


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SCHEDULE OF FOOTING REINFORCEMENT									
S.NO.	FOOTING MKD.	FOOTING SIZE		DEPTH (D)	ALONG L (N-S)		ALONG B (E-W)		FOOTING B.O.C
		L (N-S)	B (E-W)		BAR MKD.'b1' (BOTTOM)	BAR MKD.'t1' (TOP)	BAR MKD.'b2' (BOTTOM)	BAR MKD.'t2' (TOP)	
1	F1	9000	11000	850	20Y@150c/c	16Y@150c/c	16Y@150c/c	16Y@150c/c	EL(-)4.50
2	F2	6850	2500	450	12Y@175c/c	10Y@150c/c	12Y@175c/c	12Y@175c/c	EL(-)4.50
3	F3	6850	2800	400	12Y@175c/c	10Y@175c/c	12Y@175c/c	12Y@175c/c	EL(-)4.50
4	F4	7000	2200	400	12Y@175c/c	10Y@175c/c	12Y@175c/c	12Y@175c/c	EL(-)4.50
5	F5	6000	21500	1350	25Y@225c/c	25Y@225c/c	25Y@225c/c	25Y@225c/c	EL(-)4.50
6	F6	7250	3000	450	12Y@175c/c	10Y@150c/c	12Y@175c/c	10Y@150c/c	EL(-)4.50

BHEL-PROJECT ENGINEERING MANAGEMENT(CIVIL)	
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<input type="checkbox"/> PLANNING	<input type="checkbox"/> INFORMATION
<input checked="" type="checkbox"/> CONSTRUCTION	
STAMP ALL PREVIOUS REVISION AS SUPERSEDED	
ISSUED BY	
NAME	ABHAY KUMAR
SIGNATURE	For 
DATE	07/12/2020

BILL OF MATERIAL:- (FOR PR-4 SH2)				
SL.NO.	ITEM	UNIT	WT. (MT)	
1	RCC (M25)	Cu.M	400.00	
2	PCC	Cu.M	26.50	
3	REINFORCEMENT			
	8MM TMT	MT	2.65	
	10MM TMT	MT	0.75	
	12MM TMT	MT	2.50	
	16MM TMT	MT	3.80	
	20MM TMT	MT	3.40	
	25MM TMT	MT	17.25	
	28MM TMT	MT	1.90	
	TOTAL		32.25T	

**SPECIAL NOTE**

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JOB NO. 434		STATUS		DISTRIBUTION					
REV. DATE		ALTD		CHD					
01		13/12/20		SG					
REVISED AS MARKED		APPD		AK					
TITLE									
PIPE RACK PR-4									
BOP AREA - GA & RC DETAILS									
DRAWING NO. PE-DG-434-675-C019									
SHEET 2 OF 4									
REV. RI									

