SHEET: COW-A1 (03/2005)

GENERAL NOTES

1. READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER PERTINENT CONTRACT DOCUMENTS.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY DIMENSIONS BEFORE BEGINNING CONSTRUCTION AND REPORT DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE DRAWINGS.
3. THE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA 1995, ITS SUPPLEMENTS AND THE LATEST EDITIONS OF REFERENCED CODES AND STANDARDS THEREIN, UNLESS NOTED OTHERWISE. DESIGN CLEARWELL BELOW ELEVATION 238.700 TO ACI 350 AND FOR CLEARWELL ABOVE ELEVATION 238.700 TO CSA-A23.1-00.
4. REFER TO THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, SLEEVES AND OTHER BUILDING COMPONENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REPORT DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
5. CONTRACTOR TO CONFIRM DIMENSIONS, WEIGHTS AND ALL OTHER CRITICAL DETAILS WITH EQUIPMENT SUPPLIERS PRIOR TO CONSTRUCTION. REPORT DISCREPANCIES TO THE ENGINEER AND OBTAIN AUTHORIZATION IN WRITING PRIOR TO PROCEEDING WITH CONSTRUCTION.
   NOTIFY THE ENGINEER A MINIMUM 48 HOURS IN ADVANCE FOR REVIEWS.
6. DRAWINGS SHOW COMPLETED STRUCTURE ONLY. PROVIDE TEMPORARY BRACING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS.
7. CONSTRUCTION METHODS REQUIRING TEMPORARY SHORING, OR BRACING, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER, EXPERIENCED AND REGISTERED IN THE PROVINCE OF MANITOBA, TO PERFORM AND TAKE RESPONSIBILITY FOR ANY SHORING OR OTHER DESIGNS REQUIRED TO COMPLETE THE CONSTRUCTION.
8. VERIFY LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO COMMENCING CONSTRUCTION AND BE RESPONSIBLE FOR DISRUPTIONS.
9. CONSTRUCTION TO ALLOW FOR THE INSTALLATION ONLY OF THE FOLLOWING SLEEVE:

   12 – 150mm
   7 – 200mm
   5 – 300mm

   THE SAID SLEEVES MAY BE PVC OR METAL. MOST OF THEM WILL BE IN THE CLEAR WELL ROOF AND FLOOR OF THE OUTLET AND INLET BUILDING.

   IN ADDITION TO THE ABOVE, THE CONSTRUCTOR TO ALLOW FOR THE INSTALLATION ONLY OF 2 – 2700ø PIPE SECTION AND 1 –1800ø PIPE SECTION. REFER TO MECH/PROCESS DRAWING FOR INFORMATION.

DESIGN LOADS: (CLEARWELL)

1. DEAD LOADS: ROOF STRUCTURE
   - .1) SELF WEIGHT 7.2 kPa
   - .2) ADDITIONAL MECHANICAL & ELECTRICAL ROOF LOAD = 1.0 kPa
   - .3) ROOF SUPPORTING MECHANICAL & ELECTRICAL POINT LOADS ANYWHERE = 1.0 kN
   - .4) SUPERIMPOSED 16.8 kPa

2. LIVE LOADS:
   - .1) GROUND SNOW LOAD – Ss = 1.7 kPa, Sr = 0.2 kPa, MODIFY FOR EXPOSURE AND DRIFT AS PER NBC 1995. 0.42 kPa
   - .2) WIND q(1/30) = 4.8 kPa
   - .3) CLEAR WELL FLOOR U/N = 4.8 kPa
   - .4) UNIFORM = 135 kN OVER 3mx3m AREA
   - .5) EQUIPMENT =

3. VERTICAL LOAD COMBINATIONS:
   1. D.L. (SELF WEIGHT) + D.L. (SUPERIMPOSED) + L.L. (UNIFORM)
   2. D.L. (SELF WEIGHT) + D.L. (SUPERIMPOSED) + PARTIAL L.L.
   3. D.L. (SELF WEIGHT) + D.L. (SUPERIMPOSED) + L.L. (EQUIPMENT)

4. LATERAL LOAD:
   1. SOIL: UNIT WEIGHT = 19.64 kN/m^3; K_A = 0.5
   2. WATER SIDE: WATER PRESSURE TO SURGE ELEV. 236.440

5. LATERAL LOAD COMBINATIONS:
   1. SOILS SIDE: GROUND WATER TABLE TO EL. 236.500 + FULL ACTIVE PRESSURE, RESERVOIR EMPTY

