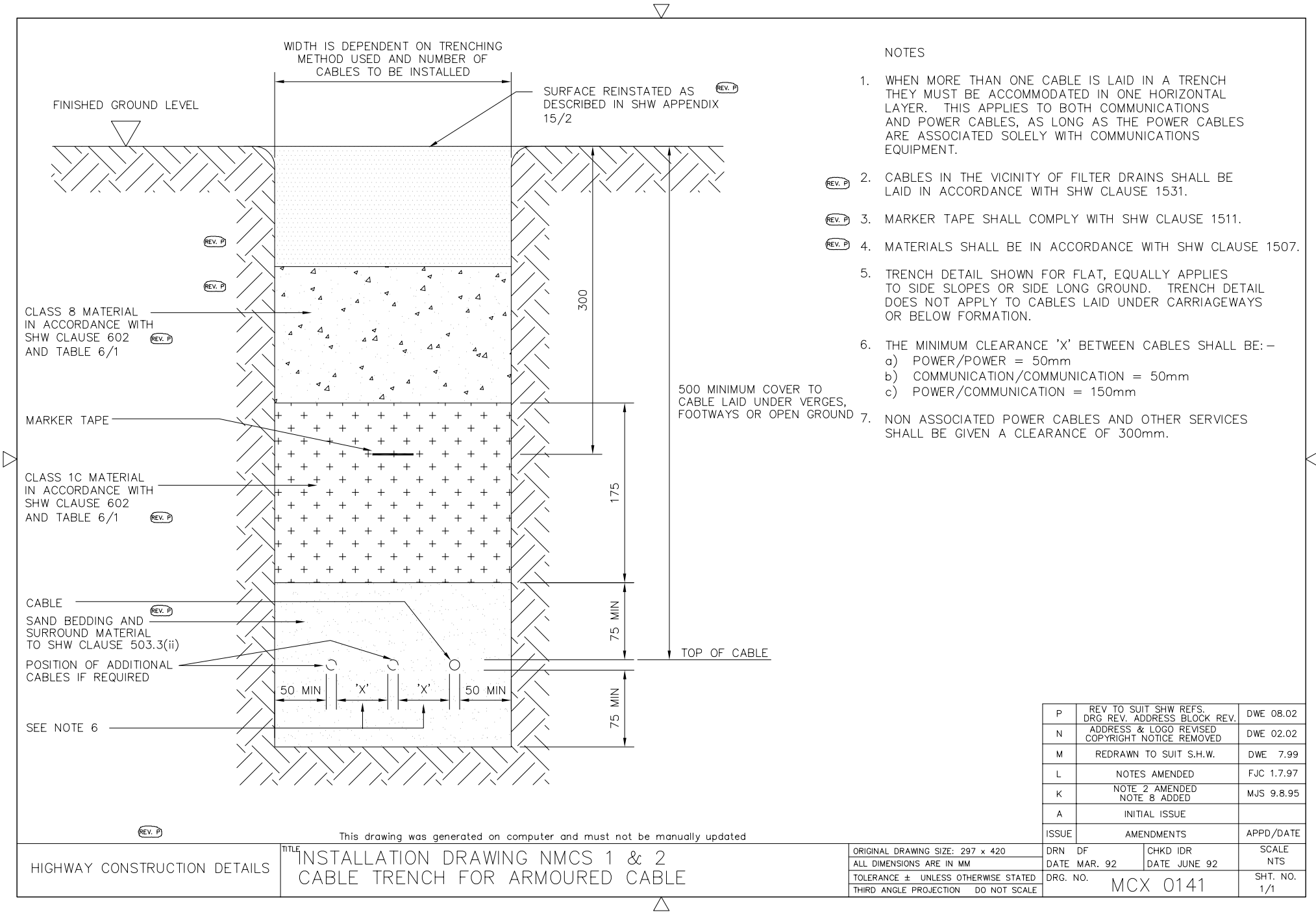
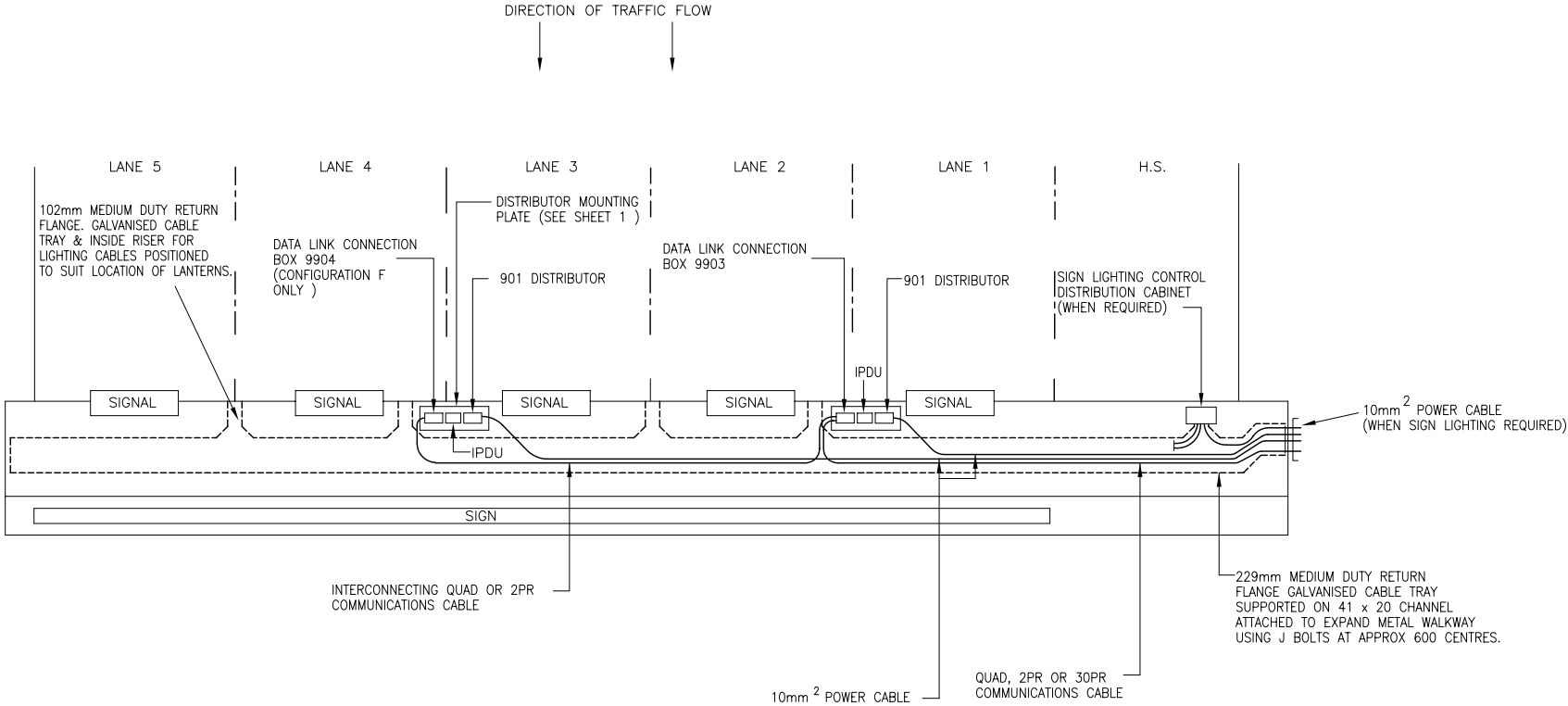


S	PAYING SLABS SIZE AMENDED IN NOTE 5	DWE 08.05
R	NOTE 2 AMENDED	DWE 11.03
Q	REV TO SUIT SHW REFS. ADDRESS BLOCK REV.	DWE 08.02
P	ADDRESS & LOGO REVISED COPYRIGHT NOTICE REMOVED	DWE 02.02
N	GENERALLY UPDATED	FJC 1.7.97
A	INITIAL ISSUE	---
ISSUE	AMENDMENTS	APPD/DATE
DRN R.A DATE 20.8.93	CHKD D.OWEN DATE 13.6.94	SCALE NTS
DRC. NO. MCX 0140		SHT. NO. 1/1





NOTES
1. FOR NOTES SEE MCX 0142 SHEET 1



(REV. 1)

