

(COAL HANDLING PLANT)

Reviewed & Submitted for

Reviewed & Submitted for

CAT II & III - Information

~~CAT IV - Reference~~

Name _____

Mallikarjun Nayak

Sr. Engineer

Bharat Heavy Electricals

Bharat Heavy Electricals

Limited

ISG-BG 1A-CHP

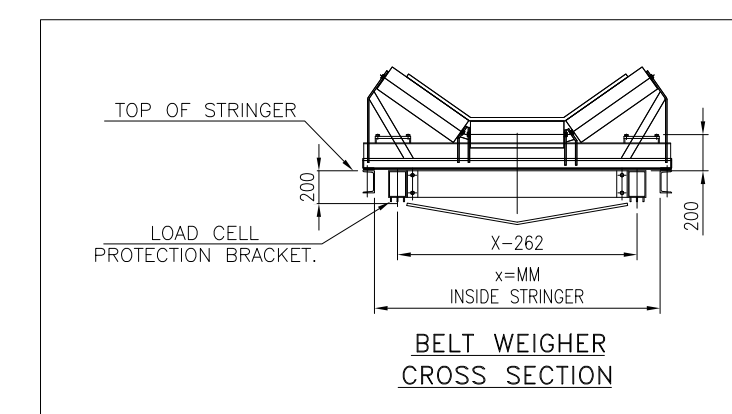
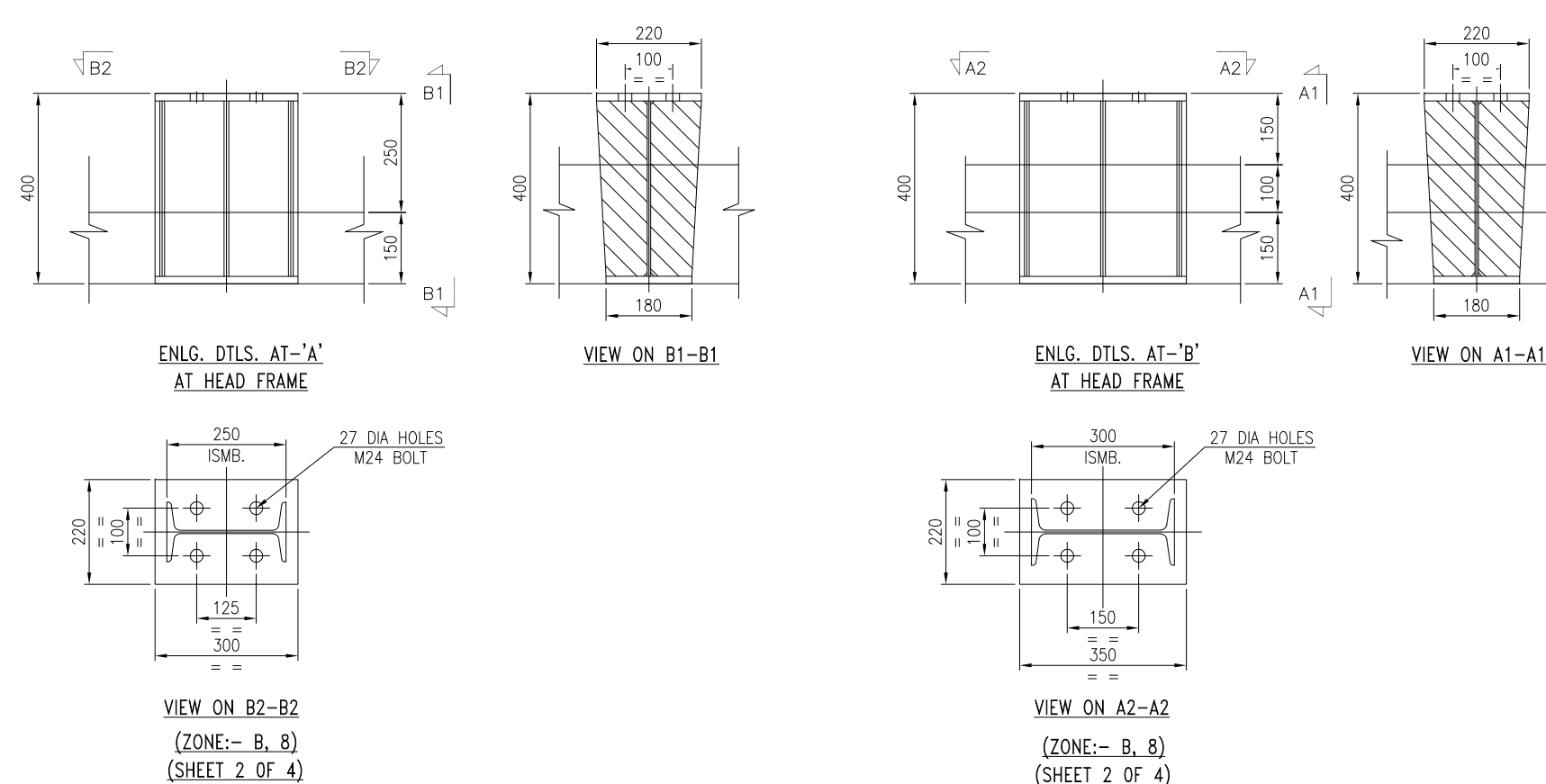
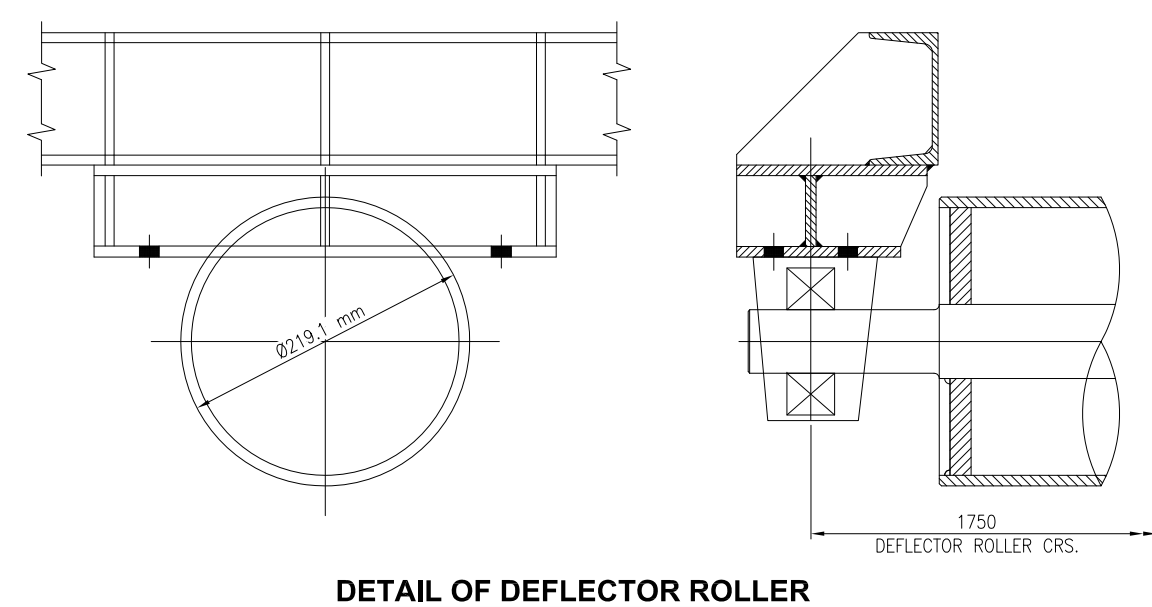
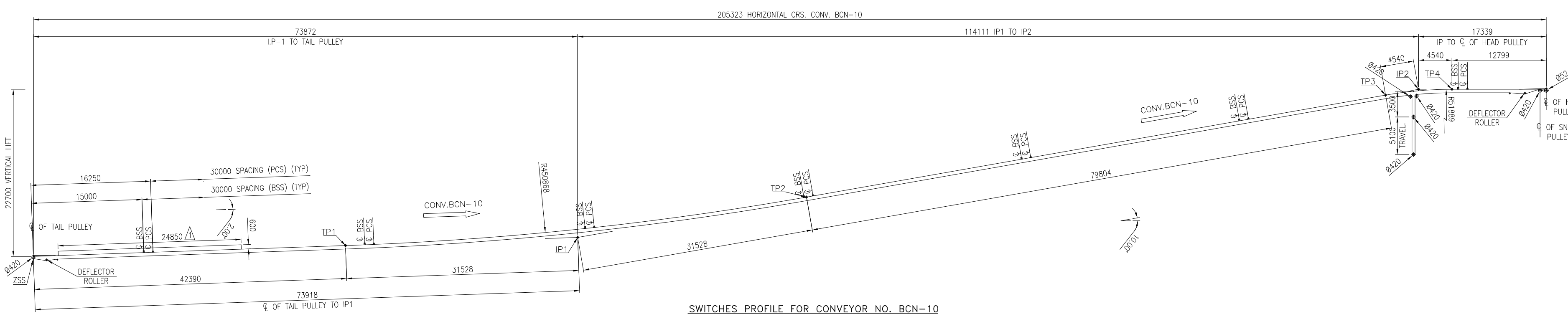
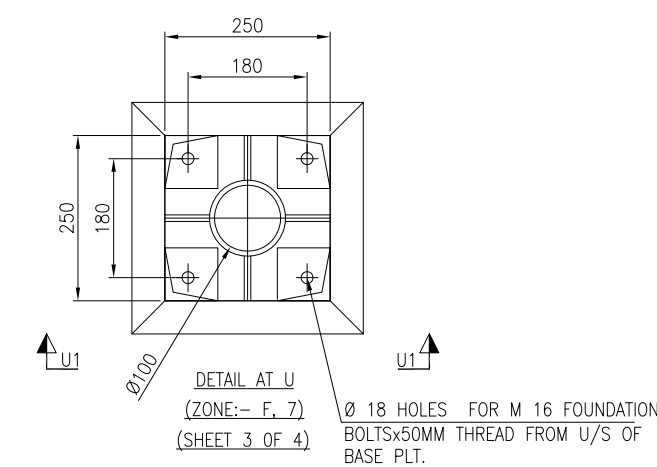
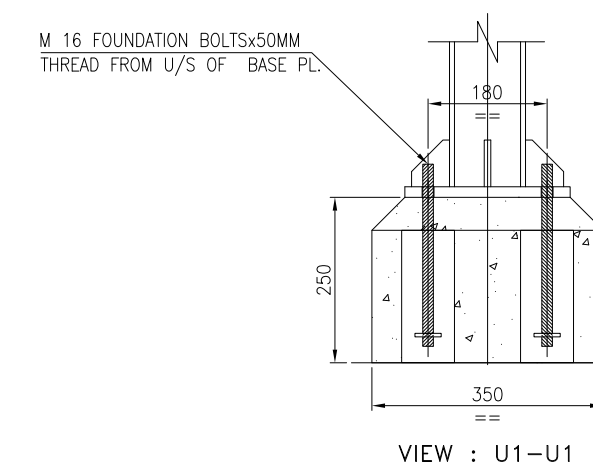
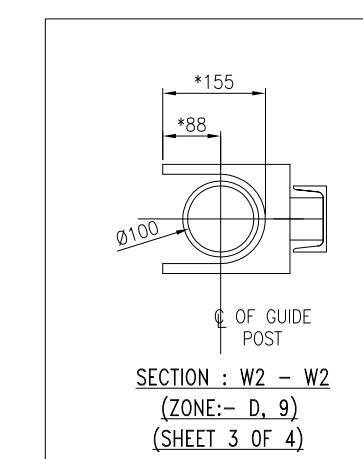