      SURCHARGE CONDITIONS:

      OUTLET AND INLET BUILDING:

      .A) EQUIPMENT = 24 kPa
      .B) ALL OTHER AREAS = 15.6 kPa

   2. WATER SIDE: WATER LEVEL TO SURGE EL. 236.440, NO ACTIVE SOIL PRESSURE.

FOUNDATION NOTES

1. PRECAST CONCRETE PILE FOUNDATION NOTES:
   BUILDING FOUNDATIONS ARE DESIGNED AS DRIVEN, END BEARING, PRESTRESSED PRECAST CONCRETE PILES WITH THE FOLLOWING DESIGN LOADS:

   400 DIAMETER = 800kN

2. PILE CUT OFF ELEVATION NOTE:
   PILES CUT OFF ELEVATIONS SHALL BE AS SHOWN IN THE PILING SECTIONS OF THE DRAWING DOCUMENTS.
   A MINIMUM OF 450mm OF STRAND SHALL BE EXPOSED FOLLOWING PILE CUT OFF.

REINFORCING STEEL NOTES

1. DEFORMED BARS CONFORMING TO CSA-G30.18, GRADE 400. TIES AND STIRRUPS TO CSA-G30.18 MINIMUM GRADE 300.
2. REINFORCING WORK SHALL BE IN ACCORDANCE WITH CSA-23.1-00 AND CSA-23.3.
3. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE RSIC "REINFORCING STEEL MANUAL OF STANDARD PRACTICE".
4. REINFORCING TO BE CONTINUOUS UNLESS NOTED. LAP TOP BARS AT MIDSPAN, BOTTOM BARS AT SUPPORTS. MINIMUM LAP FOR 10M BARS TO BE 450. MINIMUM LAPS FOR OTHER BARS TO BE CLASS B SPLICES BUT NOT LESS THAN LAPS AS NOTED IN DRAWINGS:

   WHERE REINFORCEMENT LAPS ARE REQUIRED IN ADJACENT BARS, STAGGER LAPS MINIMUM 1200 UNLESS NOTED OTHERWISE.
5. PLACE NON-METALLIC REBAR CHAIR FOR SLAB REINFORCING NOT FURTHER THAN 1000mm IN EITHER DIRECTION. SUPPLY SUPPORT BARS, CHAIRS AND CARRIERS AS NECESSARY.
6. DOWELS AND ANCHOR BOLTS SHALL BE SECURED IN POSITION BY MEANS OF TEMPLATES BEFORE CONCRETE IS CAST.
7. 90 DEGREE HOOKS AND 180 DEGREE HOOKS WHERE SHOWN SHALL BE DETAILED AS STANDARD HOOKS UNLESS NOTED OTHERWISE.
8. MINIMUM REINFORCING AROUND OPENINGS LARGER THAN 300mm (IF NOT DETAILED): 1-15M EACH SIDE AND EACH FACE OF OPENING AND 1-15M DIAGONAL AT EACH CORNER, EXTENDED 600mm PAST CORNERS BUT NOT LESS THAN AS NOTED ON DRAWINGS.
9. UNLESS SPECIFIED OTHERWISE HEREIN, TOLERANCES FOR REINFORCING STEEL REQUIREMENTS:

   A) CONCRETE PROTECTION
      - SECTIONS < 300 ± 6 mm
      - ALL OTHERS ± 10 mm

   B) LOCATION
      - SECTIONS < 300 ± 8 mm
      - SECTIONS 300 TO 600 ± 12 mm
      - ALL OTHERS ± 20 mm

   C) LOCATION OF BAR ENDS ± 50 mm

EXCAVATION, BACKFILLING AND COMPACTION NOTES

1. EXCAVATE TO LINES AND LEVELS NECESSARY TO PROPERLY COMPLETE THE WORK. MINIMUM SIDE SLOPES OF TEMPORARY EXCAVATIONS SHALL NOT EXCEED 2 HORIZONTAL TO 1 VERTICAL FOR FOOTING & FLOOR SLAB. CONTROL EXCAVATION TO ENSURE BOTTOM OF EXCAVATION DOES NOT SOFTEN DUE TO EXCESS MOISTURE. CONSTRUCT SLOPES IN BOTTOM OF EXCAVATION FOR DRAINAGE AS REQUIRED.
2. THE CONTRACTOR SHALL PROVIDE SHORING DURING EXCAVATION AS REQUIRED AND ALSO STATED ON DRAWINGS.
3. EXCAVATION BETWEEN PILES SHALL BE DONE WITH SUITABLE EQUIPMENT AND CARE SO AS NOT TO DAMAGE PILES.
4. EXCAVATE TRENCHES FOR PERIMETER DRAIN PIPE AND TO MINIMUM UNIFORM SLOPE SHOWN. EXCAVATE TO LINES AND GRADES INDICATED. PLACE PERIMETER DRAIN PIPE TO UNIFORM SLOPE ON TRENCH BOTTOM. WRAP WITH GEOTEXTILE FABRIC AND STONE AS PER SPECIFICATIONS AND AS INDICATED ON THE DRAWINGS.
5. DO NOT PLACE BACKFILL ON FROZEN GROUND, NOR USE FROZEN MATERIAL.
6. SUPPLY & INSTALL TEMPORARY BACKFILL AS NOTED ON DRAWINGS.
7. ROOF BACKFILL SEE SPECIAL REQUIREMENTS FOR CONSTRUCTION METHODS, REFER TO DWG WT-039.
8. PROTECTION FOR ACCESS ROADS OVER PILING – COVER SHALL CONSIST OF 900mm THICK OVER PILE CUT OFF ELEVATION OF 100mm DOWN CLEAN LIMESTONE. THIS TEMPORARY BACK FILL SHALL BE PLACED SO THAT PROJECTING PILE STRANDS SHALL REMAIN IN VERTICAL POSITION COMPLETE WITH SAFETY CAPS.
9. ACCESS ROUTES ON NEW FLOOR SLAB CONSTRUCTION – CONCRETE SHALL HAVE MINIMUM 75% DESIGN STRENGTH. FOR VEHICLES OF GROSS VEHICLE WEIGHT OVER 30kN (REFER TO SLAB PROTECTION DETAIL THIS DWG). CONTRACTOR SHALL SUBMIT VEHICLE LOADING TO THE CONTRACT ADMINISTRATOR FOR REVIEW AND ACCEPTANCE DATA SHALL INCLUDE AXLE LOADING, WHEEL ARRANGEMENT, AND GROSS VEHICLE WEIGHT. ALL FUEL OR CONTAMINATING SPILLS SHALL BE CLEANED UP IMMEDIATELY TO SATISFACTION OF CONTRACT ADMINISTRATOR.
9. DEWATERING
   - A.) THE CONTRATOR SHALL RESPONSIBLE FOR THE CONTROL OF SURFACE DRAINAGE ON THE EXCAVATIONS COMPLETED BY THE BULK EXCAVATION CONTRACT.
   - B.) DEWATERING SYSTEMS SHALL BE DESIGNED TO EXPEDITIOUSLY REMOVE WATER FROM BOTH THE CLEARWELL EXCAVATION UNTILL WALL BACKFILLING IS COMPLTED AND FROM THE WATER TREATMENT PLANT EXCAVATION UNTIL OCTOBER 31, 2005.
   - C.) THE DEWATERING SYSTEMS MUST PROTECT THE SUBGRADE SOILS FROM EXCESSIVE SOFTENING AND SATURATION. PERIMETER SLOP CUTOFF DITCHING SHALL NOT BE CUT LOWER THAN ELEVATION 229.400 AND SHALL NOT EXTEND BEYOND A 2 METRE DISTANCE FROM THE EDGE OF WALL FOOTINGS.
   - D.) ALL ACCESS ROADWAYS SHALL EMPLOY CULVERTS AS REQUIRED FOR THE CONTRACTOR'S PROPOSED EXCATION DEWATERING PLAN.
   - E.) THE CONTRACTOR SHALL SUBMIT THE PROPOSED DEWATERING PLAN TWO (2) WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION TO THE CONTRACT ADMINISTRATOR FOR REVIEW AND ACCEPTANCE.

CONCRETE NOTES

1. PROVIDE CONCRETE AND PERFORM WORK TO CSA-A23.1-00 UNLESS SPECIFIED HEREIN. THE CONTRACTOR SHALL HAVE A COPY OF THIS STANDARD ON SITE AT ALL TIMES. IN A EVENT OF CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL APPLY.
2. FORMWORK AND FALSEWORK DESIGN SHALL BE COMPLETED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA. SUBMIT TO ENGINEER FOR REVIEW.
3. TEST CONCRETE IN ACCORDANCE WITH CSA-A23.2-00 TEST RESULTS WILL BE ISSUED TO CONTRACTOR, CONTRACT ADMINISTRATOR AND CITY.
4. SPECIFIED SLUMPS ARE PRIOR TO THE ADDITION OF ANY ACCEPTED PLASTICIZING ADMIXTURE. WHEN CONCRETE IS PLACED BY PUMPING, THE LISTED SLUMPS SHALL BE AT DISCHARGE. ALL CONCRETE SHALL BE NORMAL WEIGHT 2400 kg/CUBIC METER UNLESS NOTED OTHERWISE.

