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FAZELABAD
63/20 KV SUBSTATION
GENERAL LAYOUT & SECTIONS


REFERENCE DOCUMENT & DWG

LEGENDS


NOTES

KEY PLAN


E	ISSUE FOR APPROVE	GHAFURAN	GHAFURAN	MANORI	MANORI	GHAFURAN	04.02.21
E	ACC TO LET NO.1403/179502/61760	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	03.12.04
D	ACC TO LET NO.1403/179502/58995	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	03.11.20
C	ACC TO LET NO.1403/179502/51332	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	03.11.06
B	ACC TO LET NO.1403/179502/49633	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	03.10.03
A	ACC TO LET NO.1403/179502/43160	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	03.09.21
Rev.	DESCRIPTION	DRAWN	DESIGNED	CHKD.	HEAD	APPR.	DATE



Mapna Power Plants Construction &
Development Co(MD-1)



MOHAM
SHARGH
CO.



GHODS NIROO
CONSULTING ENGINEERS

PROJECT:
FAZELABAD 63/20KV AIS S/S

TITLE:
GENERAL LAYOUT & SECTIONS


OWNER'S DWG. NO. : MD1-BQ-05-SS-E-01-NY0-706REV. NO. : F

SCALE : AS SHOWNFORMAT : A3FILE NO. :SHEET: 0 OF 8

CONTRACT NO. :DESIGN TYPE : BASIC DESIGN ☐
DETAIL DESIGN ☐

XXXX IN-HOUSE REVISION

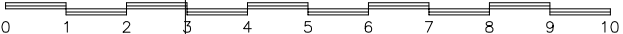
F	ISSUE FOR APPROVE	GHAFURAN	GHAFURAN	MANORI	MANORI	GHAFURAN	1404.02.21
E	ACC TO LET NO.1403/179502/61760	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	1403.12.04
D	ACC TO LET NO.1403/179502/58995	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	1403.11.20
C	ACC TO LET NO.1403/179502/51332	EMARLOO	MANORI	MANORI	MANORI	GHAFURAN	1403.11.06
Rev.	DESCRIPTION	DRAWN	DESIGNED	CHKD.	HEAD	APPR.	DATE



MAZANDARAN
REGIONAL ELECTRIC
COMPANY
(M.R.E.C)





