



WATER AND POWER DEVELOPMENT AUTHORITY
PAKISTAN

ENGINEERING, PROCUREMENT AND CONSTRUCTION (EPC) OF ATTABAD LAKE HYDROPOWER PROJECT (54 MW) PACKAGE-III: ELECTRO-MECHANICAL WORKS

**VOLUME-II: EMPLOYER'S REQUIREMENTS
PART-III: CONCEPTUAL DRAWINGS**

AHMC ATTABAD HYDROPOWER
MANAGEMENT CONSULTANTS



MAY 2026

BOOK 4

DOCUMENT NO: BD-ALHPP-03 (V2 CD)

**CONSTRUCTION OF
ATTABAD LAKE HYDROPOWER PROJECT (54 MW)
PACKAGE-III: ELECTRO-MECHANICAL WORKS
INDEX TO BIDDING DOCUMENTS**

VOLUME-I: BIDDING PROCEDURES AND CONDITIONS OF CONTRACT

Part-I: Bidding Procedures

Part-II: Conditions of Contract and Standard Forms

VOLUME-II: EMPLOYER'S REQUIREMENTS

Part-I: Specific Provisions

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Part-III: Conceptual Drawings

VOLUME-III: ADDITIONAL INFORMATION

Part-I: Feasibility Study Report (2021)

Part-II: Feasibility Review Report (2022)

Part-III: Topographic Survey Map Book (2023)

Part-IV: Updated Environmental Impact Assessment (EIA) Report (2023)

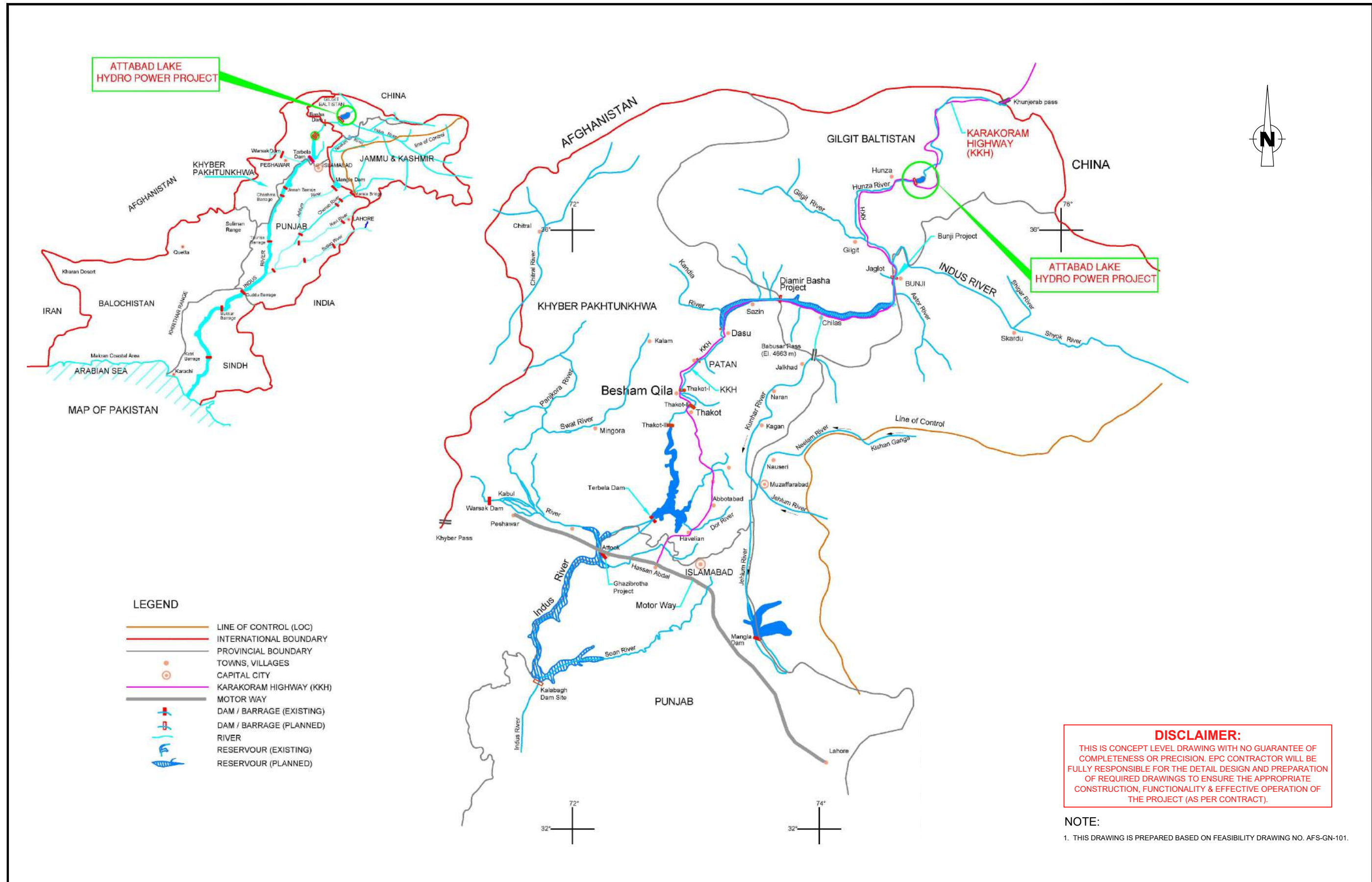
EPC BIDDING DOCUMENTS OF
ATTABAD LAKE HYDROPOWER PROJECT (54 MW)
PACKAGE-III: ELECTRO-MECHANICAL WORKS
LIST OF DRAWINGS

Sr.NO.	TITLE OF DRAWINGS	DRAWING NO.
A- GENERAL DRAWINGS		
1	LIST OF DRAWINGS	ALHPP-LD-0000
2	PROJECT LOCATION MAP	ALHPP-GN-0101
3	PROJECT AREA ACCESSIBILITY MAP	ALHPP-GN-0102
4	REGIONAL MAP OF NORTHERN AREA	ALHPP-GN-0103
5	CATCHMENT AREA MAP	ALHPP-GN-0104
6	PROJECT VICINITY MAP	ALHPP-GN-0105
B- PROJECT LAYOUT		
7	PROJECT LAYOUT	ALHPP-LAY-0201
C- POWER HOUSE		
8	POWER HOUSE LAYOUT	ALHPP-PH-0301
9	POWER HOUSE PLAN AT EL: 2299.25	ALHPP-PH-0302
10	POWER HOUSE PLAN AT EL: 2301.85	ALHPP-PH-0303
11	POWER HOUSE PLAN AT EL: 2308.00	ALHPP-PH-0304
12	POWER HOUSE PLAN AT EL: 2313.30	ALHPP-PH-0305
13	POWER HOUSE SECTION A-A	ALHPP-PH-0306
14	POWER HOUSE SECTION B-B	ALHPP-PH-0307
D- HYDRAULIC STEEL STRUCTURES		
15	POWER AND FLUSHING INTAKE LAYOUT PLAN AT EL.2425.00	ALHPP-HSS-0401
16	FLUSHING TUNNEL GATE SHAFT ARRANGEMENT	ALHPP-HSS-0402
17	FLUSHING TUNNEL SERVICE & GUARD GATE ARRANGEMENT	ALHPP-HSS-0403
18	FLUSHING TUNNEL STOPLOG ARRANGEMENT	ALHPP-HSS-0404
19	POWER INTAKE EMERGENCY GATE & STOPLOG ARRANGEMENT	ALHPP-HSS-0405
20	POWER INTAKE EMERGENCY GATE ARRANGEMENT	ALHPP-HSS-0406
21	POWER INTAKE STOPLOG ARRANGEMENT	ALHPP-HSS-0407
22	POWER INTAKE TRASHRACK ARRANGEMENT	ALHPP-HSS-0408
23	POWERHOUSE DRAFT TUBE GATE ARRANGEMENT	ALHPP-HSS-0409
E- POWERPLANT ELECTRICAL		
24	MAIN SINGLE LINE DIAGRAM	ALHPP-PPE-0501
25	AC SUPPLY SYSTEM	ALHPP-PPE-0502
26	POWER HOUSE AC LV SUPPLY SYSTEM	ALHPP-PPE-0503
27	POWER HOUSE DC SUPPLY SYSTEM	ALHPP-PPE-0504
28	POWER INTAKE DC SUPPLY SYSTEM	ALHPP-PPE-0505
29	PCS CONCEPTUAL LAYOUT	ALHPP-PPE-0506
30	PROTECTION SCHEMES	ALHPP-PPE-0507
F- SWITCHYARD ELECTRICAL		
31	132 kV SWITCHYARD SINGLE LINE DIAGRAM	ALHPP-SY-0601
32	132 kV SWITCHYARD EQUIPMENT ARRANGEMENT PLAN	ALHPP-SY-0602
33	132 kV SWITCHYARD AC AUXILIARY SERVICES SYSTEM (TYPICAL)	ALHPP-SY-0603
34	110V DC (FOR 132kV SWITCHYARD) AUXILIARY SERVICES SYSTEM (TYPICAL)	ALHPP-SY-0604

Sr.NO.	TITLE OF DRAWINGS	DRAWING NO.
35	132kV SWITCHYARD CONTROL HOUSE BUILDING LAYOUT PLAN	ALHPP-SY-0605
36	PROTECTION & METERING SYSTEM 132kV SINGLE LINE DIAGRAM	ALHPP-SY-0606
37	PROTECTION & METERING SYSTEM 132kV POWER TRANSFORMER SINGLE LINE DIAGRAM	ALHPP-SY-0607
G-TELECOM (SCADA)		
38	132kV SWITCHYARD 48V DC SYSTEM	ALHPP-TC-0701
39	132kV SWITCHYARD TELECOMMUNICATION NETWORK LAYOUT	ALHPP-TC-0702
40	132kV SWITCHYARD SCADA SYSTEM	ALHPP-TC-0703
41	132kV SWITCHYARD FIBER OPTIC SYSTEM	ALHPP-TC-0704

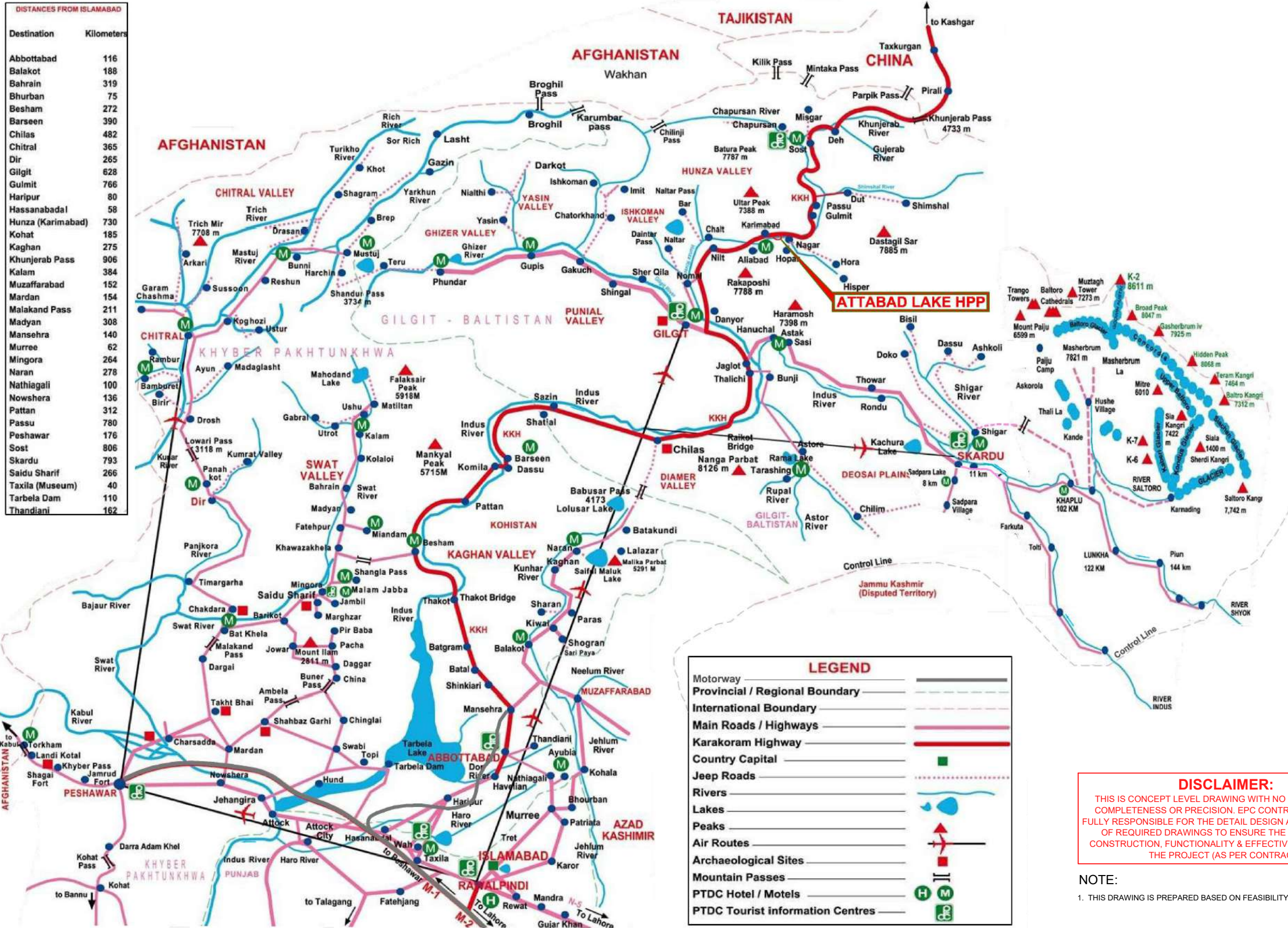
CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM) ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD. DOLSAAR ENGINEERING INC.CO. BAROAAAB CONSULTING SERVICES (PVT.) LTD.	04				DRAWN	ASIF SAMI	LIST OF DRAWINGS		SCALE		
		03				RECOMMENDED	-			AS SHOWN		
		02				CHD./VER.	-					
		01								DATE :	DRAWING No.	REV.
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	MARCH, 2026	ALHPP-LD-0000			
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)												

