



JAGDULLA HYDROPOWER COMPANY LIMITED

जगदुल्ला हाईड्रोपावर कम्पनी लिमिटेड



Ref. No.: 163-2083/084

Date: 16th September 2026

All Concerned Manufacturers/ Suppliers/ Contractors

Subject: Regarding Quotation of Price for Electromechanical Works

Dear Sir,

Jagdulla Hydropower Company Limited (JHCL) is a government-owned public limited company established in 2017 to develop Jagdulla Peaking Run-of-River Hydroelectric Project (JHEP). The project site is located 750 km west of Kathmandu on Jagdulla River near Jagdulla Rural Municipality of Dolpa District in Karnali Province. We are pleased to inform you that Jagdulla PRoR Hydroelectric Project is commencing the procurement process of Design, Manufacture, Supply, Transportation, Erection, Testing and Commissioning of electromechanical works, of our power plant of installed capacity 106 MW (3*35.33 MW - Pelton turbine).

As it is of your knowledge that, for the successful completion of the procurement process, a proper cost estimate is crucial. Therefore, you are requested to provide a cost estimate in the enclosed format at your earliest convenience via our official email info@jhcl.com.np / ceo@jhcl.com.np for the electromechanical equipment provided in the Bill of Quantities attached herewith, preferably within 5 days.

Your kind understanding, cooperation, and prompt response in this regard would be highly appreciated.

Sincerely yours,

Sanjay Sapkota

Chief Executive Officer

Enclosure:

- Bill of Quantities
- Project summary and salient features
- Drawings



Jagdulla Hydropower Company Limited
Jagdulla PROR Hydro Electric Project

FOR 106 MW

Electromechanical Cost Estimates

@US \$

Item No.	Particulars	Quantity	Unit	Rate US\$	Amount US\$	Amount in NRs.
A	Turbine					
	1 Pelton Turbine - 36 MW with acc. (governer)	3	Nos.	-	-	-
	2 Inlet Valve	3	Nos.	-	-	-
	3 Cooling Water System	L.S.		-	-	-
	4 Spare Parts (including 1 turbine)	1	No.	-	-	-
B	Generator					
	1 Salient pole alternator - 38 MVA with exitation	3	Nos.	-	-	-
	2 Unit Control, instrumentation, Fire fighter	3	Nos.	-	-	-
	3 Spares	L.S.		-	-	-
C	Transformer					
	1 132/11 kV -38 MVA ONAN power transformer	3	Nos.	-	-	-
	2 Station Transformer 315 kVA	3	Nos.	-	-	-
	3 Distribution Transformer	L.S.		-	-	-
	4 Spares	L.S.		-	-	-
D	132 kV Switchyard					
	Three Transformer Bays	3	Nos.	-	-	-
	Two Line Bay (with OTE w/o PLCC)	2	Nos.	-	-	-
	Spares	L.S.		-	-	-
E	Relay and Control, SCADA					
	Generator Control	L.S.		-	-	-
	Generator Transformer Protection	3	Nos.	-	-	-
	Line Protection	L.S.		-	-	-
	Control desk and Station Aux Panel	L.S.		-	-	-
	SCADA	L.S.		-	-	-
	Telemetry (headworks)	L.S.		-	-	-
	Spares	L.S.		-	-	-
F	12 kV Switchgear					
	Generator, Transformer VCB panels with	1	No.	-	-	-
	Station and Spare VCB panels	3	Nos.	-	-	-
	Spare (incl VCB rucks)	L.S.		-	-	-
G	Low Voltage Distribution Panels					
	AC distribution MCC	L.S.		-	-	-
	110 V DC Charger and Battery	L.S.		-	-	-
	48 V and 24 DC Charger and Battery	L.S.		-	-	-
	Spares	L.S.		-	-	-
H	Earthing and Illumination	L.S.		-	-	-
I	Communication (PABX, Tel, OFCTE)	L.S.		-	-	-
J	Miscellaneous					
	Fire Detection and Alarm	L.S.		-	-	-
	Air Conditioning and Ventilation	L.S.		-	-	-
	Cables 12 kV, 600 V Control, etc.	L.S.		-	-	-
	Crane, DG Set, Oil Handling Machine	L.S.		-	-	-
	Tools for Elect/ Mech Workshop	L.S.		-	-	-
K	Vehicles (with Custom 1%)	L.S.		-	-	-
L	Headworks Electrification incl. 50 kVA	L.S.		-	-	-
	TOTAL				-	-
	EM- Erection/Installation (EAR-EM)	1%			-	-
	Physical Contingencies (2% of EM/TL)	2%			-	-
	Price Contingencies (2.5% of EM/TL)	2.50%			-	-
	Miscellaneous					
	Grand Total				-	-
	Exchange Rate		130.00			

A. PROJECT INFORMATION

The preliminary information on the JHEP provided in this section is based on the project's detailed feasibility study.

Location

Jagdulla PROR Hydroelectric Project is located in the upper reach of the Jagdulla River in Jagdulla and Mudkechula Rural Municipalities in the high-mountainous region of Dolpa District, Karnali Province. The project site is about 750 km west of Kathmandu. According to the Desk Study Report (DSR), JHEP was envisaged to be a storage-type project with a capacity of 307 MW. The project boundary lies between 29°03'16" and 29°07'53" North and between 82°29'00" to 82°38'00" East. The proposed dam site of JHEP lies in Jagdulla Rural Municipality, while the proposed powerhouse lies in Mudkechula Rural Municipality.

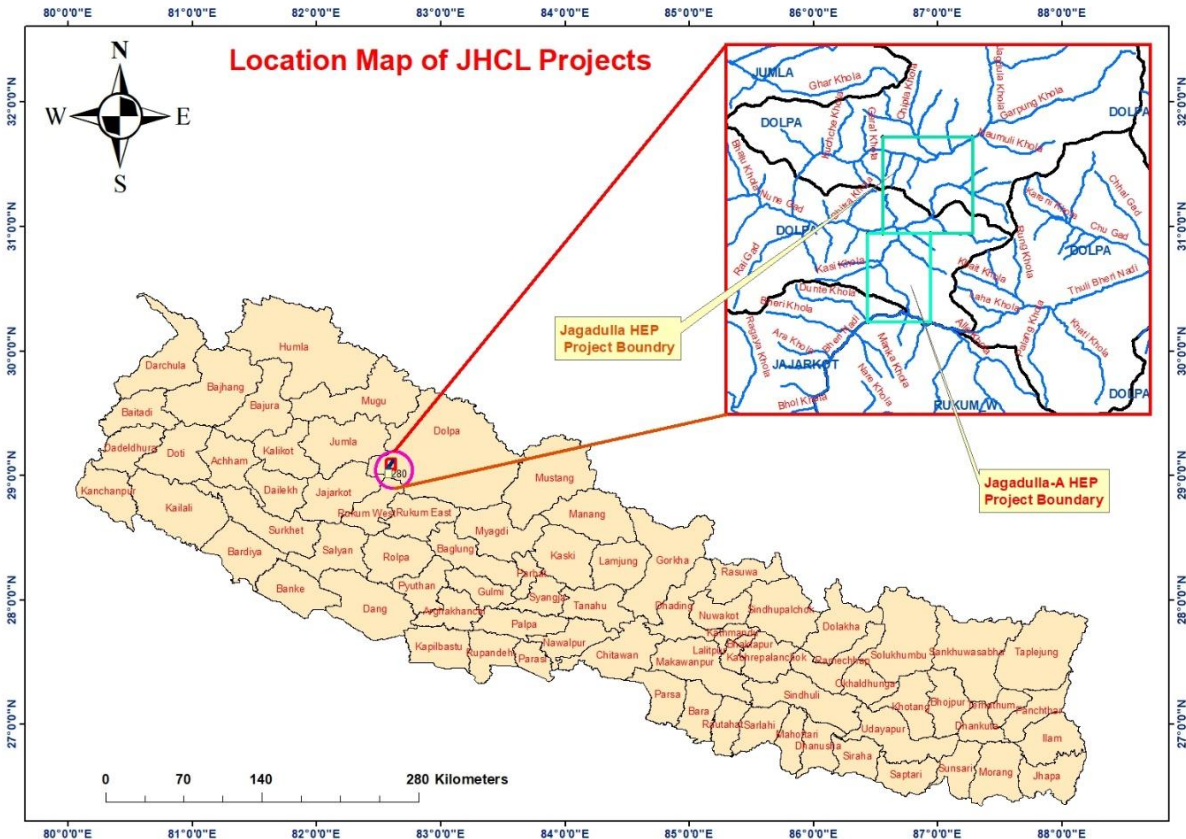


Figure-1 Project Location Map of JHEP.

Location Accessibility

JHEP is proposed as a Peaking Runoff-river project located in Dolpa District, Province 6, Nepal. The licensed boundary of this project lies between 29°03'16" and 29°07'53" North and between 82°29'00" and 82°38'00" East. The intake site lies at an elevation of about 2600 m above mean sea level (amsl), and the powerhouse site lies at about 1900 m amsl.

The nearest all-weather road available from the project site is at Triveni, the confluence of the Jagdulla River and the Bheri River along Khalanga (Jajarkot) - Dunai Road. The project's powerhouse area (Ila) is located approximately 10 km from Triveni. The track of the access road has been in the process of opening and, hence, needs to be upgraded from Triveni to the powerhouse site. At least two bridges are required along the access road for all-weather access from Triveni to Ila. Similarly, local authorities are constructing a road from the powerhouse site to approach the dam site. A new approach track has been opened from Jumla to Hurikot, near the dam site of JHEP. This newly opened track has been operational for some part of the dry months of the year since 2017. The nearest airport to the project site is at Juphal, Dolpa.

The access to the project area as follows:

From	Kohalpur	to	Chhinchu	59 km (Black Topped)
From	Chhinchu	to	Jajarkot	107 km (Fair Weathered)
From	Jajarkot	to	Triveni	75 km (Fair Weathered)
From	Triveni	to	Powerhouse	10 km Completed
From	Powerhouse	to	Headworks	35 km (32 km Completed and remaining Under Construction)

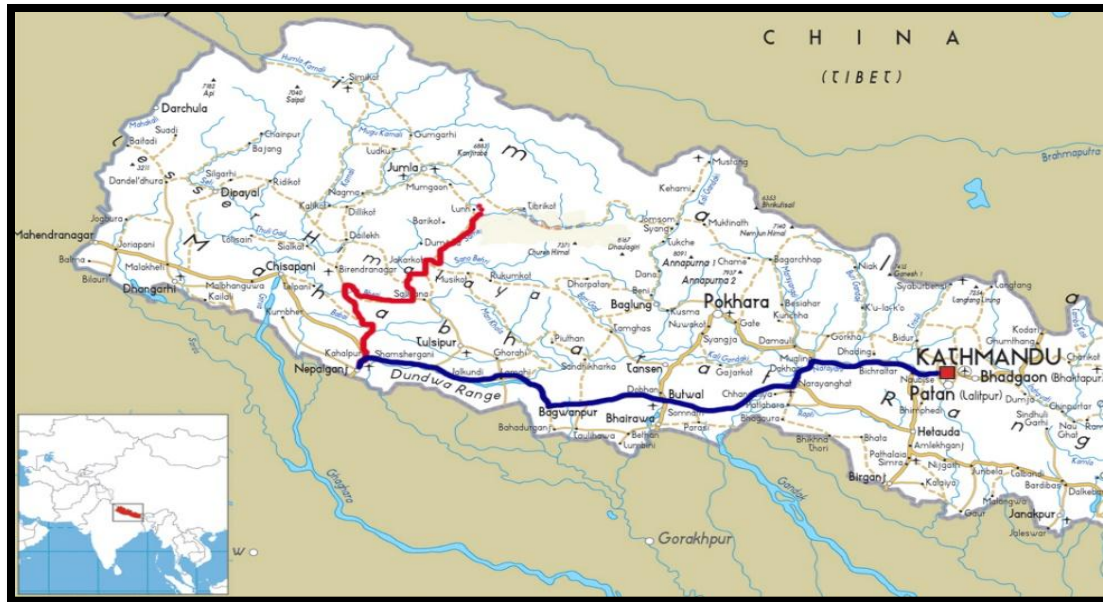


Figure-2 Accessibility to the Project Site.

Project General Layout

The whole project is divided into three work sites: Headworks Site, which covers a 23-meter-high gated-type concrete dam, settling basin, and pondage; Underground Works 1, which includes a headrace Tunnel and surge shaft; and Underground Works 2, which includes a pressure shaft, powerhouse cavern, and transformer cavern, including GIS accommodation.

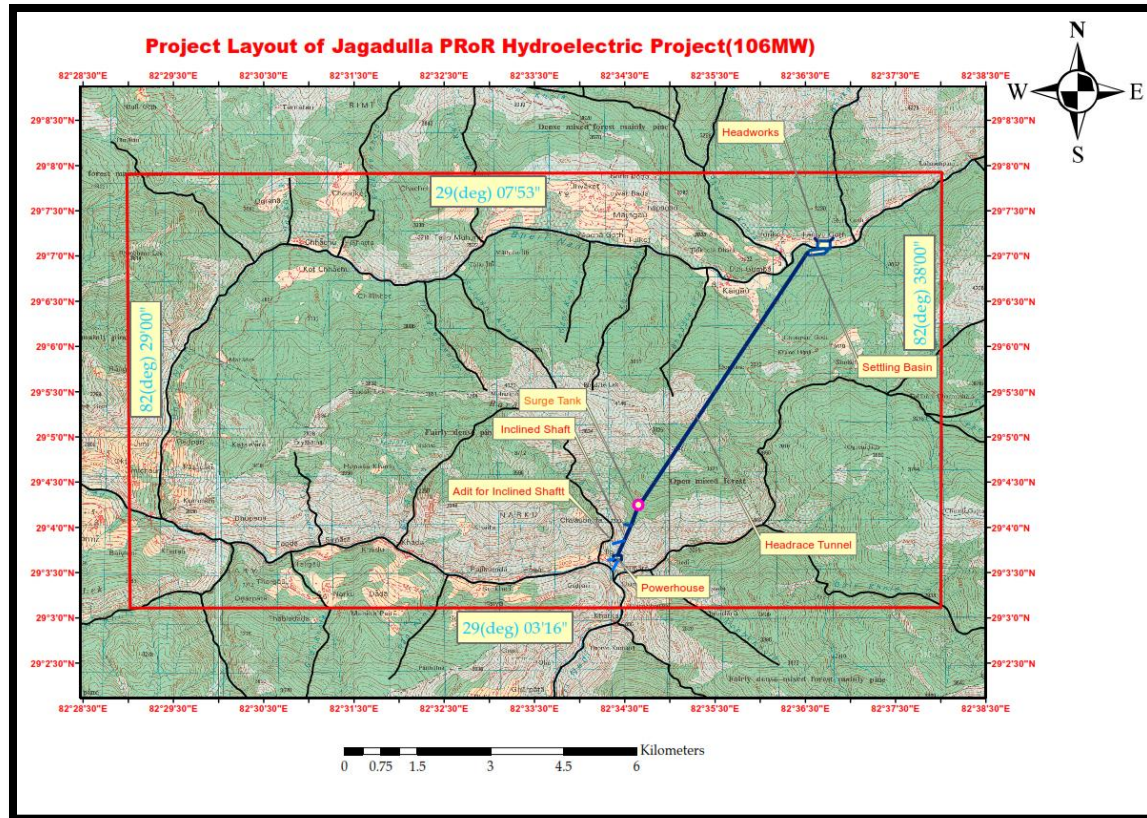


Figure-3 General Project Layout of JHEP.

The headwork is proposed near Hurikot village, about 500 m upstream of the Jagdulla River and Phoigar Khola confluence. The headworks consist of a 23 m high (from the existing riverbed level) gated diversion dam with three gates of size 7 m wide and 7 m high, side intakes, and a 120 m long and 13 m wide double chambered settling basin with the provision of the head pond at the end of settling basin. The headrace Tunnel is 6,135 m long, out of which about 3.92 km of the Tunnel length (around 64% of the total Tunnel length) will be shotcrete lined, and 2.21 km of the Tunnel length (around 36% of the Tunnel length) will be concrete lined. An underground surge shaft of a height of 49.85 m with a restricted orifice is proposed with an underground pressure shaft of 1.4 km in length. Both powerhouse and transformer bay are proposed underground inside the sound rock mass at Ila. The powerhouse will accommodate three units of vertical shaft Pelton turbine and generator of 36 MW, each positioned on a vertical axis, providing the space for a service bay. The transformer cavern will accommodate ten single-phase transformers along with an insulated Substation (GIS) system. 132kV cable shall interconnect the underground GIS system to the take-off yard located outside the Main Access Tunnel. Outdoor take-off yard (comprising of outdoor electrical equipment and gantry structures) and terminal tower will access the generated power via cable from the GIS system to connect to the 132 kV Double Circuit transmission line of length 45 km (approximately) connecting to Bafikot Substation at Bafikot, West Rukum. A 266m long tailrace Tunnel will discharge the tailwater back to the Jagdulla River.

Salient Features of the Project

S. No.	Parameters		Details
1	General		
1.1	Name of the Project		Jagdulla PROR Hydroelectric Project
1.2	Name of the River		Jagdulla River
1.3	Type of Scheme		PRoR
1.4	Project Location		Dolpa, Karnali Province, Nepal
1.5	License Boundary	Easting	82°33'43" E to 82°38'00" E
		Northing	29°03'16" N to 29°07'53" N
1.6	Nearest Settlement		Kaigaun
1.7	Access Road Name		Chaurjhari-Dolpa Highway at Triveni
2	Organization		
2.1	Developer		Jagdulla Hydropower Company Limited, Baneshwor, Kathmandu
2.2	Consultant		NEA Engineering Company Limited, Trade Tower, Thapathali, Kathmandu
3	Hydrology		
3.1	Catchment Area at Intake Site		633.83 sq. km.
3.2	Catchment Area at Powerhouse		978.99 sq. km.
3.3	Design Discharge (Q_{39})		16.12 m ³ /s
3.4	Average Annual Discharge		19.8 m ³ /s
3.5	Minimum Monthly Discharge		3.96 m ³ /s
3.6	Maximum Monthly Discharge		48.72 m ³ /s
3.7	Minimum Environmental Release		0.40 m ³ /s
3.8	Flood Discharge for Headworks Design (1000 years)		1141 m ³ /s
3.9	Flood Discharge for Powerhouse/Tailrace Design (1000 years)		1703 m ³ /s
3.10	Construction Flood Discharge for Headworks (20 years)		34.22 m ³ /s

S. No.	Parameters	Details
3.11	Construction Flood Discharge for Powerhouse/Tailrace (20 years)	69.5 m ³ /s
4	Sediment Study	
4.1	Average Annual Sediment Load	285, 925 Metric Tons
4.2	Maximum Sediment Load	1.84 kg/m ³
4.3	Design Suspended Sediment Load	2000 ppm
4.4	Estimated Annual Sediment Yield	0.52 Million Metric Tons
5	Geology	
5.1	Regional Geology	Higher and Lesser Himalaya
5.2	Major Rock Types in Headworks	Gneiss
5.3	Major Rock Type in Waterways	Schist, Phyllite, Quartzite and Amphibolite
5.4	Major Rock Type in Powerhouse	Quartzite, Phyllite and Dolomite
6	Diversion During Construction	
6.1	Construction Flood	34.22 m ³ /s
6.2	Diversion Type	Trapezoidal Canal
6.3	Length (m)	320 m
7	Structures	
7.1	Dam/Weir/Barrage	Barrage (3 nos. opening) with Emergency Spillway
7.2	Barrage Crest Level	2678.00 masl
7.3	Spillway	Uncontrolled Ogee Shaped
7.4	Spillway Crest Level	2696.00 masl
7.5	Spillway Crest Length	45.7 m
7.6	Lowest Riverbed Level at Weir Axis	2675.00 masl
7.7	Foundation Type	Rock Foundation at barrage, Floating foundation at the spillway
7.8	Provision of Stilling Basin	USBR type III

