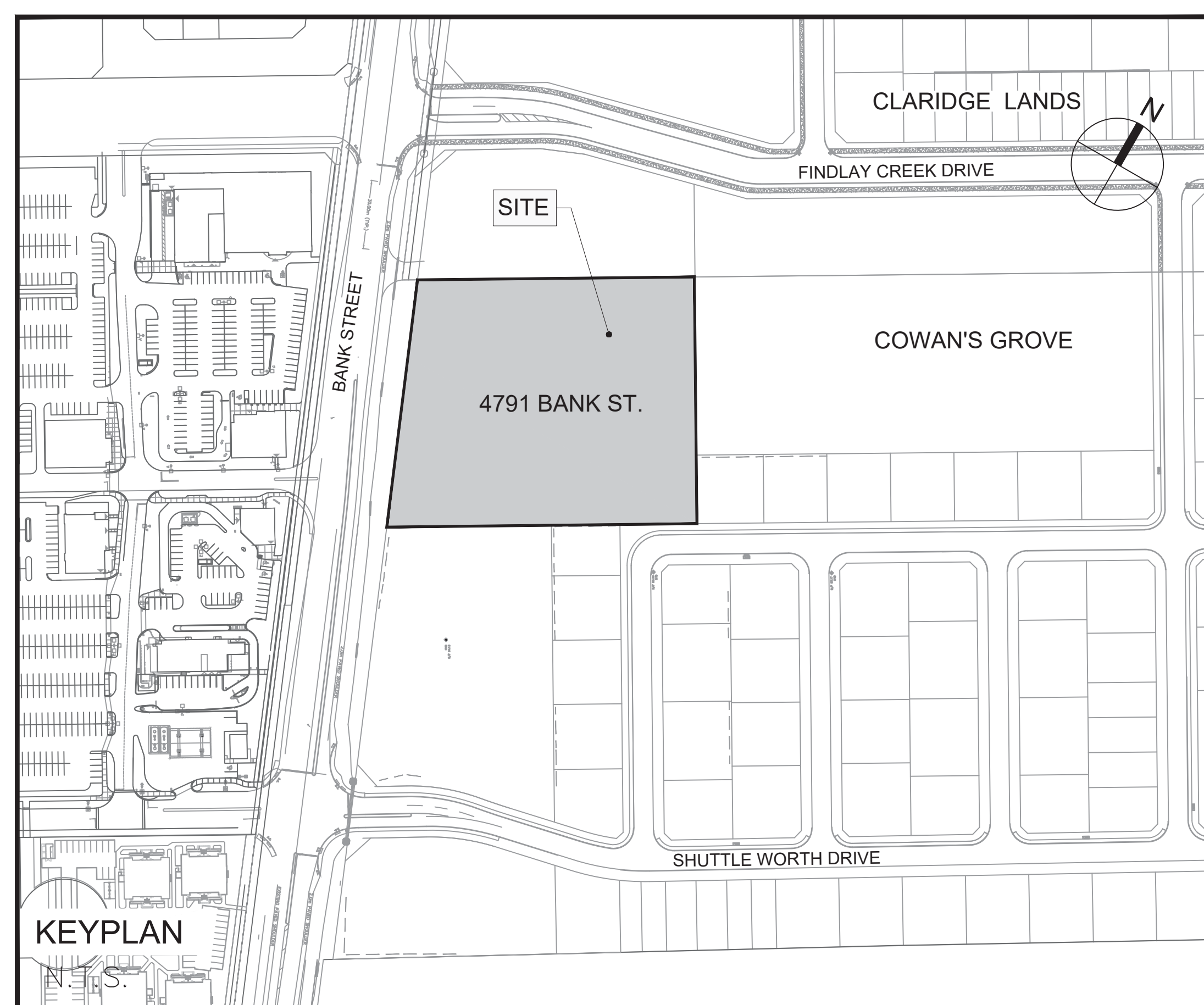


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Sheet List Table		
Sheet Number	Sheet Title	Sheet Description
--	COVER	
C-001	GENERAL PLAN OF SERVICES	
C-010	DETAILS AND NOTES	
C-200	GRADING PLAN	
C-400	SANITARY DRAINAGE AREA PLAN	
C-500	STORM DRAINAGE AREA PLAN	
C-600	PONDING PLAN	
C-900	EROSION AND SEDIMENTATION CONTROL PLAN	

URBAN DALE
CORPORATION




CONTRACT NO. 121753

[Signature]

ICD
FLOW = 9 L/
HEAD = 1.65

[illegible][illegible]

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The left side of the drawing contains a circular professional engineer seal for the Province of Ontario. The seal features the text "LICENSED PROFESSIONAL ENGINEER" around the top and "PROVINCE OF ONTARIO" around the bottom. In the center, the name "T. R. BRULE" is inscribed, with the date "2021/07/08" below it. A stylized signature "B. N." is written over the seal. To the left of the seal is a north arrow pointing towards the top-left corner of the drawing.

Scale

1 : 250

Design JB	Date JANUARY 2020
Drawn EH	Checked TRB
Project No. 121753	Drawing No. C-001

DRAWING NOTES

1.0 GENERAL

- 1.1 CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- 1.2 DO NOT SCALE DRAWINGS.
- 1.3 CONTRACTOR TO REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE ARCHITECT OR DESIGN ENGINEER AS APPLICABLE.
- 1.4 USE ONLY THE LATEST REVISED DRAWINGS OR THOSE THAT ARE MARKED "ISSUED FOR CONSTRUCTION".
- 1.5 ALL CONSTRUCTION SHALL COMPLY WITH CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
- 1.6 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS.
- 1.7 FOR LEGAL SURVEY INFORMATION REFER TO REGISTERED PLAN.
- 1.8 REFER TO SITE PLAN BY IBI GROUP ARCHITECTS INC.
- 1.9 CONTRACTOR TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES AS IDENTIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA. PRIOR TO UNDERTAKING ANY SITE ALTERATIONS (FILLING, GRADING, REMOVAL OF VEGETATION, ETC.), DURING ALL PHASES OF THE SITE PREPARATION AND CONSTRUCTION THE MEASURES ARE TO BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER AND CITY OF OTTAWA IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL. SHOULD ANY ADDITIONAL MEASURES BE REQUIRED TO ADDRESS FIELD CONDITIONS THEY SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR THE CITY OF OTTAWA. SUCH ADDITIONAL MEASURES MAY INCLUDE BUT NOT BE LIMITED TO INSTALLATION OF SEDIMENT CAPTURE FILTER SOCKS WITH MANHOLES AND CATCHBASINS TO PREVENT SEDIMENT FROM ENTERING THE STRUCTURE AND INSTALLATION AND MAINTENANCE OF A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.
- 1.10 ALL IRON WORK ELEVATIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MINOR ADJUSTMENTS AS DETERMINED BY THE ENGINEER.
- 1.11 ALL CONCRETE CURBS AND SIDEWALKS TO CONFORM TO O.P.S. AND CONSTRUCTED TO CITY STANDARDS. ALL ONSITE CURBS TO BE BARRIER TYPE, WITH DEPRESSIONS AS NOTED.
- 1.12 ALL CONCRETE SHALL BE "NORMAL PORTLAND CEMENT" IN ACCORDANCE WITH O.P.S.'S 1350 AND SHALL ACHIEVE A MINIMUM STRENGTH OF 30MPa AT 28 DAYS.
- 1.13 ALL CONSTRUCTION TRAFFIC TO ACCESS SITE FROM BANK STREET.