MAPNA'S DWG. NO. : MD1-BQ-05-SS-E-01-NY0-706REV. NO. : F

SUB CONTRACTOR DWG. NO.: F

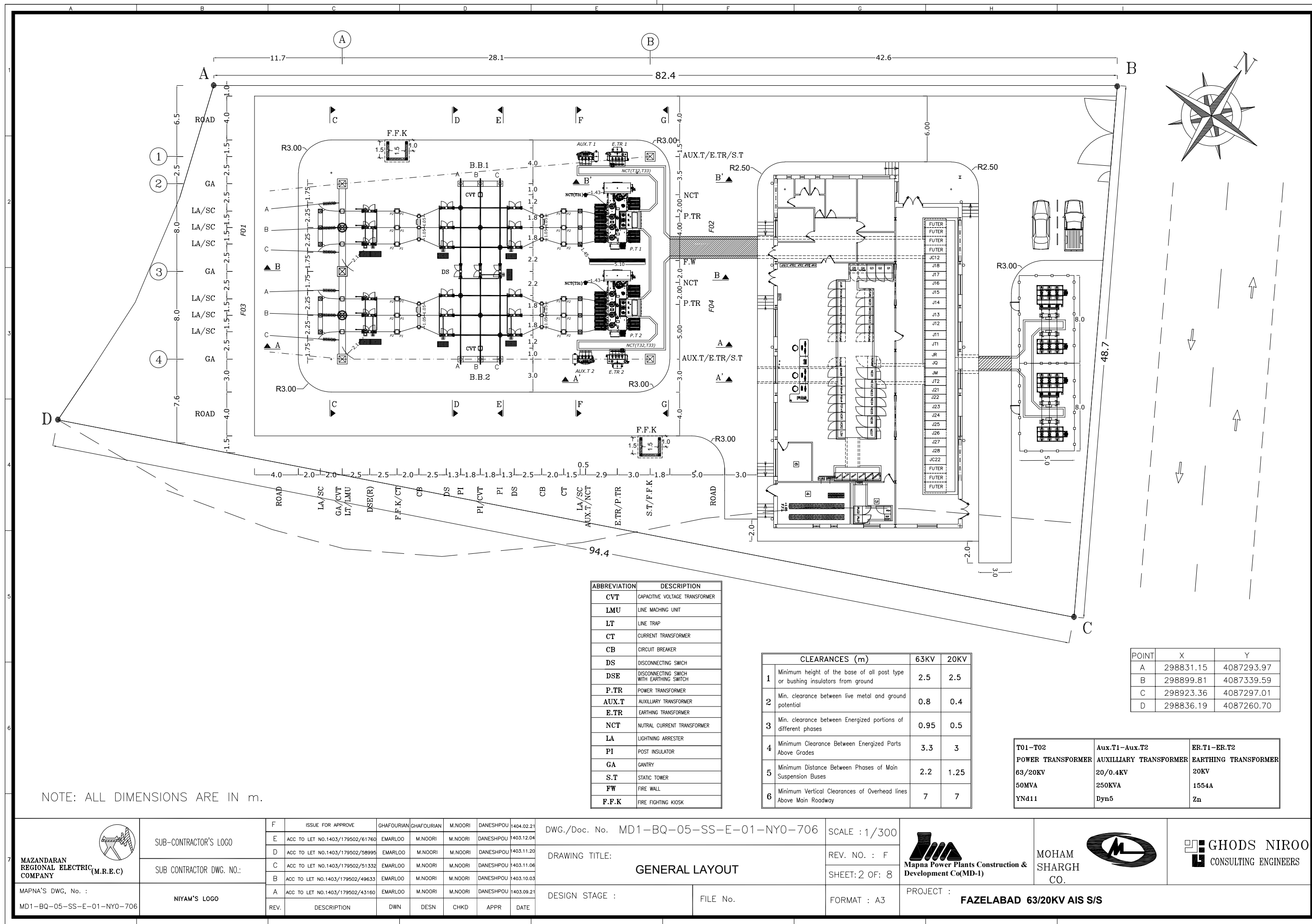


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Page	Description	Revision			
		<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>
00	COVER SHEET	X	X	X	X
01	INDEX	X	X	X	X
02	GENERAL LAYOUT	X	X	X	X
03	SECTION A-A	X	X	X	X
04	SECTION B-B	X	X	X	X
05	SECTION C-C	X	X	X	X
06	SECTION D-D&E-E	X	X	X	X
07	SECTION F-F	X	X	X	X
07	SECTION G-G	X	X	X	X

<div>MAZANDARAN REGIONAL ELECTRIC COMPANY</div> <div></div>	SUB-CONTRACTOR'S LOGO	F	ISSUE FOR APPROVE	GHAFOURIAN	GHAFOURIAN	M.NOORI	DANESHPOU	1404.02.21	DWG./Doc. No. MD1-BQ-05-SS-E-01-NY0-706	SCALE :	<div><div>Mapna Power Plants Construction & Development Co(MD-1)</div></div>	<div><div>MOHAM SHARGH CO.</div></div>	<div><div>GHODS NIROO CONSULTING ENGINEERS</div></div>		
		E	ACC TO LET NO.1403/179502/61760	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.12.04							
		D	ACC TO LET NO.1403/179502/58995	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.20							
	SUB CONTRACTOR DWG. NO.:	C	ACC TO LET NO.1403/179502/51332	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.06						DRAWING TITLE: <div>INDEX</div>	REV. NO. : F
		B	ACC TO LET NO.1403/179502/49633	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.10.03							SHEET: 1 OF: 8
A		ACC TO LET NO.1403/179502/43160	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.09.21								
MAPNA'S DWG, No. : MD1-BQ-05-SS-E-01-NY0-706	NIYAM'S LOGO	REV.	DESCRIPTION	DWN	DESN	CHKD	APPR	DATE	DESIGN STAGE :	FILE No.	FORMAT : A3	PROJECT : FAZELABAD 63/20KV AIS S/S			

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



NOTE: ALL DIMENSIONS ARE IN m.

