


**Annexure- 1****List of Material/ Equipment to be provided by PSTCL-**

Sr. No.	Brief Description of Material	Unit	Tentative Qty.
1	160MVA, 220/66KV P/T/F- complete with transformer oil, NIFPES System & other allied accessories	No.	1
2	20MVA, 66/11KV P/T/F - complete with transformer oil & other allied accessories	No.	1
3	200KVA, 11/0.415KV Station T/F - complete with transformer oil	No.	1
4	MS Channel 100X50mm	Kg	As per site requirement
5	MS Flat 50X06mm	Kg	As per site requirement
6	MS Round 32mm	Kg	As per site requirement
7	G.O. Switch 11KV for station T/F	No.	1
8	220KV Isolator 1600A -complete with insulators	No.	12
9	220KV SF6 Breaker	No.	6
10	220KV Line CT (Ratio: 1600-1200-800/ 1-1-1-1-1 A)	No.	12
11	220KV T/F CT (Ratio: 600-300/ 1-1-1-1-1 A)	No.	3
12	220KV B/C CT (Ratio: 1600-1200-800/ 1-1-1-1-1 A)	No.	3
13	220KV Lightening Arrestors	No.	9
14	220KV PT (220KV/3*110V)	No.	6
15	220KV L&E Switches 1600A -complete with insulators	No.	4
16	220KV Transformer Control Panel: AT-2 type	No.	1
17	220KV Line Control Panel: AL-2 type	No.	4
18	220KV B/C Control Panel: AB-2 type	No.	1
19	Main Marshelling Box T-200	No.	6
20	CT Marshelling Box C-65	No.	6
21	66KV Isolator 2000A- complete with insulators	No.	4
22	66KV SF6 Circuit Breaker	No.	3
23	66KV T/F CT (Ratio: 2000-1000/ 1-1-1-1-1 A)	No.	3
24	66KV B/C CT (Ratio: 2000-1000/ 1-1-1-1-1 A)	No.	3
25	66KV Lightening Arrestors	No.	12
26	66KV PT (66KV/3*110V)	No.	6
27	66KV LV Transformer Control Panel CT2RS type	No.	1
28	66KV B/C Control Panel CB-2 type	No.	1
29	Main Marshelling Box T-100	No.	3
30	CT Marshelling Box C-50	No.	3
31	PT/ CVT Marshelling Box P-25	No.	8
32	15KV NCT- 600-300/1-1A	No.	1
33	15KV NCT- 2000-1000/1-1A	No.	1
34	11KV XLPE Cable 300 sq.mm. - 01 Core	Mtr.	As per site requirement
35	Indoor type cable Box for 300 sq.mm.- 01 Core cable	No.	12
36	Outdoor type cable Box for 300 sq.mm.- 01 Core cable	No.	12
37	Copper Control Cable 2.5sq.mm.- 02 core	Mtr.	As per site requirement
38	Copper Control Cable 2.5sq.mm.- 04 core	Mtr.	As per site requirement
39	Copper Control Cable 2.5sq.mm.- 07 core	Mtr.	As per site requirement
40	Copper Control Cable 2.5sq.mm.- 09 core	Mtr.	As per site requirement
41	Copper Control Cable 2.5sq.mm.- 12 core	Mtr.	As per site requirement
42	Copper Control Cable 2.5sq.mm.- 16 core	Mtr.	As per site requirement
43	Copper Control Cable 2.5sq.mm.- 24 core	Mtr.	As per site requirement
44	Copper Control Cable 2.5sq.mm.- 32 core	Mtr.	As per site requirement
45	Copper Control Cable 10sq.mm.- 04 core	Mtr.	As per site requirement
46	Copper Control Cable 04sq.mm.- 04 core	Mtr.	As per site requirement

