

1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROJECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
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 \$5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
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 LANDFILL 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 AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM. BARE MAPPING IS REFERENCED TO THE MT ZONE 9 NAD83 (ORIGINAL DATUM). THE SITE'S BENCHMARKS ARE AT THE TOP OF THE SPINDLE FIRE HYDRANTS. SITE BENCHMARK #1 OUTSIDE THE SOUTHEAST (GEORGE STREET) CORNER OF THE SITE FIRE HYDRANT SPINDLE T6-G20-03. SITE BENCHMARK #2 IS OUTSIDE THE SOUTHWEST (HURON STREET) CORNER OF THE SITE FIRE HYDRANT SPINDLE T6-GH0-07.
9. REFER TO GEOTECHNICAL REPORT (IN: PG2373.3, REV. 5, DATED OCTOBER 29, 2024), PREPARED BY PATERSON GROUP 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 GRANULAR MATERIAL.
10. REFER TO ARCHITECTS AND LANDSCAPE ARCHITECTS' DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
11. REFER TO SERVING AND STORMWATER MANAGEMENT REPORT (R-2024-1117) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD. DATED JUNE 23, 2023.
12. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
13. PROVIDE LINE/PAVING PAINTING.
14. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INCLUDING ALL SERVING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWIN ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
15. ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL FOLLOW ALL CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. ONTARIO PROVINCIAL STANDARDS SHALL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
16. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.

ITEMIZATION:	SPEC. NO.	REFERENCE
SEWER TRENCH	58 & 59	CITY OF OTTAWA
STORM TRENCH	PVC DR 35	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LED	PVC DR 35	
INSULATION FOR SHALLOW SEWERS	535	CITY OF OTTAWA
2. INSULATE ALL PIPES (SANSTM) THAT HAVE LESS THAN 2.0m COVER WITH 150mmx1200mm H=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% IS PREFERRED).		
4. SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.		
5. A MINIMUM OF 150 mm OPS GRANULAR A SHALL BE PLACED FOR BEDDING FOR SEWER OR WATER PIPES WHEN PLACED ON SOIL SUBGRADE. THE BEDDING SHOULD EXTEND TO THE SPRING LINE OF THE PIPE. COVER MATERIAL, FROM THE SPRING LINE TO A MINIMUM 400 mm FROM THE SEWER, SHALL BE 150mm OPS GRANULAR A (CONCRETE OR PSM PIPE, CONCRETE OR PSM PIPE) OR SAND (CONCRETE PIPE). THE BEDDING AND COVER MATERIALS SHOULD BE PLACED IN MAXIMUM 225 MM THICK LIFT LAY AND COMPACTED TO 98% OF MDD. SEE DETAIL S11.1.		
6. WHERE HARD SURFACE AREAS ARE CONSIDERED ABOVE THE TRENCH BACKFILL, THE TRENCH BACKFILL MATERIAL WITHIN PROPOSED TRENCH SHALL BE FILL FINISHED GRADE AND ABOVE THE COVER MATERIAL, SHOULD MATCH THE SOILS EXPOSED. THE TRENCH WALLS TO MINIMIZE DIFFERENTIAL FROST HEAVING. THE TRENCH BACKFILL SHOULD BE PLACED IN MAXIMUM 225 MM THICK LAY AND COMPACTED TO 98% OF MDD. SEE DETAIL S11.1. THE MATERIALS SPECIAL CALLS LARGER THAN 200 MM SHALL BE IN THE TRENCH DIRECTION SHOULD BE SEGREGATED FROM RE-USE AS TRENCH BACKFILL.		
7. FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N SEAL, PSM, POSITIVE SEAL AND DUBSAL) THE CONCRETE CIRCLE FOR THE PIPE CAN BE EMBEDDED.		
8. THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF THE SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPTS #10.07.16, 41.07.16, 41.07.16.04 AND 407.07.16.04. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.		
9. STORM MANHOLES AND CBMS ARE TO HAVE 300mm SPLS UNLESS OTHERWISE INDICATED.		
10. CONTRACTOR SHALL PRELUSIVE (CTV) ALL SEWERS, 200mm OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.		

