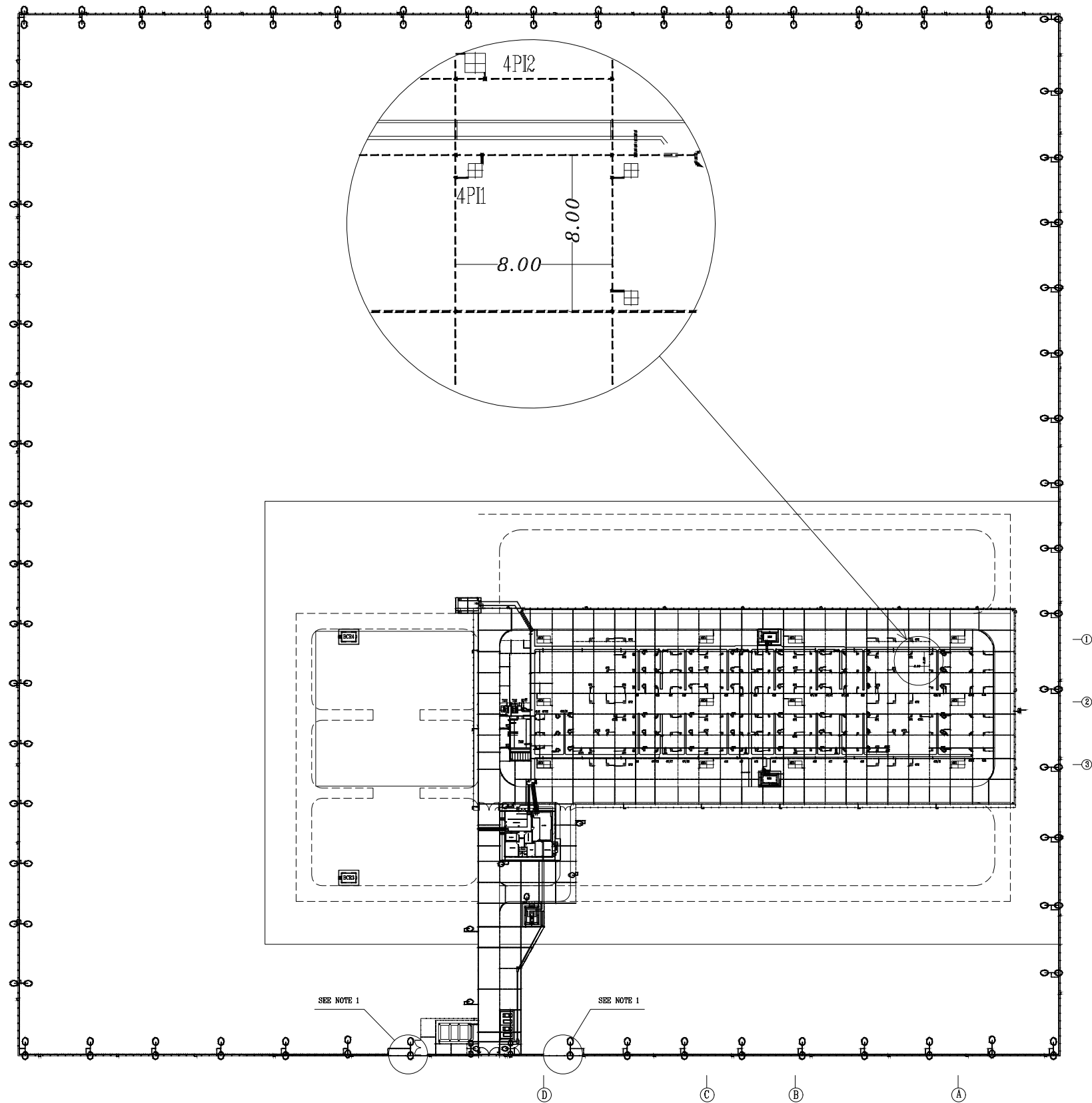


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FOR "PARSIAN HV SUBSTATIONS DEVELOPMENT CO"

