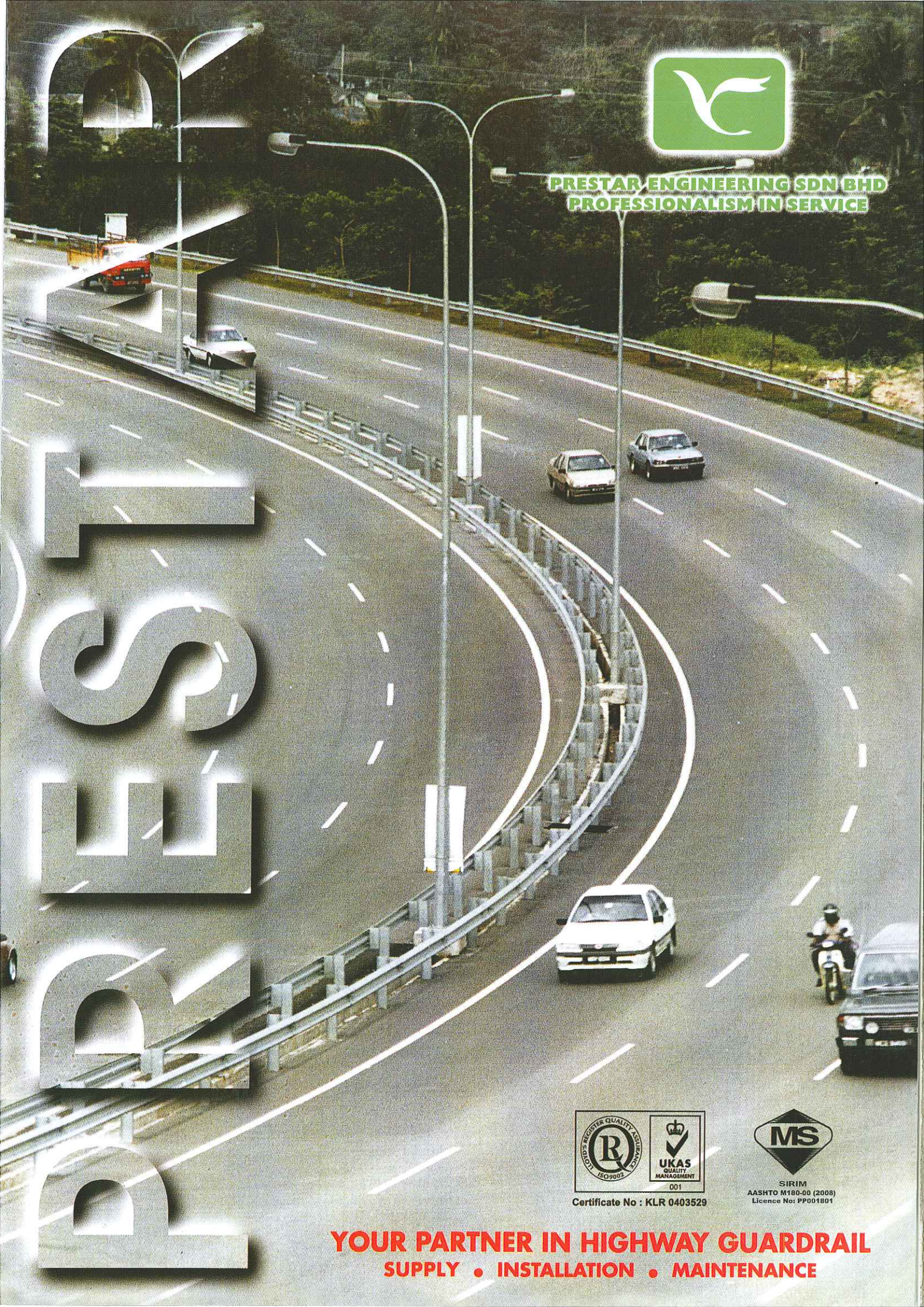




PRESTAR ENGINEERING SDN BHD
PROFESSIONALISM IN SERVICE



PRESTAR
ENGINEERING
SDN BHD



Certificate No : KLR 0403529

SIRIM
AASHTO M180-00 (2008)
Licence No: PP001801

YOUR PARTNER IN HIGHWAY GUARDRAIL
SUPPLY • INSTALLATION • MAINTENANCE

HIGHWAY GUARDRAIL PRODUCT FEATURES & APPLICATION

- * To Provide Railing Protection To Motor Vehicle At Dangerous Road Area Such As
 - Steep Slope
 - Obscure Curve/Bend
 - High Embankment
 - Sharp Corner
- * To Absorb Sudden Impact During Collision Thus Minimise Injury To Vehicle And Passenger.
- * To Act As A Directional Railing For Vehicle Moving In The Right Direction.