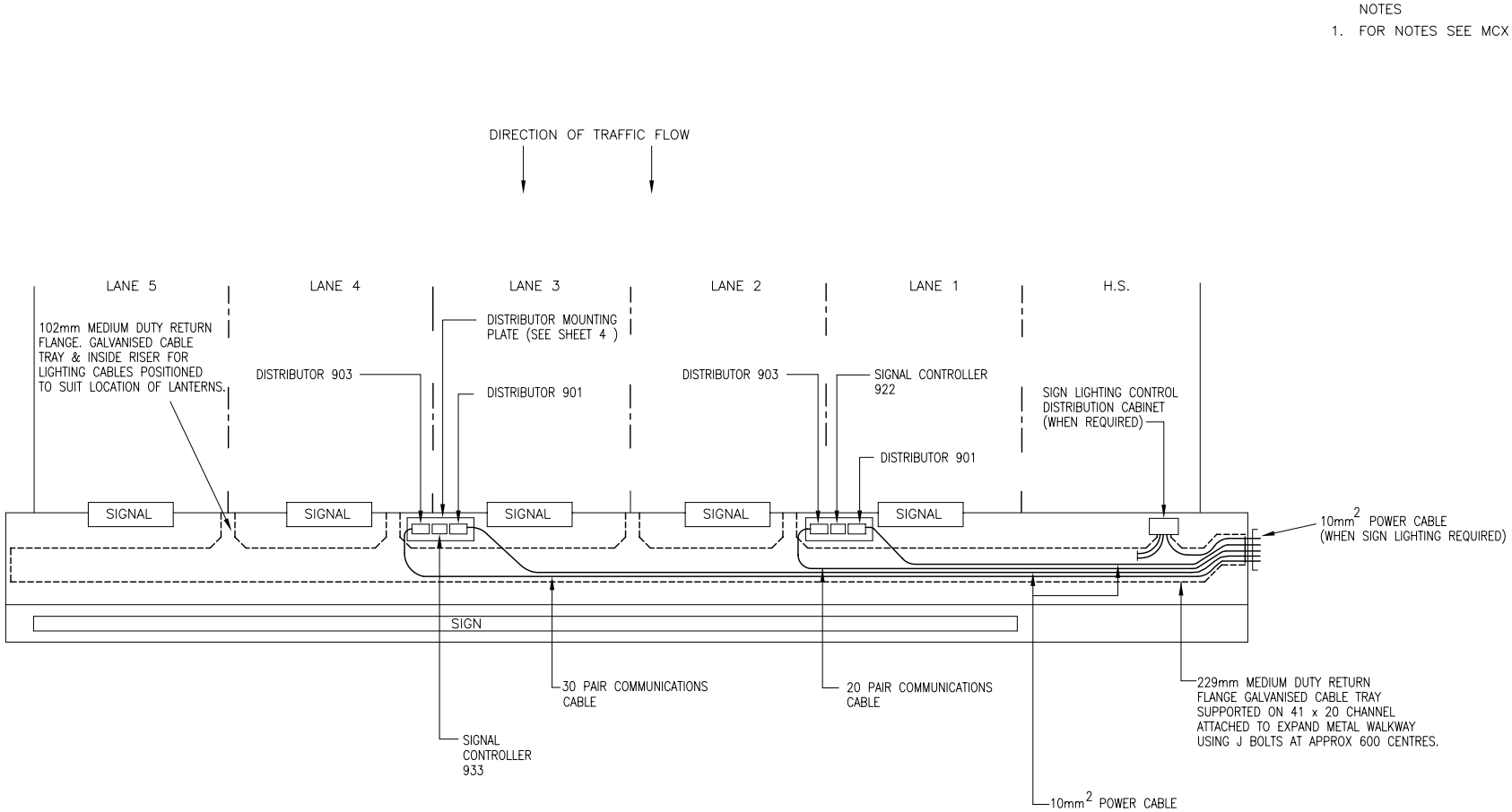
This drawing was generated on computer and must not be manually updated

ORIGINAL DRAWING SIZE: 297 x 420
ALL DIMENSIONS ARE IN MM
TOLERANCE ± UNLESS OTHERWISE STATED
THIRD ANGLE PROJECTION DO NOT SCALE

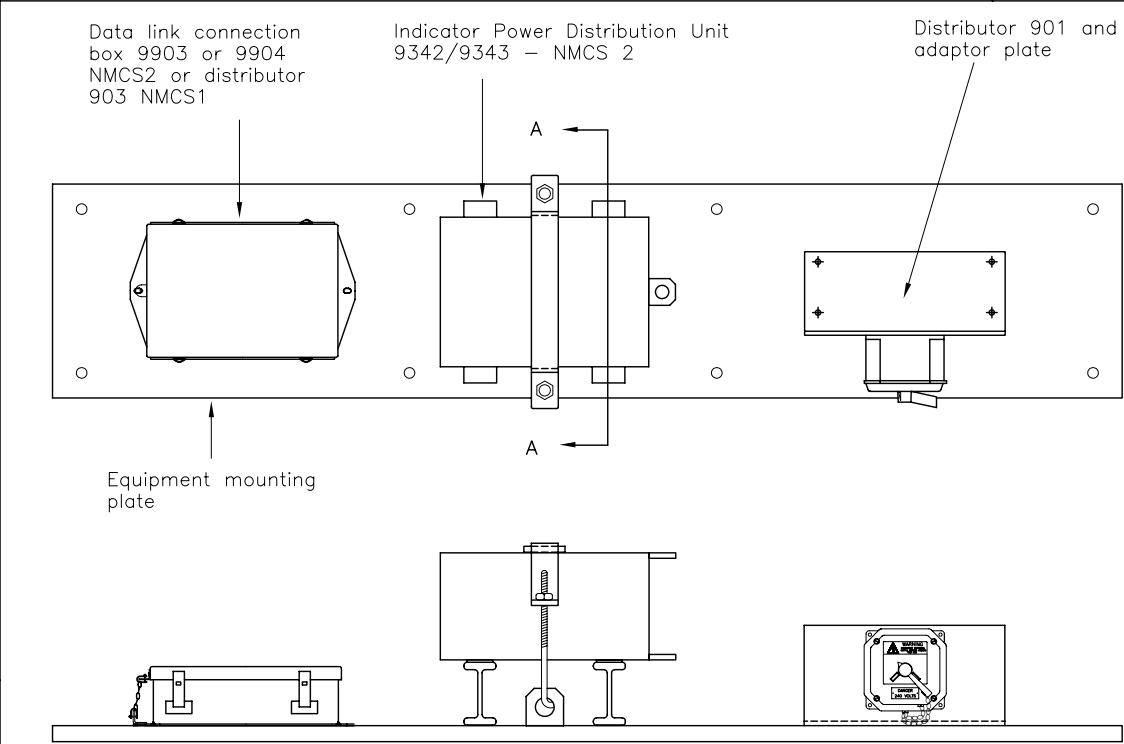
L	HA ADDRESS REPLACED BY HIGHWAY CONSTRUCTION DETAILS	DWE 02.06
K	ADDRESS & LOGO REVISED COPYRIGHT NOTICE REMOVED	DWE 02.02
J	GENERALLY UPDATED	DWE 7.97
H	DLCB'S & 901'S TRANSPOSED	FJC 19.12.94
G	TRANSFERRED TO CAD	FJC 30.9.94
A	INITIAL ISSUE	CFK 19.8.76
ISSUE	AMENDMENTS	APPD/DATE
DRN	EED	CHKD
DATE	1.12.93	DATE
DRG. NO.	MCX 0142	SHT. NO.
		2 of 4

HIGHWAY CONSTRUCTION DETAILS

TITLE
INSTALLATION DRAWING NMCS 2
CABLE ARRANGEMENTS ON GANTRY
TYPICAL 4 OR 5 LANE ARRANGEMENT (SCHEMATIC)

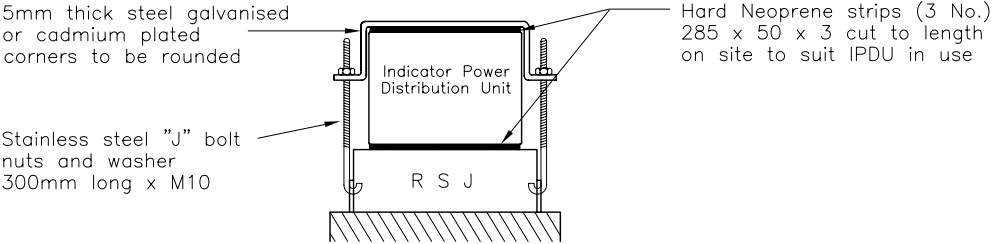


K	HA ADDRESS REPLACED BY HIGHWAY CONSTRUCTION DETAILS		DWE 02.06
J	ADDRESS & LOGO REVISED COPYRIGHT NOTICE REMOVED		DWE 02.02
H	GENERALLY UPDATED		DWE 7.97
G	DIST. 901 & 903 TRANSPOSED		FJC 19.12.94
F	TRANSFERRED TO CAD		FJC 30.9.94
A	INITIAL ISSUE		CFK 5.6.87
ISSUE	AMENDMENTS		APPD/DATE
DRN	PJS	CHKD DO	SCALE
DATE	9.6.94	DATE 13.6.94	NTS
DRG. NO.	MCX 0142		SHT. NO. 3 of 4



NOTES

1. This drawing shows a typical gantry layout of distributor 901, 903 and data link connection box for NMCS 2 installations. Variants to this drawing may exist depending upon the type of gantry installed.
2. The contractor shall:—
 - (a) Tap holes already provided in equipment mounting plate, supply necessary bolts and washers. Fit equipment.
 - (b) Terminate power in 901 and communications cable in data link connection box.
3. Fixing bolts shall nominally be 24mm long. M6 for 901 and M8 for 9903/4. Bolts and washers shall be of stainless steel.
4. 901 assembly comprises:—
 - (a) switch, cable tail with connector, cable gland (complete with earth tag and shroud) and adaptor plate.
5. The contractor shall provide a crimping tool suitable for crimping 10mm² S.C. terminals.
6. Neutral conductors of split concentric cable shall be fitted with black insulation sleeving. Earth conductors shall be fitted with yellow/green sleeving.
7. All nuts and bolts to be assembled with thread locking adhesive (except IPDU "J" bolts).
8. All electrical wiring and testing carried out by the contractor shall meet the IEE regulations for electrical installations.
9. In order to minimise possible nuisance tripping of RCD's it is important that the earth, neutral and live conductors be physically separated from each other particularly where the individual conductors emerge from the cable glands.
10. The contractor shall supply the stainless steel "J" bolts, bracket, nuts and hard neoprene strips for fixing of the IPDU to the equipment mounting plate.
11. System of wiring:—
 - (a) Armoured cables on cable tray or
 - (b) Unarmoured cables in galvanised or stainless steel trunking and stainless steel flexible conduit or on cable tray with protection covers.

