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MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT

AR ENGINEERS

Architects, Structural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.

MEP CONSULTANT



Project Name

Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

DETAILED FIRE FIGHTING Design Drawings

Sheet Name

FIRE FIGHTING SYSTEM LAYOUT PLAN

Date April, 2026

Scale NTS

Drawn by A.S.B

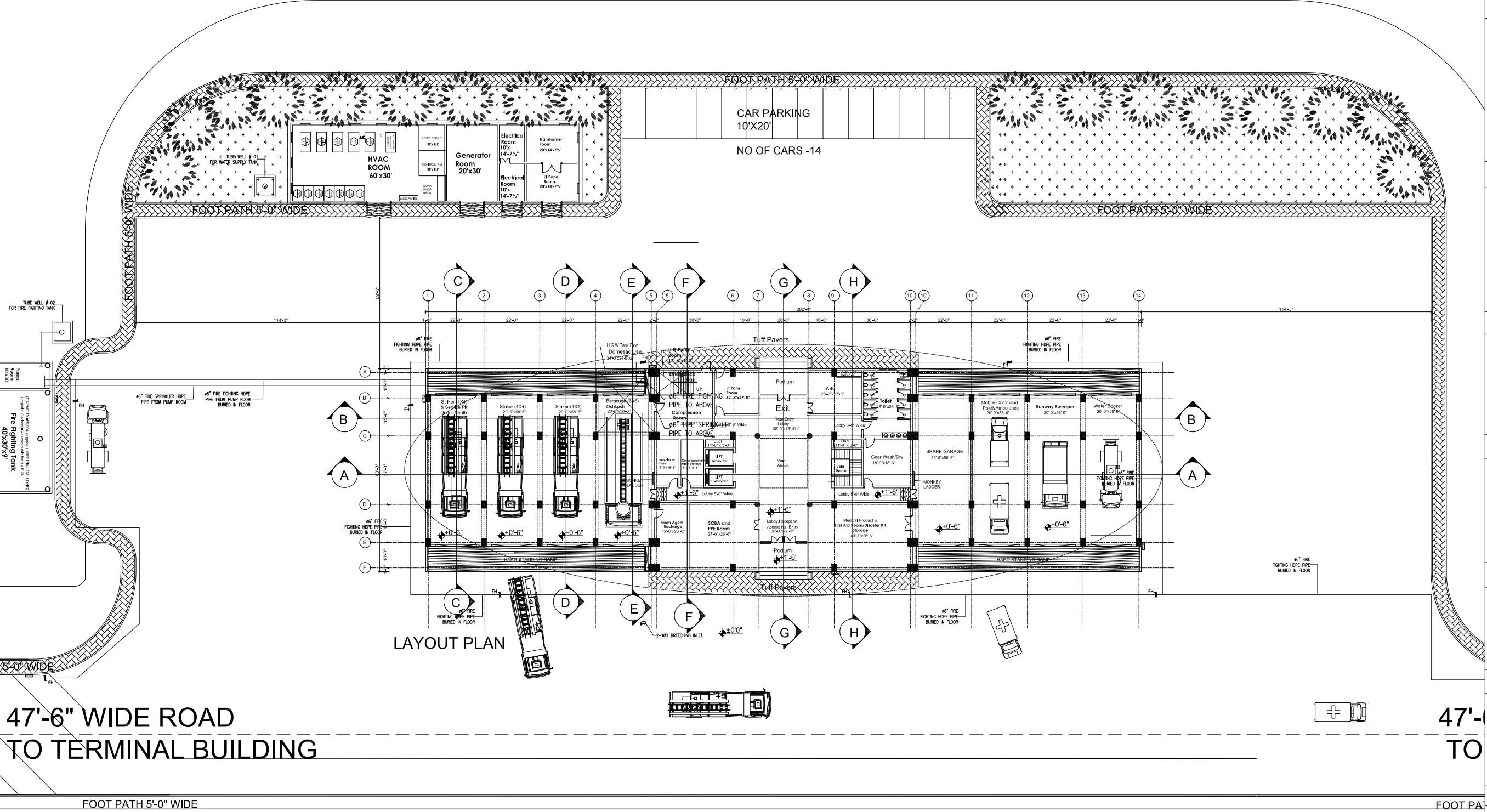
Checked by M.K

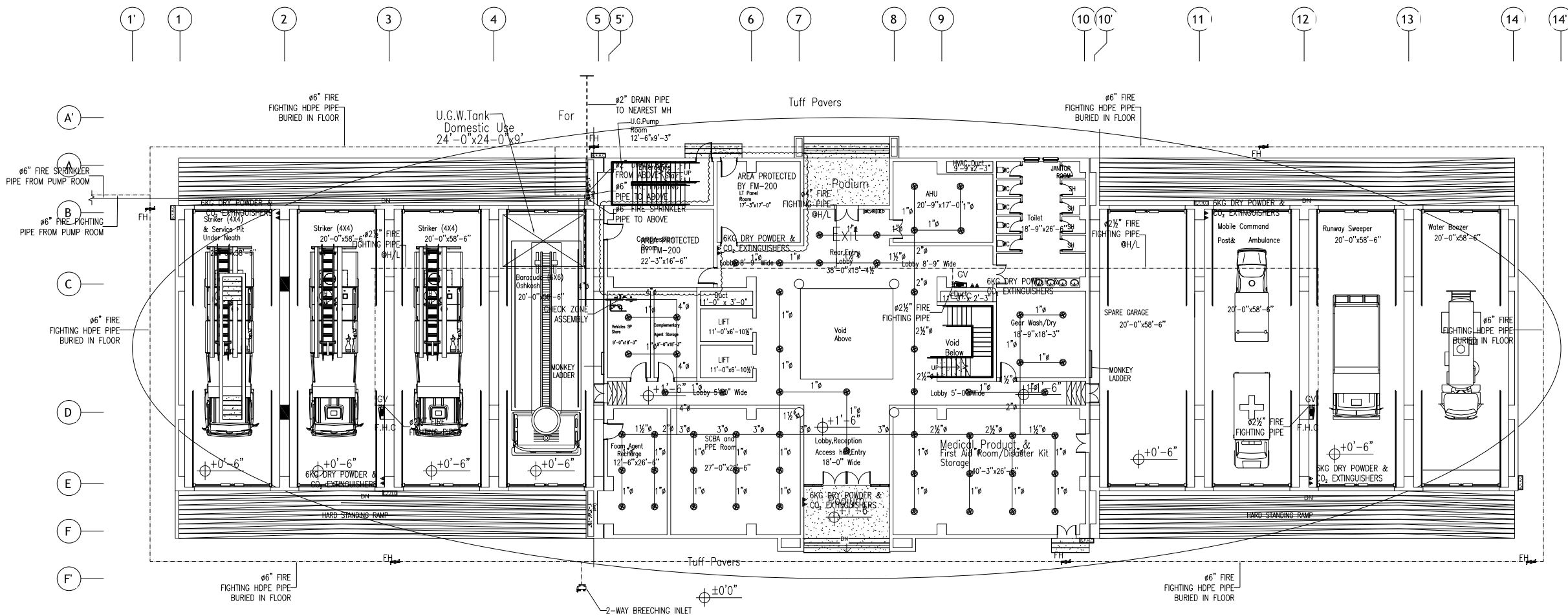
Approved by M.F

Drawing No. FF-01

2

ISSUE FOR TENDER





GROUND FLOOR PLAN

ISSUE FOR TENDER

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MEP CONSULTANT



Project Name

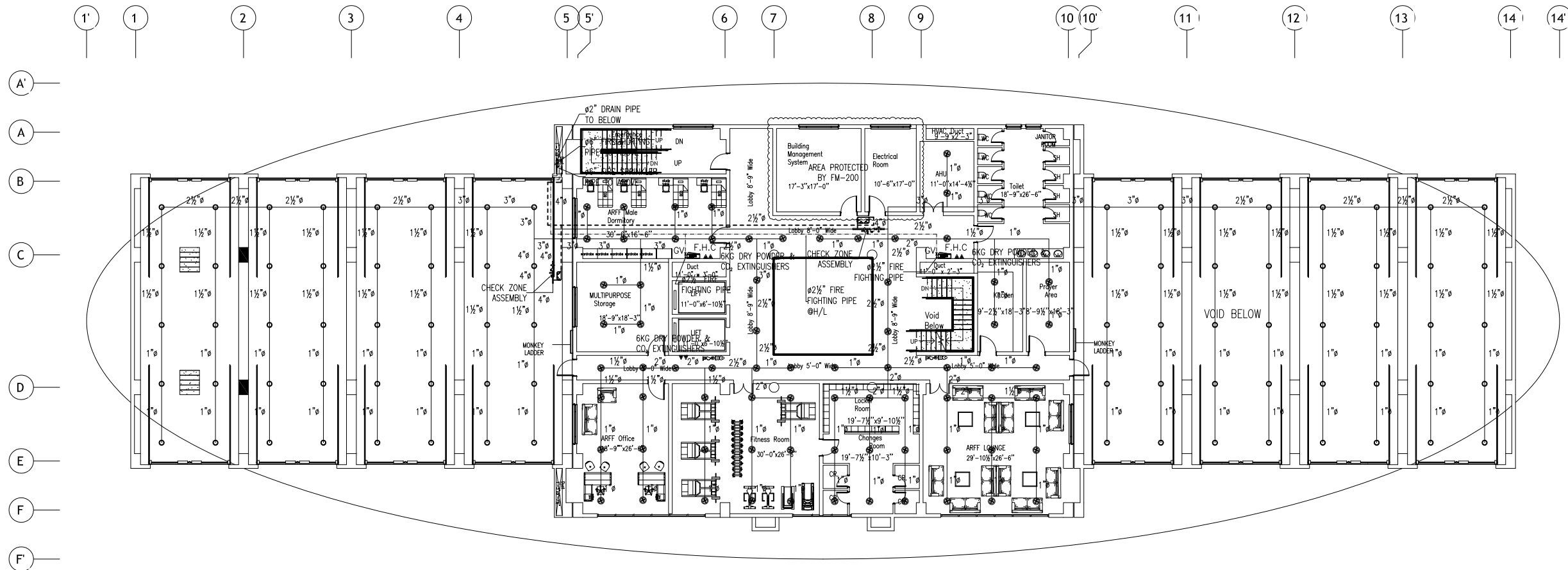
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

DETAILED FIRE FIGHTING Design Drawings

Sheet Name

FIRE FIGHTING SYSTEM GROUND FLOOR PLAN

Date	April, 2026
Scale	NTS
Drawn by	A.S.B
Checked by	M.K
Approved by	M.F
Drawing No.	FF-02



MEZZANINE FLOOR PLAN

ISSUE FOR TENDER

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Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

DETAILED FIRE FIGHTING Design Drawings

Sheet Name

FIRE FIGHTING SYSTEM MEZZANINE FLOOR PLAN

Date April, 2026

Scale NTS

Drawn by A.S.B

Checked by M.K

Approved by M.F

Drawing No. FF-03

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Anwar Ali Architects (Pvt.) Ltd.
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Planners & Management Consultants
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Public Health, Highway, Electrical Design Solution.

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Cell no: 0322-3924199
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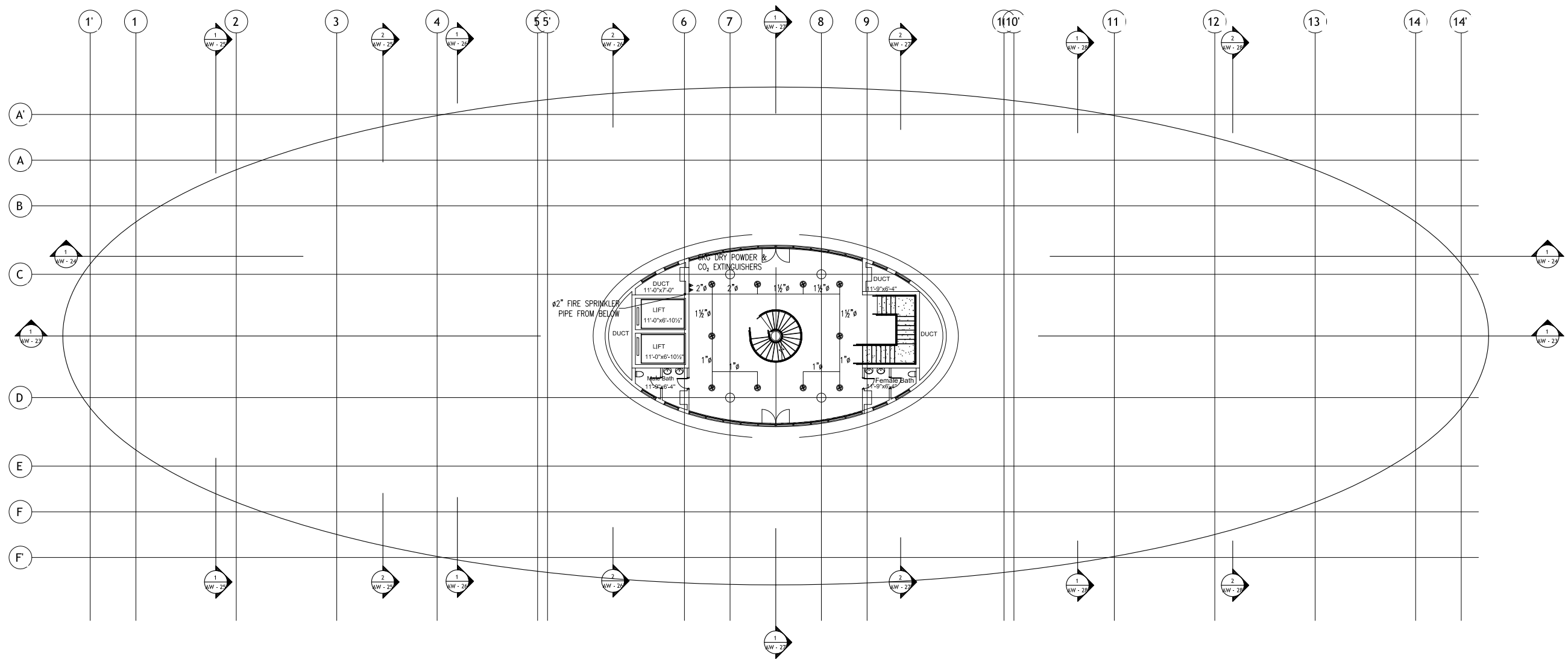
**Consultancy Services for
New Air Traffic Control Tower
(ATCT), Fire Station and Allied
Facilities at Skardu
International Airport**

