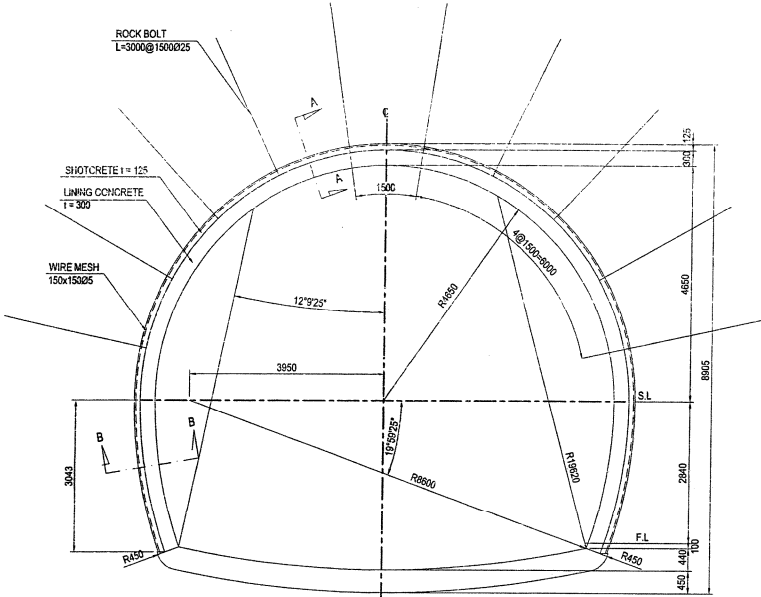
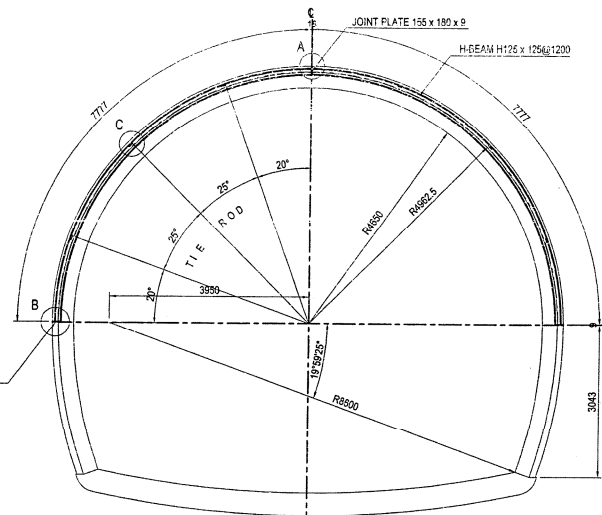


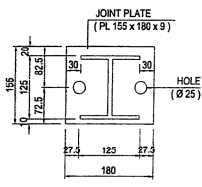
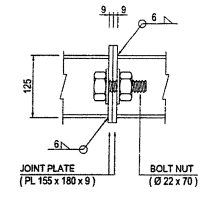
SUPPORT PATTERN TYPE B-N



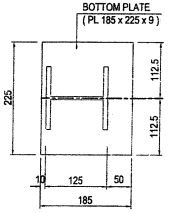
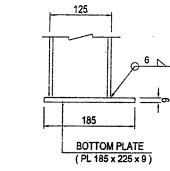
SHOTCRETE and ROCK BOLT
SCALE 1:50



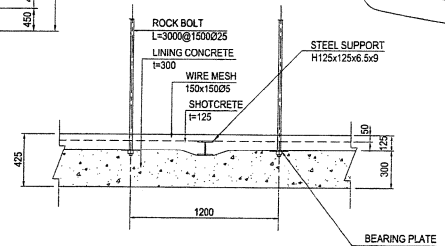
STEEL SUPPORT
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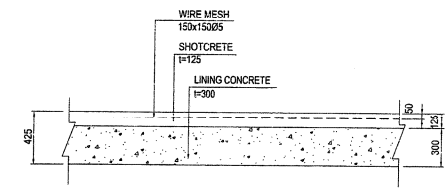
JOINT PLATE DETAIL A
SCALE 1:5