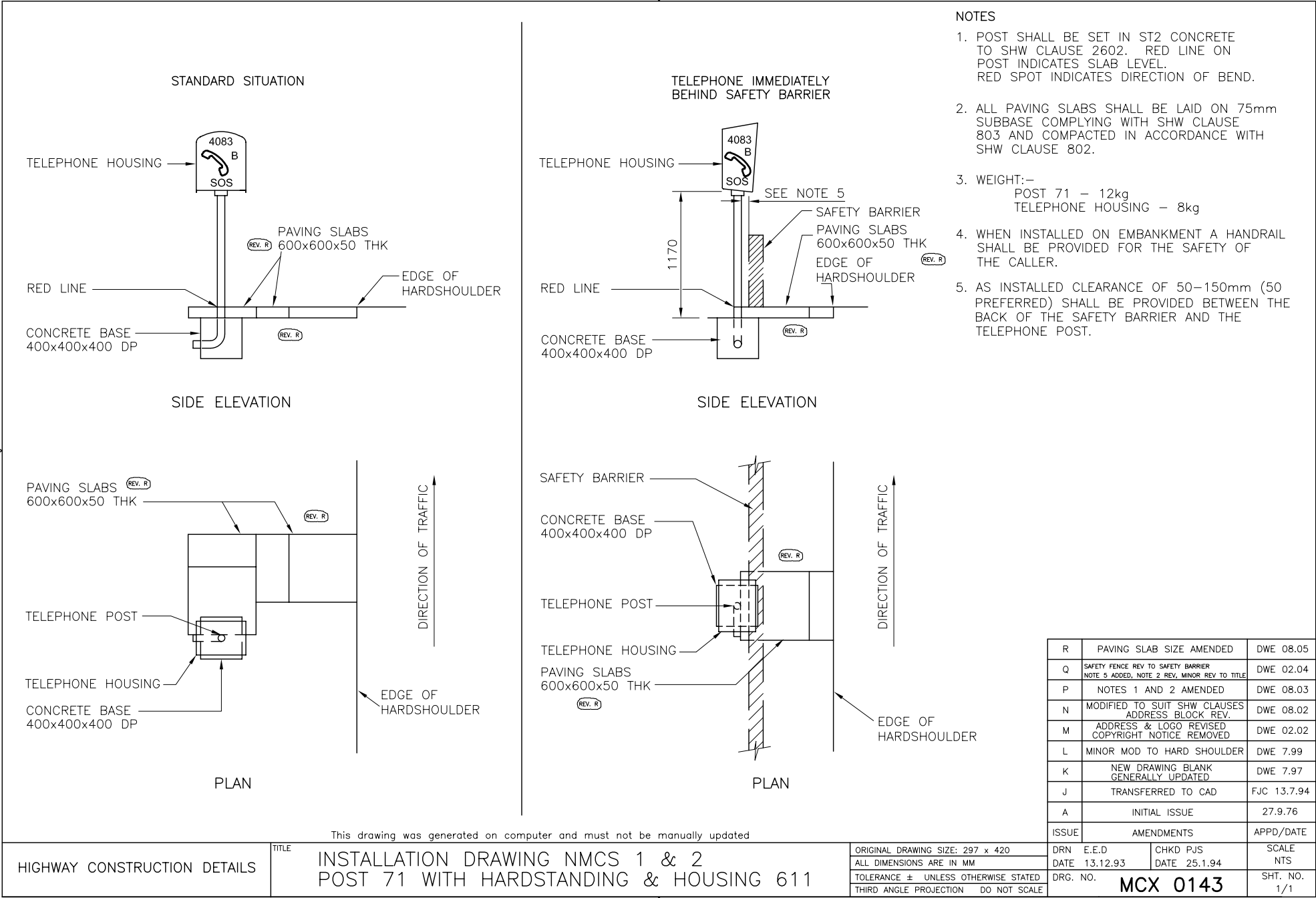


VIEW A-A

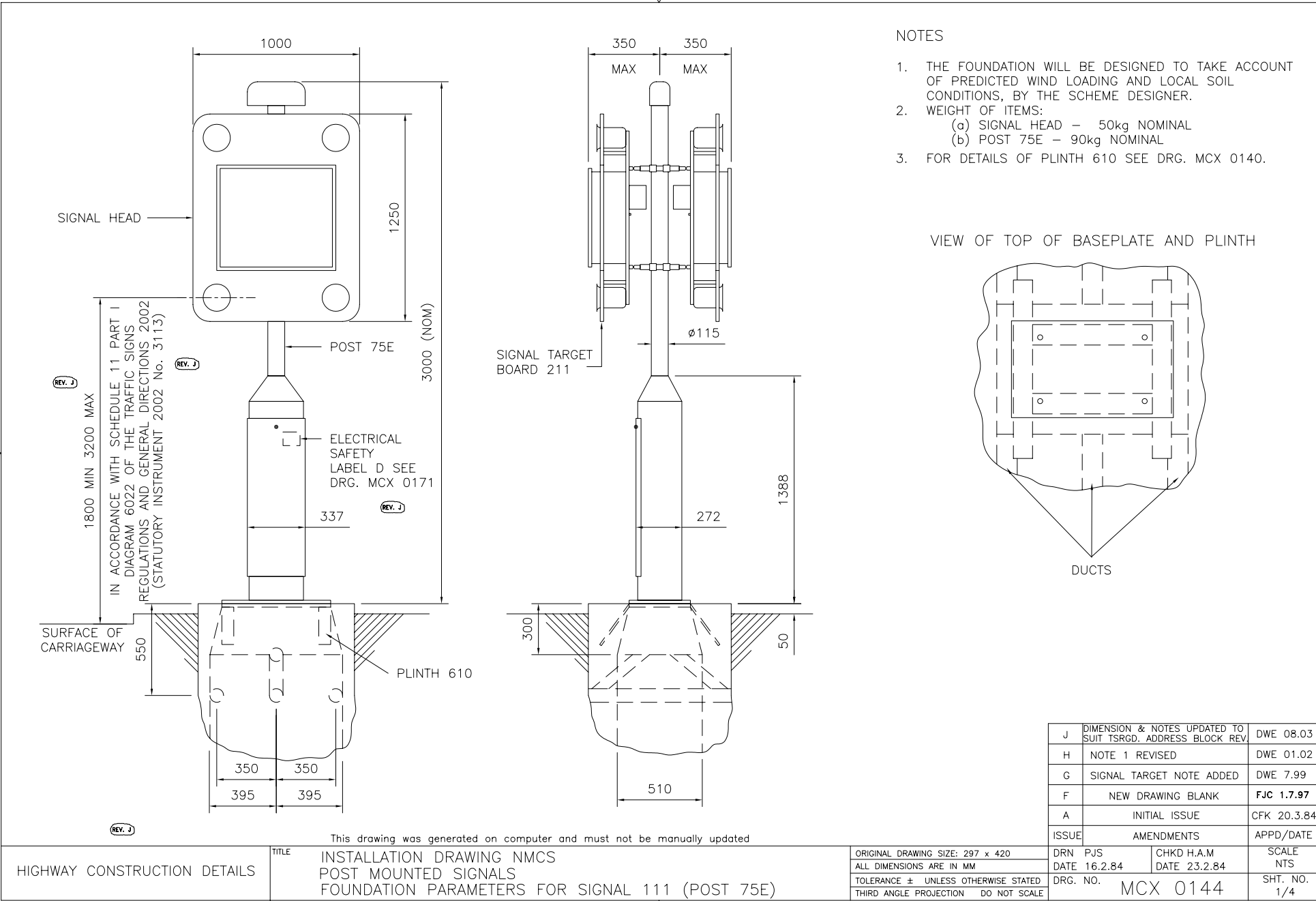
(REV. J)

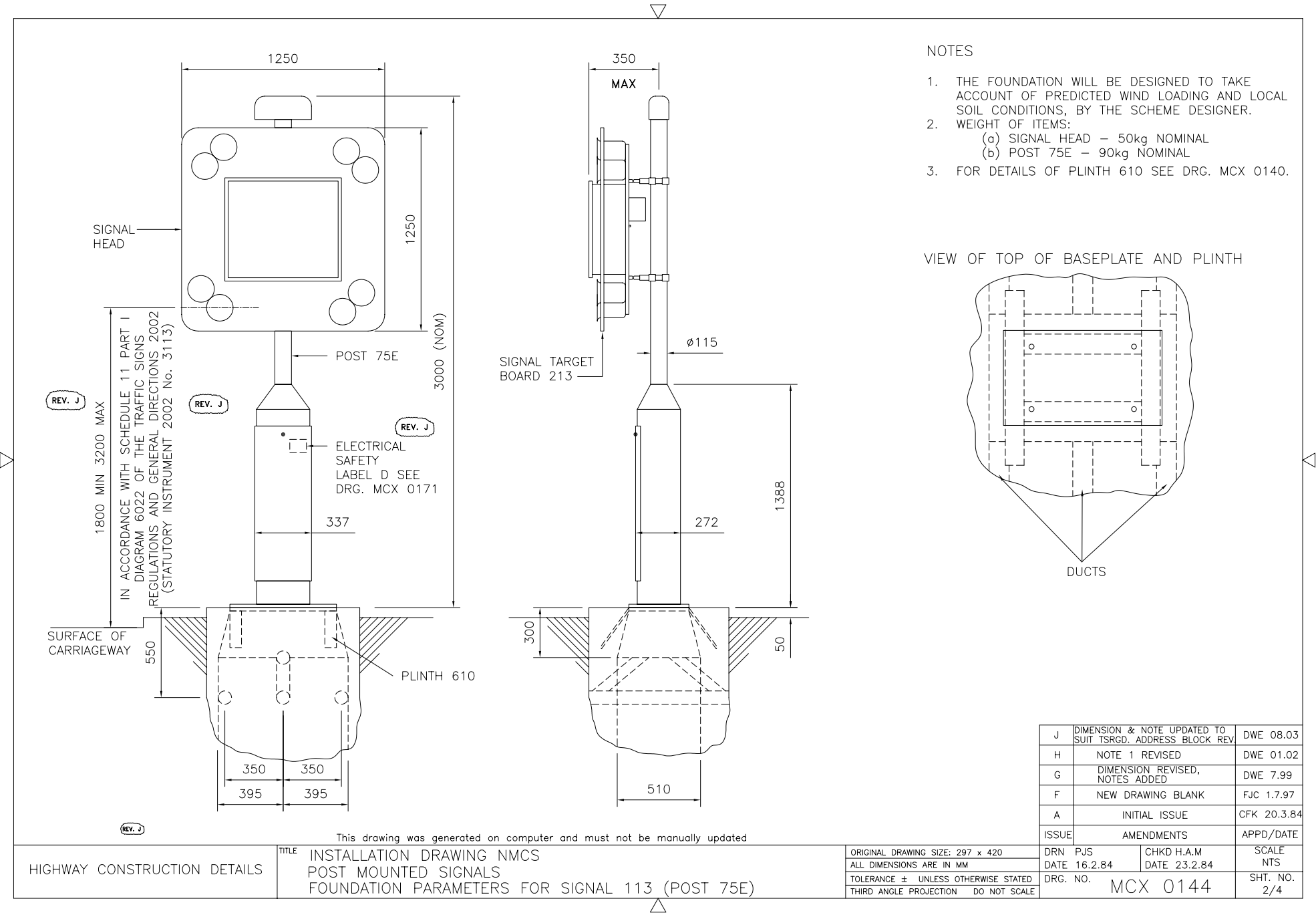
This drawing was generated on computer and must not be manually updated