ABBREVIATION	DESCRIPTION
CVT	CAPACITIVE VOLTAGE TRANSFORMER
LMU	LINE MACHING UNIT
LT	LINE TRAP
CT	CURRENT TRANSFORMER
CB	CIRCUIT BREAKER
DS	DISCONNECTING SWITCH
DSE	DISCONNECTING SWITCH WITH EARTHING SWITCH
P.TR	POWER TRANSFORMER
AUX.T	AUXILIARY TRANSFORMER
E.T.R	EARTHING TRANSFORMER
NCT	NUTRAL CURRENT TRANSFORMER
LA	LIGHTNING ARRESTER
PI	POST INSULATOR
GA	GANTRY
S.T	STATIC TOWER
FW	FIRE WALL
F.F.K	FIRE FIGHTING KIOSK

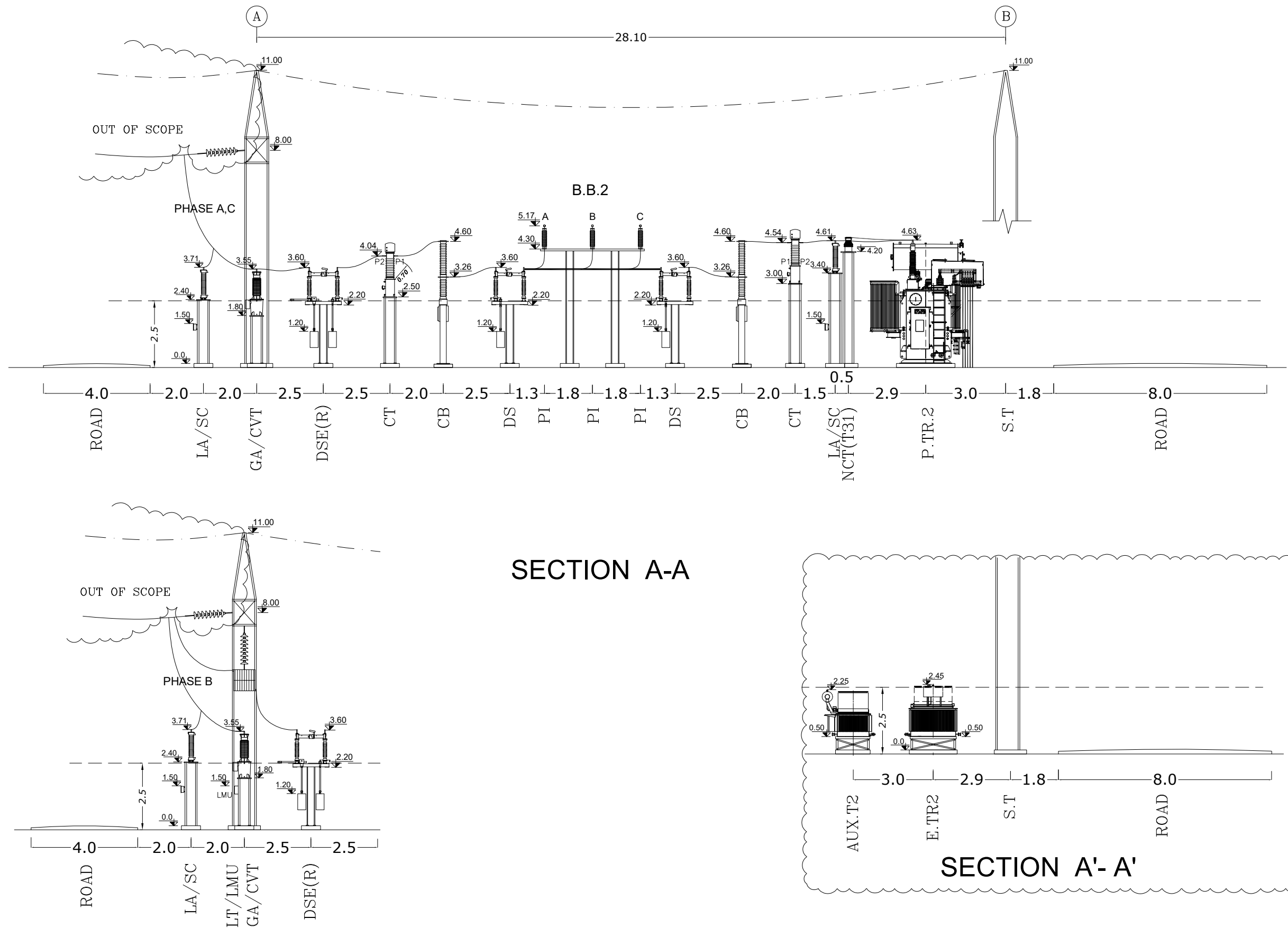
CLEARANCES (m)		63KV	20KV
1	Minimum height of the base of all post type or bushing insulators from ground	2.5	2.5
2	Min. clearance between live metal and ground potential	0.8	0.4
3	Min. clearance between Energized portions of different phases	0.95	0.5
4	Minimum Clearance Between Energized Parts Above Grades	3.3	3
5	Minimum Distance Between Phases of Main Suspension Buses	2.2	1.25
6	Minimum Vertical Clearances of Overhead lines Above Main Roadway	7	7





