

ML:2020120057-CADD\Design\120057-GP.dwg, PLANS-A1, Jun 30, 2020, 12:43pm, dld/ben

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.

| REAR YARD CATCHBASIN TABLE | | | |
|----------------------------|---------------|--------|-----------------------|
| RYCB No. | T/G ELEVATION | INVERT | I.C.D. |
| LCB1 | 89.15 | 87.90 | - |
| RYCB1 | 88.24 | 86.84 | Tempest LMF Vortex 94 |
| RYCB2 | 88.44 | 87.04 | Tempest LMF Vortex 93 |
| RYCB3 | 88.55 | 87.15 | Tempest LMF Vortex 93 |

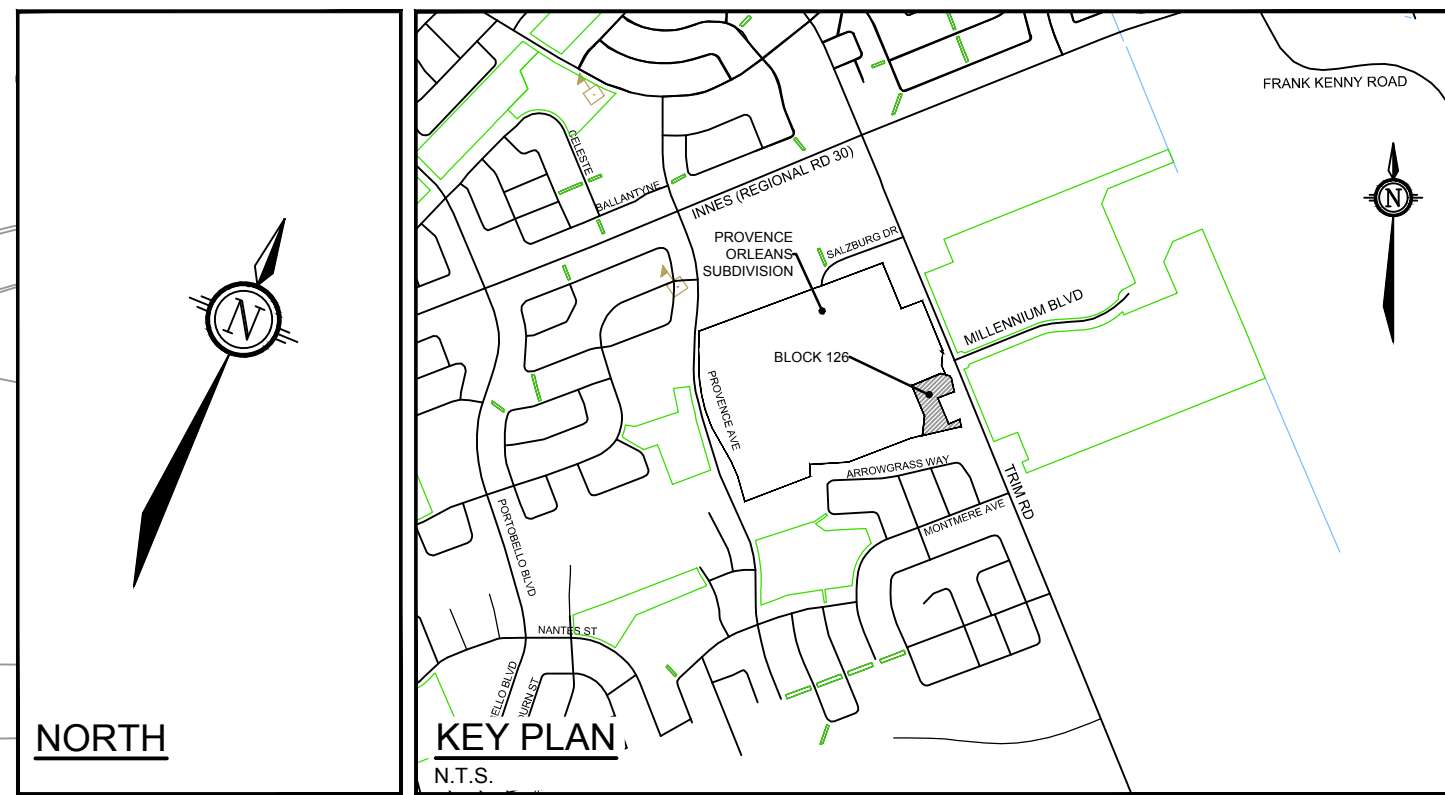
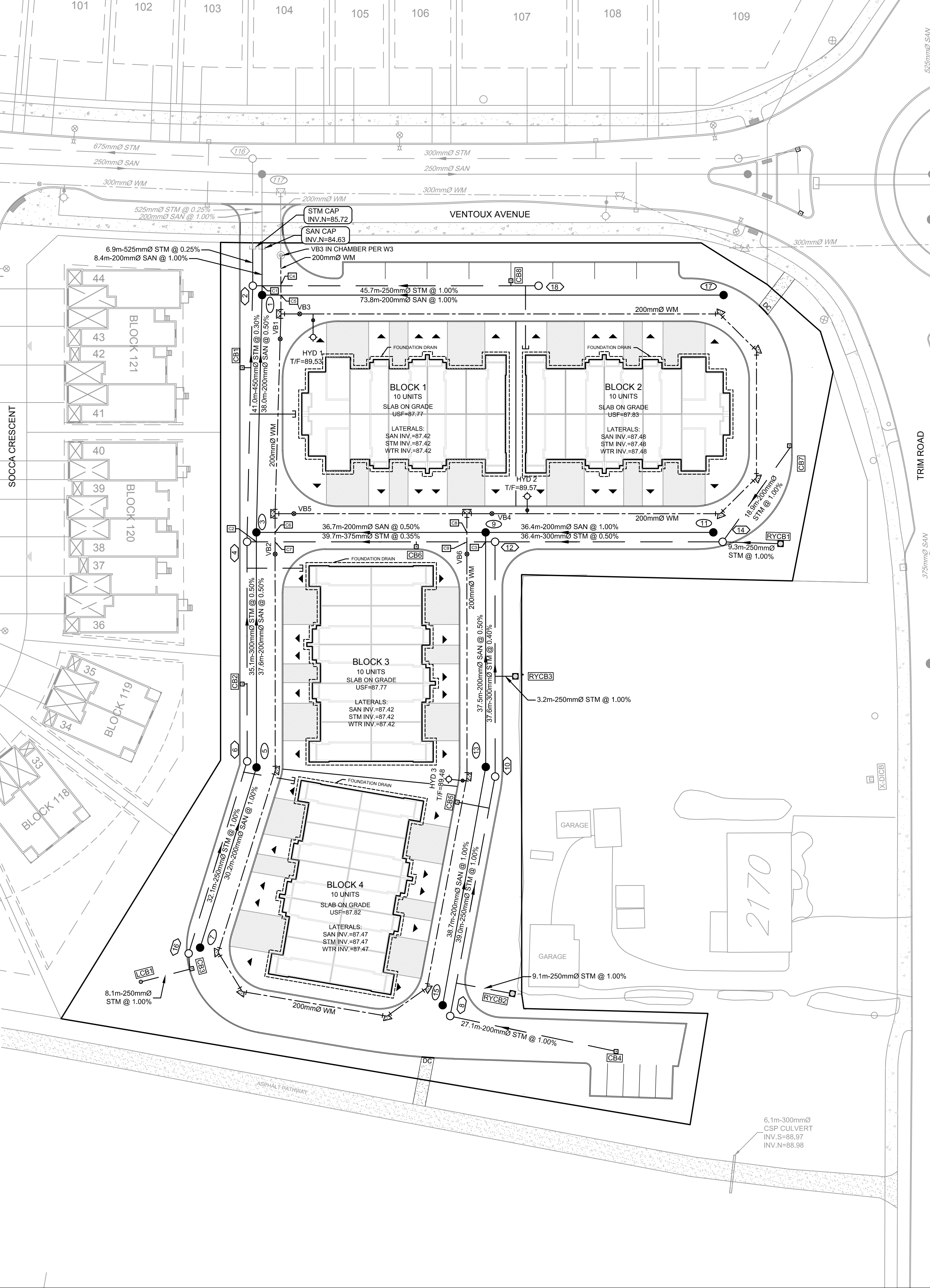
| WATERMAIN TABLE | | | |
|-----------------|---------------|------------------|-----------------|
| Station | F/G ELEVATION | TOP OF WATERMAIN | DESCRIPTION |
| 1+027.11 | 89.21 | 86.81 | 200x200 TEE |
| 1+031.11 | 89.16 | 89.16 | VB1 |
