

**GENERAL NOTES**

1. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION.
2. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
3. JOB BENCH MARK - CONFIRM WITH EXP SERVICES INC. PRIOR TO UTILIZATION.
4. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED. ALL DRAWINGS SHOULD NOT BE SCALED BY THE CONTRACTOR. ANY MISSING OR QUESTIONABLE DIMENSIONS ARE TO BE CONFIRMED WITH THE CONSULTANT IN WRITING.
5. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA AND ONTARIO PROVINCIAL STANDARD DRAWING SUPPLEMENTS WHERE APPLICABLE AND ONTARIO PROVINCIAL STANDARDS SHALL APPLY WHERE NO CITY STANDARDS ARE AVAILABLE.
6. ANY DISCREPANCIES, INTERPRETATIONS, CHANGES AND ADDITIONS TO THESE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER, WHEN NOTED AND BEFORE PROCEEDING WITH CONSTRUCTION WORKS.
7. REFER TO ARCHITECT'S SITE PLAN FOR BUILDING DIMENSIONS AND SITE LAYOUT. DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. ALL DISTURBED AREAS TO BE REINSTATED TO EQUAL OR BETTER CONDITION. ALL NEW WORK SHALL TIE INTO EXISTING.
9. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCHBASIN OUTLETS ARE PROVIDED.
10. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAWCUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT.
11. CONTRACTOR IS TO COMPLY WITH THE CITY OF OTTAWA REQUIREMENTS FOR TRAFFIC CONTROL WHEN WORKING ON CITY STREETS.
12. ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO CITY OF OTTAWA AND OPSS STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED (CONSTRUCTION OPSS 206, 310 & 314 MATERIALS OPSS 1001, 1003 & 1010).
13. THE CONTRACTOR SHALL CONFIRM LOCATIONS AND ELEVATIONS OF EXISTING SERVICES AND STRUCTURES TO BE CONNECTED TO AND EXISTING SERVICES THAT MAY BE DAMAGED OR CAUSE CONFLICTS PRIOR TO CONSTRUCTION OF ANY NEW SEWER, WATER AND/OR STORM WATER WORKS. THE ENGINEER SHALL BE INFORMED IMMEDIATELY OF ANY ERRORS, DISCREPANCIES, CONFLICTS, OMISSIONS, ETC. THAT ARE FOUND. DO NOT CONTINUE CONSTRUCTION IN AREAS WHERE DISCREPANCIES APPEAR UNTIL SUCH DISCREPANCIES HAVE BEEN RESOLVED.
14. THE CONTRACTOR SHALL PROTECT ANY SUCH EXISTING SERVICES & FACILITIES. SUCH REQUIRED MEASURES INCLUDE, BUT ARE NOT LIMITED TO: ENSURE ALL CONCERNED UTILITIES HAVE LOCATED THEIR PLANT PRIOR TO ANY EXCAVATING, LOCATE AND FLAG/PAINT THE LOCATIONS OF OTHER U/G PLANT WHICH MIGHT BE DAMAGED BY EXCAVATION AND CONSTRUCTION TRAFFIC, HAND DIG IN PROXIMITY TO EXISTING BURIED SERVICES TO LOCATE THEM WITHOUT ANY RESULTING DAMAGE, BRACE AND SUPPORT WHERE REQUIRED.
15. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES FOR THE PROTECTION OF THE AREA'S DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING FILTER CLOTH UNDER GRATES OF CATCHBASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
16. DESIGN ELEVATIONS GIVEN ON THESE PLANS ARE TO BE ADHERED TO WITH NO CHANGES WITHOUT PRIOR WRITTEN APPROVAL BY EXP SERVICES INC. SURFACE PONDING STORAGE VOLUMES AND INLET CONTROL DEVICE DIMENSIONS MUST COMPLY WITH THE DESIGN REPORT PREPARED BY EXP SERVICES INC. FOR THIS PROJECT.
17. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL PROVIDE FOR DEWATERING, SUPPORT AND PROTECTION OF EXCAVATIONS AND TRENCHING AS WELL AS RELEASE OF ANY PUMPED GROUND WATER IN A CONTROLLED AND APPROVED MANNER. THE CONTRACTOR SHALL APPLY FOR A PERMIT TO TAKE WATER FROM THE MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS IF MORE THAN 50,000 LITRES PER/DAY OF GROUNDWATER IS PUMPED FOR CONSTRUCTION ACTIVITIES.
18. CITY INSPECTOR IS TO NOTIFIED OF ANY WORKS IN THE ROW WITH SUFFICIENT NOTICE.