Sheet Name
FIRE FIGHTING SYSTEM FIRST FLOOR PLAN

Date	April, 2026
Scale	NTS
Drawn by	A.S.B
Checked by	M.K
Approved by	M.F
Drawing No.	FF-04



ISSUE FOR TENDER



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Project Name

Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

DETAILED FIRE FIGHTING Design Drawings

Sheet Name

FIRE FIGHTING SYSTEM ROOP TOP

Date April, 2026

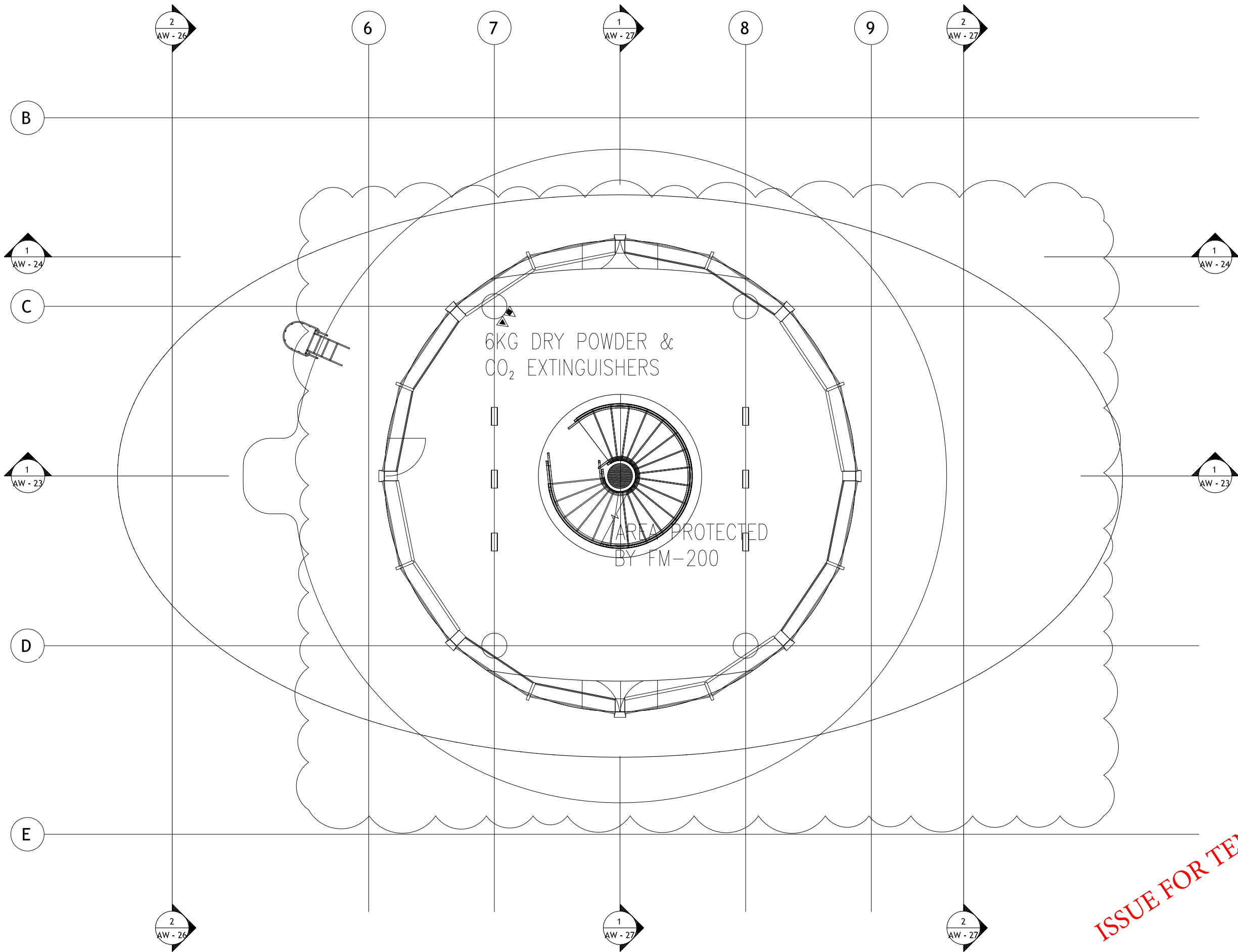
Scale NTS

Drawn by A.S.B

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Drawing No. FF-05



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Project Name

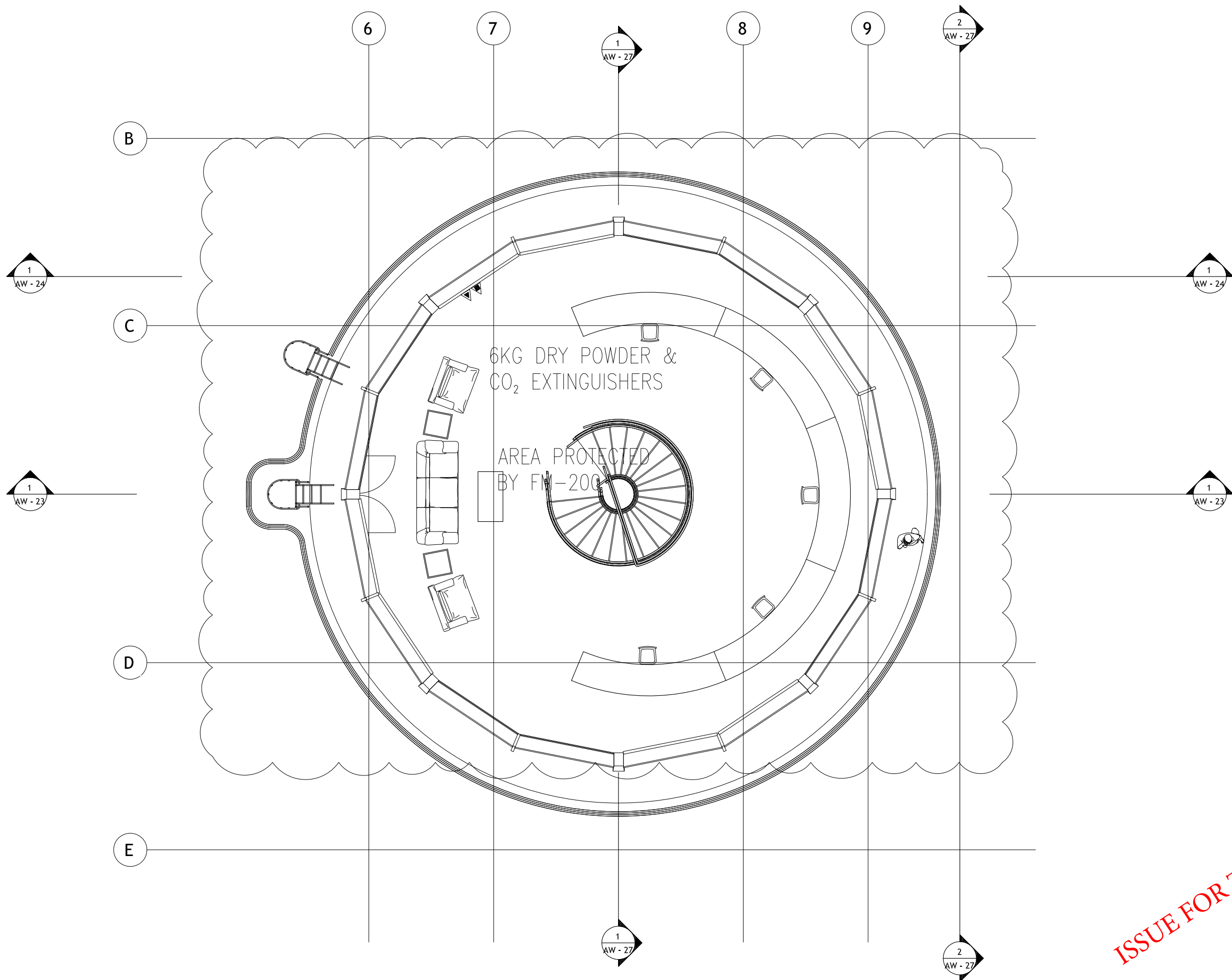
Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

DETAILED FIRE FIGHTING Design Drawings

Sheet Name

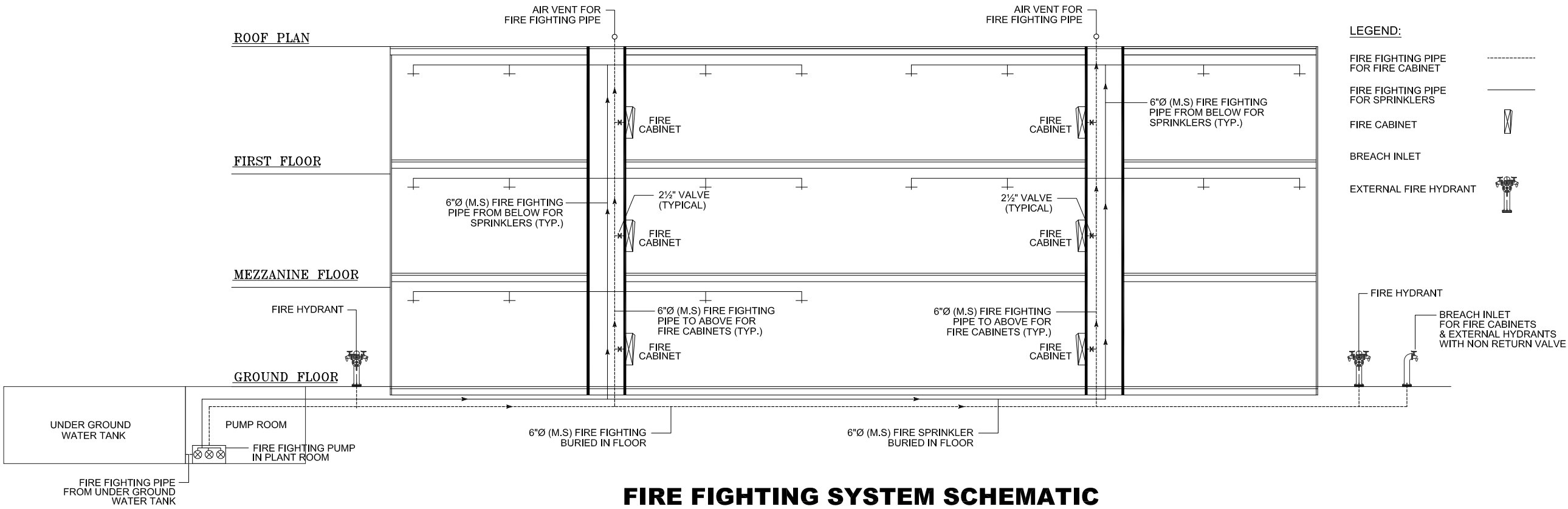
FIRE FIGHTING SYSTEM
ARFF FLOOR PLAN

Date	April, 2026
Scale	NTS
Drawn by	A.S.B
Checked by	M.K
Approved by	M.F
Drawing No.	FF-06



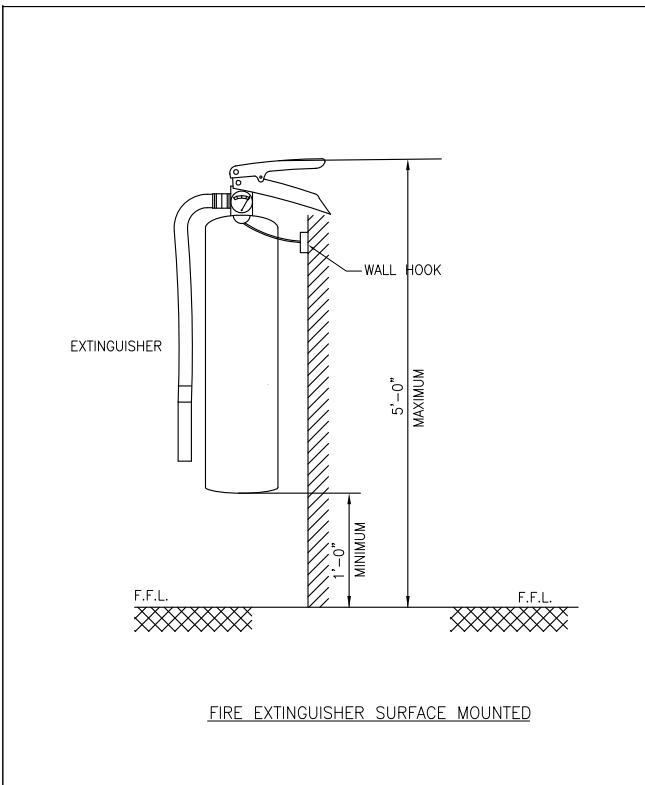
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JV MEMBERS  	
STRUCTURAL CONSULTANT AR ENGINEERS Architects, Stuctural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution,	
MEP CONSULTANT  ABSTRACTORS MEP CONSULTANT SUITE-14,3RD FLOOR JINNAH MALL,IZMIR TOWN, LHR Cell no: 0322-3924199 E-mail: abstractorseng@gmail.com	
Project Name Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
DETAILED FIRE FIGHTING Design Drawings	
Sheet Name FIRE FIGHTING SYSTEM ATCT FLOOR PLAN	
Date	April, 2026
Scale	NTS
Drawn by	A.S.B
Checked by	M.K
Approved by	M.F
Drawing No.	FF-07