A- GENERAL DRAWINGS



CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT:  ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD.  BARQAAB CONSULTING SERVICES (PVT.) LTD.  DOLSAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	PROJECT LOCATION MAP		SCALE		
		03				RECOMMENDED	-			AS SHOWN		
		02				CHD./VER.	-					
		PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		01						DATE :	DRAWING No.	REV.
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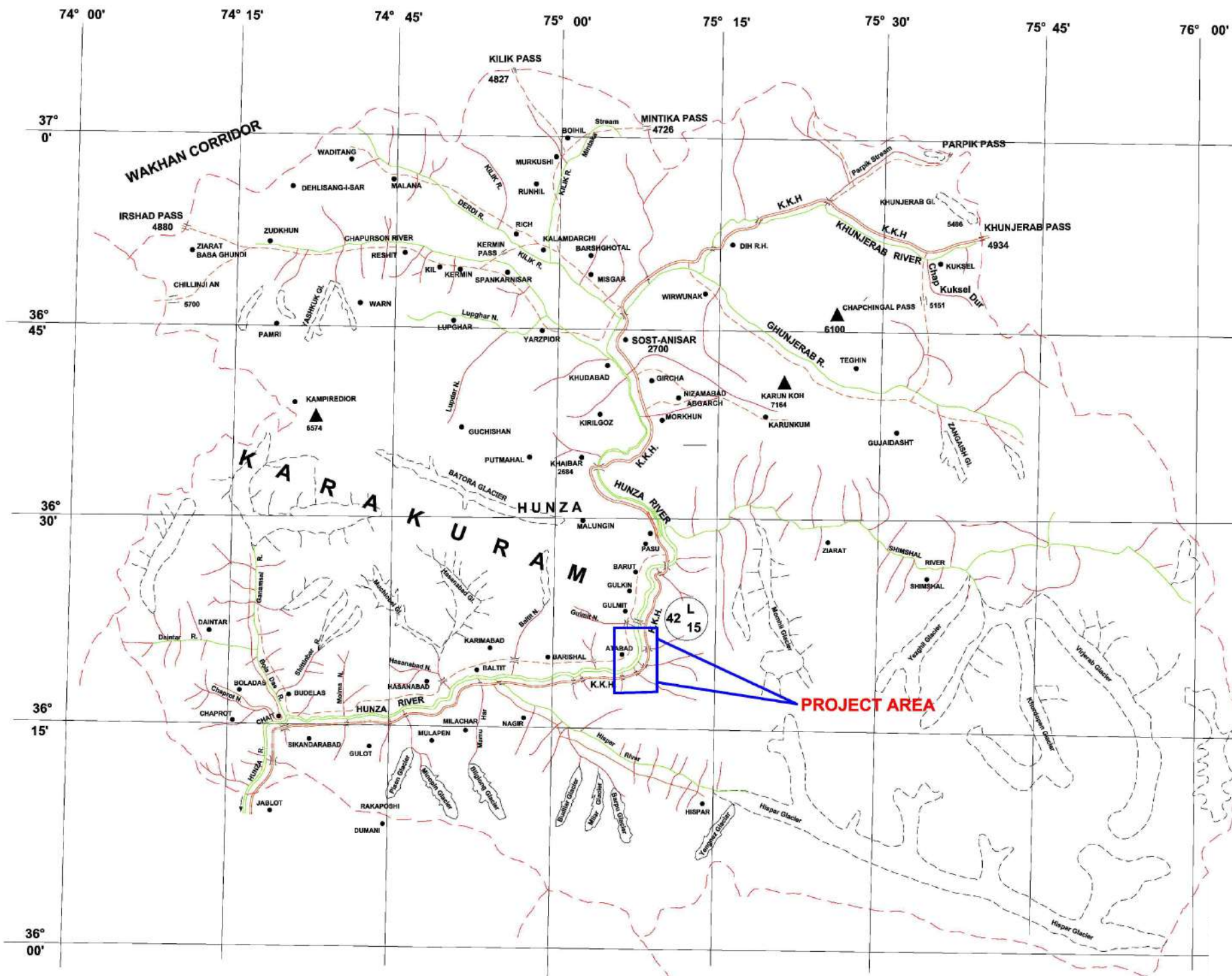
DISTANCES FROM ISLAMABAD	
Destination	Kilometers
Abbottabad	116
Balakot	188
Bahrain	319
Bhurban	75
Besham	272
Barseen	390
Chilas	482
Chitral	365
Dir	265
Gilgit	628
Gulmit	766
Haripur	80
Hassanabadal	58
Hunza (Karimabad)	730
Kohat	185
Kaghan	275
Khunjerab Pass	906
Kalam	384
Muzaffarabad	152
Mardan	154
Malakand Pass	211
Madyan	308
Mansehra	140
Murree	62
Mingora	264
Naran	278
Nathigali	100
Nowshera	136
Pattan	312
Passu	780
Peshawar	176
Sost	806
Skardu	793
Saidu Sharif	266
Taxila (Museum)	40
Tarbela Dam	110
Thandiani	162



DISCLAIMER:
THIS IS CONCEPT LEVEL DRAWING WITH NO GUARANTEE OF COMPLETENESS OR PRECISION. EPC CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE DETAIL DESIGN AND PREPARATION OF REQUIRED DRAWINGS TO ENSURE THE APPROPRIATE CONSTRUCTION, FUNCTIONALITY & EFFECTIVE OPERATION OF THE PROJECT (AS PER CONTRACT).

NOTE:
1. THIS DRAWING IS PREPARED BASED ON FEASIBILITY DRAWING NO. AFS-GN-102.

CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT:  ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.  PAKISTAN ENGINEERING SERVICES (PVT.) LTD.  BARQAAB CONSULTING SERVICES (PVT.) LTD.  DOLSAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	PROJECT AREA ACCESSIBILITY MAP		SCALE
		03				RECOMMENDED	-			AS SHOWN
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		02				CHD./VER.	-	DATE :	DRAWING No.	REV.
		01				APPROVED	-			
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	MARCH, 2026	ALHPP-GN-0102	



LEGEND

RIVER

TRIBUTARY

GLACIER

METALLED ROAD

UNMETALLED ROAD

TOWN/VILLAGE

REGION BOUNDARY

DISCHARGE MEASUREMENT SITE

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NOTE:
1. THIS DRAWING IS PREPARED BASED ON FEASIBILITY DRAWING NO. AFS-GN-101.

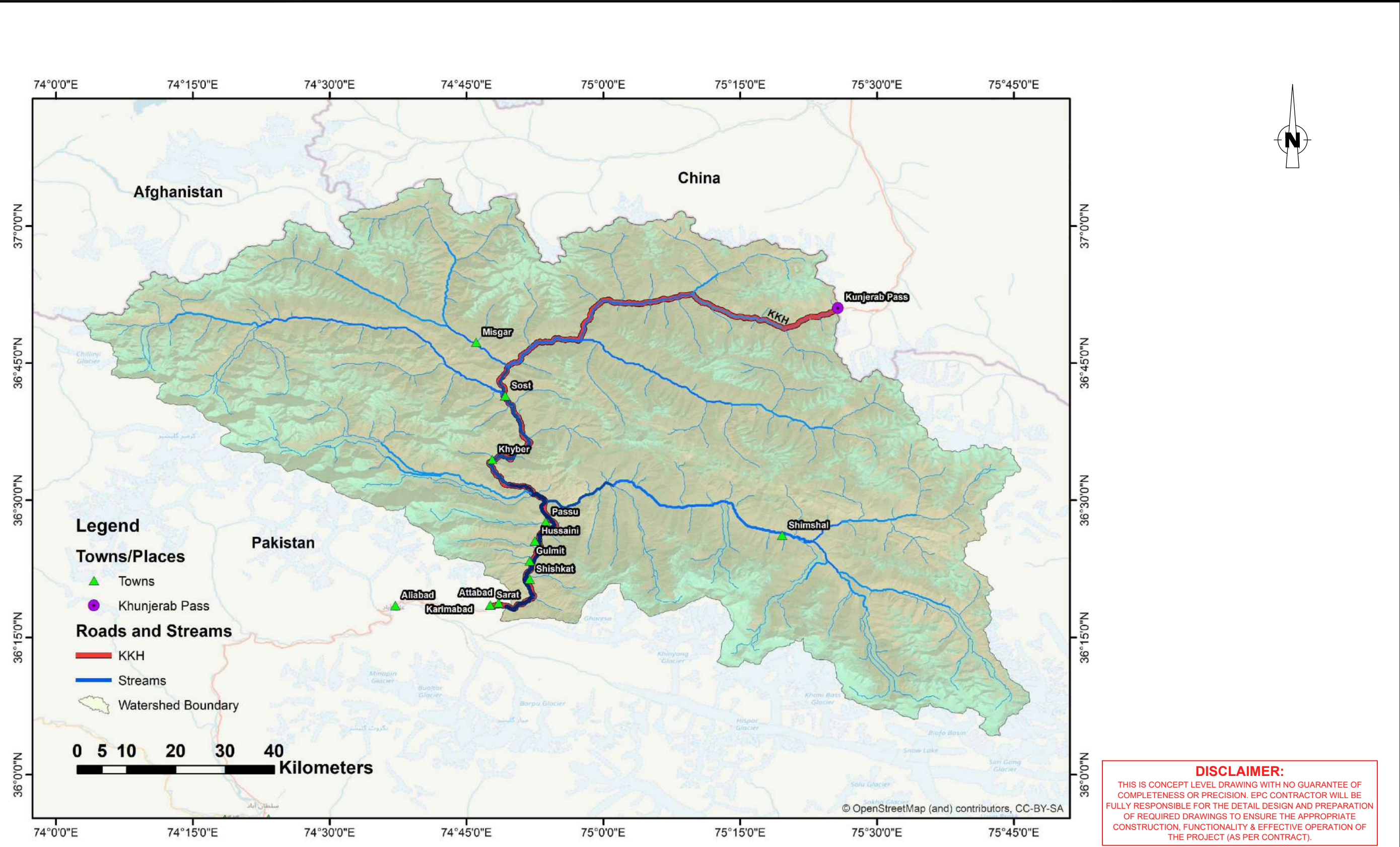
CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY		CONSULTANT:  ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD.  BARQAAB CONSULTING SERVICES (PVT.) LTD. DOLSAR ENGINEERING INC.CO.				04 03 02 01 REV. DATE			DRAWN ASIF SAMI RECOMMENDED - CHD./VER. - APPROVED -	PROJECT VICINITY MAP DATE : MARCH, 2026 DRAWING No. ALHPP-GN-0105		SCALE AS SHOWN REV. 
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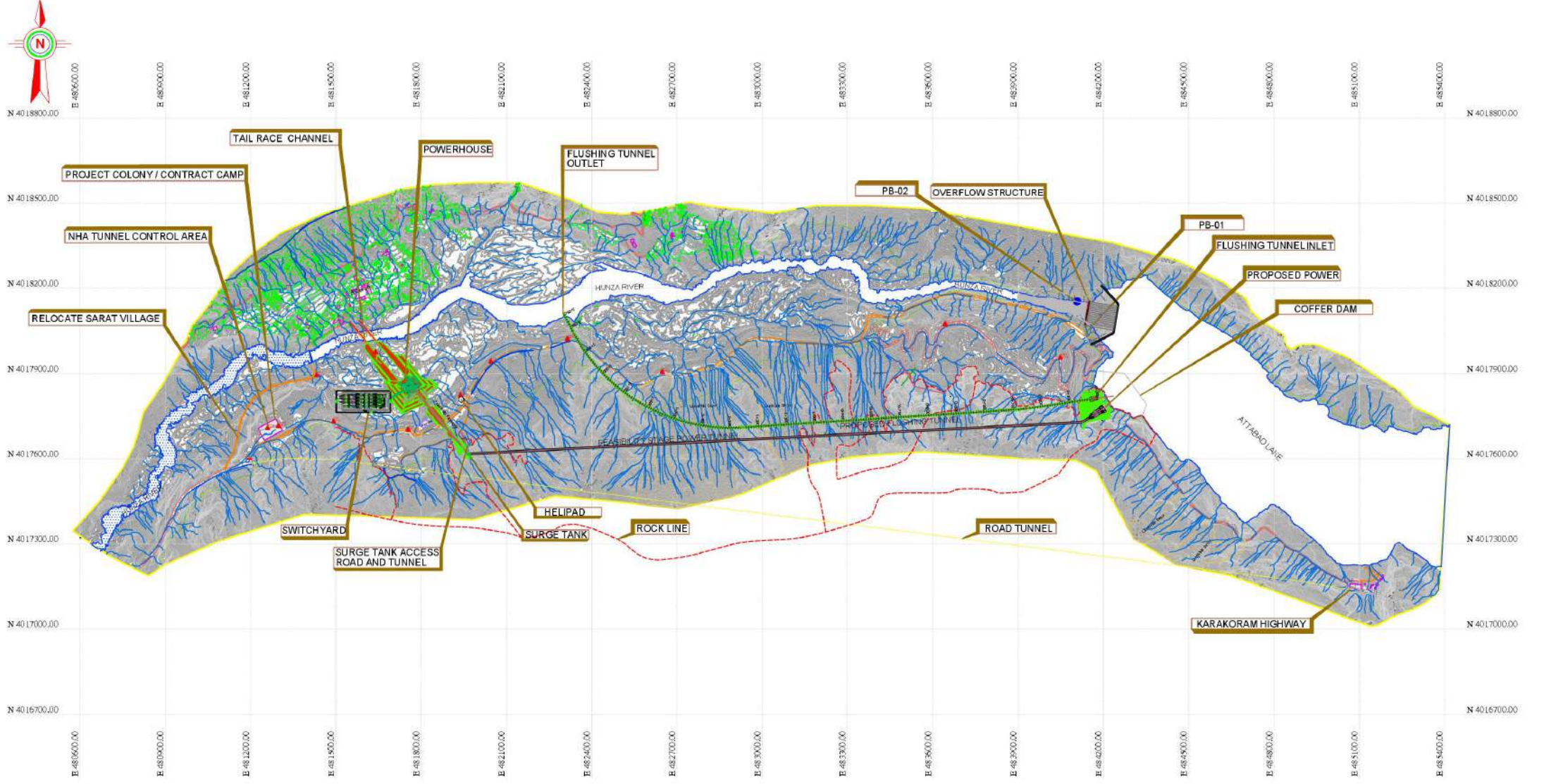
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1. THIS DRAWING IS PREPARED BASED ON FEASIBILITY DRAWING NO. AFS-GN-103.