  
AEE/ Grid Const. S/D,  
PSTCL, Ludhiana

  
AO/ Grid Const. Circle,  
PSTCL, Ludhiana

  
Addl SE/ Grid Const. Divn.  
PSTCL, Patiala

**Annexure- 1****List of Material/ Equipment to be provided by PSTCL-**

Sr. No.	Brief Description of Material	Unit	Tentative Qty.
47	415V LT Panel (15 Circuit)	No.	1
48	LT Cable 95 sq.mm. - 4 core	Mtr.	As per site requirement
49	Flood Lights	No.	30
50	Al. PVC cable- 06sq.mm.- 02 core	Mtr.	As per site requirement
51	GI 16mm Nut bolts for Towers, Beams, structures etc	Kg	As per site requirement
52	GI 16mm Spring washers for Towers, Beams, structures etc	Kg	As per site requirement
53	220KV solid core post insulator	No.	21
54	66KV solid core post insulator	No.	17
55	33KV post insulator For supporting NCT's MS Flat earthing etc.	No.	17
56	11KV post insulator For supporting 11KV Jumpering etc.	No.	12
57	ACSR Conductor- Zebra (0.4")	Mtr.	As per site requirement
58	Disc Insulators 90kN - Antifog	No.	2928
59	Catenary Wire	Kg	As per site requirement
60	Catenary Clamps	No.	As per site requirement
61	P.G. Clamps for Zebra (0.4")	No.	315
62	Post Insulator clamp- double groove type	No.	26
63	Post Insulator clamp- quad groove type	No.	15
64	Single Suspension fittings for Zebra (0.4")	No.	36
65	Double Suspension fittings for Zebra (0.4")	No.	48
66	Double Tension fittings for Zebra (0.4")	No.	90
67	Double Suspension fittings for Twin Zebra (0.4")	No.	30
68	Double Tension fittings for Twin Zebra (0.4")	No.	54
69	Aluminium Spacers for Twin Zebra (0.4")	No.	1110
70	Aluminium Spacers for Quad Zebra (0.4") (rate considered double of twin type)	No.	360
71	C-wedge clamps for Zebra (0.4")	No.	582
72	T-Clamp 0.4"	No.	12
73	Dry Chemical powder type cylinder 05 Kg	No.	6
74	Dry Chemical powder type cylinder 09 Kg	No.	5
75	Carbon Dioxide type cylinder 22.0/22.5 Kg	No.	2
76	Carbon Dioxide type cylinder 09 Kg	No.	3
77	Mechanical Foam Dual-seal type cylinder 45 Kg	No.	4
78	Soda Acid type cylinder 09 Ltr.	No.	2
79	Set of 10 Buckets for Water/Sand- complete with stand	Set	2
80	Set of 05 Buckets for Water/Sand- complete with stand	Set	2
81	220V DC Battey bank - 300Ah (complete with stand, acid etc.)	No.	2
82	Battery charger 220V DC- 300AH	No.	2
83	300AH DCDB	No.	2
84	220KV Wave Trap (1250A / 1.0mH)	No.	8
85	220KV CVT	No.	12
86	220KV Tower ATS-1	No.	4
87	220KV Tower ATS-2	No.	14
88	220KV Tower ATS-3	No.	10
89	220KV Beam ABS-1	No.	22
90	66KV Tower CTS-1	No.	13
91	66KV Tower CTS-2	No.	5
92	66KV Tower CTS-3	No.	7

  
AEE/ Grid Const. S/D,  
PSTCL, Ludhiana

  
AO/ Grid Const. Circle,  
PSTCL, Ludhiana

  
Addl. SE/ Grid Const. Dhm.  
PSTCL, Patiala




**Annexure- 1****List of Material/ Equipment to be provided by PSTCL-**

Sr. No.	Brief Description of Material	Unit	Tentative Qty.
93	66KV Beam CBS-1	No.	21
94	220KV Peak AP-220KV	No.	As per site requirement
95	66KV Peak CP-66KV	No.	As per site requirement
96	Grid Structure ASI	No.	16
97	Grid Structure ABSC	No.	36
98	Grid Structure ABSL	No.	30
99	Grid Structure CSC	No.	50
100	Grid Structure CSI	No.	6
101	66KV Isolator 800A- complete with insulators	No.	2
102	66KV T/F CT (Ratio: 200-100/ 1-1-1-1 A)	No.	3
103	66KV HV Transformer Control Panel CT2R type	No.	1
104	15KV NCT- 200-100/1-1A	No.	1
105	15KV NCT- 1200-600/1-1A	No.	1
106	11KV I/C VCB 1200-600/5A	No.	1
107	11KV O/G VCB 400-200/5A	No.	3
108	11KV Station TF VCB	No.	1

