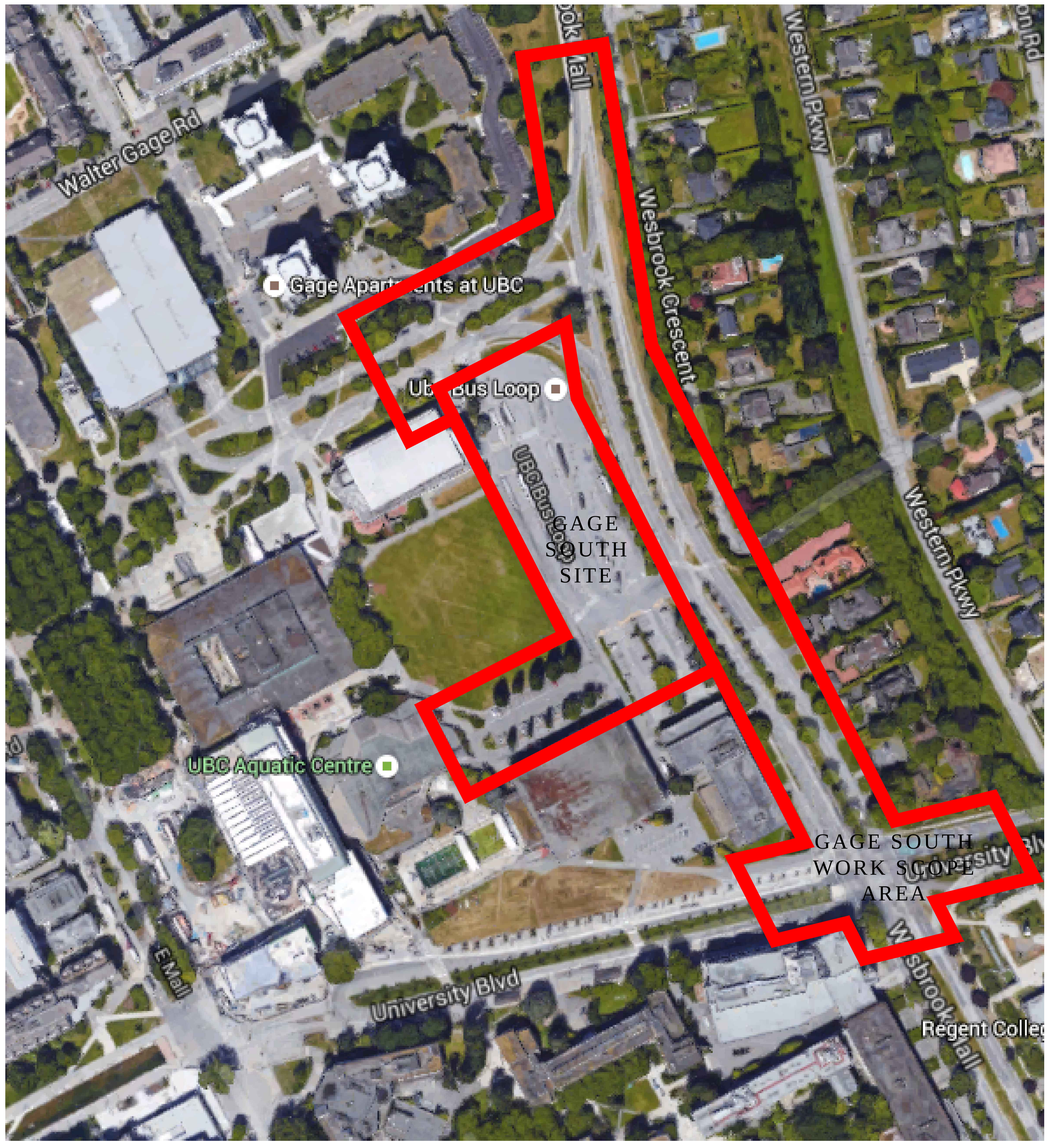
GAGE SOUTH EXCHANGE

VANCOUVER, BC

DRAWING LIST



DIALOG®

CoreGroup CONSULTANTS
LAND DEVELOPMENT SERVICES
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ISSUED FOR
2016-09-23 / REVISED FOR DP

METRIC

ALL DIMENSIONS ARE METRIC UNLESS OTHERWISE NOTED.
VERIFY DIMENSIONS.
DO NOT SCALE THIS DRAWING.

REPORT INCONSISTENCIES AND OMISSIONS TO THE CONSULTANT FOR CLARIFICATION BEFORE COMMENCING WITH THE WORK.

DEVIATIONS FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE CONSULTANT ARE SUBJECT TO CORRECTION AT THE CONTRACTOR'S EXPENSE.

GRAPHIC SCALE
−10 0 10 20
SCALE: 1:500

SEAL

UBC Gage South
ULTIMATE DESIGN

Civil Design
GAGE SOUTH
COVER SHEET

DRAWN: BC CHECKED: CN

C 0

CORE-1773

GENERAL NOTES :

1. CALL BC ONE–CALL 24 HOURS PRIOR TO CONSTRUCTION.
2. TOPOGRAPHIC SURVEY FOR THIS SITE PROVIDED BY MURRAY AND ASSOCIATES LAND SURVEYORS.
3. UTILITY TRENCH WIDTH VARIES WITH DIAMETER AND DEPTH OF UTILITY PIPE TO BE INSTALLED. MINIMUM WIDTH TYPICALLY 600mm OR AS PER MMCD STD. DET. G4.
4. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH OTHER CIVIL AND OTHER DISCIPLINE'S DRAWINGS.
5. ALL EX. VALVES AND MANHOLES TO BE ADJUSTED TO SUIT NEW GRADES. ADJUSTED EX. WATER VALVES TO BE REPLACED WITH SQUARE ROBAR VALVE BOXES SUPPLIED BY DOBNEY OR APPROVED EQUIVALENT, VALVE # TO BE MARKED WITH GREASE PEN.
6. COORDINATE ALL EXCAVATIONS CLOSE TO BUILDING WITH SHORING PLANS BY GEOTECH.
7. ALL EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS UNLESS REMOVED ENTIRELY.

TESTING :

1. ALL TESTING TO BE PERFORMED BY A CSA OR COIL (CANADIAN CERTIFIED TESTING LABORATORIES) CERTIFIED LABORATORY.
2. FREQUENCY OF DENSITY TESTS FOR EXCAVATING, TRENCHING AND BACKFILLING SHALL BE ONE TEST PER 50 LINEAL METRES OR TRENCH PER METRE OF DEPTH. MATERIAL TO BE COMPACTED IN 300mm LIFTS.
3. FREQUENCY OF DENSITY TESTS FOR ROADWAY EXCAVATION, EMBANKMENT (SUB–GRADE FILL) AND COMPACTION SHALL BE ONE TEST PER 250m^2 PER 300mm LIFT.
4. FREQUENCY OF DENSITY TESTS FOR GRANULAR BASE AND SUB–BASE SHALL BE ONE TEST PER 30 LINEAL METRES OF LANE WIDTH STAGGERED EACH SIDE OF CENTRELINE PER 150mm LIFT OR OF SPECIFIED THICKNESS.
5. FREQUENCY OF DENSITY TESTS FOR SIDEWALK BASE SHALL BE ONE TEST PER 30 LINEAL METRES WITHIN SIDEWALK AND DRIVEWAY AREA.
6. FREQUENCY OF DENSITY TESTS FOR CURB BASE SHALL BE ONE TEST PER 100 LINEAL METRES.
7. FREQUENCY OF MARSHALL TESTS FOR HOT–MIX ASPHALT CONCRETE PAVING SHALL BE ONE TEST PER 500 TONNES OF MIX PLACED OR ONE TEST FOR EACH TYPE OF ASPHALT MIX, MINIMUM ONE PER DAY.
8. FOR PAVING, CORE LOCATIONS WILL BE SELECTED FOR EACH PASS OF THE PAVING MACHINE AS FOLLOWS:
   - 8.1. ACROSS THE WIDTH, CORE LOCATIONS WILL BE SELECTED RANDOMLY FROM ONE–SIXTH INCREMENTS.
   - 8.2. ALONG THE LENGTH, CORE LOCATIONS WILL HAVE A RANDOMLY SELECTED START WITH CORES AT A SPACING OF APPROXIMATELY, BUT NOT TO EXCEED 30 METRES.
   - 8.3. FOR OTHER PAVING OPERATIONS, A MINIMUM OF ONE CORE FOR EVERY 250 SQUARE METRES OF ASPHALT MIX PLACED.
9. FREQUENCY OF PLASTIC CONCRETE TESTS FOR SIDEWALK SHALL BE ONE TEST PER 150 LINEAL METRES OR A MINIMUM OF ONE PER DAY.
10. FREQUENCY OF PLASTIC CONCRETE TESTS FOR CURB AND GUTTER SHALL BE ONE TEST PER 300 LINEAR METRES OF A MINIMUM OF ONE PER DAY.
11. PRESSURE AND BACTERIOLOGICAL TESTING TO BE DONE BY CONTRACTOR PRIOR TO TIE–IN AND ACCEPTANCE BY UBC UTILITIES. ASSUMED TEST PRESSURE OF 1380 kPa (200 psi). THE CONTRACTOR SHALL TEST ALL WATERMAINS: PRESSURE TEST TO B.C. BUILDING CODE (2012) AND SHALL CHLORINATE AND FLUSH TO MINISTRY OF HEALTH AND AWWA STANDARDS. ALL TESTING IS TO BE WITNESSED BY THE ENGINEER AND THE UBC INSPECTOR. TESTING TO BE APPROVED BY UBC PRIOR TO TIE–IN TO MUNICIPAL WATER SYSTEM. ALL STORM AND SANITARY SYSTEMS TO BE TESTED PER SECTION 3.6 OF THE B.C. PLUMBING CODE. THE ENGINEER IS TO BE NOTIFIED 48 HOURS PRIOR TO TESTING.
12. STORM SEWERS SHALL BE VIDEO INSPECTED PER MMCD SPECIFICATIONS SECTION 02731.
13. SANITARY SEWERS SHALL BE PRESSURE TESTED AND VIDEO INSPECTED PER MMCD SPECIFICATIONS.
14. EXISTING SANITARY AND STORM SERVICE STUBS ARE TO BE CCTV INSPECTED AFTER SHORING. SUBMIT THE CCTV INSPECTION REPORTS AND VIDEOS TO UTILITIES TO ENSURE NO CONSTRUCTION DAMAGE ON EXISTING SERVICE STUBS.
15. ALL TESTING TO BE DONE AND APPROVED BEFORE BACKFILLING PIPE.

STORM & SANITARY SEWER NOTES :

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT UBC AND MMCD SPECIFICATIONS.
2. PIPE BEDDING SHALL BE GRANULAR PIPE BEDDING AND SURROUND MATERIAL CONFORMING TO MMCD CLAUSE 2.7, SECTION 02226.
3. PIPE BACKFILL SHALL BE 100mm PIT RUN GRAVEL MATERIAL CONFORMING TO MMCD CLAUSE 2.3, SECTION 02226.
4. ALL PIPES UP TO AND INCLUDING 525mmø PVC PIPE TO UBC SPECIFICATIONS AS FOLLOWS (UNLESS OTHERWISE NOTED) :
   - 150mmø & SMALLER SDR28
   - 200mmø TO 525mmø SDR35 TO ASTM 03034 SPECS.
5. ALL PIPES SHALL HAVE CLOSED JOINTS
6. PIPE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS FOR PIPE DEPTH AND SLOPE PER SOIL CONDITIONS.
7. ALL SANITARY AND STORM SEWER MANHOLES TO BE 1050mmø WITH MARKINGS PER UBC REQUIREMENTS UNLESS OTHERWISE NOTED.
8. ALL CATCH BASIN LEADS SHALL HAVE A MINIMUM OF 1.0% GRADE.
9. ALL STORM MANHOLES TO BE BENCHED UNLESS NOTED OTHERWISE.
10. CONTRACTOR TO CONFIRM ANY FOUNDATION STABILIZATION REQUIREMENTS OF EXISTING STRUCTURES IN TRENCHING AREA WITH GEOTECHNICAL ENGINEER.
11. EXISTING SANITARY AND STORM SERVICE STUBS ARE TO BE CCTV INSPECTED AFTER SHORING. SUBMIT THE CCTV INSPECTION REPORTS AND VIDEOS TO UTILITIES TO ENSURE NO CONSTRUCTION DAMAGE ON EXISTING SERVICE STUBS.

WATER NOTES :

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH MMCD AND UBC SPECIFICATIONS.
2. WATERMAIN TO HAVE MIN. 1.0m COVER.
3. PIPE BEDDING SHALL BE GRANULAR PIPE BEDDING AND SURROUND MATERIAL CONFORMING TO MMCD CLAUSE 2.7, SECTION 02226.
4. PIPE BACKFILL SHALL BE 100mm PIT RUN GRAVEL MATERIAL CONFORMING TO MMCD CLAUSE 2.3, SECTION 02226.
5. ALL PIPE TO BE CLASS 50 DUCTILE IRON MANUFACTURED TO AWWA C151; CEMENT MORTAR LINED TO AWWA C104 AND COATED 1 MIL. THICK ASPHALT.
6. PRESSURE AND BACTERIOLOGICAL TESTING TO BE DONE BY CONTRACTOR PRIOR TO TIE–IN AND ACCEPTANCE BY UBC UTILITIES. ASSUMED TEST PRESSURE OF 1380 kPa (200 psi).
7. WATER MAIN OR SERVICE PIPE WALLS TO HAVE WRAPPED JOINTS PER LOCAL & MUNICIPAL HEALTH STANDARDS IF CLOSER THAN 0.5m VERTICAL OR 3.0m HORIZONTAL TO SANITARY OR STORM MAIN PIPE WALLS.
8. VALVE, VALVE BOXES, COMPONENTS & HYDRANTS TO BE PER UBC TECHNICAL GUIDELINES SECTION 02660, CLAUSE 2.7 AND 2.8. CIRCULAR VALVE BOXES SHALL BE NELSON TYPE.
9. ALL WATER VALVE KNUCKLES TO BE RAISED TO 0.6m BELOW FINAL GRADE.
10. ALL WATER MAIN JOINTS TO BE RESTRAINED.
11. ALL WATER MAIN FITTINGS TO BE INSTALLED WITH THRUST BLOCKS PER MMCD.
12. ALL TESTING TO BE DONE AND APPROVED BEFORE BACKFILLING PIPE.
13. WHERE CONTROLLED DENSITY FILL (CDF) OR CONCRETE IS USED, 6 MIL POLY BARRIER TO BE PLACED BETWEEN CDF/CONCRETE AND WATER MAIN/FITTINGS.

ROADWORKS NOTES :

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH MMCD AND UBC SPECIFICATIONS.
2. GEOTECHNICAL ENGINEER TO APPROVE ALL SUBGRADES PRIOR TO PLACING BASE MATERIALS.
3. ALL SUBGRADES AND BASE MATERIALS SHALL BE COMPACTED TO 95% MPD. ALL MATERIALS IN ACCORDANCE WITH MMCD STANDARDS.
4. COMPACTION TESTING, ASPHALT TESTING AND CONCRETE TESTING BY CONTRACTOR.
5. ALL PAVEMENT MARKINGS TO BE INCLUDED IN CONTRACT.
6. ALL CONCRETE PAVEMENT AND CONCRETE REINFORCEMENT TO BE IN ACCORDANCE WITH MMCD SECTION 03 20 01, 03 30 20, 32 13 13, AND 03 30 53.
7. CONCRETE MIX TO BE TO SECTION 03 30 53 :
   PORTLAND CEMENT : TYPE 10
   EXPOSURE CLASS : C–2
   SLUMP : 80mm
   AIR ENTRAINMENT : 5% – 8%
   MAX. AGGREGATE SIZE : 20mm
   MIN. 28 DAY COMPRESSIVE STRENGTH : 32 MPa
   MAX. WATER/CEMENT RATIO : 0.45

CURVE TABLE (ROAD BASELINE)			
CURVE	DELTA	RADIUS	ARC
BC200	18°18'57"	20.000	6.393
BC201	3°29'23"	800.200	48.737
BC202	7°05'42"	350.200	43.365
BC203	5°11'44"	70.000	6.348
BC204	4°16'46"	269.200	20.107
BC205	2°51'09"	200.000	9.957
BC206	4°03'48"	250.000	17.730
BC207	4°23'20"	100.000	7.660
BC208	5°57'28"	196.100	20.391
BC209	11°59'35"	8.250	1.727

LINE TABLE (ROAD BASELINE)		
LINE	BEARING	DISTANCE
BL200	N61°56'58"E	125.501
BL201	N80°15'55"E	10.496
BL202	S6°53'18"E	39.305
BL203	S12°36'07"E	3.802
BL204	S19°41'48"E	42.809
BL205	S29°10'18"E	25.621
BL206	S32°01'27"E	67.374
BL207	S27°57'39"E	163.627
BL208	S28°04'28"E	47.905
BL209	N77°14'30"E	125.954
BL210	N72°51'10"E	116.169
BL211	N78°48'38"E	9.826
BL212	N61°56'37"E	60.045
BL213	N73°56'12"E	21.610
BL214	N77°19'14"E	7.700
BL215	S28°03'23"E	146.964
BL216	N61°54'40"E	165.145

CURVE TABLE (FACE OF TEMP. CURB)			
CURVE	DELTA	RADIUS	ARC
C1	33°07'33"	30.00	17.34

LINE TABLE (FACE OF TEMP. CURB)		
LINE	BEARING	DISTANCE
L1	S61°56'58"W	1.164
L2	N5°22'18"W	11.522
L3	N14°07'48"W	14.044
L4	S30°56'13"E	30.323
L5	S28°01'37"E	2.446
L6	S30°56'13"E	32.772
L7	S25°46'26"E	31.504
L8	S28°04'28"E	1.993
L9	S27°44'45"E	5.183

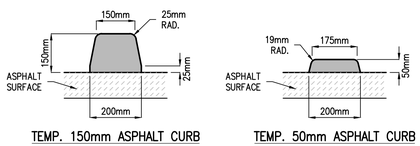
LINE TABLE		
LINE	BEARING	DISTANCE
L300	S28°03'23"E	17.234
L301	S61°56'21"W	3.314
L302	S28°03'23"E	19.800
L303	N61°56'21"E	3.486
L304	S61°56'37"W	3.500
L305	S28°03'23"E	19.800
L306	N61°56'37"E	3.500
L307	S73°03'23"E	6.026
L308	S16°56'37"W	1.744
L309	S28°03'23"E	95.494
L310	N61°56'37"E	13.500
L311	N61°54'31"E	18.474
L312	N28°03'23"W	80.649
L313	S61°56'37"W	7.000
L314	S28°03'23"E	106.756
L315	N61°54'31"E	8.978

CURVE TABLE (FACE OF CURB)			
CURVE	DELTA	RADIUS	ARC
FC1	67°19'16"	9.000	10.575
FC2	7°15'25"	30.000	3.800
FC3	172°44'35"	1.450	4.372
FC4	106°59'44"	9.000	16.807
FC5	1°09'05"	807.900	16.233
FC6	86°08'35"	6.000	9.021
FC7	90°00'00"	10.700	16.808
FC8	89°58'02"	8.500	13.347
FC9	92°12'11"	3.000	4.828
FC10	5°50'12"	355.750	36.240
FC11	2°26'53"	363.250	15.520
FC12	7°01'37"	273.850	33.586
FC13	91°04'57"	5.000	7.948
FC14	180°00'00"	4.436	13.935
FC15	55°09'00"	3.500	3.369
FC16	55°09'00"	3.500	3.369
FC17	55°09'00"	3.500	3.369
FC18	55°09'00"	3.500	3.369
FC19	89°58'02"	8.500	13.347
FC20	45°00'00"	0.600	0.471
FC21	38°55'53"	0.600	0.408
FC22	9°11'39"	3.000	0.481
FC23	9°11'39"	1.000	0.160
FC24	16°02'09"	1.000	0.280
FC25	118°01'44"	4.000	8.240
FC26	90°17'47"	5.000	7.880
FC27	15°39'50"	30.000	8.202
FC28	0°09'37"	1867.903	5.228
FC29	0°03'41"	1870.563	2.001
FC30	88°11'00"	6.000	9.235
FC31	17°00'16"	13.000	3.858
FC32	0°34'57"	792.500	8.059
FC33	3°14'31"	794.650	44.964
FC34	7°05'41"	344.650	42.677
FC35	2°42'56"	352.150	16.690
FC36	4°08'11"	152.150	10.984
FC37	5°28'32"	345.550	33.022
FC38	3°41'58"	408.100	26.349
FC39	76°11'07"	12.000	15.956
FC40	3°00'05"	200.000	10.477
FC41	100°21'43"	4.000	7.007
FC42	4°47'54"	269.700	22.586
FC43	171°57'00"	0.500	1.501
FC44	0°20'22"	151.987	0.901
FC45	3°09'20"	349.700	19.260
FC46	3°19'27"	156.300	9.068
FC47	11°57'48"	59.700	12.465
FC48	169°11'08"	0.600	1.772
FC49	1°31'39"	295.200	7.870
FC50	3°43'41"	119.700	7.789
FC51	4°27'40"	100.300	7.809
FC52	0°44'19"	1878.202	24.215
FC53	180°00'00"	0.300	0.942
FC54	3°41'47"	401.800	25.923

