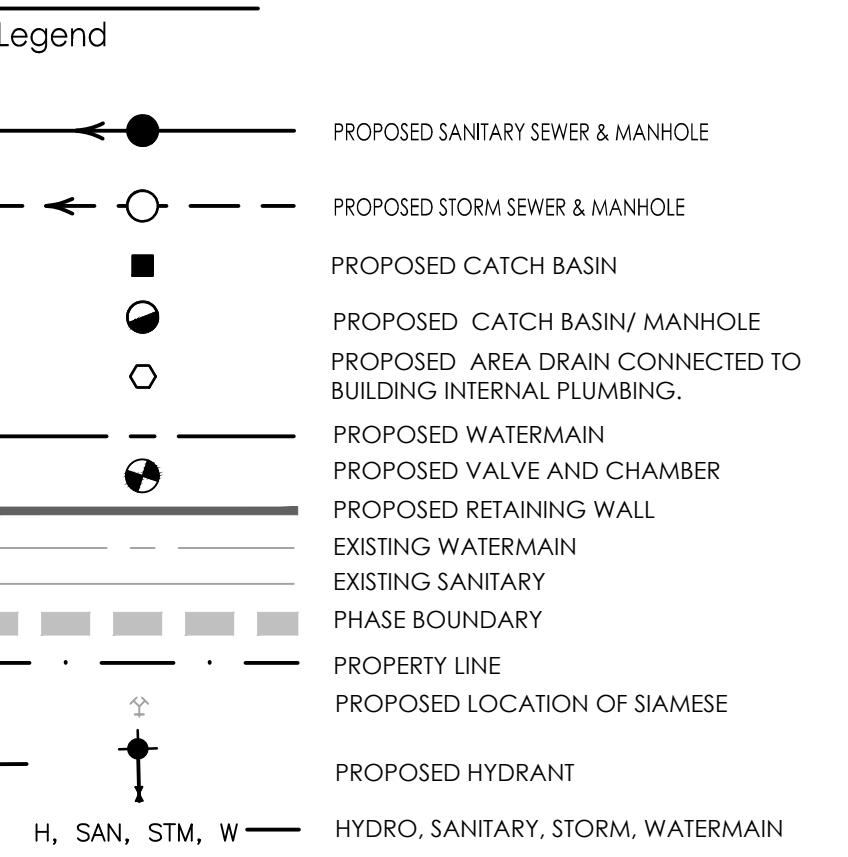
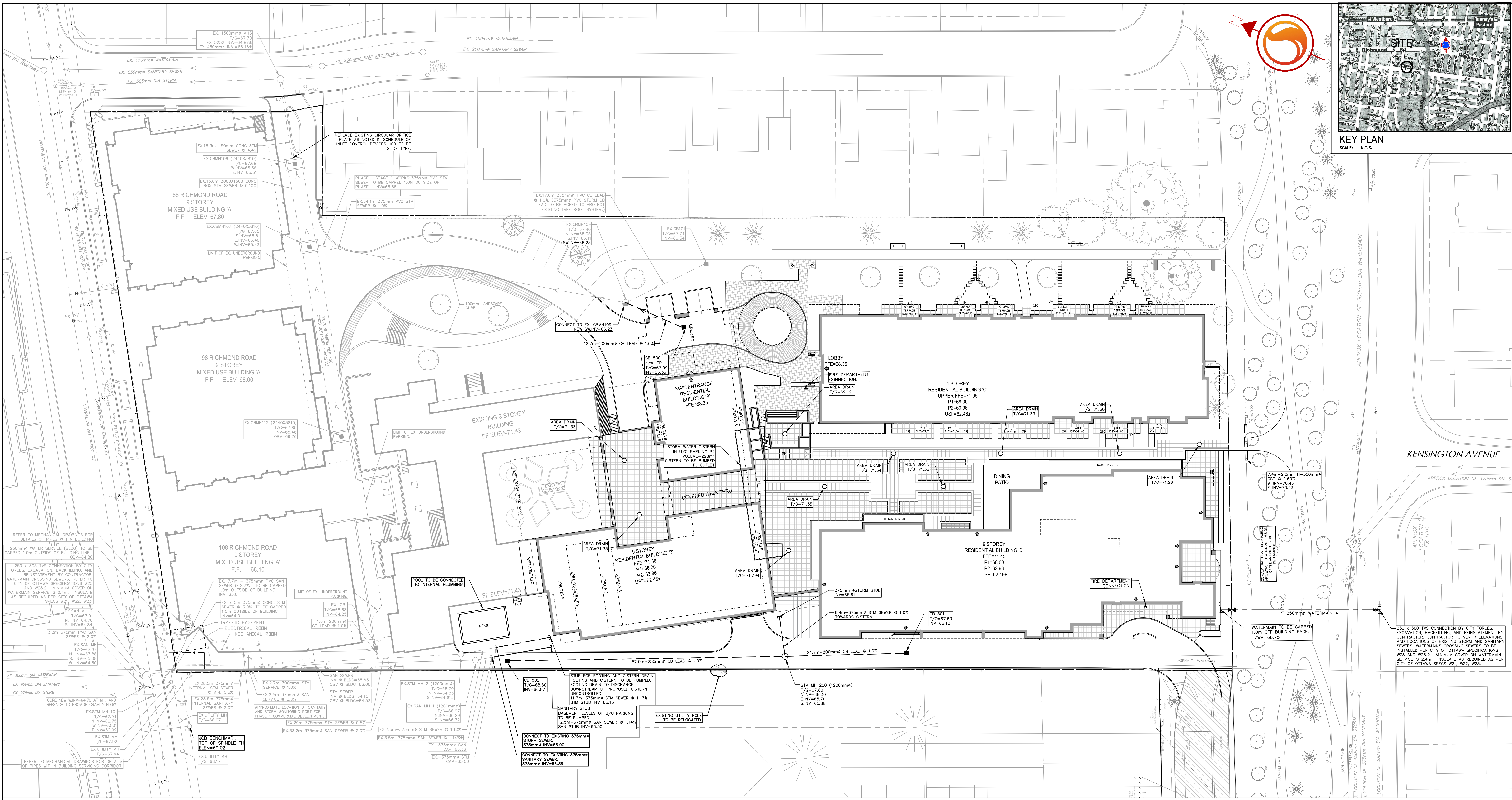


