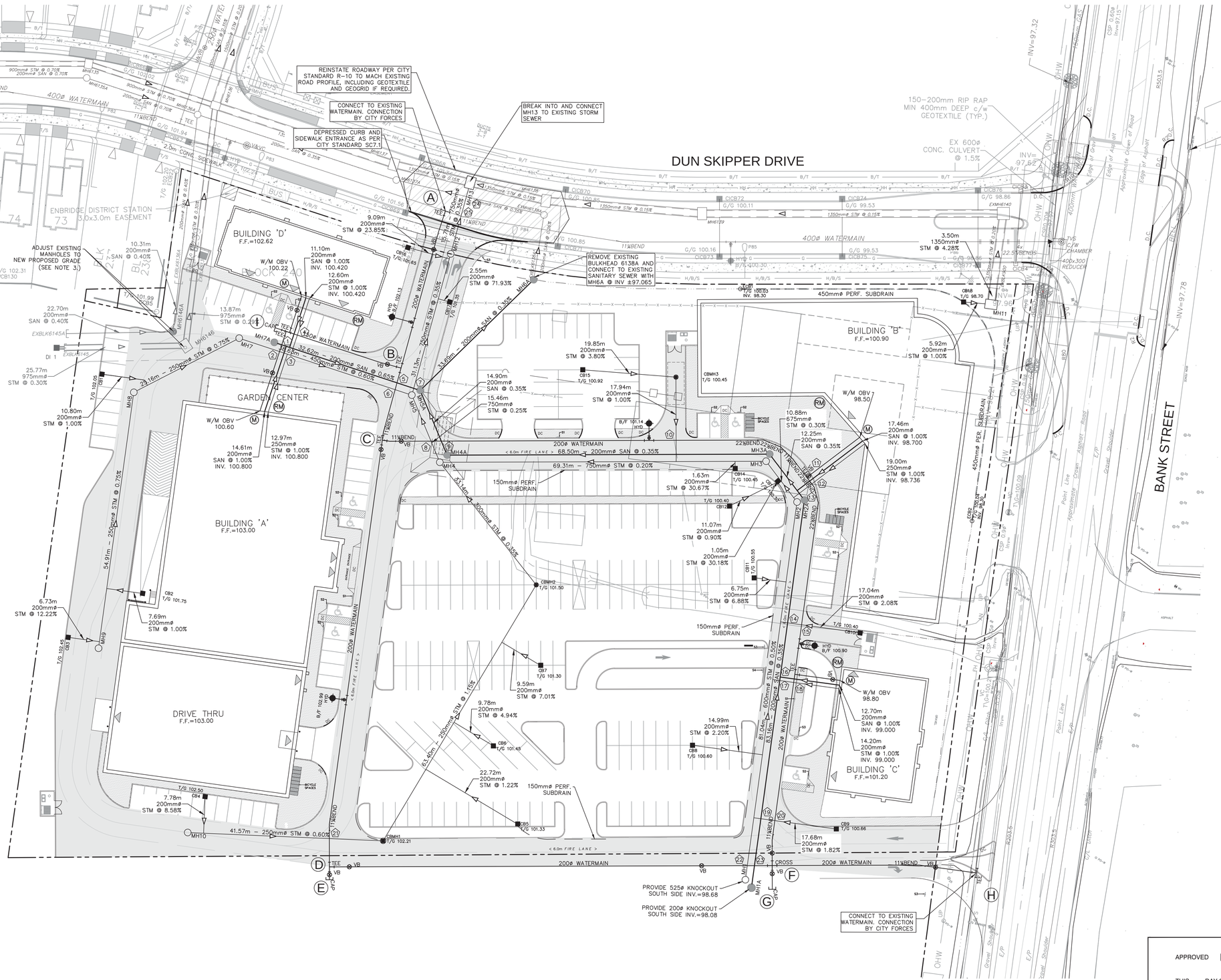

NOTES:

1. SEE DRAWING C-010 FOR ADDITIONAL DETAILS AND NOTES.
2. SITE BENCHMARK TO BE OBTAINED FROM LEGAL SURVEYOR H.A. KEN SHIPMAN SURVEYING LTD.
3. 0 EXISTING SANITARY MANHOLE - MH6146A AS-BUILT F/C = 102.019 TO BE ADJUSTED TO ±102.160
   EXISTING STORM MANHOLE - MH6146 AS-BUILT F/C = 102.018 TO BE ADJUSTED TO ±102.24.