POINT	X	Y
A	298831.15	4087293.97
B	298899.81	4087339.59
C	298923.36	4087297.01
D	298836.19	4087260.70

T01-T02 POWER TRANSFORMER 63/20KV 50MVA YNd11	Aux.T1-Aux.T2 AUXILIARY TRANSFORMER 20/0.4KV 250KVA Dyn5	ER.T1-ER.T2 EARTHING TRANSFORMER 20KV 1554A Zn
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<div>MAZANDARAN REGIONAL ELECTRIC COMPANY</div> <div></div> <div>(M.R.E.C)</div>	SUB-CONTRACTOR'S LOGO	F	ISSUE FOR APPROVE	GHAFOURIAN	GHAFOURIAN	M.NOORI	DANESHPOU	1404.02.21	DWG./Doc. No. MD1-BQ-05-SS-E-01-NY0-706	SCALE : 1/300	<div></div> <div>Mapna Power Plants Construction & Development Co(MD-1)</div>	<div></div> <div>MOHAM SHARGH CO.</div>	<div></div> <div>GHODS NIROO CONSULTING ENGINEERS</div>
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		D	ACC TO LET NO.1403/179502/58995	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.20					
	SUB CONTRACTOR DWG. NO.:	C	ACC TO LET NO.1403/179502/51332	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.06	DRAWING TITLE: GENERAL LAYOUT	REV. NO. : F			
		B	ACC TO LET NO.1403/179502/49633	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.10.03					
MAPNA'S DWG. No. : MD1-BQ-05-SS-E-01-NY0-706	NIYAM'S LOGO	A	ACC TO LET NO.1403/179502/43160	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.09.21	DESIGN STAGE :	FILE No.	FORMAT : A3	PROJECT : FAZELABAD 63/20KV AIS S/S	
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		E	ACC TO LET NO.1403/179502/61760	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.12.04					
		D	ACC TO LET NO.1403/179502/58995	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.20					
	SUB CONTRACTOR DWG. NO.:	C	ACC TO LET NO.1403/179502/51332	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.06	DRAWING TITLE: SECTION A-A	REV. NO. : F SHEET: 3 OF: 8			
		B	ACC TO LET NO.1403/179502/49633	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.10.03					
A		ACC TO LET NO.1403/179502/43160	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.09.21						
MAPNA'S DWG. No. : MD1-BQ-05-SS-E-01-NY0-706	NIYAM'S LOGO	REV.	DESCRIPTION	DWN	DESN	CHKD	APPR	DATE	DESIGN STAGE :	FILE No.	FORMAT : A3	PROJECT : FAZELABAD 63/20KV AIS S/S	

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OUT OF SCOPE

PHASE A,C

B.B.1

PHASE B

SECTION B-B

SECTION B'- B'

REV.	DESCRIPTION	DWN	DESN	CHKD	APPR	DATE
F	ISSUE FOR APPROVE	GHAFOURIAN	GHAFOURIAN	M.NOORI	DANESHPOU	1404.02.21
E	ACC TO LET NO.1403/179502/61760	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.12.04
D	ACC TO LET NO.1403/179502/58995	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.20
C	ACC TO LET NO.1403/179502/51332	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.06
B	ACC TO LET NO.1403/179502/49633	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.10.03
A	ACC TO LET NO.1403/179502/43160	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.09.21

MAZANDARAN REGIONAL ELECTRIC COMPANY (M.R.E.C)

MD1-BQ-05-SS-E-01-NY0-706

MAPNA'S DWG. No. :

MD1-BQ-05-SS-E-01-NY0-706

SUB-CONTRACTOR'S LOGO

SUB CONTRACTOR DWG. NO.:

NIYAM'S LOGO

DWG./Doc. No. MD1-BQ-05-SS-E-01-NY0-706

SCALE : 1/150

DRAWING TITLE: SECTION B-B

DESIGN STAGE :

FILE No.

