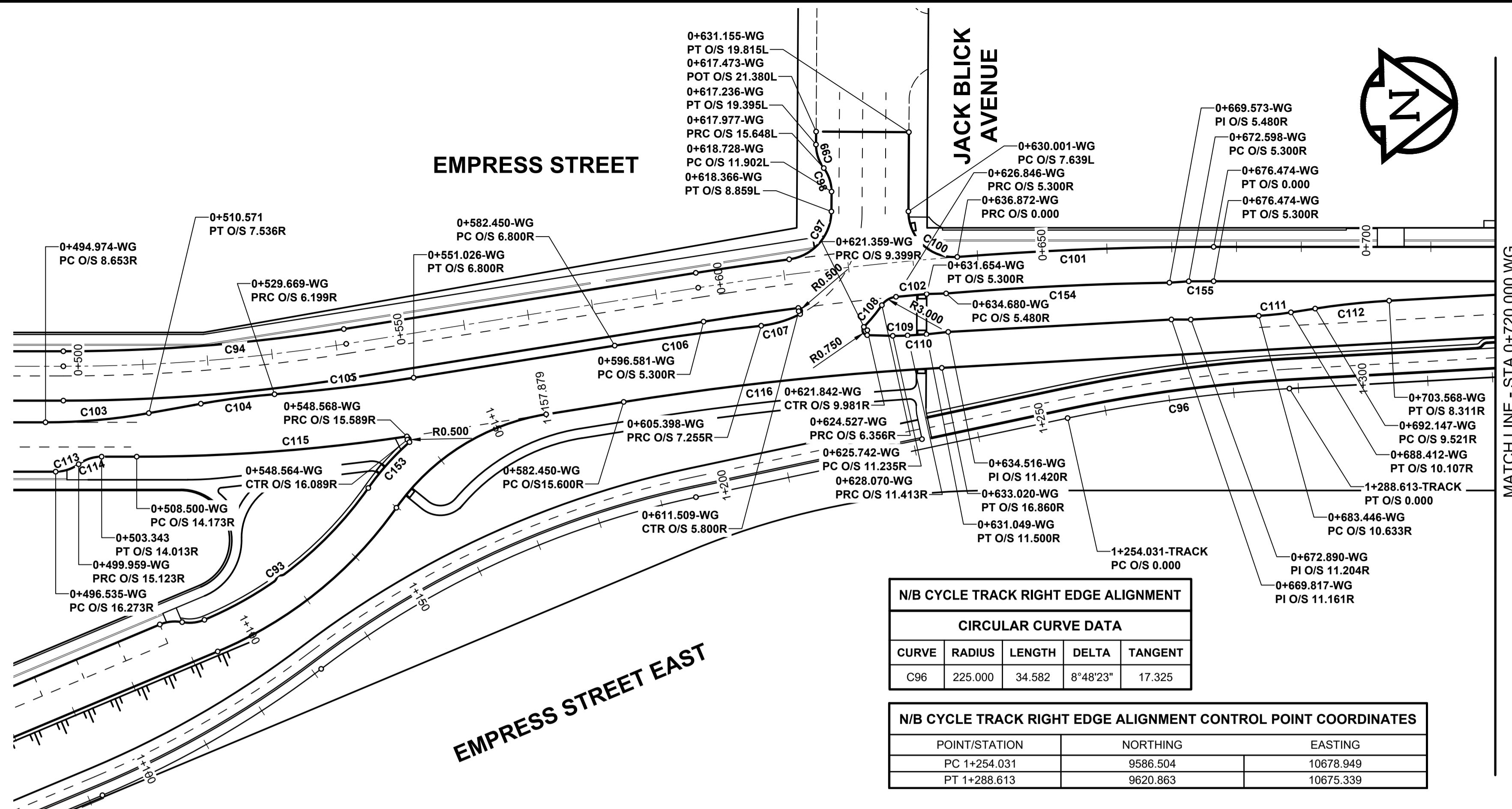


ISO A1 - 564mm x 841mm  
 O:\Winipeg\Proj\160034-5-Empr-Recon\HG-5.dwg  
 Last Saved: 8/16/2018 9:14 AM by DDaszpod  
 Plotted: 8/23/2018 2:47 PM by Daniel Daszpod

WEST GUTTER LINE CONTROL POINT COORDINATES		
POINT/STATION	NORTHING	EASTING
PC 0+497.720	9431.775	10666.640
PT 0+541.567	9475.518	10664.395
PC 0+596.581	9530.066	10657.245
PT 0+676.474	9609.771	10653.155

WEST GUTTER LINE ALIGNMENT				
CIRCULAR CURVE DATA				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C94	277.320	43.847	9°03'32"	21.969
C95	505.300	79.893	9°03'32"	40.030



N/B CYCLE TRACK RIGHT EDGE ALIGNMENT				
CIRCULAR CURVE DATA				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C96	225.000	34.582	8°48'23"	17.325