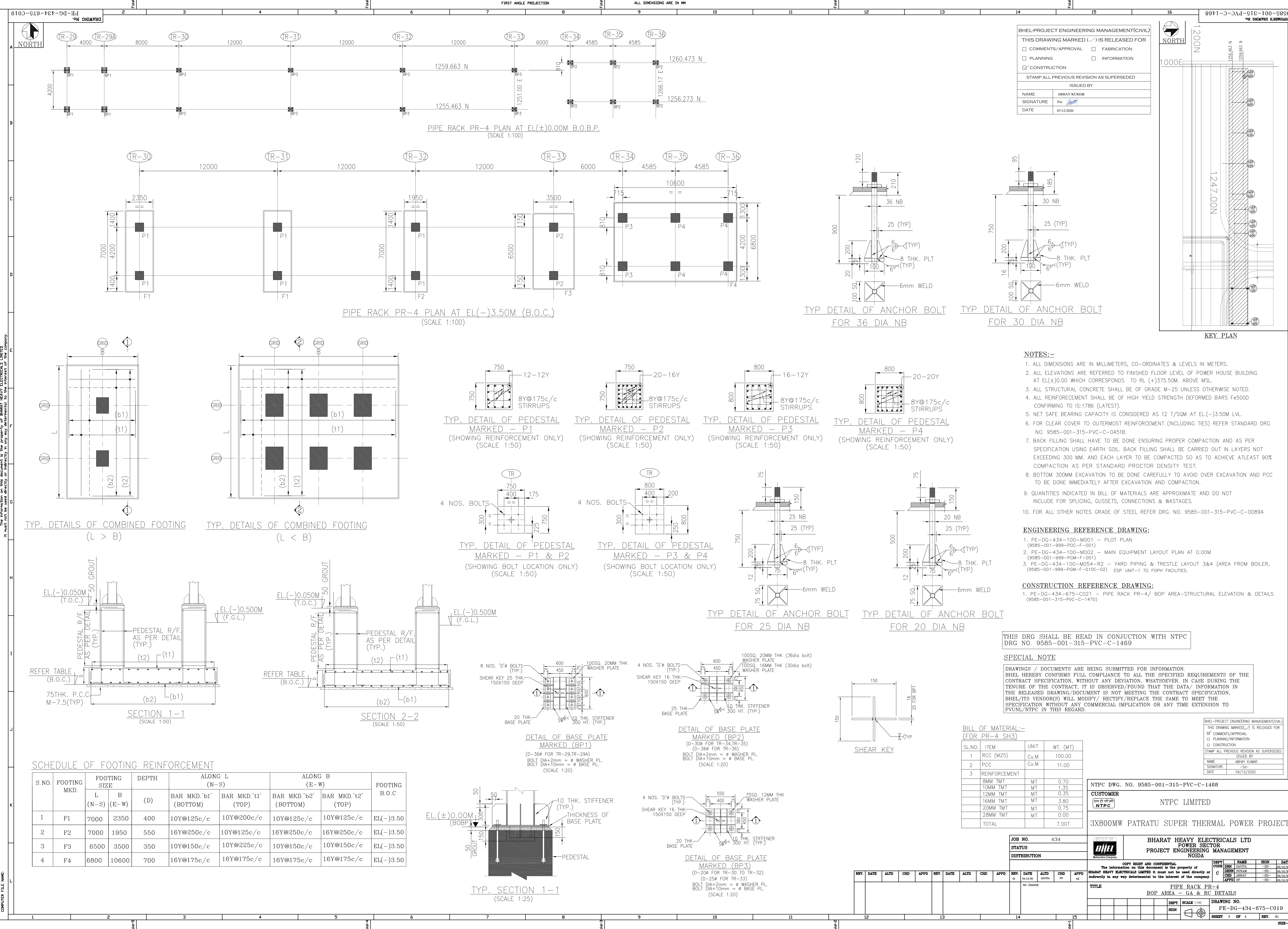
- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETERS, CO-ORDINATES & LEVELS IN METERS.
  - ALL ELEVATIONS ARE REFERRED TO FINISHED FLOOR LEVEL OF POWER HOUSE BUILDING AT EL(±)0.00 WHICH CORRESPONDS TO RL (+)375.50M. ABOVE MSL.
  - ALL STRUCTURAL CONCRETE SHALL BE OF GRADE M-25 UNLESS OTHERWISE NOTED.
  - ALL REINFORCEMENT SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS Fe500 CONFIRMING TO IS:1786 (LATEST).
  - NET SAFE BEARING CAPACITY IS CONSIDERED AS 12 T/SQM AT EL(-)4.50M LVL.
  - FOR CLEAR COVER TO OUTERMOST REINFORCEMENT (INCLUDING TIES) REFER STANDARD DRG NO. 9585-001-315-PVC-C-0451B.
  - BACK FILLING SHALL HAVE TO BE DONE ENSURING PROPER COMPACTION AND AS PER SPECIFICATION USING EARTH SOIL. BACK FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 MM. AND EACH LAYER TO BE COMPACTED SO AS TO ACHIEVE ATLEAST 90% COMPACTION AS PER STANDARD PROCTOR DENSITY TEST.
  - BOTTOM 300MM EXCAVATION TO BE DONE CAREFULLY TO AVOID OVER EXCAVATION AND PCC TO BE DONE IMMEDIATELY AFTER EXCAVATION AND COMPACTION.
  - QUANTITIES INDICATED IN BILL OF MATERIALS ARE APPROXIMATE AND DO NOT INCLUDE FOR SPLICING, GUSSETS, CONNECTIONS & WASTAGES.
  - FOR ALL OTHER NOTES GRADE OF STEEL REFER DRG. NO. 9585-001-315-PVC-C-0089A