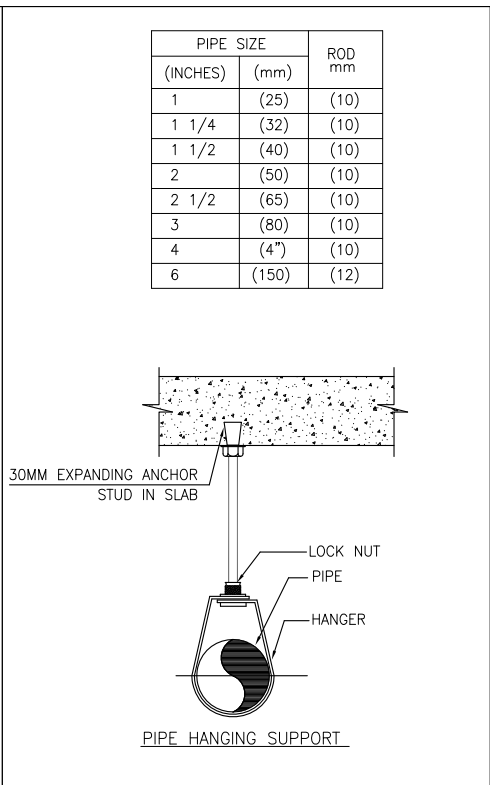


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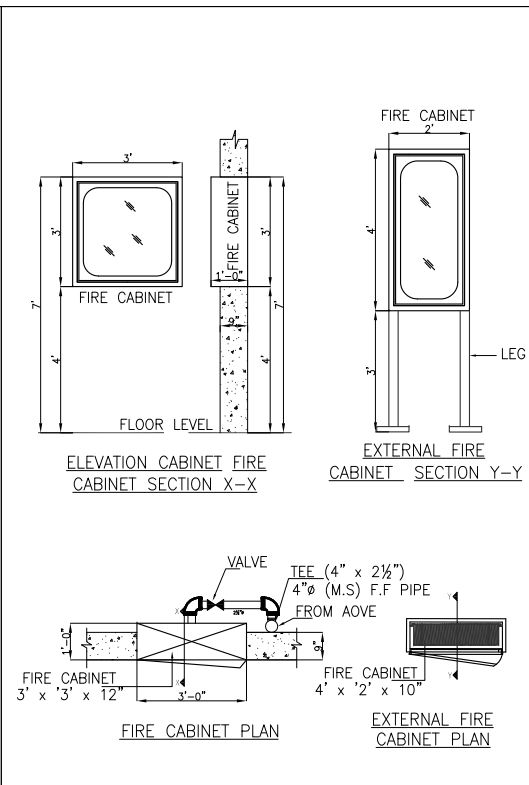
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MAIN CONSULTANT 	
JV MEMBERS  	
STRUCTURAL CONSULTANT AR ENGINEERS Architects, Structural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.	
MEP CONSULTANT  ABSTRACTORS MEP CONSULTANT SUITE-14,3RD FLOOR JINNAH MALL, QAMR TOWN, LHR Cell no: 0322-3924199 E-mail: abstractorseng@gmail.com	
Project Name Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
DETAILED FIRE FIGHTING Design Drawings	
Sheet Name FIRE FIGHTING SYSTEM SCHEMATIC DIAGRAM	
Date	April, 2026
Scale	NTS
Drawn by	A.S.B
Checked by	M.K
Approved by	M.F
Drawing No.	FF-08



FIRE EXTINGUISHER SURFACE MOUNTED

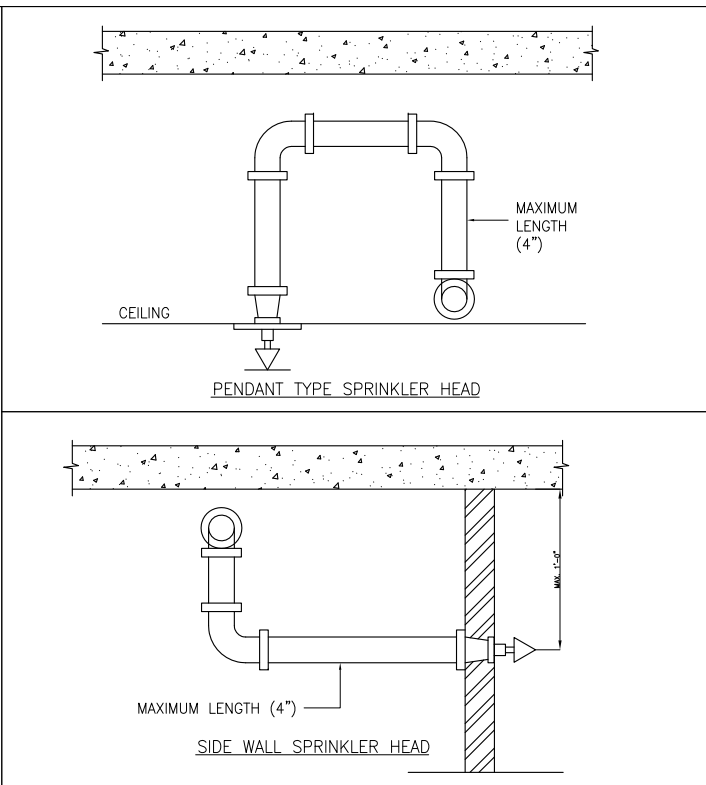


PIPE HANGING SUPPORT

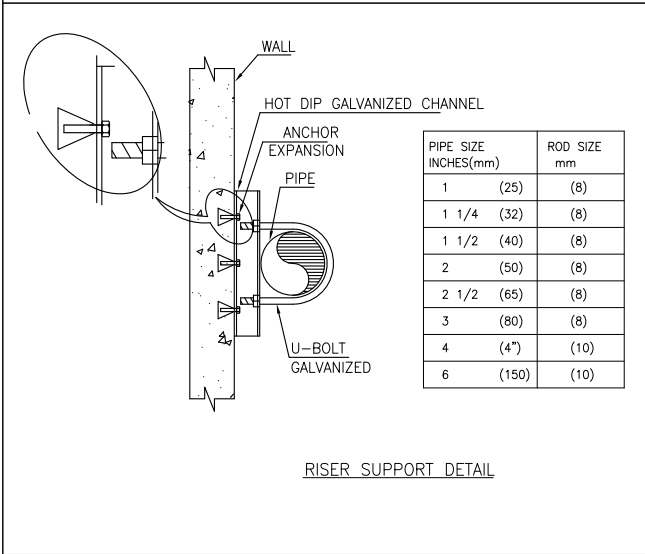


FIRE CABINET PLAN

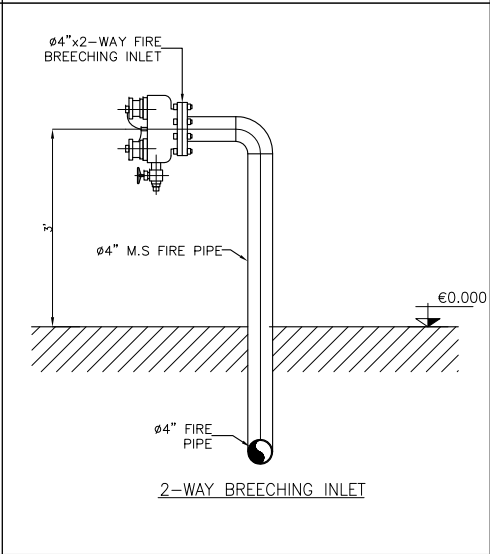
EXTERNAL FIRE CABINET PLAN



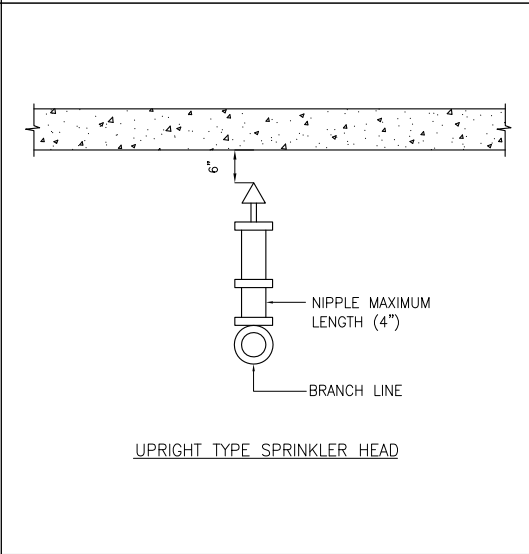
SIDE WALL SPRINKLER HEAD



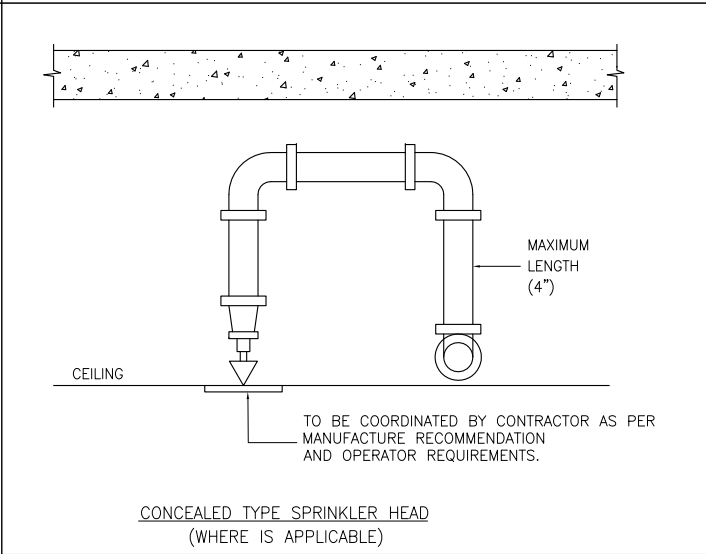
RISER SUPPORT DETAIL



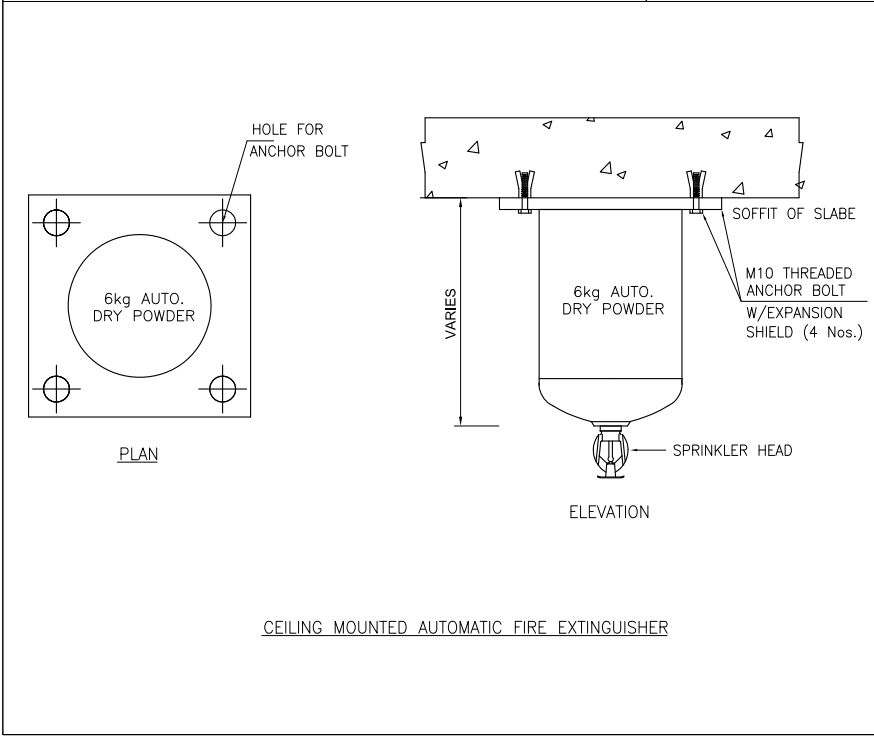
2-WAY BREECHING INLET



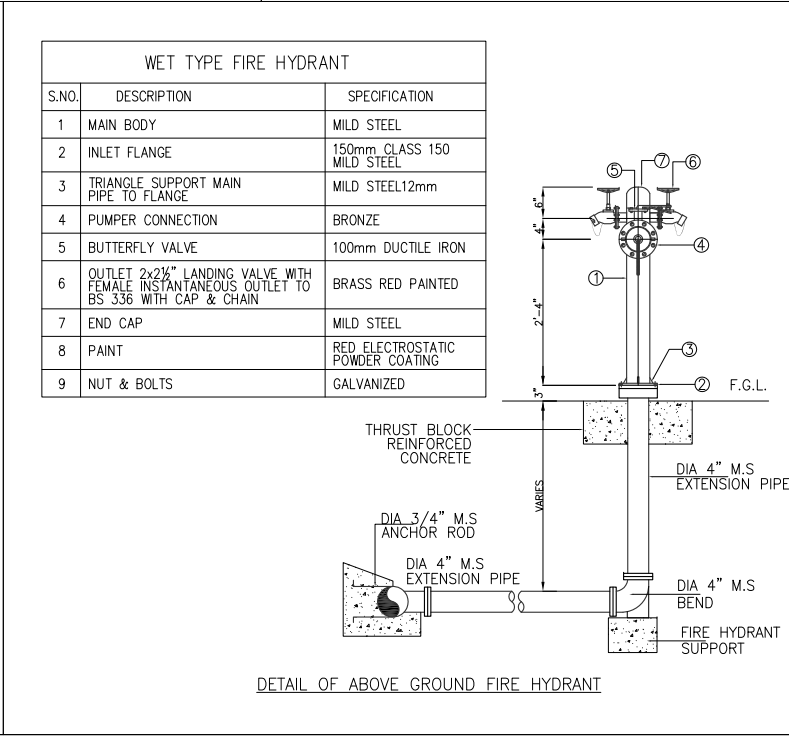
UPRIGHT TYPE SPRINKLER HEAD



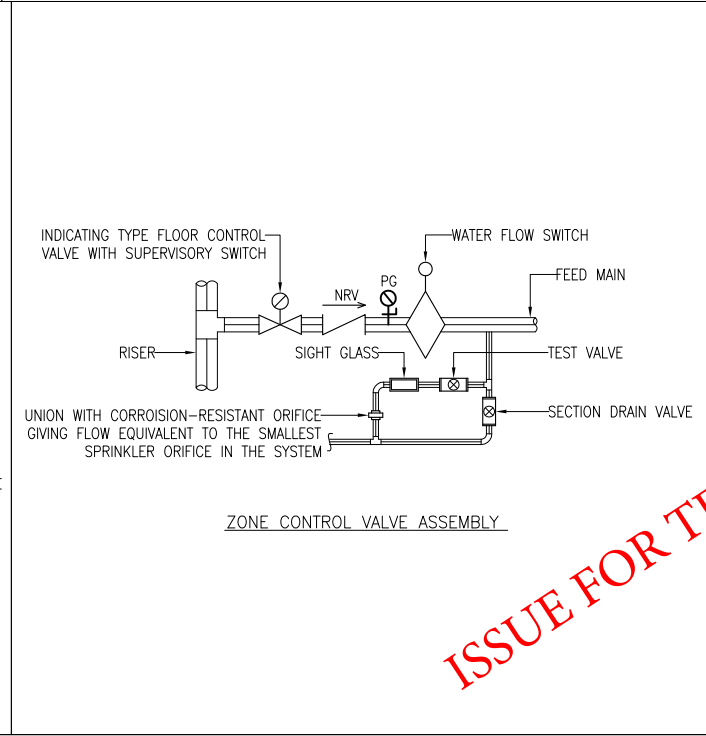
CONCEALED TYPE SPRINKLER HEAD (WHERE IS APPLICABLE)



CEILING MOUNTED AUTOMATIC FIRE EXTINGUISHER



DETAIL OF ABOVE GROUND FIRE HYDRANT



ZONE CONTROL VALVE ASSEMBLY

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Architects, Stuctural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.