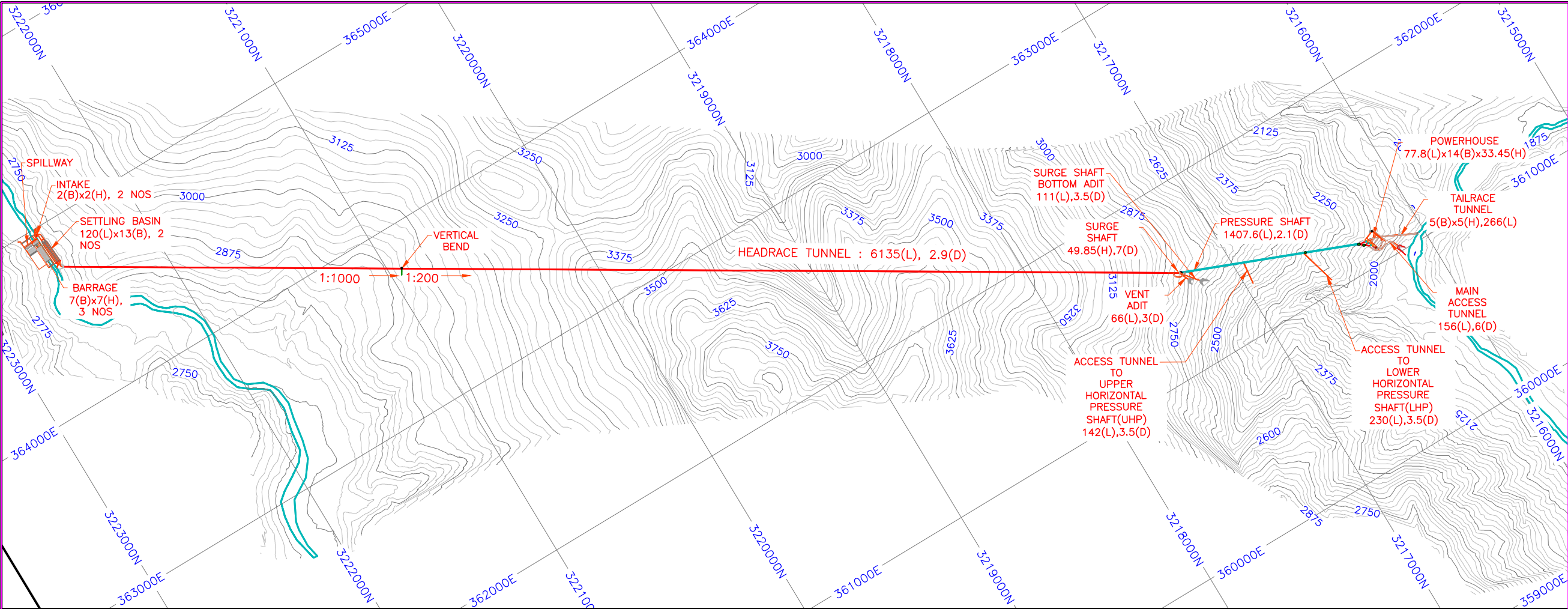
S. No.	Parameters	Details
7.9	Water Level in Stilling Basin for Design Flood	2676.45 masl
7.10	Maximum Operating Level	2696.00 masl
7.11	Minimum Operating Level	2690.00 masl
7.12	Total Capacity of the Reservoir	465,970 m ³
7.13	Live Storage Volume	260,070 m ³
7.14	Dead Storage Volume	205,900 m ³
7.15	Inundation Area	48,276 m ²
7.16	Back Water Length	500 m
7.17	Peaking Duration	6 hours per day
7A	Intake	
7A.1	Intake Type	Side Intake
7A.2	Number of Orifices	2
7A.3	Size	2.0 m (B) x 2.0 m (H)
7A.4	Top Sill Level	2685.70 masl
7A.5	Invert Sill Level	2683.70 masl
7A.6	Gate Type	Fixed Wheel Vertical Lift
7A.7	Hoisting System	Gantry Crane Hoist
7A.8	Trashrack Dimension and Opening	3.8 m (W) x 5.0 m (H) x 2 (nos)
7A.9	Clear Opening of Trash Rack	50 mm
7A.10	Trash Rack Cleaning Mechanism	Trash Rack Cleaning Machine
7B	Approach Culvert	
7B.1	Type	Underground, pressurized
7B.2	Number	2
7B.3	Culvert/Canal Size	2 m (B) x 2 m (H)
7B.4	Length	36.1 m and 49.0 m

S. No.	Parameters	Details
7B.5	Bed Slope (1V:x H)	Horizontal up to the end of curved portion and 1:11 and 1:10 in right bay and left bay respectively
7C	Settling Basin	
7C.1	Type	Dufour with Continuous Flushing
7C.2	Size of Particle to Settle	0.10 mm
7C.3	Settling Design Temperature	15° C
7C.4	Settling Efficiency	>90%
7C.5	Number of Bays	2
7C.6	Inlet Transition Length	25.50 m
7C.7	Settling Basin Size	120 m (L) x13 m (B)
7C.8	Flushing System	Continuous Flushing
7C.9	Size of Flushing Channel	1.5 m (B) x 1.5 m (H)
7C.10	Longitudinal Slope	1:96 (V:H)
7D	Headrace Tunnel	
7D.1	Type	Inverted D-shaped Tunnel
7D.2	Material	Concrete and Shotcrete Lined
7D.3	Length	6135 m
7D.4	Diameter	3.8 m (Excavation)
7D.5	Thickness	100 mm-450 mm (Varies)
7D.6	Inlet Invert Level	2682.30 masl
7D.7	Outlet Invert Level	2659.10 masl
7D.8	Support Type	Concrete Lining, Shotcrete, Steel Ribs, Rock Bolts
7E	Surge Shaft	
7E.1	Type	Restricted Orifice
7E.2	Diameter/Dimension	8 m
7E.3	Height	55.9 m
7E.4	Upsurge Level	2715.85 masl

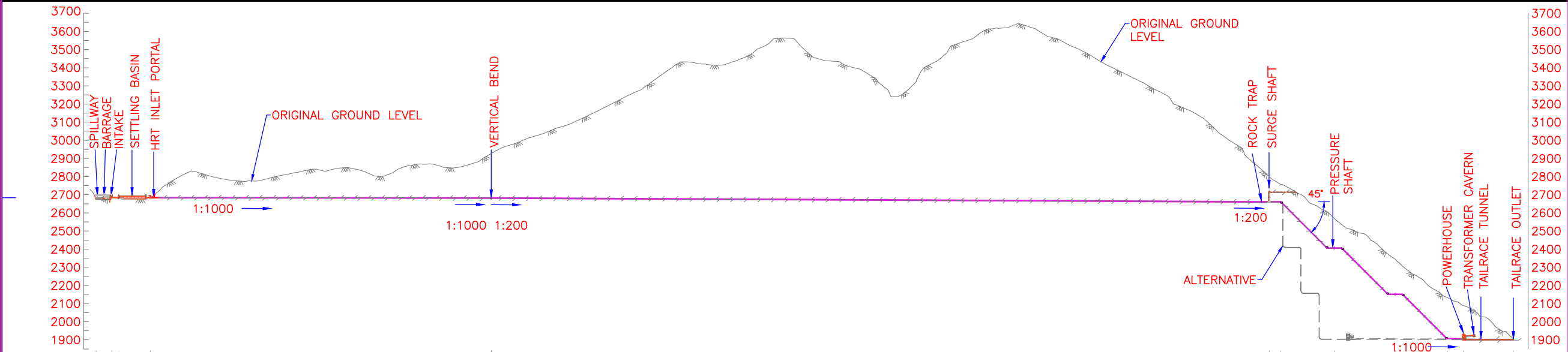
S. No.	Parameters	Details
7E.5	Down Surge Level	2667.04 masl
7E.6	Invert Level	2659.10 masl
7F	Pressure Shaft	
7F.1	Material	ASTM 537, ST-550, ST-450
7F.2	Length	1406.69 m
7F.3	Internal Diameter	2.1 m
7F.4	Thickness	10-48 mm
7F.5	Maximum Surge Pressure	78.8 m
7G	Powerhouse	
7G.1	Type	Underground
7G.2	Plan Dimensions	77.8 m (L) x14 m (B) x32.35 m (H)
7H	Tailrace	
7H.1	Type	Inverted D-shaped Tunnel
7H.2	Numbers	1
7H.3	Size	5 m (B) x 5 m (H)
7H.4	Length	266 m
7H.5	Outlet Water Level at River	1900.50 masl
7H.6	Minimum Tail Water Level	1900.30 masl
7H.7	Normal Tail Water Level	1900.40 masl
7H.8	Invert Level of Tailrace at Outlet	1900.50 masl
7H.9	Support Type	Rock bolts, Shotcrete
8	Turbine	
8.1	Type	Pelton, Vertical Axis
8.2	Number of Unit	3
8.3	Maximum Head	786.56 m
8.4	Minimum Head	766.54 m
8.5	Rated Net Head	766.54 m
8.6	Rated Capacity per Unit	36000 kW

S. No.	Parameters	Details
8.7	Discharge per Unit	5.57 m ³ /s
8.8	Turbine Axis Elevation	1906.40 masl
8.9	Turbine Efficiency	90%
9	Generator	
9.1	Type of Generators	Vertical Shaft
9.2	Centre Line Elevation	1902.4 masl
9.3	Number of Unit	3
9.4	Rated Output	42 MVA
9.5	Generation Voltage	13.8 kV
9.6	Frequency	50 Hz
9.7	Power Factor	0.85
9.8	Excitation System	Brushless
9.9	Speed	750 rpm
9.10	Generator Efficiency	96%
10	Transformer	
10.1	Cavern Size	85.0 m x 10.2 m x 13.20 m (L x B x H)
10.2	Type	3 x 1 Ph, Oil Immersed
10.3	Number of Phase	1
10.4	Number of Units	9+1
10.5	Frequency	50 Hz
10.6	Vector Group	Ynd11
10.7	Voltage Ratio	13.8 kV/132 kV
10.8	Transformer Efficiency	99%
11	Switchyard	
11.1	Type	GIS, Underground
11.2	Dimensions	18 m x 14 m x 10 m
11.3	Take-off Yard	30 m x 30 m
12	Transmission Line	

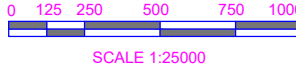
S. No.	Parameters	Details
12.1	Transmission Voltage	132 kV
12.2	Length	45 km
12.3	Connection Point	Nalgad Hub Substation, Danipeepal, Jajarkot/ Bafekot, Rukum
13	Power and Energy	
13.1	Installed Capacity	106,000 kW
13.2	Gross Head	789.60 m
13.3	Outage	5%
13.4	Dry Season Energy (with Outage)	193.24 GWh
13.5	Wet Season Energy (with Outage)	430.23 GWh
13.6	Dry Peak Energy (with Outage)	107.07 GWh
13.7	Dry Off-Peak Energy (with Outage)	86.17 GWh
13.8	Total Annual Energy (with Outage)	623.47 GWh



NOTES:
1) ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SPECIFIED.



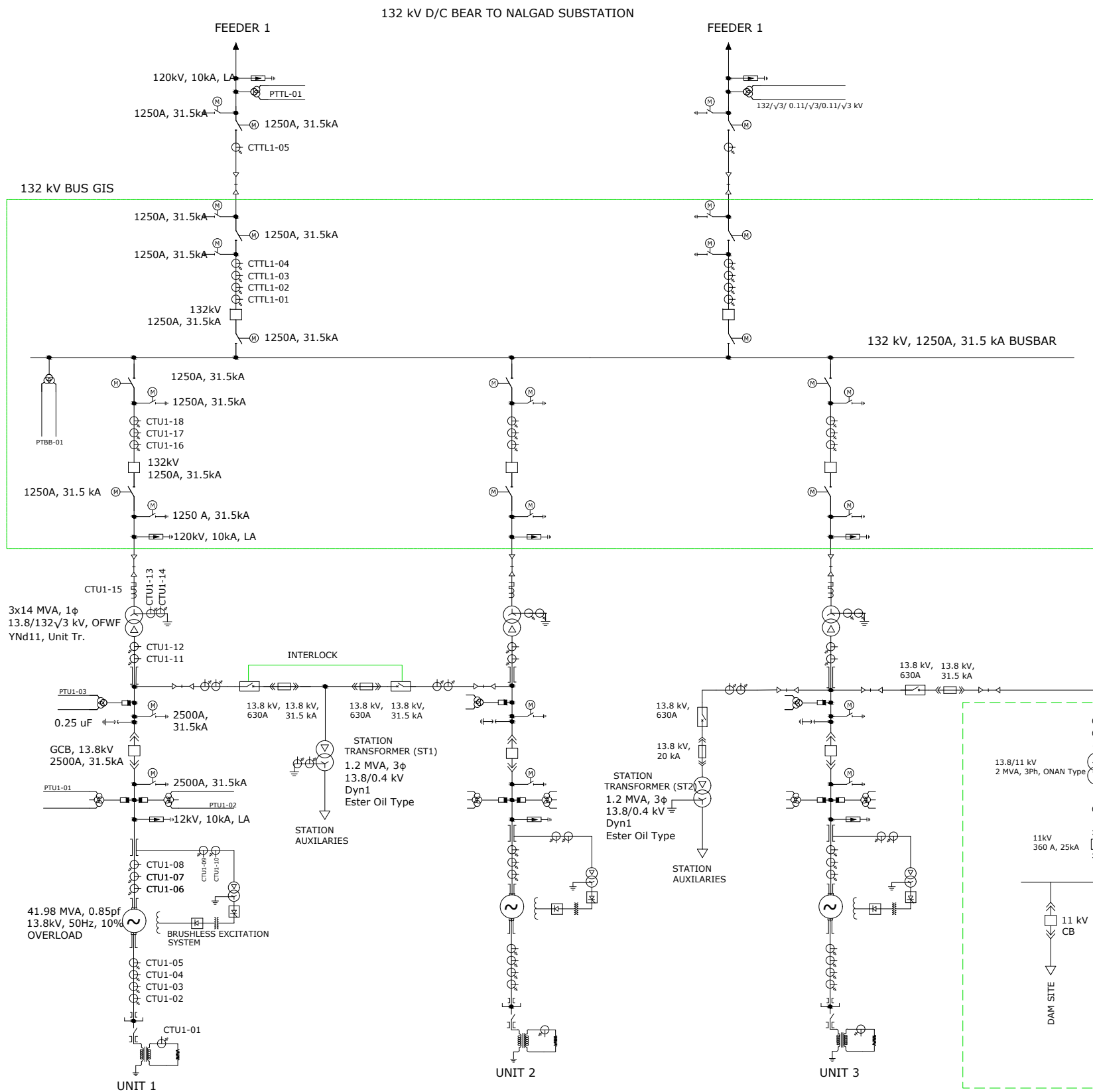
CHAINAGE	0+068.11 0+152.00 0+193.00 0+336.73	2678.59 2683.70 2681.70 2682.30	2682.08 2678.36 2684.84 2686.13
INVERT LEVEL	2+245.42	2680.43	2927.49
EXISTING LEVEL	6+530.78 6+592.36	2659.10 2659.10	2800.03 2758.02
	6+889.98	2404.82	2569.09
	7+225.01	2149.80	2344.52
	7+512.14 7+600.94	1905.29 1906.40	2132.77 2089.23
	7+877.27	1900.50	1901.43



CLIENT		CONSULTANT		PROJECT		DRAWN		DESIGNED		TITLE	
				JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		GTS DRAFTING CHECK GRT APPROVED PMS		PRK DESIGN CHECK NBB DRAWING NO. 977-2017-03/10C01		CIVIL DRAWINGS GENERAL PROJECT LAYOUT PLAN AND PROFILE	
JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL		NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL		ORIGINAL SIZE A3 CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		REPORT STATUS REV					

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SYNCHRONOUS GENERATOR		AC WATT METER		Over Speed Device		Current Transformer
	DIESEL ENGINE GENERATOR		AC VAR METER		Synchronous Speed Device		Stator Winding
	NEUTRAL GROUNDING TRANSFORMER		AC VOLT METER		Under Speed Device		Generator Circuit Breaker
	STAR/DELTA TRANSFORMER		AC AMMETER		Frequency Matching device		Generator
	SURGE ARRESTER		FREQUENCY METER		Distance Relay		Bus Bar
	SURGE CAPACITOR		WATTHOUR METER		Bearing Protective Device		Lighting Arrestor
	MOTOR OPERATED DISCONNECTING SWITCH		VAR HOUR METER		Mechanical Condition Monitoring		Cable
	MOTOR OPERATED EARTHING SWITCH		Differential Relay		Restricted Earth Fault Relay		Automatic Voltage Regulator
	CIRCUIT BREAKER (DRAWOUT)		Transformer Differential Relay		Oil Level Relay		Synchronization
	AIR CIRCUIT BREAKER		Stator Thermal Overload Relay		Out of Step Synchronizing		Earth Switch
	CIRCUIT BREAKER(NON DRAWOUT)		Rotor Thermal Overload Relay		Auto-Reclose Relay		
	FUSE		Instantaneous Over Current Relay		Under/Over Frequency Relay		
	DRAW OUT MCCB		Instantaneous Earth Fault Relay		Pilot Wire Relay		
	THREE WINDING TRANSFORMER		Buchholz Relay		Local breaker backup		
	TWO WINDING TRANSFORMER		Synchronizer or Synchronism Check		IDMT O/C Relay with high set instant. element		
	STAR POINT		Apparatus Thermal Device		Neutral time O/C Protection Relay		
	EARTH CONNECTION		Under Voltage Relay		Over Voltage Relay		
	CURRENT TRANSFORMER		Directional Power Relay		Overflux Protection Relay		
	XLPE CABLE		Loss of Excitation Relay		Voltage Balance Relay		
	BRUSHLESS EXCITATION SYSTEM		Negative Phase Sequence		Oil Pressure Relay		
	LOAD BREAK SWITCH		Thermal Overload Relay		Field Ground Protection Relay		
	DROPOUT FUSE		Field circuit breaker		100% Stator Earth Fault Protection		

CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR-10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE
		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		PRASHANT		
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV 03	APPROVED	BISHNU DRAWING NO.	ELECTRICAL DRAWINGS ELECTRICAL SYMBOLS AND ABBREVIATIONS
				PMS	977-2017-03/10E00	



- NOTES:
1. THIS DRAWING REPRESENTS THE SINGLE LINE DIAGRAM OF THIS PROJECT.
 2. CT/PT PARAMETERS ARE IDENTICAL IN ALL UNITS AND ALL THE LINE BAYS HAVE SIMILAR CT/PT.
 3. NO. OF CTs CORE AND RATING ARE INDICATIVE ONLY AND SHALL BE FINALIZED DURING DETAIL ENGINEERING.
 4. THE RATINGS OF NCT AND NGR ARE INDICATIVE ONLY AND SHALL BE FINALIZED DURING DETAIL ENGINEERING.
 5. FOR THE PROTECTION OF THE HV, MV, AND LV SYSTEM, REFER TO THE SEPARATE DRAWINGS.