**ROADWAYS & CURBS**

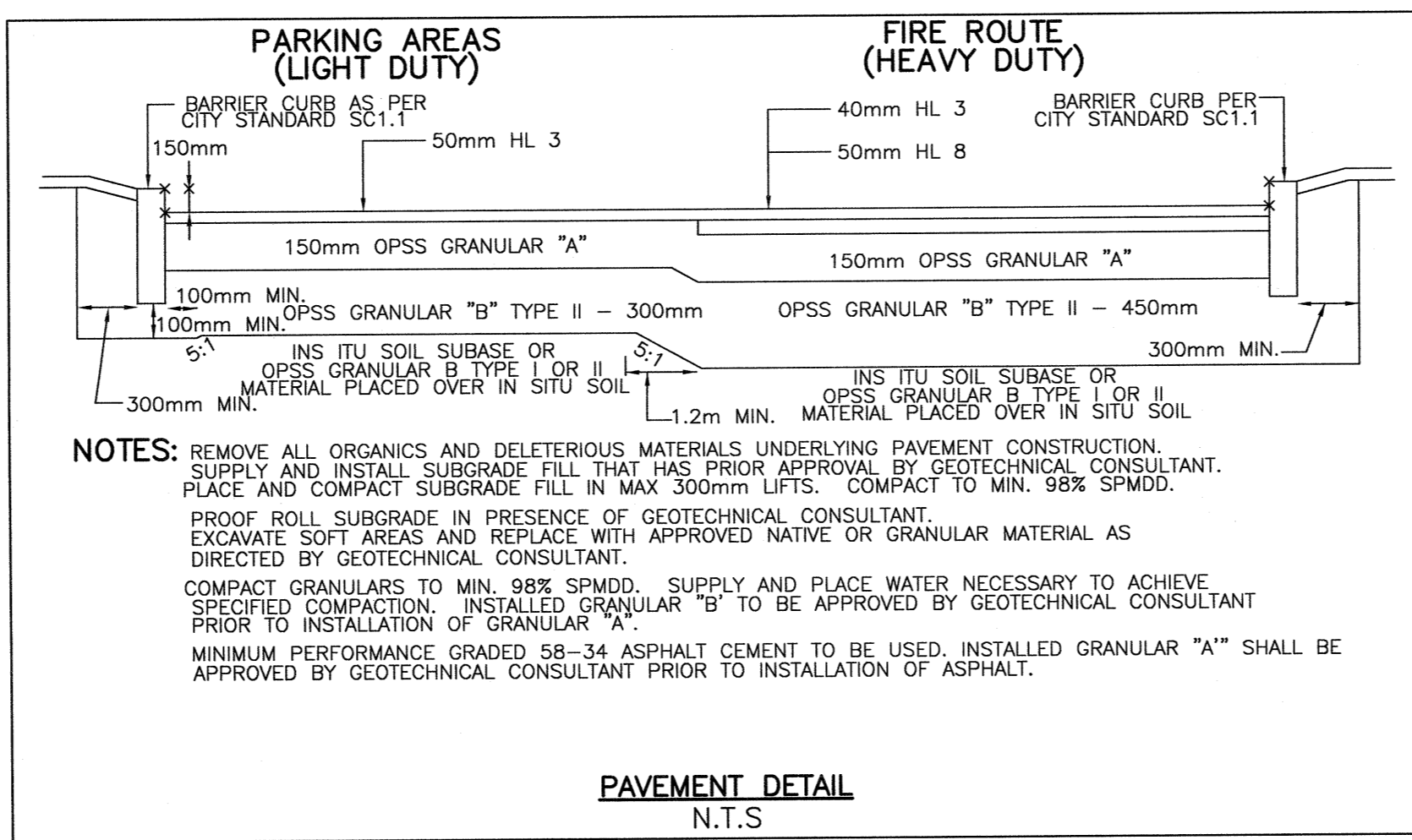
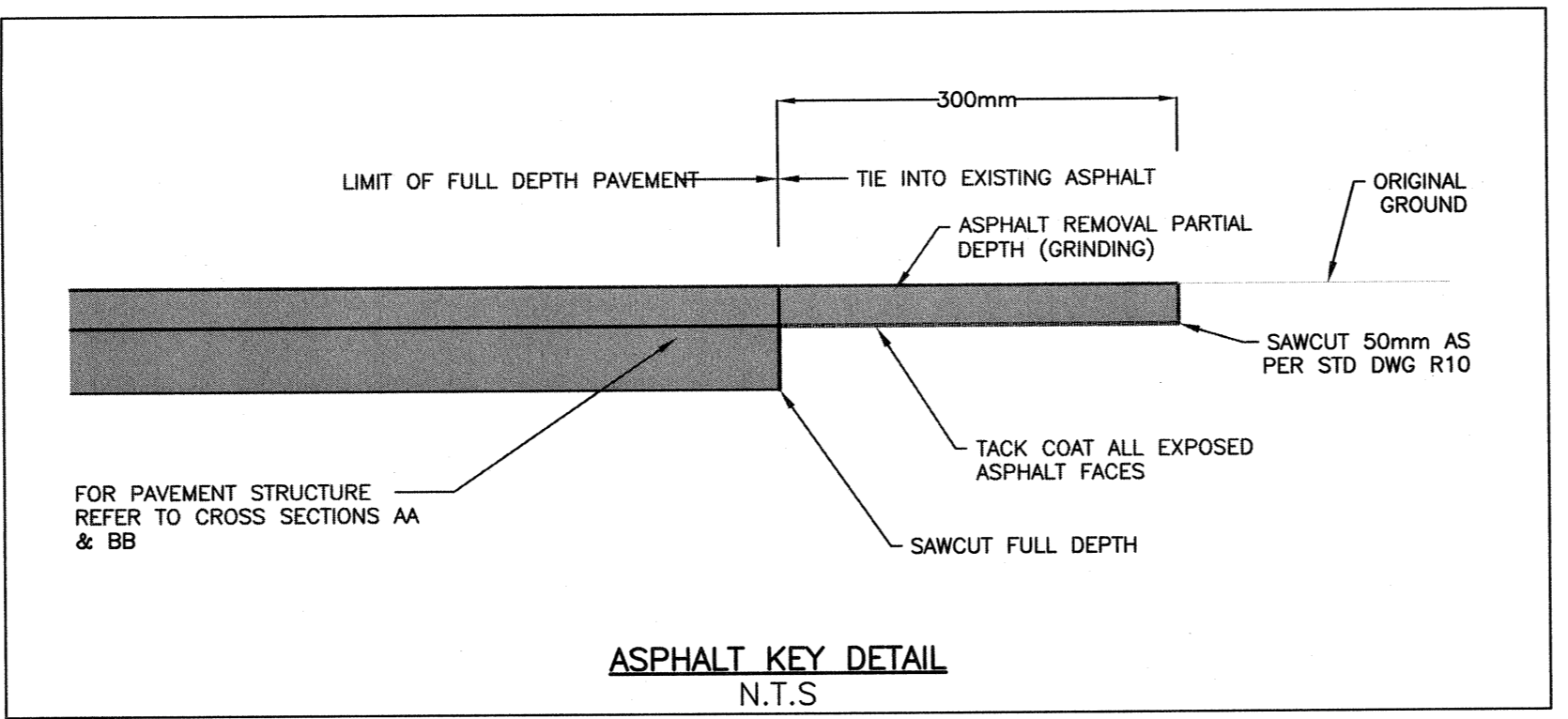
1. ASPHALT REINSTATEMENT AS PER CITY OF OTTAWA STANDARD DRAWING R10.
2. CURBS AND DEPRESSED CURBS TO BE CONCRETE BARRIER CURBS AS PER CITY OF OTTAWA STANDARD DRAWING SC1.1.
3. THE CONTRACTOR SHALL COMPLETE ALL RESTORATION WITHIN CITY ROW'S TO A CONDITION EQUAL TO ORIGINAL OR BETTER AND TO THE SATISFACTION OF THE MUNICIPAL AUTHORITIES.

