

Legend

- Source
- Fagog Fagog Bajholi Pump
- MDT
- MT
- Junction
- Rising_Main 150mm Dia GI Pipe
- Gravity_Main 80mm Dia GI Pipe
- Fagog_Banjholi
- Fagog

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	INITIALS	GKJ	ES	DVB		MK	DK						
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE
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File Name: 12503A-CV-30716-Rev-P1

DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TITLE:- NETWORK DRAWING OF LIFT IRRIGATION SCHEME FOR FAGOG BANJHOLI CLUSTER & FAGOG CLUSTER, JHANDUTTA BLOCK, BILASPUR DISTRICT.








TATACONSULTING ENGINEERS LIMITED. MUMBAI

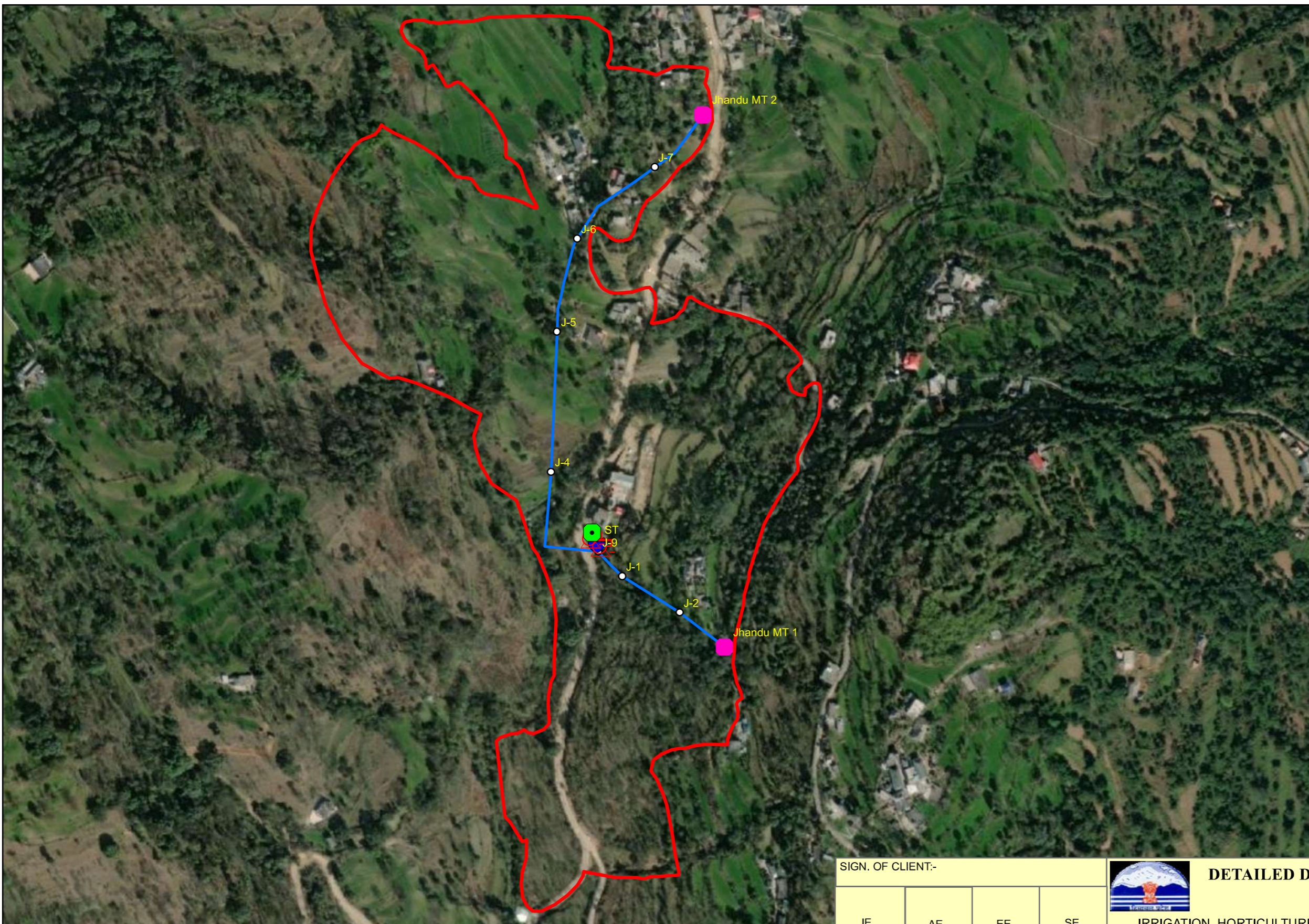
SCALE:- 1:5,000 DWG. No:- TCE.12503A-CV -3082-WS-30716 ISSUE:- P1

DL.CEN:- DEL-CV



Legend

-  Percolation Well
-  Jhandu Pump
-  MDT
-  MT
-  Junction
-  Rising Main 80mm Dia GI Pipe
-  Jhandu Cluster



SIGN. OF CLIENT:-

JE	AE	EE	SE
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**DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)**

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

PURPOSE : FOR TENDER ONLY

TITLE:- **NETWORK DRAWING OF LIFT IRRIGATION SCHEME
FOR JHANDU CLUSTER,
JHANDUTTA BLOCK, BILASPUR DISTRICT.**



**TATACONSULTING ENGINEERS LIMITED.
MUMBAI**

P1	SIGN.												
	INITIALS	GKJ	ES	DVB		MK	DK	27-05-2022					
REVISIONS		As per Client Observation											
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	INITIALS	GKJ	ES	DVB		MK	DK	25-04-2022					
REVISIONS													
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE
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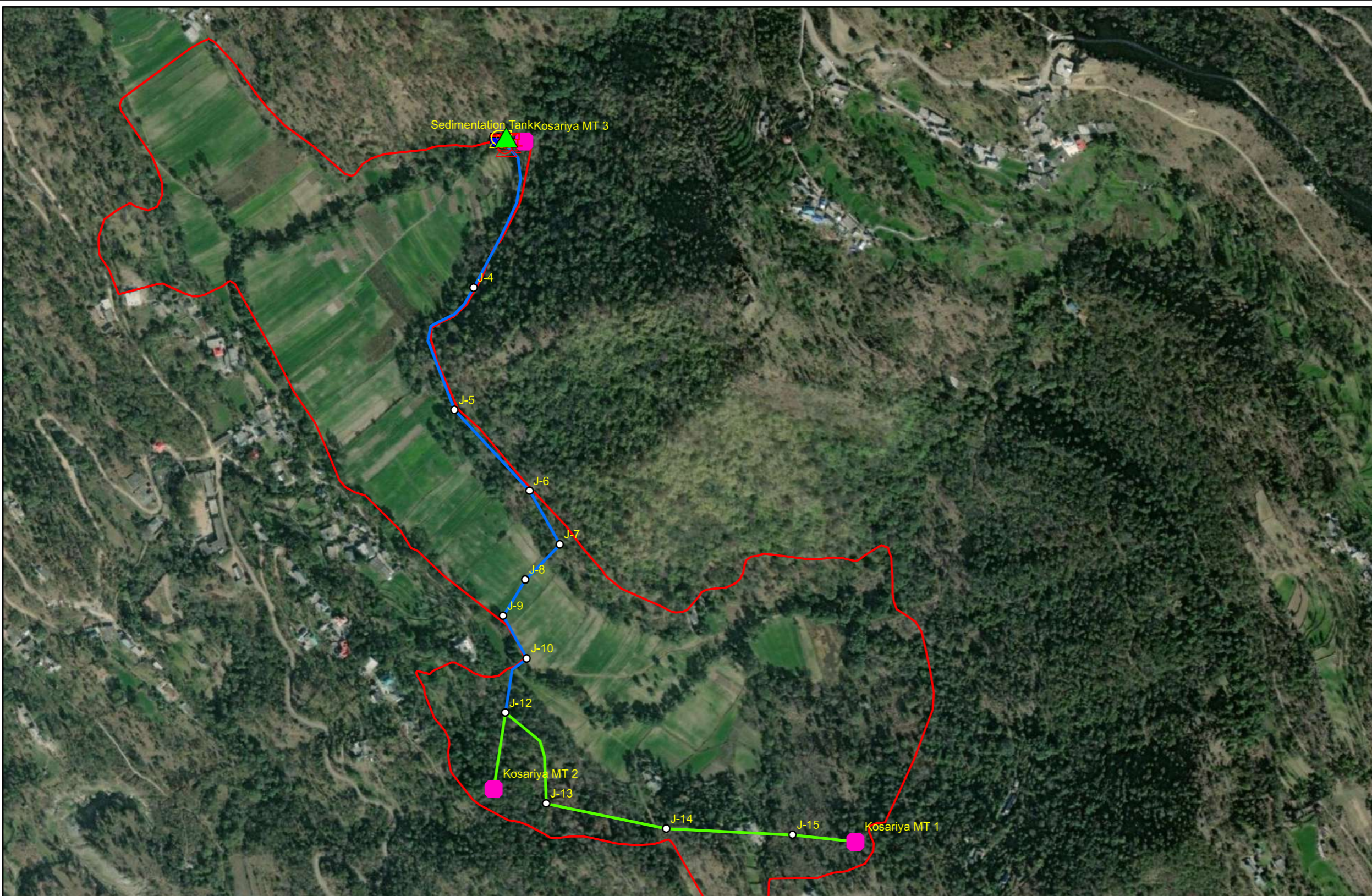
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SCALE:- 1:4,000	DWG. No:-	ISSUE:-
DL.CEN:- DEL-CV	TCE.12503A-CV-3082-WS-30717	P1



Legend

- Source
- Centrifugal Pump
- Submersible Pump
- MDT
- MT
- Junction
- Rising Main 100mm Dia GI Pipe
- Gravity Main 80mm Dia GI Pipe
- Kosariya_1

SIGN. OF CLIENT:-									
JE	AE	EE	SE						

DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

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	INITIALS	GKJ	ES	DVB		MK	DK			27-05-2022	
REVISIONS		As per Client Observation									
P0	SIGN.										
	INITIALS	GKJ	ES	DVB		MK	DK			25-04-2022	
REVISIONS											
ISSUE	DRN	DSN	CHD	CV	EL	IC	ME		PE/PM	APPD.	DATE
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File Name: 12503A-CV-30718-Rev-P1

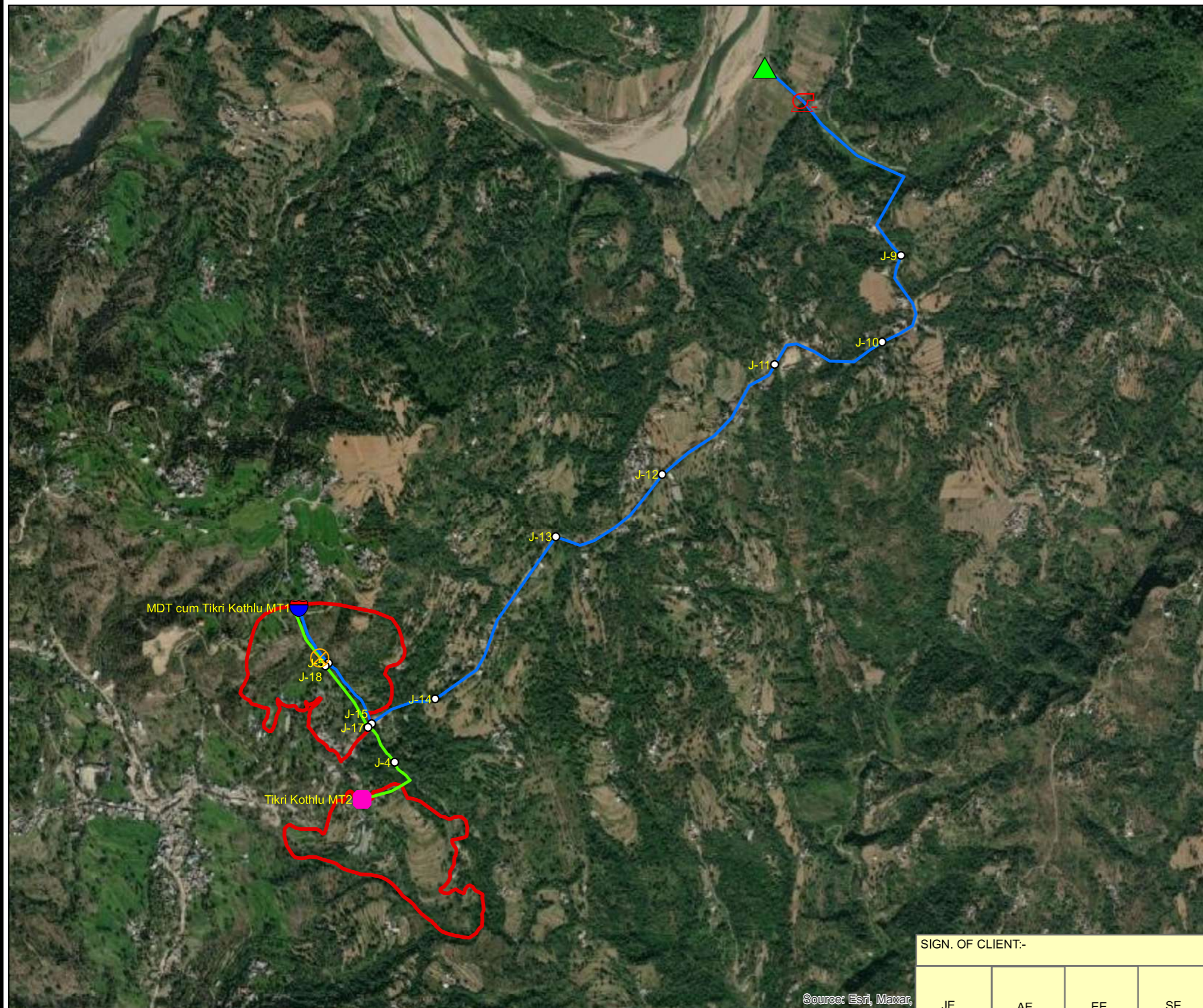
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MUMBAI

SCALE:- 1:5,500	DWG. No:-	ISSUE:-
DL.CEN.:- DEL-CV	TCE.12503A-CV -3082-WS-30718	P1



Legend

-  Source
-  Tikri Kothlu Pump
-  Tikri Kothlu PRV
-  MDT_MT
-  MT
-  Junction
-  Rising Main 100mm Dia GI Pipe
-  Gravity Main 80mm Dia GI Pipe
-  Kotlu_Tikri Cluster



SIGN. OF CLIENT:-

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DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

PURPOSE : FOR TENDER ONLY

TITLE:- NETWORK DRAWING OF LIFT IRRIGATION SCHEME FOR TIHRI KOTHLU CLUSTER, JHANDUTTA BLOCK, BILASPUR DISTRICT.



