

GRADING NOTES:

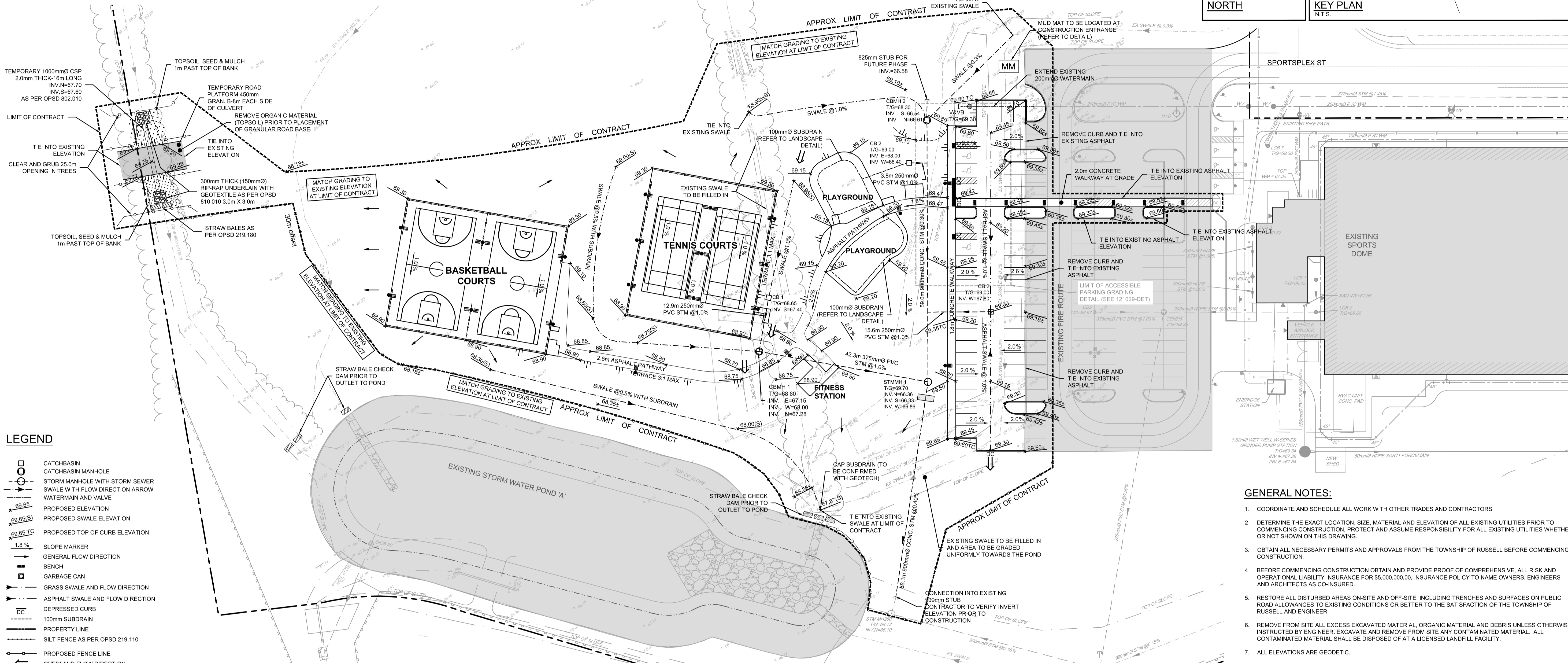
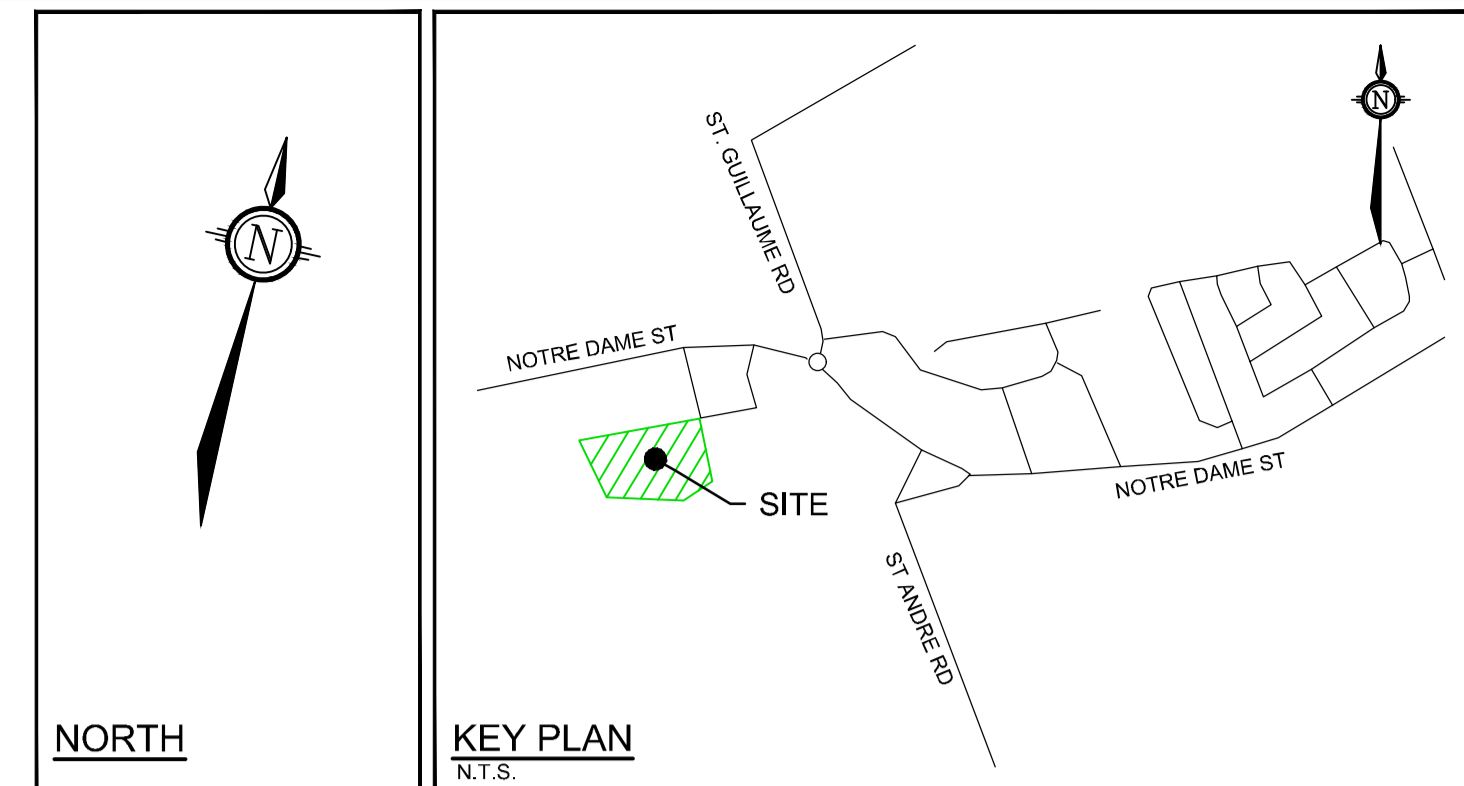
1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
2. EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
3. ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
4. THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
5. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
6. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
7. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
8. ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER TOWNSHIP OF RUSSELL STANDARDS (SC1.1).
9. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS (SUCH AS PLAY STRUCTURE AREA SUBDRAIN, TENNIS/BASKETBALL COURT COMPOSITION, WALKWAY COMPOSITION ETC.)