CLIENT: PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.  PAKISTAN ENGINEERING SERVICES (PVT.) LTD.  BARQAAB CONSULTING SERVICES (PVT.) LTD.  DOLSAAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	REGIONAL MAP OF NORTHERN AREA		SCALE			
		03					RECOMMENDED			-	AS SHOWN		
		02					CHD./VER.			-	REV.		
		PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		01							DATE :	DRAWING No.	
				REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	MARCH, 2026	ALHPP-GN-0103		



CLIENT: PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF: NATIONAL ENGINEERING SERVICES (PVT.) LTD. (LEAD FIRM) ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD. BARQAAB CONSULTING SERVICES (PVT.) LTD. DOLSAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	CATCHMENT AREA MAP SCALE: AS SHOWN	
		03				RECOMMENDED	-		
		02				CHD./VER.	-		
		01				APPROVED	-		
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	DATE : MARCH, 2026	DRAWING No. ALHPP-GN-0104

B- PROJECT LAYOUT



LEGEND:

- | | | | | | |
|--------------------------|--|------------------|--|---------------|--|
| CONTROL POINT | | PROJECT BOUNDARY | | RIVER | |
| ELECTRIC POLE | | AGRICULTURE LAND | | SHED | |
| TREES | | BUILTUP | | STRUCTURE | |
| ROAD | | BRIDGE | | CONTOUR: | |
| ROAD & TRACK | | CULVERT | | CONTOUR INDEX | |
| ELECTRIC LINE | | DRAIN | | | |
| PROPOSED FLUSHING TUNNEL | | HELIPAD | | | |
| STREAM NETWORK | | LAND DEBRIS | | | |

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NOTE:

1. ALL DIMENSIONS ARE IN METERS



CLIENT: **PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY**

PROJECT: **ATTABAD LAKE HYDROPOWER PROJECT (54 MW)**

CONSULTANT: **ATMCC ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS**

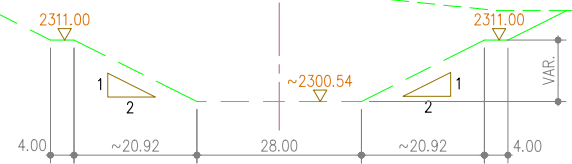
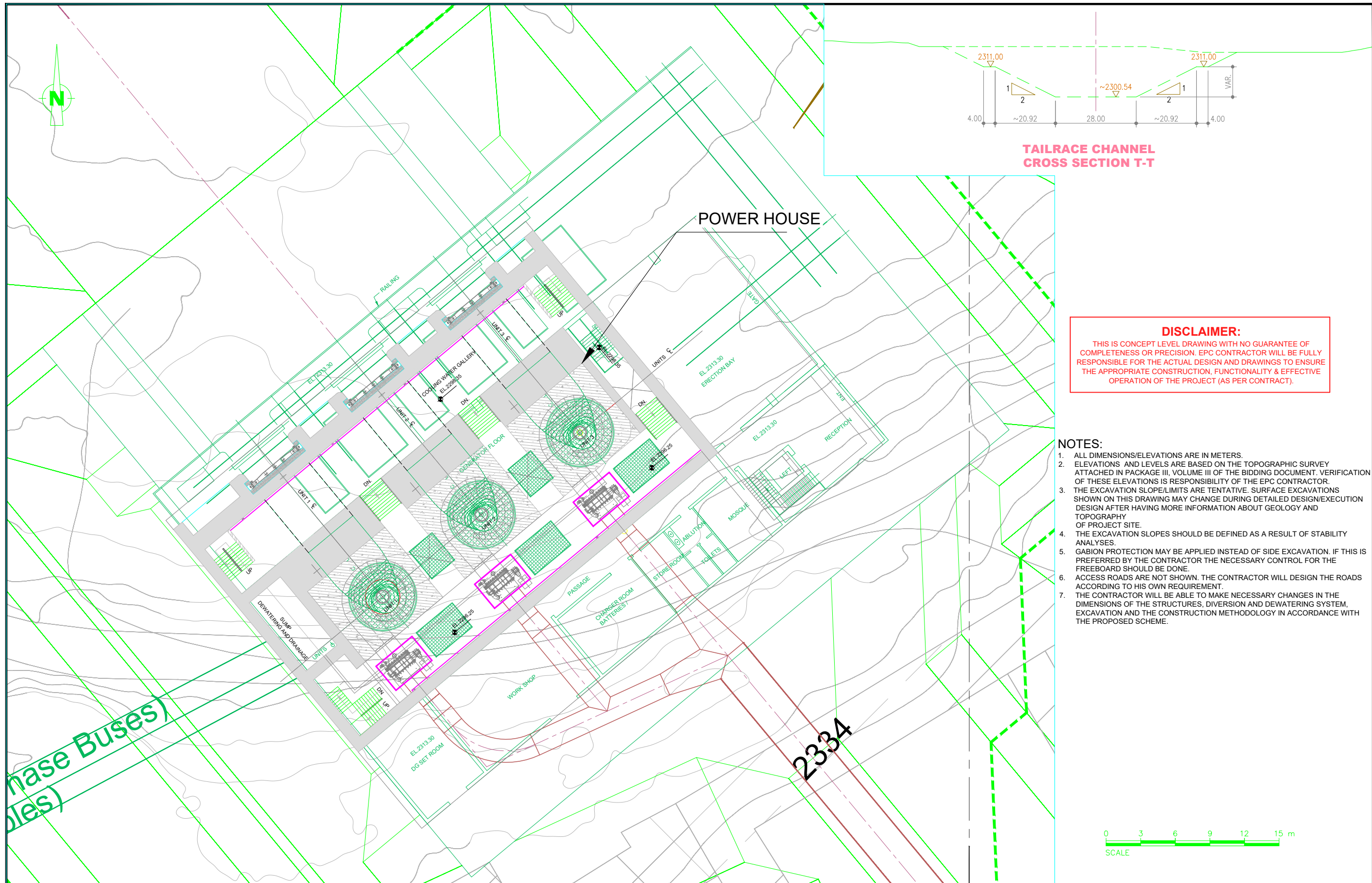
JOINT VENTURE OF:
NATIONAL ENGINEERING SERVICES (PVT) LTD.
ASSOCIATED CONSULTING ENGINEERS (PVT) LTD.
PAKISTAN ENGINEERING SERVICES (PVT) LTD.

BARSAAB CONSULTING SERVICES (PVT) LTD.
TOLAR ENGINEERING INC.CO.

04				DRAWN	ASIF SAMI
03				RECOMMENDED	-
02				CHECKED	-
01				APPROVED	-
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-

