

HYDRANT LAYOUT TABLE				
NUMBER	STATION	OFFSET FROM CONTROL LINE	FLANGE ELEVATION	INVERT
H.1	1+286.483	59.500	34.019	31.100
H.2*	1+123.236	106.725	34.356	31.800
H.3*	1+242.042	160.712	33.563	30.583
H.4*	1+362.479	213.974	33.790	30.790
H.5	1+378.863	141.731	33.776	30.776
H.6	1+469.206	129.651	33.926	30.926
H.7	1+557.408	129.651	34.132	31.132
H.8*	1+666.877	129.651	34.196	31.196

\* BOLLARD PROTECTION REQUIRED (1.5m HIGH)

MAINLINE WATERMAIN VALVE LAYOUT TABLE				
NUMBER	STATION	OFFSET FROM CONTROL LINE	INVERT	
V.1	1+320.000	0.000	29.200	
V.2	1+318.000	-3.270	29.27±	
V.3	1+322.154	57.500	30.900	
V.4	1+234.042	157.712	30.500	
V.5	1+359.178	210.974	30.770	
V.6	1+472.206	125.651	30.850	
V.7	1+680.727	125.651	30.700	
V.8	1+686.727	125.651	30.700	
V.9	1+683.727	-3.267	28.75±	
V.10	1+318.987	-4.270	29.27±	

- NOTES:**
- ALL MAINLINE VALVES = 2000
  - ALL VALVES TO OPEN COUNTER CLOCKWISE (RIGHT HAND CLOSE), WITH BLACK OPERATING NUT (SD-008)

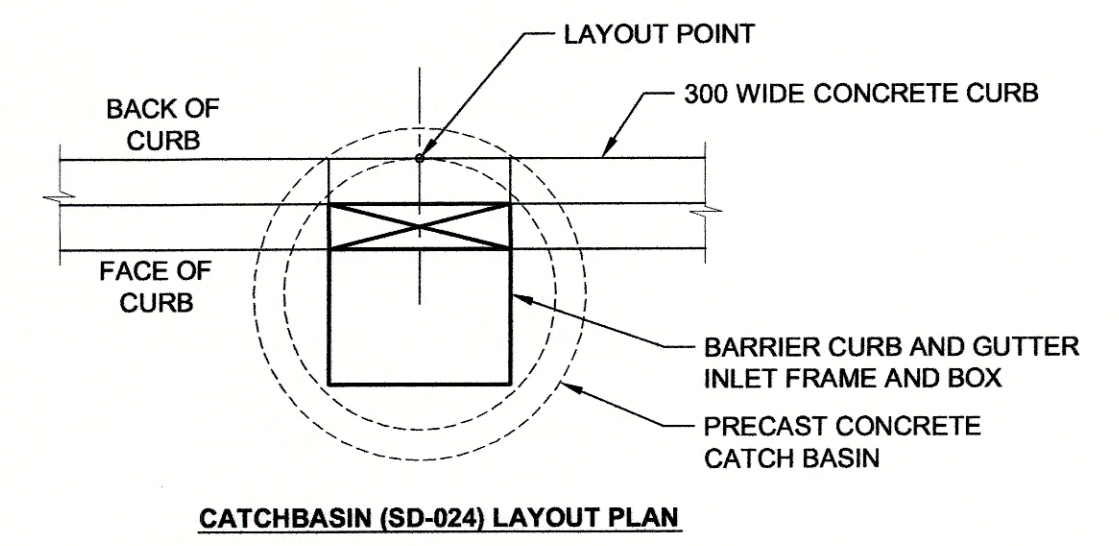
MISCELLANEOUS WATERMAIN GRADE BREAK LAYOUT TABLE				
STATION	OFFSET FROM CONTROL LINE	INVERT	DESCRIPTION	
1+234.042	82.500	30.210	45° BEND	
1+234.042	106.725	30.700	HYDRANT TEE	
1+234.042	217.530	29.750	90° BEND	
1+359.178	217.530	30.750	90° BEND	
1+359.178	171.591	30.600	ON LINE	
1+359.178	125.651	30.650	90° BEND	
1+375.563	125.651	30.500	ON LINE	
1+683.727	71.273	30.100	ON LINE	
1+318.000	32.020	30.200	ON LINE - LDS CROSSING	
1+320.000	32.020	30.200	ON LINE - LDS CROSSING	
1+683.727	0.000	28.500	PROPERTY LINE	
1+318.000	0.000	29.200	PROPERTY LINE	

GAS VENT LAYOUT TABLE		
NUMBER	STATION	OFFSET FROM CONTROL LINE
GAS VENT 1	1+319.000	31.020
GAS VENT 2	1+237.342	127.801
GAS VENT 3	1+360.779	209.974
GAS VENT 4	1+499.006	124.651
GAS VENT 5	1+665.877	124.651
GAS VENT 6	1+411.203	30.020