KEY PLAN
SCALE: N.T.S.



Notes

- ALL AREA DRAINS ON TOP OF PARKING DECK TO BE CONNECTED TO INTERNAL PLUMBING.



250mm WATERMAIN A

| STATION | FINISHED GRADE | TOP OF W/M | ITEM |
|---------|----------------|------------|------------------------------------|
| 0+000 | 71.60 | 69.20± | 250x300 TVS CONNECTION TO EXISTING |
| 0+010 | 71.45 | 69.05± | TOP OF PIPE |
| 0+020 | 71.12 | 68.72± | TOP OF PIPE |
| 0+030.6 | 71.10 | 68.70± | VALVE AND VALVE BOX |
| 0+032.9 | 71.15 | 68.75± | CAP AND THRUST BLOCK |

SCHEDULE OF INLET CONTROL DEVICES

| AREA ID | STRUCTURE ID | 100 YEAR PONDING ELEVATION (m) | INVERT ELEVATION (m) | MAX HEAD (m) | RELEASE RATE (L/s) | ORIFICE |
|--------------|------------------|--------------------------------|----------------------|--------------|--------------------|------------------------|
| A4 | CB 500 | 68.17 | 66.36 | 1.36 | 5.8 | 1PEX TEMPEST MF 75 |
| A1, A3, EXT2 | CBMH 106 | 66.81 | 65.31 | 1.50 | 47.4 | 335mm CIRCULAR ORIFICE |
| A2, A5, EXT1 | CISTERN (PUMPED) | 65.13 | (PUMPED) | | 44.0 | (PUMPED) |

SCHEDULE OF ROOF RELEASE RATE

| DRAINAGE AREA ID | DEPTH (mm) | ROOF DRAIN TYPE | No. of ROOF DRAINS | 100 YEAR RELEASE RATE (L/s) | STORAGE VOLUME (m³) |
|------------------|------------|------------------|--------------------|-----------------------------|---------------------|
| ROOF A | 27 | EXISTING | - | 17.4 | 83.6 |
| ROOF B1 | 147 | WATTS 'ACCUTROL' | 6 | 5.6 | 41.8 |
| ROOF C | 145 | WATTS 'ACCUTROL' | 11 | 10.2 | 65.7 |
| ROOF D | 146 | WATTS 'ACCUTROL' | 12 | 11.2 | 78.4 |