**WATERMAIN**

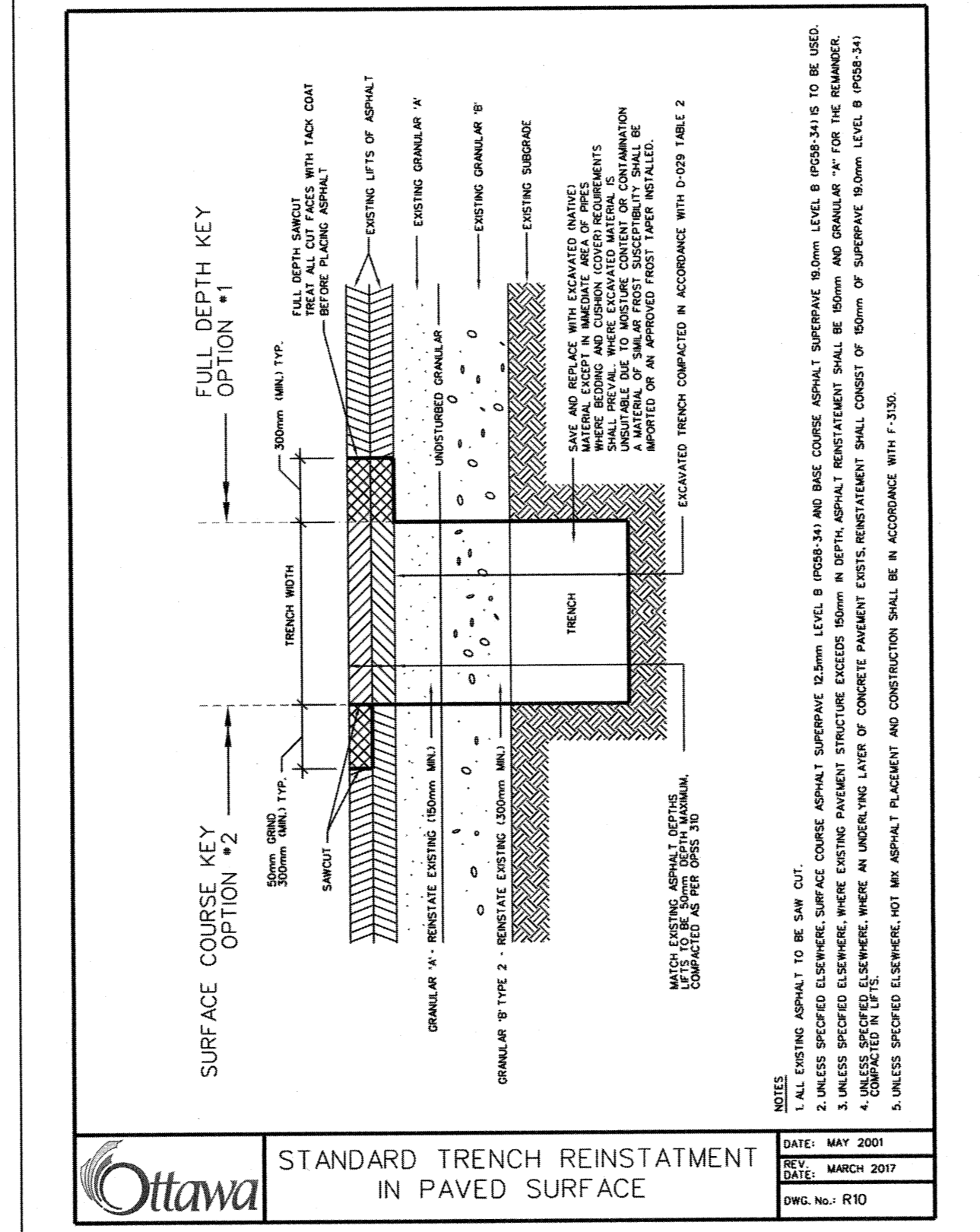
1. ALL WATERMAIN AND WATER SERVICE MATERIALS AND INSTALLATION SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS AND SPECIFICATIONS.
2. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m. THERMAL INSULATION SHALL BE INSTALLED WHERE ADEQUATE SEPARATION CANNOT BE ACHIEVED AS PER CITY STANDARD W21, W22 AND W23.
3. ALL WATERMAIN WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS. NO WORK SHALL COMMENCE UNLESS A CITY WATER WORKS INSPECTOR IS ON SITE. WATERMAIN CONNECTIONS BY CITY OF OTTAWA FORCES WITH ALL EXCAVATION BACKFILL AND ROAD REINSTATEMENT BY CONTRACTOR.
4. WATERMAIN IS TO BE PVC DR18 WITH TRACER WIRE AS PER CITY OF OTTAWA STANDARD W36 UNLESS OTHERWISE NOTED.
5. VALVE BOXES AS PER CITY OF OTTAWA DETAIL W24.
6. WATERMAIN BEDDING IS TO BE AS PER CITY OF OTTAWA DETAIL W17.
7. THRUST BLOCKS AND RESTRAINT AS PER CITY OF OTTAWA DWGS: W25.3, W25.4, W25.5 AND W25.6.
8. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS PER CITY OF OTTAWA DWGS: W39, W40, W41.
9. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
10. DISINFECTION AND TESTING OF WATERMAIN TO BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
11. WATER SERVICES TO BE INSTALLED AS PER CITY OF OTTAWA STANDARD W26 AND W35.
12. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE.
13. INSTALLATION OF WATER METER AND REMOTE RECEPTACLE SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.