- ENGINEERING REFERENCE DRAWING:**
- PE-DG-434-100-M001 - PLOT PLAN (9585-001-999-PCC-F-001)
  - PE-DG-434-100-M002 - MAIN EQUIPMENT LAYOUT PLAN AT 0.00M (9585-001-999-PGM-F-001)
  - PE-DG-434-100-M054-R2 - YARD PIPING & TRESTLE LAYOUT 3&4 (AREA FROM BOILER, (9585-001-999-PGM-F-010C-02) ESP UNIT-1 TO DPH FACILITIES.
- CONSTRUCTION REFERENCE DRAWING:**
- PE-DG-434-675-C021 - PIPE RACK PR-4/ BOP AREA-STRUCTURAL ELEVATION & DETAILS (9585-001-315-PVC-C-1470)

THIS DRG SHALL BE READ IN CONJUNCTION WITH NTPC DRG NO. 9585-001-315-PVC-C-1469

NTPC DWG. NO. 9585-001-315-PVC-C-1468		CUSTOMER		NTPC LIMITED					
3X800MW PATRATU SUPER THERMAL POWER PROJECT									
BH&E		BHARAT HEAVY ELECTRICALS LTD		POWER SECTOR					
PROJECT ENGINEERING MANAGEMENT		NOIDA		NTPC					
COPY RIGHT AND CONFIDENTIAL		THIS INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BH&E. IT IS NOT TO BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.		DEPT. NAME SIGN DATE					
CIVIL		CIVIL		CIVIL					
01		13/12/20		SG					
REVISED AS MARKED		APPD		AK					
TITLE									
PIPE RACK PR-4									
BOP AREA - GA & RC DETAILS									
DRAWING NO. PE-DG-434-675-C019									
SHEET 2 OF 4									
REV. RI									





THIS DRAWING MARKED (✓) IS RELEASED FOR

STAMP ALL PREVIOUS REVISION AS SUPERSEDED

ISSUED BY

NAME

ABHAY KUMAR

SIGNATURE

DATE

07/12/2020

89P1-C-0Ad-916-100-9898

9% OVERALL & BORDERS

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS, CO-ORDINATES & LEVELS IN METERS.
2. ALL ELEVATIONS ARE REFERRED TO FINISHED FLOOR LEVEL OF POWER HOUSE BUILDING AT EL(±)0.00 WHICH CORRESPONDS TO RL (+)375.50M. ABOVE MSL.
3. ALL STRUCTURAL CONCRETE SHALL BE OF GRADE M-25 UNLESS OTHERWISE NOTED.
4. ALL REINFORCEMENT SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS Fe500D CONFIRMING TO IS:1786 (LATEST).
5. NET SAFE BEARING CAPACITY IS CONSIDERED AS 12 T/SQM AT EL.(-)3.50M LVL.
6. FOR CLEAR COVER TO OUTERMOST REINFORCEMENT (INCLUDING TIES) REFER STANDARD DRG NO. 9585-001-315-PVC-C-0451B.
7. BACK FILLING SHALL HAVE TO BE DONE ENSURING PROPER COMPACTION AND AS PER SPECIFICATION USING EARTH SOIL. BACK FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 MM. AND EACH LAYER TO BE COMPACTED SO AS TO ACHIEVE ATLEAST 90% COMPACTION AS PER STANDARD PROCTOR DENSITY TEST.
8. BOTTOM 300MM EXCAVATION TO BE DONE CAREFULLY TO AVOID OVER EXCAVATION AND PCC TO BE DONE IMMEDIATELY AFTER EXCAVATION AND COMPACTION.
9. QUANTITIES INDICATED IN BILL OF MATERIALS ARE APPROXIMATE AND DO NOT INCLUDE FOR SPLICING, GUSSETS, CONNECTIONS & WASTAGES.
10. FOR ALL OTHER NOTES GRADE OF STEEL REFER DRG. NO. 9585-001-315-PVC-C-0089A

