GENERAL NOTES:

BUILDER TO CHECK AND AVOID ALL BURIED SERVICES PRIOR TO WORK. ULTIMATE BEARING CAPACITY = 200kPa. FOUNDATION CONDITIONS SHALL BE INSPECTED BY ENGINEER DURING CONSTRUCTION.

DESIGN LOADS:

- IMPORTANCE LEVEL 1. WIND RECURRENCE INTERVAL 200 YEAR. TERRAIN CATEGORY 3. Cpn = 1.2.
- VEHICLE IMPACT NOT CONSIDERED

CONCRETE:

ALL CONCRETE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3600:2001 AND THE RELEVANT SPECIFICATIONS.

USE OF CALCIUM CHLORIDE IN CONCRETE IS NOT PERMITTED.

CONCRETE SPECIFICATIONS ARE AS FOLLOWS

ELEMENT GRADE SLUMP

FOOTINGS N32 80mm

- DURABILITY EXPOSURE CLASSIFICATIONS FOR SURFACES FOR MEMBERS ARE -
- 3.1. IN CONTACT WITH GROUND: A2
- EXTERNAL ENVIRONMENT : B1 3.2
- 3.3. INTERNAL ENVIRONMENT : A1
- CONCRETE COVER TO REINFORCEMENT IS AS FOLLOWS UNLESS NOTED OTHERWISE

	MINIMUM COVER (mm)			
ELEMENT	IN CONTACT WITH GROUND	INTERIOR	EXTERIOR	
FOOTINGS	50	50	50	

- REINFORCEMENT NOTATION TO AS 4671: 2001 IS AS FOLLOWS N DENOTES D500N - DEFORMED, GRADE 500, NORMAL DUCTILITY BAR R DENOTES R250N - PLAIN, GRADE 250, NORMAL DUCTILITY BAR RL DENOTES D500L - DEFORMED, GRADE 500, LOW DUCTILITY MESH THE NUMBER FOLLOWING THE BAR SYMBOL IS THE NOMINAL BAR DIAMETER IN MILLIMETERS. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION
- REINFORCEMENT LAPS U.N.O.
- RECTANGULAR FABRICS 225 ENDS, 125 SIDES
- REINFORCEMENT CRANKS NOT GREATER THAN 1 IN 6
- DO NOT WELD OR SITE BEND REINFORCEMENT UNLESS SHOWN ON THE DRAWINGS OR OTHERWISE APPROVED BY THE DESIGN ENGINEER
- REINFORCEMENT SHALL BE SUPPORTED ON APPROVED BAR CHAIRS, SPACERS OR SUPPORT BARS AT 800 MAX CRS EACH WAY FOR MESH
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE APPLIED FINISHES. BEAM DEPTHS INCLUDE SLAB THICKNESS
- CONSTRUCTION JOINTS BETWEEN NEW AND EXISTING FOOTING SHALL BE KEPT PROUD. DO NOT ALLOW ANY MECHANICAL INTERLOCK TO OCCUR. DEMOLITION OF EXISTING FOOTING SHALL MATCH EXTENT OF DEMOLITION OF EXISTING WALL
- ALL CONCRETE SHALL BE COMPACTED USING MECHANICAL VIBRATORS
- NO HOLES, CHASES OR EMBEDDED ITEMS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT PRIOR APPROVAL OF THE DESIGN ENGINEER.
- CURING OF CONCRETE SHALL COMMENCE A MIN. OF 2 HRS AFTER CONCRETING IS FINISHED. CURING METHOD SHALL BE APPROVED BY THE DESIGN ENGINEER
- FORMWORK SHALL COMPLY WITH AS 3610 AND RELEVANT CONSTRUCTION SAFETY CODES. STRIPPING TIMES SHALL BE IN ACCORDANCE WITH TABLE 5.4.1 AND SHALL BE APPROVED BY THE DESIGN ENGINEER BEFORE PROCEEDING WITH THE WORK
- FINISHES TO UNFORMED SURFACES SHALL BE STEEL TOWELLED FINISH U.N.O.S

FOUNDATION:

- FOOTINGS HAVE BEEN DESIGNED FOR AN ULTIMATE BEARING CAPACITY OF 200kPa.
- ALL FOUNDATIONS ARE TO BE FREE OF WATER AND LOOSE MATERIAL
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXCAVATION IN A STABLE CONDITION WITHOUT AFFECTING SURROUNDING PROPERTY INCLUDING SERVICES. THIS INCLUDES OBTAINING ALL NECESSARY APPROVALS FOR SHORING AND ANCHOR SYSTEMS.
- ANY OVER EXCAVATION SHALL BE BACKFILLED WITH CONCRETE GRADE N15.
- PWC ENGINEER SHALL BE ADVISED IMMEDIATELY IF ANY UNEXPECTED GROUND WATER IS ENCOUNTERED ON SITE SO THAT A DECISION CAN BE MADE AS TO WHETHER LOCAL DEWATERING IS REQUIRED.
- FOOTINGS SHALL BE CONSTRUCTED AND BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID SOFTENING OR DRYING OUT BY EXPOSURE

STEELWORK:

- FABRICATE AND ERECT ALL STEELWORK IN ACCORDANCE WITH AS4100. AS1538. AS4600 AND THE SPECIFICATION.
- SHOP DRAWINGS:
 - 2.1 THE CONTRACTOR SHALL SUBMIT 3 COPIES OF ALL SHOP DETAIL DRAWINGS. SHOP DRAWINGS ARE TO BE DRAWN TO SCALE AND INCLUDE MARKING/LAYOUT PLANS TO EASILY LOCATE MEMBER LOCATIONS/POSITIONS
 - REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS
- ALL WELDING SHALL BE IN ACCORDANCE WITH AS1554.1 2000. FILLET WELDS SHALL BE CATEGORY GP U.N.O. FULL PENETRATION BUTT WELDS SHALL BE
- CATEGORY SP U.N.O. USE E48XX ELECTRODES TYPICAL ALL CUT STEEL EDGES TO BE GROUND TO A RADIUS OF 2mm. DEFECTS SUCH AS PIN HOLES, BLOW HOLES, HAMMER MARKS ETC SHALL BE RECTIFIED TO THE SATISFACTION OF THE ENGINEER PRIOR TO GALVANISING OR PAINTING.
- DO NOT MAKE PENETRATIONS OR CUTOUTS OTHER THAN THOSE SHOWN ON THE DRAWINGS 11 WITHOUT PRIOR APPROVAL OF THE DESIGN ENGINEER.
- SURFACE PREPARATION PRIOR TO COATING SHALL BE ABRASIVE BLAST CLEANING TO 6 AS1627.4 CLASS 2.5 U.N.O.
- CORROSION PROTECTION
- GALVANISING ALL STEELWORK U.N.O.
 - GALVANISING SHALL BE HOT DIPPED IN ACCORDANCE WITH AS4680
 - HOT DIP GALVANISING IS TO COMPLY WITH SYSTEM DESIGNATION HDG500 OF AS2312:2002.
 - PROVIDE DRAIN HOLES AND VENTS IN CLOSED SECTIONS
 - REMOVE ALL ARISES
 - SHOP APPLIED PAINTING AS NOTED ON DRAWINGS
 - REMOVE ALL ARISES
 - SURFACES SHALL BE ABRASIVE BLAST CLEANED TO COMPLY WITH AS1627.4, CLASS 2.5
 - APPLY ONE COAT OF INORGANIC ZINC SILICATE PAINT COMPLYING WITH SYSTEM IZS2 OF AS2312:2002 - 75 MICRON DRY FILM THICKNESS - WITHIN 4 HOURS OF CLEANING
- FIELD TOUCH UP

7.2.

- GALVANISED SURFACES
 - THOROUGHLY DEGREASE DAMAGED AREA USING SOLVENT IN ACCORDANCE WITH AS1627.1, RINSE THOROUGHLY WITH CLEAN WATER AND LIGHTLY ABRADE
- APPLY ONE COAT OF INTERZINC 352 50 MICRON DRY FILM THICKNESS
- SHOP APPLIED COATINGS 7.3.2.
 - THOROUGHLY DEGREASE DAMAGED AREAS USING SOLVENT IN ACCORDANCE
 - WITH AS1627.1 THOROUGHLY RINSE WITH CLEAN WATER AND LIGHTLY ABRADE
 - APPLY ONE COAT OF INTERZINC 72 75 MICRON DRY FILM THICKNESS
- TOP COAT OPTIONAL GALVANISED SURFACES
- - ETCH PRIME
 - APPLY TWO COATS INTERLAC 665 ALKYD GLOSS ENAMEL AT 35 MICRON DRY FILM THICKNESS EACH COAT.
 - COLOUR TO SUPERINTENDENT
- PAINTED SURFACES
 - APPLY TWO COATS INTERLAC 665 ALKYD GLOSS ENAMEL AT 35 MICRONS DRY FILM THICKNESS EACH COAT
 - COLOUR TO SUPERINTENDENT