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No. 730 Expiry: April 30, 2005

5. PROVIDE 20mm CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
6. VERIFY SIZE AND LOCATION OF ALL OPENINGS, CURBS AND EQUIPMENT PADS WITH PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS AND PROCESS, MECHANICAL AND ELECTRICAL CONTRACTORS. MAJOR OPENINGS NOT SHOWN TO BE VERIFIED WITH ENGINEER.
7. CONSTRUCTION JOINTS: SURFACE PREPARATION SHALL BE BY SAND BLASTING TO EXPOSE FINE AGGREGATE. WATERSTOPS SHALL BE PROTECTED WITH SUITABLE 12mm BOARD SANDWICH. REINFORCING STEEL SHALL BE CLEANED BY SAND BLASTING METHOD AS WELL.
8. GROUT: NON-SHRINK, NON-METALLIC GROUT WITH MINIMUM STRENGTH AT THREE DAYS OF 20 MPa AND MINIMUM STRENGTH AT 28 DAYS OF 50 MPa.
9. VOID FORM 1 AND VOID FORM 2 – SEE SPECIFICATION SECTION 03100 FOR SPECIAL REQUIREMENTS.
10. THE CONTRACTOR SHALL NOTIFY THE INSPECTION & TESTING FIRM, IN AMPLE TIME TO PERMIT SCHEDULING, PRIOR TO ANY CONCRETE POUR. IF AMPLE TIME IS NOT ALLOWED, ALTERNATE CONCRETE TESTS WILL BE PERFORMED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR AND PAID FOR BY THE CONTRACTOR.
11. AT LEAST THREE CONCRETE CYLINDERS WILL BE TAKEN FOR EVERY 75 CUBIC METERS OR LESS OF EACH CLASS OF CONCRETE PLACED. ADDITIONAL FIELD CYCLINDERS MAY BE TAKEN AS DIRECTED BY THE CONTRACT ADMINISTRATOR TO EXPEDITE CONSTRUCTION. AIR AND SLUMP TESTS MAY BE TAKEN ON EVERY CONCRETE LOAD. SLUMP TESTS WILL BE TAKEN PRIOR TO ADDITION OF SUPERPLASTISIZER.
12. CONCRETE REQUIREMENTS:

TYPE	LOCATION	28-DAY STRENGTH fc'(MPa)	CEMENT TYPE	AGGREG. MAX. (mm)	SLUMP (mm)	TOTAL AIR %	MAX. W/C RATIO	AGGREG. RATIO COARSE/FINE
1)	COLUMNS	35	10	20	S.P.	5–8	0.40	60/40
2)	ROOF SLAB	30	10	20	S.P.	5–8	0.40	55/45
3)	WALLS	30	50	50% – 20 50% – 40	S.P.	4–7	0.40	65/35
4)	FLOOR SLAB	35	50	40	75	4–7	0.40	65/35
5)	WALL FOOTING	30	50	40	75	4–7	0.40	65/35
6)	LEAN MIX FILL	10	50	40	100	N/A	0.55	50/50

NOTE: S.P. – SUPER PLASTICISER

MINIMUM CEMENT CONTENT FOR TYPE 50 CEMENT TO BE 280 kg/CUBIC METER. MAXIMUM WATER/CEMENT RATIO FOR TYPE 50 CEMENT TO BE 0.40. NO ENTRAINED AIR FOR ANY CONCRETE TO RECEIVE HARDENER.

13. PROVIDE CLEAR CONCRETE COVER OVER REBAR AS NOTED ON DRAWINGS AND FOLLOWS:

A)	WALL FOOTINGS	TOP & BOTTOM	– 75 mm
		SIDES	– 100 mm
B)	WALLS	TOP	– 65 mm
		SIDES	– 65 mm
C)	COLUMNS	SIDES	– 65 mm
D)	ROOF SLABS	BOTTOM	– 65 mm
		TOP	– 50 mm

14. CONCRETE CONSTRUCTION TOLERANCES:

   1.) CROSS SECTIONAL DIMENSIONS
   - 300mm OR LESS ± 6 mm
   - 300mm TO 1000mm ± 12 mm
   - 1000mm OR GREATER ± 20 mm

   2.) PLUMBNESS OF WALLS AND COLUMNS SHALL BE 1:500, BUT TOTAL SUM OF THE DEVIATION (±) FROM A PLUMB LINE SHALL NOT EXCEED 14mm FOR THE HEIGHT OF THE STRUCTURE.