CT Schedule						
CT No.	Nominal Voltage	Core No.	Ratio	Accuracy Class	Location	Purpose
CTU1-01	13.8 kV	1	2500/1A	SP20	Generator Neutral	Protection
CTU1-02	13.8 kV	1	2500/1A	SP20	-	Protection
CTU1-03	13.8 kV	1	2500/1A	SP20	-	Protection
CTU1-04	13.8 kV	1	2500/1A	PS	-	Protection
CTU1-05	13.8 kV	1	2500/1A	SP20	-	Spare
CTU1-06	13.8 kV	1	2500/1A	PS	-	Protection
CTU1-07	13.8 kV	1	2500/1A	SP20	-	AVR
CTU1-08	13.8 kV	1	2500/1A	0.5	-	Metering
CTU1-09	13.8 kV	1	2500/1A	SP20	-	Protection
CTU1-10	13.8 kV	1	2500/1A	SP20	-	Protection
CTU1-11	13.8 kV	1	2500/1A	SP20	-	Protection
CTU1-12	13.8 kV	1	2500/1A	PS	-	Protection
CTU1-13	132 kV	1	250/1A	SP20	-	Protection
CTU1-14	132 kV	1	250/1A	SP20	-	Protection
CTU1-15	132 kV	1	250/1A	PS	-	Protection
132kV GIS						
CTU1-16	132 kV	1	250/1A	SP20	-	Protection
CTU1-17	132 kV	1	250/1A	SP20	-	Protection
CTU1-18	132 kV	1	250/1A	PS	-	Protection
Feeder						
CTTL-01	132 kV	1	400-800/1A	SP20	Feeder Bay	Protection
CTTL-02	132 kV	1	400-800/1A	SP20	Feeder Bay	Protection
CTTL-03	132 kV	1	400-800/1A	PS	Feeder Bay	Metering
CTTL-04	132 kV	1	400-800/1A	0.2	Feeder Bay	Protection
CTTL-05	132 kV	1	400-800/1A	PS	Feeder Bay	Protection

PT Schedule						
PT No.	Nominal Voltage	Core No.	Voltage Ratio	Accuracy Class	Location	Purpose
PTU1-01	13.8 kV	1	13.8/√3 0.11/√30.11/√30.11/√3 kV	3P	Generator	Protection and Synchronization
PTU1-02	13.8 kV	1	13.8/√3 0.11/√30.11/√30.11/√3 kV	3P/0.2	Generator	Protection and Metering
PTU1-03	13.8 kV	1	13.8/√3 0.11/√30.11/√3 kV	3P	Generator	Protection and Synchronization
PTBB-01	132 kV	1	132/√3 0.11/√30.11/√3 kV	3P	GIS	Protection and Synchronization
PTL1-01	132 kV	1	132/√3 0.11/√30.11/√30.11/√3 kV	3P/0.2	Take-off yard	Metering, Protection and Synchronization



JAGDULLA HYDROPOWER
COMPANY LTD.
BANESHWOR-10
KATHMANDU, NEPAL



NEA ENGINEERING COMPANY LTD.
TRADE TOWER, THAPATHALI,
KATHMANDU, NEPAL

PROJECT
JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW)
DOLPA, NEPAL

ORIGINAL SIZE
A3

CONTRACT NUMBER:
VUCL-NEC-DES-074/75-003-A

REPORT STATUS

REV
03

DRAWN

PRASHANT

DRAFTING CHECK

GRT

APPROVED

PMS

DESIGNED

DESIGN CHECK

BISHNU

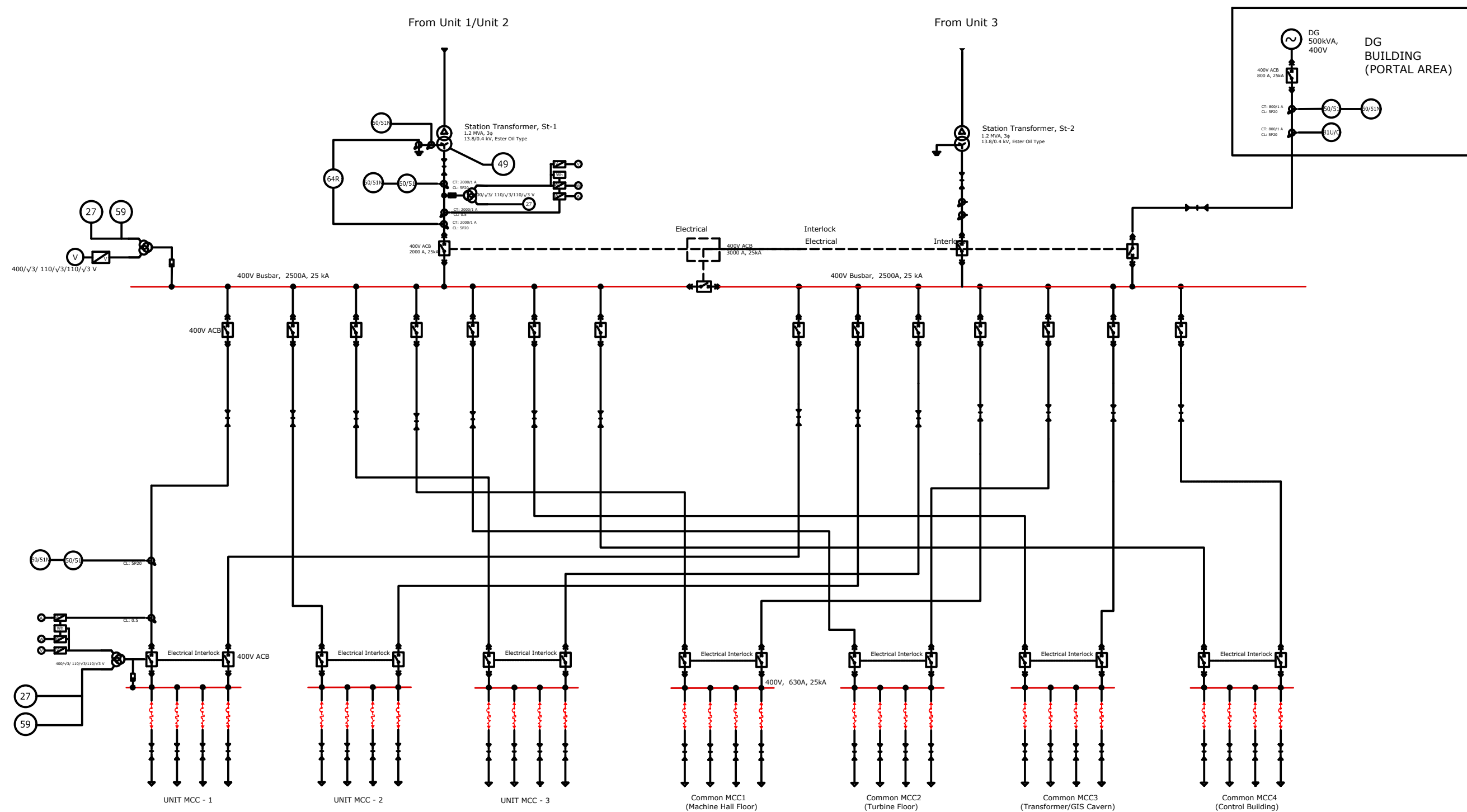
DRAWING NO.

977-2017-03/10E01

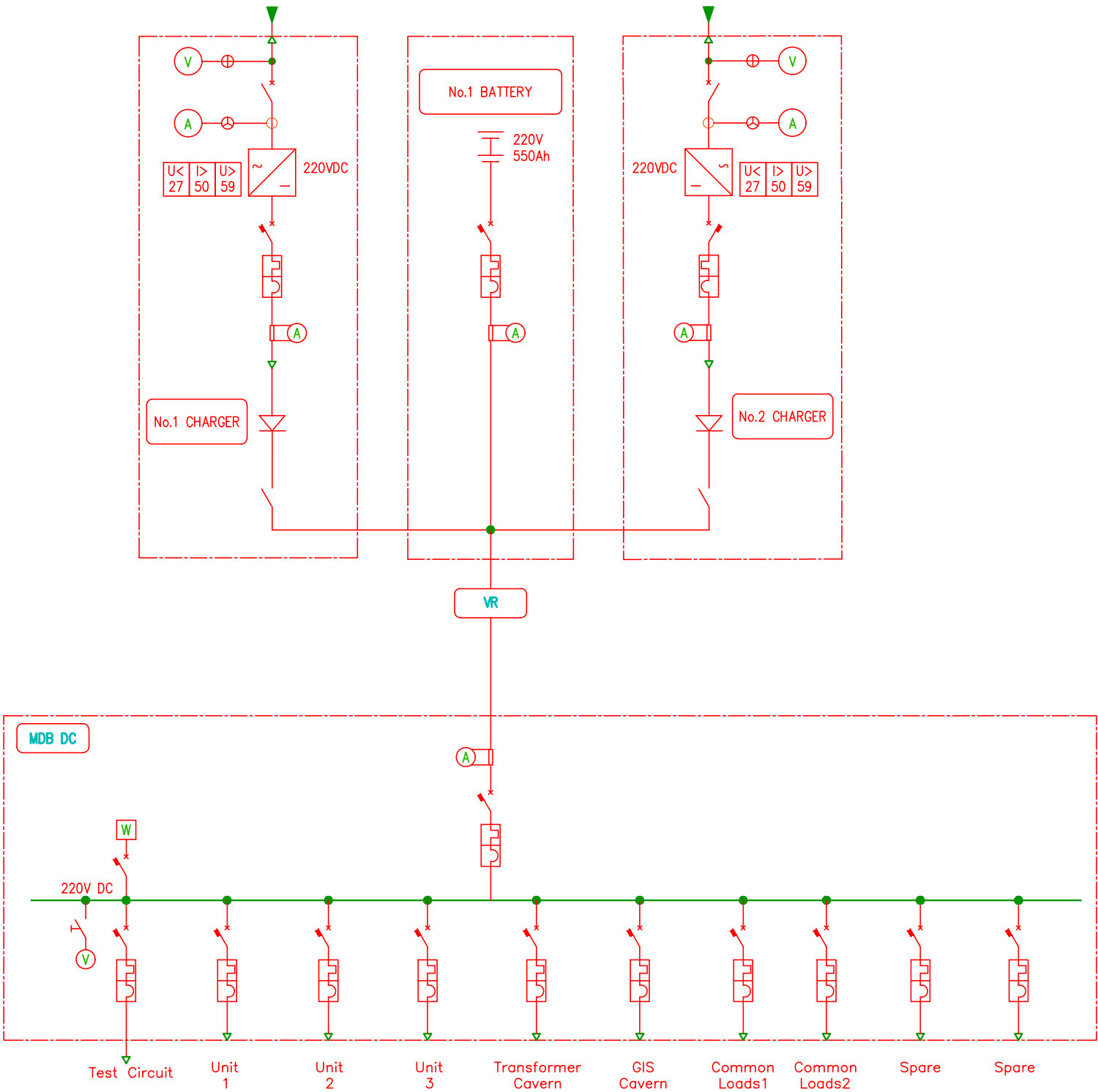
TITLE

ELECTRICAL DRAWINGS

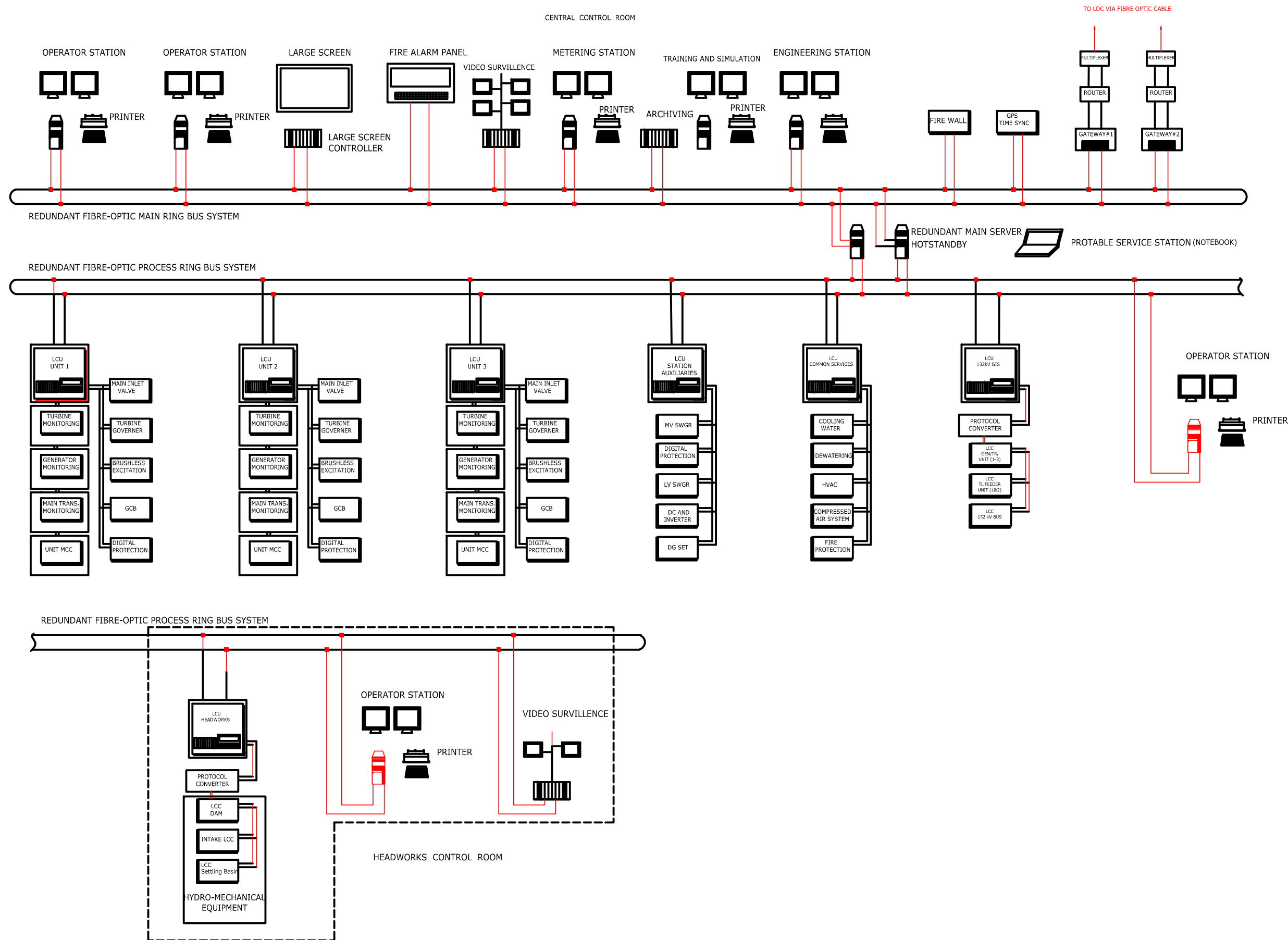
Main Single Line Diagram



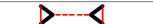
DC SYSTEM FOR POWERPLANT

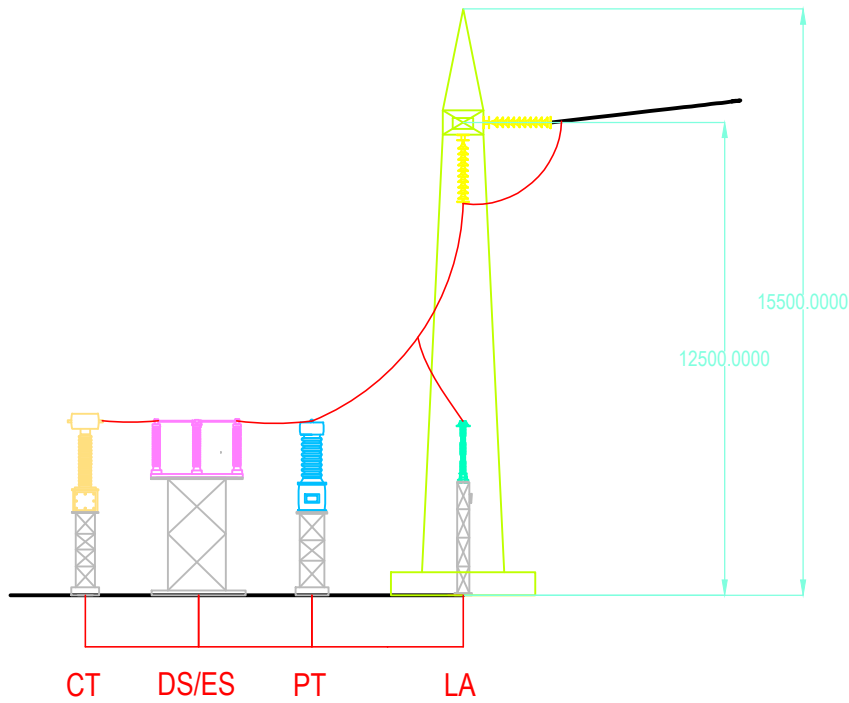
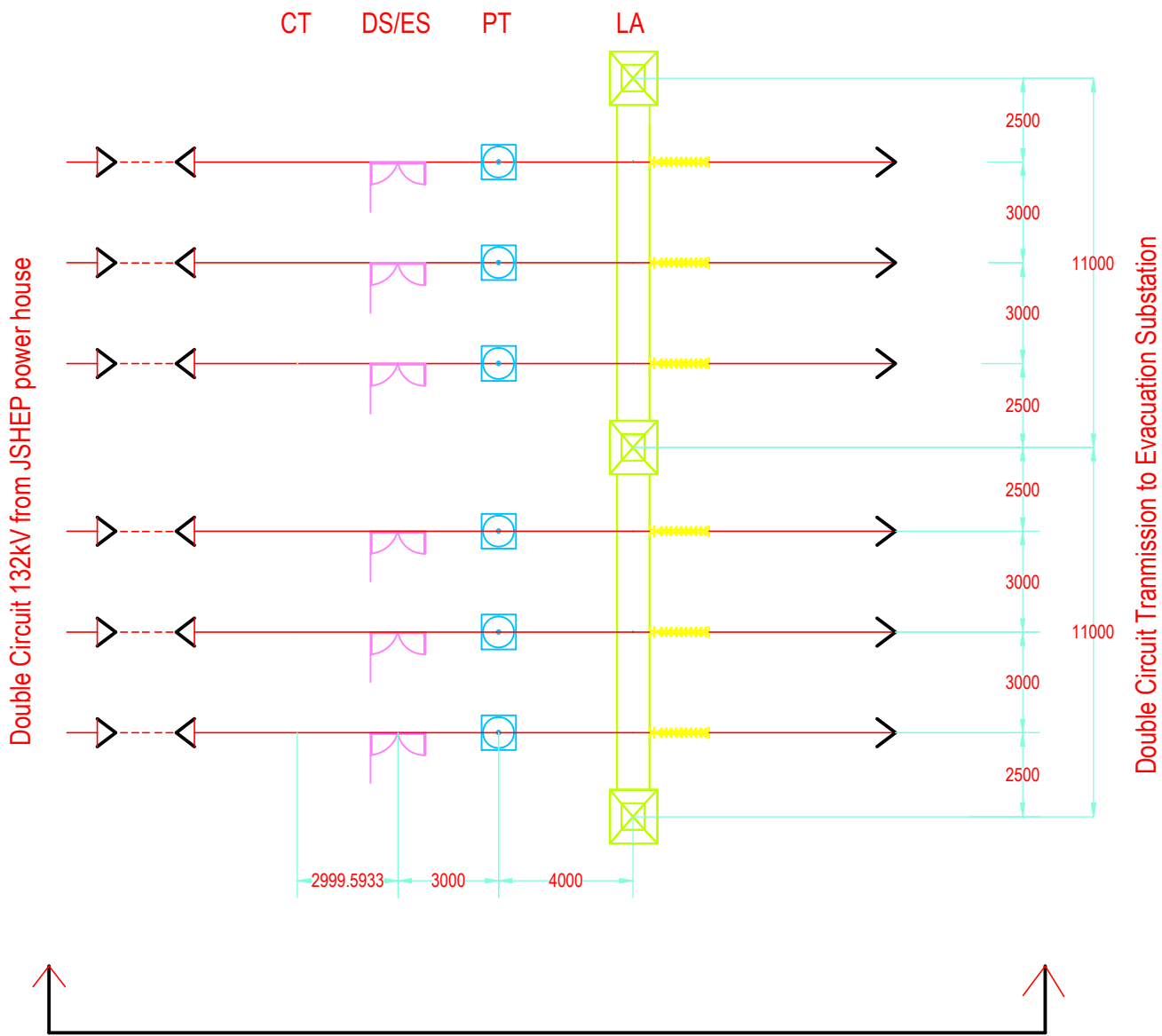


CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR-10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE	
		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		PRASHANT			
		ORIGINAL SIZE A3		DRAFTING CHECK	DESIGN CHECK		
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		REPORT STATUS	BISHNU		
				GRT	DRAWING NO.	ELECTRICAL DRAWINGS ELECTRICAL LOW VOLTAGE DC SYSTEM	
				APPROVED	977-2017-03/10E05		
				PMS			

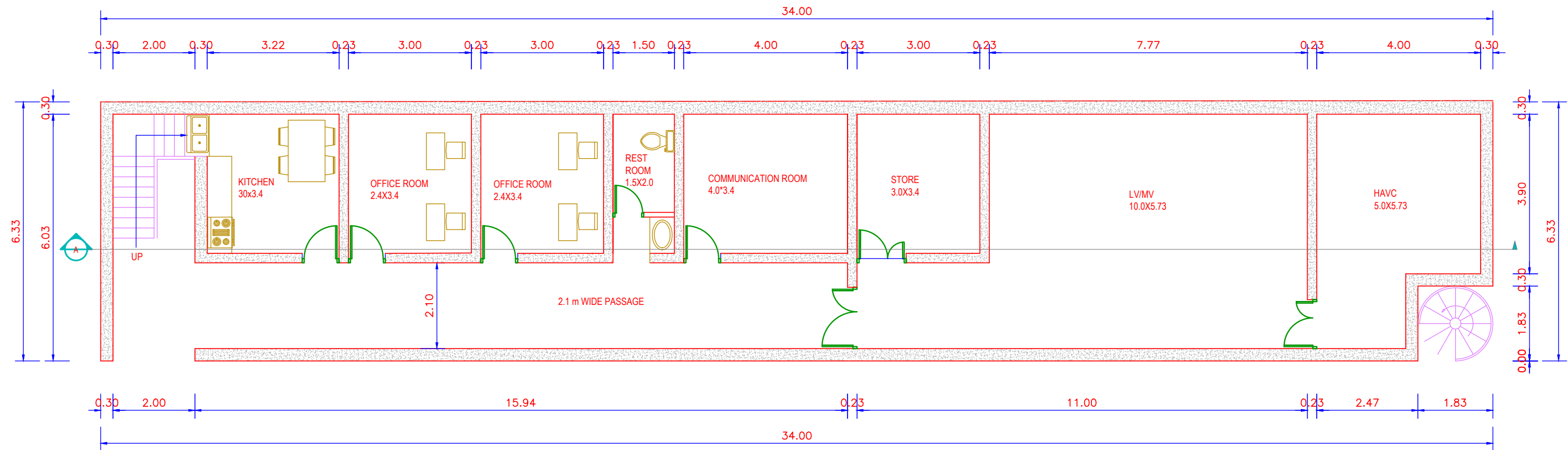


CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR-10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE
		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW)		PRASHANT		
		DOLPA, NEPAL		DRAFTING CHECK	DESIGN CHECK	
		ORIGINAL SIZE		GRT	BISHNU	
A3		REPORT STATUS	APPROVED	DRAWING NO.	ELECTRICAL AUTOMATION AND CONTROL SYSTEM ARCHITECTURE	
CONTRACT NUMBER:		REV	PMS	977-2017-03/10E06		
VUCL-NEC-DES-074/75-003-A						

