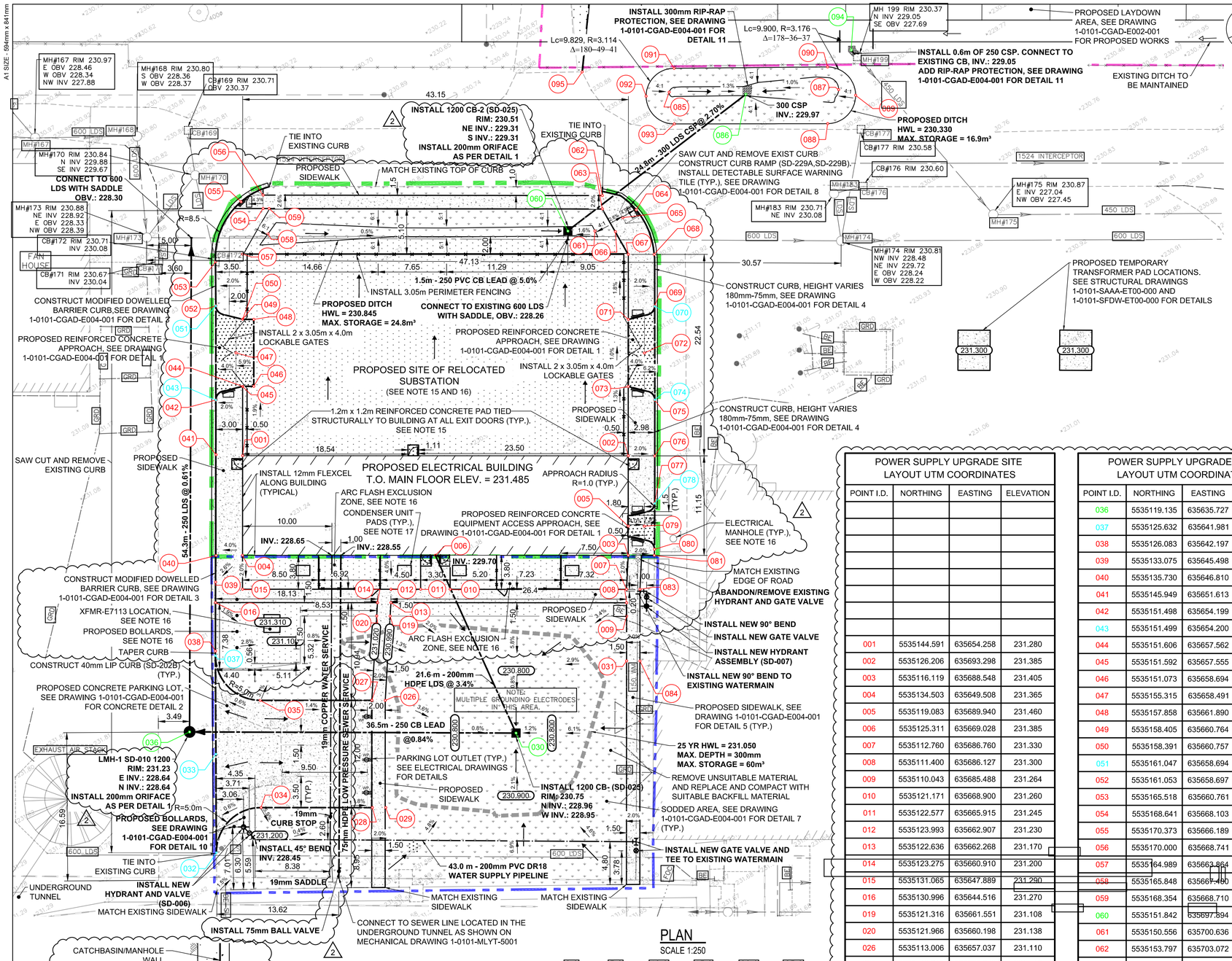
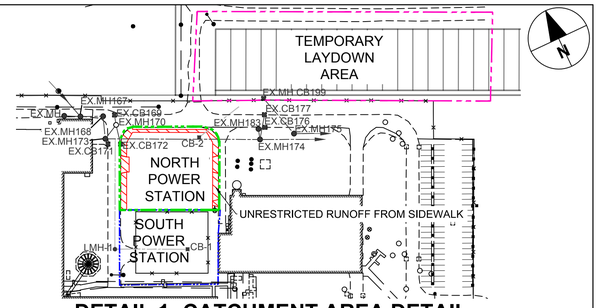