No.	REVISIONS	By	Date
14			
13			
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5			
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3			
2			
1	ISSUED FOR SPA	JIM	2019:04:15

APPROVED ☐ REFUSED ☐

THIS____DAY OF _____ , 20_____

DON HERWEYER, MCIP, RPP
MANAGER, DEVELOPMENT REVIEW - SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

IBI GROUP
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Ottawa ON K1S 5N4 Canada
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ibigroup.com

Project Title

BANK STREET DEVELOPMENT

4836 BANK STREET

LICENSED PROFESSIONAL ENGINEER
J. I. MOFFATT
2019/04/15
PROVINCE OF ONTARIO

Drawing Title

SITE SERVICING PLAN

Scale: 1 : 400

Design	Date
SEL	FEB. 2019
Drawn	Checked
DPS	JIM
Project No.	Drawing No.
119351	001

D07-12-1x-0xxx

#17xxx

C:\119351 - 4836Bank\C\3.0 Drawing\1.SiteSvc\Option\VOT.dwg Layout Name: SITE SERVICING PLAN Plot Style: AIA STANDARD - FULL.CTB Plot Scale: 125.4 Plotted At: 17/4/2019 1:09 PM Last Saved By: dmurray Last Saved At: Apr 16, 19

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 S. J. LAWRENCE ARCHITECT INCORPORATED.

1.09 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 FILTER CLOTHS ACROSS MANHOLE AND CATCHBASIN LIDS 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 COMMERCIAL DEVELOPMENT - 4836 BANK STREET, OTTAWA, ON. REPORT No. PG2934 BY PATERSON GROUP.

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 98% STANDARD MODIFIED PROCTOR DENSITY AND TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.

1.20 ALL COMPACTION METHODS TO BE PERFORMED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER TO INCLUDE BUT NOT BE LIMITED TO THE THICKNESS OF LIFTS, AND COMPACTION EQUIPMENT USED.

1.21 ALL DISTURBED BOULEVARDS TO BE REINSTATED 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 ALL UTILITY BOXES (i.e. PEDESTALS, TRANSFORMERS, ETC) ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF OTTAWA'S "GUIDELINES FOR UTILITY PEDESTALS WITHIN THE ROAD RIGHT OF WAY"

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 OSPD 1005.01. 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.

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 OPSD, 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 150mm DIAMETER SOCK-WRAPPED PERFORATED PVC SUBDRAINS TO BE INSTALLED AT THE LIMIT OF THE HEAVY DUTY ROAD STRUCTURE WHERE IT MEETS THE LIGHT DUTY ROAD STRUCTURE AND AT ALL CB'S IN HEAVY DUTY ROADS AS IDENTIFIED ON PLAN. SUBDRAINS TO DISCHARGE TO CB'S AS SHOWN.

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-TEMPEST MHF ICD'S SHOP DRAWINGS, OR EQUIVALENT, FOR ENGINEERS REVIEW PRIOR TO ORDERING ICD'S.

4.0 WATER

4.1 ALL WATERMAINS 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 WATERMAINS AND DISINFECT AND CHLORINATE ALL WATERMAINS 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 AS 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.

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

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

5.9 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.

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

5.11 DITCHES DISTURBED DURING CULVERT INSTALLATION AND GRADING OPERATIONS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION AND FLOWLINE GRADES.

5.12 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.

5.13 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.

5.14 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.