**STORM AND SANITARY SEWERS**

1. SANITARY AND STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARD DRAWINGS AND SPECIFICATIONS AND OPSS 407 AND 410.
2. SEWER BEDDING AS PER CITY STANDARD S6 & S7.
3. ALL SANITARY SEWERS ARE TO BE THE SIZES INDICATED AND THE MATERIAL SHALL BE PVC SDR35.
4. ALL STORM SEWERS ARE TO BE THE SIZES INDICATED AND THE MATERIAL SHALL BE PVC SDR35.
5. ALL MANHOLES, CATCHBASINS AND CATCHBASIN MANHOLES TO BE BACKFILLED WITH MIN. 0.3m HORIZONTAL THICKNESS GRANULAR 'A'.
6. SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN TO WITHIN 1.0m OF BUILDING WALLS AND PROVIDE TEMPORARY CAPS.
7. THE CONTRACTOR SHALL CONDUCT INFILTRATION/EXFILTRATION (AS PER CURRENT OPSS) TESTING ON ALL NEWLY INSTALLED SANITARY SEWERS. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWER INSTALLATION AND SUPERVISED BY THE ENGINEER.
8. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED STORM AND SANITARY SEWERS. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED AND SUPERVISED BY THE ENGINEER.
9. ALL SERVICE CONNECTIONS TO BE CONSTRUCTED AS PER CITY STANDARD S11 & S11.1.
10. SANITARY BUILDING DRAINS TO BE EQUIPPED WITH SANITARY BACKWATER VALVES INSTALLED PER CITY OF OTTAWA STANDARD DRAWING S14.1.
11. STORM BUILDING DRAINS TO BE EQUIPPED WITH FOUNDATION BACKWATER VALVES INSTALLED PER CITY OF OTTAWA STANDARD DRAWING S14.
12. MINIMUM SOIL COVER TO BE 2.0M TO PROTECT SEWERS FROM FROST DAMAGE. IN AREAS WHERE ADEQUATE COVER CANNOT BE ACHIEVED, THERMAL INSULATION TO BE INSTALLED AS PER OPSS 514.010.
13. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF THE EXISTING STORM AND SANITARY SEWER TO ASSES THE SEWER CONDITIONS PRIOR TO CONNECTING THE PROPOSED SEWERS.



