

**Republic of India
Preparatory Survey for
Chennai Seawater Desalination Plant Project**

**Draft Final Report
Drawings**

November 2016

Japan International Cooperation Agency (JICA)

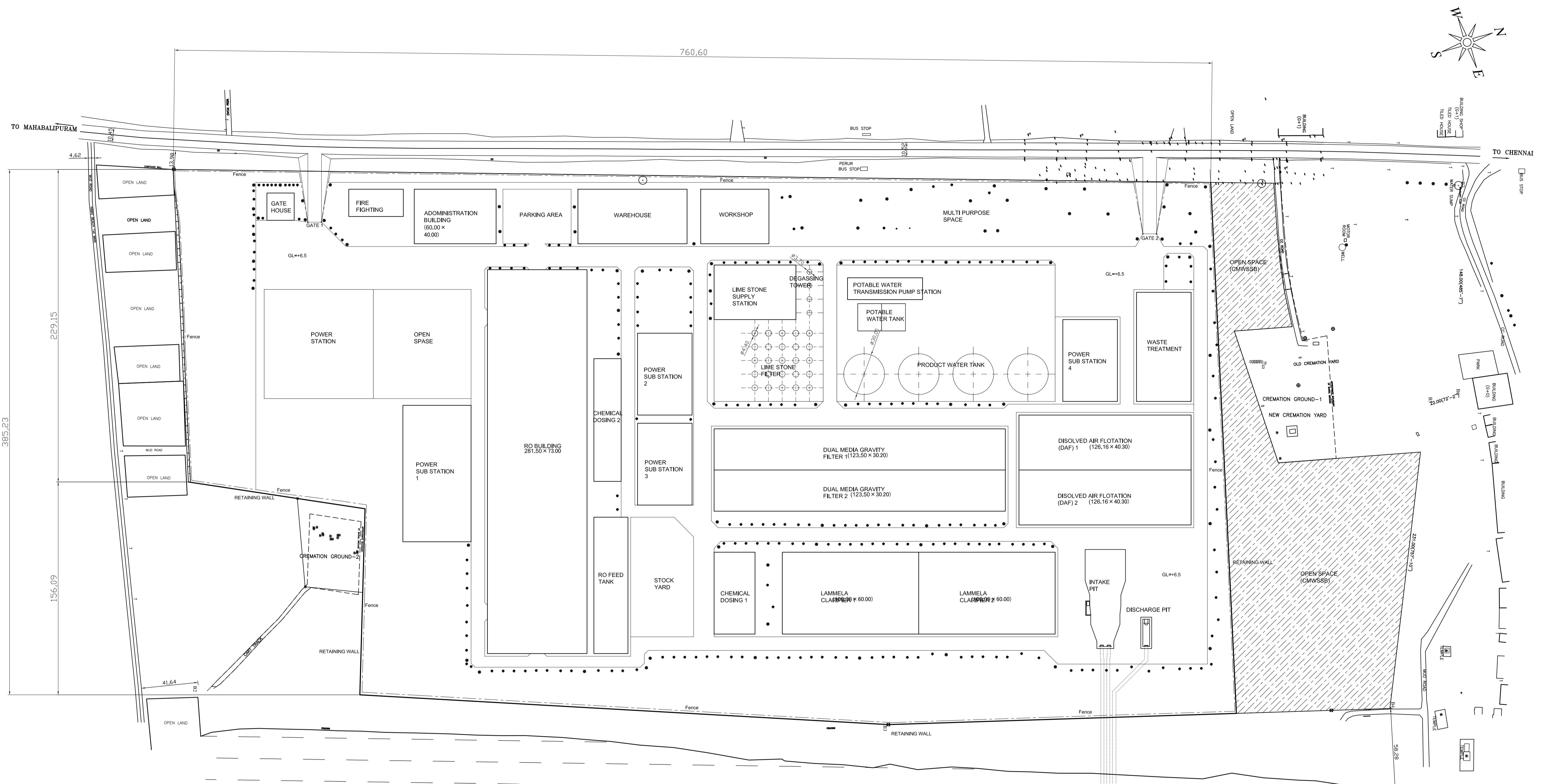
Nippon Koei Co., Ltd

INGÉROSEC Corporation

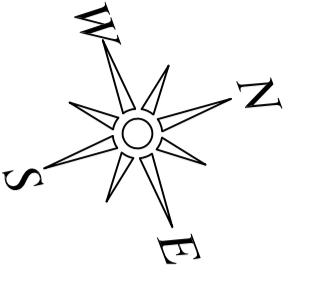
Nippon Koei India Pvt. Ltd

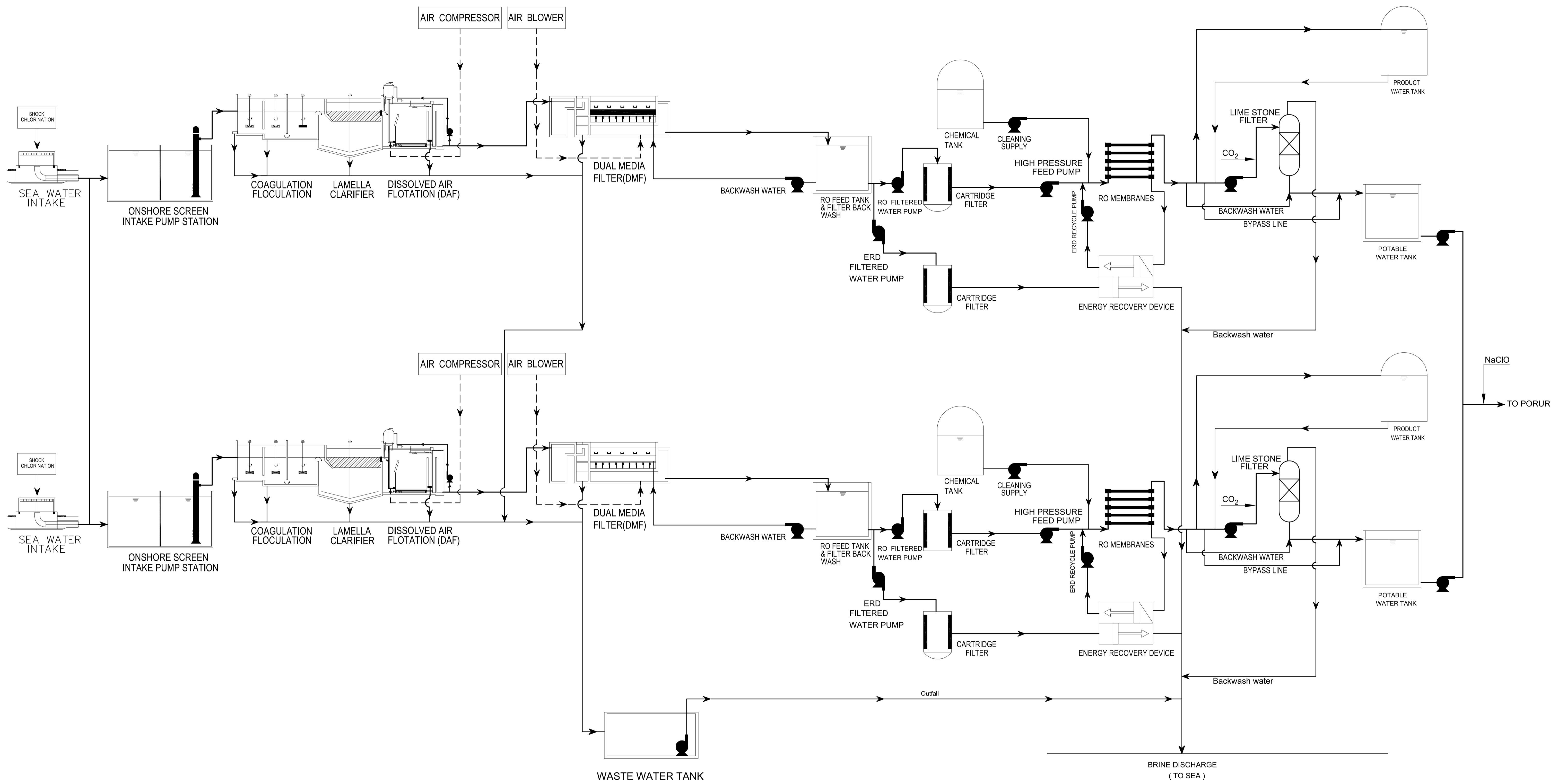
List of Drawings

Item/Title	Drawing No.	Item/Title	Drawing No.
I. Sea Water Desalination System		4.4 Single line diagram of 33/11 kV substation	I-4-4
1. Plant Facility		4.5 33/11 kV substation layout	I-4-5
1.1 Plant layout	I-1-1	4.6 33/11 kV substation control room	I-4-6
1.2 Flow sheet	I-1-2	4.7 33 kV transmission line	I-4-7
1.3 Water level design	I-1-3		
1.4 Pre-treatment (Lamella filter)	I-1-4		
1.5 Pre-treatment(DAF)	I-1-5		
1.6 Pre-treatment(DMF)	I-1-6		
1.7 RO Building	I-1-7		
1.8 Administration Building	I-1-8		
2. Electric Facility (SWRO Plant)			
2.1 110kV Intake & 11kV Main SWGR	I-2-1		
2.2 11kV Main SWGR Feeder Details	I-2-2		
2.3 Sea Water Intake Single Line Diagram	I-2-3		
2.4 Pre Treatment 11 and 0.69kV Circuit Single Line Diagram	I-2-4		
2.5 Pre Treatment System 433V Circuit Single Line Diagram	I-2-5		
2.6 Reverse Osmosis Plant 11kV SWGR-1 Single Line Diagram	I-2-6		
2.7 Reverse Osmosis Plant 433V MCC-1 Single Line Diagram	I-2-7		
2.8 Reverse Osmosis Plant 11kV SWGR-2 Single Line Diagram	I-2-8		
2.9 Reverse Osmosis Plant 433V MCC-2 Single Line Diagram	I-2-9		
2.10 Reverse Osmosis Plant 11kV SWGR-3 Single Line Diagram	I-2-10		
2.11 Reverse Osmosis Plant 11kV SWGR-4 Single Line Diagram	I-2-11		
2.12 Reverse Osmosis Plant 11kV SWGR-5 Single Line Diagram	I-2-12		
2.13 Reverse Osmosis Plant 11kV SWGR-6 Single Line Diagram	I-2-13		
2.14 Reverse Osmosis Plant 11kV SWGR-7 Single Line Diagram	I-2-14		
2.15 Reverse Osmosis Plant 11kV SWGR-8 Single Line Diagram	I-2-15		
2.16 Post treatment 11kV,690V,433V Circuit Single Line Diagram	I-2-16		
3. Control System			
3.1 Overall Control System Configuration	I-3-1		
3.2 Control System Configuration	I-3-2		
4. Power Receiving Facility			
4.1 Single line diagram of 230/33 kV substation	I-4-1		
4.2 230/33 kV substation layout	I-4-2		
4.3 230/33 kV substation control room	I-4-3		



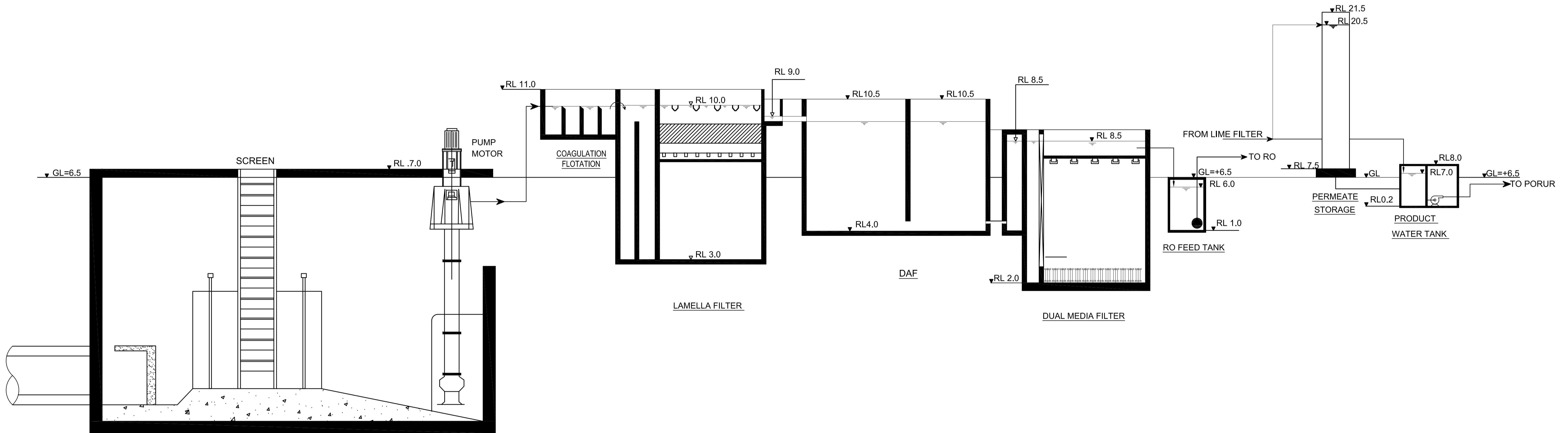
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DRAWING TITLE	PLANT LAYOUT
DRAWING NO	I -1-1

SIZE
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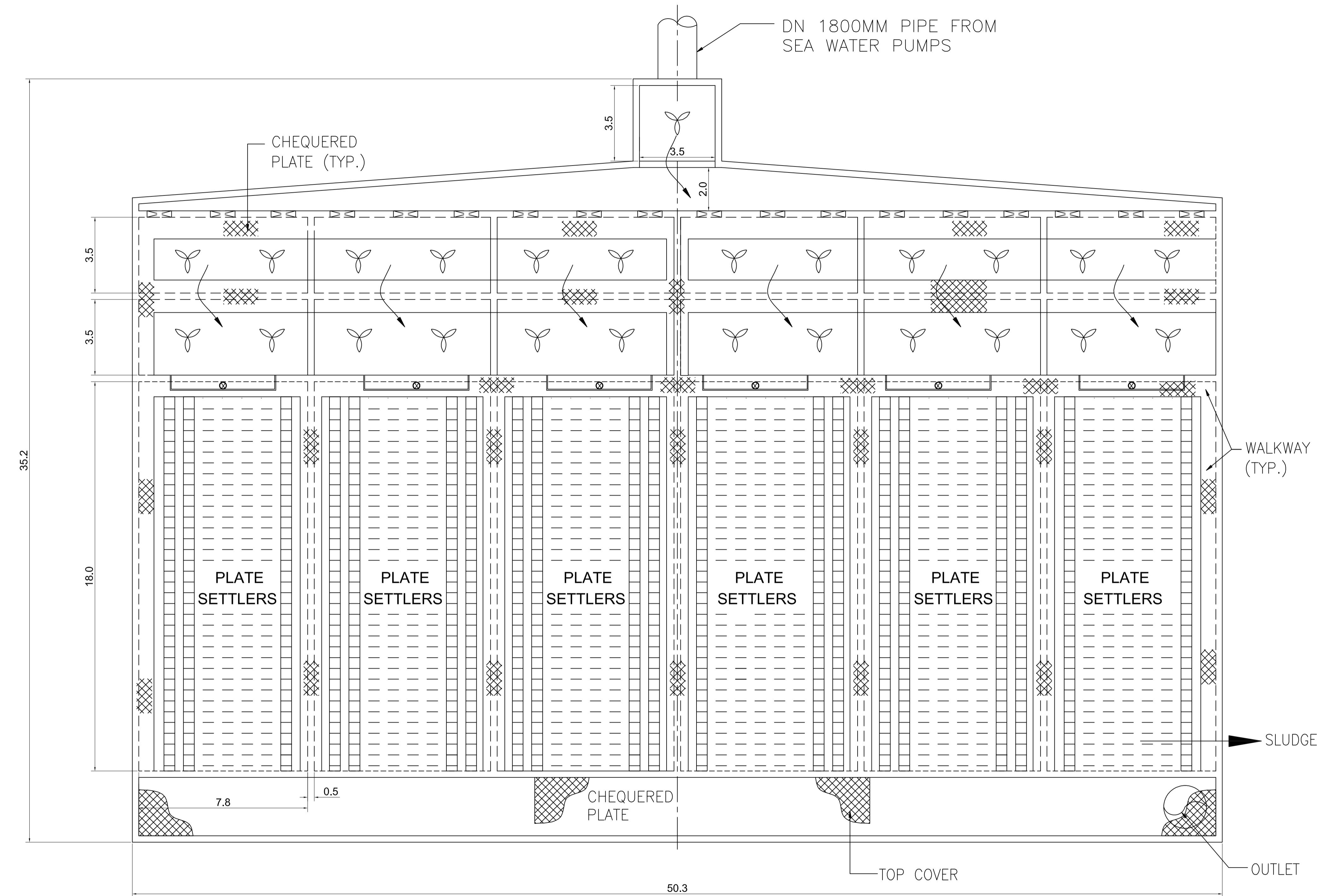
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DRAWING TITLE	Flow sheet
DRAWING NO	I-1-2

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PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE	Water level design
DRAWING NO	I-1-3

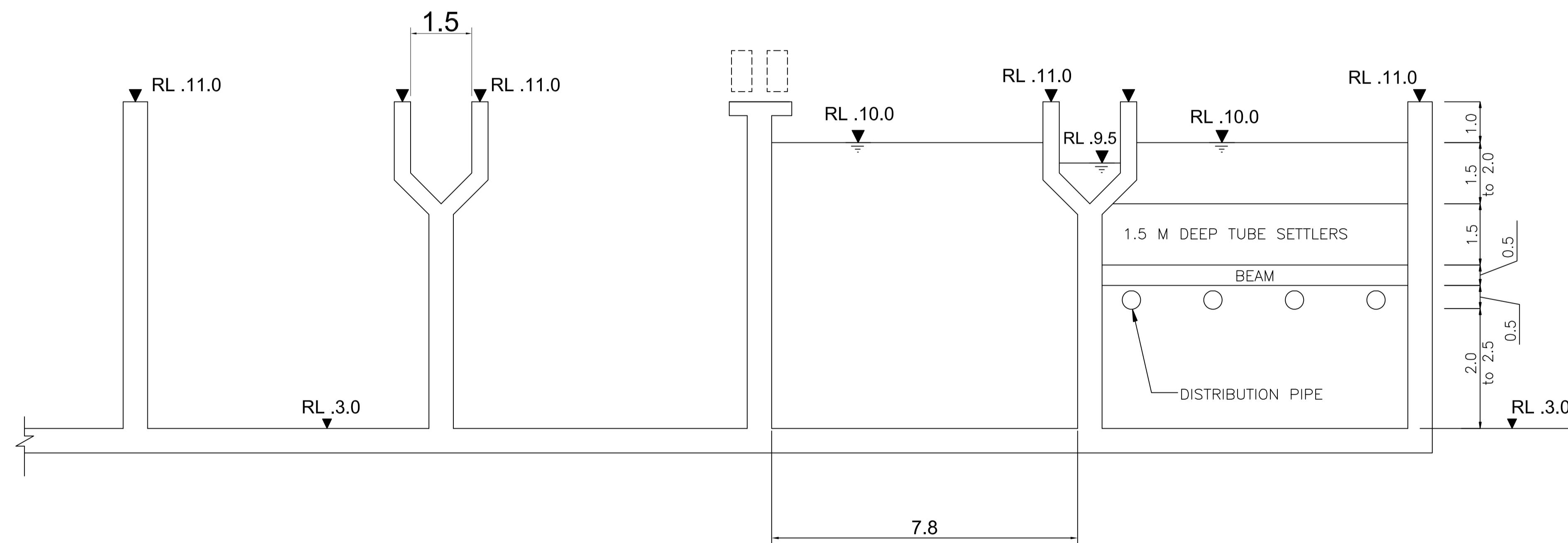
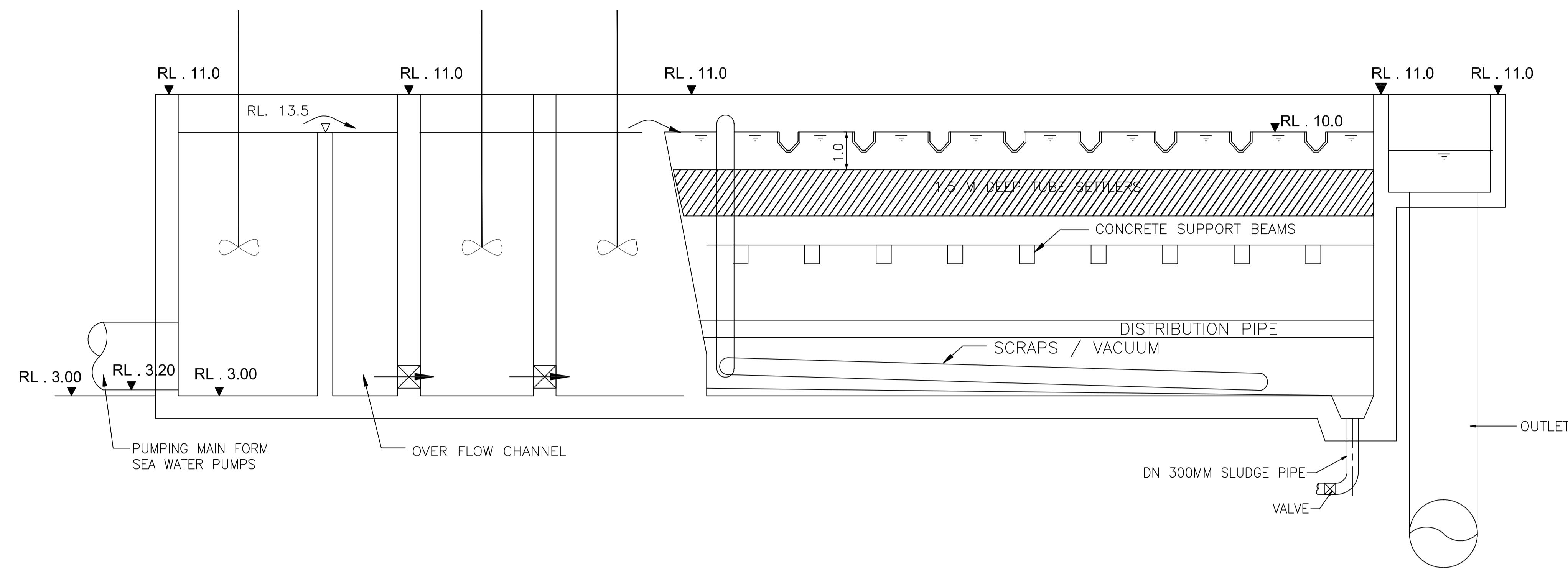
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PLAN

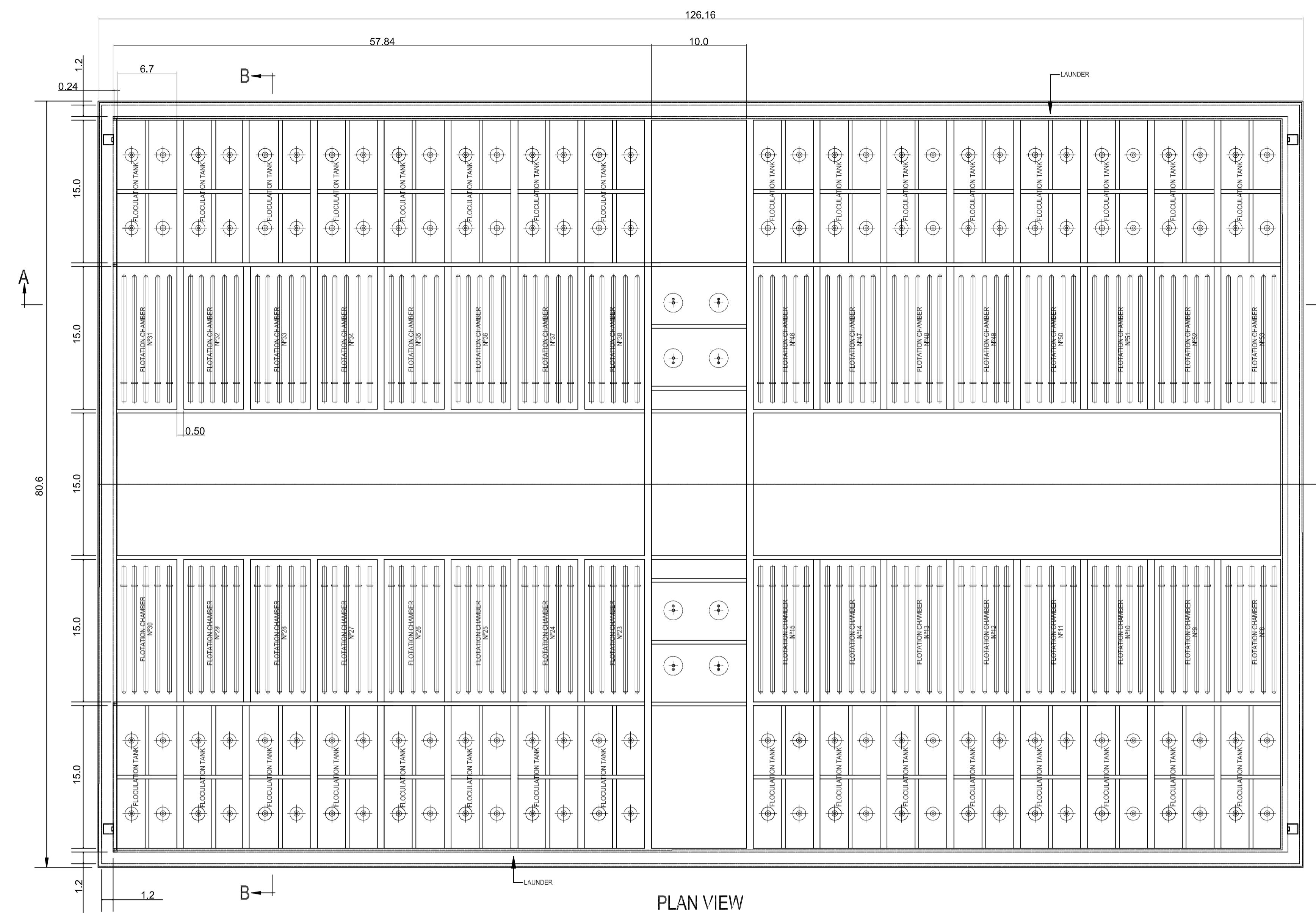
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DRAWING TITLE	Pre-treatment (Lamella filter)
DRAWING NO	I-1-4 (1/2)

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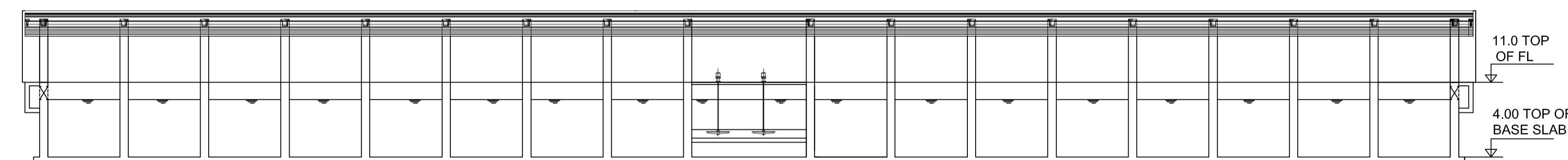


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DRAWING TITLE	Pre-treatment (Lamella filter)
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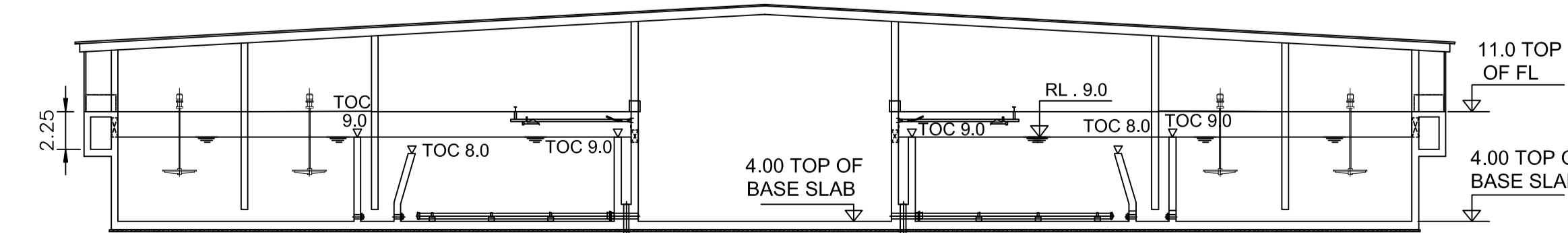
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PLAN VIEW