- * To Act As A Median Barrier For Avoiding Head On Collision.
- * To Act As A Protective Barrier For Pedestrian Along The High Way.

SPECIFICATION AND TECHNICAL DATA

1. Base Metal specification comply to AASHTO M 180-00 (2008)

- Minimum Yield Strength : 345 N/mm²
- Minimum Tensile Strength : 483 N/mm²
- Minimum Elongation : 15%

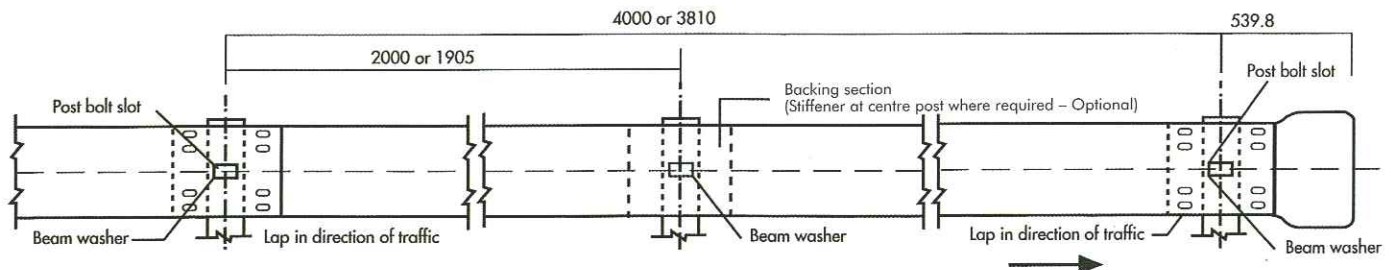
2. Galvanising specification comply to:

- AASHTO DESIGNATION: M 111M/ M 111-09
- BS EN ISO 1461: 2009

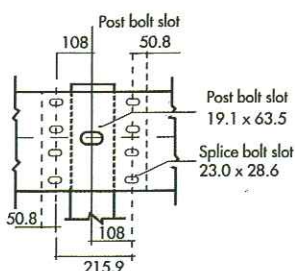
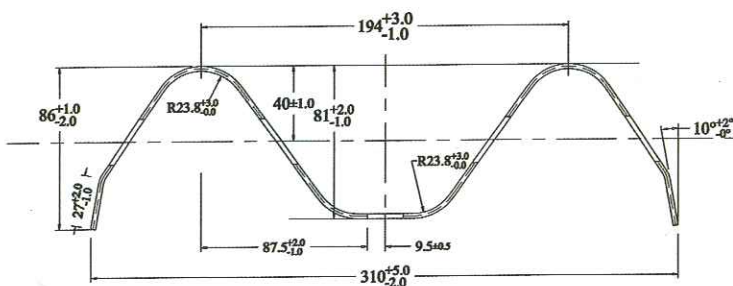
3. PRESTAR dimension comply to AASHTO M 180-00 (2008)