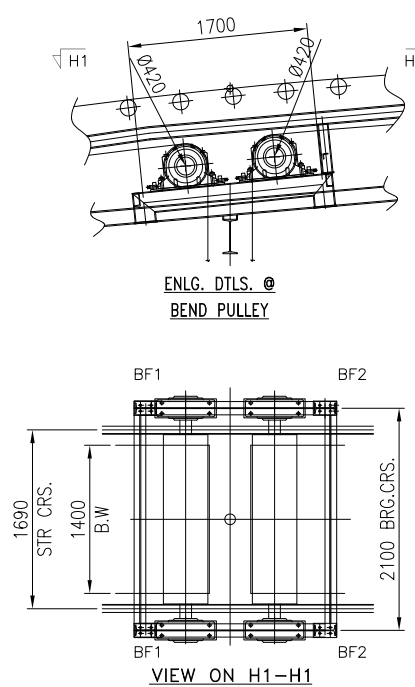
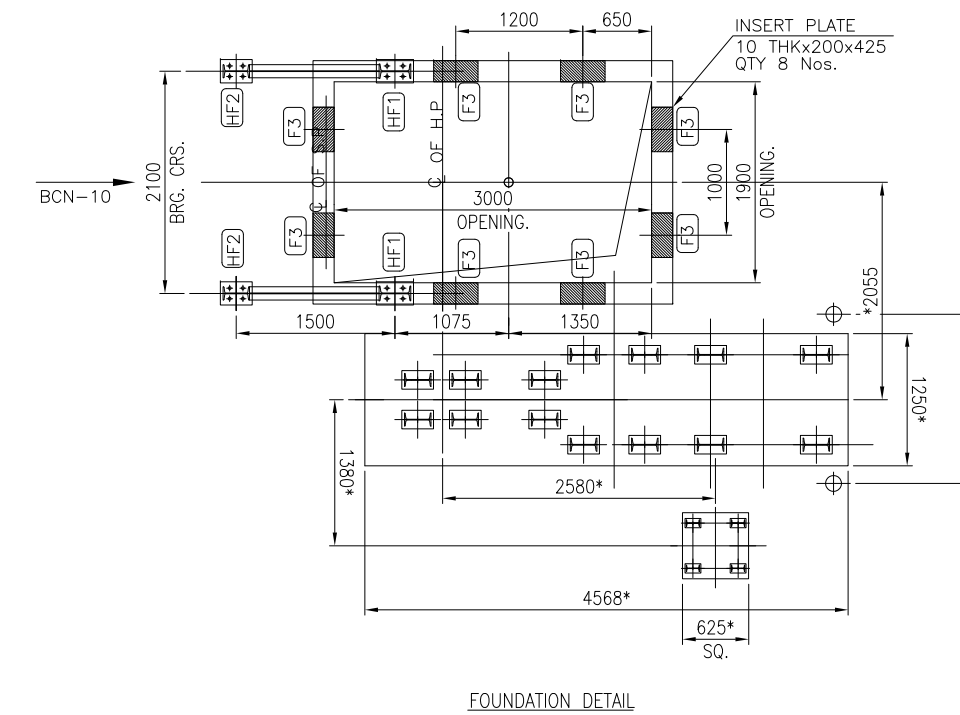
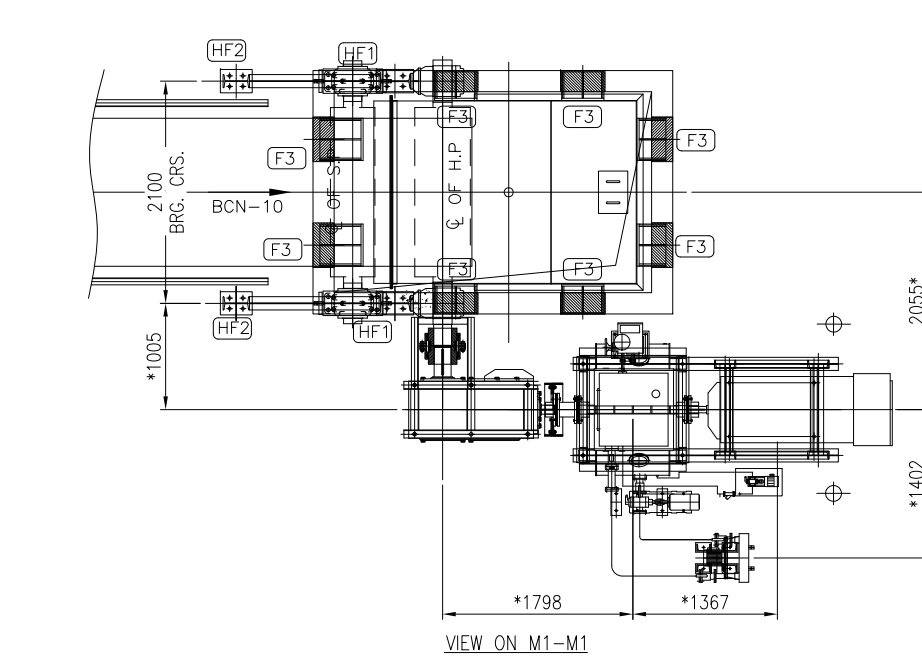
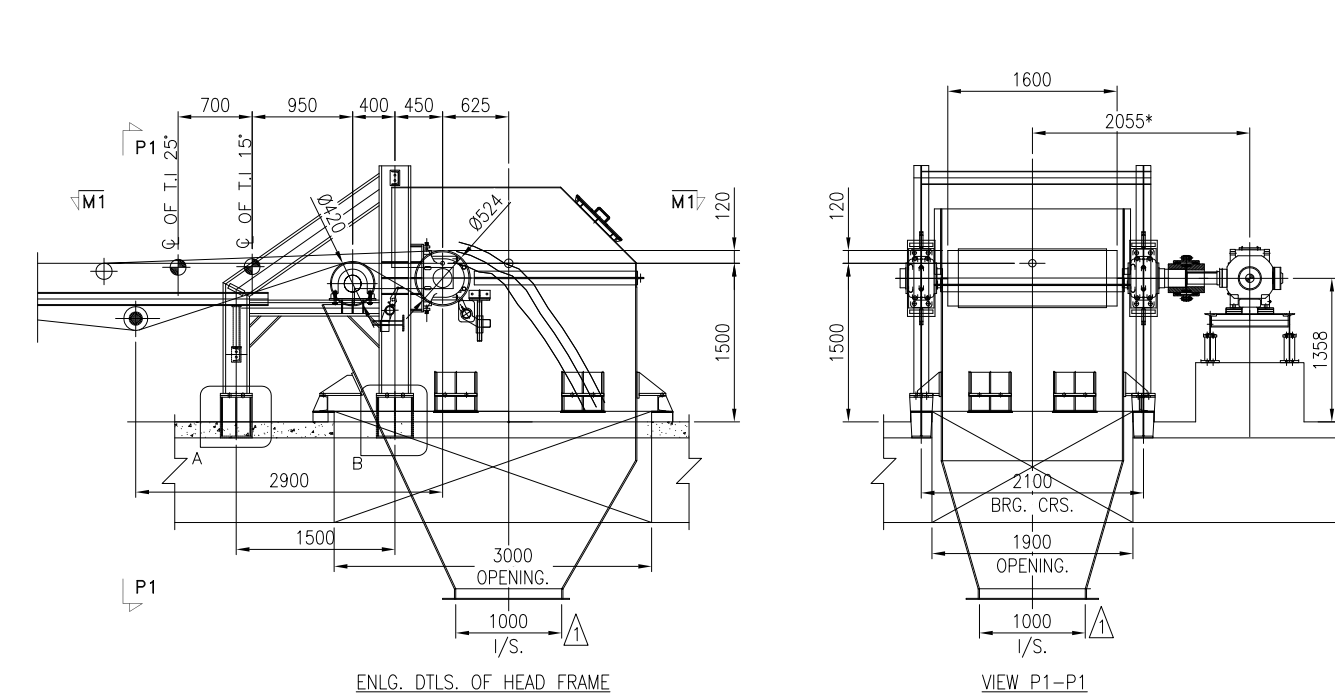
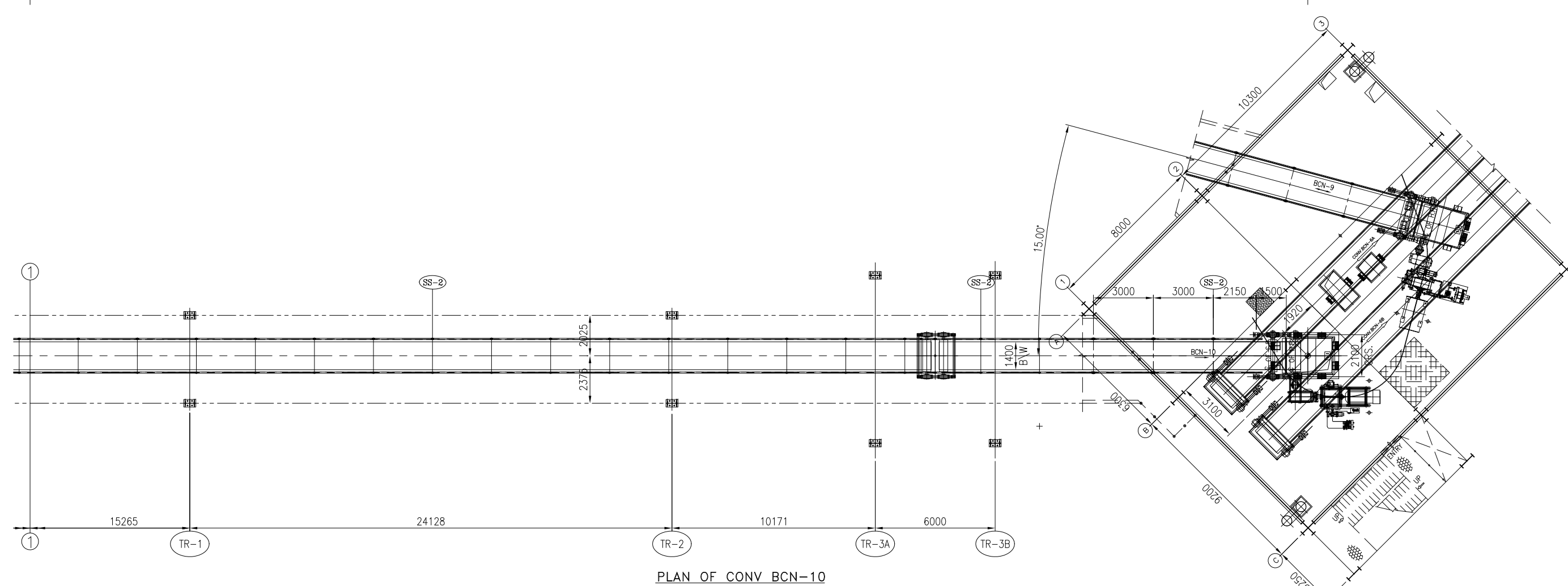
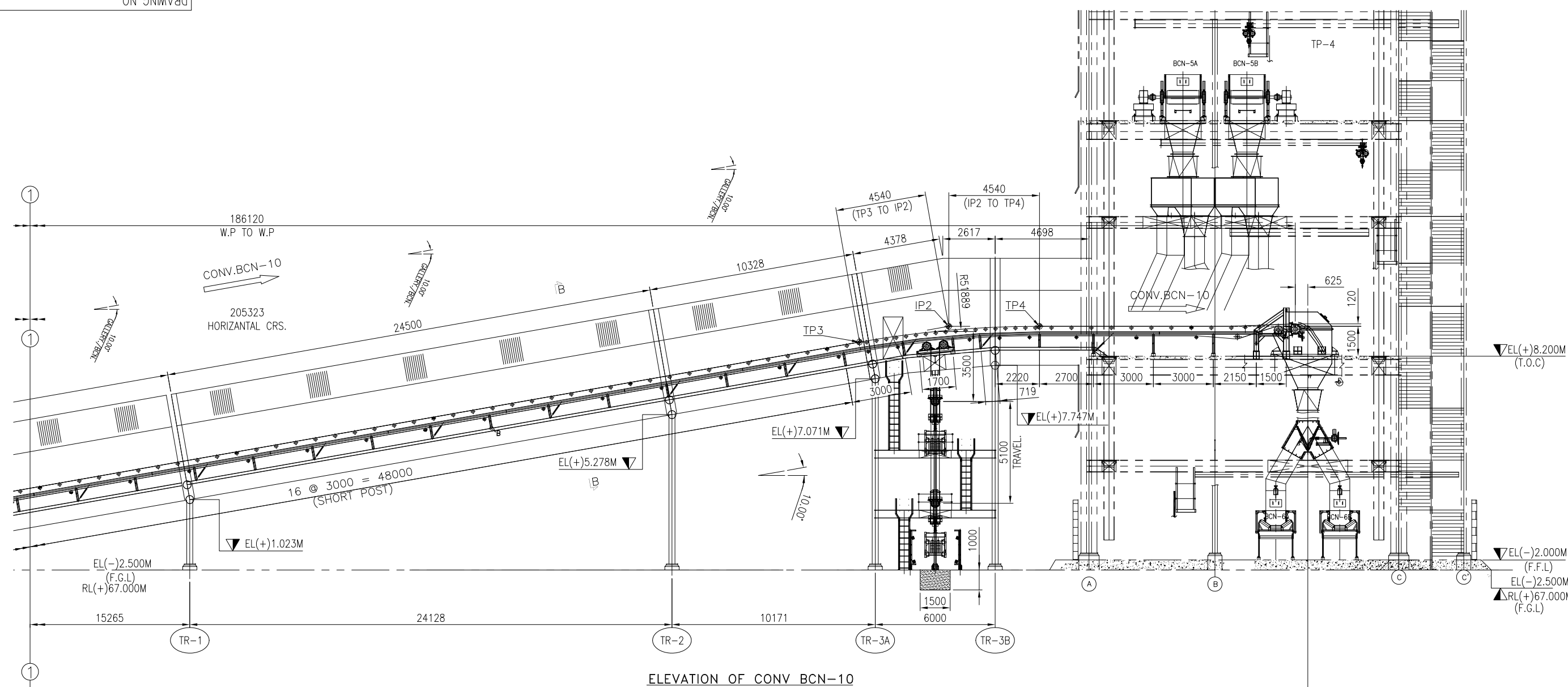
Bangalore -560012