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	INITIALS	GKJ	ES	DVB			MK	DK	27-05-2022											
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	INITIALS	GKJ	ES	DVB			MK	DK	25-04-2022											
	REVISIONS																			
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE							
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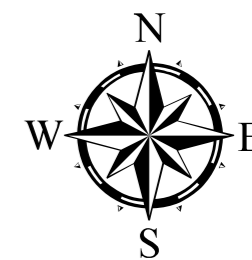
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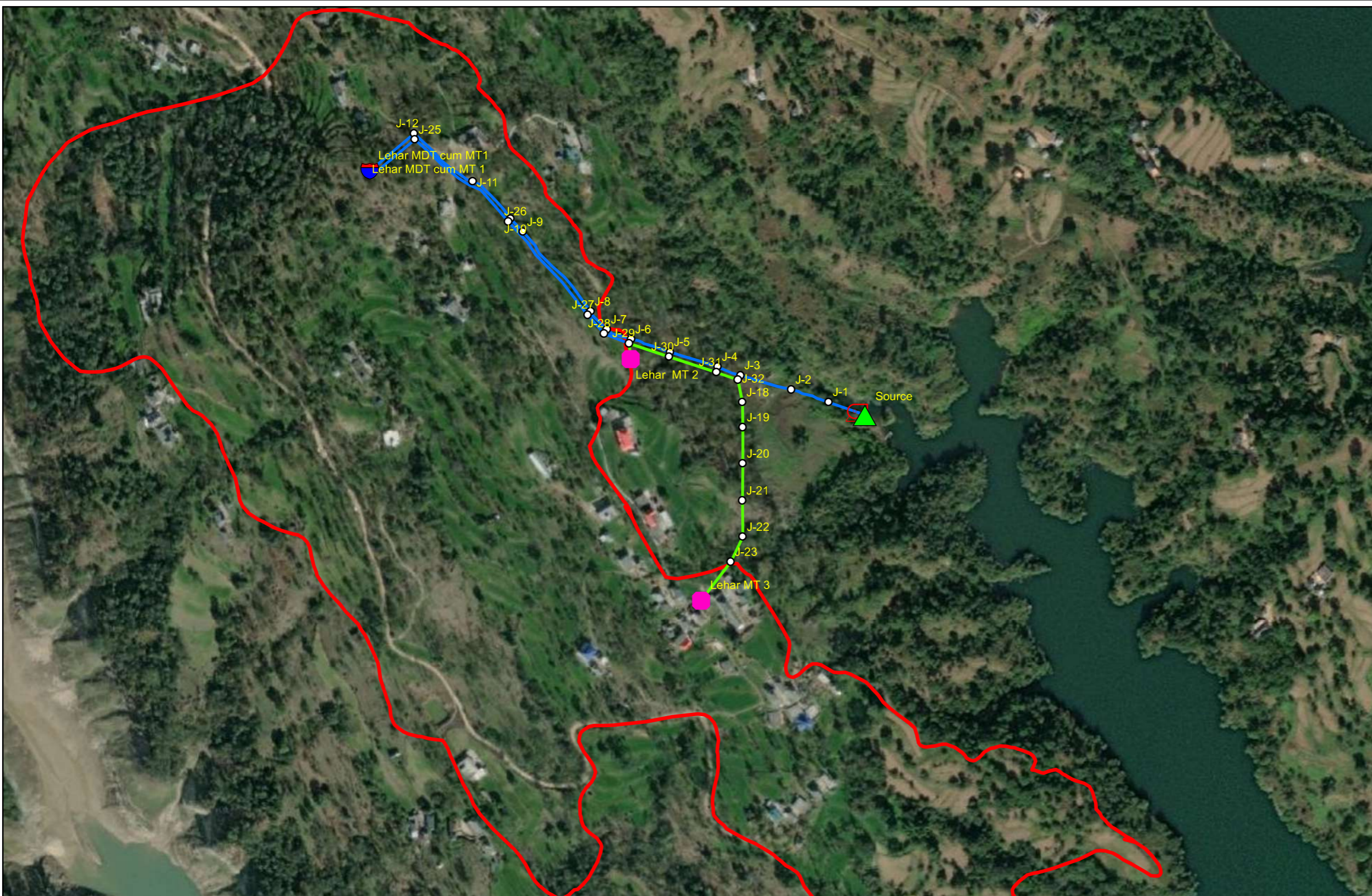
File Name: 12503A-CV-30719-Rev-P1

SCALE:- 1:14,000	DWG. No:-	ISSUE:-
DL.CEN:- DEL-CV	TCE.12503A-CV -3082-WS-30719	P1



Legend

- Source
- Lehar Pump
- MDT
- MT
- Junction
- Rising_Main 100mm Dia GI Pipe
- Gravity_Main 80mm Dia GI Pipe
- Lehar



SIGN. OF CLIENT:-

JE	AE	EE	SE
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**DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)**

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

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REVISIONS		As per Client Observation								
P0	SIGN.									
	INITIALS	GKJ	ES	DVB		MK	DK	25-04-2022		
REVISIONS										
ISSUE	DRN	DSN	CHD	CV	EL	IC	ME	PE/PM	APPD.	DATE
				CLEARED						

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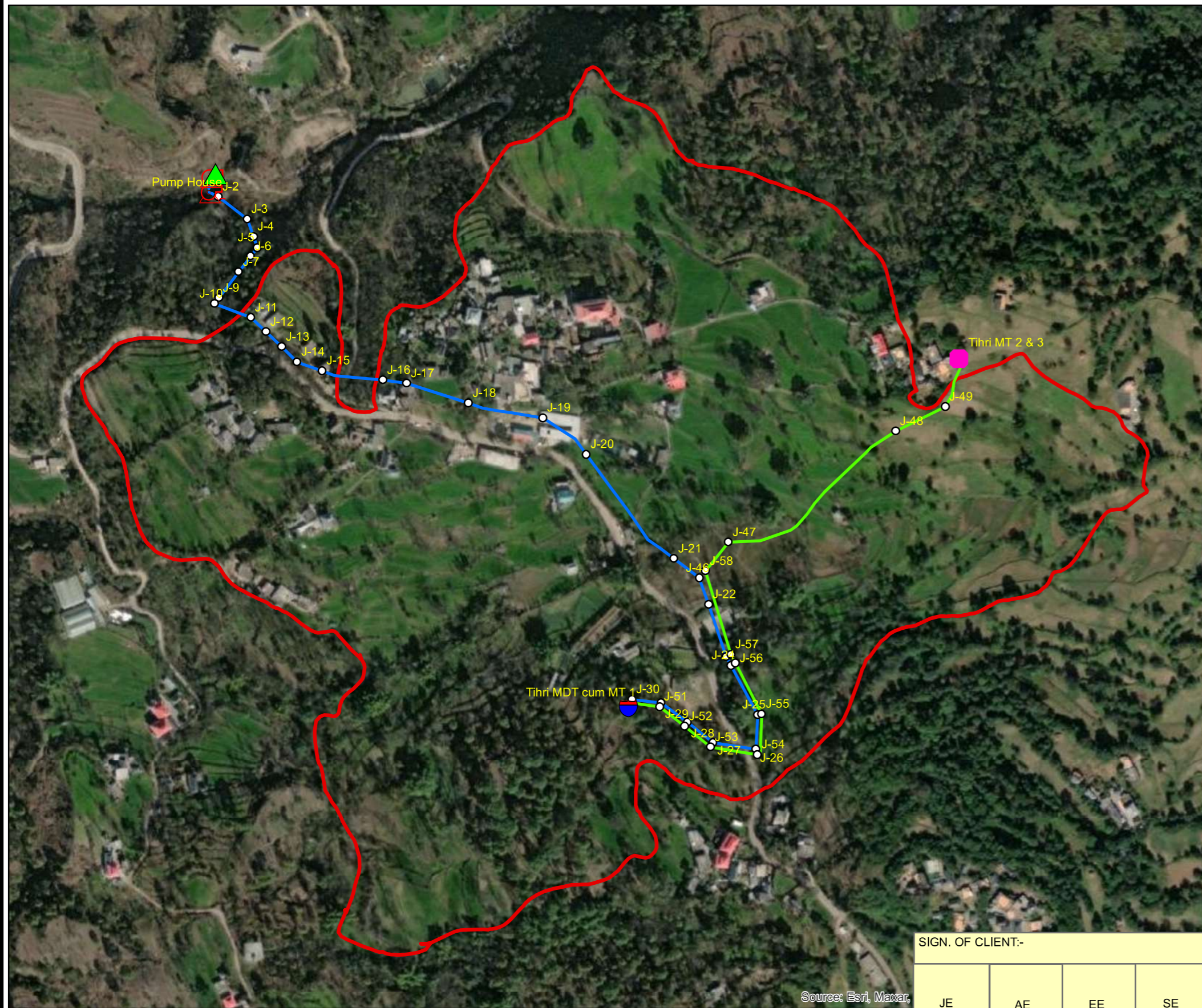
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File name: 12503A-CV-30720-Rev-P1









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SCALE:- 1:4,000	DWG. No:-	ISSUE:-
DL.CEN.:- DEL-CV	TCE.12503A-CV -3082-WS-30720	P1



Source: Esri, Maxar,

Legend

-  Nallah SEOD
-  Tihri Pump
-  MDT
-  MT
-  Junction
-  Rising Main 150mm Dia GI Pipe
-  Gravity Main 150mm Dia GI Pipe
-  Tihri Cluster

SIGN. OF CLIENT:-

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DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

PURPOSE : FOR TENDER ONLY

TITLE:- NETWORK DRAWING OF LIFT IRRIGATION SCHEME FOR TIHRI CLUSTER JHANDUTTA BLOCK, BILASPUR DISTRICT.



TATACONSULTING ENGINEERS LIMITED. MUMBAI

P1	SIGN.												
	INITIALS	GKJ	ES	DVB			MK	DK	27-05-2022				
	REVISIONS	As per client Observation											
P0	SIGN.												
	INITIALS	GKJ	ES	DVB			MK	DK	25-04-2022				
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE
					CLEARED								

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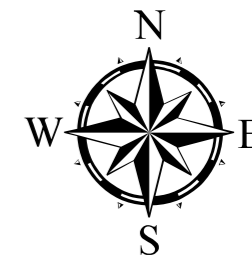
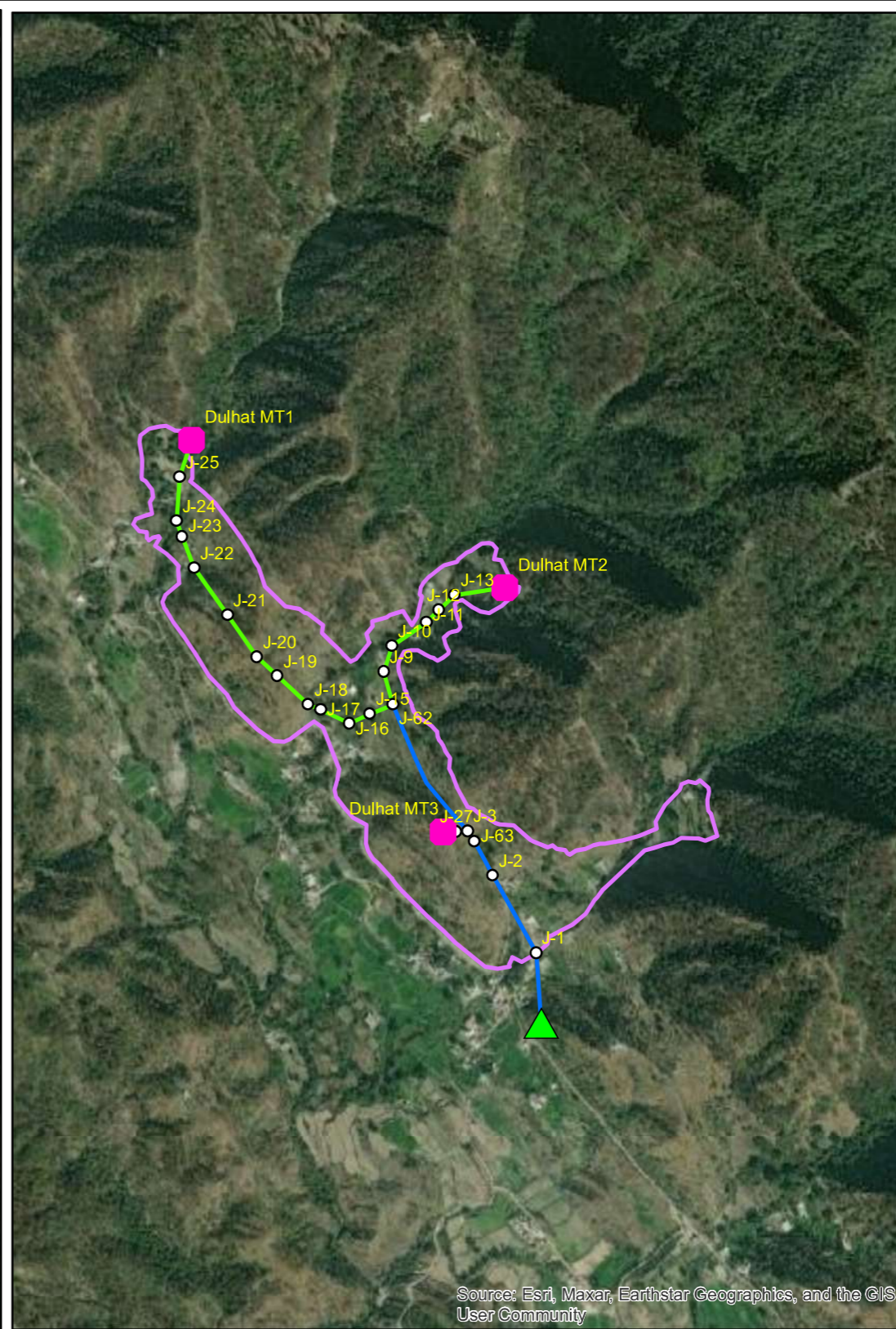
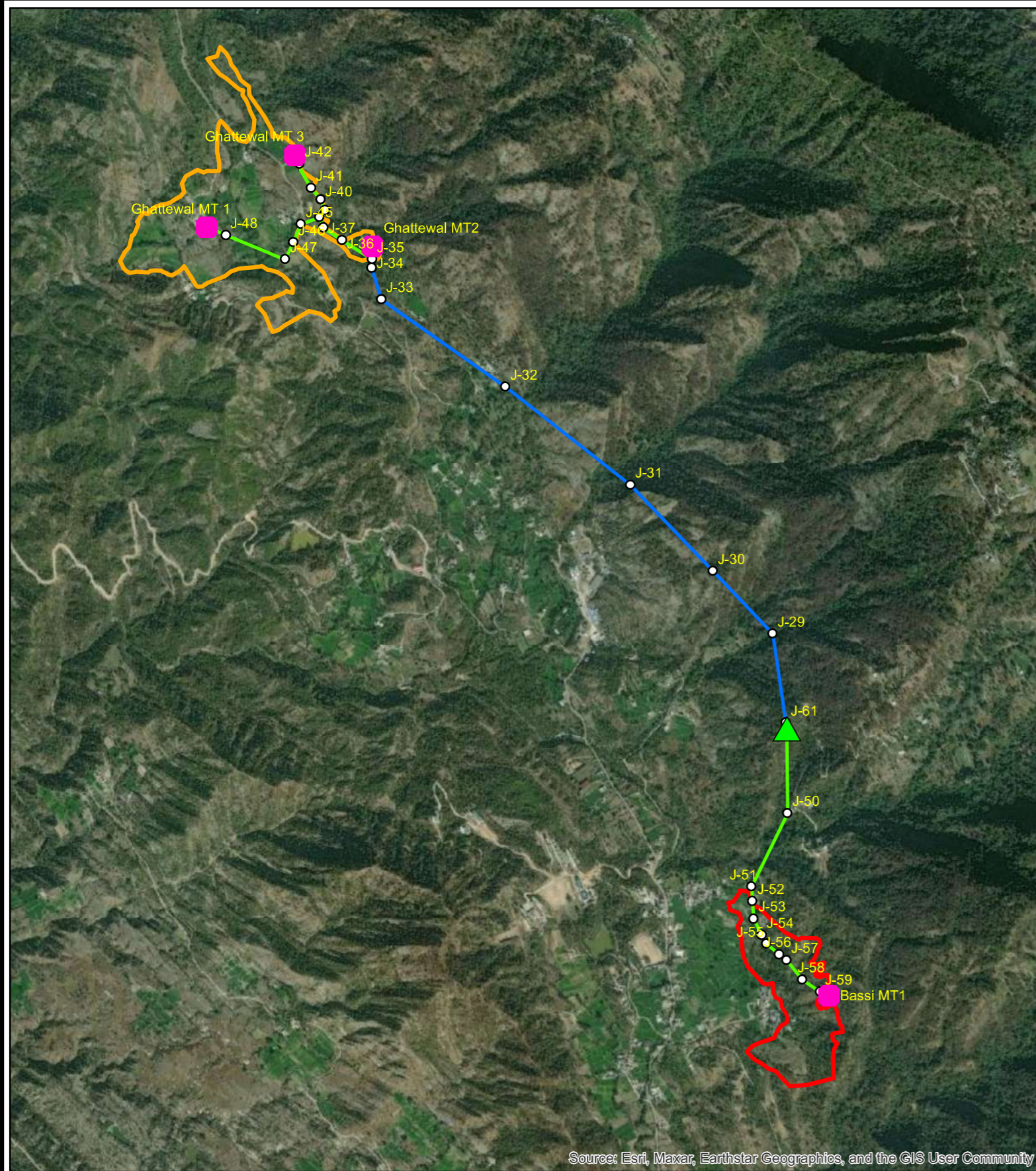
File Name: 12503A-CV-30721-Rev-P1