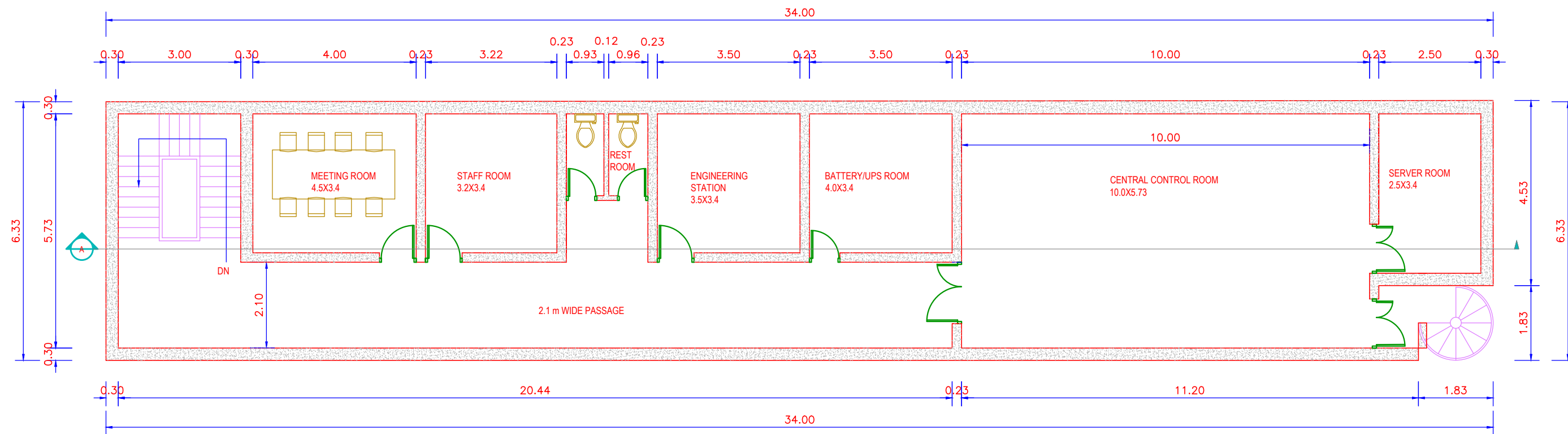
LEGEND		
S.N.	Component	Symbol
1	Lighting Arrester	
2	CT	
3	PT	
4	Isolator with ES	
5	Cable	



CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR-10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE
		JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		PRASHANT		
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT	BISHNU	
				APPROVED	DRAWING NO.	
				PMS	977-2017-03/10E07	
ELECTRICAL DRAWINGS LAYOUT OF 132 kV TAKE-OFF YARD						

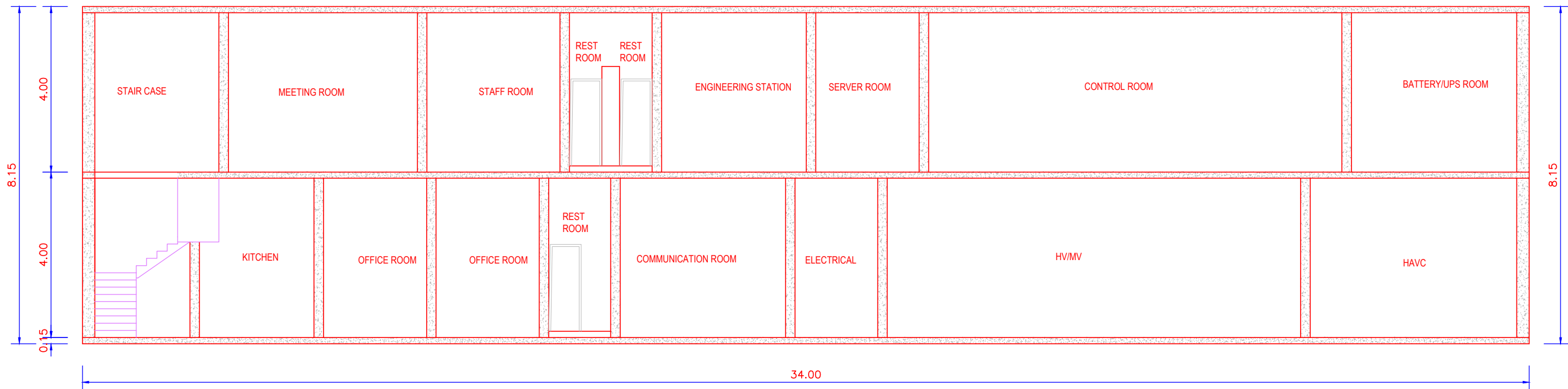


GROUND FLOOR PLAN



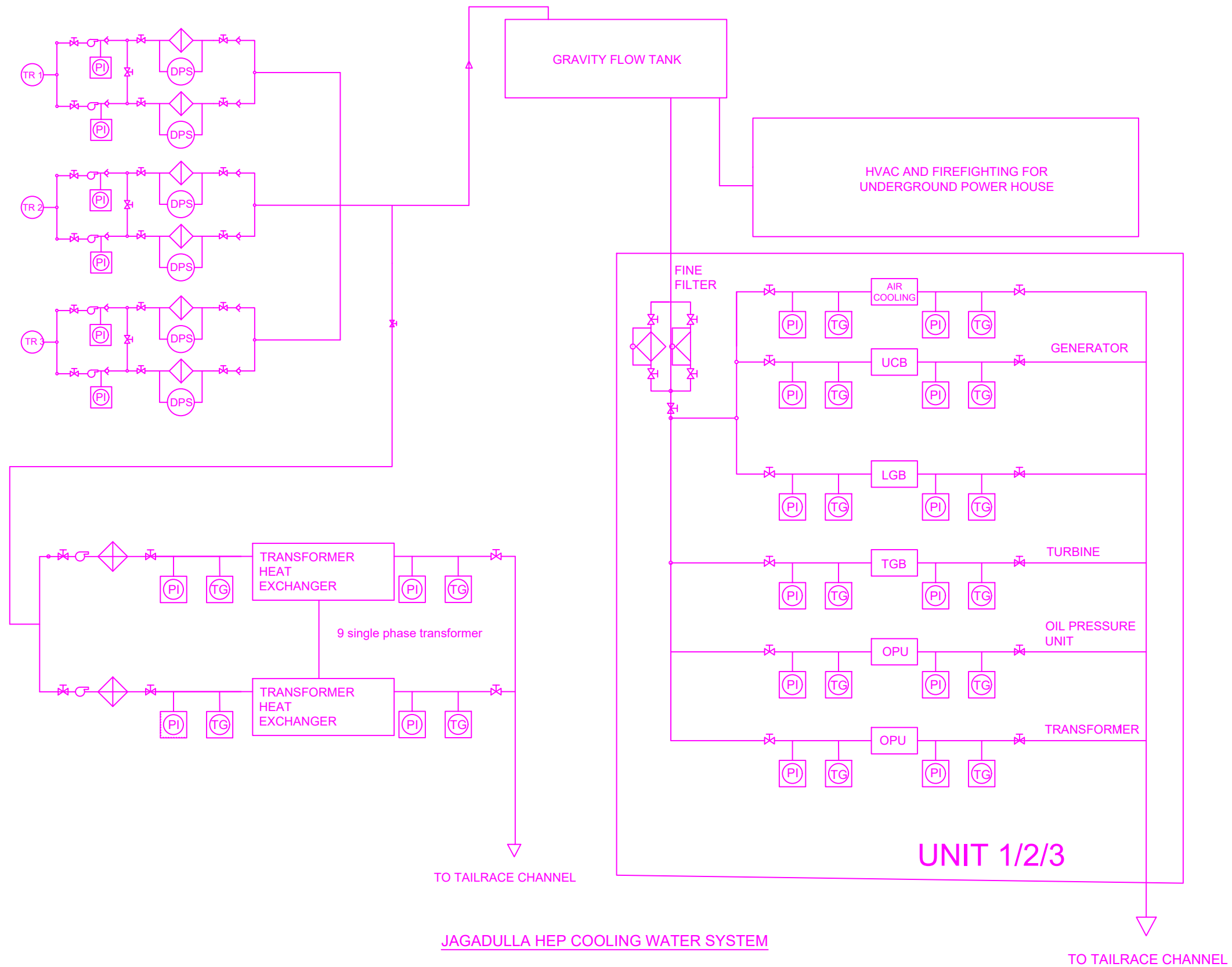
FIRST FLOOR PLAN

CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR-10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		DRAWN PRASHANT	DESIGNED	TITLE ELECTRICAL DRAWINGS CONTROL BUILDING PLAN
				DRAFTING CHECK	DESIGN CHECK	
				GRT	BISHNU	
				APPROVED	DRAWING NO.	
		ORIGINAL SIZE A3	REPORT STATUS	PMS	977-2017-03/10E08	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV			



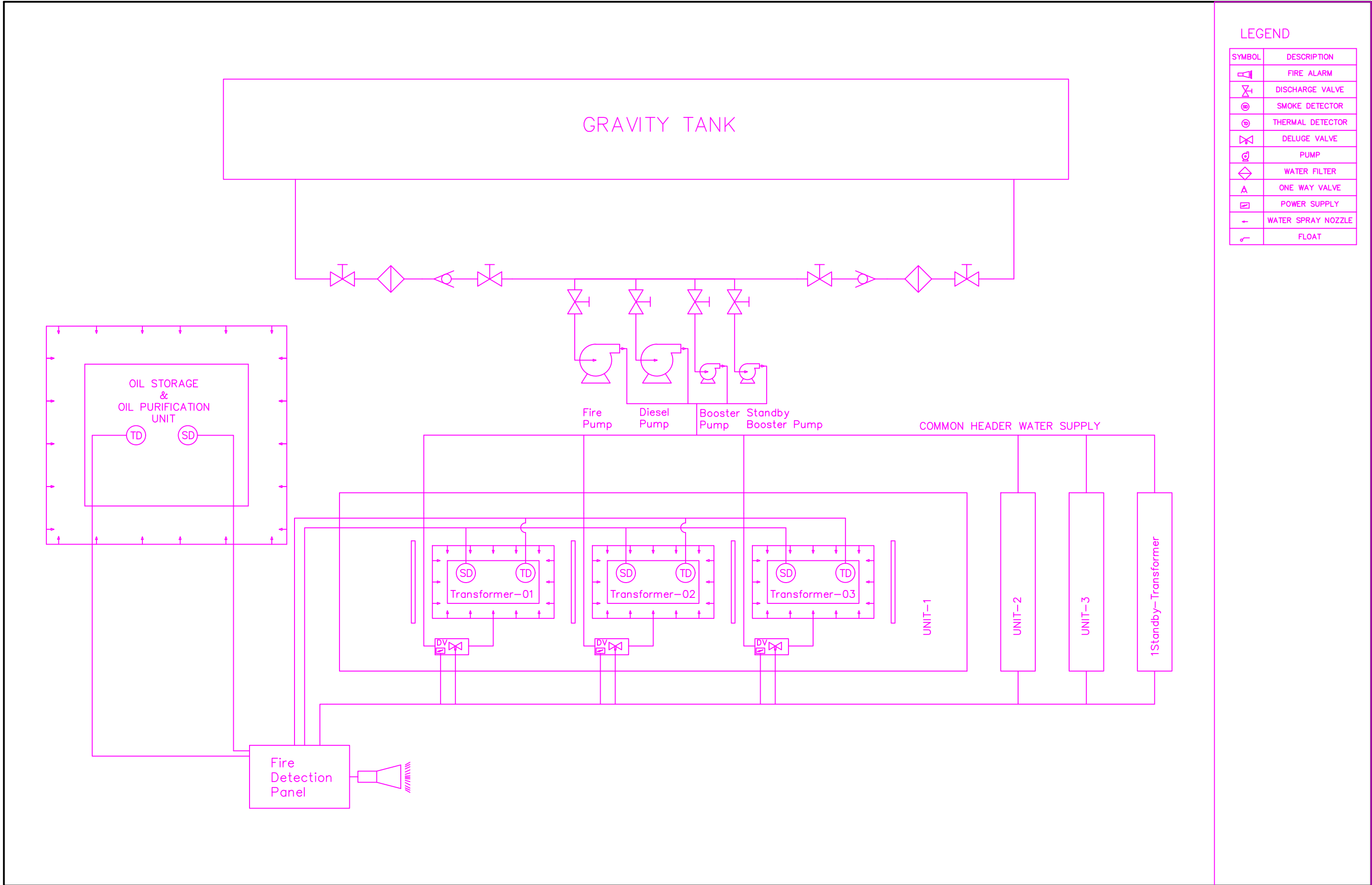
SECTION AT A-A

CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR-10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE	
		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		PRASHANT			
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK		
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT	BISHNU		
				APPROVED	DRAWING NO.	ELECTRICAL DRAWINGS CONTROL BUILDING SECTION	
				PMS	977-2017-03/10E09		



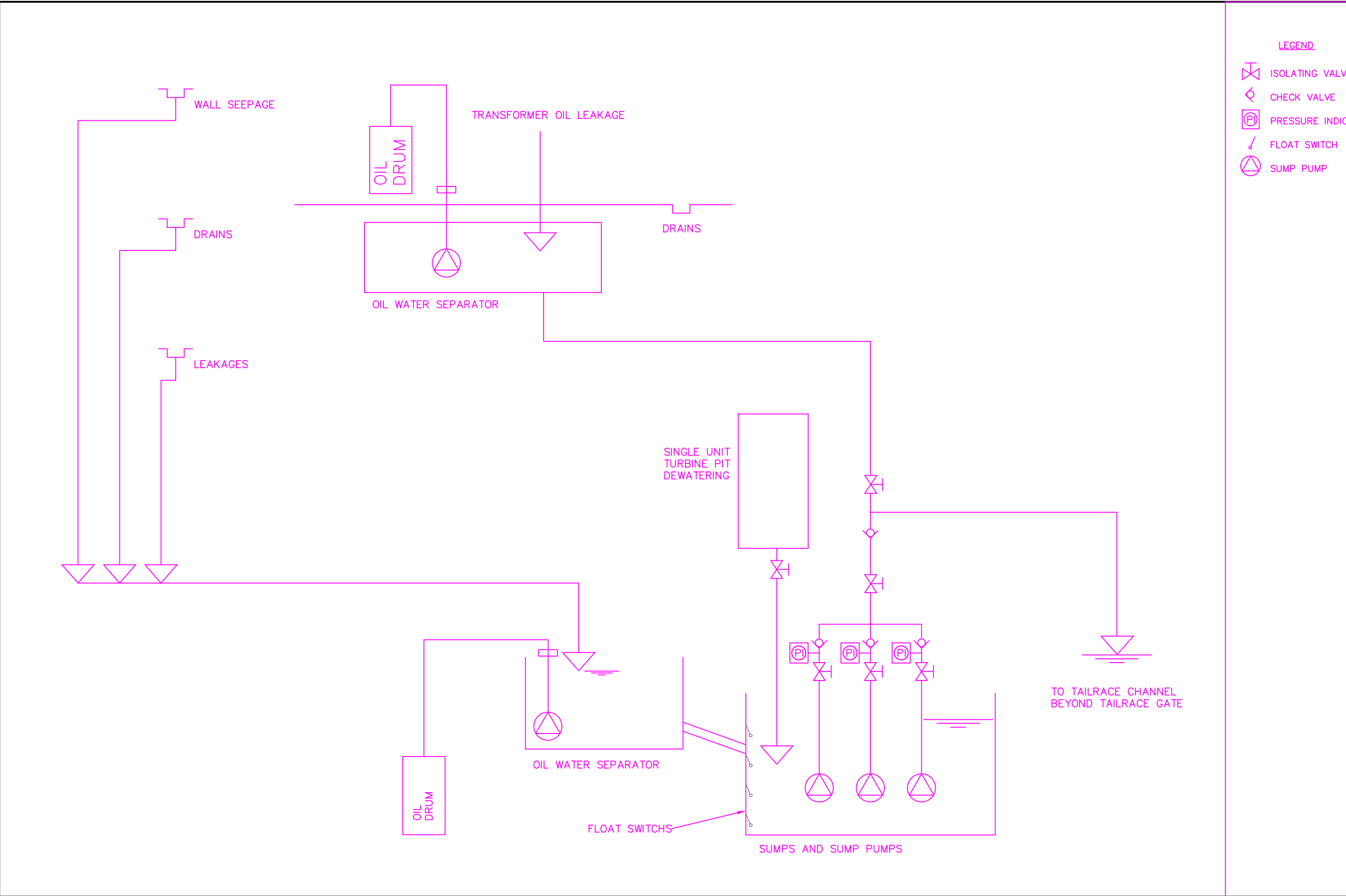
LEGEND	
	TEMPERATURE GUAGE
	PRESSURE INDICATOR
	ISOLATING VALVE
	WATER FILTER
	PUMP
	CHECK VALVE
	DIFFERENTIAL PRESSURE SWITCH

CLIENT		CONSULTANT		PROJECT		DRAWN	DESIGNED	TITLE	
 JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL		 NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW)		STB			
				DOLPA, NEPAL		DRAFTING CHECK	DESIGN CHECK		
				ORIGINAL SIZE A3	REPORT STATUS	GRT	SMT		
				CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	APPROVED	DRAWING NO.		
						PMS	977-2017-03/10M02	MECHANICAL AUXILIARY DRAWINGS SCHEMATIC DIAGRAM OF COOLING WATER SYSTEM	

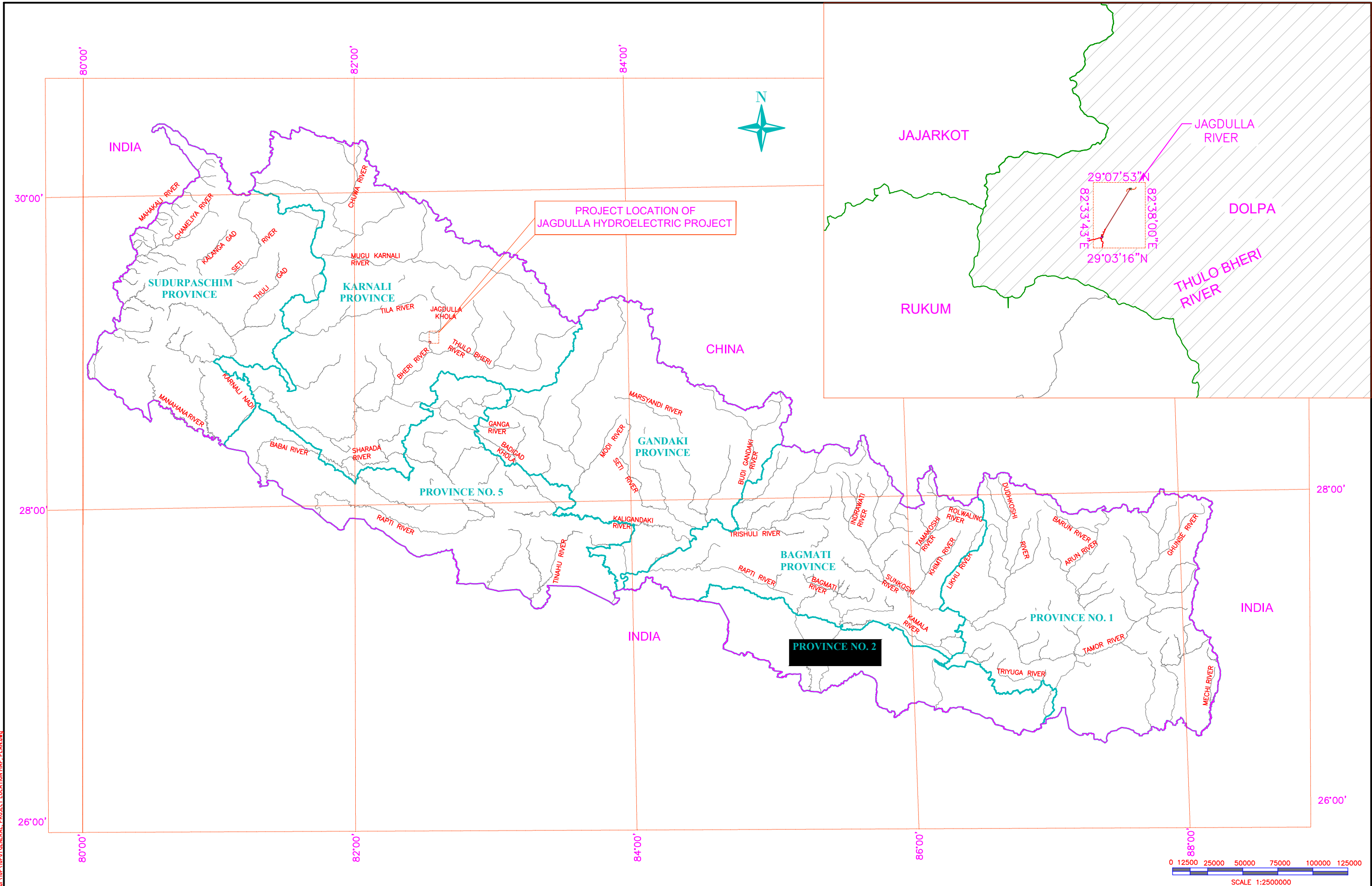


LEGEND	
SYMBOL	DESCRIPTION
	FIRE ALARM
	DISCHARGE VALVE
	SMOKE DETECTOR
	THERMAL DETECTOR
	DELUGE VALVE
	PUMP
	WATER FILTER
	ONE WAY VALVE
	POWER SUPPLY
	WATER SPRAY NOZZLE
	FLOAT

CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE		
		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		RJK	RJK			
		ORIGINAL SIZE A3		DRAFTING CHECK	DESIGN CHECK			
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		GRT APPROVED	SMT DRAWING NO.			
		REPORT STATUS		PMS	977-2017-03/10M03	MECHANICAL AUXILIARY DRAWINGS TRANSFORMER FIREFIGHTING SYSTEM		
		REV						

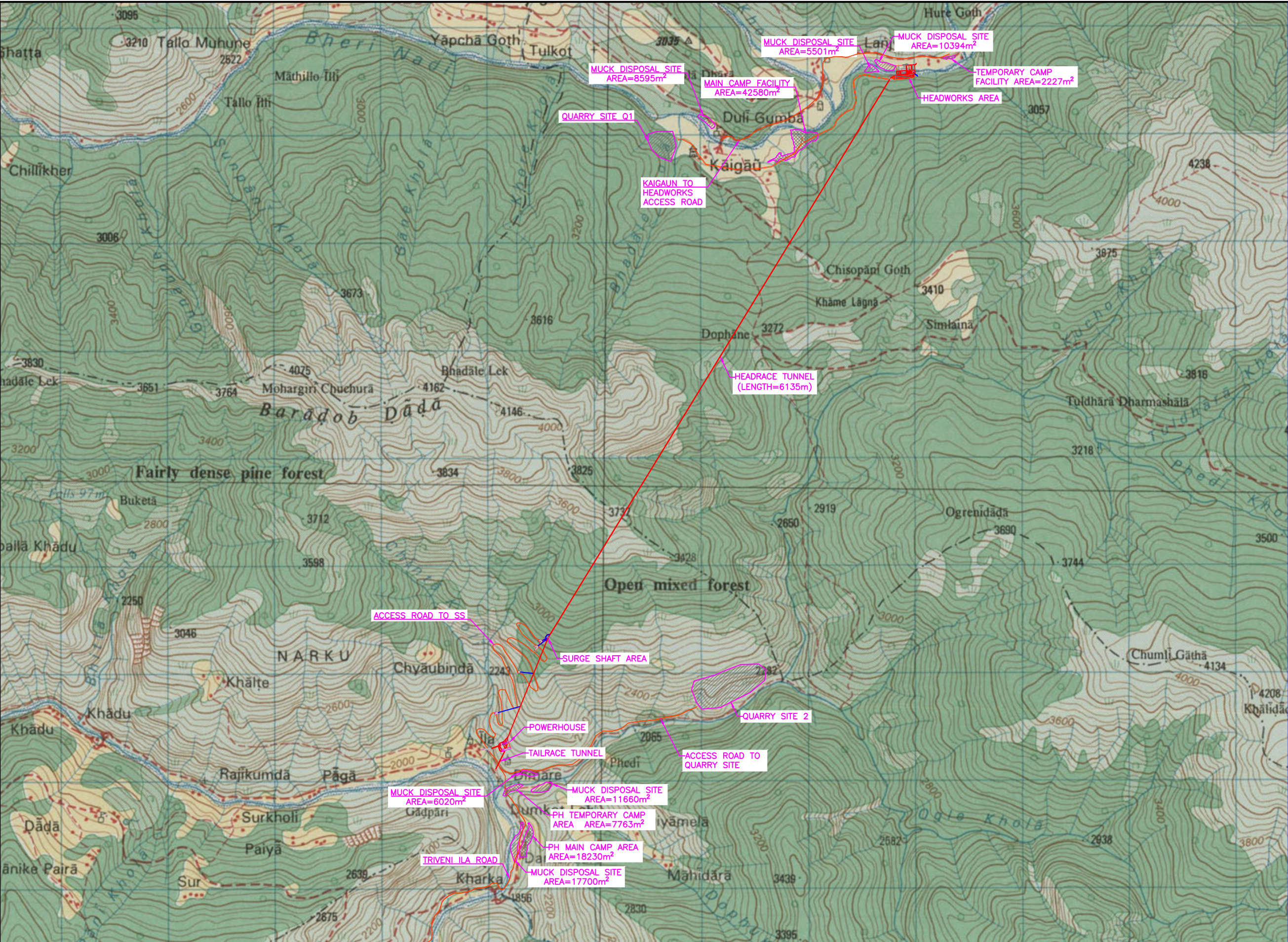


CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE
		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		SMT	SBT	
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT APPROVED PMS	SMT DRAWING NO. 977-2017-03/10M04	
MECHANICAL AUXILIARY DRAWINGS DRAINAGE AND DEWATERING SYSTEM						



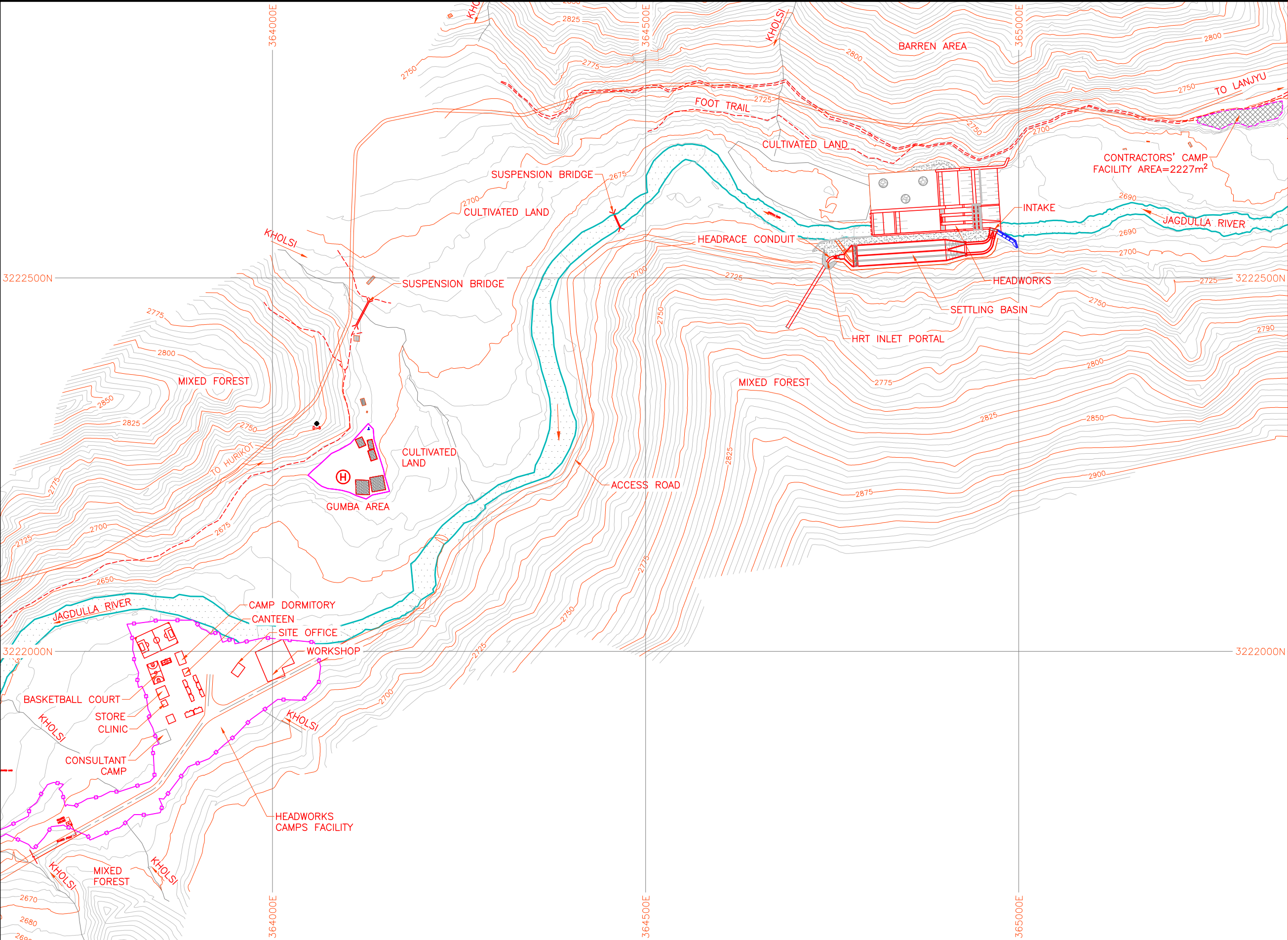
CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE
		JAGDULLA PROR HYDRO ELECTRIC PROJECT (106 MW) DOLPA, NEPAL		GRT	NBB	
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK	
			CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT	
				APPROVED	DRAWING NO.	
				PMS	977-2017-03/10P01	

GENERAL
PROJECT LOCATION MAP



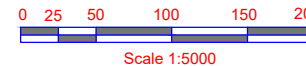
NOTES:
1) ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SPECIFIED.

CLIENT		CONSULTANT		PROJECT		DRAWN	DESIGNED	TITLE
 JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL		 NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL		JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		KGB	PRK	
						DRAFTING CHECK	DESIGN CHECK	
						GRT	NBB	
						APPROVED	DRAWING NO.	
				ORIGINAL SIZE A3	REPORT STATUS	PMS	977-2017-03/10P02	GENERAL PROJECT LAYOUT PLAN
				CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV			

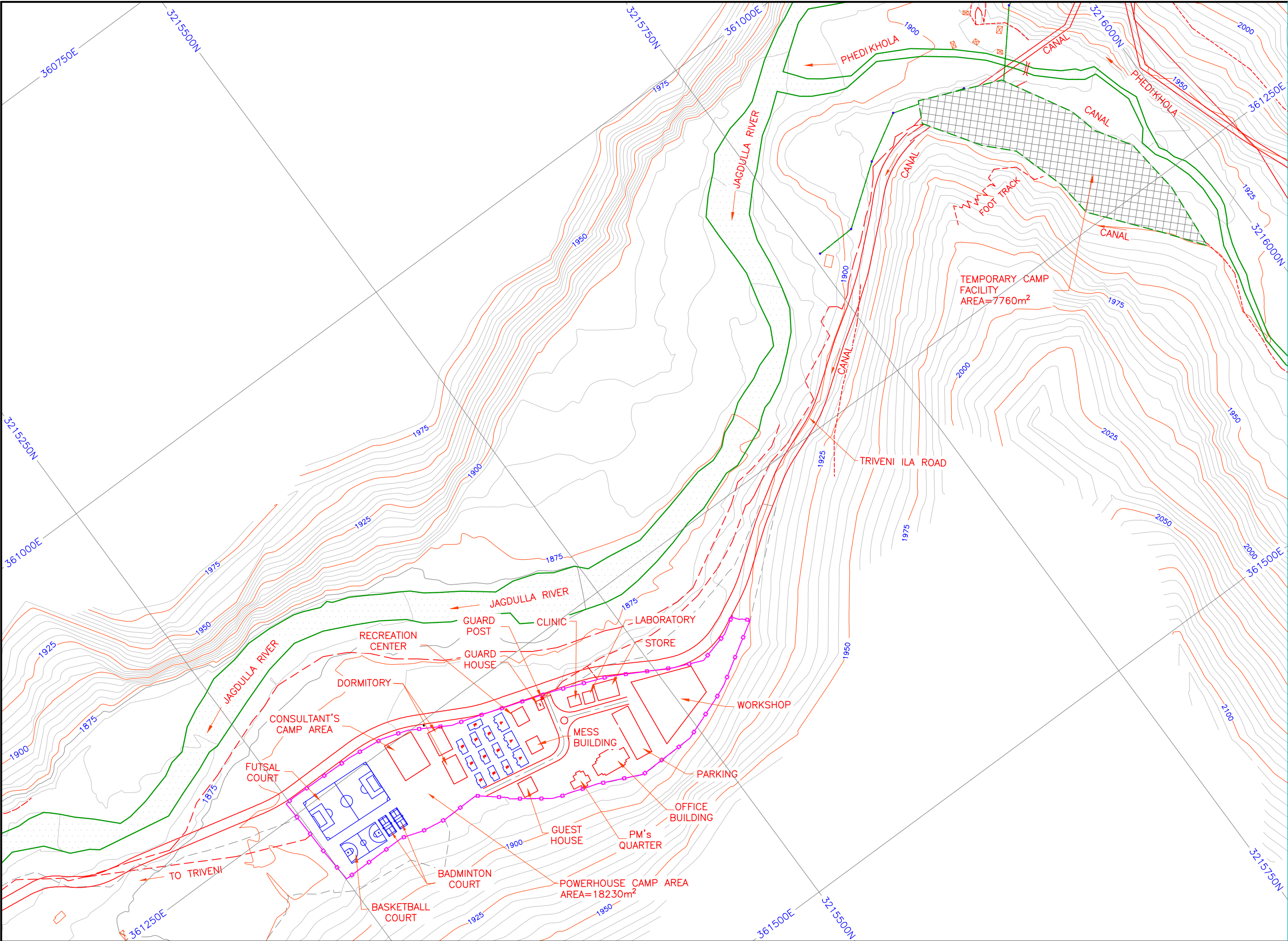


NOTES:
1) ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SPECIFIED.

- LEGEND**
- MAJOR CONTOUR
 - MINOR CONTOUR
 - RIVER
 - KHOLSI
 - CANAL
 - TRACK
 - BRIDGE
 - BUILDING
 - HELIPAD
 - TRAVERSE POINT
 - TEMPLE
 - GAUGE STATION
 - TRANSFORMER
 - LOW TENSION LINE
 - VILLAGE BOUNDARY
 - HUT
 - FLOOD LEVEL



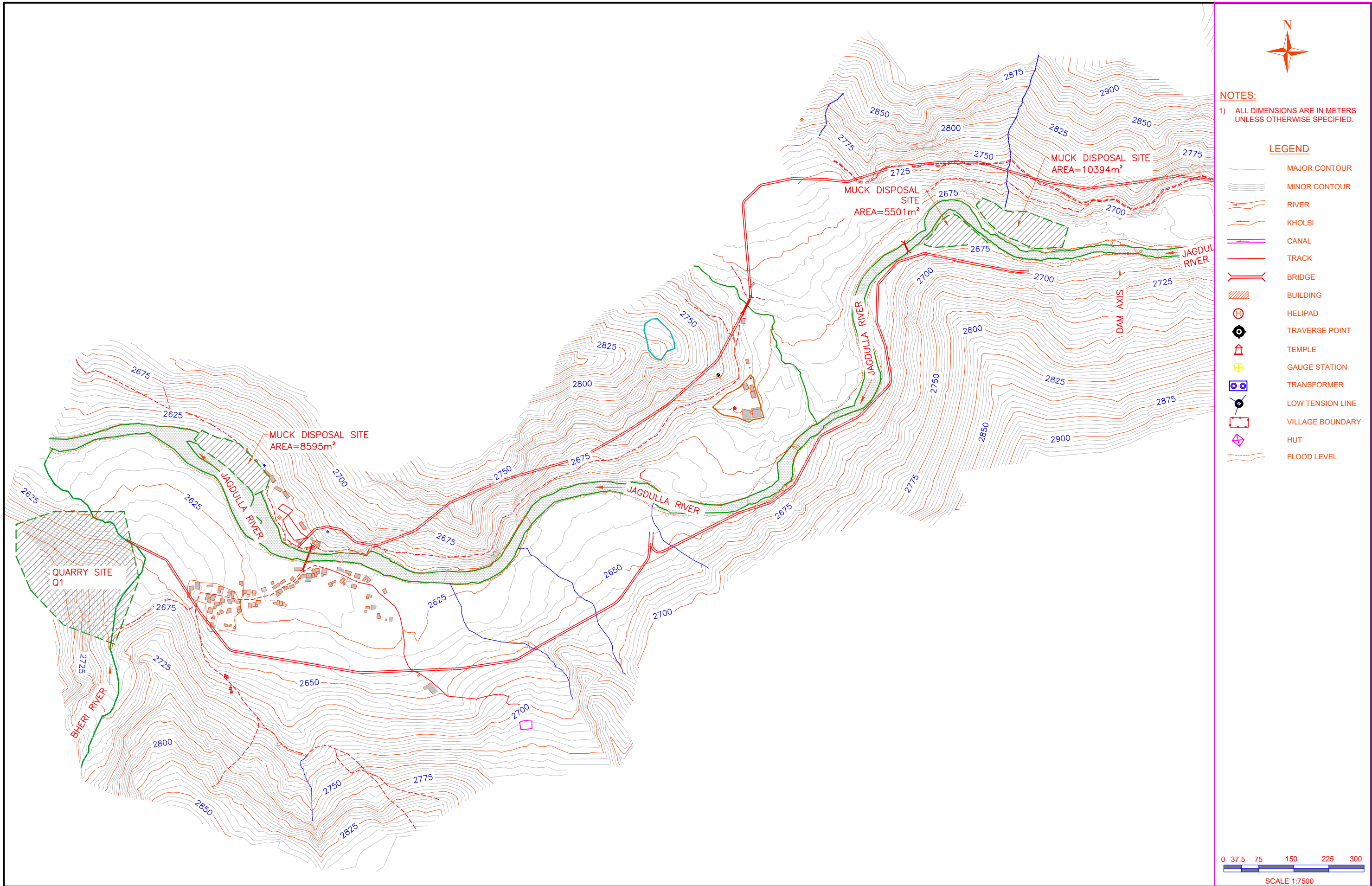
CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL		CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL		PROJECT JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		DRAWN GRT DRAFTING CHECK GRT APPROVED PMS		DESIGNED YGT DESIGN CHECK PMS DRAWING NO. 977-2017-03-10P03		TITLE PROJECT OVERVIEW HEADWORKS SITE SITE ESTABLISHMENT CAMP AREA	
ORIGINAL SIZE A3		REPORT STATUS		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		REV					



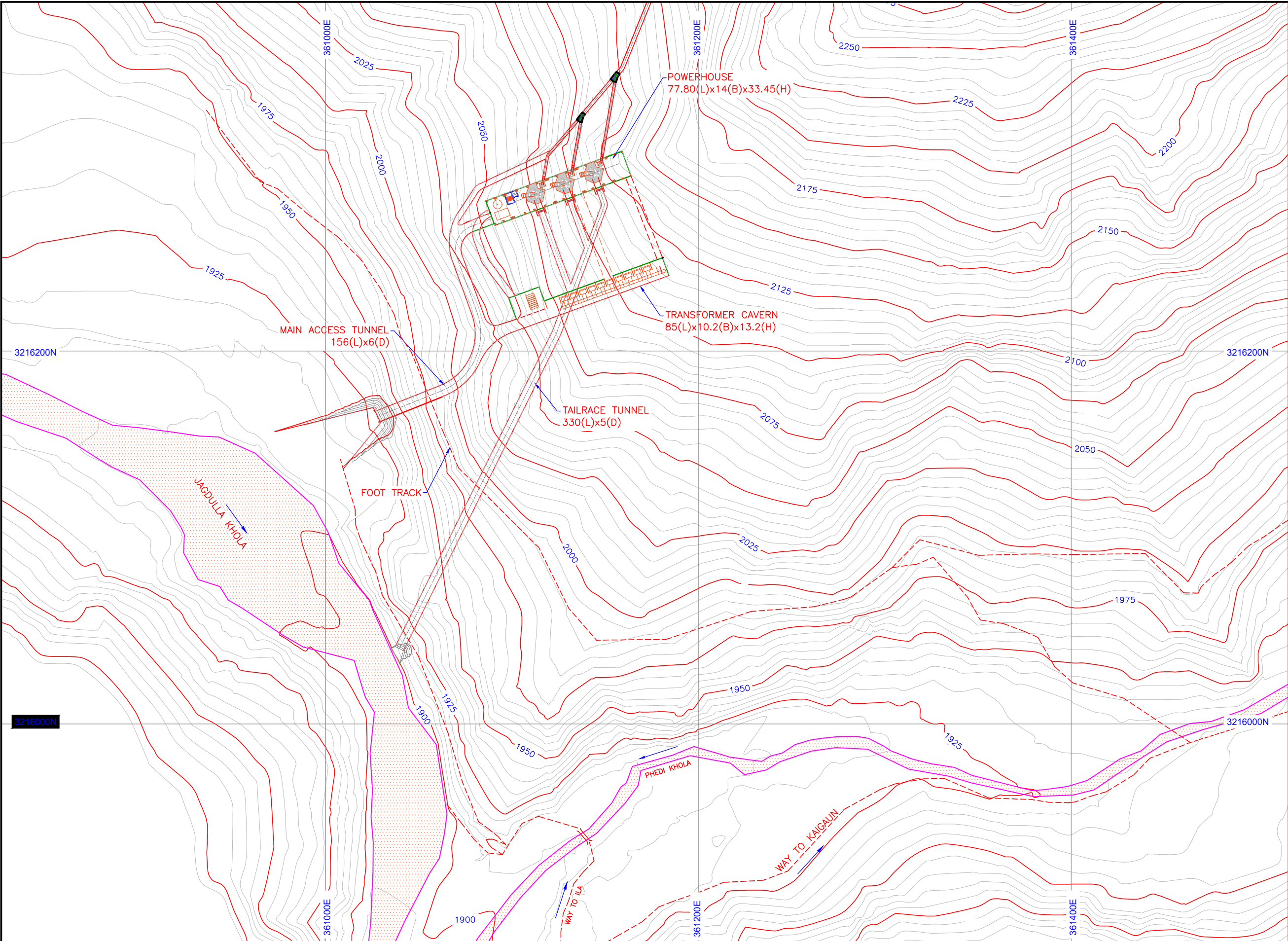
NOTES:
1) ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SPECIFIED.