**Note-** The above quantity reflected in the above list is purely tentative. Same should be read along with relevant drawing attached with tender enquiry. It may increase or decrease as per site conditions/ relevant drawing.

  
AEE/ Grid Const. S/D,  
PSTCL, Ludhiana

  
AO/ Grid Const. Circle,  
PSTCL, Ludhiana

  
Addl. SE/ Grid Const. Divn.  
PSTCL, Patiala

**Annexure-2**

List of material of patty purchase nature which has to be arranged, supplied, fitted, erected by bidder without any additional cost for completion of work in all respects-

Sr. No.	Description of Material	Quantity
1	All type metallic steel/ Brass glands for cables- off size/ all required sizes	As per site requirement
2	All type of Cable Ferrules and cable markers- 1.5 mm, 2.5 mm, 04 mm or any other required size as required to be used in work	As per site requirement
3	Control cable thimbles/ lugs/ connectors- (1.5 mm, 2.5 mm, 04 mm, 30mm or any other required size) of all types i.e. Ring 'O' type, U-type, Pin type etc. of Copper as required to be used in work	As per site requirement
4	Power cable thimbles/ lugs/ connectors- (150 mm, 300 mm, 95 mm or any other required size) of all types i.e. Ring 'O' type, U-type, Pin type etc. as required to be used in work	As per site requirement
5	All type of jumpers for flexible single core copper cables as required to be used in work	As per site requirement
6	All type of jumpers for flexible single core aluminium cables as required to be used in work	As per site requirement
7	All type of Cable ties - PVC/ Metallic/ Plastic etc of all required sizes i.e. 50mm, 75 mm, 100mm, 125mm, 150mm, 200mm, 250mm, 300mm etc. as required to be used in work	As per site requirement
8	All type of copper flexible strips for double point earthing of all equipment, structures, P/T/Fs, NCTs etc. of all required sizes. Lengths, types etc. as required to be used in work	As per site requirement
9	All type of aluminium flats as per requirement of the work.	As per site requirement
10	All type of paints, thinners, preimer etc. for marking of phases, earthings etc., for painting/ furnishings of MS flats, used as raisers for connecting with earthing mesh & sub-station structure for equipment, welding joints etc. as per requirement of the work.	As per site requirement
11	All type of Tapes- PVC type, LT type , HT type, Indicating type, Reflecting type etc or any other required type as per requirement of the work.	As per site requirement
12	All type of consumable cutting and jointing material like hexa blades, cutter blades, blades, cutters, pliers, wire strippers, Regmars, amry paper, rubbing paper, drilling bits etc. & welding rods, jointers, M-seals, Sealing threads, Chalks/Clays/putty, compounds, Elfy, Fevicol/ Feviquick, Epoxy tubes, rubber fillers, silicon fillers etc. in all sizes, types for manual and all machines/ cutters etc. as per requirement of the work.	As per site requirement
13	All type of lubricants, Hydraulic oil, Greese, Mobil oil, Varnish, Thinners, Taarpene oil, Kerosene oil, CRC, CTC as per requirement of the work.	As per site requirement
14	All type of off-size nut-bolts (except 16mm size), additional D-shackles, shlings, ropes etc. - off size/ of all required sizes.	As per site requirement
15	All type of Fabric & cloth- Duster cloth, Cleaning cloth, tarpals etc. as per requirement of the work.	As per site requirement
16	All type of consumable wearing/ safety items- such as Rubber boots, Gum boots, Rubber gloves, safety equipment, Earthing sticks, safety belts, safety helmets etc. to be used by workers of contractor during erection activities.	As per site requirement