SCALE:- 1:4,000

DWG. No:- TCE.12503A-CV -3082-WS-30721

ISSUE:- P1

DL.CEN:- DEL-CV



Legend

- Changer Reservoir
- MT
- Junction
- Rising Main 100mm Dia GI Pipe
- Gravity Main 80mm Dia GI Pipe
- Ghattewal
- Dulhet-3
- Bassi

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

SIGN. OF CLIENT:-

JE	AE	EE	SE
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**DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)**

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

PURPOSE : FOR TENDER ONLY

TITLE:- **NETWORK DRAWING OF LIFT IRRIGATION SCHEME FOR LIS CHANGER (BASSI, DULHET-3, GHATTEWAL) CLUSTER, JHANDUTTA BLOCK, BILASPUR DISTRICT.**



**TATACONSULTING ENGINEERS LIMITED.
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SCALE:- 1:20,000

DWG. No:-

TCE.12503A-CV -3082-WS-30722

ISSUE:-

P1

File name: 12503A-CV-30722-Rev-P1

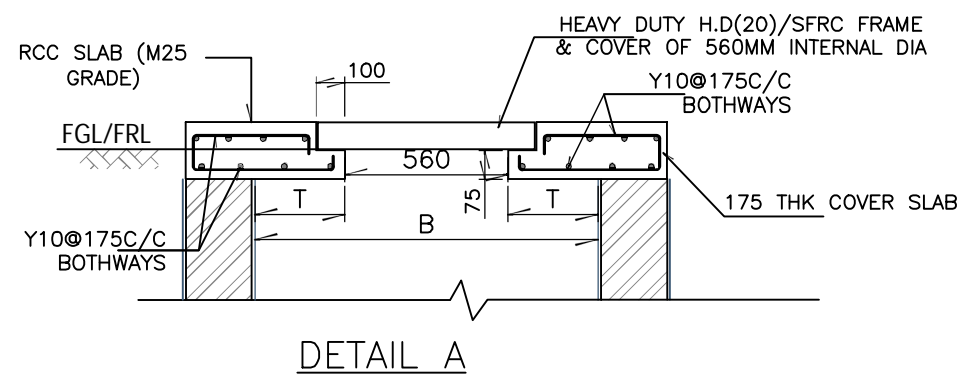
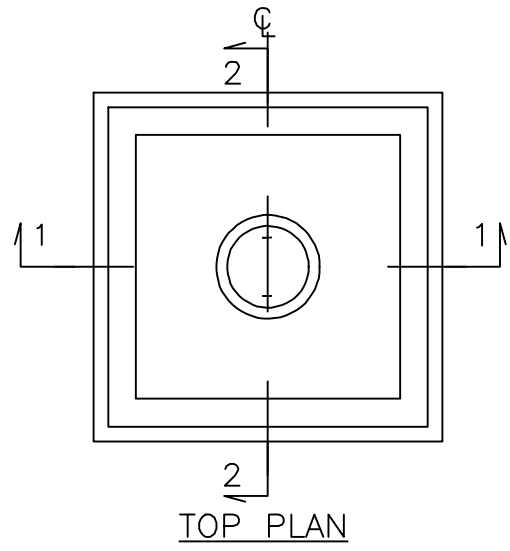
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P1	SIGN.												
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	REVISIONS	CLEARED											
P0	SIGN.												
	INITIALS	GKJ	ES	DVB			MK	DK	25-04-2022				
	REVISIONS	CLEARED											
ISSUE	DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE	
	CLEARED												

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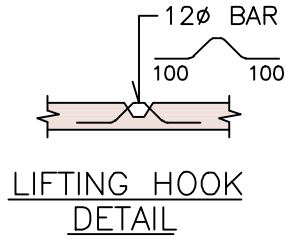
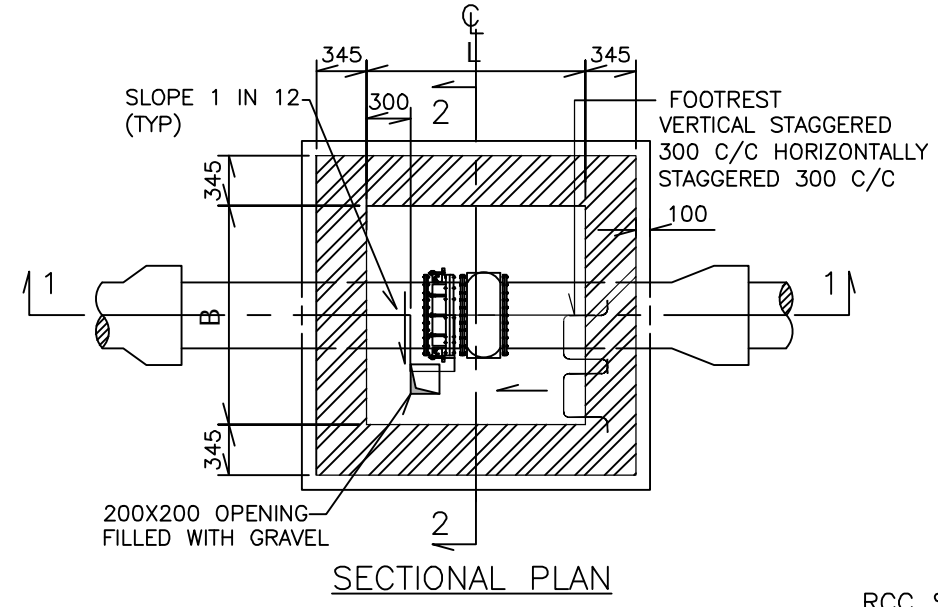
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- LEGEND**
- TYP --- TYPICAL
 - DIA --- DIAMETER
 - UN --- UNLESS NOTED
 - MS --- MILD STEEL
 - DI --- DUCTILE IRON
 - THK --- THICK
 - CL --- CENTER LINE
 - IL --- INVERT LEVEL
 - PCC --- PLAIN CEMENT CONCRETE
 - RC --- REINFORCED CONCRETE
 - EQ. --- EQUAL

- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETRE AND LEVELS IN METRE UNLESS NOTED.
 2. GRADE OF PCC SHALL BE M15 WITH MAXIMUM 40mm DOWN GRADED AGGREGATES CONFORMING TO SPECIFICATION.
 3. REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS TO GRADE Fe500 CONFORMING TO IS:1786 (LATEST ISSUE).
 4. CLEAR COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS.
RC COVER-20mm TOP & BOTTOM
 5. SAFE BEARING CAPACITY OF SOIL IS CONSIDERED AS 15 T/Sqm. AT FOUNDING LEVEL.
 6. THE ARRANGEMENT RELATED TO VALVE AND FITTINGS SHOWN IN THE DRAWING ARE INDICATIVE ONLY. BEFORE CONSTRUCTION, ARRANGEMENT OF VALVE AND FITTINGS SHALL BE PROVIDED BY THE CONTRACTOR TO ENGINEER FOR APPROVAL.
 7. BRICK MASONRY SHALL BE IN CM (1:4).
 8. BRICKS SHALL BE OF MINIMUM 75 Kg/cm² COMPRESSIVE STRENGTH.
 9. THE TYPICAL DETAILS OF CHAMBER ARE APPLICABLE FOR 150mm TO 600mm DIA PIPELINE.
 10. VALVE CHAMBERS SHALL BE CONSTRUCTED IN RCC IN CASE HIGH WATER TABLE AND SPACE CONSTRAINT.
 11. THE FOOTREST SHALL BE PROVIDED FROM TOP COVER TO PIPE BARREL TOP AND THEN PIPE BARREL TOP UPTO 300mm ABOVE CHAMBER BOTTOM.
 12. VALVE SPINDLE EXTENSIONS TO BE FITTED TO BRING TOP OF VALVE SPINDLE TO WITHIN 100mm TO UNDERSIDE OF RC COVER.



6MM THICK PLASTIC ENCAPSULATED FOOTREST ON 12MM STEEL BAR AS PER SPECIFICATION

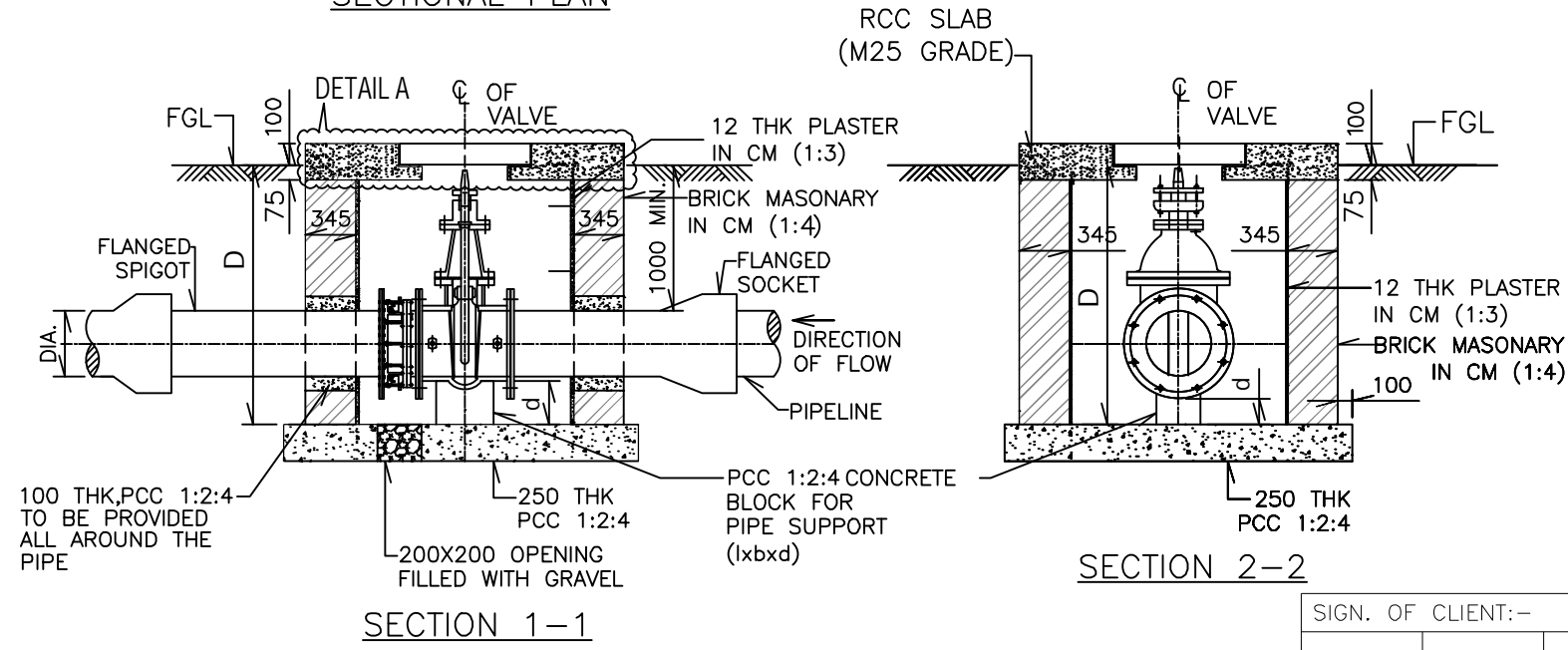
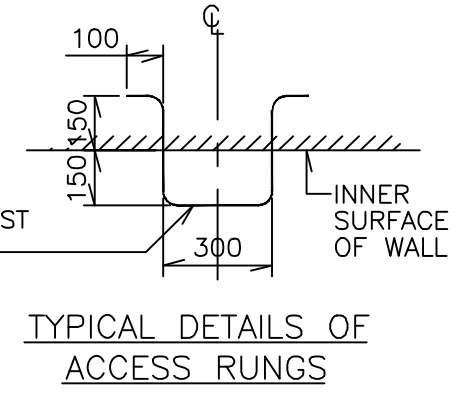


TABLE:

DIA. OF PIPE	CHAMBER SIZE			PEDESTAL		
	L	B	D	l	b	d (Min)
300	1200	1200	1600	150	250	100
200	1200	1200	1600	100	200	100
150	900	900	1600	100	150	100

SIGN.																			
INITIALS																			
REVISIONS																			
PO SIGN.																			
INITIALS	SM	MJ	DVP					NMS	NMS										
REVISIONS																			
ISSUE	DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD								

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SIGN. OF CLIENT:--

JE	AE	EE	SE
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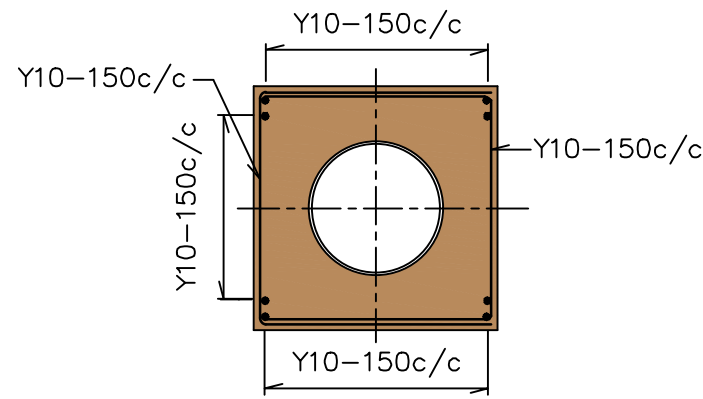
FILE NAME 12503A-CV-30581-Rev-PO

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IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