GENERAL NOTES AND SPECIFICATIONS

- ALL MATERIALS AND CONSTRUCTION METHODS TO BE IN ACCORDANCE WITH OPS AND CITY OF OTTAWA STANDARDS SPECIFICATIONS AND DRAWINGS AND OPED 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 PRINT AND ASSOCIATED COSTS.
- SERVICES 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 LOCATES FROM ALL UTILITY COMPANIES TO LOCATE EXISTING UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REINSTATEMENT.
- ALL DISTURBED AREAS SHALL BE RESTORED TO EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE ENGINEER. THE CITY SHALL BE IN ACCORDANCE WITH OPS 509.010 AND OPS 510.
- 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 DEFINED IN THE ACT.
- THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENTATION CONTROL PLAN THAT WILL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION FOR RECEIVING STORM SEWERS OR DRAINAGE DURING CONSTRUCTION ACTIVITIES. THIS PLAN SHALL INCLUDE BUT NOT BE LIMITED TO CATCH BASINS, BARRIERS, STRAW BALE CHECK DAMS AND SEDIMENT CONTROLS AROUND ALL DISTURBED AREAS. DEWATERING SHALL BE PERFORMED INTO SEDIMENT TRAPS.
- SITE PLAN PREPARED BY RODRICK LAHEY ARCHITECTS INC.
- TOPOGRAPHIC SURVEY SUPPLIED BY ANIS, OUSILLIUM, VOLLEBEKK LTD. PROJECT NO. 1989-12 PART OF LOT 33 CONVEYANCE 1 (OTTAWA FRONT), GEOGRAPHIC TOWNSHIP OF DESER, CITY OF OTTAWA.
- REFER TO LANDSCAPE ARCHITECTURE PLAN FOR ALL LANDSCAPING FEATURES (IE TREES, WALKWAYS, PARK DETAILS, NOSE BARRIERS, FENCES ETC.)
- GEOTECHNICAL INVESTIGATION PROPOSED RESIDENTIAL DEVELOPMENT, 114 RICHMOND ROAD, OTTAWA, ON, PREPARED BY PATERSON GROUP, DATED AUGUST 4, 2010. REPORT NO. P20199-1. GEOTECHNICAL INFORMATION PRESENTED ON THESE DRAWINGS MAY BE INTERPOLATED FROM THE ORIGINAL REPORT. REFER TO ORIGINAL GEOTECHNICAL REPORT FOR ADDITIONAL DETAILS AND TO VERIFY ASSUMPTIONS MADE HEREIN.
- STREET LIGHTING TO CITY OF OTTAWA STANDARDS.
- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED. DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHOULD 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.
- HAZARDOUS OPERATIONS UNIT OF THE ONTARIO MINISTRY OF CULTURE TO BE NOTIFIED IF DEEPLY BURIED ARCHAEOLOGICAL 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-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.30m LAYERS.
- ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 90% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMD).
- ROAD SUBDRAINS SHALL BE CONSTRUCTED AS PER CITY OF OTTAWA STANDARD R1.
- 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 IF REQUIRED BY THE MUNICIPALITY. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND ADJACENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
- PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITIES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD R10, AND OPS 500.010, AND OPS 510.
- CONCRETE CURBS SHALL BE CONSTRUCTED AS PER CITY STANDARDS SC1.1 AND SC1.3 (BARRIER OR MOUNTABLE CURB AS SHOWN ON DRAWINGS).
- CONCRETE SIDEWALKS SHALL BE CONSTRUCTED AS PER CITY STANDARDS SC3 AND SC1.4.
- PAVEMENT CONSTRUCTION AS PER GEOTECHNICAL INVESTIGATION. PROPOSED RESIDENTIAL DEVELOPMENT, 114 RICHMOND ROAD, OTTAWA, ON, PREPARED BY PATERSON GROUP, DATED AUGUST 4, 2010. REPORT NO. P20199-1.

WATER SUPPLY SERVICING

- THE CONTRACTOR SHALL CONSTRUCT WATERMAIN, WATER SERVICES, AND SANITARY SEWERS IN ACCORDANCE WITH OPS AND CITY OF OTTAWA STANDARDS SPECIFICATIONS AND DRAWINGS AND OPED SUPPLEMENT. ALL RELATED COSTS INCLUDING THE COST OF CONNECTION, INSPECTION, DIMENSIONING, CALIBRATION, COMMUNITY TESTING TO BE SUBMITTED TO THE CONSULTANT. SANITARY SEWERS SHALL NOT HAVE SLEEPS PERSONNEL.
- WATERMAIN PIPE MATERIAL SHALL BE PVC CL 190 DR18, DEFLECTION OF WATERMAIN PIPE NOT TO EXCEED 12% THAT SPECIFIED BY THE MANUFACTURER. PVC WATERMAIN SHALL BE INSTALLED WITH TRACER WIRE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W3.