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. FOR LOAD DATA AND OTHER NOTES REFER SHEET 4 OF 4

SIZE—A

IS-1-GA-691-101-M017

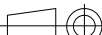
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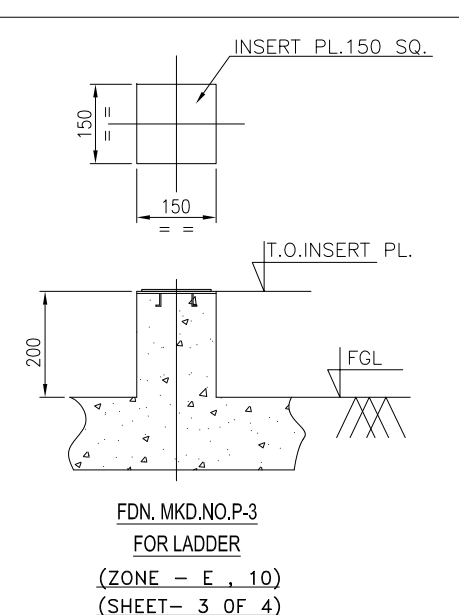
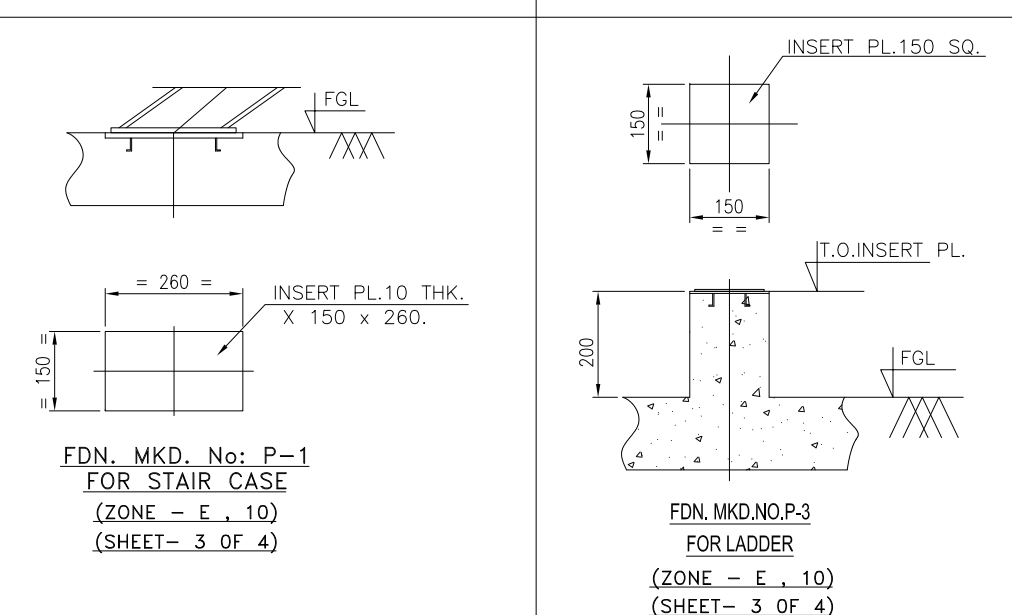
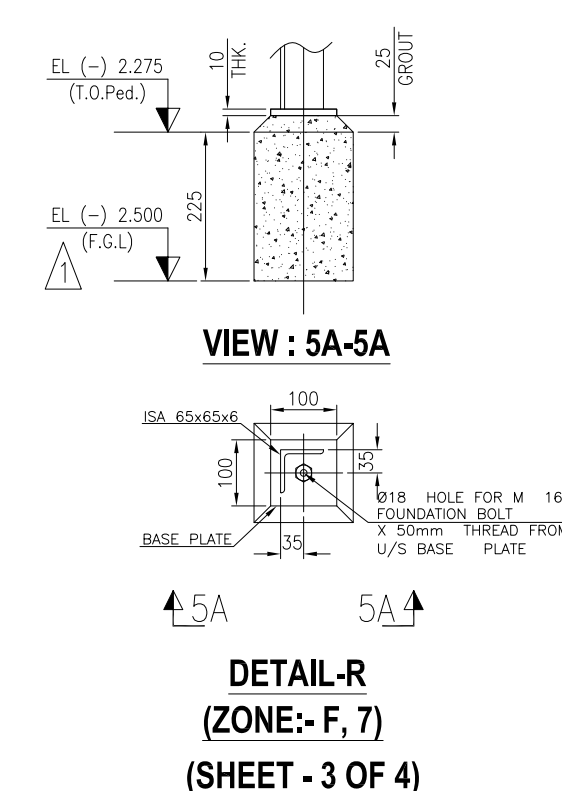
