MUST BE INSTALLED ON THE MAIN PIPE BEFORE THAT PIPE IS LAID. FOR SERVICES/BRANCHES 375mm DIA. OR LESS, APPROVED "CORED TEES" MAY BE USED.							
						7. APPROVED CUT-IN TOOL MUST BE USED FOR FIELD MADE CONNECTIONS.	
8. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN. N.T.							
		SEWER SERVICE CONNECTIONS	DATE:	MARCH 2006			
	<b>Stawa</b>	FOR RIGID MAIN SEWER PIPE	REV. DATE:	MARCH 2014			
111	JUANVA	(MODIFIED OPSD-1006.010)	DWG. No.:	S11			

(SEE NOTE 9)

— SEE NOTES FOR SLOPES

25mm CLEAR STONE

INSULATION

THICKNESS

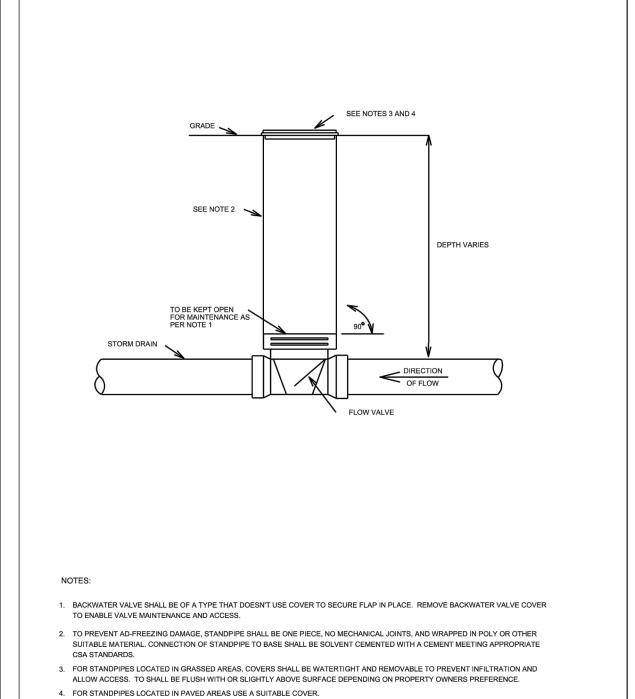
GEOTEXTILE - SEE NOTE 4 (300mm OVERLAP ON TOP)

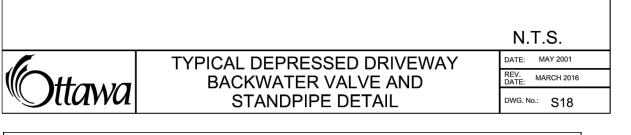
APPROVED HDPE PERFORATE SMOOTH INNER WALL PIPE WITH FILTER SOCK 250mm MIN.