CATCH BASIN DATA TABLE

STRUCTURE ID	AREA ID	STRUCTURE	COVER	ELEVATION: TOP OF GRATE	ELEVATION: INVERT INLET	ELEVATION: INVERT OUTLET	OUTLET PIPE: DIAMETER (mm)	OUTLET PIPE: TYPE	HEAD	FLOW	ICD TYPE
CB1	MH8	OPSD 705.010	S19	102.05		100.570	200	HDPE PERF	1.65	13.00	Tempest Vortex
CB2	MH9B	OPSD 705.010	S19	101.75		100.350	200	HDPE PERF			
CB3	MH9	OPSD 705.010	S19	102.45		100.950	200	PVC DR-35	1.65	10.00	Tempest Vortex
CB4	MH10A	OPSD 705.010	S19	102.50		101.200	200	PVC DR-35	1.4	6.00	Tempest Vortex
CB5	CBMH1A	OPSD 705.010	S19	101.33		99.980	200	PVC DR-35	1.4	15.00	Tempest Vortex
CB6	CBMH1B	OPSD 705.010	S19	101.45		100.200	200	PVC DR-35	1.4	20.00	Tempest HF - Type A
CB7	CBMH1C	OPSD 705.010	S19	101.30		100.050	200	PVC DR-35	1.4	30.00	Tempest HF - Type B
CB8	MH1B	OPSD 705.010	S19	100.60		99.400	200	PVC DR-35	1.4	47.00	Tempest HF - Type D
CB9	MH1A	OPSD 705.010	S19	100.66		99.420	200	PVC DR-35	1.35	43.00	Tempest HF - Type D
CB10	MH1D	OPSD 705.010	S19	100.40		98.850	200	PVC DR-35	1.65	45.00	Tempest HF - Type B
CB11	MH1E	OPSD 705.010	S19	100.55		98.930	200	PVC DR-35	1.65	15.00	Tempest Vortex
CB12	MH2B	OPSD 705.010	S19	100.40		99.100	200	PVC DR-35			
CB13	MH3	OPSD 705.010	S19	100.30	99.000	99.000	200	PVC DR-35	1.5	36.00	Tempest HF - Type B
CB14	MH4	OPSD 705.010	S19	100.45		99.000	200	PVC DR-35	1.5	37.00	Tempest HF - Type B
CB15	CBMH3B	OPSD 705.010	S19	100.92		99.470	200	PVC DR-35	1.65	6.00	Tempest Vortex
CB16	MH5B	OPSD 705.010	S19	100.65		100.020	200	PVC DR-35	1.65	6.00	Tempest Vortex
CB17	MH5A	OPSD 705.010	S19	101.35		99.690	200	PVC DR-35	1.65	6.00	Tempest Vortex
CB18	MH11	OPSD 705.010	S19	98.70		97.260	200	PVC DR-35	1.65	15.00	Tempest Vortex
CBMH1	MH10B	OPSD 701.010	S25 & S28.1 Open	102.21		99.795	250	PVC DR-35	2.54	20.0	Tempest Vortex
CBMH2	CBMH2	OPSD 701.010	S25 & S28.1 Open	101.50		99.016	300	PVC DR-35	2.834	20.0	Tempest Vortex
CBMH3	CBMH3A	OPSD 701.010	S25 & S28.1 Open	100.45		98.705	200	PVC DR-35	2.045	6.0	Tempest Vortex
ECB1	MH11	CITY STD S29	S30/S31	100.03		98.300	450	HDPE PERF			
ECB2	MH11	CITY STD S29	S30/S31	100.04		98.300	450	HDPE PERF			