  
AEE/ Grid Const. S/D,  
PSTCL, Ludhiana

  
AO/ Grid Const. Circle,  
PSTCL, Ludhiana

  
Addl. SE/ Grid Const. Divn.  
PSTCL, Patiala

Annexure- 2

List of material of patty purchase nature which has to be arranged, supplied, fitted, erected by bidder without any additional cost for completion of work in all respects-

Sr. No.	Description of Material	Quantity
17	All type of wooden material such as Wooden Gutkas, Wooden Strips, Wooden hangers/spacers for Power/ control cables, etc. in all types, sizes etc.	As per site requirement
18	All type of additional Metallic, non-metallic & composite gasket sheets & rings such as Rubber gaskets, non asbestos gaskets, Threading gaskets, rubber rings in all sizes, types etc. that are required in addition to that supplied along with requisite power transformer for its erection purposes	As per site requirement
19	All types of brushes and cleaners such as paint brushes, cleaning bushes, metallic strand brushes, porcleain cleaners, Disc cleaners etc. in all required sizes and types etc. as per requirement of work	As per site requirement
20	All type of additional flange assembly, oil pipes & connectors, air pipes & connectors, Vaccuming pipes & connectors, dummy plates, Metallic/ plastic trays, hangers etc. in all sizes and types etc. that are required additionally to that supplied along with requisite power transformer for its erection purposes	As per site requirement
21	All type of Charcoal Powders, Salts, Mositurising powders required for earthing through pits/ bores etc. except MS Round (32mm) that will be provided by PSTCL	As per site requirement
22	All other patty items (consumable and non-consumable) which are not listed but are requiried at site for completion of work/ activities in all respects	As per site requirement