- LEGEND**
- MAJOR CONTOUR
 - MINOR CONTOUR
 - RIVER
 - KHOLSI
 - CANAL
 - TRACK
 - BRIDGE
 - BUILDING
 - HELIPAD
 - TRAVERSE POINT
 - TEMPLE
 - GAUGE STATION
 - TRANSFORMER
 - LOW TENSION LINE
 - VILLAGE BOUNDARY
 - HUT
 - FLOOD LEVEL

CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL		CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL		PROJECT JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		DRAWN GTS DRAFTING CHECK GRT APPROVED PMS		DESIGNED YGT DESIGN CHECK NBB DRAWING NO. 977-2017-03-10P04		TITLE PROJECT OVERVIEW POWERHOUSE SITE SITE ESTABLISHMENT CAMP AREA	
ORIGINAL SIZE A3		REPORT STATUS		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		REV					



CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		DRAWN GTS	DESIGNED YGT	TITLE PROJECT OVERVIEW HEADWORKS QUARRY AND MUCK DISPOSAL SITE MAP PLAN
				DRAFTING CHECK GRT	DESIGN CHECK NBB	
		ORIGINAL SIZE A3	REPORT STATUS REV	APPROVED PMS	DRAWING NO. 977-2017-03/10P05	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A				



NOTES:

1) ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SPECIFIED.

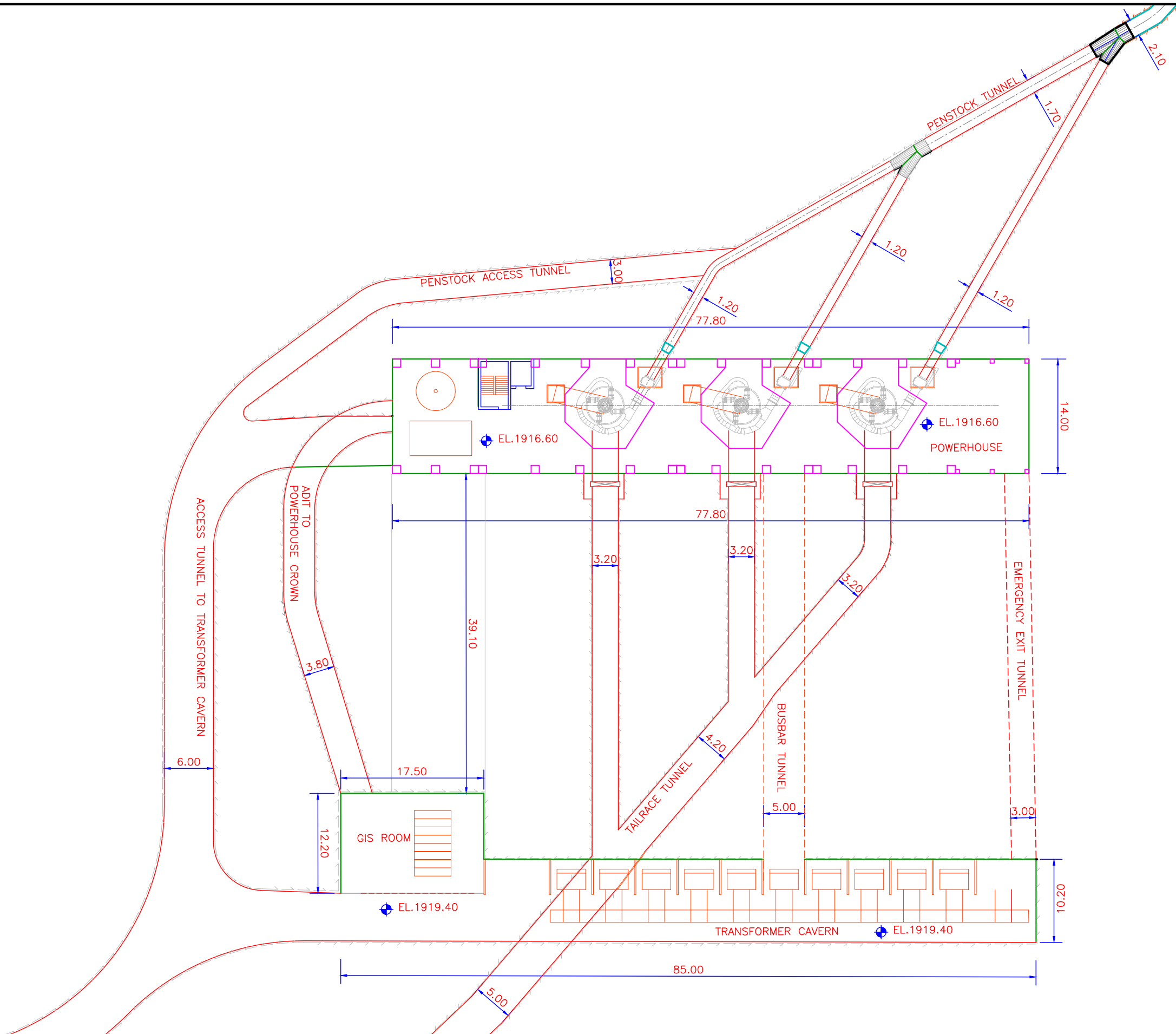
LEGEND

- MAJOR CONTOUR
- MINOR CONTOUR
- RIVER
- KHOLSI
- CANAL
- TRACK
- BRIDGE
- BUILDING
- HELIPAD
- TRAVERSE POINT
- TEMPLE
- GAUGE STATION
- TRANSFORMER
- LOW TENSION LINE
- VILLAGE BOUNDARY
- HUT
- FLOOD LEVEL

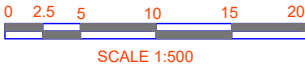
SCALE 1:2000

0 10 20 40 60 80

CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL	PROJECT JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL	DRAWN GTS DRAFTING CHECK GRT APPROVED PMS	DESIGNED YGT DESIGN CHECK NBB DRAWING NO. 977-2017-03/50C01	TITLE POWERHOUSE GENERAL LAYOUT



- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.



JAGDULLA HYDROPOWER
COMPANY LTD.
BANESHWOR - 10
KATHMANDU, NEPAL



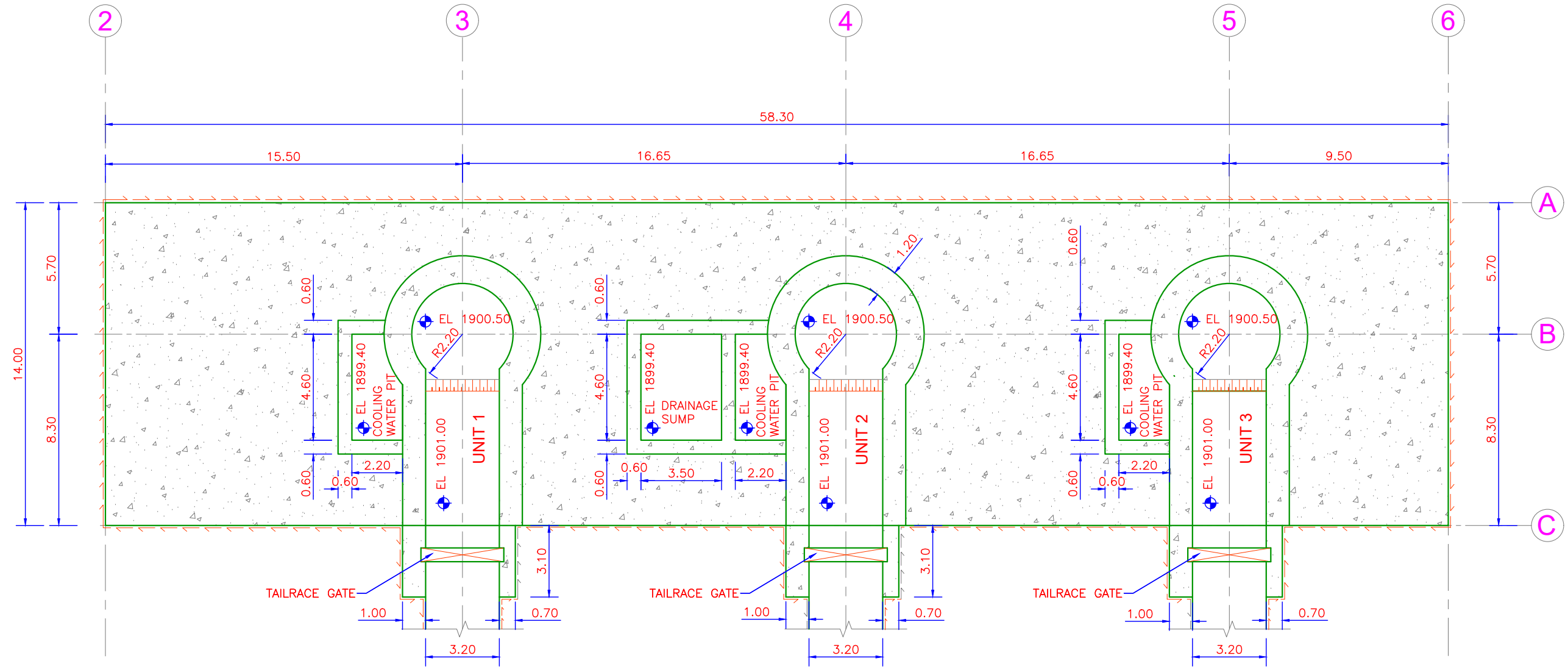
NEA ENGINEERING COMPANY LTD.
TRADE TOWER, THAPATHALI,
KATHMANDU, NEPAL

PROJECT JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL	
ORIGINAL SIZE A3	REPORT STATUS
CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV

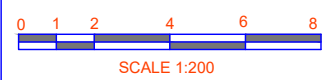
DRAWN	DESIGNED
SRG	YGT
DRAFTING CHECK	DESIGN CHECK
GRT	CBB
APPROVED	DRAWING NO.
PMS	977-2017-03/50C02

TITLE	POWERHOUSE PLAN
	SHEET 1 OF 9

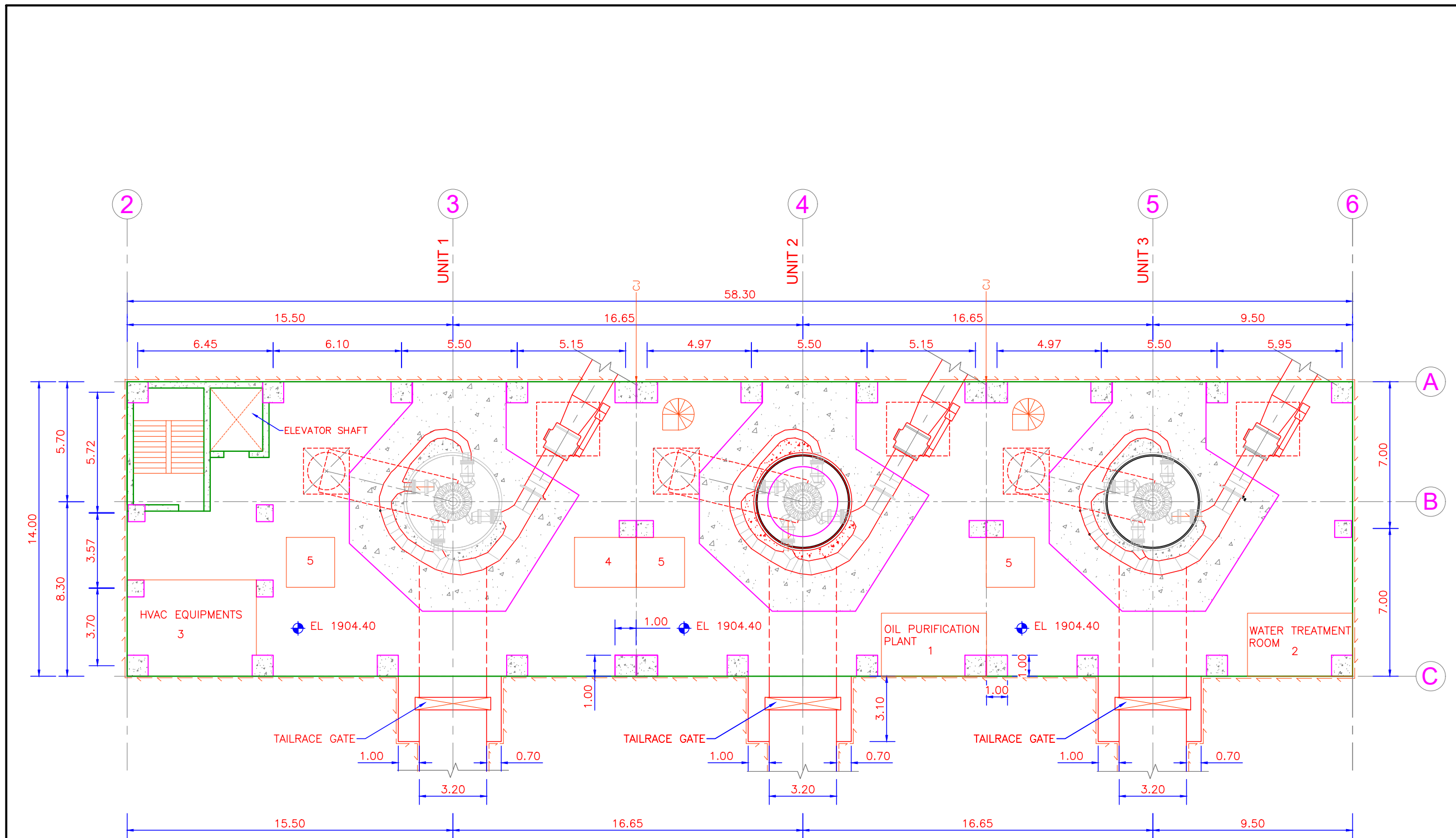
- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.



TAILRACE FLOOR PLAN



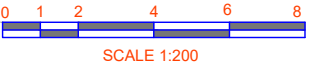
CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR - 10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		DRAWN SRG	DESIGNED YGT	TITLE POWERHOUSE TAILRACE FLOOR PLAN SHEET 2 OF 9		
		ORIGINAL SIZE A3		REPORT STATUS REV			DRAFTING CHECK GRT	DESIGN CHECK CBB
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		APPROVED PMS			DRAWING NO. 977-2017-03/50C03	



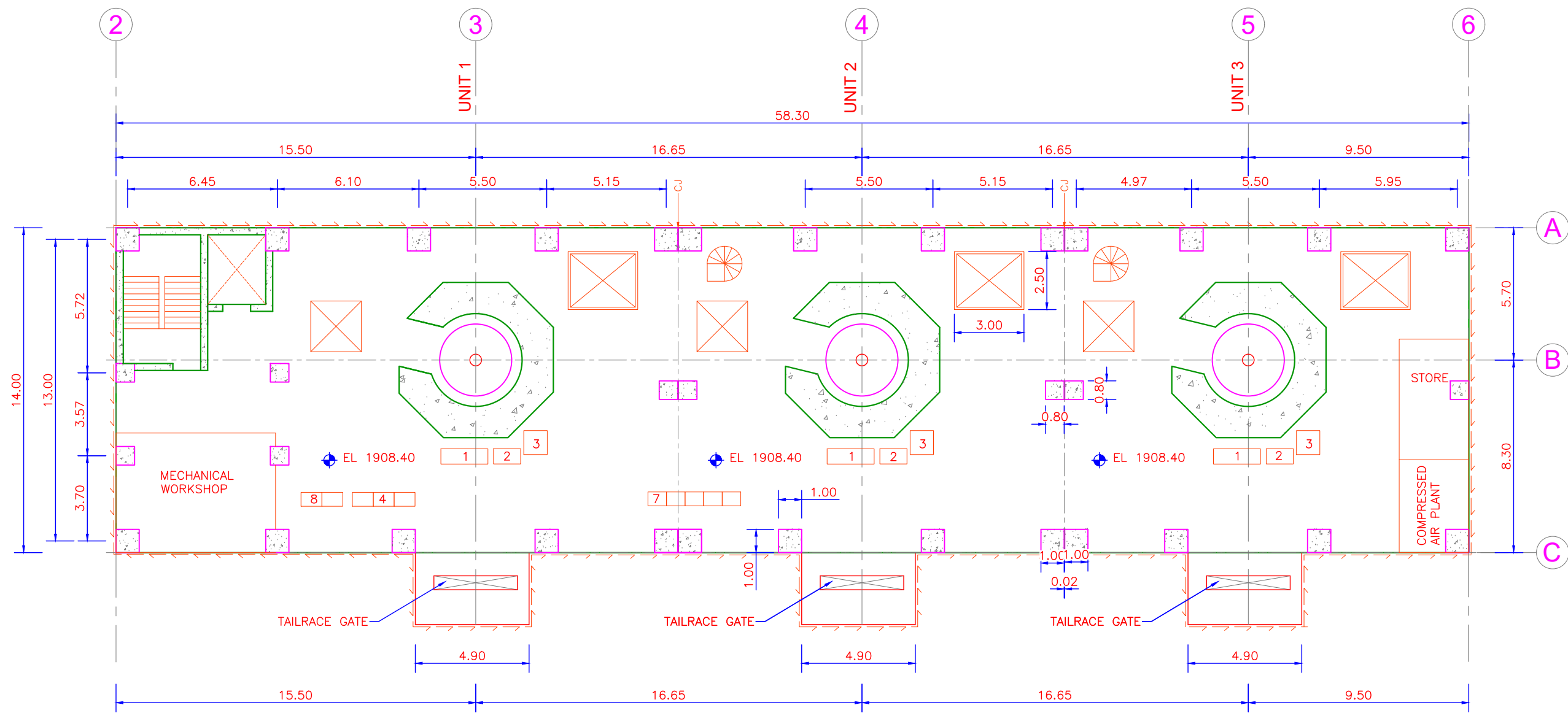
TURBINE CENTERLINE FLOOR PLAN AT EL. 1906.40

- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.

- 1. OIL PURIFICATION PLANT
- 2. WATER TREATMENT ROOM
- 3. HVAC ROOM
- 4. DRAINAGE PUMP
- 5. COOLING WATER PUMPS



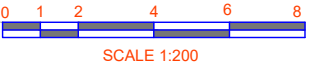
CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR - 10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE
		JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		SRG	YGT	
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT APPROVED PMS	CBB DRAWING NO. 977-2017-03/50C04	
POWERHOUSE TURBINE CENTERLINE FLOOR PLAN						SHEET 3 OF 9



TURBINE FLOOR PLAN AT EL 1908.40

- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.