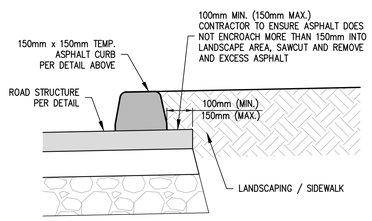
CURVE TABLE (FACE OF CURB)			
CURVE	DELTA	RADIUS	ARC
FC55	176°15'20"	0.950	2.923
FC56	71°11'54"	3.200	3.976
FC57	100°53'53"	3.200	5.635
FC58	29°01'24"	5.000	2.533
FC59	25°19'43"	5.000	2.210
FC60	79°04'22"	6.000	8.280
FC61	0°33'47"	503.850	4.951
FC62	0°33'47"	499.700	4.910
FC63	180°00'00"	0.300	0.942
FC64	10°44'05"	100.300	18.792
FC65	10°44'05"	99.700	18.679
FC66	80°44'44"	9.000	12.683
FC67	20°10'56"	14.000	4.931
FC68	4°37'57"	179.000	14.473
FC69	94°45'08"	5.000	8.269
FC70	4°37'57"	185.000	14.958
FC71	180°00'00"	1.000	3.142
FC72	8°54'58"	120.000	18.674
FC73	8°54'58"	120.000	18.674
FC74	71°03'34"	3.000	3.721
FC75	101°56'58"	3.000	5.338
FC76	5°57'28"	200.000	20.796
FC77	78°22'16"	7.000	9.575
FC78	5°07'17"	205.900	18.405
FC79	90°00'00"	1.500	2.356
FC80	90°00'00"	1.500	2.356
FC81	90°00'00"	1.500	2.356
FC82	90°00'00"	1.500	2.356
FC83	90°00'00"	1.500	2.356
FC84	90°00'00"	1.500	2.356
FC85	90°00'00"	1.500	2.356
FC86	90°00'00"	1.500	2.356
FC87	90°00'00"	1.500	2.356
FC88	90°00'00"	1.500	2.356
FC89	90°00'00"	1.500	2.356
FC90	90°00'00"	1.500	2.356
FC91	90°00'00"	1.500	2.356
FC92	90°00'00"	1.500	2.356
FC93	90°00'00"	1.500	2.356
FC94	90°00'00"	1.500	2.356
FC95	90°00'00"	1.500	2.356
FC96	90°00'00"	1.500	2.356
FC97	90°00'00"	1.500	2.356
FC98	90°00'00"	1.500	2.356
FC99	45°00'00"	1.000	0.785
FC100	90°00'00"	1.000	1.571
FC101	90°01'58"	1.000	1.571
FC102	39°45'34"	1.000	0.694
FC103	95°12'28"	6.400	10.635
FC104	3°42'03"	50.000	3.230
FC105	4°32'58"	10.000	0.794
FC106	11°34'23"	3.150	6.244
FC107	76°42'57"	4.500	6.025

LINE TABLE (FACE OF CURB)		
LINE	BEARING	DISTANCE
FL1	S5°22'18"E	10.624
FL2	S61°56'58"E	18.485
FL3	N61°56'58"E	69.479
FL4	N69°12'23"E	8.481
FL5	S61°56'58"W	81.498
FL6	N61°56'58"E	75.878
FL7	S73°56'12"W	42.476
FL8	S61°56'37"W	15.444
FL9	S28°03'23"E	126.708
FL10	S19°41'48"E	20.952
FL11	S29°10'18"E	24.777
FL12	S29°10'18"E	10.090
FL13	S61°54'40"W	134.612
FL14	N61°54'40"E	88.702
FL15	N61°54'40"E	16.500
FL16	N61°54'40"E	3.907
FL17	N28°03'23"W	52.856
FL18	N73°03'23"W	2.423
FL19	N34°07'30"W	8.079
FL20	N28°03'23"W	19.636
FL21	N18°51'44"W	21.007
FL22	N28°03'23"W	19.513
FL23	N44°05'32"W	6.875
FL24	N73°56'12"E	18.253
FL25	N68°16'34"E	7.004
FL26	N43°20'26"E	8.597
FL27	S46°21'47"E	2.311
FL28	S30°41'57"E	14.327
FL29	S28°19'32"E	5.317
FL30	S44°23'13"E	11.928
FL31	S28°19'32"E	24.110
FL32	S29°34'46"E	16.572
FL33	S27°57'39"E	42.180
FL34	S27°57'36"E	0.906
FL35	S60°13'21"W	6.781
FL36	S77°13'36"W	5.451
FL37	S8°21'35"E	1.462
FL38	S14°07'48"E	10.155
FL39	S12°36'07"E	3.802
FL40	S19°41'48"E	20.952
FL41	S22°24'44"E	18.798
FL42	S32°01'27"E	21.662
FL43	S32°01'27"E	34.516
FL44	S27°57'39"E	74.180
FL45	N75°51'14"E	12.980
FL46	N72°51'10"E	55.595
FL47	S29°10'18"E	18.988
FL48	N29°10'18"W	3.377
FL49	N30°41'57"W	20.939
FL50	N34°25'38"W	24.215
FL51	N27°57'39"W	46.462
FL52	S27°57'39"E	77.878
FL53	S32°01'27"E	38.861

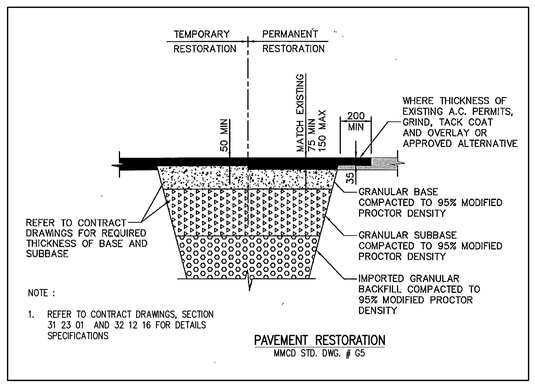
LINE TABLE (FACE OF CURB)		
LINE	BEARING	DISTANCE
FL54	N77°03'20"E	4.837
FL55	S28°02'44"E	0.458
FL56	S77°24'08"W	0.813
FL57	N72°51'10"E	11.905
FL58	S28°04'28"E	12.377
FL59	S28°04'28"E	14.359
FL60	S28°38'15"E	29.509
FL61	N28°38'15"W	32.732
FL62	N28°04'28"W	21.957
FL63	S28°04'28"E	12.520
FL64	S28°04'28"E	9.825
FL65	N28°04'28"W	53.024
FL66	N52°40'16"E	4.251
FL67	N72°51'10"E	26.184
FL68	N77°29'07"E	29.137
FL69	S72°51'10"W	38.683
FL70	N72°51'10"E	34.311
FL71	N72°51'10"E	9.032
FL72	N72°51'10"E	15.708
FL73	S29°07'52"E	4.045
FL74	N72°51'10"E	15.010
FL75	N73°03'23"W	22.626
FL76	S16°56'37"W	0.600
FL77	S73°03'23"E	22.626
FL78	N16°56'37"E	0.600
FL79	N73°03'23"W	22.626
FL80	S16°56'37"W	0.600
FL81	S73°03'23"E	22.626
FL82	N16°56'37"E	0.600
FL83	N73°03'23"W	22.626
FL84	S16°56'37"W	0.600
FL85	S73°03'23"E	22.626
FL86	N16°56'37"E	0.600
FL87	S73°03'23"E	22.626
FL88	N16°56'37"E	0.600
FL89	N73°03'23"W	22.626
FL90	S16°56'37"W	0.600
FL91	S73°03'23"E	22.626
FL92	N16°56'37"E	0.600
FL93	N73°03'23"W	22.626
FL94	S16°56'37"W	0.600
FL95	N73°03'23"W	22.331
FL96	S61°56'37"W	1.621
FL97	S28°03'23"E	27.142
FL98	N61°54'40"E	12.996
FL99	N22°08'05"E	5.275
FL100	N80°45'23"E	7.659
FL101	S72°51'10"W	8.429
FL102	N77°29'07"E	27.124
FL103	N36°05'16"W	1.593
FL104	N29°05'48"W	1.908
FL105	S74°11'15"W	1.033
FL106	N77°24'10"E	3.006



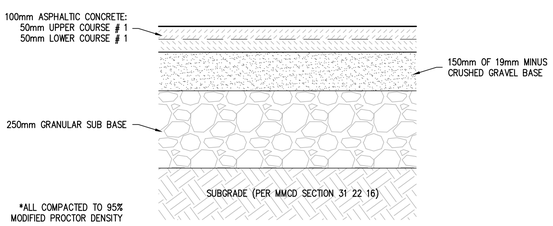
TEMP. 150mm ASPHALT CURB | TEMP. 50mm ASPHALT CURB



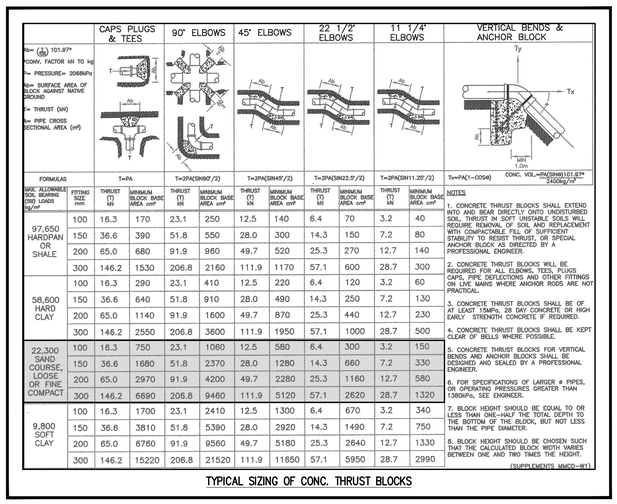
TEMP. ASPHALT CURB
SECTION



PAVEMENT RESTORATION
MMCD STD. DWG. # G5



ASPHALT PAVEMENT SPECS.
STUDENT UNION BLVD. & WESBROOK MALL SPEC.



		97,650 HARDPAN OR SHALE			58,600 HARD CLAY			22,300 SAND COURSE, LOOSE OR FINE COMPACT			9,800 SOFT CLAY		
	FITTING SIZE mm	THRUST (T) kN	MINIMUM BLOCK BASE AREA cm²		THRUST (T) kN	MINIMUM BLOCK BASE AREA cm²		THRUST (T) kN	MINIMUM BLOCK BASE AREA cm²		THRUST (T) kN	MINIMUM BLOCK BASE AREA cm²	
CAPS PLUGS & TEES	100	16.3	170		16.3	290		16.3	750		16.3	1700	
	150	36.6	390		36.6	640		36.6	1680		36.6	3810	
	200	65.0	680		65.0	1140		65.0	2970		65.0	6760	
	300	146.2	1530		146.2	2550		146.2	6690		146.2	15220	
90° ELBOWS	100	23.1	250		23.1	410		23.1	1060		23.1	2410	
	150	51.8	550		51.8	910		51.8	2370		51.8	5390	
	200	91.9	960		91.9	1600		91.9	4200		91.9	9560	
	300	206.8	2160		206.8	3600		206.8	9460		206.8	21520	
45° ELBOWS	100	12.5	140		12.5	220		12.5	580		12.5	1300	
	150	28.0	300		28.0	490		28.0	1280		28.0	2920	
	200	49.7	520		49.7	870		49.7	2280		49.7	5180	
	300	111.9	1170		111.9	1950		111.9	5120		111.9	11650	
22 1/2° ELBOWS	100	6.4	70		6.4	120		6.4	300		6.4	670	
	150	14.3	150		14.3	250		14.3	660		14.3	1490	
	200	25.3	270		25.3	440		25.3	1160		25.3	2640	
	300	57.1	600		57.1	1000		57.1	2620		57.1	5950	
11 1/4° ELBOWS	100	3.2	40		3.2	60		3.2	150		3.2	340	
	150	7.2	80		7.2	130		7.2	330		7.2	750	
	200	12.7	140		12.7	230		12.7	580		12.7	1330	
	300	28.7	300		28.7	500		28.7	1320		28.7	2990	

TYPICAL SIZING OF CONC. THRUST BLOCKS

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VERIFY DIMENSIONS.
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GRAPHIC SCALE
−10 0 10 20
SCALE: 1:500

SEAL

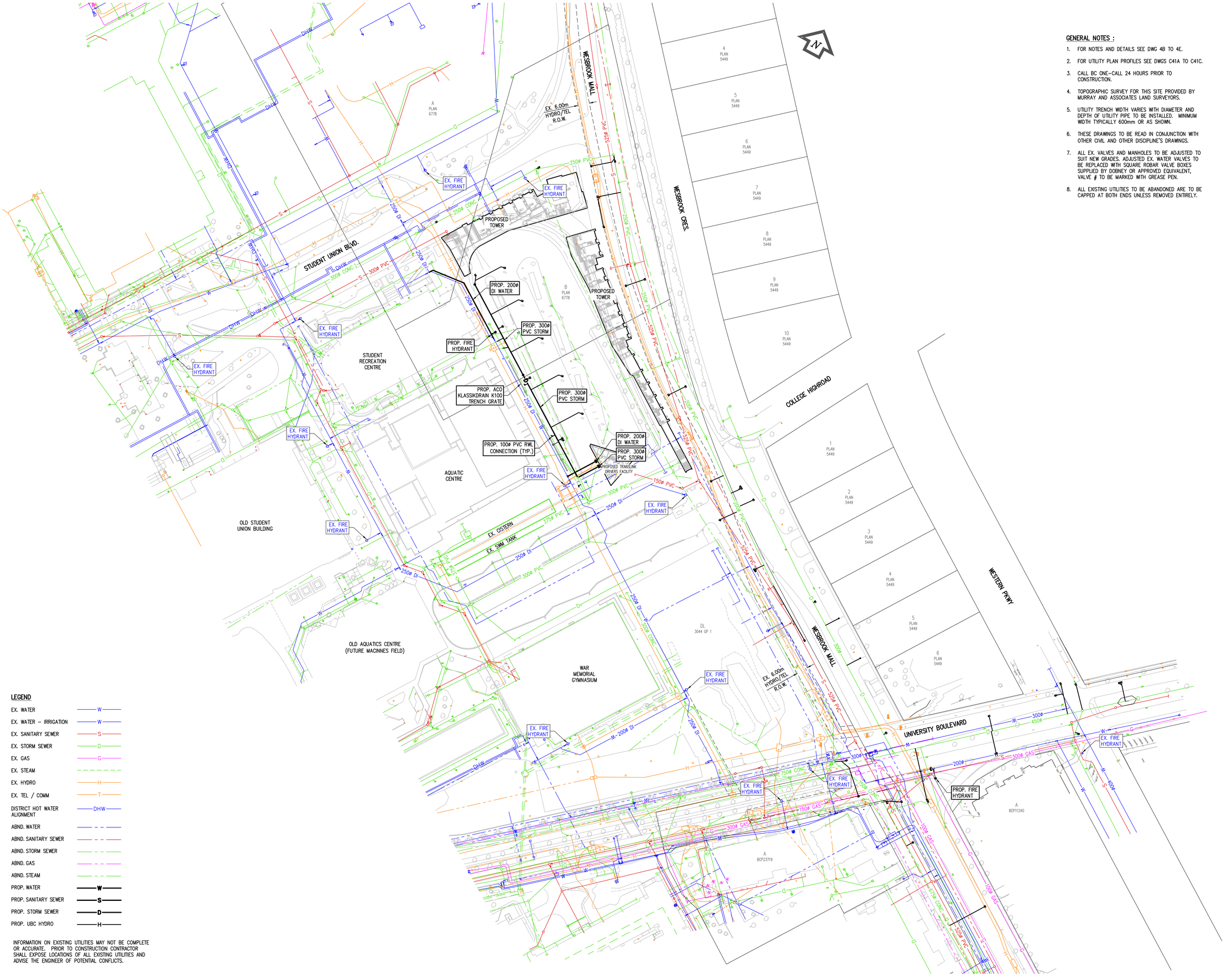
UBC Gage South
ULTIMATE DESIGN

Civil Design
NOTES, DETAILS, & LINE / CURVE DATA

DRAWN: BC CHECKED: CN

C 3

CORE-1773



LEGEND

EX. WATER	W
EX. WATER – IRRIGATION	W
EX. SANITARY SEWER	S
EX. STORM SEWER	D
EX. GAS	G
EX. STEAM	
EX. HYDRO	H
EX. TEL / COMM	T
DISTRICT HOT WATER ALIGNMENT	DHW
ABND. WATER	
ABND. SANITARY SEWER	
ABND. STORM SEWER	
ABND. GAS	
ABND. STEAM	
PROP. WATER	W
PROP. SANITARY SEWER	S
PROP. STORM SEWER	D
PROP. UBC HYDRO	H

INFORMATION ON EXISTING UTILITIES MAY NOT BE COMPLETE OR ACCURATE. PRIOR TO CONSTRUCTION CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.

GENERAL NOTES :

1. FOR NOTES AND DETAILS SEE DWG 4B TO 4E.
2. FOR UTILITY PLAN PROFILES SEE DWGS C41A TO C41C.
3. CALL BC ONE–CALL 24 HOURS PRIOR TO CONSTRUCTION.
4. TOPOGRAPHIC SURVEY FOR THIS SITE PROVIDED BY MURRAY AND ASSOCIATES LAND SURVEYORS.
5. UTILITY TRENCH WIDTH VARIES WITH DIAMETER AND DEPTH OF UTILITY PIPE TO BE INSTALLED. MINIMUM WIDTH TYPICALLY 600mm OR AS SHOWN.
6. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH OTHER CIVIL AND OTHER DISCIPLINE'S DRAWINGS.
7. ALL EX. VALVES AND MANHOLES TO BE ADJUSTED TO SUIT NEW GRADES. ADJUSTED EX. WATER VALVES TO BE REPLACED WITH SQUARE ROBAR VALVE BOXES SUPPLIED BY DOBNEY OR APPROVED EQUIVALENT, VALVE # TO BE MARKED WITH GREASE PEN.
8. ALL EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS UNLESS REMOVED ENTIRELY.

