

A. GENERAL NOTES

- THIS STRUCTURE IS DESIGNED IN ACCORDANCE WITH, AND SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE NATIONAL BUILDING CODE OF CANADA 2005, ACI 350 AND ALL APPLICABLE LOCAL BYLAWS.
- DO NOT SCALE DRAWINGS.
- ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED PRIOR TO COMMENCING CONSTRUCTION. DISCREPANCIES OR AMBIGUITIES ON THE DRAWINGS AND/OR THE SITE, SHALL BE REPORTED TO THE DESIGN ENGINEER.
- MODIFICATIONS, ALTERATIONS OR SUBSTITUTIONS MUST BE AUTHORIZED IN WRITING BY THE DESIGN ENGINEER.
- LOCATE ALL EXISTING SITE SERVICES PRIOR TO CONSTRUCTION.
- FOR OPENINGS IN SLAB, FLOOR, WALLS, ROOF, ETC. REFER TO ARCHITECTURAL, MECHANICAL, AND/OR OTHER PERTINENT DRAWINGS.
- LOCATION OF CONSTRUCTION JOINTS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR BUT APPROVAL MUST BE OBTAINED FROM THE ENGINEER BEFORE PROCEEDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL NECESSARY SHORING, BRACING AND FORMWORK. FORMWORK FOR NEW CONSTRUCTION SHALL BE BRIDGED OVER EXISTING SERVICES. PROCEDURE MUST BE APPROVED BY THE DESIGN ENGINEER.
- CONSTRUCTION SAFETY REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- THE GENERAL CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER AT LEAST 72 HOURS PRIOR TO ALL CONCRETE POURS TO ALLOW FOR SITE INSPECTIONS.
- ANY DEFECTIVE OR UNACCEPTABLE WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND THE OWNER AT NO COST TO THE OWNER OR ENGINEER.
- DESIGN LOAD
 - WIND - q (1/50) = 0.45 kN/m²
 - WIND LOAD IMPORTANCE FACTOR I_w = 1.25
 - SNOW - S_s = 1.9 kN/m²
 - S_r = 0.2 kN/m²
 - SNOW LOAD IMPORTANCE FACTOR I_s = 1.25
- WATERPROOFING/ DAMPPROOFING
 - A DAMPPROOFING AGENT (AS SPECIFIED IN THE SPECIFICATIONS) SHALL BE APPLIED TO ALL EXTERIOR UNDERGROUND WALLS AT FULL HEIGHT.
 - THE INTERIOR TANK WALLS, TOP OF TANK BASE SLAB AND UNDERSIDE OF TANK ROOF SLAB SHALL BE WATERPROOFED WITH XYPEX WATERPROOFING

B. EXCAVATION AND BACKFILLING

- RAFT FOUNDATION IS DESIGNED BASED ON AN ALLOWABLE BEARING OF 100kPa AS PER GEOTECHNICAL REPORT DATED, DECEMBER 21, 2009. PREPARED BY THE NATIONAL TESTING LABORATORIES LIMITED.
- DEWATER SITE PRIOR TO, AND DURING CONSTRUCTION SEE GEOTECHNICAL REPORT.
- REMOVE ALL TOPSOIL, ORGANIC MATERIAL AND LOOSE OR UNSUITABLE FILL TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
- PROVIDE BACKFILL MATERIAL AS NOTED IN SPECIFICATIONS.
- PLACE A MINIMUM OF 75mm THICK LEAN MIX CONCRETE IN BOTTOM OF FOUNDATION SLAB.
- CONSTRUCTION EQUIPMENT SHOULD NOT TRAVEL DIRECTLY ON THE FOUNDATION BEARING SURFACE. USE FLAT BUCKET EXCAVATION AT THE FOUNDATION LEVEL. TAKE MEASURES TO PREVENT CHANGES IN SOIL MOISTURE CONTENT AT THE FOUNDATION BEARING SURFACE.
- PROVIDE BACKFILL AS FOLLOWS:

- UNDER SLABS ON GRADE (MIN 200mm THICK)
- COMPACT NATIVE SOIL SUBGRADE TO 98% STANDARD PROCTOR.

