

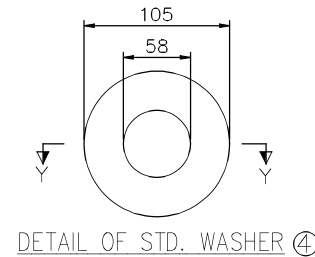
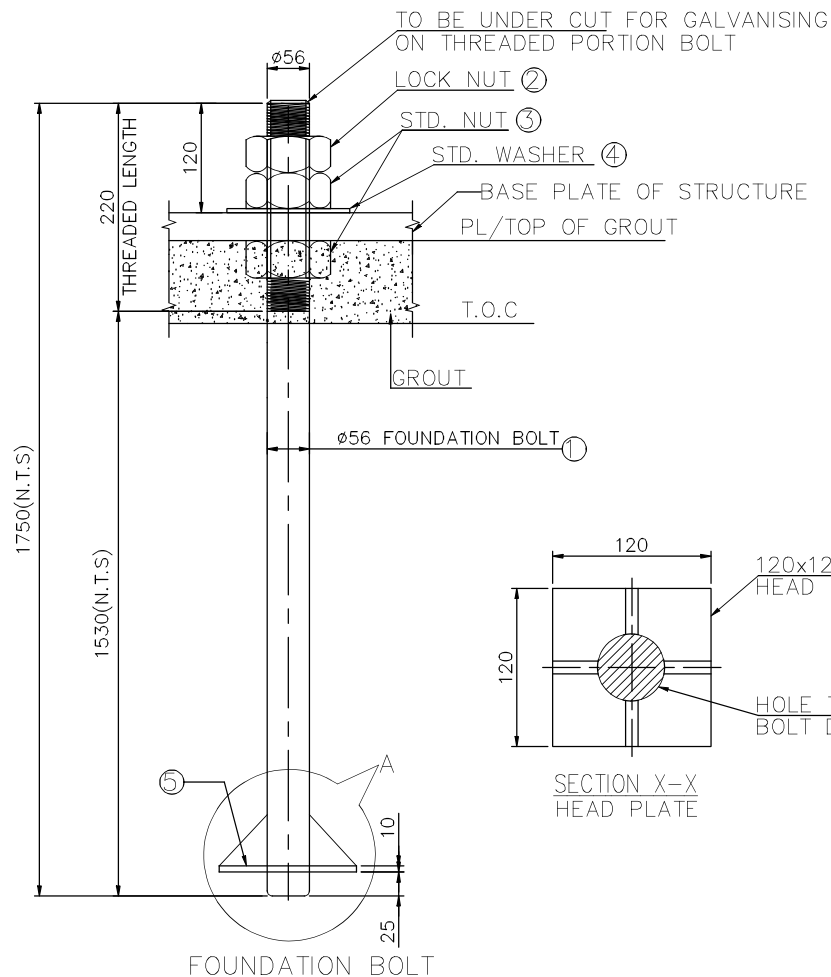
GeM bid no. GEM/2024/B/5229348  
Item: Supply of Galvanized Foundation Bolts (910 GMS/SQM)  
Project: PGCIL Vataman & Halvad, Gujarat project sites  
BHEL Unit Name : TBG Noida

Pre-Bid clarification		
Sl.No.	Bidders Query	Clarification
1	Please share size wise details with quantity and technical specification	<p>1. Tower foundation bolt for Vataman- 56 dia _1350 long (1024 nos) &amp; 56 dia _1750 long ( 384 nos) – drawing enclosed ( for reference purpose) . These quantities are tentative ,however actual quantity &amp; drawing shall be given to successful bidder after award of contract.</p> <p>2. Tower foundation bolt drawing ( size &amp; qty) for Halvad – shall be given to successful bidder after award of contract. Reference drawing given above may be used for the same project.</p> <p>3. Equipment Foundation Bolt for both Halvad &amp; Vataman -765 kV - 32 mm dia (tentative), however actual quantity &amp; drawing ( size &amp; qty) shall be given to successful bidder after award of contract.</p>

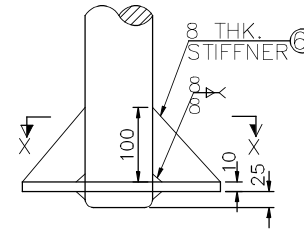
Signature of the authorized representative of

Bidder's Name  
Designation  
Company Seal

: .....  
: .....  
: .....