MARCH 2007

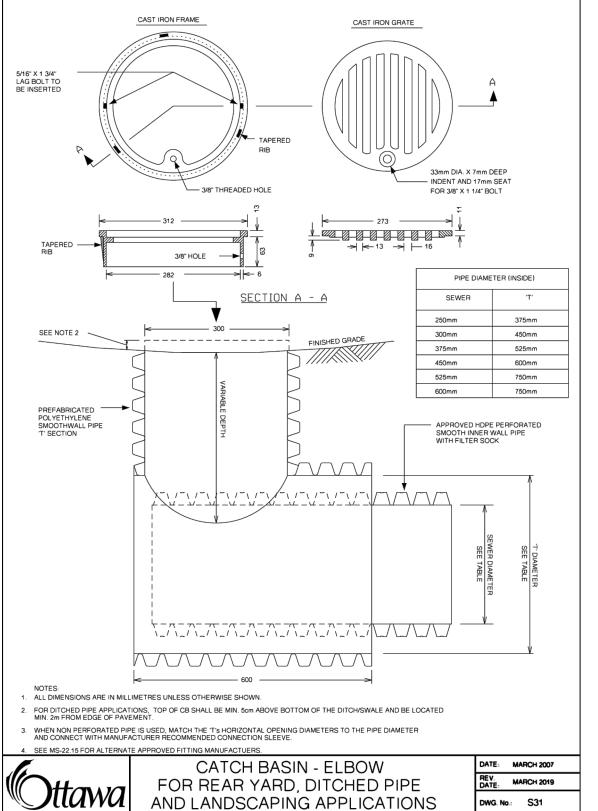
MARCH 2019

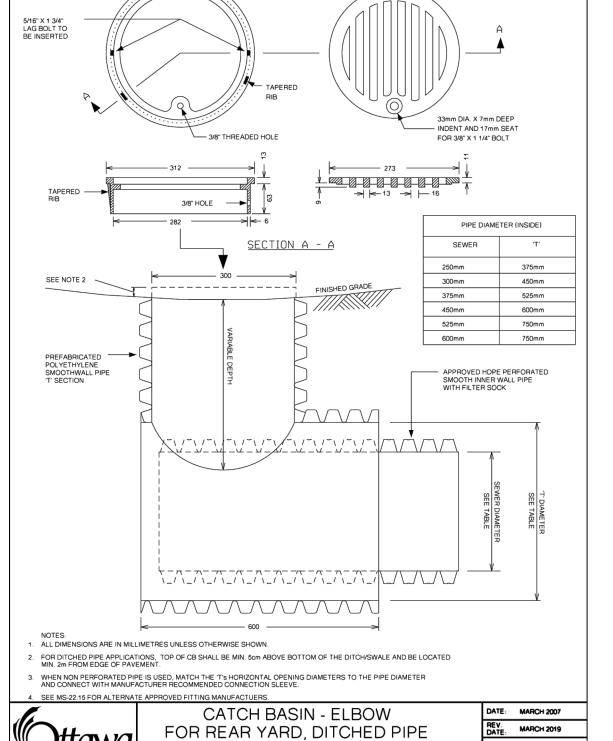
S29

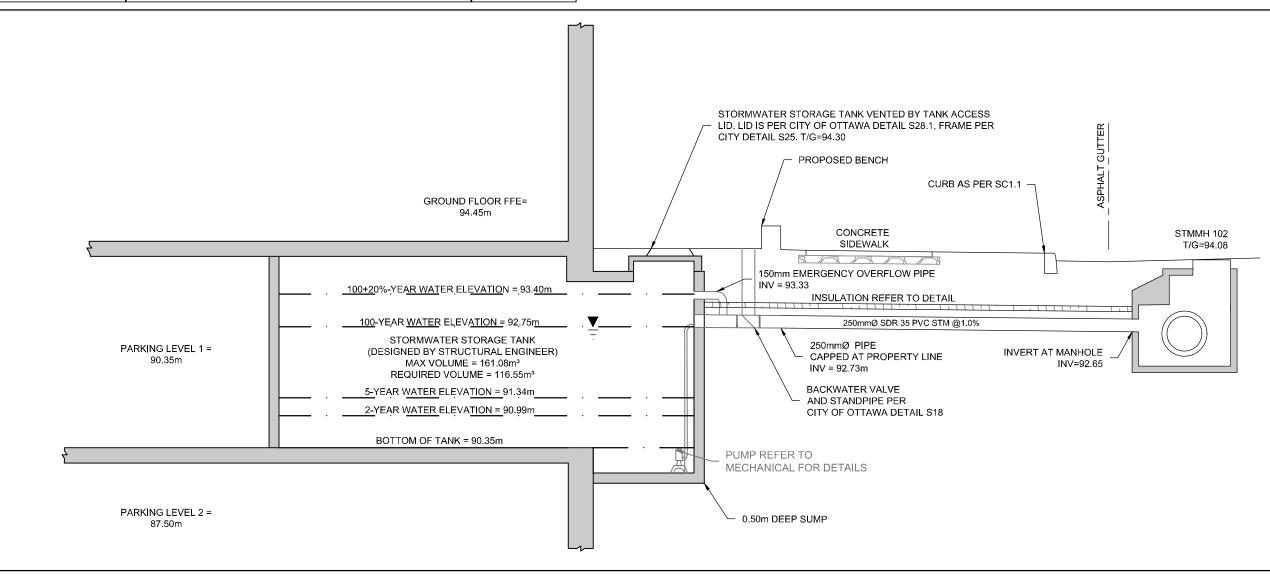




5. SEE MS 22.15 FOR APPROVED PRODUCTS.







**PHASE 1 CISTERN** 

THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR

DAMAGE TO THEM.

**CLARIDGE HOMES** CLARIDGE HOMES

OTTAWA, ONTARIO

2ND FLOOR

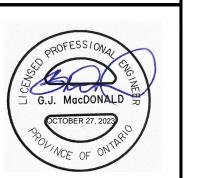
K1S 4N7

505 PRESTON STREET, CLARIDGE H·O·M·E·S



				SCALE	DESIGN	
					ARM	
					CHECKED	
					GJM	
					DRAWN	
3.	REISSUED PHASE 1 ONLY	OCT 27/2023	GJM		CJF/ARM	(3
J	INCIOSOED FILASE FONET	0012//2023	GJW		CHECKED	<b>\</b>
2.	REVISED AND ISSUED FOR CITY APPROVAL	DEC 09/2022	GJM		ARM	\ \ \
1.	ISSUED WITH SITE PLAN APPLICATION	SEPT 03/2021	JAG		APPROVED	
No.	REVISION	DATE	BY		GJM	







1500 MERIVALE 1500 MERIVALE, CITY OF OTTAWA

DRAWING NAME NOTES AND DETAILS GENERAL SERVICING (PHASE 1)

CITY PLAN No. 18612

121009

AREA DRAIN TABLE (PHASE 1)

LANDSCAPE DRAIN TABLE (PHASE 1)

CATCHBASIN MANHOLE TABLE

110 | 1+088.37 | 1200 | 94.60 | NE=92.89

**CATCHBASIN TABLE (PHASE 1)** 

01 | 1+047.58 | 610X1450 | 93.97 | NE=92.77 |

02 | 1+047.58 | 610X1450 | 93.97 | SW=92.77 |

03 | 1+095.34 | 610X610 | 94.87 | NE=93.67 |

04 | 1+095.34 | 610X610 | 94.87 | SW=93.67 | 83

STM MANHOLE TABLE (PHASE 1)

1+024.07 | 1500mmØ

1+035.35 | 1800mmØ

1+057.70 | 1500mmØ

1+087.85 | 1500mmØ |

104

CBMH ID STATION (mm)

SIZE T/G ELEV

(m)

SIZE | T/G ELEV | INVERT | ICD DIA

T/G ELEV | INVERT

94.68

NW=92 35

SE=92.2

SW=92.6

NE=92.65

NW=92.5

SE=92.42 SW=92.7 NW=92.73 SE=92.58

NE=92.88 SW=92.80

T/G ELEVATION

94.70

INVFRT

INVERT

NE=93.20

SW=93.66

94.35 REFER TO MECHANICAL FOR CONNECTION DETAILS

AD No. | T/G ELEVATION |

LD. No.

2000

CB ID STATION

REV#3 21009-NDGP1