SHEET: COW-A1 (05/2005)

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 CONTRACT ADMINISTRATOR 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 SURGE TOWER BELOW ELEVATION 247.250 TO ACI 350 AND ABOVE ELEVATION 247.250 TO CSA-A23.1-00.
4. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL YARD PIPING DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, SLEEVES AND OTHER BUILDING COMPONENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REPORT DISCREPANCIES TO THE CONTRACT ADMINISTRATOR 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 CONTRACT ADMINISTRATOR AND OBTAIN AUTHORIZATION IN WRITING PRIOR TO PROCEEDING WITH CONSTRUCTION. NOTIFY THE CONTRACT ADMINISTRATOR 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 CONTRACT ADMINISTRATOR 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.
9. PROTECT AS REQ'D ANY AND ALL EXISTING STRUCTURE, PIPES ETC. ABOVE AND BELOW GRADE FROM DAMAGE.

DESIGN LOADS:

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
   - 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.
   - .2) WIND q(1/30) = 0.42 kPa
   - .3) UNIFORM FLOOR LOADS = 4.8 kPa
3. LATERAL LOAD:
   1. SOIL: UNIT WEIGHT = 19.64 kN/m^3; K_A = 0.5
   2. WATER SIDE: WATER PRESSURE TO SURGE ELEV. 247.250
4. LATERAL LOAD COMBINATIONS:
   1. SOILS SIDE: GROUND WATER TABLE TO EL. 236.500 + FULL ACTIVE PRESSURE, SURGE TOWER EMPTY

   SURCHARGE CONDITIONS:

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

   2. WATER SIDE: WATER LEVEL TO SURGE EL. 247.500, NO ACTIVE SOIL PRESSURE.

FOUNDATION NOTES

1. PRECAST CONCRETE PILE FOUNDATION NOTES:
   SUREGE TOWER 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:
   PILE CUT OFF ELEVATIONS SHALL BE AS SHOWN IN THE PILING SECTIONS OF THE DRAWING DOCUMENTS. A MINIMUM OF 700mm OF STRAND SHALL BE EXPOSED FOLLOWING PILE CUT OFF. (01)

MASONRY NOTES

1. ALL MASONRY WORK SHALL CONFORM TO CSA S304.1, A371 AND TO DETAILS SHOWN ON DRAWINGS.
2. MASONRY BLOCK UNITS SHALL CONFORM TO CSA A165. CLASSIFICATION H/15/C/M WITH A MINIMUM UNIT STRENGTH OF 15 MPa, UNLESS NOTED OTHERWISE. (COMPRESSIVE STRENGTH IS BASED ON LOST AREA)
3. ALL MORTAR SHALL CONFORM TO CSA A179 AND SHALL BE TYPE 'S', MORTAR WITH MINIMUM STRENGTH OF 12 MPa AT 28 DAYS.
4. ALL LINTELS, BOND BEAMS, AND PILASTERS SHALL BE FILLED WITH CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa. (01)
5. PROVIDE DOWELS FROM CONCRETE BEAMS OR WALLS TO MATCH MASONRY REINFORCING.