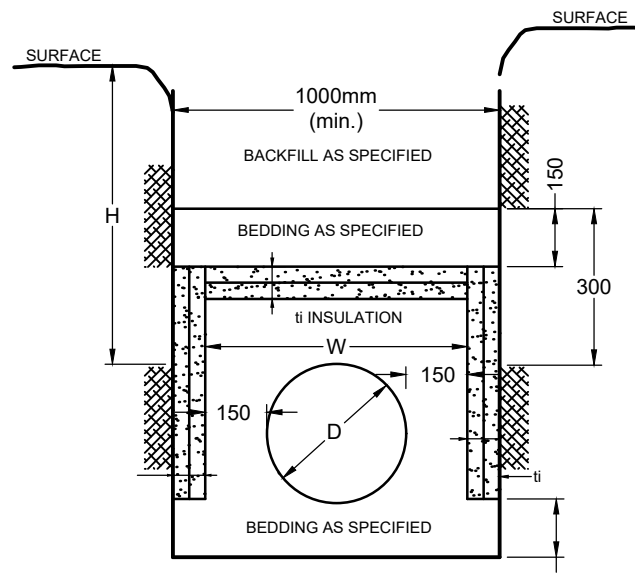
SPECIFICATIONS:		
ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER/ABOVE SEWER	W25 / W25.2	CITY OF OTTAWA
WATERMAIN	PVC DR 18	
VALVE AND VALVE BOX	W24	CITY OF OTTAWA
2. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS 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.		
3. WATERMAIN SHALL BE MINIMUM 24m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. ANY WATERMAIN WITH LESS THAN 2.4m COVER TO BE INSULATED PER THE SHOWN DETAIL.		
4. PROVIDE MINIMUM 0.25m ABOVE, 0.5m IF BELOW, CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS PER CITY OF OTTAWA STANDARDS W25/W25.2		
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.		
6. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS CITY OF OTTAWA STANDARD DETAILS W-39, 40, 41, 42, 43 AND 44.		
7. PROVIDE THERMAL INSULATION FOR WATERMAIN AT OPEN STRUCTURES PER CITY OF OTTAWA STANDARD DETAIL W-23.		
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.		

1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2.0m COVER AND ALL WATERMAIN WITH LESS THAN 2.4m OF COVER WITH EXPANDED POLYSTYRENE INSULATION AS PER OPSD 1109.030.
2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER WITH 50mm MINIMUM (SEE TABLE)

T = THICKNESS OF INSULATION (mm)
W = WIDTH OF INSULATION (mm)
 $W = D + 300$ (1000 min.)
D = O.D OF PIPE (mm)

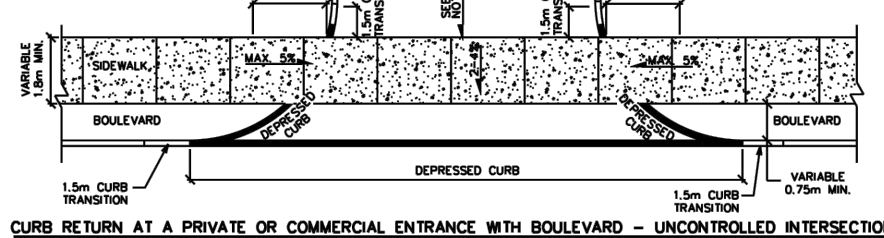
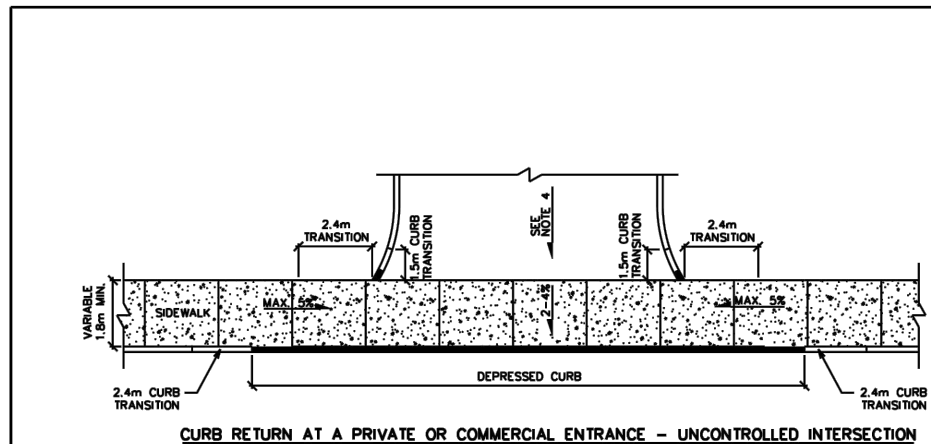
COVER SEWER / WATER (mm)	INSULATION THICKNESS (mm)
2000-1700 / 2400-2100	50
1700-1400 / 2100-1800	75
1400-1100 / 1800-1500	100