REV. NO. : F

SHEET: 4 OF: 8

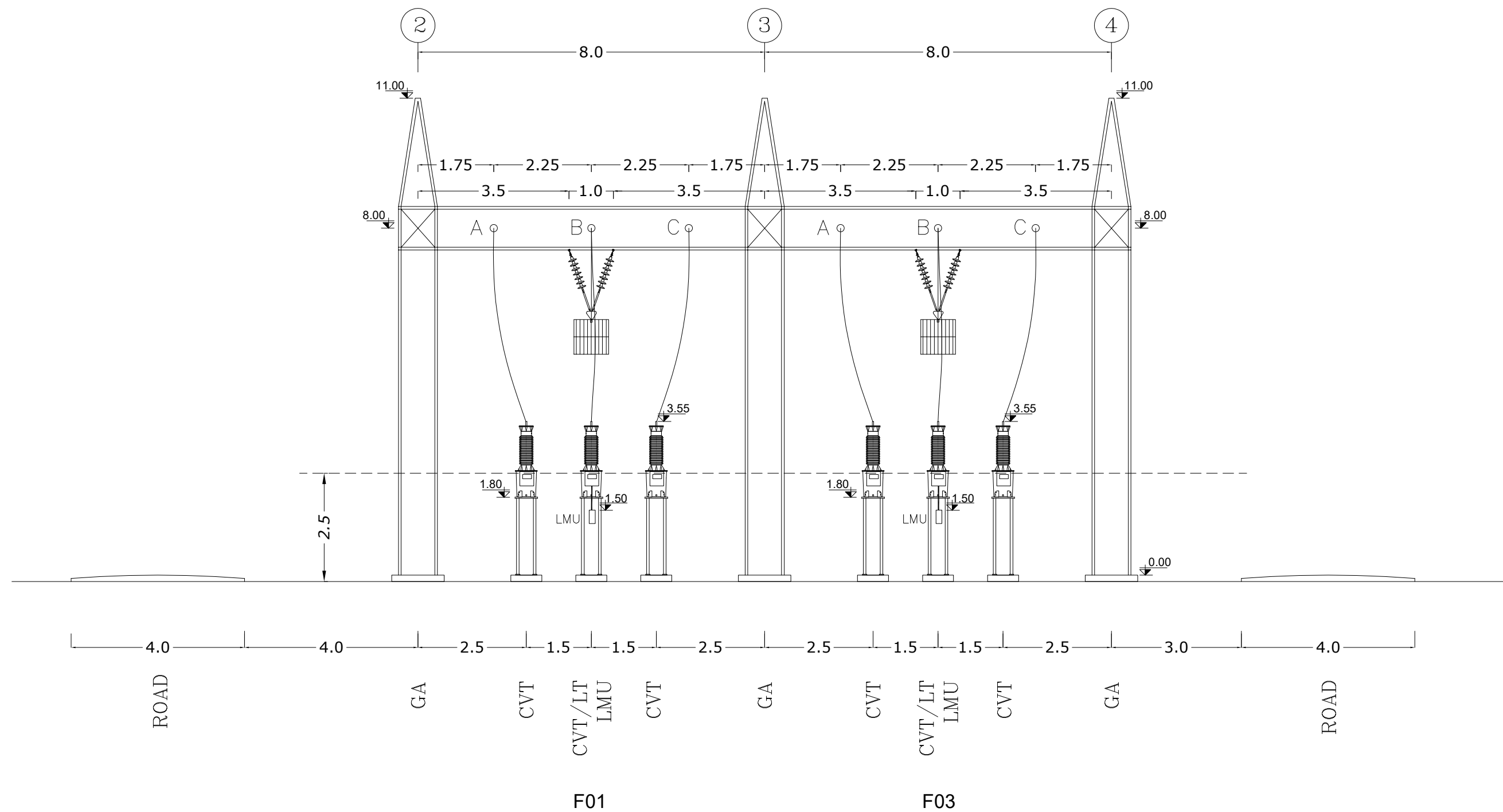
FORMAT : A3

PROJECT : FAZELABAD 63/20KV AIS S/S





GHODS NIROO CONSULTING ENGINEERS