- 1.14 FOR GEOTECHNICAL REPORT SEE GEOTECHNICAL INVESTIGATION PROPOSED RESIDENTIAL DEVELOPMENT - KELLAM LANDS, OTTAWA, ON, REPORT No. 12-1121-0286 BY GOLDER ASSOCIATES.
- 1.15 CONTRACTOR TO PROTECT EXISTING INFRASTRUCTURE AND PROPERTY SUCH AS TREES, PARKING METERS, SIDEWALKS, CURBS, ASPHALT, AND STREET SIGNS FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR TO PAY THE COST TO REINSTATE OR REPLACE ANY DAMAGED INFRASTRUCTURE OR PROPERTY TO THE SATISFACTION OF THE CITY.

- 1.16 THE POSITION OF POLE LINES, CONDUITS, WATERMAIN, SEWERS, AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES AND STRUCTURES ARE 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 THE CONTRACTOR SHALL INFORM ITSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, SHALL PROTECT ALL UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

- 1.17 CONTRACTOR TO SUPPLY SUITABLE FILL MATERIAL WHERE REQUIRED TO ROUGH GRADE THE SITE. ALL IMPORTED FILL MATERIAL TO BE CERTIFIED AS ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.

- 1.18 CONTRACTOR TO HAUL EXCESS MATERIAL OFFSITE AS NECESSARY TO GRADE SITE TO MEET THE PROPOSED GRADES. ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY ENGINEER, ENGINEER TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.

- 1.19 FILL MATERIAL WITHIN THE PARKING LOT AND BUILDING PAD AREAS, AND SUPPORTING BUILDING FOUNDATIONS SHALL BE COMPACTED TO 80% STANDARD MODIFIED PROCTOR DENSITY AND TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.

- 1.20 ALL COMPACTION METHODS TO BE PERFORMED TO THE THICKNESS OF LIFTS, AND COMPACTION EQUIPMENT USED.

- 1.21 ALL DISTURBED BOULEVARDS TO BE REINSTEATED WITH SOD ON 100mm TOPSOIL.

- 1.22 UTILITY DUCTS TO BE INSTALLED PRIOR TO ROAD BASE CONSTRUCTION.

- 1.23 CLAY DIKES TO BE INSTALLED WHERE INDICATED ON THE DRAWINGS OR AS APPROVED AND DIRECTED BY THE GEOTECHNICAL ENGINEER ALL IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

- 1.24 BACKWATER VALES, PER CITY STANDARDS S14, S14.1 AND S14.2 RE TO BE INSTALLED FOR ALL STORM AND SANITARY SEWER CONNECTIONS.

2.0 SANITARY

- 2.1 ALL SANITARY SEWER MAINS TO BE CSA CERTIFIED, BELL AND SPIGOT TYPE. ONLY FACTORY FITTINGS TO BE USED. SEWER TO BE INSTALLED AS PER OPSD 100.01. SANITARY SEWER MATERIALS TO BE 250mmØ AND SMALLER - PVC DR 35

- 2.2 ALL SANITARY MAINTENANCE HOLES TO BE 1.2m DIAMETER AS PER CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING, RUNGS, FRAME AND COVER, DROP PIPES AND LANDINGS WHERE NEEDED.

- 2.3 SANITARY MANHOLE COVERS TO BE CITY OF OTTAWA STD. S25 (MOD. OPSD. 401.020). SANITARY MANHOLE COVER TO BE CLOSED COVER TYPE AS PER CITY STANDARD S24.

- 2.4 SANITARY SEWER LEAKAGE TEST AND CCTV INSPECTION SHALL BE COMPLETED AS PER CITY SPECIFICATIONS PRIOR TO INSTALLATION OF BASE COURSE ASPHALT.

- 2.5 ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.

- 2.6 CONNECTION TO THE EXISTING SANITARY SEWER TO BE INCLUDED IN THE COST FOR SANITARY SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.

3.0 STORM

- 3.1 ALL STORM SEWERS TO BE CSA CERTIFIED, BELL AND SPIGOT TYPE. ALL STORM SEWERS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. ONLY FACTORY FITTINGS TO BE USED. STORM SEWER MATERIALS TO BE: 375mmØ AND SMALLER - PVC DR 35 450mmØ AND LARGER - 100-D REINFORCED CONCRETE, UNLESS NOTED OTHERWISE

- 3.2 ALL STORM MAINTENANCE HOLES TO BE SIZED IN ACCORDANCE WITH THE PLANS AND AS PER CITY OF OTTAWA STANDARDS COMPLETE WITH BENCHING, RUNGS, AND FRAME AND COVER.

- 3.3 STORM MH COVERS TO BE OPEN TYPE, AS PER CITY STANDARD S24, FRAMES TO BE PER CITY OF OTTAWA STD. S25. CONTRACTOR TO INSTALL FILTER FABRIC UNDER STORM MH COVER UNTIL SODDING IS COMPLETE.

- 3.4 STORM MAINTENANCE HOLES TO BE OPD, SIZE AS SPECIFIED, TAPER TOP.

- 3.5 ALL CATCH BASINS TO BE AS PER OPSD 705.010, FRAME & FISH TYPE GRATE AS PER CITY OF OTTAWA STD. S19.1.

- 3.6 3m 150mm DIAMETER SOCK-WRAPPED PERFORATED PVC SUBDRAINS TO BE INSTALLED ALL CBS, TO EXTEND PARALLEL TO CURB IN CBS ADJACENT TO CURB AND IN 4 DIRECTIONS FOR CBS IN CENTER OF PARKING LOT. SUBDRAINS TO DISCHARGE TO CBS.

- 3.7 ANY STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.

- 3.8 CONNECTION TO THE EXISTING STORM SEWER TO BE INCLUDED IN THE COST FOR STORM SEWER INSTALLATION. THIS INCLUDES REINSTATEMENT OF ROAD CUT TO CITY STANDARDS.

- 3.9 CONTRACTOR TO PROVIDE IPEX-TEMPREST MHF ICDS SHOP DRAWINGS, OR EQUIVALENT, FOR ENGINEERS REVIEW PRIOR TO ORDERING ICDS.

4.0 WATER

- 4.1 ALL WATERMANS TO BE PVC DR 18, WITH MINIMUM COVER OF 2.4m AND INSTALLED PER CITY OF OTTAWA STANDARDS. ALL DOMESTIC WATER SERVICES ARE TO BE 200mmØ

- 4.2 THRUST BLOCKS TO BE INSTALLED AT ALL BENDS, TEES, AND CAPS ALL AS PER OPSD 1103.01 AND 1103.02

- 4.3 CONTRACTOR TO CONDUCT PRESSURE AND LEAKAGE TESTING OF ALL WATERMANS AND DISINFECT AND CHLORINATE ALL WATERMANS TO THE SATISFACTION OF M.O.E. AND THE CITY OF OTTAWA.

- 4.4 TRACER WIRE TO BE INSTALLED ALONG THE FULL LENGTH OF WATERMAIN AND ATTACHED TO EACH MAIN STOP PER CITY OF OTTAWA STANDARDS.

- 4.5 ALL COMPONENTS OF THE WATER DISTRIBUTION SYSTEM SHALL BE CATHODICALLY PROTECTED AS PER CITY OF OTTAWA STANDARDS.