MEP CONSULTANT



Project Name

Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

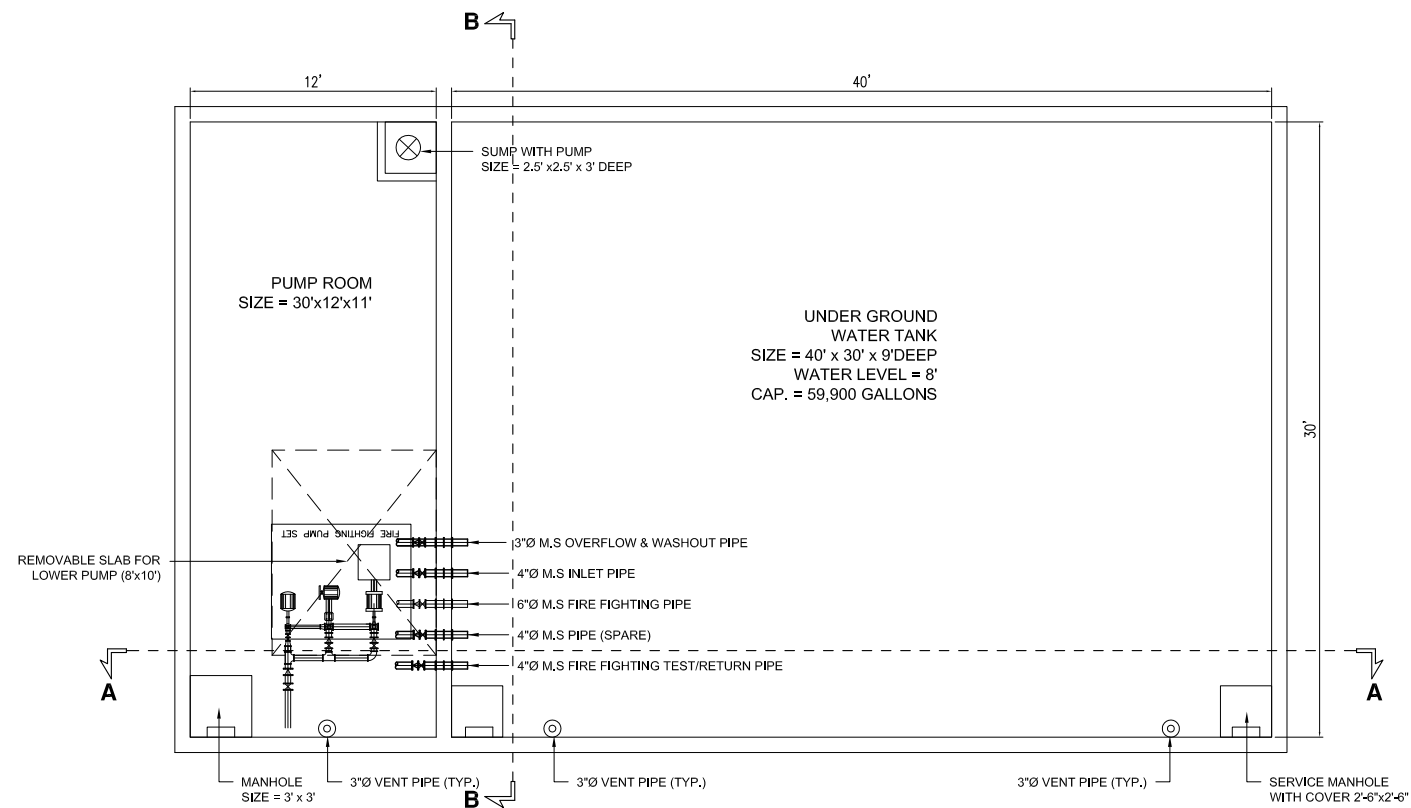
DETAILED FIRE FIGHTING Design Drawings

Sheet Name

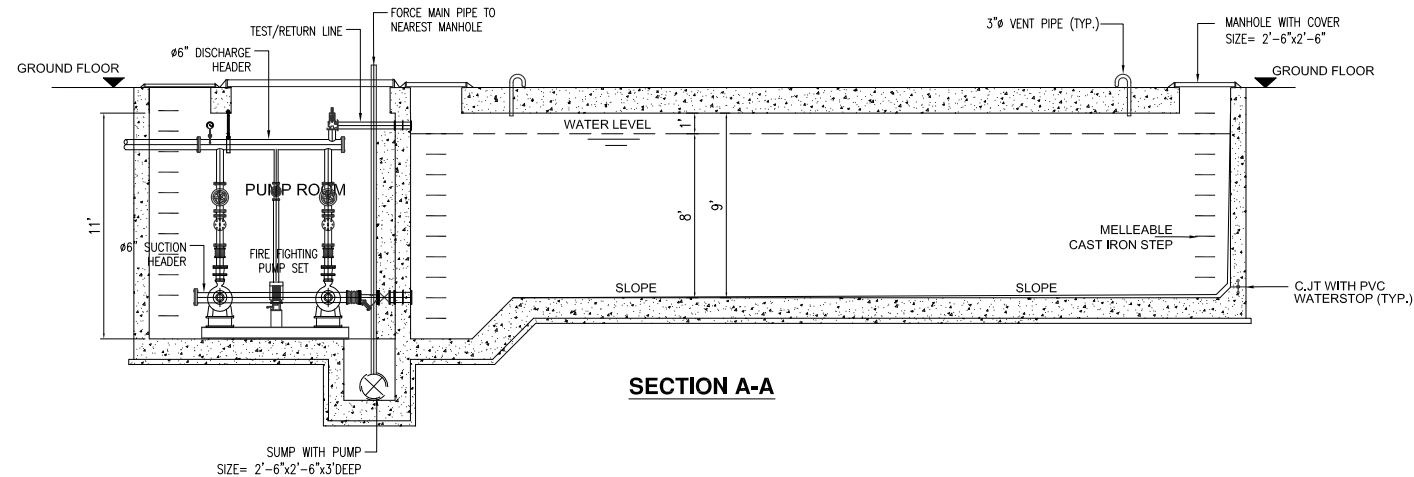
FIRE FIGHTING SYSTEM MISC. DETAILS

Date	April, 2026
Scale	NTS
Drawn by	A.S.B
Checked by	M.K
Approved by	M.F
Drawing No.	FF-09

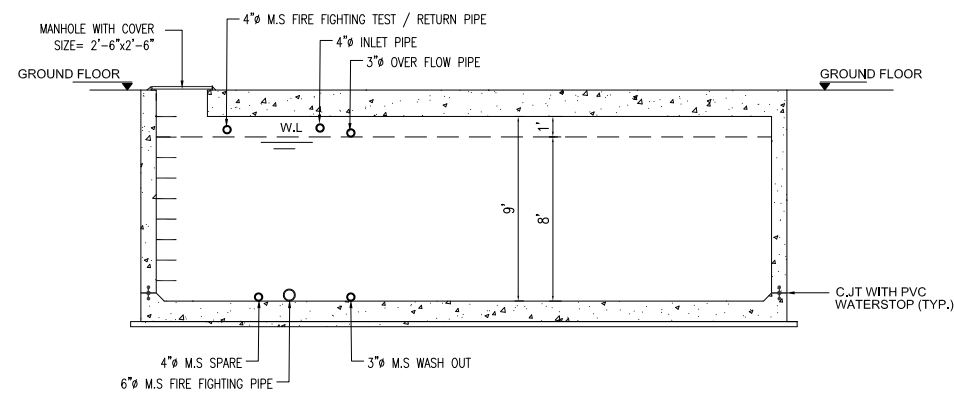
ISSUE FOR TENDER



UNDER GROUND WATER TANK WITH PUMP ROOM



SECTION A-A



SECTION B-B

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MEP CONSULTANT



Project Name

Consultancy Services for New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

DETAILED FIRE FIGHTING Design Drawings

Sheet Name

FIRE FIGHTING SYSTEM UNDER GROUND WATER TANK

Date	April, 2026
Scale	NTS
Drawn by	A.S.B
Checked by	M.K
Approved by	M.F
Drawing No.	FF-10

ISSUE FOR TENDER

SYMBOL	ABRV.	DESCRIPTION
		AIR DUCT FIGURE 15 IS DIMENSION OF SIDE SHOWN
		DUCT TURNING UP (SUPPLY)
		DUCT TURNING UP (RETURN/EXHAUST)
		DUCT TURNING DOWN (SUPPLY)
		DUCT TURNING DOWN (RETURN/EXHAUST)
	VD	VOLUME DAMPER
	MVD	MOTORISED VOLUME DAMPER
	FD	FIRE DAMPER
	AL	ACOUSTIC LINING SIZE SHOWN IS CLEAR INSIDE DIMENSIONS
	FC	FLEXIBLE DUCT CONNECTION
		INCLINED RISE (DROP) IN THE DIRECTION OF FLOW
	TV	ELBOW WITH TURNING VANES
		SECTION THRU SUPPLY/O.A. DUCT
		SECTION THRU EXHAUST/RETURN DUCT ARROW SIZE WRITTEN FIRST
		FLEXIBLE CONNECTION IN PIPING
		CHECK VALVE
		CIRCUIT SETTER TYPE BALANCING VALVE
		GATE VALVE
		GLOBE VALVE
		STEAM TRAP
		PRESSURE RELIEF VALVE
		3 WAY AUTOMATIC CONTROL VALVE, C. COMMON NO. NORMALLY OPEN , NC NORMALLY CLOSED
		VALVE OPEN
		VALVE CLOSED
		PRESSURE REDUCING VALVE
		DRAIN COCK
	TF	WELL FOR TEST FITTING
		STRAINER
		SECTION THRU PIPE
		REDUCER IN PIPE
		HOT WATER PIPE
		HOT WATER RETURN PIPE
		CONDENSER WATER SUPPLY PIPE
		CONDENSER WATER RETURN PIPE
		WATER PIPE, SUPPLY (LETTER IDENTIFY THE FLUID)
		WATER PIPE, RETURN (LETTER IDENTIFY THE FLUID)
		CONDENSATE DRAIN
		REFRIGERANT DISCHARGE
		REFRIGERANT SUCTION
	AP	ACCESS PANEL IN FALSE CEILING
		EQUIPMENT IDENTIFICATION AIR HANDLING UNIT NO.3
		REFER TO DETAIL 3 OF DRAWING NO.2
		SECTION LINE, SECTION DRAWN AS 4 OF DRAWING NO.5
		PUMP
	M.R.D	MOTORISED RELIEF DAMPER
		FILTER
	TG	TRANSFER GRILLE
		VIBRATION ISOLATOR
	BDD	BACK DRAFT DAMPER
		THERMOMETER IN PIPE
		FLOW MEASURING INSTRUMENT
	MCC	MOTOR CONTROL CENTRE
	ACP	APPARATUS CONTROL PANEL
	EF	EXHAUST FAN
	EF	EXHAUST FAN WITH BACK DRAFT DAMPER
	PF	PRESSURE SWITCH
	CH	CHILLED/HOT WATER SUPPLY

SYMBOL	ABRV.	DESCRIPTION
	P	PUMP
	B	STEAM BOILER
	HX	HEAT EXCHANGER
	CRP	CONDENSATE RETURN PUMP
	CF	CHEMICAL FEEDER
	CT	COOLING TOWER
	ET	EXPANSION TANK
	AS	AIR SEPARATOR
	CHR	CHILLED WATER RETURN
	T	THERMOSTAT
	S	SENSOR
		PRESSURE GAUGE
		SUPPLY AIR OUTLET, 24x18 INCH CORE SIZE-500 CFM CODE "A" AS LISTED IN EQUIPMENT SCHEDULE
		RETURN/EXHAUST AIR INLET, 40x12 INCH CORE SIZE-800 CFM CODE "J" AS LISTED IN EQUIPMENT SCHEDULE
	O.A	O.A INLET/OA OUTLET LOUVRE
		DOOR LOUVRE AREA IN SQUARE FT
		UNDER CUT-1 INCH(25mm) MIN.
	SIS	SECONDARY CIRCUIT NO. 1 SUPPLY
	SIR	SECONDARY CIRCUIT NO. 1 RETURN
	C	CONDENSER WATER SUPPLY
	CR	CONDENSER WATER RETURN
	PLS	LOW PRESSURE STEAM
	LPOR	LOW PRESSURE CONDENSATE RETURN
	F.B	FILTER BOX
	FS	FAN SECTION
	MXB	MIXING BOX
	(TYP.4)	QUANTITY 4 OF TYPICAL CHARACTERISTICS
		TWO WAY CONTROL VALVE
	PU	PRESSURIZATION UNIT
	HUM	HUMIDIFIER
	CF	CHEMICAL FEEDER
	FCU	FAN COIL UNIT
	EA	EXHAUST AIR
	SA	SUPPLY AIR
	RA	RETURN AIR
	OA	OUTDOOR AIR
		MANUAL VOLUME DAMPER
		MOTORISED FACE & BYPASS DAMPER
		DUCT TEMPERATURE SENSOR
		MOTORISED RELIEF DAMPER
	FS	FLOW SWITCH WATER
	FIS	FIRE STAT
	FST	FAN STARTER
	SD	SMOKE DETECTOR
	PDS	PRESSURE DIFFERENTIAL SWITCH
	ES	ENTHALPY SENSOR
	CHC	COOLING-HEATING COIL
	RHC	RE-HEAT COIL
	M	MOTOR
	MD	MOTORISED DAMPER

