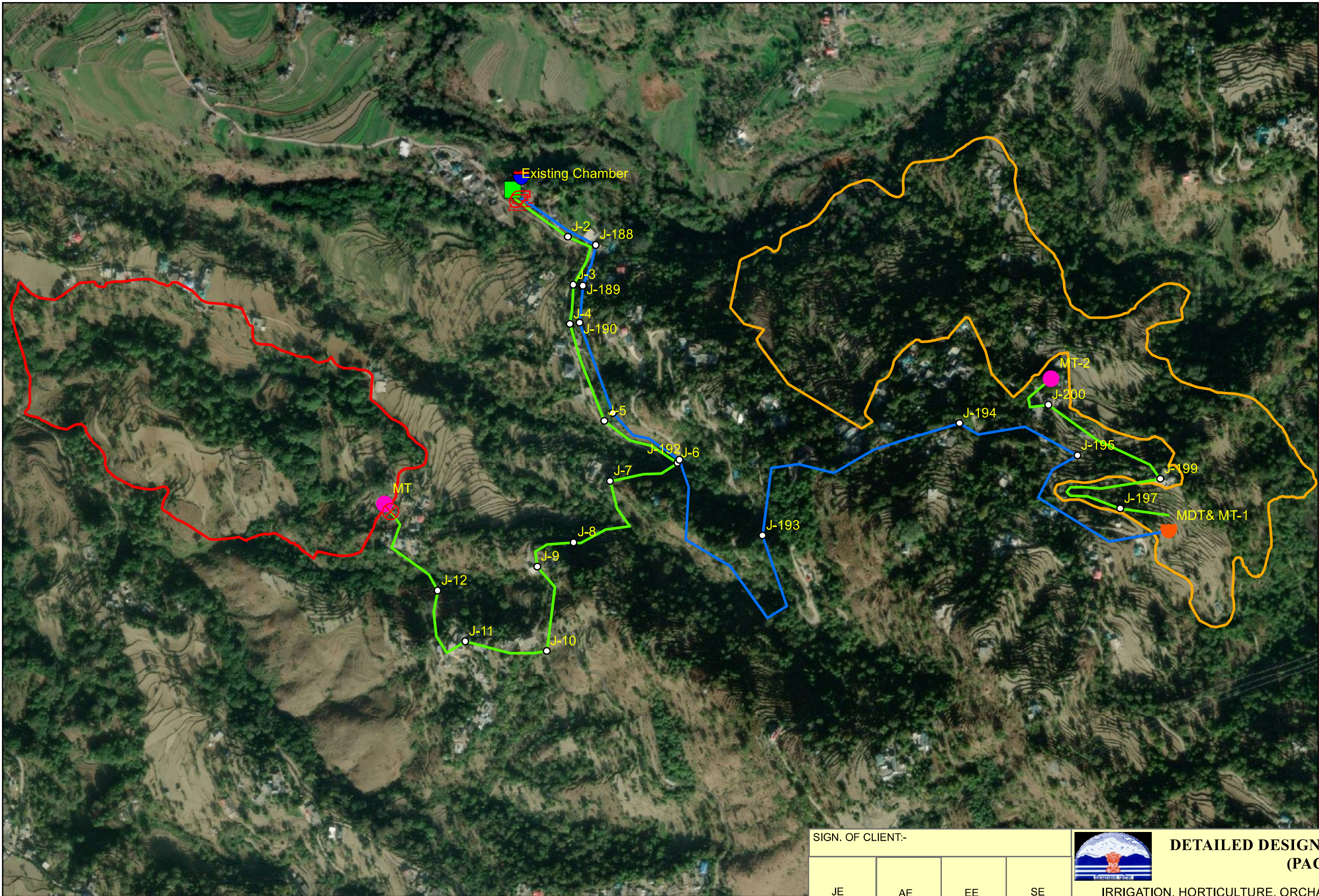




	MDT
	Pump
	PRV
	Chamber
	Junction
	MDT_MT
	MT
	Gravity Main 80mm Dia GI Pipe
	Rising Main 100mm Dia GI Pipe
	BRIKHMANI
	DARVEHAD

P1	SIGN.												03-08-2022
	INITIALS	GKJ	DG	DVB							MK	DK	
	REVISIONS	As per Client Comments											
P0	SIGN.												17-07-2022
	INITIALS	GKJ	MXL	DVB							MK	DK	
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE
					CLEARED								

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE
----	----	----	----

PURPOSE: FOR TENDER ONLY

Proprietary Notice and Version Control This document contains confidential information for use only by the "Client" - for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted here. In consideration of receipt of this document, unless agreed to in contrary in the Contract, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organisation; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of other information (including verbiage and contents submitted separately (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions.

File Name: 12503A-CV-36207-Rev-P1



**DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)**

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TITLE:-

NETWORK DRAWING FOR LIS DARVEHAD
(DARVEHAD CLUSTER, BRIKHMANI CLUSTER)
GOHAR / BALH BLOCK, MANDI DISTRICT.



TATACONSULTING ENGINEERS LIMITED.
MUMBAI

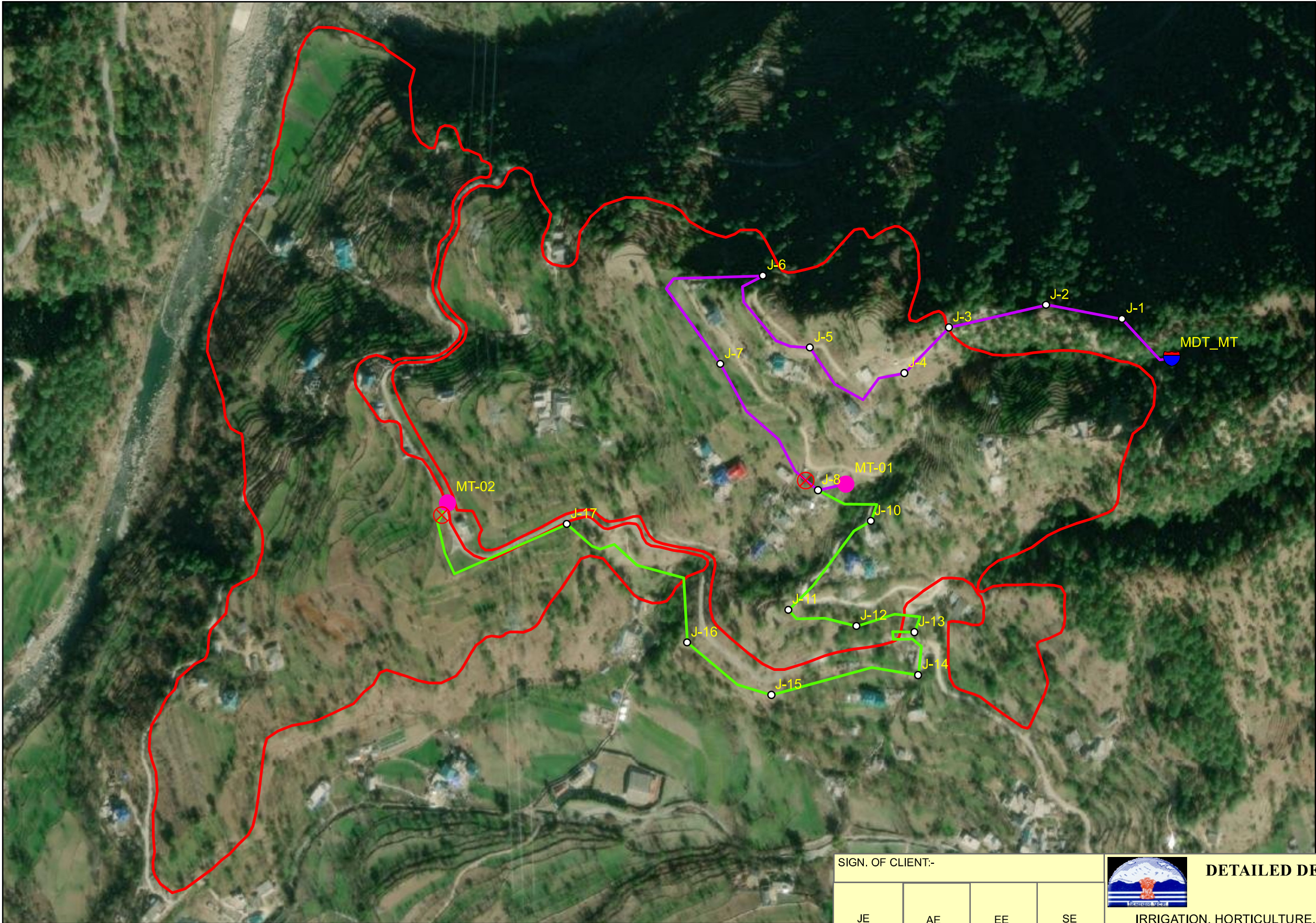
SCALE:- 1:6 000

DWG. No:-

TCE.12503A-CV-3082-WS-36207

ISSUE:-

P1



Legend

- Reservoir
- PRV
- Junction
- MT
- Gravity Main 80mm Dia GI Pipe
- Gravity Main 100mm Dia GI Pipe
- MANJHAGAN_CHUDARA

	SIGN.								
	INITIALS								
	REVISIONS								
P0	SIGN.								
	INITIALS	GKJ	MXL	DVB			MK	DK	17-07-2022
	REVISIONS								
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME	PE/PM APPD. DATE
					CLEARED				

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE
----	----	----	----

PURPOSE: FOR TENDER ONLY

Proprietary Notice and Version Control This document contains confidential information for use only by the "Client"; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted here within consideration of receipt of this document; unless agreed to in contrary in the Contract; the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organisation; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.