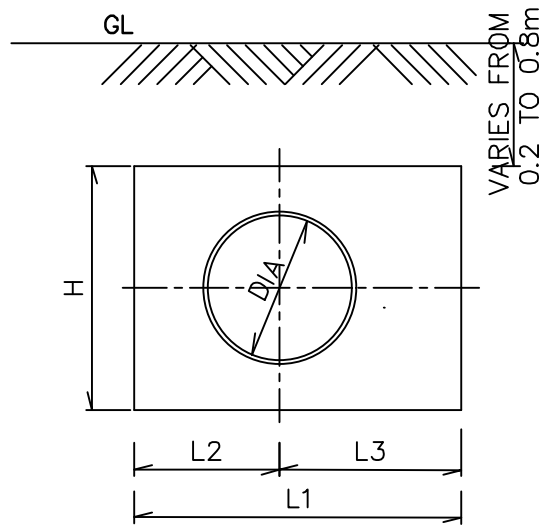
TYPICAL SLUICE VALVE CHAMBER DETAILS

TATA CONSULTING ENGINEERS LIMITED
MUMBAI

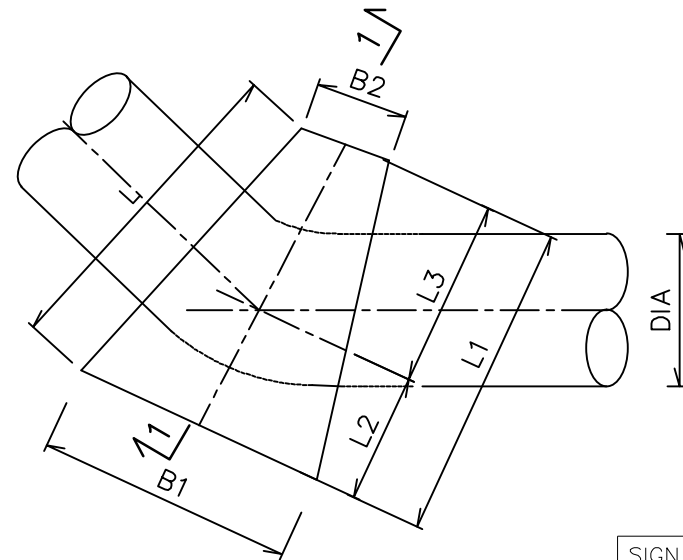
SCALE : NTS DWG NO. TCE.12503A-CV-3082-WS-30581 ISSUE PO



DETAILS OF CONCRETE BED & ENCASEMENT OF PIPE



SECTION 1-1



TYPICAL THRUST BLOCK

TABLE											
INTERNAL DIAMETER OF PIPE (mm)	ANGLE OF BEND	DESIGN PRESSURE (kg/m ²)	SOIL COVER OVER PIPE Ds (mm)	H (m)	L1 (m)	L2 (m)	L3 (m)	L (m)	B1 (m)	B2 (m)	
100	90°	4.35	1000	0.70	0.75	0.40	0.35	0.77	0.70	0.35	
100	45°	4.35	1000	0.60	0.55	0.30	0.25	0.57	0.60	0.30	
100	22.5°	4.35	1000	0.45	0.45	0.25	0.20	0.46	0.50	0.25	
100	90°	4.85	1000	0.70	0.80	0.45	0.35	0.82	0.70	0.35	
100	45°	4.85	1000	0.60	0.55	0.30	0.25	0.57	0.60	0.30	
100	22.5°	4.85	1000	0.50	0.45	0.25	0.20	0.47	0.50	0.25	
100	90°	5.93	1000	0.80	0.75	0.40	0.35	0.78	0.80	0.40	
100	45°	5.93	1000	0.65	0.65	0.35	0.30	0.67	0.70	0.35	
100	22.5°	5.93	1000	0.50	0.55	0.30	0.25	0.56	0.50	0.25	
150	90°	3.33	1000	0.85	0.85	0.45	0.40	0.88	0.90	0.45	
150	45°	3.33	1000	0.70	0.70	0.40	0.30	0.72	0.70	0.35	
150	22.5°	3.33	1000	0.55	0.55	0.30	0.25	0.57	0.50	0.25	
250	90°	3.75	1000	1.25	1.25	0.70	0.55	1.29	1.30	0.65	
250	45°	3.75	1000	1.00	1.05	0.60	0.45	1.08	1.00	0.50	
250	22.5°	3.75	1000	0.80	0.80	0.45	0.35	0.82	0.80	0.40	
250	90°	6.03	1000	1.45	1.45	0.80	0.65	1.49	1.50	0.75	
250	45°	6.03	1000	1.15	1.25	0.70	0.55	1.28	1.10	0.55	
250	22.5°	6.03	1000	0.95	0.90	0.50	0.40	0.93	0.90	0.45	
350	90°	5.93	1000	1.80	1.80	1.00	0.80	1.86	1.80	0.90	
350	45°	5.93	1000	1.45	1.55	0.85	0.70	1.59	1.50	0.75	
350	22.5°	5.93	1000	1.20	1.15	0.65	0.50	1.19	1.20	0.60	
500	90°	4.68	1000	2.15	2.05	1.15	0.90	2.12	2.20	1.10	
500	45°	4.68	1000	1.70	1.80	1.00	0.80	1.85	1.70	0.85	
500	22.5°	4.68	1000	1.40	1.35	0.75	0.60	1.39	1.40	0.70	

LEGEND:

- DIA ——— DIAMETER
- B ——— BREADTH
- L ——— LENGTH
- H ——— HEIGHT
- mm ——— MILLIMETERS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED.
2. INVERT LEVEL OF PIPES SHALL BE AS PER RELEVANT NETWORK DRAWINGS.
3. NO CONCRETE SHALL BE PLACED AROUND JOINTS OF PIPELINE, UNTIL THAT LENGTH OF PIPE HAS PASSED SECTIONAL HYDRAULIC TEST.
4. STEEL FOR REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe 500
5. REINFORCEMENT LAP LENGTHS SHALL BE 50xDIAMETER OF SMALLER BAR.
6. CONCRETE TO BE USED SHALL BE OF GRADE M20 WITH 20mm DOWN GRADED AGGRAGATES CONFORMING TO SPECIFICATIONS.
7. CLEAR COVER TO REINFORCEMENT
BOTTOM AND SIDES – 30mm
8. DURING CONSTRUCTION, IF GROUND WATER TABLE IS MET WITH, IT SHALL BE BROUGHT TO THE NOTICE OF ENGINEER FOR MAKING NECESSARY CHANGES IN THE DESIGN.
9. SOIL BENEATH AND BY THE SIDE OF THE THRUST BLOCK, WHICH ULTIMATELY BEARS THRUST THROUGH CONCRETE MEDIUM, MUST REMAIN UNDISTURBED. IN CASE ANY EXTRA EXCAVATION IS DONE IN TRENCHES, WHERE THE THRUST BLOCK IS TO BE PROVIDED, THE SAME SHALL BE FILLED WITH 1:4:8 CONCRETE
10. PIPES AND SPECIALS SHALL BE SUITABLY SUPPORTED WHILE CONCRETING THE THRUST BLOCK AS DIRECTED BY ENGINEER.
11. TESTING OF MAINS SHALL BE DONE AFTER CASTING OF THRUST BLOCKS AND COMPACTION OF BACKFILLING.
12. AT THE TIME OF TESTING, COMPACTED SOIL SHALL BE PLACED ON THE THRUST BLOCK UP TO THE ROAD LEVEL.
13. THRUST BLOCKS NEED TO BE PLACED AS PER SITE CONDITION

DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)
 IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TYPICAL DETAILS OF THRUST BLOCK

SIGN. OF CLIENT:—

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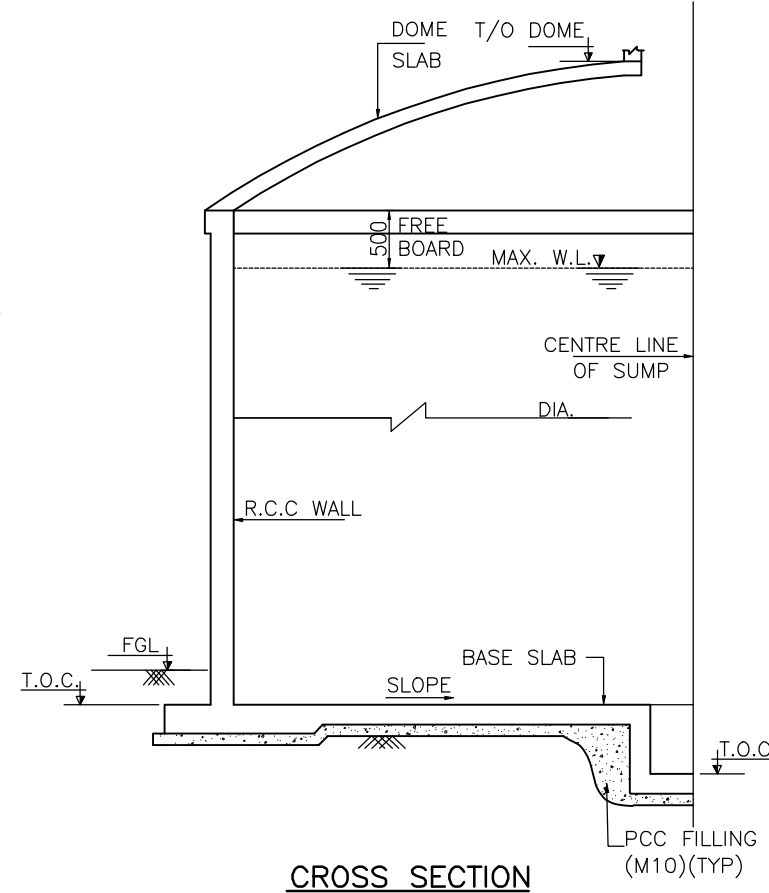
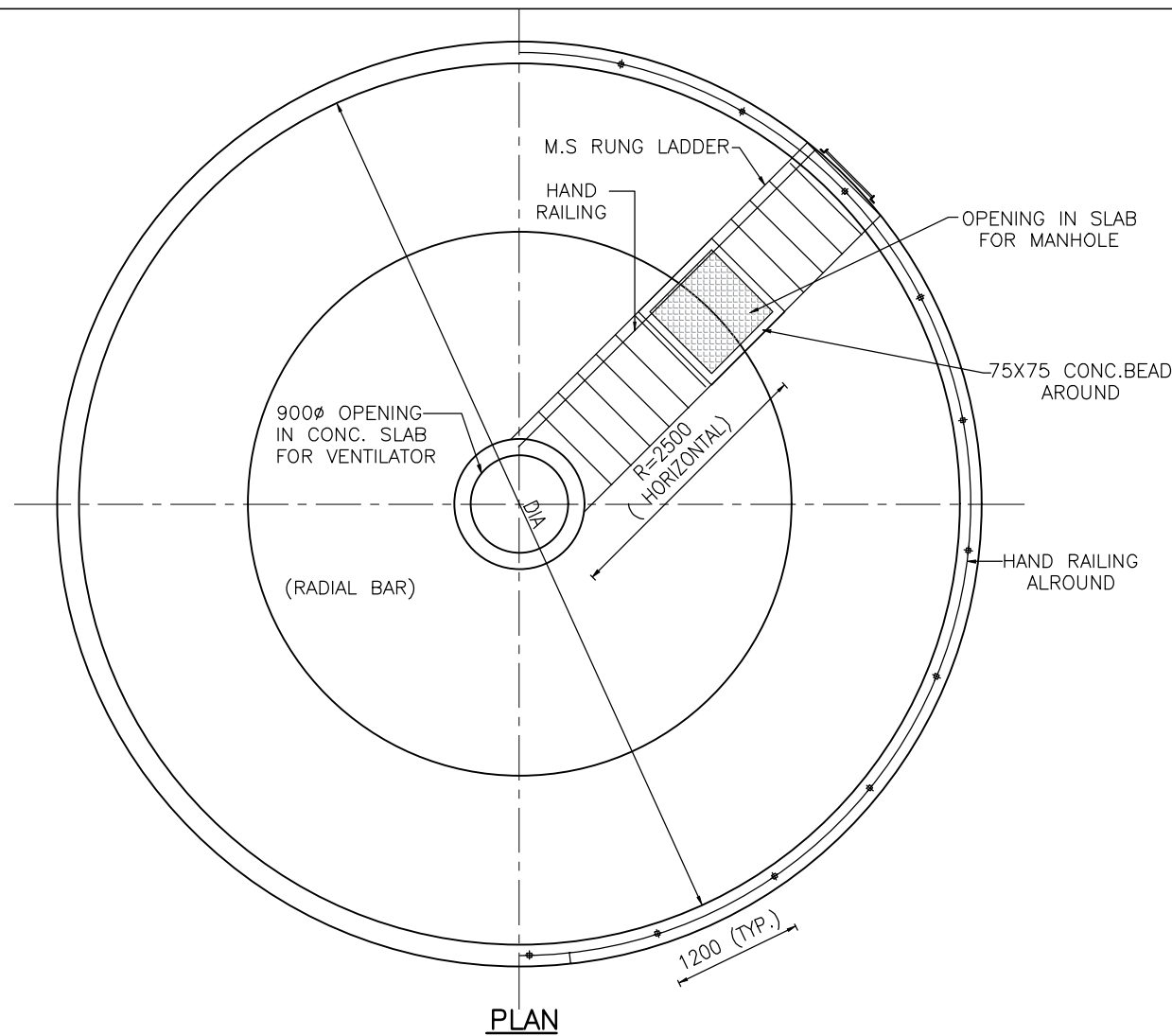
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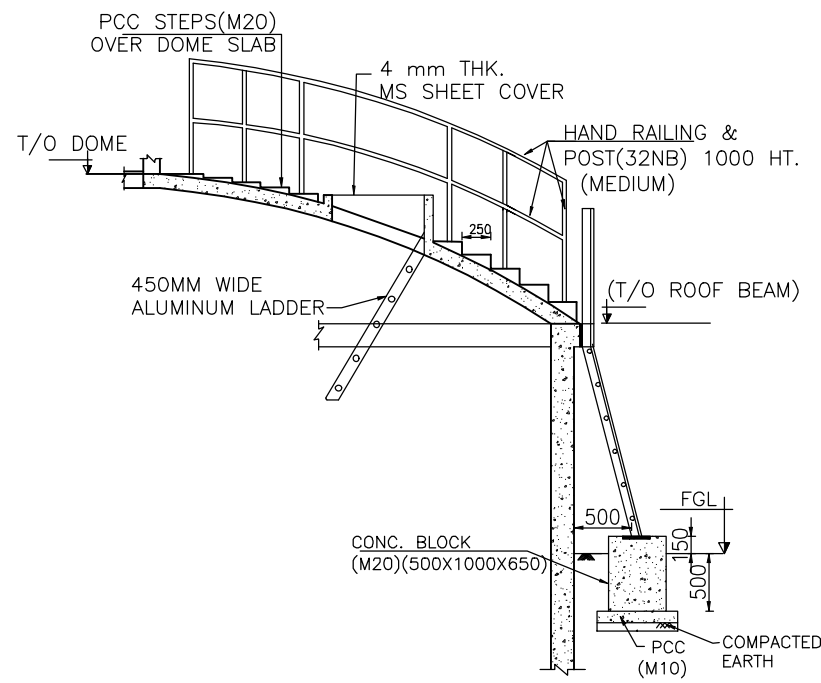


LEGEND

- DIA --- DIAMETER
- R --- RADIUS
- PCC --- PLAIN CEMENT CONCRETE
- TYP --- TYPICAL
- WL --- WATER LEVEL
- M.S. --- MILD STEEL
- T/O --- TOP OF

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED.
2. DO NOT SCALE THE DRAWING. FOLLOW FIGURED DIMENSIONS ONLY.
3. GRADE OF CONCRETE SHALL BE M30 WITH MAXIMUM 20mm DOWNGRADED AGGREGATES CONFORMING TO IS 456.
4. STEEL FOR REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS OF GRADE FE-500 CONFORMING TO IS:1786.
5. SAFE BEARING CAPACITY OF SOIL IS TAKEN AS 10T/Sq.m. AT FOUNDING LEVEL AND SAME IS TO BE CONFIRMED AT SITE BEFORE EXECUTION.
6. PLAIN CEMENT CONCRETE UNDER FOUNDATION SHALL BE OF GRADE M10 CONFORMING TO IS 456.
7. IF ANY LOOSE SOIL IS ENCOUNTERED AT FOUNDING LEVEL DURING CONSTRUCTION, IT SHOULD BE BROUGHT TO THE NOTICE OF THE ENGINEER.
8. IF GROUND WATER TABLE IS ENCOUNTERED DURING CONSTRUCTION, IT SHOULD BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR MAKING APPROPRIATE CHANGES IN THE DESIGN.
9. THE SPACING OF CONSTRUCTION JOINT SHALL NOT BE MORE THAN 1.20M.