SYMBOL	ABRV	DESCRIPTION
	EF	EXHAUST FAN WITH BACK DRAFT DAMPER
	PR	PRESSURE SWITCH
	CH	CHILLED/HOT WATER SUPPLY
	RHC	RE-HEAT COIL
		MOTOR
		MOTORIZED DAMPER
	DDC	DIRECT DIGITAL CONTROL
		ZONE/SPACE TEMP SENSOR/THERMOSTAT
		3-WAY MOTORIZED VALVE
		SPACE NUMBERS
R-30		RISER NO.
	AHFC	AIR HANDLER FAN COIL
	CPR	CENTRAL PLANT ROOM

SR. NO.	DRAWING NO.	REV NO.	DRAWING TITLE	REMARKS
1	IEST/310/AAA/TD/01	1	HVAC – LEGEND, LIST OF DRAWINGS AND GENERAL NOTES	
2	IEST/310/AAA/TD/02	1	HVAC – GROUND FLOOR PLAN	
3	IEST/310/AAA/TD/03	1	HVAC – MEZZANINE FLOOR PLAN	
4	IEST/310/AAA/TD/04	1	HVAC – FIRST FLOOR PLAN	
5	IEST/310/AAA/TD/05	1	HVAC – CONTROL CABIN (AT LEVEL 43'–6")	
6	IEST/310/AAA/TD/06	1	HVAC – CONTROL CABIN (AT LEVEL 53'–6")	
7	IEST/310/AAA/TD/07	1	HVAC – CONTROL CABIN (AT LEVEL 65'–6")	
8	IEST/310/AAA/TD/08	1	HVAC – PIPING SCHEMATIC FOR BUILDING	
9	IEST/310/AAA/TD/09	1	HVAC – PIPING SCHEMATIC FOR CENTRAL PLANT ROOM	
10	IEST/310/AAA/TD/10	1	HVAC – CENTRAL PLANT ROOM (CPR)	
11	IEST/310/AAA/TD/11	1	HVAC – CENTRAL PLANT ROOM ROOF (CPR)	
12	IEST/310/AAA/TD/12	1	HVAC – ELECTRICAL & CONTROL SCHEMATIC	
13	IEST/310/AAA/TD/13	1	HVAC – DETAILS I	
14	IEST/310/AAA/TD/14	1	HVAC – DETAILS II	

- THESE DRAWINGS ARE ONLY FOR BIDDING PURPOSE. THE LAYOUTS SHOWN ON THESE DRAWINGS ARE INDICATIVE ONLY. SHOP DRAWINGS FOR INSTALLATION SHALL BE PREPARED BY THE CONTRACTOR.
- ALL DIMENSIONS ARE IN INCHES UNLESS INDICATED OTHERWISE .
- READ THIS DRAWING IN CONJUNCTION WITH ALL RELEVANT PROJECT DRAWINGS, INCLUDING ARCHITECTURAL , STRUCTURAL , ELECTRICAL PLUMBING, INTERIORS.
- FOR ELEVATIONS AND SECTIONS OF THE BUILDING REFER TO RELEVANT ARCHITECTURAL DRAWINGS.
- FALSE CEILING/ BULKHEAD(BOXING) TO BE PROVIDED BY OTHERS TO CONCEAL HVAC DUCTS, PIPING AND EQUIPMENTS.
- ACCESS PANEL SHALL BE PROVIDED BY OTHERS IN FALSE CEILING/BULKHEAD BOXING AT ALL EQUIPMENTS, DAMPERS AND VALVES LOCATIONS - HVAC CONTRACTOR TO GIVE SIZE AND LOCATIONS.
- WATER SUPPLY PONTS SHALL BE PROVIDED BY OTHERS, INSIDE PLANT ROOM, AND NEAR EACH AHU
- ALL DRAIN PIPING REQUIRED FROM EQUIPMENT IN CENTRAL PLANT ROOM AND OTHER EQUIPMENT SHALL BE TERMINATED AT PLUMBING DRAIN PONTS BY HVAC CONTRACTOR.
- 33x18 INCHES INSIDE CLEAR BULKHEADS FOR CONCEALMENT OF FCU's WILL BE PROVIDED BY OTHERS. FOR DETAILS SEE ARCH DROS.
- SUPPLY GRILLES OF FCU WILL BE SAME AS FCU DISCHARGE SIZE UNLESS OTHERWISE INDICATED.
- RETURN AIR GRILLE FOR FCUs HINGED WITH FILTER SHALL BE INSTALLED AT BOTTOM OF BULKHEAD , UNLESS OTHERWISE SPECIFIED/SHOWN.
- DOOR LOUVERS OF SIZES SPECIFIED/SHOWN WILL BE PROVIDED BY OTHERS.
- ROOM THERMOSTAT AND TEMP SENSORS FOR FCU SHALL BE INSTALLED AT HEIGHT BETWEEN 4FT TO 6FT FROM FLOOR AT LOCATIONS ADVISED BY ARCHITECT.
- CONDENSATE DRAIN PIPING OF AHUs/FCUs (CD) SHALL BE TERMINATED IN NEAREST TOILET AREA AS SHOWN, AT CEILING HEIGHT. FROM THIS POINT ONWARD IT WILL BE PICKED UP BY OTHERS UNDER PLUMBING SPECS FOR APPROPRIATE DISPOSAL.
- ALL HVAC DRAWINGS ARE ISSUED TO DEFINE DESIGN INTENT ONLY. ALL EQUIPMENT LOCATIONS, ROUTING, AND LAYOUTS SHOWN ARE INDICATIVE AND SCHEMATIC/UNLESS EXPLICITLY DIMENSIONED.
- HVAC LOCATIONS ARE BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. ANY SUBSEQUENT ARCHITECTURAL, STRUCTURAL, OR SERVICES CHANGES SHALL BE COORDINATED THROUGH SHOP DRAWINGS. DO NOT SCALE DRAWINGS. ONLY WRITTEN DIMENSIONS, LEVELS, AND SCHEDULES SHALL GOVERN.
- LOCATIONS OF AHUS, FCUS, FAHUS, EXHAUST FANS, PUMPS, CHILLERS, AND ALL HVAC EQUIPMENT SHOWN ON DRAWINGS ARE CONCEPTUAL PLACEHOLDERS FOR DESIGN REFERENCE ONLY.
- CONTRACTOR IS FULLY RESPONSIBLE FOR FINALIZING EXACT EQUIPMENT LOCATIONS, SERVICE CLEARANCES, ACCESS FOR INSTALLATION AND MAINTENANCE, AND COORDINATION WITH ALL OTHER TRADES. EQUIPMENT SHALL NOT BE INSTALLED UNTIL COORDINATED SHOP DRAWINGS ARE PREPARED AND REVIEWED.
- CONTRACTOR SHALL COORDINATE HVAC WORKS WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND CEILING LAYOUTS.
- NO PENETRATIONS OR OPENINGS SHALL BE MADE IN STRUCTURAL OR ARCHITECTURAL ELEMENTS WITHOUT PRIOR COORDINATION AND APPROVAL.
- ANY DISCREPANCY BETWEEN HVAC AND OTHER DISCIPLINE DRAWINGS SHALL BE DISCREPANT BEFORE EXECUTION. CONFLICTS BETWEEN HVAC AND OTHER DISCIPLINES SHALL BE RESOLVED THROUGH COORDINATED SHOP DRAWINGS PRIOR TO INSTALLATION. INSTALLATION WITHOUT COORDINATION SHALL BE ENTIRELY AT THE CONTRACTOR'S RISK.
- AHU ROOMS SHALL PROVIDE MINIMUM SERVICE CLEARANCES AS PER MANUFACTURER'S RECOMMENDATIONS, INCLUDING ACCESS FOR FILTER REMOVAL, COIL WITHDRAWAL, FAN AND MOTOR SERVICING.
- FOUS ABOVE CEILINGS SHALL BE COORDINATED WITH CEILING GRIDS, LIGHTING, SPRINKLERS, AND ACCESS PANELS. ADEQUATE ACCESS SHALL BE PROVIDED FOR VALVES, FILTERS, AND CONTROLS.
- CONTRACTOR SHALL SUBMIT FULLY COORDINATED HVAC SHOP DRAWINGS SHOWING EXACT EQUIPMENT LOCATIONS, ROUTING, SUPPORTS, ACCESS CLEARANCES, AND INTERFACES WITH OTHER TRADES.
- SHOP DRAWINGS SHALL BE COORDINATED WITH ALL DISCIPLINES PRIOR TO SUBMISSION. WHERE SPACE LIMITATIONS EXIST, THE CONTRACTOR SHALL PROPOSE SOLUTIONS THROUGH SHOP DRAWINGS.
- NO REDUCTION IN ACCESS OR SERVICE CLEARANCE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL.
- MANUFACTURER'S DATA, DIMENSIONS, WEIGHTS, AND INSTALLATION REQUIREMENTS SHALL BE SUBMITTED FOR ALL MAJOR EQUIPMENT.
- INSTALL HVAC SYSTEMS IN ACCORDANCE WITH APPROVED SHOP DRAWINGS, MANUFACTURER'S INSTRUCTIONS, AND APPLICABLE CODES.
- PROVIDE VIBRATION ISOLATION, FLEXIBLE CONNECTIONS, AND ACOUSTIC TREATMENT WHERE REQUIRED.
- ROUTE PIPING, DUCTS, DRAINS, AND CABLES NEATLY WITH PROPER SLOPES, INSULATION, AND ACCESSIBILITY.
- CONTRACTOR SHALL VERIFY SITE CONDITIONS PRIOR TO FABRICATION AND INSTALLATION. ANY FIELD MODIFICATION REQUIRED DUE TO SITE CONSTRAINTS SHALL BE COORDINATED AND APPROVED BEFORE EXECUTION.
- UNAUTHORIZED DEVIATIONS SHALL BE CORRECTED AT THE CONTRACTOR'S COST.
- PROVIDE COMPLETE AS-BUILT HVAC DRAWINGS REFLECTING ACTUAL INSTALLED CONDITIONS.
- AS-BUILT DRAWINGS SHALL INCLUDE FINAL EQUIPMENT LOCATIONS, ROUTING CHANGES, VALVES, AND ACCESS PANELS.
- APPROVAL OF DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF COORDINATION, CONSTRUCTABILITY, AND COMPLIANCE RESPONSIBILITY. APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE ACCURACY, COORDINATION, COMPLIANCE WITH CODES AND SPECIFICATIONS, AND FITNESS FOR PURPOSE.
- FCU AT CONTROL TOWER CABIN SHALL BE DUCTED TYPE. INSTALLATION NEED CONSULTANT APPROVAL.

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HVAC DESIGN DRAWINGS

Anwar Ali Architects (Pvt.) Ltd.
Consulting, Architects, Engineers
Planners & Management Consultants
06 HBFK BLOCK A FAISAL TOWN LAHORE

leit-werk



AR ENGINEERS

Architects, Structural, Earthquake Engineering, Geo Technical
Public Health, Highway, Electrical Design Solution.

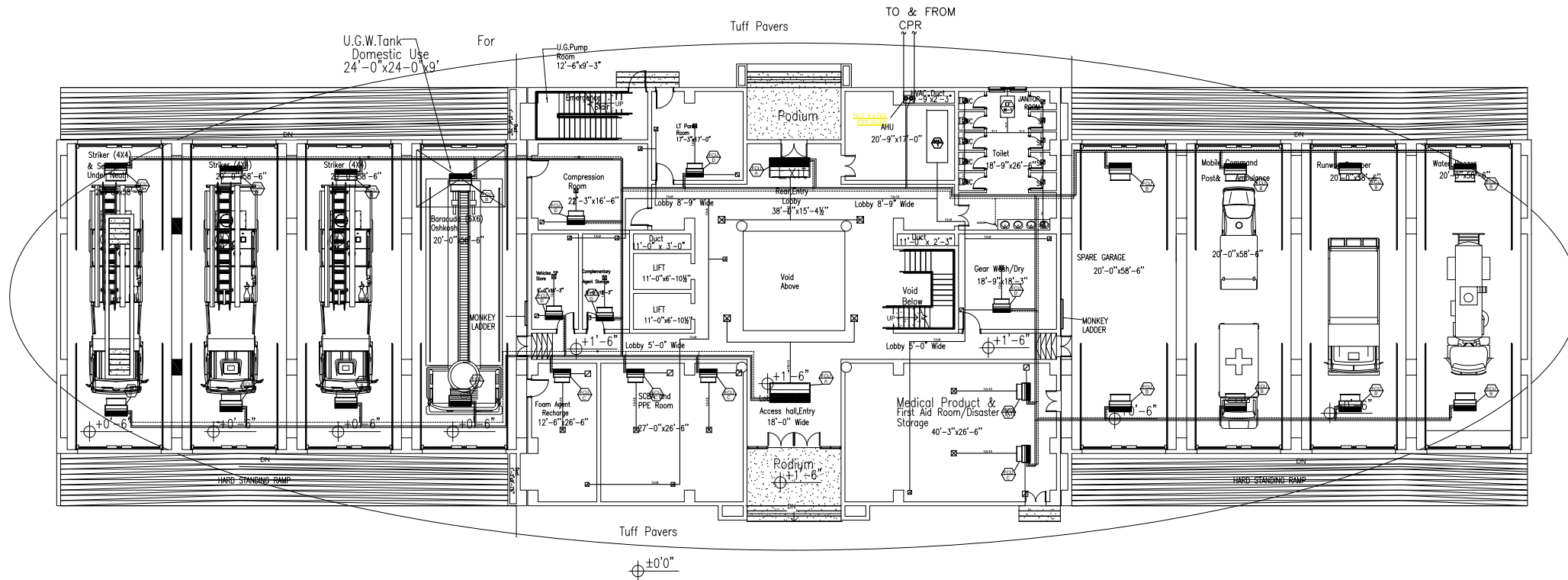
ABSTRACTORS
MEP CONSULTANT
SUITE-14,3RD FLOOR JINNAH MALL IZMIR TOWN, LHR
Cell no: 0322-3924199
E-mail: abstractorseng@gmail.com

Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

LEGENDS, LIST OF DRAWING & GENERAL NOTES

Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/01

ISSUE FOR TENDER



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TITLE PAGE:

HVAC
DESIGN DRAWINGS

CLIENT NAME



MAIN CONSULTANT



JV MEMBERS



STRUCTURAL CONSULTANT

AR ENGINEERS

Architects, Structural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.