TYPE	EFFECTIVE LENGTH (MM)	OVERALL LENGTH (MM)	NOMINAL THICKNESS (MM)
PE 1	3810	4128	2.67
PE 2	4000	4318	2.67
PE 3	3810	4128	3.00
PE 4	4000	4318	3.00

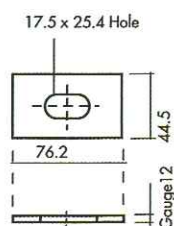
(Tolerance allowable under specified thickness)



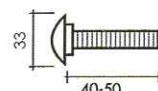
SECTION THROUGH BEAM



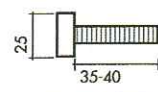
BEAM SPlice



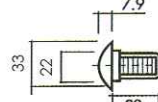
SPlice WASHER



POST BOLT



HEX BOLT



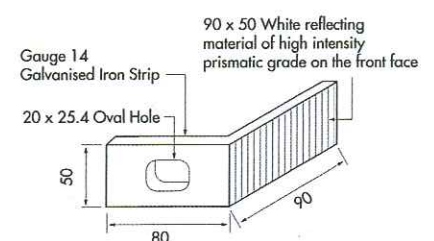
SPlice BOLT & NUT



HEX NUT



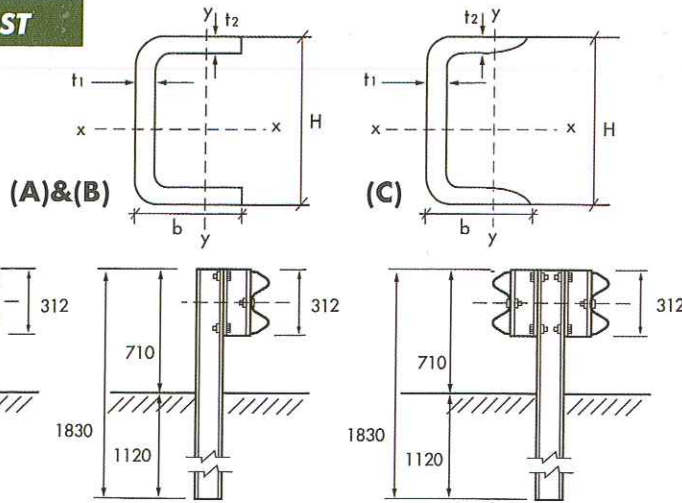
ROUND WASHER



DELINEATOR STRIP

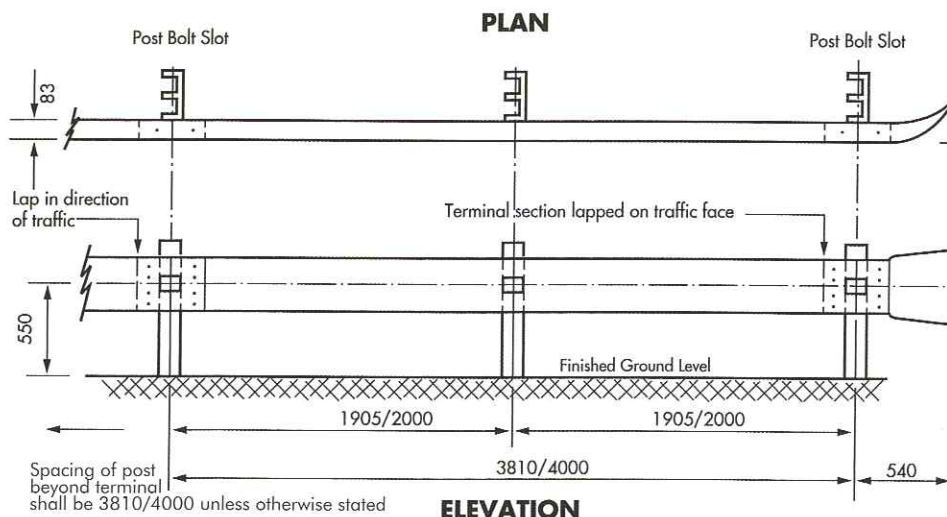
NOTE : All dimension are subject to manufacturer's design tolerance.
All dimension are in millimetre
SIRIM LICENSE NO : PP001801

