

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 MUNICIPAL AUTHORITIES.
- 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 AND UTILIZE METRIC UNITS.
- REFER TO GEOTECHNICAL INVESTIGATION REPORT PG4592-1-5510 DATED SEPTEMBER 10, 2018 PREPARED BY PATRICKSON GROUP INC. 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 ARCHITECTS' AND LANDSCAPE ARCHITECTS' DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
- REFER TO THE STORMWATER MANAGEMENT REPORT NO. R-2024-095, DATED NOVEMBER 14, 2025 PREPARED BY NOVATECH.
- SAV CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10 AND R25).
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICING AS-BUILT INFORMATION. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATION, TWIN ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC. AND A GRADING PLAN INDICATING ALL AS-BUILT SURFACE ELEVATIONS AND SLOPES.

GRADING NOTES:

- ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED DRIVEWAY AND PAVED AREAS.
- EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUBEXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS.
- THE PAVEMENT GRANULAR BASE AND SUBBASE SHOULD BE PLACED IN MAXIMUM 300mm THICK LIFTS AND COMPACTED TO A MINIMUM OF 98% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
- ALL CURBS AND SIDEWALKS TO BE BUILT AS PER CITY OF OTTAWA DETAIL DRAWINGS SC1.4 AND SC4.
- GRADE AND/OR FILL BEHIND PROPOSED CURB AND BETWEEN BUILDINGS AND CURBS, WHERE REQUIRED TO PROVIDE POSITIVE DRAINAGE.
- MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
- ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
- REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING THE AS-BUILT ELEVATION OF EVERY DESIGN GRADE SHOWN ON THIS PLAN.

WATERMAIN NOTES:

- SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- SPECIFICATIONS:

ITEM	SPEC. NO.	REFERENCE
WATERMAIN TRENCHING	OPSD 701.010	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
THERMAL INSULATION BY OPEN STRUCTURES	W23	CITY OF OTTAWA
WATERMAIN	PEX SDR 9	
- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD AND SPECIFICATIONS. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND COLORIMETRATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
- WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
- PROVIDE MINIMUM 0.5m 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.

SEWER NOTES:

- SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- SPECIFICATIONS:

ITEM	SPEC. NO.	REFERENCE
CATCH-BASIN (600x600mm)	705.010	OPSD
SANITARY/STORMCATCH-BASIN MANHOLE (12000)	701.010	OPSD
STORM MANHOLE (15000)	701.011	OPSD
STORM/SANITARY MAN FRAME	526	CITY OF OTTAWA
STORM COVER (OPEN)	528.1	CITY OF OTTAWA
STORM SEWER < 450mm Ø	PVC DR 35 (UNLESS SPECIFIED OTHERWISE)	
STORM SEWER > 450mm Ø	CONC (UNLESS SPECIFIED OTHERWISE)	
SANITARY SEWER	PVC DR 35	
CATCH-BASIN LEAD	535	
PIPE INSULATION		
- SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM THE FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
- ALL STORM AND SANITARY LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
- 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.
- 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.
- ALL STORM MANHOLES MANHOLES WITH PIPE SIZES LESS THAN 900mm ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED. ALL STORM MANHOLES WITH PIPE SIZES 900mm AND LARGER ARE TO BE BENCHED.
- CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS 200mm OR GREATER IN DIAMETER PRIOR TO BASE COURSE ASPHALT TO ENSURE THAT THEY ARE CLEAN AND OPERATIONAL. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES AND RE CCTV PRIOR TO ACCEPTANCE. OBTAIN APPROVAL FROM THE CITY'S SEWER OPERATIONS. PROVIDE THE CCTV INSPECTION AND REPORT TO THE ENGINEER FOR REVIEW AND APPROVAL.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL APPLICABLE SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIG ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
- 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 OPS5 410.07.16, 410.07.16.04 AND 407.24. 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.
- INSULATE ALL STORM SEWERS THAT HAVE LESS THAN 1.5m COVER PER INSULATION DETAIL FOR SHALLOW SEWERS, PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- ALL CATCH-BASINS IN THE PARKING AREA ARE TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS EXTENDING IN FOUR ORTHOGONAL DIRECTIONS AT THE SUBGRADE LEVEL. SUBDRAIN IS TO BE PROVIDED AT THE TRANSITIONS BETWEEN DIFFERENT PAVEMENT COMPOSITIONS. THE SUBGRADE SURFACE SHOULD BE SHAPED TOWARDS THE CATCH-BASINS TO PROMOTE DRAINAGE OF THE GRANULAR BASE.
- PERIMETER SUBDRAINS SHALL BE PROVIDED LONGITUDINALLY AROUND THE PARKING AREA ALONG CURBS PER GEOTECHNICAL RECOMMENDATION.