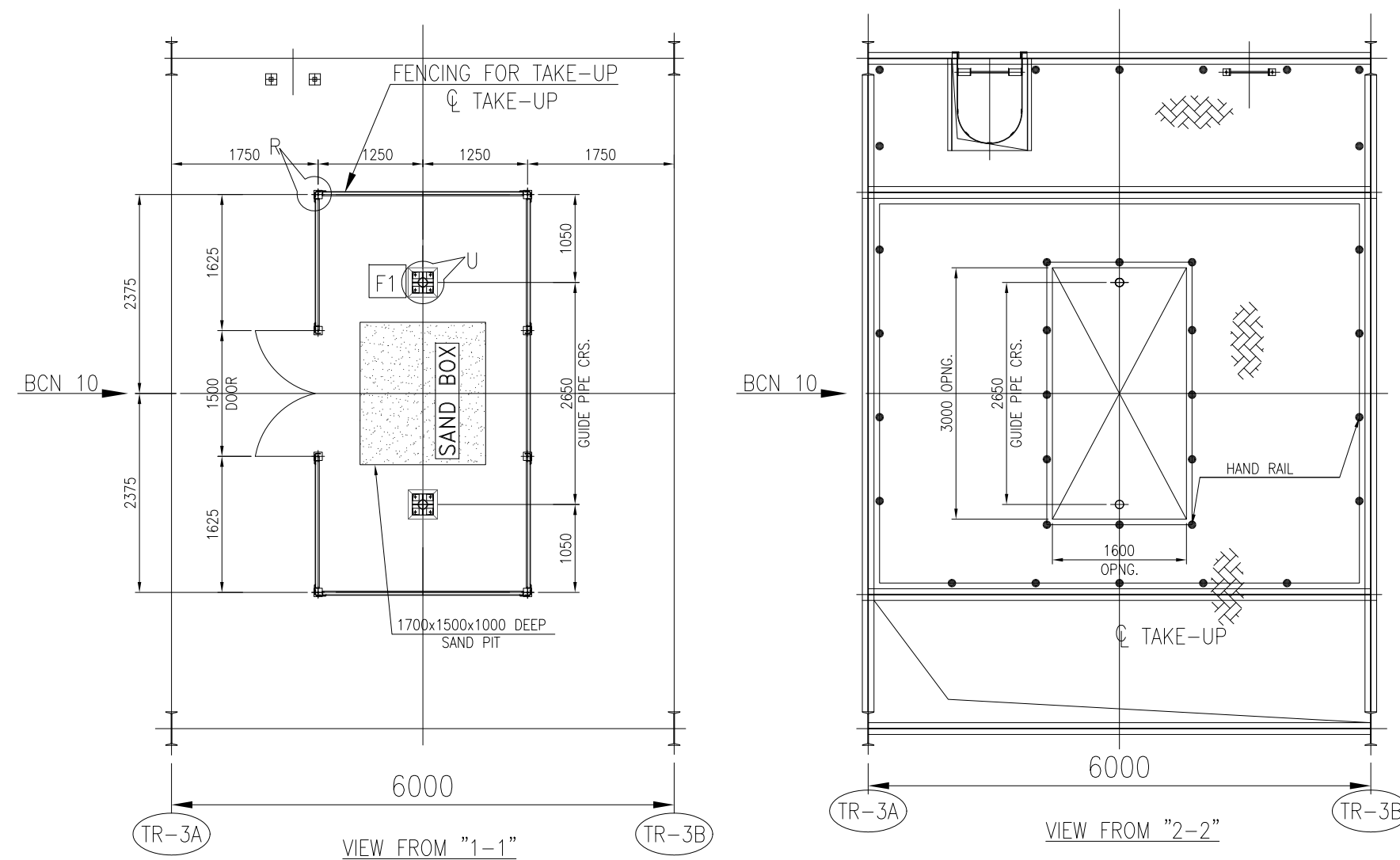
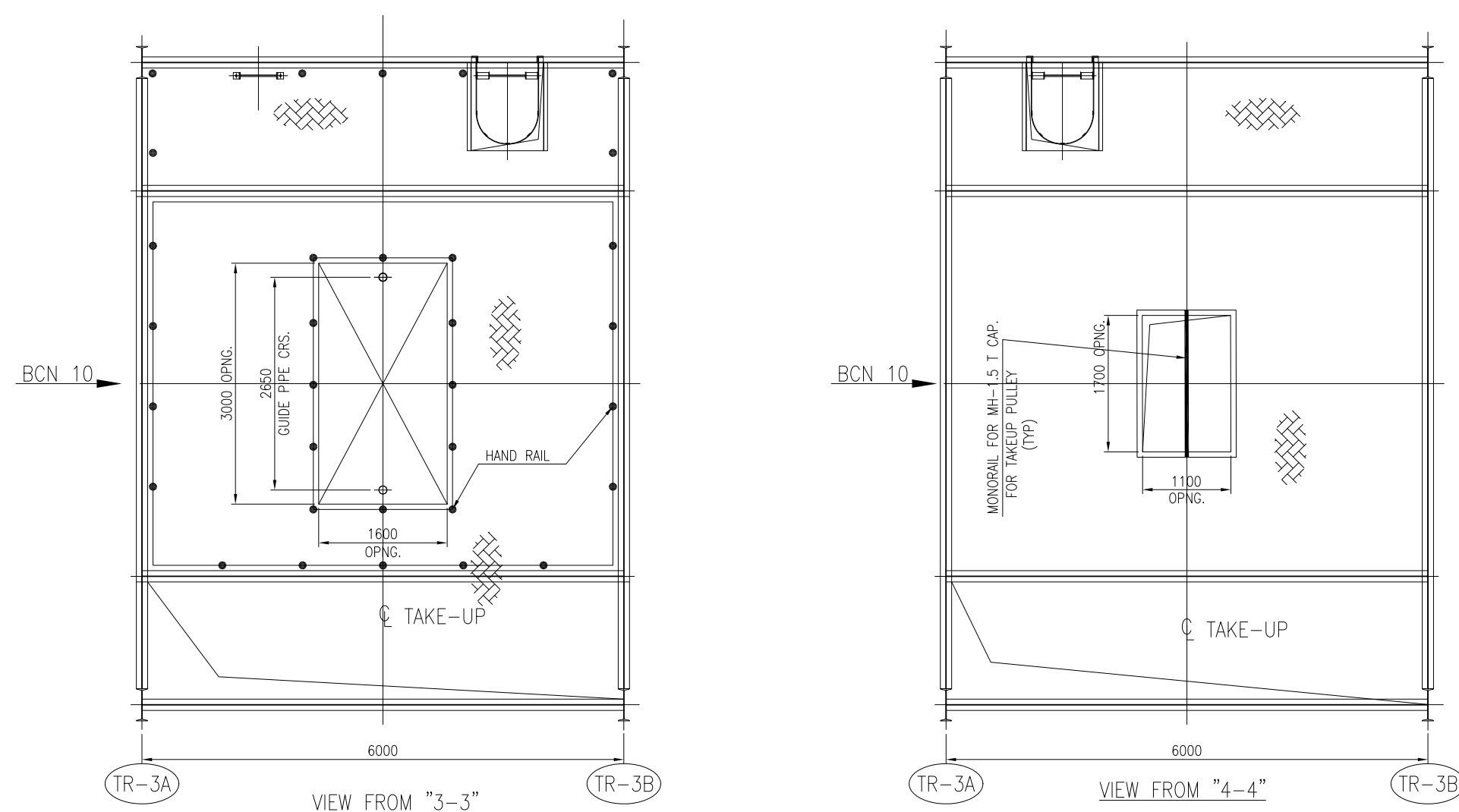
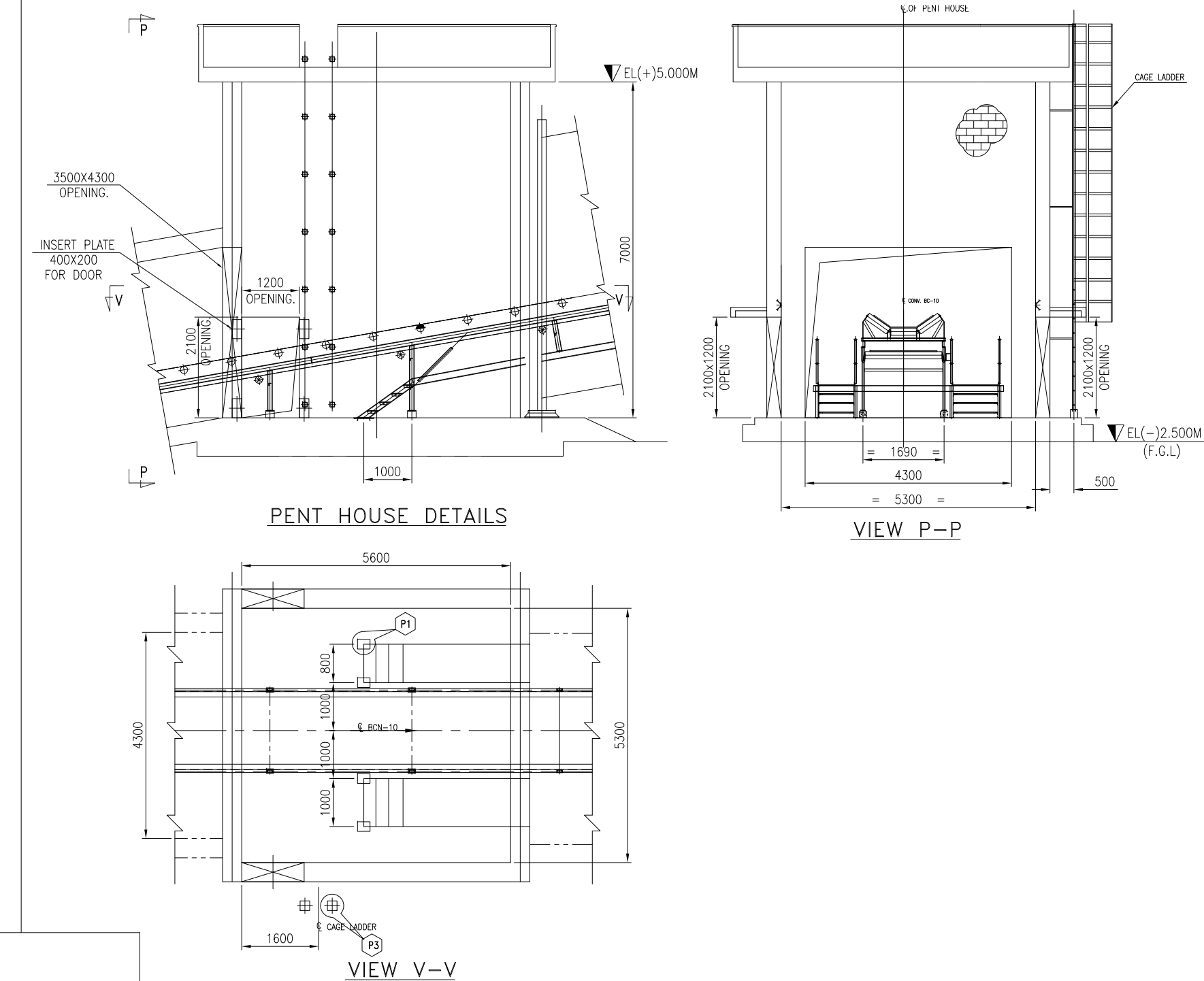
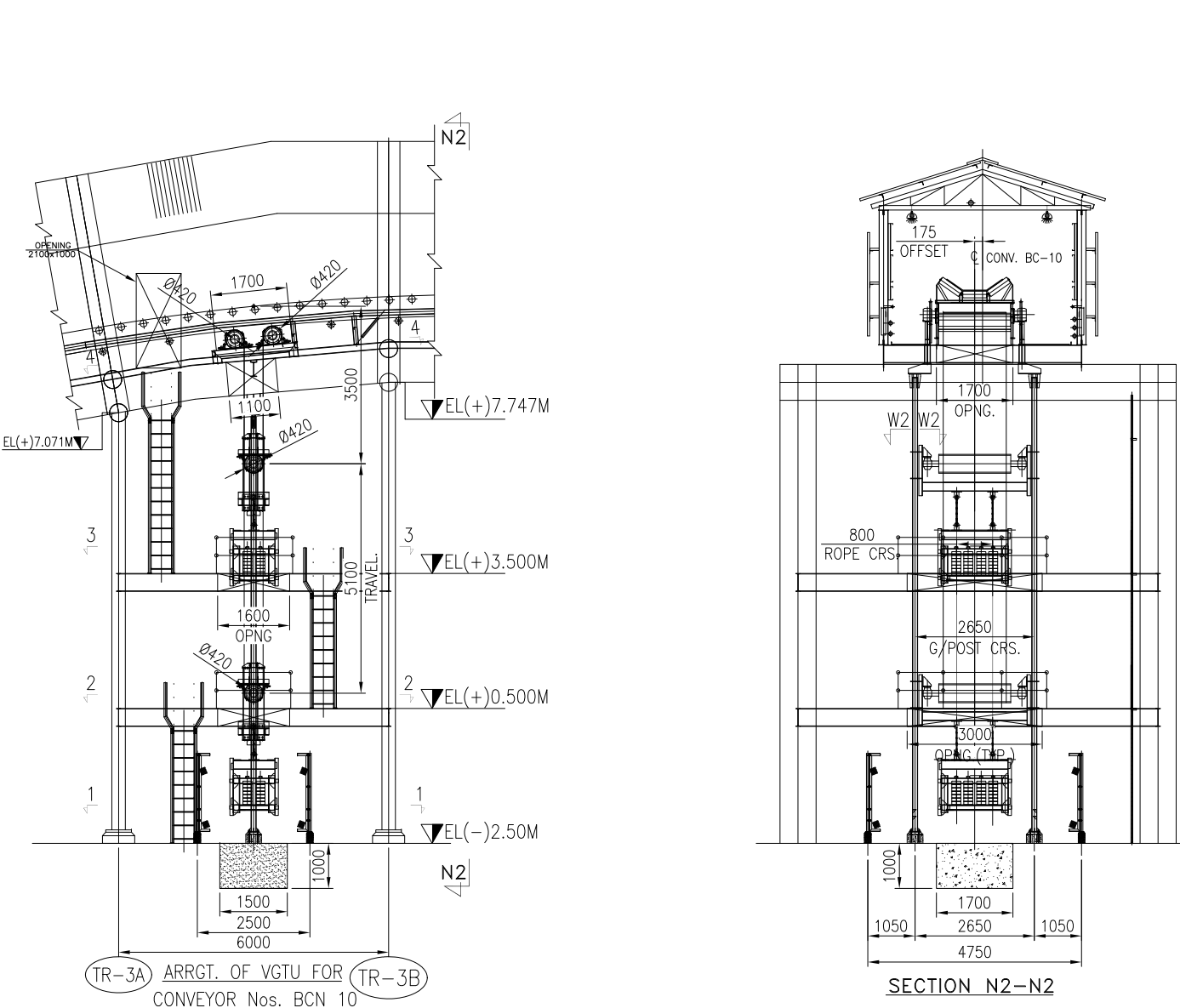
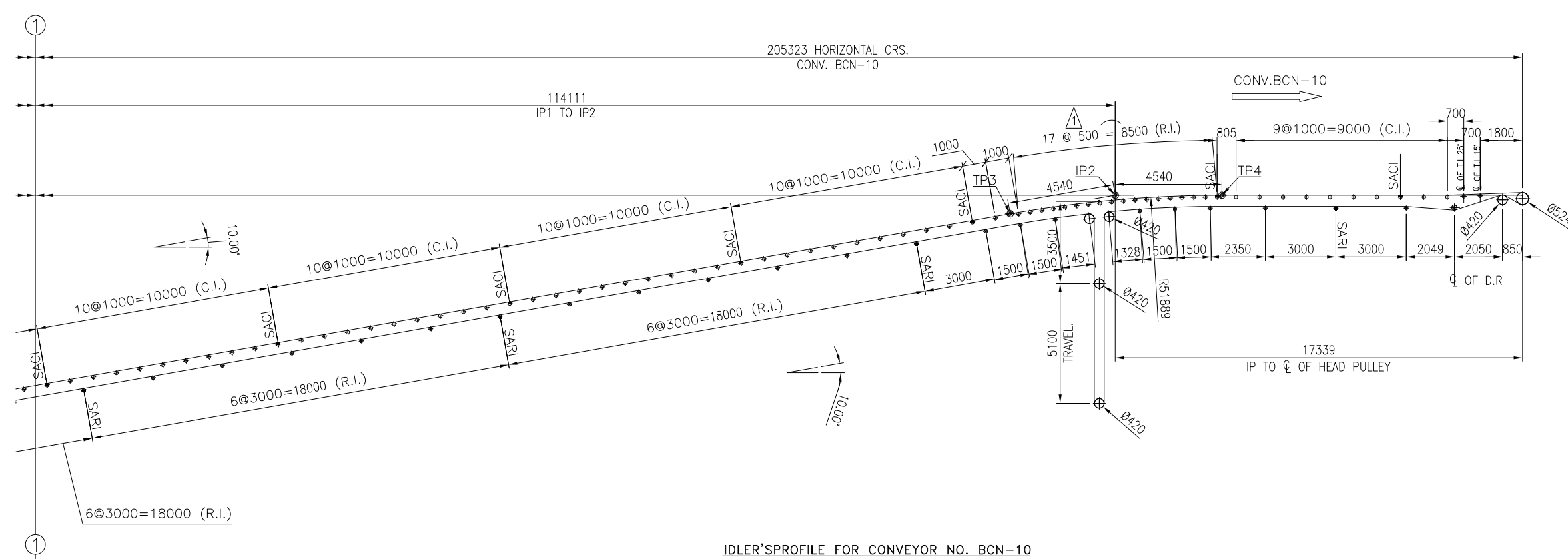
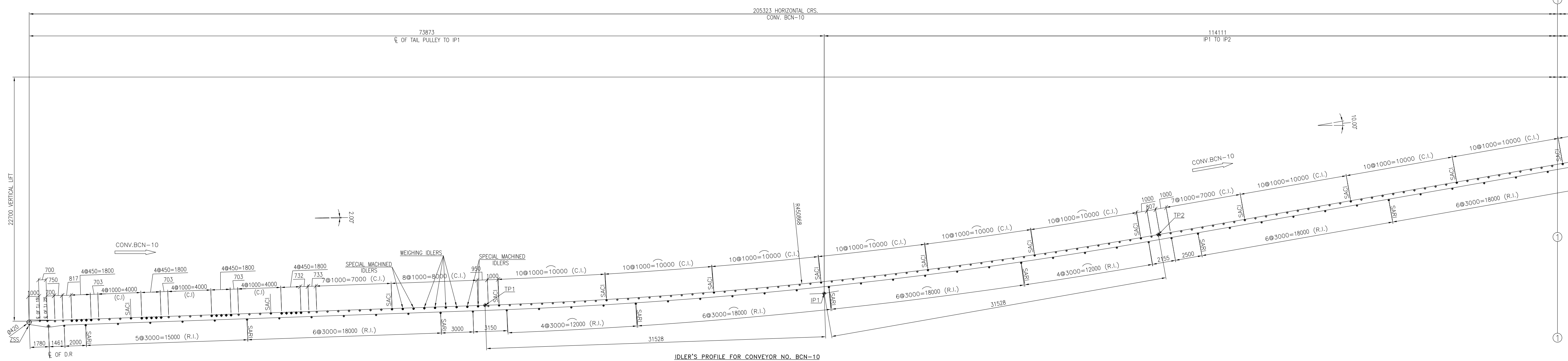
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R.No:	DATE	BRIEF RECORD	BY	APP
REVISIONS				