- 4.6 ALL VALVES & VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLIES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS.

- 4.7 ANY WATERMAIN WITH LESS THAN 2.4m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR AS APPROVED BY THE ENGINEER.

- 4.8 CONTRACTOR IS RESPONSIBLE FOR ACQUIRING THE WATER PERMIT FROM THE CITY OF OTTAWA AND PAYMENT OF ANY FEES ASSOCIATED WITH SECURING THE WATER PERMIT. OWNER IS RESPONSIBLE FOR REIMBURSING THE CONTRACTOR FOR THE ACTUAL COST OF ACQUIRING THE WATER PERMIT.

- 4.9 CONNECTION TO EXISTING WATERMAIN TO BE INCLUDED IN THE COST FOR THE WATERMAIN INSTALLATION. THIS COST INCLUDES REINSTATEMENT OF ROAD CUTS TO CITY STANDARDS.

- 4.10 ALL WATERMAIN CROSSINGS TO BE COMPLETED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2

5.0 PARKING LOT AND WORK IN PUBLIC RIGHTS OF WAY

- 5.1 CONTRACTOR TO REINSTATE ROAD CUTS PER CITY OF OTTAWA STANDARD R-10.

- 5.2 THE CONTRACTOR SHALL PREPARE A TRAFFIC MANAGEMENT PLAN FOR REVIEW AND APPROVAL BY THE CITY OF OTTAWA. CONTRACTOR TO MAINTAIN TRAFFIC FLOW DURING THE ENTIRE CONSTRUCTION PERIOD. MAINTENANCE OF ROAD CUTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. PROVISION OF FLAGMEN, DETOURS AS NECESSARY, BARRICADES AND SIGNS TO THE FULL SATISFACTION OF THE ENGINEER AND ROAD AUTHORITY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

- 5.3 CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROPPROLLING, TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.

- 5.4 FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.

- 5.5 CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL, IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.

- 5.6 GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL ENGINEER OF GRANULAR B PLACEMENT.

- 5.7 ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL ENGINEER OF GRANULAR A PLACEMENT.

- 5.8 CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. CONTRACTOR TO PROVIDE ENGINEER WITH SAMPLES OF ASPHALT MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL ENGINEER THAT THE MATERIAL MEETS THE REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.

- 5.9 CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE ENGINEER WITH VERIFICATION PRIOR TO PLACEMENT.

- 5.10 DITCHES DISTURBED DURING CULVERT INSTALLATION AND GRADING OPERATIONS ARE TO BE REINSTEATED TO THEIR ORIGINAL CONDITION AND FLOWLINE GRADES.

- 5.11 EXISTING EAST SIDE ROAD DITCH ALONG PALLADIUM DRIVE TO BE REALIGNED AS PER THE GRADING PLAN. ADJACENT AREAS BETWEEN ROAD SIDE DITCH AND PARKING LOT TO BE RE-GRADED AS PER THE GRADING PLAN. ALL RE-GRADED AREAS IN EXISTING PUBLIC RIGHTS OF WAY AND ANY OTHER DISTURBED AREAS IN EXISTING PUBLIC RIGHTS OF WAY ARE TO BE FINISHED WITH SOD ON 100mm TOPSOIL.

- 5.12 PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESSES) FOR HEAVY DUTY AND LIGHT DUTY AREAS TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT AND SHOWN ON THE PLANS.

SAN STRUCTURE TABLE						
NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
EXMH13123	91.51	NW90.700				1200mmØ OPSD-701.010
MH01A	94.03			SE91.707		1200mmØ OPSD-701.010
MH02A	94.31			SE91.899		1200mmØ OPSD-701.010
MH03A	93.93	NW91.605		NE91.545		1200mmØ OPSD-701.010
MH04A	93.85	SE91.262		NE91.202		1200mmØ OPSD-701.010
MH05A	93.83	SW91.086 SE91.126		NE91.066		1200mmØ OPSD-701.010
MH06A	93.43			NW91.253		1200mmØ OPSD-701.010
MH07A	94.11	SE91.443 NW91.443		NE91.383		1200mmØ OPSD-701.010
MH08A	93.81	SW91.076		SE91.016		1200mmØ OPSD-701.010
MH09A	93.74	SW90.855 NW90.915		SE90.895		1200mmØ OPSD-701.010
MH10A	93.22	NW90.752		SW90.752		1200mmØ OPSD-701.010
MH11A	93.31	NE90.732		SE90.732		1200mmØ OPSD-701.010
MH12A	94.21			NW91.541		1200mmØ OPSD-701.010
MH13A	93.95	SW91.450		NW91.390		1200mmØ OPSD-701.010

STM STRUCTURE TABLE						
NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
EXMH13123	94.14	NW89.694				1200mmØ OPSD-701.010
MH01	93.82	SW91.787		SE90.390		1200mmØ OPSD-701.010
MH02	93.88			NE91.110		1200mmØ OPSD-701.010
MH04	93.85	SW90.900 SE91.337 NW90.700		NE90.141		1200mmØ OPSD-701.010
MH07	93.79	W91.823		SE90.878		1200mmØ OPSD-701.010
MH09	93.71	NW90.175 SW90.025		SE89.875		1200mmØ OPSD-701.010
MH10	93.25	NW89.818		SW89.788		1500mmØ OPSD-701.011
MH11	93.24	NE89.779 SW91.890		SE89.704		1500mmØ OPSD-701.011
MH12	93.86	SW91.842		NW91.500		1200mmØ OPSD-701.010

CROSSING SCHEDULE		
①	200Ø SAN 0.50m	CLEARANCE OVER 300Ø STM.
②	200Ø SAN 0.45m	CLEARANCE OVER 300Ø STM.
③	150Ø W/M 0.30m	CLEARANCE OVER 200Ø SAN.
④	150Ø W/M 0.50m	CLEARANCE OVER 450Ø STM.
⑤	450Ø STM 0.50m	CLEARANCE UNDER 200Ø SAN.
⑥	200Ø W/M 0.45m	CLEARANCE OVER 250Ø STM.
⑦	200Ø SAN 0.20m	CLEARANCE OVER 250Ø STM.
⑧	150Ø W/M 0.50m	CLEARANCE UNDER 200Ø WM.
⑨	150Ø W/M 0.50m	CLEARANCE OVER 200Ø SAN.
⑩	150Ø W/M 0.50m	CLEARANCE UNDER 200Ø WM.
⑪	200Ø SAN 0.50m	CLEARANCE OVER 250Ø STM.
⑫	250Ø STM 0.30m	CLEARANCE OVER 200Ø SAN.
⑬	200Ø W/M 0.50m	CLEARANCE OVER 600Ø STM.
⑭	200Ø W/M 0.15m	CLEARANCE OVER 150Ø W/M.
⑮	200Ø W/M 0.80m	CLEARANCE OVER 450Ø STM.
⑯	200Ø W/M 0.30m	CLEARANCE UNDER 200Ø SAN.
⑰	200Ø W/M 0.80m	CLEARANCE UNDER 200Ø STM.
⑱	200Ø W/M 0.50m	CLEARANCE UNDER 200Ø SAN.
⑲	150Ø W/M 0.50m	CLEARANCE OVER 250Ø STM.
㉑	200Ø W/M 0.50m	CLEARANCE OVER 975Ø STM.
㉒	200Ø W/M 1.50m	CLEARANCE OVER 200Ø SAN.
㉓	200Ø W/M 0.35m	CLEARANCE OVER 200Ø SAN.