1. OIL PRESSURE SYSTEM
2. ACTATOR UNIT
3. ACCUMULATOR SYSTEM
4. COOLING WATER PUMP CONTROL
7. COMMON MOTOR CONTROL CENTER 1
8. LCU - COMMON SERVICES



JAGDULLA HYDROPOWER
COMPANY LTD.
BANESHWOR - 10
KATHMANDU, NEPAL



NEA ENGINEERING COMPANY LTD.
TRADE TOWER, THAPATHALI,
KATHMANDU, NEPAL

PROJECT JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL	
ORIGINAL SIZE A3	REPORT STATUS
CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV

DRAWN SRG	DESIGNED YGT
DRAFTING CHECK	DESIGN CHECK
GRT	CBB
APPROVED	DRAWING NO.
PMS	977-2017-03/50C05

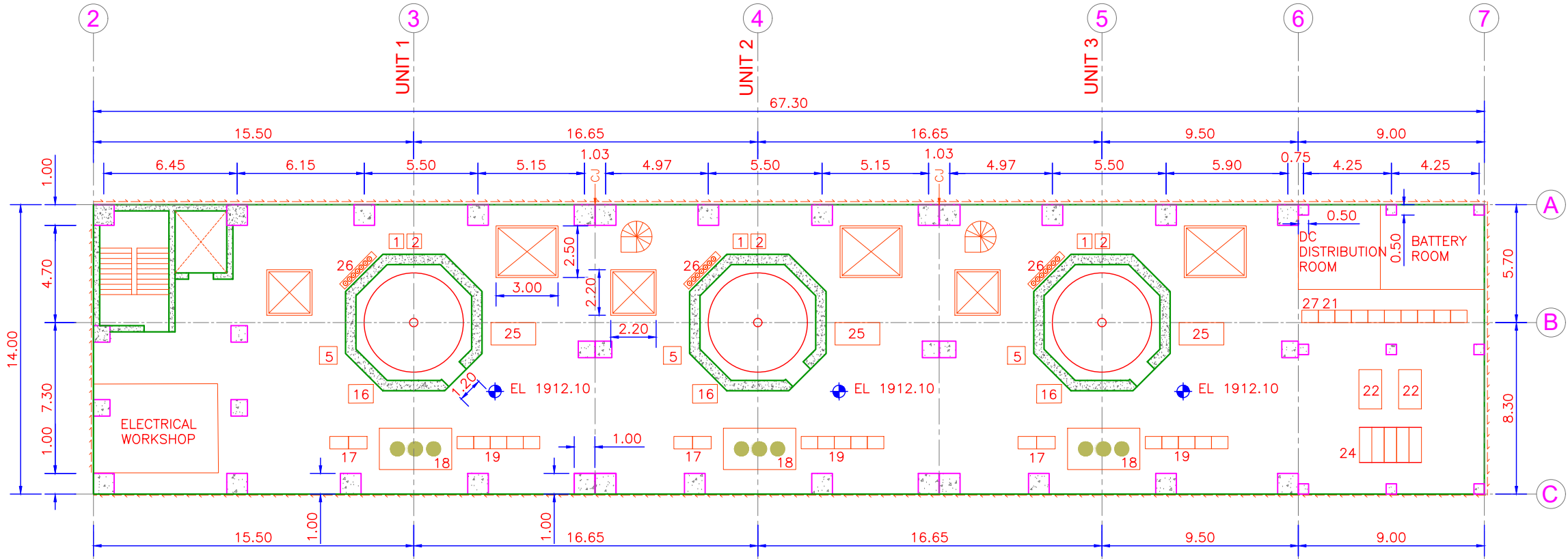
TITLE POWERHOUSE TURBINE FLOOR PLAN	
	SHEET 4 OF 9

NOTES:

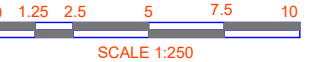
1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.

2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.

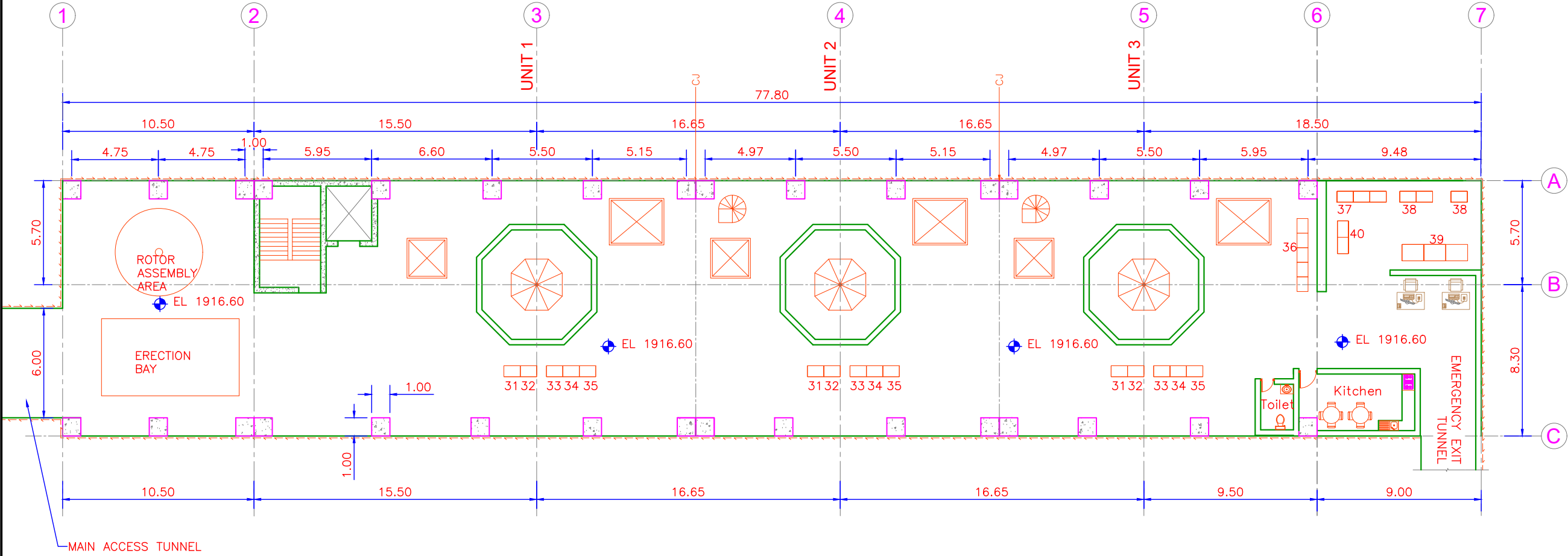
1. BRAKE DUST COLLECTOR
2. MECHANICAL BRAKE SYSTEM
5. HIGH PRESSURE (HP) PLANT
16. NATURAL GROUNDING TRANSFORMER
17. UNIT LCU
18. GENERATOR CIRCUIT BREAKER
19. UNIT MOTOR CONTROL CENTER
21. LOW VOLTAGE SWITCHGEAR CUBICLES/PANELS.
22. STATION TRANSFORMER (12 MVA)
24. 11&13.8 kV VACUUM CIRCUIT BREAKERS.
25. GENERATOR BEARING COOLER.
26. FIRE FIGHTING EQUIPMENT.
27. DIESEL GENERATOR CONNECTION PANEL.



GENERATOR FLOOR PLAN AT EL 1912.10



CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR - 10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE
		JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		SRG	YGT	
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT	CBB	
			APPROVED	PMS	DRAWING NO. 977-2017-03/50C06	
POWERHOUSE GENERATOR FLOOR PLAN SHEET 5 OF 9						



MACHINE HALL FLOOR PLAN EL 1916.60

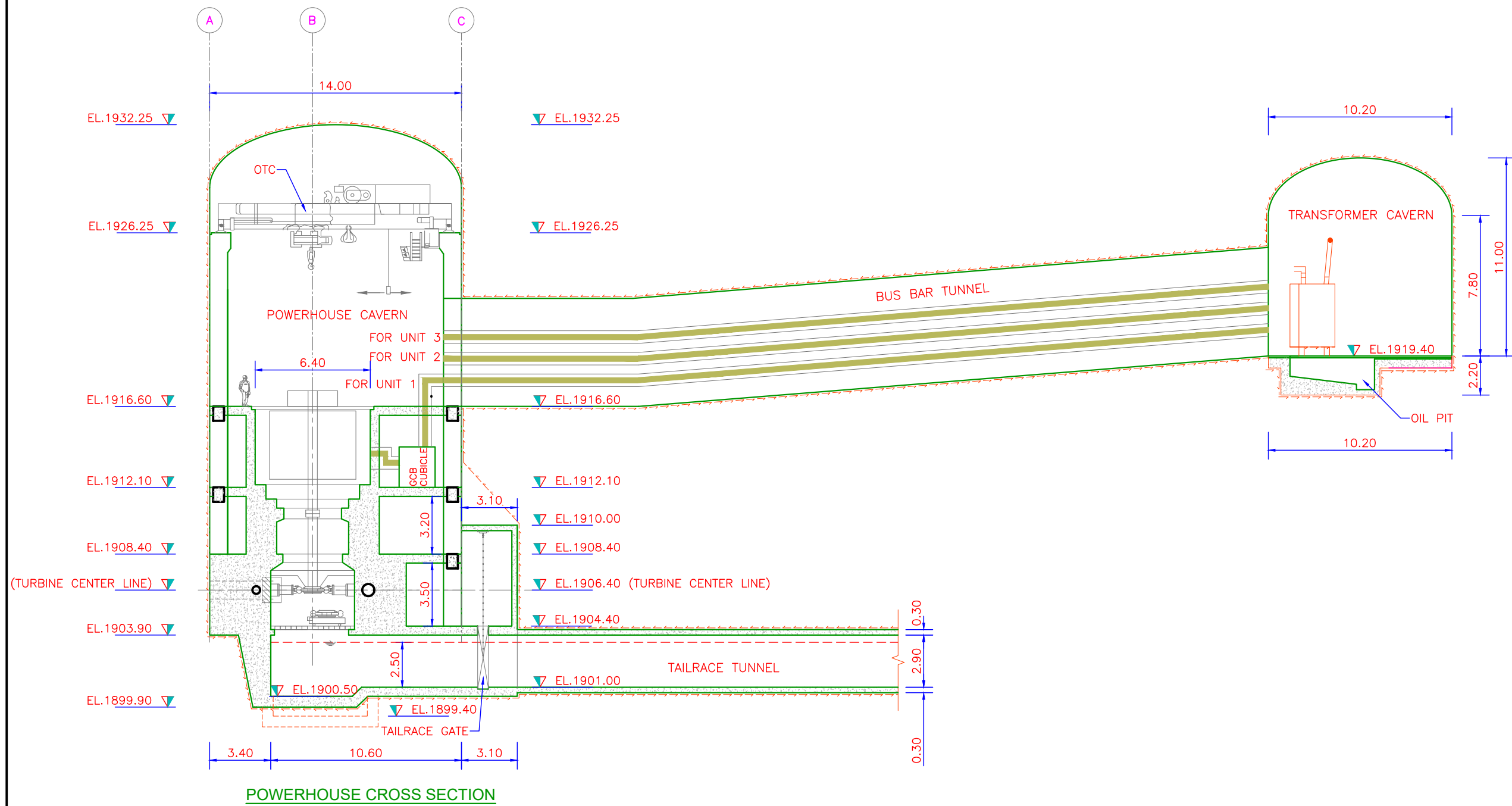
- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.

- 31. EXCITATION TRANSFORMER
- 32. AVR PANEL.
- 33. GOVERNOR CONTROL PANEL.
- 34. PROTECTION PANEL.
- 35. VIBRATION CONTROL PANEL.
- 36. COMMON MOTOR CONTROL CENTER 2.
- 37. TRANSFORMER PROTECTION PANEL.
- 38. TRANSMISSION LINE PROTECTION PANEL.
- 39. MAIN LIGHTING DISTRIBUTION BOARD (MLDB).
- 40. LCU - MV/LV SWITCHGEAR.

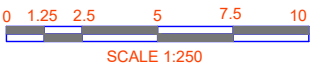


CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR - 10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN		DESIGNED	TITLE		
		JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		SRG	YGT	POWERHOUSE			
		ORIGINAL SIZE A3		REPORT STATUS		DRAFTING CHECK		DESIGN CHECK	MACHINE HALL FLOOR PLAN
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		REV		GRT		CBB	
						APPROVED		DRAWING NO.	
				PMS	977-2017-03/50C07	SHEET 6 OF 9			

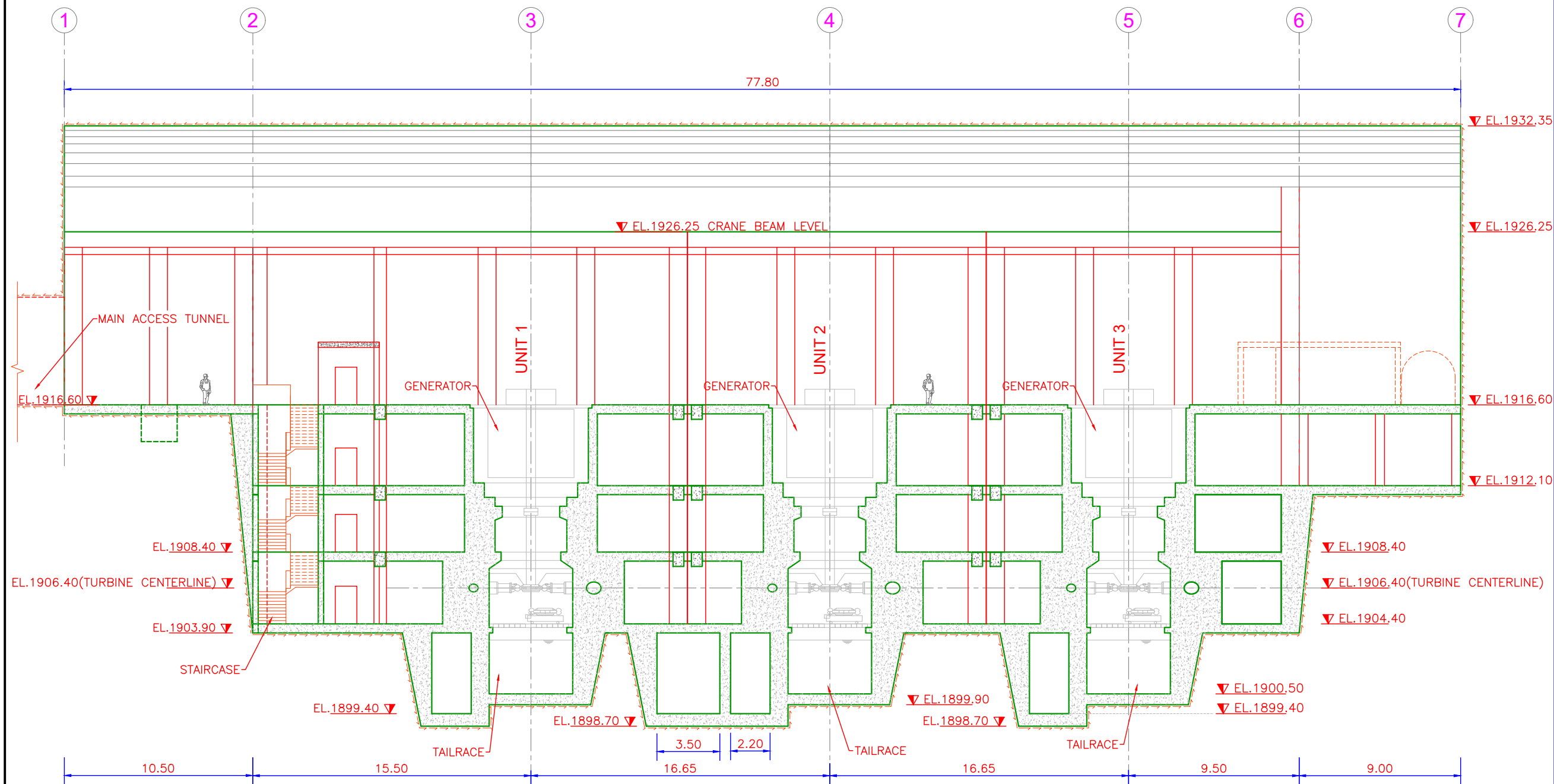
- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.



POWERHOUSE CROSS SECTION

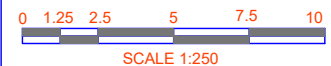


CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR - 10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL	PROJECT JAGDULLA PROR HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL	DRAWN SRG	DESIGNED YGT	TITLE POWERHOUSE CROSS SECTION SHEET 7 OF 9
		ORIGINAL SIZE A3	DRAFTING CHECK GRT	DESIGN CHECK CBB	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REPORT STATUS REV	APPROVED PMS	
				DRAWING NO. 977-2017-03/50C08	



POWERHOUSE LONGITUDINAL SECTION

- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.



JAGDULLA HYDROPOWER
COMPANY LTD.
BANESHWOR - 10
KATHMANDU, NEPAL



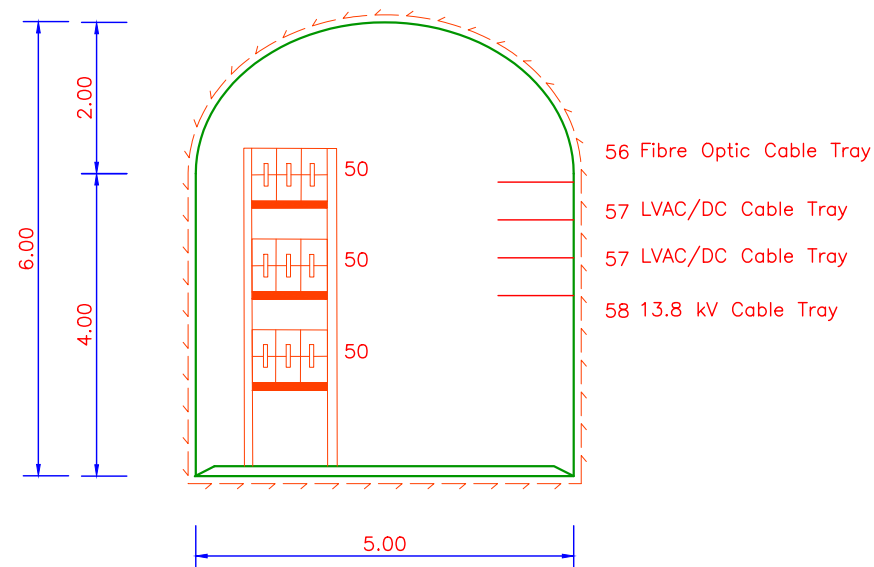
NEA ENGINEERING COMPANY LTD.
TRADE TOWER, THAPATHALI,
KATHMANDU, NEPAL

PROJECT
JAGDULLA HYDRO ELECTRIC PROJECT (106MW)
DOLPA, NEPAL

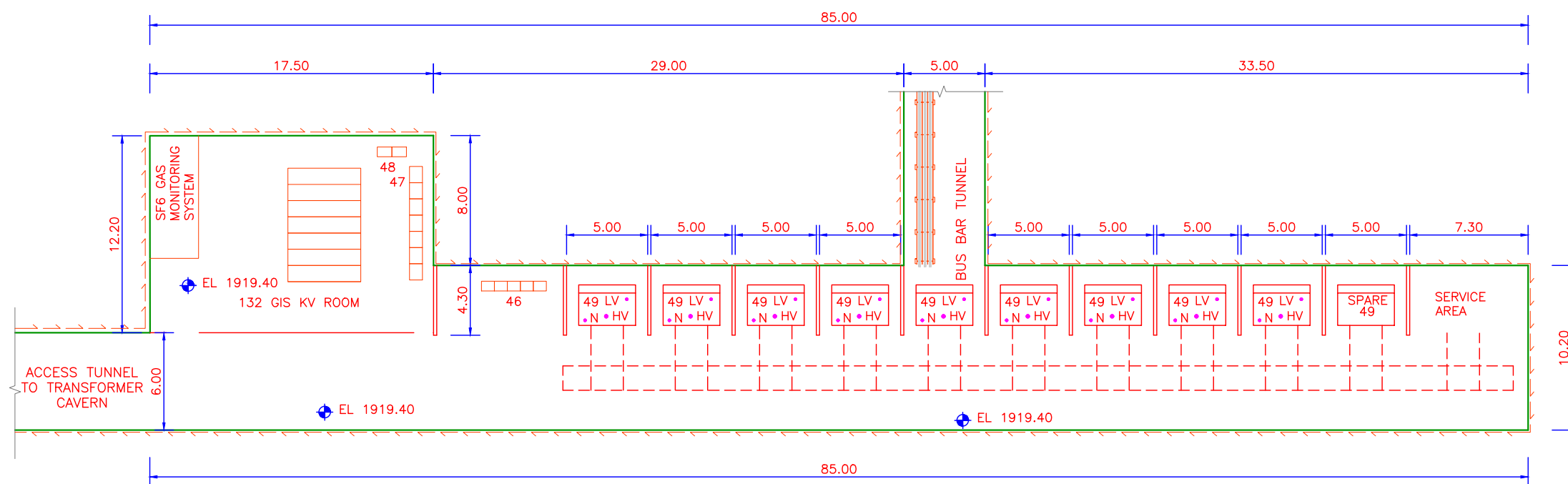
ORIGINAL SIZE A3	REPORT STATUS
CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV 01

DRAWN	DESIGNED
SRG	YGT
DRAFTING CHECK	DESIGN CHECK
GRT	CBB
APPROVED	DRAWING NO.
PMS	977-2017-03/50C09

TITLE
POWERHOUSE
LONGITUDINAL SECTION



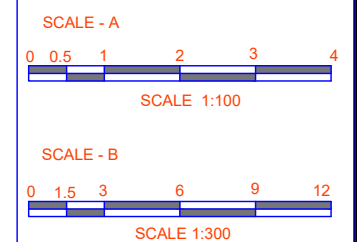
BUSBAR TUNNEL X-SECTION
SCALE - A



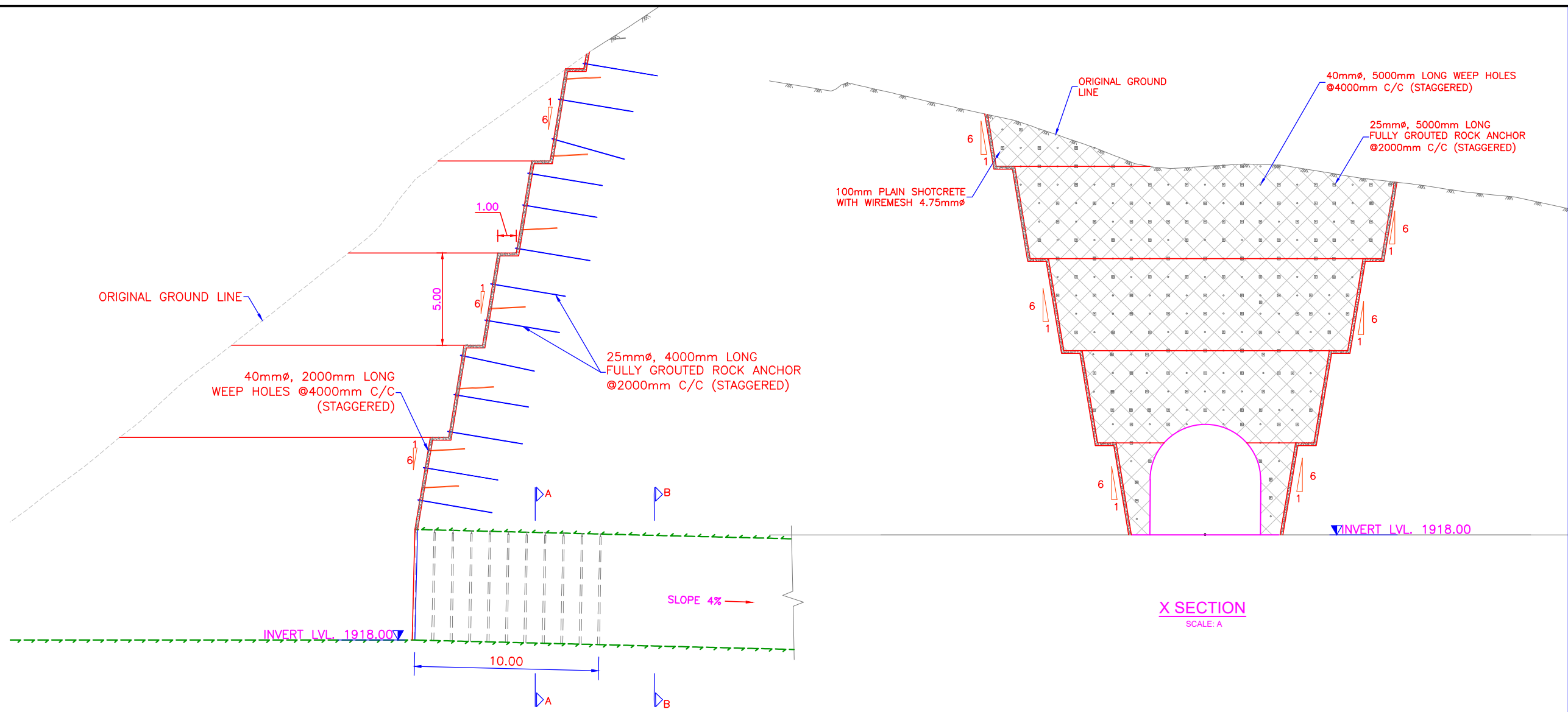
TRANSFORMER AND GIS CAVERN
SCALE - B

- NOTES:
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING NO. 977-2017-03/50C01.