T = THICKNESS OF INSULATION (mm)
W = WIDTH OF INSULATION (mm)
W = D + 300 (1000 min.)
D = O.D OF PIPE (mm)



**INSULATION DETAIL FOR SHALLOW
SEWERS & WATERMAIN**
N.T.S

PROPOSED WATER SERVICE (4+000.0)			
STATION	SURFACE ELEVATION	T/WMM ELEVATION	COMMENTS
4+000.0	60.90	58.50*	CONNECTION TO EXISTING 200mmØ SERVICE
4+004.8	60.65	58.77	CROSS ABOVE 1200mm SAN AS PER CITY OF OTTAWA DETAIL W/25.2 (CLEARANCE =±0.30m)
4+007.8	60.70	59.21	CROSS ABOVE 675mm STM AS PER CITY OF OTTAWA DETAIL W/25.2 (CLEARANCE =±0.30m)
4+023.0	60.15	57.75	W&VB
4+024.0	61.26	58.54	CAP SERVICE 1.0m FROM THE FOUNDATION WALL

[illegible]

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. CURB DETAILS SEE SC1.1, SC1.2 AND SC1.3.
3. SIDEWALK DETAILS SEE SC2 AND SC3.
4. MAXIMUM SLOPE VARIES, SEE PRIVATE APPROACH BYLAW.
5. UNCONTROLLED INTERSECTION MEANS AN ENTRANCE NOT LOCATED AT A TRAFFIC SIGNAL OR ALL-WAY STOP CONTROL.