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 SHALL BE TO THE "REINFORCING STEEL INSTITUTE OF CANADA" STANDARDS

EXCAVATION, BACKFILLING AND COMPACTION NOTES

1. EXCAVATE TO LINES AND LEVELS INDICATED IN THE CONSTRUCTION SEQUENCE AND DRAWINGS NECESSARY TO PROPERLY COMPLETE THE WORK. MINIMUM SIDE SLOPES OF TEMPORARY EXCAVATIONS SHALL NOT EXCEED 2.5 HORIZONTAL TO 1 VERTICAL.
   CONSTRUCT SLOPES IN BOTTOM OF EXCAVATION FOR DRAINAGE AS REQUIRED.
2. THE CONTRACTOR SHALL PROVIDE SHORING DURING EXCAVATION AS REQUIRED OR STATED ON DRAWINGS.
3. EXCAVATION BETWEEN PILES SHALL BE DONE WITH SUITABLE EQUIPMENT AND CARE SO AS NOT TO DAMAGE PILES.
4. DO NOT PLACE BACKFILL ON FROZEN GROUND, NOR USE FROZEN MATERIAL.
5. SUPPLY & INSTALL TEMPORARY BACKFILL AS NOTED ON DRAWINGS.
6. DEWATERING
   - A.) THE CONTRATOR SHALL BE RESPONSIBLE FOR THE CONTROL OF SURFACE DRAINAGE GOING INTO THE EXCAVATION.
   - B.) DEWATERING SYSTEMS SHALL BE DESIGNED TO EXPEDITIOUSLY REMOVE WATER FROM THE SURGE TOWER EXCAVATION UNTILL WALL BACKFILLING IS COMPLTED.
   - C.) THE DEWATERING SYSTEMS MUST PROTECT THE SUBGRADE SOILS FROM EXCESSIVE SOFTENING AND SATURATION.
   - D.) 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 THE CONTRACT ADMINISTRATOR 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.
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 CONTRACT ADMINISTRATOR.
7. CONSTRUCTION JOINTS: SURFACE PREPARATION SHALL BE BY SAND BLASTING TO EXPOSE FINE AGGREGATE. REINFORCING STEEL SHALL BE CLEANED BY SAND BLASTING METHOD AS WELL.
8. PRIOR TO PLACING CONCRETE ON HORIZONTAL CONSTRUCTION, THE SURFACE SHALL BE THROUGHLY WETTED WITH WATER AND PRE-BAGGED GROUT SLURRY COAT SHALL BE PLACED IMMIDIATLY PRIOR TO PLACING OF CONCRETE.
9. GROUT: NON-SHRINK, NON-METALLIC GROUT WITH MINIMUM STRENGTH AT THREE DAYS OF 20 MPa AND MINIMUM STRENGTH AT 28 DAYS OF 50 MPa.
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	EXPOSURE CLASS
1)	BASE SLAB	35	50	20	80 ± 30	4-7	0.40	C1, S1
2)	WALLS BELOW EL. 237.000 FOR WATER RETAINING SILICA FUME CONCRETE	35	50E-SF	20	S.P.	5-8	0.40	C1, S1
2a)	WALLS ABOVE EL. 237.000 FOR WATER RETAINING SILICA FUME CONCRETE	35	10	20	S.P.	5-8	0.40	C1
3)	IN CONTACT w/ SOIL THRUST BLK, NONWATER RETAINING WALLS BELOW GRADE, PADS	35	50	20	80 ± 30	4-7	0.40	S1
4)	OTHER STRUCTURAL CONCRETE NON WATER RETAINING WALLS ABOVE GRADE, ROOF, BENCHING	30	10	20	80 ± 30	4-7	0.45	N
5)	LEAN MIX FILL	10	50	20	100	N/A	0.55	N

(02)

NOTE: S.P. – SUPER PLASTICISER, SHALL BE ADDED AT THE SITE CONCRETE SLUMP SHALL BE TAKEN BEFORE ADDING SUPER PLASTICISER

13. PROVIDE CLEAR CONCRETE COVER OVER REBAR AS NOTED ON DRAWINGS AND FOLLOWS:
   - A) BASE SLAB — TOP & BOTTOM – 75 mm; SIDES – 100 mm
   - B) SURGE TOWER WALLS — INSIDE FACE – 70 mm; OUTSIDE FACE – 50 mm
   - C) ALL OTHER SECTIONS – 65 mm
14. CONCRETE CONSTRUCTION TOLERANCES:
   - 1.) CROSS SECTIONAL DIMENSIONS
     - 300mm OR LESS ± 6 mm
     - 300mm TO 1000mm ± 10 mm
     - 1000mm OR GREATER ± 20 mm
   - 2.) PLUMBNESS OF WALLS 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 ± 12 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 – MAY BE SPECIFIED CURING SEALER OR WET BURLAP.

.2) WALL 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:
- BASE SLAB — STEEL TROWEL FINISH
- SURFACES EXPOSED TO VIEW — SMOOTH-FORM FINISH
- 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 ALUM FROM FOLLOWING COMPONENTS, BY MEANS OF BITUMINOUS PAINT: 2 COATS
   .1 DISSIMILAR METALS EXCEPT STAINLESS STEEL, ZINC, OR WHITE BRONZE OF SMALL AREA.
   .2 CONCRETE, MORTAR AND MASONRY.