SECTION Y-Y



DETAIL-A

## LEGEND

N.T.S	- NOT TO SCALE
T.O.C	- TOP OF CONCRETE
TYP	- TYPICAL
PL	- PLINTH LEVEL

## NOTE :-

1. ALL DIMENSIONS ARE IN MM.
2. 6MM THK WELD SHALL BE PROVIDED U.N.O.
3. MATERIAL FOR BOLT CONFORM TO IS:2062 ~~(GRADE-250A)~~ **GRADE A**
4. NUTS TO CONFORM TO IS:1367/1363/6639, & HEX BOLT LOCKS NUTS SHALL BE GRADE-5 IN LINE WITH IS:1367 & IS:1364 PART-4,
5. PLAIN WASHER TO CONFORM TO IS:2016,
6. ALL ANCHOR BOLTS & NUTS SHALL BE HOT DIP GALVANIZED (610G/M<sup>2</sup>).
7. THE THREADS SHALL BE UNDER CUT TO SUIT STD M-56 NUTS.
8. ALL FOUNDATION BOLTS SHALL BE OF GRADE 5.6 CONFORMING TO IS:5624.
9. THE PITCH OF THREADS SHALL BE 5.5MM AS PER IS:4218 (PART-II).
10. MEASUREMENT SHALL BE REGULATED AS PER TECHNICAL SPECIFICATION.

## CLIENT:

● POWER GRID CORPORATION OF INDIA LTD.

## LEAD PARTNER OF JV



KEC INTERNATIONAL LIMITED

## NOA-I : SUPPLY:

TBCB/765KV/KHAVDA/PHASE-II Part  
C/SS01/G5/CA-1/23-100318/02: Dated 17/03/2023

## NOA-II : SERVICE

TBCB/765KV/KHAVDA/PHASE-II Part  
C/SS01/G5/CA-2/23-100318/01: Dated 17/03/2023

## PROJECT CODE :

SA 322

## PROJECT:

SUBSTATION PACKAGE SS01 FOR 765/400KV AHMEDABAD  
NEW 765KV SUB-STATION INCLUDING 400KV CLASS BUS  
REACTOR UNDER TRANSMISSION SYSTEM FOR  
EVACUATION OF 4.5 GW RE INJECTION AT KHAVDA P.S.  
UNDER PHASE-II PART-C THROUGH TBCB ROUTE.

## SUBSTATION:

765/400KV SUBSTATION AT AHMEDABAD S/S (NEW)

## TITLE:

TYPICAL DETAILS OF FOUNDATION BOLTS  
(TYPE-1 - 56mm DIA FOUNDATION BOLT-1750mm LONG)

