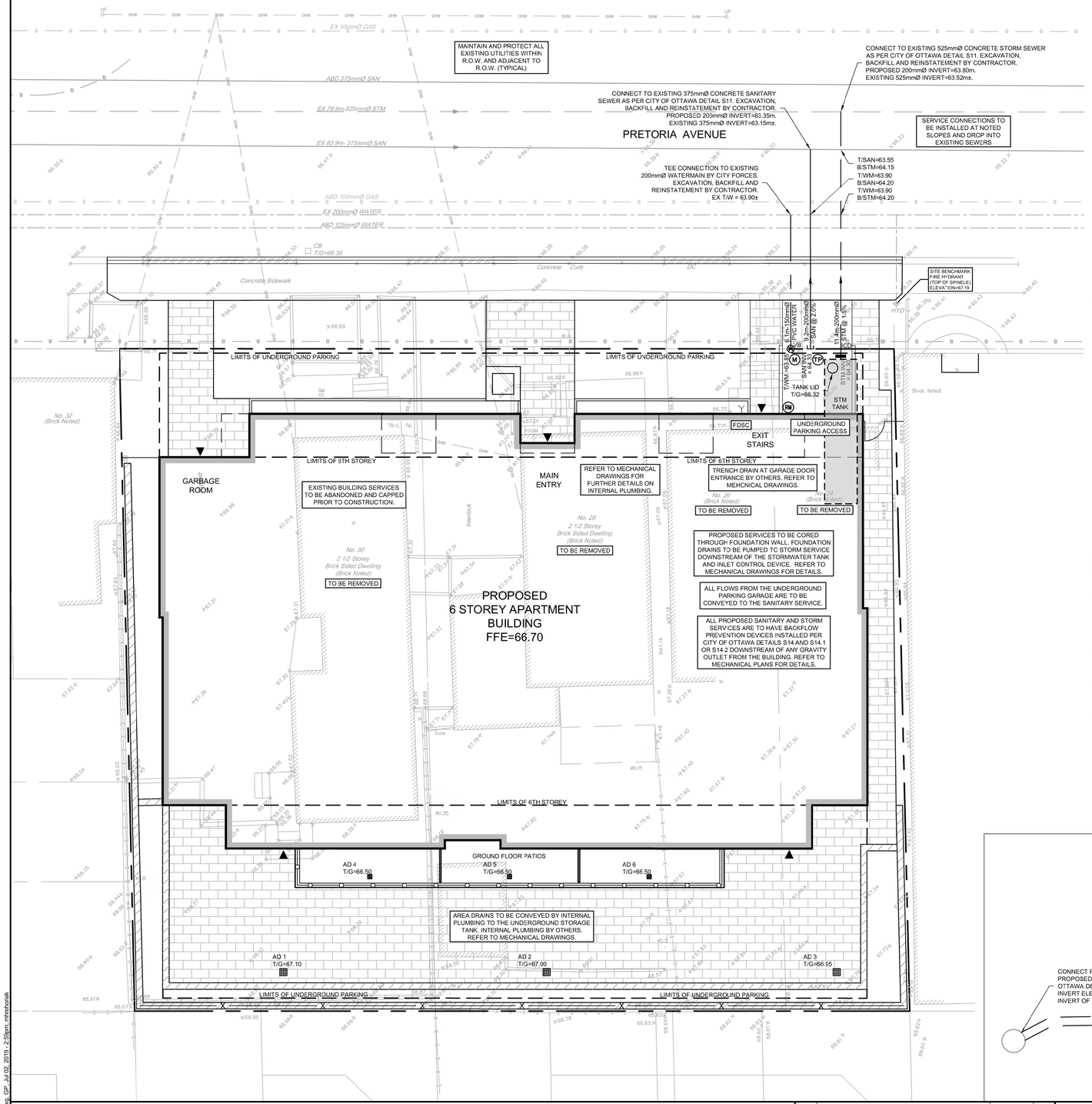


STORMWATER STORAGE TANK TABLE

DESIGN EVENT	CONTROLLED FLOW FROM STORAGE TANK	STORAGE TANK VOLUME	
		REQUIRED	PROVIDED
1:5 YR	1.3 L/s	6.7 m³	20.0 m³
1:100 YR	2.1 L/s	13.5 m³	20.0 m³

NOTES:

1. ALL DRAINAGE FROM AREA A-2 (PROPOSED REARYARD TERRACE AND ROOF DECK PATIOS) TO BE DIRECTED TO THE INTERNAL STORMWATER STORAGE TANK. REFER TO MECHANICAL PLANS FOR DETAILS.
2. REFER TO STRUCTURAL PLANS FOR EXACT SIZE AND DETAILS OF INTERNAL STORMWATER STORAGE TANK.
3. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR LOCATION AND CONNECTIONS TO INTERNAL STORMWATER STORAGE TANK.

