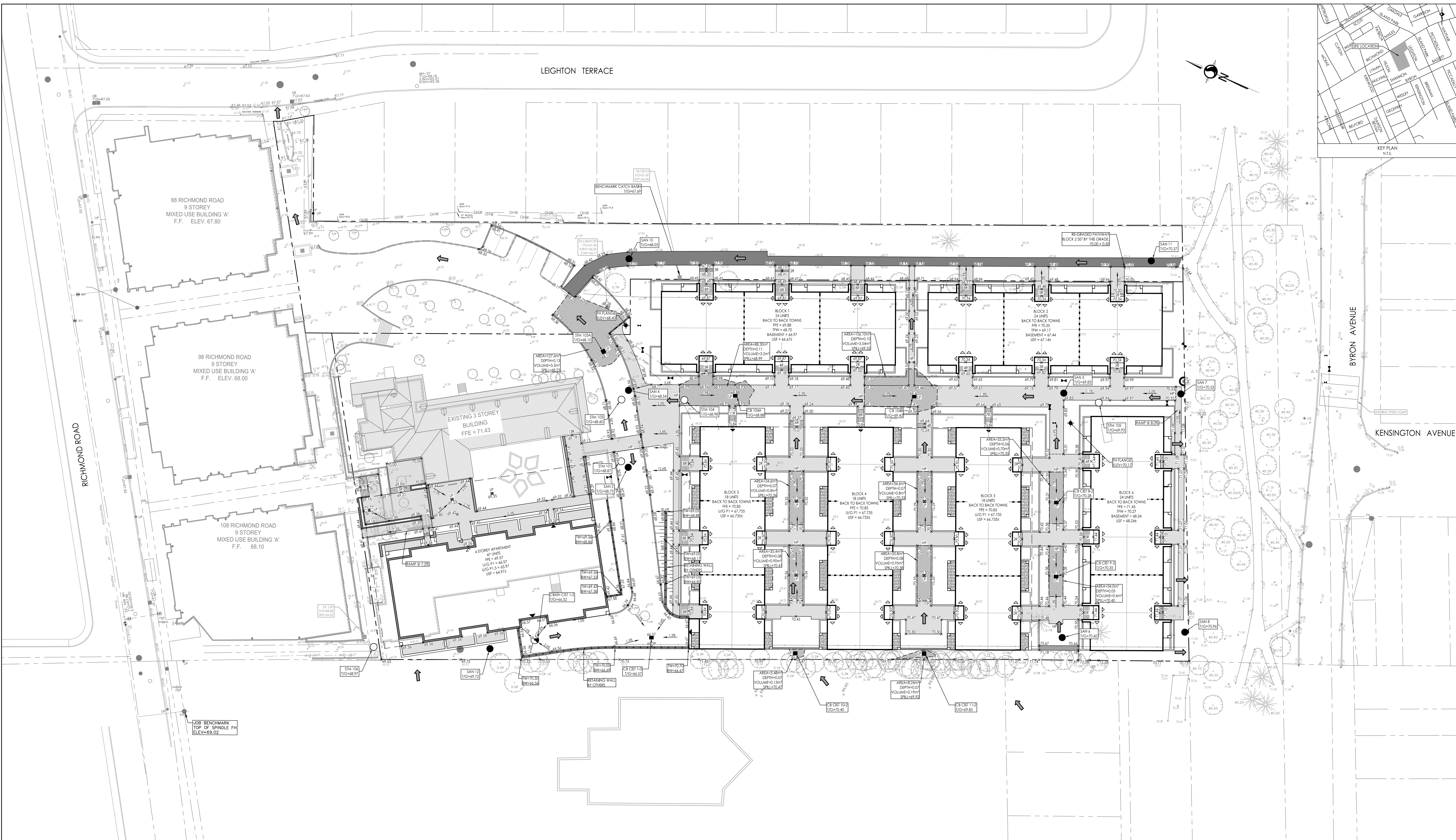


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- Legend**
- ORIGINAL GROUND ELEVATION
 - PROPOSED ELEVATION
 - PROPOSED LOT CORNER ELEVATION
 - EXISTING LOT CORNER ELEVATION
 - FLOW DIRECTION AND GRADE
 - FINISHED FLOOR ELEVATION
 - FINISH OF FOOTING ELEVATION
 - ENGINEERED FILL REQUIRED
 - TERRACING 3:1 SLOPE MAXIMUM (UNLESS OTHERWISE SHOWN)
 - DIRECTION OF EMERGENCY OVERLAND FLOW
 - PROPOSED VALVE BOX
 - PROPOSED FIRE HYDRANT
 - PROPOSED RRE HYDRANT
 - PROPOSED SANITARY SEWER MANHOLE
 - PROPOSED STORM SEWER MANHOLE
 - PROPOSED CATCH-BASIN
 - PROPOSED C.B.T.
 - PROPOSED DEPRESSED CURB LOCATION
 - PROPOSED BARRIER CURB
 - PROPOSED HEAVY DUTY ASPHALT
 - OVERLAND SPILL LOCATION
 - TWO LANE CARAVAN PER CITY STD
 - PROPOSED 2H RATED FIRE WALL LOCATION

- Notes**
- ELEVATION NOTES**
- ELEVATIONS SHOWN ARE GEODESIC AND ARE REFERRED TO THE COUNTRY GEODESIC DATUM.
 - IT IS THE RESPONSIBILITY OF THE USER OF THE INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DELETED AND THAT ITS RELATIVE ELEVATION AND GEOSPHERIC AGREES WITH THE INFORMATION SHOWN ON THE DRAWING.
 - BOUNDARY INFORMATION COMPILED FROM PLAN 46-281-57.



- GENERAL NOTES AND SPECIFICATIONS**
- ALL MATERIALS AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH OPS AND CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS AND OPS SUPPLEMENT. ONTARIO PROVINCIAL STANDARDS WILL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
 - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF SAME INCLUDING WATER PERMIT AND ASSOCIATED COSTS.
 - SERVICE AND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING SERVICES AND UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATION FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REPAIRS THEREOF.
 - CONTRACTOR TO CONFIRM THE ELEVATIONS TO EXISTING INFRASTRUCTURE PRIOR TO INITIATING CONSTRUCTION AND BEFORE THE ENGINEER OF ANY DISCREPANCY FROM THE AS-BUILT INFORMATION REFERENCED ON THE DRAWING.
 - ALL DISTURBED AREAS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE ENGINEER & THE CITY. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH OPS 309.010 AND OPS 310.
 - ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS. THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONTRACTOR AS REFERRED IN THE ACT.
 - THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENTATION CONTROL PLAN THAT WILL IMPLEMENT BEST MANAGEMENT PRACTICES TO PREVENT PROTECTION FROM RECEIVING STORM SEWER OR DRAINAGE DURING CONSTRUCTION ACTIVITIES. THIS PLAN SHALL INCLUDE BUT NOT BE LIMITED TO CATCH BASIN INSPECTION, DRAIN BALE CHECKS, DRAINAGE SEDIMENT CONTROLS AROUND ALL DISTURBED AREAS, DEWATERING SHALL BE PUMPED INTO SEDIMENT TRAPS.
 - SEE PLAN PREPARED BY PROJECT 1 STUDIO DRAWING SP-01, REV 4, PROJECT NAME: 114 RICHMOND ROAD, OTTAWA, ON, PROJECT NO: 2511-2020-0460.
 - TOPOGRAPHIC SURVEY SUPPLIED BY AMNE, CESSAUNA VOLLEBERG LTD. PROJECT NO: 25279-25, TOPOGRAPHICAL PLAN OF 114 RICHMOND ROAD, CITY OF OTTAWA.
 - NOISE BARRIERS: (SEE SEE 41)
 - GEOTECHNICAL INVESTIGATION: PROPOSED RESIDENTIAL DEVELOPMENT 114 RICHMOND ROAD, OTTAWA, ONTARIO. PREPARED BY PATRICK GROUP, DATED FEBRUARY 2020, REPORT NO. PR20-14. GEOTECHNICAL INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN REPRODUCED FROM THE ORIGINAL REPORT. REFER TO ORIGINAL GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS AND TO VERIFY ASSUMPTIONS MADE HEREIN.
 - STREET LIGHTING BY OTHERS TO CITY OF OTTAWA STANDARDS.
 - ALL OVERSIGHTS ARE IN PLACE UNLESS OTHERWISE STATED. DIMENSION SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO ENGINEER.
 - THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS PRIOR WRITTEN APPROVAL BY THE CONTRACT ADMINISTRATOR AND DIRECTOR OF ENGINEERING HAS BEEN OBTAINED.
 - HERITAGE OPERATIONS LINE OF THE ONTARIO MINISTRY OF CULTURE IS NOTED TO BE HONORED BY DEEMED HERITAGE REMAINS ARE FOUND ON THE PROPERTY DURING CONSTRUCTION ACTIVITIES.
- ROADWORKS**
- ALL TOPSOIL AND ORGANIC MATERIAL TO BE STRIPPED FROM WITHIN THE FULL RIGHT OF WAY PRIOR TO CONSTRUCTION.
 - SUB-GRANULATE SOFT AREAS & FILL WITH GRANULAR B TYPE & COMPACTED IN 150mm LAYERS.
 - ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPD).
 - ROAD SUBGRANULATE SHALL BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD B1.
 - ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT.
 - CONTRACTOR TO OBTAIN A ROAD OCCUPANCY PERMIT 48 HOURS PRIOR TO COMMENCING ANY WORK WITHIN THE MUNICIPAL ROAD ALLOWANCE AS REQUIRED BY THE MUNICIPALITY. ALL WORK ON THE MUNICIPAL ROAD OF WAY AND EASEMENTS TO BE RESPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
 - PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD B10, AND OPS 309.010, AND OPS 310.