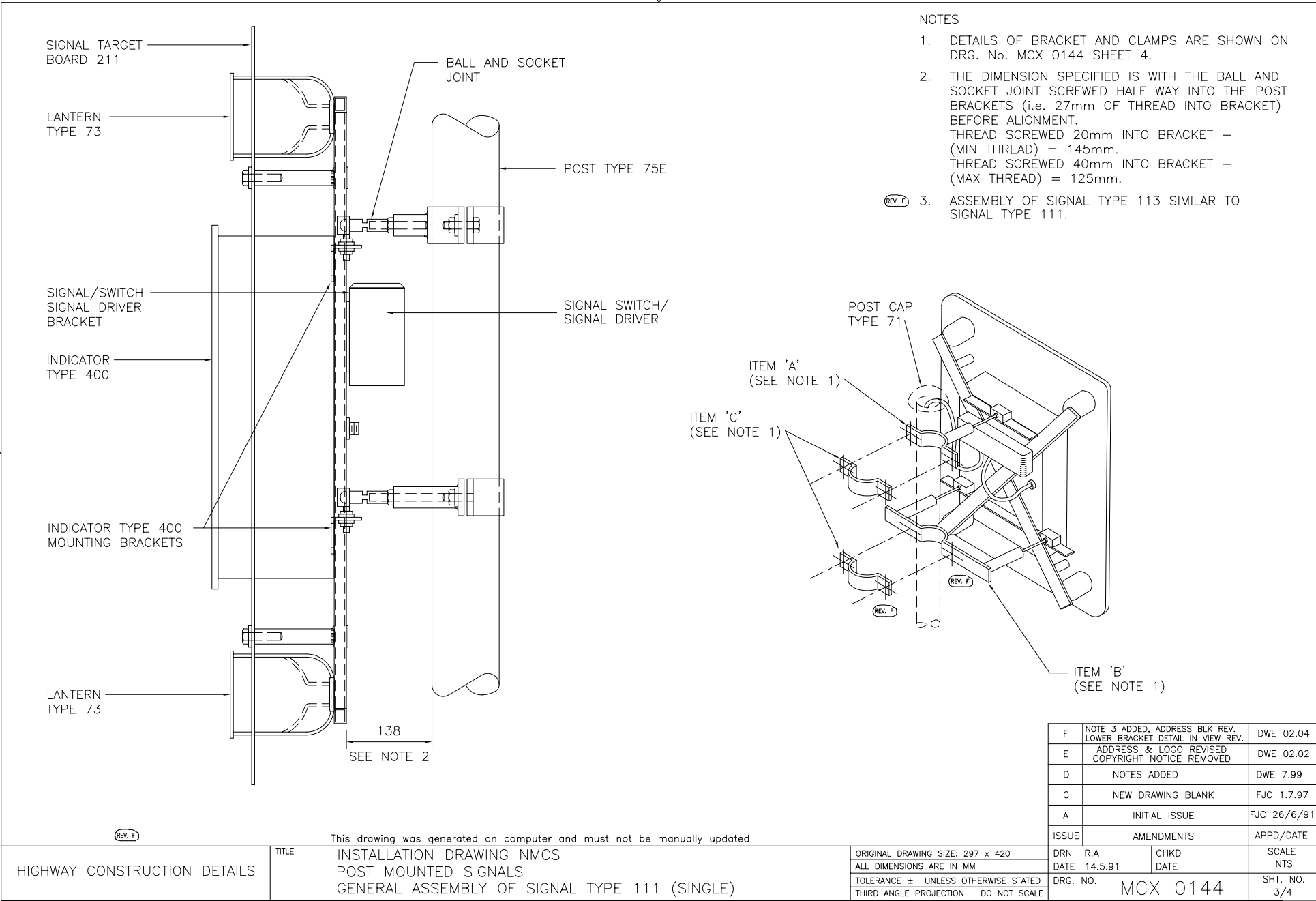
HIGHWAY CONSTRUCTION DETAILS	TITLE INSTALLATION DRAWING NMCS 1 & 2 CABLE ARRANGEMENTS ON GANTRY MOUNTING PLATE DETAILS	ORIGINAL DRAWING SIZE: 297 x 420		DRN	PJS	CHKD	DO	SCALE
		ALL DIMENSIONS ARE IN MM		DATE	27.6.94	DATE	29.6.94	NTS
		TOLERANCE ± UNLESS OTHERWISE STATED		DRG. NO.		MCX 0142		SHT. NO.
		THIRD ANGLE PROJECTION DO NOT SCALE						4 of 4

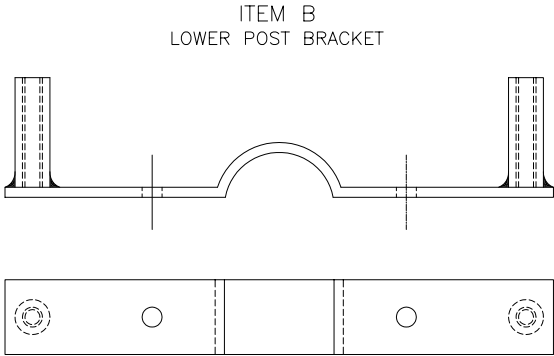
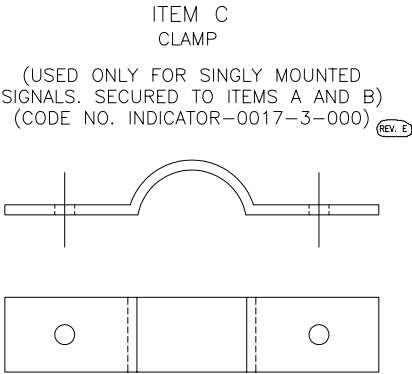
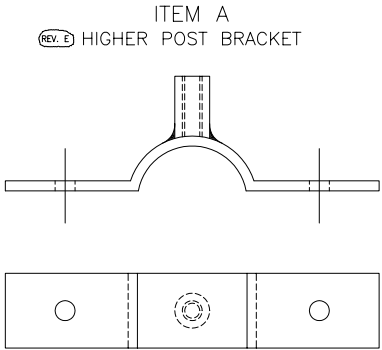