150mmØ WATERMAIN TABLE

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
1+00.0	66.30	✱63.90	CONNECTION TO EX 200mmØ WM
1+06.1	66.25	63.85	VALVE AND VALVEBOX AND CAP AT PROPERTY LINE

✱ 150mmØ CONNECTION TO EXISTING 200mmØ WATERMAIN. EXACT ELEVATION TO BE FIELD DETERMINED. PROVIDE THERMAL INSULATION AS PER CITY OF OTTAWA DETAIL W23 AND DETAIL W22 WHERE COVER IS LESS THAN 2.4m AND/OR ADJACENT TO OPEN STRUCTURES.

INLET CONTROL DEVICE DATA - STM TANK

DESIGN EVENT	ICD TYPE (IPEX MODEL #)	DIAMETER OF OUTLET PIPE	DESIGN FLOW	DESIGN HEAD	WATER ELEVATION
1:5 YR	TEMPEST VORTEX LMF 45	200mm Ø	1.3 L/s	0.57m	64.97m
1:100 YR	TEMPEST VORTEX LMF 45	200mm Ø	2.1 L/s	1.25m	65.65m

SEWER NOTES:

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

ITEM	SPEC. No.	REFERENCE
STORM SERVICE	PVC DR 35	
SANITARY SERVICE	PVC DR 35	
SEWER TRENCH	S6 & S7	CITY OF OTTAWA
BEDDING (GRANULAR 'A')		
COVER (GRANULAR 'A' OR GRANULAR 'B' TYPE I WITH MAXIMUM PARTICLE SIZE=25mm)		
STORM / SANITARY MH FRAME	S25	CITY OF OTTAWA
STORM COVER OPEN	S24	CITY OF OTTAWA

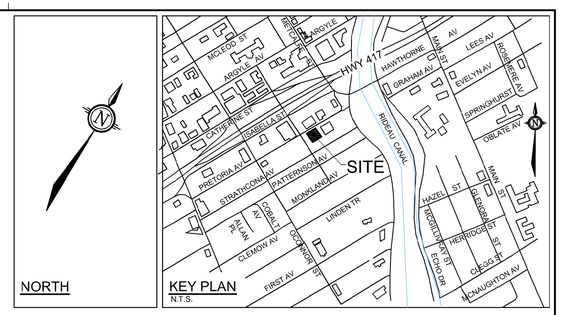
3. ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTERS WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2. REFER TO MECHANICAL PLANS FOR DETAILS.
4. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
5. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 1.5m COVER WITH 125mm THICK HI-40 RIGID INSULATION.
6. 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.
7. 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.

WATERMAIN NOTES:

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

ITEM	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 SEWERS	W25	CITY OF OTTAWA
WATERMAIN MATERIAL	PVC DR 18 (100mm AND LARGER)	

3. 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. EXCAVATION, INSTALLATION OF SERVICE, BACKFILL AND RESTORATION BY THE CONTRACTOR.
4. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
5. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
6. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.



LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM SERVICE
- PROPOSED AREA DECK DRAIN
- ICD — PROPOSED INLET CONTROL DEVICE
- PROPOSED BARRIER CURB
- DC — PROPOSED DEPRESSED CURB
- 150mmØ — PROPOSED WATER SERVICE AND DIAMETER
- VB — PROPOSED VALVE & VALVE BOX
- PROPOSED CAP
- PROPOSED SIAMESE CONNECTION
- M RM — PROPOSED WATER METER & REMOTE METER
- TP — PROPOSED SANITARY INTERNAL TEST PORT
- PROPOSED BUILDING ENTRANCE
- PROPOSED RETAINING WALL
- OHW — EXISTING OVERHEAD WIRES
- EXISTING CONCRETE CURB
- SANMH — EXISTING SANITARY MANHOLE & SEWER
- CBMH — EXISTING CATCHBASIN MANHOLE
- STMMH — EXISTING STORM MANHOLE & SEWER
- CB — EXISTING CATCHBASIN C/W CATCHBASIN LEAD
- HYD — VAVB — EXISTING HYDRANT & VALVE
- EXISTING TREES / VEGETATION
- EX UP — EXISTING UTILITY POLE C/W GUY WIRES
- EXISTING FENCE
- 750mmØ WM — EXISTING WATERMAIN
- HYD — EXISTING HYDRANT C/W VALVE & LEAD