PROJECT LAYOUT			SCALE
DATE: MARCH, 2028	DRAWING No. ALHPP-LAY-0201	REV. 1	AS SHOWN

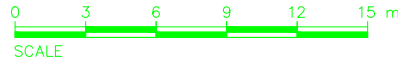
C- POWER HOUSE



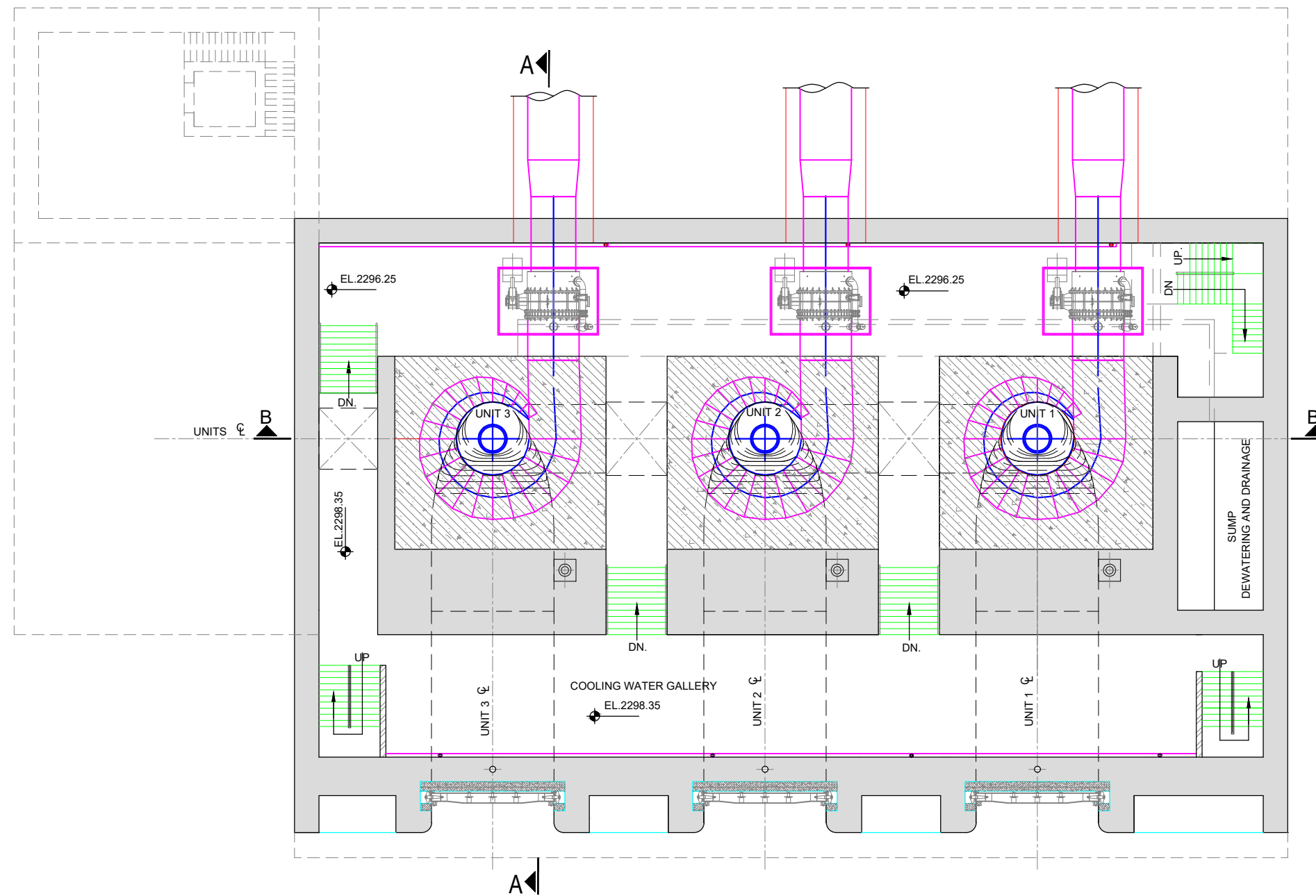
TAILRACE CHANNEL
CROSS SECTION T-T

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- NOTES:**
- 1. ALL DIMENSIONS/ELEVATIONS ARE IN METERS.
 - 2. ELEVATIONS AND LEVELS ARE BASED ON THE TOPOGRAPHIC SURVEY ATTACHED IN PACKAGE III, VOLUME III OF THE BIDDING DOCUMENT. VERIFICATION OF THESE ELEVATIONS IS RESPONSIBILITY OF THE EPC CONTRACTOR.
 - 3. THE EXCAVATION SLOPE/LIMITS ARE TENTATIVE. SURFACE EXCAVATIONS SHOWN ON THIS DRAWING MAY CHANGE DURING DETAILED DESIGN/EXECUTION DESIGN AFTER HAVING MORE INFORMATION ABOUT GEOLOGY AND TOPOGRAPHY OF PROJECT SITE.
 - 4. THE EXCAVATION SLOPES SHOULD BE DEFINED AS A RESULT OF STABILITY ANALYSES.
 - 5. GABION PROTECTION MAY BE APPLIED INSTEAD OF SIDE EXCAVATION. IF THIS IS PREFERRED BY THE CONTRACTOR THE NECESSARY CONTROL FOR THE FREEBOARD SHOULD BE DONE.
 - 6. ACCESS ROADS ARE NOT SHOWN. THE CONTRACTOR WILL DESIGN THE ROADS ACCORDING TO HIS OWN REQUIREMENT.
 - 7. THE CONTRACTOR WILL BE ABLE TO MAKE NECESSARY CHANGES IN THE DIMENSIONS OF THE STRUCTURES, DIVERSION AND DEWATERING SYSTEM, EXCAVATION AND THE CONSTRUCTION METHODOLOGY IN ACCORDANCE WITH THE PROPOSED SCHEME.



CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY		CONSULTANT:  ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.  DOLSAAR ENGINEERING INC.CO.  BARQAAB CONSULTING SERVICES (PVT.) LTD.		04					DRAWN	ASIF SAMI	POWER HOUSE LAYOUT		SCALE
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		03						RECOMMENDED	-	AS SHOWN			
		02							CHD./VER.	-			
		01								-			
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-			DATE :	DRAWING No.	REV.	
								MARCH, 2026	ALHPP-PH-0301				



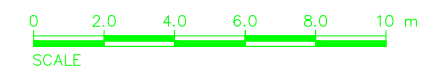
PLAN AT EL. 2299.25

DISCLAIMER:

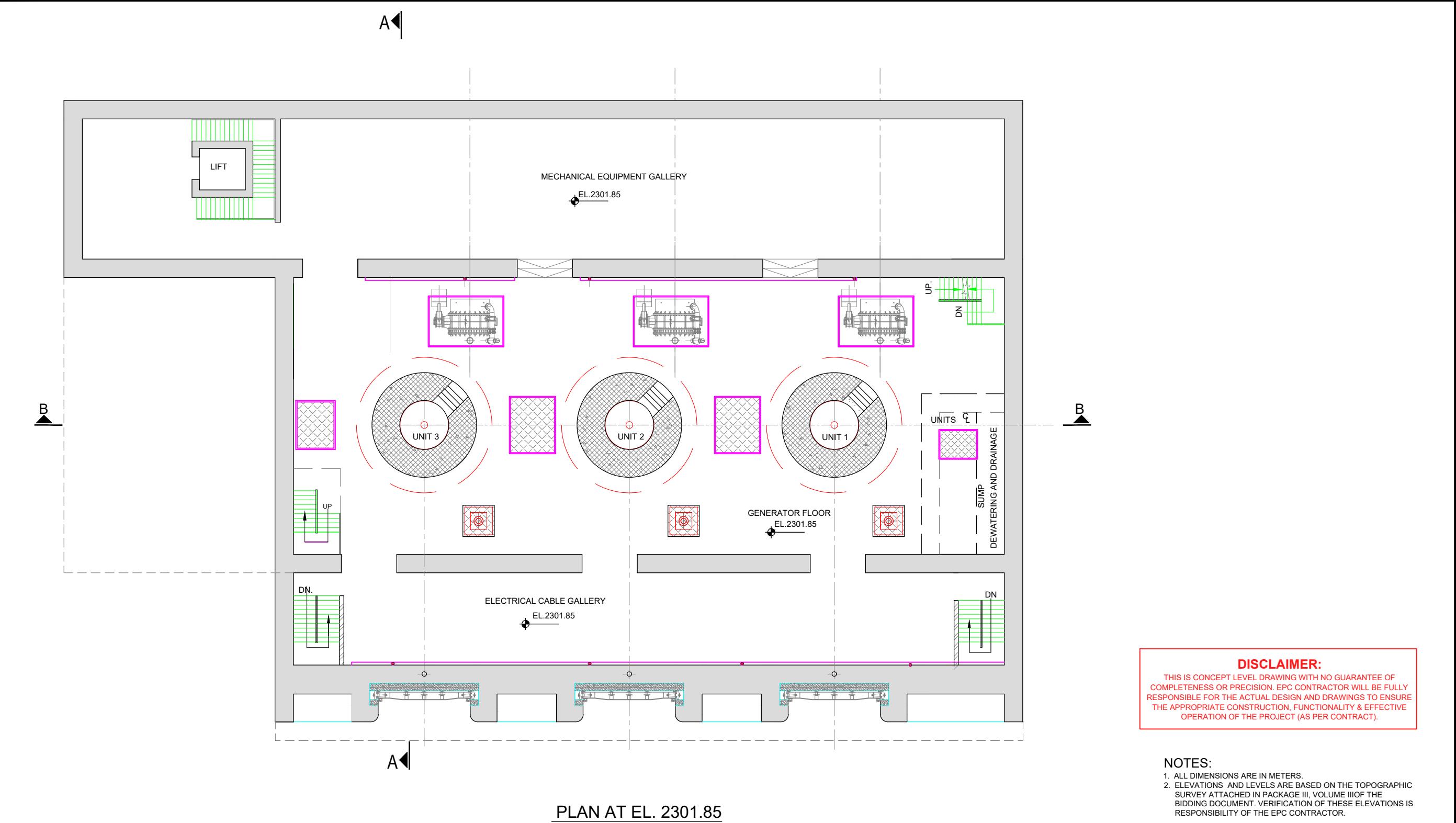
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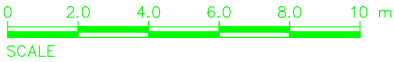


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		03				RECOMMENDED	-			AS SHOWN
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		02				CHD./VER.	-	DATE : MARCH, 2026	DRAWING No. ALHPP-PH-0302	REV. 
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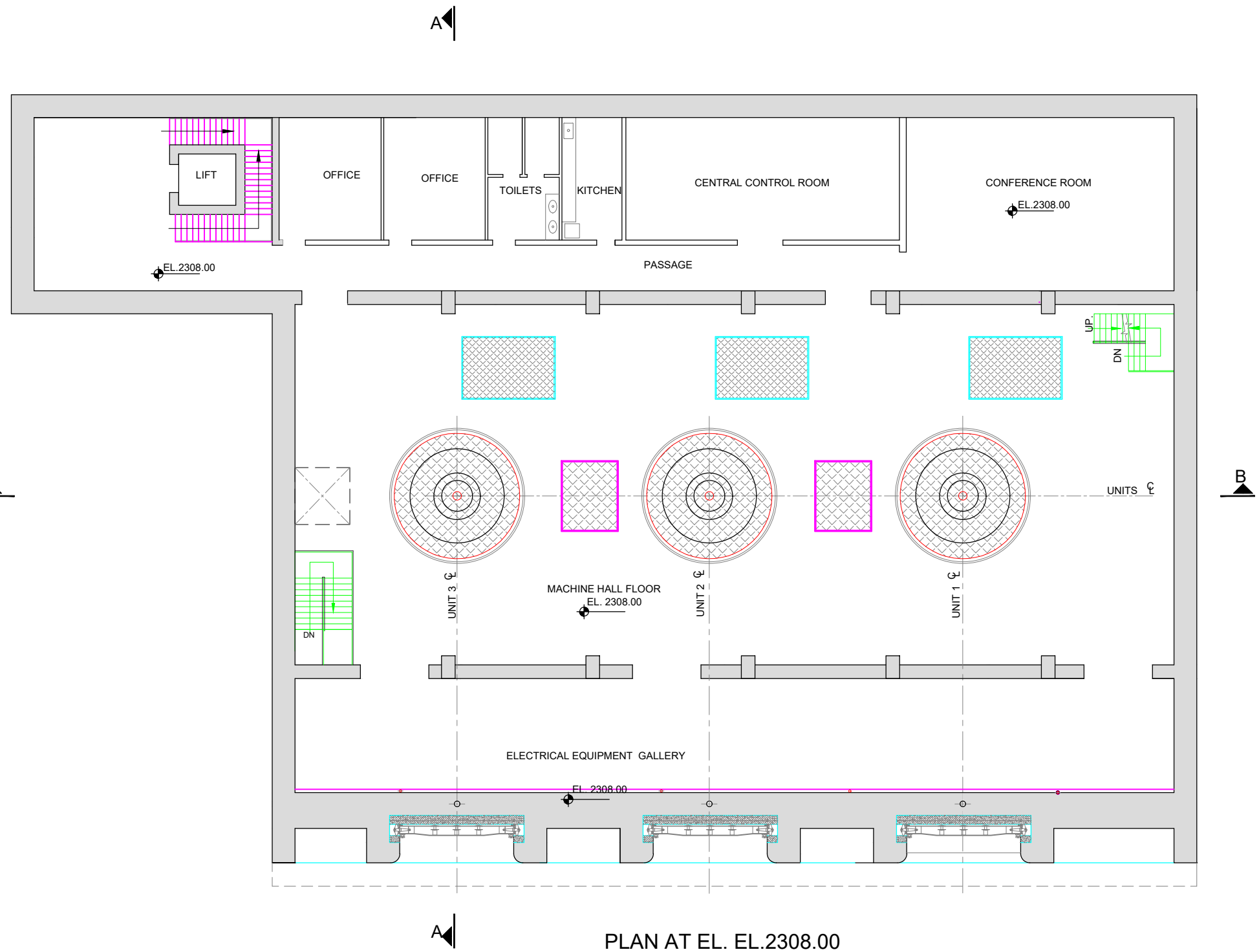


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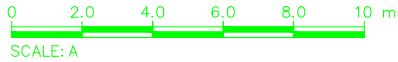


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		03				RECOMMENDED	-			AS SHOWN
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		02				CHD./VER.	-	DATE : MARCH, 2026	DRAWING No. ALHPP-PH-0303	REV. 
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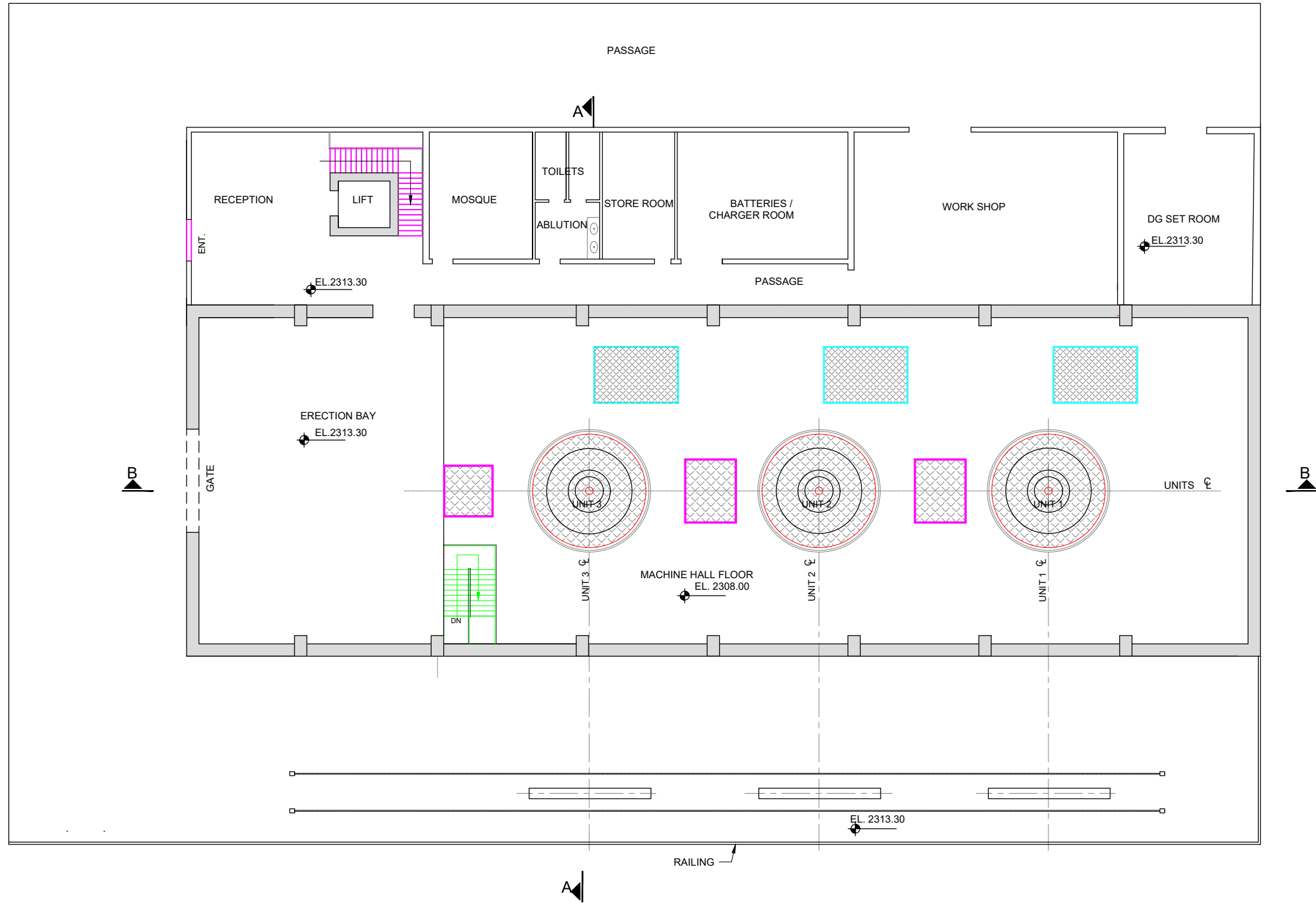