ENGINEERING REFERENCE DRAWING:

1. PE-DG-434-100-M001 - PLOT PLAN (9585-001-999-PCC-F-001)
2. PE-DG-434-100-M002 - MAIN EQUIPMENT LAYOUT PLAN AT 0.00M (9585-001-999-PGM-F-001)
3. PE-DG-434-100-M054-R2 - YARD PIPING & TRESTLE LAYOUT 3&4 (AREA FROM BOILER, 9585-001-999-PGM-F-010C-02) ESP UNIT-1 TO FOPH FACILITIES.

CONSTRUCTION REFERENCE DRAWING:

1. PE-DG-434-675-C021 - PIPE RACK PR-4/ BOP AREA-STRUCTURAL ELEVATION & DETAILS (9585-001-315-PVC-C-1470)

THIS DRG SHALL BE READ IN CONJUNCTION WITH NTPC DRG NO. 9585-001-315-PVC-C-1469

SPECIAL NOTE

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BILL OF MATERIAL:-  
(FOR PR-4 SH3)

SL.NO.	ITEM	UNIT	WT. (MT)
1	RCC (M25)	Cu.M	100.00
2	PCC	Cu.M	11.00
3	REINFORCEMENT		
	5MM TMT	MT	0.70
	10MM TMT	MT	1.35
	12MM TMT	MT	0.35
	16MM TMT	MT	3.80
	20MM TMT	MT	0.75
	28MM TMT	MT	0.00
	TOTAL		7.00T

JOB NO.	434
STATUS	
DISTRIBUTION	

REV.	DATE	ALTD	CHD	APPD	REV.	DATE	ALTD	CHD	APPD
01	04.12.20								

NO CHANGE									
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NTPC DWG. NO. 9585-001-315-PVC-C-1468