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GRAPHIC SCALE
−15 0 15 30
SCALE: 1:750

SEAL

UBC Gage South
ULTIMATE DESIGN
UNDERGROUND WORKS

Civil Design
UTILITIES - OVERALL
SITE SERVICING

DRAWN: BC CHECKED: CN

C 4A

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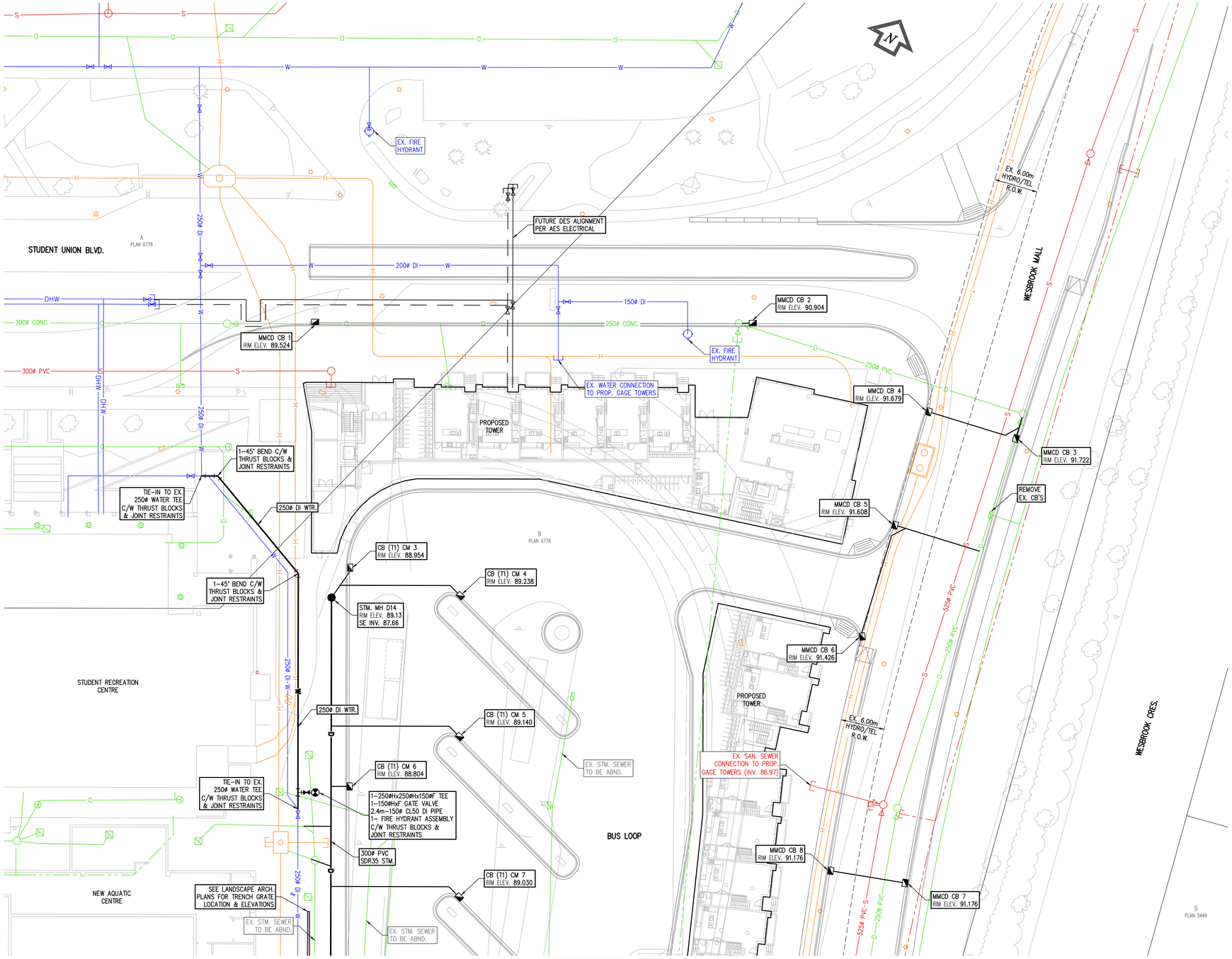

FOR CONTINUATION SEE DWG C4C

LEGEND

EX. WATER	W	ABND. WATER	
EX. WATER – IRRIGATION	W	ABND. SANITARY SEWER	
EX. SANITARY SEWER	S	ABND. STORM SEWER	
EX. STORM SEWER	D	ABND. GAS	
EX. GAS	G	ABND. STEAM	
EX. STEAM		PROP. WATER	W
EX. HYDRO	H	PROP. SANITARY SEWER	S
EX. TEL / COMM	T	PROP. STORM SEWER	D
DISTRICT HOT WATER ALIGNMENT	DHW	PROP. UBC HYDRO	H

GENERAL NOTES:

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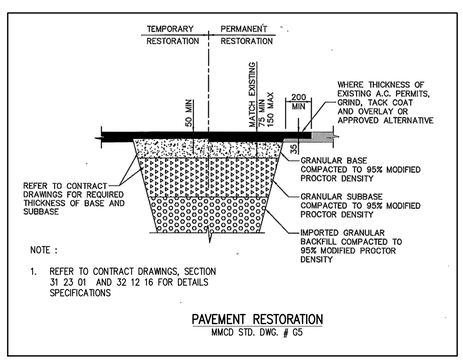
2. FOR UTILITY PLAN PROFILES SEE DWGS C41A TO C41C.
3. CALL BC ONE-CALL 24 HOURS PRIOR TO CONSTRUCTION.
4. COORDINATE ALL EXCAVATIONS CLOSE TO BUILDING WITH SHORING PLANS BY GEOTECH.
5. UTILITY TRENCH WIDTH VARIES WITH DIAMETER AND DEPTH OF UTILITY PIPE TO BE INSTALLED. MINIMUM WIDTH TYPICALLY 600mm OR AS PER MMCD STD. DET. G4.
6. TOPOGRAPHIC SURVEY FOR THIS SITE PROVIDED BY MURRAY AND ASSOCIATES LAND SURVEYORS.
7. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH OTHER CIVIL AND OTHER DISCIPLINE'S DRAWINGS.
8. ALL EX. VALVES AND MANHOLES TO BE ADJUSTED TO SUIT NEW GRADES. ADJUSTED EX. WATER VALVES TO BE REPLACED WITH SQUARE ROBAR VALVE BOXES SUPPLIED BY DORNEY OR APPROVED EQUIVALENT, VALVE # TO BE MARKED WITH GREASE PEN.
9. ALL NEW WATER VALVES TO BE TAGGED BY UBC (TYP.)



PAVEMENT RESTORATION
MMCD STD. DWG. # G5

WATER NOTES :

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH MMCD AND UBC SPECIFICATIONS.
2. WATERMAIN TO HAVE MIN. 1.0m COVER.
3. PIPE BEDDING SHALL BE GRANULAR PIPE BEDDING AND SURROUND MATERIAL CONFORMING TO MMCD CLAUSE 2.7, SECTION 02226.
4. PIPE BACKFILL SHALL BE 100mm PIT RUN GRAVEL MATERIAL CONFORMING TO MMCD CLAUSE 2.3, SECTION 02226.
5. ALL PIPE TO BE CLASS 50 DUCTILE IRON MANUFACTURED TO AWWA C151; CEMENT MORTAR LINED TO AWWA C104 AND COATED 1 MIL. THICK ASPHALT.
6. PRESSURE AND BACTERIOLOGICAL TESTING TO BE DONE BY CONTRACTOR PRIOR TO TIE-IN AND ACCEPTANCE BY UBC UTILITIES. ASSUMED TEST PRESSURE OF 1380 kPa (200 psi).
7. WATER MAIN OR SERVICE PIPE WALLS TO HAVE WRAPPED JOINTS PER LOCAL & MUNICIPAL HEALTH STANDARDS IF CLOSER THAN 0.5m VERTICAL OR 3.0m HORIZONTAL TO SANITARY OR STORM MAIN PIPE WALLS.
8. VALVE, VALVE BOXES, COMPONENTS & HYDRANTS TO BE PER UBC TECHNICAL GUIDELINES SECTION 02660, CLAUSE 2.7 AND 2.8. CIRCULAR VALVE BOXES SHALL BE NELSON TYPE.
9. ALL WATER VALVE KNUCKLES TO BE RAISED TO 0.6m BELOW FINAL GRADE.
10. ALL WATER MAIN JOINTS TO BE RESTRAINED.
11. ALL WATER MAIN FITTINGS TO BE INSTALLED WITH THRUST BLOCKS PER MMCD.
12. ALL TESTING TO BE DONE AND APPROVED BEFORE BACKFILLING PIPE.
13. WHERE CONTROLLED DENSITY FILL (CDF) OR CONCRETE IS USED, 6 MIL POLY BARRIER TO BE PLACED BETWEEN CDF/CONCRETE AND WATER MAIN/FITTINGS.

STORM & SANITARY SEWER NOTES :

1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT UBC AND MMCD SPECIFICATIONS.
2. PIPE BEDDING SHALL BE GRANULAR PIPE BEDDING AND SURROUND MATERIAL CONFORMING TO MMCD CLAUSE 2.7, SECTION 02226.
3. PIPE BACKFILL SHALL BE 100mm PIT RUN GRAVEL MATERIAL CONFORMING TO MMCD CLAUSE 2.3, SECTION 02226.
4. ALL PIPES UP TO AND INCLUDING 525mmø PVC PIPE TO UBC SPECIFICATIONS AS FOLLOWS (UNLESS OTHERWISE NOTED) :
   - 150mmø & SMALLER SDR28
   - 200mmø TO 525mmø SDR35 TO ASTM 03034 SPECS.
5. ALL PIPES SHALL HAVE CLOSED JOINTS
6. PIPE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS FOR PIPE DEPTH AND SLOPE PER SOIL CONDITIONS.
7. ALL SANITARY AND STORM SEWER MANHOLES TO BE 1050mmø WITH MARKINGS PER UBC REQUIREMENTS UNLESS OTHERWISE NOTED.
8. ALL CATCH BASIN LEADS SHALL HAVE A MINIMUM OF 1.0% GRADE.
9. ALL STORM MANHOLES TO BE BENCHED UNLESS NOTED OTHERWISE.
10. CONTRACTOR TO CONFIRM ANY FOUNDATION STABILIZATION REQUIREMENTS OF EXISTING STRUCTURES IN TRENCHING AREA WITH GEOTECHNICAL ENGINEER.
11. EXISTING SANITARY AND STORM SERVICE STUBS ARE TO BE CCTV INSPECTED AFTER SHORING. SUBMIT THE CCTV INSPECTION REPORTS AND VIDEOS TO UTILITIES TO ENSURE NO CONSTRUCTION DAMAGE ON EXISTING SERVICE STUBS.
12. MMCD CB : PER MMCD STD. DET. S11
13. (T1) CM CB : PER COAST MOUNTAIN CATCHBASIN TYPE 1 DETAIL C/W TRAPPING HOOD
14. COMBINATION INLET CM CB : PER COAST MOUNTAIN COMBINATION INLET DETAIL (C/W TRAPPING HOOD)
15. ALL MMCD CB LEADS TO BE 150ø PVC UNLESS OTHERWISE NOTED, ALL CM (COAST MOUNTAIN) CB LEADS TO BE 200ø PVC UNLESS OTHERWISE NOTED

TESTING :

1. ALL TESTING TO BE PERFORMED BY A CSA OR CCIL (CANADIAN CERTIFIED TESTING LABORATORIES) CERTIFIED LABORATORY.
2. FREQUENCY OF DENSITY TESTS FOR EXCAVATING, TRENCHING AND BACKFILLING SHALL BE ONE TEST PER 50 LINEAL METRES OR TRENCH PER METRE OF DEPTH. MATERIAL TO BE COMPACTED IN 300mm LIFTS.
3. FREQUENCY OF DENSITY TESTS FOR ROADWAY EXCAVATION, EMBANKMENT (SUB-GRADE FILL) AND COMPACTION SHALL BE ONE TEST PER 250m² PER 300mm LIFT.
4. FREQUENCY OF DENSITY TESTS FOR GRANULAR BASE AND SUB-BASE SHALL BE ONE TEST PER 30 LINEAL METRES OF LANE WIDTH STAGGERED EACH SIDE OF CENTRELINE PER 150mm LIFT OR OF SPECIFIED THICKNESS.
5. FREQUENCY OF DENSITY TESTS FOR SIDEWALK BASE SHALL BE ONE TEST PER 30 LINEAL METRES WITHIN SIDEWALK AND DRIVEWAY AREA.
6. FREQUENCY OF DENSITY TESTS FOR CURB BASE SHALL BE ONE TEST PER 100 LINEAL METRES.
7. FREQUENCY OF MARSHALL TESTS FOR HOT-MIX ASPHALT CONCRETE PAVING SHALL BE ONE TEST PER 500 TONNES OF MIX PLACED OR ONE TEST FOR EACH TYPE OF ASPHALT MIX, MINIMUM ONE PER DAY.
8. FOR PAVING, CORE LOCATIONS WILL BE SELECTED FOR EACH PASS OF THE PAVING MACHINE AS FOLLOWS:
   - 8.1. ACROSS THE WIDTH, CORE LOCATIONS WILL BE SELECTED RANDOMLY FROM ONE-SIXTH INCREMENTS.
   - 8.2. ALONG THE LENGTH, CORE LOCATIONS WILL HAVE A RANDOMLY SELECTED START WITH CORES AT A SPACING OF APPROXIMATELY, BUT NOT TO EXCEED 30 METRES.
   - 8.3. FOR OTHER PAVING OPERATIONS, A MINIMUM OF ONE CORE FOR EVERY 250 SQUARE METRES OF ASPHALT MIX PLACED.
9. FREQUENCY OF PLASTIC CONCRETE TESTS FOR SIDEWALK SHALL BE ONE TEST PER 150 LINEAL METRES OR A MINIMUM OF ONE PER DAY.
10. FREQUENCY OF PLASTIC CONCRETE TESTS FOR CURB AND GUTTER SHALL BE ONE TEST PER 300 LINEAR METRES OF A MINIMUM OF ONE PER DAY.
11. PRESSURE AND BACTERIOLOGICAL TESTING TO BE DONE BY CONTRACTOR PRIOR TO TIE-IN AND ACCEPTANCE BY UBC UTILITIES. ASSUMED TEST PRESSURE OF 1380 kPa (200 psi). THE CONTRACTOR SHALL TEST ALL WATERMAINS: PRESSURE TEST TO B.C. BUILDING CODE (2012) AND SHALL CHLORINATE AND FLUSH TO MINISTRY OF HEALTH AND AWWA STANDARDS. ALL TESTING IS TO BE WITNESSED BY THE ENGINEER AND THE UBC INSPECTOR. TESTING TO BE APPROVED BY UBC PRIOR TO TIE-IN TO MUNICIPAL WATER SYSTEM. ALL STORM AND SANITARY SYSTEMS TO BE TESTED PER SECTION 3.6 OF THE B.C. PLUMBING CODE. THE ENGINEER IS TO BE NOTIFIED 48 HOURS PRIOR TO TESTING.
12. STORM SEWERS SHALL BE VIDEO INSPECTED PER MMCD SPECIFICATIONS SECTION 02731.
13. SANITARY SEWERS SHALL BE PRESSURE TESTED AND VIDEO INSPECTED PER MMCD SPECIFICATIONS.
14. EXISTING SANITARY AND STORM SERVICE STUBS ARE TO BE CCTV INSPECTED AFTER SHORING. SUBMIT THE CCTV INSPECTION REPORTS AND VIDEOS TO UTILITIES TO ENSURE NO CONSTRUCTION DAMAGE ON EXISTING SERVICE STUBS.
15. ALL TESTING TO BE DONE AND APPROVED BEFORE BACKFILLING PIPE.

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GRAPHIC SCALE
−5 0 5 10
SCALE: 1:250

SEAL

UBC Gage South
ULTIMATE DESIGN
UNDERGROUND WORKS

Civil Design
UTILITIES
SITE SERVICING

DRAWN: BC CHECKED: CN

C 4B

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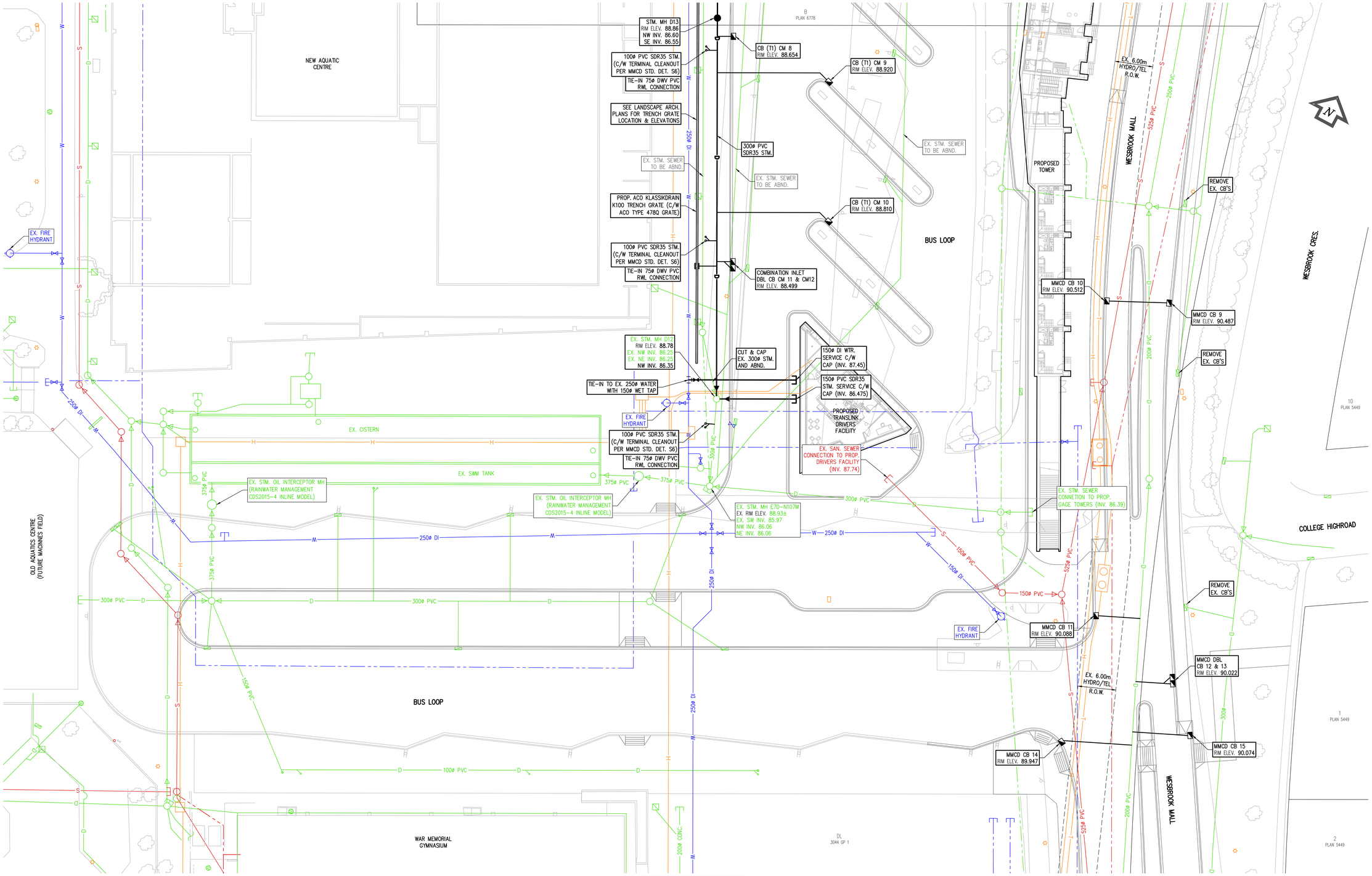
FOR CONTINUATION SEE DWG C4A



FOR CONTINUATION SEE DWG C4D

LEGEND

EX. WATER	W	ABND. WATER	
EX. WATER – IRRIGATION	W	ABND. SANITARY SEWER	
EX. SANITARY SEWER	S	ABND. STORM SEWER	
EX. STORM SEWER	D	ABND. GAS	
EX. GAS	G	ABND. STEAM	
EX. STEAM		PROP. WATER	W
EX. HYDRO	H	PROP. SANITARY SEWER	S
EX. TEL / COMM	T	PROP. STORM SEWER	D
DISTRICT HOT WATER ALIGNMENT	DHW	PROP. UBC HYDRO	H

GENERAL NOTES:

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2. FOR UTILITY PLAN PROFILES SEE DWGS C41A TO C41C.
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GRAPHIC SCALE
−5 0 5 10
SCALE: 1:250

SEAL

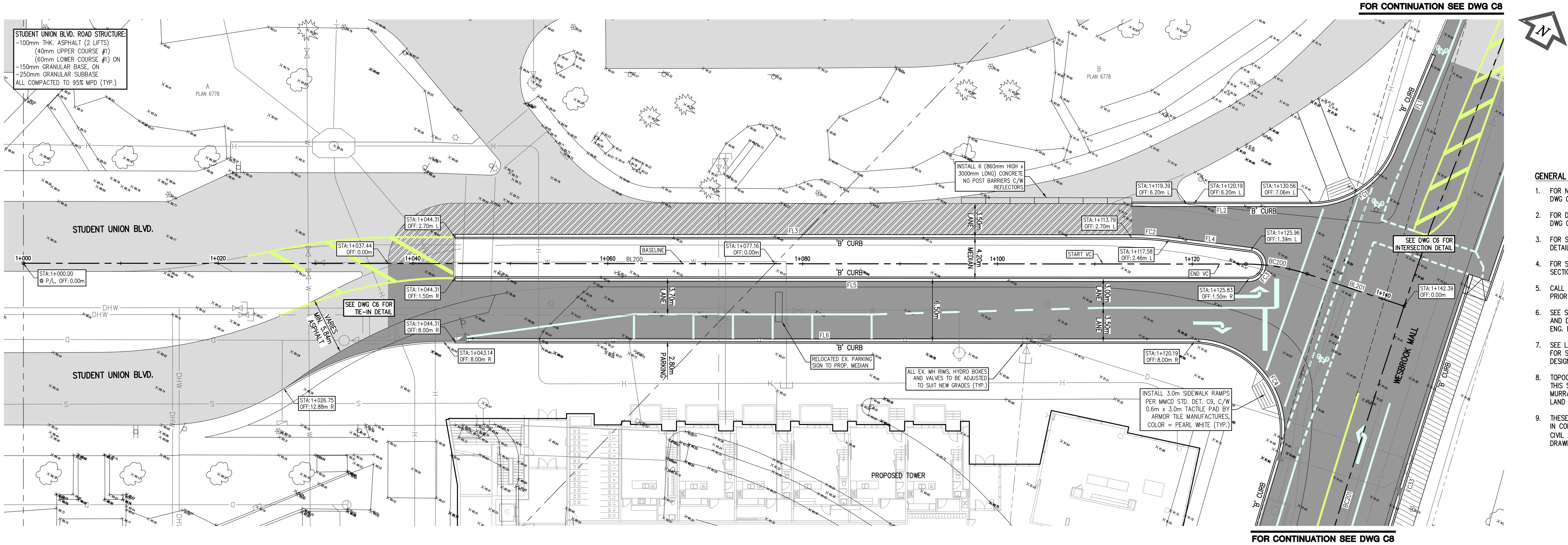
UBC Gage South
ULTIMATE DESIGN UNDERGROUND WORKS

Civil Design
UTILITIES SITE SERVICING

DRAWN: BC CHECKED: CN

C 4C

CORE-1773



FOR CONTINUATION SEE DWG C8

FOR CONTINUATION SEE DWG C8

DIALOG®

GENERAL NOTES:

1. FOR NOTES AND DETAILS SEE DWG C3.
2. FOR DEMOLITION PLANS SEE DWG C2.
3. FOR STUDENT UNION BLVD. DETAILS SEE DWG. C6.
4. FOR STUDENT UNION BLVD. SECTIONS SEE DWG. C7.
5. CALL BC ONE-CALL 24 HOURS PRIOR TO CONSTRUCTION.
6. SEE STREETLIGHT LOCATIONS AND DETAILS SEE ELECTRICAL ENG. DWGS.
7. SEE LANDSCAPE ARCH. DWGS. FOR SIDEWALK AND BOULEVARD DESIGN AND DETAILS
8. TOPOGRAPHIC SURVEY FOR THIS SITE PROVIDED BY MURRAY AND ASSOCIATES LAND SURVEYORS.
9. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH OTHER CIVIL AND OTHER DISCIPLINE'S DRAWINGS.