- WATER SERVICES ARE TO BE TYPE 'K' SOFT COPPER AS PER CITY OF OTTAWA STANDARD W20 UNLESS OTHERWISE NOTED. WATER SERVICE TO EXTEND 1.0M BEYOND PROPERTY LINE. STAND POST TO BE INSTALLED ALONG A CURB AND AT AN ELEVATION OF 200mm BELOW SUBGRADE LEVEL.
 - FIRE HYDRANTS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W18 AND W19.
 - WATER VALVES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W24.
 - WATERMAIN TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W17 UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL TO BE SPECIFIED BY PROJECT GEOTECHNICAL CONSULTANT.
 - SERVICE CONNECTIONS SHALL BE INSTALLED AT A MINIMUM OF 2400mm FROM ANY CATCHBASIN, MANHOLE, OR OBJECT THAT MAY CONTRIBUTE TO FREEZING. THERMAL INSULATION SHALL BE INSTALLED ON ALL PROPOSED OPS ON THE MAIN STREET SIDE WHERE 2400mm SEPARATION CANNOT BE ACHIEVED (AS PER CITY OF OTTAWA STD. W23).
 - CATHODIC PROTECTION TO BE SUPPLIED ON METALLIC FITTINGS AS PER CITY OF OTTAWA STD. W25 AND W26.
 - THRUST BLOCKS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25.3 AND W25.4.
 - WATERMAIN TO HAVE MIN. 2.4m COVER. WHERE WATERMAIN COVER IS LESS THAN 2.4m, INSULATION TO BE SUPPLIED IN ACCORDANCE WITH CITY STANDARD W22.
 - WATERMAIN CROSSINGS ABOVE AND BELOW SEWERS TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W25 AND W25.2.
 - 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 DR35. SANITARY SEWERS LARGER THAN 375mm SHALL BE CONCRETE CSA A 257.2 CLASS 1000 AS PER OPS 807.010.
 - STORM SEWERS 375mm DIA. OR SMALLER SHALL BE PVC DR35. STORM SEWERS LARGER THAN 375mm DIA. SHALL BE CONCRETE CSA A 257.2 CLASS 1000 AS PER OPS 807.010.
 - ALL STORM AND SANITARY SEWER BEDDING SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS S6 AND S7. CLASS 'B' BEDDING, UNLESS OTHERWISE NOTED. SUITABLE BEDDING AND COVER MATERIAL TO BE SPECIFIED BY GEOTECHNICAL CONSULTANT.
 - STORM AND SANITARY MANHOLES SHALL BE 1200mm DIAMETER IN ACCORDANCE WITH OPS 701.01 UNLESS OTHERWISE NOTED. W/ FRAME AND COVER AS PER CITY OF OTTAWA STD. S24.1, AND S25 WHERE APPLICABLE. CATCH BASIN MANHOLE FRAME AND COVERS PER S19, S26, AND S28.1 WHERE APPLICABLE. ALL STORM MANHOLES WITH PROPOSED VIDEOS INSPECTION SHALL BE BENCHED. ALL OTHER STORM MANHOLES SHALL BE COMPLETED WITH 300mm SLEEPS AS PER CITY STANDARDS. SANITARY MANHOLES SHALL NOT HAVE SLEEPS.
 - ALL SEWERS CONSTRUCTED WITH GRADES 0.50% OR LESS, TO BE INSTALLED WITH LASER AND CHECKED WITH LEVEL INSTRUMENT PRIOR TO BACKFILLING.
 - FOR STORM SEWER INSTALLATION (EXCLUDING CB LEADS) THE MINIMUM DEPTH OF COVER OVER THE CROWN OF THE SEWER IS 2.0m. FOR SANITARY SEWERS THE MINIMUM DEPTH OF COVER IS 2.5m OVER PIPE OVERTOP.
 - ALL STORM AND SANITARY SEWERS TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
 - STORM AND SANITARY SERVICE LATERALS TO BE SOR 28" INSTALLED AT MIN. 1.0% SLOPE.
 - CATCH BASINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS S1, S2, S3 W/ FRAME AND GRATE AS PER S19.1. CURB INLET FRAME AND GRATE PER S22 AND S23. CATCH BASIN MANHOLES FRAME AND GRATE AS PER S19. PROVIDE 150mm ADJUSTED SPACERS. ALL CATCH BASINS SHALL HAVE SLEEPS (300mm DEEP). STREET CATCH BASIN LEADS SHALL BE 200mm DIA. (W/ PVC DR 35) AT 1.0% GRADE WHERE NOT OTHERWISE SHOWN ON PLAN. CATCH BASINS WILL BE INSTALLED WITH INLET CONTROL DEVICES (ICD) AS PER ICD SCHEDULE ON STORM DRAINAGE PLAN.
 - STREET CATCH BASINS TO BE INSTALLED c/w SUBDRAINS 3m LONG IN FOUR ORTHOGONAL DIRECTIONS ON LONGITUDINALS WHEN PLACED ALONG A CURB, AND AT AN ELEVATION OF 200mm BELOW SUBGRADE LEVEL.
 - REAR LOT PERFORATED PIPE TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD S28.
 - CLAY SEALS TO BE INSTALLED AS PER CITY STANDARD DRAWING S8. THE SEALS SHOULD BE AT LEAST 1.5m LONG IN THE TRENCH DIRECTION AND SHOULD EXTEND FROM THE TRENCH WALL TO TRENCH WALL. GENERALLY THE SEALS SHOULD EXTEND FROM THE FROST LINE AND FULLY PENETRATE THE BEDDING. SUBDRAINING AND COVER MATERIAL. THE BARRIERS SHOULD CONSIST OF RELATIVELY DRY AND COMPACTABLE BROWN SILTY CLAY PLACED IN MAXIMUM 225mm THICK LAYERS COMPACTED TO A MINIMUM OF 95% OF THE MATTER'S SPECIFIC GRADE. THE CLAY SEALS SHOULD BE PLACED AT THE BOUNDARIES AND AT STRATEGIC LOCATIONS AT NO MORE THAN 60m INTERVALS IN THE SERVICE TRENCHES. 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 96% STANDARD PROCTOR DENSITY.
 - CONTRACTOR SHALL PERFORM LEAKAGE TESTING. IN THE PRESENCE OF THE CONSULTANT. FOR SANITARY SEWERS IN ACCORDANCE WITH OPS 410 AND OPS 407. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF ALL STORM AND SANITARY SEWERS. A COPY OF THE VIDEO AND INSPECTION REPORT SHALL BE SUBMITTED TO THE CONSULTANT.
 - ANY SEWER ABANDONMENT TO BE CONDUCTED ACCORDING TO CITY OF OTTAWA STANDARD S11.4.
 - SEWERS WITH LESS THAN 1.5m COVER TO BE INSULATED IN ACCORDANCE WITH CITY STANDARD W22.
- GRADING**
- ALL GRANULAR BASE & SUB BASE COURSE MATERIALS SHALL BE COMPACTED TO 96% STANDARD PROCTOR MAX. DRY DENSITY.
 - SUB-EXCAVATE SOFT AREAS & FILL WITH GRANULAR 'B' COMPACTED IN 0.15m LAYERS.
 - ALL DISTURBED GRASSSED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER, WITH 500 ON MIN. 100mm TOPSOIL. THE RELOCATION OF TREES AND SHRUBS SHALL BE SUBJECT TO APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER.