400 KV EARTHING SYSTEM



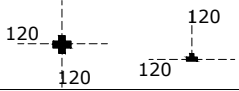
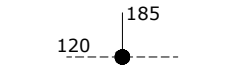
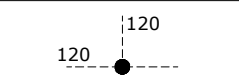
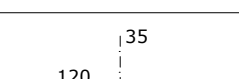
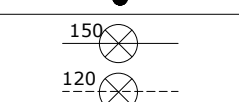
		 PARSIAN HV SUBSTATIONS DEVELOPMENT CO	DESIGN: M SH	DATE: 01.06.21	EMPLOYER: MEHDI ABAD Lead and Zinc Pioneers Co. Engineering Support - Planning Company		Great supervisor: YAZD REGIONAL ELECTRICITY COMPANY	TITLE: BAHADORAN 400/132 KV SUBSTATION EARTHING SYSTEM PLAN	SH / SHEETS 3 / 23	
C	PARSIAN MODIFICATION		DRAWN: P N	DATE: 01.06.21						
B	MODIFIED ACC. TO LETTER NO. 71/17612 DATED 1400/08/01		CHECK: R RN	DATE: 01.06.21						
A	MODIFIED ACC. TO M.O.M DATED 1400/06/30		APPR1: M H	DATE: 01.06.21						
REV	DESCRIPTION		APPR2: H PA	DATE: 01.06.21						
		MANUFACTURER:	SCALE: 1:2000	UNIT: mm	DWG NO:		CLIENT'S REF: 9210-PR-EL-EET-0123	DWG NO 7329-BHD-E-ET-3-01 3 002	REV C	

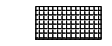
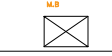
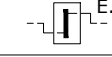
132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION EARTHING SYSTEM PLAN

4						CLIENT: Mehdiabad Lead & Zinc Industry Pioneers Company 132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION	CONSULTING ENGINEERS:  (Mahsab Niroo Consulting Engineers Co.)		NAME	DATE	DWG TITLE: 132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION COVER SHEET							
3								DESIGNED	M.HOSEINI	1405.04								
2	1405.04	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			DRAWN	M.HOSEINI	1405.04								
1	1405.03	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			CHECKED	S.ALIZADEH	1405.04								
0	1405.02	FIRST ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			APPROVED	M.DANESHPOU	1405.04								
REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED	CONTRACTOR: 	PROJECT:	Mehdiabad Lead & Zinc Project										
							CONTRACT NO.:		SHT NO.	SHT SIZE	SCALE	AREA CODE	ISSUED	DISCIP	DOC. TYPE	EQ. NO.	SEQ. NO.	REV.
CUSTOMER DWG NUMBER: 9210-MS-EL-ES-00-0011-D00								JOB NO.:	01	A3	—	9210	MS	EL	ES	00	0011	B02