   3.) VARIATION FROM HORIZONTAL AND VERTICAL REFERENCE SYSTEM AND GENERAL DIMENSIONS:

   A) HORIZONTAL
   - PILING ± 100 mm
   - FOOTINGS ± 20 mm
   - COLUMNS AND WALLS ± 6 mm

   B) VERTICAL
   - PILE CUT OFF ± 25 mm
   - FOOTINGS ± 25 mm
   - COLUMNS AND WALLS ± 8 mm
   - WALL AND BEAM ± 4 mm

   C) FLATNESS
   - GENERAL SURFACES – MODERATELY FLAT (8mm GAP ALONG 3000mm STRAIGHT EDGE)

CONCRETE CURING, PROTECTION, AND FINISHING UNLESS SPECIFIED HEREIN:

.1) CURING – TO CSA-A23.1-00 CLAUSE 21 AS FOLLOWS:
   - A) VERTICAL SURFACES – SPECIFIED CURING SEALER
   - B) HORIZONTAL SURFACES – WALL FOOTINGS MAY BE SPECIFIED CURING SEALER OR WET BURLAP. FLOOR AND ROOF SLABS SHALL BE BURLAP WITH SOAKER HOSES AND POLYETHYLENE SHEET COVER.

.2) COLUMNS, INTERIOR AND EXTERIOR WALL VERTICAL SURFACES THAT WILL RETAIN WATER SHALL USE FORM LINER AS PER SPECIFICATION SECTION 03100.

.3) SURFACE FINISHES TO CSA-A23.1-00 CLAUSE 22 AND SPECIFIED HEREIN:

FLOOR SLABS AND FOOTING	POWER STEEL TROWEL FINISH
CLEARWELL ROOF	POWER STEEL TROWEL FINISH
INTERIOR SURFACES EXPOSED TO VIEW	SMOOTH-FORM FINISH
INTERIOR SURFACES NOT EXPOSED TO VIEW	ROUGH-FORM FINISH
EXTERIOR SURFACES NOT EXPOSED TO VIEW	ROUGH-FORM FINISH

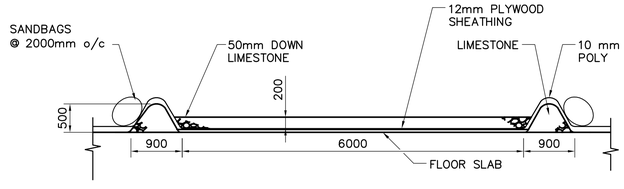
15. ANY DISCREPANCIES BETWEEN CSA STANDARDS AND CONSTRUCTION DOCUMENTS, THE MOST STRINGENT SHALL APPLY, AND AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

MISCELLANEOUS METALS – ALUMINUM

1. ALUMINUM: CONFORMING TO ALUMINUM ASSOCIATION ALLOY AND TEMPER DESIGNATION 6061-T6 OR 6351-T6.
2. PERFORM WELDING OF ALUMINUM IN ACCORDANCE WITH REQUIREMENTS OF CSA W59.2; COMPANY CERTIFICATION TO CSA W47.2.
3. BOLTS AND ANCHOR BOLTS: CONFORMING TO STAINLESS STEEL C/W ISOLATION WASHERS.
4. BITUMINOUS PAINT: TO CAN/CGSB-1.108.
5. ISOLATE ALUMINUM FROM FOLLOWING COMPONENTS, BY MEANS OF BITUMINOUS PAINT:
   - .1 DISSIMILAR METALS EXCEPT STAINLESS STEEL, ZINC, OR WHITE BRONZE OF SMALL AREA.
   - .2 CONCRETE, MORTAR AND MASONRY.

