



- LEGEND**
- PROPOSED ELEVATION
  - EXISTING ELEVATION
  - F.F. PROPOSED TOP OF GROUND FLOOR ELEVATION
  - T.O.F. PROPOSED TOP OF CONCRETE FOUNDATION ELEVATION
  - U.S.F. PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION
  - D/W PROPOSED DRIVEWAY
  - EXISTING COMBINED SEWER
  - EXISTING WATERMAIN
  - EXISTING STORM SEWER
  - PROPOSED 150mm PVC SANITARY LATERAL SERVICE @ 1% (MIN.) SLOPE
  - PROPOSED 150mm PVC STORM LATERAL SERVICE @ 1% (MIN.) SLOPE
  - PROPOSED 150mm WATER SERVICE PVC CL-150 DR-18
  - EXISTING STORM MANHOLE
  - EXISTING COMBINED MANHOLE
  - EXISTING CATCH BASIN
  - EXISTING WATER VALVE
  - EXISTING FIRE HYDRANT
  - EXISTING UTILITY POLE
  - EXISTING OVERHEAD WIRES
  - PROPOSED VALVE AND VALVE BOX (V&VB)
  - PROPOSED GENERAL DIRECTION OF LOT GRADING AND SURFACE FLOW
  - PROPOSED TERRACING 5H (MAX.) TO 1V
  - PROPOSED RETAINING WALL
  - T/W PROPOSED TOP OF RETAINING WALL ELEVATION
  - B/W PROPOSED BOTTOM OF RETAINING WALL ELEVATION
  - PROPOSED WASTEWATER SAMPLING INSPECTION CHAMBER LOCATION (PER CITY DETAIL S18.1)
  - PROPOSED RETAINING WALL LOCATION PER ARCHITECTURAL SITE PLAN (DWG. No. A1.0)
  - PROPOSED WEeping TILE SUMP PIT LOCATION
  - C/W DUPLEX SUMP PUMPS (REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS)
  - PROPOSED SANITARY HOLDING TANK LOCATION
  - C/W DUPLEX SEWAGE PUMPS
  - PROPOSED ROOF DRAIN NUMBER AND LOCATION
  - PROPOSED SCUPPER LOCATION
  - PROPOSED LANDSCAPE RETAINING WALL PER ARCHITECTURAL SITE PLAN
- NOTES**
- EXISTING SERVICES AND UTILITIES SHOWN ON THIS DRAWING WERE TAKEN FROM THE BEST AVAILABLE RECORDS BUT ARE NOT COMPLETE. CONTRACTOR IS REQUESTED TO CHECK IN THE FIELD FOR LOCATION AND ELEVATION OF PIPES, UNDERGROUND STRUCTURES, ETC. AND CHECK WITH AUTHORITIES AND UTILITIES TO HIS SATISFACTION BEFORE DIGGING.
  - CONTRACTOR IS ADVISED TO COLLECT INFORMATION ON SOIL CONDITIONS AS DEEMED NECESSARY. BEFORE POURING OF CONCRETE FOOTING AND FOUNDATION, THE OWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SUBGRADE ON THIS LOT IS SUFFICIENT TO SUPPORT PROPOSED RESIDENTIAL BUILDING. REFER ALSO TO THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY THE OWNER'S GEOTECHNICAL CONSULTANTS, THE PATERSON GROUP, ENTITLED "GEOTECHNICAL INVESTIGATIONS - PROPOSED MULTI-STORY BUILDING 71 RUSSELL AVENUE" (REPORT No. P07696-1 DATED SEPTEMBER 16, 2025).
  - SITTING DETAILS FOR THE PROPOSED RESIDENTIAL BUILDING WERE PROVIDED BY LAWRENCE ARCHITECTS AS DETAILED ON THEIR SITE PLAN (DWG. No. A1.0 REV. 9 DATED APRIL 2, 2026) RECEIVED ON APRIL 2, 2026 AND UPDATED PER E-MAIL OF MAY 26, 2026. BUILDING ELEVATIONS THAT ARE SHOWN (TOP OF GROUND FLOOR, TOP OF FOUNDATION, TOP OF BASEMENT FLOOR, AND USF) ARE REFERENCED FROM ARCHITECT'S "ELEVATIONS" PLAN (DWG. No. A4.2 REV. 9 DATED APRIL 2, 2026) RECEIVED ON APRIL 2, 2026 AND UPDATED PER E-MAIL OF MAY 26, 2026.
  - EXISTING HORIZONTAL AND VERTICAL SURVEY DATA SHOWN ON THIS PLAN INCLUDING SITE BENCHMARK, ROAD ELEVATIONS, SEWER INVERTS, SEWER LOCATIONS, AND TOPOGRAPHICAL INFORMATION OF THE LOT WERE PROVIDED BY FARLEY SMITH AND DENIS SURVEYING LTD. AS SHOWN ON THEIR TOPOGRAPHICAL SURVEY PLAN (FILE No. 259-25 COMPLETED ON SEPTEMBER 8, 2025) RECEIVED ON NOVEMBER 17, 2025. THE CONTRACTOR SHALL ALSO REFER TO THE CITY OF OTTAWA PLAN AND PROFILE DRAWING ENTITLED "RUSSELL AVENUE STA. 3+000 TO STA. 3+100" DWG. No. 022 SHEET 22 OF 54 REV. 7 DATED SEPTEMBER 23, 2022. T.L. MAK ENGINEERING CONSULTANTS LTD. DOES NOT TAKE ANY RESPONSIBILITY FOR THE SURVEY INFORMATION SHOWN HERE.