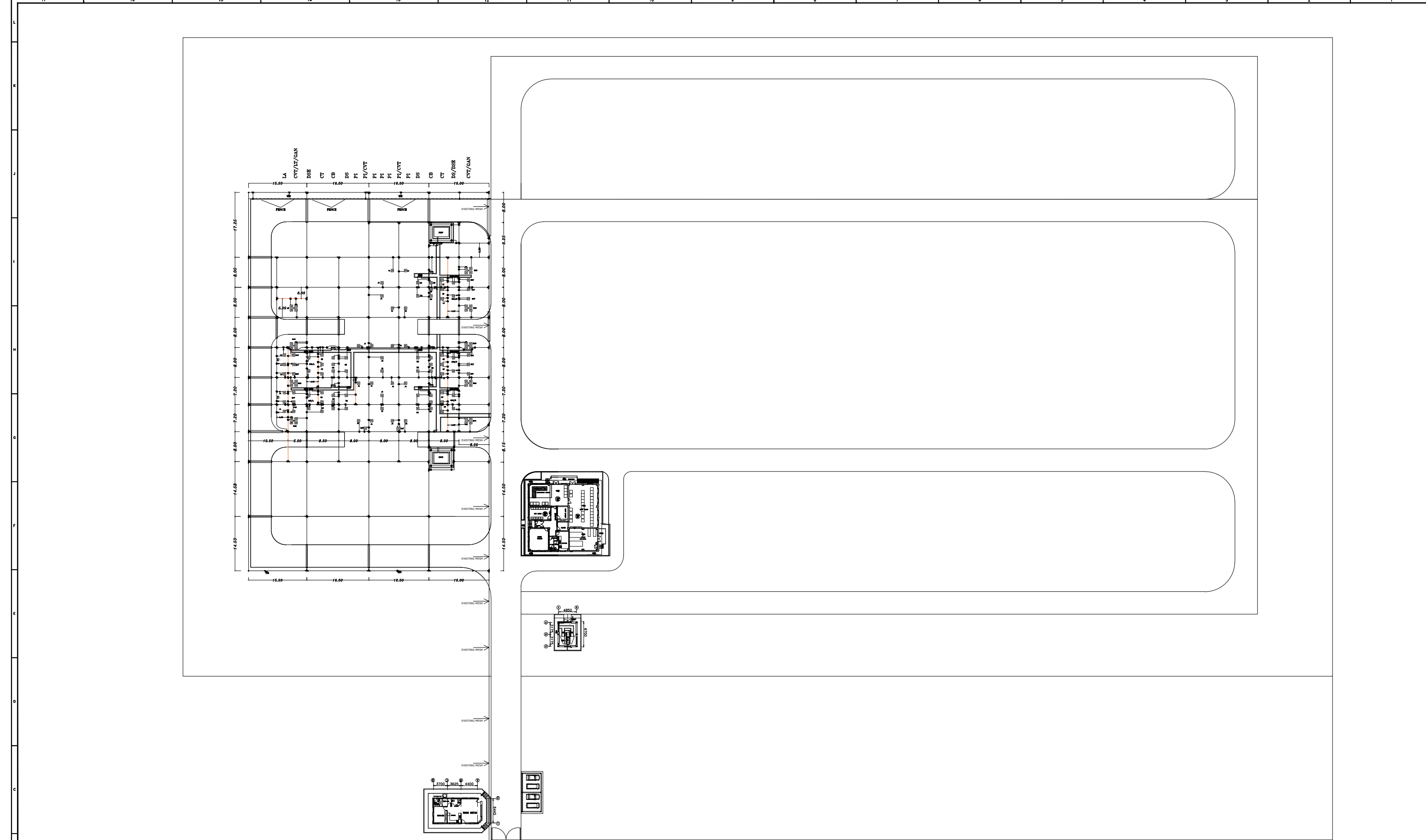
NOTES :

- 1 : ALL THE UNDER GROUND CONNECTIONS ARE THERMOWELDED.
- 2 : ALL THE ABOVE GROUND CONNECTIONS TO STRUCTURES ARE BOLTED.
- 3 : MESH CONDUCTOR SIZE : 120mm2
- 4 : RISER CONDUCTOR SIZE : 185/35mm2
- 5 : EARTHING ROD DIAMETER : 20mm
- 6 : MAIN EARTH GRID SHOULD BE INSTALLED −0.6 FROM SURFACE OF SOIL,
- 7 : SURFACE LAYER THICKNESS (GRAVEL HEIGHT) IS 0.15m.
- 8 : CABLE TRAYS MUST BE EARTHED AT INTERVALS MAXIMUM 15m.
- 9 : EARTH MAT MUST BE INSTALLED FOR DISCONNECTOR SWITCH.
- 10 : P.V.C. PIPE (ø 50mm, 10 BAR) MUST BE CONSIDERED AT CROSSING OF EARTHING WIRE WITH TRENCH.
- 11 : GALVANIZED PIPE (ø 50mm, 4 BAR) MUST BE CONSIDERED AT CROSSING OF EARTHING WIRE WITH ROAD.
- 12 : THE EQUIPMENTS MUST BE EARTHED BY RISERS FROM NEAREST PATH TO GROUND GRID.
- 13 : CONECTIONS OF EARTH RISERS TO EQUIPMENTS ARE DIFINED AT EARTHING DETAIL DOCUMENT.
- 14 : TO INCREASER RELIABILITY, THE EQUIPMENT STRUCTURES SHOULD BE EARTHED BOTH FROM A RISER FROM THE VERTICAL MESH AND A RISER FROM HORIZONTAL MESH.
- 15 : EARTHING ROD SHOULD BE EARTHED AT INTERVALS AT LEAST 3m FROM EACH OTHER.