Bold font indicates CB's with ICD's

Revision: 2019-04-15

STM STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
CBMH1	102.22	SW100.250		N99.795		1200mmø OPSD-701.010
CBMH2	101.50	S99.066		W99.016		1200mmø OPSD-701.010
CBMH3	100.45	SW98.765		SE98.705		1200mmø OPSD-701.010
EXBLK900	99.20	SE96.677		NW95.298		1350mm BULKHEAD
EXMH6140	98.93	SE95.266		SW95.206		2438mm x 2438mm RECTANGULAR METRIC
MH1	100.60			NW98.605		1200mmø OPSD-701.010
MH2	100.41	SE98.200		W98.125		1200mmø OPSD-701.010
MH3	100.39	E98.092		SW98.017		1200mmø OPSD-701.010
MH4	102.14	NE97.879 E98.900		NW97.849		1200mmø OPSD-701.010
MH5	102.15	SE97.810 W99.130		N97.584		1200mmø OPSD-701.010
MH7	102.35	SW99.562		E99.362		1200mmø OPSD-701.010
MH8	102.38	SE99.780		NE99.750		1200mmø OPSD-701.010
MH9	102.69			NW100.192		1200mmø OPSD-701.010
MH10	102.68			NE100.499		1200mmø OPSD-701.010
MH11	98.99	SW95.538		NW96.827		1829mm x 2438mm RECTANGULAR METRIC
MH12	101.59	S97.475		N97.455		1200mmø OPSD-701.010
MH13	101.36	S97.400 E94.995		W94.995		1829mm x 2438mm RECTANGULAR METRIC

SAN STRUCTURE TABLE

NAME	RIM ELEV.	INVERT IN	INVERT IN AS-BUILT	INVERT OUT	INVERT OUT AS-BUILT	DESCRIPTION
EXBLK6138A	0.00					200mm BULKHEAD
EXMH6138A	101.10	S97.028		W96.968		1200mmø OPSD-701.010
MH1A	101.53			NW98.004		1200mmø OPSD-701.010
MH2A	100.43	SE97.713		W97.683		1200mmø OPSD-701.010
MH3A	100.41	E97.640		SW97.610		1200mmø OPSD-701.010
MH4A	102.09	NE97.370		NW97.340		1200mmø OPSD-701.010
MH5A	102.08	SE97.288 W98.640		N97.228		1200mmø OPSD-701.010
MH6A	101.01	S97.110		N97.065		1200mmø OPSD-701.010
MH7A	102.36			E98.852		1200mmø OPSD-701.010