This drawing was generated on computer and must not be manually updated



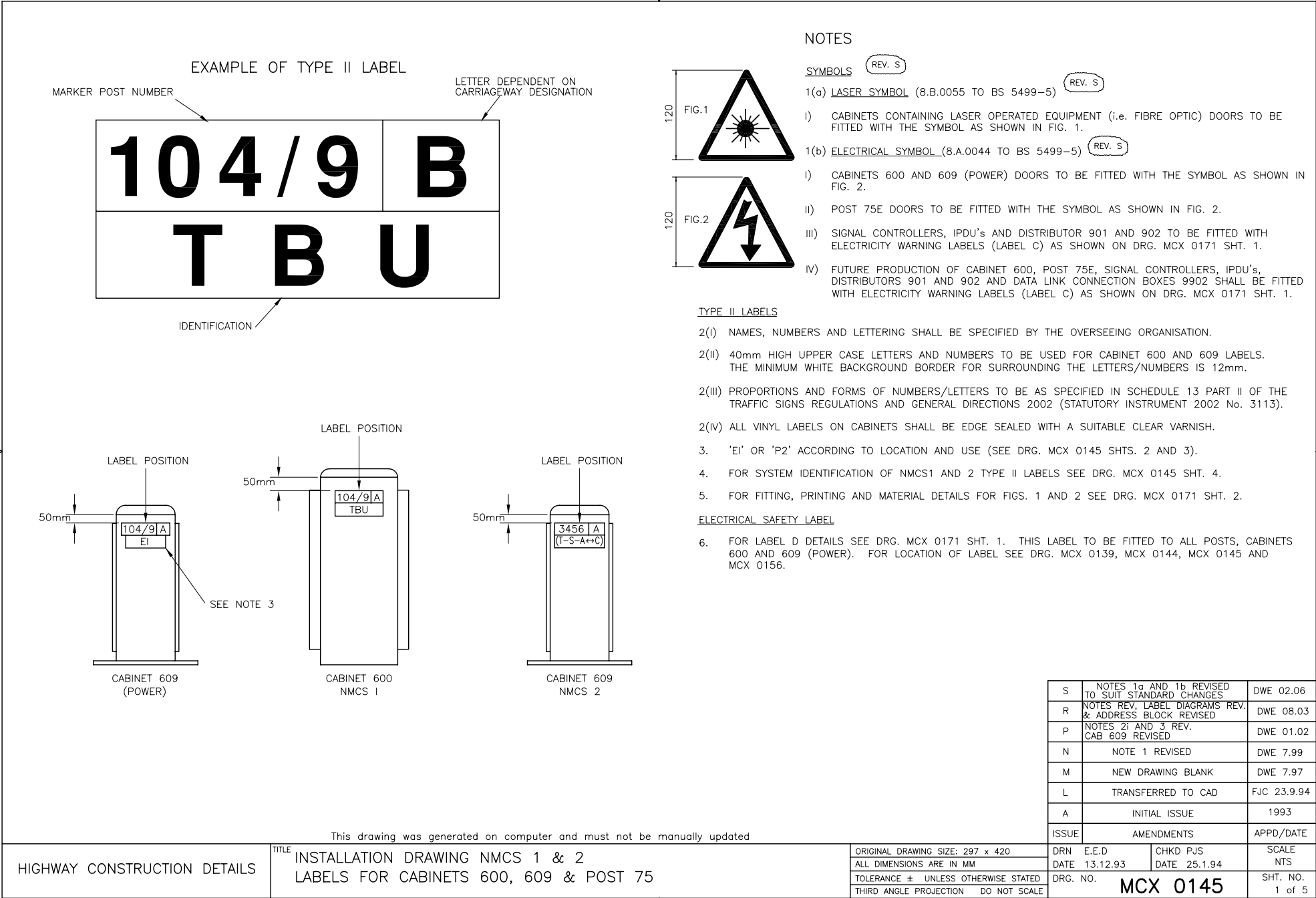


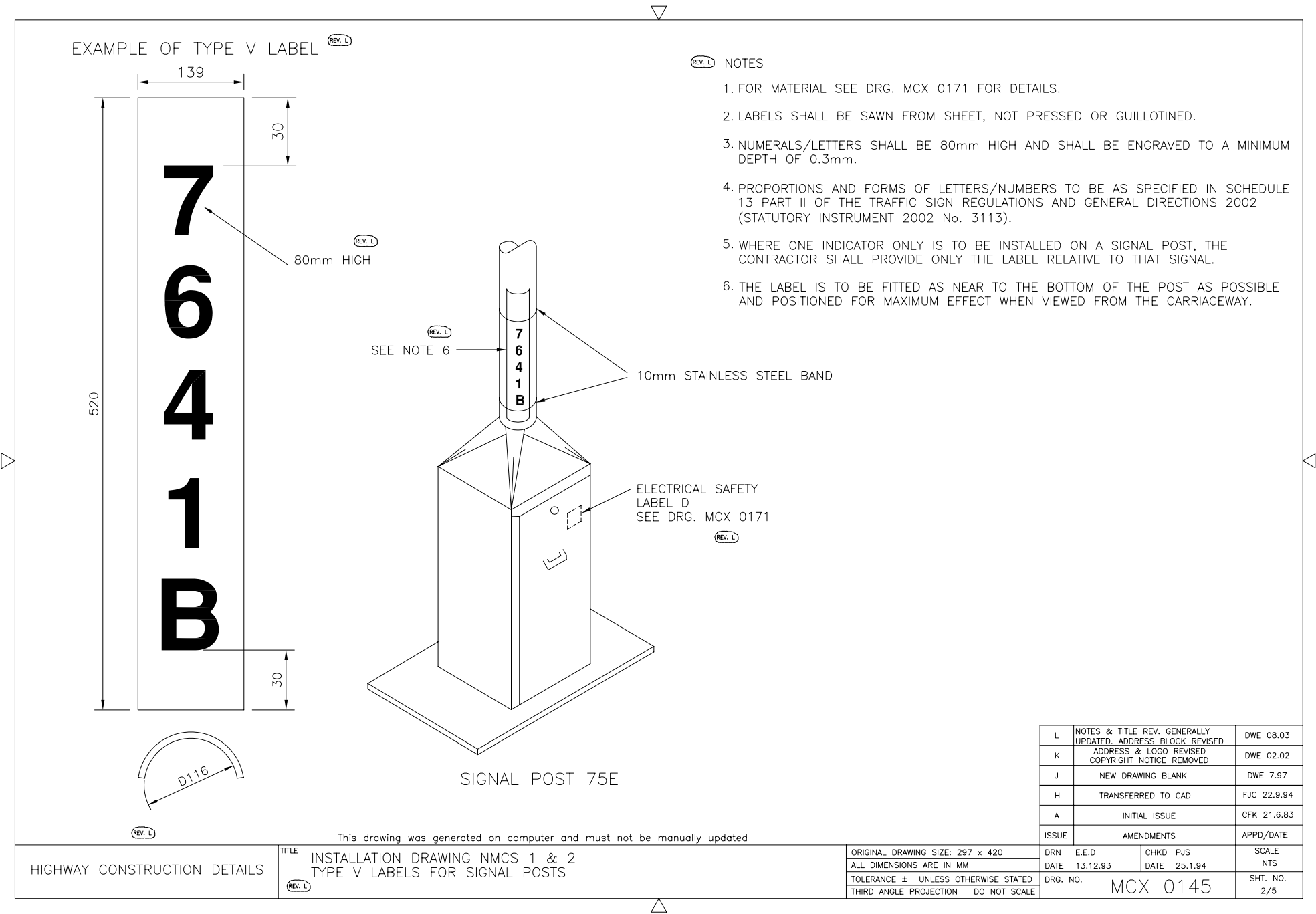


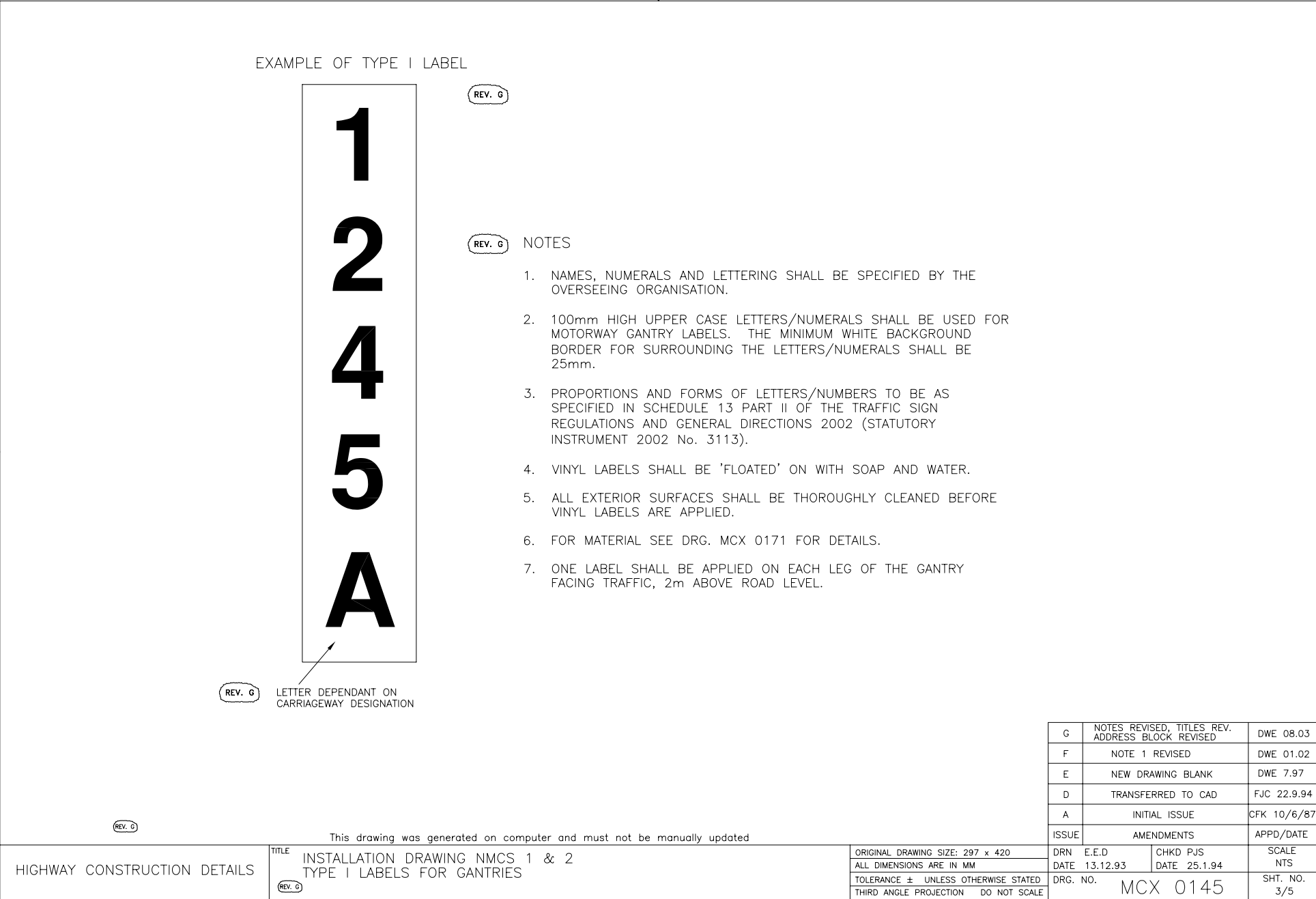


- # NOTES
1. SIGNAL TYPE 111 IS SUPPLIED WITH:
1 OFF ITEM A
1 OFF ITEM B
1 OFF ITEM D (SEE NOTE 4)
 2. WHEN FITTED AS A DOUBLE SIGNAL
ITEM D TO BE RETURNED TO YATE STORES
(CODE NO. INDICATOR-0018-3-000).
 3. WHEN FITTED AS A SINGLE SIGNAL, 2 OFF
ITEM C ARE REQUIRED TO BE ORDERED FROM
YATE STORES (CODE NO. INDICATOR-0017-3-000).
 4. FIXING KIT, (CODE NO. INDICATOR-0018-3-000),
ITEM D COMPRISES:
2 HEX HEAD BOLTS, 4 WASHERS, 2 SELF LOCKING NUTS
(BAGGED UP AND SECURED TO FRAME).
 5. SIGNAL TYPE 113 IS SUPPLIED WITH SAME ITEMS
AS SIGNAL TYPE 111.