| 1+059.07 | 89.40 | 87.00 | 200x200 TEE |
| 1+065.53 | 89.40 | 87.00 | VB2 |
| 1+099.76 | 89.27 | 86.87 | 22.5" H. BEND |
| 1+130.64 | 89.34 | 86.94 | 45" H.BEND |
| 1+139.71 | 89.37 | 86.97 | 45" H.BEND |
| 1+164.18 | 89.59 | 87.19 | 45" H.BEND |
| 2+012.65 | 89.23 | 86.83 | VB3 |
| 2+014.80 | 89.29 | 86.89 | HYD1 CONNECTION |
| 2+080.50 | 89.42 | 87.02 | 45" H.BEND |
| 2+089.89 | 89.35 | 86.95 | 45" H.BEND |
| 2+111.55 | 89.27 | 86.87 | 45" H.BEND |
| 2+121.07 | 89.35 | 86.95 | 45" H.BEND |
| 2+152.60 | 89.32 | 86.92 | HYD2 CONNECTION |
| 2+158.24 | 89.30 | 86.90 | VB4 |
| 2+162.24 | 89.27 | 86.87 | 200x200 TEE |
| 2+189.92 | 89.42 | 87.02 | VB5 |
| 3+007.56 | 89.25 | 86.85 | VB6 |
| 3+043.37 | 89.25 | 86.85 | 11" H.BEND |
| 3+044.16 | 89.24 | 86.84 | HYD3 CONNECTION |
| 3+077.95 | 89.48 | 87.08 | 45" H.BEND |