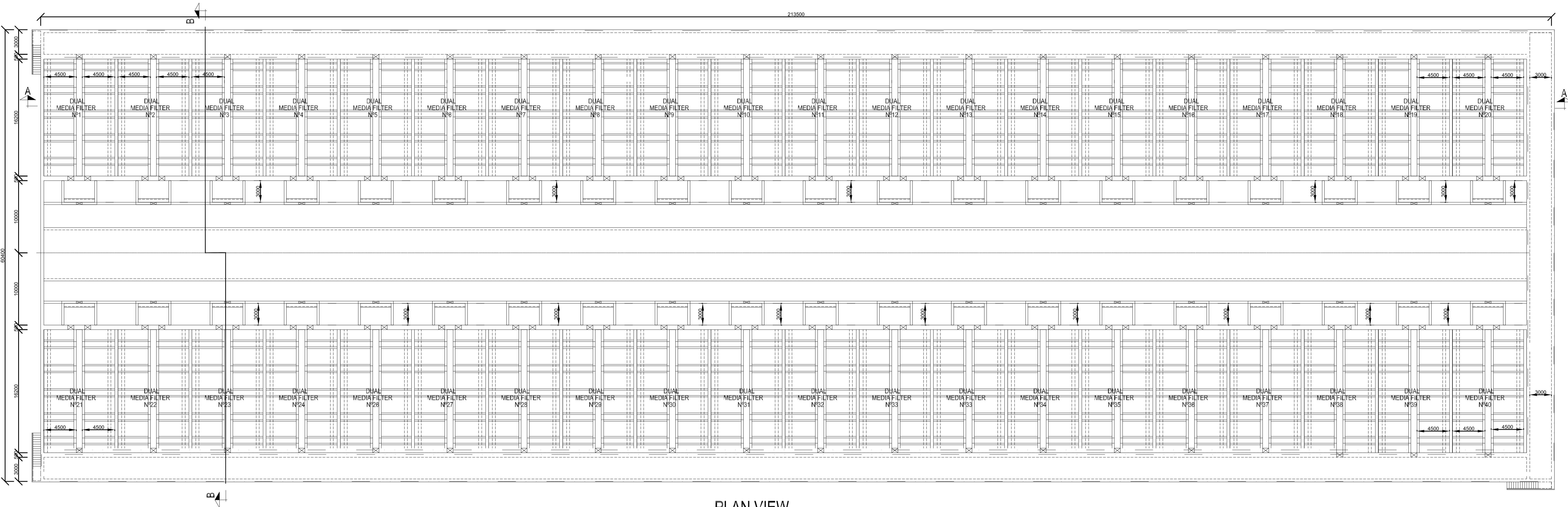


SECTION A-A



SECTION B-B

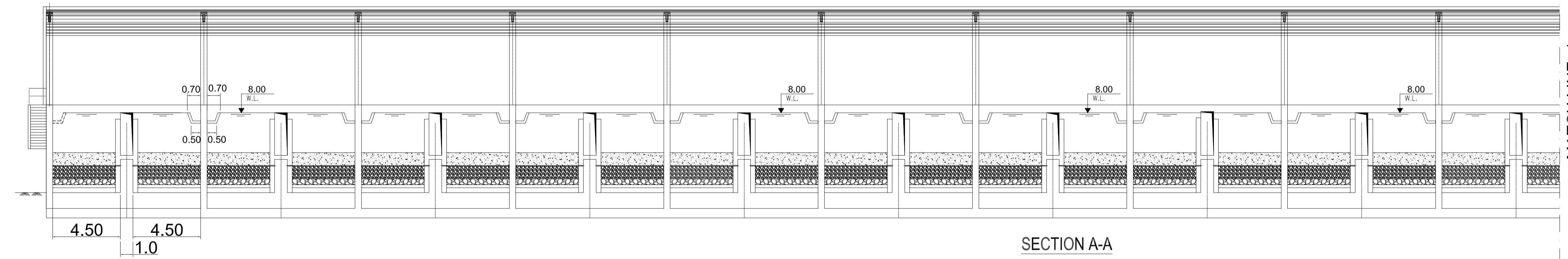
PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Pre-treatment (DAF)	
DRAWING NO	I-1-5	SIZE A1



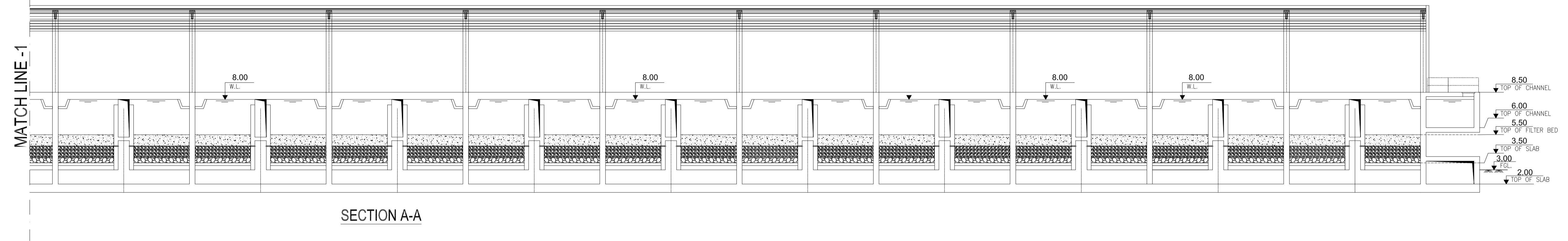
PLAN VIEW

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE	Pre-treatment (DMF)
DRAWING NO	I-1-6 (1/2)

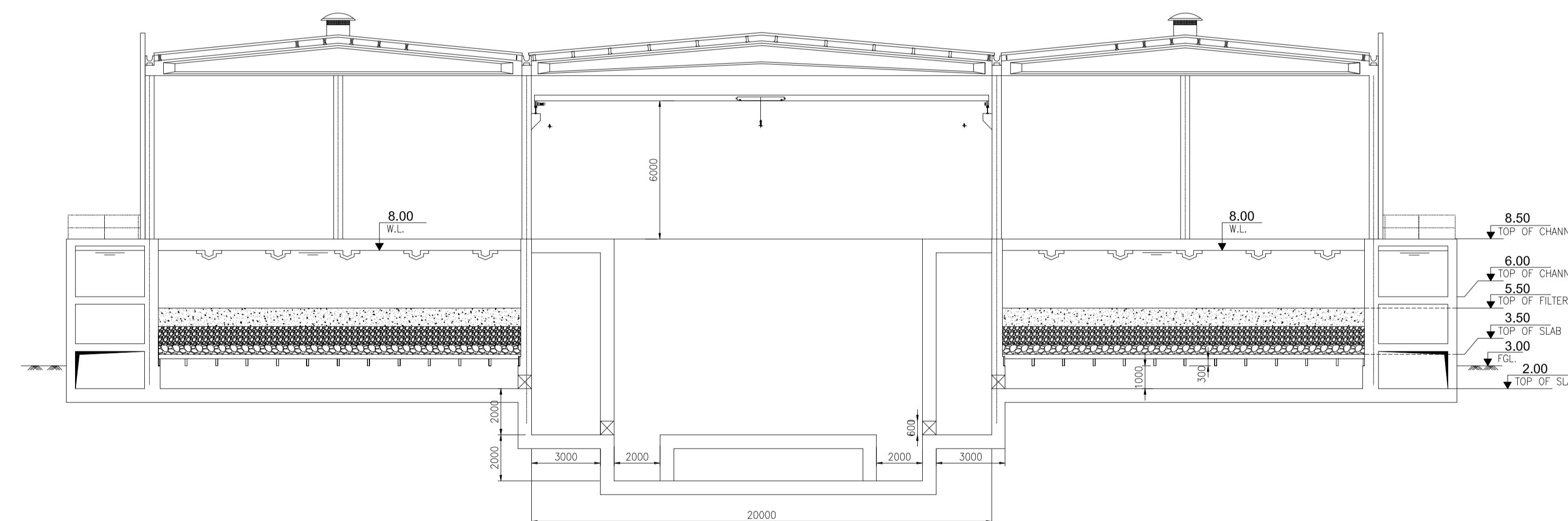
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SECTION A-A

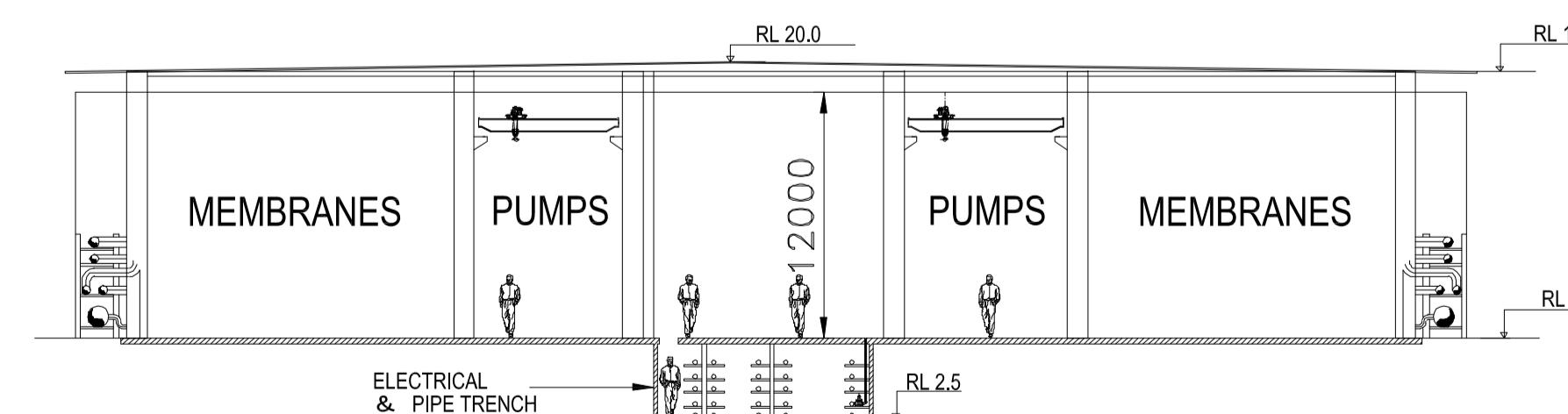
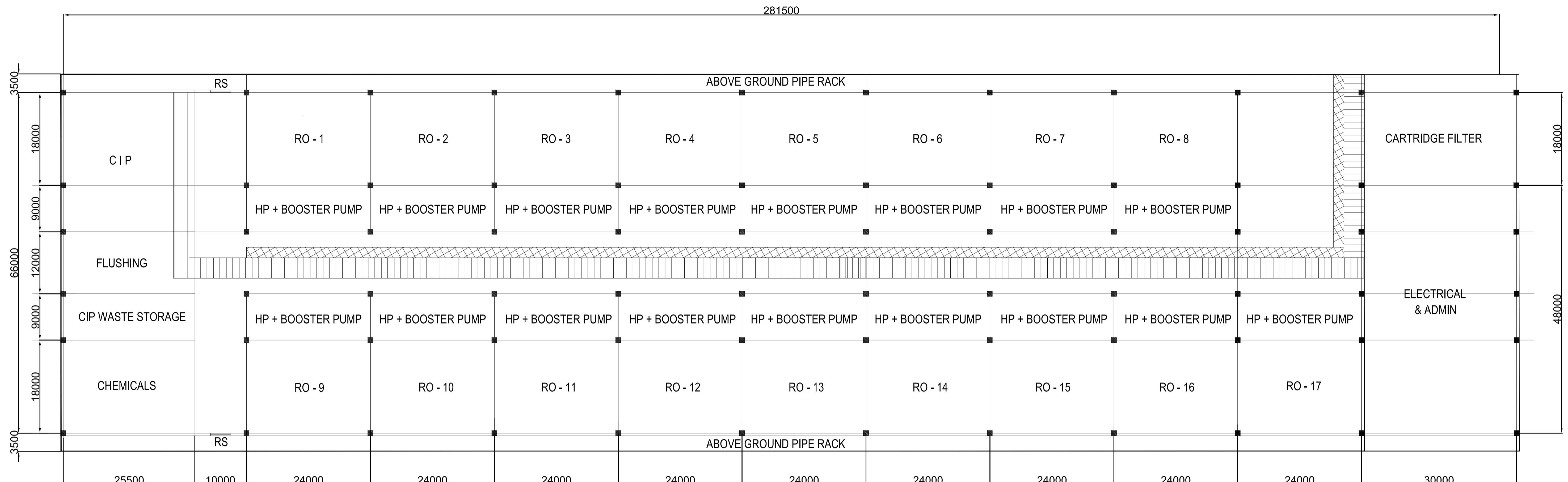


SECTION A-A



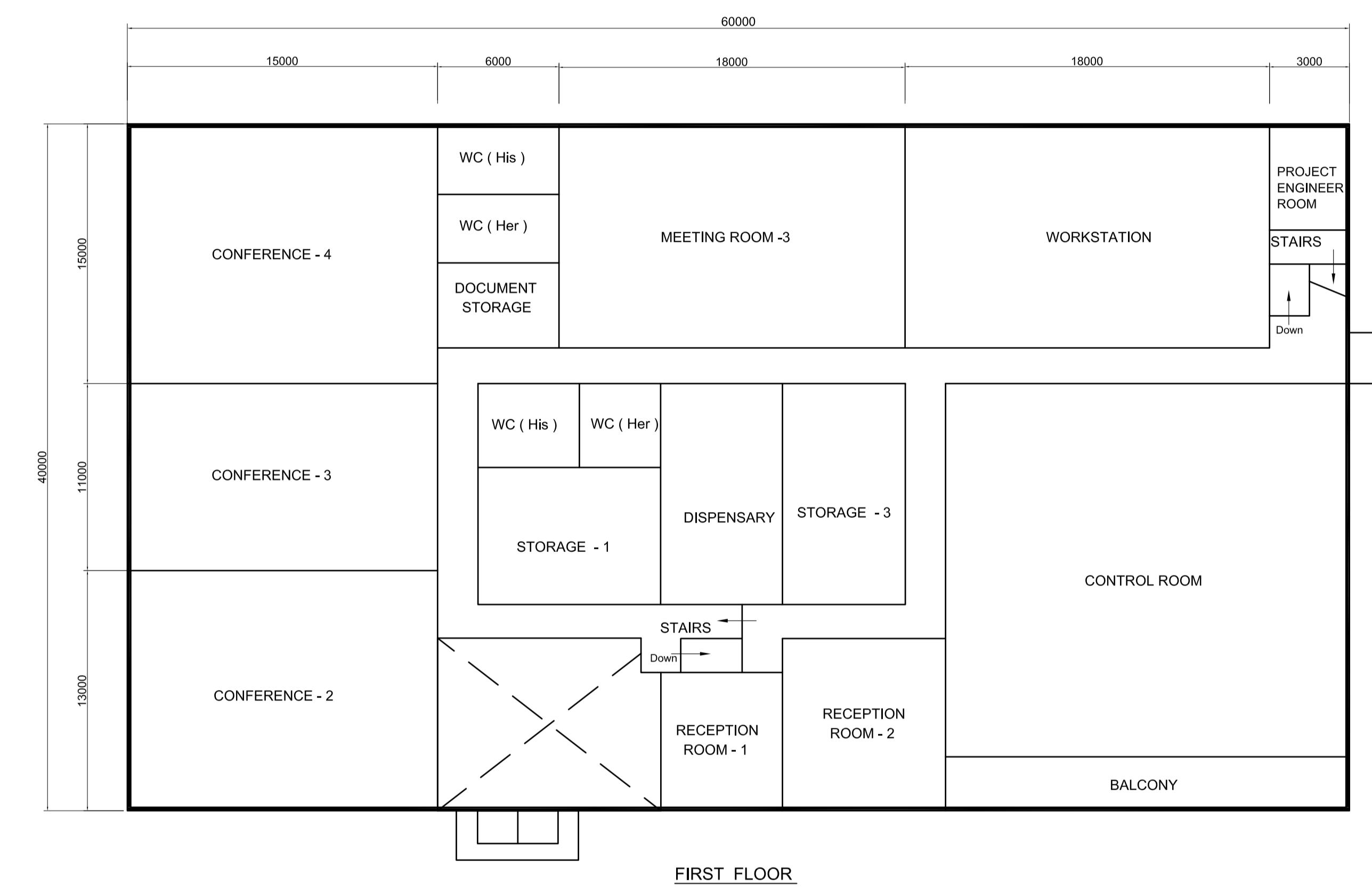
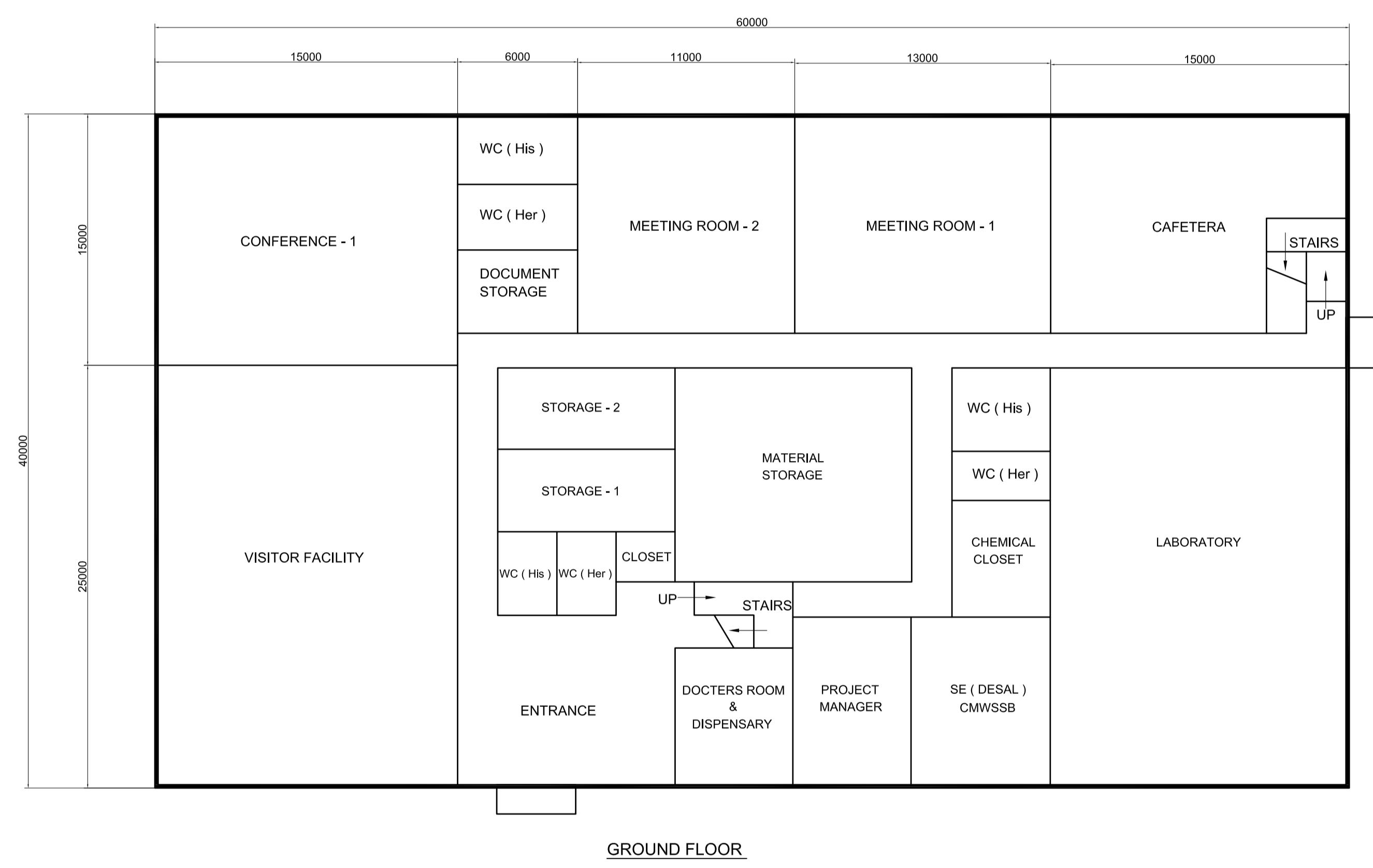
SECTION B-B

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Pre-treatment(DMF)	
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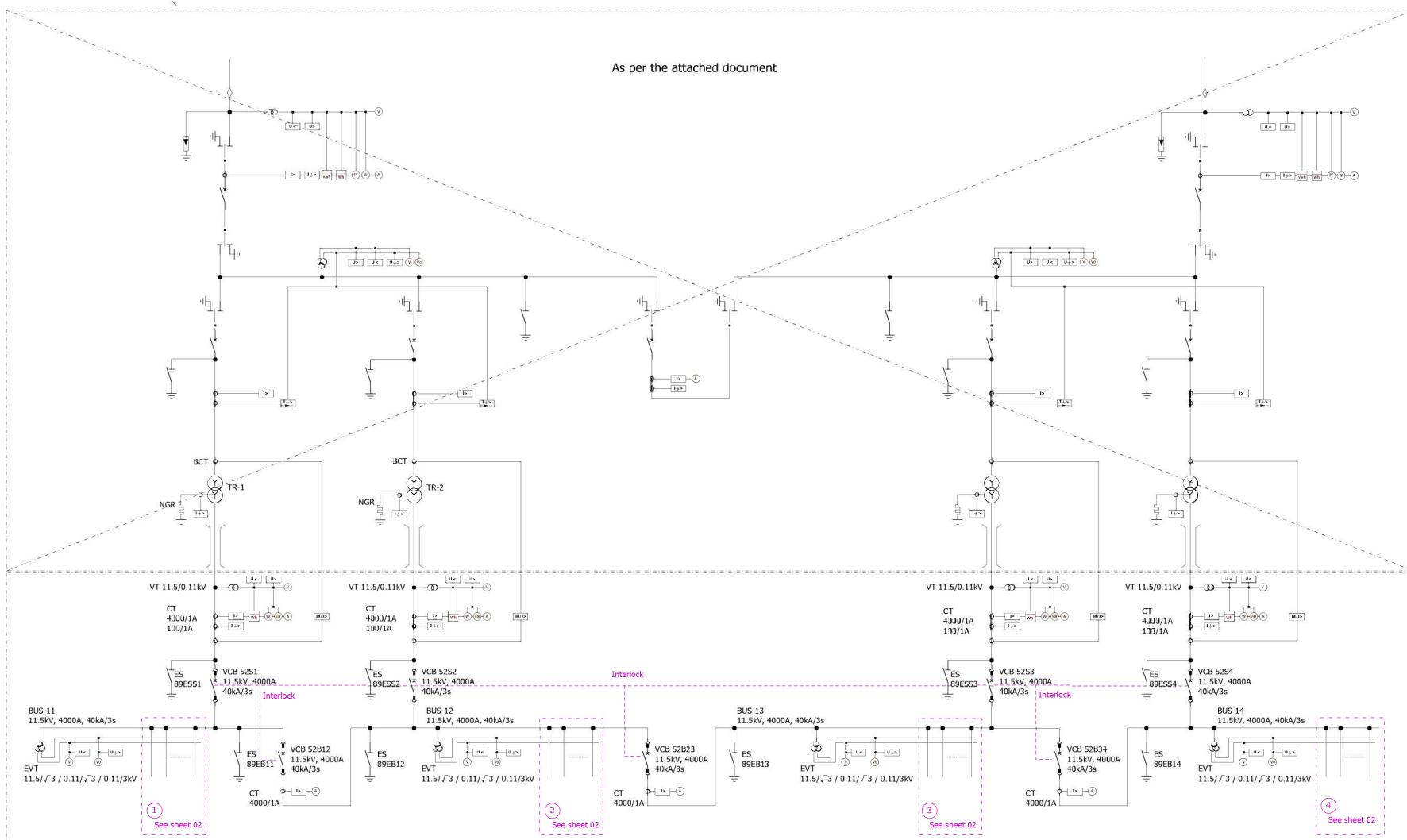


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DRAWING TITLE	RO Building
DRAWING NO	I-1-7

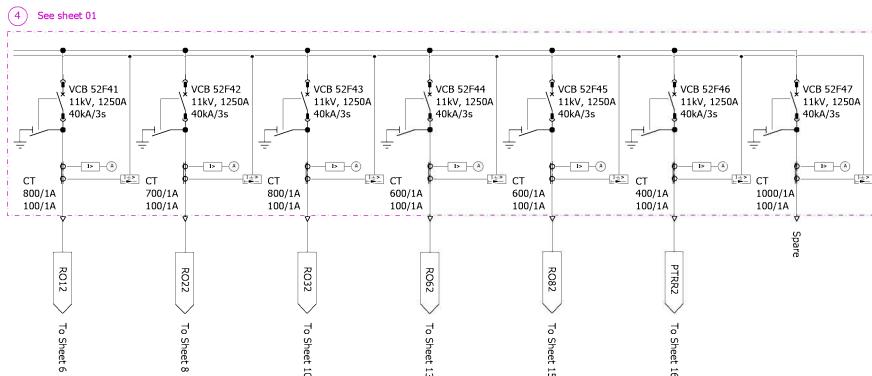
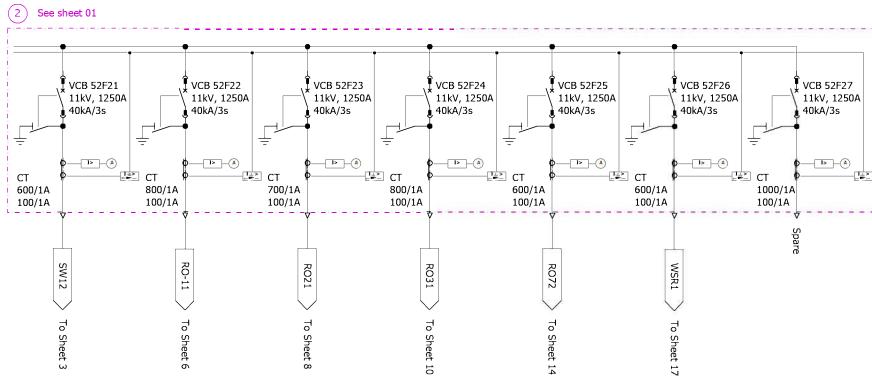
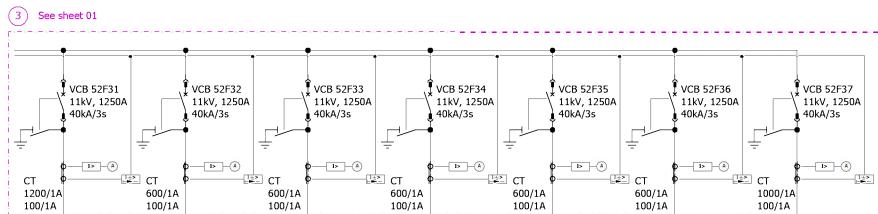
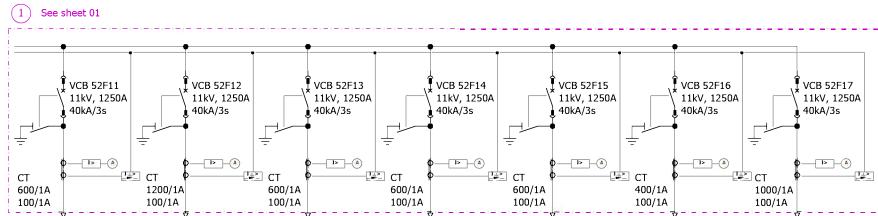
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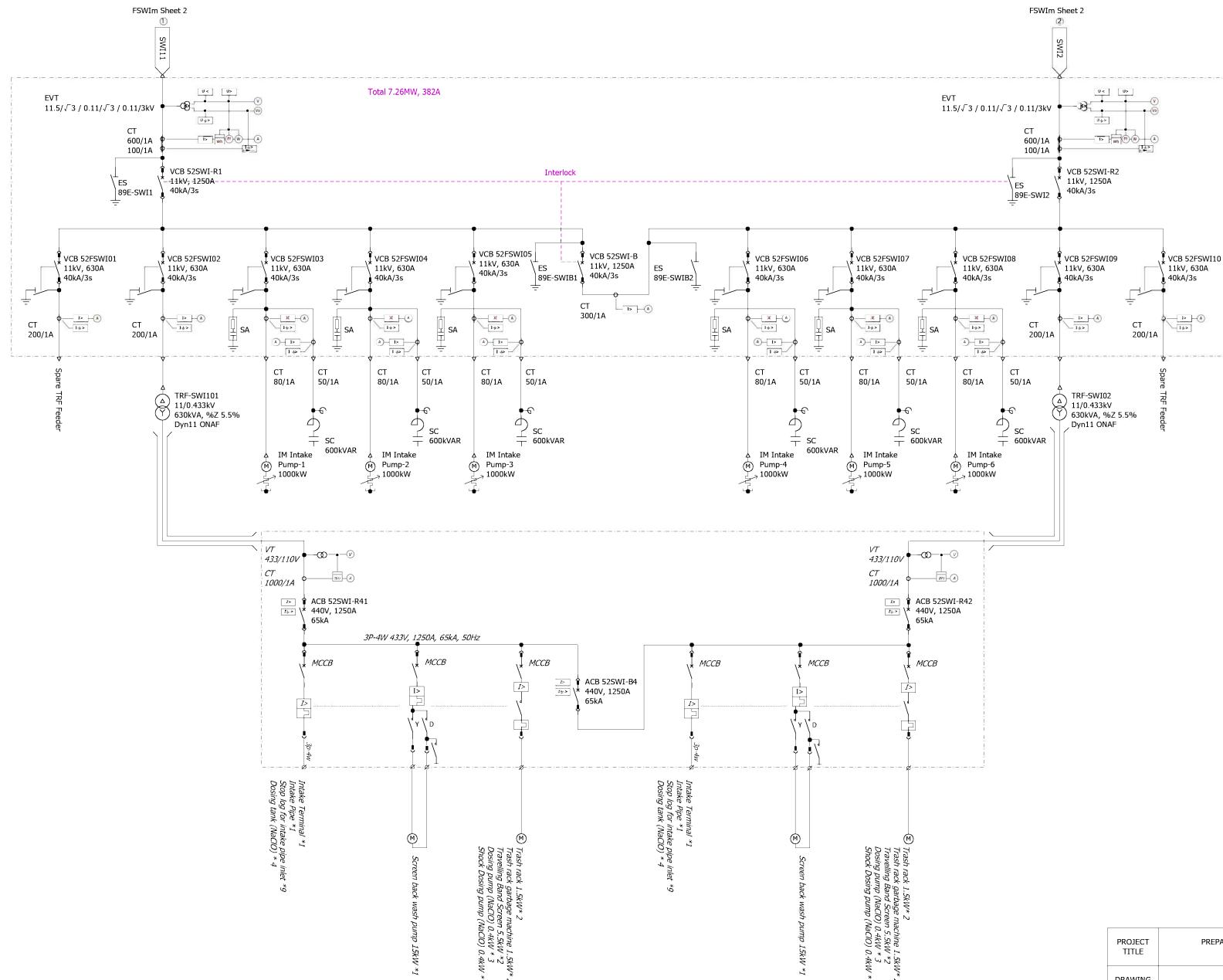
PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Administration Building	
DRAWING NO	I-1-8	SIZE A1



PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	110kV Intake & 11kV Main SWGR	
DRAWING NO	I - 2 - 1	SIZE A1

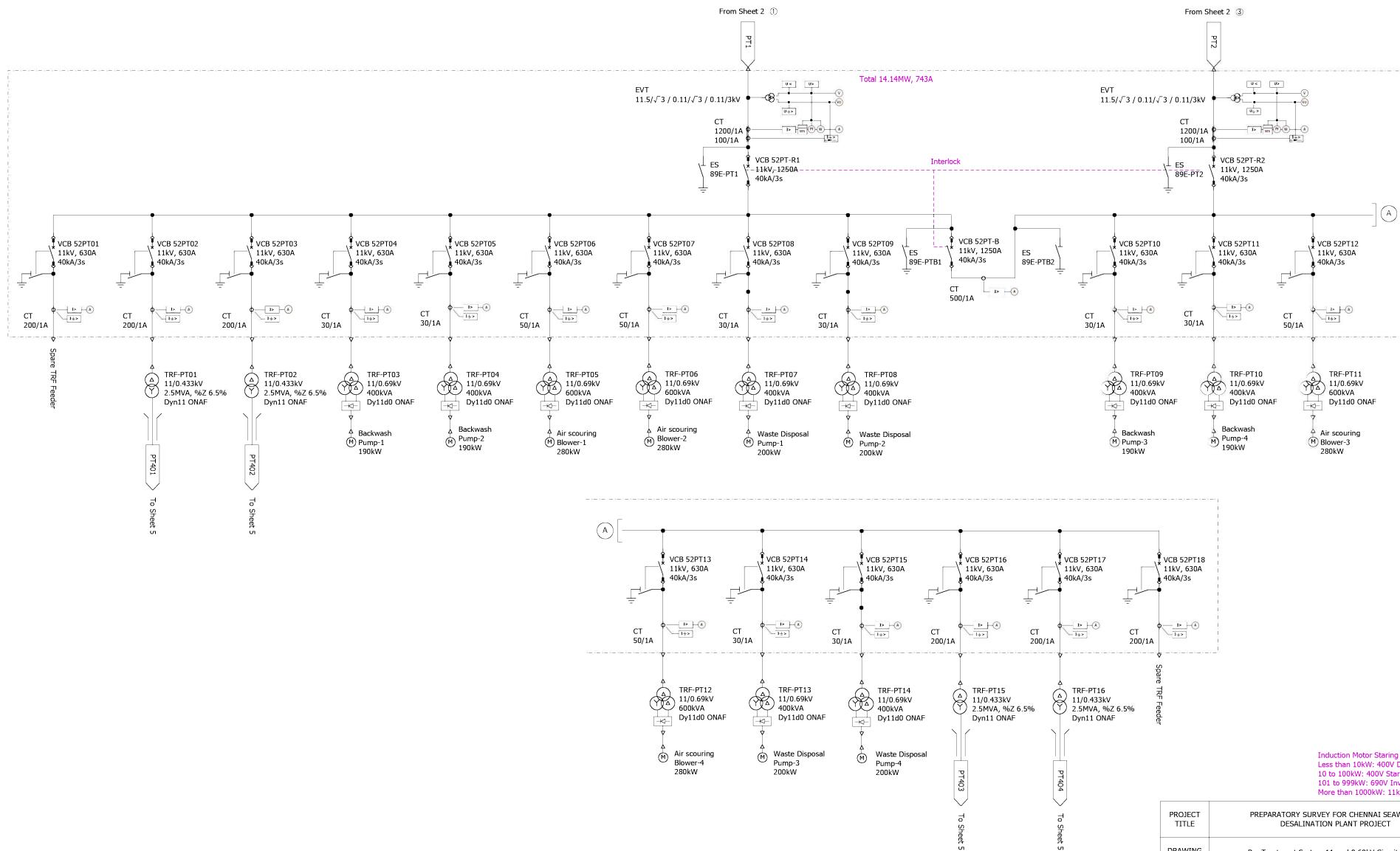


PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	11kV Main SWGR Feeder Details	
DRAWING NO	I - 2 - 2	SIZE A1

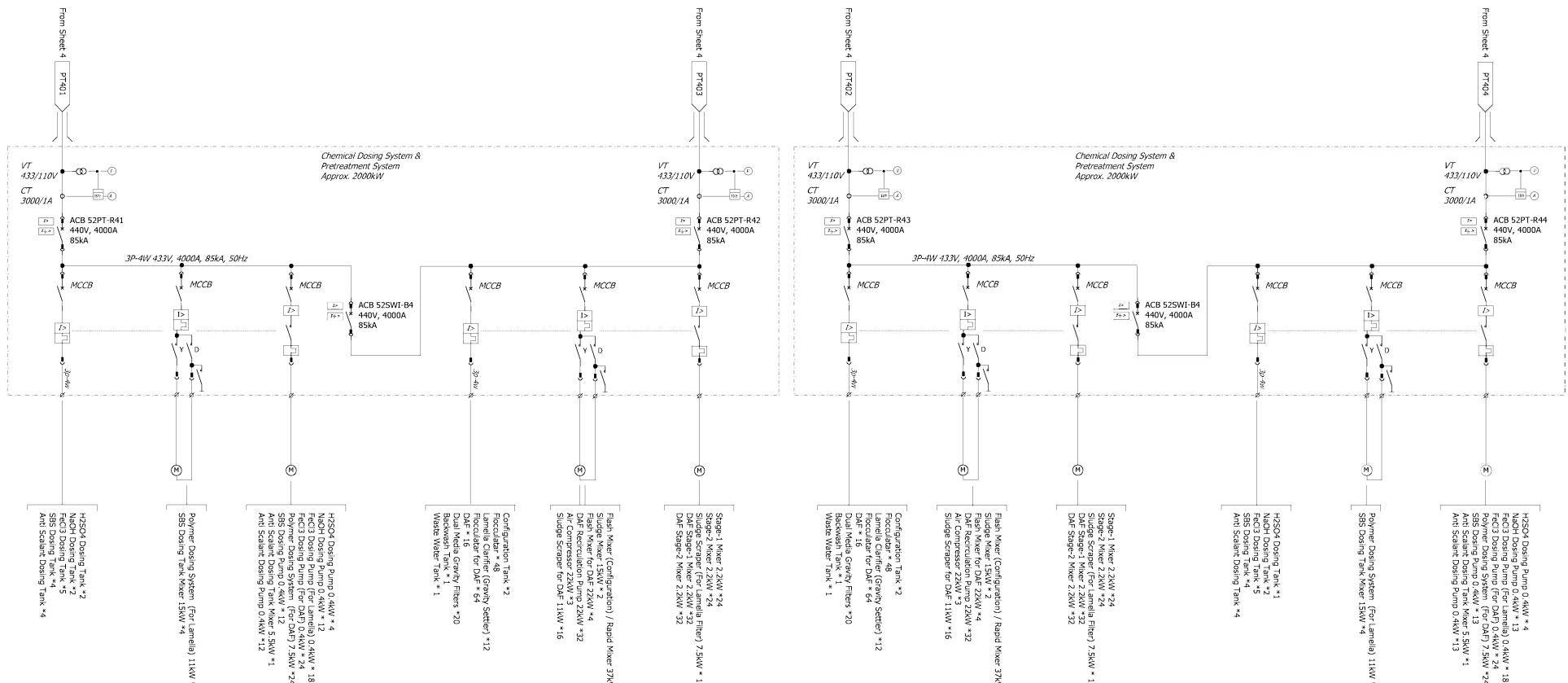


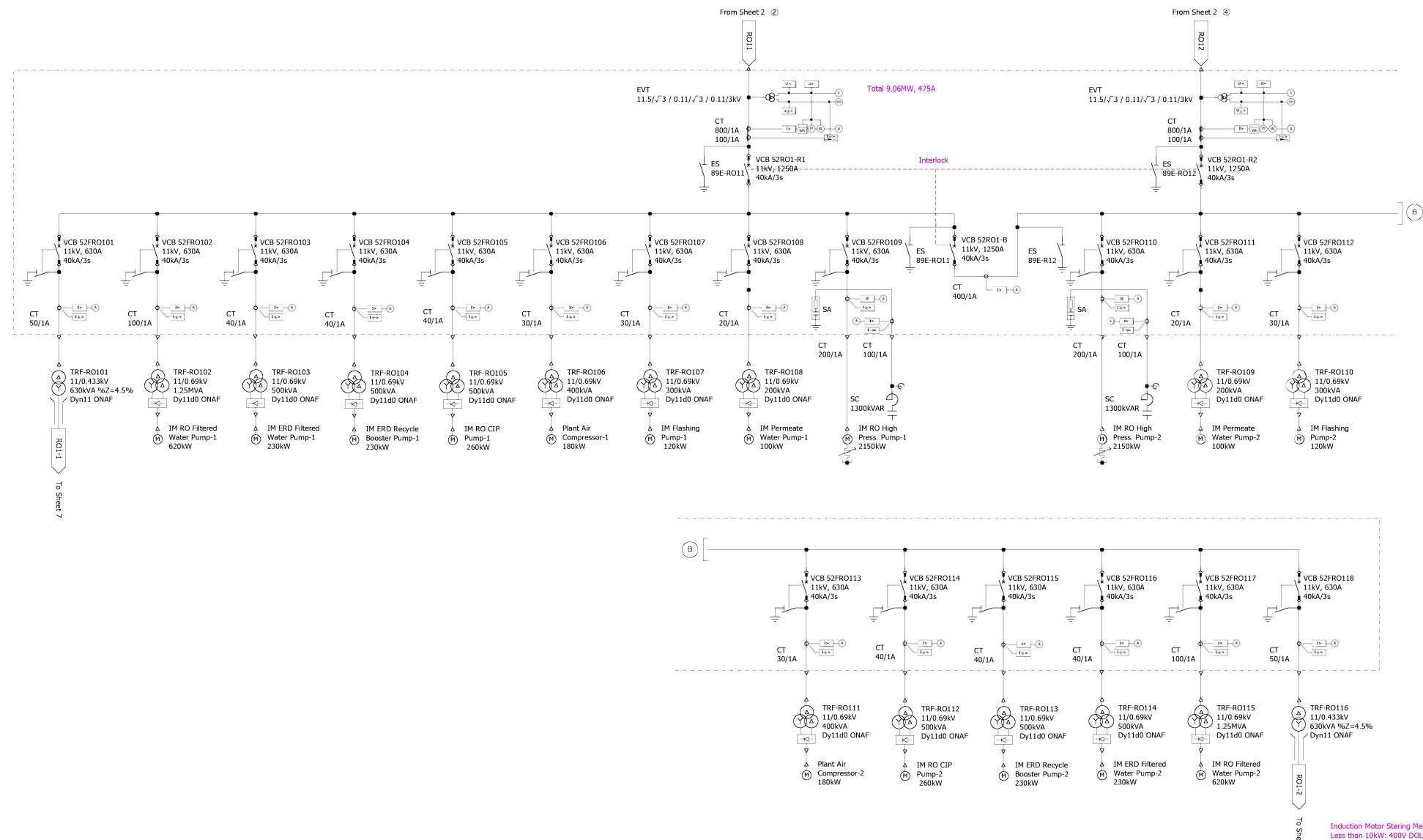
Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Sea Water Intake Single Line Diagram	
DRAWING NO	I - 2 - 3	SIZE A1



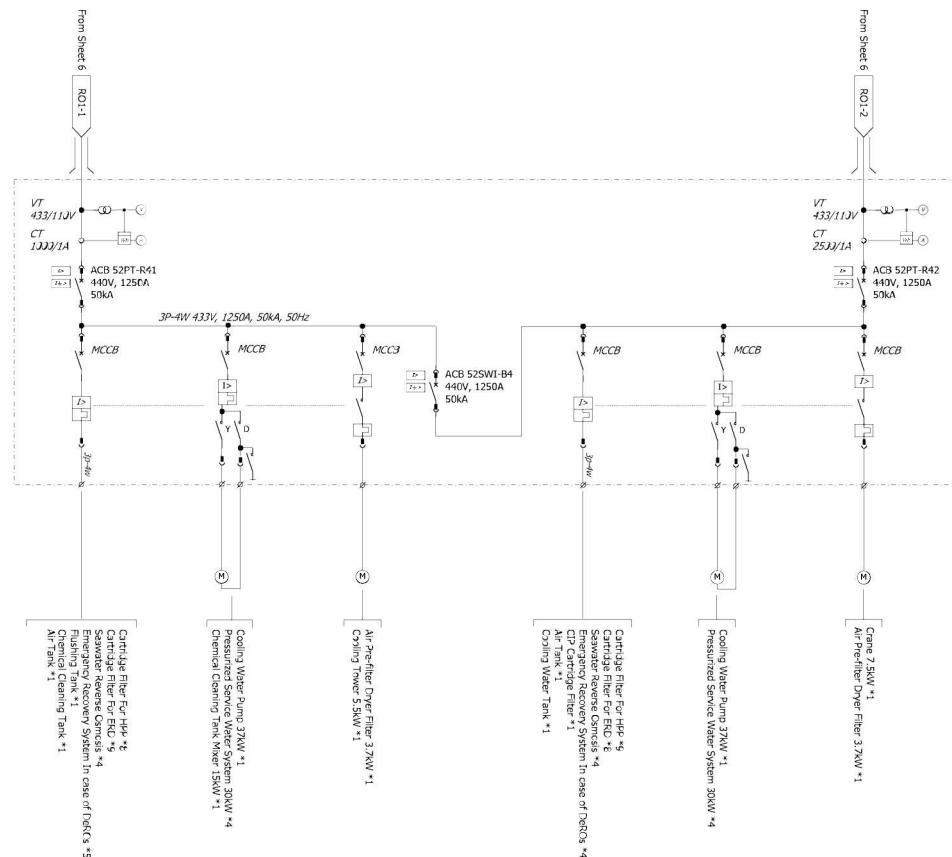
PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Pre Treatment System 11 and 0.69kV Circuit Single Line Diagram	
DRAWING NO	I - 2 - 4	SIZE A1





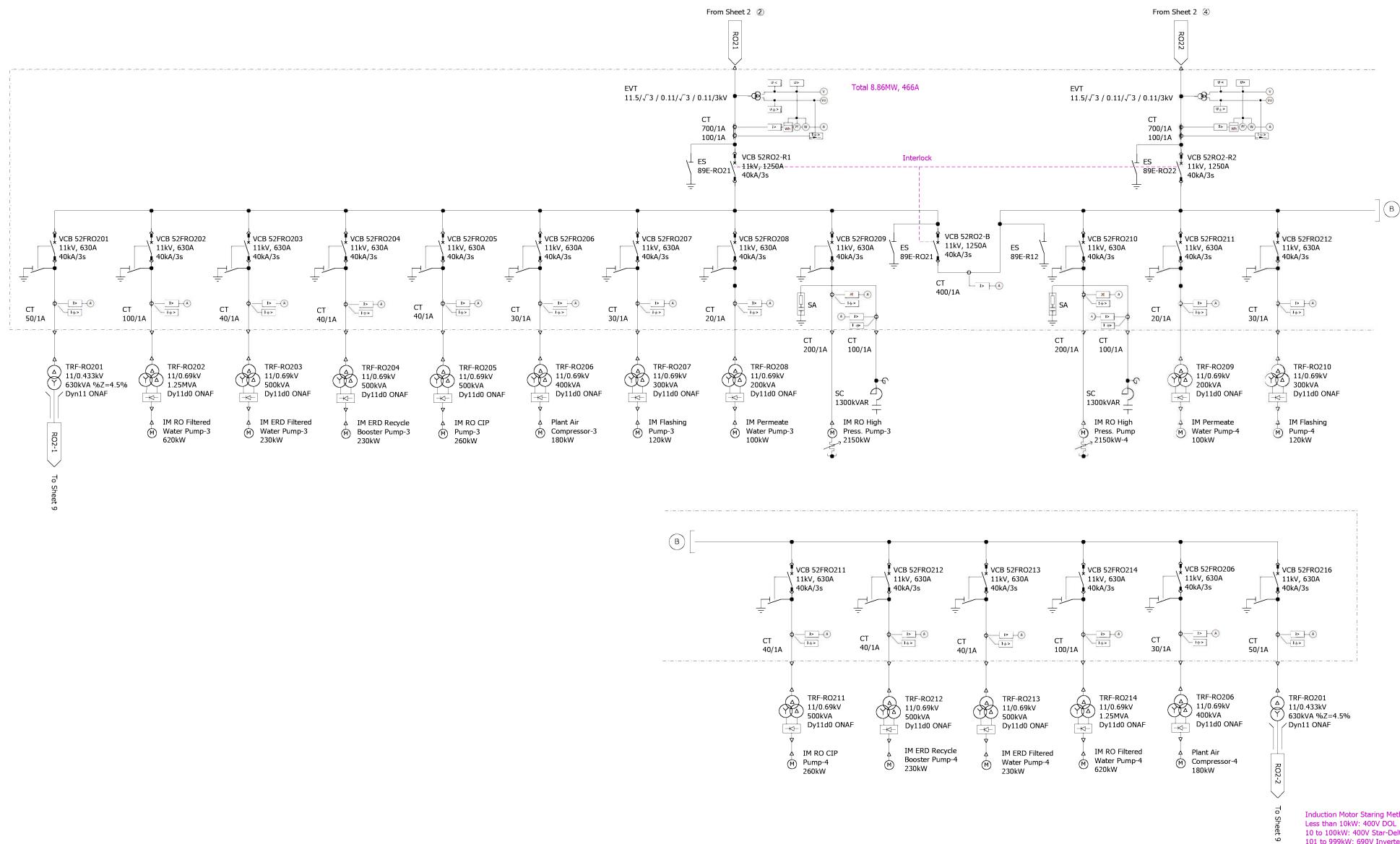
Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant 11kV SWGR-1 Single Line Diagram	
DRAWING NO	I - 2 - 6	SIZE
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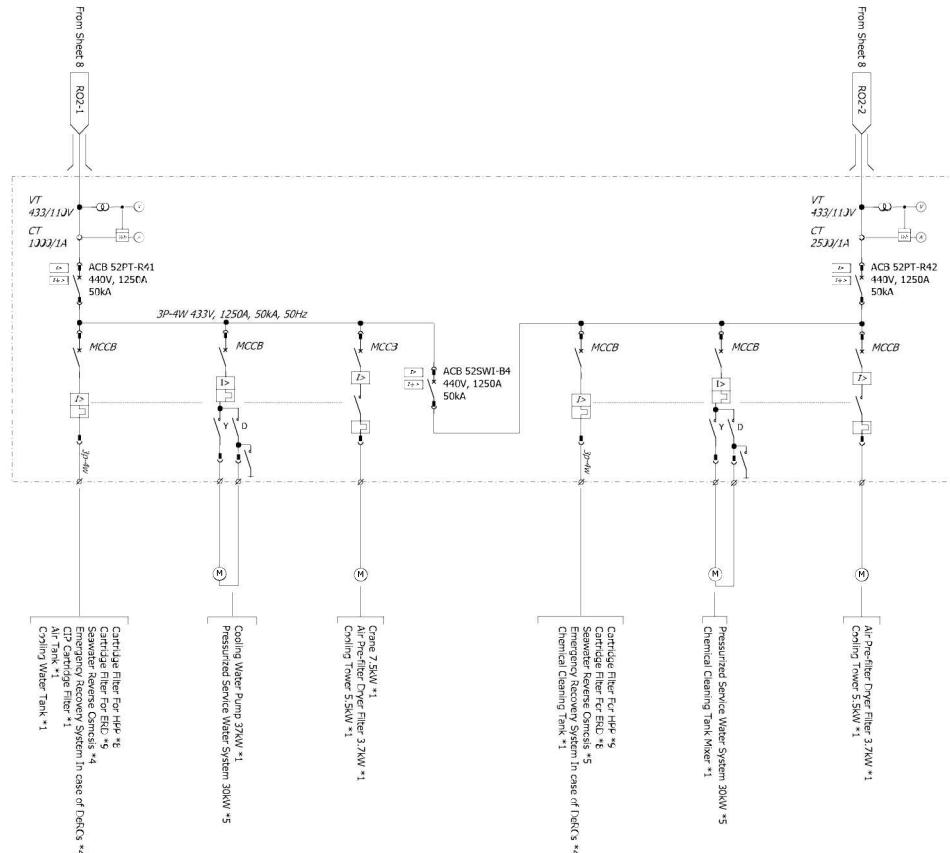


Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

More than 1000KV, 11KV Resistor		
PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant 433V MCC-1 Single Line Diagram	
DRAWING NO	I - 2 - 7	SIZE A1

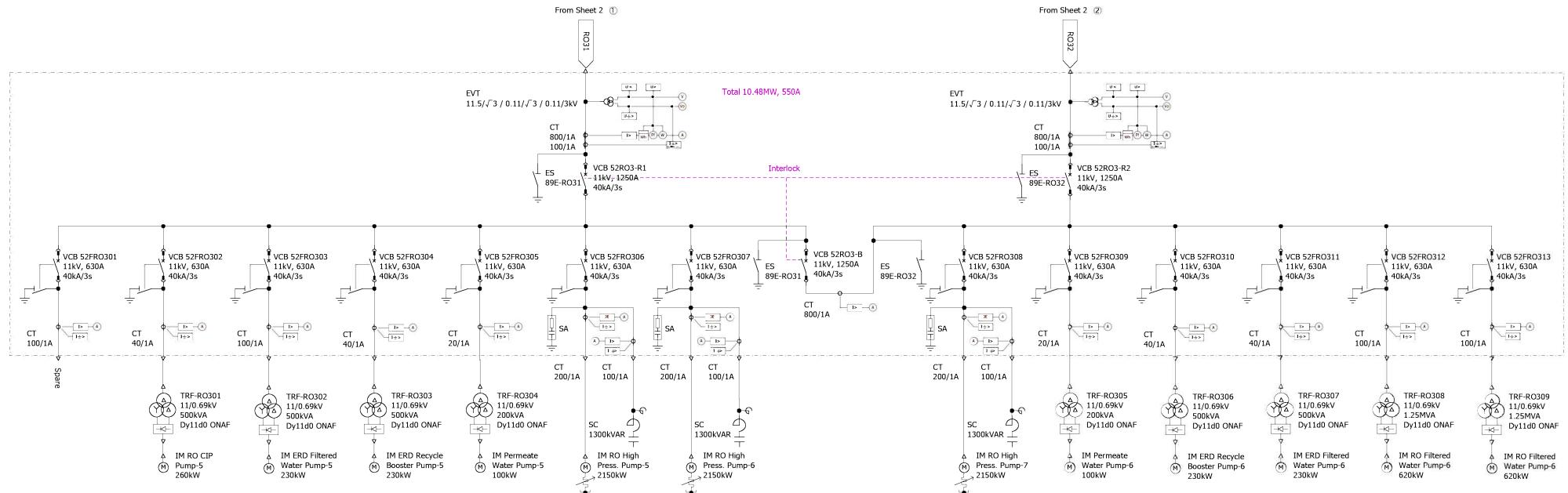


PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant: 11kV SWGR-2 Single Line Diagram	
DRAWING NO	I - 2 - 8	SIZE
		A1



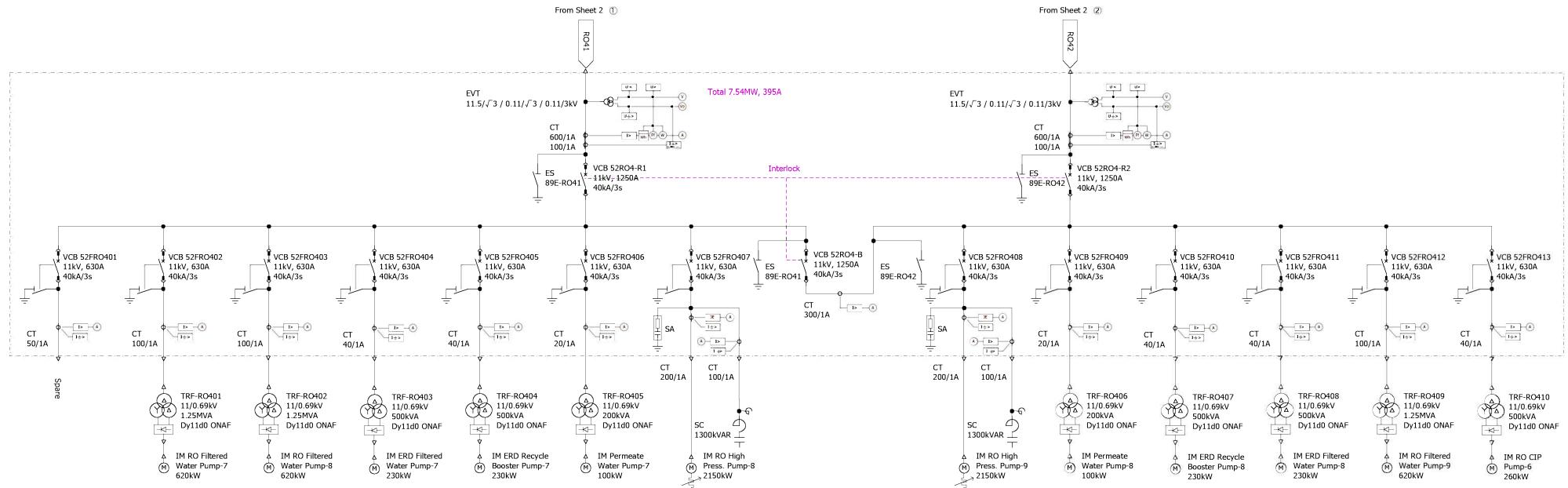
Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant 433V MCC-2 Single Line Diagram	
DRAWING NO	I - 2 - 9	SIZE A1