PLAN

SCALE 1:250

0.0 5.0 10.0 15.0 20.0 25.0



DETAIL 1: CATCHMENT AREA DETAIL

Scale: N.T.S.

DRAINAGE SUBCATCHMENT PARAMETERS

Catchment	Area (ha)	Allowable C-Value	Post-Development C-Value	Allowable Discharge Rates (L/s)	25 YR HWL (m)	25-Year Required Storage (m3)	Available Storage (m3)
Temporary Laydown Area	0.49	0.35	0.68	51.8	230.15	109.6	157.0
North Power Station	0.15	0.35	0.81	16.0*	231.65	34.5	41.0
South Power Station	0.23	0.35	0.64	24.0	231.05	51.4	60.0

* INCLUDES 3.0 L/s UNRESTRICTED FLOW

THE MAXIMUM ALLOWABLE DISCHARGE RATES WERE CALCULATED BASED ON THE RUNOFF COEFICCIENT C=0.35 FOR BOTH POWER STATION SITE AND FOR TEMPORARY LAYDOWN AREA.

THE ESTIMATED MAXIMUM ALLOWABLE DISCHARGE RATES ARE 51.8 LPS AND 40.0 LPS FOR TEMPORARY LAYDOWN AREA AND POWER STATION SITE, RESPECTIVELY. USING A 1 IN 5 YEAR DESIGN STORM.

REQUIRED ON-SITE STORAGES CAULCATED BASED ON THE CITY OF WINNIPEG 25-YEAR DESIGN STORM ARE 109.6 CUBIC METERS FOR TEMPORARY LAYDOWN AREA AND 85.9 CUBIC METERS FOR POWER STATION SITE.

AVAILABLE ON-SITE STORAGES ARE 157.0 CUBIC METERS IN TEMPORARY LAYDOWN AREA AND 101.0 CUBIC METERS IN POWER STATION SITE.

POWER SUPPLY UPGRADE SITE LAYOUT UTM COORDINATES

POINT I.D.	NORTHING	EASTING	ELEVATION
001	5535144.591	635654.258	231.280
002	5535126.206	635693.298	231.385
003	5535116.119	635688.548	231.405
004	5535134.503	635649.508	231.365
005	5535119.083	635689.940	231.460
006	5535125.311	635669.028	231.385
007	5535112.760	635686.760	231.330
008	5535111.400	635686.127	231.300
009	5535110.043	635685.488	231.264
010	5535121.171	635668.900	231.260
011	5535122.577	635665.915	231.245
012	5535123.993	635662.907	231.230
013	5535122.636	635662.268	231.170
014	5535123.275	635660.910	231.200
015	5535131.065	635647.889	231.290
016	5535130.996	635644.516	231.270
019	5535121.316	635661.551	231.108
020	5535121.966	635660.198	231.138
026	5535113.006	635657.037	231.110
027	5535113.645	635655.680	231.140
028	5535102.762	635650.623	231.150
029	5535102.123	635651.980	231.100
030	5535103.468	635668.728	230.750
031	5535105.507	635683.351	231.145
032	5535105.623	635632.686	231.288
033	5535115.627	635637.333	231.215
034	5535108.066	635639.364	231.380
035	5535118.972	635644.371	231.320