PAVEMENT STRUCTURE **

CAR ONLY PARKING AREAS:

50mm WEAR COURSE – HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
150mm BASE – OPSS GRANULARGRANULAR "A" CRUSHED STONE
300mm SUBBASE – OPSS GRANULAR "B" TYPE II
SUBGRADE – IN SITU SOIL, OR OPSS GRANULAR "B" TYPE I OR II MATERIAL PLACED OVER IN SITU SOIL

HEAVY TRUCK PARKING AREAS AND ACCESS LANES:

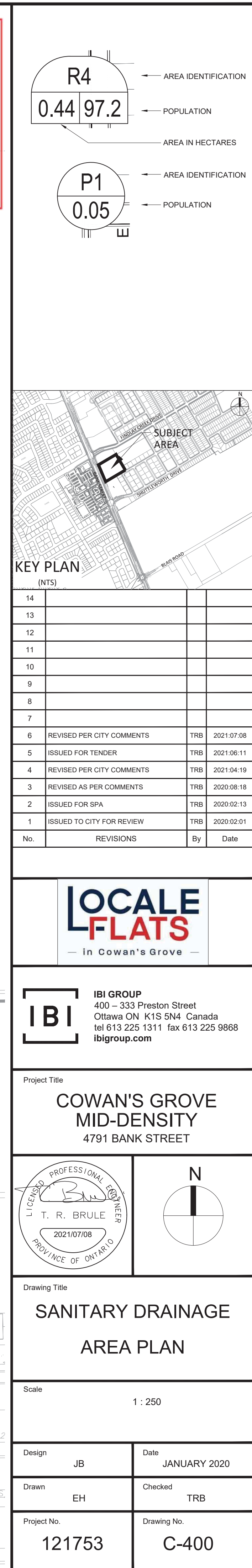
40mm WEAR COURSE – HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50mm BINDER COURSE – HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm BASE COURSE – OPSS GRANULAR "A" CRUSHED STONE
450mm SUBBASE – OPSS GRANULAR "B" TYPE II
SUBGRADE – IN SITU SOIL, OR OPSS GRANULAR "B" TYPE I OR II MATERIAL PLACED OVER IN SITU SOIL

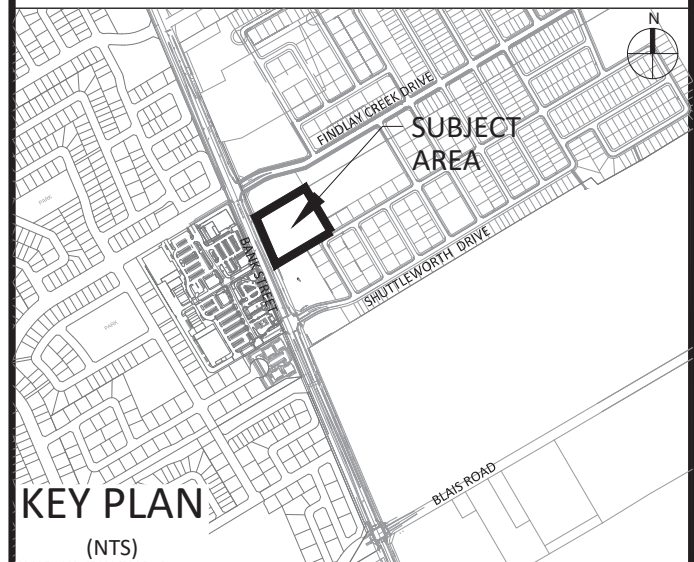
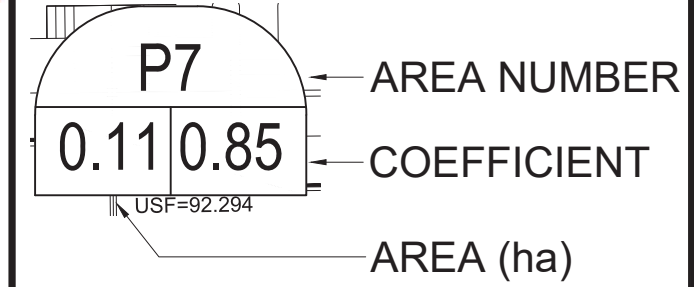
** REFER TO GEOTECHNICAL REPORT BY GOLDER ASSOCIATES 12-1121-0286

WATERMAIN SCHEDULE							
	Station	Description	Finished Grade	Top of Watermain	As Built Watermain		
A	0+000.00	TEE	93.457	91.057			
	0+031.80	WAVE	94.286	91.886			
	0+042.77	22.5" BEND	94.032	91.632			
	0+049.32	22.5" BEND	93.944	91.544			
	0+051.04	V BEND	93.936	91.536			
	0+051.54	V BEND	93.934	91.534			
	0+058.03	V BEND	94.167	91.134			
	0+058.53	V BEND	94.176	91.776			
	0+061.80	SERVICE TEE	94.231	91.831			
	0+073.93	11.25" BEND	94.106	91.706			
	0+078.18	HYDRANT	94.032	91.632			
	0+138.39	45" BEND	93.905	91.505			
	0+159.28	45" BEND	93.567	91.167			
	0+162.00	V BEND	93.567	91.167			
	0+163.00	V BEND	93.567	91.567			
	0+179.00	V BEND	93.250	91.250			
	0+180.00	V BEND	93.250	90.850			
	0+184.79	45" BEND	93.250	90.850			
	0+187.57	45" BEND	93.195	90.795			
	B	0+190.00	HYDRANT	93.180	90.780		
0+191.38		WAVE	93.299	90.899			
0+195.22		V BEND	93.036	90.636			
0+195.72		V BEND	93.019	91.503			
0+198.95		V BEND	93.130	91.503			
0+199.45		V BEND	93.130	90.730			
0+203.38		TVS	93.000	90.600			
C		0+000.00	TEE	93.984	91.984		
		0+006.53	VB	94.261	92.261		
		0+008.13	V BEND	94.185	92.185		
	0+008.63	V BEND	94.208	91.808			
	0+017.75	11.25" BEND	94.128	91.728			
	0+063.49	V BEND	93.906	91.506			
	0+063.99	V BEND	93.905	91.505			
	0+065.99	45" BEND	93.924	91.924			
	0+068.48	45" BEND	93.953	91.953			
	0+071.44	V BEND	93.867	91.867			
	0+073.94	V BEND	93.868	91.468			
	0+078.49	45" BEND	93.892	91.492			
	0+081.74	45" BEND	93.665	91.265			
	0+082.61	SERVICE CROSS	93.695	91.255			
	0+090.25	SERVICE CROSS	93.631	91.131			
	0+097.72	SERVICE CROSS	93.469	91.069			
	0+105.19	SERVICE CROSS	93.395	90.985			
	0+105.93	CAP	93.372	90.972			
D	0+000.00	TEE	93.984	91.984			
	0+002.17	VB	93.976	91.976			
	0+003.03	V BEND	93.985	91.985			
	0+003.53	V BEND	93.985	91.585			
	0+010.64	11.25" BEND	94.156	91.756			
	0+014.46	SERVICE TEE	94.295	91.895			
	0+018.32	SERVICE TEE	94.344	91.944			
	0+018.11	SERVICE TEE	94.360	91.960			
	0+024.01	SERVICE TEE	94.296	91.896			
	0+029.46	SERVICE TEE	94.204	91.804			
	0+032.92	SERVICE TEE	93.998	91.598			
	0+037.62	45" BEND	93.953	91.553			
	0+041.45	45" BEND	94.146	91.746			
0+043.44	VB	94.252	91.852				
0+044.32	CAP	94.282	91.882				
E	0+000.00	TEE	93.984	91.984			
	0+002.27	VB	94.005	92.005			
	0+003.92	TEE	94.031	92.031			
	0+005.72	V BEND	94.220	92.220			
	0+005.72	V BEND	94.246	91.846			
	0+007.03	VB	94.302	91.902			
	0+013.53	SERVICE TEE	94.309	91.909			
	0+021.00	SERVICE TEE	94.273	91.873			
	0+024.69	SERVICE TEE	94.223	91.823			
	0+026.49	TEE	94.189	91.789			
F	0+032.18	SERVICE TEE	94.136	91.736			
	0+043.67	SERVICE TEE	94.171	91.771			
	0+047.15	SERVICE TEE	94.163	91.763			
	0+049.14	CAP	94.190	91.790			
	G	0+000.00	TEE	94.189	91.789		
0+001.00		V BEND	94.189	91.789			
0+002.00		V BEND	94.189	92.189			
0+004.00		V BEND	94.100	92.100			
0+005.00		V BEND	93.950	91.550			
0+005.54		11.25" BEND	93.907	91.507			
0+009.42		VB	93.801	91.401			
0+041.41		SERVICE CROSS	94.265	91.865			
0+048.88		SERVICE CROSS	94.391	91.991			
0+052.56		SERVICE CROSS	94.400	92.000			
0+063.88		SERVICE CROSS	94.274	91.874			
0+067.86		SERVICE CROSS	94.234	91.834			
0+075.03		SERVICE CROSS	94.152	91.752			
0+075.97		CAP	94.142	91.742			
H							