- CONCRETE CURBS SHALL BE CONSTRUCTED AS PER CITY STANDARD SCL 1.1 AND SCL 1.3 (BARRIER OR MOUNTAIN CURB AS SHOWN ON DRAWINGS).
 - CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER CITY STANDARDS SCS 3 AND SCL 4.
 - PAVEMENT CONSTRUCTION AS PER GEOTECHNICAL INVESTIGATION, PROPOSED RESIDENTIAL DEVELOPMENT, 114 RICHMOND ROAD, OTTAWA, ONTARIO. PREPARED BY PATRICK GROUP, DATED FEBRUARY 24 2020. PROJECT NO. PR20-14.
 - ROAD PAVEMENT STRUCTURE - UNDERGROUND PARKING LEVEL**
100mm FIBRE CONCRETE PAVEMENT - 200mm CONCRETE WITH AIR ENTRAINMENT
300mm OPS GRANULAR A - CRUSHED STONE BASE
PAVEMENT STRUCTURE - CAR PARKING ONLY (BROOM FINISH)
50mm OPS SUPERPAVE 12.5 ASPHALTIC CONCRETE
200mm OPS GRANULAR A - CRUSHED STONE BASE
PAVEMENT STRUCTURE - ACCESS LANES AND HEAVY TRUCKS (POORUM DECK)
50mm OPS SUPERPAVE 12.5 ASPHALTIC CONCRETE
300mm OPS GRANULAR A - CRUSHED STONE BASE
PAVEMENT STRUCTURE - CAR PARKING ONLY
50mm OPS SUPERPAVE 12.5 ASPHALTIC CONCRETE
100mm OPS GRANULAR B - FINE B
PAVEMENT STRUCTURE - ACCESS LANES AND HEAVY TRUCKS
50mm OPS SUPERPAVE 12.5 ASPHALTIC CONCRETE
300mm OPS GRANULAR A - CRUSHED STONE BASE
400mm OPS GRANULAR B - FINE B
 - WHERE PROPOSED ASPHALT SURFACE RECOMMENDED ABOVE THE EXISTING ASPHALT SURFACE, THE FOLLOWING JOINT TRANSITION DETAIL SHOULD BE EMPLOYED:
100mm WIDE SECTION OF THE EXISTING ASPHALT SHOULD BE SAW CUT FROM THE EXISTING PAVEMENT EDGE TO PROVIDE A SOUND SURFACE TO ADJUT THE PROPOSED PAVEMENT STRUCTURE.
FIBRE REINFORCED TO BE 100mm WIDE AND 40mm DEEP SECTION OF THE EXISTING ASPHALT AT THE SAW CUT EDGE.
- WATER SUPPLY SERVICES**
- THE CONTRACTOR SHALL CONSTRUCT WATERMAIN, WATER SERVICE, CONNECTIONS & APPURTENANCES AS PER CITY OF OTTAWA SPECIFICATIONS & SHALL COORDINATE AND PAY ALL RELATED COSTS INCLUDING THE COST OF CONNECTION, INSPECTION & DEMONSTRATION BY CITY PERSONNEL.
 - WATERMAIN PIPE MATERIAL SHALL BE PVC CL 150 OR 180 (DEFLECTION OF WATERMAIN PIPE IS NOT TO EXCEED 1/2 OF THAT SPECIFIED BY THE MANUFACTURER). PIPE WATERBARS TO BE INSTALLED WITH TRACK HERE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W36.
 - WATER SERVICES ARE TO BE TYPE 1 SOFT COPPER AS PER CITY OF OTTAWA STANDARD W36 UNLESS OTHERWISE NOTED. WATER SERVICE TO BE 100mm (3/4") BORE PROPERTY PIPE. STAND POST TO BE INSTALLED AT PROPERTY LINE.
 - PIPE HUBS ARE TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W10 AND W11.
 - WATER VALVES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W34.
 - WATERMAIN TRENCH SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W17 UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL AS PER SECTION 4.4 OF THE GEOTECH REPORT.
 - SERVICE CONNECTIONS SHALL BE INSTALLED A MINIMUM OF 200mm FROM ANY CATCH-BASIN, MANHOLE, OR OBJECT THAT MAY CONTRIBUTE TO REDUCING THERMAL INSULATION. SHALL BE INSTALLED ON ALL PROPOSED CUTS ON THE W/4 STREET SIDE WHERE 400mm SEPARATION CANNOT BE ACHIEVED (AS PER CITY OF OTTAWA W22 & W23)
 - CATHODIC PROTECTION TO BE SUPPLIED ON METALLIC FITTINGS AS PER CITY OF OTTAWA W40 AND W42.
 - THRUST BLOCKS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W33 AND W34.
 - WATERMAIN TO HAVE MIN 2.4m COVER, WHERE WATERMAIN COVER IS LESS THAN 2.4m, INSULATION TO BE SUPPLIED BLACK POLYURETHANE (PER CITY STANDARD W32).
 - WATERMAIN CROSSINGS ABOVE AND BELOW SEWER TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W35 AND W32.
 - PRESSURE REDUCING VALVES (PRVs) IF REQUIRED, TO BE INSTALLED AS PER ONTARIO PLUMBING CODE.