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LEGEND

- EXISTING ROAD ASPHALT
- PROPOSED ROAD ASPHALT
- PROPOSED RAISED BIKE PATH
- PROPOSED MILL & OVERLAY
- PROPOSED CURB & GUTTER
  'B' = BARRIER
  'R' = ROLL
- PROPOSED BIKE RAMP TRANSITION (2m WIDE x 2m LONG)
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE

GRAPHIC SCALE

-4 0 4 8
SCALE: 1:200

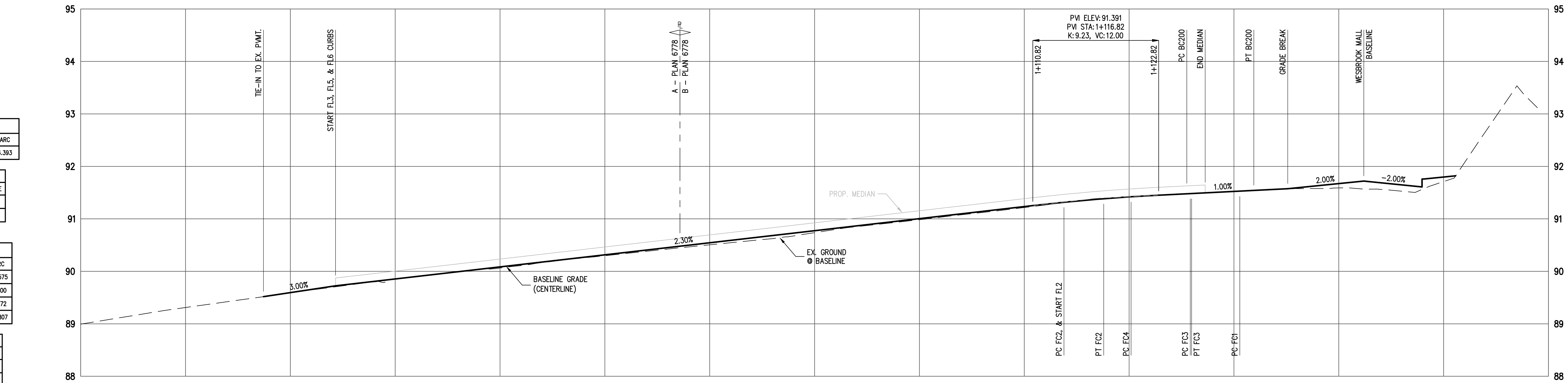
SEAL

CURVE TABLE (ROAD BASELINE)			
CURVE	DELTA	RADIUS	ARC
BC200	18°18'57"	20.000	6.393

LINE TABLE (ROAD BASELINE)		
LINE	BEARING	DISTANCE
BL200	N61°56'58"E	125.501
BL201	N80°15'55"E	10.496

CURVE TABLE (FACE OF CURB)			
CURVE	DELTA	RADIUS	ARC
FC1	67°19'16"	9.000	10.575
FC2	7°15'25"	30.000	3.800
FC3	172°44'35"	1.450	4.372
FC4	106°59'44"	9.000	16.807

LINE TABLE (FACE OF CURB)		
LINE	BEARING	DISTANCE
FL2	S61°56'58"W	18.485
FL3	N61°56'58"E	69.479
FL4	N69°12'23"E	8.481
FL5	S61°56'58"W	81.498
FL6	N61°56'58"E	75.878



EXISTING GRADE @ C/L		89.52±	89.59±	89.70±	89.85±	90.06±	90.30±	90.51±	90.74±	90.98±
NORTH GUTTER GRADE (& EOP TIE-IN)				89.59±	89.73±	89.91±	90.16±	90.38±	90.59±	90.83±
NORTH MEDIAN GUTTER GRADE				89.669	89.800	90.030	90.260	90.490	90.720	90.950
C/L GRADE (BASELINE)		89.520	89.594	89.723	89.854	90.084	90.314	90.544	90.774	91.004
SOUTH MEDIAN GUTTER GRADE				89.693	89.824	90.054	90.284	90.514	90.744	90.974
SOUTH GUTTER GRADE				89.563	89.694	89.924	90.154	90.384	90.614	90.844
STATION	1+030	1+037.44	1+040	1+044.31	1+050	1+060	1+070	1+080	1+090	1+100

EXISTING GRADE @ C/L	91.22± 91.24±	91.31±	91.38±	91.43± 91.43±	91.45±	91.47± 91.48± 91.49± 91.50±	91.53± 91.54± 91.55±	91.57±	91.59±	91.57±	91.71±
NORTH GUTTER GRADE (& EOP TIE-IN)	91.08± 91.10±	(90.19±) 91.193	91.260	91.295	91.327	91.354	FOR GRADES SEE INTERSECTION DETAIL (DWG C06)				
NORTH MEDIAN GUTTER GRADE	91.180 91.199	91.263	91.335	91.376	91.413	91.449					
C/L GRADE (BASELINE)	91.234 91.253	91.317	91.384	91.419 91.421	91.451	91.478 91.481 91.482 91.495	91.523 91.528 91.542	91.574	91.672	91.719	91.797
SOUTH MEDIAN GUTTER GRADE	91.204 91.223			91.389 91.391	91.421	91.448					
SOUTH GUTTER GRADE	91.074 91.093			91.258 91.261			FOR GRADES SEE INTERSECTION DETAIL (DWG C06)				
STATION	1+110 1+110.82	1+113.79	1+117.58	1+120 1+120.19	1+122.82	1+125.50 1+125.83 1+125.96 1+127.26	1+130 1+130.56 1+131.89	1+135.13	1+140	1+142.39	1+150

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UBC Gage South

ULTIMATE DESIGN
SURFACE WORKS

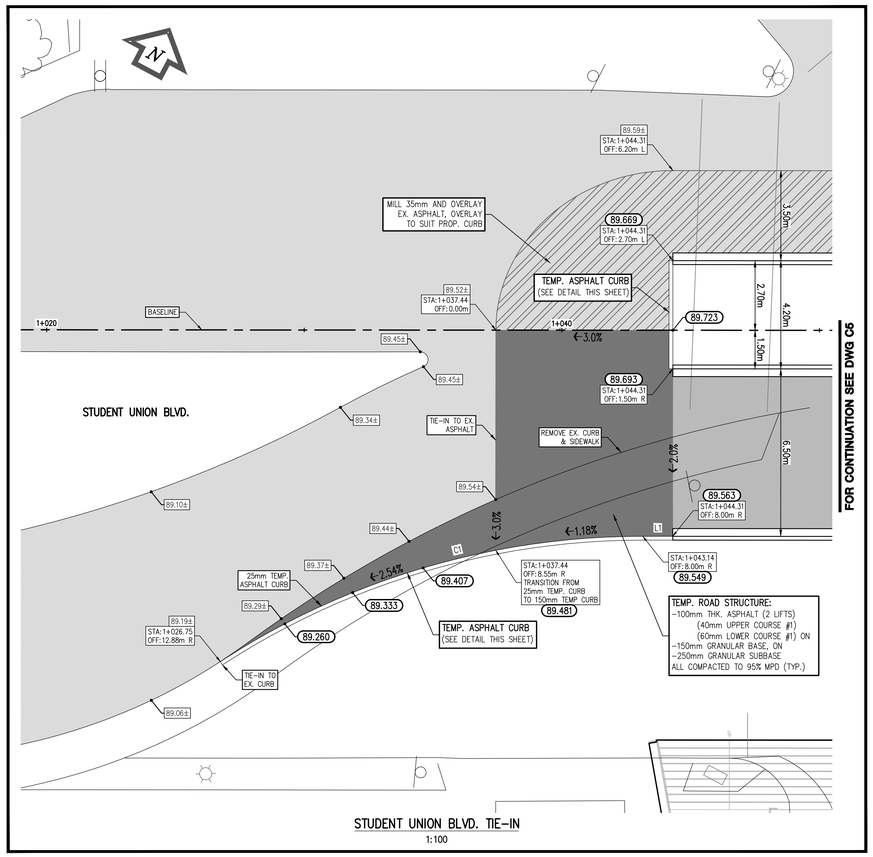
Civil Design

PAVING - PLAN / PROFILE
STUDENT UNION BLVD.

DRAWN: BC CHECKED: CN

C 5

CORE-1773



STUDENT UNION BLVD. TIE-IN
1:100

GENERAL NOTES:

1. FOR NOTES AND DETAILS SEE DWG C3.
2. FOR DEMOLITION PLANS SEE DWG C2.
3. FOR STUDENT UNION BLVD. PLAN / PROFILE SEE DWG. C5.
4. FOR STUDENT UNION BLVD. SECTIONS SEE DWG. C7.
5. CALL BC ONE-CALL 24 HOURS PRIOR TO CONSTRUCTION.
6. TOPOGRAPHIC SURVEY FOR THIS SITE PROVIDED BY MURRAY AND ASSOCIATES LAND SURVEYORS.
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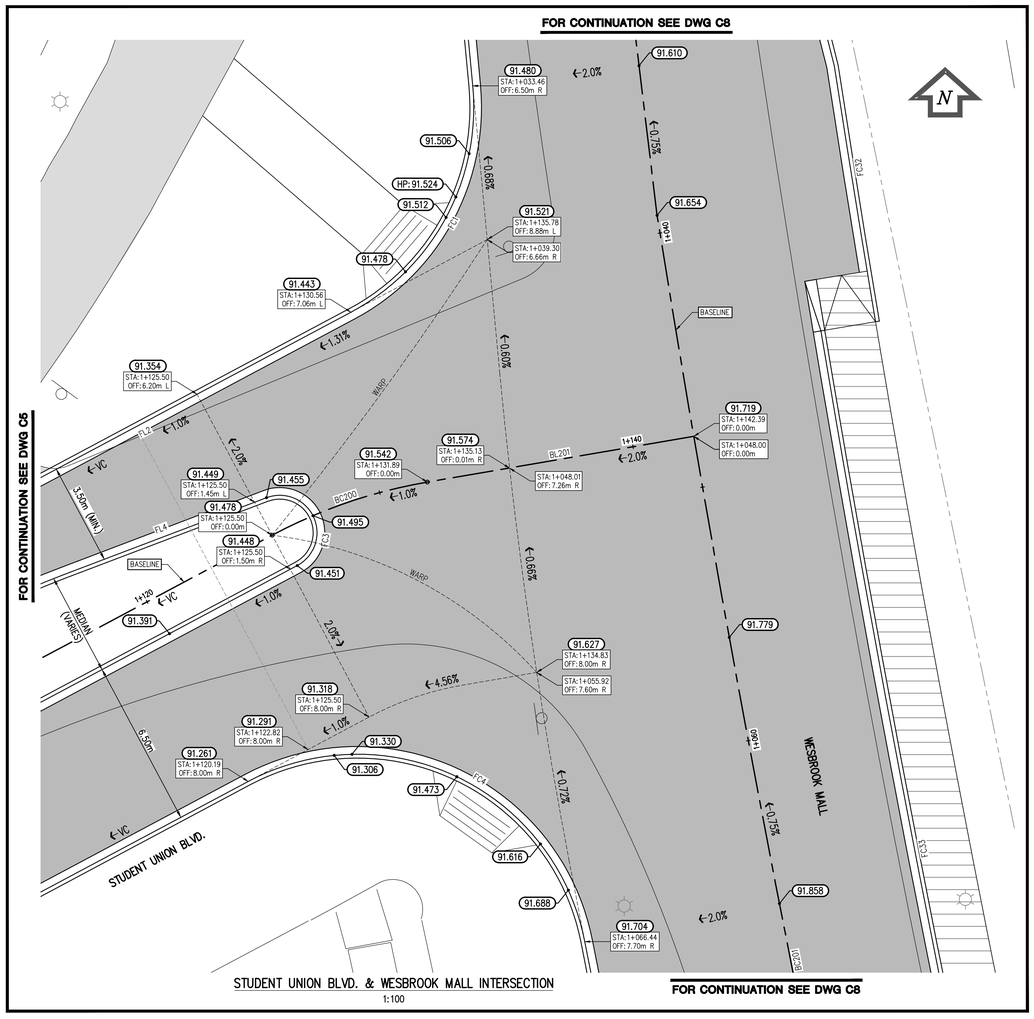
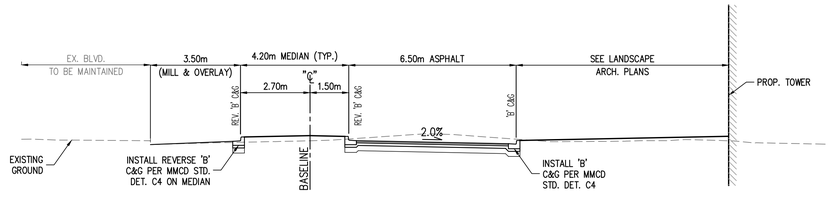
LEGEND

- EXISTING ROAD ASPHALT
- PROPOSED ROAD ASPHALT
- PROPOSED TEMP. ROAD ASPHALT
- PROPOSED MILL & OVERLAY
- PROPOSED CURB & GUTTER
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE
- VC VERTICAL CURVE
- GB: GRADE BREAK
- LP: LOW POINT
- HP: HIGH POINT
- 91.164 EXISTING ELEVATIONS
- 91.462 PROPOSED ELEVATIONS

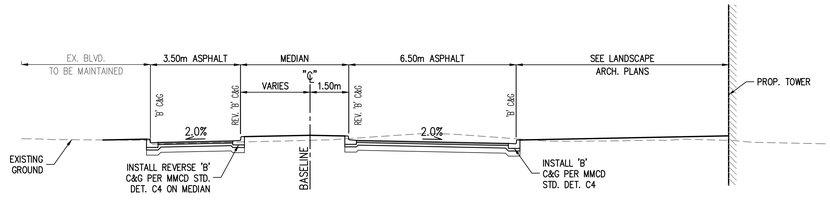
CURVE TABLE (FACE OF TEMP. CURB)			
CURVE	DELTA	RADIUS	ARC
C1	33°07'33"	30.00	17.34

LINE TABLE (FACE OF TEMP. CURB)		
LINE	BEARING	DISTANCE
L1	S61°56'58"W	1.164





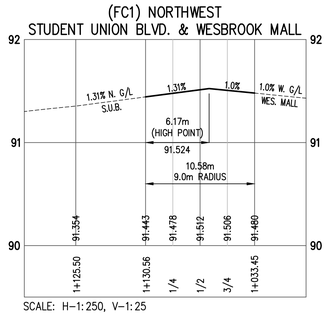
STUDENT UNION BLVD.
STA: 1+037.44 TO STA: 1+113.79
SCALE 1:100



STUDENT UNION BLVD.
STA: 1+013.79 TO WESBROOK
SCALE 1:100

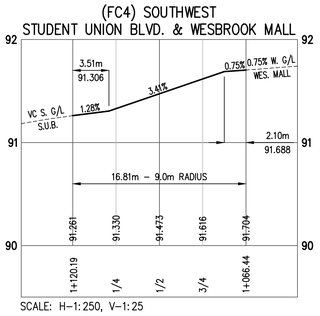
STUDENT UNION BLVD. ROAD STRUCTURE:
-100mm THK. ASPHALT (2 LIFTS)
(40mm UPPER COURSE #1)
(60mm LOWER COURSE #1) ON
-150mm GRANULAR BASE, ON
-250mm GRANULAR SUBBASE
ALL COMPACTED TO 95% MPD (TYP.)

(FC1) NORTHWEST
STUDENT UNION BLVD. & WESBROOK MALL

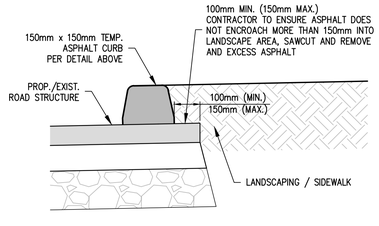


SCALE: H-1:250, V-1:25

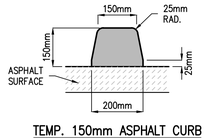
(FC4) SOUTHWEST
STUDENT UNION BLVD. & WESBROOK MALL



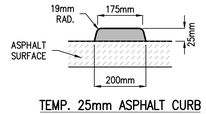
SCALE: H-1:250, V-1:25



TEMP. ASPHALT CURB
SECTION



TEMP. 150mm ASPHALT CURB



TEMP. 25mm ASPHALT CURB

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DIALOG®

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METRIC

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GRAPHIC SCALE
-4 0 4 8
SCALE: 1:200

SEAL

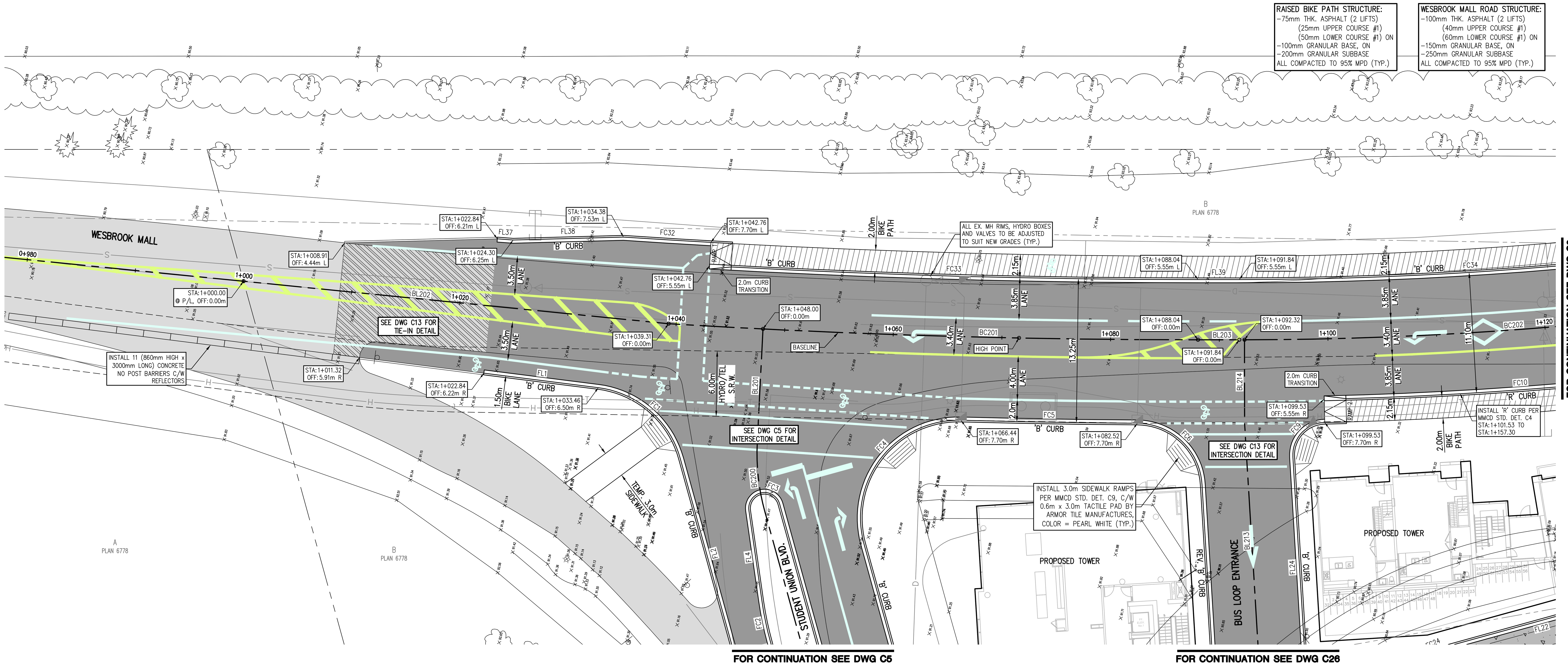
UBC Gage South
ULTIMATE DESIGN
SURFACE WORKS

Civil Design
PAVING - DETAILS
STUDENT UNION BLVD.