N/B CYCLE TRACK RIGHT EDGE ALIGNMENT CONTROL POINT COORDINATES		
POINT/STATION	NORTHING	EASTING
PC 1+254.031	9586.504	10678.949
PT 1+288.613	9620.863	10675.339

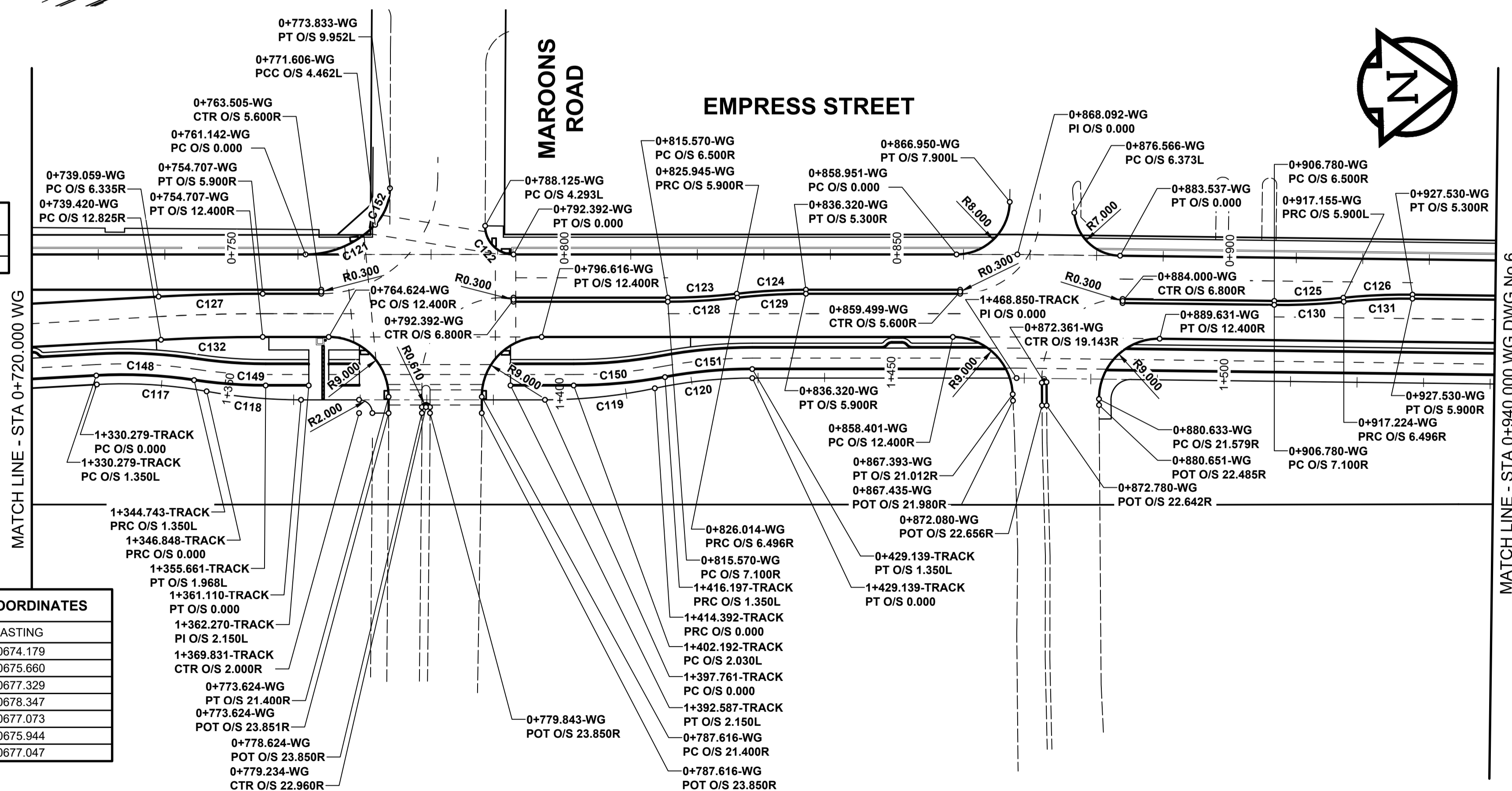
CIRCULAR CURVE DATA				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C97	7.500	10.763	82°13'34"	6.546
C98	6.035	3.892	36°57'10"	2.016
C99	6.000	3.893	37°10'28"	2.018
C100	7.000	11.588	94°50'50"	7.619
C101	505.300	79.893	9°03'32"	40.030
C102	500.000	4.758	0°32'43"	2.379
C103	90.000	16.026	10°12'08"	8.034
C104	115.000	11.462	5°42'38"	5.736
C105	271.500	21.642	4°34'02"	10.827
C106	490.880	22.829	2°39'53"	11.416
C107	17.500	6.310	20°39'38"	3.190
C108	25.000	4.363	9°59'54"	2.187
C109	25.000	2.284	5°14'06"	1.143
C110	487.380	2.913	0°20'33"	1.456
C111	50.000	4.996	5°43'28"	2.500
C112	115.000	11.490	5°43'28"	5.750
C113	6.000	3.794	36°13'43"	1.963
C114	6.000	3.794	36°13'43"	1.963
C115	280.300	41.860	8°33'24"	20.969
C116	482.080	49.409	5°52'21"	24.726