DET.OF STEPS AND M.S.RUNG LADDER

DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TYPICAL GLSR DETAILS
(1,00,000, 1,50,000, 2,00,000, 2,50,000 LITRE CAPACITY)

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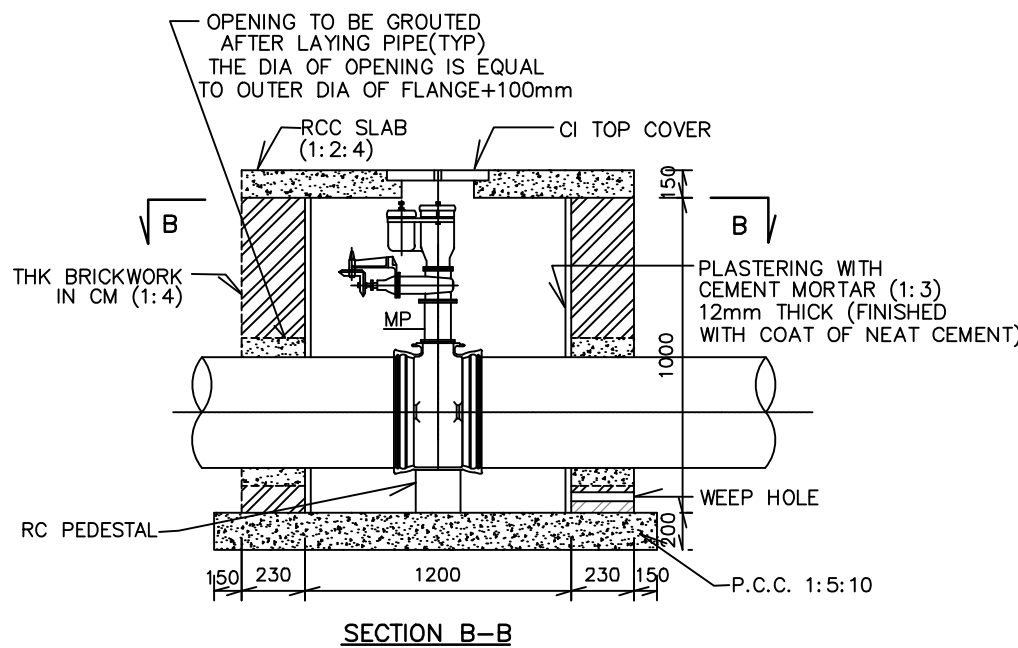
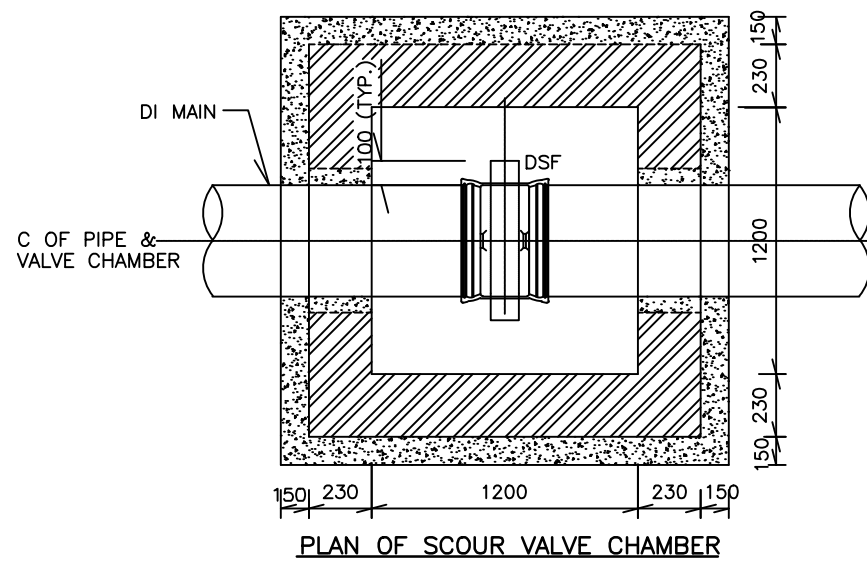
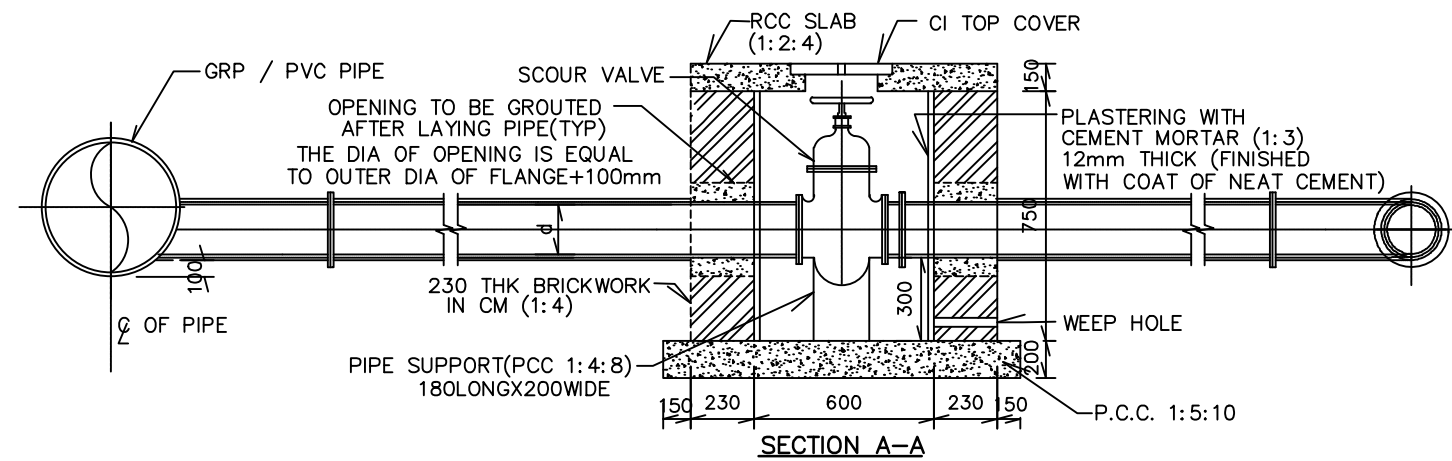
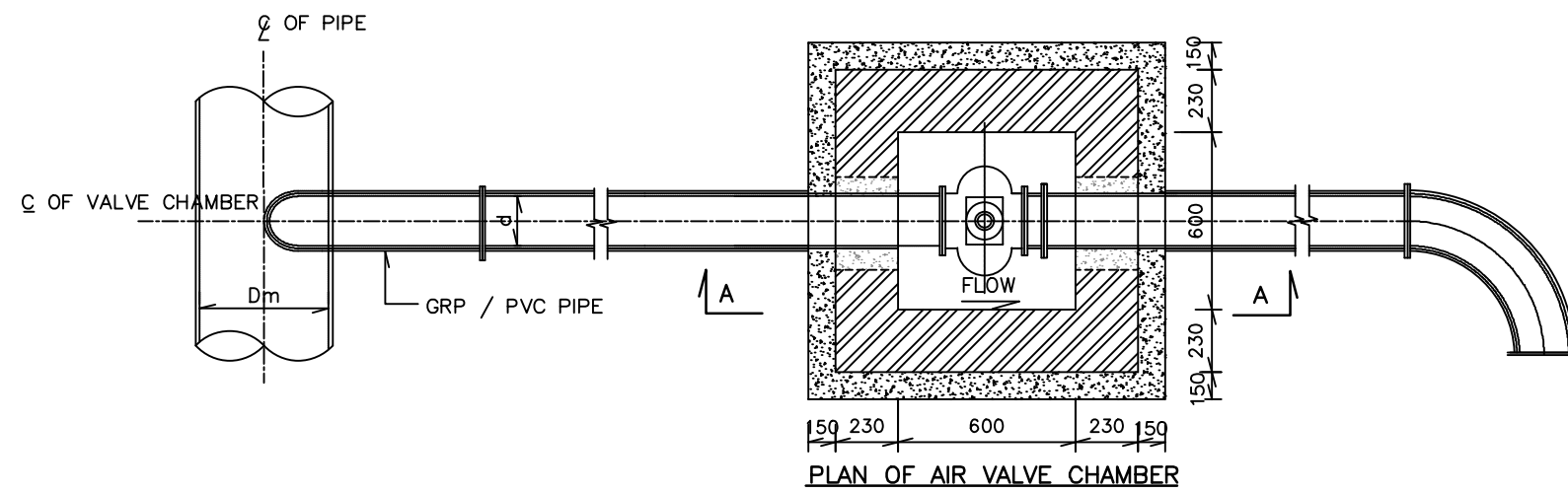
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LEGEND

- RCC ——— REINFORCED CEMENT CONCRETE
- PCC ——— PLAIN CEMENT CONCRETE
- CI ——— CAST IRON
- CM ——— CEMENT MORTAR
- THK ——— THICK
- PVC ——— POLY VINYL CHLORIDE
- Dm/d ——— INTERNAL CLEAR DIAMETER OF PIPELINE
- DI ——— DUCTILE IRON
- DSF ——— DOUBLE SOCKET FLANGE
- Q ——— CENTER LINE
- MP ——— MAKEUP PIECE

NOTES

1. ALL DIMENSIONS ARE IN MM. & LEVELS ARE IN METRES.
2. GRADE OF REINFORCEMENT CEMENT CONCRETE SHALL 1:2:4
3. THE ACTUAL GLS AND ILS OF ALL CHAMBERS SHALL BE FIXED BY THE CONTRACTOR IN CONSULTATION WITH THE ENGINEER-IN-CHARGE.
4. EXACT ORIENTATION AND LOCATION OF THE CHAMBERS SHALL BE DECIDED BY THE CONTRACTOR IN CONSULTATION WITH THE ENGINEER-IN-CHARGE.
5. CEMENT SHALL BE ORDINARY PORTLAND TYPE CONFORMING TO IS:269 UN,
6. MAXIMUM SIZE OF AGGREGATES SHALL BE 20mm DOWNGRADED FOR RAFT, WALLS, BEAMS AND SLABS.
7. BACKFILLING AROUND WALLS TO BE DONE UNIFORMLY ALL ROUND IN SUCCESSIVE LIFTS OF EQUAL HEIGHT AS PER SPECIFICATION BACKFILLING SHALL BE DONE ONLY WHEN DIRECTED BY ENGINEER.
8. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH TENDER SPECIFICATION.
9. CHAMBER TO BE PLASTERED INTERNALLY WITH CEMENT MORTAR 1:3 IN 12MM THICKNESS.
10. GRADE OF CONCRETE SHALL BE M20 WITH MAXIMUM 20mm DOWN GRADED AGGREGATES CONFORMING TO SPECIFICATION.
11. FOR LOCATION OF VALVE CHAMBERS REFER NETWORK DISTRIBUTION DRAWING. THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR ALL VALVE CHAMBER LOCATIONS AND LEVELS BEFORE EXECUTION.
12. THE ARRANGEMENT RELATED TO VALVE AND FITTINGS SHOWN IN THE DRAWING ARE INDICATIVE ONLY. BEFORE CONSTRUCTION, ARRANGEMENT OF VALVE & FITTINGS SHALL BE PROVIDED BY THE CONTRACTOR TO ENGINEER FOR APPROVAL.



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TYPICAL DETAILS OF SCOUR VALVE
AND AIR VALVE CHAMBER

SIGN. OF CLIENT: -

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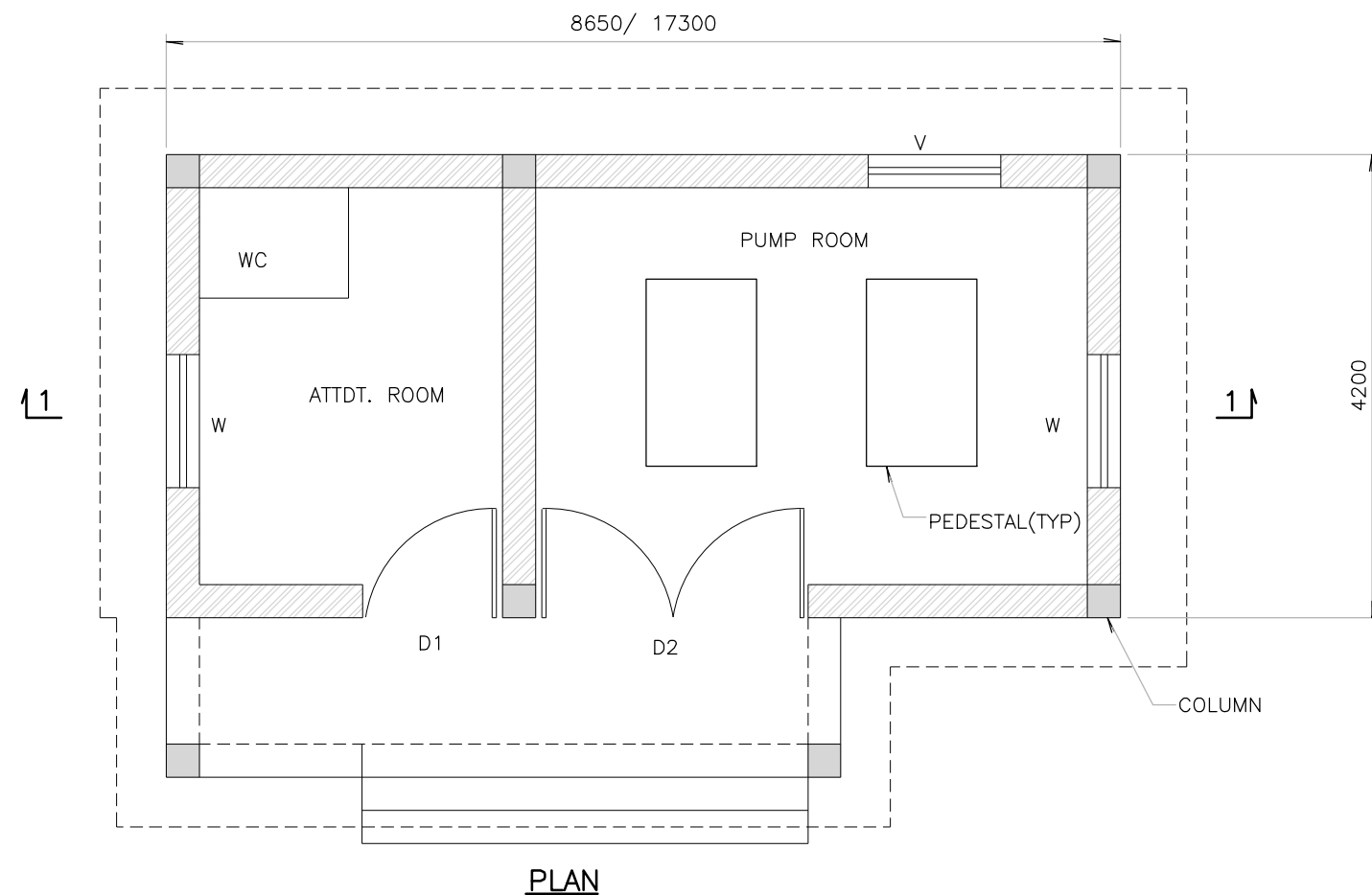
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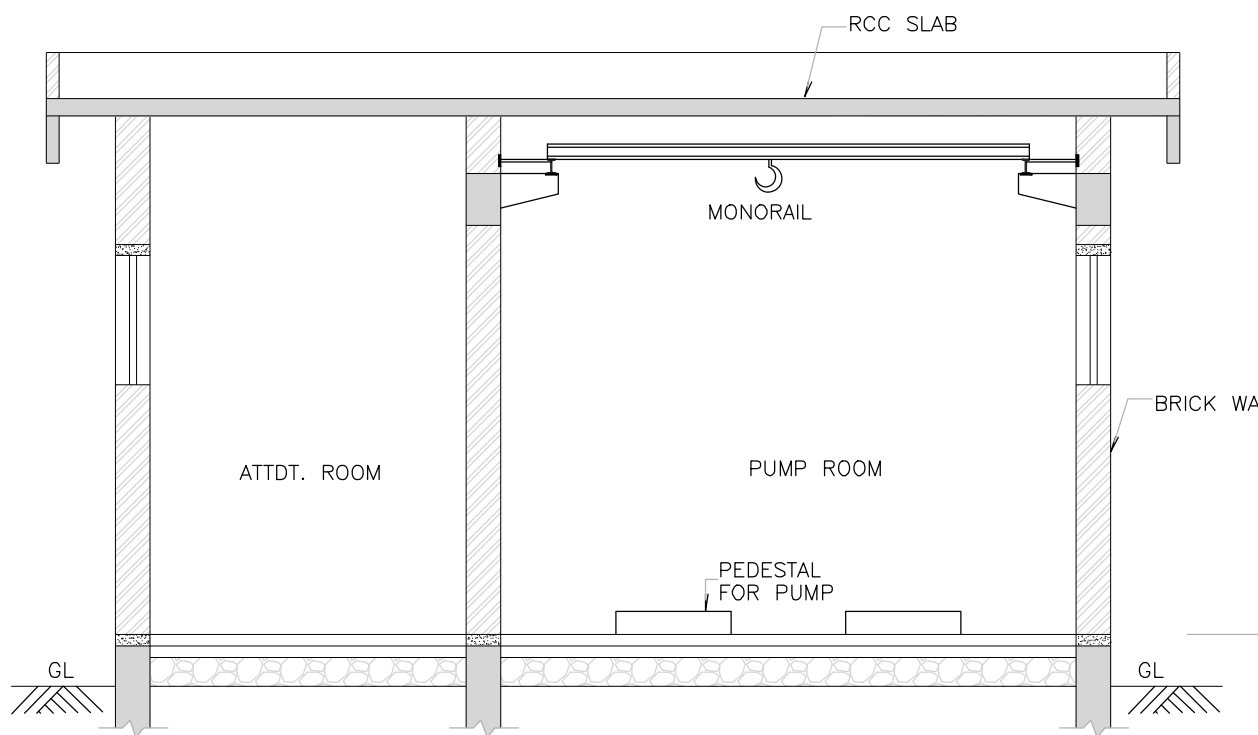
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PLAN