POWER SUPPLY UPGRADE SITE LAYOUT UTM COORDINATES

POINT I.D.	NORTHING	EASTING	ELEVATION
036	5535119.135	635635.727	231.230
037	5535125.632	635641.981	231.143
038	5535126.083	635642.197	231.320
039	5535133.075	635645.498	231.265
040	5535135.730	635646.810	231.245
041	5535145.949	635651.613	231.160
042	5535151.498	635654.199	231.098
043	5535151.499	635654.200	230.918
044	5535151.606	635657.562	231.015
045	5535151.592	635657.555	231.130
046	5535151.073	635658.694	231.133
047	5535155.315	635658.491	230.943
048	5535157.858	635661.890	230.988
049	5535158.405	635660.764	230.985
050	5535158.391	635660.757	230.871
051	5535161.047	635658.694	230.785
052	5535161.053	635658.697	230.894
053	5535165.518	635660.761	230.780
054	5535168.641	635668.103	230.933
055	5535170.373	635666.189	230.807
056	5535170.000	635668.741	230.893
057	5535164.989	635663.864	230.845
058	5535165.848	635667.460	230.680
059	5535168.354	635668.710	230.935
060	5535151.842	635697.394	230.510
061	5535150.556	635700.636	230.560
062	5535153.797	635703.072	230.990
063	5535152.441	635702.432	231.020
064	5535150.733	635705.819	230.928
065	5535150.590	635704.089	231.013
066	5535149.521	635702.673	231.067
067	5535146.608	635702.907	231.075
068	5535145.372	635705.515	231.015
069	5535140.125	635703.117	231.120
070	5535140.096	635703.103	231.040
071	5535140.007	635699.797	231.208

POWER SUPPLY UPGRADE SITE LAYOUT UTM COORDINATES

POINT I.D.	NORTHING	EASTING	ELEVATION
072	5535135.847	635699.828	231.172
073	5535133.222	635696.602	231.280
074	5535130.604	635698.656	231.160
075	5535130.578	635698.643	231.240
076	5535124.924	635695.977	231.325
077	5535120.167	635693.734	231.384
078	5535120.124	635693.714	231.268
079	5535118.315	635691.572	231.390
080	5535115.484	635691.496	231.335
081	5535114.876	635691.187	231.345
083	5535112.121	635688.117	231.360
084	5535104.864	635684.707	231.175
085	5535161.091	635714.772	230.082
086	5535157.218	635722.428	229.970
087	5535153.263	635732.049	230.077
088	5535150.345	635729.312	230.668
089	5535151.891	635733.500	230.597
090	5535156.098	635732.006	230.362
091	5535163.267	635716.403	230.606
092	5535161.777	635712.241	230.768
093	5535157.624	635713.767	230.843
094	5535156.679	635735.213	229.050
095	5535167.282	635706.930	230.862