STEELWORK (CONT):

- CONCRETE ENCASE ALL STEELWORK BELOW GROUND, MIN 50 COVER TO ALL SURFACES. WRAP ENCASED MEMBERS WITH GGW41 - MIN 35 COVER U.N.O.
- ALL HOLDING DOWN BOLTS, NUTS, WASHERS AND ALL FIXINGS TO BE CAST INTO CONCRETE SHALL BE HOT DIPPED GALVANISED. ALL HOLDING DOWN BOLTS SHALL BE HOT DIPPED GALVANISED.
- 10. UNLESS NOTED OTHERWISE
- 10.1. ALL CLEAT, GUSSET, END, FIN AND STIFFENER PLATES SHALL BE 10mm THICK TO AS3679-1996
- ALL BOLTS SHALL BE M20 4.6/s TO AS 1252-1983. MINIMUM CONNECTION -2-M20 10.2. 4.6/s BOLTS. BOLT HOLE CLEARANCE 2mm TYPICAL
- 10.3. WELDS SHALL BE 6mm CONTINUOUS FILLET TO AS1554 PART 1 - 1991. WELDS FULL PERIMETER OF CONTACT
- 10 4 ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANISED TO AS1214-1983
- 10.5. MORTAR WHERE REQUIRED - A MINIMUM OF 25mm NON SHRINK GROUT - 40 MPa MASONRY ANCHORS TO BE HILTI HVU OR APPROVED EQUIVALENT (MINIMUM SIZE 10.6.
- M16) INSTALLED INTO CORE FILLED MASONRY OR CONCRETE 10.7. ALL FILLET WELDS TO HOLLOW SECTION MEMBERS SHALL BE FOR FULL CONTACT. THE SIZE OF FILLET WELD SHALL BE 2 TIMES THE WALL THICKNESS OF THE THINNEST HOLLOW SECTION AT THE CONNECTION
- BOLTS SHALL BE PROVIDED WITH THREADS EXCLUDED FROM THE SHEAR PLANE. PROVIDE A HARDENED WASHER UNDER ALL NUTS. WHERE TENSIONED USE LOAD INDICATING WASHERS AND TENSION TO AS1252
- BOLT NOTATION

DRAFTING STANDARD TO A.S.1100

- 4.6/s COMMERCIAL GRADE 4.6 BOLTS, SNUG TIGHTENED
- 8.8/s HIGH STRENGTH GRADE 8.8 BOLTS, SNUG TIGHTENED
- 8.8/TF HIGH STRENGTH GRADE 8.8 BOLTS, TENSIONED, FRICTION CONNECTION
- 8.8/TB HIGH STRENGTH GRADE 8.8 BOLTS, TENSIONED CONNECTION
- ROD COUPLERS PRODUCT GRADE C
- ROD TURNBUCKLES CLASS L TO AS2319
- 12. THE STRUCTURE SHALL BE MAINTAINED IN A STABLE STATE AT ALL TIMES. THE CONTRACTOR SHALL SUPPLY TEMPORARY BRACING AS REQUIRED.

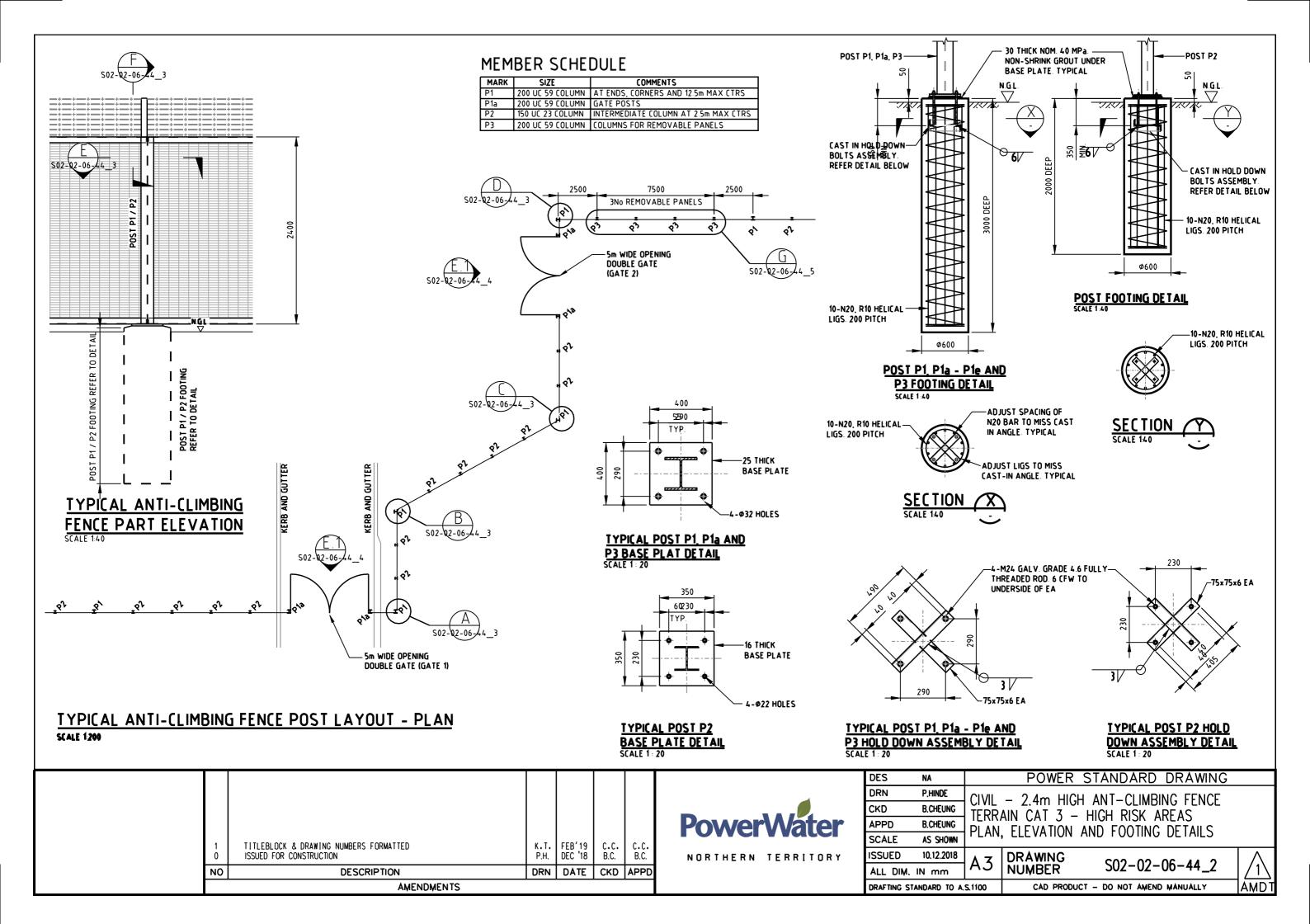
EARTH GRID DETAILS SHEET 6 & SHEET 7 REMOVED OCT'20 B.V. B.C. TITLEBLOCK & DRAWING NUMBER FORMATTED EB'19 ISSUED FOR CONSTRUCTION DEC '18 DATE APPD NO DESCRIPTION DRN CKD **AMENDMENTS**

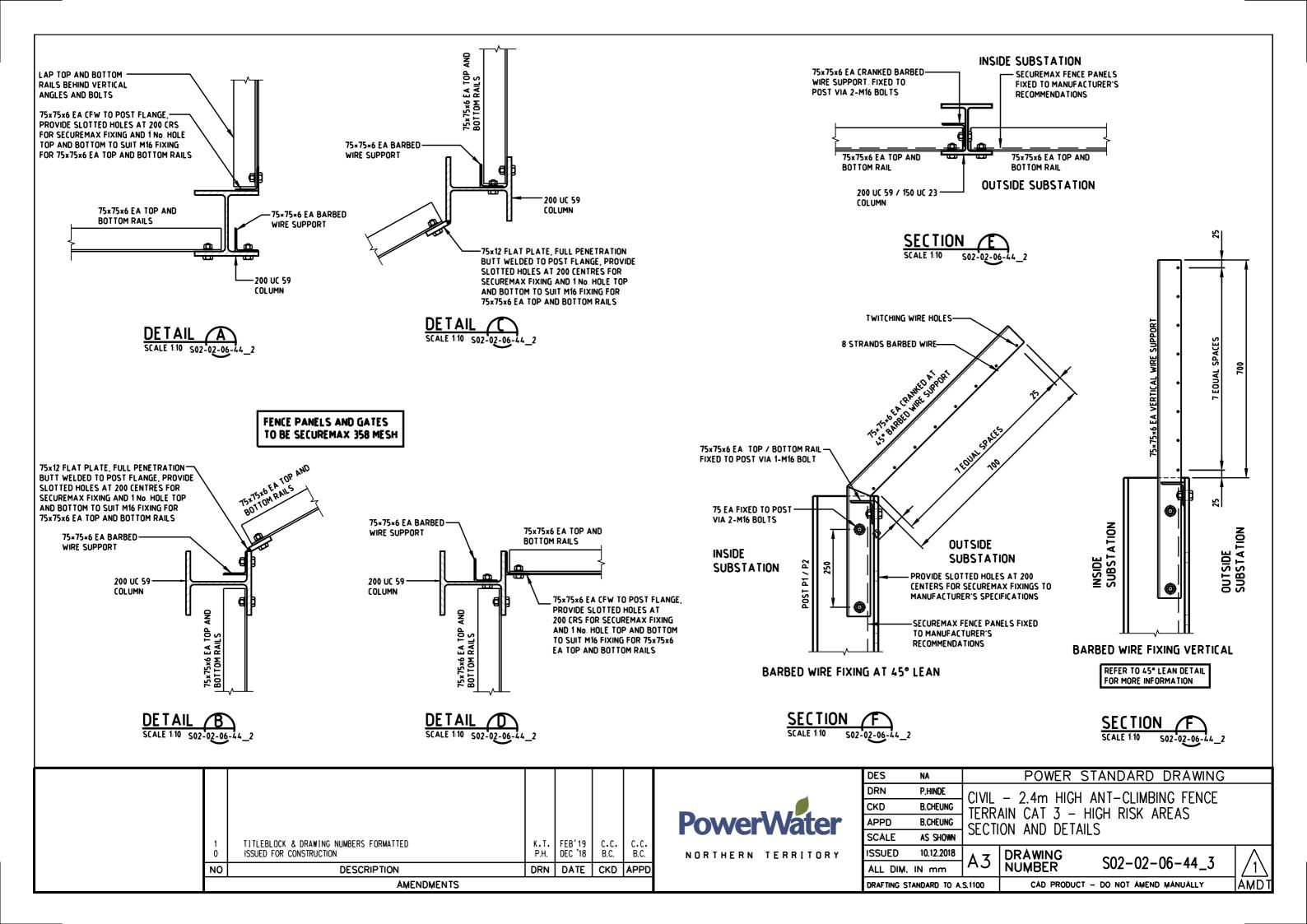


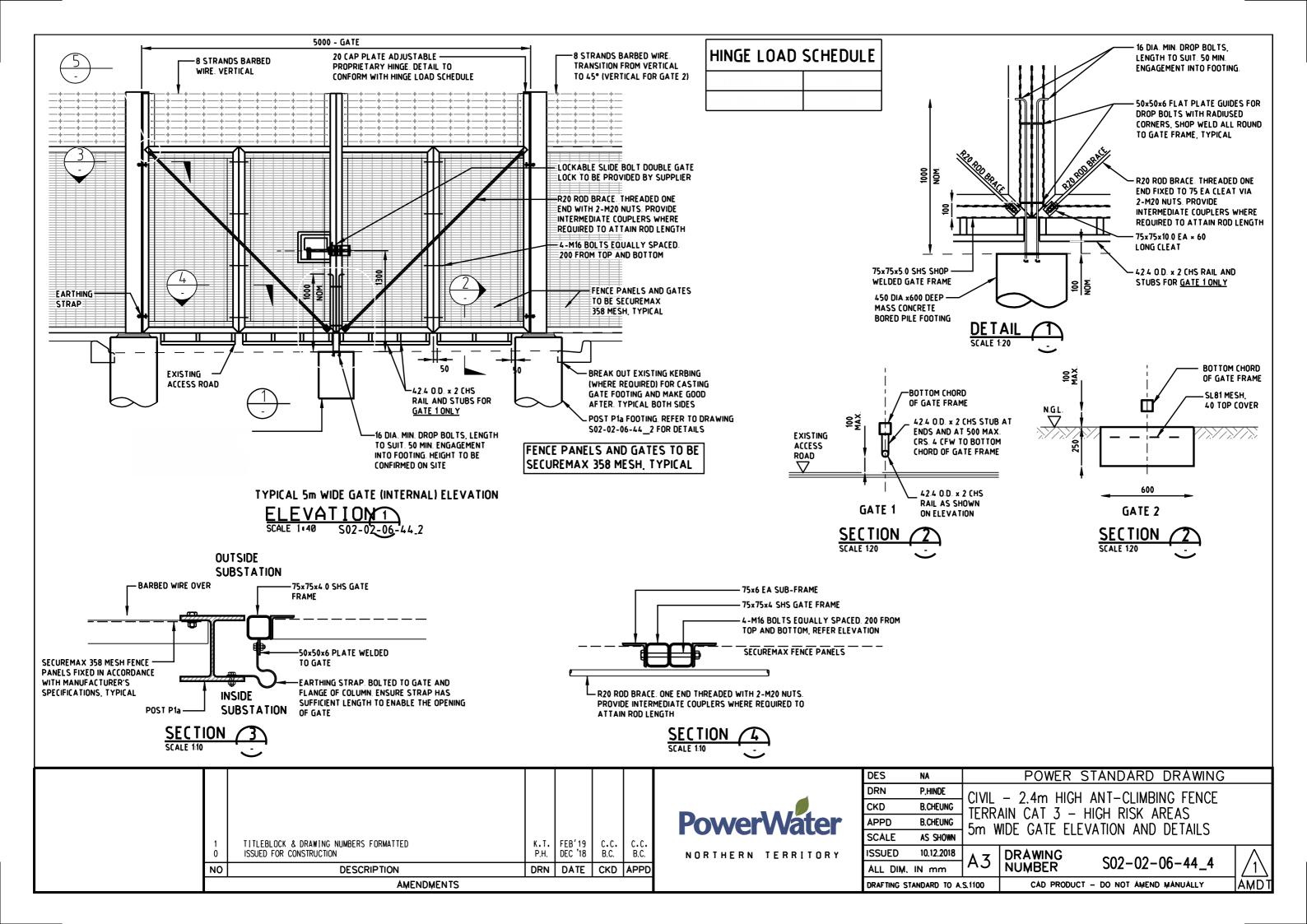
DES	NA	POWER STANDARD DRAWING			
DRN	P.HINDE			ANT-CLIMBING FENCE	
CKD	B.CHEUNG		TERRAIN (AT 3 - HIGH RISK AREAS		
APPD	B.CHEUNG] S I ANI	STANDARD STRUCTURAL DRAWING NOTES		
SCALE	AS SHOWN				
ISSUED	10.12.2018	۸ ۵	DRAWING	S02-02-06-44 1 \(\frac{1}{2} \)	
ALL DIM IN mm		נאן	NUMBER	302-02-00-44_1/2\	