- AGAINST PERIMETER BEAMS/WALL (OUTSIDE)
 - TO WITHIN 300MM OF FINISHED GRADE:
 - SUITABLE EXCAVATED MATERIAL COMPACTED TO 95% STANDARD PROCTOR
 - TO FINISHED GRADE:
 - TYPE 2 MATERIAL TO UNDERSIDE CONCRETE SLABS, TOPSOIL AT UNPAVED AREAS

- ALL BACKFILL AT WALLS TO BE PLACED IN 150MM LIFTS. BACKFILL UNDER STRUCTURAL SLABS MAY BE PLACED IN 200 MM LIFTS.
- SUBMIT AN EXCAVATION AND SHORING PLAN PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN MANITOBA.

C. REINFORCING STEEL

- REINFORCING STEEL SHALL BE NEW BILLET, DEFORMED BARS IN ACCORDANCE WITH CSA STANDARDS G30.18 MINIMUM YIELD STRENGTH TO BE 400 MPa, EXCEPT 10M STIRRUPS MAY BE 300 MPa.
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST A.C.I. DETAILING MANUAL.
 - COVER TO REINFORCING STEEL:
 - UNDERSIDE OF BEAMS 50mm
 - TOPS AND SIDES OF BEAMS (DRY) 40mm
 - TOPS AND SIDES OF BEAMS (WET) 50mm
 - WALLS 50mm
 - UNDERSIDE OF STRUCTURAL SLABS (DRY) 25mm
 - UNDERSIDE OF STRUCTURAL SLABS (WET) 50mm
 - TOP OF STRUCTURAL SLABS (DRY) 25mm
 - SLAB ON GRADE - TOP & BOTTOM 50mm

- LAP TOP BARS AT CENTRE SPAN AND BOTTOM BARS OVER SUPPORTS, UNLESS NOTED OTHERWISE.
- ALL REINFORCING TO BE HELD IN PLACE AND TIED BY THE USE OF PROPER ACCESSORIES SUCH AS HI-CHAIRS, SPACERS, ETC., TO BE SUPPLIED BY THE REINFORCING STEEL FABRICATOR.
- REINFORCING IN CONCRETE BEAMS/WALLS TO BE BENT 600 mm AROUND CORNERS OR USE 1000 x 1000 CORNER BARS, UNLESS NOTED OTHERWISE.
- FRAME ALL OPENINGS IN CONCRETE, BEAMS, WALLS AND/OR SLABS WITH 2-20M BARS (EXTRA) EACH FACE, EACH SIDE, TOTAL 16. EXTEND BARS 600 mm BEYOND EDGES OF OPENING EXCEPT AS NOTED.
- SUBMIT SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, GRADE, SPACING, HOOKS, BENDS, AND SUPPORTING/SPACING DEVICES, ETC. FOR REVIEW TO THE DESIGN ENGINEER PRIOR TO FABRICATION OF THE REINFORCING STEEL.
- HOUSEKEEPING PADS SHALL BE A MINIMUM OF 100 mm THICK AND REINFORCED WITH 10M @ 300 o/c EACH WAY AT CENTRE UNLESS OTHERWISE SHOWN. PROVIDE HATCHING DOWELS ALONG THE PERIMETER EMBEDDED MIN 125mm INTO CONCRETE SLAB.
- PRIOR TO PLACING CONCRETE, ENSURE THAT ALL REINFORCING STEEL IS CLEAN, FREE OF LOOSE SCALE, RUST, MUD, OIL OR OTHER FOREIGN MATERIAL WHICH WOULD REDUCE BOND.
- HEATING, QUENCHING AND BENDING OF REINFORCING STEEL ON THE SITE IS NOT ALLOWED.
- WHERE NO SPLICE OR SPLICE TYPE IS INDICATED ON THESE DRAWINGS IT SHALL BE A TENSION SPLICE EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION SPLICE (UNLESS DETAILED OTHERWISE). SEE TABLE C.1
- WHERE NO EMBEDMENT OR EMBEDMENT TYPE IS INDICATED ON THESE DRAWINGS IT SHALL BE A TENSION EMBEDMENT EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION EMBEDMENT. SEE TABLE C.2

D. CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO CSA STANDARD A23.1 AND A23.2 (LATEST).
- PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CAN3-A23.1 (LATEST) TO GIVE

TABLE D.1						
CONTROLLED CONCRETE						
CONCRETE LOCATION	MAX. AGG. SIZE	28 DAY STRENGTH	EXPOSURE CLASS	AIR CONTENT	CEMENT TYPE	SLUMP
INTERIOR STRUCTURAL SLABS	20 mm	30 MPa	N	0%	GU	80±30
EXTERIOR SLABS ON GRADE	20 mm	30 MPa	S-1	4 - 7%	HS	80±30
WALLS & FOUNDATIONS	20 mm	35 MPa	S-1	4 - 7%	HS	80±30
LEAN CONCRETE BELOW FOUNDATION	20 mm	15 MPa	S-1	4 - 7%	HS	80±30
FLOOR OVER TANK	20 mm	35 MPa	S-1	4 - 7%	HS	80±30
BENCHING	20 mm	30 MPa	A-3	5 - 8%	GU	80±30
MASONRY FILL	10-14 mm	20 MPa	N	0%	GU	80±30

TABLE C.1						
READ IN CONJUNCTION WITH DESIGN NOTES SECTION C. STEEL REINFORCING						
REINFORCEMENT SPLICES (UNLESS NOTED OTHERWISE)						
BAR DESIGNATION	REINFORCEMENT GRADE (MPa)	COMPRESSION SPLICE	REGULAR TENSION SPLICE (CLASS B) (BASED ON CONCRETE STRENGTH MPa) (SEE NOTE 1)			
			20 MPa	25 MPa	30 MPa	35 MPa
10M	400	330	490	430	400	390
15M	400	470	690	610	570	480
20M	400	570	840	740	690	590
25M	400	740	1350	1180	1090	950
30M	400	880	1600	1400	1290	1130
35M	400	1050	1910	1680	1540	1350

NOTE 1: TOP BAR TENSION SPLICES ARE 1.3 TIMES REGULAR SPLICES. TOP SPLICE LENGTHS APPLY TO HORIZONTAL REINFORCEMENT CAST WITHIN 300 mm OR MORE OF CONCRETE BELOW THE BAR.

NOTE 2: FOR EPOXY REINFORCEMENT INCREASE THESE LENGTHS BY 1.5. INCREASE THESE LENGTHS BY 1.7 FOR EPOXY COATED TOP REINFORCEMENT.

TABLE C.2										
READ IN CONJUNCTION WITH DESIGN NOTES SECTION C. STEEL REINFORCING										
EMBEDMENT OF DOWELS										
BAR DESIGNATION	REINFORCEMENT GRADE (MPa)	COMPRESSION EMBEDMENT (BASED ON CONCRETE STRENGTH MPa)			REGULAR TENSION EMBEDMENT (BASED ON CONCRETE STRENGTH MPa) (SEE NOTE 1)					
		20 MPa	25 MPa	30 MPa AND OVER	20 MPa	25 MPa	30 MPa	35 MPa	40 MPa	
10M	400	250	225	200	325	300	300	300	300	
15M	400	350	300	275	490	440	400	380	380	
20M	400	430	385	350	650	580	530	490	450	
25M	400	540	480	440	1010	900	825	760	710	
30M	400	645	580	530	1210	1080	990	910	840	
35M	400	760	680	620	1690	1520	1400	1270	1200	

NOTE 1: TOP EMBEDMENT VALUES ARE 1.3 TIMES REGULAR EMBEDMENT VALUES. TOP EMBEDMENT APPLIES TO HORIZONTAL REINFORCEMENT CAST WITHIN 300 mm OR MORE OF CONCRETE BELOW THE BAR.