NOTES:-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. FOR LOAD DATA AND OTHER NOTES REFER SHEET 4 OF 4

OWNER:	TELANGANA STATE POWER GENERATION CORPORATION LTD. HYDERABAD – TELANGANA, INDIA												
CONSULTANT	DESEIN PRIVATE LIMITED												
PROJECT :	BHADRADRI THERMAL POWER STATION 4 X 270 MW, UNITS-1 TO 4, MANUGURU, TELANGANA, INDIA												
EPC CONTRACTOR	BHARAT HEAVY ELECTRICALS LIMITED INDUSTRIAL SYSTEMS GROUP ISG-BANGALORE							DRN	BMH	NAME	SIGN	DATE	REV
								CHD	MNK			21.08.15	NO. OF VARS
								APP	RSP	VSD			22.08.15
	TITLE : GA AND LOAD DATA OF BCN-10									TOTAL SHEETS SHEET..		04 02	
PPD													
SCALE	BHEL JOB NO. IS-1-14-2007					BHEL-ISG DRG.NO.: IS-1-GA-691-101-M017					REV		

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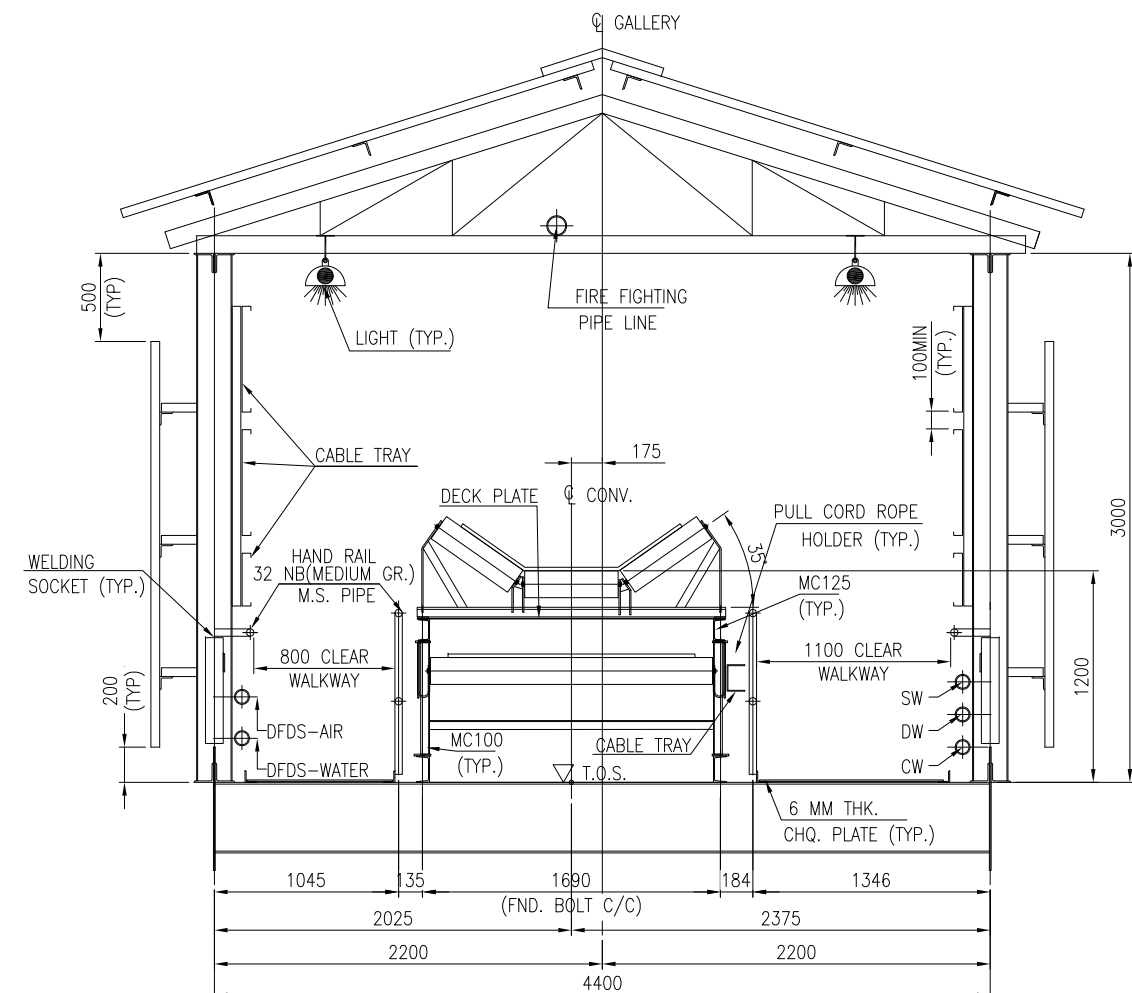
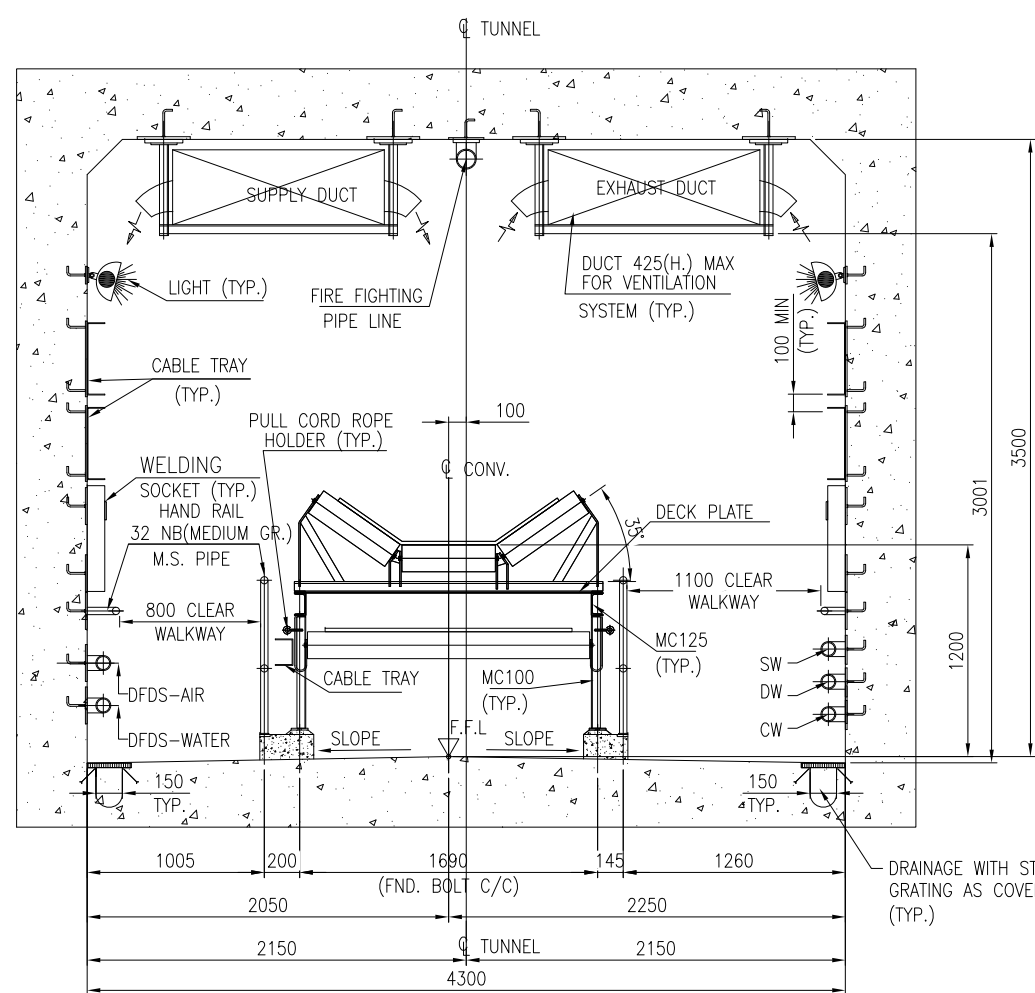


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						CHD, MNK			22.08.15	NO. OF VARS	
						APP, RSP/VSD			22.08.15		
	TITLE : GA AND LOAD DATA OF BCN-10								TOTAL SHEETS	04	
									SHEET. NO.	03	
SCALE	BHEL JOB NO. IS-1-14-2007					BHEL-ISG DRG.NO.: IS-1-GA-691-101-M017				REV	

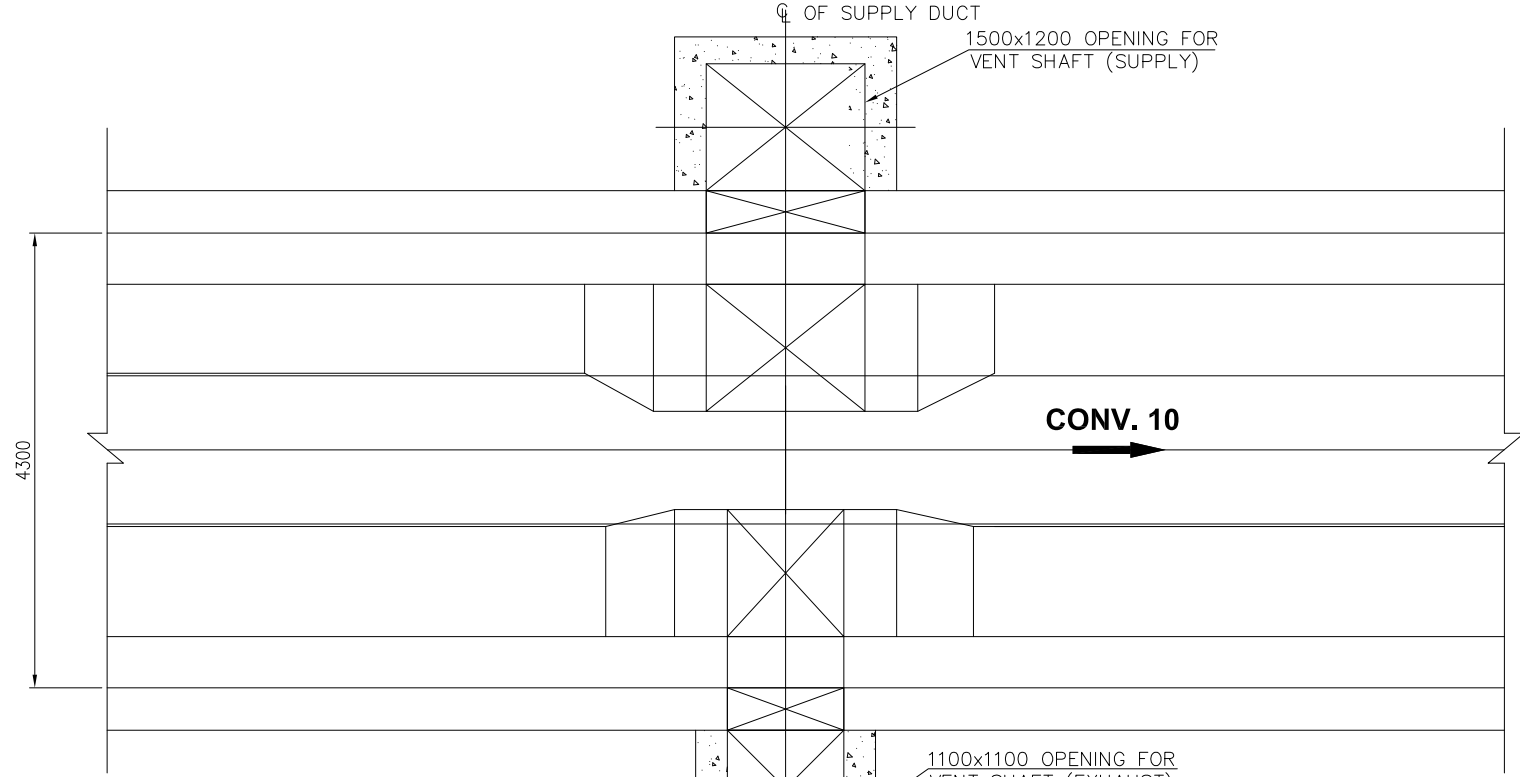
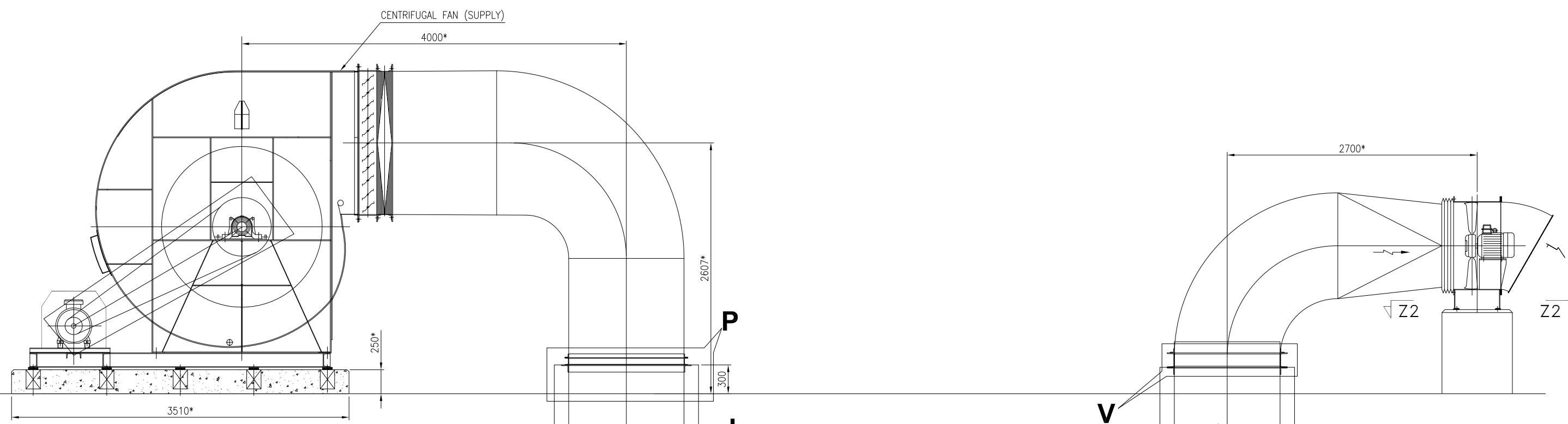
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R.No:	DATE	BRIEF RECORD	BY	AP
REVISIONS				