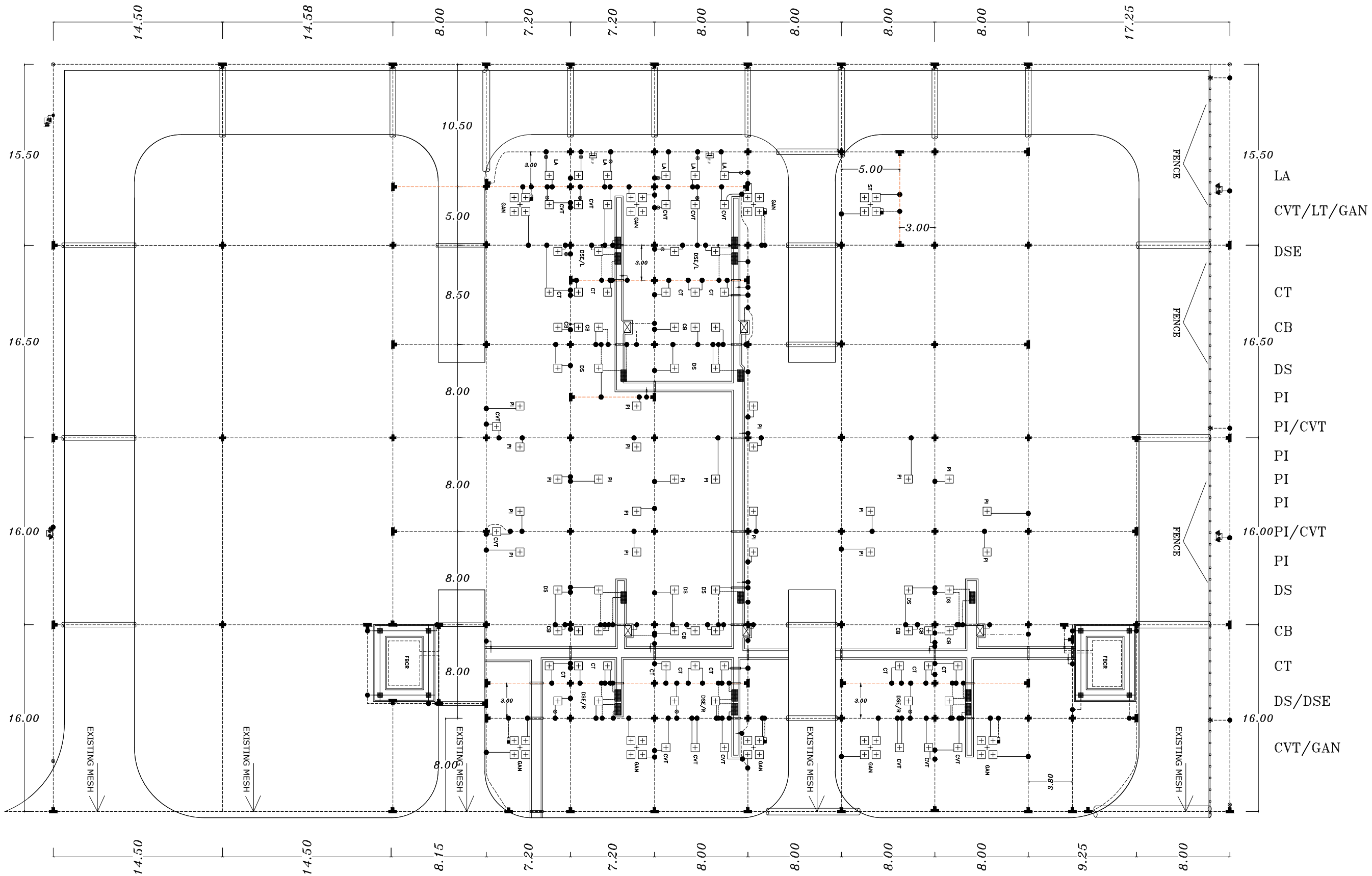
CONNECTION LEGENDS	
SYMBOL	DESCRIPTION
	CADWELD CONNECTION MESH TO MESH 120mm2 TO 120mm2 CONDUCTOR
	TEE CADWELD CONNECTION RISER TO MESH 120 TO 185mm2 CONDUCTOR
	TEE CADWELD CONNECTION RISER TO MESH 120 TO 120mm2 CONDUCTOR
	TEE CADWELD CONNECTION RISER TO MESH 120 TO 35mm2 CONDUCTOR
	TEE CADWELD CONNECTION RISER OR MESH CONDUCTOR TO EARTHING ROD (ROD: LENGTH 3m,DIAMETER 3/4")