PRESTAR POST

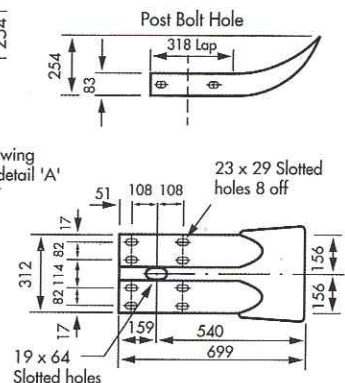


TYPE	H x b x t1 x t2 (mm)	Unit Weight (kg/m)	Section Area (cm ²)	Moment of Inertia		Section Modulus	
				I _x (cm ⁴)	I _y (cm ⁴)	S _x (cm ³)	S _y (cm ³)
A	C178 x 76 x 6 x 6	14.3	19.08	903.5	102.5	101.5	52.0
B	C150 x 76 x 6 x 6	13.2	17.50	610.0	98.0	80.3	45.3
C	C125 x 65 x 6 x 8	13.4	17.11	425	65.5	68.0	14.4

TERMINAL UNIT (TYPE 1)

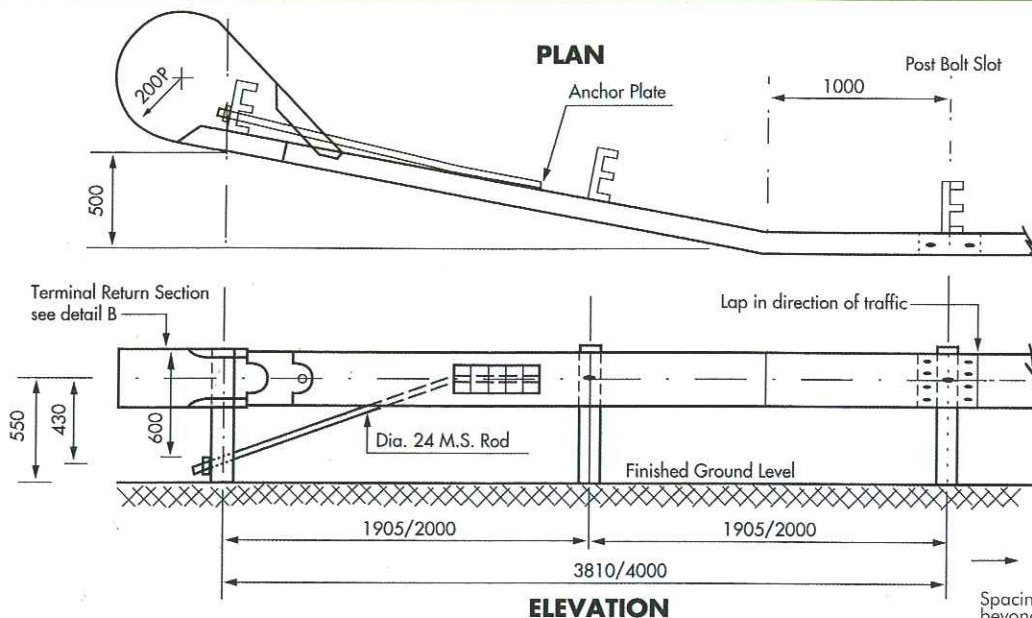


DETAIL 'A' - END WING PLAN

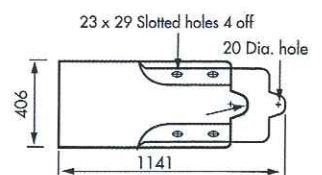
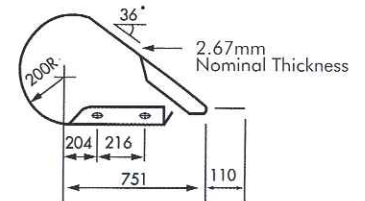