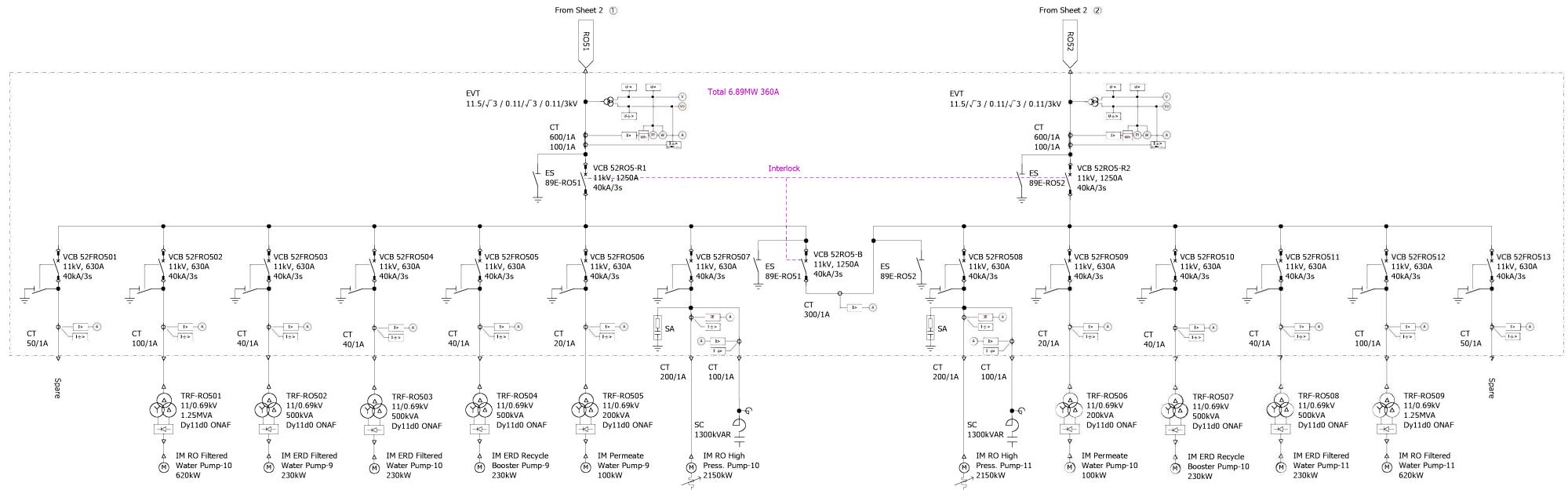
Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant: 11kV SWGR-3 Single Line Diagram	
DRAWING NO	I - 2 - 10	SIZE A1



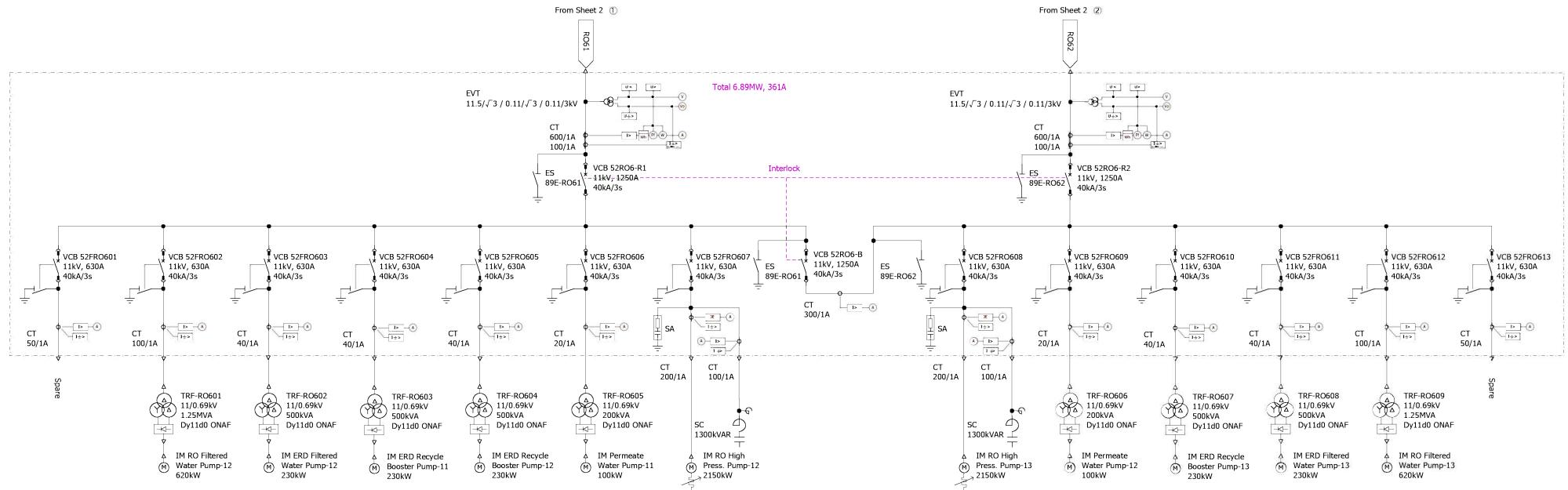
Induction Motor Starting Method
 Less than 10kW: 400V DOL
 10 to 100kW: 400V Star-Delta
 101 to 999kW: 690V Inverter
 More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant 11kV SWGR-4 Single Line Diagram	
DRAWING NO	I - 2 - 11	SIZE A1



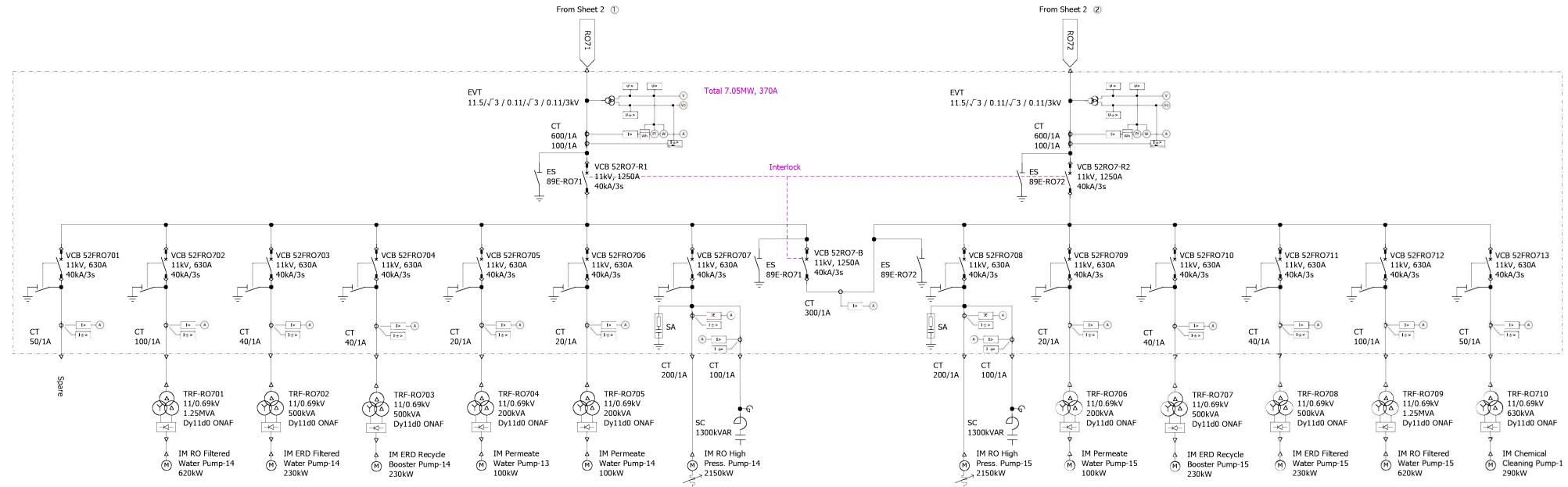
- Induction Motor Starting Method
- Less than 10kW: 400V DOL
- 10 to 100kW: 400V Star-Delta
- 101 to 999kW: 690V Inverter
- More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant 11kV SWGR-5 Single Line Diagram	
DRAWING NO	I - 2 - 12	SIZE A1



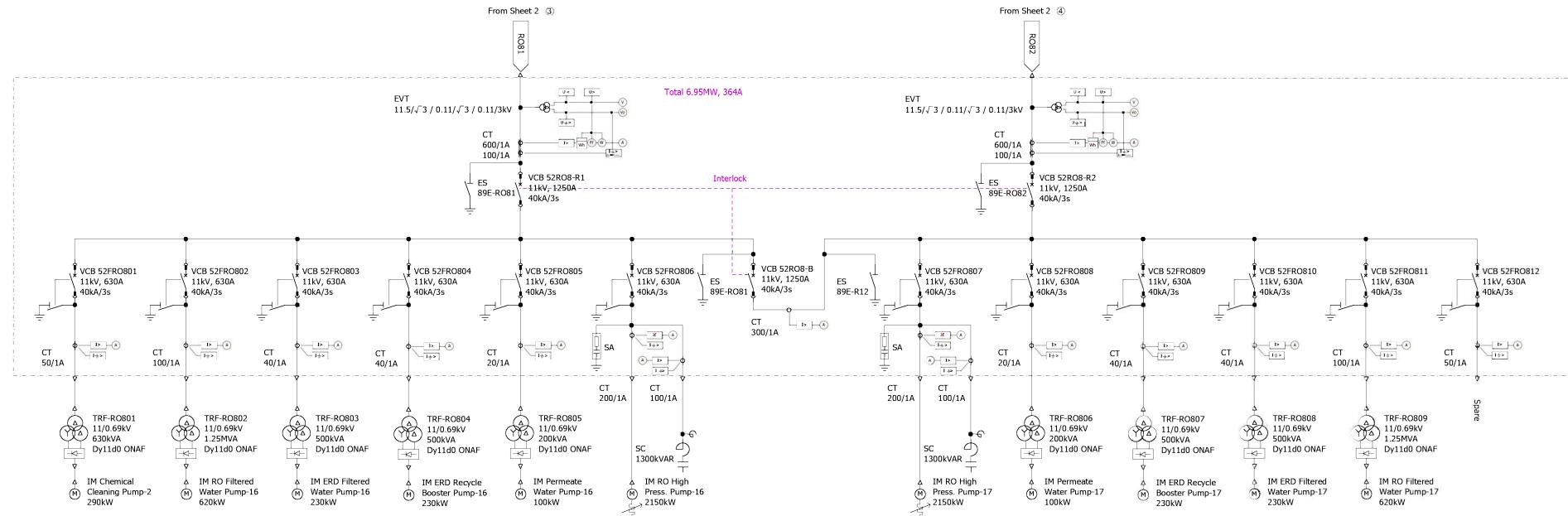
Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant 11kV SWGR-6 Single Line Diagram	
DRAWING NO	I - 2 - 13	SIZE A1



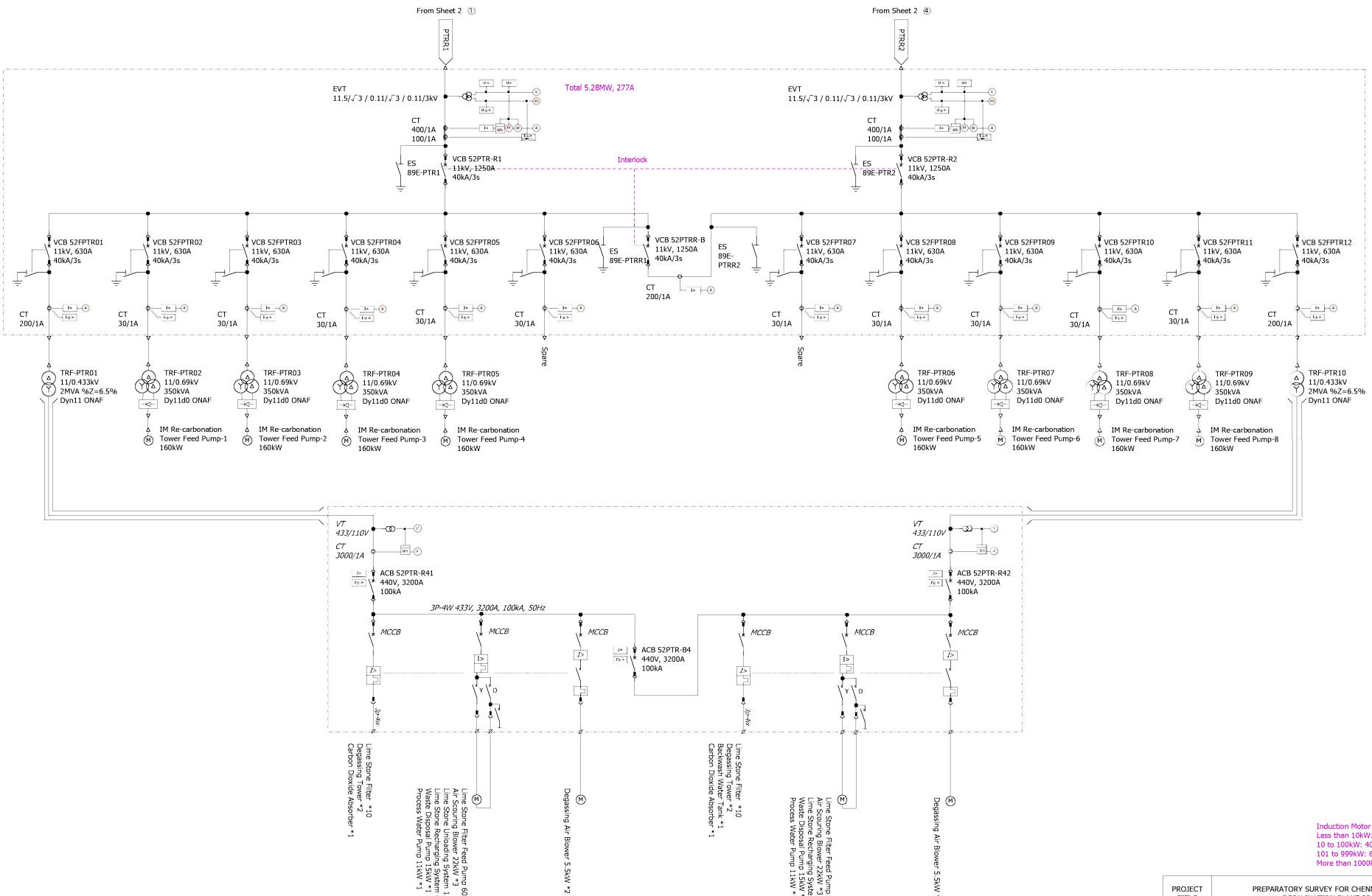
Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Reverse Osmosis Plant 11kV SWGR-7 Single Line Diagram	
DRAWING NO	I - 2 - 14	SIZE
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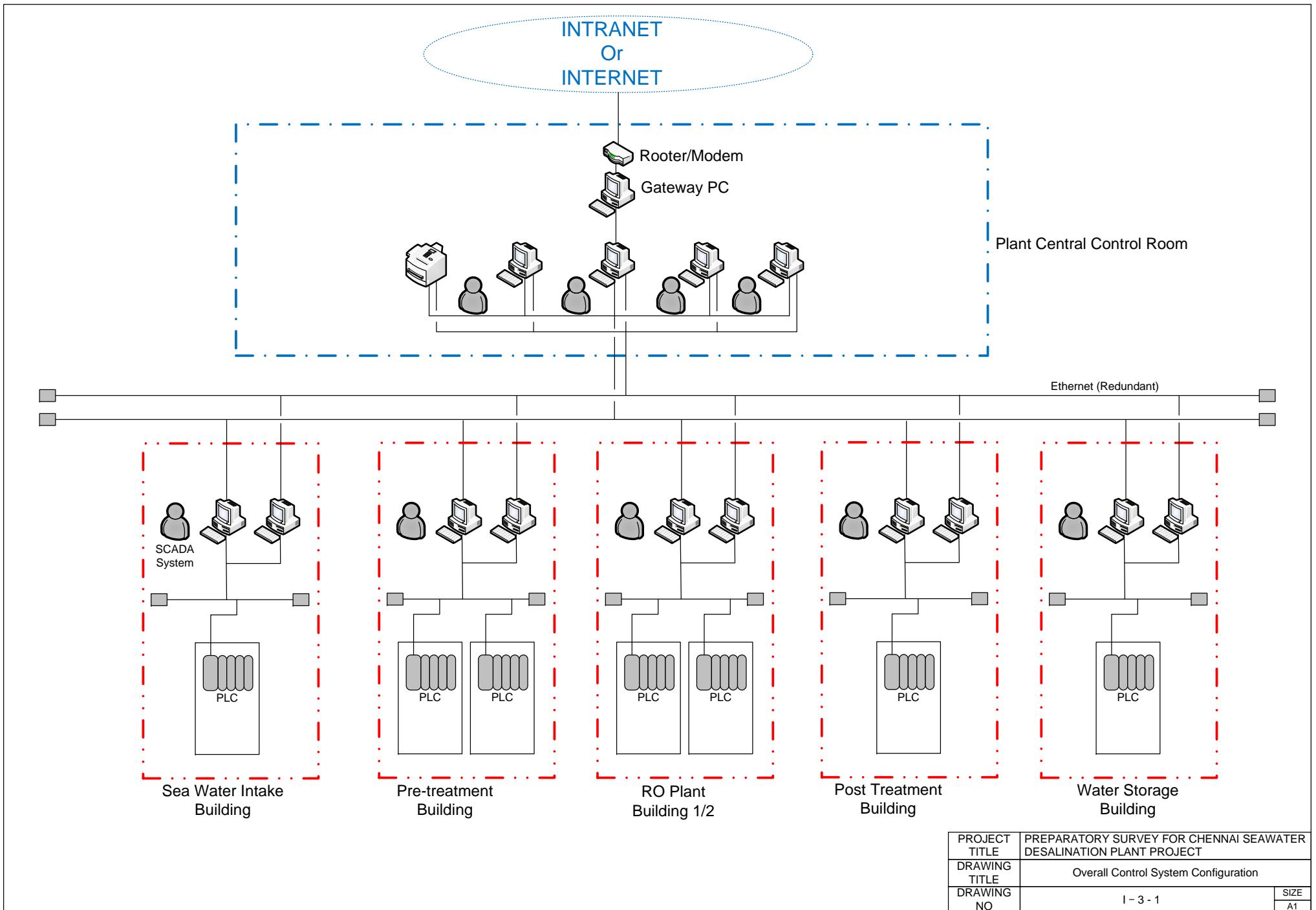
Induction Motor Starting Method
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10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

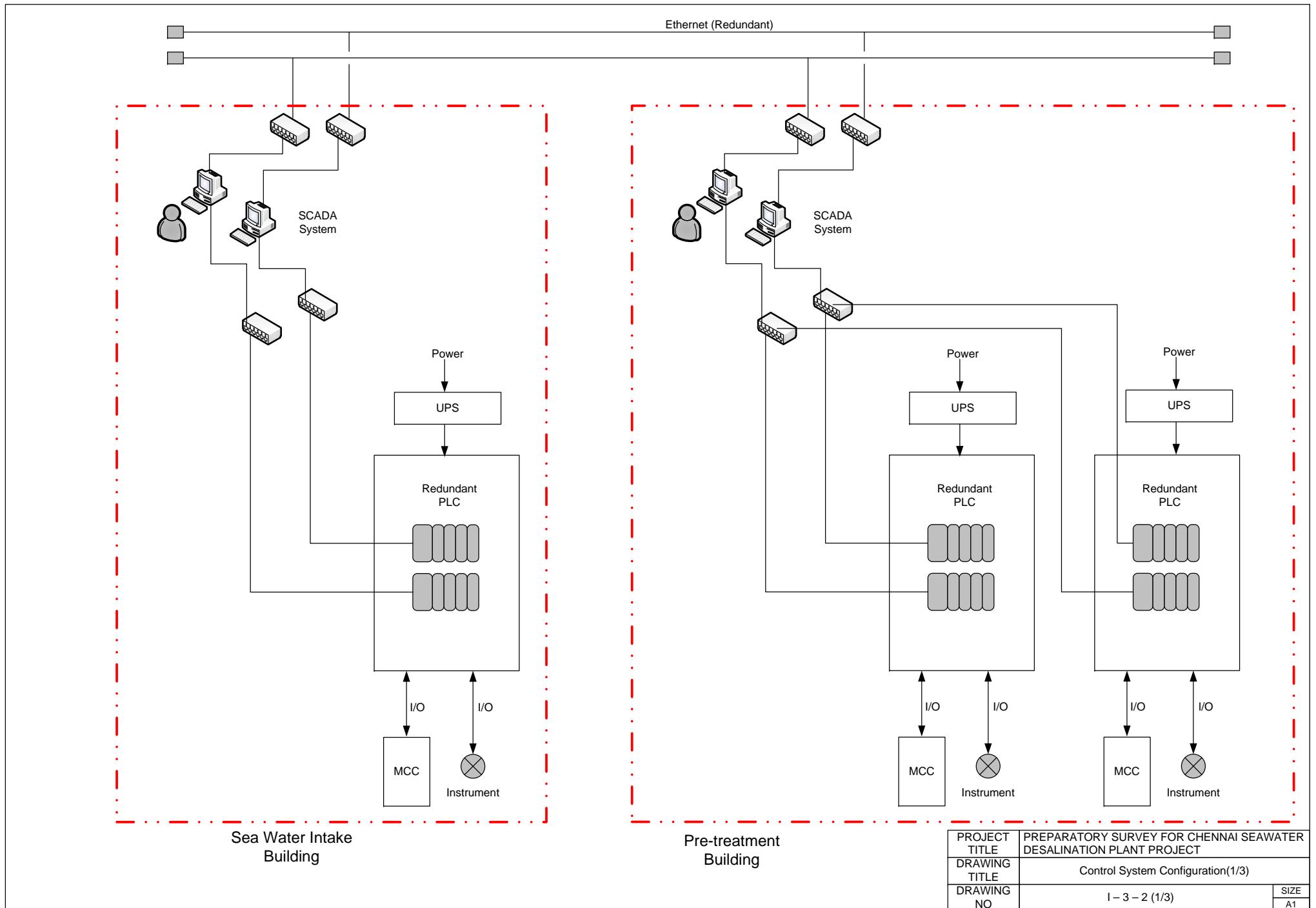
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DRAWING TITLE	Reverse Osmosis Plant 11kV SWGR-8 Single Line Diagram	
DRAWING NO	I - 2 - 15	SIZE
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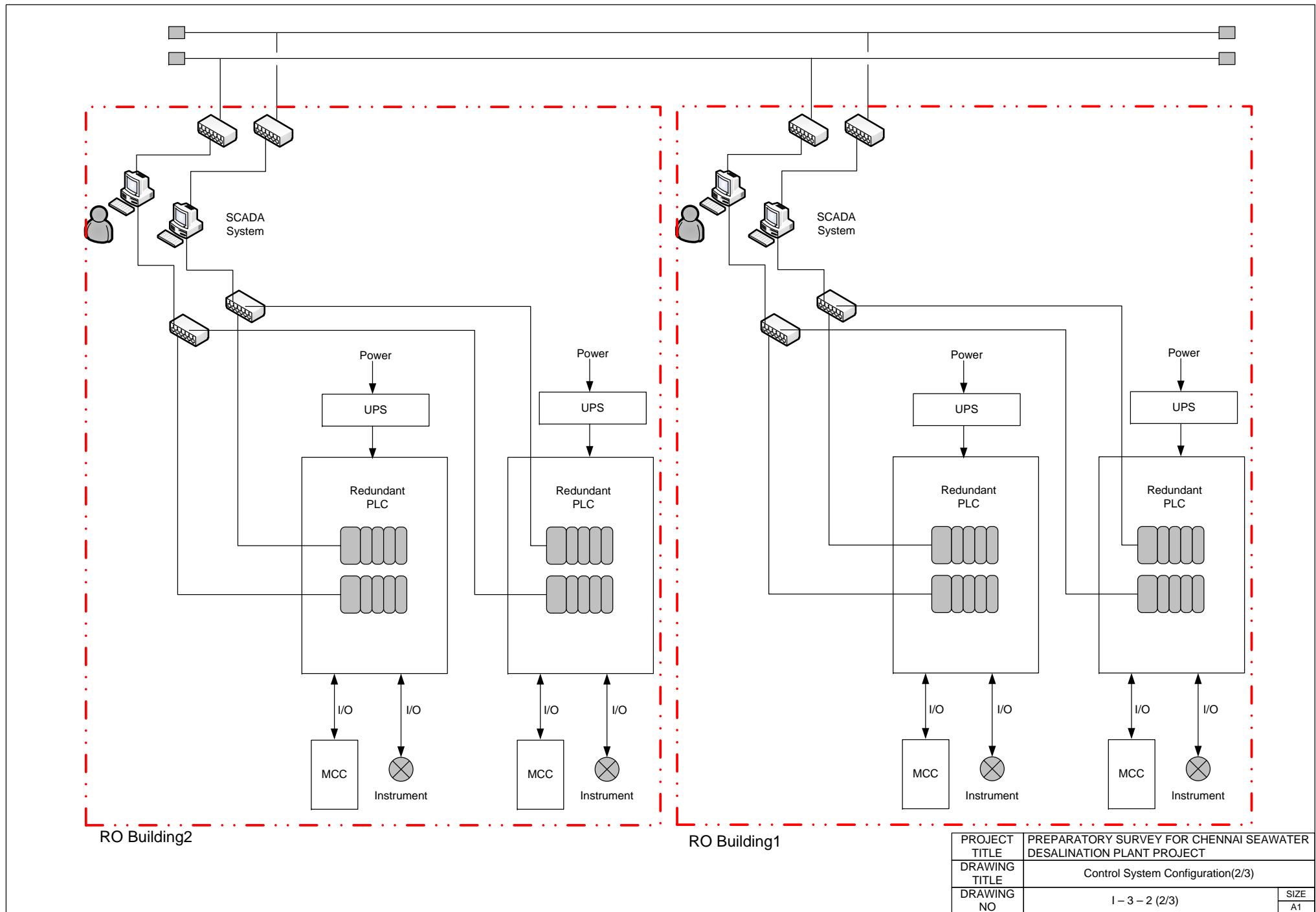


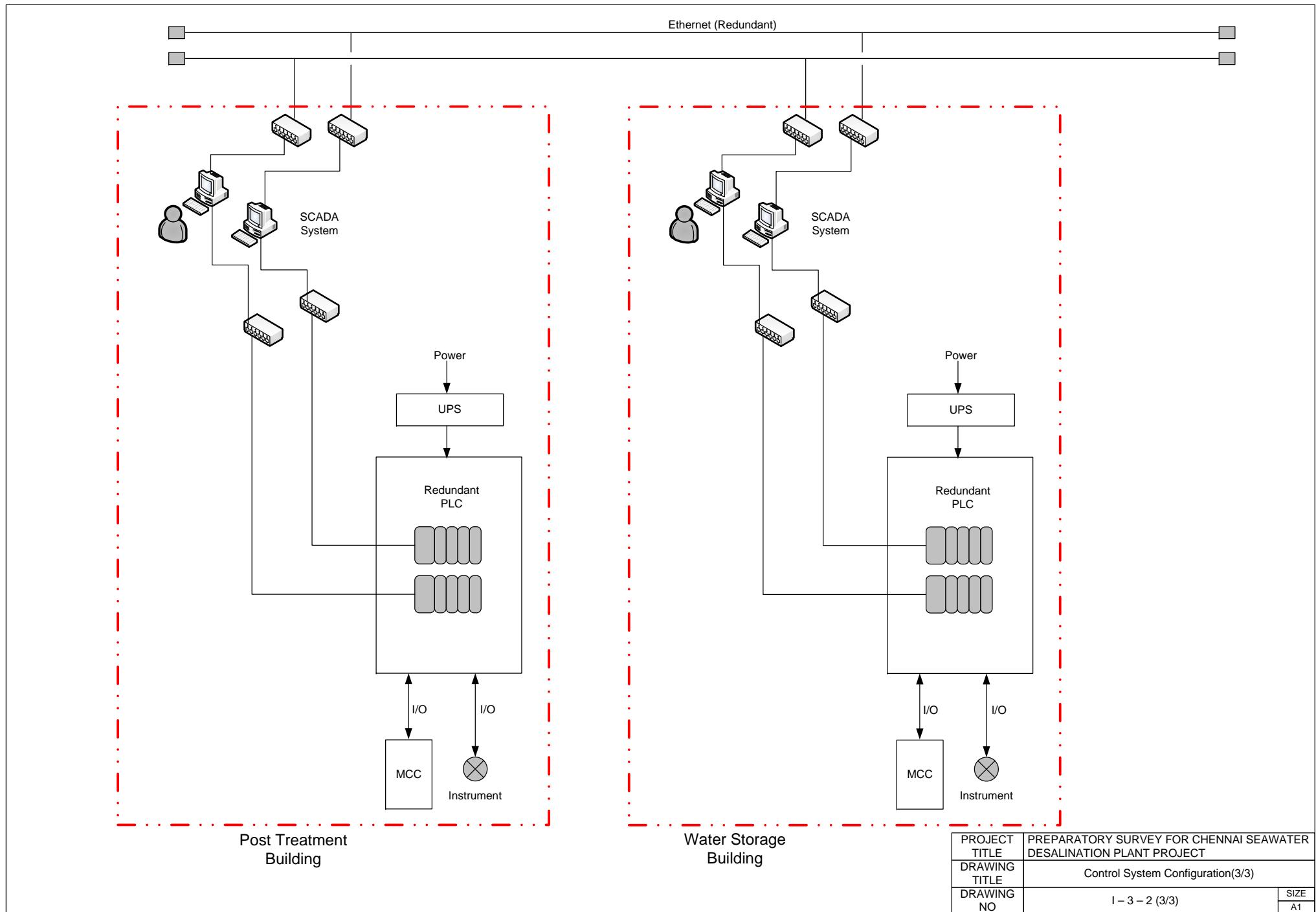
Induction Motor Starting Method
Less than 10kW: 400V DOL
10 to 100kW: 400V Star-Delta
101 to 999kW: 690V Inverter
More than 1000kW: 11kV Resistor