WATERMAIN SCHEDULE

	STATION	DESCRIPTION	FINISHED GRADE (m)	TOP OF WATERMAIN	AS-BUILT WATERMAIN
A	0+000	CONNECT TO EX. 400Ø W/M	101.45	99.16	
	0+008.59	200Ø V&VB	101.67	99.27	
	0+020	--	101.57	99.17	
	0+024.72	200Ø x 150Ø HYDRANT TEE	101.76	99.36	
B	0+034.70	150Ø x 200Ø TEE	102.05	99.65	
	0+040	--	102.21	99.81	
	0+048.82	200Ø – 11 1/4° BEND	102.42	100.02	
C	0+050.57	200Ø x 200Ø TEE	102.45	100.05	
	0+052.57	200Ø V&VB	102.46	100.06	
	0+060	--	102.55	102.09	
	0+080	--	102.65	100.25	
	0+100	--	102.68	100.28	
	0+106.32	200Ø x 150Ø HYDRANT TEE	102.71	100.31	
	0+120	--	102.70	100.30	
	0+133.06	200Ø – 11 1/4° BEND	102.56	100.16	
	0+136.02	--	102.56	99.80	
D	0+142.04	200Ø x 200Ø TEE	102.42	100.02	
	0+143.71	200Ø V&VB	102.37	99.97	
E	0+144.76	200Ø CAP	102.33	99.93	
C	0+000	200Ø x 200Ø TEE	102.45	100.05	
	0+001.61	200Ø – 11 1/4° BEND	102.39	99.99	
	0+004.04	200Ø V&VB	102.34	99.94	
	0+020	--	101.91	99.51	
	0+040	--	101.35	98.95	
	0+056.69	200Ø x 150Ø HYDRANT TEE	100.90	98.50	
	0+060	--	100.74	98.34	
	0+062.44	--	100.66	98.10	
	0.081.06	200Ø – 22 1/2° BEND	100.47	98.07	
	0+084.95	200Ø – 22 1/2° BEND	100.44	98.04	
	0+088.64	200Ø – 11 1/4° BEND	100.40	98.00	
	0+093.48	200Ø x 200Ø TEE DOMESTIC WATER SERVICE	100.41	98.01	
	0+096.06	200Ø – 22 1/2° BEND	100.44	98.04	
	0+099.51	200Ø – 22 1/2° BEND	100.47	98.07	
	0+120	--	100.56	98.16	
	0+129.73	200Ø x 150Ø HYDRANT TEE	100.66	98.26	
	0+136.32	200Ø x 200Ø TEE DOMESTIC WATER SERVICE	100.82	98.42	
	0+140	--	100.85	98.45	
	0+160	--	100.88	98.48	
	0+171.94	--	100.93	98.53	
	0+174.66	200Ø V&VB	100.98	98.58	
F	0+177.30	200Ø x 200Ø CROSS	101.05	98.65	
	0+179.04	200Ø V&VB	100.99	98.59	
H	0+182.36	200Ø CAP	100.89	98.49	
G	0+000	CONNECT TO EX. 400Ø W/M	101.05	97.80	
	0+008.79	200Ø V&VB	101.06	98.66	
	0+012.26	200Ø – 11 1/4° BEND	101.04	98.64	
	0+020	--	100.96	98.56	
F	0+043.52	200Ø x 200Ø CROSS	101.03	98.63	
	0+048.81	--	101.12	98.70	
	0+058.52	200Ø V&VB	101.22	98.82	
	0+060	--	101.23	98.83	
	0+080	--	101.41	99.01	
	0+100	--	101.73	99.33	
	0+120	--	102.23	99.83	
	0+133.36	200Ø V&VB	102.42	100.02	
D	0+137.59	200Ø x 200Ø TEE	102.42	100.02	
B	0+000	150Ø x 200Ø TEE	102.05	99.65	
	0+003	150Ø V&VB	102.09	99.69	
	0+020	--	102.33	99.93	
	0+024.87	150Ø x 150Ø TEE DOMESTIC WATER SERVICE	102.31	99.91	
	0+025.62	150Ø x 150Ø TEE DOMESTIC WATER SERVICE	102.31	99.91	
I	0+028.10	150Ø CAP	102.29	99.89	

REVISED 2019-04-15

Crossing Schedule

1	150 Φ WM	0.8 m CLEARANCE OVER	200 Φ SAN
2	150 Φ WM	0.2 m CLEARANCE OVER	450 Φ STM
3	200 Φ SAN	0.35 m CLEARANCE OVER	450 Φ STM
4	200 Φ SAN	0.25 m CLEARANCE OVER	200 Φ STM
	150 Φ WM	0.50 (min) m CLEARANCE UNDER	200 Φ SAN
	150 Φ WM	0.50 (min) m CLEARANCE UNDER	200 Φ STM
5	200 Φ WM	0.8 m CLEARANCE OVER	200 Φ SAN
6	200 Φ WM	0.2 m CLEARANCE OVER	450 Φ STM
7	750 Φ STM	0.2 m CLEARANCE OVER	200 Φ SAN
8	200 Φ WM	0.95 m CLEARANCE OVER	750 Φ STM
9	200 Φ WM	2.1 m CLEARANCE OVER	200 Φ SAN
10	200 Φ STM	0.8 m CLEARANCE OVER	200 Φ SAN
	200 Φ WM	0.50 (min) m CLEARANCE UNDER	200 Φ STM
11	200 Φ WM	0.50 (min) m CLEARANCE UNDER	200 Φ SAN
12	200 Φ WM	0.50 (min) m CLEARANCE UNDER	200 Φ STM
13	200 Φ STM	0.65 m CLEARANCE OVER	200 Φ SAN
14	200 Φ STM	0.9 m CLEARANCE OVER	200 Φ SAN
15	200 Φ WM	0.7 m CLEARANCE UNDER	200 Φ STM
16	200 Φ WM	0.50 (min) m CLEARANCE UNDER	200 Φ SAN
17	200 Φ STM	0.75 m CLEARANCE OVER	200 Φ SAN
18	200 Φ WM	0.50 (min) m CLEARANCE UNDER	200 Φ STM
19	200 Φ STM	0.8 m CLEARANCE OVER	200 Φ SAN
20	200 Φ WM	0.9 m CLEARANCE UNDER	200 Φ STM
21	200 Φ WM	0.50 (min) m CLEARANCE UNDER	250 Φ STM
22	200 Φ WM	0.2 m CLEARANCE OVER	525 Φ STM
23	200 Φ WM	0.5 m CLEARANCE OVER	200 Φ SAN
24	750 Φ STM	0.2 m CLEARANCE OVER	200 Φ SAN
25	400 Φ WM	0.35 m CLEARANCE OVER	750 Φ STM