MEP CONSULTANT



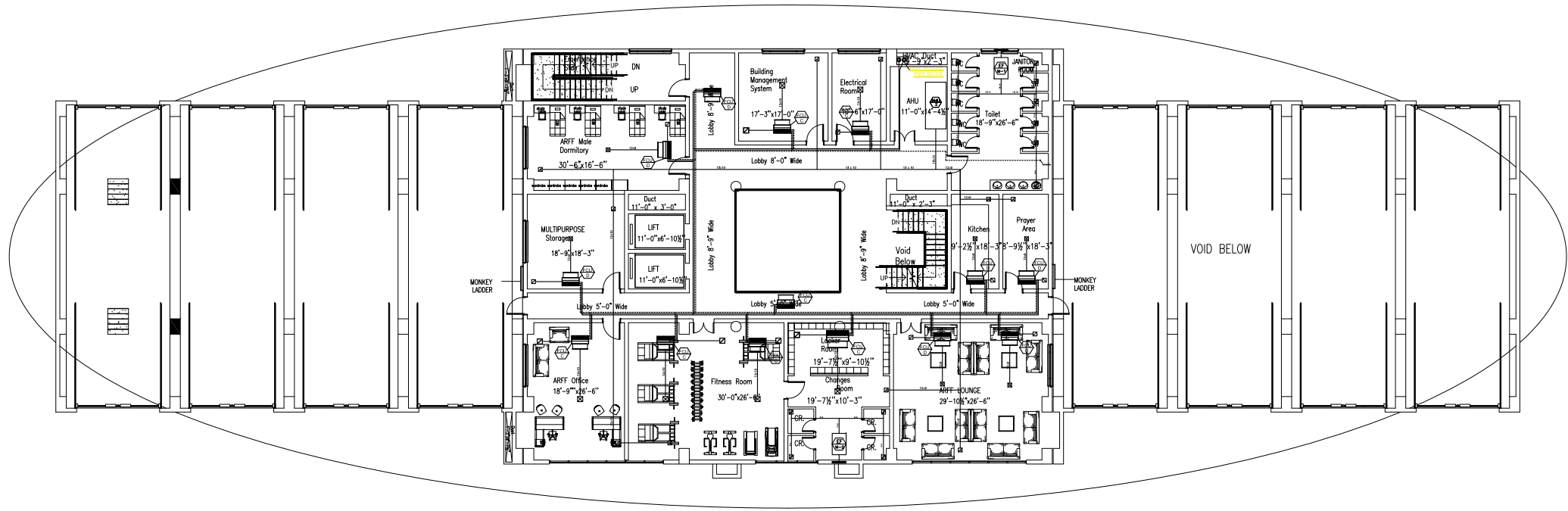
Project Name

Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

HVAC

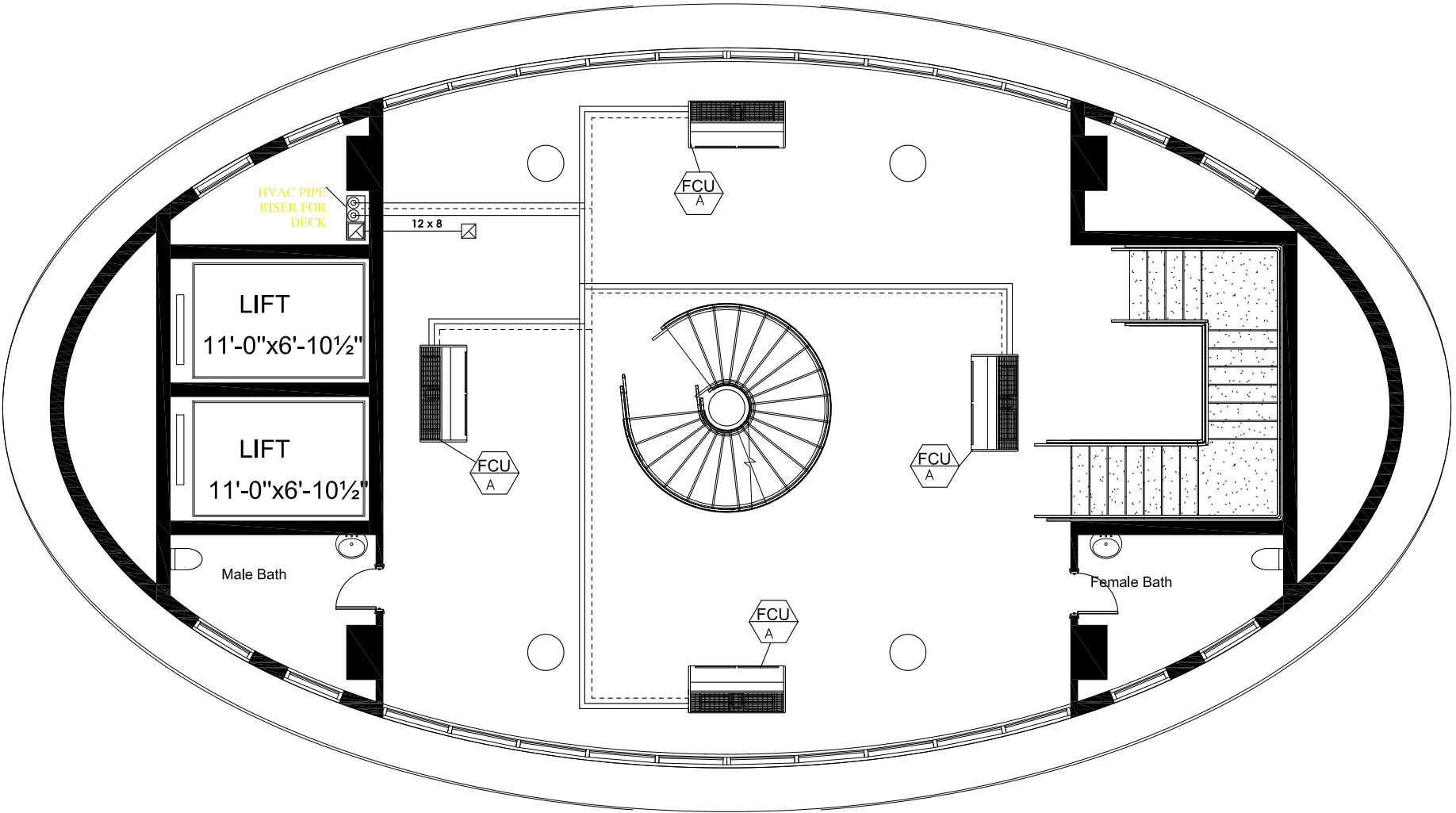
HVAC - GROUND FLOOR PLAN

Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/02



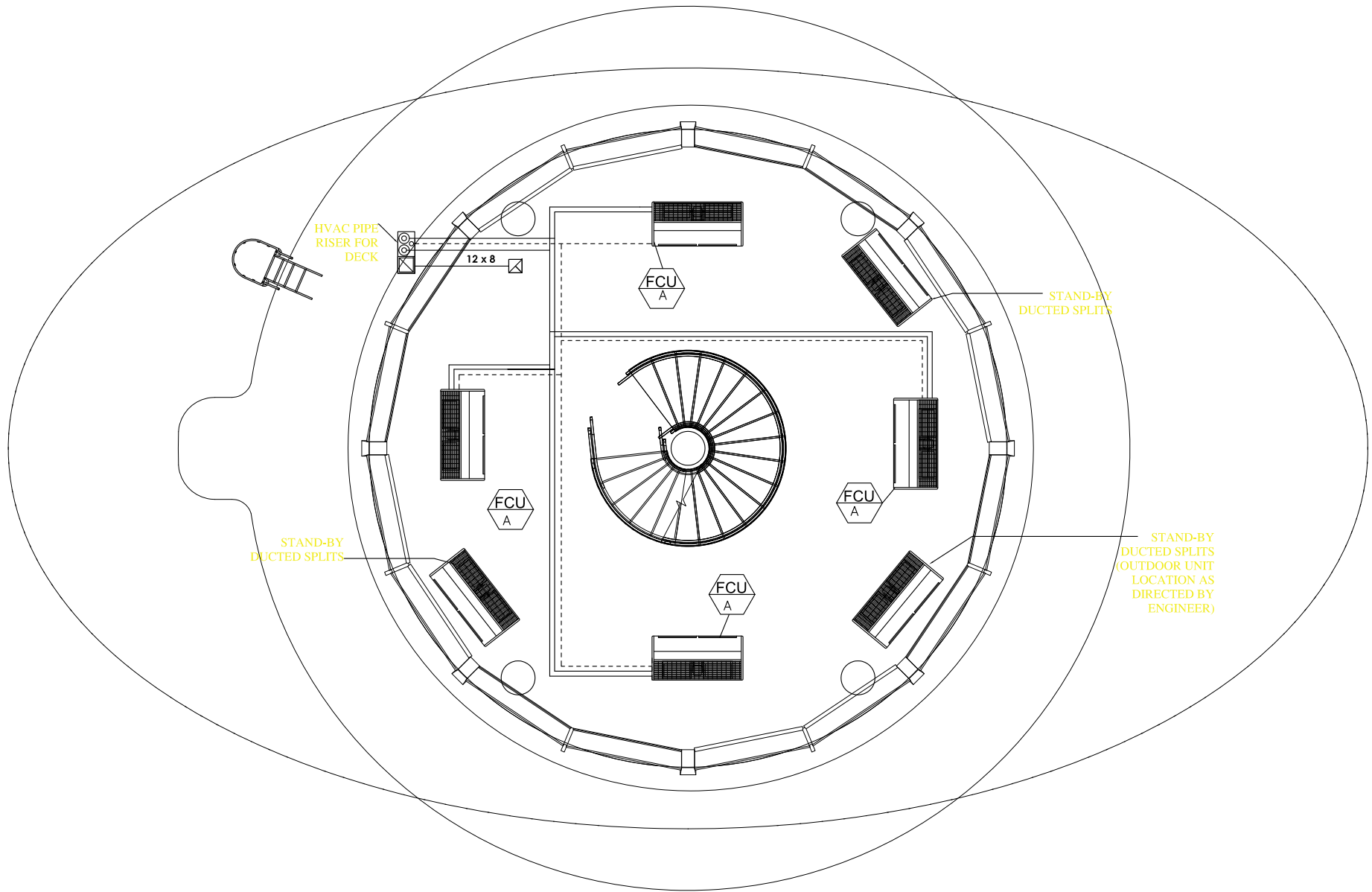
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HVAC DESIGN DRAWINGS	
CLIENT NAME	
	
MAIN CONSULTANT	
 Anwar Ali Architects (Pvt.) Ltd. Consulting,Architects,Engineers Planners & Management Consultants 06 HFC BLOCK A FASAL TOWN LAHORE	
JV MEMBERS	
 	
STRUCTURAL CONSULTANT	
AR ENGINEERS Architects, Structural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.	
MEP CONSULTANT	
 ABSTRACTORS MEP CONSULTANT SUITE-14,3RD FLOOR, JINNAH HALL, DHA TOWN, LHR Cell no: 0322-3924199 E-mail: abstractorseng@gmail.com	
Project Name	
Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
HVAC	
HVAC - MEZZANINE FLOOR PLAN	
Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	UEST/310/AAA/TD/03



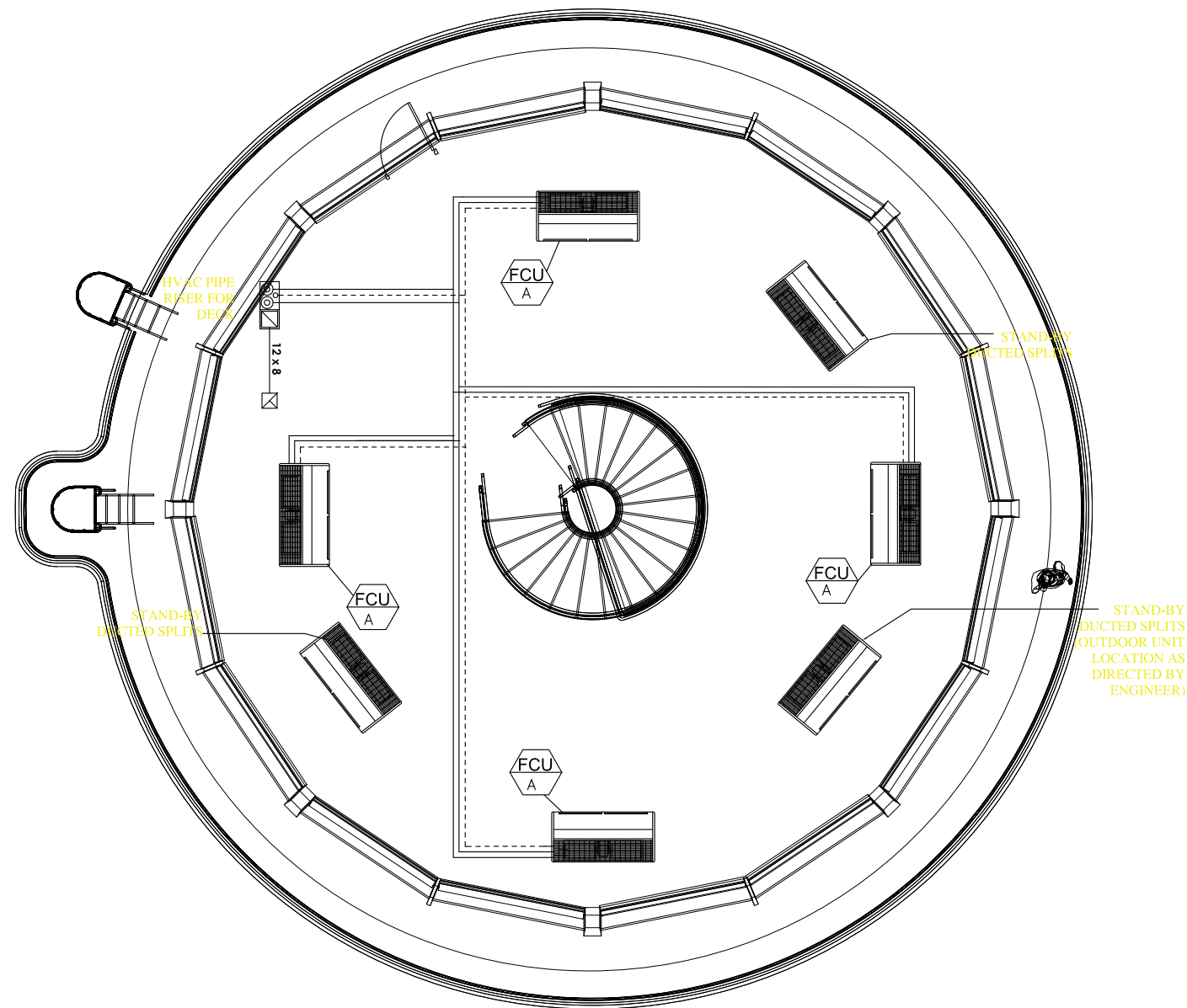
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JV MEMBERS	
 	