LILY XU, MCIP, RPP
MANAGER, DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA





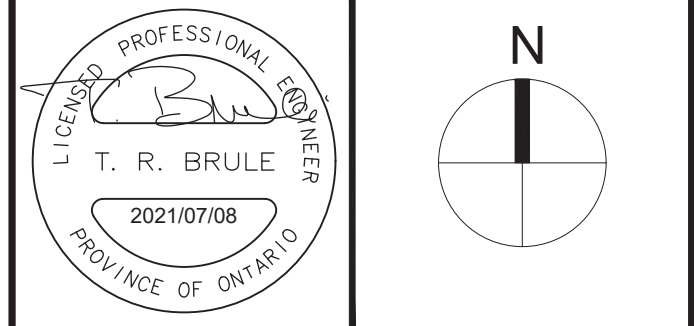
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13			
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6	REVISED PER CITY COMMENTS	TRB	2021-07-08
5	ISSUED FOR TENDER	TRB	2021-06-11
4	REVISED PER CITY COMMENTS	TRB	2021-04-19
3	REVISED AS PER COMMENTS	TRB	2020-08-18
2	ISSUED FOR SPA	TRB	2020-02-13
1	ISSUED TO CITY FOR REVIEW	TRB	2020-02-01
No.	REVISIONS	By	Date



Project Title

**COWAN'S GROVE
MID-DENSITY**

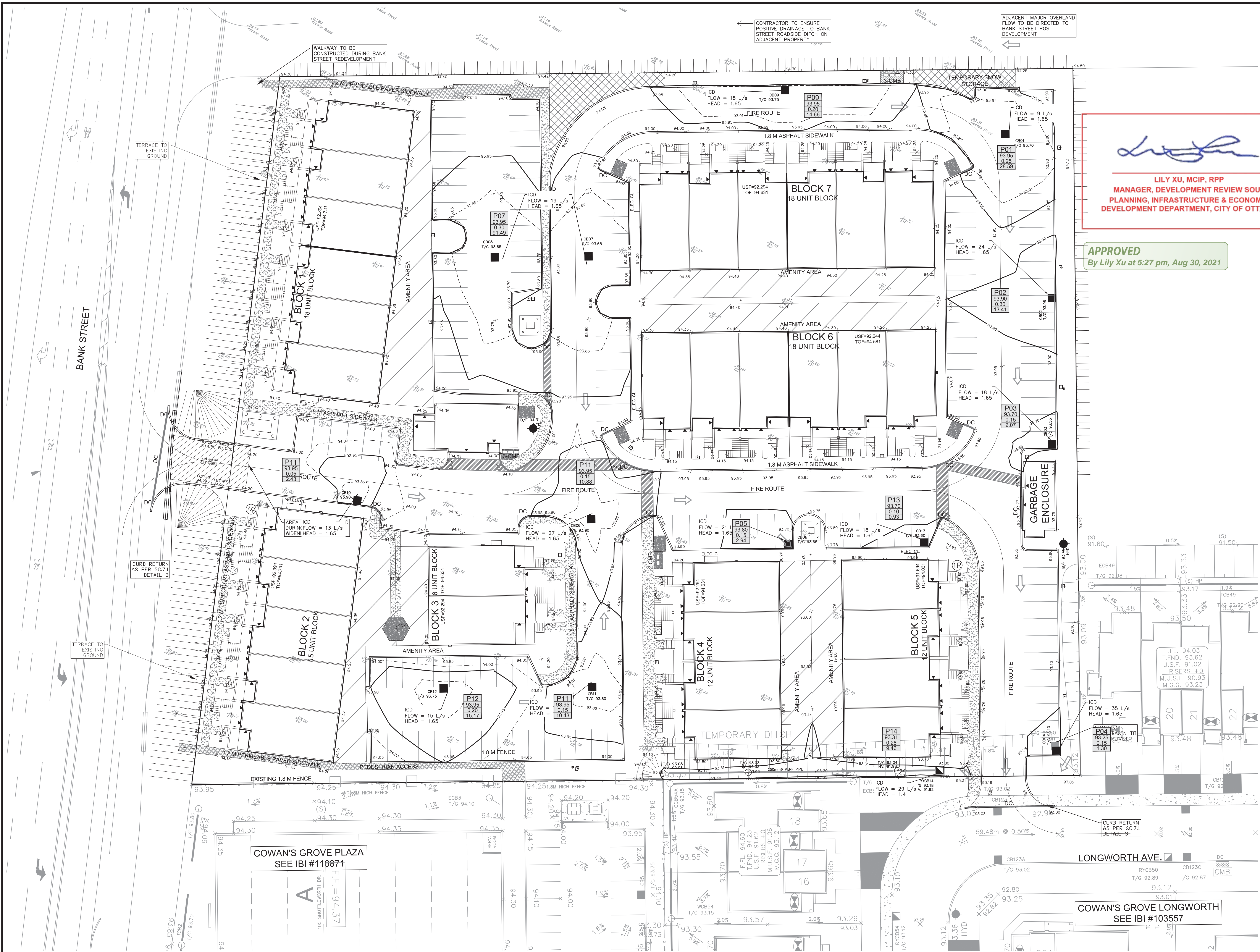
4791 BANK STREET



STORM DRAINAGE AREA PLAN

Scale 1:250

Design	JB	Date	JANUARY 2020
Drawn	EH	Checked	TRB
Project No.	121753	Drawing No.	C-500