E	GENERALLY UPDATED TO SUIT NEW STORES CODE, ADDRESS BLK & TITLE REV		DWE 02.04
D	ADDRESS & LOGO REVISED COPYRIGHT NOTICE REMOVED		DWE 02.02
C	NEW DRAWING BLANK		FJC 1.7.97
A	INITIAL ISSUE		FJC 26/6/91
ISSUE AMENDMENTS			APPD/DATE
DRN	PJS	CHKD	SCALE
DATE	22.6.94	DATE	NTS
DRG. NO. MCX 0144			SHT. NO. 4/4









NMCS 1 SYSTEM IDENTIFICATION

CABINET DESIGNATION	IDENTIFICATION
RESPONDER 600	R
COMM's 600 & 609	C
POWER 609	P
ELECTRICITY SUPPLY COMPANY INTERFACE	EI
PRIVATE WIRE 620	PW
LOOP DETECTOR 600	LD
TELE BRIDGE UNIT 600	TBU
OPTICAL FIBRE	OF
T.V. EQUIPMENT 600	TV
PSTN TELEPHONE 609	PSTN
BATTERY EQUIPMENT 600	BATT

NMCS 2 SYSTEM IDENTIFICATION

CABINET 600 EQUIPMENT	CODE	LOCAL ELECTRONICS EQUIPMENT CODE
TELEPHONE RESPONDER	TR	N/A
SIGNAL TRANSPONDER	ST	N/A
ATS TRANSPONDER	AT	A
MIDAS TRANSPONDER	MT	M
VMS DRIVER	VT	V
EMS DRIVER	EMS	N/A
MS2 DRIVER	MS2	N/A
LIGHTING CONTROL	L	N/A
OPTICAL FIBRE	OF	N/A
CCTV	TV	N/A
MIDAS DETECTOR	MD	N/A
COMMS.	C	N/A
AUTOMATIC NUMBER PLATE RECOGNITION	AR	N/A

CABINET 609 EQUIPMENT	CODE
TELEPHONES	T
SIGNALS	S
ATS	A
MIDAS	M
VMS	V
EMS	E
LIGHTING CONTROL	L
COMMS. 615 JB	C
POWER 609	P
ELECTRICITY SUPPLY COMPANY INTERFACE	EI
OPTICAL FIBRE	OF
FOG	F

REV. L

EXAMPLES OF EXTERNAL NMCS 2 LABELS ILLUSTRATED BELOW

a) CABINET 600 HOUSING A TELEPHONE RESPONDER AND A SIGNAL TRANSPONDER.

123/4A
(TR-ST)

b) CABINET 600 HOUSING AN ATS TRANSPONDER PLUS LOCAL OUTSTATION EQUIPMENT.

456/7B
(AT-A)

c) CABINET 609 WITH TRANSMISSION BOX 615 AND LOCAL BOX 615 CONTAINING LOCAL CABLES FOR TELEPHONES, SIGNAL POST AND LOOP SITE.

345/6A
(T-S-A ↔ C)

d) CABINET 609 CONTAINING TRANSMISSION BOX 615 ONLY.

234/5B
(→ C)

e) CABINET 609 CONTAINING TRANSMISSION BOX 615 AND LOCAL BOX 615 CONTAINING LOCAL CABLE TO SIGNAL TRANSPONDER CABINET 600.

543/2A
(ST ↔ C)

↔ ARROWS INDICATE EQUIPMENT SIDE OF CABINET

L	NEW SYMBOL ADDED TO CAB 600 EQUIPMENT	DWE 02.06
K	ADDRESS BLOCK REVISED	DWE 08.03
J	LABEL DETAILS REVISED	DWE 01.02
H	NEW DRAWING BLANK	FJC 1.7.97
A	INITIAL ISSUE	CFK '87
ISSUE	AMENDMENTS	APPD/DATE
DRN RA	CHKD	SCALE
DATE 16.4.93	DATE 5.6.87	NTS
DRG. NO.	MCX 0145	SHT. NO.
		4 of 5

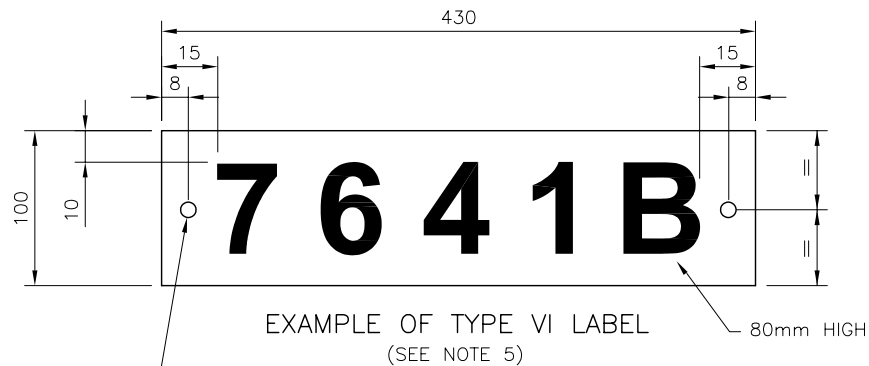
This drawing was generated on computer and must not be manually updated

ORIGINAL DRAWING SIZE: 297 x 420
ALL DIMENSIONS ARE IN MM
TOLERANCE ± UNLESS OTHERWISE STATED
THIRD ANGLE PROJECTION DO NOT SCALE

HIGHWAY CONSTRUCTION DETAILS

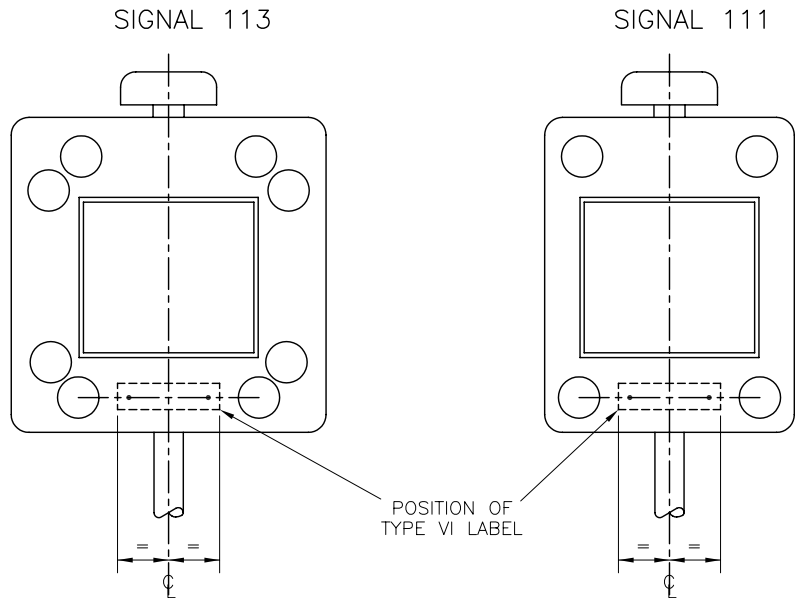
TITLE
INSTALLATION DRAWING NMCS 1 & 2
SYSTEM IDENTIFICATION OF LABELS FOR CABINETS
AND POSTS 75/85





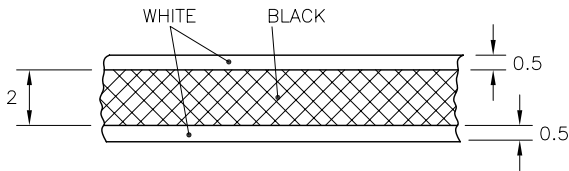
2 OFF $\varnothing 4.5$ CLEARANCE HOLES FOR 2 M4 STAINLESS STEEL HEX HEAD BOLTS 16mm LONG EACH WITH STAINLESS STEEL NUT AND 2 STAINLESS STEEL SHAKEPROOF WASHERS.

NOTE – ALL FRONT FACING BOLT HEADS TO BE FINISHED IN MATT BLACK



NOTES

- REV. F 1. MATERIAL TO BE 3mm SANDWICH LAMINATED SHEET TO BS 3757.
2. LABELS SHALL BE SAWN FROM SHEET, NOT PRESSED OR GUILLOTINED.
3. NUMERALS AND LETTERING SHALL BE 80mm HIGH AND ENGRAVED TO A MINIMUM DEPTH OF 0.6mm.
4. PROPORTIONS AND FORMS OF NUMERALS AND LETTERING TO BE AS SPECIFIED IN SCHEDULE 13 PART II OF THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS 2002 (STATUTORY INSTRUMENT 2002 No. 3113). THE NUMERALS AND LETTERS TO BE SPACED AS EVENLY AS POSSIBLE ON THE LABEL.
- REV. F 5. SIGNAL ADDRESS TO BE DISPLAYED.
6. THIS LABEL IS AN ALTERNATIVE TO THAT ON MCX 0145 SHEET 2. THE CONTRACT WILL STATE WHICH IS TO BE FITTED.