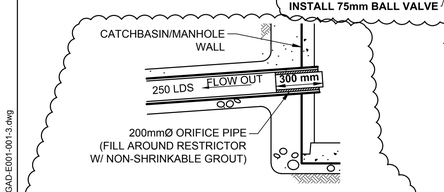
BENCHMARK UTM COORDINATES

POINT I.D.	NORTHING	EASTING	ELEVATION
BM1	5534996.006	636000.318	231.073
BM2	5534816.615	635804.484	230.670

NOTE:
BENCHMARKS ARE BRASS CAPS ON CONCRETE PILES

ISSUED FOR CONSTRUCTION
December 17, 2018

NOTE:
1. ALL COORDINATES ARE NAD 83 UTM ZONE 14.
2. ALL WORK AND MATERIALS IN ACCORDANCE WITH CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
3. LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT.
4. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
5. PLACE GEOGRID AS REQUIRED AT UNSUITABLE SUBGRADE LOCATIONS.
6. INSTALL UTILITIES BY TRENCHLESS METHODS BENEATH EXISTING ROAD AND NEW PAVEMENT AREAS.
7. BACKFILL ALL TRENCHES UNDER OR WITHIN 1.0m OF EXISTING OR PROPOSED ROADS, WALKS, AND PARKING LOTS WITH CLASS 3 BACKFILL.
8. BACKFILL UNDER BOULEVARDS WITH CLASS 4 BACKFILL.
9. ALL PIPES IN OPEN TRENCHES TO BE INSTALLED WITH CLASS B (SAND) BEDDING.
10. ALL LDS, WWS PIPING, AND CB LEADS TO BE PVC SDR35, CULVERTS TO BE CORRUGATED STEEL PIPING.
11. ALL WM TO BE PVC C900 DR18. WATER SERVICE TO BE TO BE COPPER TYPE K.
12. RESTORE ALL SURFACES WITHIN CITY RIGHT-OF-WAY TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL CONDITION.
13. DO NOT SCALE DRAWING. ALL MEASUREMENTS MUST BE OBTAINED FROM STATED DIMENSIONS.
14. CONFIRM SERVICE ENTRY POINTS AND ELEVATIONS WITH MECHANICAL PLANS PRIOR TO CONSTRUCTION.
15. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
16. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
17. REFER TO MECHANICAL DRAWINGS FOR DETAILS.



1 OUTLET FLOW RESTRICTOR DETAIL

Scale: N.T.S.

EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED	EXISTING	LEGEND - PLAN	PROPOSED
150 WM	WATERMAIN	150 WM		HYDRO			CONCRETE	
	HYDRANT			HYDRO POLE			REINFORCED CONCRETE	
	VALVE			GRAVEL			TOPSOIL / SOD AREA	
300 LDS	LAND DRAINAGE SEWER	300mm LDS		ASPHALT			SIDEWALK	
250 WWS	WASTEWATER SEWER			PROPERTY LINE			LAYOUT POINT	(001)
	MANHOLE			SURVEY BAR			SEWER LAYOUT POINT	(006)
	CATCH BASIN			TESTHOLE			GUTTER LAYOUT POINT	(003)
	CATCH PIT		235.750	ELEVATION	235.750		WEATHERPROOF ELECTRICAL RECEPTACLE	WP
	JUNCTIONS			TREE				
	CULVERT			BUSH LINE				
	GAS			DITCH				
	BELL M.T.S.			FENCE				

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: June 11, 2019

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

B.M. 1
ELEV. 231.073
W. side of Main St., N.E. Cor. of the North End Treatment Plant, S. of Highland Ave., between parking lot and Main St.
N: 5534996.006, E: 636000.318

NO.	REVISIONS	DATE	DESIGN	CHECK
2	REVISED FOR CONSTRUCTION	2019-06-11	CS	ZP
1	RE-ISSUED FOR CONSTRUCTION	2018-12-17	CS	ZP
0	ISSUED FOR CONSTRUCTION	2018-09-27	CS	ZP
A	ISSUED FOR 60% REVIEW	2018-09-07	CS	ZP

AECOM

DESIGNED BY: CS
CHECKED BY: ZP
DRAWN BY: CS
APPROVED BY: ZP
SCALE: 1:250
RELEASED FOR CONSTRUCTION BY:
DATE: 2019-06-11
DATE:
CONSULTANT NO.: CT-01

ENGINEER'S SEAL
PROVINCE OF MANITOBA
Z. PAN
Member
REGISTERED PROFESSIONAL ENGINEER

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

NORTH END SEWAGE TREATMENT PLANT
POWER SUPPLY UPGRADE PROJECT
POWER SUPPLY UPGRADE SITE PLAN

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0101-CGAD-E001	001	2	A1

A1 SIZE - 594mm x 841mm

2019/06/11 2:24 PM
P:\60676903\600-CAD_GIS\910-CAD\20-SHEETS\C\1-0101-CGAD-E001-001-3.dwg

LAST ARCHIVE: