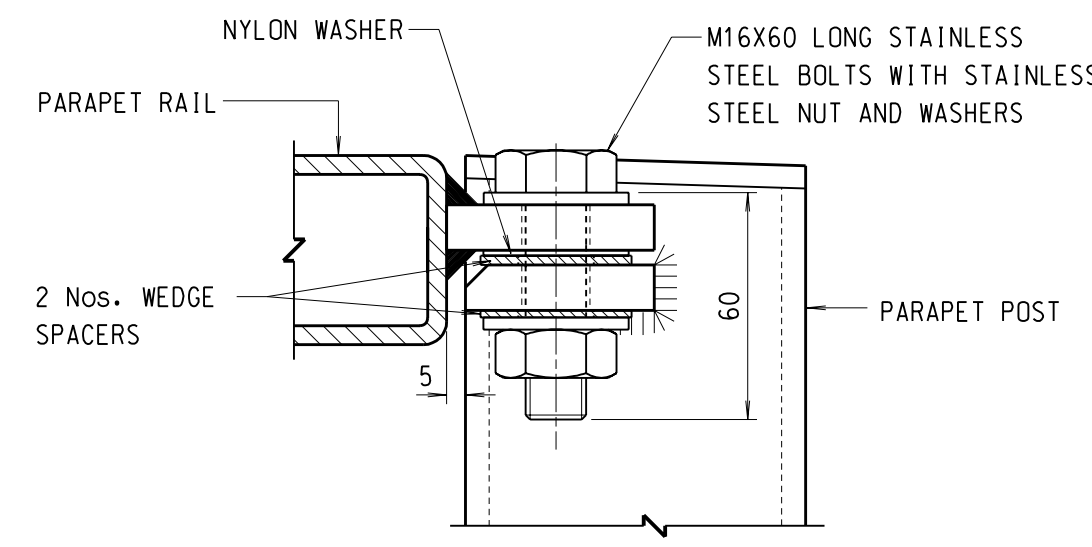


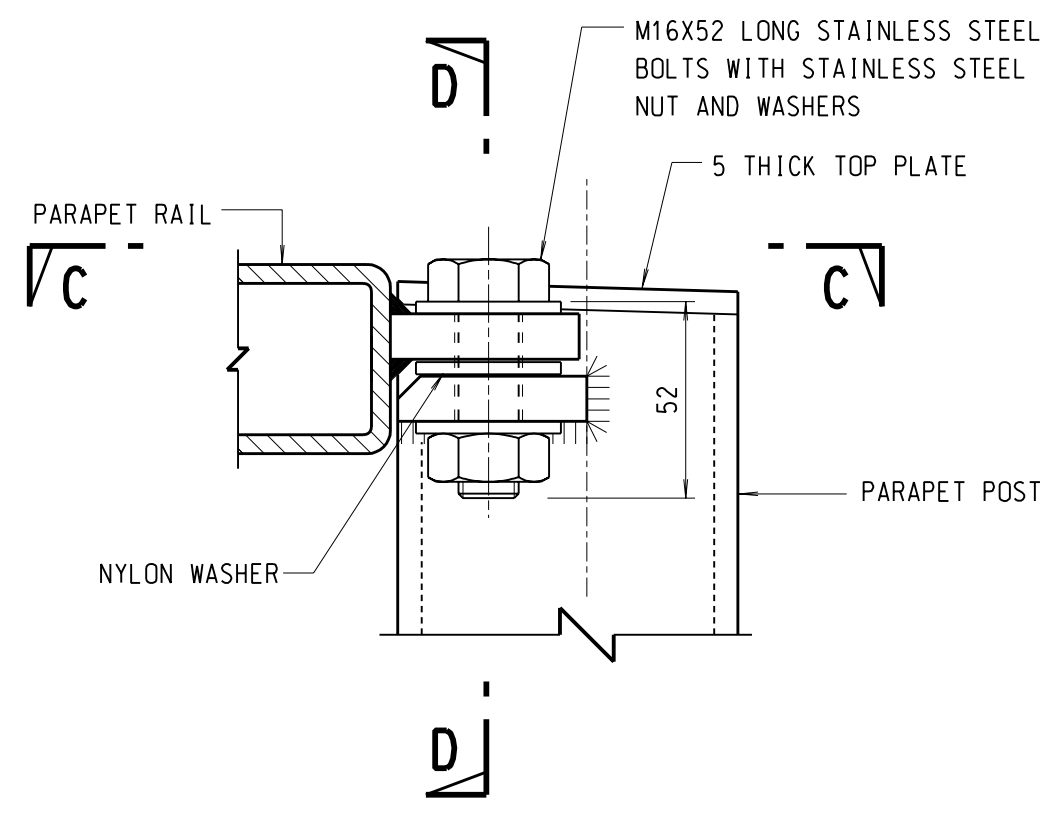
**FRONT ELEVATION**

SCALE 1:25



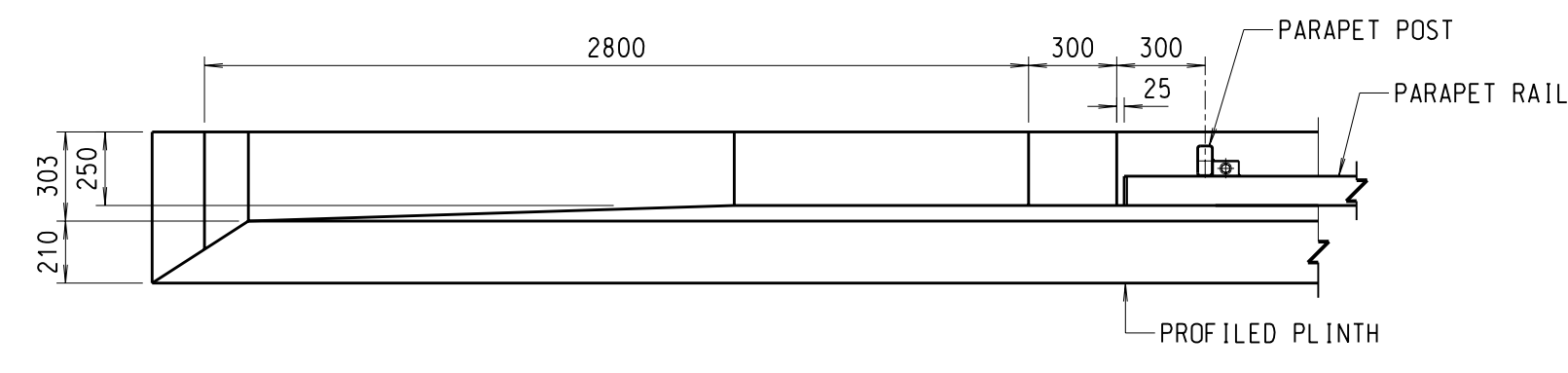
**DETAIL Y FOR SLOPING RAIL**

SCALE 1:2



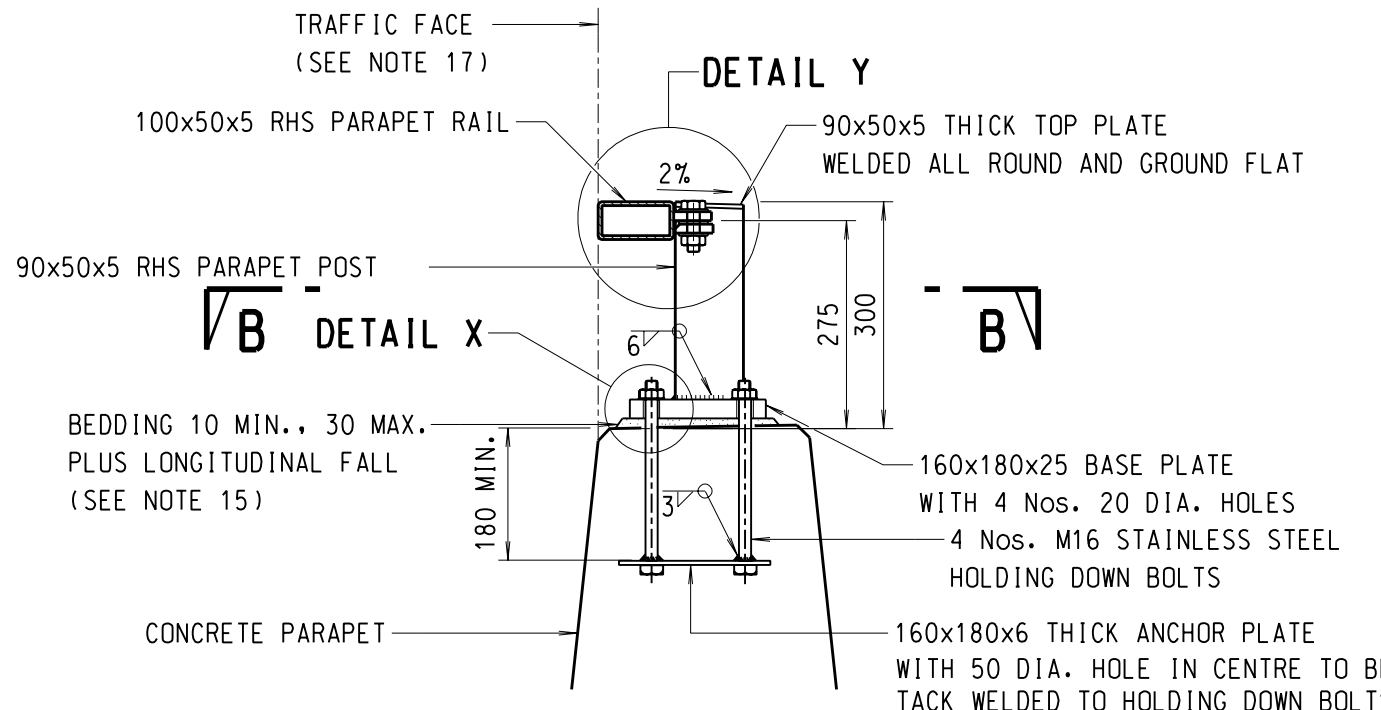
**DETAIL Y FOR HORIZONTAL RAIL**

SCALE 1:2



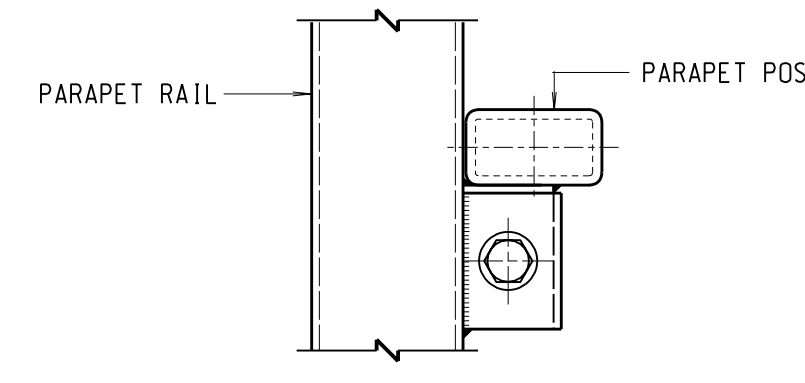
**PLAN OF END DETAIL**

SCALE 1:25



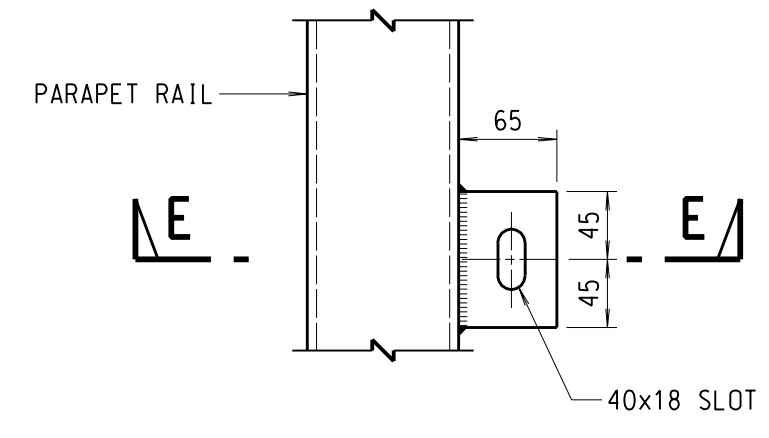
**SECTION A-A**

SCALE 1:10



**PLAN C-C**

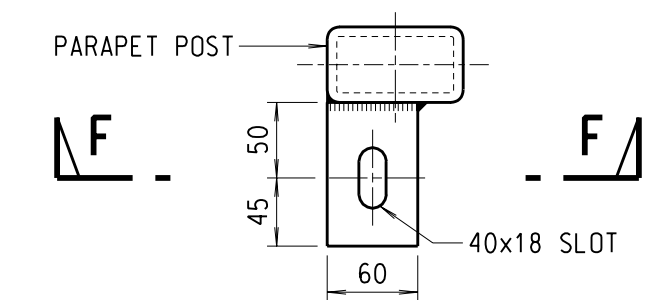
SCALE 1:5



**PLAN C-C**

(PARAPET POST OMITTED)

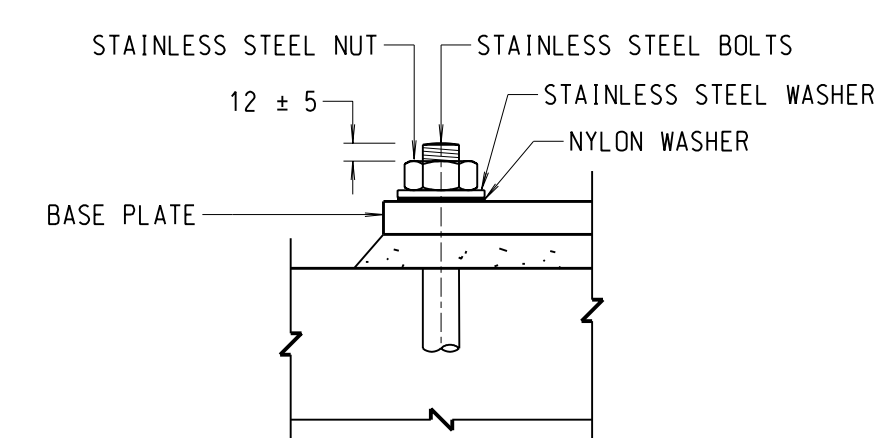
SCALE 1:5



**PLAN C-C**

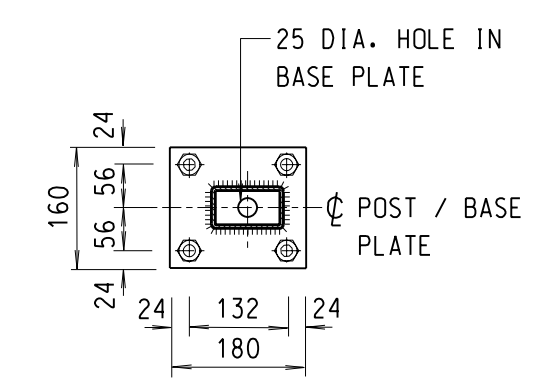
(PARAPET RAIL OMITTED)

SCALE 1:5



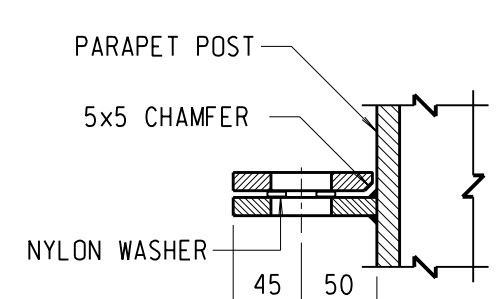
**DETAIL X**

SCALE 1:5



**SECTION B-B**

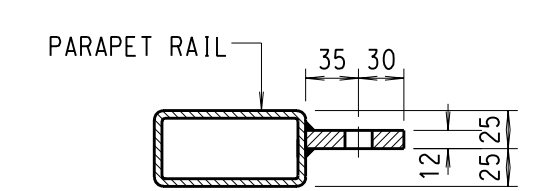
SCALE 1:10



**SECTION D-D**

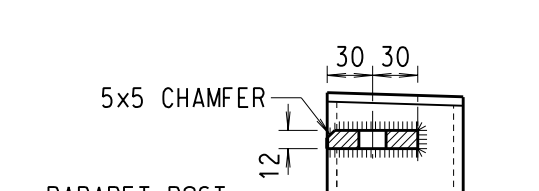
(BOLT NOT SHOWN)

SCALE 1:5



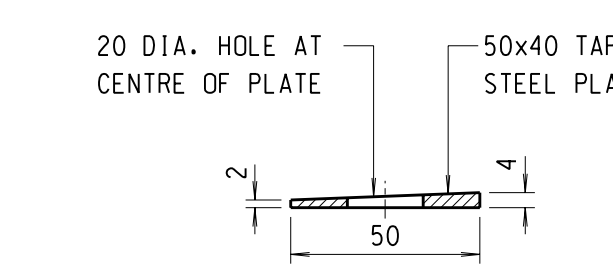
**SECTION E-E**

SCALE 1:5



**SECTION F-F**

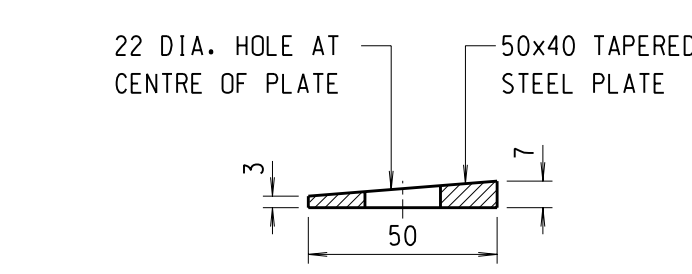
SCALE 1:5



**SECTION OF WEDGE SPACER**

(FOR GRADIENT 2% TO 5%)

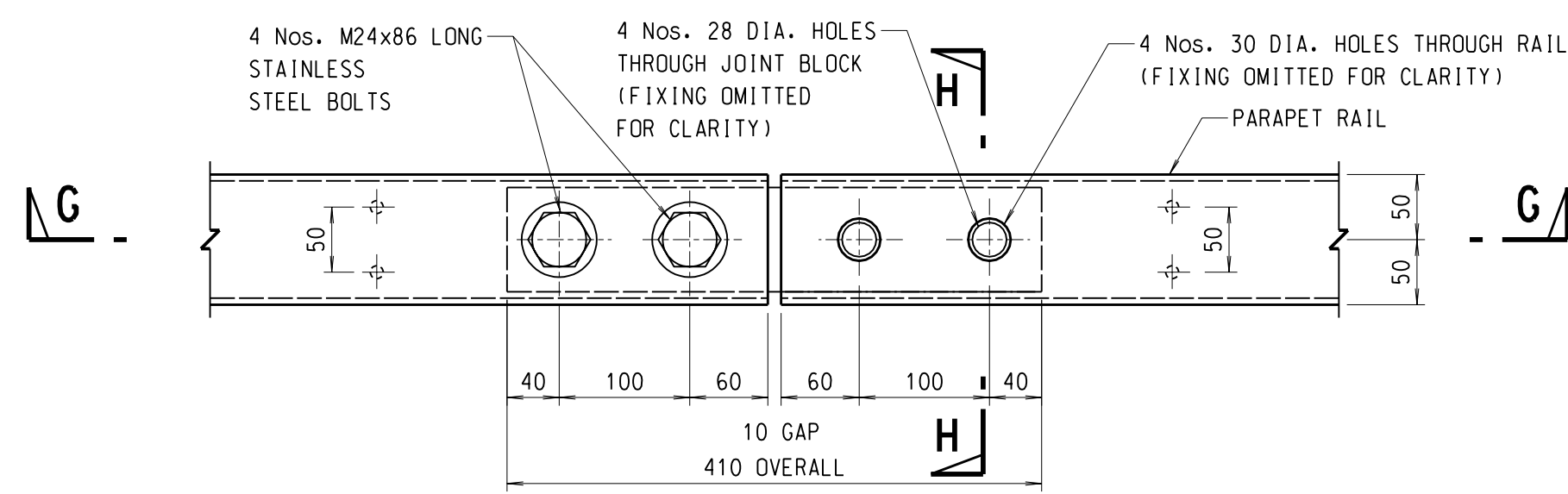
SCALE 1:2



**SECTION OF WEDGE SPACER**

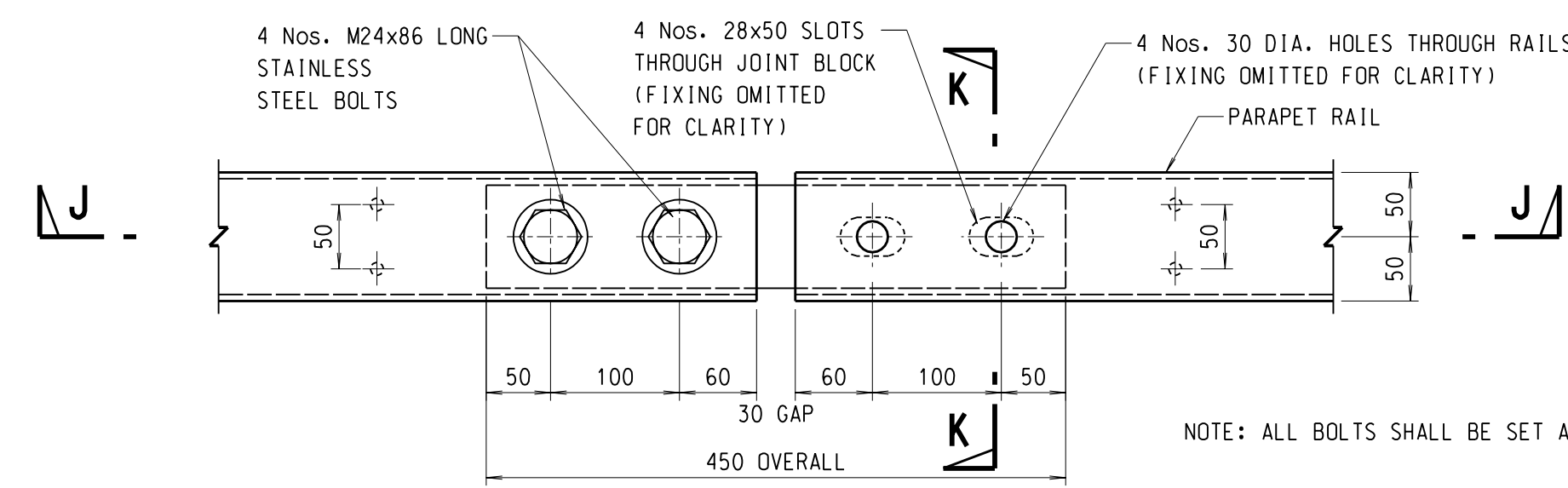
(FOR GRADIENT > 5%)

SCALE 1:2



**PLAN OF RAIL JOINT TYPE I**

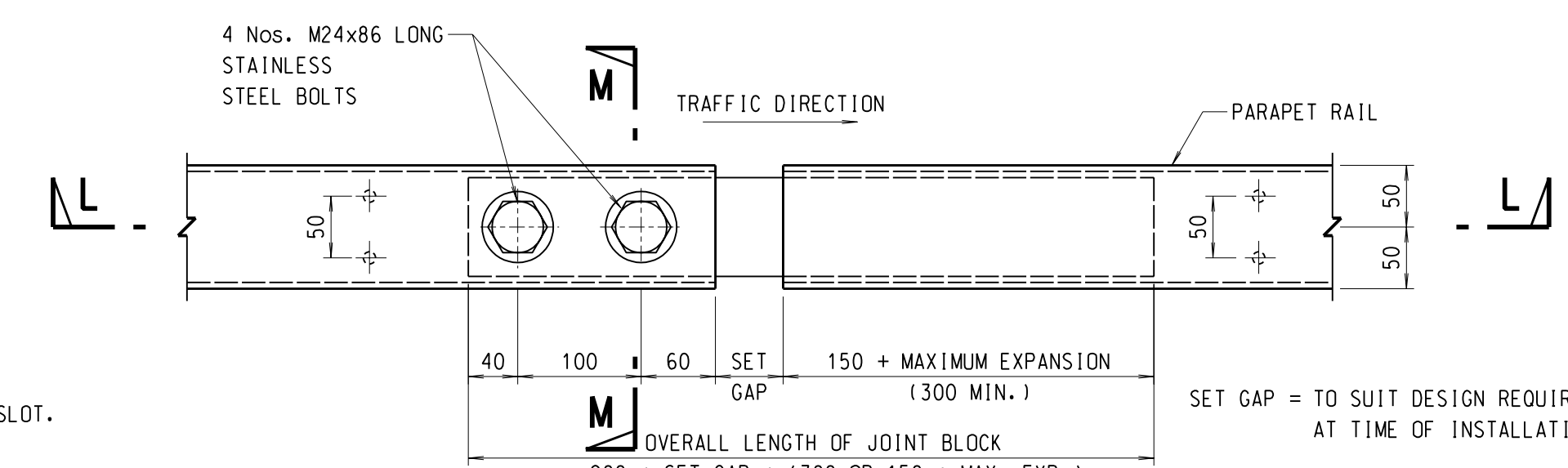
SCALE 1:5



**PLAN OF RAIL JOINT TYPE II**

(FOR MOVEMENT RANGES UP TO AND INCLUDING ±25 MM)

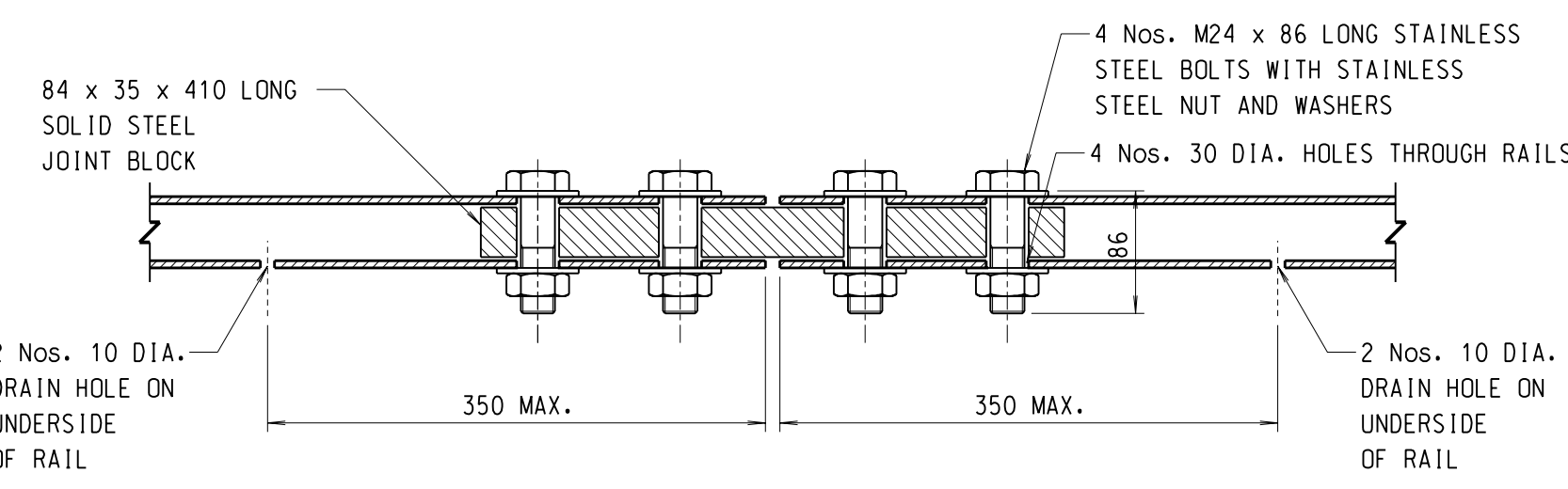
SCALE 1:5



**PLAN OF RAIL JOINT TYPE III**

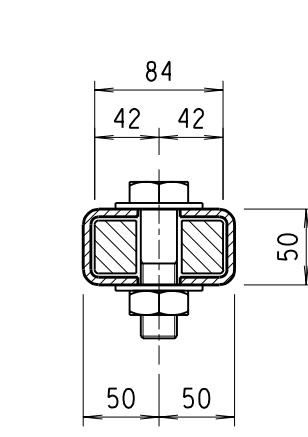
(FOR MOVEMENT RANGES EXCEEDING ±25 MM)