ELEVATION

TERMINAL ANCHORAGE UNIT OR FLARE END (TYPE 2)



BUFFER RETURN (Detail B)

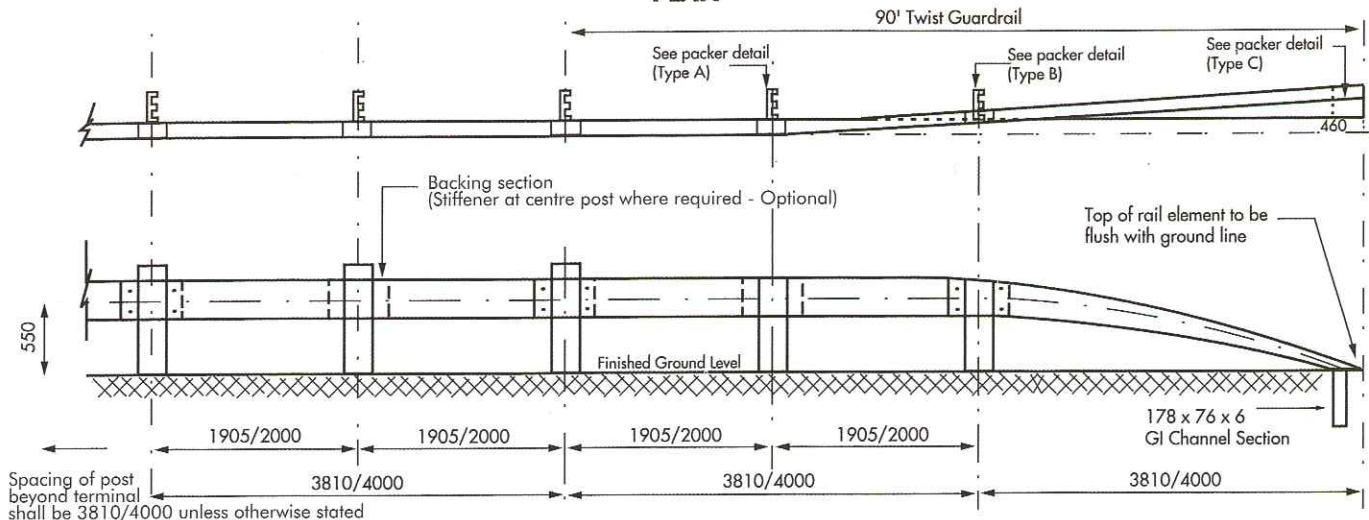


ELEVATION (Detail B)

Spacing of post beyond terminal shall be 3810/4000 unless otherwise stated

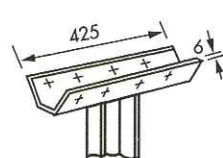
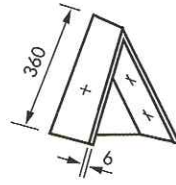
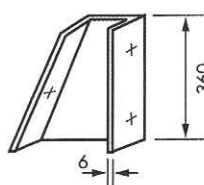
90° TWIST TERMINAL ANCHORAGE UNIT (TYPE 3)

PLAN



Formula 1, Sepang

ELEVATION



16mm Dia. bolt with hex nut and washer (Galvanized)

16mm Dia. bolt with hex nut and washer (Galvanized)

178 x 76 x 6 GI Channel Section

2 Nos 16mm Dia. hex head bolt with standard hex nut (Galvanized)

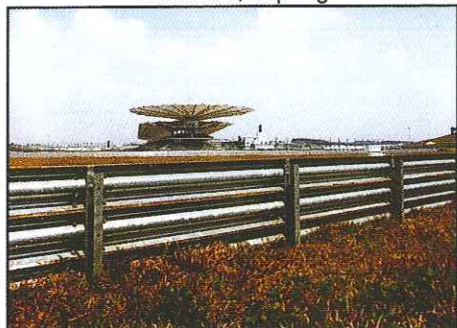
178 x 76 x 6 GI Channel Section

Range 600-1000

PACKER (TYPE A)