CROSS SECTION OF LAMINATED SHEET

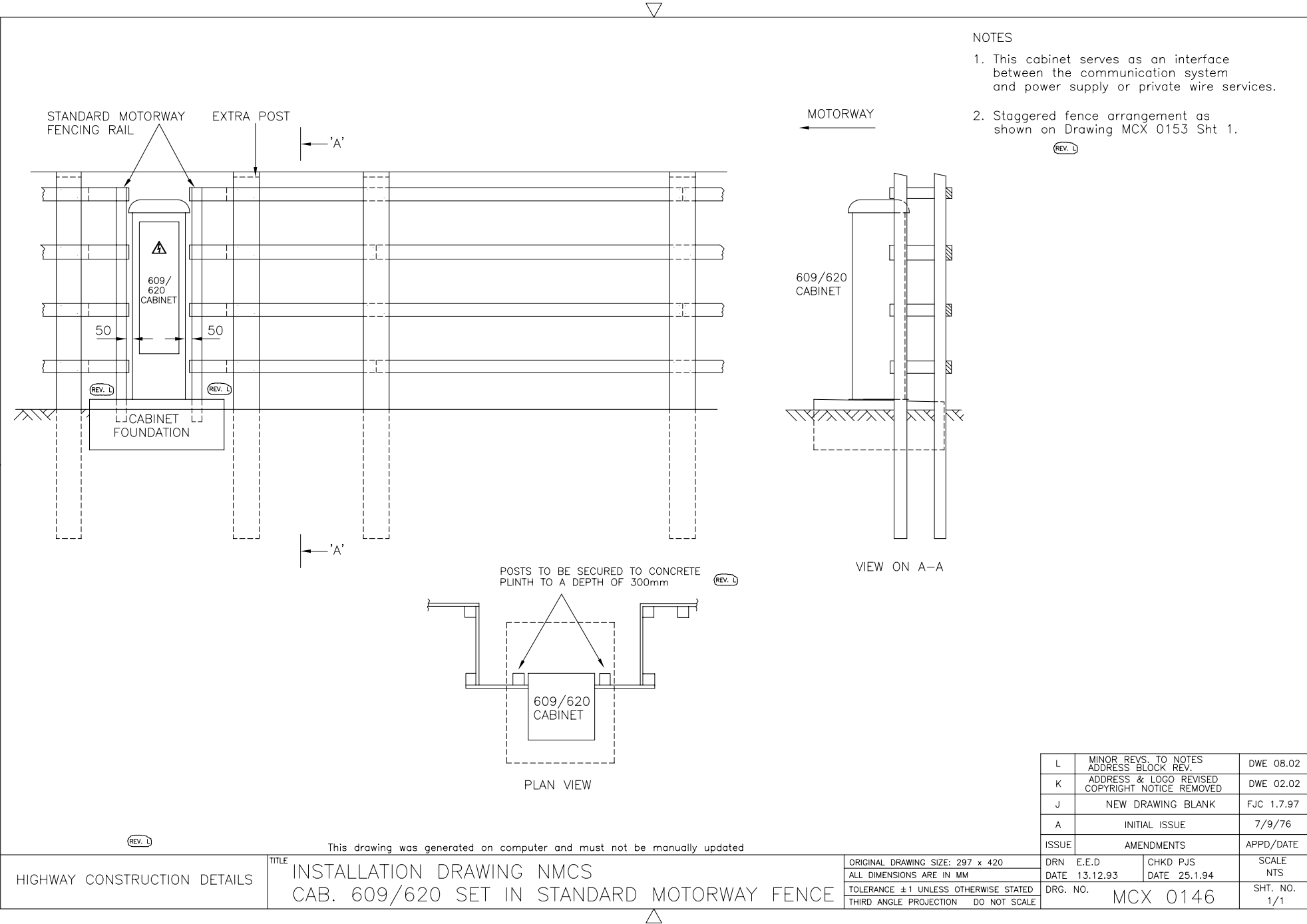
F	NOTES 1 AND 5 REVISED.	DWE 02.06
E	TYPE VI LABEL & NOTES REVISED ADDRESS BLOCK REVISED	DWE 08.03
D	ADDRESS & LOGO REVISED COPYRIGHT NOTICE REMOVED	DWE 02.02
C	NEW DRAWING BLANK	DWE 7.97
B	TRANSFERRED TO CAD	FJC 22.9.94
A	INITIAL ISSUE	FJC 9/11/90
ISSUE	AMENDMENTS	APPD/DATE
DRN	E.E.D	CHKD PJS
DATE	13.12.93	DATE 25.1.94
DRG. NO.	MCX 0145	SH. NO.
		5 of 5