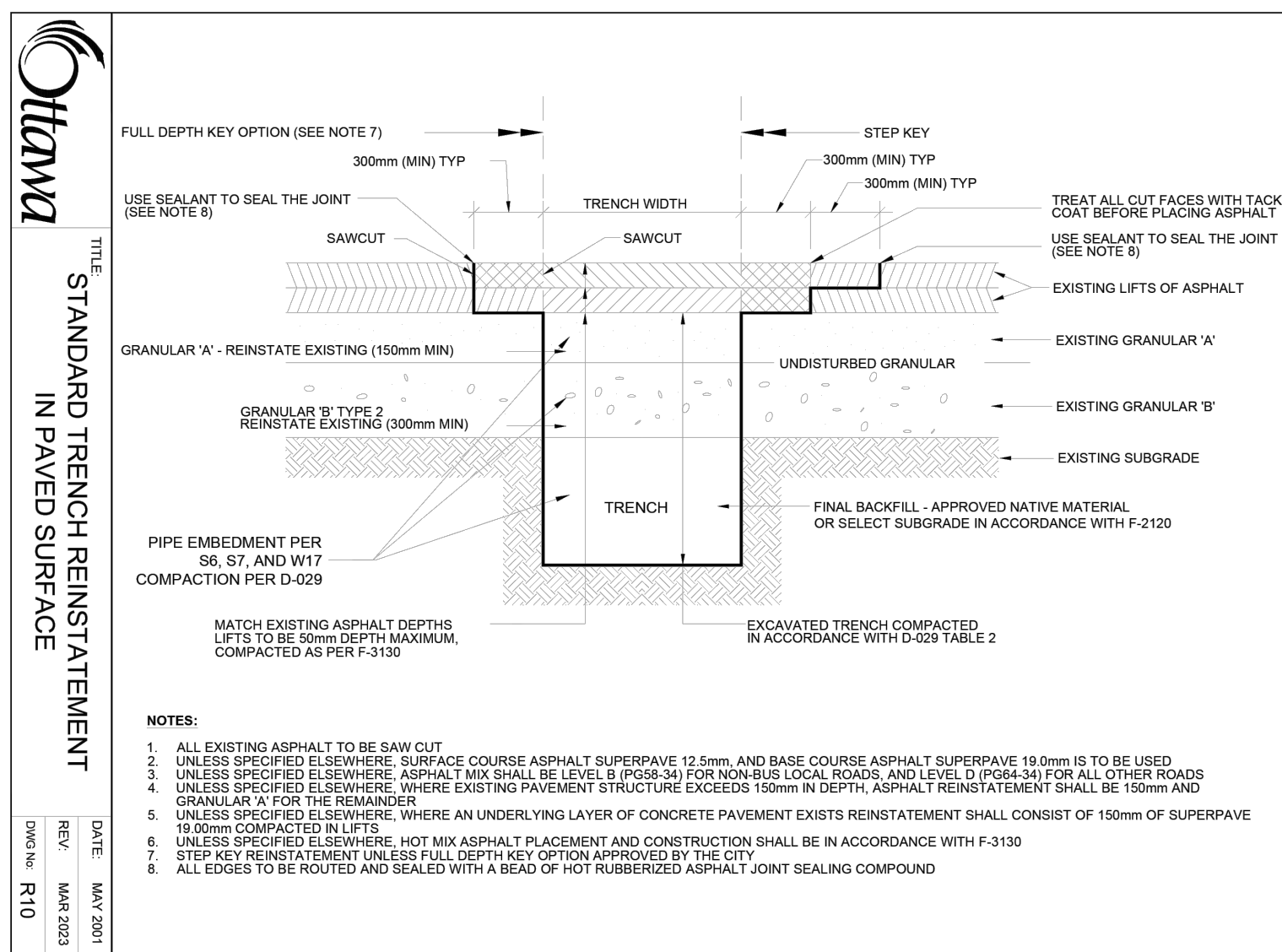
	CURB RETURN ENTRANCES - UNCONTROLLED INTERSECTIONS	DATE: MARCH 2007
		REV. DATE: MARCH 2021
		DWG. No.: SC7.1

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE
⑥	675mmØ STM OBV = 58.63	200mmØ STM INV = 59.02	±0.38m
⑦	1200mmØ STM OBV = 58.35	150mmØ WTM INV = 58.65	±0.30m
⑧	675mmØ STM OBV = 58.78	150mmØ WTM INV = 59.08	±0.30m
⑨	1200mmØ STM OBV = 58.32	150mmØ WTM INV = 58.62	±0.30m
⑩	675mmØ STM OBV = 58.76	150mmØ WTM INV = 59.06	±0.30m

NOTES:

1. BARREL TO BARREL SEPARATION (S) SHALL BE 250mm MINIMUM.
2. THRUST LOGGERS FOR MANS (LARGER THAN 600mm PHMMAL) SHALL BE PER SPECIAL DESIGN.
3. FOR 300mm (NOMINAL) AND 400mm (NOMINAL) MAN, BENDS SHALL BE MAX. 27° 32'.
4. CONCRETE FOR THRUST LOGS SHALL BE 20 MPa.
5. REFER TO W25.6 FOR RESTRAINED LENGTH REQUIREMENTS.
6. REFER TO W25.3 AND W25.4 FOR THRUST LOG REQUIREMENTS.
7. ALL CONDITIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
8. DESIGN TO BE THE INTENT OF THE WORK UNDER DISCUSSION CRITERIA JUNE 2013.
9. CATHODIC PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH W99, W40, AND W42.
10. TRACER WIRE REQUIRED FOR PVC, PEK AND HDPE WATERMAIN PIPE ONLY AS PER SPEC.