  
AEE/ Grid Const. S/D,  
PSTCL, Ludhiana

  
AO/ Grid Const. Circle,  
PSTCL, Ludhiana

  
Addl. SE/ Grid Const. Divn.  
PSTCL, Patiala



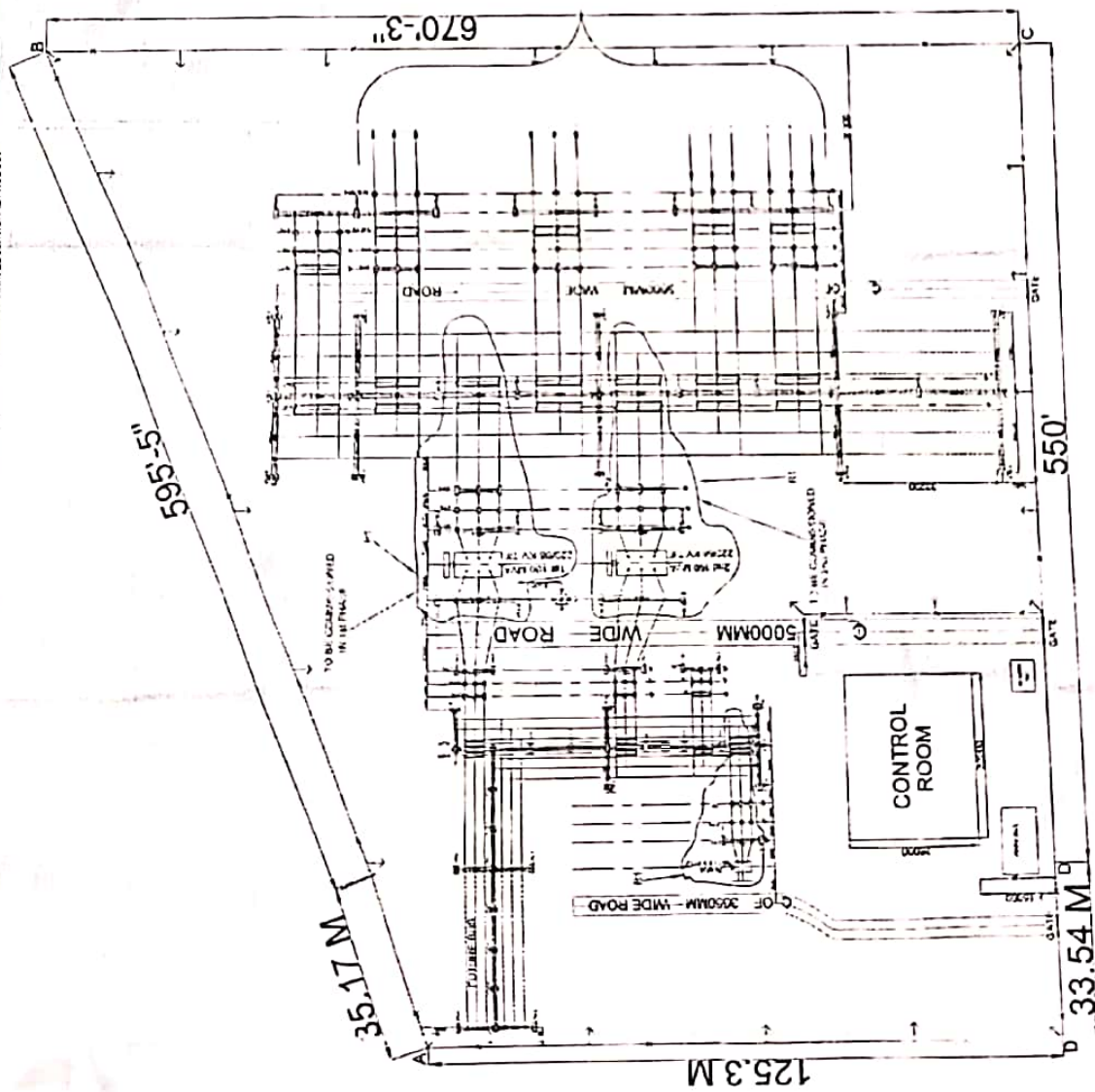
ANNEXURE-3

REVISIONS IN CONNECTION WITH THE PROJECT ARE:

1. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
2. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
3. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
4. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
5. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
6. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
7. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
8. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
9. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
10. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
11. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
12. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
13. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
14. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
15. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
16. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
17. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
18. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
19. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.
20. APPROVED BY THE ENGINEER IN CHARGE OF THE PROJECT.

9/5  
 ਵਧੀਕ ਨੇਗਰਾਨ ਇੰਜੀਨੀਅਰ,  
 ਗਰਿਡ ਉਸਾਰੀ ਮੰਡਲ,  
 ਪੰ.ਰ.ਕ੍ਰ.ਸ. ਕਾਰਪੋ. ਲਿਮ. ਪਟਿਆਲਾ.

GGSTP-GOBINDGARH-I  
 LILO OF 220 KV  
 GOBINDGARH-I - BASSI PATHANA  
 LILO OF 220 KV



PUNJAB STATE TRANS CO LTD	
TRANSMISSION SYSTEM DESIGN & CONSTRUCTION	
PROJECT NO	11-20/11
DATE	11-20/11
DESIGNER	
CHECKER	
APPROVED	
GENERAL LAYOUT PLAN	
STEEL WORK ERECTION	
220 KV S/S IN AT	
GOBINDGARH G.S	

SCHEDULE OF STRUCTURE

NO	DESCRIPTION	QTY	UNIT
1	STEEL WORK		
2	CONCRETE		
3	BRICKWORK		
4	PAINT		
5	GLASS		
6	IRONWORK		
7	WOODWORK		
8	PLASTER		
9	ROOFING		
10	MECHANICAL		
11	ELECTRICAL		
12	WATER SUPPLY		
13	SEWERAGE		
14	LANDSCAPING		
15	ROADWORK		
16	UTILITY		
17	ENVIRONMENTAL		
18	SAFETY		
19	TRAINING		
20	OPERATION		