## DIVISION:

CIVIL SUBSTATION

## DATE: (CURRENT ISSUE)

12.06.2024

## DWG.NO.

KEC-SA322-AMD-ESC-640-DRG-011

## SCALE:

AS SHOWN

## SHEET NO:

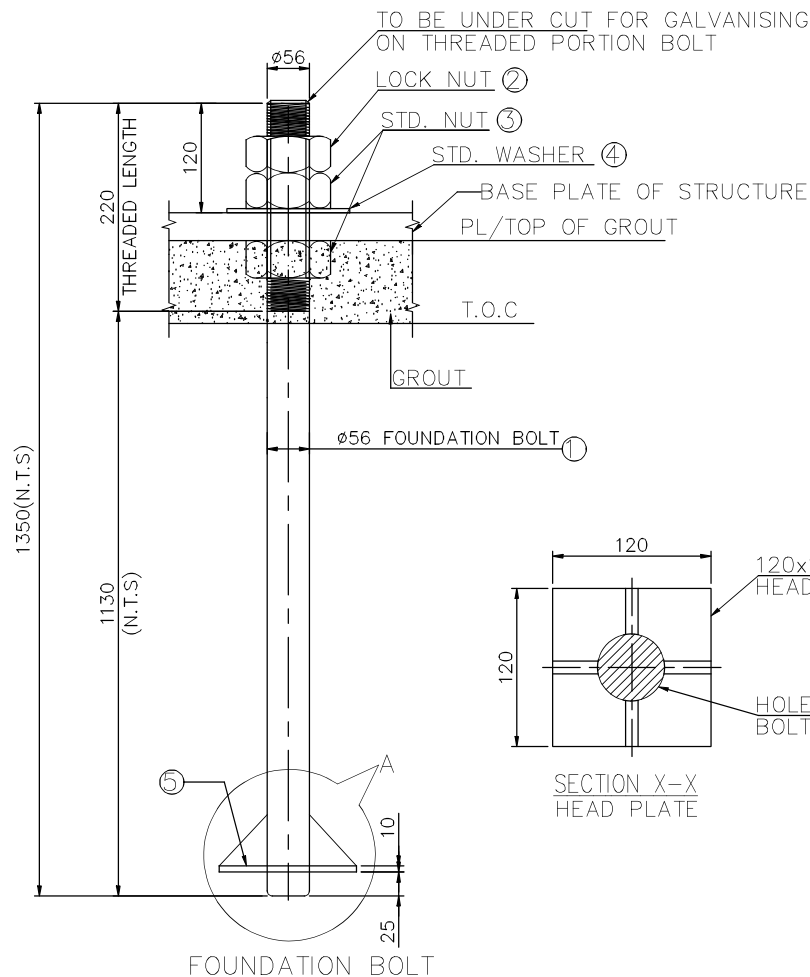
01 OF 02

## REV.

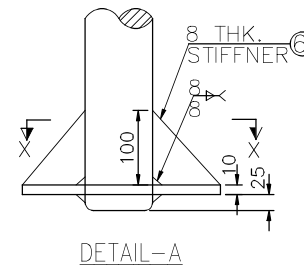
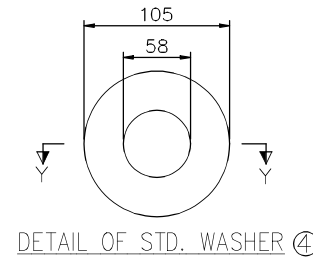
R0

ERECTION MARK	DESCRIPTION	SECTION (MM)	LENGTH (MM)	NO. OF PIECE PER BOLT	UNIT WEIGHT (KG/M)	WEIGHT PER PIECE (KG)	TOTAL WEIGHT (KG)
1	ROD	56 DIA	1750	1	19.335	$\pi \times .056^2/4 \times 1.75 \times 7850$	33.836
2	LOCK NUT	-	-	1	-	0.832	0.832
3	STD. NUT	-	-	2	-	1.31	2.620
4	STD. WASHER	105 DIAx58 DIAx8 THK.	-	1	62.8	$\pi \times (0.105^2 - 0.058^2)/4 \times 62.8$	0.378
5	HEAD PLATE	PL-120X10 THK.	120	1	78.5	$0.12 \times 0.12 \times 78.5$	1.130
6	STIFFNER	PL-100X8 THK.	32	4	62.8	$0.5 \times 0.100 \times 0.035 \times 62.8$	0.402
						<b>TOTAL WEIGHT</b>	<b>39.198</b>

R0	12.06.2024	ISSUED FOR APPROVAL	RJ	AJ	VV
REV	DATE	DESCRIPTION	DRN	CHD	APP



BILL OF MATERIAL (APPROX WEIGHT PER BOLT)							
ERECTION MARK	DESCRIPTION	SECTION (MM)	LENGTH (MM)	NO. OF PIECE PER BOLT	UNIT WEIGHT (KG/M)	WEIGHT PER PIECE (KG)	TOTAL WEIGHT (KG)
1	ROD	56 DIA	1350	1	19.335	$\pi \times .056^2/4 \times 1.35 \times 7850$	26.102
2	LOCK NUT	-	-	1	-	0.832	0.832
3	STD. NUT	-	-	2	-	1.31	2.620
4	STD. WASHER	105 DIAx58 DIAx8 THK.	-	1	62.8	$\pi \times (0.105^2/2 - 0.053^2/2)/4 \times 62.8$	0.378
5	HEAD PLATE	PL-120X10 THK.	120	1	78.5	$0.12 \times 0.12 \times 78.5$	1.130
6	STIFFNER	PL 100X8 THK	30	4	62.8	$0.5 \times 0.100 \times 0.03 \times 62.8$	0.402
						<b>TOTAL WEIGHT</b>	<b>31.464</b>



#### LEGEND

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#### SUBSTATION:

765/400KV SUBSTATION AT AHMEDABAD S/S (NEW)

#### TITLE:

TYPICAL DETAILS OF FOUNDATION BOLTS  
(TYPE-2 - 56mm DIA FOUNDATION BOLT-1350mm LONG)

#### DIVISION:

CIVIL SUBSTATION

#### DATE: (CURRENT ISSUE)

12.06.2024

#### DWG.NO.

KEC-SA322-AMD-ESC-640-DRG-011

#### SCALE:

AS SHOWN

#### SHEET NO:

02 OF 02

#### REV.

R0

R0	12.06.2024	ISSUED FOR APPROVAL	RJ	AJ	VV
REV	DATE	DESCRIPTION	DRN	CHD	APP