**NOTES:** REMOVE ALL ORGANICS AND DELETERIOUS MATERIALS UNDERLYING PAVEMENT CONSTRUCTION. SUPPLY AND INSTALL SUBGRADE FILL THAT HAS PRIOR APPROVAL BY GEOTECHNICAL CONSULTANT. PLACE AND COMPACT SUBGRADE FILL IN MAX 300mm LIFTS. COMPACT TO MIN. 95% SPMD. PROOF ROLL SUBGRADE IN PRESENCE OF GEOTECHNICAL CONSULTANT. EXCAVATE SOFT AREAS AND REPLACE WITH APPROVED NATIVE OR GRANULAR MATERIAL AS DIRECTED BY GEOTECHNICAL CONSULTANT. COMPACT GRANULARS TO MIN. 98% SPMD. SUPPLY AND PLACE WATER NECESSARY TO ACHIEVE SPECIFIED COMPACTION. INSTALLED GRANULAR 'B' TO BE APPROVED BY GEOTECHNICAL CONSULTANT PRIOR TO INSTALLATION OF GRANULAR 'A'. MINIMUM PERFORMANCE GRADED 58-34 ASPHALT CEMENT TO BE USED. INSTALLED GRANULAR 'A' SHALL BE APPROVED BY GEOTECHNICAL CONSULTANT PRIOR TO INSTALLATION OF ASPHALT.



**NOTES:**  
 1. EXISTING ASPHALT TO BE SAW CUT.  
 2. UNLESS SPECIFIED OTHERWISE, SURFACE COURSE ASPHALT (SURFACE COURSE ASPHALT SUPERPAVE 16.5mm LEVEL B (POSS-3A) IS TO BE USED.  
 3. UNLESS SPECIFIED OTHERWISE, WHERE EXISTING PAVEMENT STRUCTURE EXCEEDS 150mm IN DEPTH, ASPHALT REINSTATEMENT SHALL BE 150mm AND GRANULAR 'A' FOR THE TRENCH.  
 4. UNLESS SPECIFIED OTHERWISE, WHERE AN UNDERLYING LAYER OF CONCRETE PAVEMENT EXISTS, REINSTATEMENT SHALL CONSIST OF 150mm OF SURFACE COURSE ASPHALT (LEVEL B (POSS-3A) UNLESS SPECIFIED OTHERWISE, 107 MM ASPHALT PLACEMENT AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH F-1330.

*Lily Xu*  
**LILY XU, MCIP, RPP**  
 (A) MANAGER, DEVELOPMENT REVIEW - SOUTH  
 PLANNING, INFRASTRUCTURE & ECONOMIC  
 DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

**APPROVED**  
 By Lily Xu at 12:49 pm, Oct 02, 2019

**CAUTION**  
 THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, 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.

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REV	REVISION DESCRIPTION	DATE	BY	APPD
3	REVISED AS PER CITY COMMENTS	26/08/19	ML	AA
2	REVISED AS PER CITY COMMENTS	08/08/19	AE	AA
1	ISSUED FOR SITE APPLICATION	09/04/19	AE	AA

SCALE  
 DESIGNED BY  
 CHECKED BY  
 REVISED BY  
 CLIENT

REVIEWED BY

**CLIENT**  
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BASEPLAN	AE
DESIGN	AE
CHECKED	AA
CAD	AE
PROJECT MANAGER	AA
APPROVED	AA

**PROJECT**  
**OTTAWA TRAIN YARDS**  
 830 BELFAST ROAD  
 OTTAWA, ONTARIO.

**TITLE**  
**DETAILS AND NOTES PLAN**

**PROJECT No.**  
 OTT-00251090-A0

**SURVEY**  
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**DATE**  
 APRIL 2019

**DRAWING No.**  
 DET