NOTE 2: FOR EPOXY REINFORCEMENT INCREASE THESE LENGTHS BY 1.5. INCREASE THESE LENGTHS BY 1.7 FOR EPOXY COATED TOP REINFORCEMENT.

THE FOLLOWING PROPERTIES:

- THE USE OF ANY ADDITIVES WITHIN THE CONCRETE MIX SHALL BE APPROVED BY THE C.A. PRIOR TO CONSTRUCTION.
- VIBRATE ALL CONCRETE WORK WITH APPROPRIATE INTERNAL VIBRATORS.
- CONCRETE WORKING TIME, FROM BATCHING TO PLACEMENT AND CONSOLIDATION, SHALL NOT EXCEED 1-1/2 HOURS.
- CURE CONCRETE IN ACCORDANCE WITH CSA STANDARD A23.1
- PROVIDE HOT AND COLD WEATHER CONCRETING IN ACCORDANCE WITH CSA STANDARD A23.1.
- CONCRETE TESTING BE PERFORMED BY AN INDEPENDENT TESTING COMPANY. THREE CONCRETE TEST CYLINDERS AND ONE SLUMP TEST SHALL BE TAKEN FOR EVERY 50 (OR LESS) CUBIC METERS, OR EACH DAY CONCRETE IS PLACED, WHICHEVER IS GREATER. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH CSA STANDARD A23.2 (LATEST), AND THE RESULTS SHALL BE FORWARDED TO THE DESIGN ENGINEER.
- "VOID FORMS", AS DETAILED ON THE DRAWINGS SHALL BE CARDBOARD FORMS (MIN 150mm THICK) UNLESS OTHERWISE SPECIFIED.
- PROVIDE DAMPPROOFING TO UNDERGROUND STRUCTURES AS PER SPECIFICATION 07 13 52.
- PROVIDE WATERPROOFING TO THE INSIDE FACE OF TANK FLOOR AND SIDEWALLS AS PER SPECIFICATION SECTION 07 16 16.

E. STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO CSA STANDARD G40.21-350W AND G40.21-350W FOR H.S.S. CLASS "C".
- ALL STRUCTURAL STEEL CONNECTIONS SHALL BE IN ACCORDANCE WITH CSA G40.21 GRADE 300W.
- FABRICATION AND ERECTION SHALL CONFORM TO CSA STANDARD S16 (LATEST).
- ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS FULLY APPROVED FOR STRUCTURAL WELDING BY THE CANADIAN WELDING BUREAU IN ACCORDANCE WITH CSA SPECIFICATIONS W47 AND W59.
- SPLICING OF MEMBERS NOT PERMITTED UNLESS OTHERWISE NOTED.
- ALL MEMBERS AND CONNECTIONS SHALL BE GALVANIZED AS PER CSA G164-M92.
- SUPPLY AND INSTALL ALL TEMPORARY GUYING AND BRACING NECESSARY TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE. THESE SHALL REMAIN IN PLACE UNTIL PERMANENT BRACING IS INSTALLED.
- MAINTAIN BURIED SERVICES IN THE UNDISTURBED STATE.
- STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA SHOWING ALL DESIGN AND FABRICATION DETAILS OF CONNECTIONS TO THE ENGINEER FOR REVIEW PRIOR TO START OF FABRICATION.
- THE CONTRACTOR SHALL MAINTAIN EXISTING BURIED SERVICES IN AN UNDISTURBED STATE - DESIGN ENGINEER TO REVIEW AND PROVIDE THE NECESSARY REQUIREMENTS.

F. MASONRY

- MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CSA STANDARD CAN3-A371, UNLESS NOTED.
- CONCRETE BLOCKS SHALL CONFORM TO CSA A165.1.
- MORTAR SHALL CONFORM TO CSA A179M (TYPE S), 13 MPa AT 28 DAYS.
- INSTALL NO. 9 A.S.W.G. "DUR-O-WALL" TRUSS TYPE JOINT REINFORCING OR EQUIVALENT WITHIN EVERY SECOND MORTAR JOINT (400 o/s MAX.) UNLESS NOTED.