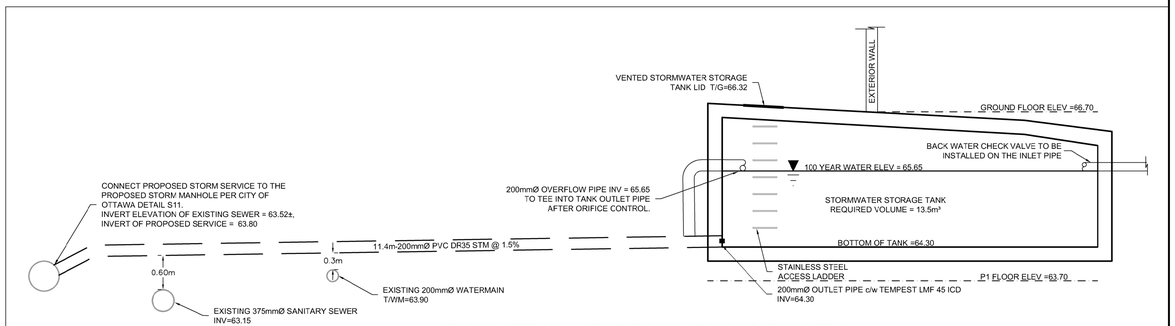
GENERAL NOTES:

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. PROTECT 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 $2,000,000.00. 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 MUNICIPAL AUTHORITIES.
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 ELEVATIONS ARE GEODETIC.
8. REFER TO GEOTECHNICAL INVESTIGATION REPORT NO. PG4798-1 DATED APRIL 22, 2019 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.
9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACED AREAS AND DIMENSIONS.
10. REFER TO THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT' (R-2019-116) DATED JULY 3, 2019 PREPARED BY NOVATECH.
11. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE-IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).

ROOF DRAIN TABLE: AREA R-1 (ROOF DRAINS 1-4)

AREA ID *	ROOF DRAIN No. (WATTS MODEL)**	ROOF DRAIN OPENING SETTING	1:5 YEAR RELEASE RATE	APPROX. 5 YR PONDING DEPTH	1:100 YEAR RELEASE RATE	APPROX. 100 YR PONDING DEPTH
A-2	RD 1 (RD-100-A-ADJ)	1/2 OPEN	2.5 L/s	5 cm	3.8 L/s	10 cm

* REFER TO THE POST-DEVELOPMENT DRAINAGE AREA PLAN (FIGURE A5) IN THE NOVATECH SERVICING AND STORMWATER MANAGEMENT REPORT FOR DRAINAGE AREA IDENTIFIERS AND STORMWATER MANAGEMENT DETAILS.
**ALL CONTROLLED FLOW ROOF DRAINS FOR THE PROPOSED BUILDING TO BE WATTS ADJUSTABLE ACCUTROL ROOF DRAINS.



STORMWATER MANAGEMENT TANK CROSS-SECTION DETAIL

SCALE = 1:50

NOTE:
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.

No.	REVISION	DATE	BY
1.	ISSUED FOR SITE PLAN APPLICATION	JULY 3/19	CJR

SCALE: 1:100 (1:100 0 1 2 3 4)

DESIGN: MJH
CHECKED: CJR
DRAWN: MJH
CHECKED: CJR
APPROVED: JLS

FOR REVIEW ONLY

LICENSED PROFESSIONAL ENGINEER M.J. FREHORIAK 100125256 PROVINCE OF ONTARIO July 3/19

LICENSED PROFESSIONAL ENGINEER L. RUDDLE PROVINCE OF ONTARIO July 3/19

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LOCATION
CITY of OTTAWA
24-30 PRETORIA AVENUE

DRAWING NAME
GENERAL PLAN OF SERVICES

PROJECT No. 119011
REV. REV # 1
DRAWING No. 119011-GP