DRAWN: BC CHECKED: CN

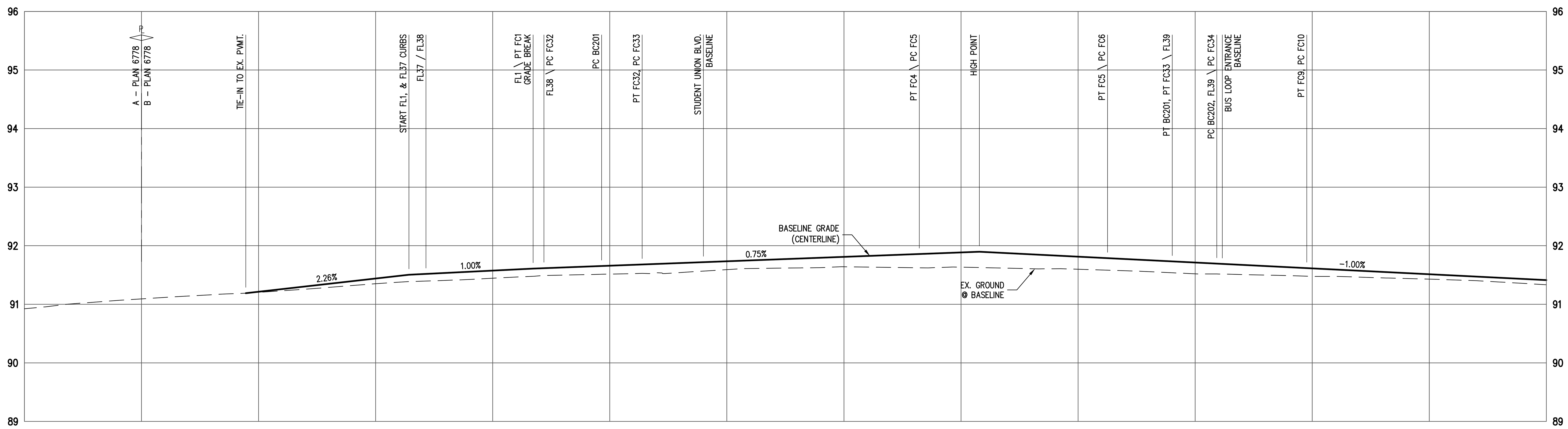
C 6

CORE-1773



FOR CONTINUATION SEE DWG C5

FOR CONTINUATION SEE DWG C26



STATION	EXISTING GRADE @ C/L	BACK OF EAST BIKE PATH	EAST GUTTER GRADE	EAST MEDIAN GUTTER GRADE	C/L GRADE (BASELINE)	WEST MEDIAN GUTTER GRADE	WEST GUTTER GRADE	BACK OF WEST BIKE PATH
1+000	91.09±							
1+008.91	91.19±				91.189			
1+010	91.20±				91.214			
					FOR GRADES SEE TIE-IN DETAIL (DWG C13)			
1+020	91.35±				91.440			
1+022.84	91.39±		91.379		91.504		91.379	
1+024.30	91.40±		91.393		91.518			
1+030	91.45±		91.435		91.575		91.447	
	91.46±							
1+033.46	91.48±				91.610		91.480	
1+034.38	91.49±		91.466		91.617			
1+039.31	91.51±		91.500		91.654			
1+040	91.52±		91.505		91.659			
1+042.76	91.50±	(@ CURB) 91.526	91.569		91.680			
1+048.00	91.57±	91.798	91.608		91.719		FOR GRADES SEE INTERSECTION DETAIL (DWG C06)	
1+050	91.59±	91.868	91.678		91.734			
1+060	91.64±	91.888	91.698		91.809			
1+066.44	91.62±				91.858		91.704	
1+070	91.63±	91.964	91.774		91.885		91.731	
1+071.57	91.63±	91.975	91.785		91.896		91.742	
1+080	91.60±	91.891	91.701		91.812		91.658	
1+082.52	91.58±				91.787		91.633	
1+088.04	91.54±	91.811	91.621		91.732		FOR GRADES SEE INTERSECTION DETAIL (DWG C13)	
1+090	91.52±	91.791	91.601		91.712			
1+091.84	91.52±	91.773	91.583		91.694			
1+092.32	91.52±	91.768	91.578		91.689			
1+099.53	91.48±				91.617		91.506	(@ CURB) 91.463
1+100	91.48±	91.691	91.501		91.612		91.501	
1+110	91.43±	91.591	91.401		91.512		91.401	91.501
1+120	91.33±	91.514	91.324		91.435		91.324	91.424

GENERAL NOTES:

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3. FOR WESBROOK MALL DETAILS SEE DWG C13 & C16.
4. FOR WESBROOK MALL SECTIONS SEE DWG. C17 TO C19.
5. CALL BC ONE-CALL 24 HOURS PRIOR TO CONSTRUCTION.
6. SEE STREETLIGHT LOCATIONS AND DETAILS SEE ELECTRICAL ENG. DWGS.
7. SEE LANDSCAPE ARCH. DWGS. FOR SIDEWALK AND BOULEVARD DESIGN AND DETAILS
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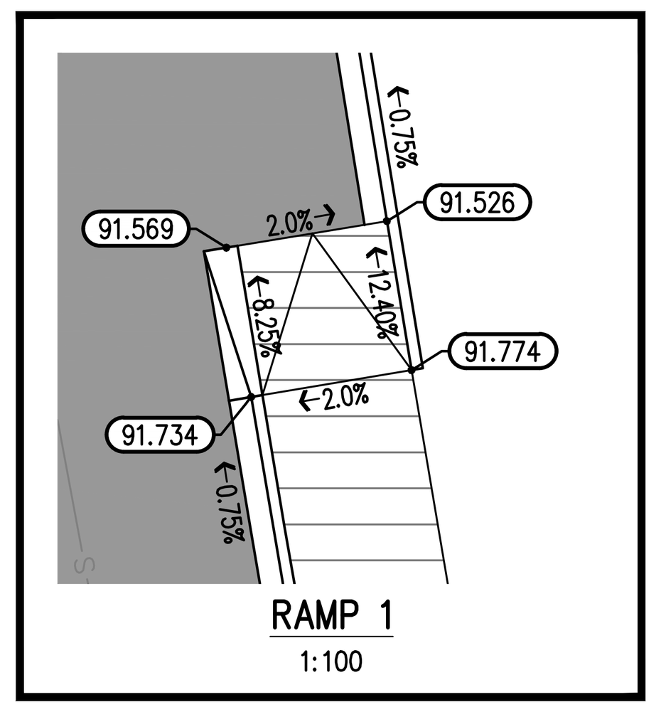

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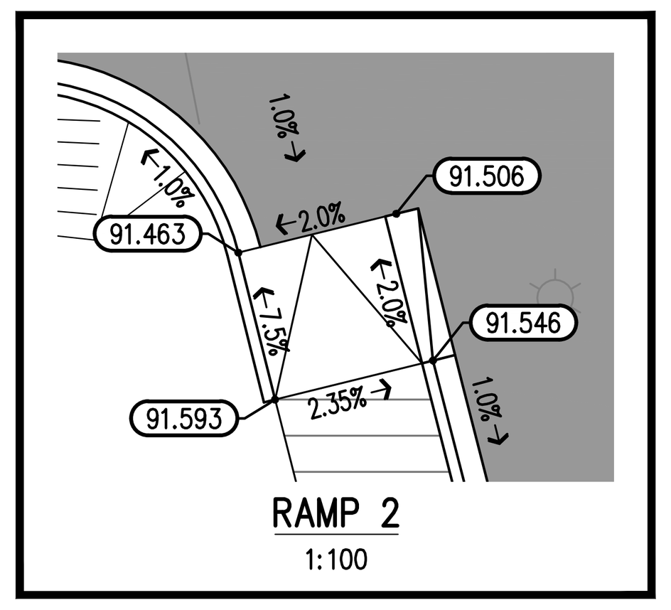

RAMP 2
1:100

CURVE TABLE (ROAD BASELINE)			
CURVE	DELTA	RADIUS	ARC
BC201	3°29'23"	800.200	48.737
BC202	7°05'42"	350.200	43.365

LINE TABLE (ROAD BASELINE)		
LINE	BEARING	DISTANCE
BL202	S6°53'18"E	39.305
BL203	S12°36'07"E	3.802

CURVE TABLE (FACE OF CURB)			
CURVE	DELTA	RADIUS	ARC
FC1	67°19'16"	9.000	10.575
FC4	106°59'44"	9.000	16.807
FC5	1°09'05"	807.900	16.233
FC6	86°08'35"	6.000	9.021
FC9	92°12'11"	3.000	4.828
FC10	5°50'12"	355.750	36.240
FC32	0°34'57"	792.500	8.059
FC33	3°14'31"	794.650	44.964
FC34	7°05'41"	344.650	42.677

LINE TABLE (FACE OF CURB)		
LINE	BEARING	DISTANCE
FL1	S5°22'18"E	10.624
FL37	S8°21'35"E	1.462
FL38	S14°07'48"E	10.155
FL39	S12°36'07"E	3.802

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LEGEND

- EXISTING ROAD ASPHALT
- PROPOSED ROAD ASPHALT
- PROPOSED RAISED BIKE PATH
- PROPOSED MILL & OVERLAY
- PROPOSED CURB & GUTTER
  'B' = BARRIER
  'R' = ROLL
- PROPOSED BIKE RAMP TRANSITION (2m WIDE x 2m LONG)
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE

GRAPHIC SCALE
-4 0 4 8
SCALE: 1:200

SEAL

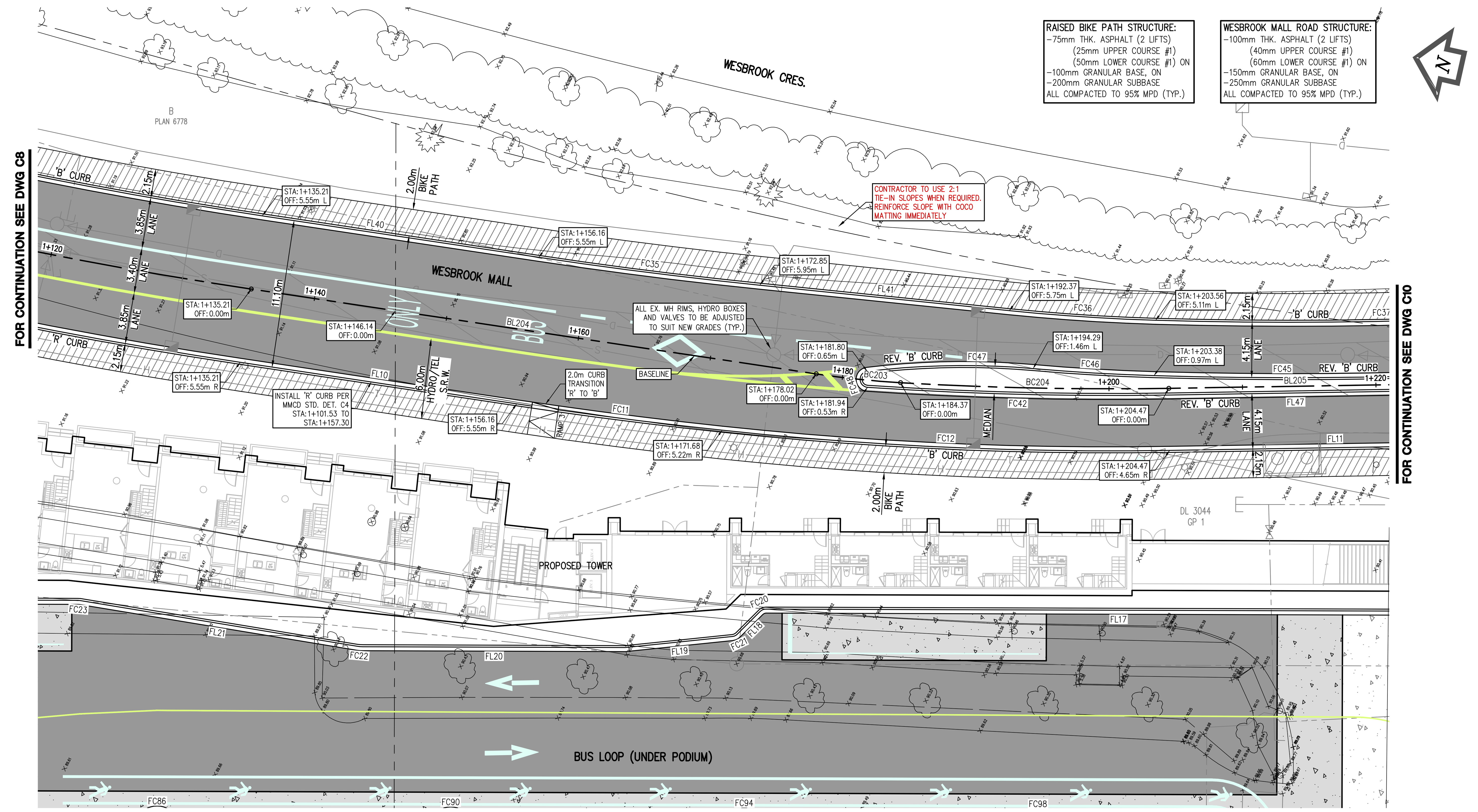
UBC Gage South
ULTIMATE DESIGN
SURFACE WORKS

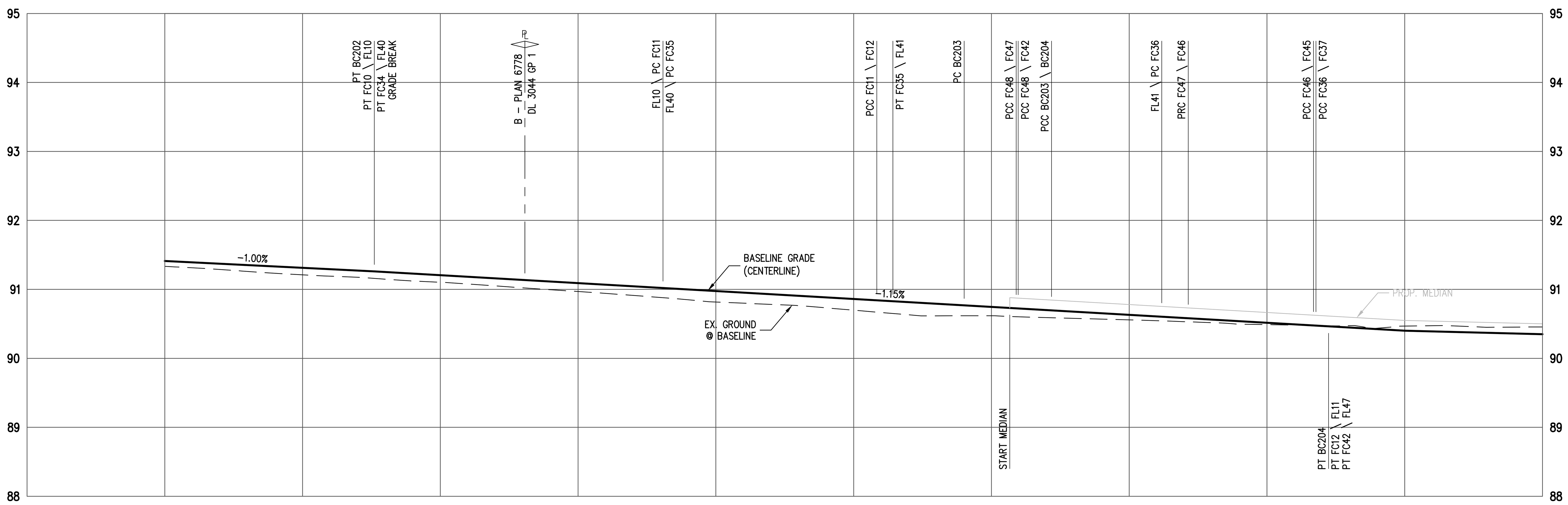
Civil Design
PAVING - PLAN / PROFILE
WESBROOK MALL

DRAWN: BC CHECKED: CN

C 8

CORE-1773





STATION	EXISTING GRADE @ C/L	BACK OF EAST BIKE PATH	EAST GUTTER GRADE	EAST MEDIAN GUTTER GRADE	C/L GRADE (BASELINE)	WEST MEDIAN GUTTER GRADE	WEST GUTTER GRADE	BACK OF WEST BIKE PATH
1+120	91.33±	91.514	91.324		91.435		91.324	91.424
1+130	91.21±	91.391	91.201		91.312		91.201	91.301
1+135.21	91.16±	91.339	91.149		91.260		91.149	91.249
1+140	91.10±	91.284	91.094		91.205		91.094	91.194
1+150	90.97±	91.169	90.979		91.090		90.979	91.079
1+156.16	90.88±	91.098	90.908		91.019		90.908	91.008
1+160	90.82±	91.053	90.863		90.975		90.864	90.054
1+170	90.70±	90.993	90.743		90.860		90.754	90.944
1+171.68	90.67±				90.841		90.736	90.926
1+172.85	90.65±	90.898	90.708		90.827			
1+178.02	90.62±	90.834	90.644		90.768		90.670	90.860
1+180	90.62±	90.430	90.620		90.745		90.650	90.840
1+181.33	90.61±	90.794	90.604		90.730		90.636	90.826
1+181.80	90.60±	90.789	90.599	90.711	90.724			
1+181.94	90.60±				90.723	90.712	90.629	90.819
1+184.37	90.59±	90.761	90.571	90.673	90.695	90.685	90.602	90.792
1+190	90.56±	90.702	90.512	90.599	90.630	90.620	90.537	90.727
1+192.37	90.54±	90.678	90.488	90.572	90.603			
1+194.29	90.53±	90.659	90.469	90.552	90.581			
1+200	90.49±	90.599	90.409	90.493	90.515	90.505	90.422	90.612
1+203.38	90.48±	90.563	90.373	90.457	90.476			
1+203.56	90.48±	90.562	90.372	90.455	90.474			
1+204.47	90.47±				90.464	90.454	90.371	90.561
1+210	90.47±	90.492	90.302	90.385	90.400	90.390	90.307	90.497
1+220	90.46±	90.445	90.255	90.338	90.350	90.340	90.257	90.447

FOR GRADES SEE INTERSECTION DETAIL (DWG C14)

DIALOG®

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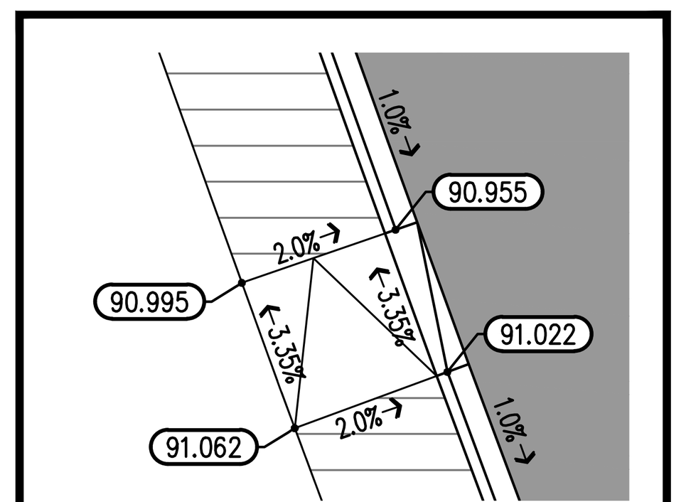

RAMP 3
1:100

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- PROPOSED ROAD ASPHALT
- PROPOSED RAISED BIKE PATH
- PROPOSED CURB & GUTTER
  'B' = BARRIER
  'R' = ROLL
- PROPOSED BIKE RAMP TRANSITION (2m WIDE x 2m LONG)
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE

CURVE TABLE (ROAD BASELINE)			
CURVE	DELTA	RADIUS	ARC
BC202	7°05'42"	350.200	43.365
BC203	5°11'44"	70.000	6.348
BC204	4°16'46"	269.200	20.107