REVISED 2019-04-15

PAVEMENT STRUCTURE **

CAR ONLY PARKING AREAS:

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

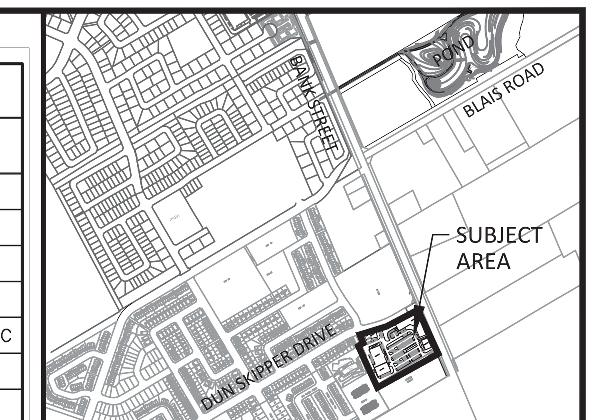
EXISTING DUN SKIPPER DRIVE ***

40mm WEAR COURSE – SUPERPAVE 12.5 ASPHALTIC CONCRETE
2x50mm BINDER COURSE – SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm BASE COURSE – OPSS GRANULAR "A" CRUSHED STONE
450mm SUBBASE – OPSS GRANULAR "B" TYPE II

** REFER TO GEOTECHNICAL REPORT PG2934 DATED NOV. 25–2013 BY PATERSON GROUP
*** REFER TO GEOTECHNICAL REPORT No. 12-1121-0286 BY GOLDER ASSOCIATES.

LEGEND:

MH3A	EXISTING SANITARY MANHOLE
MH3	EXISTING STORM MANHOLE
CB T/G 99.76	EXISTING STREET CATCHBASIN
CICB G/G 99.76	EXISTING CURB INLET CATCHBASIN
V&VB	EXISTING VALVE AND VALVE BOX
V&C	EXISTING VALVE AND CHAMBER
HYD B/F 100.56	EXISTING HYDRANT
	EXISTING BARRIER CURB
D.C.	EXISTING DEPRESSED BARRIER CURB
	EXISTING CONCRETE SIDEWALK
	250mmØ SUBDRAIN
	SIAMESE CONNECTION (IF REQUIRED)
M	METER
RM	REMOTE METER
PRV	PRESSURE REDUCING VALVE
	WATERMAIN IDENTIFICATION
1	PIPE CROSSING IDENTIFICATION
	INLET CONTROL DEVICE LOCATION
	PROTECTIVE BOLLARD
	HEAVY DUTY ASPHALT / FIRE ROUTE
MH3A	SANITARY MANHOLE
MH3	STORM MANHOLE
CB T/G 99.76	CATCHBASIN c/w TOP OF GRATE
RYCB T/G 99.76	REAR YARD CATCHBASIN c/w GUTTER GRADE
ECB T/G 100.25	REAR YARD "END" CATCHBASIN C/W TOP OF GRATE 300ø)
CBMH T/G 101.55	CATCHBASIN MANHOLE c/w TOP OF GRATE
V&VB	VALVE AND VALVE BOX
V&C	VALVE AND CHAMBER
HYD B/F 100.56	HYDRANT c/w BOTTOM OF FLANGE ELEVATION
D.C.	DEPRESSED BARRIER CURB AS PER SC1.1
	BARRIER CURB AND GUTTER AS PER SC1.2
	MOUNTABLE CURB AS PER SC1.3
	PROPOSED CONCRETE SIDEWALK
200mmø SAN	SANITARY SEWER & FLOW DIRECTION
825mmø STM	STORM SEWER & FLOW DIRECTION
200ø WATERMAIN	WATERMAIN
200ø WM RED 150ø WM	WATERMAIN REDUCER
2 VBENDS	VERTICAL BEND LOCATION
	PROPERTY LINE
MB	PROPOSED MAIL BOX
	PROPOSED SWALE C/W FLOW DIRECTION
0.5%	PROPOSED DITCH C/W FLOW DIRECTION AND SLOPE
1.3%	SLOPE C/W FLOW DIRECTION
	MAJOR OVERLAND FLOW ROUTE
×104.62	PROPOSED SPOT GRADE
×104.40 (S)	PROPOSED SWALE GRADE
×104.50 (S)HP	PROPOSED SWALE HIGH POINT
104.60 × 103.59	LOT CORNER GRADE C/W EXISTING GROUND
86.45 EX ×	TIE INTO EXISTING GRADE
96.79	FULL STATIC PONDING GRADE
	RETAINING WALL
105.30 T/W ×	TOP OF RETAINING WALL
103.50 B/W ×	PROPOSED BOTTOM OF RETAINING WALL
	TERRACING 3:1 MAXIMUM UNLESS NOTED OTHERWISE
	PRELIMINARY ROOF DRAIN LOCATION
TP 13-301	TEST PITS (SEE GEOTECHNICAL REPORT)
	CLAY DYKES PER S8
F.F.E.=106.30	PROPOSED BUILDING FINISHED FLOOR ELEVATION
U.S.F.=104.30	PROPOSED UNDERSIDE OF FOOTING ELEVATION
	PROPOSED TRANSFORMER
B	PROPOSED BIKE RACK



KEY PLAN
(NTS)

NOTES:

1. SEE DRAWING C-010 FOR ADDITIONAL DETAILS AND NOTES.

2. SITE BENCHMARK TO BE OBTAINED FROM LEGAL SURVEYOR H.A. KEN SHIPMAN SURVEYING LTD.

No.	REVISIONS	By	Date
14			
13			
12			
11			
10			
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6			
5			
4			
3			
2			
1	ISSUED FOR SPA	JIM	2019:04:15

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Project Title
BANK STREET DEVELOPMENT
4836 BANK STREET

LICENSED PROFESSIONAL ENGINEER
J. I. MOFFATT
2019/04/15
PROVINCE OF ONTARIO

N

Drawing Title
DETAILS AND NOTES

Scale
N.T.S.

Design	Date
SEL	FEB. 2019

Drawn	Checked
DPS	JIM

Project No.	Drawing No.
119351	010

APPROVED ☐ REFUSED ☐

THIS____DAY OF ____________ , 20______

DON HERWEYER, MCIP, RPP
MANAGER, DEVELOPMENT REVIEW - SOUTH
PLANNING, INFRASTRUCTURE & ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

D07-12-1x-0xxx

#17xxx

J:\119351_4836BankSt\5.9 Drawings\59civil\layouts\010 - DETAILS AND NOTES.dwg Layout Name: 010 - DETAILS AND NOTES Plot Style: AIA STANDARD-FULL.CTB Plot Scale: 1:25.4 Plotted At: 4/16/2019 1:57 PM Last Saved By: dsiurna Last Saved At: Apr. 16, 19