

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.
4. NOTIFY THE ENGINEER A MINIMUM 48 HOURS IN ADVANCE FOR REVIEWS.
5. 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.
6. 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.
7. VERIFY LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO COMMENCING CONSTRUCTION AND BE RESPONSIBLE FOR DISRUPTIONS.
8. PROTECT AS REQUIRED ANY AND ALL EXISTING STRUCTURES, PIPES ETC. ABOVE AND BELOW GRADE FROM DAMAGE.
9. ANY DISCREPANCIES BETWEEN CSA STANDARDS AND CONSTRUCTION DOCUMENTS, THE MOST STRINGENT SHALL APPLY, AND AS DIRECTED BY THE CONTRACT ADMINISTRATOR.

DESIGN LOADS:

1. DEAD LOADS: SELF WEIGHT
2. LIVE LOADS: .1) GROUND SNOW LOAD - $S_s = 1.7 \text{ kPa}$
 $S_r = 0.2 \text{ kPa}$
 MODIFY FOR EXPOSURE AND DRIFT AS PER NBC 1995.
 .2) ACCESS HATCH COVERS & GRATING: LIVE LOAD = 2.4 kPa
3. LATERAL LOAD:
 1. SOIL: UNIT WEIGHT = 22.0 kN/m^3
 $K_0 = 0.5$
 2. SURCHARGE: 12.0 kPa

FOUNDATION NOTES

1. ALL FOUNDATION CONSTRUCTION SHALL BE PERFORMED WITH REFERENCE TO THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL INFORMATION AVAILABLE FOR THE SITE.
2. PILE FOUNDATIONS ARE DESIGNED IN COMBINATION AS DRIVEN, END BEARING, PRESTRESSED PRECAST CONCRETE PILES WITH ALLOWABLE LOAD CAPACITY OF 800 kN. SEE SPECIFICATIONS FOR PREBOARING REQUIREMENTS
3. PRECAST PILE CUT-OFF ELEVATIONS SHALL BE AS SHOWN ON THE DRAWINGS. A MINIMUM OF 450 mm OF STRAND LENGTHS SHALL BE EXPOSED FOLLOWING THE 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 RSI "REINFORCING STEEL MANUAL OF STANDARD PRACTICE".

EXCAVATION, BACKFILLING & COMPACTION NOTES

1. EXCAVATE TO LINES AND LEVELS NECESSARY TO PROPERLY COMPLETE THE WORK AND WITH REFERENCE TO THE GEOTECHNICAL INFORMATION. CONSTRUCT SLOPES IN BOTTOM OF EXCAVATION FOR DRAINAGE AS REQUIRED.
2. EXCAVATION BETWEEN PILES SHALL BE DONE WITH SUITABLE EQUIPMENT AND CARE SO AS NOT TO DAMAGE PILES.
3. DO NOT PLACE BACKFILL ON FROZEN GROUND, NOR USE FROZEN MATERIAL.
4. DEWATERING SYSTEMS SHALL BE DESIGNED TO EXPEDITIOUSLY REMOVE WATER FROM THE EXCAVATION UNTIL BACKFILING IS COMPLETED.
5. BACKFILLING MATERIAL AND COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTIONS 02223.

MISCELLANEOUS METALS - ALUMINUM

1. ALUMINUM: CONFORMING TO ALUMINUM ASSOCIATION ANODIZED ALLOY & TEMPER. DESIGNATION 6061-T6. GRATING BEARING BARS TO 6063-T6 & CROSS BARS TO 6063-T5.
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 ASTM 316 c/w ISOLATION WASHERS.
4. BITUMINOUS PAINT: TO MPI EXT. 5.5D.
5. ISOLATE ALUMINUM 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 AND GROUT.