File Name: 12503A-CV-36208-Rev-P0



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)

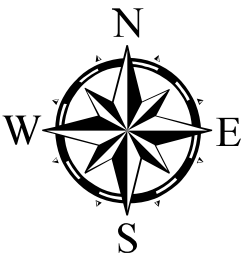
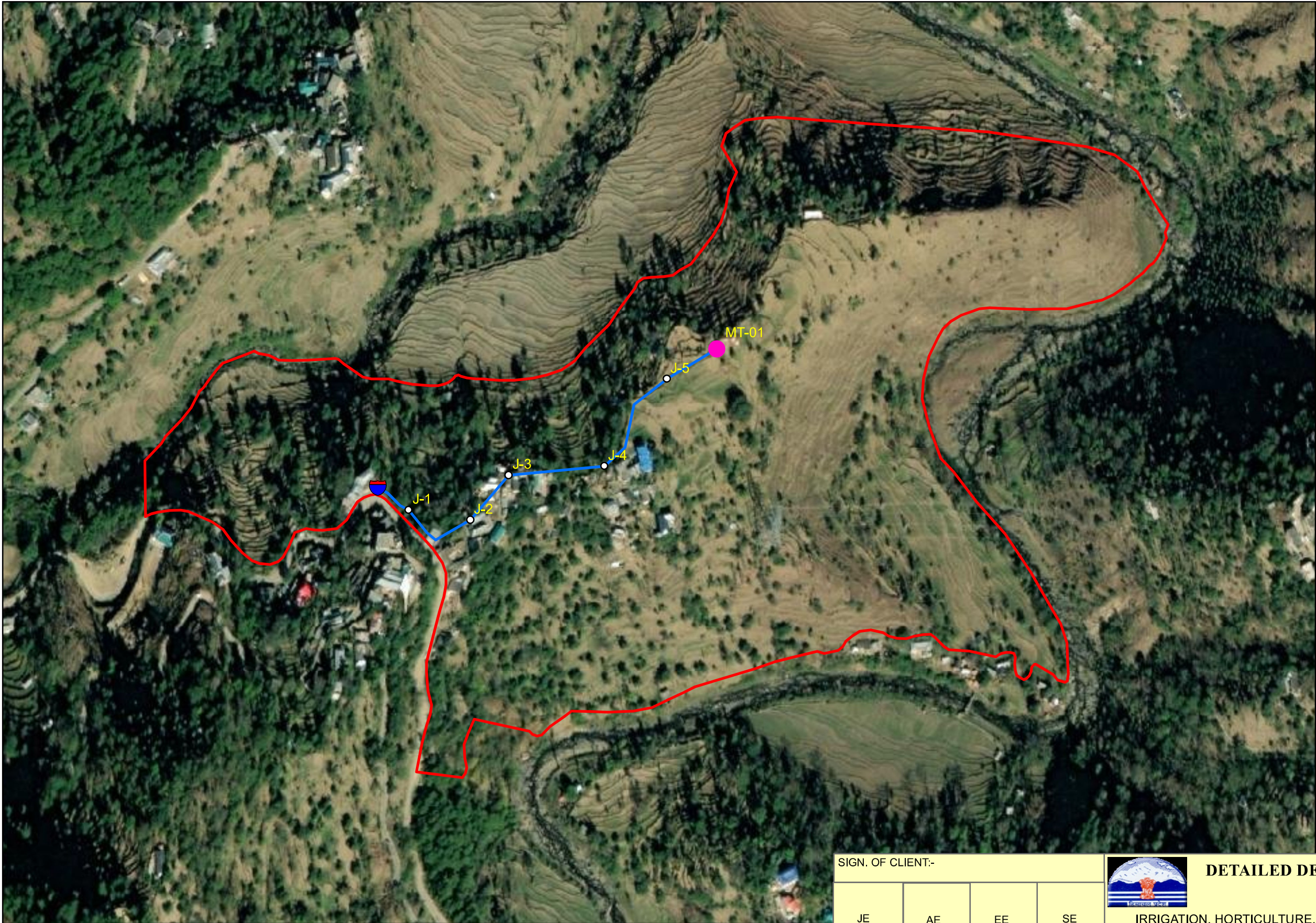
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TITLE:- NETWORK DRAWING FOR LIS MANJHAGAN CHUDARA GOHAR / BALH BLOCK, MANDI DISTRICT.



TATACONSULTING ENGINEERS LIMITED. MUMBAI

SCALE:- 1:4,000	DWG. No:- TCE.12503A-CV-3082-WS-36208	ISSUE:- P0
DL.CEN:- DEL-CV		



Legend

-  Reservoir
-  Junction
-  MT
-  Gravity Main 80mm Dia GI Pipe
-  DHANIYARA Cluster

P1	SIGN.											03-08-2022	
	INITIALS	GKJ	DG	DVB						MK	DK		
	REVISIONS	As per Client Comments											
P0	SIGN.											17-07-2022	
	INITIALS	GKJ	MXL	DVB						MK	DK		
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE
					CLEARED								

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE
----	----	----	----



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

PURPOSE: FOR TENDER ONLY

Proprietary Notice and Version Control This document contains confidential information for use only by the "Client"; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted here with in consideration of receipt of this document; unless agreed to in contrary in the Contract; the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organisation; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.



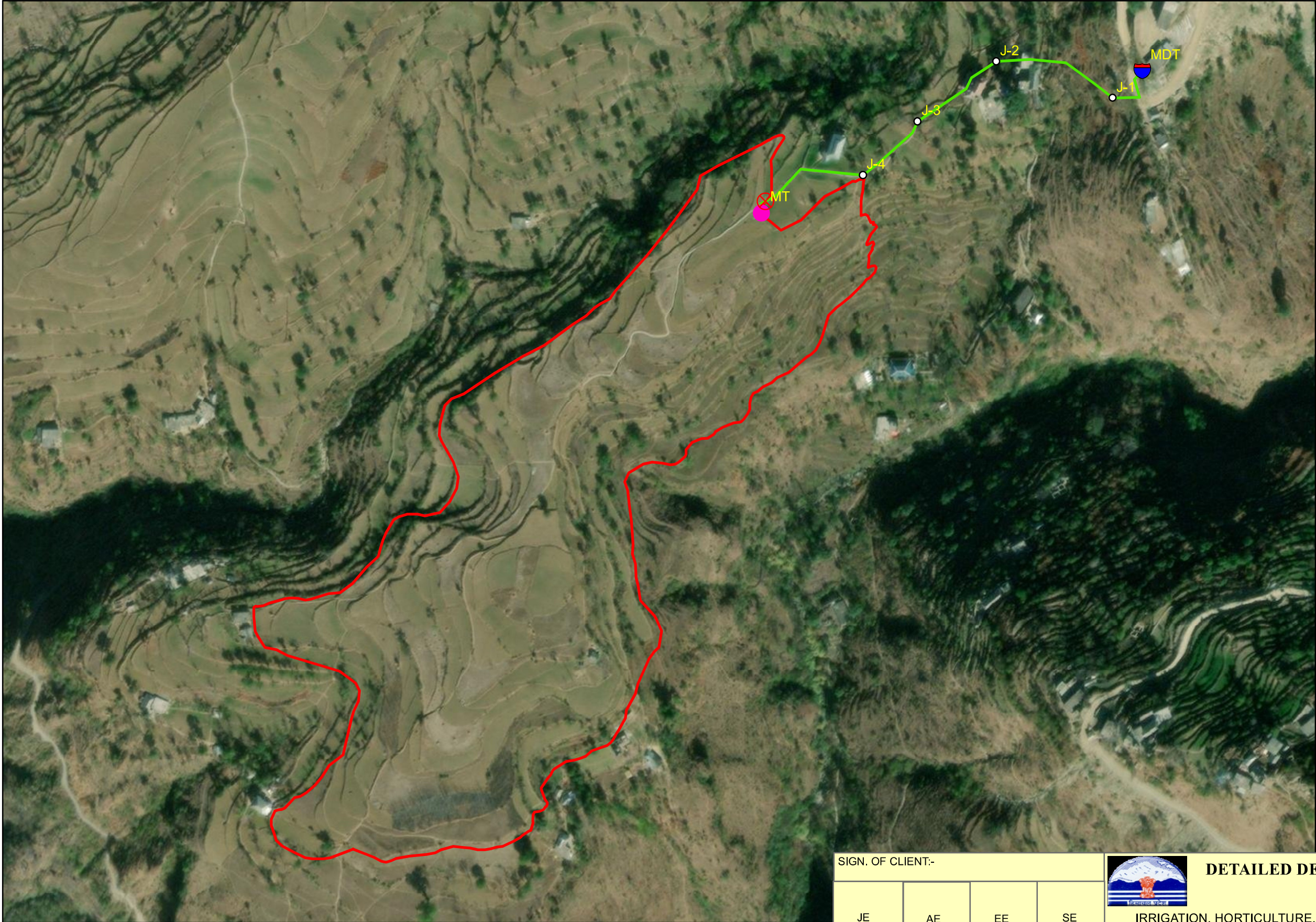
TATACONSULTING ENGINEERS LIMITED. MUMBAI

SCALE:- 1:3,500

DWG. No:- TCE.12503A-CV-3082-WS-36209

DL.CEN:- DEL-CV

ISSUE:- P1



Legend

-  Reservoir
-  PRV
-  Junction
-  MT
-  Gravity Main 80mm Dia GI Pipe
-  BINOL

	SIGN.								
	INITIALS								
	REVISIONS								
P0	SIGN.								
	INITIALS	GKJ	MXL	DVB			MK	DK	17-07-2022
	REVISIONS								
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME	
					CLEARED			PE/PM	APPD.
									DATE

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE
----	----	----	----

PURPOSE: FOR TENDER ONLY

Proprietary Notice and Version Control This document contains confidential information for use only by the "Client"; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted here with in consideration of receipt of this document; unless agreed to in contrary in the Contract; the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organisation; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.

File Name: 12503A-CV-36210-Rev-P0



DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)