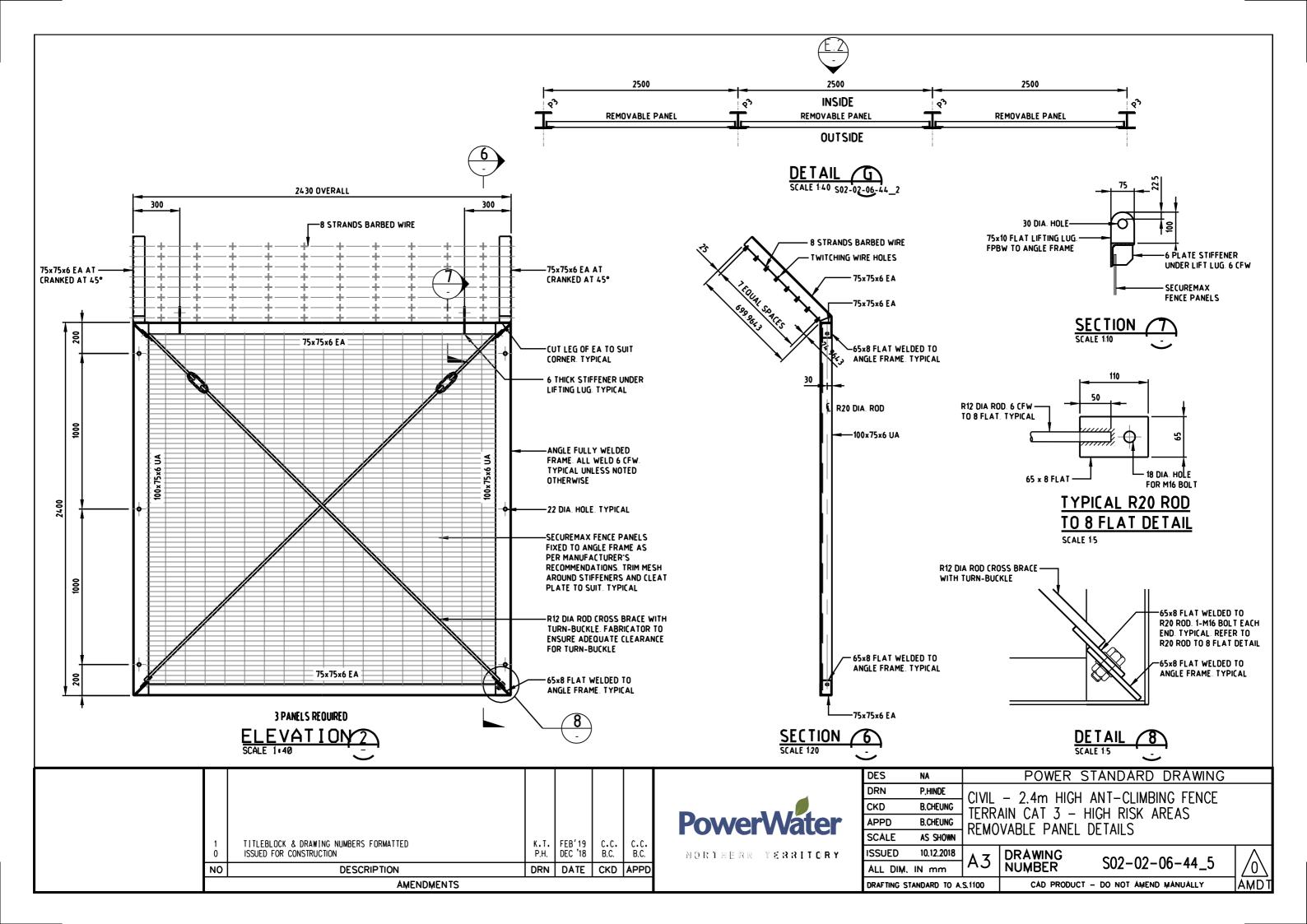
CAD PRODUCT - DO NOT AMEND MANUALLY

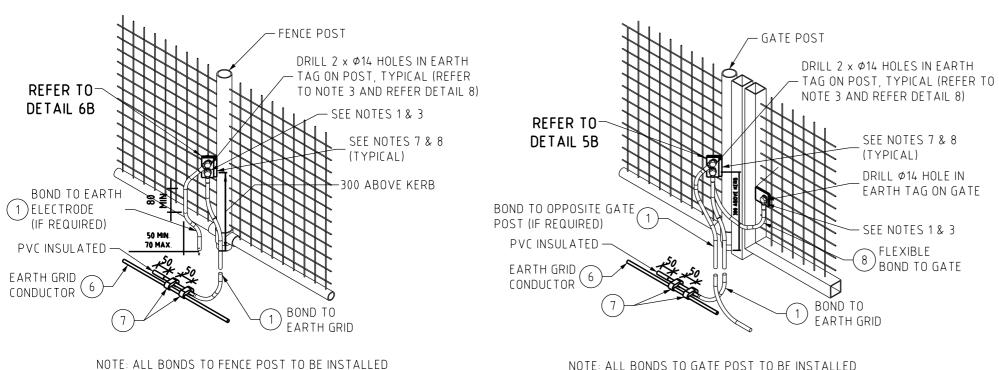
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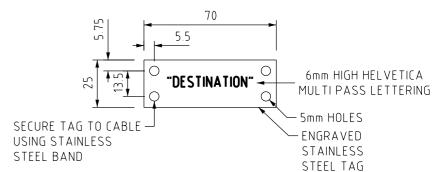


NOTE: ALL BONDS TO GATE POST TO BE INSTALLED INSIDE ONLY. NO CONDUCTOR TO BE RUN OVER KERB. BONDING OF GATE POST TO EARTH GRID



NOTES:

- CONNECTION BETWEEN MAIN EARTH GRID AND CONCRETE REINFORCING OR FENCE POST TO BE INSTALLED WITH INSULATION INTACT TO INHIBIT CORROSION.
- 2. ALL PVC COVERED CONDUCTORS SHOULD BE PROTECTED DURING WELDING OPERATIONS.
- 3. ALL CONNECTIONS TO EARTH TAGSTO BE CLEARLY & PERMANENTLY LABELLED WITH CABLE DESTINATION. SEE DETAIL 8.
- ALL COMPRESSION LUGS TO BE TERMINATED USING CORRECT HEXAGONAL DIES.
- ALL DIMENSION ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. DO NOT SCALE, DIMENSIONS TAKE PRECEDENCE.
- 6. FENCE BONDING EARTH TAGS SHALL BE WELDED TO FENCE /GATE POSTS PRIOR TO HOT DIP GALVANISING.
- 7. WHERE WELDING IS TO BE CARRIED OUT ON SITE ALL WELDS TO BE CLEARED OF SLAG, WIRE BRUSHED AND PAINTED WITH COLD GALVANISING PAINT.
- B. ONLY ONE CONNECTION PER BOLT IS PERMITTED.
- 9. DIRECT BOND TO ALL EXPOSED METALIC PLANT IS TO BE PROVIDED.
- IF ELECTRODES DRIVEN USE ITEMS 9 & 10 OTHERWISE IF HOLE DRILLED USE ITEMS 6 & 12 (i.e. BARE STRANDED CONDUCTOR)