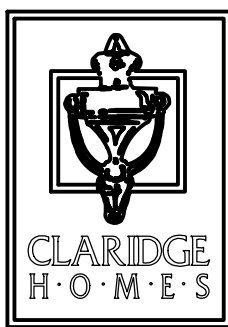
	WATERMAIN CROSSING OVER SEWER	DATE: MAY 2001
		REV. DATE: MARCH 2001
		DWG. No.: W25.2



NOTES

1. ALL EXISTING ASPHALT TO BE SAW CUT
2. UNLESS SPECIFIED ELSEWHERE, SURFACE COURSE ASPHALT SUPERPAVE TYPE 10M, AND BASE COURSE ASPHALT SUPERPAVE TYPE 10M IS TO BE USED.
3. UNLESS SPECIFIED ELSEWHERE, ASPHALT MIX SHALL BE LEVEL B (P058+34) FOR NON-BUS LOCAL ROADS, AND LEVEL D (P064+34) FOR ALL OTHER ROADS.
4. UNLESS SPECIFIED ELSEWHERE, WHERE EXISTING PAVEMENT STRUCTURE EXCEEDS 150mm IN DEPTH, ASPHALT REINSTATEMENT SHALL BE 150mm AND BASE COURSE SHALL BE 150mm.
5. UNLESS SPECIFIED ELSEWHERE, WHERE AN UNDERLYING LAYER OF CONCRETE PAVEMENT EXISTS REINSTATEMENT SHALL CONSIST OF 150mm OF SUPERPAVE TYPE 10M AND 150mm OF CONCRETE.
6. UNLESS SPECIFIED ELSEWHERE, HOT MIX ASPHALT PLACEMENT AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH F-3130.
7. UNLESS SPECIFIED ELSEWHERE, JOINT DEPTH SHALL BE 100mm OR DEPTH OPTION APPROVED BY THE CITY.
8. ALL EDGES TO BE ROUTED AND SEALED WITH A BEAD OF HOT RUBBERIZED ASPHALT JOINT SEALING COMPOUND

CLARIDGE HOMES
CLARIDGE HOMES
505 PRESTON STREET,
OTTAWA , ONTARIO
K1S 4N7.



				SCALE		DESIGN				LOCATION CITY OF OTTAWA 137, 141 GEORGE ST, 110, 116 YORK ST, AND 321, 325 DALHOUSIE ST				
				AS SHOWN		ARM/C/JF		 		 Engineers, Planners & Landscape Architects Suite 200, 240 Michael Cowpland Drive Ottawa, Ontario, Canada K2M 1P5 Telephone (613) 254-9643 Facsimile (613) 254-5867 Website www.novatech-eng.com		DRAWING NAME		PROJECT No.
						CHECKED						ARM		NOTES AND DETAILS (YORK)
6.	REVISED PER CITY COMMENTS	JUL 29/25	GJM	AS SHOWN		DRAWN		 				REV # 6		
4.	REVISED DRAINAGE CATCHMENTS	JUNE 23/25	GJM			ARM/C/JF								ARM
4.	REVISED PER CITY COMMENTS	JUNE 12/25	GJM	AS SHOWN		CHECKED		 				DRAWING No. 112142-ND-Y		
3.	SUPPORT SPC SUBMISSION	MAR 07/25	GJM			ARM								ARM
2.	MUNICIPAL CONSENT APPLICATION	MAY 06/24	GJM	AS SHOWN		APPROVED		 						
1.	PART LOT CONTROL APPLICATION	FEB 01/24	GJM			GJM								GJM
No.	REVISION	DATE	BY											

PLANS1.DWG - 10/23/2017
#19235