- 100 YEAR PONDING DEPTH TO BE 0.30m (MAXIMUM).
- EMBANKMENTS TO BE SLOPED AT MIN. 3:1 UNLESS OTHERWISE SPECIFIED.
- ALL SLOPES TO BE MIN. 0.1m DEEP WITH MIN. 3:1 SLOPE UNLESS OTHERWISE NOTED. THE MINIMUM LONGITUDINAL SLOPE TO BE 1.5% OR 1.0% WHEN PERFORATED SUBDRAIN IS INSTALLED.
- ALL ROOF DOWNSPOUTS TO DISCHARGE TO THE GROUND ONTO SPLASH-PADS AND SHALL NOT BE DIRECTED TO THE STORM SEWER, OR THE BUILDING FOUNDATION DRAIN.
- TOP OF GRATE (TIG) ELEVATIONS FOR ALL STREET CATCHBASINS SHOWN ON PLANS. REFER TO THE ELEVATION AT EDGE OF PAVEMENT, OR OTHERWISE WHERE APPLICABLE.
- ALL RETAINING WALLS GREATER THAN 1.0m IN HEIGHT ARE TO BE DESIGNED, APPROVED, AND STAMPED BY STRUCTURAL ENGINEER.
- FENCES OR RAILINGS ARE REQUIRED FOR RETAINING WALLS GREATER THAN 0.9m IN HEIGHT.
- EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
- ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO TREE CUTTING.
- REFER TO DRAWING CD 05-1 FOR EROSION AND SEDIMENT CONTROL DETAILS.

Client/Project
ASHCROFT HOMES
18 ANDES DRIVE, OTTAWA, ON, K2E 1A9
PH: 613-229-7266

Q-WEST PHASE 2
OTTAWA, ON, CANADA

Title
SITE SERVICING PLAN

Project No. 160400864
Scale 0 3 6 9 15m
1:300

Drawing No. Sheet
Revision

SSP-1 1 of 4 1