SCALE 1:5



**SECTION G-G**

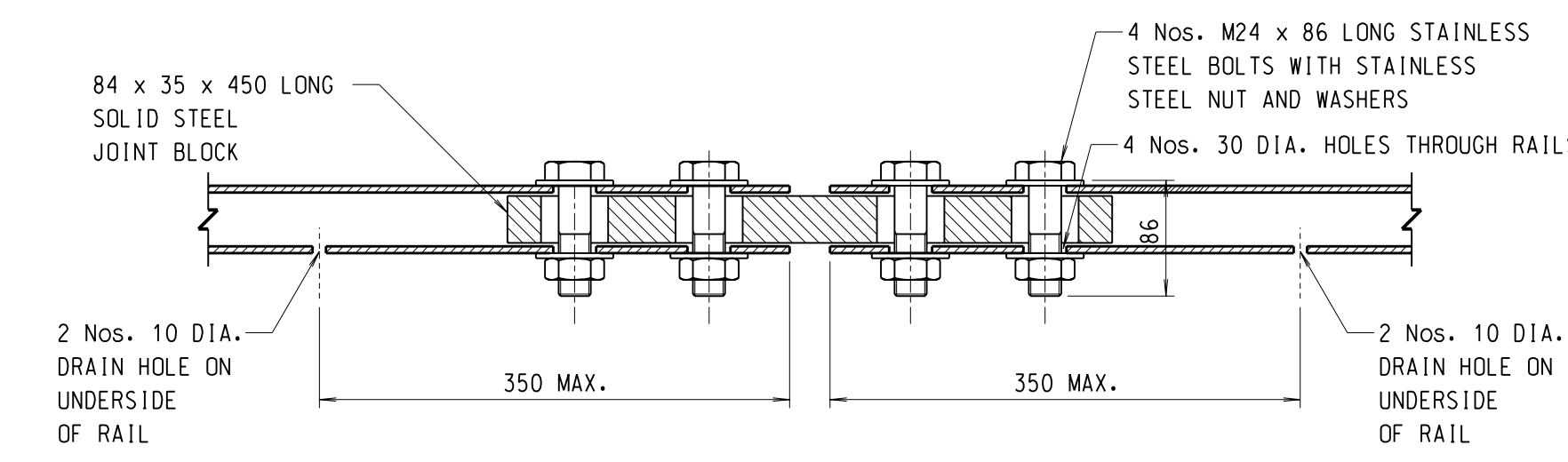
SCALE 1:5



**SECTION H-H**

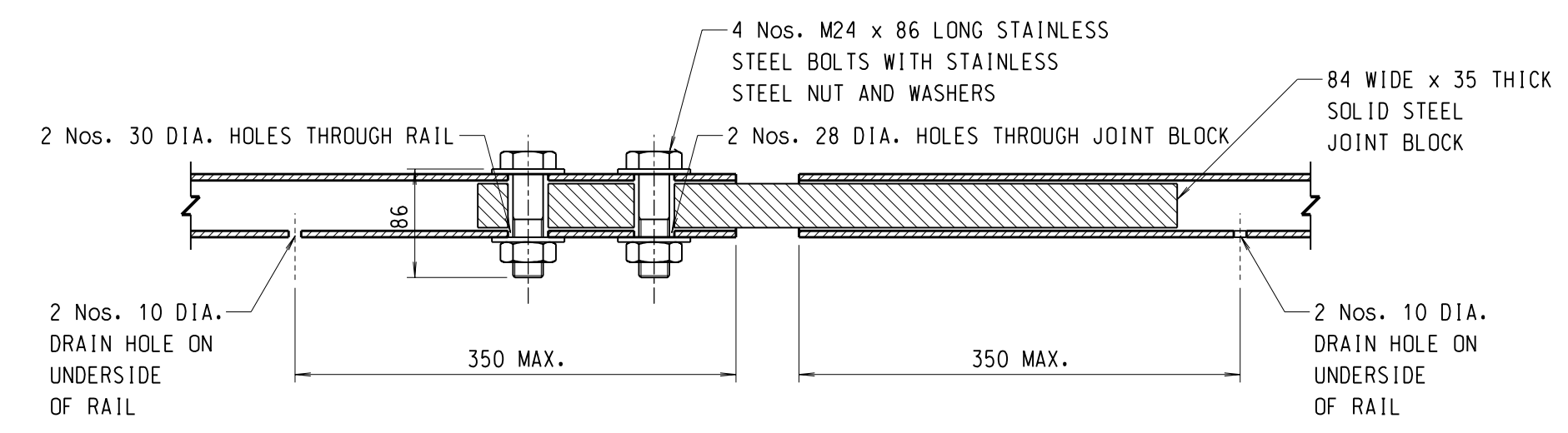
(SECTION K-K AND SECTION M-M SIMILAR)