EROSION AND SEDIMENT CONTROL NOTES:

- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES DURING CONSTRUCTION ACTIVITIES TO PROTECT THE STORM DRAINAGE SYSTEM AND THE DOWNSTREAM RECEIVING WATERCOURSE(S). THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING FILTER BAGS UNDER THE GRATES OF CATCH-BASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS.
- ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA. THEY ARE TO BE 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. THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AND SHOULD INCLUDE AS A MINIMUM THOSE MEASURES INDICATED ON THE PLAN.
- TO PREVENT SURFACE EROSION FROM ENTERING ANY DITCH OR STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF CATCH-BASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA. THESE CONTROL MEASURES ARE TO BE IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED AND CONSTRUCTION IS COMPLETE.
- THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE ENGINEER, THE MEASURES ARE NO LONGER REQUIRED, NO CONTROL MEASURES MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY DITCH OR STORM SEWER SYSTEM. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.
- THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- ROADWAYS ARE TO BE SWEEP AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR MUNICIPALITY.
- THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS.
- THE PROPOSED PERIMETER SWALE IS TO BE TREATED WITH TOPSOIL, HYDROSEED AND MULCH AS SOON AS IS PRACTICAL AFTER CONSTRUCTION OF THE SWALE.
- THE EROSION SEDIMENT CONTROL PLAN IS TO BE CONSIDERED A "LIVING DOCUMENT" WHICH MAY BE MODIFIED IN THE EVENT THAT THE CONTROL MEASURES ARE INSUFFICIENT.
- PROVIDE REGULAR MAINTENANCE TO THE EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION AND SEDIMENT CONTROL MEASURES ARE MAINTAINED AND WILL MONITOR THE WATER CLARITY DOWNSTREAM OF THE WORK SITE THROUGHOUT THE DAY AND DURING RAIN EVENTS. WATER QUALITY IS TO MEET THE CANADIAN WATER QUALITY GUIDELINES FOR THE PROTECTION OF AQUATIC LIFE. MONITORING FOR VISIBLE PLUMES OUTSIDE OF THE WORK AREA IS TO BE UNDERTAKEN.
- SUSPEND ACTIVITIES THAT CAUSE MUDDY ENVIRONMENTS DURING PERIODS OF HEAVY RAINS.
- ANY STOCKPILES OF SOIL OR FILL MATERIAL WILL BE STORED AS FAR AS POSSIBLE FROM THE FISH HABITAT OR CHANNELS LEADING TO FISH HABITAT (MINIMUM 30 M).
- THE EROSION CONTROL MEASURES WILL NOT BE REMOVED UNTIL THE BANKS ARE STABILIZED (I.E., <20% EXPOSED SOIL).
- WHERE BANKS/RIPARIAN AREA (AREA WITHIN 30 M OF CHANNEL) HAVE BEEN STABILIZED BY SEEDING AND/OR PLANTING, MONITOR THE REVEGETATION TO ENSURE THAT THE VEGETATION BECOMES FULLY ESTABLISHED (AT LEAST 80% COVER REQUIRED).
- WHERE POSSIBLE, LIMIT CLEARING OF VEGETATION TO TRIMMING AND LEAVE THE STUMP AND LOWER 60 CM OF THE TREE TRUNK IN PLACE (FOR SHORELINE STABILIZATION).
- ONCE WORK IS COMPLETED, STABILIZE USING NATIVE VEGETATION, WHERE POSSIBLE. THIS SHOULD INCLUDE NATIVE TREES AND SHRUBS AS PER THE LANDSCAPING PLAN (TO BE DEVELOPED AT DETAILED DESIGN).