CUSTOMER

NTPC LIMITED

3X800MW PATRATU SUPER THERMAL POWER PROJECT

BHARAT HEAVY ELECTRICALS LTD  
POWER SECTOR  
PROJECT ENGINEERING MANAGEMENT  
Noida

DEPT. NAME SIGN DATE

CHD SIGNAM -SD- 09/12/2020  
CHD LABHAY -SD- 09/12/2020  
APPD SP -SD- 09/12/2020

TITLE PIPE RACK PR-4  
BOP AREA - GA & RC DETAILS

DRAWING NO. PE-DG-434-675-C019

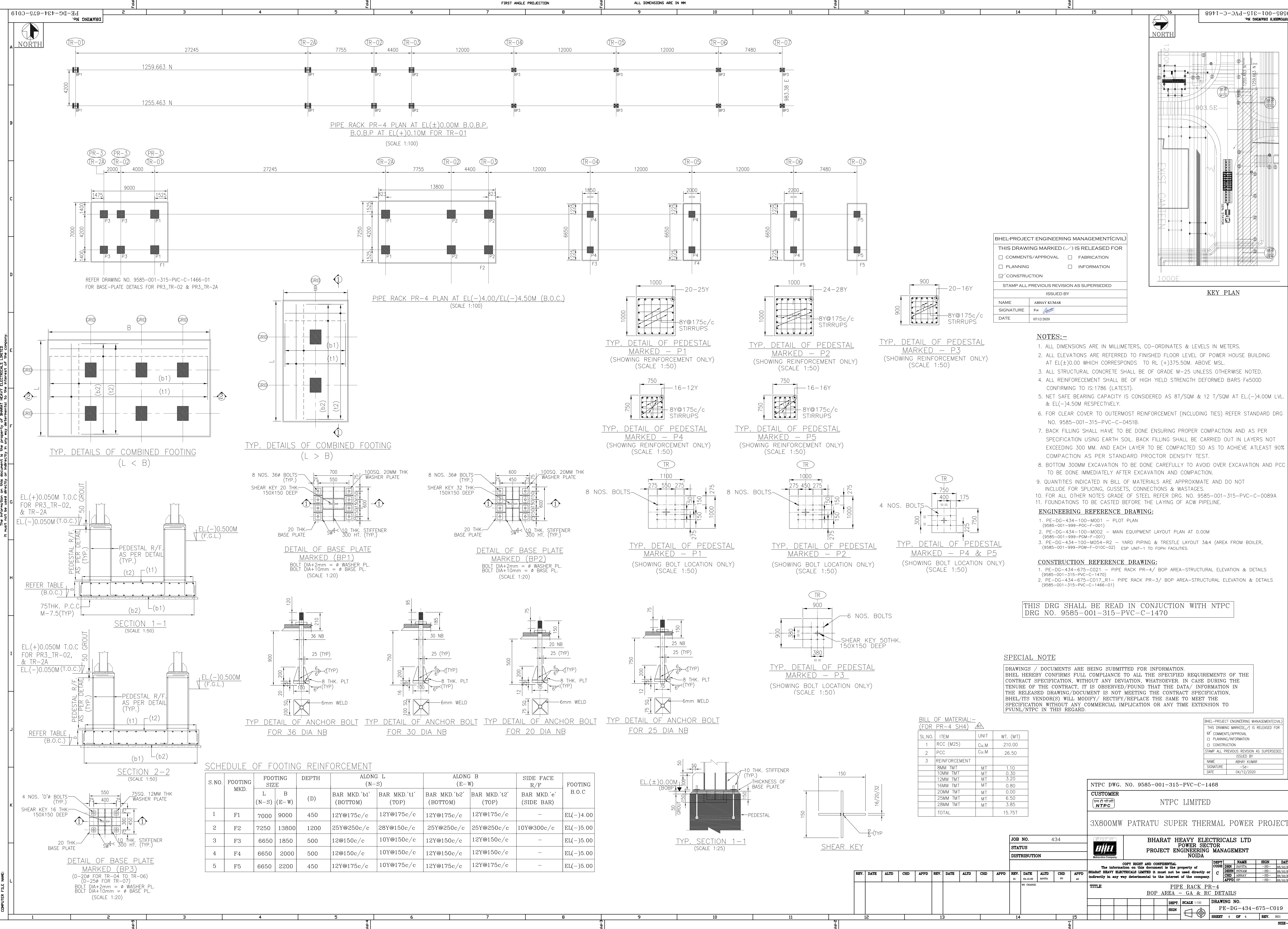
SHEET 3 OF 4 REV. RI

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COMPUTED FILE NAME

SIZE-A0





BH&L-PROJECT ENGINEERING MANAGEMENT(CIVIL)	
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<input type="checkbox"/> PLANNING	<input type="checkbox"/> INFORMATION
<input checked="" type="checkbox"/> CONSTRUCTION	
STAMP ALL PREVIOUS REVISION AS SUPERSEDED	
ISSUED BY	
NAME	ABHAY KUMAR
SIGNATURE	For
DATE	07/12/2020

- NOTES:-**
- ALL DIMENSIONS ARE IN MILLIMETERS, CO-ORDINATES & LEVELS IN METERS.
  - ALL ELEVATIONS ARE REFERRED TO FINISHED FLOOR LEVEL OF POWER HOUSE BUILDING AT EL(±)0.00 WHICH CORRESPONDS TO RL (+)375.50M. ABOVE MSL.
  - ALL STRUCTURAL CONCRETE SHALL BE OF GRADE M-25 UNLESS OTHERWISE NOTED.
  - ALL REINFORCEMENT SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS Fe500D CONFIRMING TO IS:1786 (LATEST).
  - NET SAFE BEARING CAPACITY IS CONSIDERED AS 8T/SQM & 12 T/SQM AT EL(-)4.00M LVL. & EL(-)4.50M RESPECTIVELY.
  - FOR CLEAR COVER TO OUTERMOST REINFORCEMENT (INCLUDING TIES) REFER STANDARD DRG NO. 9585-001-315-PVC-C-0451B.
  - BACK FILLING SHALL HAVE TO BE DONE ENSURING PROPER COMPACTION AND AS PER SPECIFICATION USING EARTH SOIL. BACK FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 MM. AND EACH LAYER TO BE COMPACTED SO AS TO ACHIEVE ATLEAST 90% COMPACTION AS PER STANDARD PROCTOR DENSITY TEST.
  - BOTTOM 300MM EXCAVATION TO BE DONE CAREFULLY TO AVOID OVER EXCAVATION AND PCC TO BE DONE IMMEDIATELY AFTER EXCAVATION AND COMPACTION.
  - QUANTITIES INDICATED IN BILL OF MATERIALS ARE APPROXIMATE AND DO NOT INCLUDE FOR SPLICING, GUSSETS, CONNECTIONS & WASTAGES.
  - FOR ALL OTHER NOTES GRADE OF STEEL REFER DRG. NO. 9585-001-315-PVC-C-0089A
  - FOUNDATIONS TO BE CASTED BEFORE THE LAYING OF ACW PIPELINE.