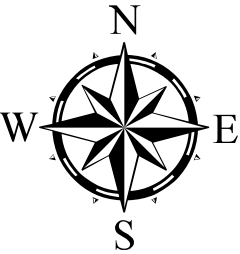
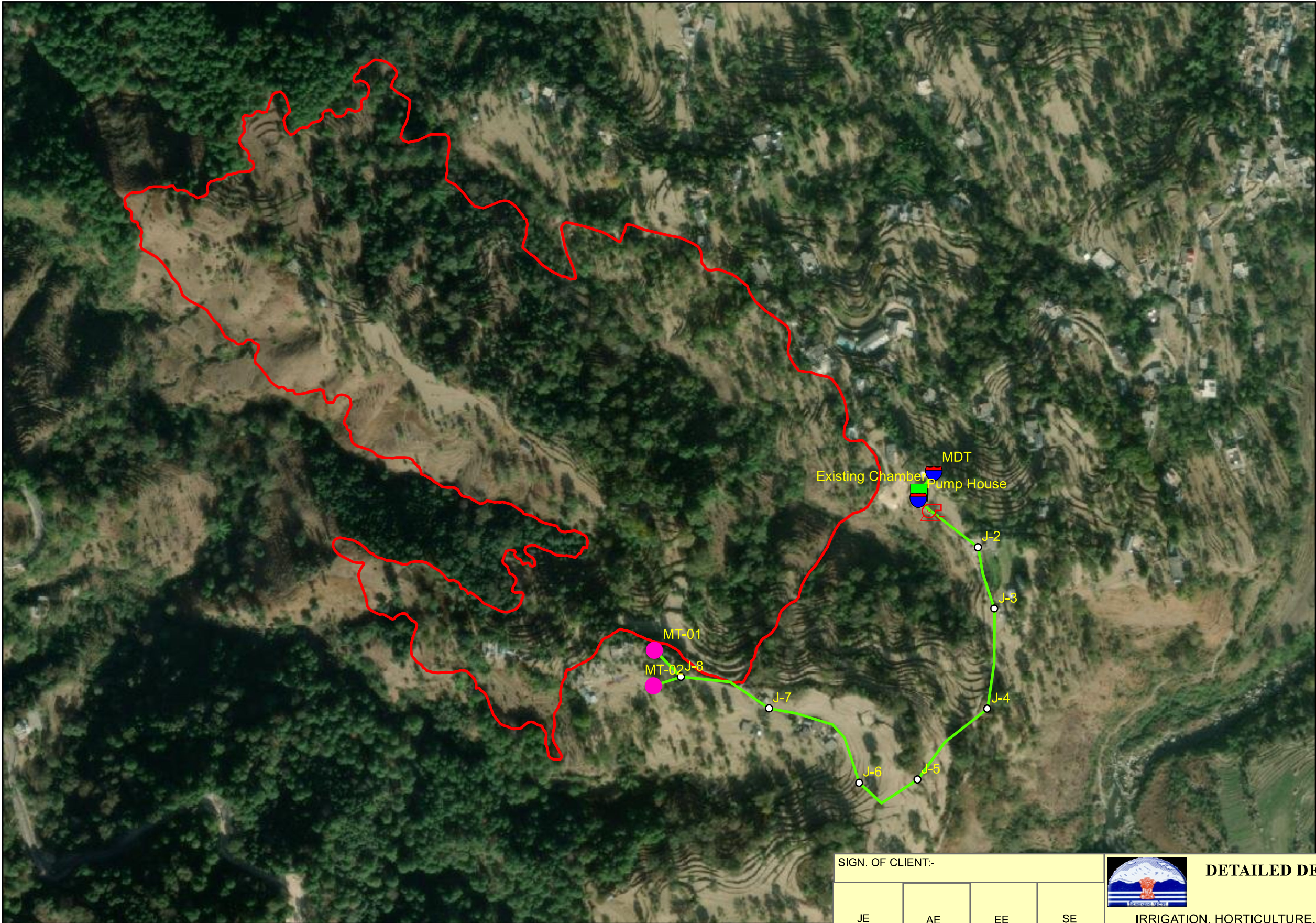
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TITLE:-
NETWORK DRAWING FOR LIS BINOL
SADAR BLOCK, MANDI DISTRICT.



TATACONSULTING ENGINEERS LIMITED.
MUMBAI

SCALE:- 1:3,000	DWG. No:- TCE.12503A-CV-3082-WS-36210	ISSUE:- P0
DL.CEN:- DEL-CV		



Legend

- Reservoir
- Pump
- Junction
- MT
- Tank
- Gravity Main 100mm Dia GI Pipe
- PALHOTA

	SIGN.												
	INITIALS												
	REVISIONS												
P0	SIGN.												17-07-2022
	INITIALS	GKJ	MXL	DVB							MK	DK	
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE
					CLEARED								

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE
----	----	----	----

PURPOSE: FOR TENDER ONLY

Proprietary Notice and Version Control This document contains confidential information for use only by the "Client"; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted here with in consideration of receipt of this document; unless agreed to in contrary in the Contract; the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organisation; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.

File Name: 12503A-CV-36211-Rev-P0

DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TITLE:-
NETWORK DRAWING FOR LIS PALHOTA
SUNDER NAGAR BLOCK, MANDI DISTRICT.

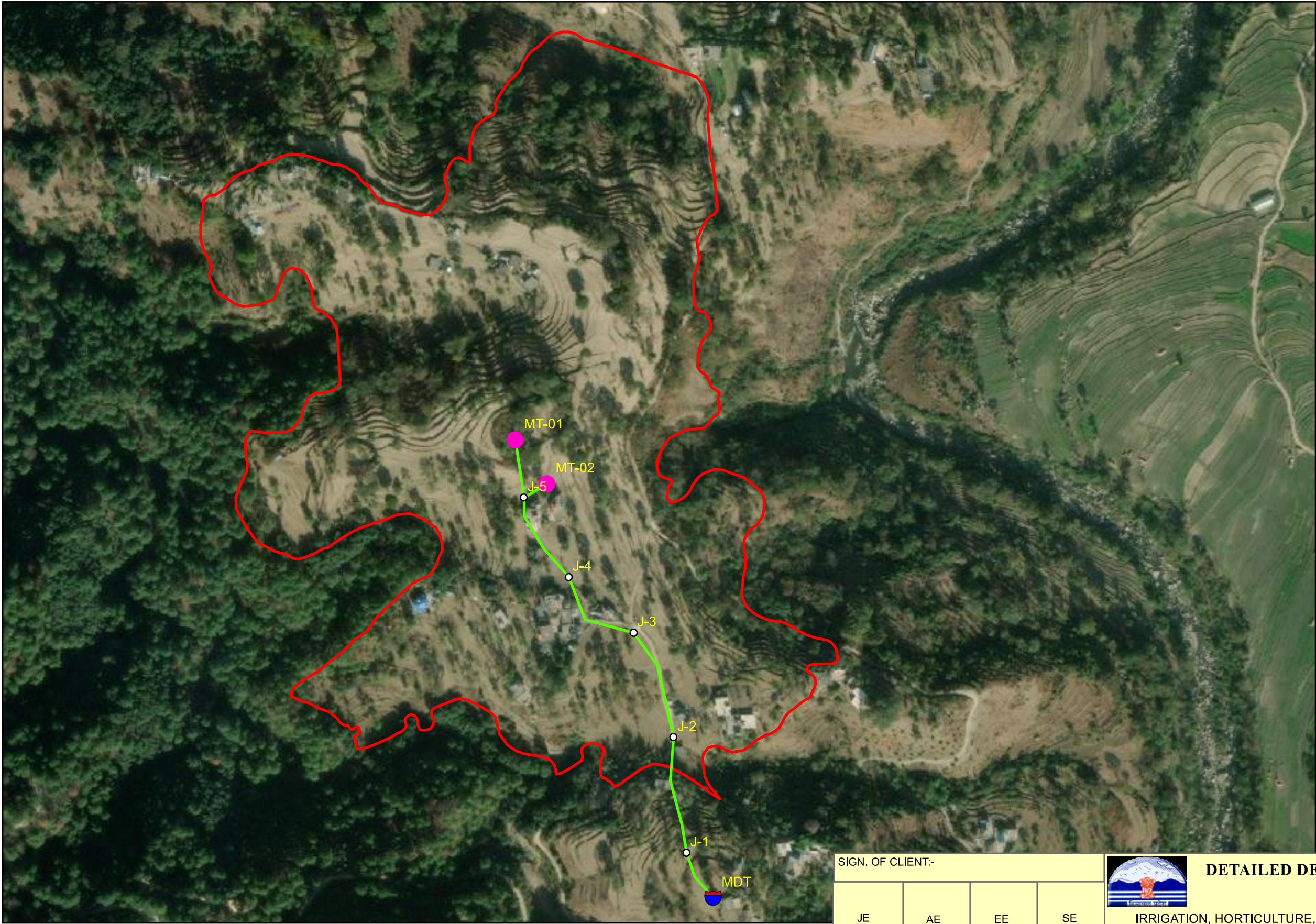
TATACONSULTING ENGINEERS LIMITED.
MUMBAI

SCALE:- 1:4,000

DWG. No:-
TCE.12503A-CV-3082-WS-36211

DL.CEN:- DEL-CV

ISSUE:-
P0



Legend

-  Reservoir
-  Junction
-  MT
-  Gravity Main 100mm Dia GI Pipe
-  KUTHAIN

	SIGN.												
	INITIALS												
	REVISIONS												
P0	SIGN.											17-07-2022	
	INITIALS	GKJ	MXL	DVB						MK	DK		
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD.	DATE
					CLEARED								

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE
----	----	----	----

PURPOSE: FOR TENDER ONLY

Proprietary Notice and Version Control This document contains confidential information for use only by the "Client"; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted here with in consideration of receipt of this document; unless agreed to in contrary in the Contract; the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organisation; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version overrides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.

File Name: 12503A-CV-36212-Rev-P0



DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)

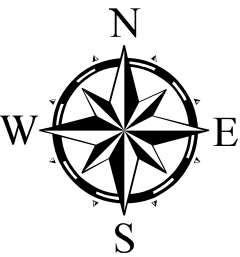
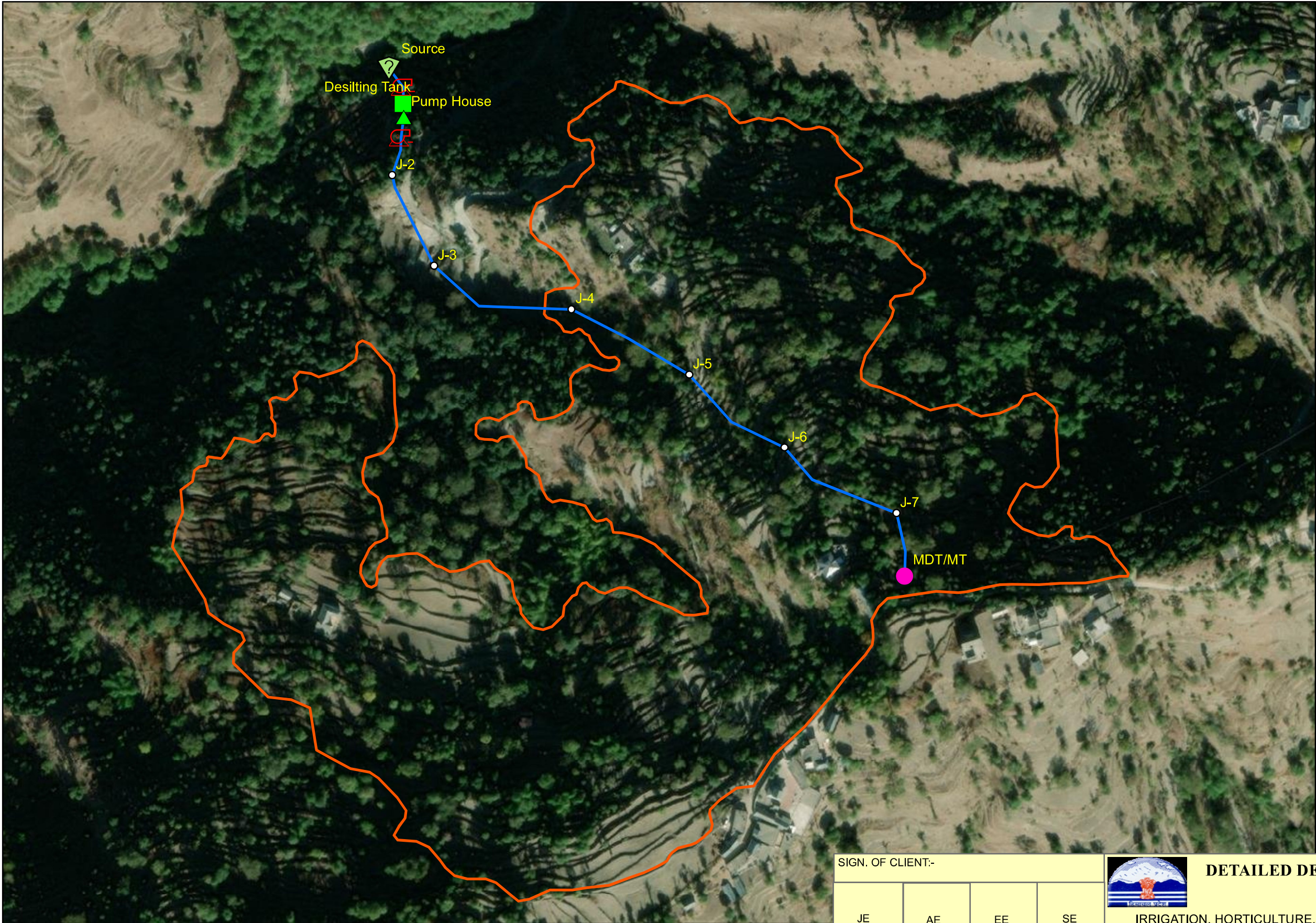
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TITLE:-
NETWORK DRAWING FOR LIS KUTHAIN
SUNDER NAGAR BLOCK, MANDI DISTRICT.