LINE TABLE (ROAD BASELINE)		
LINE	BEARING	DISTANCE
BL204	S19°41'48"E	42.809
BL205	S29°10'18"E	25.621

GRAPHIC SCALE
-4 0 4 8
SCALE: 1:200

CURVE TABLE (FACE OF CURB)			
CURVE	DELTA	RADIUS	ARC
FC10	5°50'12"	355.750	36.240
FC11	2°26'53"	363.250	15.520
FC12	7°01'37"	273.850	33.586
FC34	7°05'41"	344.650	42.677
FC35	2°42'56"	352.150	16.690
FC36	4°08'11"	152.150	10.984
FC37	5°28'32"	345.550	33.022
FC42	4°47'54"	269.700	22.586
FC45	3°09'20"	349.700	19.260
FC46	3°19'27"	156.300	9.068
FC47	11°57'48"	59.700	12.465
FC48	169°11'08"	0.600	1.772

LINE TABLE (FACE OF CURB)		
LINE	BEARING	DISTANCE
FL10	S19°41'48"E	20.952
FL11	S29°10'18"E	24.777
FL40	S19°41'48"E	20.952
FL41	S22°24'44"E	18.798
FL47	S29°10'18"E	18.988

SEAL

UBC Gage South

ULTIMATE DESIGN
SURFACE WORKS

Civil Design

PAVING - PLAN / PROFILE
WESBROOK MALL

DRAWN: BC CHECKED: CN

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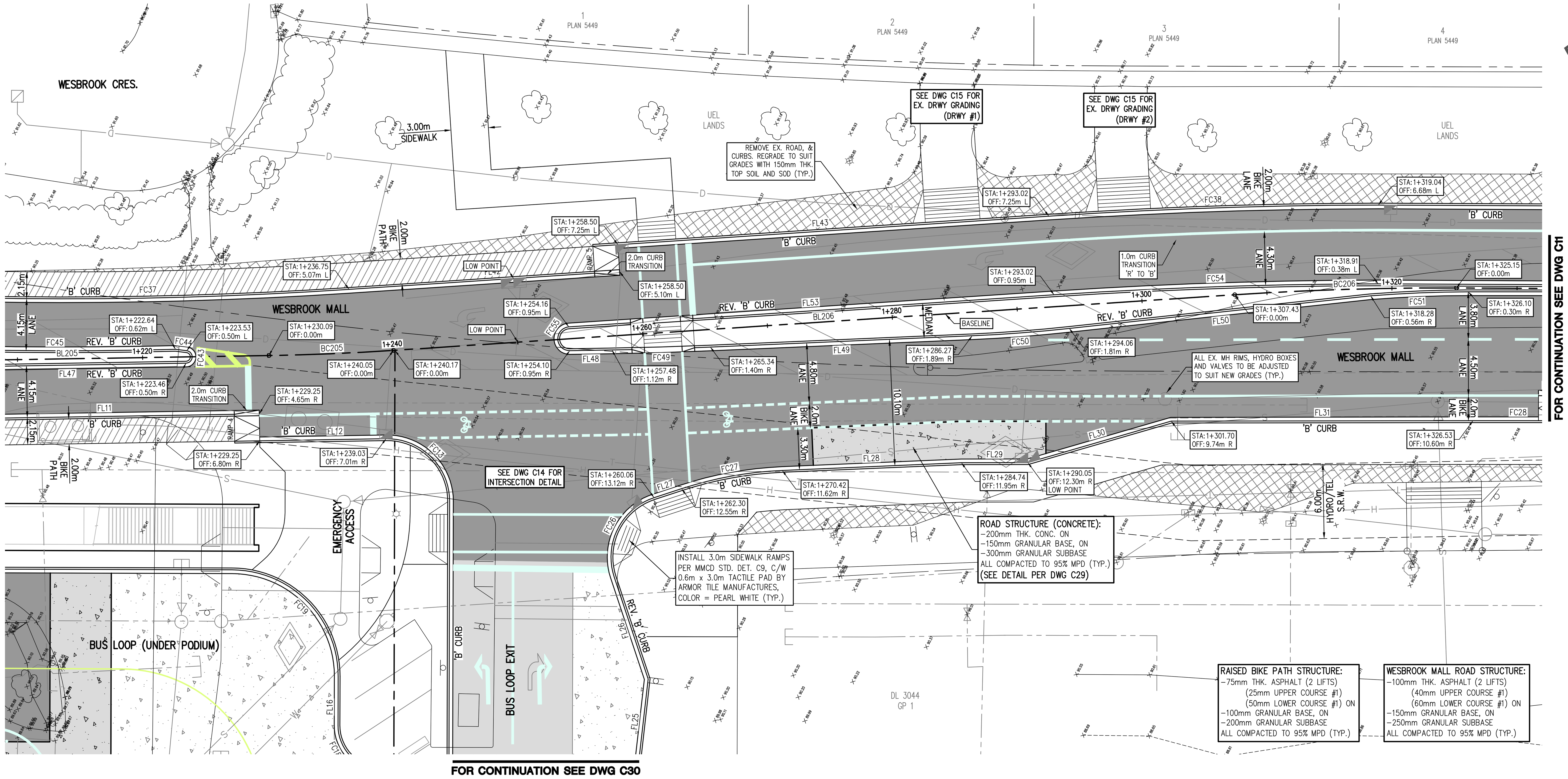
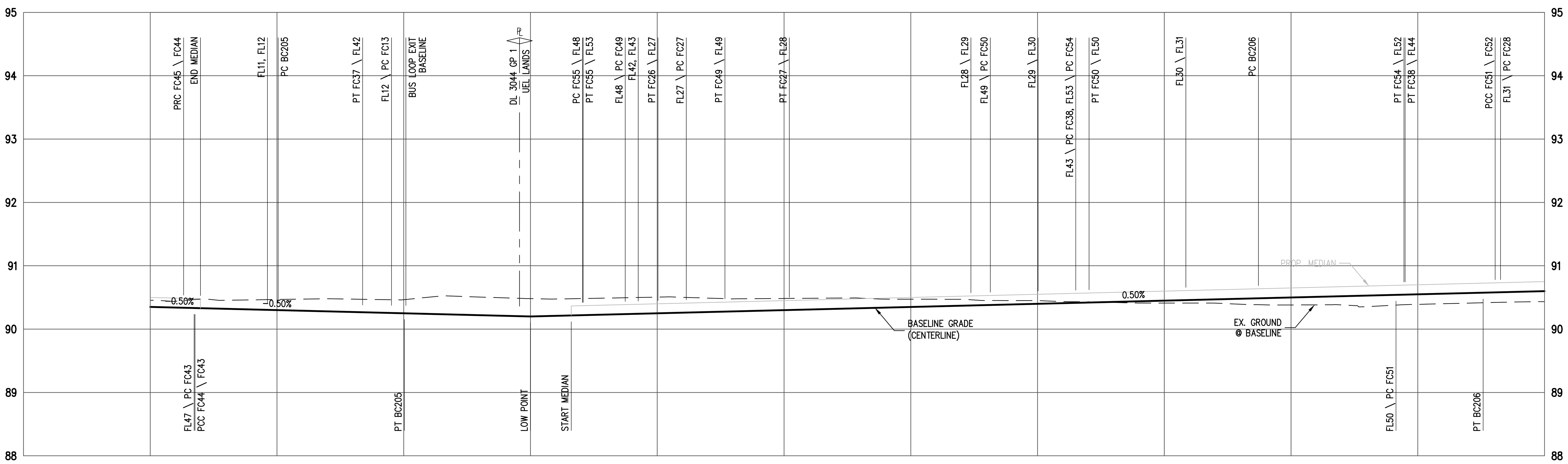
C 9

CORE-1773





	1+220	1+222.64 / 1+223.46 / 1+223.53 / 1+223.96	1+229.25 / 1+230 / 1+230.09	1+236.75	1+239.03 / 1+240 / 1+240.05 / 1+240.17	1+250	1+253.21 / 1+254.10 / 1+254.16	1+257.48 / 1+258.50	1+260 / 1+260.06	1+262.30	1+265.34	1+270 / 1+270.42
EXISTING GRADE @ C/L	90.46±	90.45± 90.47± 90.47± 90.47±	90.47± 90.47± 90.47±	90.47±	90.46± 90.47± 90.47± 90.47±	90.48±	90.48± 90.48± 90.48±	90.49± 90.50±	90.50± 90.50±	90.50±	90.48±	90.48± 90.48±
BACK OF EAST BIKE PATH	90.445	90.408 90.402	90.361 90.361	90.320	90.300 90.300	90.237		90.098 (@ CURB)				
EAST GUTTER GRADE	90.255	90.218 90.212	90.171 90.171	90.130	90.110 90.110 FOR GRADES SEE INTERSECTION DETAIL (DWG C14)	90.047	FOR GRADES SEE INTERSECTION DETAIL (DWG C14)	90.141	90.105			90.155
EAST MEDIAN GUTTER GRADE	90.338	90.321 90.319					90.197	90.224	90.231			90.281
C/L GRADE (BASELINE)	90.350	90.337 90.333 90.332 90.330	90.304 90.300 90.300	90.266	90.255 90.250 90.250 90.249	90.200	90.216 90.221 90.221	90.237 90.243	90.250 90.250	90.261	90.277	90.300 90.302
WEST MEDIAN GUTTER GRADE	90.340	90.323					90.202	90.215	90.225 90.225	90.235	90.249	90.270 90.272
WEST GUTTER GRADE	90.257	90.240 90.237	90.211 90.164 90.164		90.113	FOR GRADES SEE INTERSECTION DETAIL (DWG C14)			89.987	90.010	90.038	90.067 90.069
BACK OF WEST BIKE PATH	90.447	90.430 90.427	90.168 (@ CURB)									

	1+280	1+284.74	1+286.27	1+290 / 1+290.05	1+293.02 / 1+294.06	1+300	1+301.70	1+307.43	1+310	1+318.28 / 1+318.91 / 1+319.04 / 1+320	1+325.15 / 1+326.10 / 1+326.53	1+330
EXISTING GRADE @ C/L	90.47±	90.46±	90.45±	90.45± 90.45±	90.43± 90.43±	90.41±	90.41±	90.38±	90.38±	90.38± 80.39± 80.39± 90.39±	90.42± 90.42± 90.42±	90.43±
BACK OF EAST BIKE PATH												
EAST GUTTER GRADE	90.205			90.255	90.270	90.306		90.347	90.361	90.411 90.411 90.416	90.444	90.468
EAST MEDIAN GUTTER GRADE	90.331			90.381	90.396	90.433		90.473	90.488	90.537 90.537 90.543	90.570	90.594
C/L GRADE (BASELINE)	90.350	90.374	90.381	90.400 90.400	90.415 90.420	90.450	90.458	90.487	90.500	90.541 90.545 90.545 90.550	90.576 90.580 90.583	90.600
WEST MEDIAN GUTTER GRADE	90.299	90.312	90.315	90.328 90.328	90.356	90.400	90.413	90.452	90.469	90.526 90.538	90.568 90.572 90.575	90.594
WEST GUTTER GRADE	90.005	89.973	89.963	89.938 89.938	90.016	90.133	90.166	90.201	90.216	90.264 90.275	90.305 90.310 90.313	90.388
BACK OF WEST BIKE PATH												

GENERAL NOTES:

1. FOR NOTES AND DETAILS SEE DWG C3.
2. FOR DEMOLITION PLANS SEE DWG C2.
3. FOR WESBROOK MALL DETAILS SEE DWG C13 & C16.
4. FOR WESBROOK MALL SECTIONS SEE DWG. C17 TO C19.
5. CALL BC ONE-CALL 24 HOURS PRIOR TO CONSTRUCTION.
6. SEE STREETLIGHT LOCATIONS AND DETAILS SEE ELECTRICAL ENG. DWGS.
7. SEE LANDSCAPE ARCH. DWGS. FOR SIDEWALK AND BOULEVARD DESIGN AND DETAILS
8. TOPOGRAPHIC SURVEY FOR THIS SITE PROVIDED BY MURRAY AND ASSOCIATES LAND SURVEYORS.
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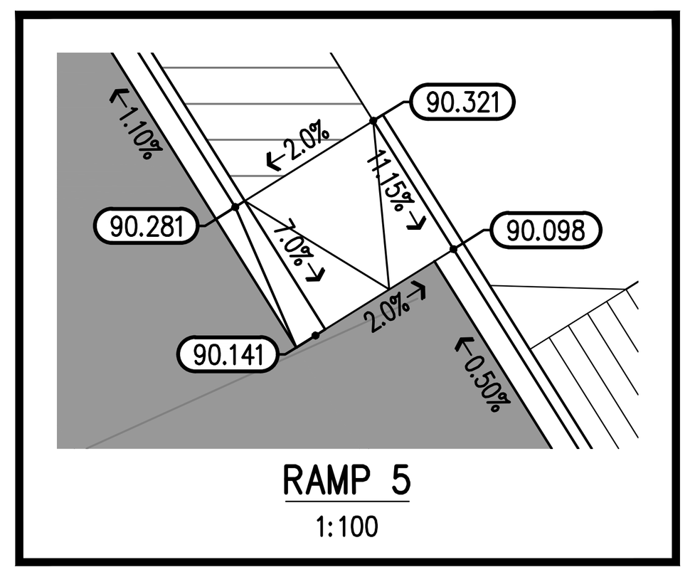

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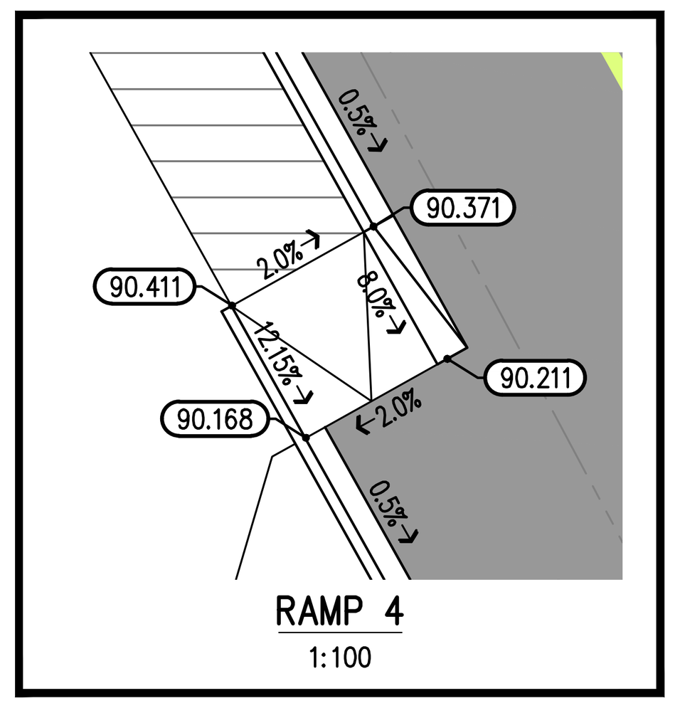

RAMP 4
1:100

CURVE TABLE (ROAD BASELINE)

CURVE	DELTA	RADIUS	ARC
BC205	2°51'09"	200.000	9.957
BC206	4°03'48"	250.000	17.730

LINE TABLE (ROAD BASELINE)

LINE	BEARING	DISTANCE
BL205	S29°10'18"E	25.621
BL206	S32°01'27"E	67.374

CURVE TABLE (FACE OF CURB)

CURVE	DELTA	RADIUS	ARC
FC13	91°04'57"	5.000	7.948
FC26	90°17'47"	5.000	7.880
FC27	15°39'50"	30.000	8.202
FC28	0°09'37"	1867.903	5.228
FC37	5°28'32"	345.550	33.022
FC38	3°41'54"	408.100	26.349
FC43	171°57'00"	0.500	1.501
FC44	0°20'22"	151.987	0.901
FC45	3°09'20"	349.700	19.260
FC49	1°31'39"	295.200	7.870
FC50	3°43'41"	119.700	7.789
FC51	4°27'40"	100.300	7.809
FC54	3°41'47"	401.800	25.923
FC55	176°15'20"	0.950	2.923

LINE TABLE (FACE OF CURB)

LINE	BEARING	DISTANCE
FL11	S29°10'18"E	24.777
FL12	S29°10'18"E	10.090
FL27	S46°21'47"E	2.311
FL28	S30°41'57"E	14.327
FL29	S28°19'32"E	5.317
FL30	S44°23'13"E	11.928
FL31	S28°19'32"E	24.110
FL42	S32°01'27"E	21.662
FL47	S29°10'18"E	18.988
FL48	N29°10'18"W	3.377
FL49	N30°41'57"W	20.939
FL50	N34°25'38"W	24.215
FL53	S32°01'27"E	38.861

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DIALOG®

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tel. (604)299 0605 fax. (604)299 0629

ISSUED FOR
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METRIC

ALL DIMENSIONS ARE METRIC UNLESS OTHERWISE NOTED.
VERIFY DIMENSIONS.
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LEGEND

- EXISTING ROAD ASPHALT
- PROPOSED ROAD ASPHALT
- PROPOSED RAISED BIKE PATH
- EX. STRUCTURES TO BE REMOVED & REPLACED W/ TOPSOIL
- PROPOSED CURB & GUTTER 'B' = BARRIER 'R' = ROLL
- PROPOSED BIKE RAMP TRANSITION (2m WIDE x 2m LONG)
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE

GRAPHIC SCALE
-4 0 4 8
SCALE: 1:200

SEAL

UBC Gage South

ULTIMATE DESIGN
SURFACE WORKS

Civil Design
PAVING - PLAN / PROFILE
WESBROOK MALL

DRAWN: BC CHECKED: CN

C 10

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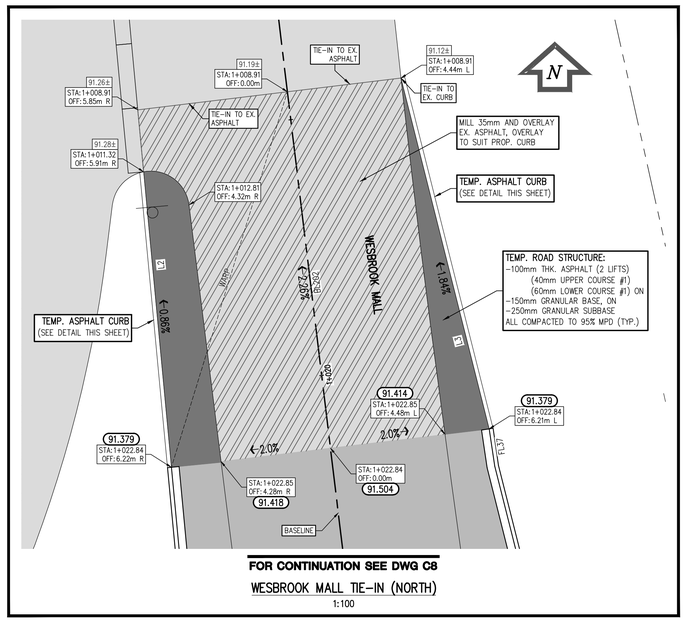


FOR CONTINUATION SEE DWG C8

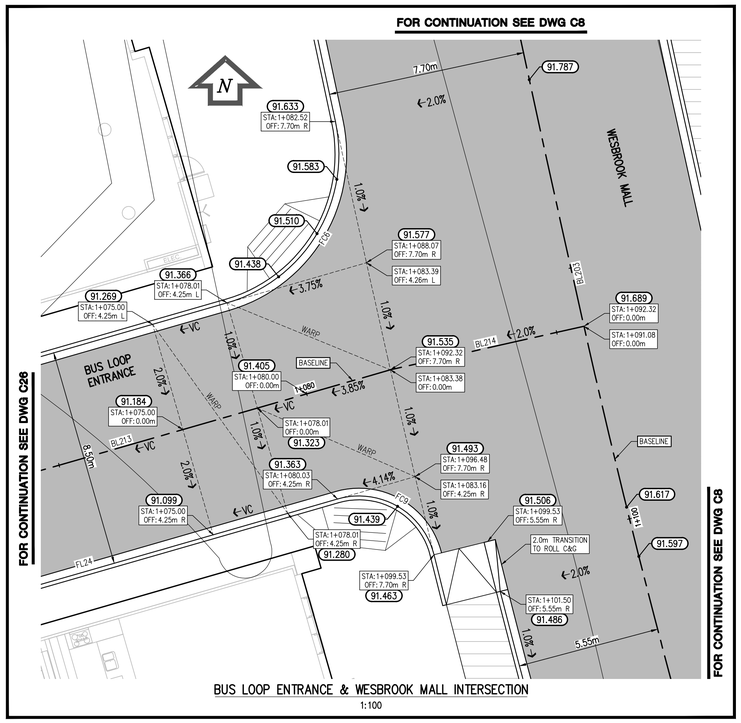
WESBROOK MALL TIE-IN (NORTH)