PACKER (TYPE B)

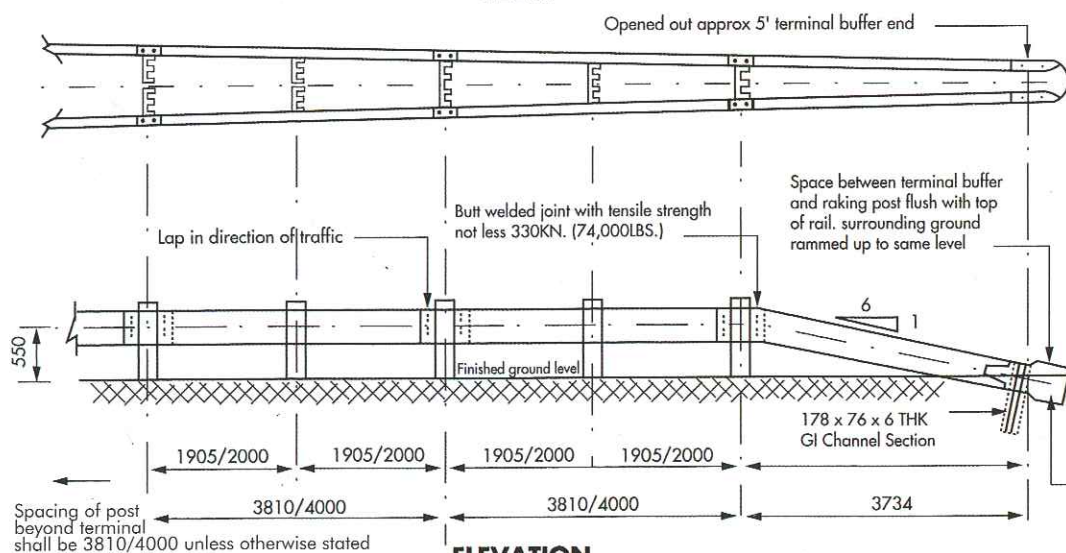
PACKER (TYPE C)



Type 2 Complete Set

TERMINAL SECTION 1:6 (TYPE 4)

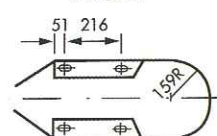
PLAN



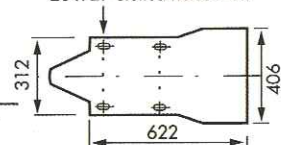
ELEVATION

TERMINAL BUFFER END (DETAIL 'C')

PLAN



23 x 29 Slotted holes 4 off



ELEVATION

Terminal buffer end see detail 'C'

COMPANY INTRODUCTION

PRESTAR ENGINEERING SDN BHD (PESB) is a fully integrated manufacturer and supplier of highway guardrail and accessories. Our highway guardrail and accessories are manufactured strictly conforming to the design usage and application with the latest engineering know how and is certified by SIRIM.

As an affiliated company to **PRESTAR RESOURCES BHD**, PESB have the access to the various facilities and technical support which further enhance the capability to undertake all aspect of project involving highway guardrail and accessories. The range of facilities include hot dip galvanising services and metal fabrication equipment such as press and forming machines etc.

The highway guardrail and accessories are produced at the new factory in Rawang Industrial Estate under the brand name PRESTAR and is in compliance with

American Association Of State Highway & Transportation Official (AASHTO)

Standard Industry Research Institute Of Malaysia (SIRIM)

Malaysia Public Work Department Standard (JKR)

The product galvanising finish is in compliance with

- AASHTO DESIGNATION : M 111M/M111-09
- BS EN ISO 1461: 2009