TATACONSULTING ENGINEERS LIMITED.
MUMBAI

SCALE:- 1:3,500	DWG. No:- TCE.12503A-CV-3082-WS-36212	ISSUE:- P0
DL.CEN:- DEL-CV		



Legend

- Source
- Pump House
- Pump
- Junction
- MDT_MT
- Tank
- Rising Main 80mm Dia GI Pipe
- KHAGRON

	SIGN.								
	INITIALS								
	REVISIONS								
P0	SIGN.								
	INITIALS	GKJ	MXL	DVB			MK	DK	17-07-2022
	REVISIONS								
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME	
					CLEARED			PE/PM	APPD.
									DATE

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE
----	----	----	----

PURPOSE: FOR TENDER ONLY

Proprietary Notice and Version Control This document contains confidential information for use only by the " Client " ; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted here within consideration of receipt of this document; unless agreed to in contrary in the Contract; the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organisation; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.

File Name: 12503A-CV-36213-Rev-P0



DETAILED DESIGN CONSULTANCY, HP-SHIVA
(PACKAGE CS09)

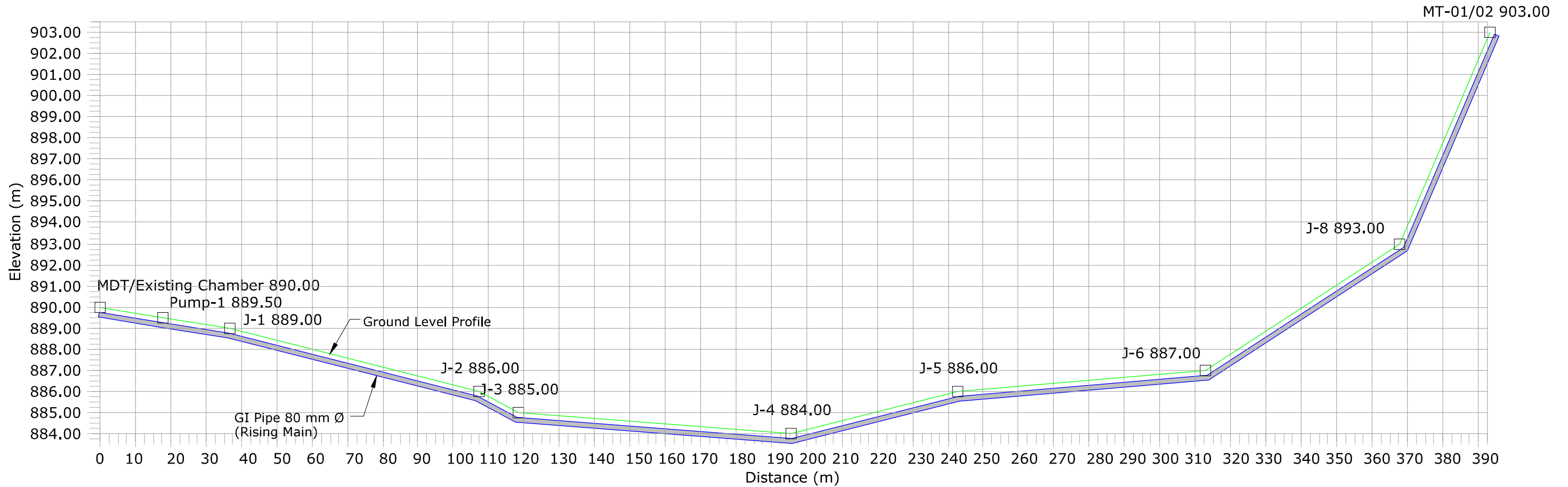
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TITLE:-
NETWORK DRAWING FOR LIS KHAGRON
SUNDER NAGAR BLOCK, MANDI DISTRICT.



TATACONSULTING ENGINEERS LIMITED.
MUMBAI

SCALE:- 1:2,500	DWG. No:-	ISSUE:-
DL.CEN:- DEL-CV	TCE.12503A-CV-3082-WS-36213	P0



Legend :-

- Ground Level
- Rising Main
- Junction
- Air Valve
- Scour Valve

Note:-

- Air Valves are Considered to be provided at 500 m c/c and at High Points.
- Scour Valves are Provided at 2000 m c/c Distance.
- The Arrangement Shown is Tentative. Based on Actual Site Condition size, Quantity and Location of Proposed Valves May Vary.

	SIGN.												
	INITIALS												
	REVISIONS												
PO	SIGN.												
	INITIALS	BSN	ML	DVB							MK	DK	10-07-2022
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD	DATE (dd-mm-yyyy)

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE

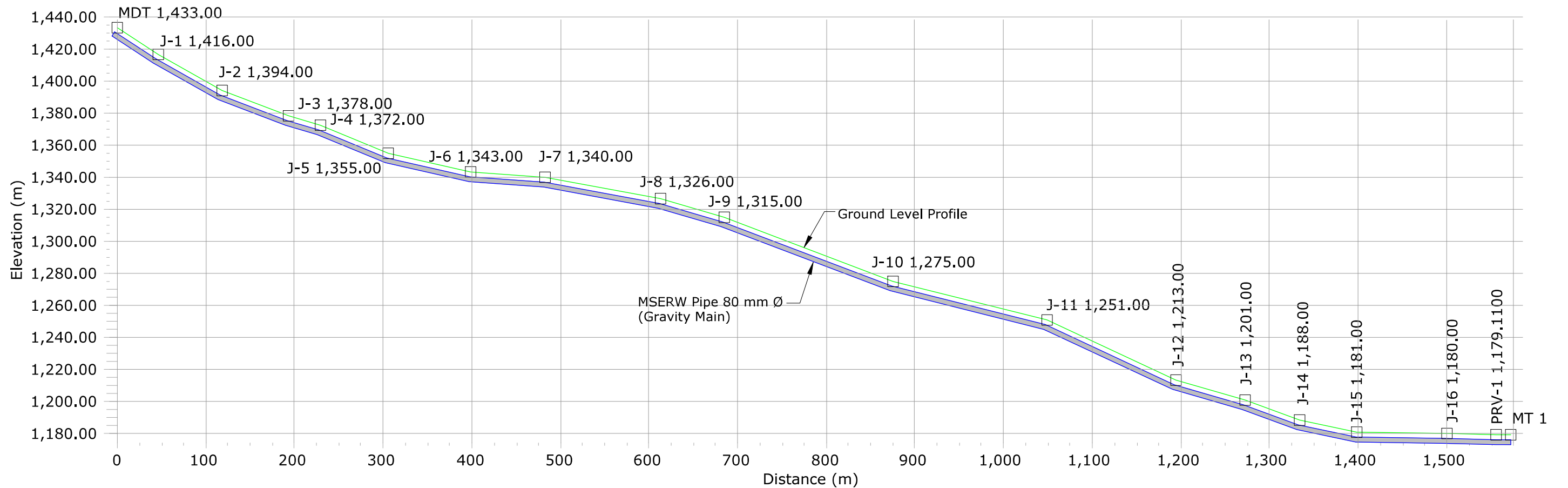
PURPOSE : FOR TENDER ONLY

DO NOT SCALE

Proprietary Notice and Version Control This document contains confidential information for use only by the Client ; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted hereafter. In consideration of receipt of this document, unless agreed to in contrary in the Contract, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and commitments submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions/s.

FILE NAME: 12503A-CV-36351-Rev-P0

	DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE-CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT	
PROPOSED L-SECTION - LIS BARAGAON-I & II DRANG BLOCK, MANDI DISTRICT	
	TATA CONSULTING ENGINEERS LIMITED MUMBAI
SCALE : NTS	DWG NO. TCE.12503A-CV-3082-WS-36351
DC & Disc: DEL-CV	ISSUE P0



Legend :-

- Ground Level
- Rising Main
- Junction
- Air Valve
- Scour Valve

Note:-

- Air Valves are Considered to be provided at 500 m c/c and at High Points.
- Scour Valves are Provided at 2000 m c/c Distance.
- The Arrangement Shown is Tentative. Based on Actual Site Condition size, Quantity and Location of Proposed Valves May Vary.