- PROVIDE CLEAN-OUTS AT BOTTOM OF ALL FILLED CORES. REMOVE ALL MORTAR FLASH AND DEBRIS FROM WITHIN CORE PRIOR TO FILLING.
- PROVIDE MATCHING DOWELS EXTENDING FROM CONCRETE FOUNDATION INTO MASONRY WALLS AT ALL REINFORCED CORES.
- ALL REINFORCED CORES AND BLOCK COURSES SHALL BE FILLED WITH CONCRETE. VIBRATE WITH AN INTERNAL "PENCIL" TYPE VIBRATOR.
- CONCRETE LIFTS SHALL NOT EXCEED 2400 MM.
- LAP ALL REINFORCING 600 MM MINIMUM UNLESS NOTED. DETAIL TO SUIT CONCRETE LIFT CRITERIA WHERE APPLICABLE.
- WHERE MASONRY, CONCRETE OR STEEL LINTELS BEAR ON A MASONRY WALL, FILL TWO COURSES (400 MIN.) BELOW AND TWO CORES (400 MIN.) WIDE WITH CONCRETE UNLESS SHOWN OTHERWISE.
- FILL ONE CORE EACH SIDE OF WALL OPENINGS WITH CONCRETE AND REINFORCE 1-15M VERTICAL (FULL HEIGHT), TYPICAL UNLESS SHOWN OTHERWISE. EXTEND VERTICAL REINFORCING INTO LINTEL.
- BOND BEAMS SHALL BE A 200 DEEP U-BLOCK, FILLED WITH 20 MPa CONCRETE AND REINFORCED WITH 2-15M CONTINUOUS, TYPICAL UNLESS SHOWN OTHERWISE. PROVIDE A CONTINUOUS BOND BEAM AT THE TOP COURSE OF ALL WALLS UNLESS SHOWN OTHERWISE.
- CONTROL JOINT SPACING TO BE 7000 MM (MAXIMUM) ALONG EXTERIOR WALLS AND 9000 MM (MAXIMUM) ALONG INTERIOR WALLS.
- INTERLOCK ALL WALL INTERSECTIONS OR PROVIDE MECHANICAL TIES @ 400 o/c UNLESS NOTED.
- FILL CORES WITH CONCRETE WHERE REQUIRED TO SUPPORT EMBEDDED OR DRILLED ANCHORS, INSERTS, SERVICES, ETC.
- TEMPORARY BRACING SHALL BE PROVIDED FOR ALL WALLS UNTIL STRUCTURE IS CLOSED IN, AND PERMANENT SUPPORT IS PROVIDED. SUBMIT BRACING DETAILS UNDER THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA, TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- MORTAR TESTS SHALL BE TAKEN IN ACCORDANCE WITH CSA STANDARD A304 AND A COPY OF RESULTS SHALL BE SUBMITTED TO THE DESIGN ENGINEER.
- COLD-WEATHER REQUIREMENTS IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA (LATEST) SHALL BE IMPLEMENTED WHEN NECESSARY. NO "TORCHING TECHNIQUES" OR MORTAR ADMIXTURES SHALL BE ALLOWED.
- CAVITY WALL BRICK TIES - PROVIDE TIES AS MANUFACTURED BY FERO HOLDINGS LTD. OR APPROVED EQUAL. MAXIMUM SPACING OF 600 MM VERTICALLY AND 800 MM HORIZONTALLY. U.N.O.
- PROVIDE CONCRETE FILLED MASONRY LINTEL BLOCKS FOR OPENINGS IN NON-BEARING WALLS AS FOLLOWS UNLESS OTHERWISE INDICATED.
 - OPENINGS UP TO 1200 - 200 DEEP LINTEL BLOCK 2-15M.
 - OPENINGS UP TO 2400 - 400 DEEP LINTEL BLOCK 4-15M-2T&2B.
 - OPENINGS UP TO 3600 - 600 DEEP LINTEL BLOCK 4-15M-2T&2B.