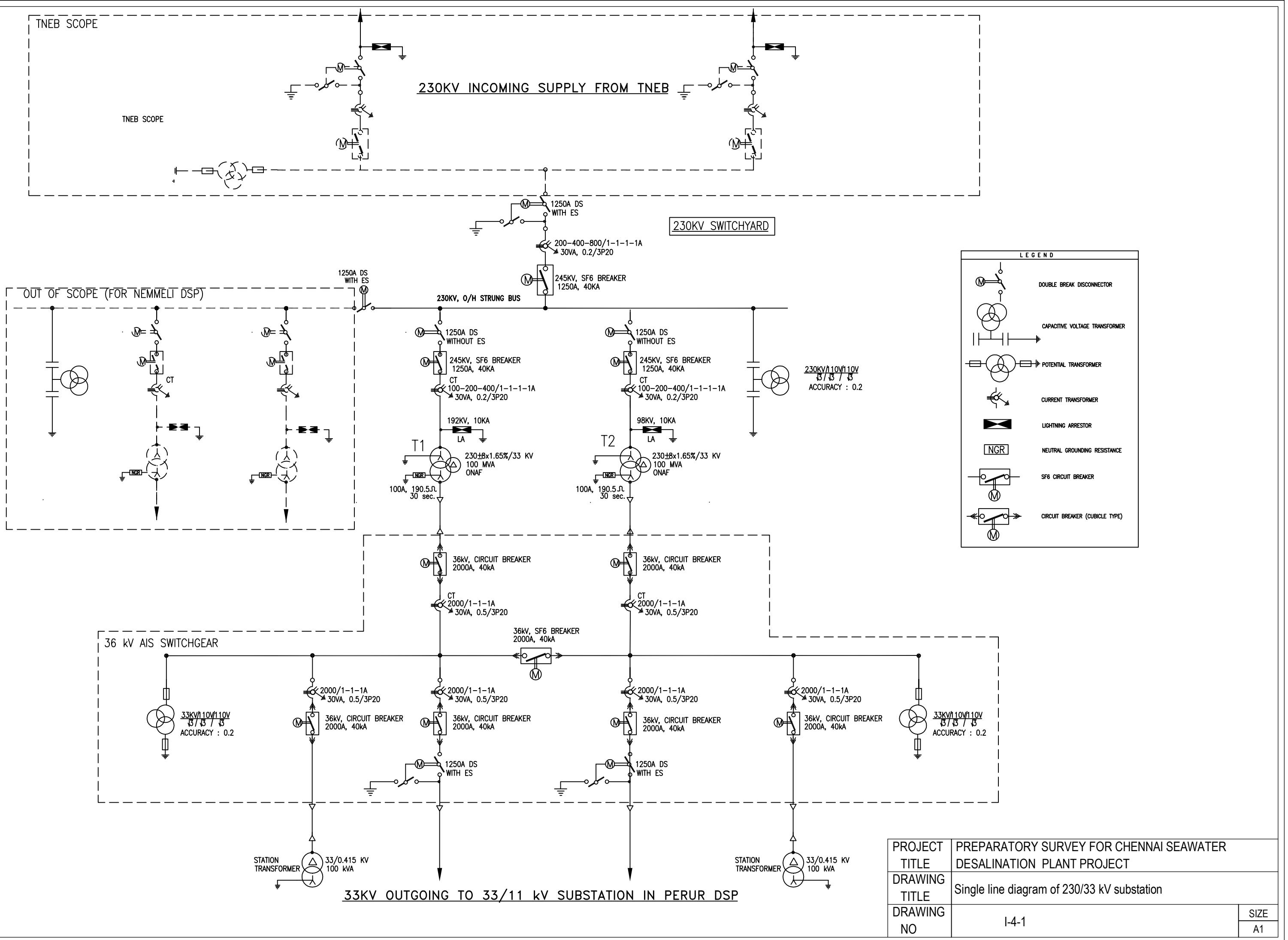
PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	Post Treatment 11kV, 690V, 433V Circuit Single Line Diagram	
DRAWING NO	I - 2 - 16	SIZE A1

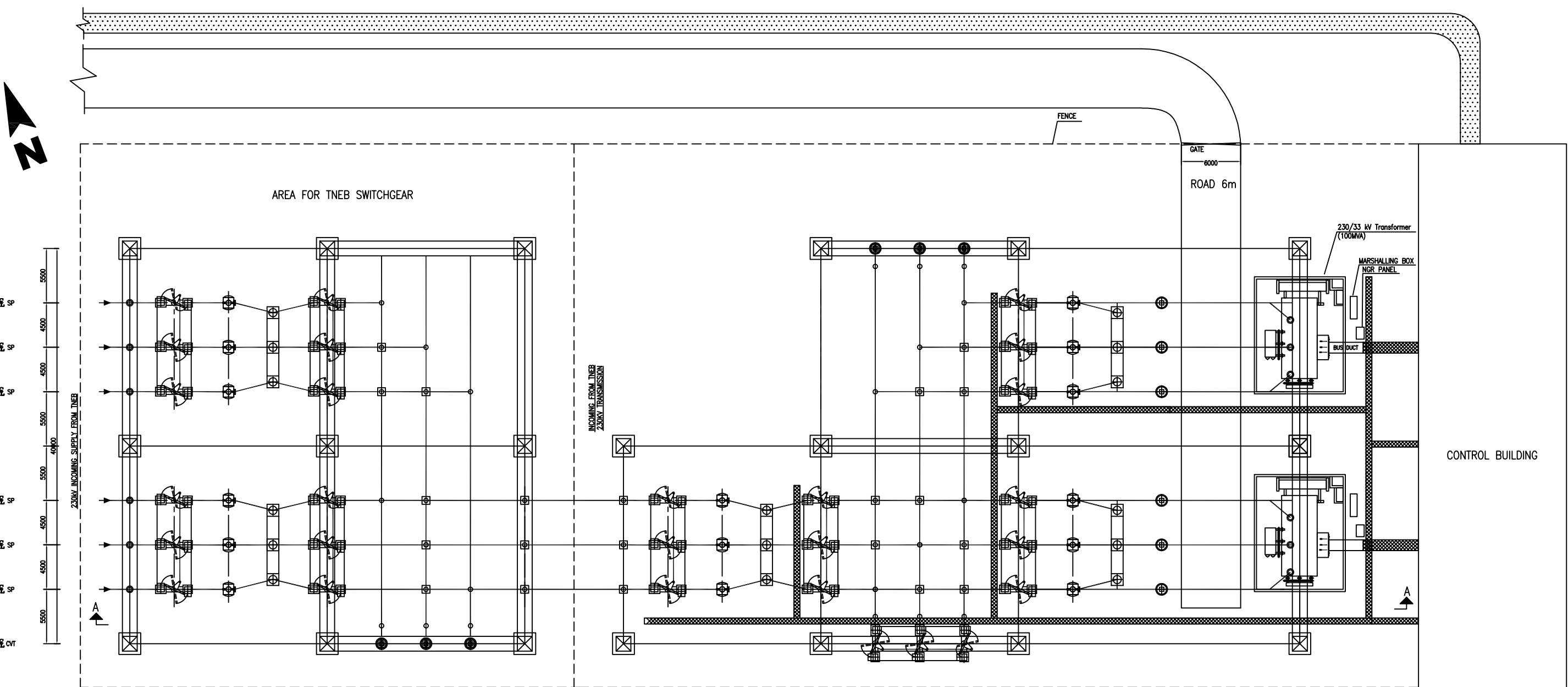




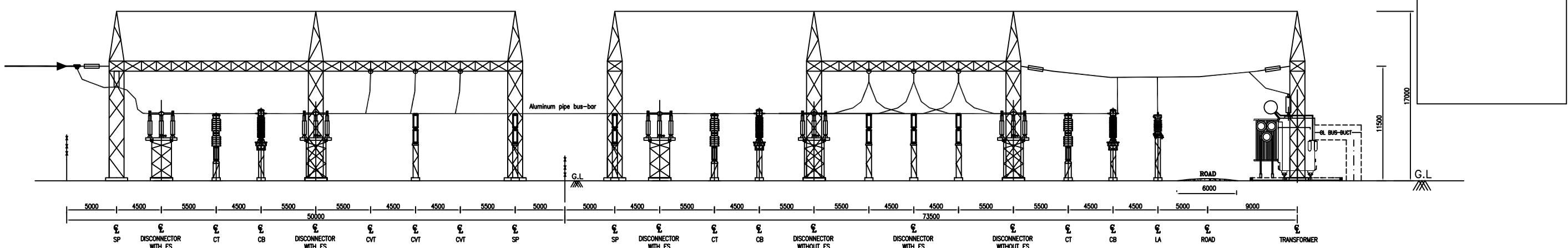




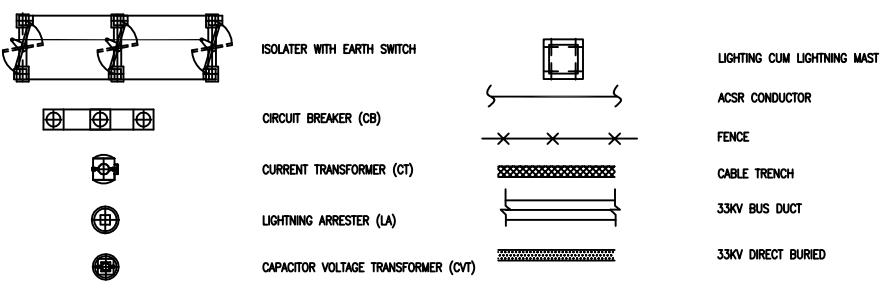




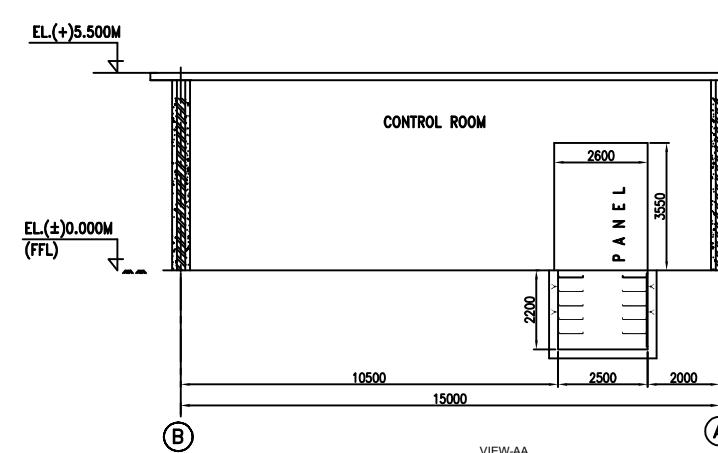
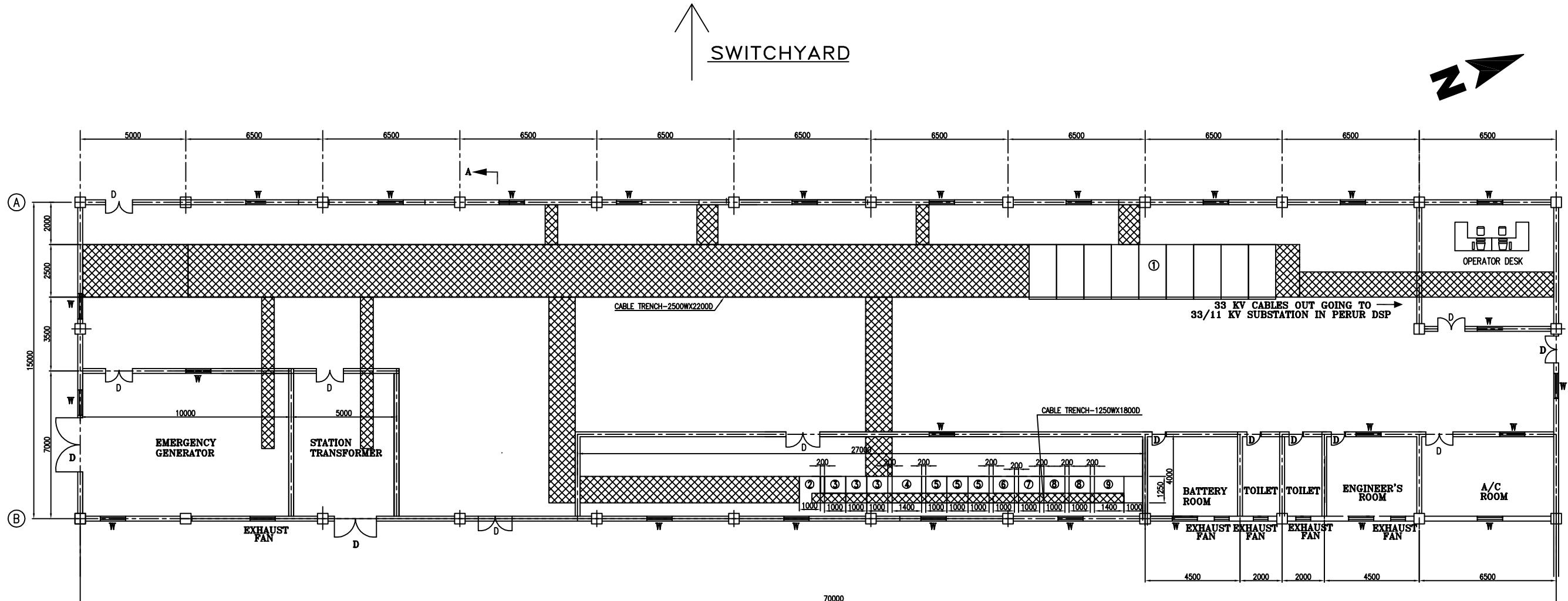
SECTION A-



LEGEND



PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	230/33 kV substation layout	
DRAWING NO	I-4-2	SIZE A1

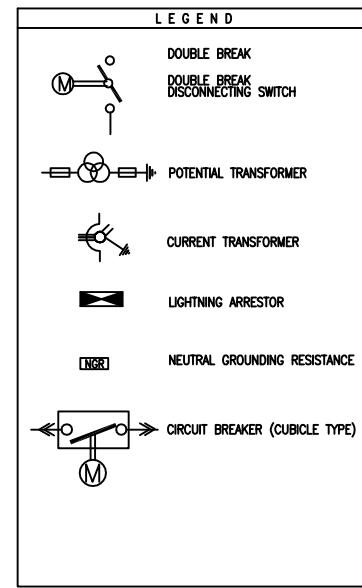
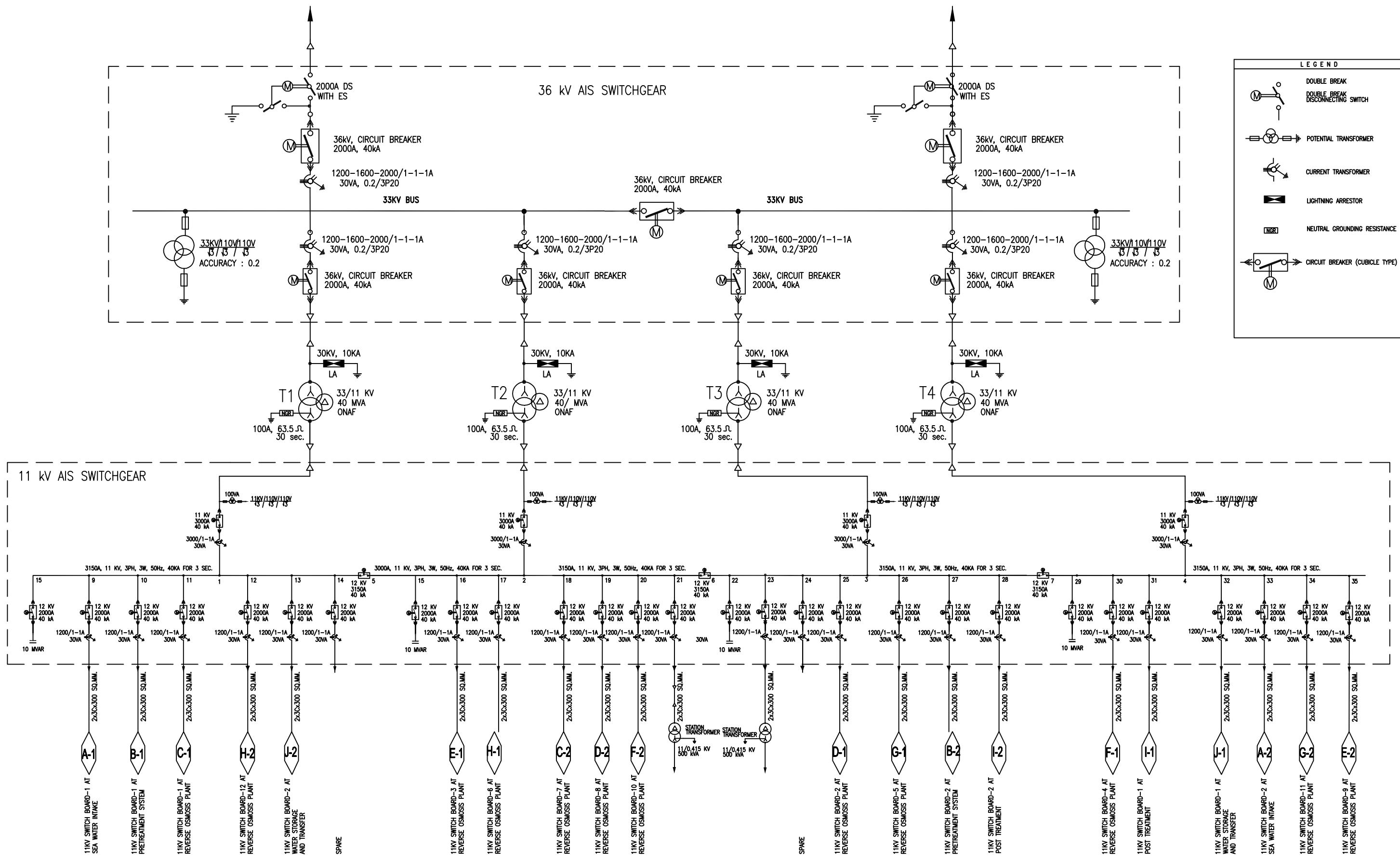


<u>LEGEND</u>			
	DESCRIPTION	QTY.	
1	36KV SWITCHGEAR	1	
2	ACDB-600X800	1	
3	CONTROL PANEL FOR 230 KV LINE AND TRANSFORMER	3	
4	CONTROL PANEL FOR 33 KV LINE	1	
5	RELAY PANEL FOR 230 KV LINE AND TRANSFORMER	3	
6	240AH, BATTERY CHARGER(800X1200)	1	
7	DCDB	1	
8	OLTC PANEL	2	
9	AUXILIARY LIGHTING DISTRIBUTION BOARD	1	

PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	230/33 kV substation control room	
DRAWING NO	I-4-3	SIZE A1

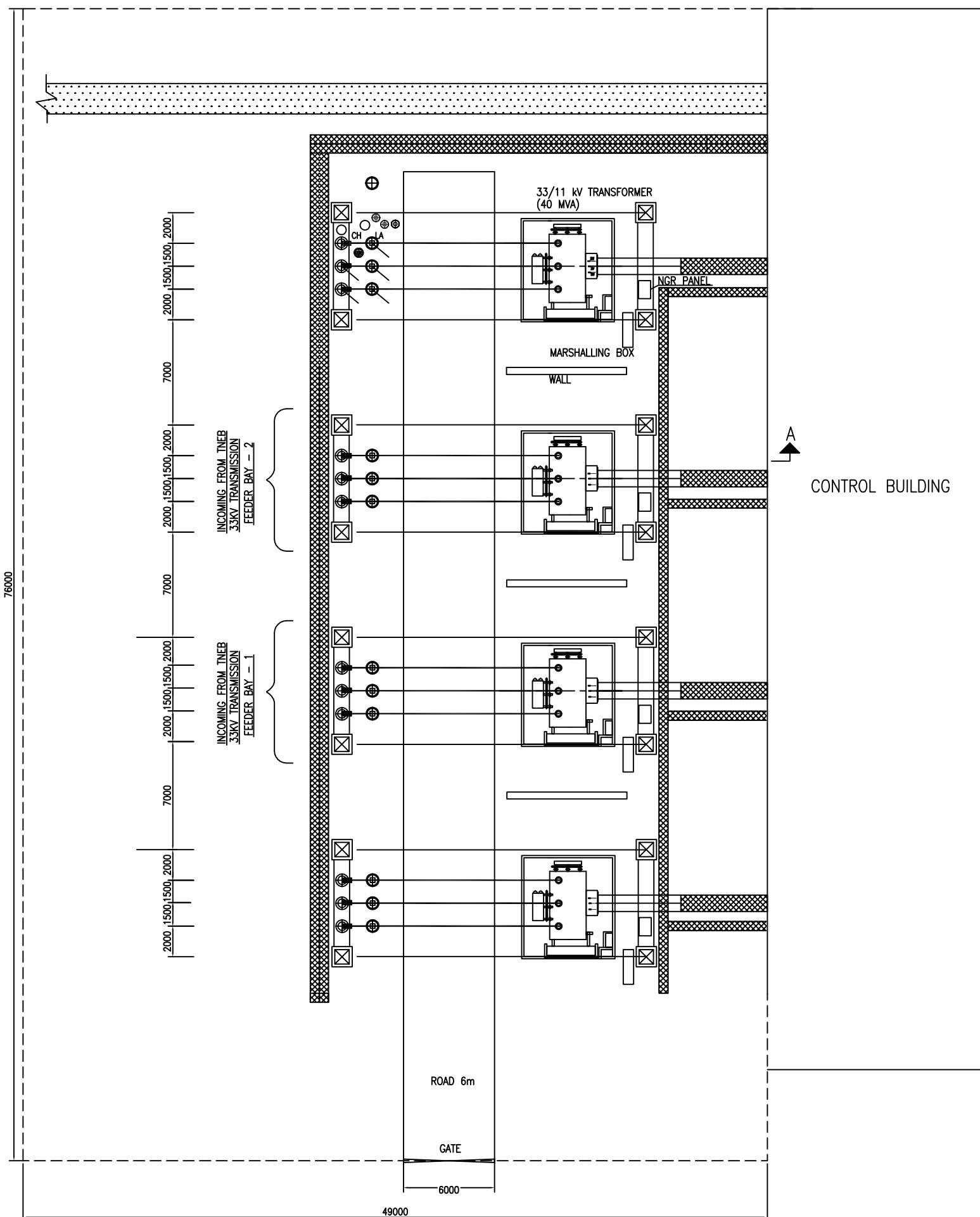
33KV INCOMING SUPPLY FROM 230/33kV Substation

33KV INCOMING SUPPLY FROM 230/33kV Substation

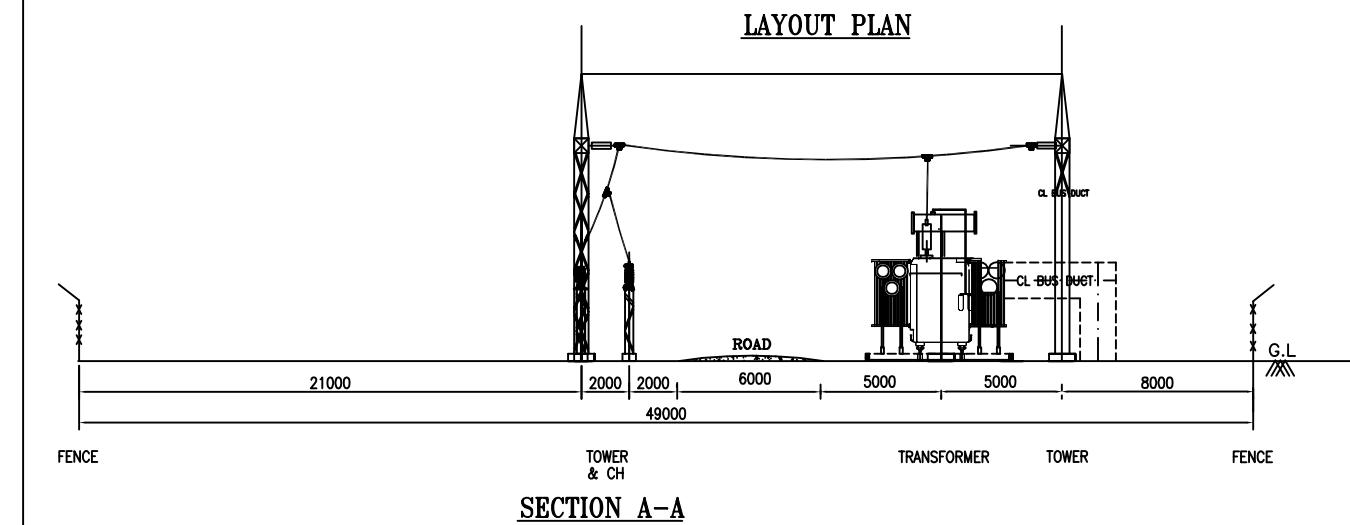


PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE	Single line diagram of 33/11 kV substation
DRAWING NO	I-4-4

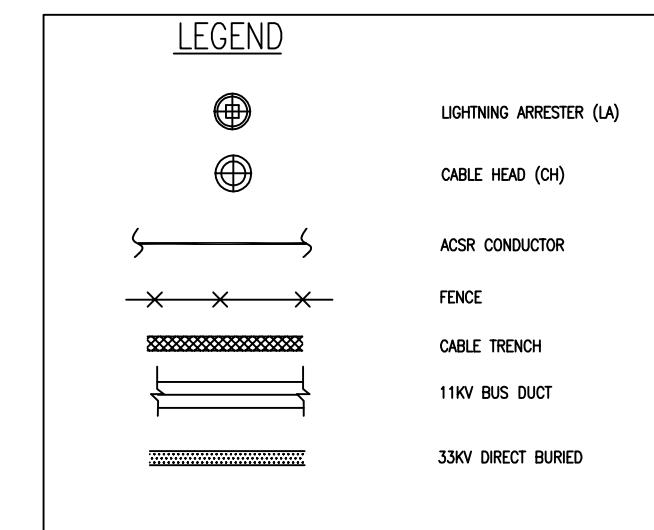
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CONTROL BUILDING