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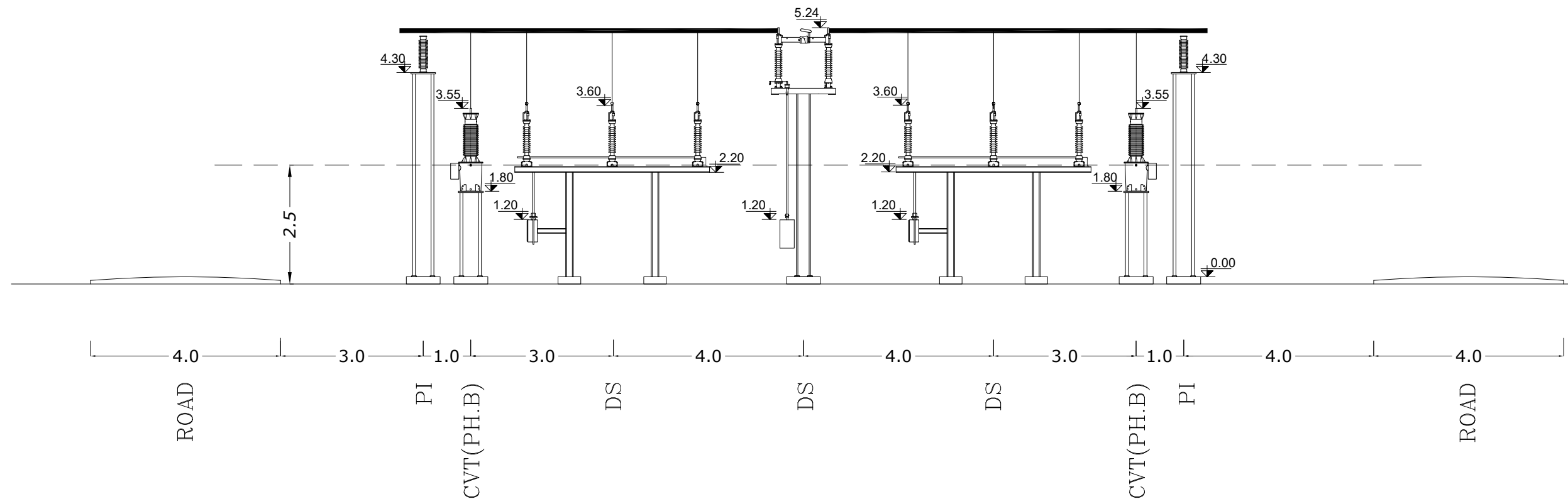
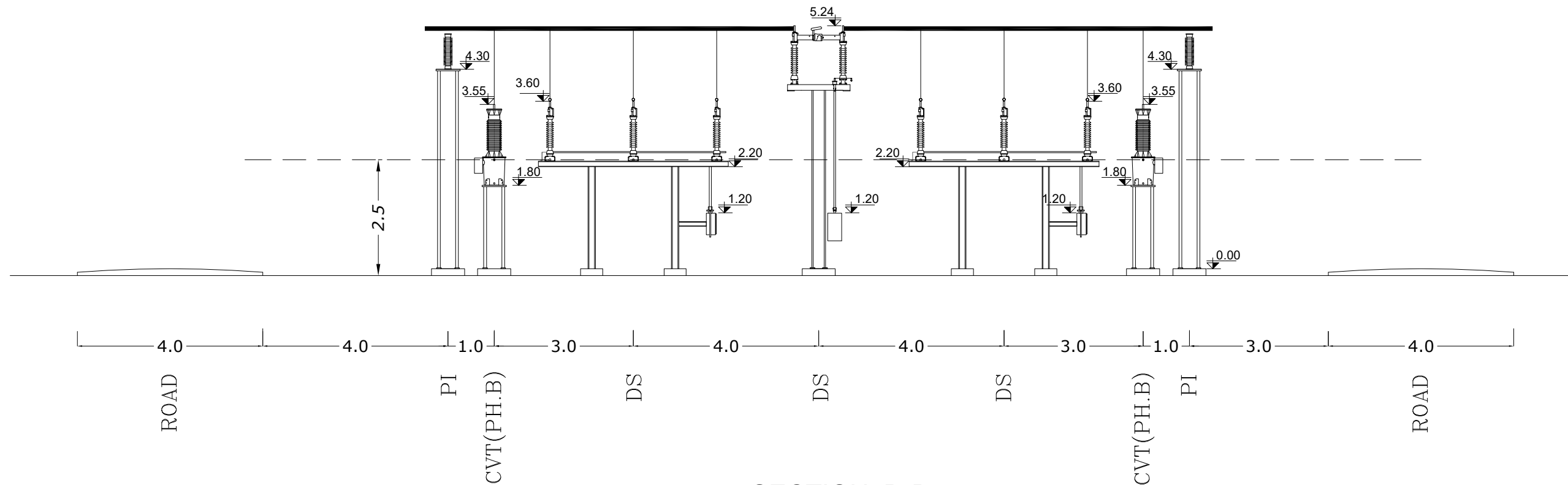
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SECTION C-C