STANDARD ABBREVIATIONS:

ADDITIONAL	ADDL	INSIDE DIAMETER	I.D.
AT	@	INSULATION	INSUL
ANCHOR BOLT	A. BOLT	INTERIOR	INT
ALTERNATE	ALTER.	KILONEWTON	kN
ALUMINUM	ALUM	LIVE LOAD	L.L.
APPROXIMATELY	APPROX	LOCATION	LOC'N
ARCHITECTURAL	ARCH	LONG	LG
AVERAGE	AVG.	LONG LEG HORIZONTAL	LLH
BALANCE	BOT	LONG LEG VERTICAL	LLV
BOTTOM	BAL	MATERIAL	MATL
BOTTOM LOWER LAYER	BLL	MAXIMUM	MAX
BOTTOM UPPER LAYER	BUL	MECHANICAL	MECH
BETWEEN	BTWN	MEZZANINE	MEZZ
BUILDING	BLDG	MINIMUM	MIN
BENCH MARK	B.M.	MISCELLANEOUS	MISC
BEARING	BRG	NEAR SIDE	N.S.
BY (Between dims)	x (lower case)	NELSON STUD	N.STUD
CENTERLINE	℄	NUMBER	No.
CENTER TO CENTER	C/C	NOT TO SCALE	N.T.S.
CAST IN PLACE	C.I.P.	ON CENTER	o/c (lower case)
CONCRETE MASONRY UNIT	C.M.U.	OUTSIDE FACE	O.F.
CONSTRUCTION JOINT	C.J.	OUT TO OUT	O/O
COMPLETE WITH	C/W	OUTSIDE DIAMETER	O.D.
COLUMN	COL	OPENING	OPNG
CONCRETE	CONC	OPPOSITE	OPP
CONTINUOUS	CONT	ORIGINAL	ORIG
DEAD LOAD	D.L.	OPEN WEB STEEL JOIST	OWSJ
DIAMETER	DIA	PERIMETER	PERIM
DOWN	DN	PERPENDICULAR	PERP
DRAWING	DWG	PLATE	PL
DOWEL	DWL	PRECAST	P/C
EACH FACE	E.F.	PRELIMINARY	PRELIM.
EXPANSION JOINT	E.J.	PROJECTION	PROJ
EACH END	E.E.	REINFORCE WITH	R/W
EACH SIDE	E.S.	REINFORCING	REINF
EACH WAY	E.W.	REQUIRED	REQD
ELEVATION	EL.	REVISION	REV.
ELECTRICAL	ELECT	ROOF DRAIN	R.D.
EQUAL	EQ	SECTION	SECT.
EQUAL SPACES	EQ SP	SHEET	SHT
EXISTING	EXIST	SIMILAR	SIM
EXPANSION	EXP.	SPECIFICATION	SPEC
EXTERIOR	EXT	STAINLESS STEEL	S.S.
FAR SIDE	F.S.	STANDARD	STD
FACE TO FACE	F/F	STIFFENER	STIFF
FACE OF CONCRETE	F.O.C.	STIRRUP	STIRR
FOUNDATION	FDN	STRUCTURAL	STRUCT
FOOTING	FTG	SYMMETRICAL	SYM
FULL TENSION SPLICE	F.T.S.	TOP LOWER LAYER	TLL
GALVANIZE	GALV	TOP OF	T.O.
GAUGE	GA	TOP UPPER LAYER	TUL
HANGER	HGR	TYPICAL	TYP
HORIZONTAL	HORIZ	UNLESS NOTED OTHERWISE	U/N
HOLLOW STRUCTURAL STEEL	HSS	UNDERSIDE	U/S
HEIGHT	HT	VERTICAL	VERT
INSIDE FACE	I.F.	WIND LOAD	W.L.



VEHICLE ACCESS CLEARWELL FLOOR SLAB PROTECTION

NO.	REVISIONS	DATE	BY
00	ISSUED FOR TENDER	05/04/17	C.T.

B.M. ELEV.

CH2MHILL / Fredericksen Cooper ARCHITECTS
EarthTech A Tyco International Ltd. Company

DESIGNED BY	FK	CHECKED BY	FK
DRAWN BY	C.T.	APPROVED BY	AHL
HOR. SCALE: VERTICAL SCALE:		RELEASED FOR CONSTRUCTION BY:	R. SOROKOWSKI
DATE	2005/02/24	DATE	2005-04-17

ENGINEER'S SEAL
ORIGINAL SIGNED BY
M. KLASSEN
2005/04/17

CONSULTANT DRAWING NO.
WT-S001

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WATER TREATMENT PLANT CLEARWELL CONSTRUCTION

STRUCTURAL GENERAL NOTES

CITY FILE NUMBER
SHEET OF
CITY DRAWING NUMBER
1-60IT-D-S0001-001-00D