LEGEND:

- 100 YEAR PONDING VOLUME LIMIT
- 5 YEAR PONDING ELEVATION
- SPILL OVER ELEVATION
- EMERGENCY OVERLAND FLOW ROUTE

POND AREA #	POND ELEVATION (m)	POND DEPTH (m)	POND VOLUME (m³)
P11C	93.95	0.25	26.45

APPROVED
By Lily Xu at 5:27 pm, Aug 30, 2021

KEY PLAN
(NTS)

No.	REVISIONS	By	Date
14			
13			
12			
11			
10			
9			
8			
7			
6	REVISED PER CITY COMMENTS	TRB	2021-07-08
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LOCALE FLATS
— in Cowan's Grove —

IBI GROUP
400 – 333 Preston Street
Ottawa ON K1S 5N4 Canada
tel 613 225 1311 fax 613 225 9868
ibigroup.com

Project Title
COWAN'S GROVE MID-DENSITY
4791 BANK STREET

PROFESSIONAL ENGINEER
T. R. BRULE
2021/07/08
PROVINCE OF ONTARIO

PONDING PLAN

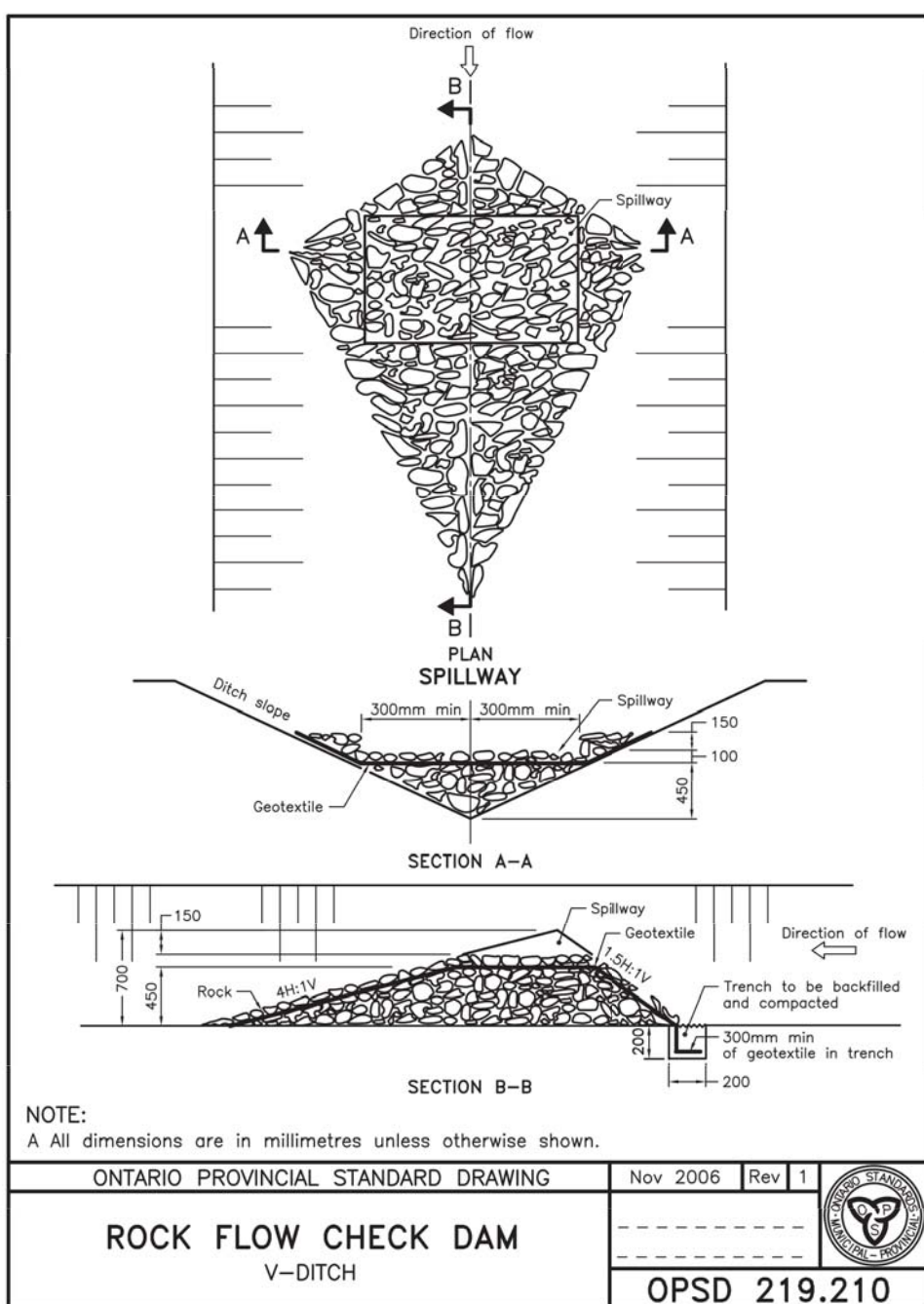
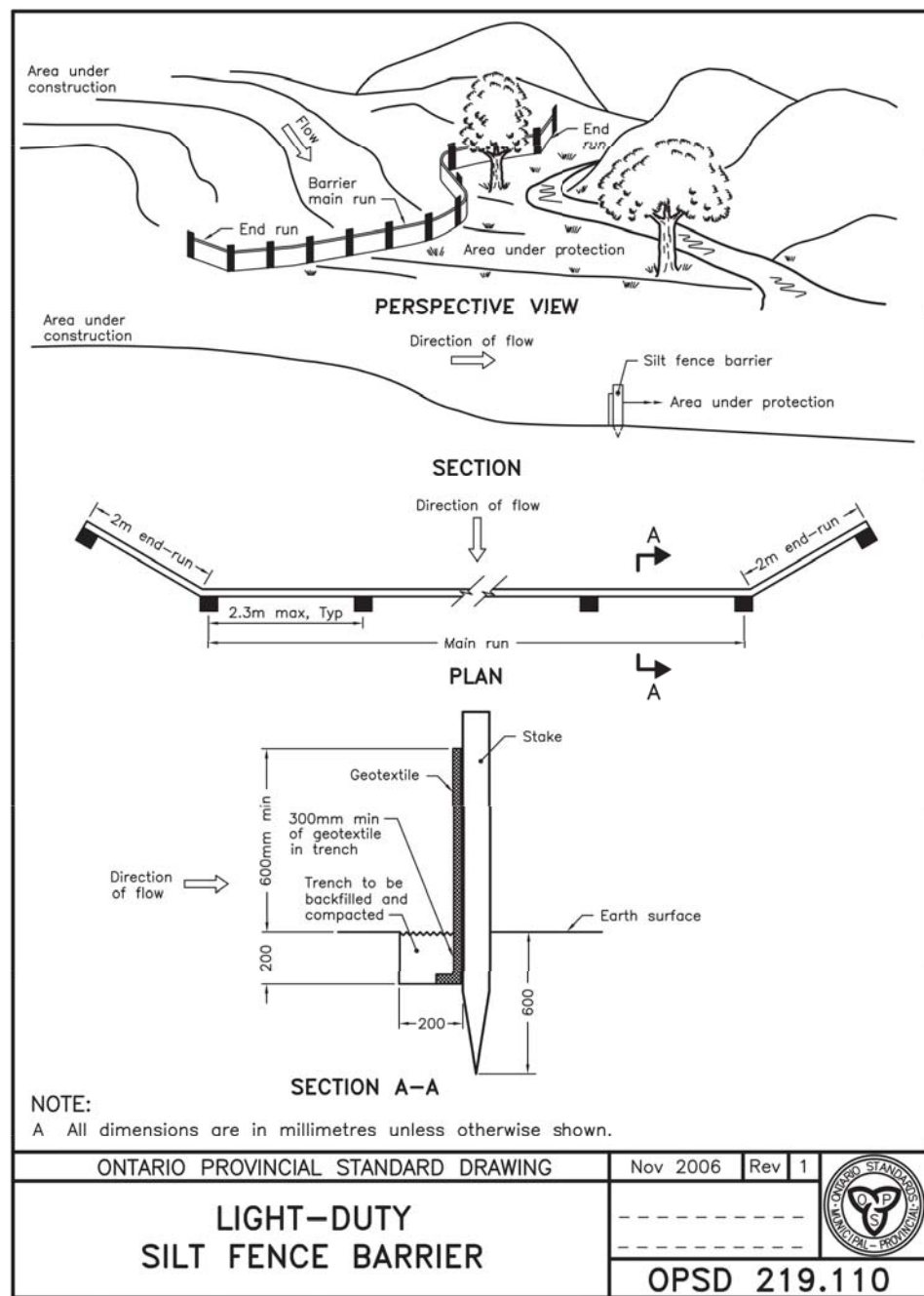
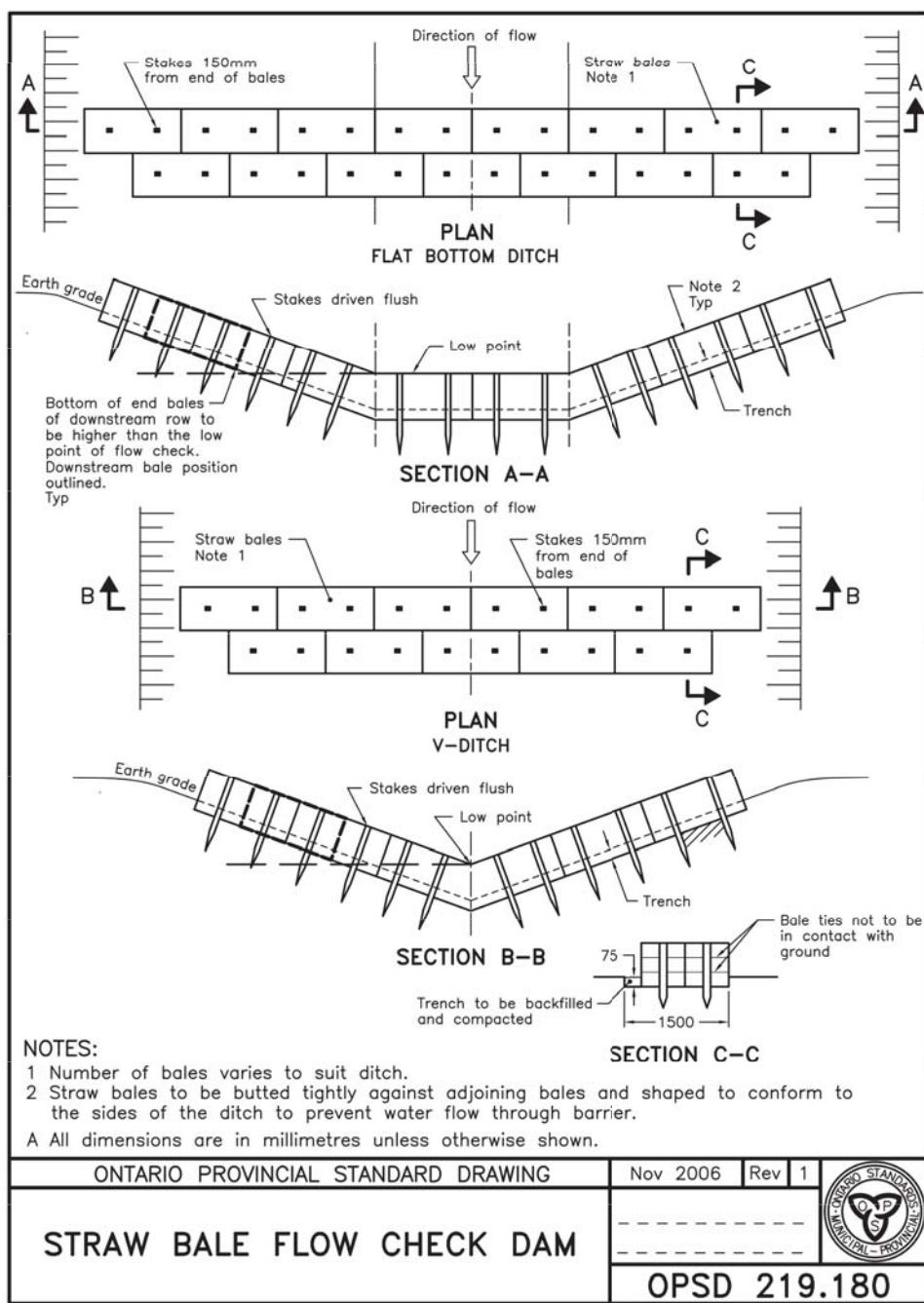
Scale
1 : 250
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Design	Date
JB	JANUARY 2020