CONCRETE NOTES

1. PROVIDE CONCRETE AND PERFORM WORK TO CSA-A23.1-00. THE CONTRACTOR SHALL HAVE A COPY OF THIS STANDARD ON SITE AT ALL TIMES. IN THE 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 CONTRACT ADMINISTRATOR FOR REVIEW.
3. CONCRETE WILL BE TESTED IN ACCORDANCE WITH CSA-A23.2-00.
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. CONSTRUCTION JOINTS: SURFACE PREPARATION SHALL BE BY SAND BLASTING TO EXPOSE FINE AGGREGATE. REINFORCING STEEL SHALL BE CLEANED BY SAND BLASTING METHOD AS WELL.
7. GROUT: NON-SHRINK, NON-METALLIC GROUT WITH MINIMUM STRENGTH AT THREE DAYS OF 20 MPa AND MINIMUM STRENGTH AT 28 DAYS OF 50 MPa.
8. VOID FORM UNDER PILED STRUCTURES ONLY.
9. THE CONTRACTOR SHALL NOTIFY THE INSPECTION AND TESTING FIRM, IN AMPLIE TIME TO PERMIT SCHEDULING, PRIOR TO ANY CONCRETE POUR. IF AMPLIE TIME IS NOT ALLOWED, ALTERNATE CONCRETE TESTS WILL BE PERFORMED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR AND PAID FOR BY THE CONTRACTOR.
10. AT LEAST THREE CONCRETE CYLINDERS WILL BE TAKEN FOR EVERY 75 CUBIC METERS OR LESS OF EACH CLASS OF CONCRETE PLACED. ADDITIONAL FIELD CYLINDERS 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.
11. CONCRETE REQUIREMENTS:

TYPE	LOCATION	28-DAY STRENGTH f_c' (MPa)	AGGREG. CEMENT TYPE	AGGREG. MAX. SLUMP (mm)	TOTAL MAX. AIR %	EXPOSURE CLASS
1.	BASE SLAB AND ROOF	35	50*	20	75± 25	4-7 0.40 S1
2.	BEAMS & WALLS: CONCRETE FOR WATER RETAINING OR IN CONTACT WITH SOIL	35	50*	20	S.P.	4-7 0.40 S1
3.	LEAN MIX FILL	10	50*	20	100	N/A 0.55 N

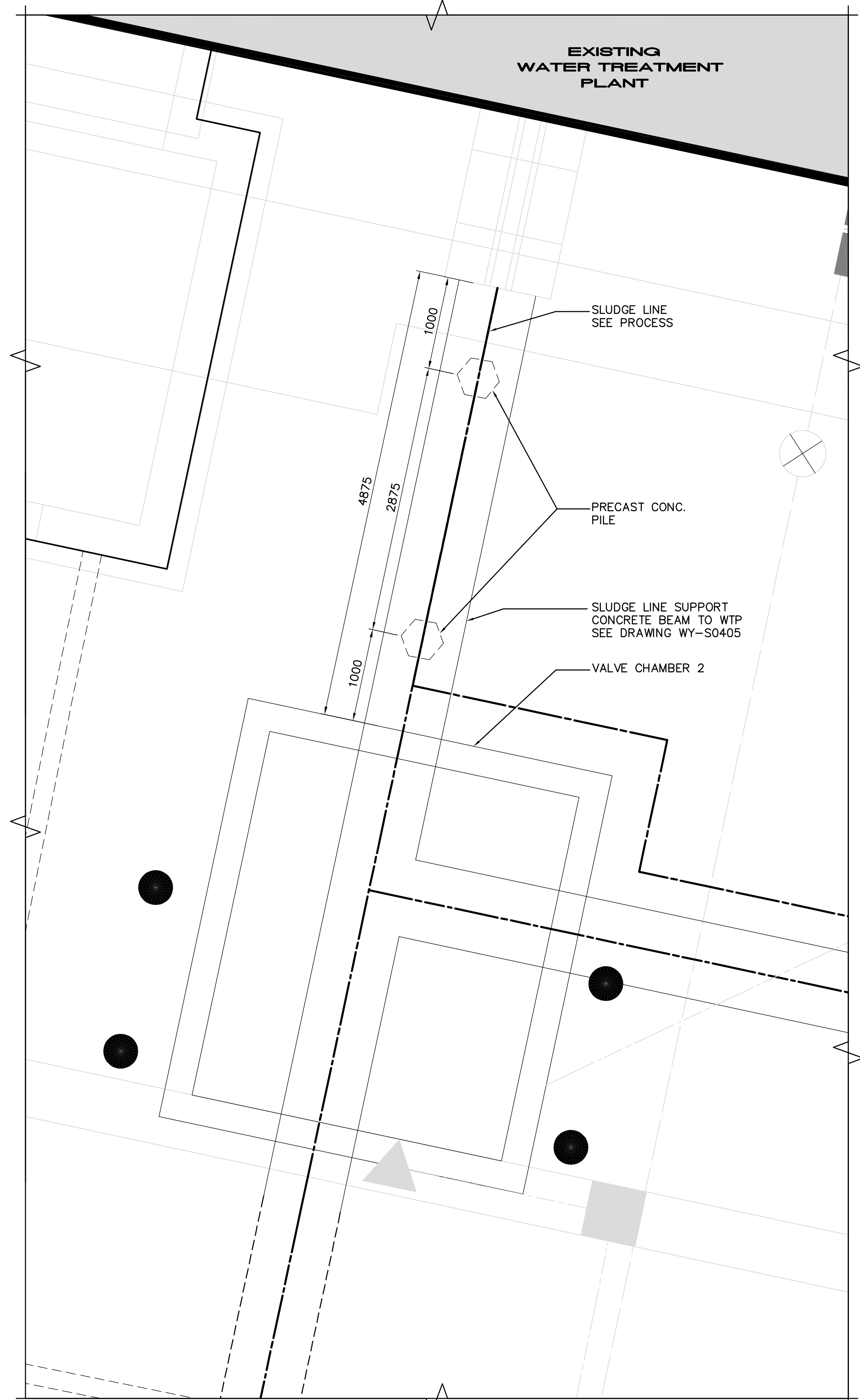
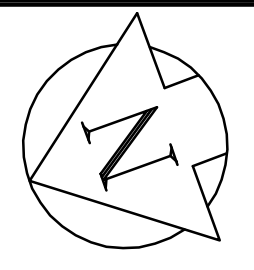
S.P. = 75H-25 SUPERPLASTIZER
 * HS6 IS ACCEPTABLE (SEE SPECIFICATIONS FOR ACCEPTANCE CRITERIA)
12. PROVIDE CLEAR CONCRETE COVER OVER REBAR AS NOTED ON DRAWINGS AND AS FOLLOWS:
 1. BASE SLAB: 75 mm
 2. ALL OTHER LOCATIONS: 50 mm
13. CONCRETE CONSTRUCTION TOLERANCES:
 1. CROSS SECTIONAL DIMENSIONS