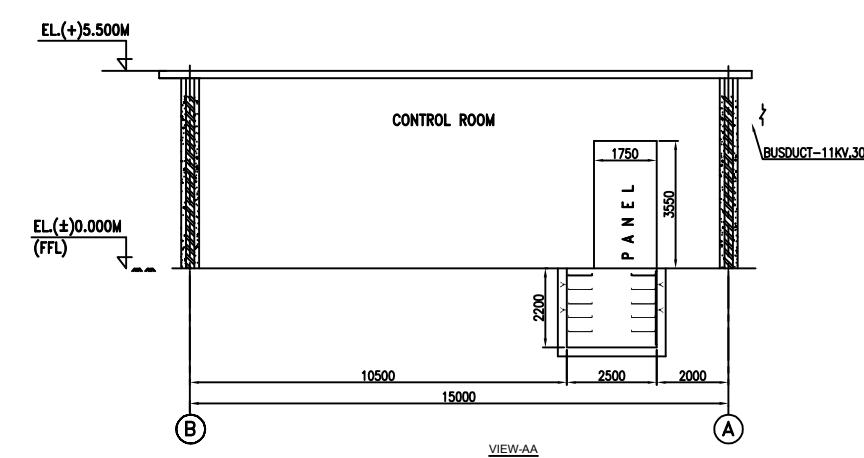
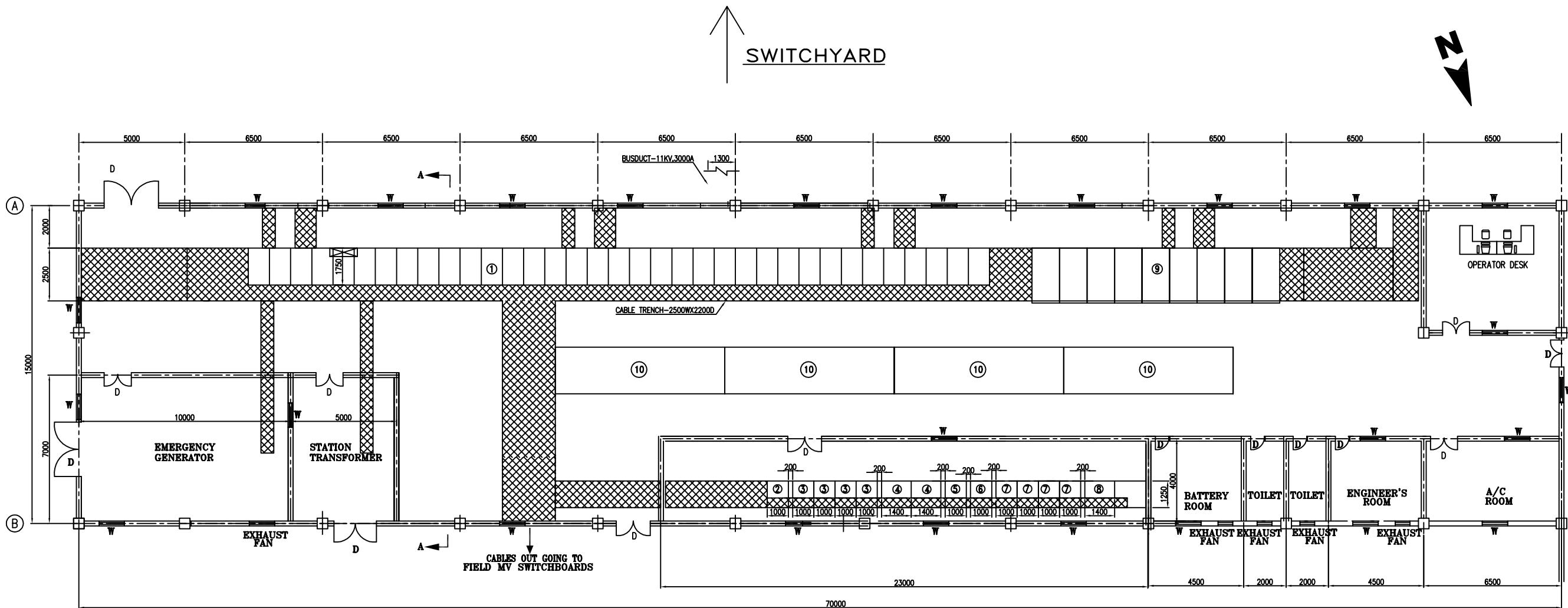


LAYOUT PLAN



PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE	33/11 kV substation layout
DRAWING NO	I-4-5

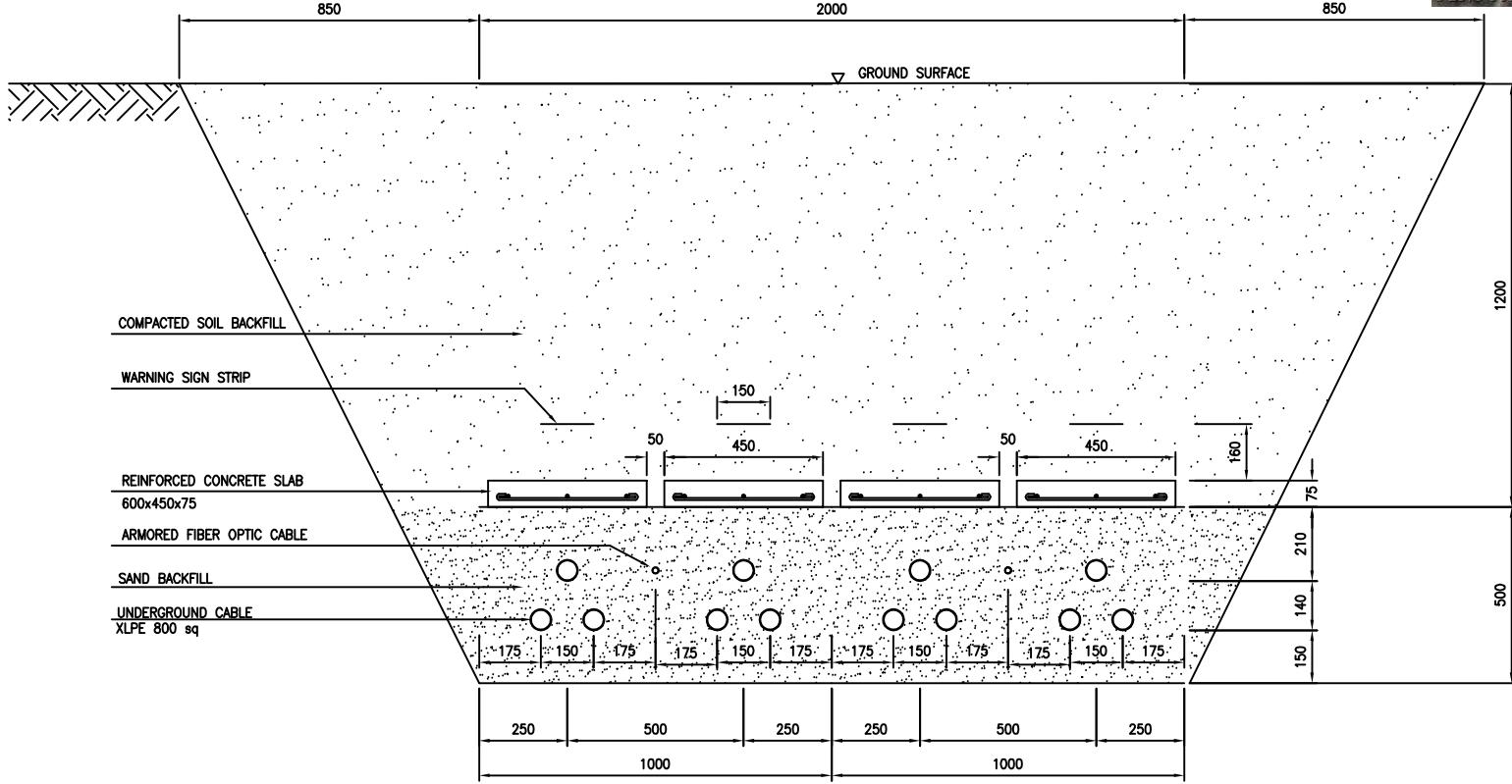
SIZE
A1



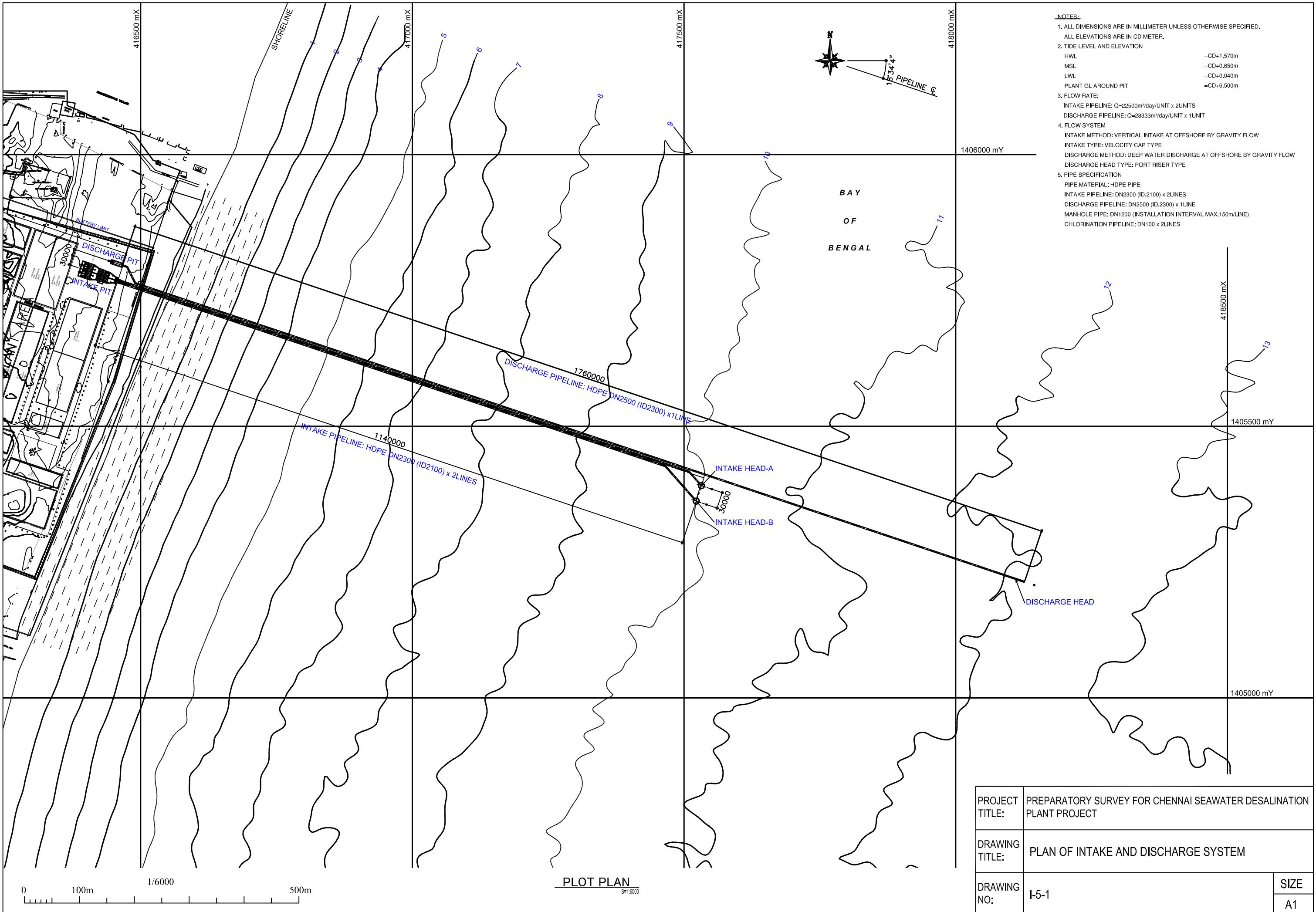
LEGEND		
	DESCRIPTION	QTY.
1	12KV SWITCHGEAR	1
2	ACDB-600X800	1
3	CONTROL PANEL for TR	4
4	CONTROL PANEL FOR 33 KV LINE AND 11 KV LINE	2
5	240AH, BATTERY CHARGER(800X1200)	1
6	DCDB	1
7	OLTC PANEL	4
8	AUXILIARY LIGHTING DISTRIBUTION BOARD	1
9	36KV SWITCHGEAR	1
10	12KV CAPACITOR	4

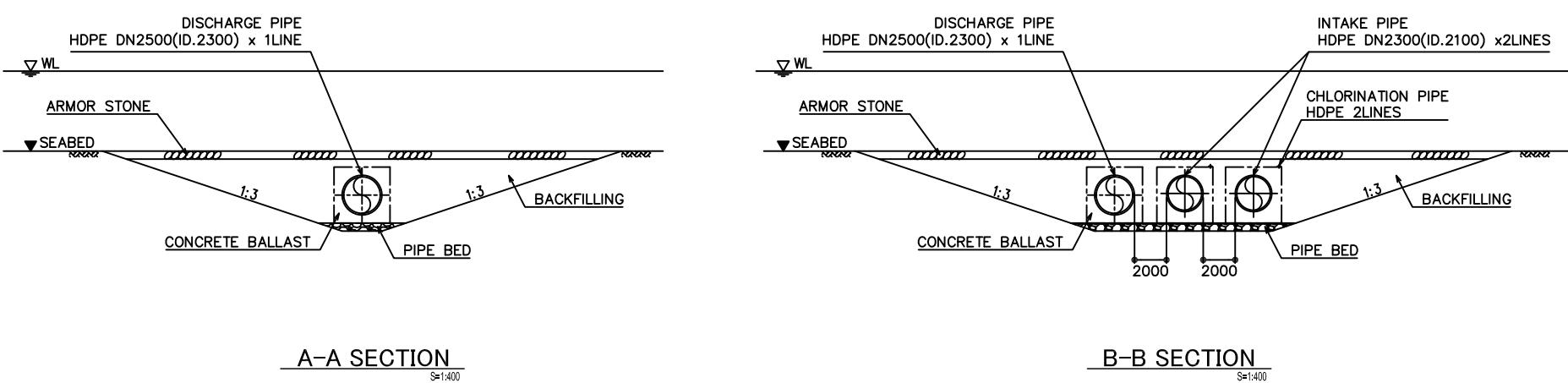
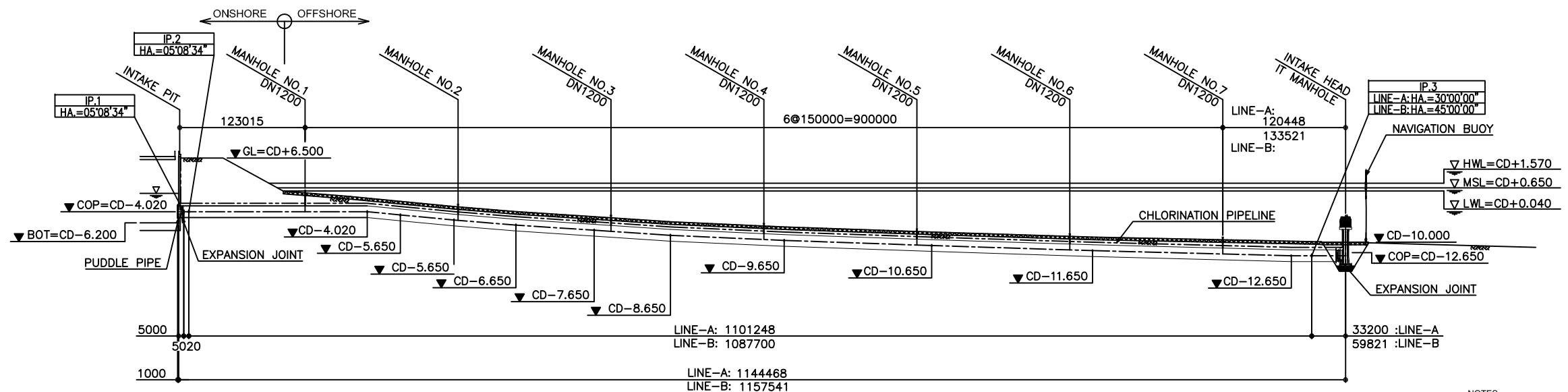
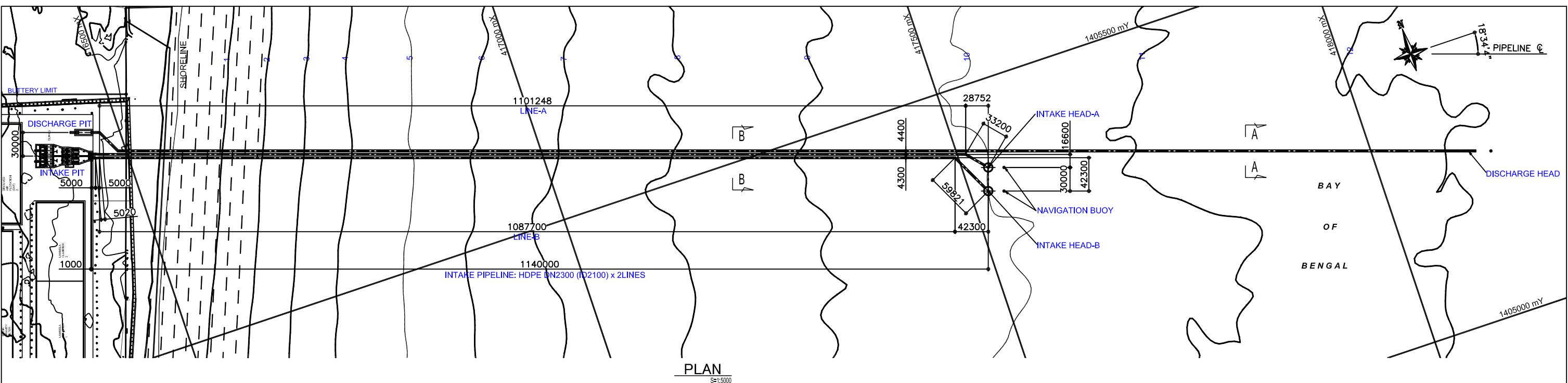
PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE	33/11 kV substation control room
DRAWING NO	I-4-6

SIZE
A1

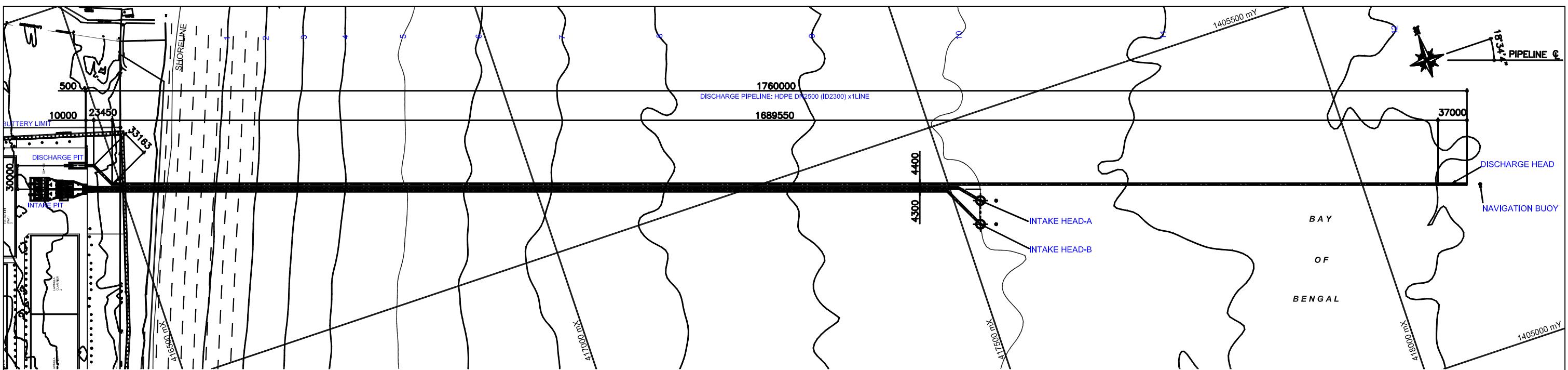


PROJECT TITLE	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE	33 kV transmission line	
DRAWING NO	I-4-7	SIZE A1

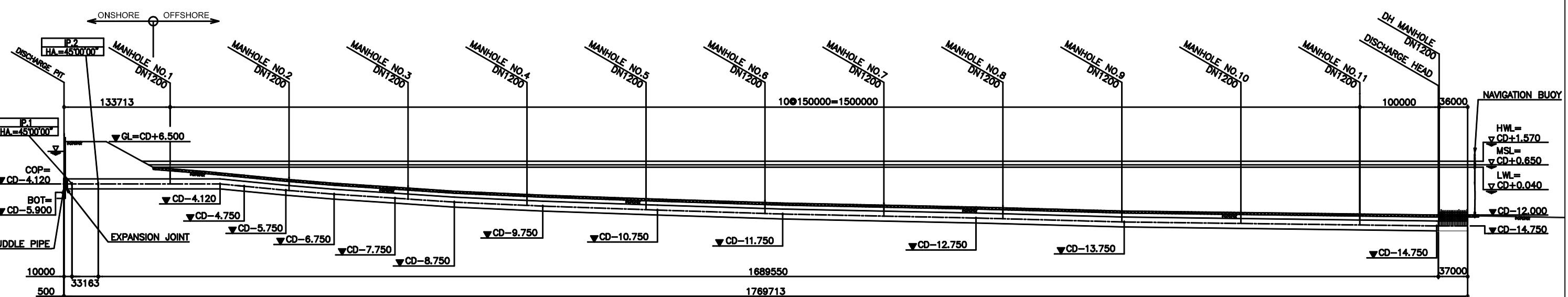




PROJECT TITLE:	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	SEA WATER INTAKE PIPELINE	
DRAWING NO:	I-5-2	SIZE A1

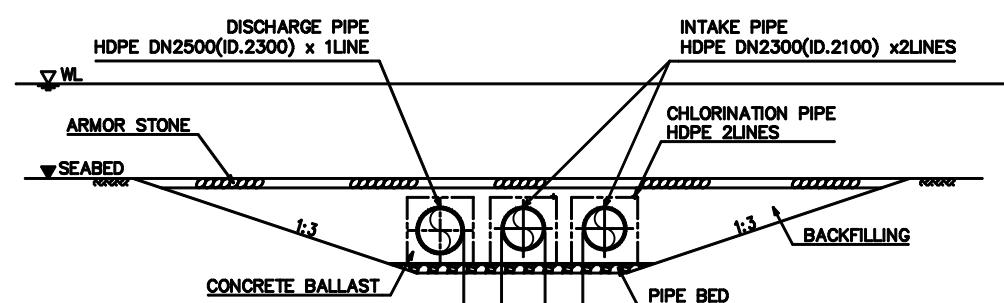


PLAN
S=1:5000



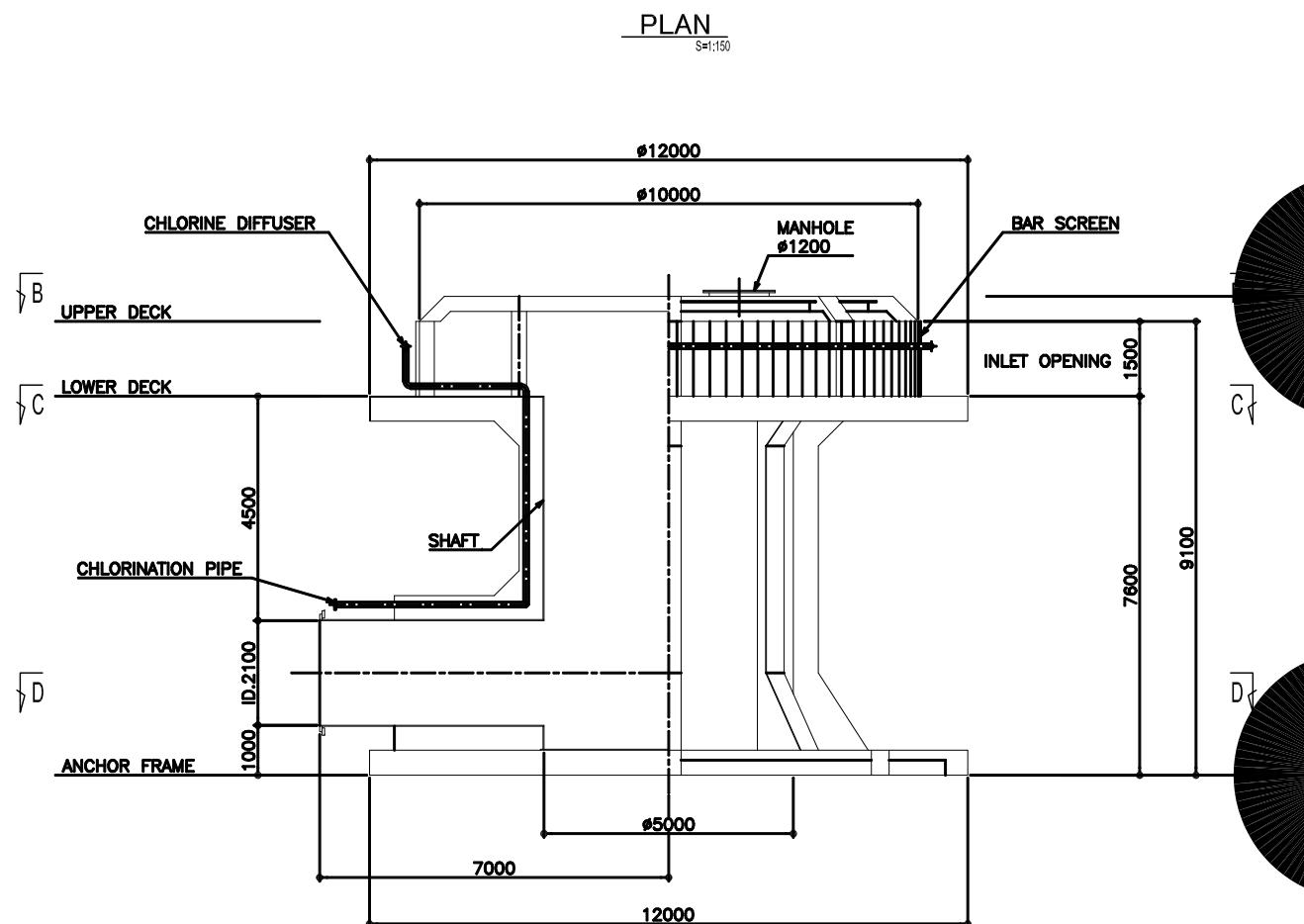
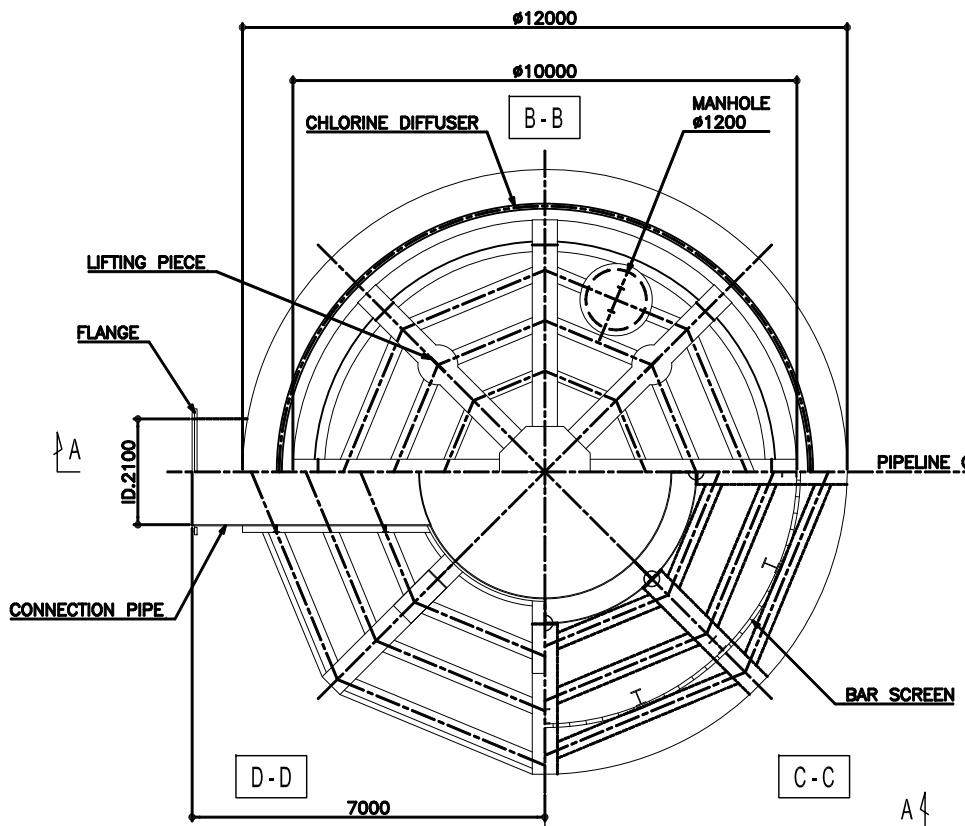
NOTES:

- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
ALL ELEVATIONS ARE IN CD METER.
- TIDE LEVEL AND ELEVATION
HWL = CD+1.570m
MSL = CD+0.650m
LWL = CD+0.040m
PLANT GL AROUND PIT = CD+6.500m
- FLOW RATE:
 $Q=2833\text{m}^3/\text{day}/\text{UNIT} \times 1\text{UNIT}$
- FLOW SYSTEM
DISCHARGE METHOD: DEEP WATER DISCHARGE AT OFFSHORE BY GRAVITY FLOW
DISCHARGE HEAD TYPE: PORT RISER TYPE
- PIPE SPECIFICATION
PIPE MATERIAL: HDPE PIPE
DISCHARGE PIPELINE: DN2500 (ID.2300) x 1LINE
MANHOLE PIPE: DN1200 (INSTALLATION INTERVAL MAX.150m/LINE)

