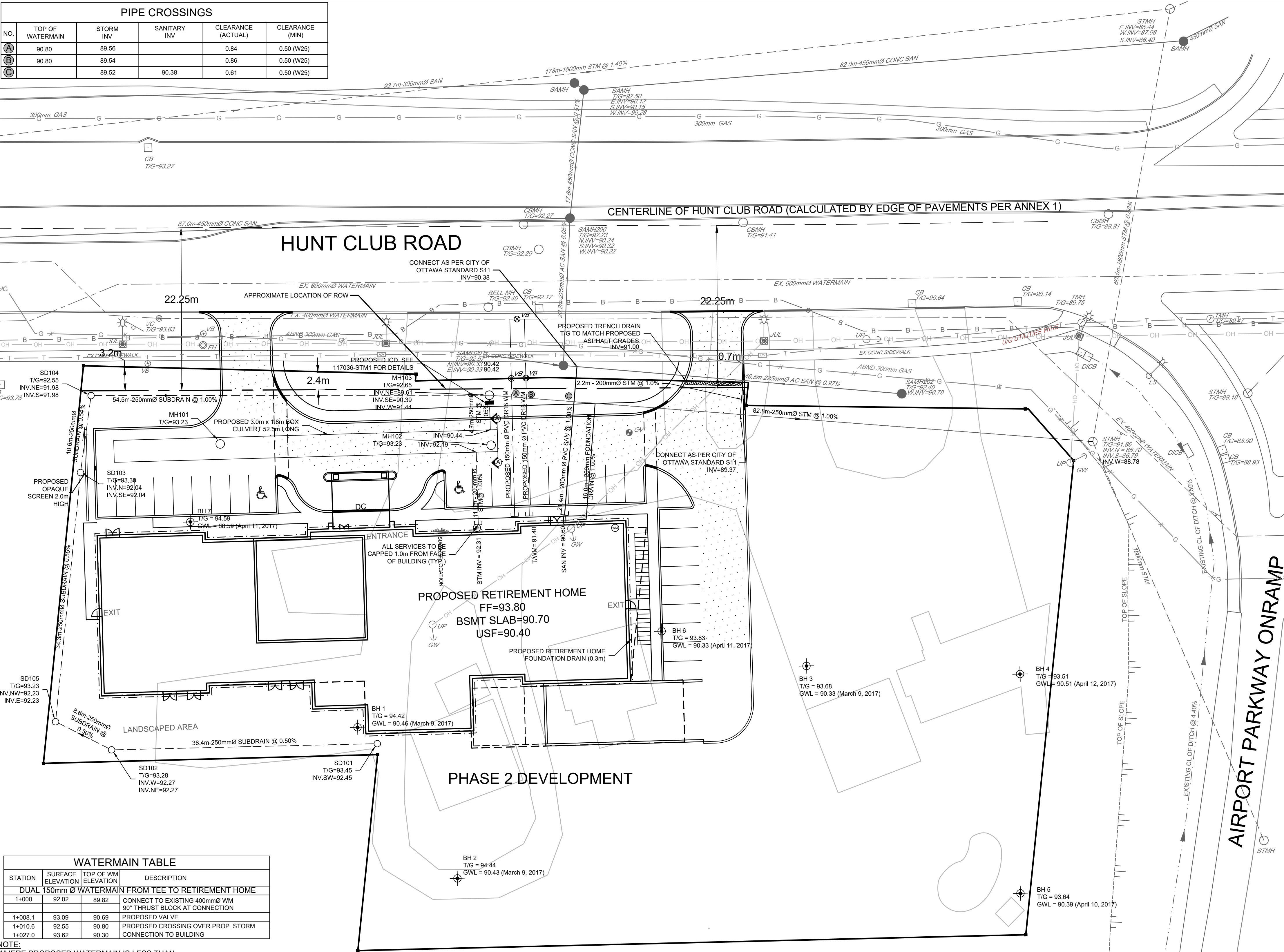


| PIPE CROSSINGS | | | | | |
|----------------|------------------|-----------|--------------|--------------------|-----------------|
| NO. | TOP OF WATERMAIN | STORM INV | SANITARY INV | CLEARANCE (ACTUAL) | CLEARANCE (MIN) |
| (A) | 90.80 | 89.56 | | 0.84 | 0.50 (W25) |
| (B) | 90.80 | 89.54 | | 0.86 | 0.50 (W25) |
| (C) | | 89.52 | 90.38 | 0.61 | 0.50 (W25) |



| WATERMAIN TABLE | | | |
|--|-------------------|---------------------|---|
| STATION | SURFACE ELEVATION | TOP OF WM ELEVATION | DESCRIPTION |