SECTION 1-1

LEGEND

- ATTDT: --- ATTENDANT
- RCC --- REINFORCED CEMENT CONCRETE
- TYP --- TYPICAL
- GL --- GROUND LEVEL

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED.
2. DO NOT SCALE THE DRAWING. FOLLOW FIGURED DIMENSIONS ONLY.
3. GRADE OF CONCRETE SHALL BE M20 WITH MAXIMUM 20mm DOWNGRADED AGGREGATES CONFORMING TO IS 456.
4. SAFE BEARING CAPACITY OF SOIL IS TAKEN AS 10T/Sq.m. AT FOUNDING LEVEL AND SAME IS TO BE CONFIRMED AT SITE BEFORE EXECUTION.
5. PLAIN CEMENT CONCRETE UNDER FOUNDATION SHALL BE OF GRADE M10 CONFORMING TO IS 456.
6. IF ANY LOOSE SOIL IS ENCOUNTERED AT FOUNDING LEVEL DURING CONSTRUCTION, IT SHOULD BE BROUGHT TO THE NOTICE OF THE ENGINEER.
7. IF GROUND WATER TABLE IS ENCOUNTERED DURING CONSTRUCTION, IT SHOULD BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR MAKING APPROPRIATE CHANGES IN THE DESIGN.
8. THE SPACING OF CONSTRUCTION JOINT SHALL NOT BE MORE THAN 1.20M.



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

SIGN. OF CLIENT:-

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TYPICAL DETAILS OF PUMP HOUSE

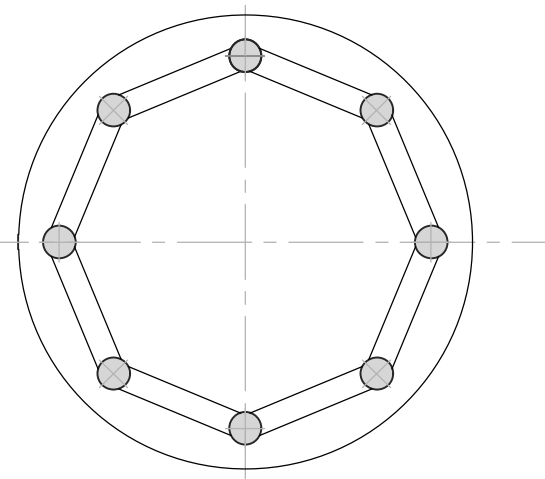
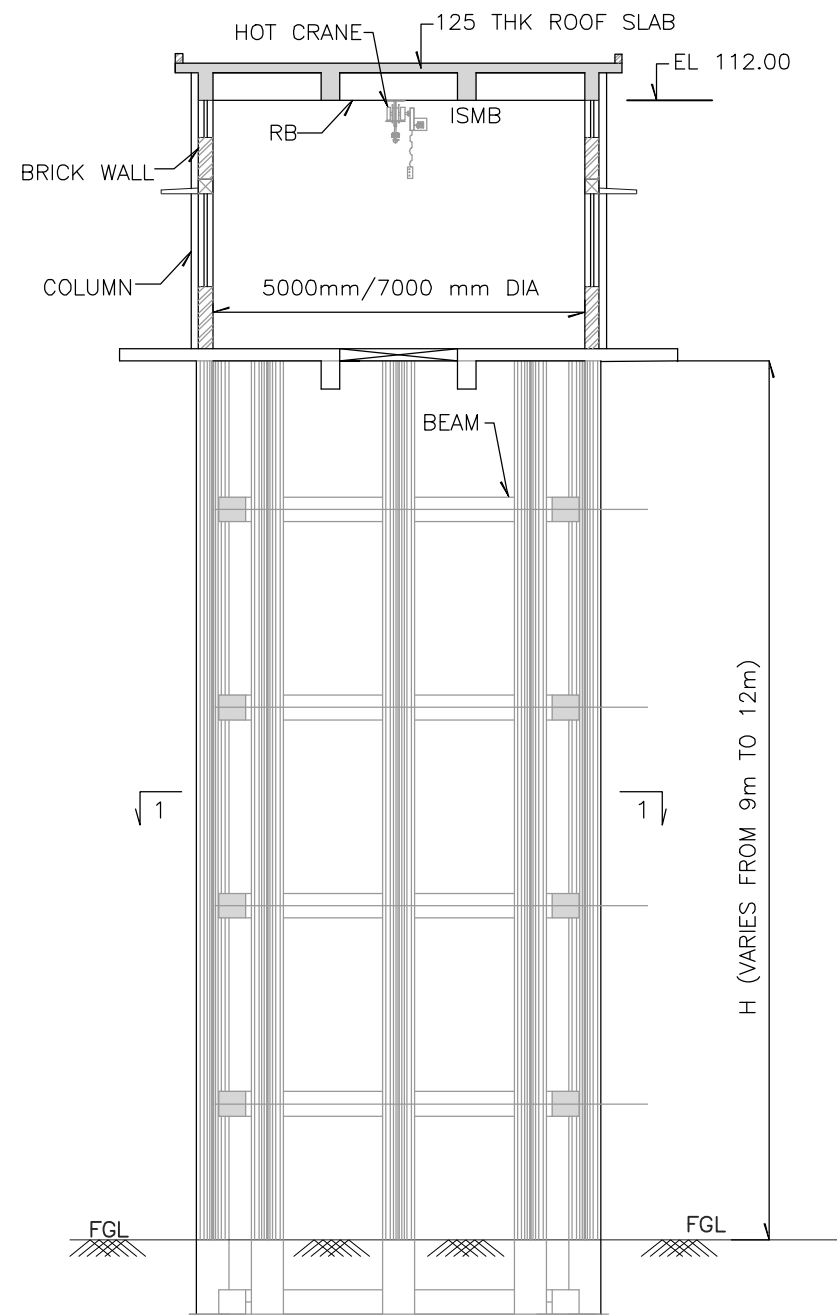


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ISSUE P1



SECTIONAL PLAN
SEC 1-1

LEGEND:

- DIA----- DIAMETER
- H----- STAGE HEIGHT
- THK----- THICKNESS
- FGL-----FINISHED GROUND LEVEL
- RB----- ROOF BEAM

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED.
2. DO NOT SCALE THE DRAWING. FOLLOW FIGURED DIMENSIONS ONLY.
3. GRADE OF CONCRETE SHALL BE M30 WITH MAXIMUM 20mm DOWNGRADED AGGREGATES CONFORMING TO IS 456.
4. STEEL FOR REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS OF GRADE FE-500 CONFORMING TO IS:1786.
5. SAFE BEARING CAPACITY OF SOIL IS TAKEN AS 10T/Sq.m. AT FOUNDING LEVEL AND SAME IS TO BE CONFIRMED AT SITE BEFORE EXECUTION.
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8. IF GROUND WATER TABLE IS ENCOUNTERED DURING CONSTRUCTION, IT SHOULD BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR MAKING APPROPRIATE CHANGES IN THE DESIGN.
9. THE SPACING OF CONSTRUCTION JOINT SHALL NOT BE MORE THAN 1.20M.

SECTION ELEVATION



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

GENERAL ARRANGEMENT OF INTAKE WELL

SIGN. OF CLIENT:-

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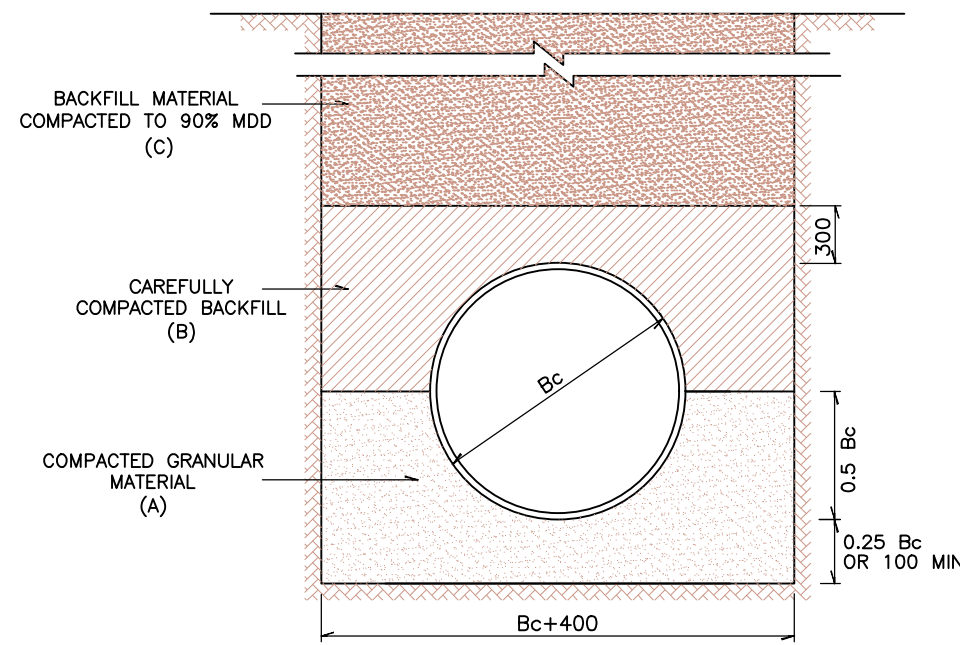
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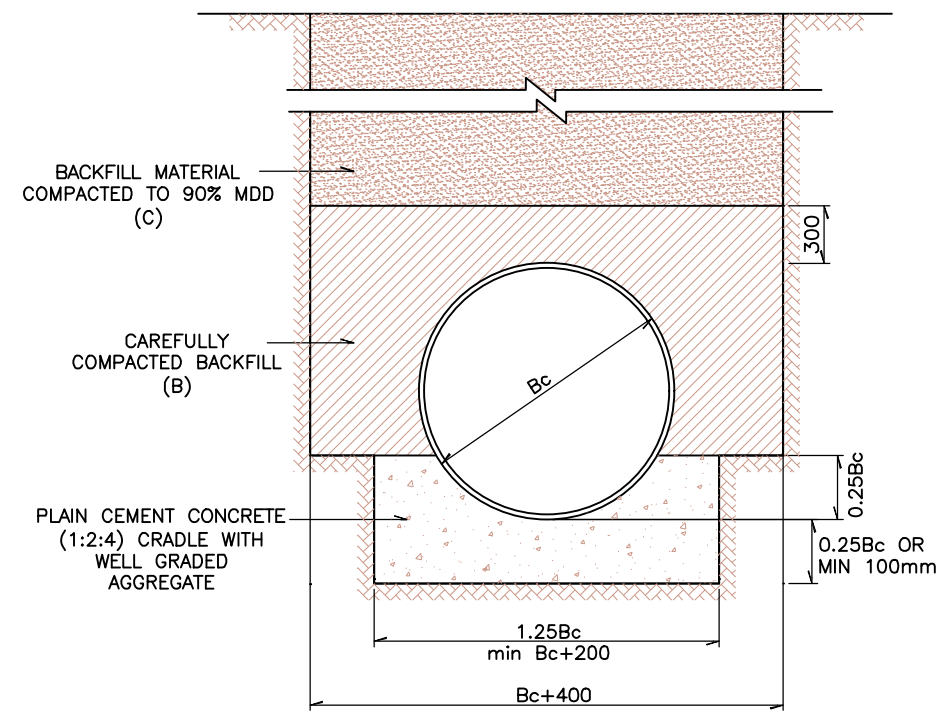
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**GRANULAR BEDDING (GRB)
CLASS-B**



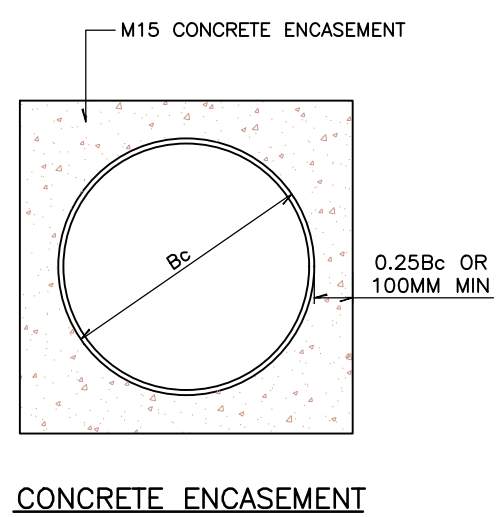
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CLASS-Ab**