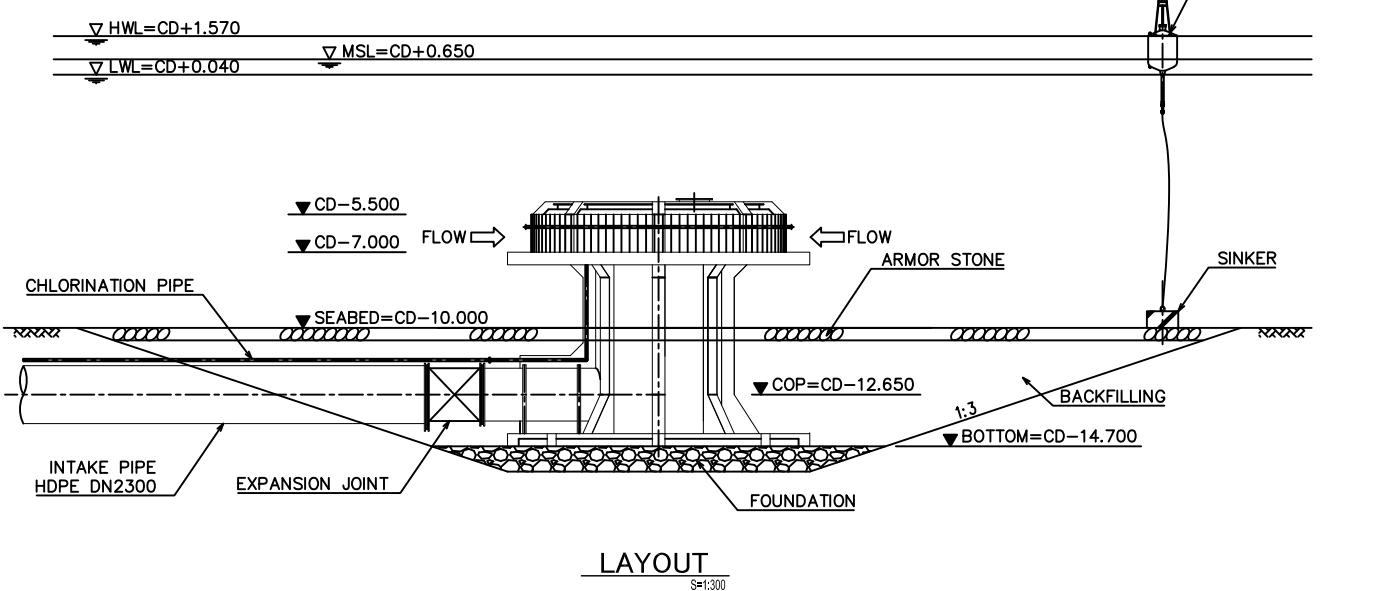


TYPICAL SECTION AT OFFSHORE
S=1:400

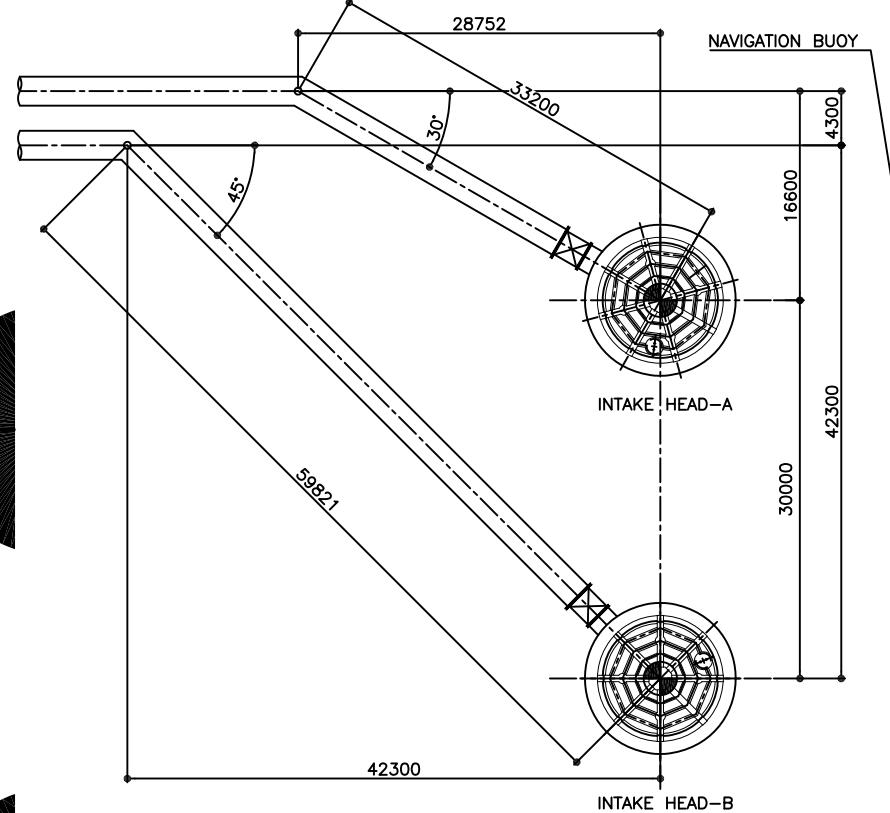
PROJECT TITLE:	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	BRINE DISCHARGE PIPELINE	
DRAWING NO:	I-5-3	SIZE A1



SECTION A-A
S=1:150



LAYOUT
S=1:300

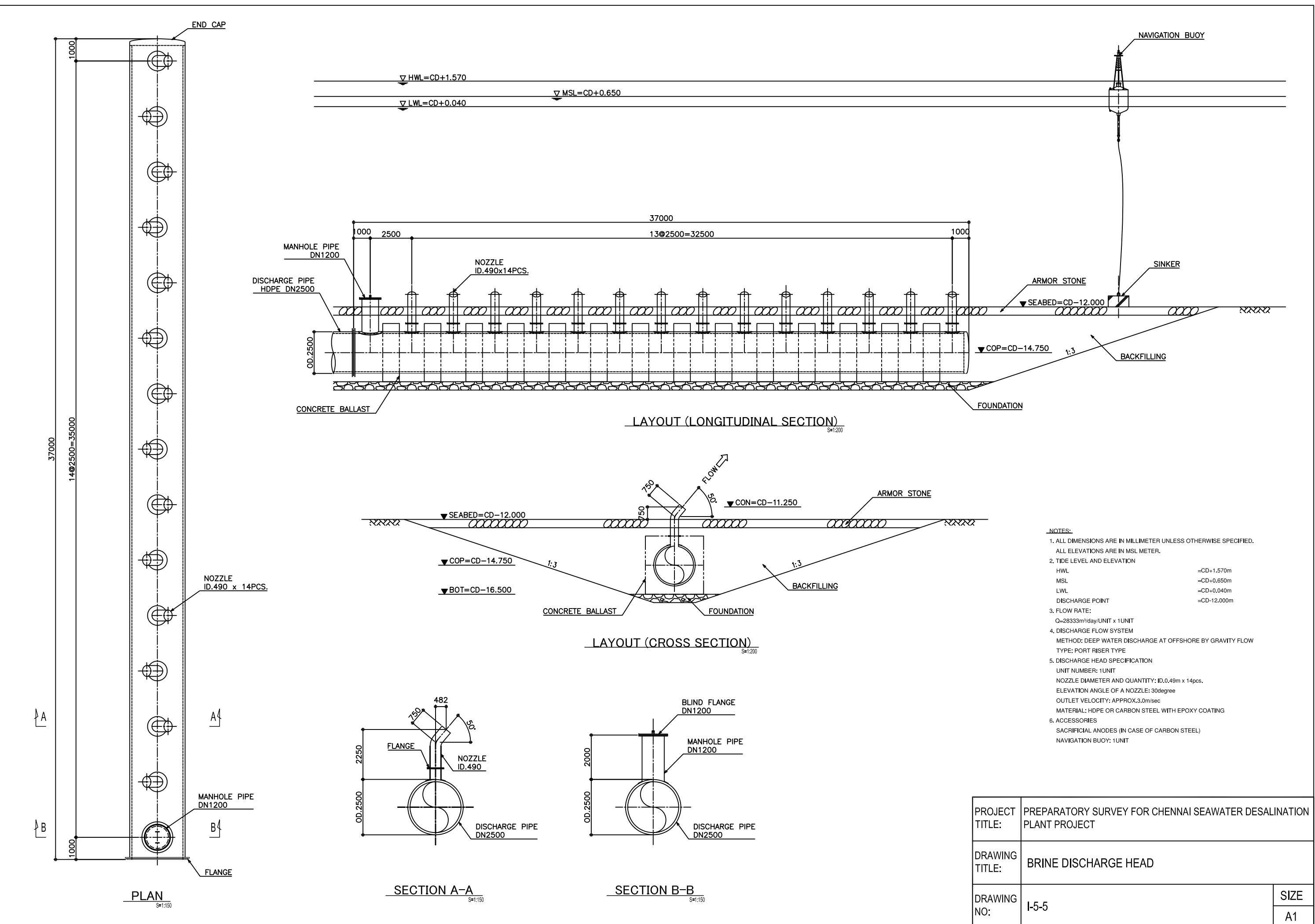


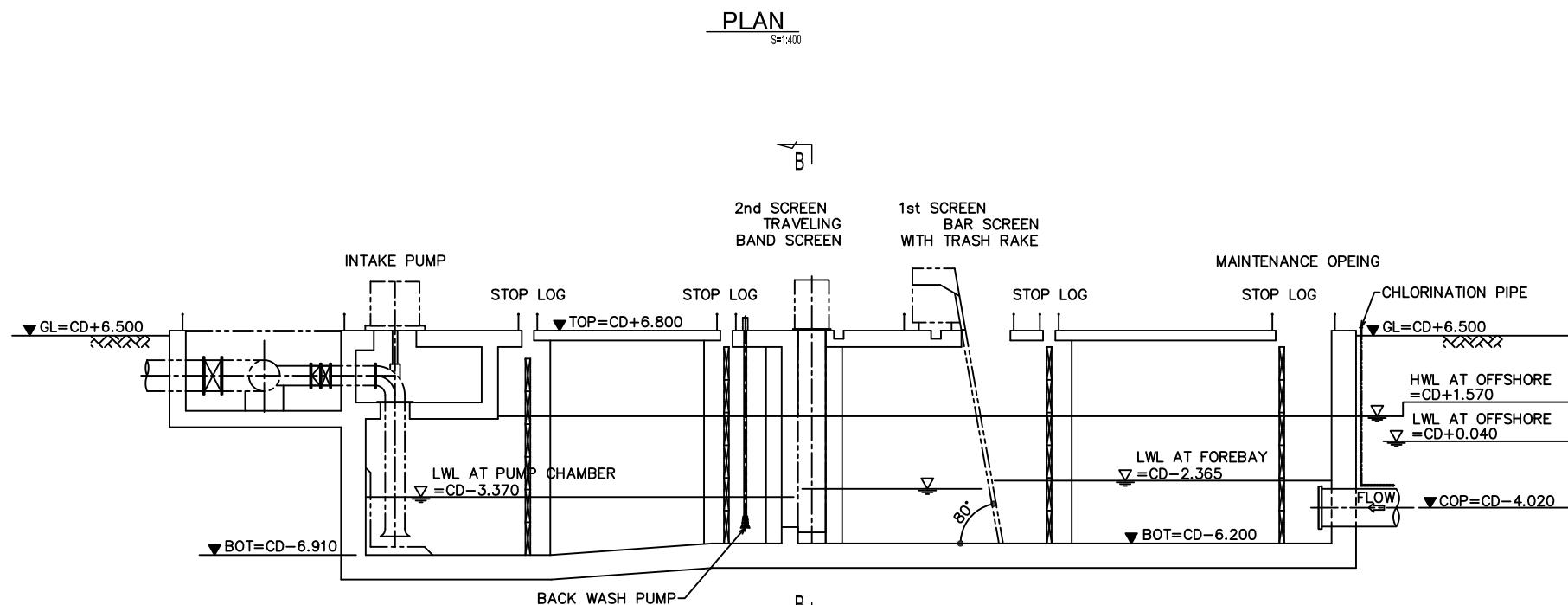
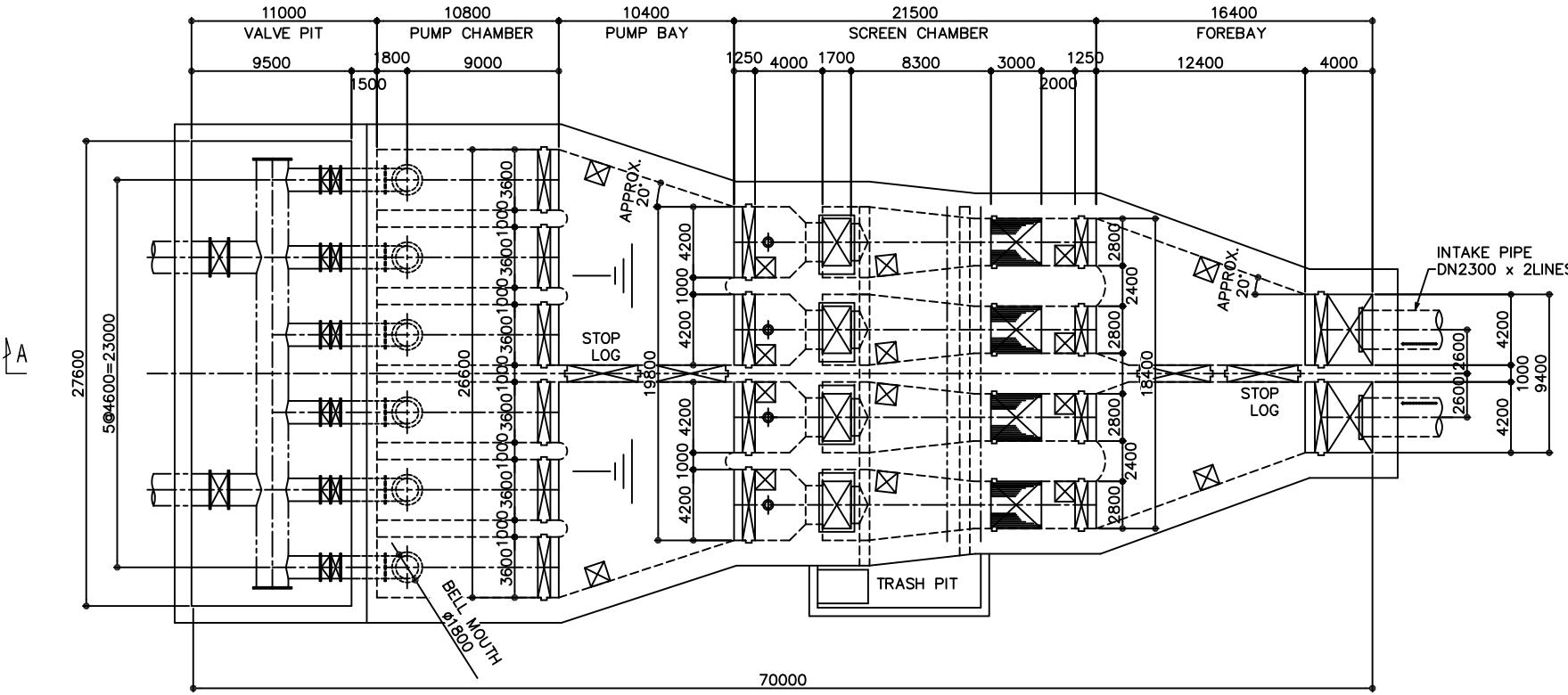
LOCATION
S=1:600

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
ALL ELEVATIONS ARE IN CD METER.
- TIDE LEVEL AND ELEVATION
HWL = CD+1.570m
MSL = CD+0.650m
LWL = CD+0.040m
SEABED = CD-10.000m
- FLOW RATE:
 $Q=22500\text{m}^3/\text{day} \times 2\text{UNITS}$
- INTAKE FLOW SYSTEM
METHOD: VERTICAL INTAKE AT OFFSHORE BY GRAVITY FLOW
TYPE: VELOCITY CAP TYPE
- INTAKE HEAD SPECIFICATION
UNIT NUMBER: 2UNITS
INLET VELOCITY: 0.15m/sec
CONNECTION PIPE DIAMETER: ID.2.1m
MATERIAL: CARBON STEEL WITH EPOXY COATING
- ACCESSORIES
CHLORINE DIFFUSER: DN100 x 1RING, PVC PIPE REINFORCED BY FRP
SACRIFICIAL ANODES
NAVIGATION BUOY: 2UNITS

PROJECT TITLE:	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	SEAWATER INTAKE HEAD	
DRAWING NO:	I-5-4	SIZE A1



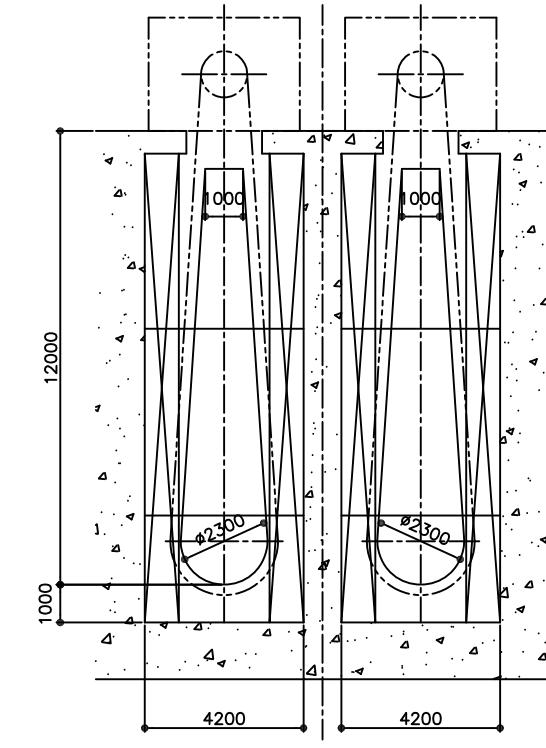


▼ TOP = CD + 6.800

▼ HWL AT OFFSHORE
= CD + 2.380

▼ LLL = CD - 3.370

▼ SCREEN CHAMBER
BOT = CD - 6.200



NOTES:

- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
- ALL ELEVATIONS ARE IN CD METER.
- TIDE LEVEL AND ELEVATION

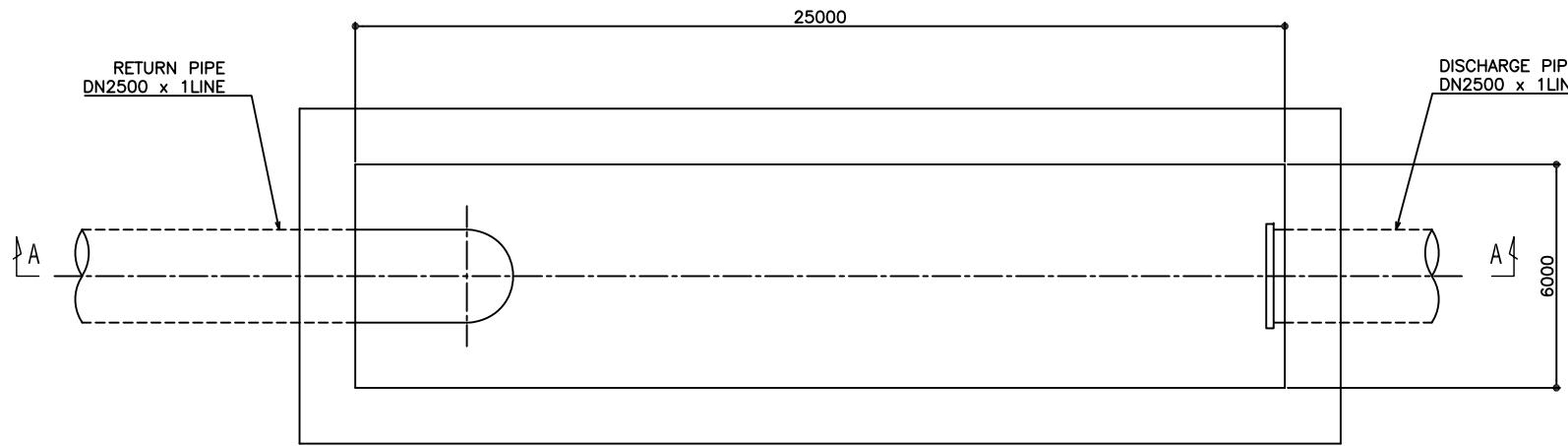
HWL	=CD+1.570m
MSL	=CD+0.650m
LWL	=CD+0.040m
GL AROUND PIT	=CD+6.500m
- FLOW CAPACITY

INTAKE PIT	45000m ³ /h
SCREENS	11250m ³ /h/UNIT x 4 UNITS
SEAWATER SUPPLY (SWS) PUMP	11250m ³ /h/UNIT x 6 UNITS (INCLUDED STAND-BY x 2 UNITS)
- TARGETED HEAD LOSS

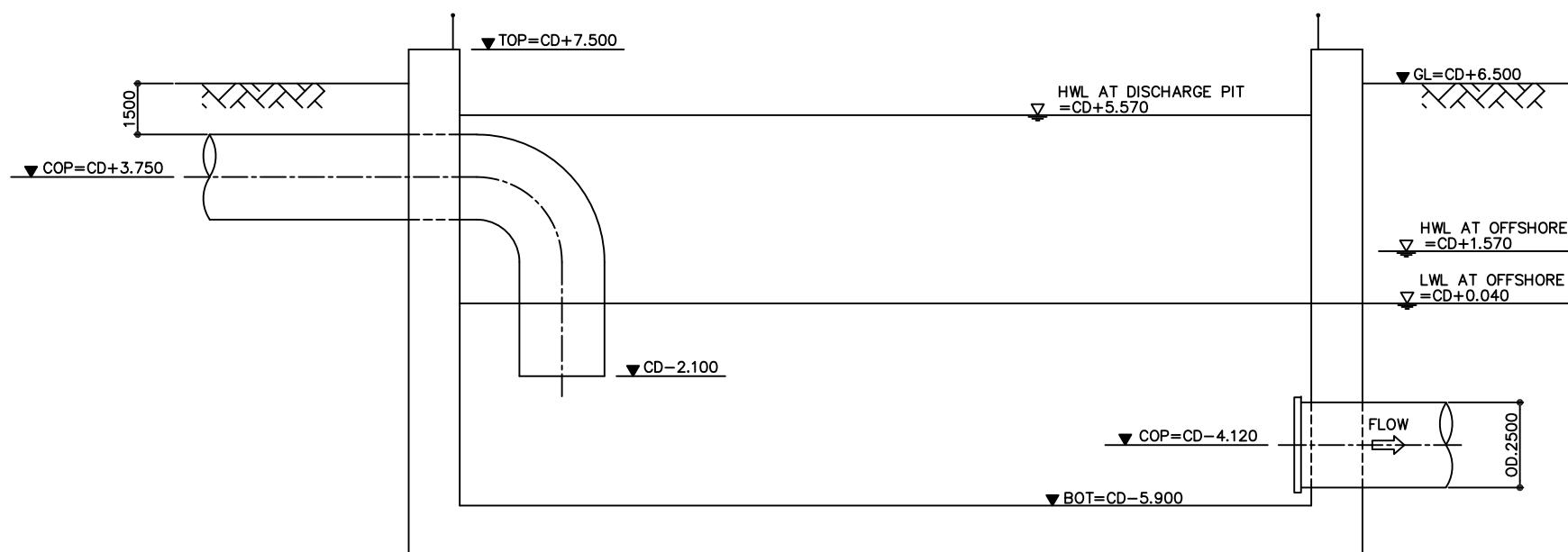
INTAKE PIPELINE	APPROX.3.0m
SCREENS	APPROX.1.0m
- SPECIFICATIONS

INTAKE PIPE:	DN2300(ID.2000) x 2LINES
-DIAMETER x LINE NO.	
INTAKE PUMPS:	4UNITS FOR OPERATION
-PUMP NO.	2UNITS FOR STAND-BY
BAR SCREENS WITH A MOBILE TRASH RAKE:	
-SCREEN NO.	4UNITS
TRAVELLING BAND SCREENS:	
-SCREEN TYPE	DOUBLE FLOW TYPE (2IN-OUT)
-SCREEN NO.	4UNITS
SCREEN BACK WASH PUMPS:	
-PUMP NO.	4UNITS
STOP LOGS:	
-STOP LOG FOR SWS PUMP	6UNITS
-STOP LOG FOR SCREENS	8UNITS
-STOP LOG FOR INTAKE PIPE	2UNITS
-STOP LOG FOR PARTITION WALL	4UNITS

PROJECT TITLE:	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	SEAWATER INTAKE PIT	
DRAWING NO:	I-5-6	SIZE A1



PLAN
S=1:200



SECTION A-A
S=1:200

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
- ALL ELEVATIONS ARE IN CD METER.
- TIDE LEVEL AND ELEVATION

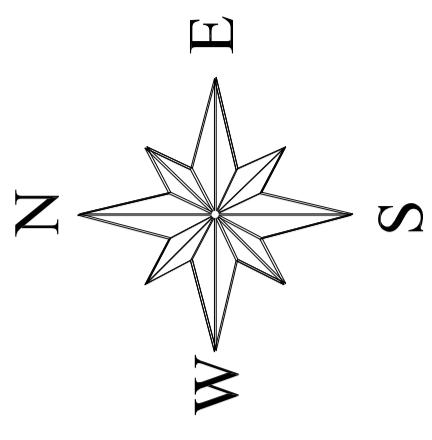
HWL	=CD+1.570m
MSL	=CD+0.650m
LWL	=CD+0.040m
GL AROUND PIT	=CD+6.500m
- FLOW CAPACITY

DISCHARGE PIT	28333m ³ /h
---------------	------------------------
- TARGETED HEAD LOSS

DISCHARGE PIPELINE	APPROX.4.0m
--------------------	-------------
- SPECIFICATIONS

DISCHARGE PIPE:	-DIAMETER x LINE NO. DN2500(ID.2300) x 1LINE
RETURN PIPE:	-DIAMETER x LINE NO.(ASSUMPTION) DN2500(ID.2300) x 1LINE

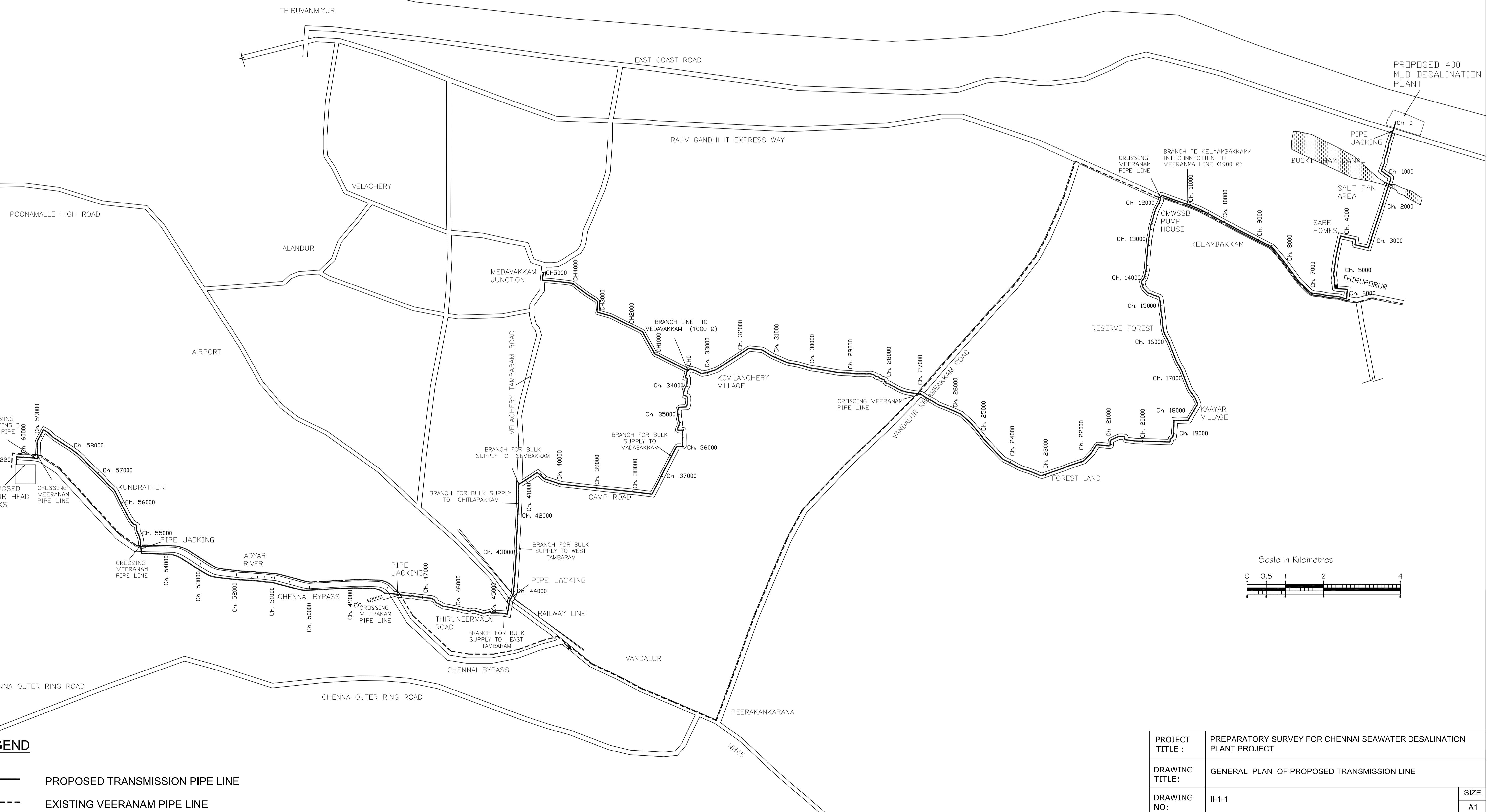
PROJECT TITLE:	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	BRINE DISCHARGE PIT	
DRAWING NO:	I-5-7	SIZE A1