	SIGN.												
	INITIALS												
	REVISIONS												
PO	SIGN.												
	INITIALS	BSN	ML	DVB							MK	DK	10-07-2022
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD	DATE (dd-mm-yyyy)

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET 'DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-			
JE	AE	EE	SE
PURPOSE : FOR TENDER ONLY			
DO NOT SCALE			
Proprietary Notice and Version Control This document contains confidential information for use only by the Client for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted hereafter. In consideration of receipt of this document, unless agreed to in contrary in the Contract, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and conditions submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions.			
FILE NAME: 12503A-CV-36354-Rev-P0			



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE-CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

PROPOSED L-SECTION – LIS BAGGA CHALOG

GOHAR BLOCK, MANDI DISTRICT



TATA CONSULTING ENGINEERS LIMITED

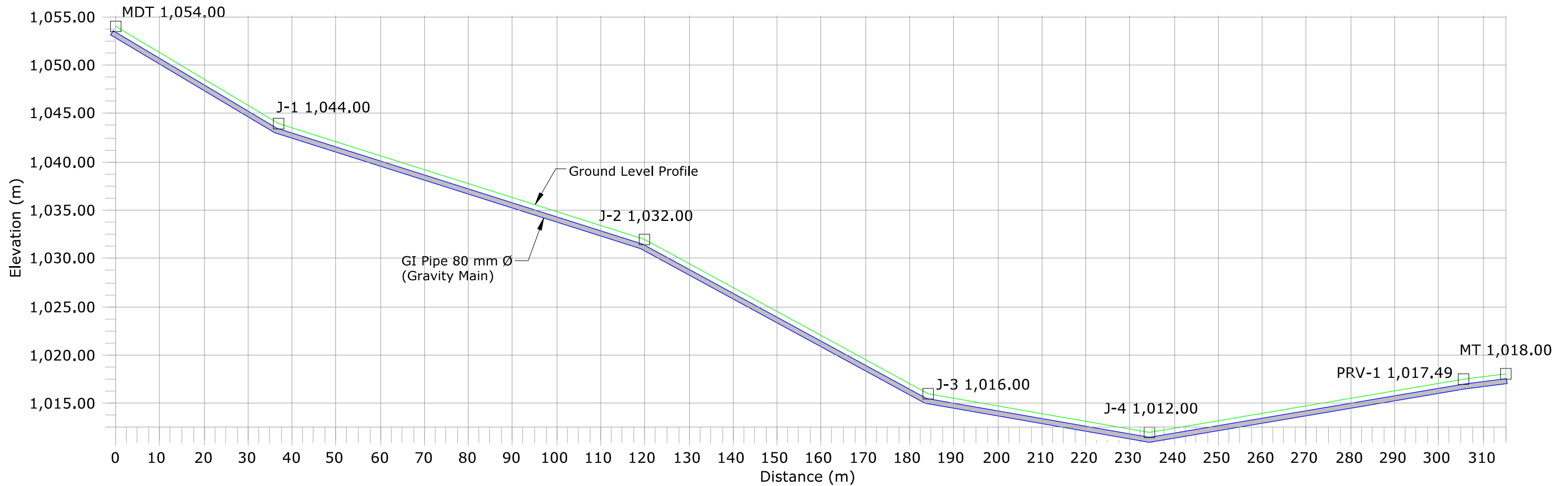
MUMBAI

SCALE : NTS

DC & Disc: DEL-CV

DWG NO. TCE.12503A-CV-3082-WS-36354

ISSUE P0



- Legend :-
- 1. Ground Level
 - 2. Rising Main
 - 3. Junction
 - 4. Air Valve
 - 5. Scour Valve

- Note:-
- 1. Air Valves are Considered to be provided at 500 m c/c and at High Points.
 - 2. Scour Valves are Provided at 2000 m c/c Distance.
 - 3. The Arrangement Shown is Tentative. Based on Actual Site Condition size, Quantity and Location of Proposed Valves May Vary.

	SIGN.											
	INITIALS											
	REVISIONS											
PO	SIGN.											
	INITIALS	BSN	ML	DVB						MK	DK	10-07-2022
	REVISIONS											
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME		PE/PM	APPD	DATE (dd-mm-yyyy)
					CLEARED							

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-			
JE	AE	EE	SE
PURPOSE : FOR TENDER ONLY			
DO NOT SCALE			
Proprietary Notice and Version Control This document contains confidential information for use only by the Client ; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted hereafter. In consideration of receipt of this document; unless agreed to in contrary in the Contract; the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and commitments submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions/s.			
FILE NAME: 12503A-CV-36360-Rev-P0			

DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE-CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

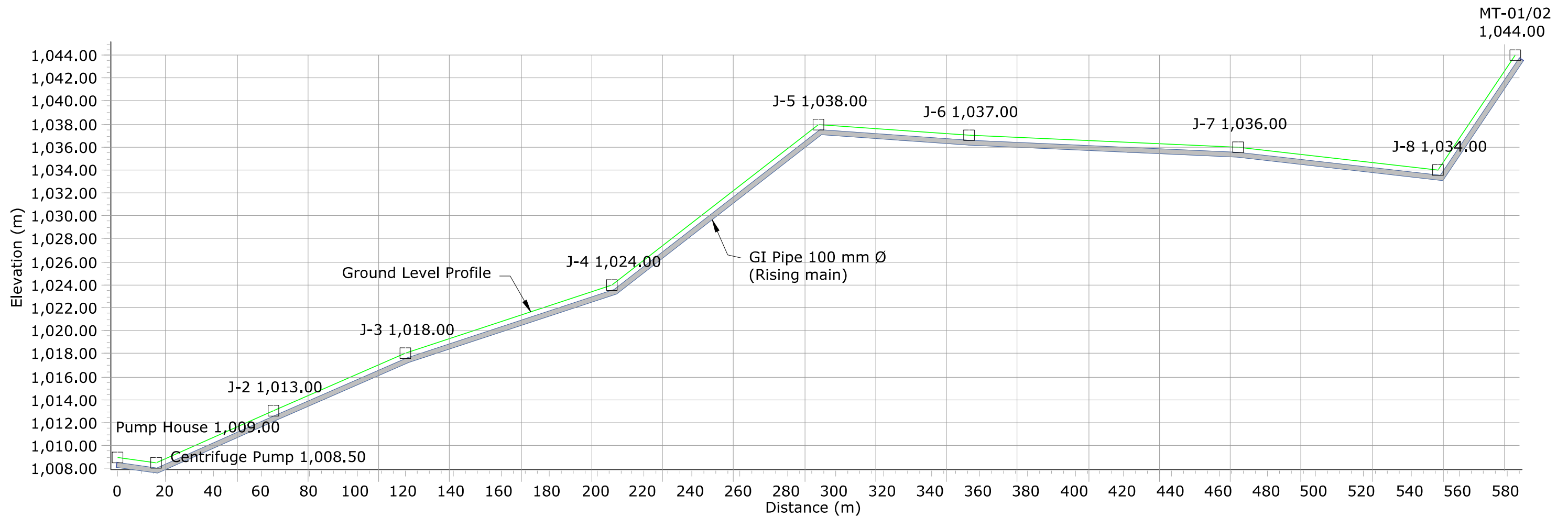
PROPOSED L-SECTION – LIS BINOL

SADAR BLOCK, MANDI DISTRICT

TATA CONSULTING ENGINEERS LIMITED

MUMBAI

SCALE : NTS	DWG NO. TCE.12503A-CV-3082-WS-36360	ISSUE P0
DC & Disc: DEL-CV		



Legend :-

- Ground Level
- Rising Main
- Junction
- Air Valve
- Scour Valve

Note:-

- Air Valves are Considered to be provided at 500 m c/c and at High Points.
- Scour Valves are Provided at 2000 m c/c Distance.
- The Arrangement Shown is Tentative. Based on Actual Site Condition size, Quantity and Location of Proposed Valves May Vary.

	SIGN.												
	INITIALS												
	REVISIONS												
P0	SIGN.												
	INITIALS	BSN	ML	DVB							MK	DK	10-07-2022
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD	DATE (dd-mm-yyyy)

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLD' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLD'.

SIGN. OF CLIENT:-

JE	AE	EE	SE

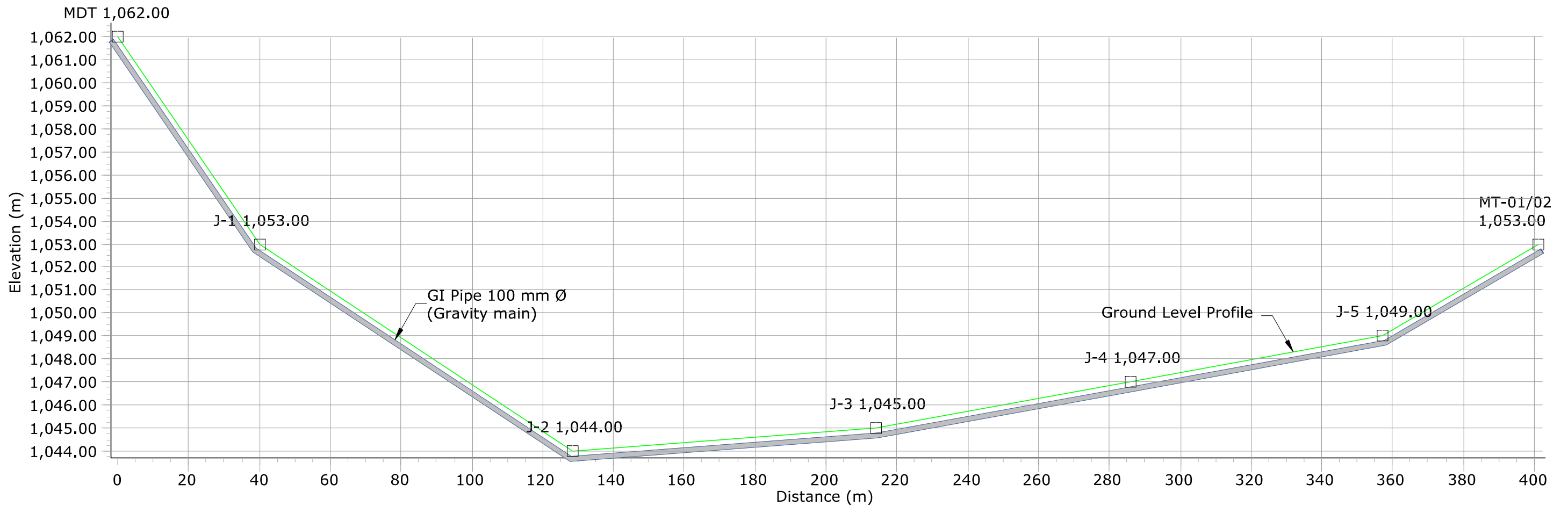
PURPOSE : FOR TENDER ONLY

DO NOT SCALE

Proprietary Notice and Version Control This document contains confidential information for use only by the Client ; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted hereafter. In consideration of receipt of this document, unless agreed to in contrary in the Contract, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization; except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and controls submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.

FILE NAME: 12503A-CV-36360-Rev-P0

	DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE-CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT	
PROPOSED L-SECTION - LIS PALHOTA SUNDERNAGAR BLOCK, MANDI DISTRICT	
	TATA CONSULTING ENGINEERS LIMITED MUMBAI
SCALE : NTS	DWG NO. TCE.12503A-CV-3082-WS-36361
DC & Disc: DEL-CV	ISSUE P0



Legend :-

1. Ground Level
2. Rising Main
3. Junction
4. Air Valve
5. Scour Valve

Note:-

1. Air Valves are Considered to be provided at 500 m c/c and at High Points.
2. Scour Valves are Provided at 2000 m c/c Distance.
3. The Arrangement Shown is Tentative. Based on Actual Site Condition size, Quantity and Location of Proposed Valves May Vary.