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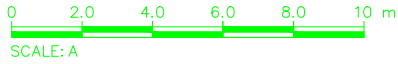
CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM) ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD. BARQAAB CONSULTING SERVICES (PVT.) LTD. DOLSAR ENGINEERING INC. CO.	04					DRAWN	ASIF SAMI	POWER HOUSE PLAN AT EL. 2308.00		SCALE			
		03						RECOMMENDED			-	AS SHOWN		
		02						CHD./VER.			-	REV.		
		PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		01								DATE :	DRAWING No.	REV.
				REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	MARCH, 2026	ALHPP-PH-0304			



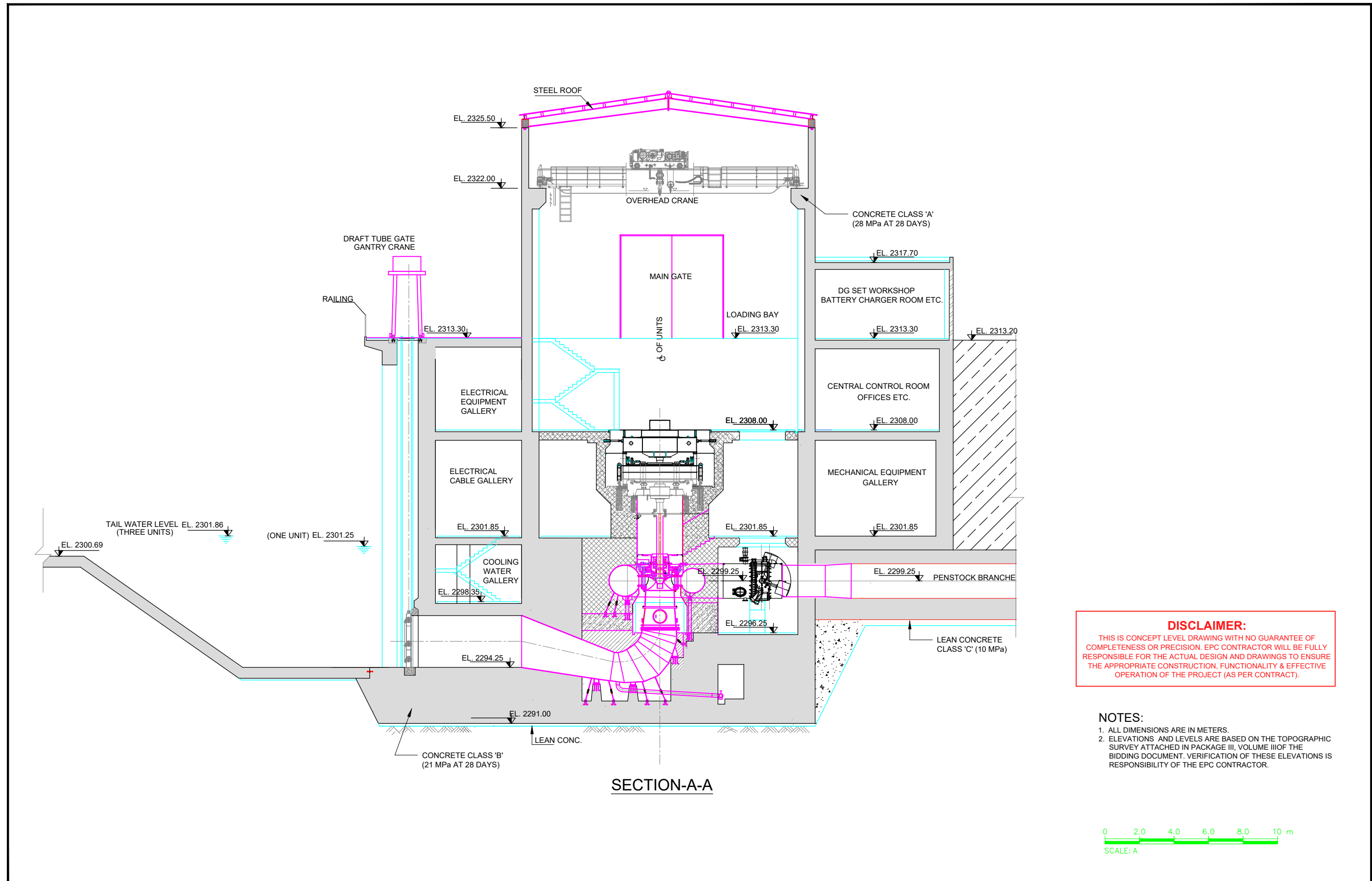
PLAN AT EL. EL.2313.30

DISCLAIMER:
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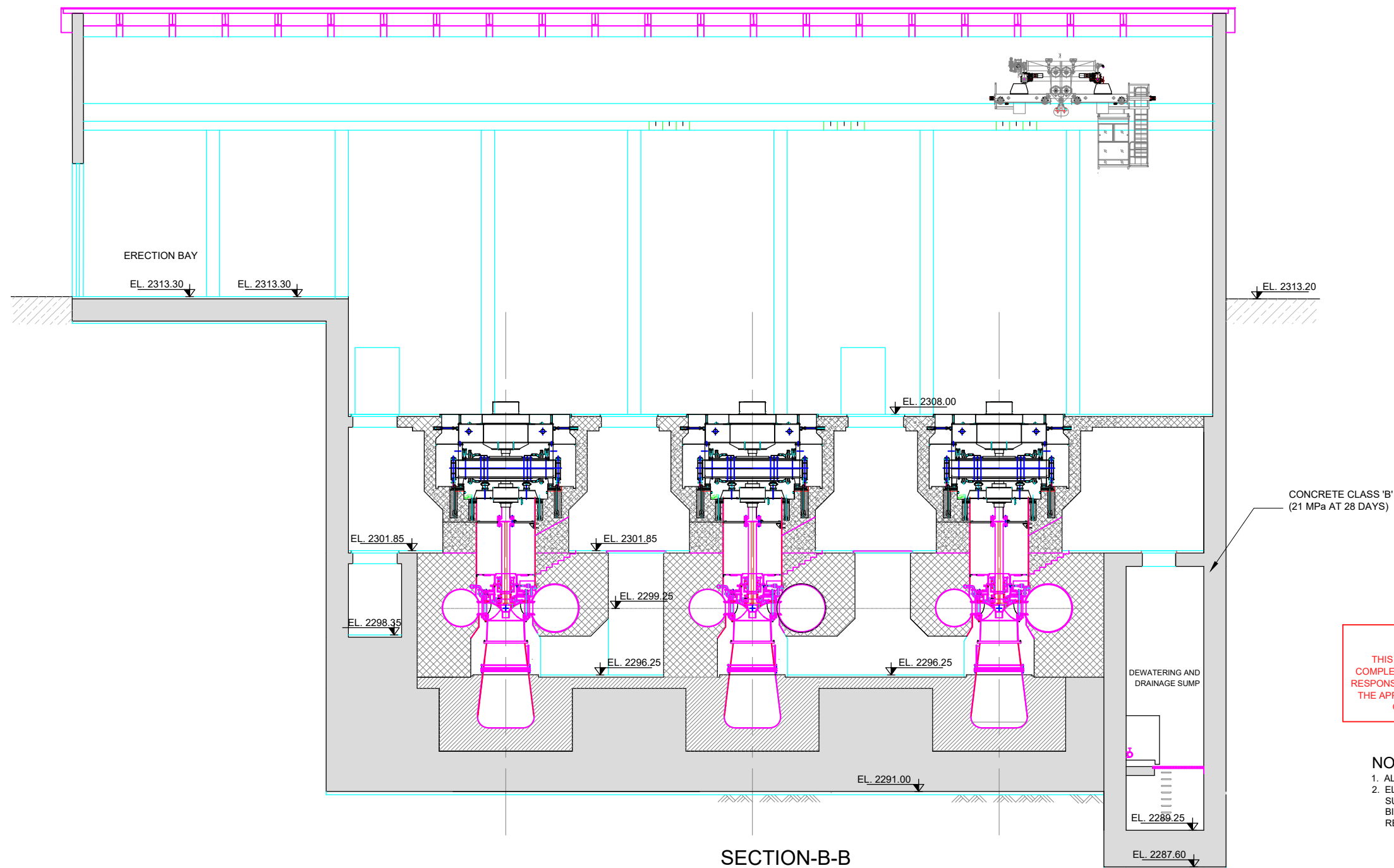
- NOTES:**
1. ALL DIMENSIONS ARE IN METERS.
 2. ELEVATIONS AND LEVELS ARE BASED ON THE TOPOGRAPHIC SURVEY ATTACHED IN PACKAGE III, VOLUME III OF THE BIDDING DOCUMENT. VERIFICATION OF THESE ELEVATIONS IS RESPONSIBILITY OF THE EPC CONTRACTOR.



CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM) ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD. BARQAAB CONSULTING SERVICES (PVT.) LTD. DOLSAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	POWER HOUSE PLAN AT EL.2313.30		SCALE
		03				RECOMMENDED	-			AS SHOWN
		02				CHD./VER.	-	DATE : MARCH, 2026	DRAWING No. ALHPP-PH-0305	REV. 
		01				APPROVED	-			
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-			



CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT:  ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.  PAKISTAN ENGINEERING SERVICES (PVT.) LTD.  BARQAAB CONSULTING SERVICES (PVT.) LTD.  DOLSAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	POWER HOUSE SECTION A-A		SCALE
		03				RECOMMENDED	-			AS SHOWN
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		02				CHD./VER.	-	DATE : MARCH, 2026	DRAWING No. ALHPP-PH-0306	REV. 
		01				APPROVED	-			
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-			



DISCLAIMER:
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- NOTES:**
1. ALL DIMENSIONS ARE IN METERS.
 2. ELEVATIONS AND LEVELS ARE BASED ON THE TOPOGRAPHIC SURVEY ATTACHED IN PACKAGE III, VOLUME III OF THE BIDDING DOCUMENT. VERIFICATION OF THESE ELEVATIONS IS RESPONSIBILITY OF THE EPC CONTRACTOR.