| SANITARY MANHOLE TABLE | | | | |
|------------------------|----------|--------------|-------------------------------|-------------------------|
| MANHOLE ID | SIZE(mm) | T/G ELEV (m) | INVERT (m) | PIPE DIAMETER (mm) |
| 1 | 1200Ø | 89.22 | N=84.70 S=85.24 E=85.30 | N=200 S=200 E=200 |
| 3 | 1200Ø | 89.40 | S=85.44 E=85.44 N=85.43 | S=200 E=200 N=200 |
| 5 | 1200Ø | 89.27 | S=85.66 N=85.63 | S=200 N=200 |
| 7 | 1200Ø | 89.25 | N=85.96 | N=200 |
| 9 | 1200Ø | 89.30 | W=85.62 S=85.68 E=85.63 | W=200 S=200 E=200 |
| 11 | 1200Ø | 89.33 | W=85.99 | W=200 |
| 13 | 1200Ø | 89.34 | S=85.90 N=85.87 | S=200 N=200 |
| 15 | 1200Ø | 89.47 | N=86.29 | N=200 |
| 17 | 1200Ø | 89.43 | W=86.04 | W=200 |
| 117 | 1200Ø | 89.36 | W=83.92 E=83.91 S=84.51 | W=250 E=250 S=200 |