EROSION AND SEDIMENT CONTROL NOTES:

1. THE OWNER AGREES TO PREPARE AND IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE TOWNSHIP OF RUSSELL, APPROPRIATE TO THE SITE CONDITIONS, PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL SUCH AS BUT NOT LIMITED TO: INSTALLING FILTER CLOTHS ACROSS MANHOLE/CATCHBASIN LIDS TO PREVENT SEDIMENTS FROM ENTERING STRUCTURES AND INSTALL AND MAINTAIN A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.
2. THE CONTRACTOR SHALL PLACE FILTER CLOTH UNDER THE CATCHBASIN AND MANHOLE GRATES FOR THE DURATION OF CONSTRUCTION AND WILL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION.
3. SILT FENCING FOR ENTIRE PERIMETER OF SITE, SHALL BE UTILIZED TO CONTROL EROSION FROM THE SITE DURING CONSTRUCTION.
4. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
5. PROVIDE MUD MATS AT ALL CONSTRUCTION ACCESS POINTS TO MINIMIZE SEDIMENT TRANSPORT OFFSITE.

WATERMAIN NOTES:

- | SPECIFICATIONS: | SPEC. No. | REFERENCE |
|--|-----------|--|
| ITEM | 701 | OPSS |
| WATERMAIN TRENCHING | 1108.030 | OPSD |
| THERMAL INSULATION IN SHALLOW TRENCHES | 1108.010 | OPSD |
| WATERMAIN CROSSING BELOW SEWER | | PVC DR 18 (UNLESS SPECIFIED OTHERWISE) |
| WATERMAIN | | |
1. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE TOWNSHIP OF RUSSELL/ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS AS WELL AS CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF A TOWNSHIP INSPECTOR.
 2. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
 3. PROVIDE MINIMUM 0.25m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS.