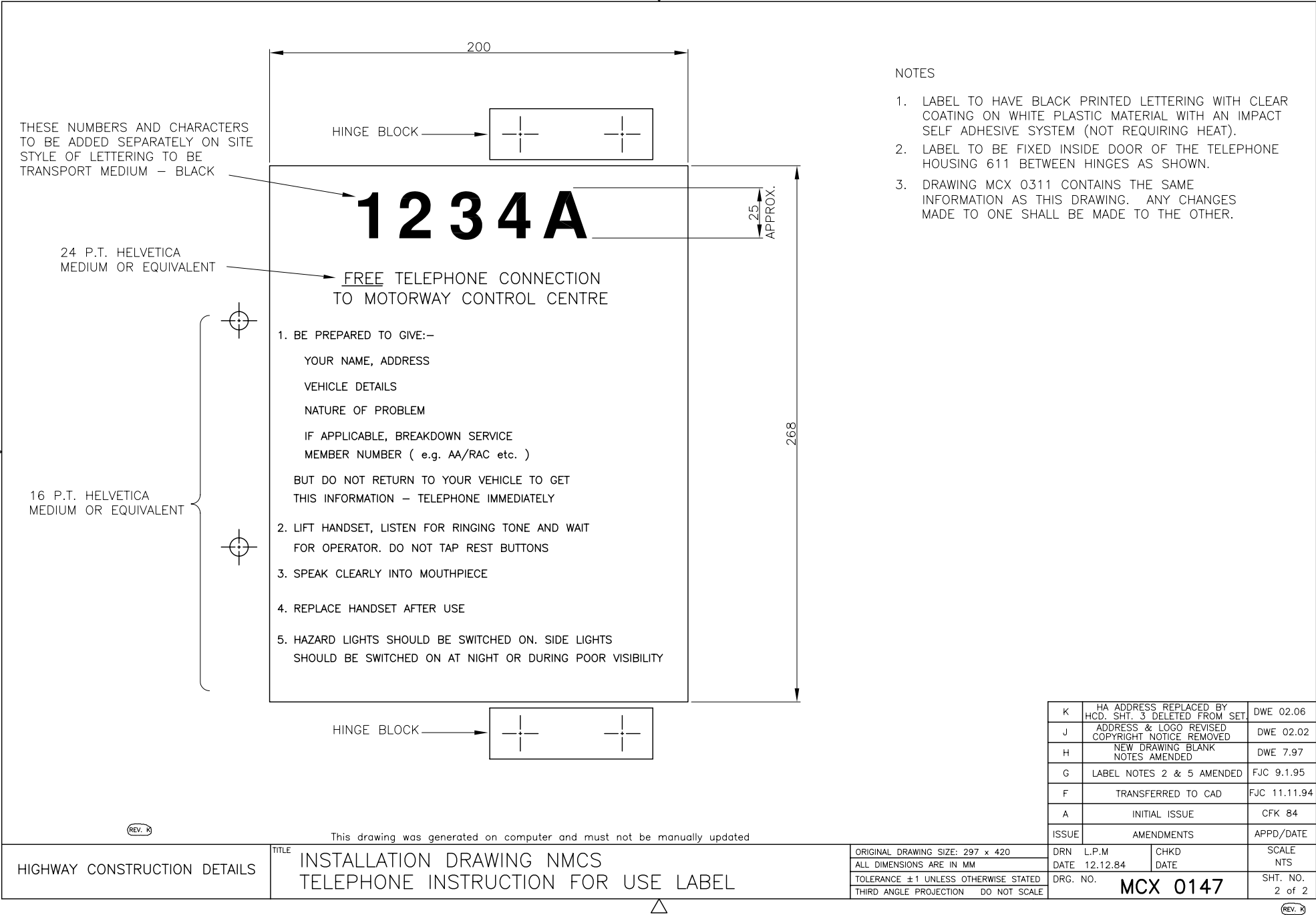
HIGHWAY CONSTRUCTION DETAILS

TITLE
INSTALLATION DRAWING NMCS
TYPE VI LABEL FOR TARGET BOARDS

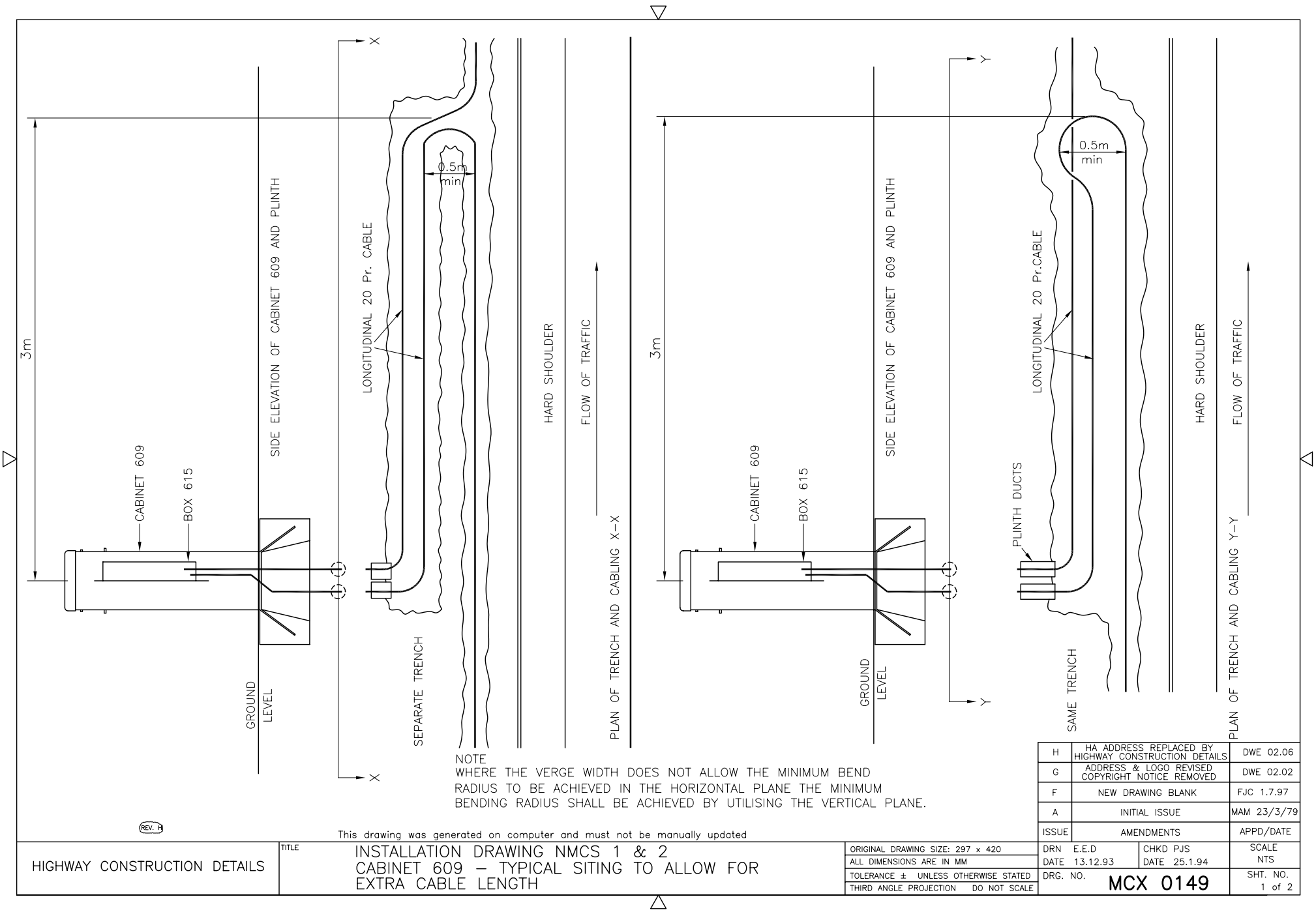
ORIGINAL DRAWING SIZE: 297 x 420
ALL DIMENSIONS ARE IN MM
TOLERANCE \pm UNLESS OTHERWISE STATED
THIRD ANGLE PROJECTION DO NOT SCALE

DRN E.E.D
DATE 13.12.93
CHKD PJS
DATE 25.1.94
SCALE
NTS
SH. NO.
5 of 5

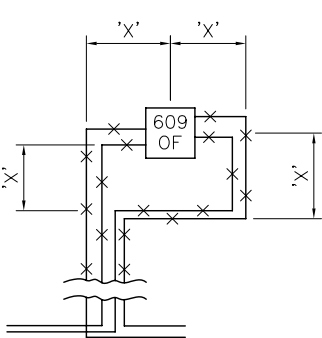




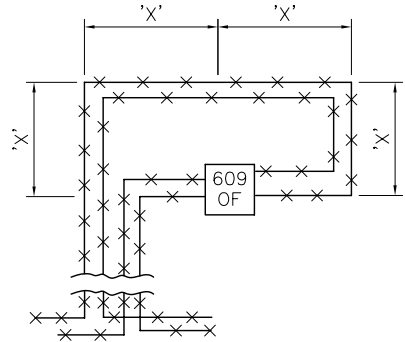
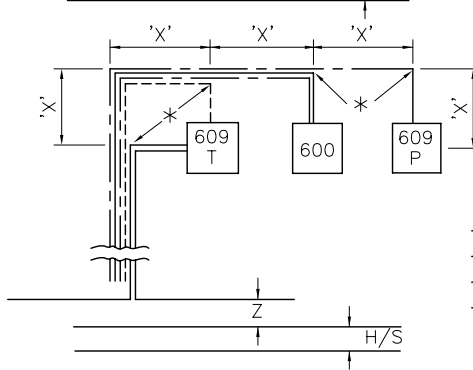
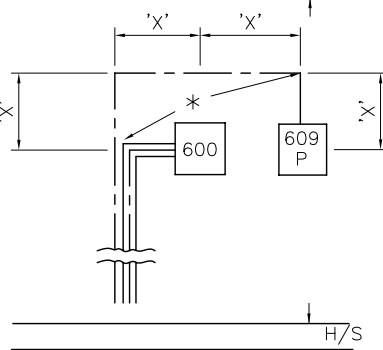
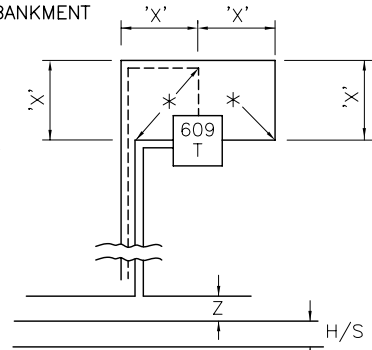
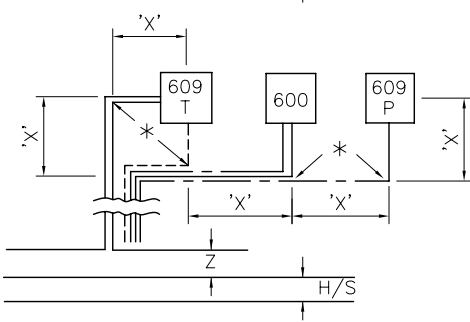
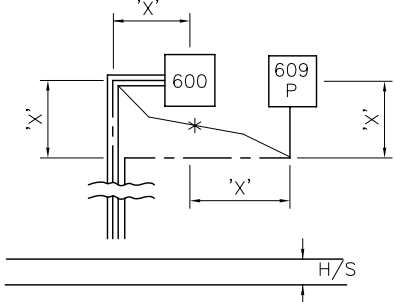
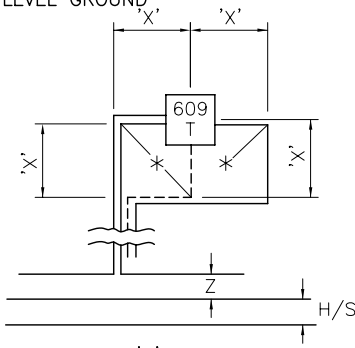
MCX 0148
NOT USED



MOTORWAY IN CUTTING OR ON LEVEL GROUND



MOTORWAY ON EMBANKMENT



ABBREVIATIONS

H/S - HARD SHOULDER
609T - TERMINATION CABINET 609
600 - CABINET 600
609P - POWER CABINET 609
Z - 2.0m APPROX

REFERENCE

— 30/20 PR CABLES
- - - 2 PR CABLES (WHEN REQ'D)
- - - POWER CABLES (WHEN REQ'D)
X X X OPTIC FIBRE CABLE.

NOTES

1. THE SKETCHES ARE DIAGRAMATIC ONLY.
2. THE 'X' DIMENSION IS 2 METRES UNLESS SPECIFICALLY NOTED TO THE CONTRARY.
3. THE ACTUAL LOCATION OF INDIVIDUAL CABLE GLANDS IN BOXES 615 ARE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE ARRANGEMENTS SHOWN ON TSS DRG. No. MCX 0154.
4. *INDICATES GENERAL LOCATION OF BURIED 3 METRE RE-MAKE CABLES COIL(S)
5. LONGITUDINAL CABLES SHOULD BE ROUTED EITHER 1 METRE FROM THE BOUNDARY FENCE, OR ALTERNATIVELY 2 METRES FROM THE REAR OF THE HARD SHOULDER.
6. IT IS PERMISSABLE TO DEViate FROM THE STANDARD ROUTING TO OVERCOME PHYSICAL OBSTRUCTIONS.
7. ANY DEVIATION FROM THE STANDARD ROUTING SHALL BE CLEARLY IDENTIFIED & DIMENSIONED ON 'AS INSTALLED' DRAWINGS.

(REV. 9)

This drawing was generated on computer and must not be manually updated

HIGHWAY CONSTRUCTION DETAILS

TITLE
INSTALLATION DRAWING NMCS 1 & 2
STANDARD TRANSVERSE CABLING ARRANGEMENTS
AT CABINET LOCATIONS

ORIGINAL DRAWING SIZE: 297 x 420
ALL DIMENSIONS ARE IN MM
TOLERANCE ± UNLESS OTHERWISE STATED
THIRD ANGLE PROJECTION DO NOT SCALE

G	HA ADDRESS REPLACED BY HIGHWAY CONSTRUCTION DETAILS	DWE 02.06
F	ADDRESS & LOGO REVISED COPYRIGHT NOTICE REMOVED	DWE 02.02
E	NEW DRAWING BLANK	FJC 1.7.97
A	INITIAL ISSUE	LJI 8/6/87
ISSUE	AMENDMENTS	APPD/DATE
DRN	E.E.D	CHKD D OWEN
DATE	1.11.93	DATE 19.11.93
DRG. NO.	MCX 0149	SCALE NTS
		SHT. NO. 2 of 2