PAVEMENT STRUCTURES:

- LIGHT DUTY (CAR PARKING AREAS ONLY)**
- 50mm HLS OR SUPERPAVE 12.5
- 100mm GRAN "A"
- 300mm GRAN "B" TYPE II
- SUBGRADE:** Either fill, in situ soil, or OPSS Granular B Type I or II material placed over in situ soil or fill
- HEAVY DUTY (ACCESS LANES AND HEAVY TRUCK PARKING)**
- 40mm HLS OR SUPERPAVE 12.5
- 50mm HLS OR SUPERPAVE 19.0
- 150mm GRAN "A"
- 450mm GRAN "B" TYPE II
- SUBGRADE:** Either fill, in situ soil, or OPSS Granular B Type I or II material placed over in situ soil or fill

ACCEPTABLE FILL MATERIALS: STORMTECH DC-780 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	ASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER "D" STARTS FROM THE TOP OF THE "C" LAYER TO THE FINISHED GRADE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE "D" LAYER.	ANY SOIL/ROCK MATERIALS, NATURAL SOILS, OR PER ENGINEERS PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A
C	INITIAL FILL: FILL MATERIAL FOR LAYER "C" STARTS FROM THE TOP OF THE PRELAYERED STONE (A LAYER) TO THE "C" LAYER ABOVE.	GRANULAR WELL-GRADED SOLID AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.	BEFORE COMPACTATIONS AFTER 12" (300 mm) OF MATERIAL COVER THE CHAMBERS IS PLACED. PROVIDE ADDITIONAL LAYERS OF 1" (25 mm) MAX LIFTS TO A MIN. 98% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GRADES VEHICLE WEIGHT NOT TO EXCEED 20,000 LB (90 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 LB (90 kN).
B	FOUNDATION STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE "C" LAYER ABOVE.	CLEAN CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{1,2}

- PLEASE NOTE:
- THE LISTED ASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (ASHTO M45) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A-1, A-2, A-3, A-4, A-5, A-6, A-7, A-8, A-9, A-10, A-11, A-12, A-13, A-14, A-15, A-16, A-17, A-18, A-19, A-20, A-21, A-22, A-23, A-24, A-25, A-26, A-27, A-28, A-29, A-30, A-31, A-32, A-33, A-34, A-35, A-36, A-37, A-38, A-39, A-40, A-41, A-42, A-43, A-44, A-45, A-46, A-47, A-48, A-49, A-50, A-51, A-52, A-53, A-54, A-55, A-56, A-57, A-58, A-59, A-60, A-61, A-62, A-63, A-64, A-65, A-66, A-67, A-68, A-69, A-70, A-71, A-72, A-73, A-74, A-75, A-76, A-77, A-78, A-79, A-80, A-81, A-82, A-83, A-84, A-85, A-86, A-87, A-88, A-89, A-90, A-91, A-92, A-93, A-94, A-95, A-96, A-97, A-98, A-99, A-100, A-101, A-102, A-103, A-104, A-105, A-106, A-107, A-108, A-109, A-110, A-111, A-112, A-113, A-114, A-115, A-116, A-117, A-118, A-119, A-120, A-121, A-122, A-123, A-124, A-125, A-126, A-127, A-128, A-129, A-130, A-131, A-132, A-133, A-134, A-135, A-136, A-137, A-138, A-139, A-140, A-141, A-142, A-143, A-144, A-145, A-146, A-147, A-148, A-149, A-150, A-151, 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