| STORM MANHOLE TABLE | | | | | |
|---------------------|----------|--------------|-------------------------------|-------------------------|--------|
| MANHOLE ID | SIZE(mm) | T/G ELEV (m) | INVERT (m) | PIPE DIAMETER (mm) | I.C.D. |
| 2 | 1200Ø | 89.22 | N=85.74 E=86.02 S=85.82 | N=525 E=250 S=450 | - |
| 4 | 1200Ø | 89.37 | N=85.94 S=86.09 E=86.02 | N=450 S=300 E=375 | - |
| 6 | 1200Ø | 89.26 | N=86.27 S=86.32 | N=300 S=250 | - |
| 8 | 1200Ø | 89.46 | N=86.82 E=87.51 | N=250 E=200 | - |
| 10 | 1200Ø | 89.37 | N=86.38 S=86.43 | N=300 S=250 | - |
| 12 | 1200Ø | 89.32 | S=86.23 E=86.23 W=86.15 | S=300 E=300 W=375 | - |
| 14 | 1200Ø | 89.30 | W=86.41 N=87.53 E=86.75 | W=300 N=200 E=250 | - |
| 16 | 1200Ø | 89.19 | N=86.64 SE=87.72 | N=250 SE=250 | - |
| 18 | 1200Ø | 89.10 | W=86.48 | W=250 | - |
| 116 | 1500Ø | 89.34 | W=85.54 S=85.68 E=85.91 | W=675 S=525 E=300 | - |

| CATCHBASIN TABLE | | | |
|------------------|---------------|----------------|-----------------------|
| CB ID | T/G ELEVATION | INVERT | I.C.D. |
| CB1 | 89.00 | 87.60 | Tempest LMF Vortex 93 |
| CB2 | 89.08 | 87.68 | Tempest LMF Vortex 78 |
| CB3 | 89.15 | 87.75 87.82 | Tempest LMF Vortex 78 |
| CB4 | 89.18 | 87.78 | Tempest LMF Vortex 78 |
| CB5 | 89.18 | 89.14 | Tempest LMF Vortex 94 |
| CB6 | 89.13 | 87.73 | Tempest LMF Vortex 78 |
| CB7 | 89.12 | 87.72 | Tempest LMF Vortex 78 |
| CB8 | 89.05 | 87.65 | Tempest LMF Vortex 78 |

| SEWER CROSSING TABLE | | |
|----------------------|--------------------------------|-----------|
| LOCATION | ELEVATIONS | CLEARANCE |
| C1 | STM INV=86.03 SAN OBV=84.89 | 1.14m |
| C2 | STM INV=86.02 SAN OBV=85.65 | 0.37m |
| C3 | STM INV=86.15 SAN OBV=85.89 | 0.26m |
| C4 | WM INV=86.69 STM OBV=86.32 | 0.37m |
| C5 | WM INV=86.67 SAN OBV=85.53 | 1.14m |
| C6 | WM OBV=86.83 SAN INV=85.66 | 1.17m |
| C7 | WM INV=86.81 STM OBV=86.41 | 0.40m |
| C8 | WM INV=86.66 SAN OBV=85.81 | 0.85m |
| C9 | WM INV=86.66 STM OBV=86.51 | 0.15m |



| LEGEND | | | |
|--------|---|--|--------------------------------|
| | SANITARY MANHOLE, SEWER & DIRECTION OF FLOW | | ROAD CATCHBASIN |
| | STORM MANHOLE, SEWER & DIRECTION OF FLOW | | ROAD CATCHBASIN WITH ICD |
| | WATERMAIN AND DIAMETER | | LANDSCAPE TYPE CATCHBASIN |
| | VALVE & VALVE BOX | | REAR YARD CATCH BASIN |
| | VALVE & VALVE CHAMBER | | REAR YARD CATCH BASIN WITH ICD |
| | BEND AND THRUST BLOCK | | HYDRANT C/W VALVE & LEAD |
| | | | CAP |