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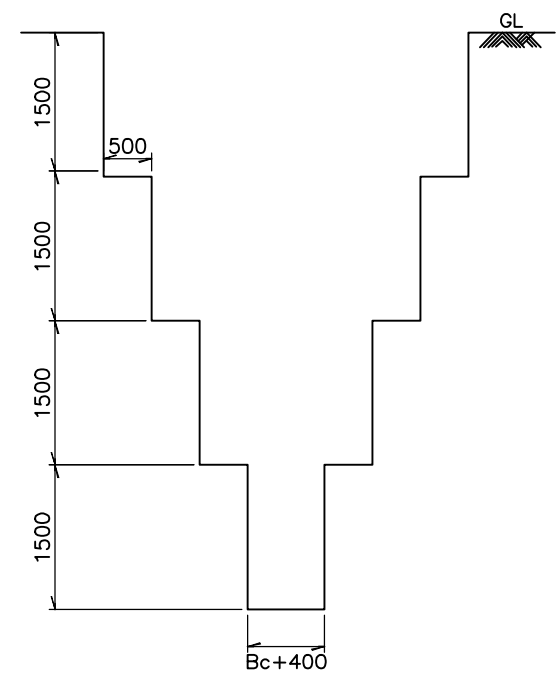
- GL GROUND LEVEL
- C.M. CEMENT MORTAR
- TYP TYPICAL
- MAX MAXIMUM
- DIA DIAMETER
- THK THICK
- MS MILD STEEL
- Bc OUTER DIAMETER OF PIPE
- d INTERNAL DIAMETER OF PIPE

NOTES:

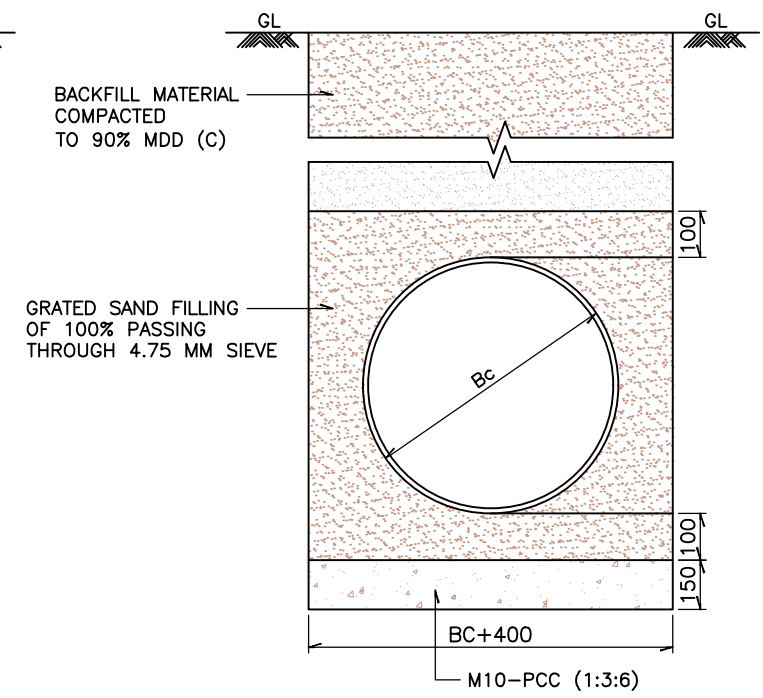
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. INTERNAL DIAMETER OF PIPE = D
3. OUTER DIAMETER OF PIPE = Bc.
4. BACKFILLING WITH APPROVED SELECTED EXCAVATED MATERIAL AND COMPACTION SHALL BE DONE BY HAND OR APPROVED MECHANICAL METHODS IN LAYERS OF 150MM WITH SPECIAL CARE TO AVOID DAMAGE OF THE PIPE
5. BACKFILLING SHALL BE DONE WITH EXCAVATED MATERIAL BY HAND OR APPROVED MECHANICAL METHODS IN LAYERS NOT EXCEEDING 150 MM THICKNESS AFTER COMPACTION, WETTED AND COMPACTION TO A DENSITY OF NOT LESS THAN 90% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT OF THE SURROUNDING MATERIAL.
6. LAYER A. COMPACTED GRANULAR MATERIAL
7. LAYER B. CAREFULLY COMPACTED BACKFILL
8. LAYER C. BACKFILL MATERIAL COMPACTED TO 90% M.D.D



CONCRETE ENCASEMENT



TYPICAL SECTION OF TRENCH



SAND BEDDING (SB) CLASS-S

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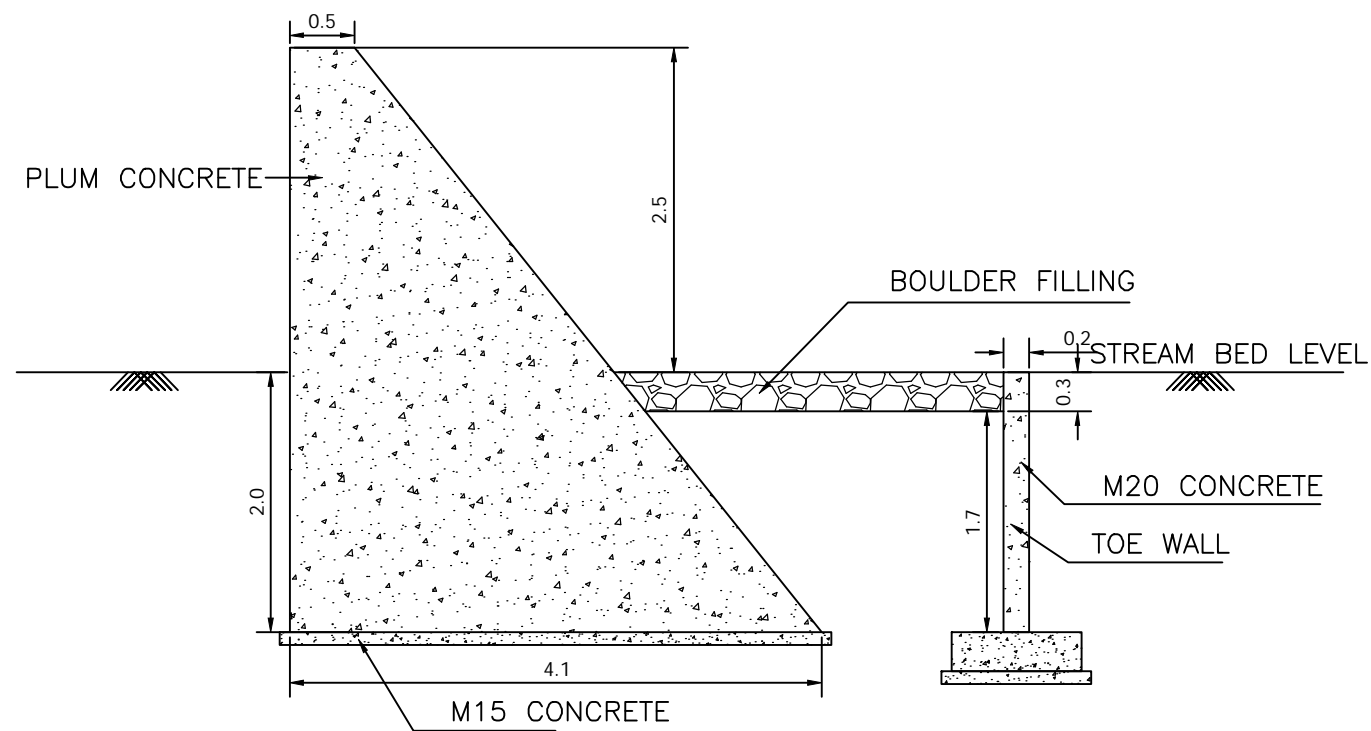
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IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TYPICAL DETAILS OF BEDDING AND TRENCH

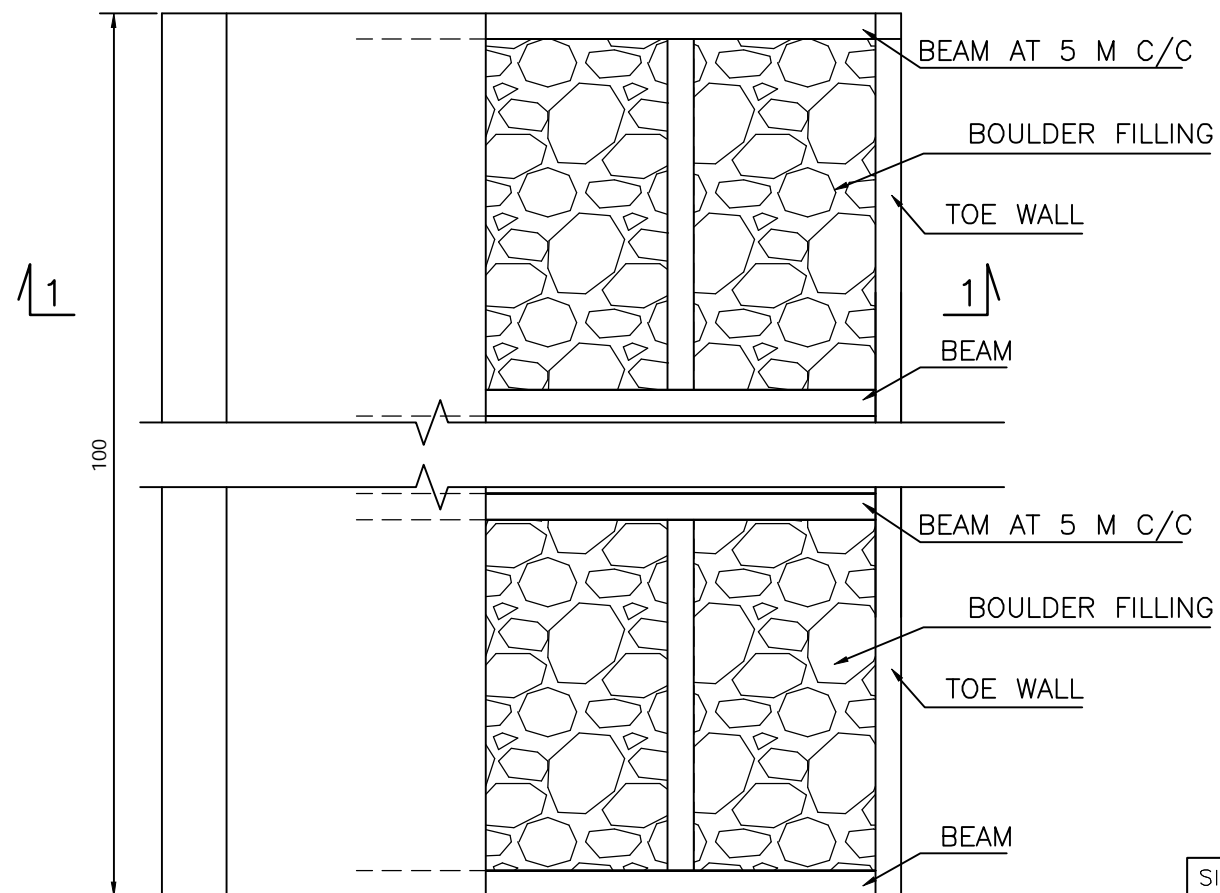
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SECTION 1-1



PLAN

NOTES

1. ALL DIMENSIONS ARE IN METER.
2. THIS DRAWING HAS BEEN PREPARED IN ABSENCE OF DETAILED SURVEY AND GEOTECHNICAL INVESTIGATION WORKS. FOUNDATION IS ASSUMED AT 2M BELOW BED LEVEL



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IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

GENERAL ARRANGEMENT OF CHECK DAM

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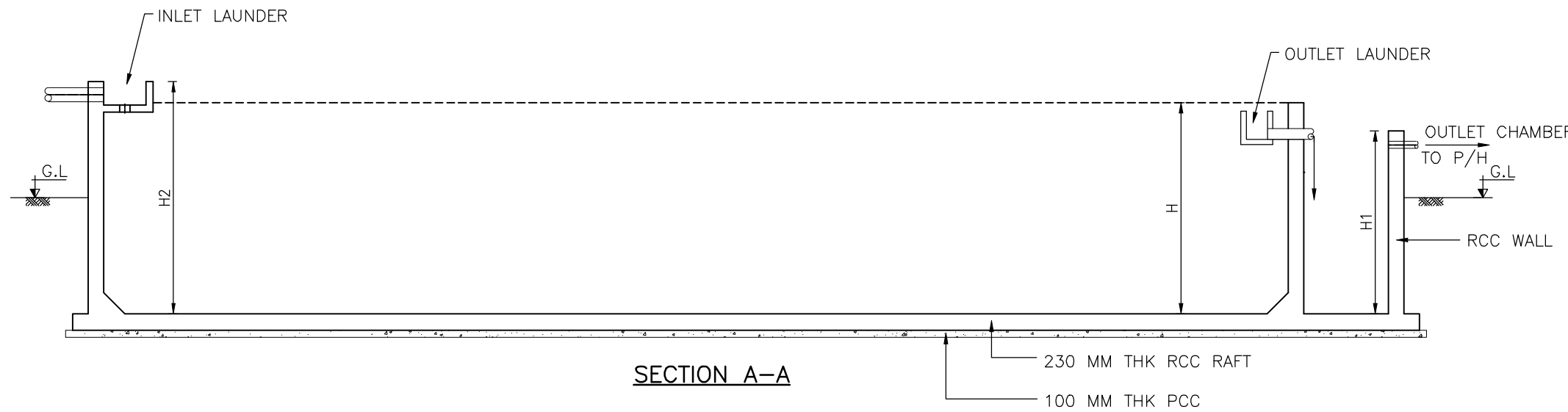
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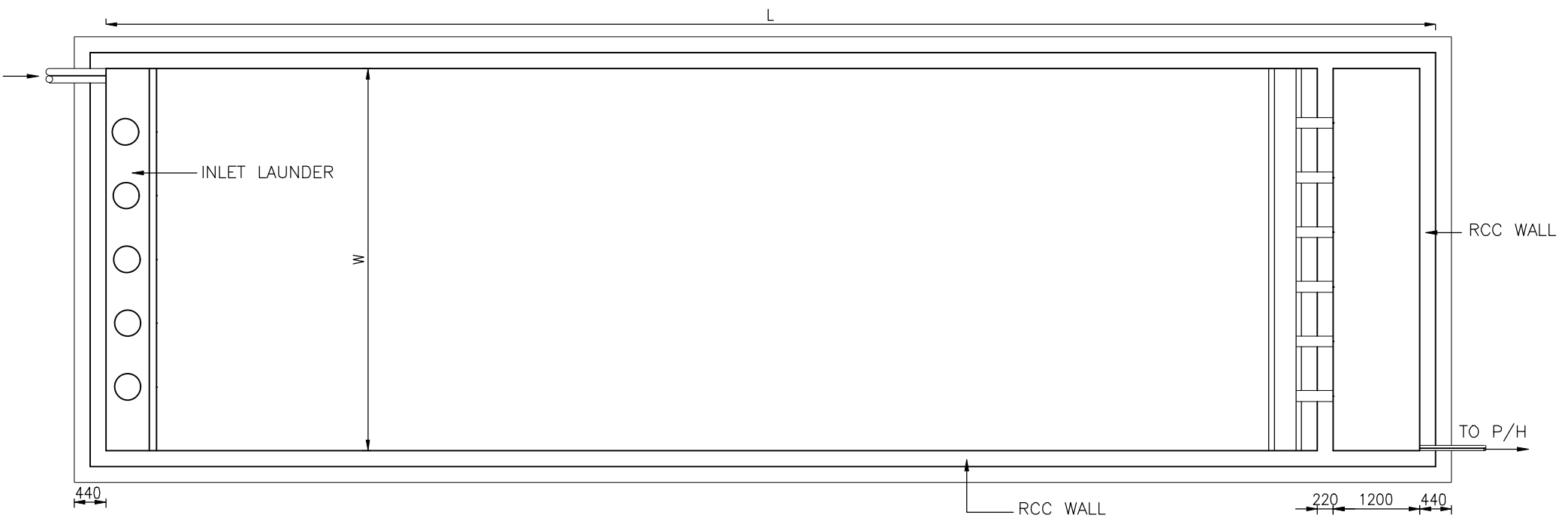
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LEGEND

- P/H --- PUMP HOUSE
- THK --- THICK
- PCC --- PLAIN CEMENT CONCRETE
- RCC --- REINFORCED CEMENT CONCRETE
- G.L. --- GROUND LEVEL
- L --- LENGTH OF TANK
- W --- WIDTH OF TANK
- H --- HEIGHT OF TANK

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED.
2. DO NOT SCALE THE DRAWING. FOLLOW FIGURED DIMENSIONS ONLY.
3. GRADE OF CONCRETE SHALL BE M30 WITH MAXIMUM 20mm DOWNGRADED AGGREGATES CONFORMING TO IS 456.
4. STEEL FOR REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS OF GRADE FE-500 CONFORMING TO IS:1786.
5. SAFE BEARING CAPACITY OF SOIL IS TAKEN AS 10T/Sq.m. AT FOUNDING LEVEL AND SAME IS TO BE CONFIRMED AT SITE BEFORE EXECUTION.
6. PLAIN CEMENT CONCRETE UNDER FOUNDATION SHALL BE OF GRADE M10 CONFORMING TO IS 456.
7. IF ANY LOOSE SOIL IS ENCOUNTERED AT FOUNDING LEVEL DURING CONSTRUCTION, IT SHOULD BE BROUGHT TO THE NOTICE OF THE ENGINEER.
8. IF GROUND WATER TABLE IS ENCOUNTERED DURING CONSTRUCTION, IT SHOULD BE BROUGHT TO THE NOTICE OF THE ENGINEER FOR MAKING APPROPRIATE CHANGES IN THE DESIGN.
9. THE SPACING OF CONSTRUCTION JOINT SHALL NOT BE MORE THAN 1.20M.