  - ALL GRADES SHOWN ARE GEODETIC AND METRIC (SEE FARLEY SMITH AND DENIS SURVEYING LTD'S TOPOGRAPHICAL PLAN).
  - PIPE SIZES SHOWN ON THIS PLAN ARE METRIC.
  - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, LABOUR AND MATERIALS RELATING TO ALL CIVIL WORKS REQUIRED FOR THIS SITE AND BY THE CITY OF OTTAWA TO CONNECT INTO THE WATERMAIN.
  - ALL GRADING SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA.
  - CONNECTION OF THE NEW 150mm WATER SERVICE TO THE EXISTING AT THE EX. V&VB ON RUSSELL AVENUE ROAD RIGHT-OF-WAY SHALL BE BY THE CITY FORCES AND AS PER CITY OF OTTAWA ENGINEERING STANDARDS AND REQUIREMENTS. ALL EXCAVATION, BACKFILLING AND REINSTATEMENT SHALL BE CARRIED OUT BY THE OWNER'S CONTRACTOR. ALL WATERWORKS TO BE CONSTRUCTED TO CITY OF OTTAWA WATER ENGINEERING STANDARDS AND SPECIFICATIONS.
  - CONSTRUCTION OF ALL WATERMAIN, WATER SERVICES, SANITARY AND STORM SEWER SYSTEMS IN ACCORDANCE WITH CITY OF OTTAWA'S LATEST REVISED STANDARD OTHERWISE AS PER OPSS REQUIREMENT AND DONE TO THE SATISFACTION OF THE CITY.
  - BEDDING AND HAUNCHING MATERIAL FOR SEWER INSTALLATIONS TO BE GRANULAR "A" INSTALLED AND COMPACTED AS PER CITY STANDARD DETAIL DWG. No. S6 AND S7.
  - STORM AND SANITARY LATERALS SHALL BE PVC DR-28 OR EQUIVALENT. SEWER CONNECTION DETAILS PER CITY DETAIL S11.1 FOR FLEXIBLE PIPES AND S11.2 FOR RIGID PIPES.
  - ALL WATER SERVICES/MAINS SHALL HAVE 2.4m COVER (MIN.). THE 150mm WATER SERVICE SHALL BE PVC CL 150 DR-18. WATER SERVICE AND WATERMAIN TRENCH DETAILS AS PER CITY OF OTTAWA W17. THRUFAST DETAIL S15 PER CITY DETAIL W25.3 DATED MAY 2001. FITTINGS SHALL CONFORM TO APPROVED ANMA AND/OR CSA STANDARDS. CATHODIC PROTECTION FOR NEW WATERMAIN AND SERVICE AS PER CITY DETAIL W40 REV. DATE MARCH 2005.
  - IF WATER SERVICE IS LESS THAN 2.0m FROM SEWER, MANHOLE OR CATCHBASIN, CONTRACTOR IS REQUESTED TO INSULATE BETWEEN THEM WITH S/4 RIGID INSULATION (SEE CITY DETAIL DRAWING No. W23).
  - STORM MANAGEMENT NOTES**  
- REFER TO PROPOSED ROOFTOP STORMWATER MANAGEMENT PLAN (DWG. No. 825-96 SWM-1) FOR ROOFTOP 2-YEAR AND 100-YEAR HWL  
- SEE STORM DRAINAGE REPORT No. R-825-96 DATED DECEMBER 2025 ALSO FOR DETAILS.  
- CONTROLLED ROOF DRAIN FLOW RATE FOR EACH DRAIN SHALL BE 0.316 L/s OR 5.0 US GAL/MIN.
  - ALL PROPOSED BUILDING SANITARY, STORM AND WATER SERVICES SHALL TERMINATE ±1.0m OUTSIDE THE FOUNDATION WALL AND CONNECTION TO PLUMBING BY OTHERS.
  - IT IS REQUIRED THAT A CITY APPROVED BACKWATER VALVE BE INSTALLED AT THE NEW 150mm DIA. (FOUNDATION DRAINS) STORM LATERAL SERVICE AND A FULL PORT BACKWATER VALVE BE INSTALLED FOR THE NEW 150mm SANITARY LATERAL SERVICE AS PER CITY DETAIL S14, S14.1, AND S14.2.
  - PRIOR TO CONCRETE FOOTING AND FOUNDATION POURING, THE OWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SUBGRADE ON THIS LOT IS SUFFICIENT TO SUPPORT THE PROPOSED BUILDING.
  - FOR DEVELOPMENT OF THIS LOT, THE CONTRACTOR MUST FIRST CONSTRUCT THE UNDERGROUND SANITARY, STORM AND WATER SERVICES FROM THE SEWER AND WATERMAIN TO SERVICE THE ENTIRE PROPERTY. PRIOR TO BUILDING CONCRETE FOUNDATION POURING, THE CONTRACTOR SHALL VERIFY SEWER DEPTHS TO ENSURE THAT SEWER LATERALS CAN ACHIEVE A SLOPE OF 1% (MIN.) AND STILL BE BELOW PROPOSED UNDERSIDE OF CONCRETE FOOTING ELEVATION. IF THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL CONTACT THE OWNER TO REPORT THE FINDING IN ORDER TO ADJUST THE BUILDING FOUNDATION GRADES PRIOR TO CONCRETE POURING.
  - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY EQUIPMENT, LABOUR AND MATERIALS RELATING TO THE CIVIL WORKS REQUIRED FOR INSTALLATION OF NEW SITE SERVICES, PROVINCIAL HEALTH AND SAFETY REGULATIONS MUST BE FOLLOWED DURING CONSTRUCTION.
  - IT IS THE RESPONSIBILITY OF THE SITE SERVICES CONTRACTOR TO OBTAIN AND CONSTRUCT THE WORKS TO MEET THE LATEST REVISIONS IN CURRENT CIRCULATION OF THE CITY OF OTTAWA'S ENGINEERING STANDARDS, OPSS AND OPSD STANDARDS, AND ONTARIO BUILDING/PLUMBING CODES. WHERE THE LATEST REVISION DIFFERS FROM THE REQUIREMENTS SET OUT IN THIS PLAN, THE CONTRACTOR SHALL PRICE THE WORKS TO MEET LATEST REVISED STANDARDS IN HIS PRICE BID FOR THIS PROJECT. THE CONTRACTOR SHALL INFORM THE ENGINEERS OF ANY CHANGES PRIOR TO COMMENCEMENT OF THE WORKS.
  - PROPOSED GROUND FLOOR, TOP OF CONCRETE FOUNDATION, TOP OF BASEMENT SLAB AND UNDERSIDE OF FOOTING ELEVATIONS SHALL BE REVIEWED AND APPROVED BY OWNER'S ARCHITECTS PRIOR TO CONSTRUCTION.
  - IF EXISTING GRADES ALONG ANY EXISTING ABUTTING PROPERTY LINES EXCEED THE PROPOSED GRADES ON THIS PROPERTY BY A HEIGHT DIFFERENTIAL THAT EXCEEDS TERRACING OF 3H TO 1V, THEN INSTALL A RETAINING WALL AS PER OWNER'S REQUIREMENTS.
  - SITE SERVICING BEDDING, BACKFILL REQUIREMENTS ALONG WITH ROADWAY AND PARKING LOT PAVEMENT STRUCTURES SHALL MEET RECOMMENDATIONS AND REQUIREMENTS SET OUT IN THE OWNER'S SOILS ENGINEER'S REPORT. ALL WORKS TO BE CARRIED OUT BY THE CONTRACTOR ON THE PROPOSED ASPHALT, EXISTING LANEWAY AND PRIVATE DRIVEWAY STRUCTURES SHALL BE APPROVED BY SOILS ENGINEER ON SITE PRIOR TO CONSTRUCTION.
  - CONCRETE BARRIER CURB AND CONCRETE SIDEWALK DETAILS AS PER CITY OF OTTAWA STANDARDS (DWG. No. SC14 REV. DATE MARCH 2007). CONCRETE CURB AND CONCRETE SIDEWALK CONSTRUCTION AND REINSTATEMENT SHALL BE DONE TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.
  - THE EXISTING CONCRETE CURB AND SIDEWALK ON RUSSELL AVENUE AND ANY DISTURBED AREA IN THE RIGHT OF WAY IF DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REINSTATED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF OTTAWA AND IN ACCORDANCE WITH THE LATEST REVISED CITY ENGINEERING STANDARDS.
  - THE CONTRACTOR, UPON COMPLETION OF THE NEW SERVICES SHALL RESTORE THE EXISTING RUSSELL AVENUE ROADWAY DISTURBED BY CONSTRUCTION WORKS ON THIS PROPERTY. ADDITIONALLY, THE ROADWAY GRADING SHALL BE RESTORED AND REGRADED TO DRAIN POSITIVELY TO EXISTING STORMWATER OUTLET AS REQUIRED BY THE CITY INSPECTOR.
  - EXISTING DRIVEWAY TO BE REMOVED WILL BE REINSTATED WITH SOFT LANDSCAPE MATERIAL, WHERE APPLICABLE.
  - WHERE FROST COVER FROM UNDERSIDE OF BUILDING CONCRETE FOOTING TO PROPOSED FINISHED GROUND ELEVATION IS LESS THAN 1.55m, IT IS RECOMMENDED THAT INSULATION (50mm THICK) MINIMUM BE INSTALLED AT THE BUILDING FOOTING AND FOUNDATION TO PROVIDE SUFFICIENT FROST COVER FOR THE FOUNDATION STRUCTURES. THE FOOTINGS WILL NEED TO BE REVIEWED FOR INSULATION BY THE OWNER'S SOILS ENGINEER. EXACT INSULATION REQUIREMENTS SHALL BE AS PER ARCHITECT'S INSULATION DETAILS AS SHOWN ON THEIR ARCHITECTURAL DRAWINGS AND CONFIRMED BY THE OWNER'S SITE SOILS ENGINEER.