STRUCTURAL CONSULTANT	
AR ENGINEERS Architects, Stuctural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.	
MEP CONSULTANT	
 ABSTRACTORS MEP CONSULTANT SUITE-14,3RD FLOOR JINNAH MALL DHAIR TOWN, LHR Cell no: 0322-3924199 E-mail: abstractorseng@gmail.com	
Project Name	
Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
HVAC	
HVAC - ROOF & CONTROL CABIN	
Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/05



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JV MEMBERS	
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AR ENGINEERS Architects, Stuctural, Earthquake Engineering, Geo Technical, Public Health, Highway, Electrical Design Solution.	
MEP CONSULTANT	
 ABSTRACTORS MEP CONSULTANT SUITE-14,3RD FLOOR JINNAH MALL DHAIR TOWN, LHR Cell no: 0322-3924199 E-mail: abstractorseng@gmail.com	
Project Name	
Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
HVAC	
HVAC - ARFF CABIN	
Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/06



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HVAC DESIGN DRAWINGS

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JV MEMBERS



STRUCTURAL CONSULTANT

AR ENGINEERS

Architects, Structural, Earthquake Engineering, Geo Technical,
Public Health, Highway, Electrical Design Solution.

MEP CONSULTANT



Project Name

Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

HVAC

HVAC - ATCT CABIN

Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IENT/310/AAA/TD/07

FLOOR AT 65'-6"

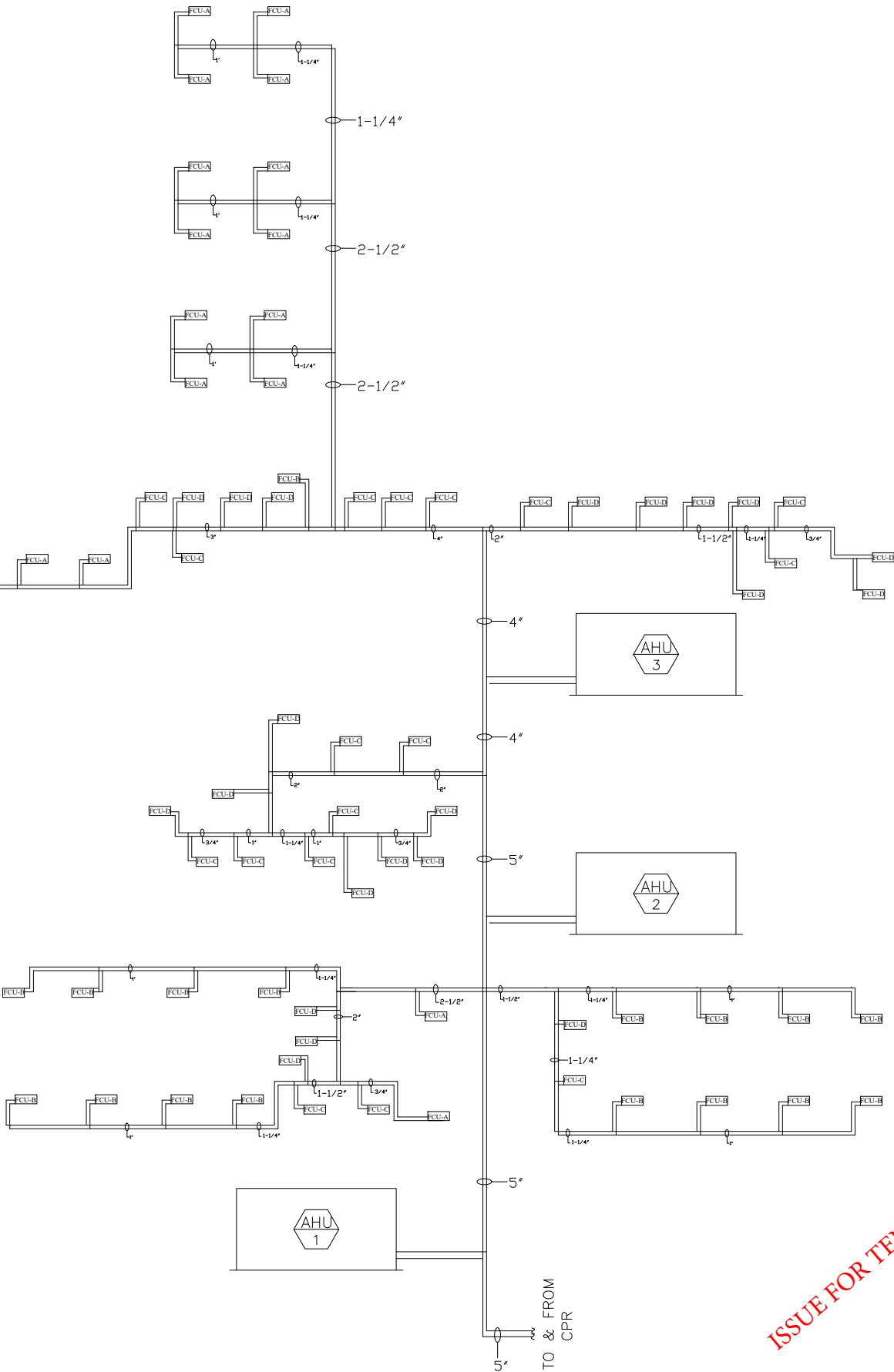
FLOOR AT 53'-6"

FLOOR AT 43'-6"

FIRST FLOOR

MEZZNINE FLOOR

GROUND FLOOR



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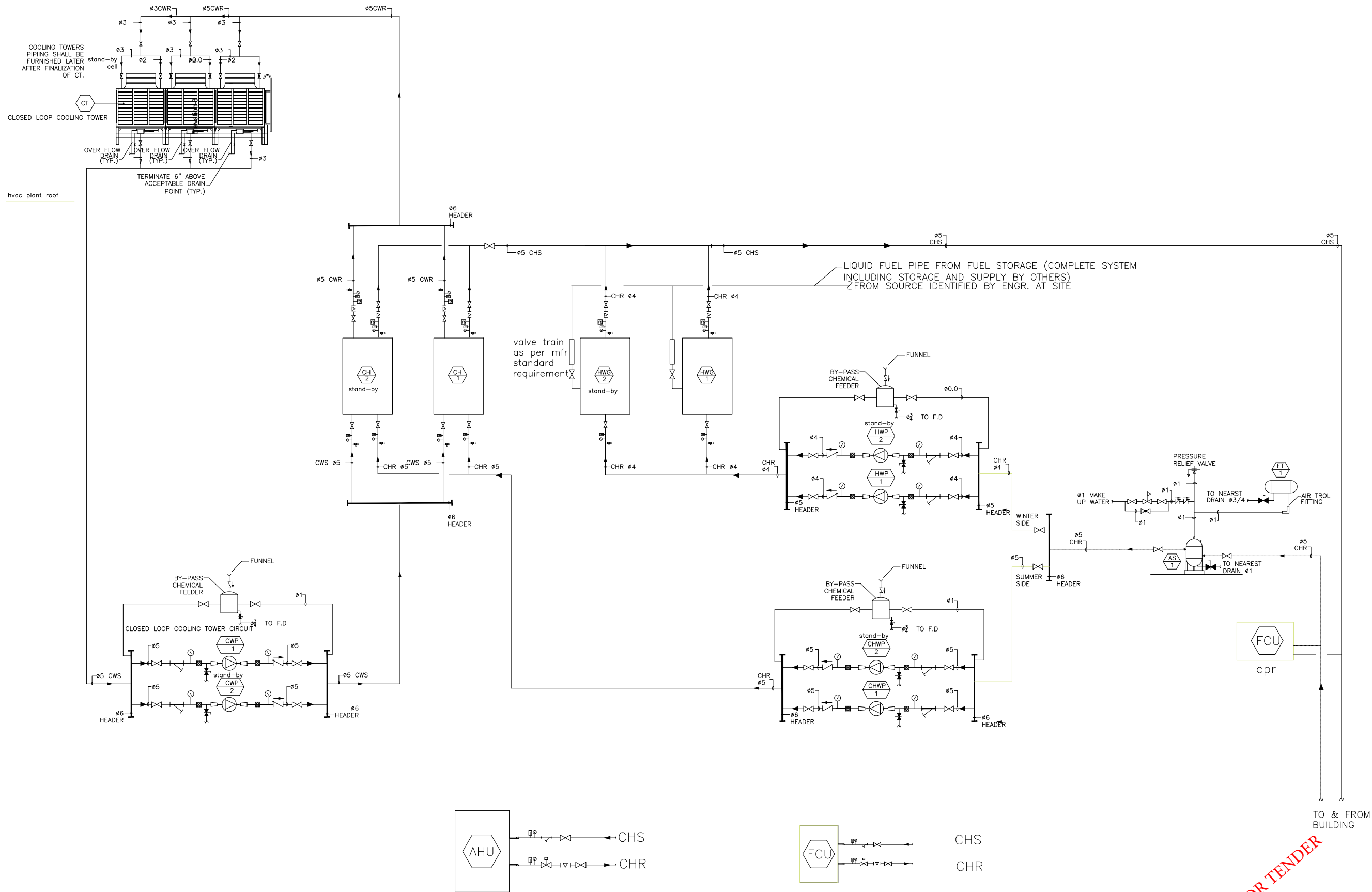
Project Name

Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

HVAC

HVAC - PIPING SCHEMATIC

Date	27 MARCH, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/08



TYPICAL AHU

TYPICAL FCU

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DESIGN DRAWINGS

CLIENT NAME

MAIN CONSULTANT

Anwar Ali Architects (Pvt.) Ltd.
Consulting,Architects,Engineers
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06 HBF BLOCK A Faisal Town Lahore

JV MEMBERS

STRUCTURAL CONSULTANT

MEP CONSULTANT

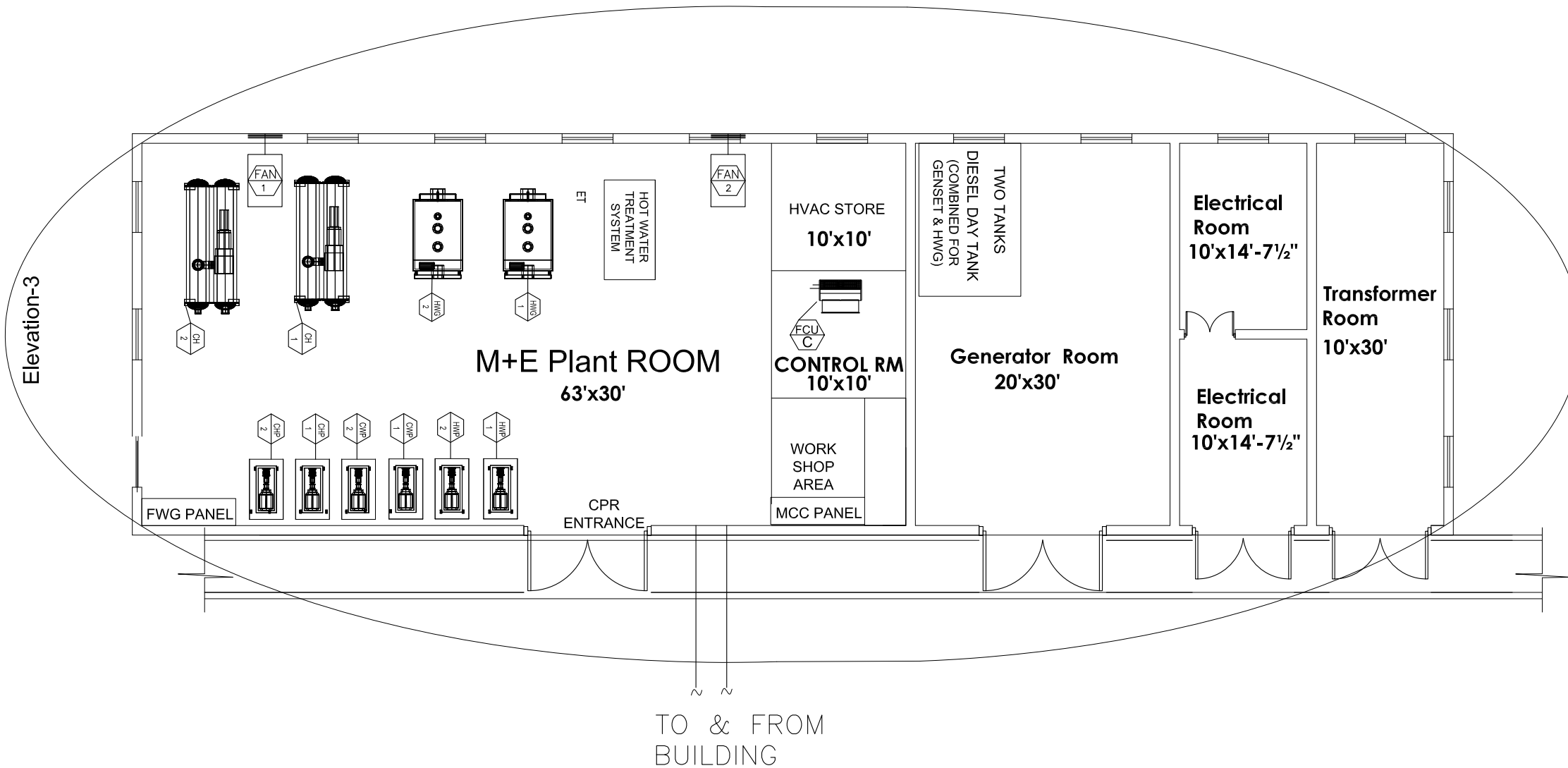
Project Name

Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

HVAC

HVAC-PIPING SCHEMATIC FOR
CENTRAL PLANT ROOM (CPR)