| DUAL 150mm Ø WATERMAIN FROM TEE TO RETIREMENT HOME | | | |
| 1+000 | 92.02 | 89.82 | CONNECT TO EXISTING 400mm Ø WM 90° THRUST BLOCK AT CONNECTION |
| 1+008.1 | 93.09 | 90.69 | PROPOSED VALVE |
| 1+010.6 | 92.55 | 90.80 | PROPOSED CROSSING OVER PROP. STORM |
| 1+027.0 | 93.62 | 90.30 | CONNECTION TO BUILDING |

NOTE:
WHERE PROPOSED WATERMAIN IS LESS THAN 2.4m BELOW GRADE, INSULATE WATERMAIN PER CITY OF OTTAWA STANDARD W22.

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.

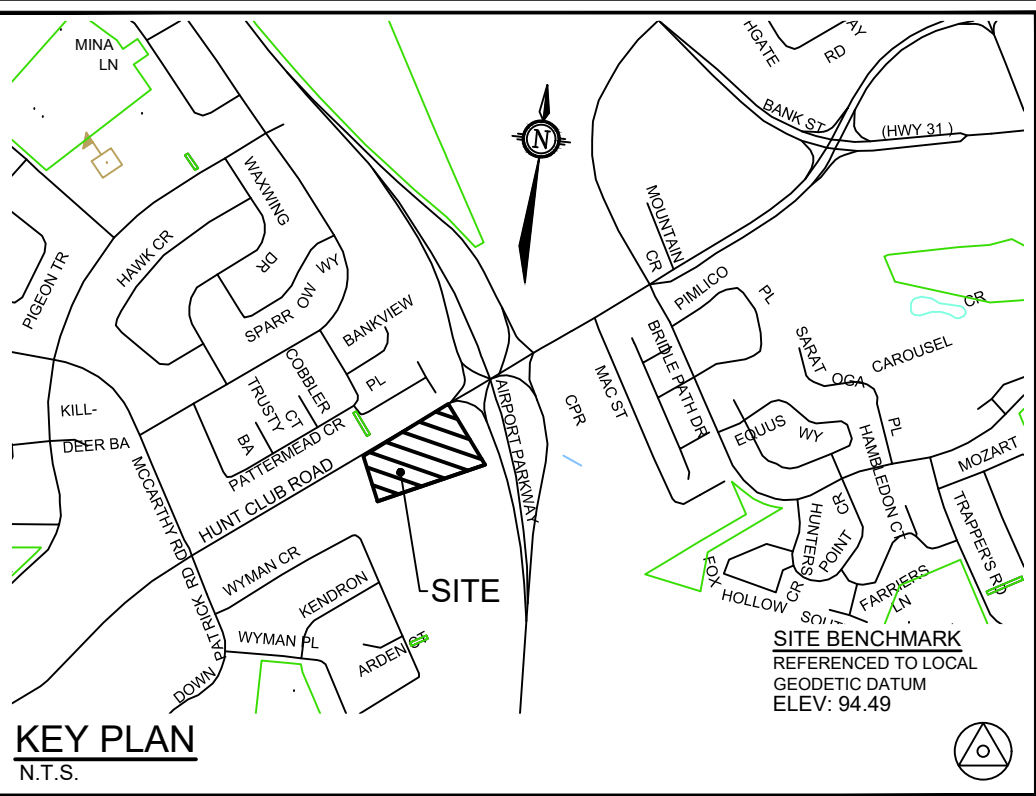
GENERAL NOTES:

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- 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.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- 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.
- 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.
- 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.
- ALL ELEVATIONS ARE GEODETIC.
- REFER TO GEOTECHNICAL REPORT (No. PG4091-1, DATED APR 24 2017), 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.
- REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
- REFER TO STORMWATER MANAGEMENT REPORT (R-2017-058) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
- PROVIDE LINE/PARKING PAINTING.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, 1 INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

PAVEMENT STRUCTURE:

- LIGHT DUTY
50mm HL3
150mm GRAN "A"
250mm GRAN "B" TYPE II
- HEAVY DUTY
40mm HL3
50mm HL8
150mm GRAN "A"
400mm GRAN "B" TYPE II

| STORM ICD TABLE | | | | | |
|-----------------|-------|------------------|-----------|--------------------------|-----------------|
| STR. NO | T/G | 100YR WL IN TANK | INVERT IN | ICD MODEL/SIZE | 100-YR HEAD (m) |
| MH103 | 92.65 | 92.04 | 90.39 | 55mm IPEX TEMPEST LMF 14 | 1.65 |



LEGEND

- PROPOSED PROPERTY LINE
PROPOSED WATERMAIN
PROPOSED VALVE BOX
PROPOSED STORM MANHOLE
PROPOSED SANITARY SEWER
PROPOSED FOUNDATION DRAIN
UNDERGROUND PARKING LIMITS
PROPOSED STORM SEWER
PROPOSED STORM TRENCH DRAIN
PROPOSED CAP
EXISTING LEGAL ADJACENT LINE
EXISTING STANDARD IRON BAR / CONTROL POINT
EXISTING FLOW DIRECTION OF SEWERS
EXISTING SANITARY MANHOLE & SEWER
EXISTING STORM MANHOLE & SEWER
EXISTING CATCH BASIN
- EXISTING WATERMAIN VALVE CHAMBER
EXISTING WATERMAIN SHUT-OFF VALVE BOX
EXISTING WATERMAIN
EXISTING HYDRANT CIV LEAD & SHUT OFF VALVE BOX
EXISTING GAS VALVE
EXISTING GAS MAIN
EXISTING ABANDONED GAS MAIN
EXISTING BELL CONDUIT
EXISTING OVER HEAD WIRE
EXISTING HYDRO/UTILITY POLE
EXISTING GUY WIRE
EXISTING TRAFFIC MANHOLE
EXISTING JOINT USE STREET LIGHT
EXISTING STREET LIGHT
EXISTING TRAFFIC HAND HOLE
EXISTING TRAFFIC SIGN
EXISTING DITCH INLET
CATCH BASIN

SEWER NOTES:

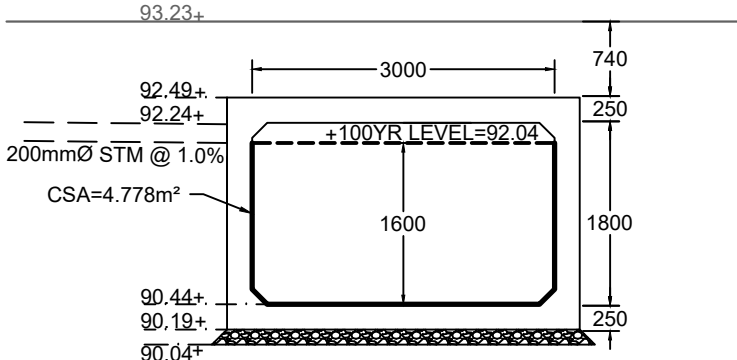
- SPECIFICATIONS:

| ITEM | SPEC. No. | REFERENCE |
|--|-----------|-----------|
| CATCHBASIN (600x600mm) | 705.010 | OPSD |
| STORM / SANITARY MANHOLE (1200Ø) | 701.010 | OPSD |
| CB, FRAME & COVER | 400.020 | OPSD |
| STORM / SANITARY MH FRAME & COVER | 401.010 | OPSD |
| SEWER TRENCH - BEDDING (GRANULAR A) | | |
| COVER (GRANULAR A OR GRANULAR B TYPE I, WITH MAXIMUM PARTICLE SIZE=25mm) | | |
| STORM SEWER | PVC DR 35 | |
| SANITARY SEWER | PVC DR 35 | |
| CATCHBASIN LEAD | PVC DR 35 | |
 - INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmx1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
 - SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
 - PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
 - FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KOR-N-SEAL, PSX: POSITIVE SEAL AND DURASEAL). THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
 - 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.
- STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SUMPES UNLESS OTHERWISE INDICATED.
- CONTRACTOR TO TELEWISE (CCTV) ALL PROPOSED SEWERS, 200mm Ø OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.

WATERMAIN NOTES:

- SPECIFICATIONS:

| ITEM | SPEC. No. | REFERENCE |
|--|-----------|----------------|
| WATERMAIN TRENCHING | W17 | CITY OF OTTAWA |
| THERMAL INSULATION IN SHALLOW TRENCHES | W22 | CITY OF OTTAWA |
| WATERMAIN CROSSING BELOW SEWER | W25 | CITY OF OTTAWA |
| WATERMAIN | PVC DR 18 | |
- 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.
- WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
- PROVIDE MINIMUM 0.25m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.
- WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- WATER DEMAND HAS BEEN CALCULATED AND INCLUDED IN THE 'SERVICING AND STORMWATER MANAGEMENT REPORT' PREPARED BY NOVATECH



SECTION 'A' - RETIREMENT HOME WATER STORAGE TANK
SCALE: 1:75



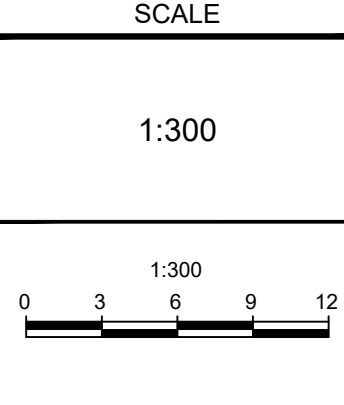
CLARIDGE HOMES
BUILDING QUALITY & VALUE FOR OVER 25 YEARS

APPROVED ☐ REFUSED ☐

THIS _____ DAY OF _____, 20____

DON HERWEYER, MCIP, RPP, MANAGER
DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE AND

| No. | REVISION | DATE | BY |
|-----|---|-----------|-----|
| 5. | REVISED RETAINING WALL AND WEST PARKING LOT | NOV 24/17 | GJM |
| 4. | ADDITION OF PROPOSED OGS UNIT | NOV 15/17 | GJM |
| 3. | ADDITION OF ICD TABLE | OCT 26/17 | GJM |
| 2. | REVISED PER CITY COMMENTS | SEPT 7/17 | GJM |
| 1. | ISSUED FOR SITE PLAN APPLICATION | MAY 25/17 | GJM |



| DESIGN |
|--------|
| MTL |
| GJM |
| MTL |
| GJM |
| GJM |

FOR REVIEW ONLY

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LOCATION
CITY OF OTTAWA
HUNT CLUB DEVELOPMENT

DRAWING NAME

GENERAL PLAN OF SERVICES
PHASE 1

| | |
|-------------|------------|
| PROJECT No. | 117036-00 |
| REV | REV # 5 |
| DRAWING No. | 117036-SP1 |