

ESP-001-
2A Rev.00



PROJECT ENGINEERING & SYSTEMS DIVISION

Annexure-3

Scope of Work for Bhandai-Udi

Std. / Doc. Number

PY-AS-4-M121-2001-01

Rev. No.

00

Sheet **1** of **5**

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of **BHARAT HEAVY ELECTRICALS LIMITED**,
It must not be used directly or indirectly in any way detrimental to the interest of the company.

Annexure-3
Scope of Work for Bhandai-Udi

**1.0 ELECTRIFICATION OF EXISTING RAILWAY LINE****1.1 OVERHEAD EQUIPMENT (OHE)**

Supply, erection, testing and commissioning of 25 KV, 50 Hz, AC Overhead equipment including Structures and all ancillary equipments but excluding design and foundations as per following details along with PTFE neutral section, insulated catenary wire under over line structure, Height Gauges at level crossing gate, Protective screens on over line structure, Structure arrangement on bridge piers, feeder wire, all types of caution, warning, instruction and protection boards at required locations, anti-theft charging arrangement, Traction Station Working Rule along with sectioning diagram at required locations (TPC, Traffic control, OHE Depot, AEE office etc.), Safety items (i.e. key box, First aid box, shock treatment chart, Collar ring, men at work board etc.) at required locations and all necessary documentation for EIG sanction and CRS Inspection. Breakdown attention till CRS inspection. Supply of contact and catenary wire is excluded from the scope of contractor. It will be a free issued to contractor by the purchaser from **Purchaser stores location as mentioned in NIT.**

1.1.1 Regulated conventional type OHE with normal contact wire height 5.80 Meter

SN	From Station to Station	km to km	Total Track km	Remarks
1	Bhandai-Udi	Refer Annexure-2	119.00	

1.1.2 Regulated high rise type OHE with normal contact wire height 7.57 Meter

SN	From Station to Station	km to km	Total Track km	Remarks
1	Bhandai-Udi	--	0	

1.1.3 Regulated Tramway type OHE with normal contact wire height 5.80 meter

SN	From Station to Station	km to km	Total Track km	Remarks
1	Bhandai-Udi	a) Shamshabad-1351/050- 1351/500 b) Fatehabad-1368/500- 1368/1000 c) Bah-1408/770- 1409/230	1.5	

1.2 25 KV Auxiliary transformer stations

Design, supply, erection, testing and commissioning of single phase Auxiliary Transformer Station of different capacity as per following details, complete with all structures and fittings etc. along with anti-climbing device and all types of caution, warning, instruction, protection boards and location/Name boards, junction box and all necessary documentation for EIG sanction and CRS Inspection. Breakdown attention till CRS inspection.

**PROJECT ENGINEERING & SYSTEMS DIVISION**

Annexure-3

Scope of Work for Bhandai-Udi

Std. / Doc. Number

PY-AS-4-M121-2001-01

Rev. No.

00

Sheet 3 of 5

5 KVA AT requirements for LC Gate

SN	Location/LC Gate No.	Capacity	Quantity of AT	Remarks
(A)	Bhandai-Udi Gr.240			
NIL				

10 KVA AT requirements

S.N.	Location	capacity	Quantity of AT	Remarks
(A)	Bhandai-Udi Gr.240			
1	Bhandai		01 No.	
2	Shamshabad		01 No.	
3	Karandhand Kalan		01 No.	
4	Dhimsiri		01 No.	
5	Fatehabad		01 No.	
6	Manikpura		01 No.	
7	Bhadrauli		01 No.	
8	Batesar		01 No.	
9	Bah		01 No.	
10	Jaitpur Kalan		01 No.	
11	ManSingh ka pura		01 No.	
12	Jaitpura		01 No.	
13	oodi		01 No.	

1.3 Modification of HT power lines and crossings (raising of height)

SN	Item	Nominal Voltage level	Single circuit/Double Circuit	No of phases	Designated current carrying capacity	Quantity	Remarks
1.	Track crossing	NIL					
2.	Along the Track	NIL					



PROJECT ENGINEERING & SYSTEMS DIVISION

Annexure-3

Scope of Work for Bhandai-Udi

Std. / Doc. Number

PY-AS-4-M121-2001-01

Rev. No.

00

Sheet 4 of 5

1.4 Modification of HT power lines and crossings (replacement by UG cabling)

SN	Item	Nominal Voltage level	Single circuit/ Double Circuit	No of phases	Designated current carrying capacity	Quantity	Remarks
1	Track crossing	33 KV	Single Circuit	3 Phase	340 Amp	NIL	Cable to be provided 3 x 300 sqmm (One spare cable also to be provided of the same length and size)
		11 KV	Single Circuit	3 Phase	270 Amp	01	Cable to be provided 3 x 185 sqmm (One spare cable also to be provided of the same length and size)
2	Along the Track	11 KV	Single Circuit	3 Phase	270 Amp	(Shall be informed later)	Cable to be provided 3 x 185 sqmm (One spare cable also to be provided of the same length and size)

1.5 Modification of LT power lines and crossings (replacement by UG cabling)

SN	Item	Nominal Voltage level	Single circuit/ Double Circuit	No of phases	Designated current carrying capacity	Quantity	Remarks
1.	Track crossing	NIL					



PROJECT ENGINEERING & SYSTEMS DIVISION

Annexure-3

Scope of Work for Bhandai-Udi

Std. / Doc. Number

PY-AS-4-M121-2001-01

Rev. No.

00

Sheet 5 of 5

2.	Along the track	440 V	Single Circuit	3 Phase, 4 wire	125 A	4 locations (total length 700 meter)	<p>1. In platform area or concrete structure the cable may be required to laid by insertion of HDPE pipe by boring method.</p> <p>2. One spare cable also to be provided of the same length and size</p>
		230 V	Double Circuit	2 Phase, 4 wire	40 A	5 Locations (total length 2500 meter)	<p>PF area lighting cable</p> <p>1. In platform area or concrete structure the cable may be required to be laid by insertion of HDPE pipe by boring method.</p> <p>2. One spare cable also to be provided of the same length and size</p>