	SIGN.												
	INITIALS												
	REVISIONS												
PO	SIGN.												
	INITIALS	BSN	ML	DVB							MK	DK	10-07-2022
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD	DATE (dd-mm-yyyy)

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-

JE	AE	EE	SE

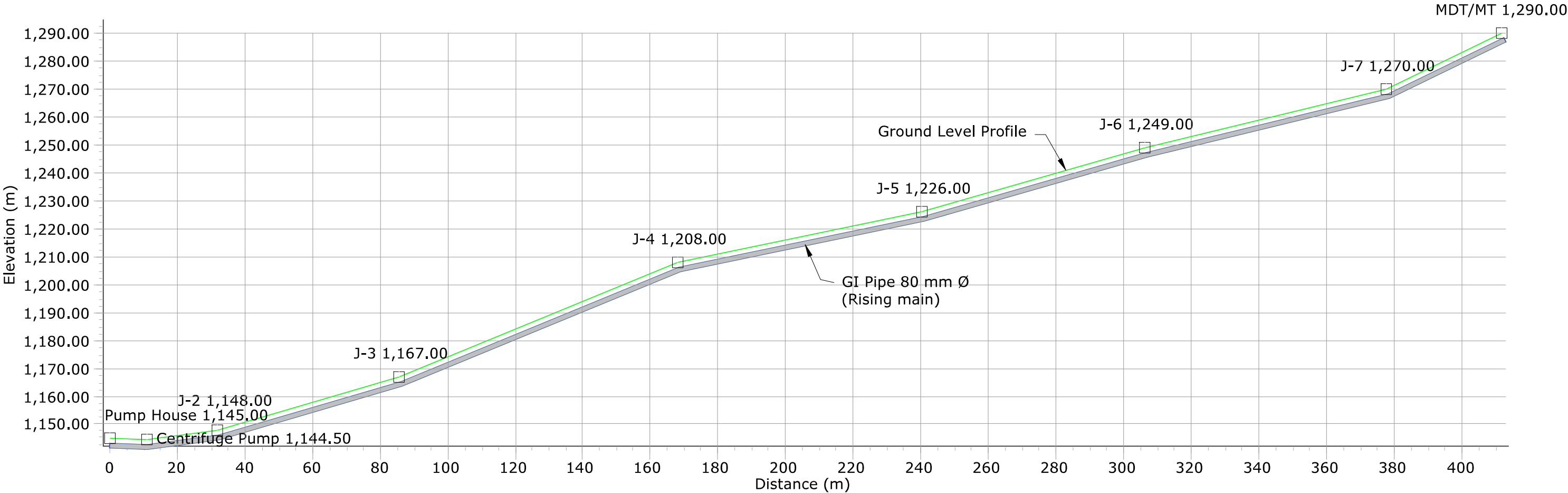
PURPOSE : FOR TENDER ONLY

DO NOT SCALE

Proprietary Notice and Version Control This document contains confidential information for use only by the Client ; for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted hereafter. In consideration of receipt of this document, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization, except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and controls submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions.

FILE NAME: 12503A-CV-36360-Rev-P0

	DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE-CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT	
PROPOSED L-SECTION - LIS KUTHAIN SUNDERNAGAR BLOCK, MANDI DISTRICT	
	TATA CONSULTING ENGINEERS LIMITED MUMBAI
SCALE : NTS	DWG NO. TCE.12503A-CV-3082-WS-36362
DC & Disc: DEL-CV	ISSUE P0



- Legend :-
- 1. Ground Level
 - 2. Rising Main
 - 3. Junction
 - 4. Air Valve
 - 5. Scour Valve

- Note:-
- 1. Air Valves are Considered to be provided at 500 m c/c and at High Points.
 - 2. Scour Valves are Provided at 2000 m c/c Distance.
 - 3. The Arrangement Shown is Tentative. Based on Actual Site Condition size, Quantity and Location of Proposed Valves May Vary.

	SIGN.												
	INITIALS												
	REVISIONS												
P0	SIGN.												
	INITIALS	BSN	ML	DVB							MK	DK	10-07-2022
	REVISIONS												
ISSUE		DRN	DSN	CHD	CV	EL	IC	ME			PE/PM	APPD	DATE (dd-mm-yyyy)

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLD' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLD'S'.

SIGN. OF CLIENT:-			
JE	AE	EE	SE
PURPOSE : FOR TENDER ONLY			
DO NOT SCALE			
Proprietary Notice and Version Control This document contains confidential information for use only by the Client for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted hereafter. In consideration of receipt of this document, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization, except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and controls submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions.			
FILE NAME: 12503A-CV-36360-Rev-P0			



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE-CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

PROPOSED L-SECTION – LIS KHAGRON

SUNDERNAGAR BLOCK, MANDI DISTRICT



TATA CONSULTING ENGINEERS LIMITED

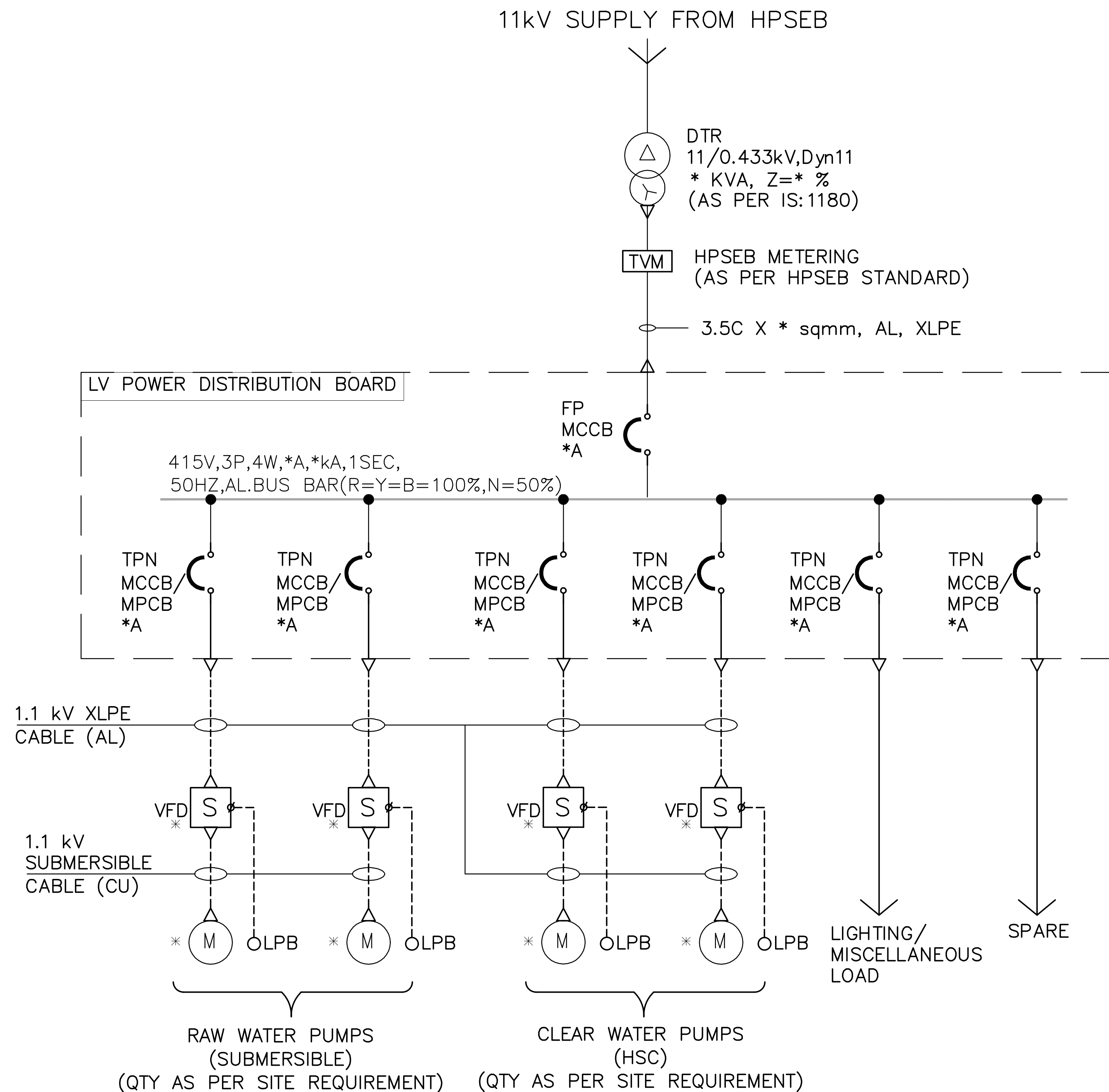
MUMBAI

SCALE : NTS

DC & Disc: DEL-CV

DWG NO. TCE.12503A-CV-3082-WS-36363

ISSUE P0



SIGN.										
PO										
ISSUE										

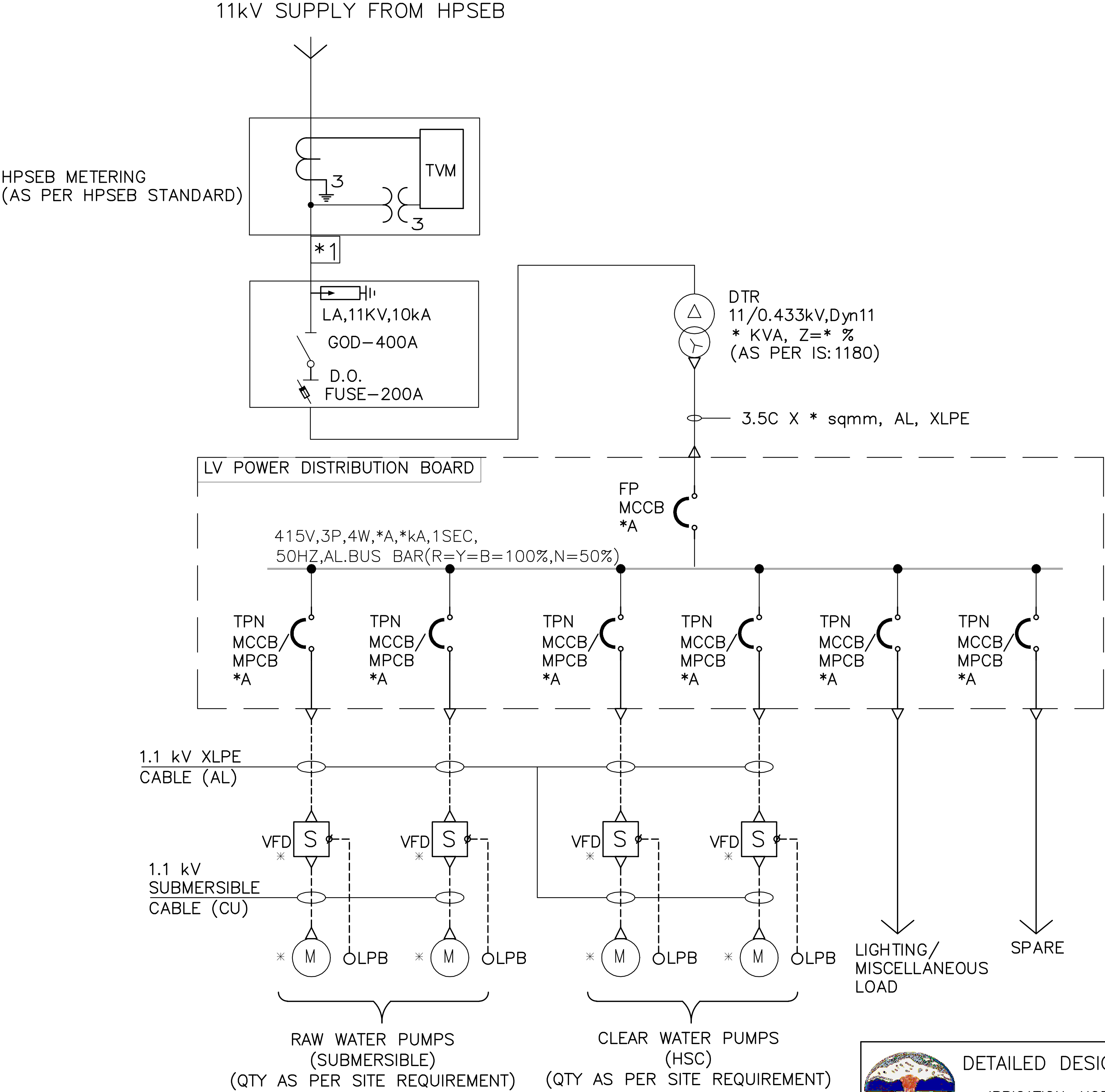
"P" (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON "R" (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT: -			
JE	AE	EE	SE
PURPOSE : FOR TENDER ONLY			
DO NOT SCALE			
Proprietary Notice and Version Control This document contains confidential information for use only by the Client. For the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted herewith, in consideration of receipt of this document, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.			
FILE NAME: 12503A-EL-40001-Rev-P0			

	DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09) IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT	
	TYPICAL SLD FOR LIS PUMPING STATION WITH 1W+1S UNITS & LT METERING	
TATA CONSULTING ENGINEERS LIMITED MUMBAI		
SCALE : NTS DC & DISC: DEL-CV	DWG NO. TCE.12503A-EL-4002-AU-40001	ISSUE P0



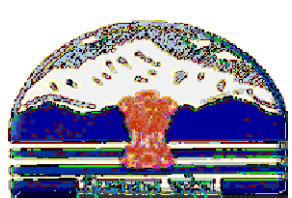
SIGN.										
PO										
ISSUE										

'P' (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON 'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS' IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO 'HOLDS'.

SIGN. OF CLIENT:-			
JE	AE	EE	SE
PURPOSE : FOR TENDER ONLY			
DO NOT SCALE			
Proprietary Notice and Version Control This document contains confidential information for use only by the Client for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted herewith, in consideration of receipt of this document, unless agreed to in writing by the Client, the recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party owing no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of offers, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions/.			
FILE NAME: 12503A-EL-40002-Rev-P0			



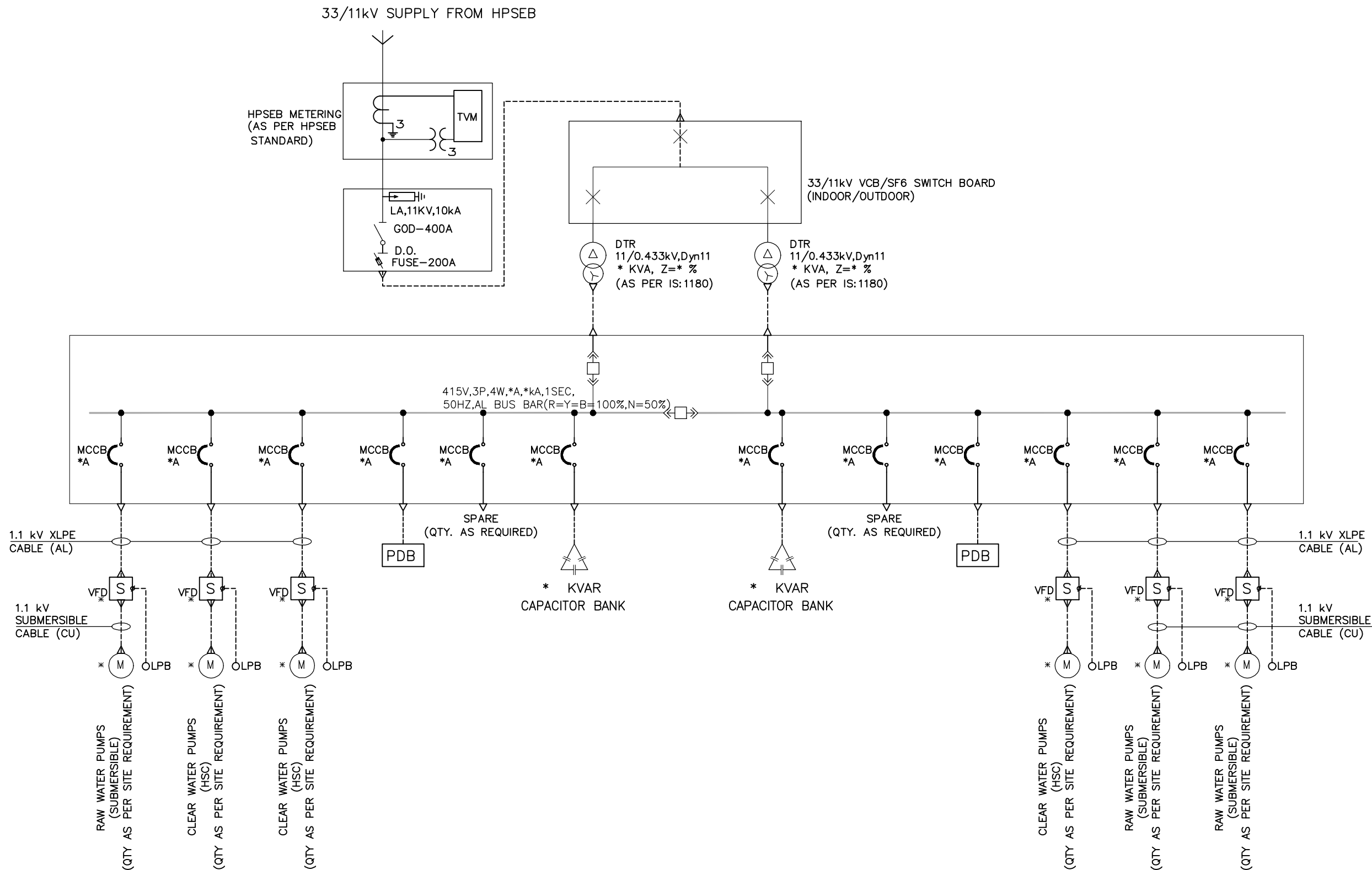
DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)
IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

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



TATA CONSULTING ENGINEERS LIMITED
MUMBAI

SCALE : NTS	DWG NO. TCE.12503A-EL-4002-AU-40002	ISSUE P0
DC & DISC: DEL-CV		



SIGN.										
PO										
ISSUE										

"P" (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON "R" (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN "HOLD" IS NOT RELEASED FOR CONSTRUCTION / FABRICATION. FIELD MUST GET DESIGN OFFICE TO CLEAR "HOLDS" IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION/ FABRICATION WORK RELATED TO "HOLDS".

SIGN. OF CLIENT:-			
JE	AE	EE	SE
PURPOSE : FOR TENDER ONLY			
DO NOT SCALE			
Proprietary Notice and Version Control This document contains confidential information for use only by the Client for the Project under consideration, which is provided for the sole purpose of permitting the recipient to evaluate the information submitted herewith, in consideration of receipt of this document unless agreed to in writing by the Client. The recipient agrees to maintain such information in confidence and to not reproduce or otherwise disclose this information to any person outside the recipient's organization except that there is no obligation to maintain the confidentiality of any information which was known to the recipient prior to receipt of such information from Tata Consulting Engineers Limited, or becomes publicly known through no fault of recipient or Tata Consulting Engineers Limited, or is received without obligation of confidentiality from a third party using no obligation of confidentiality to Tata Consulting Engineers Limited. All information given under this version over rides all and any kind of others, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous version/s.			
FILE NAME: 12503A-EL-40003-Rev-P0			



DETAILED DESIGN CONSULTANCY, HP-SHIVA (PACKAGE CS09)