- 46 Common Motor Control Centre 3.
- 47 GIS Local Control Cubicles.
- 48 LCU - GIS.
- 49 13.8/132kV, 15MVA, 1-Ph Transformer.
- 50 Phase Segregated Busduct System.
- 56 Fibre Optics Cable Tray System.
- 57 Low Voltage AC/DC Cable Tray System.
- 58 13.8 kV Cable Tray System.



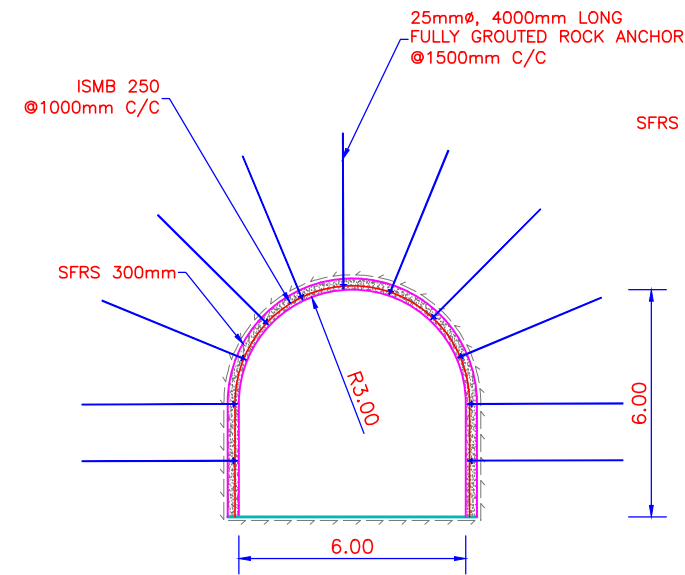
CLIENT		CONSULTANT		PROJECT		DRAWN	DESIGNED	TITLE	
				JAGDULLA HYDRO ELECTRIC PROJECT (106MW)		SRG	YGT	POWERHOUSE	
JAGDULLA HYDROPOWER COMPANY LTD.		NEA ENGINEERING COMPANY LTD.		DOLPA, NEPAL		DRAFTING CHECK	DESIGN CHECK	TRANSFORMER AND GIS CAVERN PLAN	
BANESHWOR - 10		TRADE TOWER, THAPATHALI,		ORIGINAL SIZE	REPORT STATUS	GRT	CBB	BUSBAR TUNNEL X-SECTION	
KATHMANDU, NEPAL		KATHMANDU, NEPAL		A3		APPROVED	DRAWING NO.		
				CONTRACT NUMBER:	REV	PMS	977-2017-03/50C10	SHEET 9 OF 9	
				VUCL-NEC-DES-074/75-003-A	01				



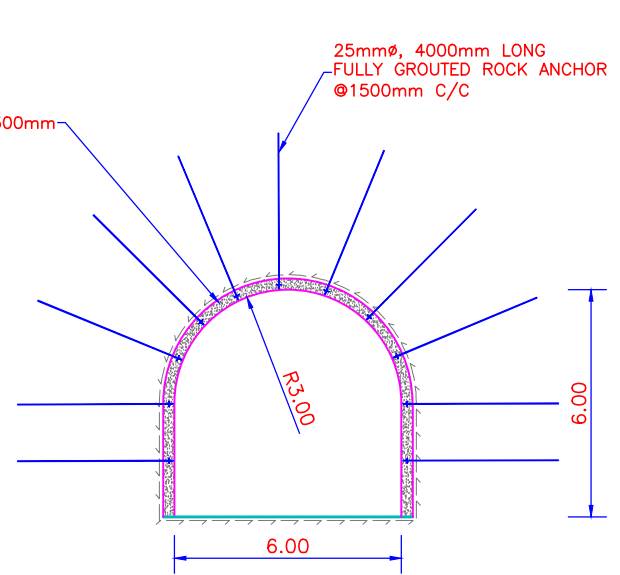
NOTES:
1) ALL DIMENSIONS ARE IN METERS
UNLESS OTHERWISE SPECIFIED.

L SECTION
SCALE: A

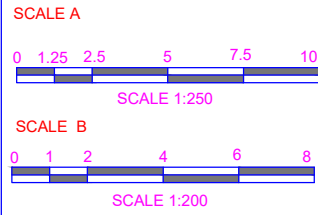
X SECTION
SCALE: A



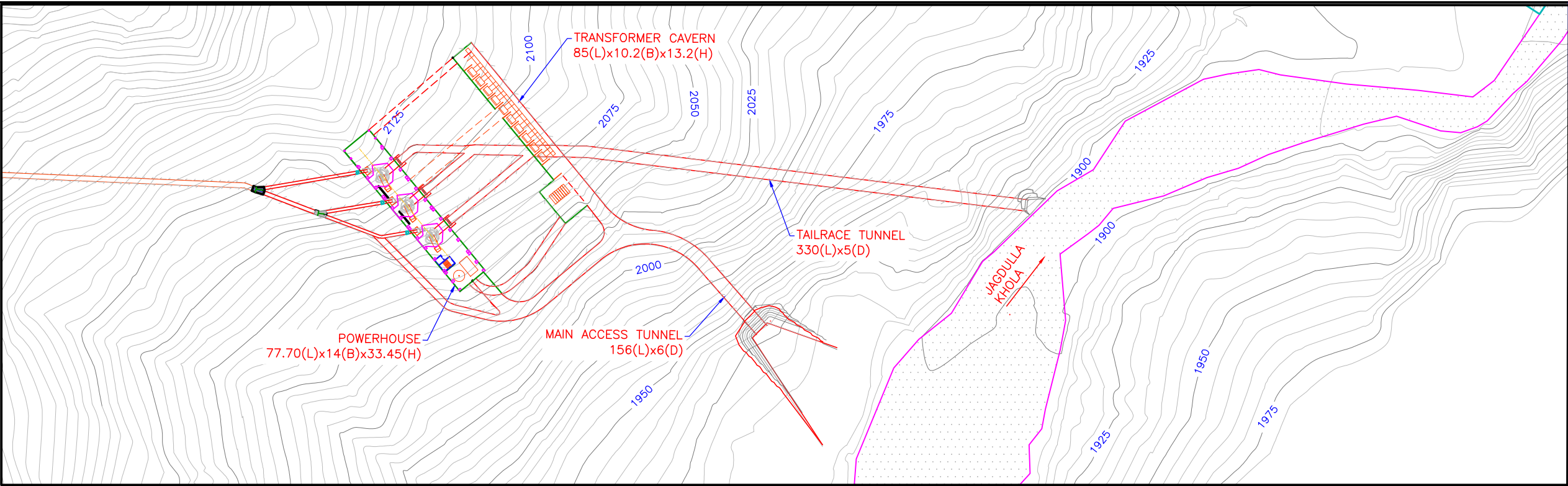
SECTION A-A
SCALE: B



SECTION B-B
SCALE: B



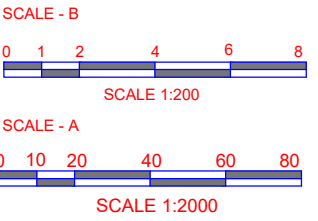
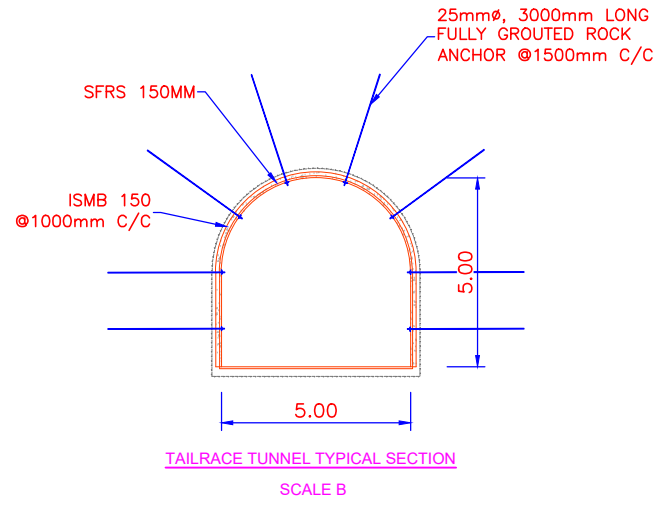
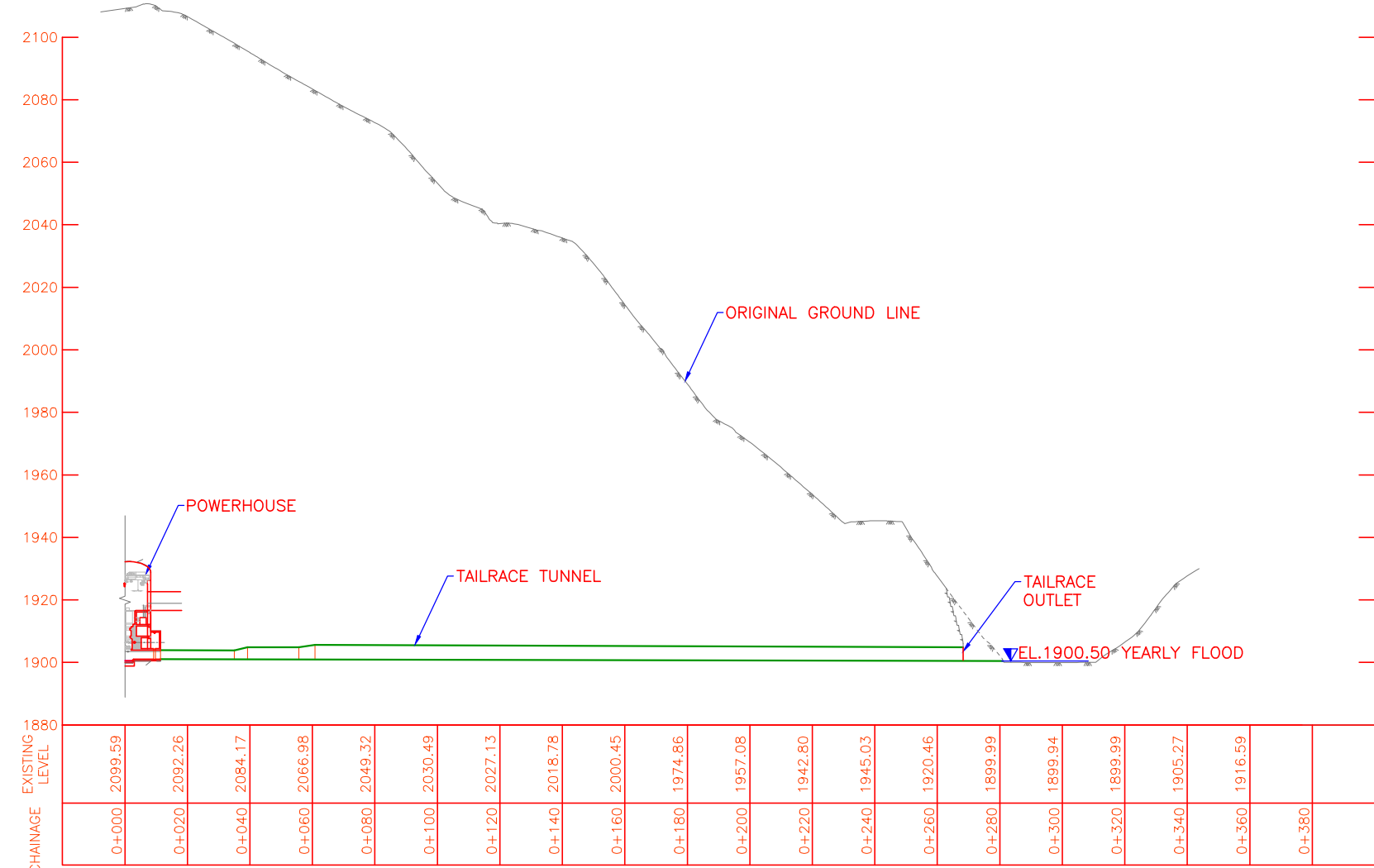
CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER, THAPATHALI, KATHMANDU, NEPAL	PROJECT JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		DRAWN PRK	DESIGNED YGT	TITLE POWERHOUSE/TAIRACE MAIN ACCESS TUNNEL PROFILE AND SECTIONS
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK	
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT	NBB	
				APPROVED	DRAWING NO.	
				PMS	977-2017-03/50C11	



- NOTES:**
- 1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
 - 2) THIS DRAWING IS TO BE READ IN COMJUNCTION WITH DRAWING NO. 977-2017-03/10C01.

LEGEND

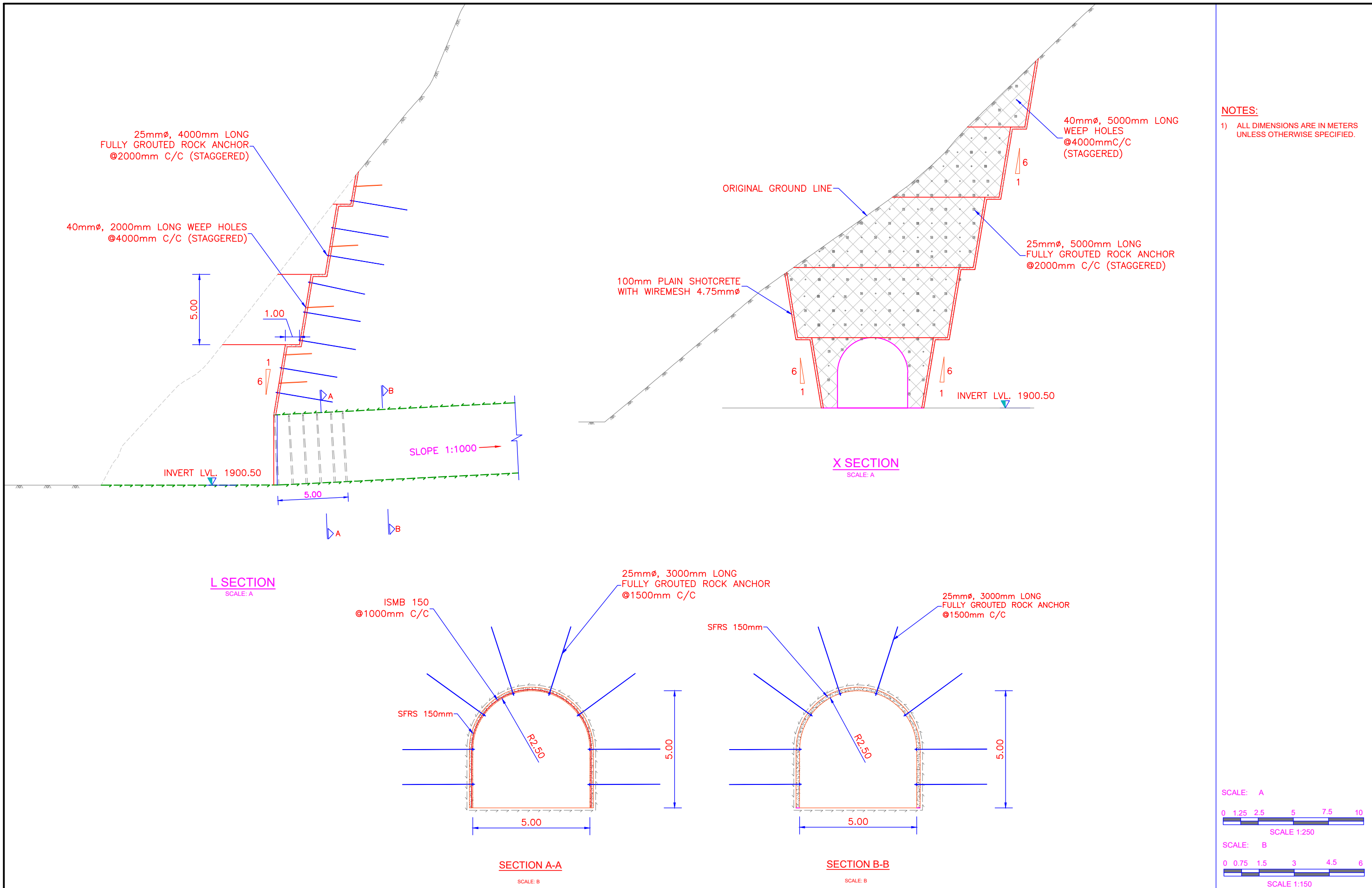
- MAJOR CONTOUR
- MINOR CONTOUR
- RIVER
- KHOLSI
- CANAL
- TRACK
- BRIDGE
- BUILDING
- HELIPAD
- TRAVERSE POINT
- TEMPLE
- GAUGE STATION
- TRANSFORMER
- LOW TENSION LINE
- VILLAGE BOUNDARY
- HUT
- FLOOD LEVEL



PROFILE

CLIENT		CONSULTANT		PROJECT		DRAWN	DESIGNED	TITLE
				JAGDULLA HYDRO ELECTRIC PROJECT (106MW)		UTN	UTN	
JAGDULLA HYDROPOWER COMPANY LTD.		NEA ENGINEERING COMPANY LTD.		DOLPA, NEPAL		DRAFTING CHECK	DESIGN CHECK	
BANESHWOR -10 KATHMANDU, NEPAL		TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL		ORIGINAL SIZE A3		GRT	NBB	
				CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A		APPROVED	DRAWING NO.	977-2017-03/50C12
						PMS		

TAILRACE TUNNEL
PLAN AND PROFILE



NOTES:
1) ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.

CLIENT  JAGDULLA HYDROPOWER COMPANY LTD. BANESHWOR -10 KATHMANDU, NEPAL	CONSULTANT  NEA ENGINEERING COMPANY LTD. TRADE TOWER,THAPATHALI, KATHMANDU, NEPAL	PROJECT		DRAWN	DESIGNED	TITLE	
		JAGDULLA HYDRO ELECTRIC PROJECT (106MW) DOLPA, NEPAL		PRK	YGT		POWERHOUSE/TAIRACE TAILRACE TUNNEL PROFILE AND SECTIONS
		ORIGINAL SIZE A3	REPORT STATUS	DRAFTING CHECK	DESIGN CHECK		
		CONTRACT NUMBER: VUCL-NEC-DES-074/75-003-A	REV	GRT	NBB		
				APPROVED	DRAWING NO.		
				PMS	977-2017-03/50C13		