EARTH CONDUCTOR ENGRAVED STAINLESS STEEL TAG

ADVICE ON LABELING NOMENCLATURE PROVIDED ON REQUEST - PH: 02 4951 9636



STRENGTH BUTT WELDED TO POST REFER TO NOTES 7 & 8 UG FOR OPPOSITE ELECTRODE (IF REQUIRED) NUT (TYPICAL) BELLEVILLE WASHER (TYPICAL) FLAT WASHER (TYPICAL) FLAT WASHER (TYPICAL) FLAT WASHER (TYPICAL) DETAIL 5B STRENGTH BUTT WELDED TO POST REFER TO NOTES 7 & 8 LUG FOR OPPOSITE GATE POST (IF REQUIRED) NUT (TYPICAL) FLAT WASHER (TYPICAL) FLAT WASHER (TYPICAL) DETAIL 5B

INSIDE ONLY. NO CONDUCTOR TO BE RUN OVER KERB.

BONDING OF FENCE POST TO EARTH GRID

DETAIL

N.T.S.

13	AR	CABLE PROTECTOR- 150mm x 20m ROLL COVER MARKED "ELECTRICAL CABLE"	6569	S02-01-08-05
12	AR	EARTHING COMPOUND - USE AROUND ELECTRODE IN PIT JBS 02342012	400915	S02-01-05-02
10	2 MIN. & AR	ELECTRODE COUPLING - Ø15mm BRASS	414061	S01-01-05-01
9	2 MIN. & AR	ELECTRODE ROD - Ø15mm - 1800mm LONG COPPER CLAD	414060	S01-01-05-01
8	AR	CONDUCTOR - 070mm2 STRANDED COPPER PVC COVERED	1578	S02-01-01-23
7	AR	CONNECTOR COMPRESSION - 070mm2 BURNDY STYLE YGHC CRIMP 35/070mm2 TAP	255786	S01-01-05-08
6	AR	CONDUCTOR - 070mm2 STRANDED COPPER - BARE	9803	S01-01-05-05
5	1	FASTENERS - WASHER - M12 BELLEVILLE STAINLESS STEEL TO A.S.316	-	-
4	2	FASTENERS - WASHER - M12 FLAT STAINLESS STEEL TO A.S.316 JBS 03756209	-	-
3	AR	FASTENERS - BOLT & NUT - M12 HEX STAINLESS STEEL TO A.S. 316/A4 - LENGTH TO SUIT		-
2	AR	LUG - 070mm2 M12 TINNED COPPER HEX COMPRESSION UTILUX H1423/25	5512	-
1	AR	CONDUCTOR - 070mm2 STRANDED COPPER - PVC COVERED	1578	S02-01-01-23
ITEM	QTY	DESCRIPTION	ITEM NUMBER	DRG NUMBER

2 EARTH GRID DETAILS REMOVED
1 TITLEBLOCK & DRAWING NUMBER FORMATTED
2 ISSUED FOR CONSTRUCTION
3 DESCRIPTION
4 DATE CKD APPD

AMENDMENTS



DES	NA	POWER STANDARD DRAWING			
DRN	P.HINDE	CIVIL - 2.4m HIGH ANT-CLIMBING FENCE			
CKD	B.CHEUNG	TERRAIN CAT 3 - HIGH RISK AREAS			
APPD	B.CHEUNG	GENERAL EARTHING DETAILS - SHEET 6			
SCALE	AS SHOWN				
ISSUED	10.12.2018	А3	DRAWING	S02-02-06-44 6	
ALL DIM. IN mm		NUMBER	302-02-00-440	2\	
DRAFTING STANDARD TO A.S.1100		(AD PRODUCT - DO NOT AMEND MANUALLY		AMDT	