No.	REVISION	DATE	BY	No.	REVISION	DATE	BY
7	REVISIONS TO RELOCATE PROPOSED RETAINING WALL PER MARKED-UP DETAILS PROVIDED ON MAY 5, 2026 AND AS PER TEAM MEETING OF MAY 5, 2026	05/05/26	TLM	1	REVISIONS AS PER ARCHITECT'S REVISED SITE PLAN AND ARCHITECTURAL DRAWINGS OF APRIL 23, 2026 AND APRIL 27, 2026	04/28/26	TLM
6	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS OF APRIL 15, 2026	04/15/26	TLM	2	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS OF APRIL 15, 2026	04/15/26	TLM
5	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS OF APRIL 15, 2026	04/15/26	TLM	3	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS OF APRIL 15, 2026	04/15/26	TLM
11	REVISIONS AS PER ARCHITECT'S LATEST REVISED SITE PLAN AND REVIEW COMMENTS OF MAY 21, 2026 AND MAY 26, 2026	05/27/26	TLM	4	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS AND REVISED SITE PLAN OF APRIL 10, 2026	04/10/26	TLM
10	REVISIONS TO LOWER REAR OF BUILDING GRADES AS PER ARCHITECT'S REQUEST OF MAY 20, 2026	05/21/26	TLM	3	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS OF APRIL 2, 2026 AND CITY'S REVIEW COMMENTS RECEIVED ON MARCH 26, 2026	04/10/26	TLM
9	ISSUED FOR BUILDING PERMIT	05/15/26	TLM	2	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS OF JANUARY 29, 2026	01/22/26	TLM
8	REVISIONS AS PER ARCHITECT'S REVIEW COMMENTS OF MAY 6, 2026	05/13/26	TLM	1	REVISIONS AS PER ARCHITECT'S REVISED SITE PLAN AND ARCHITECTURAL DRAWINGS OF DECEMBER 23, 2025	01/07/26	TLM

**71 RUSSELL AVENUE**  
**LOT 14**  
**EAST SIDE OF RUSSELL AVENUE**  
**REGISTERED PLAN 58319**  
**CITY OF OTTAWA**

**T.L. MAK ENGINEERING CONSULTANTS LTD.**  
**CONSULTING ENGINEERS**

PROJECT No. **825-96** DATE **NOVEMBER 2025** DRAWING No. **G-1**

**PROPOSED LOT GRADING AND SERVICING PLAN**

SCALE: 1:100 HORIZONTAL

DESIGN BY: T.L.M.  
 CHECKED BY: T.L.M.  
 DRAWN BY: P.M.  
 CHECKED BY: T.L.M.  
 APPROVED BY: T.L.M.

FOR PERMIT APPLICATION

Site Benchmark  
 Concrete Pin  
 Utility Pole at  
 #84 Russell Avenue  
 Elevation=63.11  
 (Location Not to Scale)

D07-12-26-0014