- STORM AND SANITARY SEWERS**
- SANITARY SEWERS 375mm DIA. OR SMALLER SHALL BE PVC DRESS SANITARY SEWERS LARGER THAN 375mm SHALL BE CONCRETE CSA A 287.2 CLASS 1000 AS PER OPS 807.010.
 - STORM SEWERS 375mm DIA. OR SMALLER SHALL BE PVC DRESS. STORM SEWERS LARGER THAN 375mm DIA. SHALL BE CONCRETE CSA A 287.2 CLASS 1000 AS PER OPS 807.010.
 - ALL STORM AND SANITARY SEWER BEDDING SHALL BE INSTALLED AS PER SECTION 4.4 OF THE GEOTECH REPORT.
 - STORM AND SANITARY MANHOLES SHALL BE 1200mm DIAMETER IN ACCORDANCE WITH OPS 801.01 (UNLESS OTHERWISE NOTED). LOW FRAME AND COVER AS PER CITY OF OTTAWA STA. S24, S24.1 AND S24.2 WHERE APPLICABLE. CATCH BASIN MANHOLE FRAME AND COVER PER S25 AND S26.1. ALL STORM MANHOLES WITH SEWER ROOMS (SA SEWERS) AND COVER DEBS SHALL BE BENCHEDED. ALL OTHER STORM MANHOLES SHALL BE COVERED WITH 1500mm SQUARE AS PER CITY STANDARDS. SANITARY MANHOLES SHALL NOT HAVE SUMPS.
 - ALL SEWERS CONSTRUCTED WITH GRADES 0.5% OR LESS, TO BE INSTALLED WITH LAZER AND CHECKED WITH LEVEL INDICATOR PRIOR TO BACKFILLING.
 - FOR STORM SEWER INSTALLATION (INCLUDING CE LEADS) THE MINIMUM DEPTH OF COVER OVER THE CROWN OF THE SEWER IS 2.0m. FOR SANITARY SEWERS THE MINIMUM DEPTH OF COVER IS 1.0m OVER PIPE ORVERT.
 - ALL STORM AND SANITARY SERVICES TO BE EQUIPPED WITH APPROVED BACKFLOW VALVES.
 - ALL STORM AND SANITARY SERVICES LATERALS TO BE 80mm BENTALLED AT MIN 1.0% SLOPE.
 - CATCH BASIN SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS S1, S2, S3, S4, S5 AND GRADE AS PER S14. CURB IN FRAME AND GRATE PER S22 AND S23. CATCH BASIN MANHOLES FRAME AND GRATE AS PER S23 FRAME AND S21 COVER. PROVIDE 150mm ADJUSTED SPACER. ALL CATCH BASINS SHALL HAVE 500mm (18") DEEP STREET CATCH BASIN LEADS SHALL BE 300mm DIA. (MIN) PVC OR CP 11.1 OF GRADE WHERE NOT OTHERWISE SHOWN OTHERWISE, CATCH BASIN SHALL BE INSTALLED WITH INLET CONTROL DEVICES (ICD) AS PER SCHEDULE ON STORM DRAINAGE PLAN.