1:100

LINE TABLE (FACE OF TEMP. CURB)		
LINE	BEARING	DISTANCE
L2	N5°22'18"W	11.522
L3	N14°07'48"W	14.044

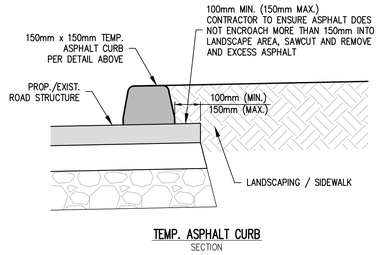
LEGEND

- EXISTING ROAD ASPHALT
- PROPOSED ROAD ASPHALT
- PROPOSED TEMP. ROAD ASPHALT
- PROPOSED MILL & OVERLAY
- PROPOSED CURB & GUTTER
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE
- VC: VERTICAL CURVE
- GB: GRADE BREAK
- LP: LOW POINT
- HP: HIGH POINT
- 91.16± EXISTING ELEVATIONS
- 91.462 PROPOSED ELEVATIONS



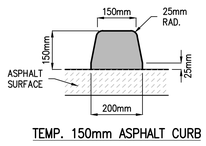
BUS LOOP ENTRANCE & WESBROOK MALL INTERSECTION

1:100



TEMP. ASPHALT CURB

SECTION



TEMP. 150mm ASPHALT CURB

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GRAPHIC SCALE

−4 0 4 8

SCALE: 1:200

SEAL

UBC Gage South

ULTIMATE DESIGN
SURFACE WORKS

Civil Design

PAVING - DETAILS
WESBROOK MALL

DRAWN: BC CHECKED: CN

C 13

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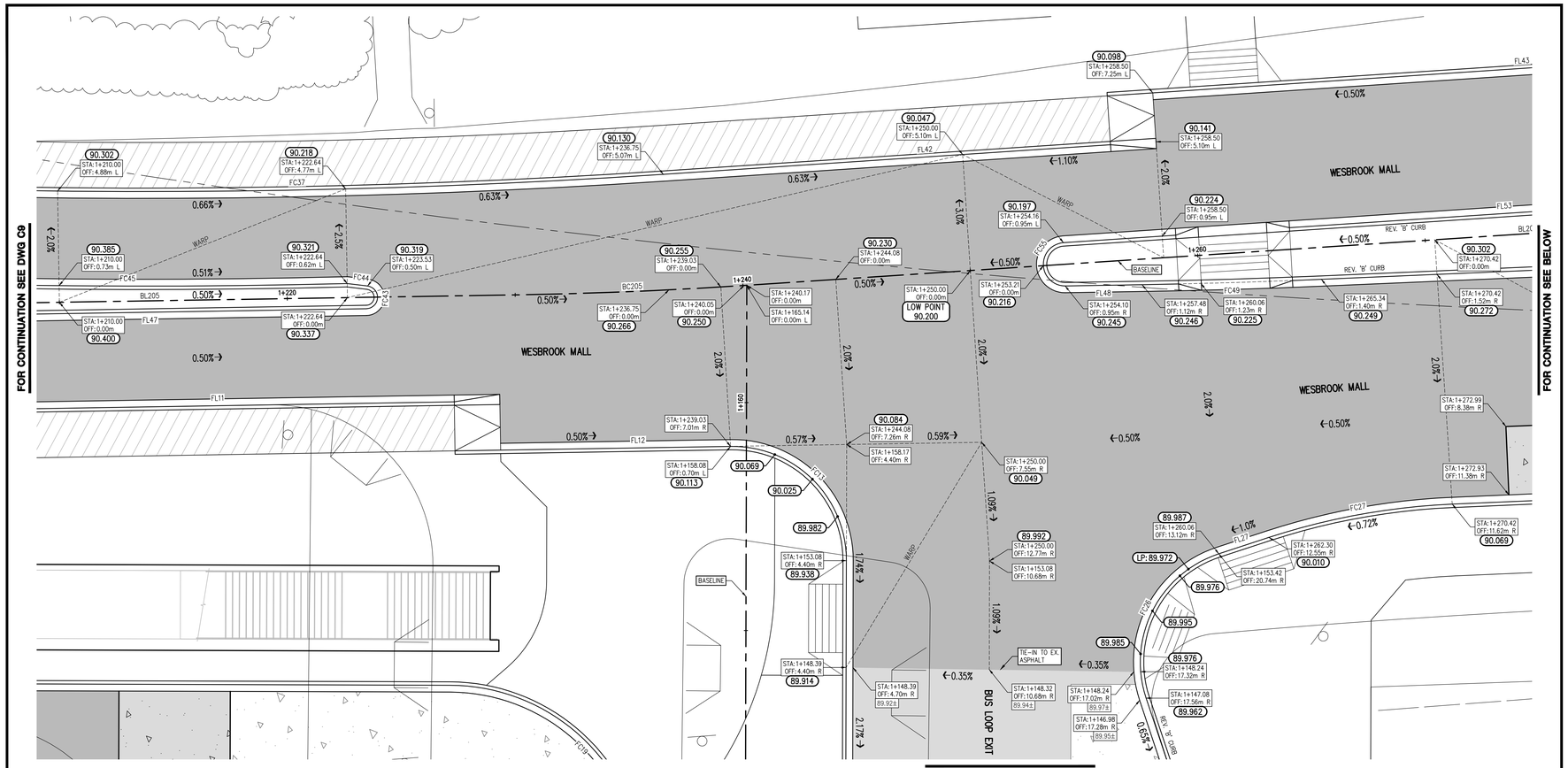
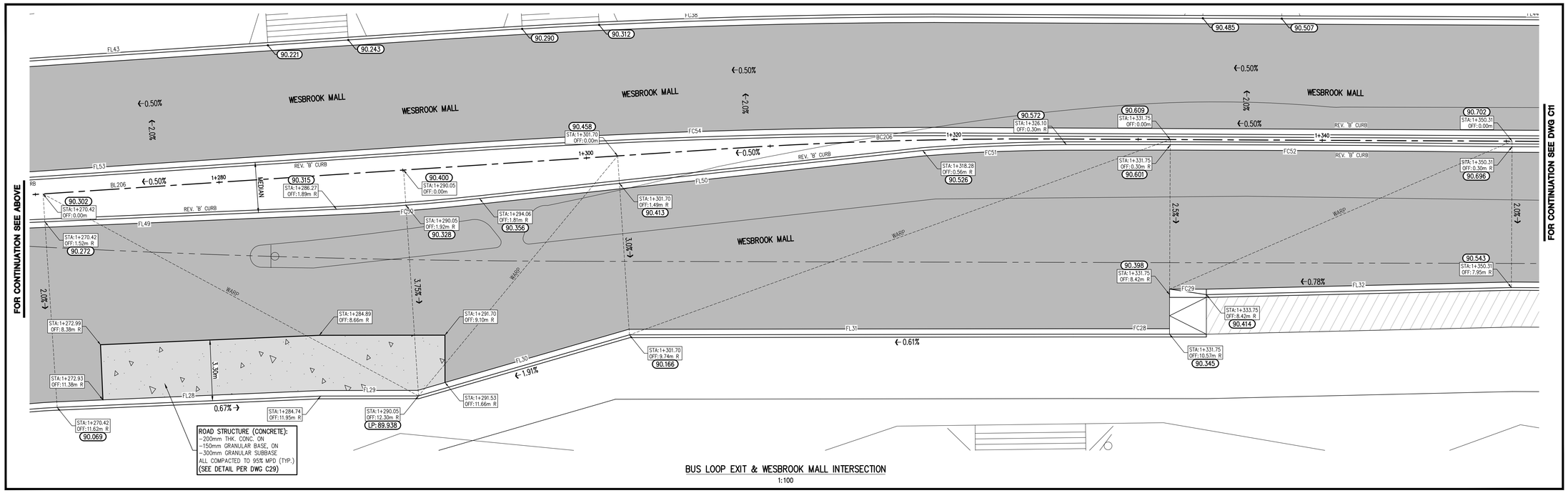


BUS LOOP EXIT & WESBROOK MALL INTERSECTION
1:100



BUS LOOP EXIT & WESBROOK MALL INTERSECTION
1:100

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LEGEND

- EXISTING ROAD ASPHALT
- PROPOSED ROAD ASPHALT
- PROPOSED CURB & GUTTER
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE
- VC VERTICAL CURVE
- GB: GRADE BREAK
- LP: LOW POINT
- HP: HIGH POINT
- 91.16± EXISTING ELEVATIONS
- 91.462 PROPOSED ELEVATIONS

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GRAPHIC SCALE
−2 0 2 4
SCALE: 1:100

SEAL

UBC Gage South
ULTIMATE DESIGN
SURFACE WORKS

Civil Design
PAVING - DETAILS
WESBROOK MALL

DRAWN: BC CHECKED: CN

C 14

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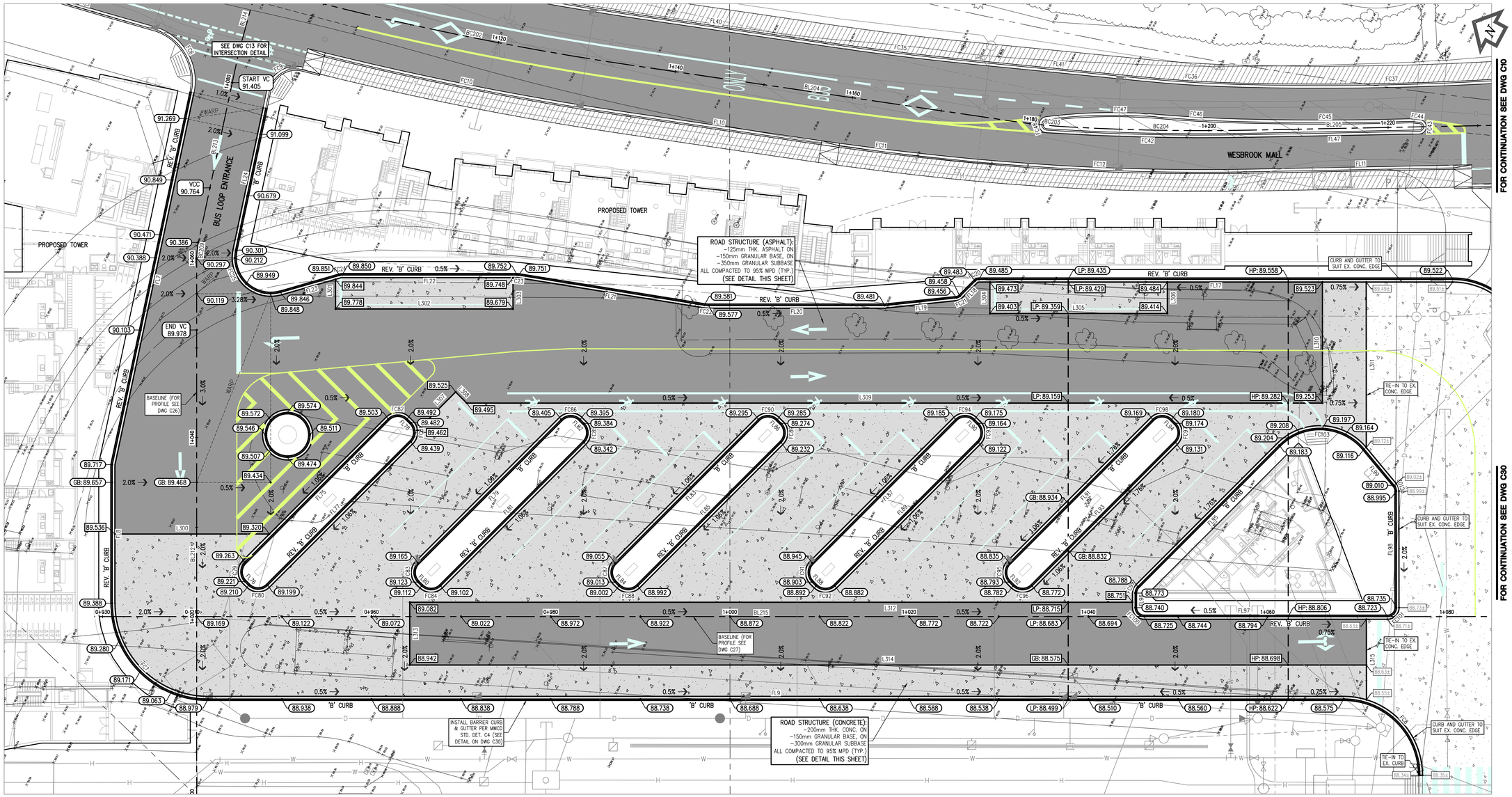
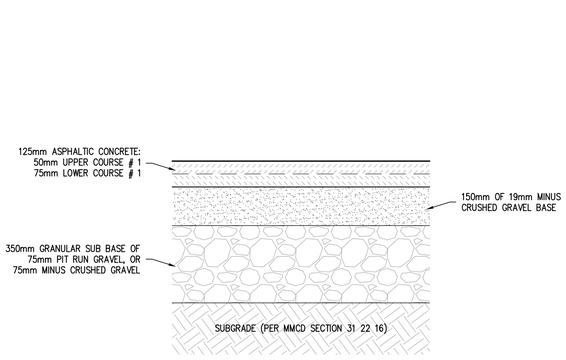
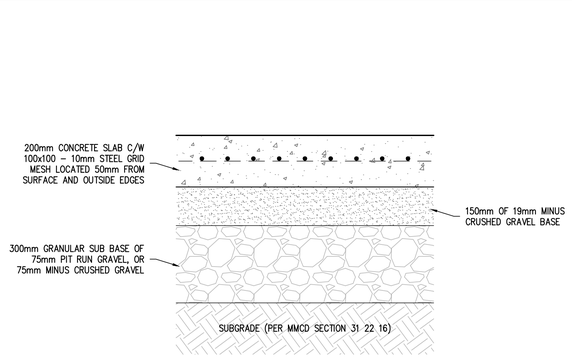
FOR CONTINUATION SEE DWG C8





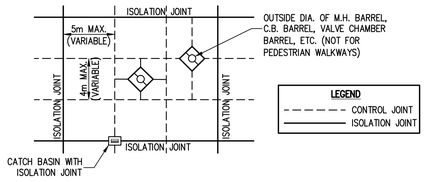
ASPHALT PAVEMENT SPECS.

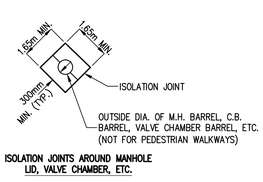
*ALL COMPACTED TO 95% MODIFIED PROCTOR DENSITY



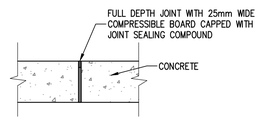
CONC. PAVEMENT SPECIFICATIONS

*ALL COMPACTED TO 95% MODIFIED PROCTOR DENSITY

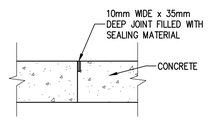




ISOLATION JOINTS AROUND MANHOLE LID, VALVE CHAMBER, ETC.



ISOLATION JOINT DETAIL



CONTROL JOINT DETAIL

CONCRETE PAVEMENT JOINT DETAILS
N.T.S.

GENERAL NOTES:

1. FOR NOTES AND DETAILS SEE DWG C3.
2. FOR DEMOLITION PLANS SEE DWG C2.
3. FOR BUS LOOP PLAN / PROFILE SEE DWG. C26 & C27.
4. FOR BUS LOOP GEOMETRY SEE DWG. C28.
5. FOR BUS LOOP DETAILS SEE DWG. C31.
6. FOR BUS LOOP SECTIONS SEE DWG. C32 TO C35.
7. CALL BC ONE-CALL 24 HOURS PRIOR TO CONSTRUCTION.
8. SEE STREETLIGHT LOCATIONS AND DETAILS SEE ELECTRICAL ENG. DWGS.
9. SEE LANDSCAPE ARCH. DWGS. FOR SIDEWALK AND BOULEVARD DESIGN AND DETAILS
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11. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH OTHER CIVIL AND OTHER DISCIPLINE'S DRAWINGS.
12. ALL CONC. SIDEWALK LETDOWNS PER MMCD STD. DET. C9, C/W 0.6m x 3.0m TACTILE PAD BY ARMOR TILE MANUFACTURES. COLOR = PEARL WHITE (TYP.)

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LEGEND

- PROPOSED BUS LOOP ASPHALT
- PROPOSED BUS LOOP CONCRETE
- EXISTING BUS LOOP CONCRETE
- PROPOSED CONCRETE BARRIER CURB & GUTTER
- GB: GRADE BREAK
- LP: LOW POINT
- HP: HIGH POINT
- 91.163 EXISTING CONCRETE ELEVATIONS
- 91.163 PROPOSED SPOT ELEVATIONS
- 91.462 PROPOSED GUTTER ELEVATIONS (@ FACE OF CURB)

GRAPHIC SCALE

−4 0 4 8

SCALE: 1:200

SEAL

UBC Gage South
ULTIMATE DESIGN
SURFACE WORKS

Civil Design
PAVING - GRADING
BUS LOOP - PODIUM

DRAWN: BC CHECKED: CN

C 29

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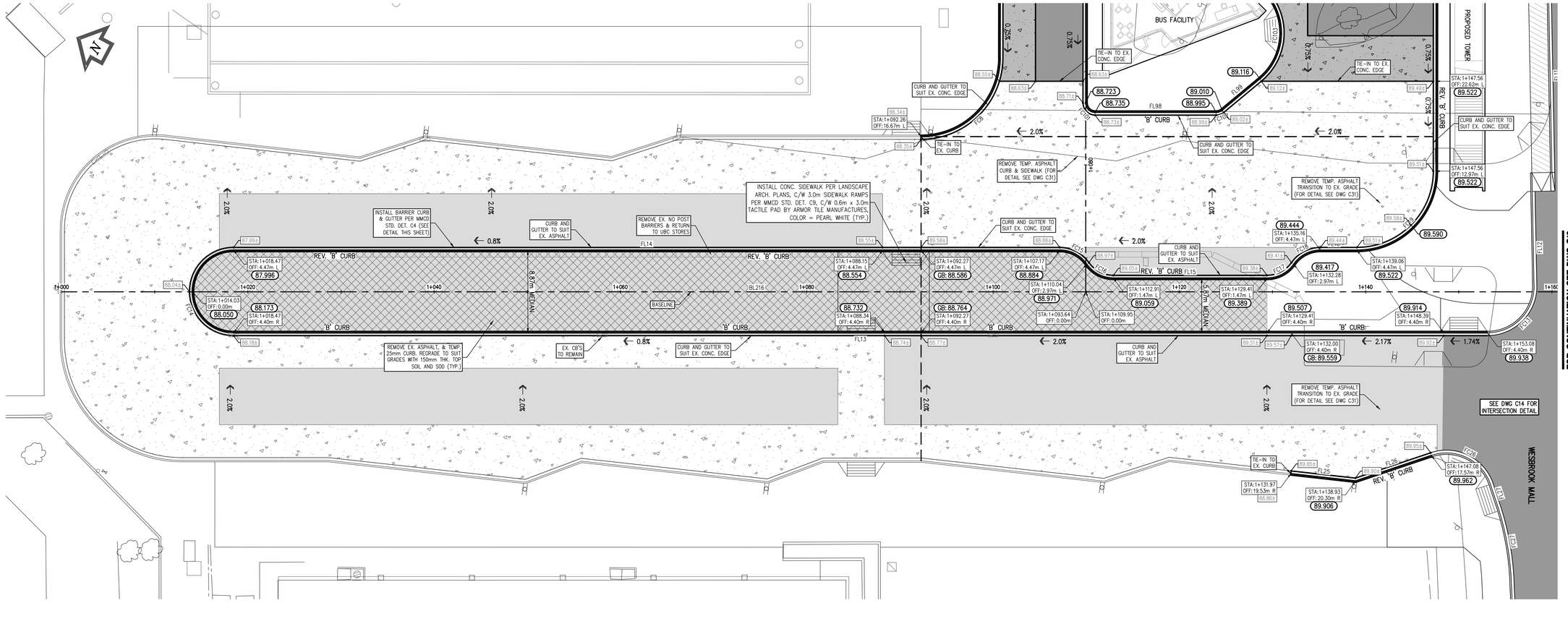