Drawn	Checked
EH	TRB

Project No.	Drawing No.
121753	C-600

J:\121753_CowansGrove\2.0_Production\4. Civil\Sheets\C-900 EROSION AND SEDIMENTATION CONTROL PLAN\Draw Layout Name: C-900 EROSION AND SEDIMENTATION CONTROL PLAN Plot Style: AIA STANDARD-FULL/CTB Plot Scale: 1:25.4 Plotted At: 7/8/2021 8:18 AM Last Saved By: ERENWE



APPROVED
By Lily Xu at 5:26 pm, Aug 30, 2021

Lily Xu

LILY XU, MCIP, RPP
MANAGER, DEVELOPMENT REVIEW SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

NOTES:

THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

- SILT FENCE TO BE ERECTED PRIOR TO EARTH WORKS BEING COMMENCED. SILT FENCE TO BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED OR UNTIL START OF SUBSEQUENT PHASE.
- STRAW BALE SEDIMENT TRAPS TO BE CONSTRUCTED IN EXISTING ROAD SIDE DITCHES. TRAPS TO REMAIN AND BE MAINTAINED UNTIL VEGETATION IS ESTABLISHED.
- SILT SACK TO BE PLACED AND MAINTAINED UNDER COVER OF ALL CATCHBASINS. GEOTEXTILE SILT SACK IN STREET C&B TO REMAIN UNTIL ALL CURBS ARE CONSTRUCTED. GEOTEXTILE FABRIC IN RYOBs TO REMAIN UNTIL VEGETATION IS ESTABLISHED. ALL CATCHBASINS TO BE REGULARLY INSPECTED AND CLEANED, AS NECESSARY, UNTIL SOD AND CURBS ARE CONSTRUCTED.
- WORKS NOTED ABOVE ARE TO BE INSTALLED, INSPECTED, MAINTAINED AND ULTIMATELY REMOVED BY SERVING CONTRACTOR.
- THIS IS A "LIVING DOCUMENT" AND MAY BE MODIFIED IN THE EVENT THE PROPOSED CONTROL MEASURES ARE INSUFFICIENT.