350mm OR LESS	± 6 mm
350mm TO 1000mm	± 12 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
BASE SLABS	± 20 mm
WALLS	± 6 mm
B) VERTICAL	
PILE CUT OFF	± 25 mm
BASE SLABS	± 25 mm
WALLS	± 8 mm
BEAMS	± 4 mm
C) FLATNESS	
GENERAL SURFACES - MODERATELY FLAT	(6mm GAP ALONG 3000mm STRAIGHT EDGE)
14. CONCRETE CURING, PROTECTION & 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.
 2. SURFACE FINISHES TO CSA-A23.1-00 CLAUSE 22 AND SPECIFIED HEREIN:

SLABS	STEEL TROWEL FINISH
SURFACES EXPOSED TO VIEW	SMOOTH-FORM FINISH
SURFACES NOT EXPOSED TO VIEW	ROUGH-FORM FINISH
ROOF SLABS	LIGHT BROOM FINISH



PLAN VIEW - PARTIAL
N.T.S.

<p>Certificate of Authorization Earth Tech Canada Inc. No. 730 Expiry: April 30, 2007</p>	B.M. ELEV.	<p>Frederickson Cooper ARCHITECTS</p>	<p>A Tyco International Ltd. Company</p>	ENGINEER'S SEAL	<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION</p>		
				DESIGNED BY: GGP / AP		CHECKED BY: MK	ORIGINAL SIGNED BY: A. POCHANART
				DRAWN BY: CMF		APPROVED BY: AHL	2007/01/26
				SCALE: AS NOTED		RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI	CONSULTANT DRAWING NO. WY-S0406
	01 ISSUED FOR TENDER (94-2007) 07/04/05 GSK				CITY FILE NUMBER		
	00 ISSUED FOR TENDER 07/01/26 CMF				SHEET OF		
	NO. REVISIONS	DATE	DATE	2006/11/16	2007/01/26	CITY DRAWING NUMBER	
						1-0601Y-A-S0406-001-010	