SCALE 1:5



**SECTION J-J**

SCALE 1:5



**SECTION L-L**

SCALE 1:5

16. AFTER FABRICATION, ALL STEELWORK SHALL BE PAINTED WITH THE FOLLOWING PAINT SYSTEM:
- LIFE TO FIRST MAINTENANCE : 5 - 10 YEARS.
  - PRETREATMENT : TWO-PACK ETCH PRIMER; OR BRITISH RAIL "T-WASH" AS SPECIFIED IN BS 5493, SECTION 2, CLAUSE 11.3.2.
  - PRIMER : CHLORINATED RUBBER ZINC PHOSPHATE PRIMER, 70 µm MINIMUM TOTAL DRY-FILM THICKNESS.
  - UNDERCOAT : MICACEOUS IRON OXIDE CHLORINATED RUBBER UNDERCOAT, 100 µm MINIMUM TOTAL DRY-FILM THICKNESS.
  - FINISH : CHLORINATED RUBBER FINISH COAT THAT IS RESISTANT TO FISH OIL AND OTHER ANIMAL AND VEGETABLE OILS, 60 µm MINIMUM TOTAL DRY-FILM THICKNESS.
17. THE TRAFFIC FACE OF RAILS SHALL BE SET IN LINE WITH THE TOP EDGE OF CONCRETE PARAPET.

- NOTES:
- ALL DIMENSIONS ARE GIVEN IN MILLIMETRES.
  - ALL STEELWORK SHALL BE HOT ROLLED OR COLD FORMED SECTIONS COMPLYING WITH BS4, BSEN10210-2 OR BSEN10219-2 AS APPROPRIATE.
  - STEEL HOLLOW SECTIONS SHALL BE GRADE S275J2H TO BSEN10210-1 OR BSEN10219-1 OR EQUIVALENT.
  - ALL STEELWORK SHALL BE HOT DIP GALVANIZED TO BSEN10240 OR EQUIVALENT.
  - WELDING OF STEEL SHALL BE IN ACCORDANCE WITH BSEN1011-1 AND BSEN1011-2 AND ELECTRODES SHALL BE IN ACCORDANCE WITH BSEN499.
  - WELDING SYMBOLS ARE IN ACCORDANCE WITH BS499.
  - WELDS ARE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE SPECIFIED.
  - STAINLESS STEEL HOLDING DOWN BOLTS AND NUTS SHALL BE GRADE A4-80 TO BSEN1503506-1 AND BSEN1503506-2 WITH COMPATIBLE STAINLESS STEEL WASHERS, GRADE A2-70 MAY BE USED IN NON-MARINE ENVIRONMENT WHERE SPECIFIED IN THE CONTRACT.
  - STAINLESS STEEL BOLTS AND NUTS USED AT THE RAIL BOLTED JOINTS SHALL BE GRADE A2-70 TO BSEN1503506-1 AND BSEN1503506-2 WITH COMPATIBLE STAINLESS STEEL WASHER.
  - A NYLON OR OTHER APPROVED PLASTIC WASHER SHALL BE PROVIDED AT EVERY INTERFACE BETWEEN STAINLESS STEEL AND GALVANIZED STEEL.
  - FASTENERS OTHER THAN STAINLESS STEEL MATERIALS SHALL BE CADMIUM OR ZINC ELECTROPLATED, HOT-DIP GALVANIZED, OR SHERARDISED TO THE APPROPRIATE BRITISH STANDARDS.
  - PARAPET POSTS SHALL BE FIXED VERTICALLY AND BASE PLATES SHALL BE BOLTED DOWN TIGHTLY WITH LEVELS ADJUSTED BY STEEL SHIMS PRIOR TO GROUTING.
  - RAIL EXPANSION JOINTS SHALL BE PROVIDED AT ALL STRUCTURE MOVEMENT JOINTS.
  - PARAPET RAILS SHALL BE CONTINUOUS OVER AT LEAST TWO POSTS. MAXIMUM RAIL LENGTH SHALL BE 12 METRES. MAXIMUM POST SPACING SHALL BE 3 METRES.
  - BEDDING SHALL BE CEMENT / SAND GROUT WITH MIN. COMPRESSIVE STRENGTH OF 40N/mm<sup>2</sup>.

no.	date	description	initial
REVISION			
		name	signature
designed	M.H. TAM		SIGNED
drawn	H.C. YU		SIGNED
senior technical officer	P.S. CHAN		SIGNED
project engineer	M.H. TAM		SIGNED
senior engineer	W.C. CHAN		SIGNED

approved  
 SIGNED  
 R.K.W. WONG  
 Chief Highway Engineer  
 SEP 2002  
 date

contract no.  
 file no.  
 project no.  
 contract

drawing title  
**STEEL TOP RAIL FOR CONCRETE VEHICLE PARAPET**

drawing no. **SSD 143** scale **AS SHOWN**

office **STRUCTURES DIVISION** 結構部

**HIGHWAYS DEPARTMENT** 路政署  
**HONG KONG** 香港