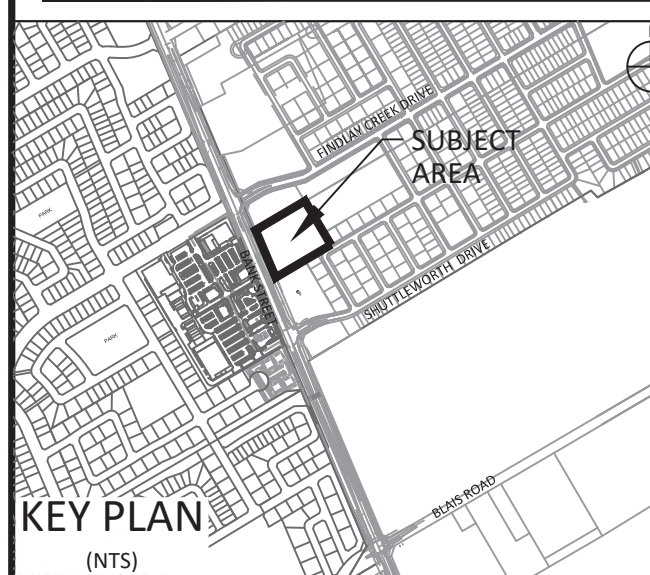
NOTES:

- SEE DRAWING C-010 FOR ADDITIONAL DETAILS AND NOTES.
- SITE BENCHMARK TO BE OBTAINED FROM LEGAL SURVEYOR ANNIS, O'SULLIVAN, VOLLEBEK LTD.

LEGEND:

- LIGHT DUTY SILT FENCE AS PER OPSD-219.110
- SNOW FENCE
- STRAW BALE CHECK DAM AS PER OPSD-219.180
- ROCK CHECK DAM AS PER OPSD-219.210
- SILT SACK PLACED UNDER EXISTING CB COVER
- TEMPORARY MUD MAT 0.15m THICK 50mm CLEAR STONE ON NON WOVEN FILTER CLOTH

SEE 010, 011, 012 FOR NOTES, LEGEND, CB TABLE, STREET SECTIONS AND DETAILS

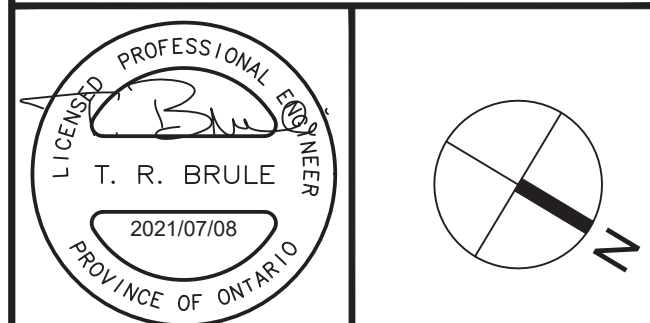


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LOCALE
FLATS
— in Cowan's Grove —

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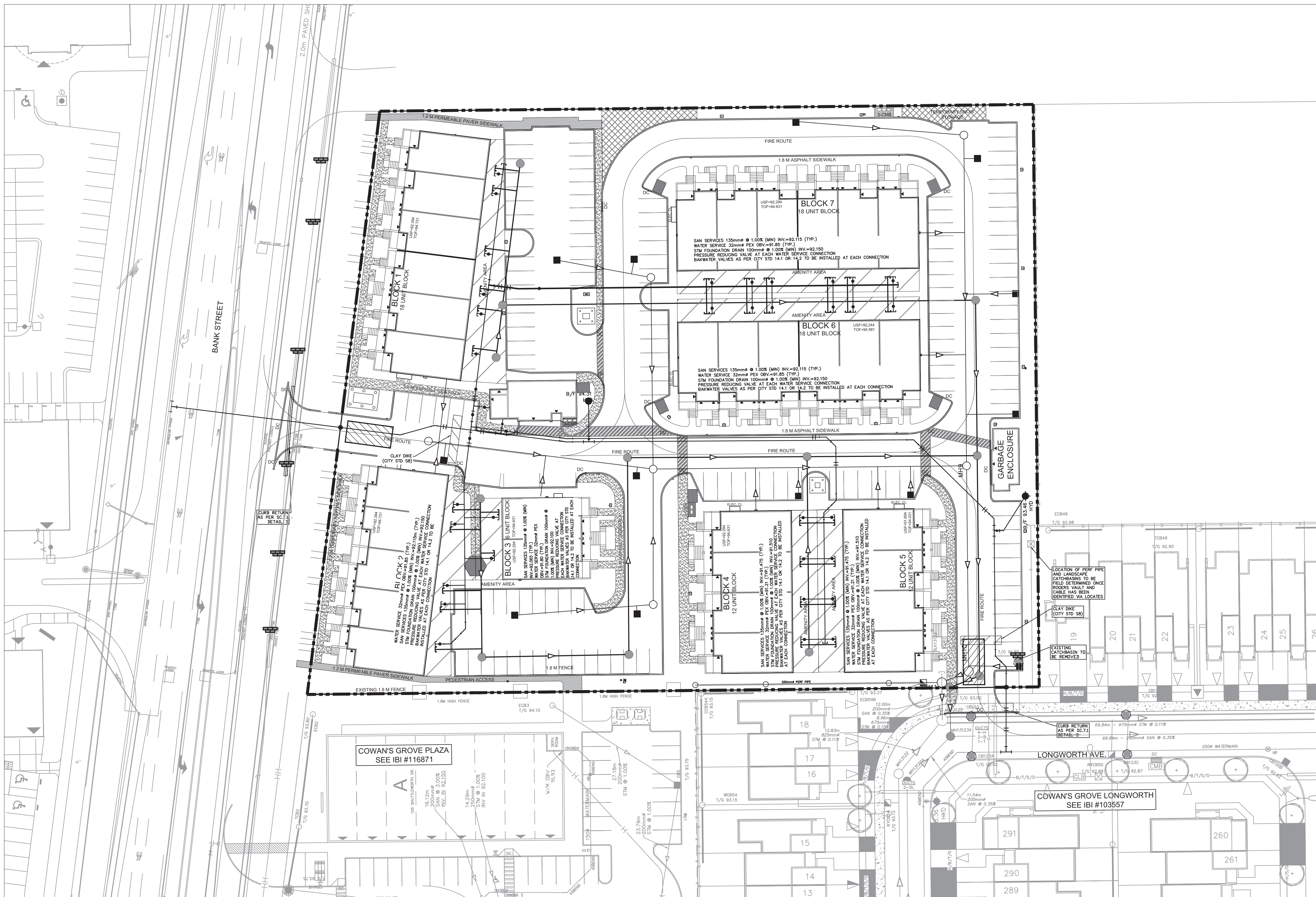
Project Title
COWAN'S GROVE
MID-DENSITY
4791 BANK STREET



Drawing Title
EROSION AND
SEDIMENTATION PLAN

Scale
1 : 400

Design JB	Date JANUARY 2020
Drawn EH	Checked TRB
Project No. 121753	Drawing No. C-900



CITY PLAN No. 18124

CITY FILE No. D07-12-20-0015