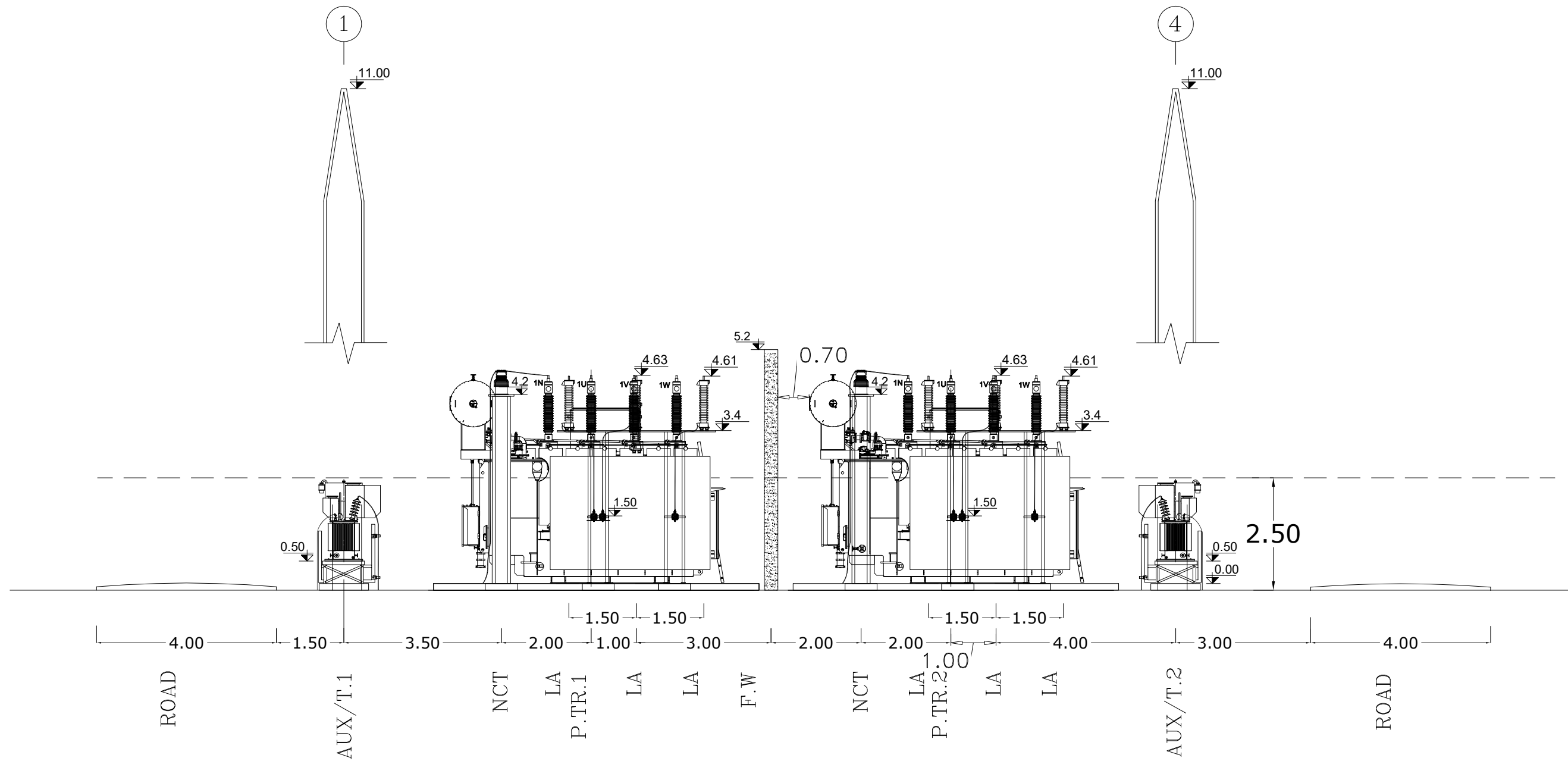
<div> MAZANDARAN REGIONAL ELECTRIC COMPANY (M.R.E.C)</div>	SUB-CONTRACTOR'S LOGO	F	ISSUE FOR APPROVE	GHAFOURIAN	GHAFOURIAN	M.NOORI	DANESHPOU	1404.02.21	DWG./Doc. No. MD1-BQ-05-SS-E-01-NY0-706	SCALE :1/100	<div> Mapna Power Plants Construction & Development Co(MD-1)</div>	<div>MOHAM SHARGH CO. </div>	<div> GHODS NIROO CONSULTING ENGINEERS</div>
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		D	ACC TO LET NO.1403/179502/58995	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.20					
		C	ACC TO LET NO.1403/179502/51332	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.06					
	SUB CONTRACTOR DWG. NO.:	B	ACC TO LET NO.1403/179502/49633	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.10.03	DRAWING TITLE: SECTION C-C		REV. NO. : F		
MAPNA'S DWG. No. : MD1-BQ-05-SS-E-01-NY0-706	NIYAM'S LOGO	A	ACC TO LET NO.1403/179502/43160	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.09.21	DESIGN STAGE :	FILE No.	SHEET: 5 OF: 8	FORMAT : A3	PROJECT : FAZELABAD 63/20KV AIS S/S
		REV.	DESCRIPTION	DWN	DESN	CHKD	APPR	DATE					