- ### GENERAL NOTES:
- DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO START OF CONSTRUCTION.
 - THE ORIGINAL TOPOGRAPHY AND GROUND ELEVATIONS, SERVICING AND SURVEY INFORMATION SHOWN ON THIS PLAN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL INFORMATION OBTAINED FROM THIS PLAN.
 - CO-ORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
 - BEFORE COMMENCING CONSTRUCTION, PROVIDE PROOF OF COMPREHENSIVE ALL RISK AND OPERATIONAL LIABILITY INSURANCE INCLUDING BLASTING. INSURANCE POLICY TO NAME THE OWNER, ENGINEER AND THE CITY AS CO-INSURED.
 - CONNECT TO EXISTING SYSTEMS AS DETAILED, INCLUDING ALL RESTORATION WORK NECESSARY TO REINSTATE SURFACES TO EXISTING CONDITIONS OR BETTER.
 - 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 THESE DRAWINGS.
 - OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS BEFORE COMMENCING CONSTRUCTION.
 - RESTORE ALL TRENCHES AND SURFACE FEATURES TO EXISTING CONDITIONS OR BETTER AND TO THE SATISFACTION OF MUNICIPAL AUTHORITIES.
 - REMOVE FROM SITE ALL DEBRIS AND EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER.
 - ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
 - REFER TO GEOTECHNICAL INVESTIGATION PG4278-3 (DATED JUNE 4, 2020), PREPARED BY PATERSON GROUP INC. FOR SUBSURFACE CONDITIONS AND CONSTRUCTION RECOMMENDATIONS.
 - PERFORATED PIPE SUB-DRAINS TO BE PROVIDED AT SUBGRADE LEVEL EXTENDING FROM THE ROADSIDE CATCHBASIN FOR A DISTANCE OF 3.0m, PARALLEL TO THE CURB IN TWO DIRECTIONS.

- ### SEWER NOTES:
- SPECIFICATIONS:

| ITEM | SPEC. No. | REFERENCE |
|-----------------------------------|--------------------|---------------------------------------|
| CATCHBASIN (600x600mm) | 705.010 | OPSD |
| CATCHBASIN MANHOLE (1200Ø) | 701.010 | OPSD |
| STORM / SANITARY MANHOLE (1200Ø) | 701.010 | OPSD |
| ROADSIDE CB, FRAME & COVER | S2 & S19 | CITY OF OTTAWA |
| CBM FRAME & COVER | S25 & S28.1 | CITY OF OTTAWA |
| STORM / SANITARY MH FRAME & COVER | S24.1 / S24 & S25 | CITY OF OTTAWA |
| STORM SEWER | PVC DR 35 OR CONC. | (CLASS SPECIFIED ON PROFILE DRAWINGS) |
| 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 PROPERTY LINE AT MINIMUM SLOPE OF 1.0% (2.0% IS PREFERRED).
 - 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 IS NOT PERMITTED.
 - SEWER SERVICE CONNECTIONS PER CITY OF OTTAWA DETAILS S11 AND S11.1.
 - THE SITE SERVICING CONTRACTOR SHALL PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 410.07.16 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 THE ENGINEER.
 - STORM MANHOLES AND CBMHS SHALL HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
 - CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.

- ### WATERMAIN NOTES:
- GENERAL:

| ITEM | DETAIL No. | REFERENCE |
|---|-------------|----------------|
| WATERMAIN TRENCHING | W17 | CITY OF OTTAWA |
| THERMAL INSULATION IN SHALLOW TRENCHES | W22 | CITY OF OTTAWA |
| WATERMAIN CROSSING BELOW SEWER / OVER SEWER | W25 / W25.2 | CITY OF OTTAWA |
 - THE WATERMAIN SHALL BE PVC DR 18 IN ACCORDANCE WITH MATERIAL SPECIFICATION MW-18.1, UNLESS OTHERWISE INDICATED.
 - 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 CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS PER W25 (0.50m) AND W25.2 (0.25m).
 - WATER LATERAL AND SERVICE POST ARE TO BE CONSTRUCTED 2.0m FROM BACK OF CURB USING 19mmØ PEX.

| SCALE | | | |
|----------|-----|----------|-----|
| 1:400 | | | |
| | | | |
| DESIGN | | | |
| DTD | MAB | DTD | MAB |
| CHECKED | | CHECKED | |
| DRAWN | | DRAWN | |
| APPROVED | JGR | APPROVED | JGR |

| FOR REVIEW ONLY | |
|-----------------|--|
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|---|--------|
| CITY OF OTTAWA PROVENCE ORLEANS - 2128 TRIM ROAD (BLOCK 126) | |
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| PROJECT No. 120057 | REV #1 |
| DRAWING No. 120057-GP | |