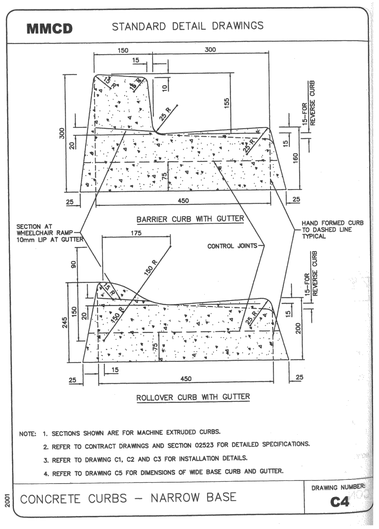

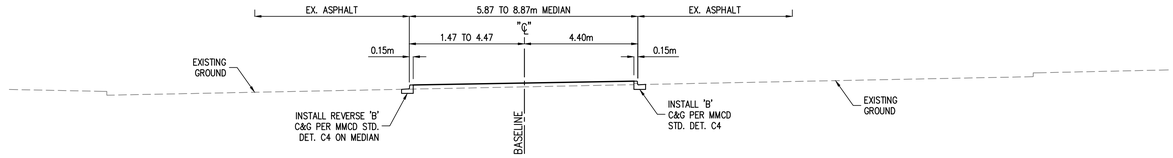

EXISTING BUS LOOP
SCALE 1:100

LEGEND

- PROPOSED BUS LOOP ASPHALT
- PROPOSED BUS LOOP CONCRETE
- EXISTING BUS LOOP CONCRETE
- EXISTING BUS LOOP ASPHALT
- EX. STRUCTURES TO BE REMOVED & REPLACED W/ TOPSOIL
- PROPOSED CONCRETE BARRIER CURB & GUTTER
- GB: GRADE BREAK
- STA: STATION @ BASELINE
- OFF: OFFSET OFF BASELINE
- 91.162 EXISTING CONCRETE ELEVATIONS
- (91.462) PROPOSED GUTTER ELEVATIONS (@ FACE OF CURB)

LINE TABLE (ROAD BASELINE)		
LINE	BEARING	DISTANCE
BL216	N61°54'40"E	165.145

LINE TABLE (FACE OF CURB)		
LINE	BEARING	DISTANCE
FL13	S61°54'40"W	134.612
FL14	N61°54'40"E	88.702
FL15	N61°54'40"E	16.500
FL16	N61°54'40"E	3.907
FL25	N68°16'34"E	7.004
FL26	N43°20'26"E	8.597

CURVE TABLE (BACK OF CURB)			
CURVE	DELTA	RADIUS	ARC
FC13	91°04'57"	5.000	7.948
FC14	180°00'00"	4.436	13.935
FC15	55°09'00"	3.500	3.369
FC16	55°09'00"	3.500	3.369
FC17	55°09'00"	3.500	3.369
FC18	55°09'00"	3.500	3.369
FC19	89°58'02"	8.500	13.347
FC26	90°17'47"	5.000	7.880

GENERAL NOTES:

1. FOR NOTES AND DETAILS SEE DWG C3.
2. FOR DEMOLITION PLANS SEE DWG C2.
3. FOR BUS LOOP PLAN / PROFILE SEE DWG. C26 & C27.
4. FOR BUS LOOP GEOMETRY SEE DWG. C28.
5. FOR BUS LOOP DETAILS SEE DWG. C31.
6. FOR BUS LOOP SECTIONS SEE DWG. C32 TO C35.
7. CALL BC ONE-CALL 24 HOURS PRIOR TO CONSTRUCTION.
8. SEE STREETLIGHT LOCATIONS AND DETAILS SEE ELECTRICAL ENG. DWGS.
9. SEE LANDSCAPE ARCH. DWGS. FOR SIDEWALK AND BOULEVARD DESIGN AND DETAILS
10. TOPOGRAPHIC SURVEY FOR THIS SITE PROVIDED BY MURRAY AND ASSOCIATES LAND SURVEYORS.
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GRAPHIC SCALE
−4 0 4 8
SCALE: 1:200

SEAL

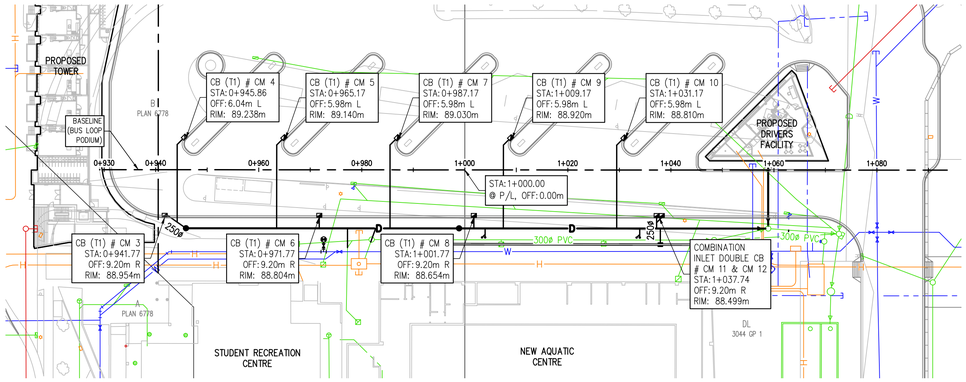
UBC Gage South
ULTIMATE DESIGN
SURFACE WORKS

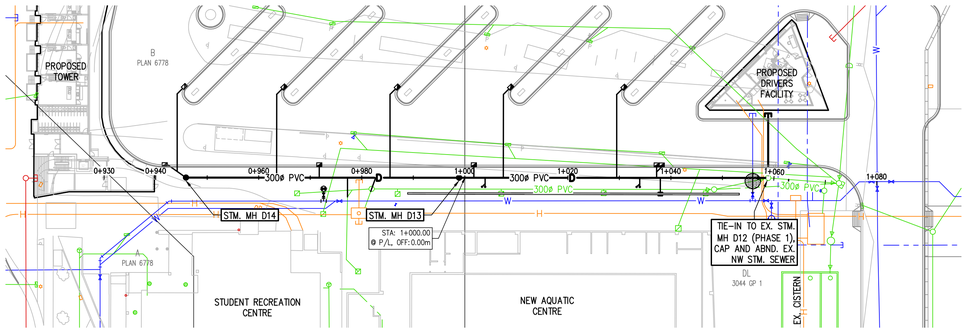
Civil Design
PAVING - GRADING
BUS LOOP - EXIT

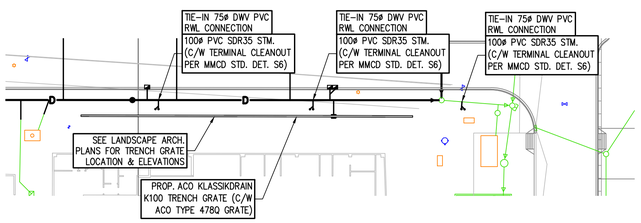
DRAWN: BC CHECKED: CN

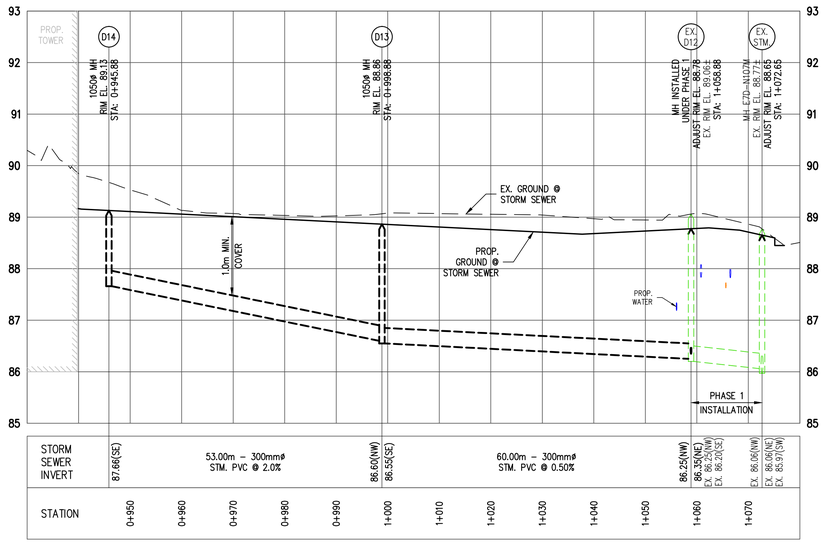
C 30

CORE-1773



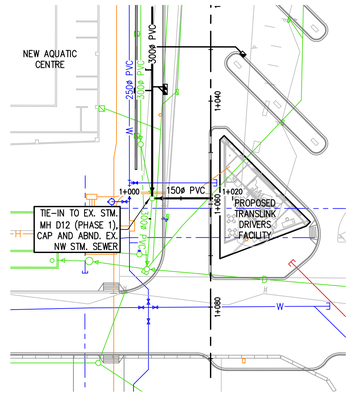


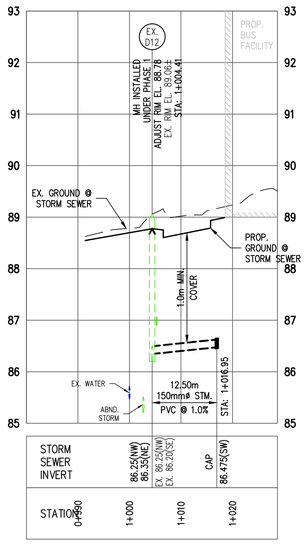




LEGEND

- EX. WATER — W
- EX. WATER – IRRIGATION — W
- EX. SANITARY SEWER — S
- EX. STORM SEWER — D
- EX. GAS — G
- EX. STEAM
- EX. HYDRO — H
- EX. TEL / COMM — T
- DISTRICT HOT WATER ALIGNMENT — DHW
- ABND. WATER
- ABND. SANITARY SEWER
- ABND. STORM SEWER
- ABND. GAS
- ABND. STEAM
- PROP. WATER — W
- PROP. SANITARY SEWER — S
- PROP. STORM SEWER — D
- PROP. UBC HYDRO — H





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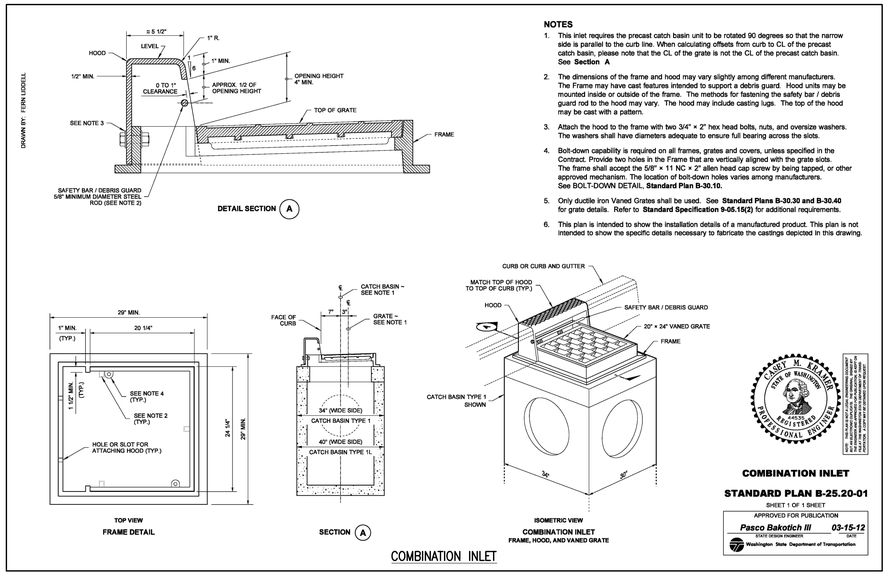
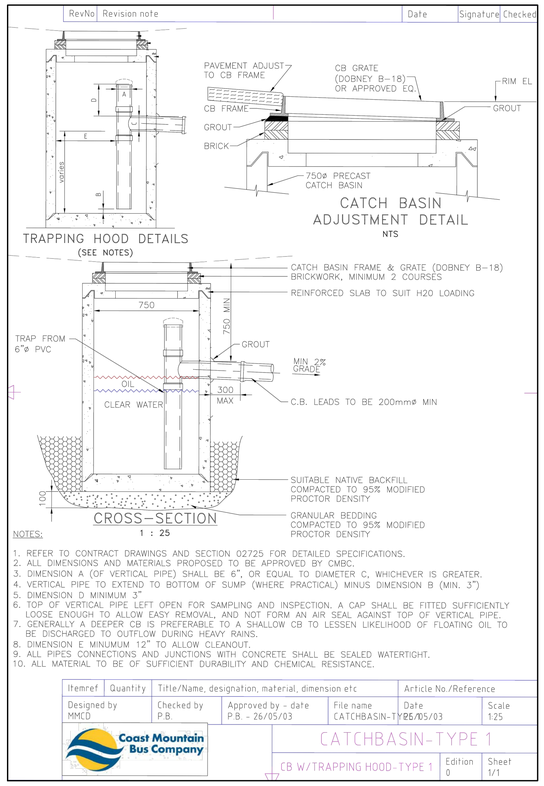
8. ALL NEW WATER VALVES TO BE TAGGED BY UBC (TYP.)

STORM SEWER NOTES

1. (T1) CM CB : PER COAST MOUNTAIN CATCHBASIN TYPE 1 DETAIL C/W TRAPPING HOOD
2. COMBINATION INLET CM CB : PER COAST MOUNTAIN COMBINATION INLET DETAIL (C/W TRAPPING HOOD)
3. ALL CM (COAST MOUNTAIN) CB LEADS TO BE 200ø PVC UNLESS OTHERWISE NOTED





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GRAPHIC SCALE
–10 0 10 20
SCALE: 1:500

SEAL

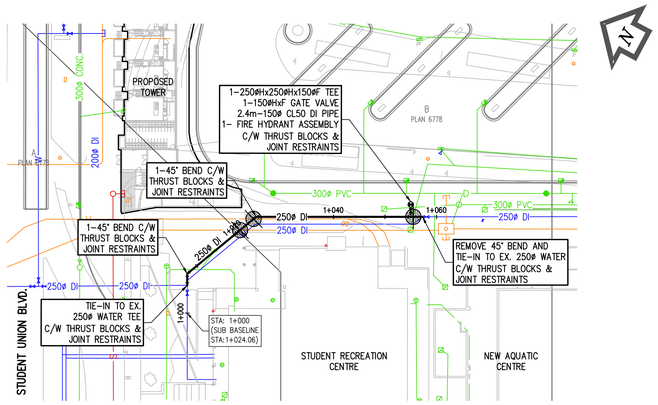
UBC Gage South
ULTIMATE DESIGN
UNDERGROUND WORKS

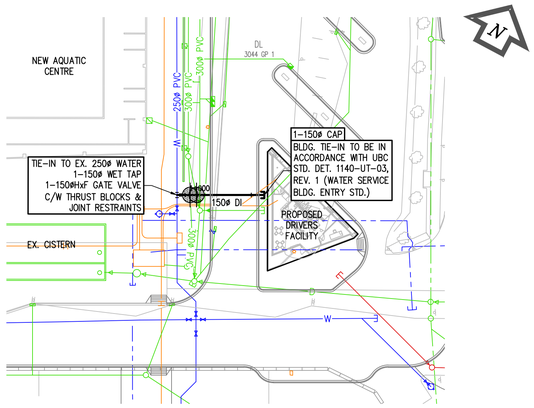
Civil Design
UTILITIES - PLAN/PROFILE
BUS LOOP STORM SEWER

DRAWN: BC CHECKED: CN

C 41B

CORE-1773





LEGEND

EX. WATER	W
EX. WATER – IRRIGATION	W
EX. SANITARY SEWER	S
EX. STORM SEWER	D
EX. GAS	G
EX. STEAM	
EX. HYDRO	H
EX. TEL / COMM	T
DISTRICT HOT WATER ALIGNMENT	DHW
ABND. WATER	
ABND. SANITARY SEWER	
ABND. STORM SEWER	
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ABND. STEAM	
PROP. WATER	W
PROP. SANITARY SEWER	S
PROP. STORM SEWER	D
PROP. UBC HYDRO	H

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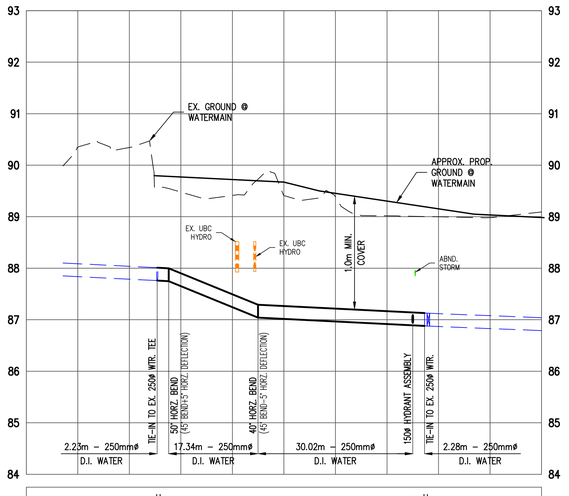
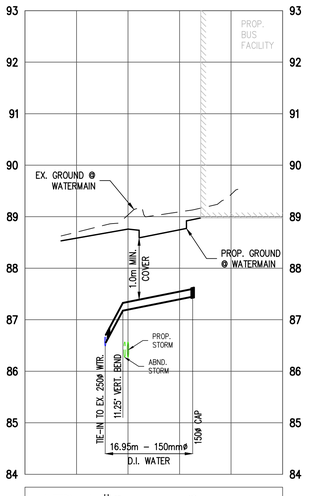
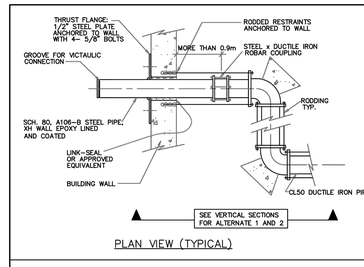


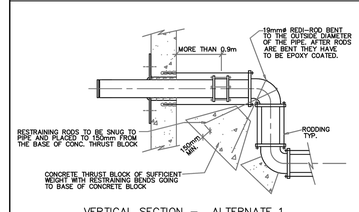
WATERMAIN INVERT		87.76± 87.75		87.04			86.89 86.88±		
EXISTING GRADE @ C/L	90.34±	89.77	89.72	89.67	89.45	89.30	89.15	89.03	
STATION	0+990	1+000	1+005.41 1+007.64 1+010	1+020	1+024.98	1+030	1+040	1+050	1+055.00 1+057.28 1+060	1+070



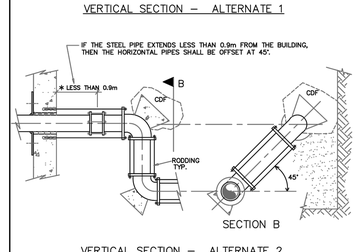
WATERMAIN INVERT	86.49± 87.18	87.45	
EXISTING GRADE @ C/L	88.76	88.75	88.95
STATION	0+995.58 0+999.00 1+000	1+010 1+012.54	1+020



PLAN VIEW (TYPICAL)



VERTICAL SECTION – ALTERNATE 1



VERTICAL SECTION – ALTERNATE 2

NOTES

1. ALL MATERIAL TO BE SUPPLIED AND INSTALLED BY CONTRACTOR UNLESS OTHERWISE SPECIFIED.
2. THRUST BLOCKS
   - PLACE 6 mil POLYETHYLENE ON INTERFACE BETWEEN CONCRETE AND FITTING.
   - PLACE 20 MPa CONCRETE AGAINST UN–DISTURBED GROUND; KEEP CONCRETE CLEAR OF FITTING JOINTS.
   - IF THRUST BLOCKS CANNOT BE PLACED AGAINST UNDISTURBED SOIL, THE SPACE BETWEEN THRUST BLOCK AND UNDISTURBED SOIL SHALL BE FILLED WITH CONTROL DENSITY FILL (CDF).
3. THRUST FLANGE
   - 1/2" STEEL PLATE WELDED TO SCH. 80, A106–B STEEL PIPE XH WALL
   - EPOXY LINED AND COATED

NO.	DATE	REVISIONS	BY
3	12-Mar-12	NOTE 3 ADDED	E.K.
2	08-Mar-09	Revised for UBC Technical Guidelines	D.B.
1	07-Dec-04	Revised for UBC Technical Guidelines	E.K.
0	07-06-02	FOR UBC TECHNICAL GUIDELINES	A.P.

UBC UTILITIES
THE UNIVERSITY OF BRITISH COLUMBIA

BUILDING/FACILITY

PROJECT TITLE
BUILDING WATER SUPPLY

DRAWING TITLE
WATER SERVICE BUILDING ENTRY STANDARD

SCALE: N.T.S.	DATE: APR. 08, 2009
DRAWN: D.B.	SHEET NO.
REVIEWED: J.L.	
CAD FILENAME: WATERENTRY.DWG	
UBC PROJECT NO.: ...	1 OF 1
UBC DRAWING NO.: 1140–UT–03–WATERENTRY.DWG	REV.: 1

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SCALE: 1:500

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UBC Gage South
ULTIMATE DESIGN
UNDERGROUND WORKS

Civil Design
UTILITIES - PLAN/PROFILE
WATER

DRAWN: BC CHECKED: CN

C 41C

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