G. WATERPROOFING

- PROVIDE CRYSTALLINE WATERPROOFING TO ALL INTERIOR FACES OF HOLDING TANK WALLS AND FLOORS.

SLAB REINFORCEMENT SCHEDULE					
MARK	REINFORCEMENT				
	THICKNESS	DESCRIPTION/ ASSEMBLY	REINFORCEMENT	DIRECTION	T/O SLAB ELEVATION
S1	350	TWO WAY	20M @ 250 o/c TUL, BLL 20M @ 300 o/c TLL, BUL	SEE BELOW	SEE PLAN
S2	350	ONE WAY	20M @ 250 o/c TUL, BLL 15M @ 300 o/c TLL, BUL	SEE BELOW	SEE PLAN
S3	250	TWO WAY	15M @ 200 o/c TUL, BLL 15M @ 300 o/c TLL, BUL	SEE BELOW	SEE PLAN
S4	250	TWO WAY	20M @ 200 o/c TUL, BLL 15M @ 300 o/c TLL, BUL 20M @ 200 o/c TOP DOWELS FROM WALL ALL AROUND	SEE BELOW	SEE PLAN
S5	200	ONE WAY	15M @ 300 o/c TUL, BLL 15M @ 400 o/c TLL, BUL	SEE BELOW	SEE PLAN

SLAB REINFORCEMENT NOTES:

NOTE 1. REFER TO DRAWINGS FOR ALL SLOPES AND ALL EXTERIOR ENTRANCE SLAB SIZES AND LOCATIONS

BAR PLACING ORDER:

MAIN REINF = ARROW DIRECTION ON PLAN

TRANVERSE REINF

TOP UPPER LAYER (TUL)

BOTTOM LOWER LAYER (BLL)

TOP LOWER LAYER (TLL)

BOTTOM UPPER LAYER (BUL)

CONC WALL REINF SCHEDULE		
MARK	WALL THICKNESS (mm)	REINFORCEMENT (UNLESS NOTED OTHERWISE)
W1	300	20M VERT. BARS @ 200 o/c EF 20M HORIZ. BARS @ 200 o/c IF, (@ BOTTOM 4 METERS) 20M HORIZ. BARS @ 300 o/c IF, (@ REMAINING TOP) 15M HORIZ. BARS @ 300 o/c OF, (@ WHOLE HEIGHT)
W2	300	20M VERT. @ 200 o/c EF + MATCHING DOWELS AT BOTTOM OF WALL 15M HORIZ. @ 300 o/c EF + 20M CORNER BARS @ 300 o/c EF.
W3	300	15M VERT. @ 250 o/c EF 15M HORIZ. @ 300 o/c EF
W4	300	20M VERT. @ 300 o/c EF + MATCHING DOWELS AT BOTTOM OF WALL 15M HORIZ. @ 300 o/c EF + 20M CORNER BARS @ 300 o/c EF.

NOTES:

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METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGM
Certificate of Authorization
Stantec Consulting Ltd.
No. 1301 Date: _____

LOCATION APPROVED UNDERGROUND STRUCTURES

SUPV. 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.

B.M. ELEV.			
DESIGNED BY	M.H	CHECKED BY	T.D.
DRAWN BY	L.L	APPROVED BY	M.H.
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION:	
VERTICAL:		DATE	
A ISSUED FOR TENDER	10.02.16	WO	
NO. REVISIONS	DATE	BY	DATE 09.11.23

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DESIGNED BY: M.H
CHECKED BY: T.D.
DRAWN BY: L.L
APPROVED BY: M.H.

HOR. SCALE: AS NOTED
RELEASED FOR CONSTRUCTION: _____
VERTICAL: _____

ENGINEER'S SEAL

BID OPPORTUNITY NO. 822-2009

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

Winnipeg

NORTH END WATER POLLUTION CONTROL CENTRE
HAULED WASTEWATER RECEIVING FACILITIES
LEACHATE RECEIVING BUILDING
GENERAL NOTES AND SCHEDULES

CITY DRAWING NUMBER: 1-0101A-S0005-001

SHEET 1 OF 4