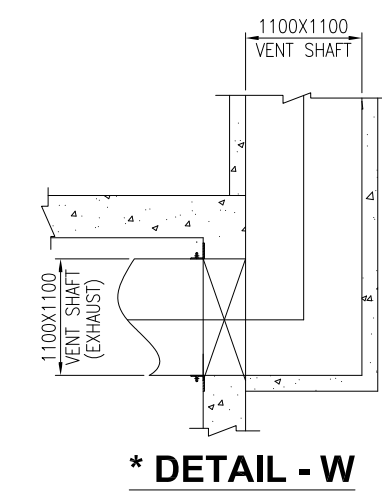
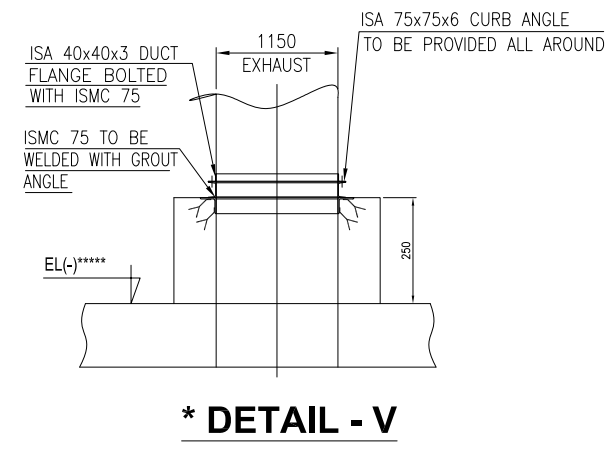
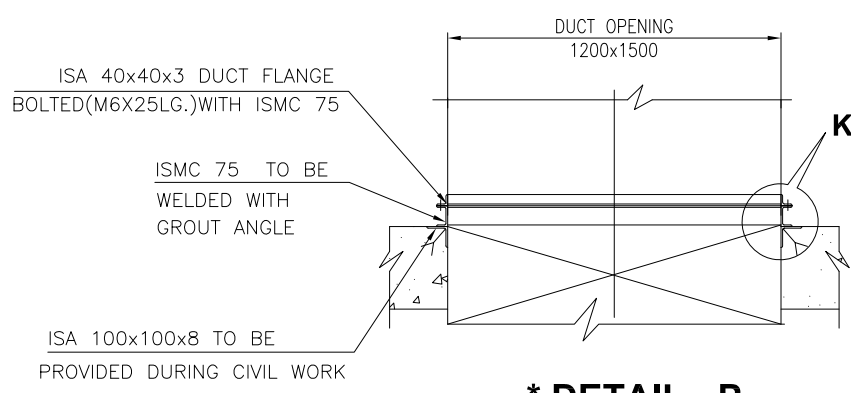
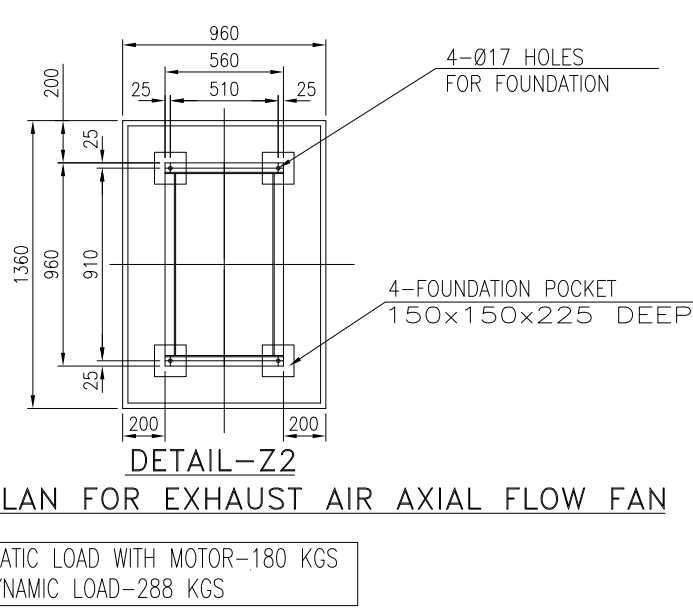
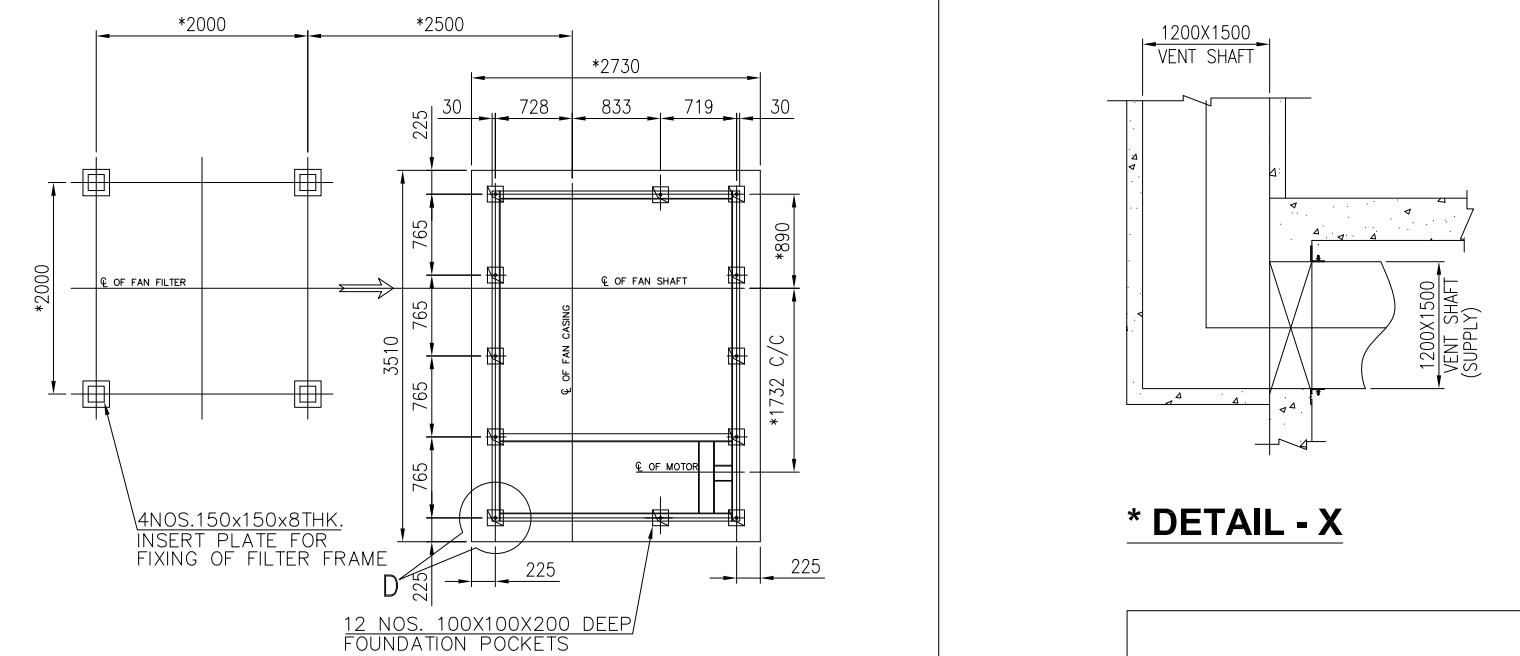
EQUIPMENT LOAD DATA-BCN-10 (Ton.)									
	HEAD END FOUNDATION		CHUTE BRACKET	BEND PULLEY FOUNDATION		TAIL END FOUNDATION		SHORT SUPPORT	SHORT SUPPORT
FOOTING MARKING	H#1	H#2	F3	B#1	B#2	T#1	T#2	SS1	SS2
NO OF FOOTING	2	2	8	2	2	2	2	28	118
DEAD LOAD DL	2.26	0.9	4.0	1.5	1.5	0.77	5.7	2.5	1.3
LIVE LOAD LL	0.0	0.15	1.0	0.1	0.1	0.00	0.11	0.5	0.3
LOAD DUE TO BELT PUL	HX (STARTING)	5.10	3.75	—	0.00	0.00	—	—	—
	HX (RUNNING)	4.23	3.13	—	0.00	0.00	-1.66	-2.14	—
	Y+ (STARTING)	-7.56	8.22	—	1.92	2.4	—	—	—
	Y+(RUNNING)	-6.30	6.84	—	1.6	2.0	-3.81	3.67	—