SYMBOLS	
	STANDS FOR P.V.C PIPE (ø 50)
	EARTH MAT (1000mm*500mm)
	M.B: MARSHALING or AC OUTDOOR PANEL
	J.B: JUNCTION BOX
	EARTH PIT
	FENCE
	LIGHTING POLE

4						CLIENT: Mehdiabad Lead & Zinc Industry Pioneers Company 132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION	CONSULTING ENGINEERS:  (Mahsab Niroo Consulting Engineers Co.)		NAME	DATE	DWG TITLE: 132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION								
3								DESIGNED	M.HOSEINI	1405.04									
2	1405.04	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			DRAWN	M.HOSEINI	1405.04									
1	1405.03	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			CHECKED	S.ALIZADEH	1405.04									
0	1405.02	FIRST ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			APPROVED	M.DANESHPOU	1405.04									
REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED	CONTRACTOR:  شرکت توسعه انرژی های متانکو متانکو METANCO	PROJECT:												
							CONTRACT NO.:		SHT NO.	SHT SIZE	SCALE	AREA CODE	ISSUED	DISCIP	DOC. TYPE	EQ. NO.	SEQ. NO.	REV.	
CUSTOMER DWG NUMBER: 9210-MS-EL-ES-00-0011-D00							JOB NO.:		03	A3		9210	MS	EL	ES	00	0011	B02	



4						CLIENT:  Mehdiabad Lead & Zinc Industry Pioneers Company 132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION CONTRACTOR: 	CONSULTING ENGINEERS:  (Mahsab Niroo Consulting Engineers Co.) PROJECT: Mehdiabad Lead & Zinc Project CONTRACT NO.: JOB NO.:		NAME	DATE	DWG TITLE: 132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION EARTH PLAN 01						
3								DESIGNED	M.HOSEINI	1405.04							
2	1405.04	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			DRAWN	M.HOSEINI	1405.04							
1	1405.03	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU			CHECKED	S.ALIZADEH	1405.04							
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REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED			SHT NO.	SHT SIZE	SCALE	AREA CODE	ISSUED	DISCIP	DOC. TYPE	EQ. NO.	SEQ. NO.	REV.
CUSTOMER DWG NUMBER: 9210-MS-EL-ES-00-0011-D00								04	A3		9210	MS	EL	ES	00	0011	B02



4					
3					
2	1405.04	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU
1	1405.03	SECOND ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU
0	1405.02	FIRST ISSUE FOR APPROVAL	M.HOSEINI	S.ALIZADEH	M.DANESHPOU
REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

CLIENT:
Mehdiabad
Lead & Zinc Industry Pioneers Company
132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION

CONTRACTOR:
MANICO
مهندسان مشاور نیرو

CONSULTING ENGINEERS:
MANICO
(Mansab Niroo Consulting Engineers Co.)

PROJECT:
Mehdiabad Lead & Zinc Project

CONTRACT NO.:
JOB NO.:

	NAME	DATE
DESIGNED	M.HOSEINI	1405.04
DRAWN	M.HOSEINI	1405.04
CHECKED	S.ALIZADEH	1405.04
APPROVED	M.DANESHPOU	1405.04
SHT NO.	SHT SIZE	SCALE
05	A3	

DWG TITLE:						
132 KV SECTION OF BAHADORAN 400/132 KV SUBSTATION EARTH PLAN 02						
AREA CODE	ISSUED	DISCIP	DOC. TYPE	EQ. NO.	SEQ. NO.	REV.
9210	MS	EL	ES	00	0011	B02

CUSTOMER DWG NUMBER: 9210-MS-EL-ES-00-0011-D00