CLIENT: **PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY**

PROJECT: **ATTABAD LAKE HYDROPOWER PROJECT (54 MW)**

CONSULTANT: **AHMC** ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS

JOINT VENTURE OF:
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM)

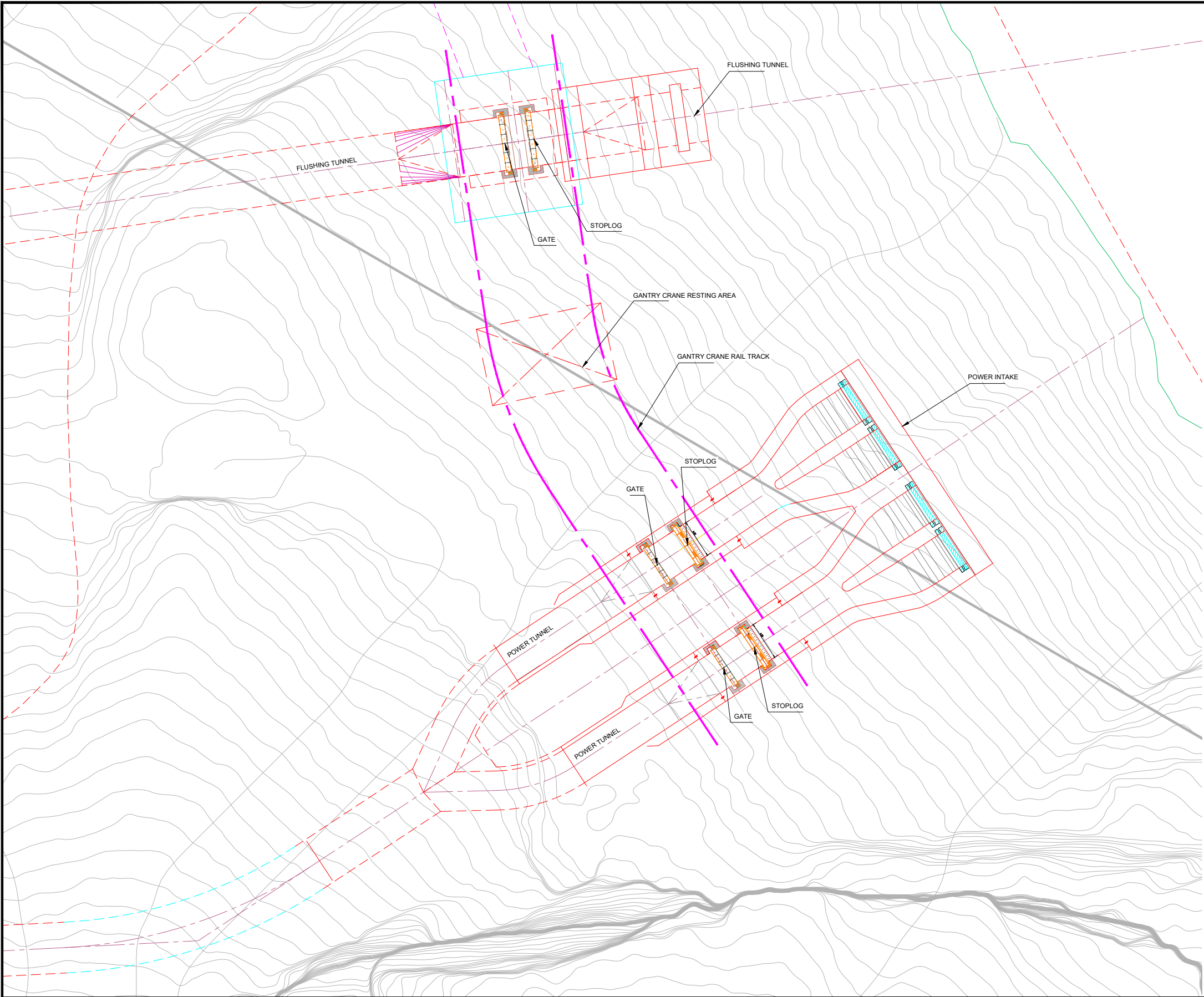
ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.
PAKISTAN ENGINEERING SERVICES (PVT.) LTD.

BARQAAB CONSULTING SERVICES (PVT.) LTD.
DOLSAR ENGINEERING INC. CO.

04				DRAWN	ASIF SAMI
03				RECOMMENDED	-
02				CHD./VER.	-
01				APPROVED	-
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-

POWER HOUSE SECTION B-B		SCALE
		AS SHOWN
DATE : MARCH, 2026	DRAWING No. ALHPP-PH-0307	REV.

D- HYDRAULIC STEEL STRUCTURES



DISCLAIMER:
THIS IS CONCEPT LEVEL DRAWING WITH NO GUARANTEE OF COMPLETENESS OR PRECISION. EPC CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE DETAIL DESIGN AND PREPARATION OF REQUIRED DRAWINGS TO ENSURE THE APPROPRIATE CONSTRUCTION, FUNCTIONALITY & EFFECTIVE OPERATION OF THE PROJECT (AS PER CONTRACT).

- NOTES:**
- 1. ALL DIMENSIONS ARE IN METERS.
 - 2. ELEVATIONS AND LEVELS ARE BASED ON THE TOPOGRAPHIC SURVEY ATTACHED IN PACKAGE III, VOLUME III OF THE BIDDING DOCUMENT. VERIFICATION OF THESE ELEVATIONS IS RESPONSIBILITY OF THE EPC CONTRACTOR.



CLIENT:


PROJECT:
ATTABAD LAKE HYDROPOWER PROJECT (54 MW)

CONSULTANT:
 **ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS**

JOINT VENTURE OF:

 NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM)

 ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.

 PAKISTAN ENGINEERING SERVICES (PVT.) LTD.

 BARQAAB CONSULTING SERVICES (PVT.) LTD.

 DOLSAR ENGINEERING INC. CO.

04				DRAWN	ASIF SAMI
03				RECOMMENDED	-
02				CHD./VER.	-
01				APPROVED	-
REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-

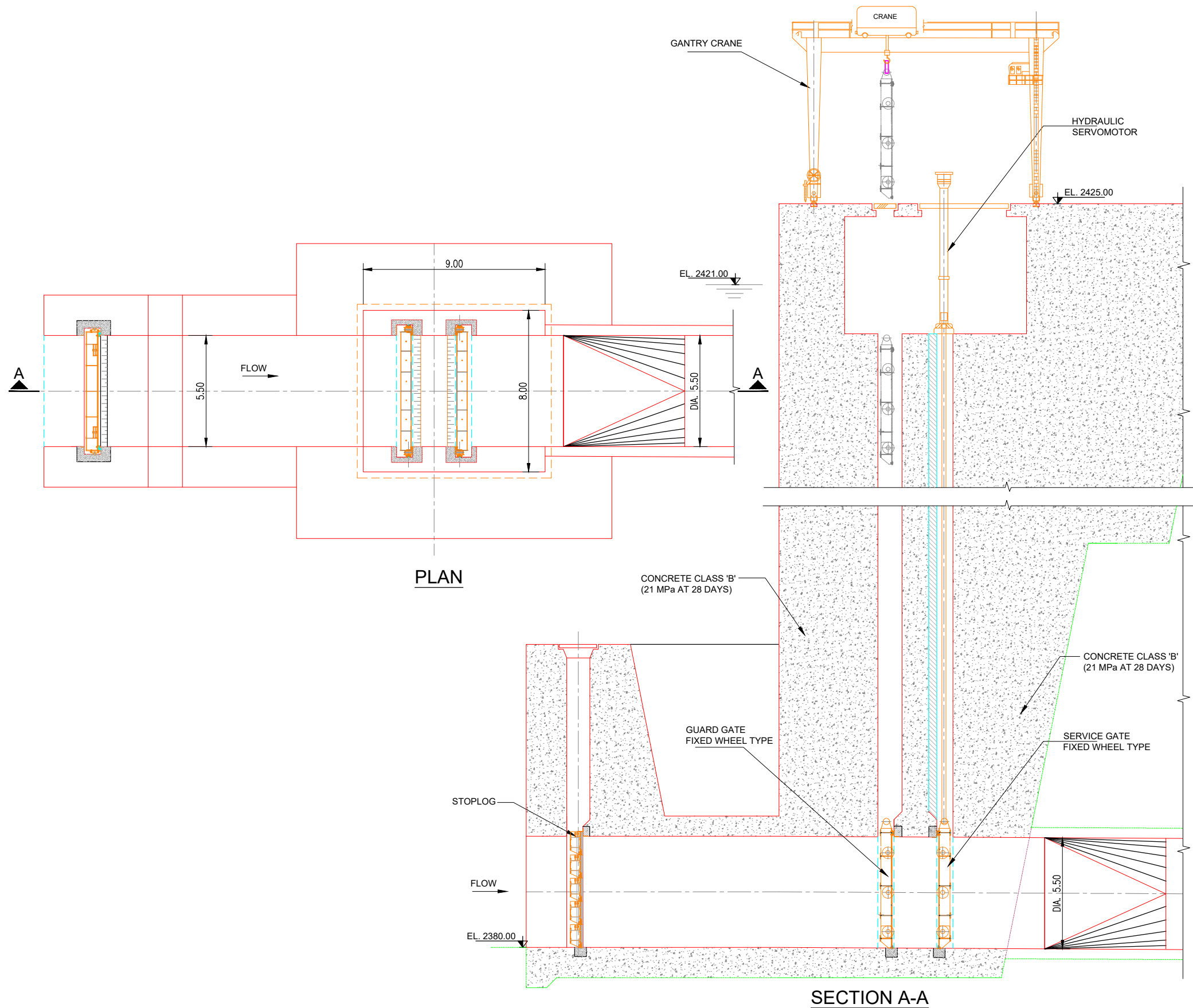
POWER AND FLUSHING INTAKE LAYOUT PLAN AT EL.2425.00

DATE : MARCH, 2026

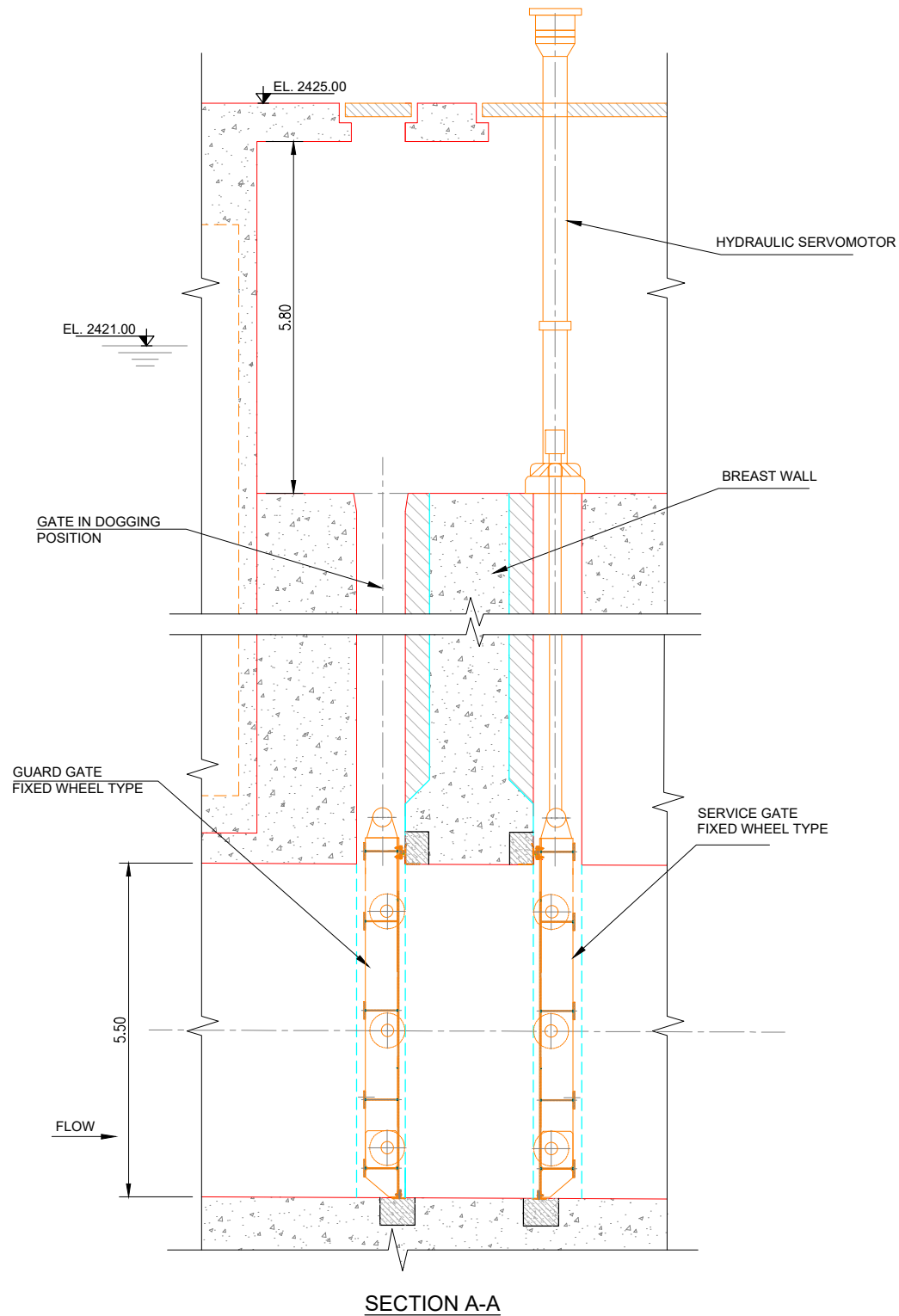
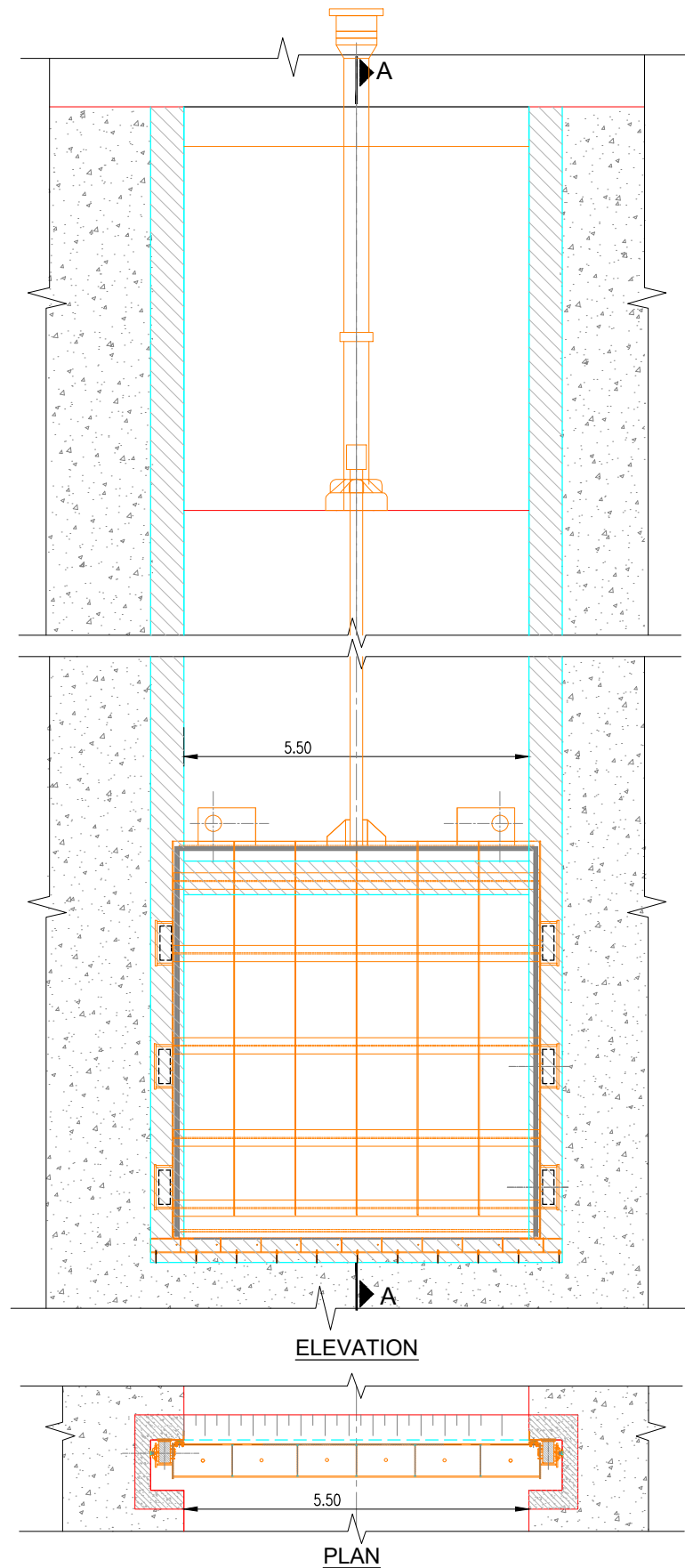
DRAWING No. ALHPP-HSS-0401