IRRIGATION, HORTICULTURE, ORCHARDS AND VALUE CHAIN DEVELOPMENT

TYPICAL SLD FOR LIS PUMPING STATION WITH 2W+1S UNITS & HT METERING



TATA CONSULTING ENGINEERS LIMITED

MUMBAI

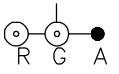
SCALE : NTS

DWG NO. TCE.12503A-EL-4002-AU-40003

ISSUE P0

1. THIS SLD SHOWS THE SCHEME FOR DISTRIBUTION OF THE POWER WITHIN THE PROJECT BATTERY LIMIT & SHALL be READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRGS. RATINGS, SIZES & QUANTITIES OF EQUIPMENTS MARKED AS '*' NEED TO BE CALCULATED / PROVIDED BASED ON SYSTEM REQUIREMENT AS TENDER SPECIFICATIONS. CONTRACTOR SHALL SUBMIT THE EQUIPMENT SIZING CALCULATIONS & CORRESPONDING SWITCH GEAR RATING ALONG WITH THE BID.
2. THE CONTRACTOR HAS TO DO DETAIL ENGINEERING OF HV & LV SYSTEM AND WORK OUT THE RATING OF EACH COMPONENT AS PER DESIGN CRITERIA GIVEN IN TENDER & EQUIPMENT SIZING CALCULATIONS AS APPROVED BY ENGINEER-IN -CHARGE.
3. HV SYSTEM:
 - a) INTER TRIPPING & CLOSING INTERLOCK SHALL BE PROVIDED BETWEEN TRANSFORMER FEEDER (11KV) AND LT PANEL INCOMER (0.415KV) SIDE.
 - b) CT /PT UNIT FOR HT METERING AND TVM SHALL BE AS PER DISCOM.
4. LV SYSTEM:
 - a) ACB
 - 415V SWITCHBOARD INCOMER/ BUS COUPLER ACB SHALL BE FP, EDO TYPE WITH MICROPROCESSOR-BASED O/C, S/C & INBUILT E/F AND UV RELEASES.
 - ALL OUTGOING ACBS SHALL BE TP, EDO TYPE WITH MICROPROCESSOR-BASED O/C, S/C & INBUILT E/F RELEASES EXCEPT FOR APFC WHICH SHALL BE MDO TYPE WITH THERMAL MAGNETIC RELEASES.
 - IN ALL LT SWITCHBOARDS, CURRENT RATING ABOVE 630A SHALL HAVE ACBs.
 - ALL ACBS SHALL BE WITH ICS=ICU=ICW=100%.
 - b) MCCB
 - 415V SWITCHBOARD INCOMER/ BUSCOUPLER MCCB (>=250A) SHALL BE FP FIXED TYPE WITH MICROPROCESSOR BASED O/C, S/C & E/F RELEASES AND OUTGOING MCCB (>=250A) SHALL BE TP FIXED TYPE WITH MICROPROCESSOR BASED O/C, S/C & E/F RELEASES EXCEPT FOR APFC AND WHICH SHALL HAVE TM BASED O/C, S/C & E/F RELEASES WITH EXTERNAL E/F MODULE. ALL INCOMER/ OUTGOING MCCB (<250A) SHALL HAVE TM BASED O/C, S/C & E/F RELEASES WITH EXTERNAL E/F MODULE.
 - ALL MCCB SHALL BE WITH Ics=Icu=100%.
5. ALL INDICATIONS, SHUNT TRIP/CLOSING COILS OF HT/ LT BREAKERS (VCBS/ ACBS) WILL BE ON 30/110V DC CONTROL SUPPLY. SPRING CHARGING MOTORS OF ALL BREAKERS WILL BE ON 230V AC SUPPLY. IF, DC SUPPLY IS NOT AVAILABLE FROM EXTERNAL SOURCE, IT SHALL BE DERIVED FROM INBUILT DC POWER PACK SUITABLE FOR ACCEPTING 230V AC SUPPLY FROM EXTERNAL SOURCE.
6. IN MCC, ALL MOTOR STARTER COMPONENTS RATING SHALL BE SELECTED AS PER MANUFACTURER'S TYPE-2 CO-ORDINATION CHART. MOTOR STARTERS SHALL BE COMPLETE WITH SINGLE PHASING PREVENTER. AMMETERS IN MOTOR FEEDERS SHALL BE PROVIDED WITH SUPPRESSED SCALE UP TO 6 TIMES FULL LOAD CURRENT FOR INDICATING STARTING CURRENT. ALL MOTOR FEEDERS UP TO OR EQUAL TO 5.5 KW SHALL HAVE DIRECT CONNECTED AMMETERS IN Y PHASE & MOTORS GREATER THAN 5.5KW WILL BE PROVIDED WITH ONE CT & AMMETER.
7. THE ON, OFF AND TRIP POSITION OF MCCB/ MPCB SHALL BE CLEARLY INDICATED. ROTARY OPERATING HANDLE FOR MCCBs/ MPCBs WITH THE DOOR CLOSED INTERLOCK SHALL BE PROVIDED. ALL MCCB/ MPCB FEEDERS ON ALL PANELS SHALL BE PROVIDED WITH ON/OFF/TRIP INDICATING LAMPS THROUGH AUXILIARY CONTACTS. WHEREVER STARTER FEEDER PROVIDED WITH MPCB BUT WITHOUT OVERLOAD RELAY, MPCB SHALL HAVE INBUILT OVERLOAD PROTECTION FEATURE.
8. 110 OR 220V AC CONTROL SUPPLY FOR LT PCC/ MCC SHALL BE DERIVED FROM CONTROL TRANSFORMER(S) OF ADEQUATE RATING. INTERLOCKING BETWEEN TWO CONTROL SUPPLIES SHALL BE PROVIDED SUCH THAT ENERGIZED SECTION CATERS FOR THE NEED OF THE PCC/ MCC PANEL.
9. MCCB & MPCB TERMINALS SHALL BE SHROUDED AND SHALL BE DESIGNED TO RECEIVE CABLE LUGS FOR RELEVANT CABLE SIZES.
10. ALL INDICATING LAMPS SHALL BE MULTICHIP LED TYPE.
11. MULTIFUNCTION METER FOR MEASURING ALL POWER & ENERGY PARAMETERS SHALL HAVE AN ACCURACY CLASS OF 1.0 OR BETTER, WITH RS 485 COMM PORT.
12. ALL CONTACTORS / TIMERS SHALL BE DIN RAIL MOUNTED.
13. UNDER STEADY STATE CONDITIONS, VOLTAGE DROP IN VARIOUS SECTIONS OF ELECTRICAL SYSTEM SHALL BE LIMITED TO A) CABLES BETWEEN TRANSFORMER SECONDARY TO PMCC - 2 % AND B) CABLES BETWEEN PMCC TO MOTOR- 3%. UNDER MOTOR STARTING CONDITIONS, THE CORRESPONDING VOLTAGE DROP SHALL NOT AFFECT THE OPERATION OF THE MOTOR CONTROLS OR THE ABILITY OF THE MOTOR TO START AND RUN EFFECTIVELY AND IN ANY EVENT SHALL NOT EXCEED 15%. FAULT CLEARING TIME TO BE CONSIDERED WHILE SIZING OF CABLES SHALL BE AS A) PCC INCOMER - 1 SEC AND B) TRANSFORMER PRIMARY: 0.16 SEC.
14. UNLESS SPECIFIED, ALL SWITCHBOARDS SHALL BE FREE STANDING, COMPARTMENTALIZED, EXTENSIBLE ON BOTH SIDES WITH HEIGHT NOT EXCEEDING 2300MM. ENCLOSURE PROTECTION OF SWITCHBOARDS SHALL BE AS PER TENDER.
15. WHEREVER APPLICABLE, SEPARATE PANEL FOR HVAC, FIRE AND PLUMPING PUMP WILL BE PART OF RESPECTIVE BOQ.
16. WHEREVER APPLICABLE, PROVISION OF ONE-WAY NET METERING SHALL BE PROPOSED IN THE SLD FOR INTEGRATION OF THE SOLAR WITH THE DISTRIBUTION SYSTEM. THIS METHODOLOGY NEEDS TO BE VERIFIED WITH THE STATE ELECTRICITY BOARD AND THE SOLAR VENDORS. SOLAR POWER SUPPLY WILL NOT BE ON WHEN DG IS ON.
17. WHEN TWO DG'S ARE OPERATING IN PARALLEL THEN PROVISION OF NEUTRAL CONTRACTOR INTERLOCKING SHOULD BE SUCH THAT ONLY ONE DG WILL BE EARTHED.
18. MCB USED FOR STANDARD NETWORK SHALL HAVE 'C' CHARACTERISTIC CURVE.
19. EACH TYPE & RATING OF OUTGOING FEEDER SHALL HAVE 10% SPARE OR MINIMUM ONE NUMBER.

LEGEND:

	LIGHTNING ARRESTER	R	RELAYING
	ISOLATER WITH EARTH SWITCH	I	INSTRUMENTATION
	ISOLATER WITH D.O. FUSE	25	SYNCHRONIZING RELAY
		27/59	UNDER/OVER VOLTAGE RELAY
	CIRCUIT BREAKER(ACB/VCB) DRAW-OUT TYPE	81	UNDERFREQUENCY RELAY
		(50)	INST. O/C PROTECTION
	CIRCUIT BREAKER(ACB/VCB) NON DRAW-OUT TYPE	(50N)	INST. E/F PROTECTION
		(51)	IDMT. O/C PROTECTION
	MCCB	95	TRIP SUPERVISION RELAY
	MPCB	49W	WINDING TEMP. HIGH INDICATOR WITH ALARM & TRIP CONTACTS
	MCB	490	OIL TEMP. HIGH INDICATOR WITH ALARM & TRIP CONTACTS
	CABLE GLAND	(63 X)	PRESSURE RELIEF DEVICE
	INDICATING LAMP	(63 T)	BUCHHOLZ RELAY
	PUSH BUTTON	OSR	OIL SURGE RELAY
	CURRENT TRANSFORMER (CT) (FIGURE INDICATES NO. OF CT's)	MOG	MAGNETIC OIL GAUGE
		86	LOCK OUT RELAY
	POTENTIAL TRANSFORMER	SC	SPRING CHARGED
		TCH	TRIP CIRCUIT HEALTHY
	TRANSFORMER	SP	SERVICE POSITION
		TP	TEST POSITION
	TRI VECTOR METER		ELECTRICAL CABINET
	CHOKE	(MFM)	MULTIFUNCTION METER
	AMMETER SELECTOR SWITCH		
	ANALOG AMMETER		NET ENERGY METER
	VOLTMETER SELECTOR SWITCH		
	ANALOG VOLTMETER		
	PUSH BUTTON STATION	TNC 	TRIP-NEUTRAL-CLOSE SWITCH (KEY OPERATED)
	ELECTRICAL- MECHANICAL INTERLOCK	ETPB	EMERGENCY TRIP PUSH BUTTON
	TWO MOMENTARY CONTACT PB WITH THREE INDICATING LAMPS (R = RED, G = GREEN, A = AMBER)		CONTACTOR
		NC	NORMALLY CLOSED
	LOCAL REMOTE SELECTOR SWITCH	NO	NORMALLY OPEN

SIGN. OF CLIENT:-

--	--	--	--

PURPOSE : FOR TENDER ONLY

DO NOT SCALE

Proprietary Notice and Version Control This document contains confidential information for use only by the recipient. The recipient is prohibited from disclosing this information to any third party. The recipient agrees to maintain such information in confidence and not to reproduce or otherwise disclose this information to any person outside the recipient's organization; except that there is no obligation to maintain the confidentiality of any information which is lawfully in the recipient prior to receipt of such information from Tels Consulting Engineers Limited, or becomes publicly known through no fault of recipient, or Tels Consulting Engineers Limited, or is received without obligation of confidentiality from a third party acting under no obligation of confidentiality to Tels Consulting Engineers Limited. All information given under this version over rides all in any kind of other, assumptions, deliverables and contracts submitted verbally (and subsequently communicated in writing) or in writing or otherwise given under any and all previous versions.

FILE NAME: 12503A-EL-40004-Rev-PC

[illegible]

P (PRELIMINARY) ISSUES ARE NOT TO BE USED FOR CONSTRUCTION / FABRICATION BUT ARE ISSUED FOR LIMITED PURPOSES ONLY AS INDICATED IN THE SMALL BLOCK ABOVE THIS BLOCK.

CONSTRUCTION / FABRICATION WORK IS PERMITTED ON
'R' (RELEASED) ISSUES ONLY.

INFORMATION CONTAINED WITHIN 'HOLD' IS NOT
RELEASED FOR CONSTRUCTION / FABRICATION.
FIELD MUST GET DESIGN OFFICE TO CLEAR 'HOLDS'
IN TIME BEFORE PROCEEDING WITH ANY CONSTRUCTION,
FABRICATION WORK RELATED TO 'HOLDS'.