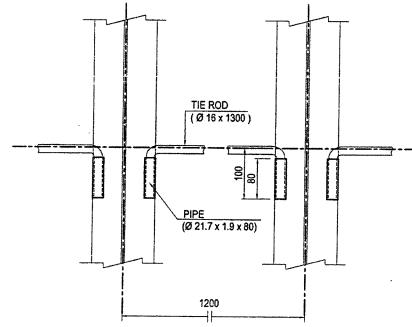
BOTTOM PLATE DETAIL B
SCALE 1:5



SECTION A - A
SCALE 1:20



SECTION B - B
SCALE 1:20



TIE ROD DETAIL C
SCALE 1:5

STEEL SUPPORT MATERIAL

ITEM	DIMENSION	UNIT	QTY	LENGTH (mm)	UNIT WEIGHT (kg)	TOTAL WEIGHT (kg)	REMARK
H-BEAM	H 125 x 125 x 6.5 x 9	KG	2	7.777	165.1	370.2	23.8 kg/m
JOINT PLATE	PL 155 x 180 x 9	KG	2		1.971	3.9	70.7 kg/m ²
BOLT NUT	Ø 22 x 70	KG	2		-	-	
BOTTOM PLATE	PL 185 x 225 x 9	KG	2		2.941	5.9	70.7 kg/m ²
PIPE	Ø 21.7 x 1.9 x 80	KG	12		0.074	0.9	0.9 kg/m
TIE ROD	Ø 16	KG	6	1.300	2.054	12.3	1.6 kg/m
TOTAL						383.2	kg

SUPPORT PATTERN

LENGTH (m)	NOS	ROCK BOLT (D25 SD345)		BEARING PLATE NOS	STEEL SUPPORT		SHORTCRETE THICKNESS (cm)	LINING THICKNESS (cm)		WIRE MESH
		SPACING (m)			UPPER	LOWER		ARCH & WALL	INVERT	
		CIRCUMFERENCIAL	LONGITUDINAL							
3	10	1.5	1.2	10	H-125	-	12.5	30	45	UPPER & LOWER

NOTE:
SHOTCRETE STRENGTH: f_{ck} 18 N/mm²
LINING AND INVERT CONCRETE STRENGTH: f_{ck} 21 N/mm²
TYPE B-N : f_{ck} 21 N/mm²

KEMENTERIAN PERHUBUNGAN
MINISTRY OF TRANSPORTATION
DIREKTORAT JENJALAN KERETA API
DIRECTORATE GENERAL OF RAILWAYS
JALAN MEKAR HIRDEDA BAKI NO.100000 KAMPALIT 11 TLP. 021-5060041 - 5060047
J.A.K.A.T.A.

DISETUIJU OLEH
APPROVED BY

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PROYEK PROJECT
PEMBANGUNAN JALUR GANDA KERETA API LINTAS SELATAN JAWA (JLS) CREBON - KROYA SEGMENT (ANTARA CREBON - PURUPO) DAN SEGMENT II (ANTARA PURUPOKERTO - KROYA)
RAILWAY DOUBLE TRACKING ON JAVA SOUTH LINE PROJECT III, CREBON - KROYA SEGMENT I (BETWEEN CREBON - PURUPO) AND SEGMENT II (BETWEEN PURUPOKERTO - KROYA) (JICA LOAN NO. IP-348)

KONSULTAN CONSULTANTS
JOINT VENTURE
JAPAN TRANSPORTATION CONSULTANTS, INC.
ORIENTAL CONSULTANTS CO., LTD.
PT. INTI ERA CIPTA
PT. DARDELA YASA OLUNA
PT. RAYAKONSULT
PT. JAYA CM MANGGALA PRATAMA

TANGGAL DATE
12 JANUARY 2012

DISETUIJU OLEH APPROVED BY
H. KUMANO

DIPERIKSA OLEH CHECKED BY
F. TADA

DIDENYAKAN OLEH DESIGNED BY
BIJUAN, E. H.

SKALA SCALE
Jumlah Lembar Total of Dwg
54
NO GAMBAR DRAWING NO.
TU-01-008

JUDUL GAMBAR DRAWING TITLE
SUPPORT PATTERN TYPE B-N