PLAN



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TYPICAL DETAILS OF DESILTING TANK

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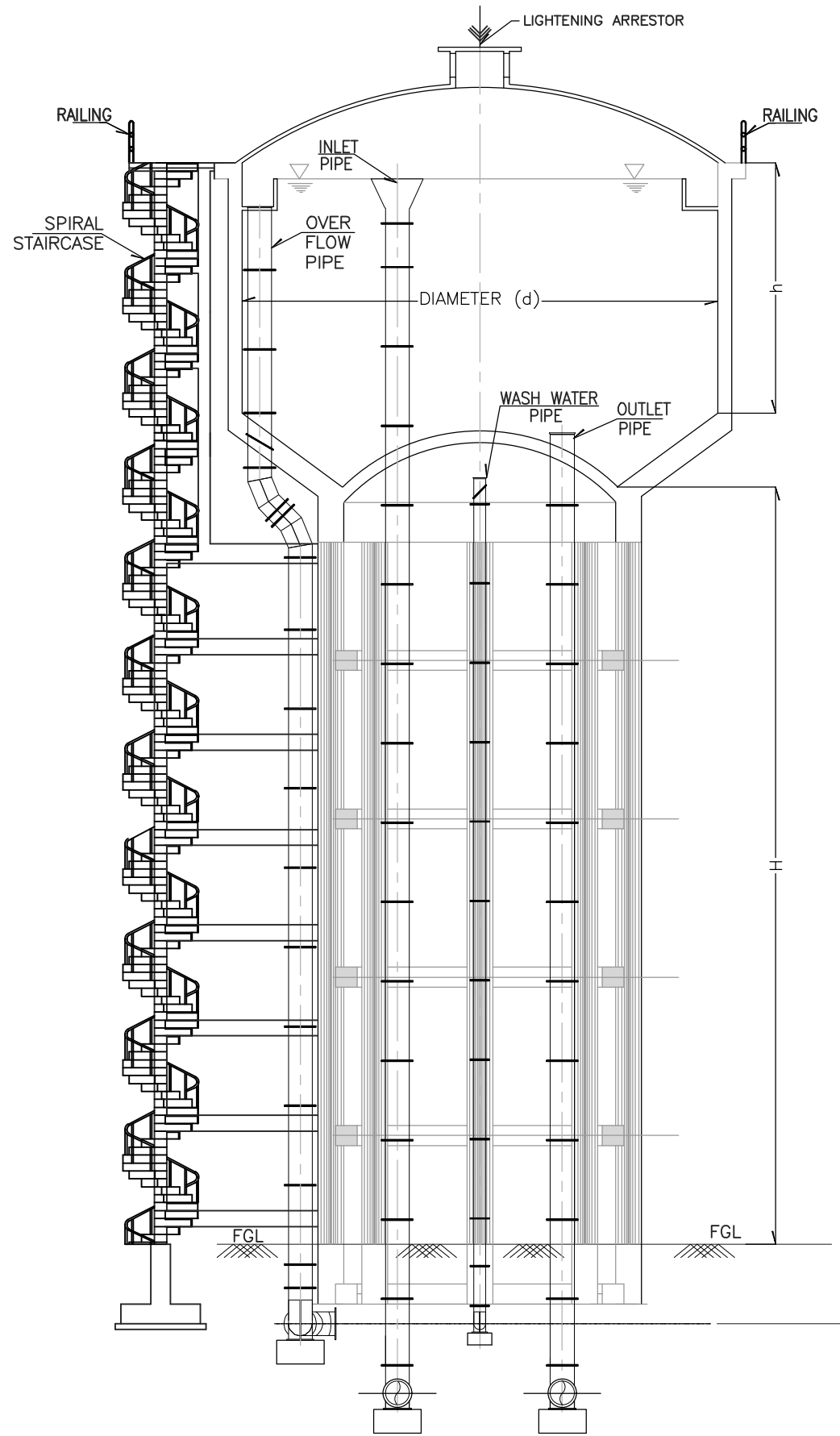
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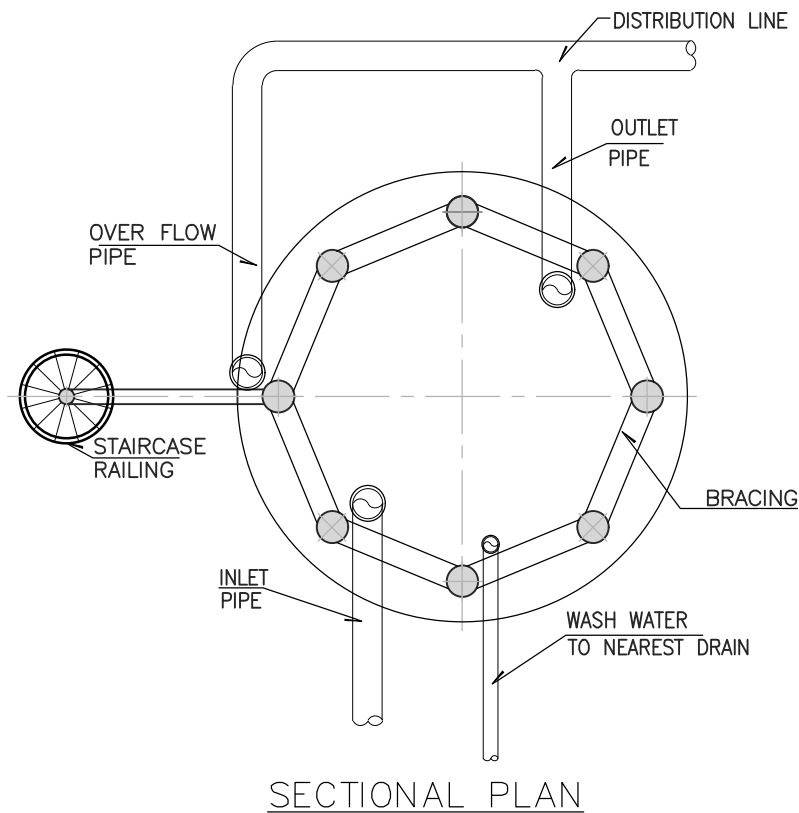
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SECTION ELEVATION



SECTIONAL PLAN

LEGEND:

- D-----DIAMETER
- H-----STAGE HEIGHT
- h-----HEIGHT OF CYLINDRICAL WALL
- FGL-----FINISHED GROUND LEVEL

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES. ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS.

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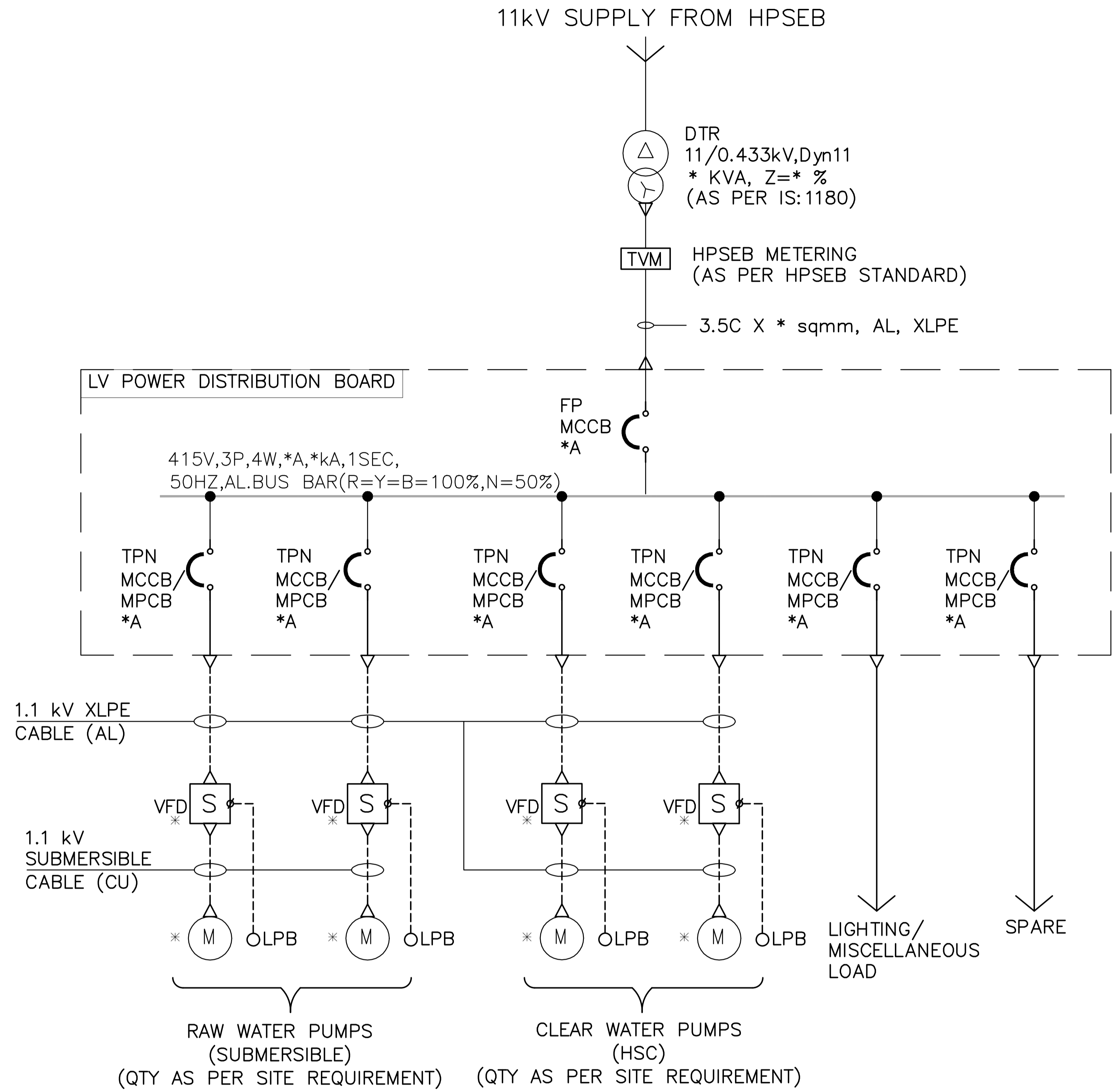
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TYPICAL DETAILS OF ELSR	
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TYPICAL SLD FOR LIS PUMPING STATION WITH 1W+1S UNITS & LT METERING

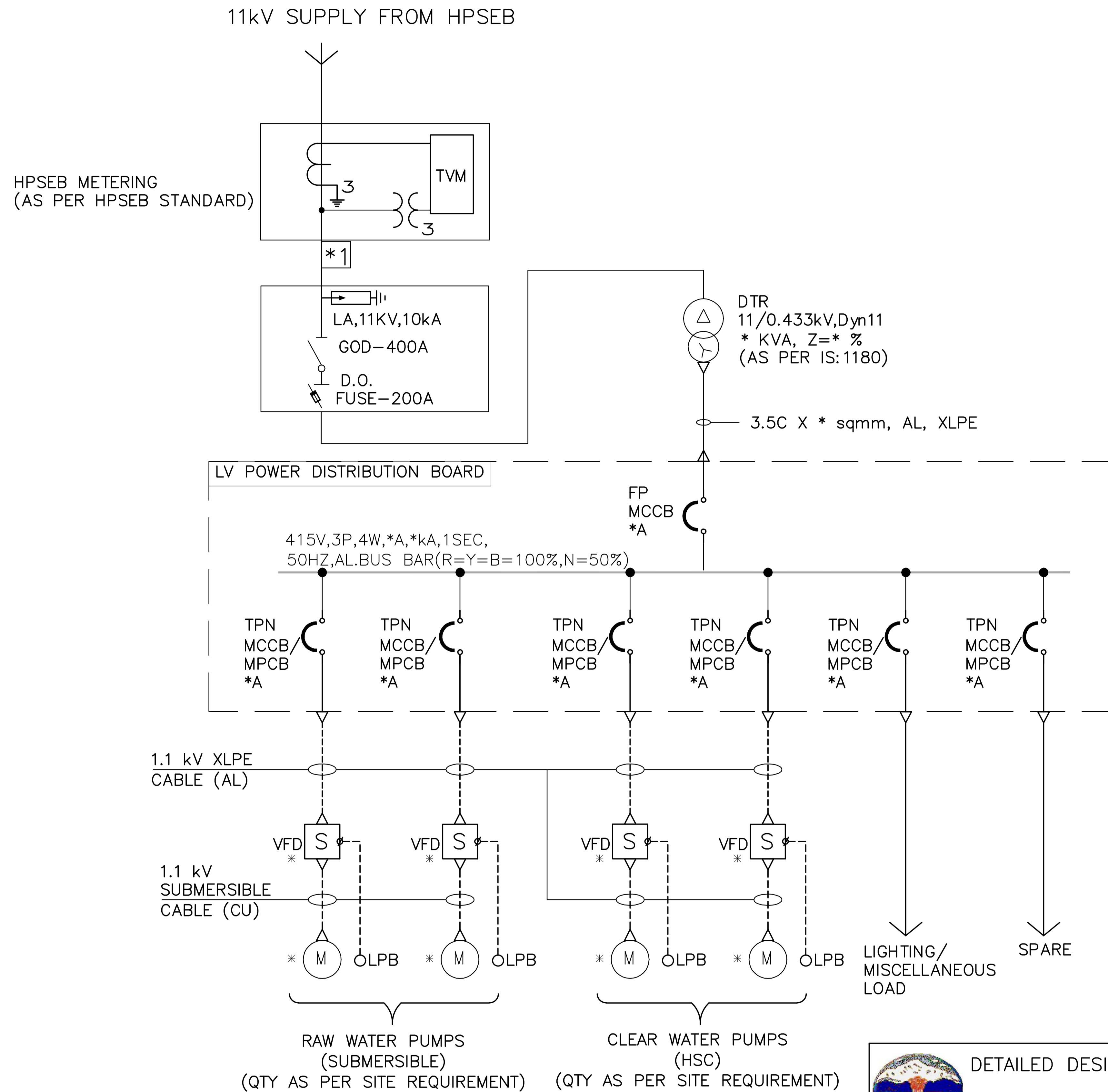
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TYPICAL SLD FOR LIS PUMPING STATION WITH 1W+1S UNITS & HT METERING

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