SCALE: AS SHOWN

REV. 

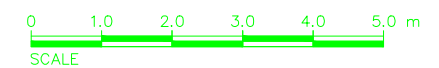


CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT:  ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.  DOLSAAR ENGINEERING INC. CO.  BARQAAB CONSULTING SERVICES (PVT.) LTD.	04 03 02 01 REV.	DATE	DESCRIPTION	APPROVED	DRAWN ASIF SAMI RECOMMENDED - CHD./VER. - APPROVED -	FLUSHING TUNNEL GATE SHAFT ARRANGEMENT			SCALE AS SHOWN
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)							DATE : MARCH, 2026	DRAWING No. ALHPP-HSS-0402		REV. 

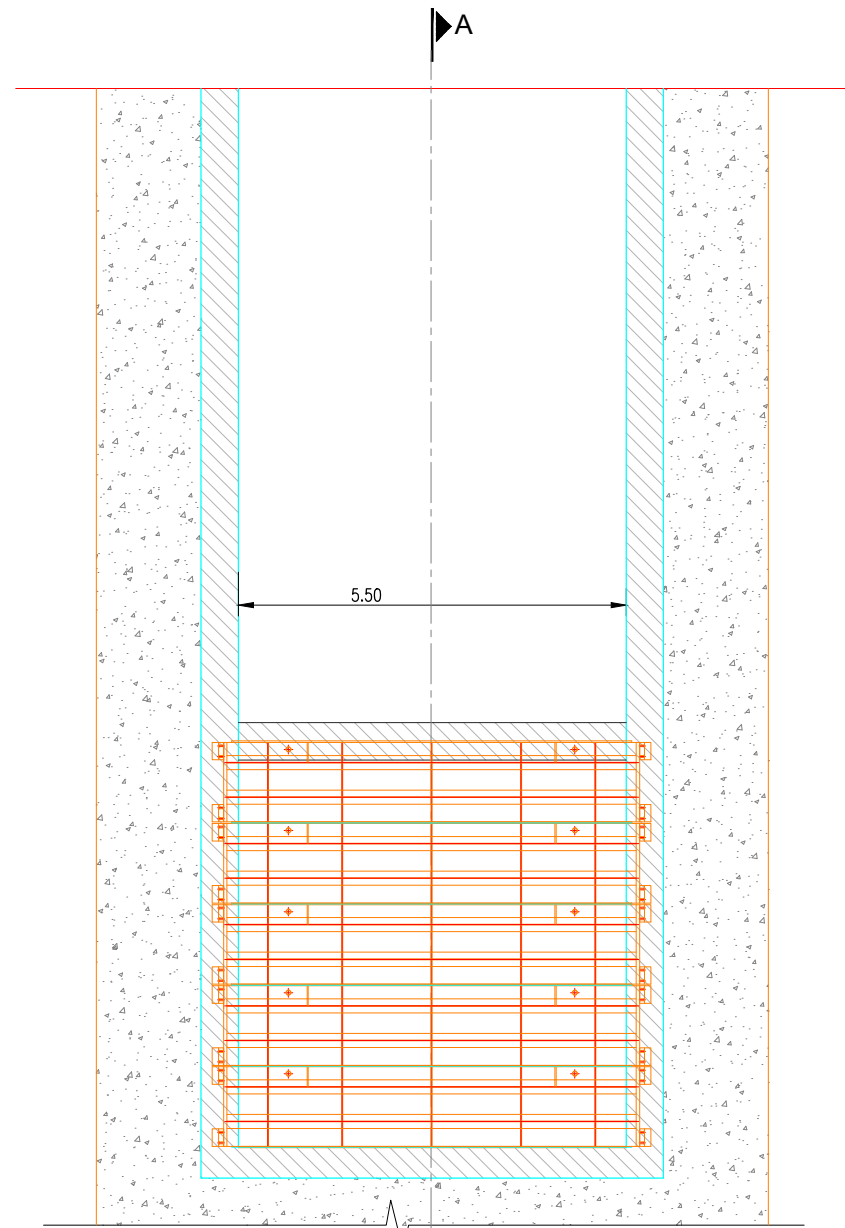


DISCLAIMER:
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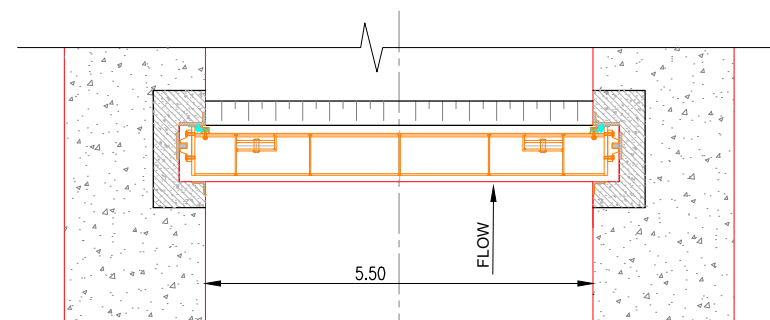
NOTE:
1. ALL THE UNITS IN METERS UNLESS OTHERWISE NOTED.



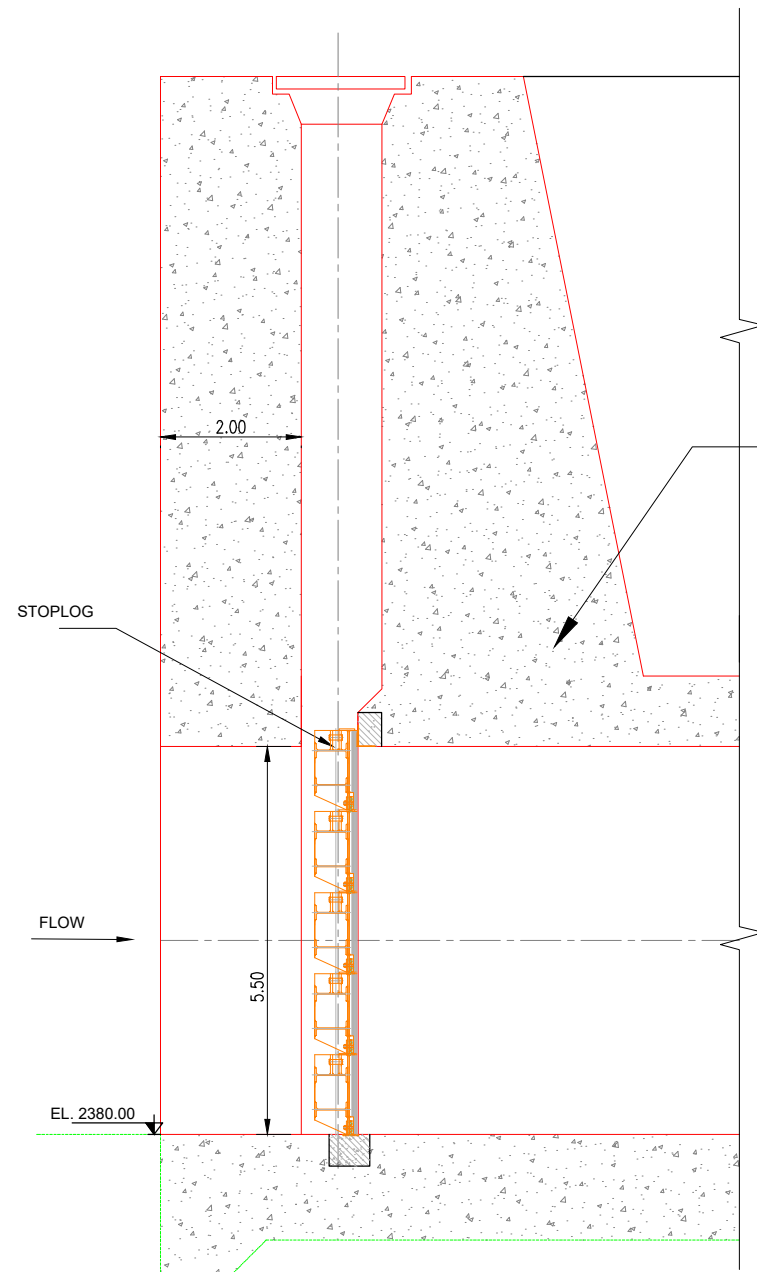
CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT:  ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD.  BARQAAB CONSULTING SERVICES (PVT.) LTD.  DOLSAAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	FLUSHING TUNNEL SERVICE & GUARD GATE ARRANGEMENT		SCALE
		03				RECOMMENDED	-			AS SHOWN
PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		02				CHD./VER.	-	DATE : MARCH, 2026	DRAWING No. ALHPP-HSS-0403	REV. 
		01				APPROVED	WAQAR HUSNAIN			
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	WAQAR HUSNAIN			



ELEVATION



PLAN



SECTION A-A

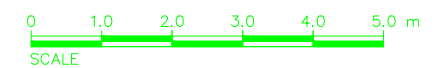
CONCRETE CLASS 'B'
(21 MPa AT 28 DAYS)

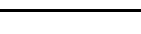
DISCLAIMER:

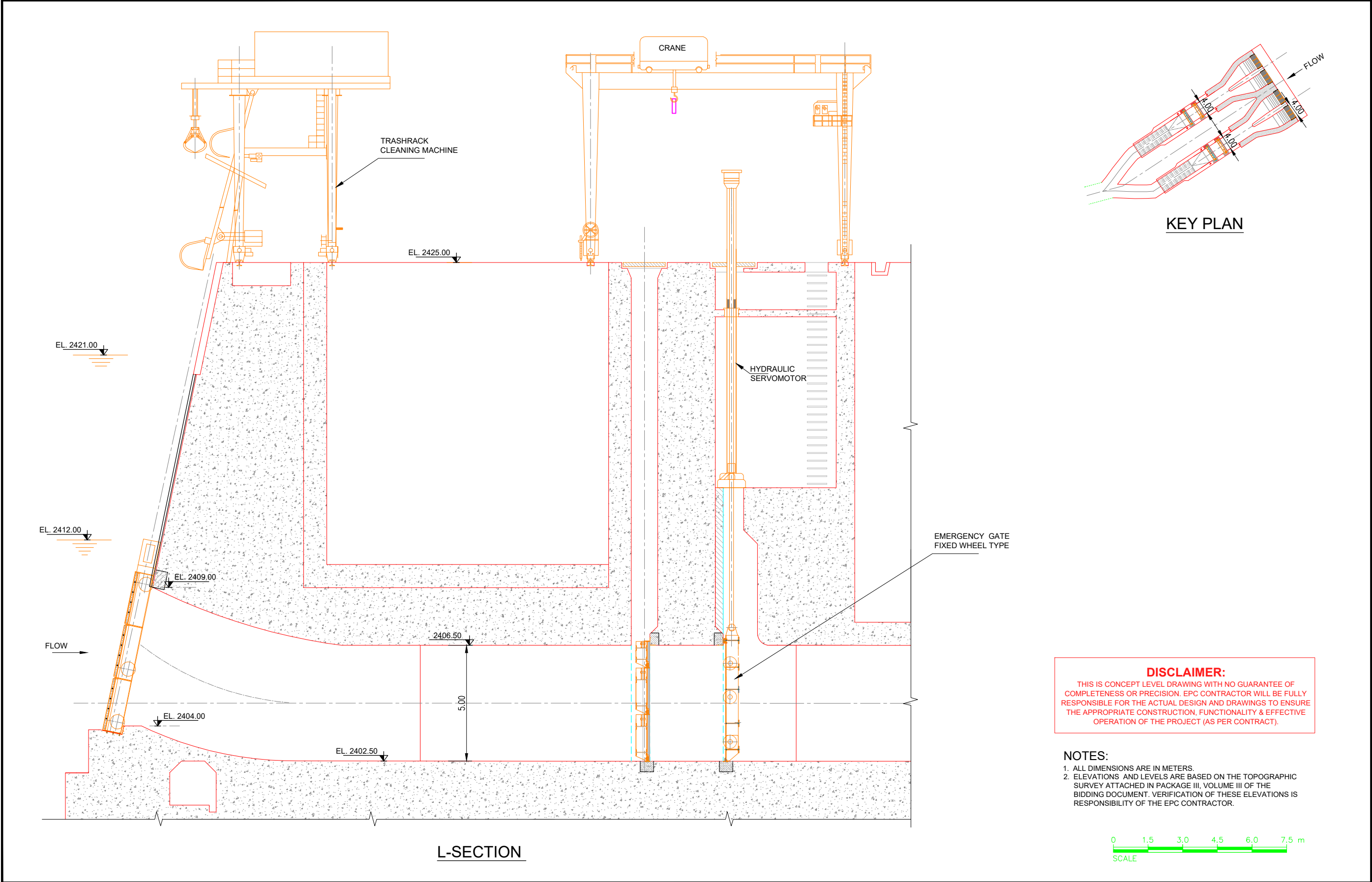
THIS IS CONCEPT LEVEL DRAWING WITH NO GUARANTEE OF COMPLETENESS OR PRECISION. EPC CONTRACTOR WILL BE FULLY RESPONSIBLE FOR THE ACTUAL DESIGN AND DRAWINGS TO ENSURE THE APPROPRIATE CONSTRUCTION, FUNCTIONALITY & EFFECTIVE OPERATION OF THE PROJECT (AS PER CONTRACT).

NOTE:

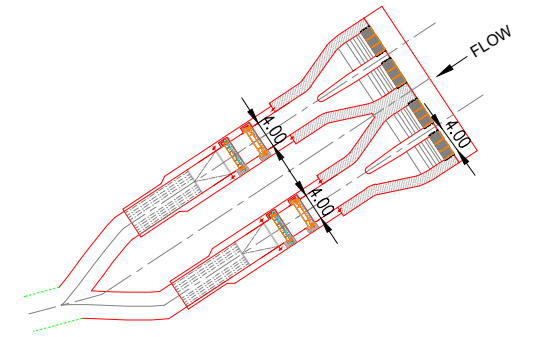
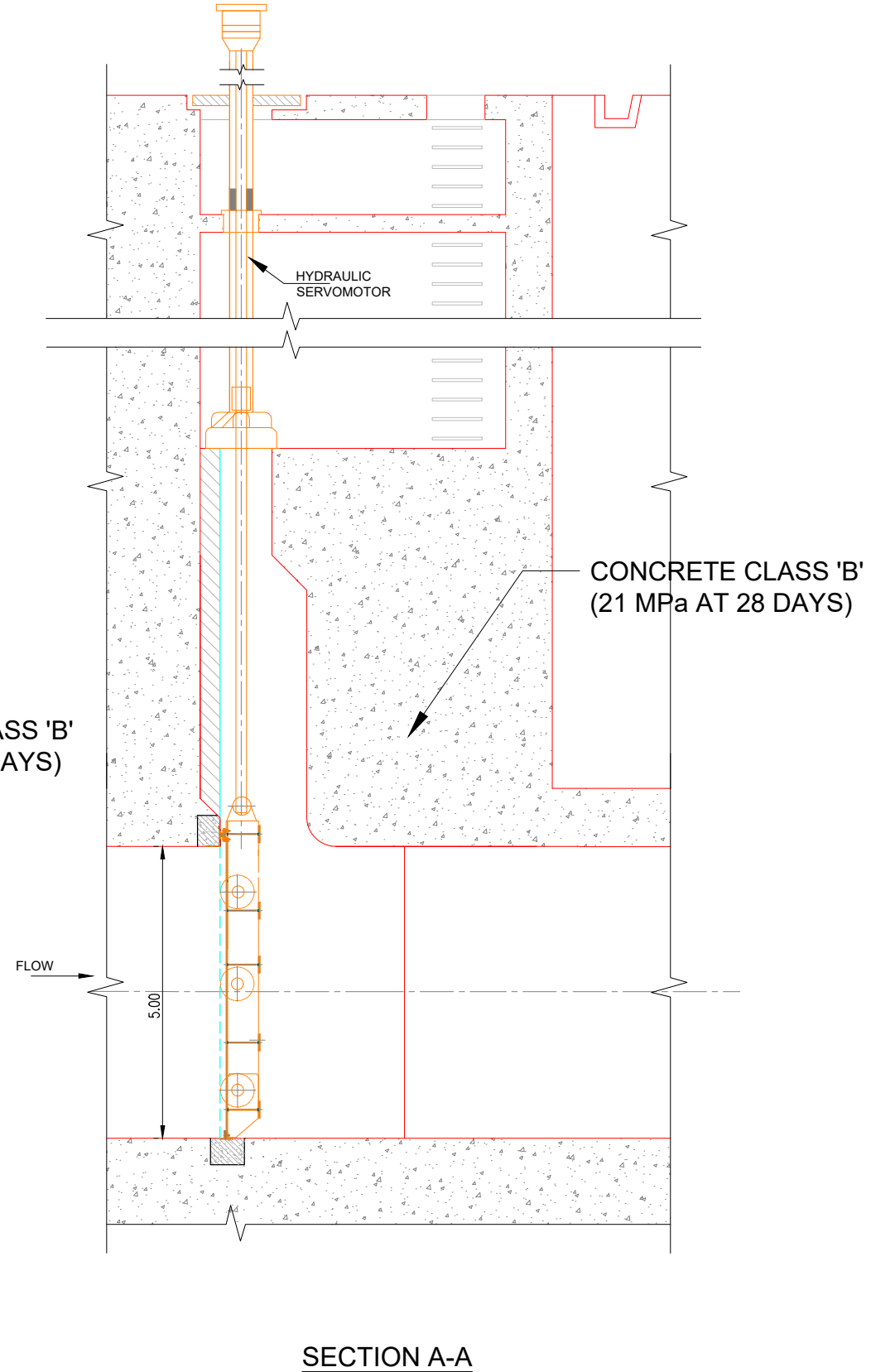
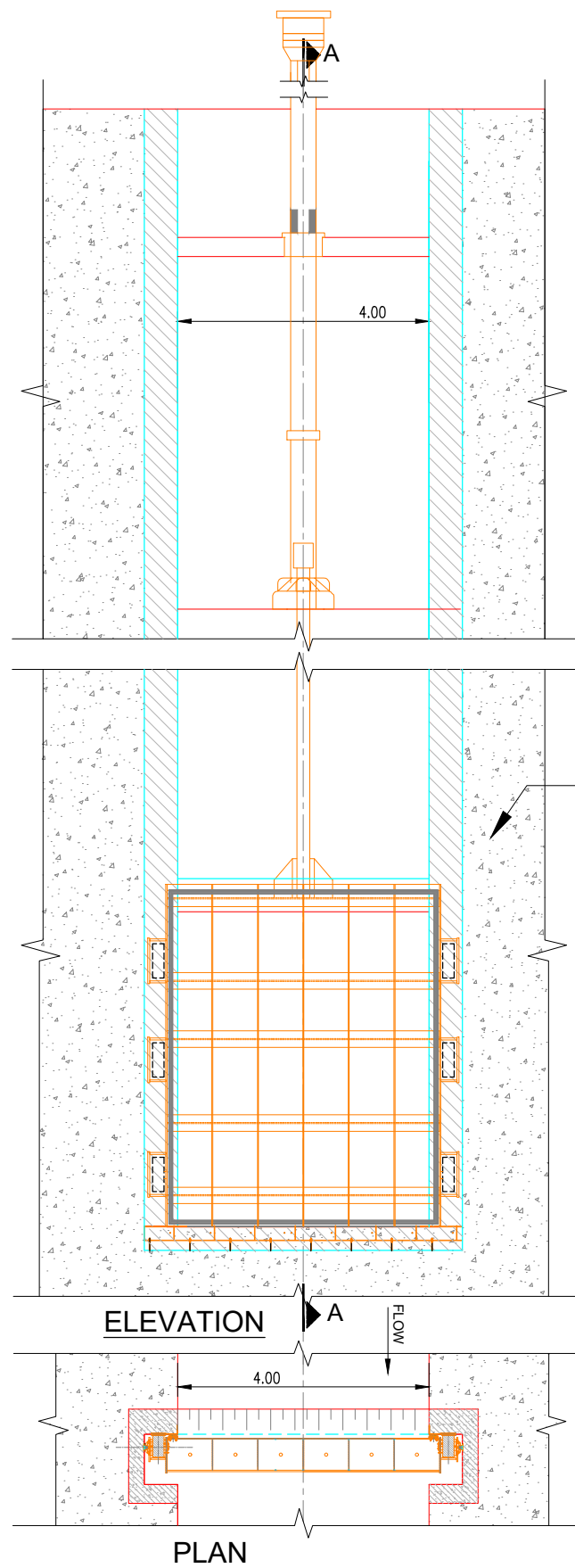
1. ALL THE UNITS IN METERS UNLESS OTHERWISE NOTED.
2. ALL STRUCTURAL CONCRETE IS CLASS 'B' (21 MPa AT 28 DAYS) UNLESS NOTED OTHERWISE.



CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM) ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD. BARQAAB CONSULTING SERVICES (PVT.) LTD. DOLSAR ENGINEERING INC.CO.	04				DRAWN	ASIF SAMI	FLUSHING TUNNEL STOPLOG ARRANGEMENT		SCALE
		03				RECOMMENDED	-			AS SHOWN
		02				CHD./VER.	-			
		01								
		PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	DATE : MARCH, 2026



CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF:  NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM)  ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD.  DOLSAR ENGINEERING INC. CO.  BARQAAB CONSULTING SERVICES (PVT.) LTD.	04				DRAWN	ASIF SAMI	POWER INTAKE EMERGENCY GATE & STOPLOG ARRANGEMENT		SCALE			
		03				RECOMMENDED	-			AS SHOWN			
		02				CHD./VER.	-						
		PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		01							DATE :	DRAWING No.	REV.
				REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	MARCH, 2026	ALHPP-HSS-0405		



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0 1.0 2.0 3.0 4.0 5.0 m
SCALE

CLIENT:  PAKISTAN WATER & POWER DEVELOPMENT AUTHORITY	CONSULTANT: ATTABAD HYDROPOWER MANAGEMENT CONSULTANTS JOINT VENTURE OF: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. (LEAD FIRM) ASSOCIATED CONSULTING ENGINEERS (PVT.) LTD. PAKISTAN ENGINEERING SERVICES (PVT.) LTD. BARQAAB CONSULTING SERVICES (PVT.) LTD. DOLSAR ENGINEERING INC. CO.	04				DRAWN	ASIF SAMI	POWER INTAKE EMERGENCY GATE ARRANGEMENT		SCALE
		03				RECOMMENDED	-			AS SHOWN
		02				CHD./VER.	-			
		01				APPROVED	-			
		PROJECT: ATTABAD LAKE HYDROPOWER PROJECT (54 MW)		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	-	DATE : MARCH, 2026