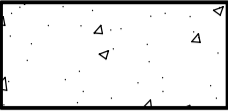



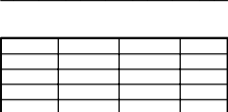
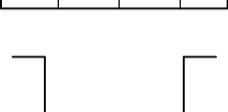



LEGEND

-  NEW CONCRETE
-  EXISTING CONCRETE
-  CUT AND REMOVE EXISTING FEATURES
-  EARTH
-  GRATING
-  LADDER
-  WATERPROOFING

GENERAL NOTES

1. DIMENSIONS IN MILLIMETRES. ELEVATIONS IN METRES.
2. DIMENSIONS, ELEVATIONS, AND DETAILS OF EXISTING STRUCTURES ARE BASED ON PREVIOUS CONTRACT DRAWINGS. VERIFY IN THE FIELD ALL DIMENSIONS, ELEVATIONS, AND DETAILS BEFORE COMMENCEMENT OF CONSTRUCTION.
3. DESIGN LOADS INDICATED ON DRAWINGS ARE SERVICE LOADS (UNFACTORED), UNLESS NOTED OTHERWISE. DESIGN LOADS INDICATED ON DRAWINGS WITH SUBSCRIPT 'f' ARE FACTORED LOADS.
4. COMPACTION DENSITIES INDICATED ON DRAWINGS ARE PERCENTAGES OF MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D698.
5. FOR REINFORCING LAP TABLE AND SIMILAR ITEMS, SEE STANDARD DETAILS DRAWING NO. S0006 & S0007.

DESIGN NOTES

(NOTE: THIS INFORMATION IS FOR REFERENCE PURPOSES ONLY. CONTRACTOR TO REFER TO SPECIFICATIONS.)

1. ASSUMED DESIGN BEARING CAPACITY: SQUARE/RECTANGULAR FOOTINGS 100kPa
2. CONCRETE 28-DAY COMPRESSIVE STRENGTH:
 - TYPE A 30MPa MINIMUM, UNLESS NOTED OTHERWISE
 - PRECAST 35MPa
3. REINFORCEMENT BARS: CAN/CSA-G30.18-M92; GRADE 400R.
4. STRUCTURAL STEEL: CAN/CSA-G40.21-M98; GRADE 350W
5. ANCHOR BOLTS: ASTM A307-04; UNLESS NOTED OTHERWISE HILTI HVA ANCHORS
6. BACKFILL: UNIT WEIGHT 21.5kN/m³
7. SNOW LOAD DATA: GROUND SNOW LOADING (S_g) 1.9kPa ASSOCIATED RAIN LOADING (S_r) 0.2kPa
8. WIND LOAD DATA: 1/10 YEAR PRESSURE (q₁₀) 0.35kPa 1/50 YEAR PRESSURE (q₅₀) 0.45kPa
9. SEISMIC DATA: PEAK GROUND ACCELERATION PGA=0.059 S_a(0.2)=0.12 S_a(0.5)=0.056 S_a(1.0)=0.023 S_a(2.0)=0.006
10. REFERENCE CODES:
 - i) MANITOBA BUILDING CODE
 - ii) NATIONAL BUILDING CODE OF CANADA 2005
 - iii) CONCRETE AND REINFORCEMENT: CSA A23.1-04, CSA A23.2-04 AND CSA A23.3-04
 - iv) STRUCTURAL STEEL: CAN/CSA-S16-01

ABBREVIATIONS

AB	ANCHOR BOLT	JT	JOINT
AL	ALUMINUM	LL	LIVE LOAD
ALT	ALTERNATE	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
BLDG	BUILDING	LPT	LOW POINT
BLL	BOTTOM LOWER LAYER	LSSJ	LONG SPAN STEEL JOIST
BM	BEAM		
BOT	BOTTOM	MAX	MAXIMUM
B PL	BASE OR BEARING PLATE	MC	MOMENT CONNECTION
BUL	BOTTOM UPPER LAYER	MEZZ	MEZZANINE
		MH	MANHOLE
C TO C	CENTRE TO CENTRE	MID	MIDDLE
CB	CATCH BASIN	MIN	MINIMUM
CHKD PL	CHECKERED PLATE	MISC	MISCELLANEOUS
CJ	CONSTRUCTION JOINT	MW	MEMBRANE WATERPROOFING
CL	CENTRE LINE		
CLJ	CONTROL JOINT	NF	NEAR FACE
CLSM	CONTROLLED LOW STRENGTH MATERIAL	NO.	NUMBER
COL	COLUMN	NTS	NOT TO SCALE
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONT	CONTINUOUS	O.F.	OUTSIDE FACE
CW	CAPILLARY WATERPROOFING	OPNG	OPENING
C/W	COMPLETE WITH	OPP	OPPOSITE
		OWSJ	OPEN-WEB STEEL JOIST
DIA	DIAMETER		
DBS	DOWEL BAR SPLICER(S)	PCC	PRECAST CONCRETE
DIM	DIMENSION	PERF	PERFORATED
DL	DEAD LOAD	PL	PLATE
DN	DOWN	PVC	POLYVINYL CHLORIDE
DO.	DITTO		
DWG	DRAWING(S)	R	RISERS
DWL	DOWEL(S)	R	RADIUS
		REINF	REINFORCING STEEL BAR
EF	EACH FACE	REQD	REQUIRED
EL	ELEVATION		
EQL	EQUAL	SEP JT	SEPARATION JOINT
EQPT	EQUIPMENT	SIM	SIMILAR
ES	EACH SIDE	SPEC	SPECIFICATION
EW	EACH WAY	SPMDD	STANDARD PROCTOR
EXST	EXISTING		MAXIMUM DRY DENSITY
EXP JT	EXPANSION JOINT	SQ	SQUARE
		SST	STAINLESS STEEL
FD	FLOOR DRAIN	STD	STANDARD
FDN	FOUNDATION	STGR	STAGGERED
FF	FAR FACE	STIF	STIFFENER
FNSH	FINISH	STIRR	STIRRUP
FL	FLOOR	SYMM	SYMMETRICAL
FRP	FIBRE REINFORCED PLASTIC		
FTG	FOOTING	T	TREADS
		T&B	TOP AND BOTTOM
GALV	GALVANIZED	TJ	TIE JOIST
GD	GUTTER DRAIN	TLL	TOP LOWER LAYER
GID	GROUTED-IN DOWEL	TOC	TOP OF CONCRETE
GRAN	GRANULAR	TOS	TOP OF STEEL
		TUL	TOP UPPER LAYER
		TYP	TYPICAL
HORIZ	HORIZONTAL	U/S	UNDERSIDE
HPT	HIGH POINT	UNO	UNLESS NOTED OTHERWISE
HSS	HOLLOW STRUCTURAL STEEL		
HWL	HIGH WATER LEVEL	VERT	VERTICAL
ID	INSIDE DIAMETER		
I.F.	INSIDE FACE	W/	WITH
INSUL	INSULATION	WS	WATERSTOP
INVT	INVERT	WWF	WELDED WIRE FABRIC

APEGM
 Certificate of Authorization
 CH2M HILL Canada Ltd.
 No. 1441 Expiry: April 30, 2008

B.M. ELEV.	FIELD BOOK #:
POSTED TO LBIS	
DESIGNED BY	R. ZENG
CHECKED BY	R. PARIKH
DRAWN BY	A. JANSSENS
APPROVED BY	E. SHARP
HOR. SCALE	NTS
VERTICAL	
RELEASED FOR CONSTRUCTION	K. ZUREK
DATE	2007/06/20
DATE	2007/11/29
NO.	REVISIONS
DATE	BY



ENGINEER'S SEAL
 ORIGINAL SIGNED BY
 R.P. PARIKH
 2007/11/28
 PROJECT No.: 358676
 PLOT DATE: 2007/11/28

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 NORTH END WATER
 POLLUTION CONTROL CENTRE
WET WELL REHABILITATION
 STRUCTURAL
 LEGEND & GENERAL NOTES

SHEET **4** OF **24**
 CONSULTANT DRAWING NUMBER
S0001
 CITY DRAWING NUMBER
1-0101M-D-S0001-001-00D