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MAPNA'S DWG. No. : MD1-BQ-05-SS-E-01-NY0-706	NIYAM'S LOGO	REV.	DESCRIPTION	DWN	DESN	CHKD	APPR	DATE	DESIGN STAGE :	FILE No.	FORMAT : A3	PROJECT : FAZELABAD 63/20KV AIS S/S	

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SECTION F-F

<div><p>MAZANDARAN REGIONAL ELECTRIC COMPANY (M.R.E.C)</p></div> <div>MAPNA'S DWG. No. : MD1-BQ-05-SS-E-01-NY0-706</div>	SUB-CONTRACTOR'S LOGO	F	ISSUE FOR APPROVE	GHAFOURIAN	GHAFOURIAN	M.NOORI	DANESHPOU	1404.02.21	DWG./Doc. No. MD1-BQ-05-SS-E-01-NY0-706	SCALE : 1/100	<div><p>Mapna Power Plants Construction & Development Co(MD-1)</p></div>	<div><p>MOHAM SHARGH CO.</p></div>	<div><p>GHODS NIROOM CONSULTING ENGINEERS</p></div>
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		C	ACC TO LET NO.1403/179502/51332	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.11.06					
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		REV.	DESCRIPTION	DWN	DESN	CHKD	APPR	DATE					

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3.00

5.00

4.00

4.00

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1.5

4.0

ROAD

S.T/E.T.R.2

NCT(T32, T33)

P.T.R.2

F.W




P.T.R.1

NCT(T32, T33)

S.T/E.T.R.1

ROAD

SECTION G-G

 MAZANDARAN REGIONAL ELECTRIC COMPANY	SUB-CONTRACTOR'S LOGO	F	ISSUE FOR APPROVE	GHAFOURIAN	GHAFOURIAN	M.NOORI	DANESHPOU	1404.02.21	DWG./Doc. No. MD1-BQ-05-SS-E-01-NYO-706	SCALE : 1/100	 Mapna Power Plants Construction & Development Co(MD-1)	MOHAM SHARGH CO.	 GHODS NIROO CONSULTING ENGINEERS
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MAPNA'S DWG. No. : MD1-BQ-05-SS-E-01-NYO-706	SUB CONTRACTOR DWG. NO.:	B	ACC TO LET NO.1403/179502/49633	EMARLOO	M.NOORI	M.NOORI	DANESHPOU	1403.10.03	DESIGN STAGE :	FILE No.	FORMAT : A3	PROJECT : FAZELABAD 63/20KV AIS S/S	
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		REV.	DESCRIPTION	DWN	DESN	CHKD	APPR	DATE	DESIGN STAGE :	FILE No.	FORMAT : A3		

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0.00

NCT

4.0

3.00

5.00

4.00

4.00

5.50

1.5

4.0

ROAD

S.T./E.T.R.2

NCT(T32, T33)

P.T.R.2

F.W

P.T.R.1

NCT(T32, T33)

S.T./E.T.R.1

ROAD

SECTION G-G

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F	ISSUE FOR APPROVE	GHAFOURIAN	GHAFOURIAN	M.NOORI	DANESHPOU	1404.02.21

DWG./Doc. No. MD1-BQ-05-SS-E-01-NY0-706

SCALE : 1/100

DRAWING TITLE: SECTION G-G

REV. NO. : F

SHEET: 8 OF: 8

FORMAT : A3

PROJECT : FAZELABAD 63/20KV AIS S/S

MAZANDARAN REGIONAL ELECTRIC COMPANY (M.R.E.C)

SUB-CONTRACTOR'S LOGO

SUB CONTRACTOR DWG. NO.:

NIYAM'S LOGO

Mapna Power Plants Construction & Development Co(MD-1)

MOHAM SHARGH CO.

GHODS NIROO CONSULTING ENGINEERS