CIRCULAR CURVE DATA				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C154	499.820	34.515	3°57'23"	17.264
C155	500.000	3.836	0°26'22"	1.918

WEST GUTTER LINE CONTROL POINT COORDINATES		
POINT/STATION	NORTHING	EASTING
PI 0+868.092	9801.315	10658.477

CYCLE TRACK RIGHT EDGE ALIGNMENT				
CIRCULAR CURVE DATA				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C117	70.500	16.569	13°27'57"	8.323
C118	79.500	14.263	10°16'45"	7.151
C119	79.500	16.630	11°59'08"	8.346
C120	70.500	14.748	11°59'08"	7.401

CYCLE TRACK RIGHT EDGE ALIGNMENT CONTROL POINT COORDINATES		
POINT/STATION	NORTHING	EASTING
PC 1+330.279	9662.513	10674.179
PRC 1+346.848	9678.977	10675.660
PT 1+361.110	9693.122	10677.329
PC 1+397.761	9729.759	10678.347
PRC 1+414.392	9746.310	10677.073
PT 1+429.139	9800.683	10675.944
PI 1+468.850	9760.988	10677.047



CIRCULAR CURVE DATA				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C121	14.500	11.689	46°11'13"	6.183
C122	4.267	6.729	90°20'40"	4.293
C123	90.000	10.398	6°37'11"	5.205
C124	90.000	10.398	6°37'11"	5.205
C125	90.000	10.398	6°37'11"	5.205
C126	90.000	10.398	6°37'11"	5.205
C127	281.500	15.656	3°11'12"	7.830
C128	90.600	10.467	6°37'11"	5.240
C129	89.400	10.329	6°37'11"	5.170
C130	90.600	10.467	6°37'11"	5.240
C131	89.400	10.329	6°37'11"	5.170
C132	275.000	15.295	3°11'12"	7.649
C152	8.000	6.069	43°28'07"	3.189

CIRCULAR CURVE DATA				
CURVE	RADIUS	LENGTH	DELTA	TANGENT
C148	71.850	14.742	11°45'20"	7.397
C149	72.150	10.791	8°34'09"	5.405
C150	75.150	13.796	10°31'05"	6.917
C151	71.850	13.190	10°31'05"	6.614

**METRIC**  
 WHOLE NUMBERS INDICATE MILLIMETRES  
 DECIMALIZED NUMBERS INDICATE METRES

EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PLAN	NEW	EXISTING	LEGEND - PLAN	NEW
---	GAS	○	MANHOLE	●	CONCRETE PAVEMENT	▨	CONC SIDEWALK / MEDIAN	▨
---	MTS / PEDESTAL	□	CATCH BASIN / CATCH PIT	■	ASPHALT PAVEMENT	▨	PAVING STONE	▨
---	HYDRO / CABINET	△	CURB INLET WITH BOX	▲	GRAVEL	▨	RAMP CURB	▨
---	CATV / FIBRE OPTIC	○	TREE	○	PLANING / REMOVAL	▨		
---	TRAFFIC SIGNALS / PIT	⊕	TEST HOLE	⊕				
---	LAND DRAINAGE SEWER	⊕	PROPERTY LINE	---				
---	SANITARY/COMBINED SEWER	⊕	SURVEY BAR	---				
---	CB LEAD / SSP / DCP	---	FENCE	---				
---	WATER MAIN	---	BOC / EDGE OF PAVEMENT	---				
---	SUBDRAIN	---	ELEVATION	(33.333)				
---	DITCH	---	TRAFFIC SIGN	(33.333)				

**LOCATION APPROVED**  
 UNDERGROUND STRUCTURES

DATE: \_\_\_\_\_

**NOTE:**  
 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. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE	BY
B	ISSUED FOR TENDER	18/09/04	RPB
A	ISSUED FOR CLIENT REVIEW	18/06/27	RPB

PROFESSIONAL'S SEAL  
 PROVINCE OF MANITOBA  
 REGISTERED PROFESSIONAL ENGINEER  
**R.P. BRUCE**  
 CONSULTANT FILE NAME  
 W160034-5-Empr-Recon-HG-5.dwg

**THE CITY OF WINNIPEG**  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION

**EMPRESS STREET PROJECT**  
 PAVEMENT RECONSTRUCTION  
 HORIZONTAL GEOMETRY  
 EMPRESS STREET EAST  
 EMPRESS STREET EAST TO STA 0+940.000 WG

CITY DRAWING NUMBER: P-3494-S  
 SHEET 5 OF 168  
 DRAWING No. REV: 5 B

BID OPPORTUNITY No. 602-2018

**ENGINEERS GEOSCIENTISTS MANITOBA**  
 Certificate of Authorization  
 MORRISON HERSHFIELD  
 No. 1736