MISCELLANEOUS METALS – STEEL

1. STEEL PLATES AND SECTIONS: CONFORMING TO CSA G40.21-94; TYPE W WITH A MINIMUM YIELD STRENGTH OF 300 MPa.
2. HOLLOW STRUCTURAL SECTIONS: CONFORMING TO CSA G40.21-94; TYPE W WITH A MINIMUM YIELD STRENGTH OF 350 MPa.
3. ANCHOR BOLTS: CONFORMING TO ASTM A307.
4. WELDING MATERIALS: CONFORMING TO CSA W59-03.
5. PRIMER: TO CISC/CPMA 2-75.
6. WELDING OF ALL LOAD CARRYING ASSEMBLIES IS TO BE PERFORMED BY A FIRM CERTIFIED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1-03 IN DIVISION 1 OR DIVISION 2.1.
7. GROUT: NON-SHRINK, NON-METALLIC, 50 MPa AT 28 DAYS.
8. VERIFY ALL DIMENSIONS ON SITE PRIOR TO FABRICATION.
9. FABRICATE ITEMS OF SIZES AND PROFILES DETAILED ON DRAWINGS, WITH JOINTS NEATLY FITTED AND PROPERLY SECURED.
10. SUPPLY ALL COMPONENTS REQUIRED FOR PROPER ANCHORAGE OF MISCELLANEOUS METALS. FABRICATE ANCHORAGE AND RELATED COMPONENTS OF SAME MATERIAL AND FINISH AS METAL FABRICATIONS, UNLESS OTHERWISE SPECIFIED OR SHOWN.
11. WELD CONNECTIONS WHERE POSSIBLE, OTHERWISE BOLT CONNECTIONS. COUNTERSINK ALL EXPOSED FASTENINGS. CUT OFF BOLTS FLUSH WITH NUTS.
12. ACCURATELY FORM ALL CONNECTIONS AND JOINTS WITH EXPOSED FACES FLUSH, MITRES AND JOINTS TIGHT.
13. GRIND OR FILE EXPOSED ROUGH WELDS AND METALS SECTIONS SMOOTH AND FLUSH.
14. GALVANIZING CONFORMING TO CSA G164-M92.
15. CLEAN ALL STEEL PRIOR TO PRIMING TO SSPC SURFACE PREPARATION SPECIFICATION No. 7 "BRUSH-OFF BLAST CLEANING".
16. PRIME STEEL SURFACES WITH ONE COAT OF PRIMER TO CISC/CPMA 2-75. FINISH COAT(S) TO OWNER REQUIREMENTS.

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	BAL	LONG LEG VERTICAL	LLV
BOTTOM	BOT	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.

APEGM
Certificate of Authorization
Earth Tech Canada Inc.
No. 730 Expiry: April 30, 2007

B.M. ELEV.

NO.	REVISIONS	DATE	BY
02	37-2006 ADDENDUM 2	06/05/31	GGP
01	37-2006 ADDENDUM 1	06/05/24	NS
00	ISSUED FOR TENDER	06/05/03	WDB

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

DESIGNED BY	FK	CHECKED BY	GGP
DRAWN BY	WDB / GGP	APPROVED BY	AHL
SCALE:	N.T.S.	RELEASED FOR CONSTRUCTION BY:	R. SOROKOWSKI
DATE	2006/03/04	DATE	2006/05/03

ENGINEER'S SEAL
ORIGINAL SIGNED BY
F.A. KEMP
2006/05/03

CONSULTANT DRAWING NO.
WY-S0140

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WATER TREATMENT PLANT
YARD PIPING AND VALVE CHAMBERS
SURGE TOWER CONSTRUCTION

CITY FILE NUMBER
SHEET OF

STRUCTURAL
GENERAL NOTES

CITY DRAWING NUMBER
1-0601Y-A-S0140-001-02D

Last Save: 2006-06-01 11:44 AM

L:\WORK\79000\79538\02A-CAD\IND\CONTR\SURGE TOWER\DN_WY-S0140_ET.DWG