Date	27 MARCH, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/09



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AR ENGINEERS
Architects, Structural, Earthquake Engineering, Geo Technical,
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MEP CONSULTANT



Project Name

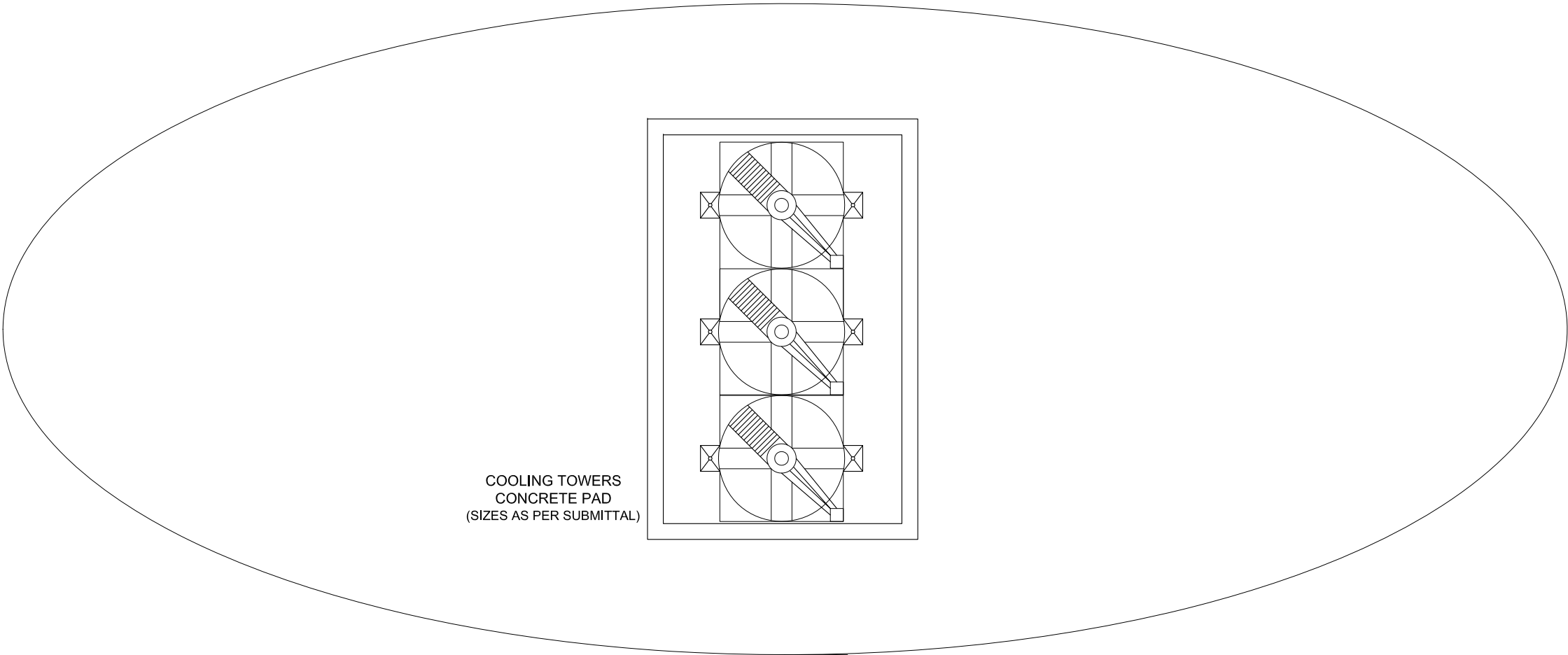
Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport

HVAC

HVAC - CENTRAL PLANT ROOM (CPR)

Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/10

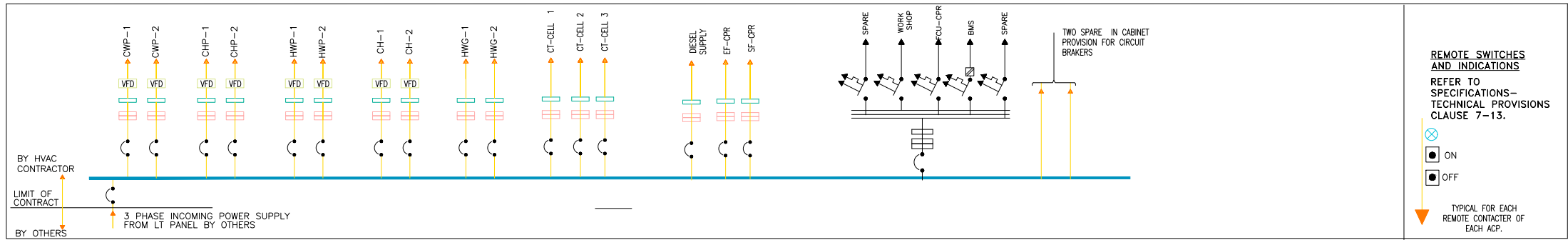
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COOLING TOWERS
CONCRETE PAD
(SIZES AS PER SUBMITTAL)

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HVAC DESIGN DRAWINGS	
CLIENT NAME	
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STRUCTURAL CONSULTANT	
AR ENGINEERS	
MEP CONSULTANT	
Project Name	
Consultancy Services for the Preparation of Detailed Design, Procurement Support and Construction Supervision of New Air Traffic Control Tower (ATCT), Fire Station and Allied Facilities at Skardu International Airport	
HVAC	
HVAC - CENTRAL PLANT ROOM ROOF	
Date	27 April, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IEST/310/AAA/TD/11



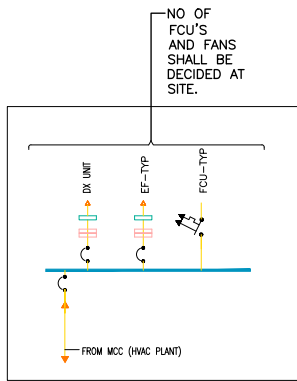
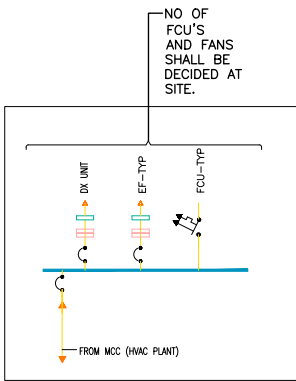
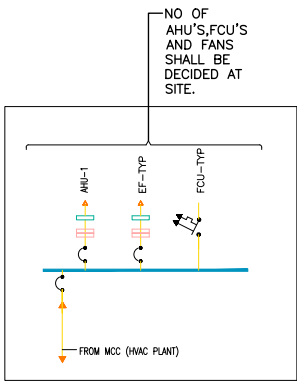
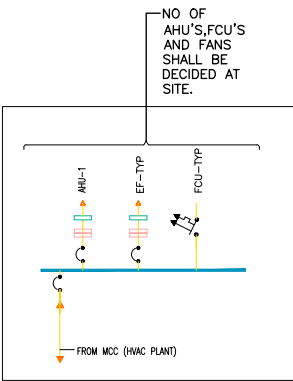
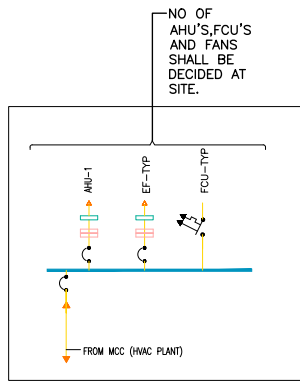
LEGEND:

- CIRCUIT BREAKER (3 PHASE)
- CIRCUIT BREAKER (1 PHASE)
- CONTACTOR
- RELAY
- BUS BAR
- LOCAL ISOLATING SWITCH
- VOLTAGE STABILIZER
- INDICATING LIGHT
- SUPPLY

REMOTE SWITCHES AND INDICATIONS
REFER TO SPECIFICATIONS-
TECHNICAL PROVISIONS
CLAUSE 7-13.

- ON
- OFF
- TYPICAL FOR EACH
REMOTE CONTACTOR OF
EACH ACP.

01
08 MCC
LOCATION: PLANT ROOM



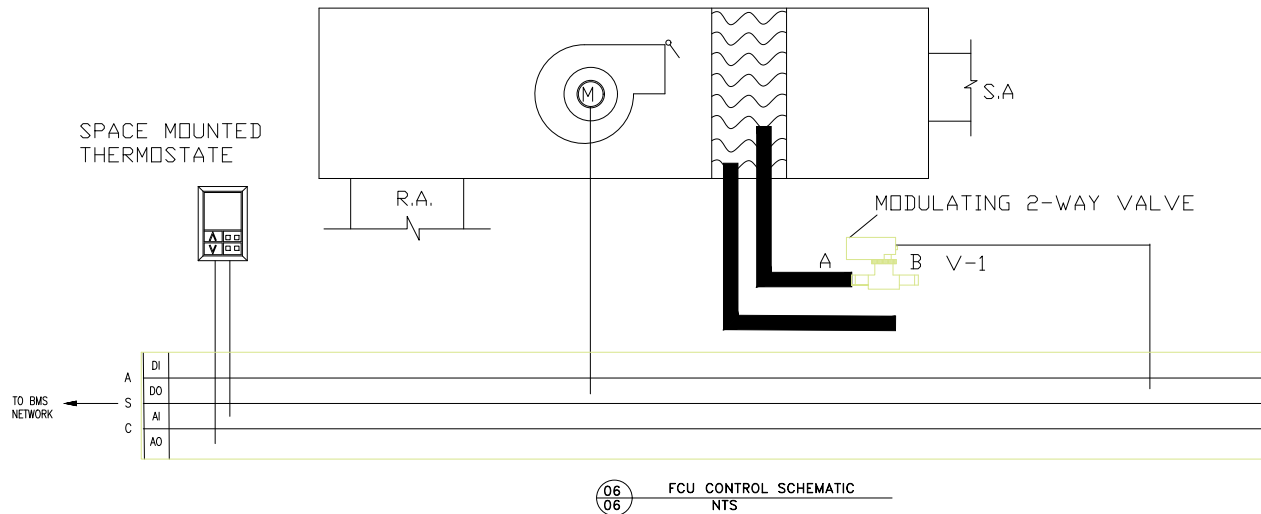
02
06 ACP FIRE STATION
LOCATION: GROUND

03
06 ACP
LOCATION: MEZANINE

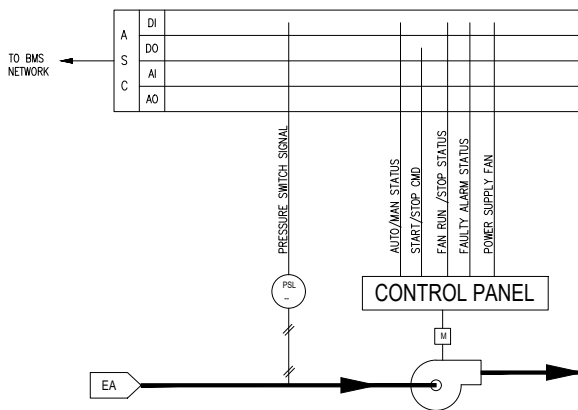
04
06 ACP OFFICES
LOCATION: FIRST

05
06 ACP CABINS
LOCATION: AS DIRECTED

06
06 ACP CABINS
LOCATION: AS DIRECTED



06
06 FCU CONTROL SCHEMATIC
NTS



06
06 EXHAUST FAN CONTROL SCHEMATIC
NTS

SEQUENCE OF OPERATIONS:

- 1.THE FAN(START/STOP) IS CONTROLLED BY THREE POSITION SWITCH 'ON-OFF-AUTO'. IN 'ON' POSITION, THE FAN OPERATE CONTINUOUSLY, IN 'OFF' POSITION, THE FAN WILL STOP, IN 'AUTO' POSITION, THE START/STOP IS CONTROLLED BY THE BMS.
2. THE EXHAUST AIR FAN SHALL BE ENERGIZED EITHER MANUALLY OR BY THE BMS.
3. DURING 'FIRE MODE',THE EXHAUST FAN ARE CONTINUOUSLY WORK.
4. DIFFERENTIAL PRESSURE SWITCH INSTALLED ACROSS THE FAN WILL MONITOR THE FAN FLOW STATUS.
4. THE CONTRACTOR SHALL SUBMIT ALL THE SUBMITTAL BEFORE INSTALLATION FOR CONSULTANTS'S APPROVAL

ISSUE FOR TENDER

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TITLE PAGE:

HVAC
DESIGN DRAWINGS

CLIENT NAME

MAIN CONSULTANT

Anwar Ali Architects (Pvt.) Ltd.
Consulting,Architects,Engineers
Planners & Management Consultants
06 HBF BLOCK A FASAL TOWN LAHORE

JV MEMBERS

STRUCTURAL CONSULTANT

MEP CONSULTANT

Project Name

Consultancy Services for the
Preparation of Detailed Design,
Procurement Support and
Construction Supervision of
New Air Traffic Control Tower
(ATCT), Fire Station and Allied

Facilities at Skardu
International Airport

HVAC

ELECTRICAL & CONTROL SCHEMATIC

Date	27 MARCH, 2026
Scale	NTS
Drawn by	IBRAHIM
Checked by	FAHEEM
Approved by	MUBASHIR
Drawing No.	IENT/310/AAA/TD/12