LAND DRAINAGE SEWER MANHOLE LAYOUT TABLE											
NUMBER	DESCRIPTION	FRAME & COVER	STATION	OFFSET FROM CONTROL LINE	RIM ELEVATION	INVERT	INVERT	INVERT	INVERT	BOTTOM ELEVATION	SPECIAL FEATURES
MH.L1	2100Ø BASE	AP-004, AP-006	1+232.042	215.530	32.803	1050Ø W 27.910	1050Ø E 27.940	750Ø N 28.210		27.910	OPEN GRATE COVER
MH.L2	1500Ø BASE	AP-004, AP-006	1+232.042	137.917	33.579	750Ø S 28.400	600Ø N 28.550			28.400	OPEN GRATE COVER
MH.L3	1500Ø BASE	AP-004, AP-006	1+232.042	60.304	33.242	600Ø S 28.860	600Ø E 28.920			28.860	OPEN GRATE COVER
MH.L4	1500Ø BASE	AP-004, AP-006	1+305.842	32.020	32.440	600Ø W 29.240	525Ø E 29.310	250Ø N 29.590		29.240	OPEN GRATE COVER, INCLUDES 150 RISER SECTION
MH.L5	1200Ø BASE	AP-004, AP-006	1+360.223	32.020	32.480	525Ø W 29.480	450Ø E 29.550	250Ø N 29.760		29.480	OPEN GRATE COVER, INCLUDES 150 RISER SECTION
MH.L6	1200Ø BASE	AP-004, AP-006	1+392.623	32.020	32.480	450Ø W 29.670	450Ø E 29.700	250Ø N 29.870		29.670	OPEN GRATE COVER, INCLUDES 150 RISER SECTION
MH.L7	1200Ø BASE	AP-004, AP-006	1+512.623	32.020	32.874	450Ø W 30.000	250Ø S 30.100			30.000	OPEN GRATE COVER
MH.L8	2100Ø BASE	AP-004, AP-006	1+357.178	215.530	33.595	1050Ø W 28.060	900Ø N 28.210			28.060	OPEN GRATE COVER
MH.L9	2100Ø BASE	AP-004, AP-006	1+357.178	123.651	33.623	900Ø S 28.310	900Ø E 28.370			28.310	OPEN GRATE COVER
MH.L10	1800Ø BASE	AP-004, AP-006	1+462.198	123.651	33.592	900Ø W 28.470	900Ø E 28.500			28.470	OPEN GRATE COVER
MH.L11	1800Ø BASE	AP-004, AP-006	1+567.198	123.651	33.917	900Ø W 28.610	750Ø E 28.760			28.610	OPEN GRATE COVER
MH.L12	1800Ø BASE	AP-004, AP-006	1+667.727	123.651	33.957	750Ø W 28.890	600Ø N 29.040			28.890	OPEN GRATE COVER
MH.L13	1500Ø BASE	AP-004, AP-006	1+667.727	75.826	32.865	600Ø S 29.120	375Ø E 29.180			29.120	OPEN GRATE COVER
MH.L14	2100Ø BASE	AP-004, AP-006	1+122.173	210.164	33.000	1050Ø W 26.710	1050Ø E 26.740			26.710	OPEN GRATE COVER
MH.L15	1200Ø BASE	AP-004, AP-006	1+014.305	3.691	30.500	450Ø W 27.910	450Ø S 27.939			27.310	OPEN GRATE COVER, FLAP GATE, 600 SUMP & 260Ø ORIFICE PLATE REQUIRED

LAND DRAINAGE SEWER CATCHBASIN LAYOUT TABLE											
NUMBER	DESCRIPTION	FRAME & COVER	STATION	OFFSET FROM CONTROL LINE	RIM ELEVATION	INVERT	INVERT	INVERT	INVERT	BOTTOM ELEVATION	SPECIAL FEATURES
CB.1	900Ø x 1.8 DEEP, SD-024	AP-008, AP-009	1+305.842	9.850	31.809	250Ø S 30.159				29.559	
CB.2	900Ø x 1.8 DEEP, SD-024	AP-008, AP-009	1+360.223	9.850	31.852	250Ø S 30.202				29.602	
CB.3	900Ø x 1.8 DEEP, SD-024	AP-008, AP-009	1+392.623	9.850	31.852	250Ø S 30.202				29.602	
CB.4	900Ø x 1.8 DEEP, SD-024	AP-008, AP-009	1+469.308	9.850	31.946	375Ø S 30.296				29.696	
CB.5	900Ø x 1.8 DEEP, SD-025	DITCH INLET GRATE	1+242.042	33.536	31.938 TG	250Ø S 30.238				29.638	C/W 900Ø x 760Ø x 0.300 FLAT TOP REDUCER
CB.6	900Ø x 1.8 DEEP, SD-025	DITCH INLET GRATE	1+242.042	61.800	32.457 TG	250Ø N 30.757				30.157	C/W 900Ø x 760Ø x 0.300 FLAT TOP REDUCER
CB.7	900Ø x 1.8 DEEP, SD-025	DITCH INLET GRATE	1+520.609	46.538	32.400 TG	250Ø N 30.700				29.000	C/W 900Ø x 760Ø x 0.300 FLAT TOP REDUCER
CB.8	900Ø x 1.8 DEEP, SD-025	DITCH INLET GRATE	1+545.692	74.946	31.950 TG	375Ø S 30.250				29.650	C/W 900Ø x 760Ø x 0.300 FLAT TOP REDUCER
CB.9	900Ø x 1.8 DEEP, SD-025	DITCH INLET GRATE	1+242.042	181.673	32.526 TG	250Ø W 30.826				30.226	C/W 900Ø x 760Ø x 0.300 FLAT TOP REDUCER
CB.10	900Ø x 1.8 DEEP, SD-025	AP-004, AP-006	1+375.563	128.030	33.362	250Ø N 31.662				31.062	
CB.11	900Ø x 1.8 DEEP, SD-024	AP-008, AP-009	1+497.353	121.951	33.510	250Ø S 31.860				31.260	
CB.12	1200Ø x 1.8 DEEP, SD-025	DITCH INLET GRATE	1+398.357	197.435	32.036 TG	600Ø W 30.336				29.725	C/W 1200Ø x 760Ø x 0.300 FLAT TOP REDUCER
CB.13	900Ø x 1.8 DEEP, SD-025	DITCH INLET GRATE	1+674.442	73.666	31.692 TG	375Ø W 29.992				29.392	C/W 900Ø x 760Ø x 0.300 FLAT TOP REDUCER
CB.14	1200Ø x 1.8 DEEP, SD-025	AP-004, AP-006	1+316.833	211.630	33.855	250Ø S 32.700				31.605	C/W 1200Ø x 760Ø x 0.300 FLAT TOP REDUCER

RIM ELEVATIONS NOTED FOR DITCH INLET GRATES ARE TO TOP OF GRATE

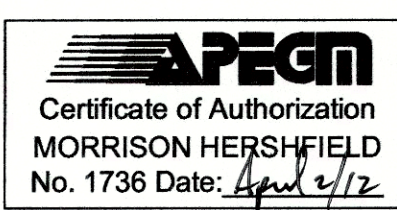


WASTEWATER SEWER MANHOLE LAYOUT TABLE											
NUMBER	DESCRIPTION	FRAME & COVER	STATION	OFFSET FROM CONTROL LINE	RIM ELEVATION	INVERT	INVERT	INVERT	INVERT	BOTTOM ELEVATION	SPECIAL FEATURES
MH.W1	1200Ø, SD-010	AP-004, AP-005	1+283.483	136.800	33.816	150Ø E 31.160	150Ø N 31.090			31.090	
MH.W2	1200Ø, SD-010	AP-004, AP-005	1+283.483	32.775	32.450	150Ø S 30.050	150Ø N 30.000			30.000	
MH.W3	1200Ø, SD-010	AP-004, AP-005	1+411.339	59.500	33.890	150Ø S 30.890	150Ø N 30.840			30.840	

- NOTES:**
- CONTROL LINE IS THE SOUTH PROPERTY LINE OF THOMAS AVENUE. SEE GENERAL SITE PLAN FOR INFORMATION.

**LOCATION APPROVED UNDERGROUND STRUCTURES**

SUPR. U/G STRUCTURES COMMITTEE 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.	ISSUED FOR CONSTRUCTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	12/04/02	RPB
	REVISIONS	YY/MM/DD	BY

**MORRISON HERSHFIELD**

DESIGNED BY	RPB	CHECKED BY	WRJ
DRAWN BY	DML	APPROVED BY	BWB
HOR. SCALE	N/A	RELEASED FOR CONSTRUCTION	
VERT. SCALE	N/A	DATE	November 24, 2011

PROFESSIONAL'S SEAL  
 PROVINCE OF MANITOBA  
 REGISTERED PROFESSIONAL ENGINEER  
 R.P. BRUCE  
 CONSULTANT DRAWING No. W11401000-T-012-TAB\_RX.dwg

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 3 TERRACON PLACE  
 WINNIPEG, CANADA R2J 4B3  
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 www.ehansch.com

**PUBLIC WORKS EAST YARD**  
**#960 THOMAS AVENUE**  
**SURFACE AND UNDERGROUND WORKS**  
 -UNDERGROUND WORKS-  
 FEATURES LAYOUT TABLES

CITY DRAWING NUMBER	N/A
SHEET	12 OF 17
DRAWING NUMBER	REV
<b>C-12</b>	<b>1</b>

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