- ENGINEERING REFERENCE DRAWING:**
- PE-DG-434-100-M001 - PLOT PLAN (9585-001-999-PCC-F-001)
  - PE-DG-434-100-M002 - MAIN EQUIPMENT LAYOUT PLAN AT 0.00M (9585-001-999-PGM-F-001)
  - PE-DG-434-100-M054-R2 - YARD PIPING & TRESTLE LAYOUT 3&4 (AREA FROM BOILER, (9585-001-999-PGM-F-010C-02) ESP UNIT-1 TO FOPH FACILITIES.

- CONSTRUCTION REFERENCE DRAWING:**
- PE-DG-434-675-C021 - PIPE RACK PR-4/ BOP AREA-STRUCTURAL ELEVATION & DETAILS (9585-001-315-PVC-C-1470)
  - PE-DG-434-675-C017-R1 - PIPE RACK PR-3/ BOP AREA-STRUCTURAL ELEVATION & DETAILS (9585-001-315-PVC-C-1466-01)

THIS DRG SHALL BE READ IN CONJUNCTION WITH NTPC DRG NO. 9585-001-315-PVC-C-1470

**SPECIAL NOTE**

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BILL OF MATERIAL:- (FOR PR-4 SH4)			
SL.NO.	ITEM	UNIT	WT. (MT)
1	RCC (M25)	Cu.M	210.00
2	PCC	Cu.M	26.50
3	REINFORCEMENT		
	8MM TMT	MT	1.10
	10MM TMT	MT	0.30
	12MM TMT	MT	3.20
	16MM TMT	MT	0.80
	20MM TMT	MT	0.00
	25MM TMT	MT	6.50
	28MM TMT	MT	3.85
	TOTAL		15.75T

BH&L-PROJECT ENGINEERING MANAGEMENT(CIVIL)			
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ISSUED BY			
NAME	ABHAY KUMAR	-34-	
SIGNATURE			
DATE	04/12/2020		

NTPC DWG. NO. 9585-001-315-PVC-C-1468

**CUSTOMER**  
 **NTPC LIMITED**

**3X800MW PATRATU SUPER THERMAL POWER PROJECT**

**BHARAT HEAVY ELECTRICALS LTD**  
**POWER SECTOR**  
**PROJECT ENGINEERING MANAGEMENT**  
**Noida**

DEPT	NAME	SIGN	DATE
DRN	SAHIL	-35-	04/12/2020
DRN	SANAM	-35-	04/12/2020
CHD	ABHAY	-35-	04/12/2020
APPR	SP	-35-	04/12/2020

**TITLE**  
PIPE RACK PR-4  
BOP AREA - GA & RC DETAILS

DEPT	SCALE 1:100	DRAWING NO.
SIGN		PE-DG-434-675-C019
SHEET	4 OF 4	REV. B01

JOB NO.		434		
STATUS				
DISTRIBUTION				
REV.	DATE	ALTD	CHD	APPR
01	04.12.20	SAVITA	SG	AX
NO CHANGE				

REV.	DATE	ALTD	CHD	APPR

TYP. SECTION 1-1  
(SCALE 1:25)

SHEAR KEY