 - STREET CATCH BASINS TO BE INSTALLED LOW SUBGRAN 3m LONG IN FOUR ORTHOGONAL DIRECTIONS OR LONGITUDINALLY WHEN PLACED ALONG A CURB, AND AT AN ELEVATION OF 300mm BELOW SUBGRADE LEVEL.
 - ROAD OR FRESHWATER PIPE BE INSTALLED AS PER CITY OF OTTAWA STANDARDS S29. ROAD LOT STRUCTURES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W30 AND W31.
 - CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5m LONG IN THE BRUSH DIRECTION AND JACQUED SPRING FROM TRENCH TO TRENCH WALL. GENERALLY THE SEAL SHOULD EXTEND FROM THE ROOT LINE AND FULLY PENETRATE THE BEDDING, SUBBEDDING AND COVER MATERIAL. THE BARRIERS SHOULD BE CONSIDERED TO BE INSTALLED FROM THE TRENCH WALL TO THE TRENCH WALL. THE SEAL SHOULD BE LOOSE LAYERS COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS SPINDS. THE CLAY SEALS SHOULD BE PLACED AT THE BEE BENCHES AND AT STRAIGHT LOCATIONS AT NO MORE THAN 60m INTERVALS IN THE SERVICE TRENCH. FOR DETAILS REFER TO GEOTECHNICAL INVESTIGATION.
 - GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300 mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA AND COMPACTED TO A MINIMUM OF 98% SPD.
 - CONTRACTOR SHALL PERFORM LEAKAGE TESTING IN THE PRESENCE OF THE CONSULTANT FOR ALL STRUCTURES IN ACCORDANCE WITH OPS 410 AND OPS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL STORM AND SANITARY SERVICES. A COPY OF THE INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW.
 - ANY SEWER ABANDONMENT TO BE CONDUCTED ACCORDING TO CITY OF OTTAWA STANDARD S14.
 - STORM SEWERS WITH LESS THAN 2.0m COVER AND SANITARY SEWERS WITH LESS THAN 2.5m COVER TO BE INSULATED IN ACCORDANCE WITH CITY STANDARD S30.

Revision	By	App'd	Date
0	ISSUED FOR SPA	MJS	01.26.2010
1	BY	YJ	01.26.2010

File Name	Date	Drawn	Checked	Design	Yr
114 Richmond Road	2021-08-09	MJS	DT	MJS	20.03.00
		DT	DT	DT	20.03.00

Permit-Seal

Client/Project
**JORDAN TANNIS
CONCORD PROPERTIES**
114 RICHMOND ROAD
RESIDENTIAL DEVELOPMENT
OTTAWA, ON, CANADA

Title
GRADING PLAN

Project No. 16402212	Scale 0 3 9 15m
Drawing No. GP-1	Sheet 3 of 6
Revision 0	