NOTES(FOR LOAD DATA DIRECTION :
1. SYMBOL -IVE IMPLIES VERTICAL UPWARD FORCE AND +IVE IMPLIES VERTICAL DOWNWARD FORCE
2. DIRECTION OF HORIZONTAL LOADS AS INDICATED IN THE TABLE SHALL BE READ IN CONJUNCTION WITH THE RESPECTIVE PLAN VIEW ALONG THE CONVEYOR

LEGEND FOR CONVEYOR		
⊕	CARRYING IDLER	C.I
⊖	TRANSITION IDLER	T.I
⊗	RETURN IDLER	R.I
⊙	IMPACT IDLER	I.I
⊕	SELF ALIGNING CARRYING IDLER	S.A.C.I
⊖	SELF ALIGNING RETURN IDLER	S.A.R.I
⊗	WEIGHING IDLER	
⊙	SPECIAL MACHINED IDLER	S.M.I
⊕	DEFLECTOR ROLLER	D.R
▲	PULL CORD SWITCH	PCS
■	BELL SWAY SWITCH	BSS
①	ZERO SPEED SWITCH	ZSS
⊕	WORKING POINT	W.P
	HEAD PULLEY	H.P
	TAIL PULLEY	T.P
	BEND PULLEY	B.P



				TECHNICAL SPECIFICATION	QTY FOR EACH	MAKE		
CONVEYOR IS 11592	MATERIAL HANDLED	CONVEYOR NO./EQUIPMENT NO.		BCN-10				
		RATED CAPACITY/DESIGN CAPACITY (T.P.H)		1400/1400				
		BELT WIDTH (MM)/THROUGHING ANGLE		1400/35°				
		VERTICAL LIFT (M)		22.700				
		HORIZONTAL CRS. (M)		205.33M				
		PROFILE LENGTH (MM)		207.902M				
		ENDLESS BELT LENGTH (CONSIDERING SAG) (MM)		446M				
		SPEED (M/SEC.)		2.7				
		MATERIAL		COAL				
		BELT IS 1801	BELT	BULK DENSITY FOR CONVEYOR SIZING (TON/CU.M)		0.8		
FOR STRUCTURAL DESIGN (TON/CU.M)				1.2				
LUMP SIZE (MM)				(-120)				
MOISTURE CONTENT				20%				
MATERIAL TEMP.				AMBIENT (MAX. 50°)				
TYPE/GRADE				N/N – FR				
RATING				800/4				
TOP COVER THICKNESS (MM)				5				
BOTTOM COVER THICKNESS (MM)				3				
BELT TENSION (KN)				T1=87.63, T2=33.82				
DRIVE DETAILS	MOTOR	TYPE OF JOINT		VULCANIZED				
		TYPE		TEFC, I2, IP55	1 No.			
		POWER RATING(KW)/RPM/FRAME SIZE		200				
		SUPPLY VOLTAGE / DUTY		6.6 KV,3PHASE,50Hz				
		TYPE		BEVEL HELICAL	1 No.			
		MODEL NO		–		MAKE LATER		
		HOLD BACK		YES				
		RATIO		–				
		MECHANICAL RATING KW		–		MAKE LATER		
		COUPLING LAGGING	BRAKE	TYPE		NA		MAKE LATER
TYPE/SIZE				–	1 No.			
RATING KW				–		MAKE LATER		
TYPE/SIZE				–	1 No.	MAKE LATER		
RATING KW/100 rpm				–				
TAKE UP	DRIVE			TYPE		VCU		
				TRAVEL (MM)		5100		
				COUNTER WEIGHT (IN KG)		–		
				DRIVE		#524	1 No.	
				TAIL		#420	1 No.	
		TAKE-UP		#420	1 No.			
		BEND		#420	4 Nos.			
		SNUB		#420	1 No.			
		DRIVE PULLEY		12 MM SHORE, DIAMOND GROOVE				
		IDLEERS (IS-8531)	CARRYING	ALL OTHER PULLEYS		10 MM PLAIN NATURAL RUBBER		
3 ROLL 15° TRANSITION IDLERS				#152.4 ERW #4.85THK. MS PIPE	2 Nos.			
3 ROLL 25° TRANSITION IDLERS				#152.4 ERW #4.85THK. MS PIPE	2 Nos.			
3 ROLL 35° IMPACT IDLERS				#152.4 ERW #4.85THK. MS PIPE	173 Nos.	⚠		
3 ROLL 35° CARCING IDLERS				#139.7 ERW #4.85THK. MS PIPE, OD # 190	20 Nos.			
3 ROLL 35° SELF ALIGNING CARRYING IDLERS				#152.4 ERW #4.85THK. MS PIPE	20 Nos.			
WEIGHING IDLERS				#152.4 ERW #4.85THK. MS PIPE	4 Nos.			
SPECIAL MACHINED IDLERS				#152.4 ERW #4.85THK. MS PIPE	4 Nos.			
1 ROLL RETURN IDLER				#152.4 ERW #4.85THK. MS PIPE	60 Nos.	⚠		
1 ROLL SELF ALIGNING RETURN IDLER				#152.4 ERW #4.85THK. MS PIPE	12 Nos.			
IS 8598B)	RETURN	DEFLECTOR ROLLER		#219*6MM THK. MS PLATE	2 Nos.			
		INTERNAL SCRAPER TYPE		V-PLUGH TYPE	1 No.			
		EXTERNAL SCRAPER TYPE		PRIMARY WITH MULTI BLADE SPRUNG TYPE	1 No.			
		PRIMARY	SECONDARY WITH TORSION ARM	1 No.				
		SKIRT BOARD		24.85 M	1 LOT			
		DECK PLATE		3.15MM THK. MS THROUGHOUT	1 LOT.			
		HEAD FRAME, TAIL FRAME & DRIVE BASE FRAME		–	1 EACH			
		BEND FRAME		–	1 EACH			
		STRINGER		ISM-125	1 LOT			
		SHORT SUPPORT		ISM-100	1 LOT			
SAFETY SWITCHES	MISCELLANEOUS INFORMATION	PULL CORD SWITCH /LOCATION		30 M SPACING	7 PAIRS.			
		BELT SWAY SWITCH/LOCATION		30 M SPACINGS	7 PAIRS.			
		ZERO SPEED SWITCH/LOCATION		ONE FOR EACH CONVEYOR MOUNTED AT TAIL PULLEY	1 NO.			



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THE FINISHED FLOOR LEVEL (F.L) OF POWER HOUSE BUILDING GROUND FLOOR IS 0.00 WHICH CORRESPONDS TO RL 69.5M. I.E. 0.5M ABOVE F.O.L.

BOILER AREA FINISHED GRADED LEVEL IS 200MM BELOW O.O.L I.E. 69.3M.

TRANSFORMER YARD FINISHED GRADED LEVEL IS 100MM BELOW O.O.L I.E. 69.4M.

STEPPED WALKWAY , IF CONVEYOR INCLINATION IS MORE THAN 8°

THE DRIVE DIMENSIONS ARE INDICATIVE ONLY AS MARKED * & SHALL BE FINALIZED AFTER GETTING THE DRIVE COMPONENT DRGS.

GALLERY SUPPORTING TRESTLE TYPES AND TRESTLE LOCATIONS INDICATED IN THIS DRG ARE TENTATIVE AND FINALLY THEY SHALL BE AS PER STRUCTURAL DRGS.

CIVIL REQUIREMENT INDICATED TENTATIVE.

REFERENCE DRAWINGS/DOCUMENTS	
DRG. NO.	DESCRIPTION
IS-0-PL-691-100-M001	PLOT PLAN OF COAL HANDLING PLANT
IS-1-FL-691-100-M002	COAL FLOW DIAGRAM
IS-1-GA-691-100-M003	TYPICAL GALLERY CROSS-SECTIONS OF GALLERIES & TUNNELS
IS-1-GA-691-104-M022	MECHANICAL GA & LOAD DATA OF TP-4
IS-1-GA-691-104-M017	GA OF ERH

OWNER:	TELANGANA STATE POWER GENERATION CORPORATION LTD.									
	HYDERABAD – TELANGANA, INDIA									
CONSULTANT	DESEIN PRIVATE LIMITED									
PROJECT :	BHADRADI THERMAL POWER STATION 4 X 10 MW, UNITS-1 TO 4, MANUGURU, TELANGANA, INDIA									
EPC CONTRACTOR	BHARAT HEAVY ELECTRICALS LIMITED									
	INDUSTRIAL SYSTEMS GROUP ISG-BANGALORE									
		NAME	SIGN	DATE	REV					
	DRN.	BMH		21.08.15						
	CHD.	MNK		22.08.15						
	APP.	RSP/VSD		22.08.15						
	TITLE :				TOTAL SHEETS		04			
	GA AND LOAD DATA OF BCN-10				SHEET NO.		04			
SCALE	BHEL JOB NO.	IS-1-14-2007		BHEL ISG JOB NO.:	IS-1-GA-691-101-M017					REV

Project : Bhadradri Thermal Power Station Client : TSGENCO Consultant : DESEIN Contractor : BHEL-ISG		
		DATE: 17.11.2015
SL No.	D E S E I N Comments	BHEL Compliance/ Clarificatrion/ Confirmation
	Drawing: GA OF BCN-10 & DRG. NO.: IS-1-GA-691-101-M017, R0	
1	Refer key plan: please indicate angle of north orientation	Noted & revised.
2	Please confirm the * marking data and delete note 6.	Whenever possible revised at this stage. However, it shall be taken care before release of drgs to site for civil work.
3	Please complete the full data in technical specification	Shall be updated by next revision
4	Refer enlarge details of head frame: Please indicate the chute opening size	Noted & revised.
5	Please provide shed for maintenance of ventilation fan along with handling equipment	Canopy shall be provided.
6	Spacing of carrying idlers in convex curves shall be 500mm. Please correct.	Noted & revised.
7	Refer zone B4 sheet 2: Please indicate ladder in all elevations	Noted & revised.
8	Refer view 5A-5A : Please correct FFL as FGL.	Noted & revised.
9	Please provide skirt board along with access platform	Noted & revised.
10	Please provide a section for pent house & belt weigher	Noted & revised.
11	Hold shall be removed .	Noted & revised.