LEGEND

- CATCHBASIN
- CATCHBASIN MANHOLE
- STORM MANHOLE WITH STORM SEWER
- SWALE WITH FLOW DIRECTION ARROW
- WATERMAIN AND VALVE
- PROPOSED ELEVATION
- PROPOSED SWALE ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- SLOPE MARKER
- GENERAL FLOW DIRECTION
- BENCH
- GARBAGE CAN
- GRASS SWALE AND FLOW DIRECTION
- ASPHALT SWALE AND FLOW DIRECTION
- DEPRESSED CURB
- 100mm SUBDRAIN
- PROPERTY LINE
- SILT FENCE AS PER OPSD 219.110
- PROPOSED FENCE LINE
- OVERLAND FLOW DIRECTION
- EXISTING ELEVATION
- MUD MAT (SEE DETAIL)
- PROPOSED TOP OF SLOPE
- TERRACE AT 3:1 MAX
- SILT FENCE PER OPSD 219.110
- STRAW BALE FOR ESC MEASURES
- TWSI (REFER TO LANDSCAPE DRAWINGS)
- PROPOSED LIGHT STAND
- SEEPAGE BARRIER
- EXISTING HYDRANT
- EXISTING WATERMAIN AND VALVE
- EXISTING LANDSCAPE CATCHBASIN
- EXISTING CATCHBASIN MANHOLE AND STORM SEWER
- EXISTING SIGN
- EXISTING CATCHBASIN

PAVEMENT STRUCTURE:

- LIGHT DUTY
- 50mm H1.3
- 150mm GRAN "A"
- 300mm GRAN "B" TYPE II

SEWER NOTES:

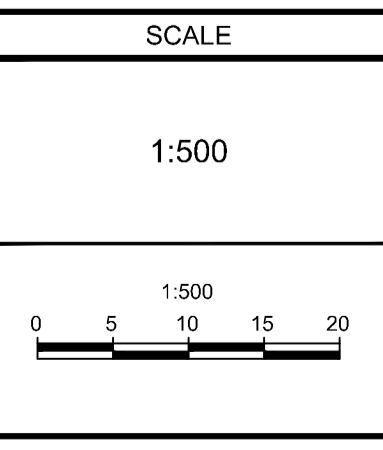
- | SPECIFICATIONS: | SPEC. No. | REFERENCE |
|------------------------|-----------------------------|-----------|
| ITEM | 705.010 | OPSD |
| CATCHBASIN (600x600mm) | 701.010 | OPSD |
| STORM MANHOLE (12000) | 400.020 | OPSD |
| CB, FRAME & COVER | 401.010 | OPSD |
| STORM MH FRAME & COVER | 410 | OPSS |
| SEWER TRENCH - | | |
| STORM SEWER | PVC DR 35 | |
| CATCHBASIN LEAD | HDPE PERF. PIPE | |
| SUBDRAIN | WITH FILTER SOCK (OPSS 405) | |
1. INSULATE ALL PIPES (STM) THAT HAVE LESS THAN 1.5m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
 2. 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 SHALL NOT BE PERMITTED.
 3. 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.
 4. STORM MANHOLES AND CBMHs ARE TO HAVE 300mm SUMP UNLESS OTHERWISE INDICATED.
 5. CONTRACTOR TO TELEPHONE (CCTV) ALL PROPOSED SEWERS, 200mm OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.

GENERAL NOTES:

1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. 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.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE TOWNSHIP OF RUSSELL BEFORE COMMENCING CONSTRUCTION.
4. 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.
5. 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 TOWNSHIP OF RUSSELL AND ENGINEER.
6. 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.
7. ALL ELEVATIONS ARE GEODETIC.
8. REFER TO GEOTECHNICAL REPORT (NO. 120430 DATED DECEMBER 21, 2012), PREPARED BY LRL ASSOCIATES LTD. 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.
9. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
10. REFER TO STORMWATER MANAGEMENT TECHNICAL MEMORANDUM PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD DATED APRIL 28TH, 2021.
11. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER TOWNSHIP OF RUSSELL STANDARDS.
12. PROVIDE LINE/PARKING PAINTING.
13. 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, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TBM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
14. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON THIS PLAN.
15. ALL WORKS SHALL BE PERFORMED IN ACCORDANCE WITH THE UNITED COUNTIES OF PRESCOTT AND RUSSELL OR ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.

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.

No.	REVISION	DATE	BY
3.	ADDENDUM #1, TEMPORARY CULVERT ADDED	JUNE 14/21	JLS
2.	ISSUED FOR TENDER	JUNE 2/21	CJR
1.	ISSUED FOR SITE PLAN APPLICATION	APR 28/21	CJR



DESIGN	PWN
CHECKED	CJR
DRAWN	PWN/JK
CHECKED	CJR
APPROVED	JLS

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LOCATION
 150 SPORTSPLEX STREET, RUSSELL TOWNSHIP
 RUSSELL RECREATION COMPLEX PARK PROJECT

DRAWING NAME
GRADING AND SERVICING PLAN

PROJECT No. 121029
 REV. REV #3
 DRAWING No. 121029-GS

ML:2021121029/CAD/Design/121029_GS.dwg, PLANS.A1, Jun 14, 2021, 3:49pm, jonescomb