BAY OF BENGAL

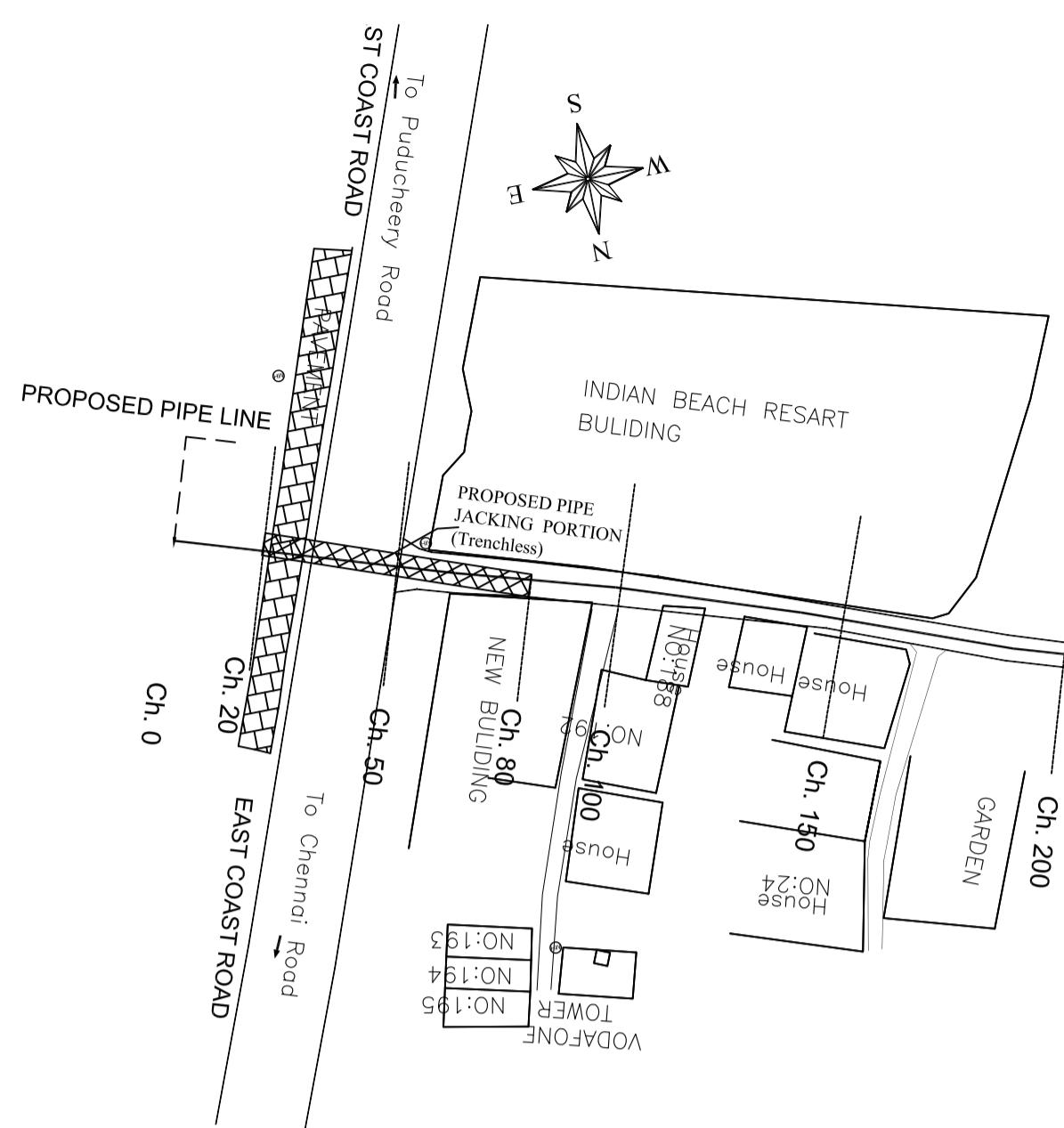
BAY OF BENGAL

BAY OF BENGAL

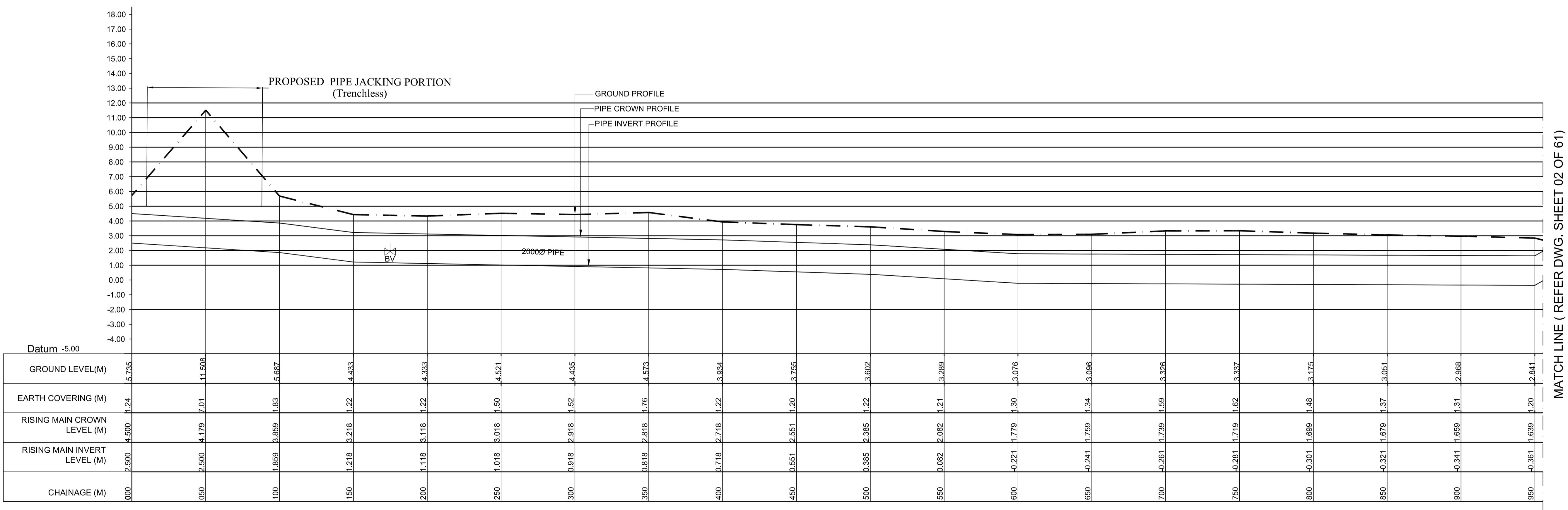




KEY PLAN
SCALE 1:10000



PLAN
SCALE 1:1500



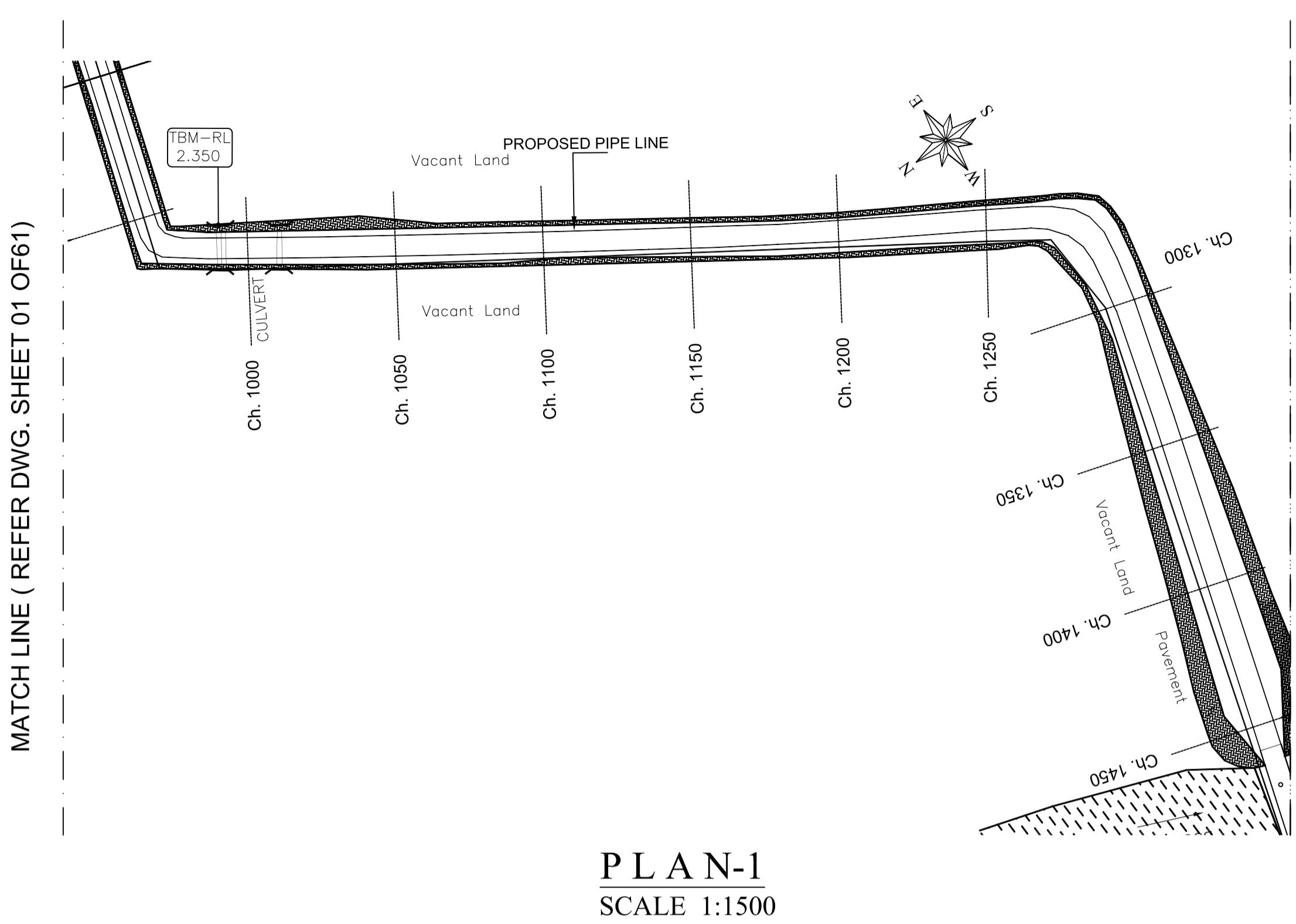
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

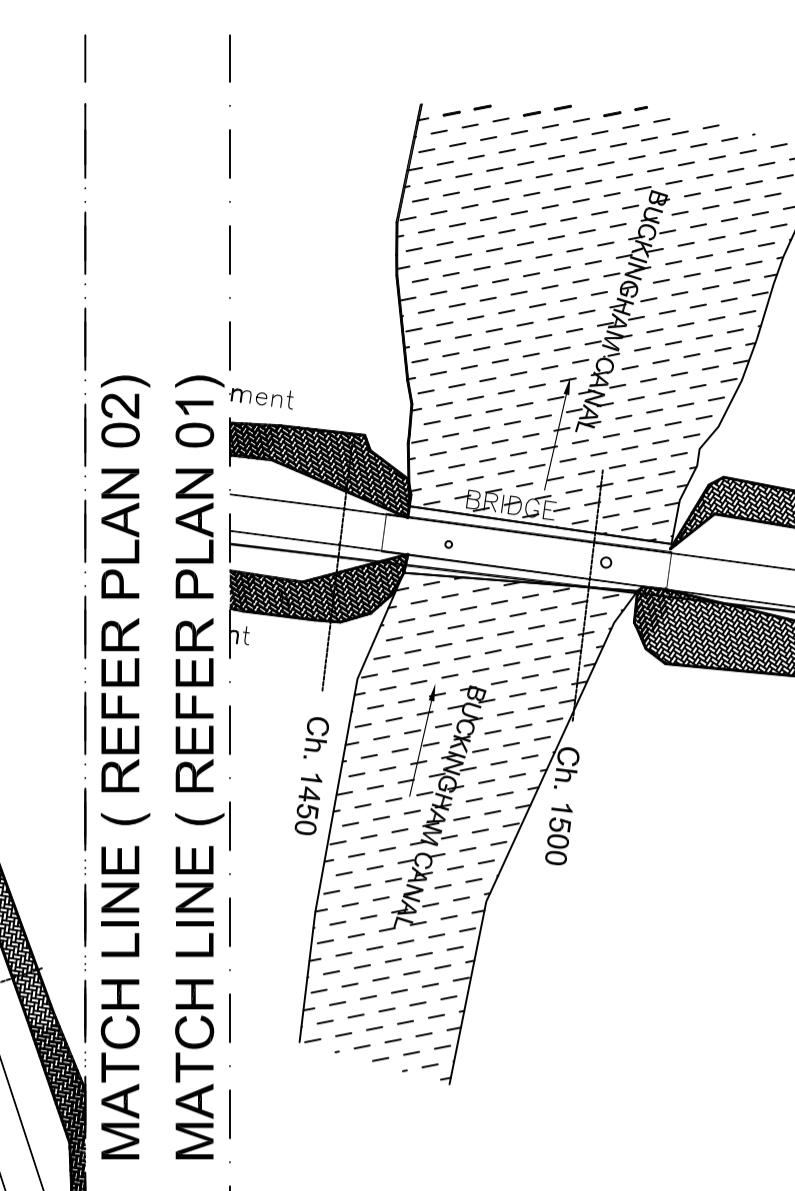
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT		
DRAWING TITLE:	Plan and Profile of Main Pipeline		
DRAWING NO:	II-1-2 (1/61)		

SIZE
A1

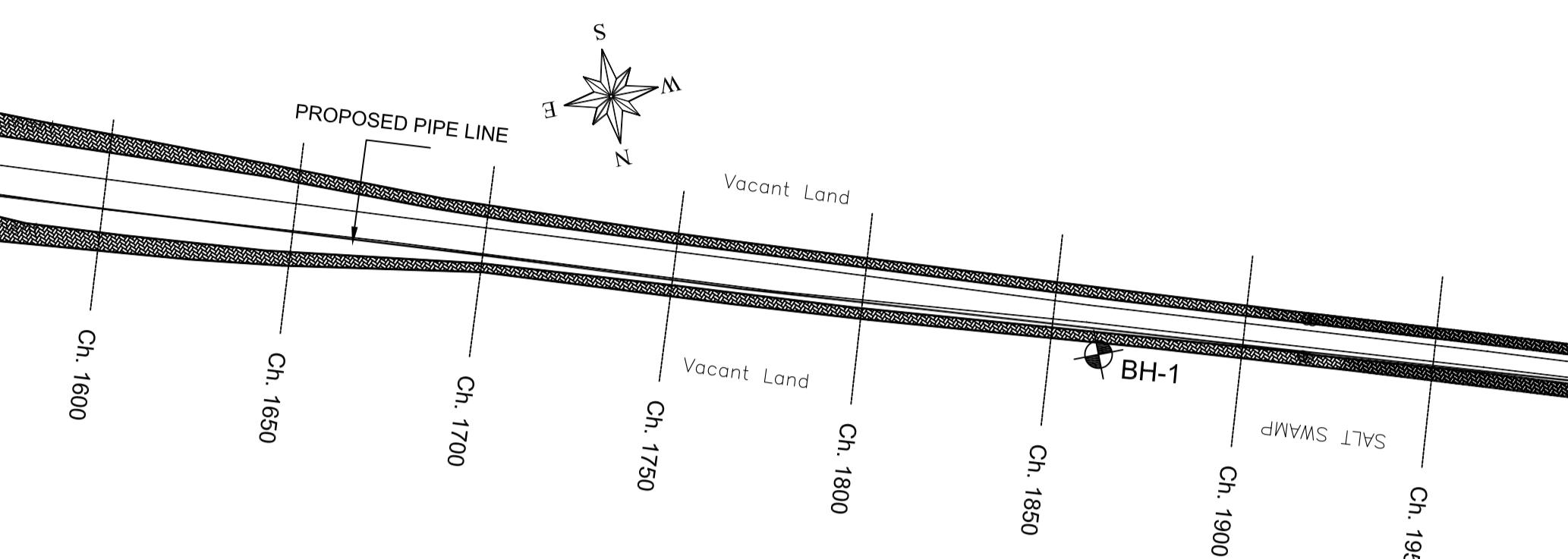
LEGEND:-	
SYMBOLS	DESCRIPTION
AUGER BORE LOCATION	
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE



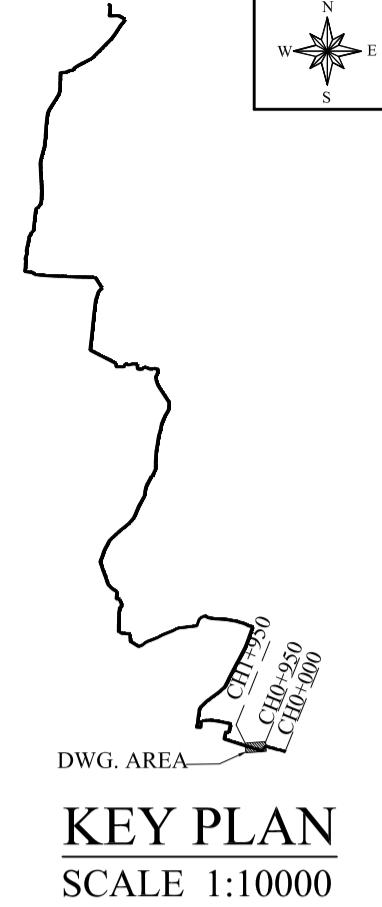
PLAN-1
SCALE 1:1500



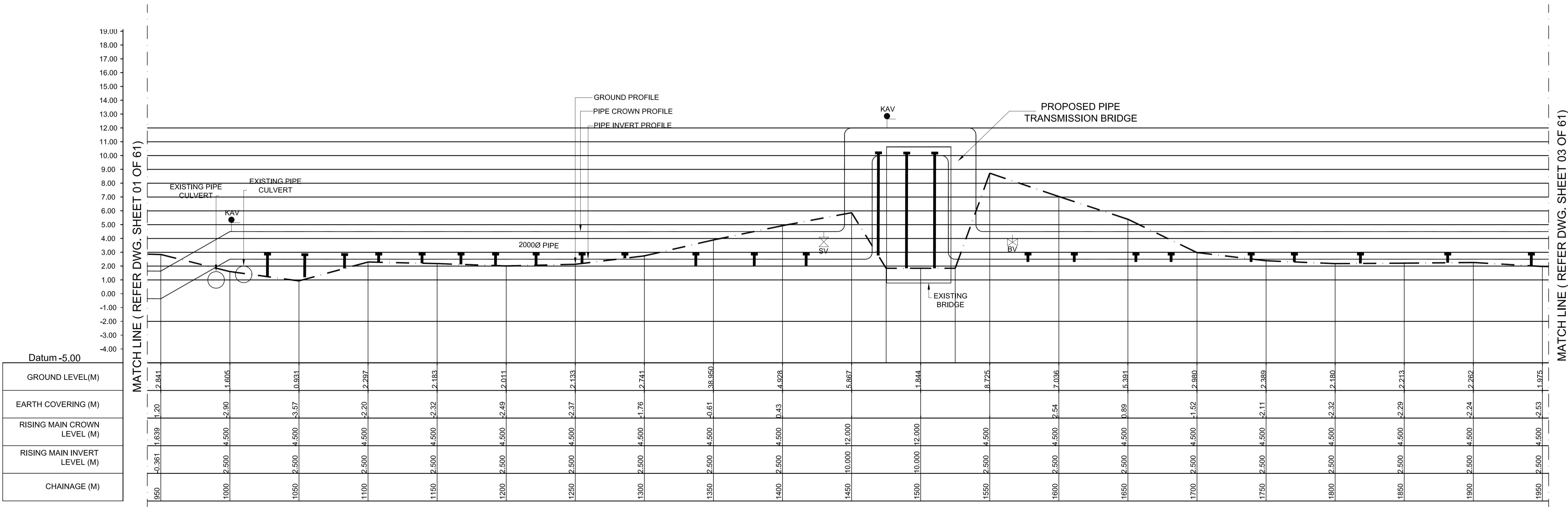
P L A N-2
SCALE 1:1500



MATCH LINE (REFER DWG. SHEET 03 OF 61



KEY PLAN
SCALE 1:10000

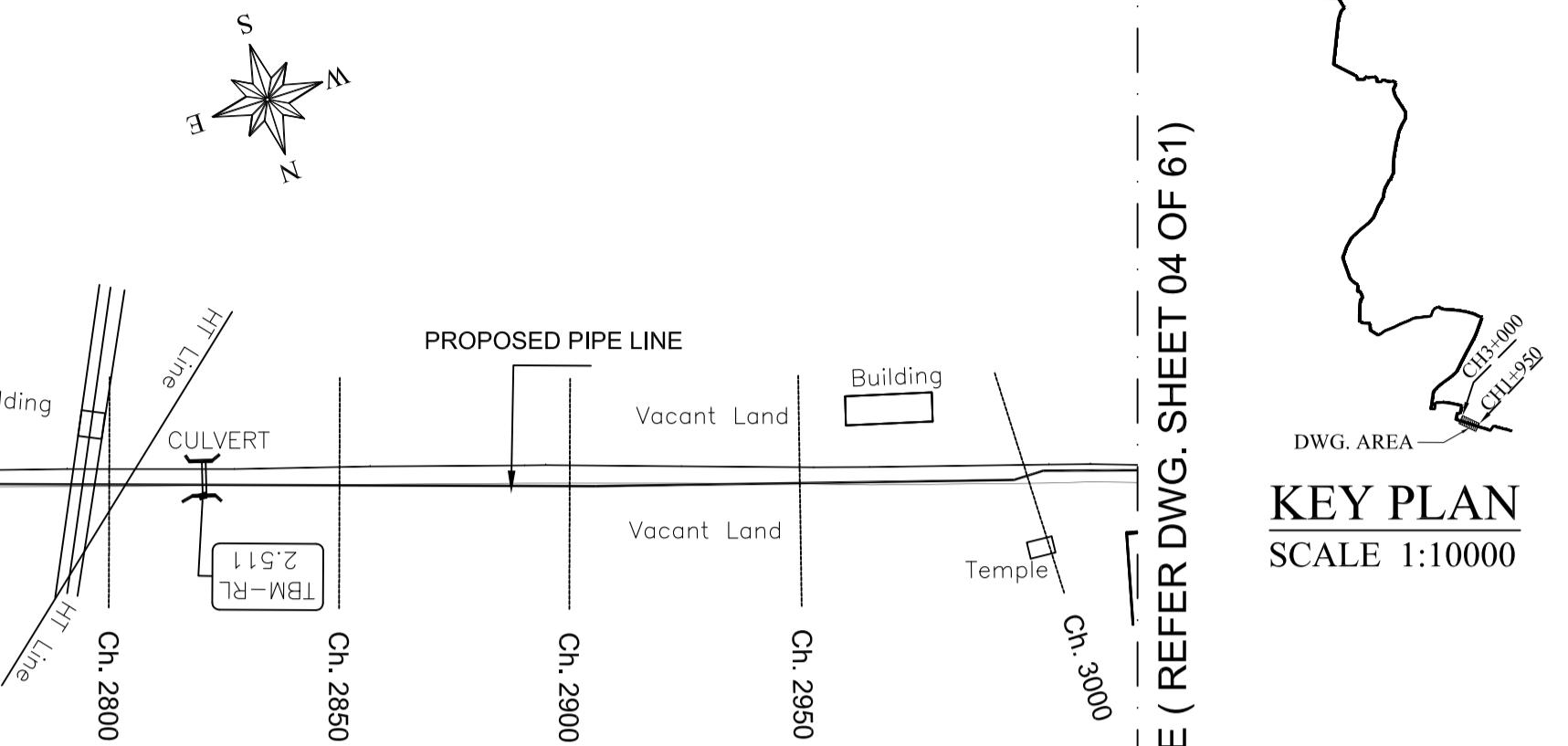
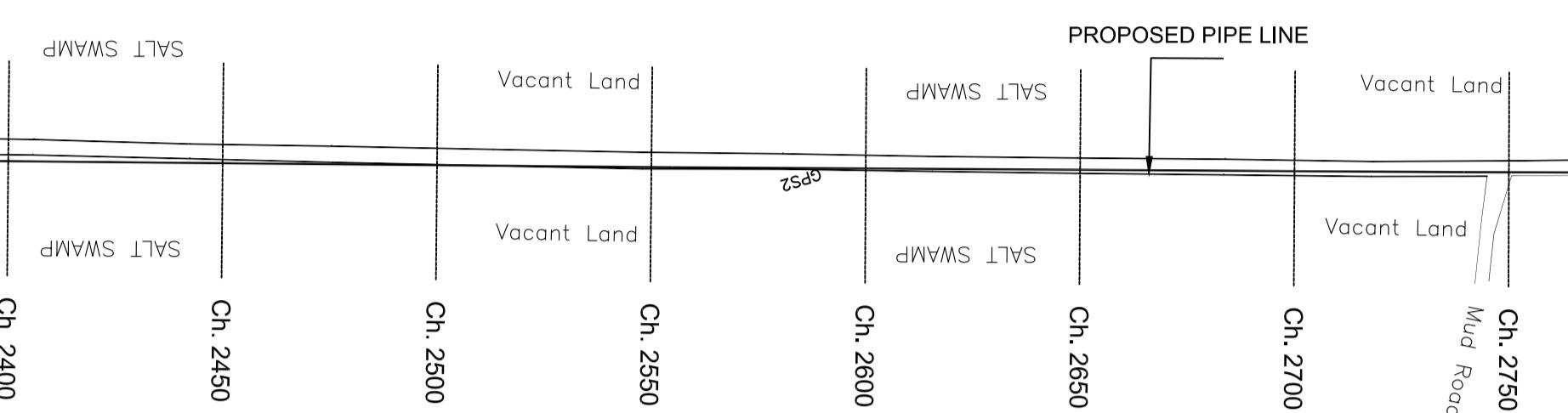
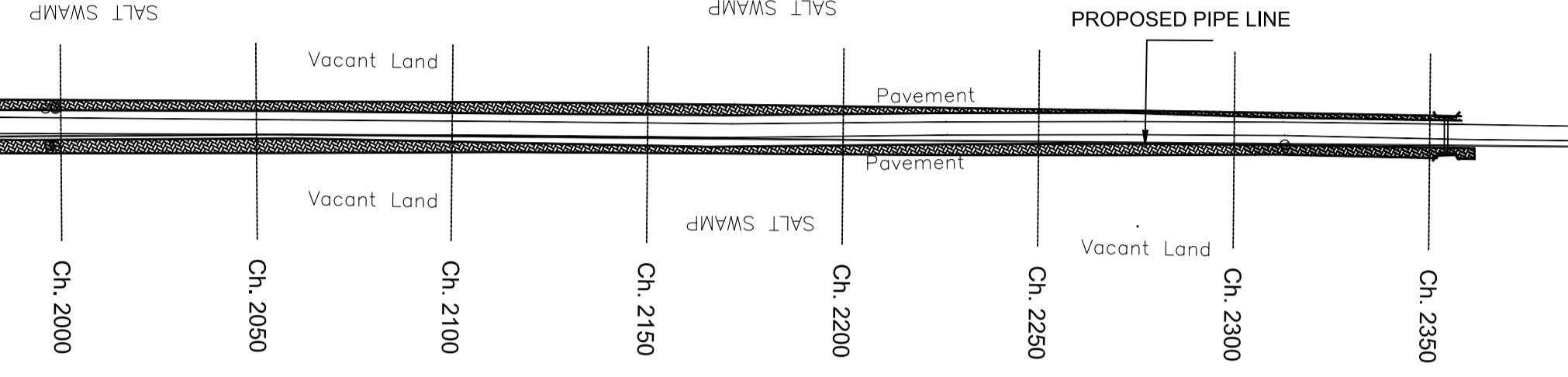


L - SECTION

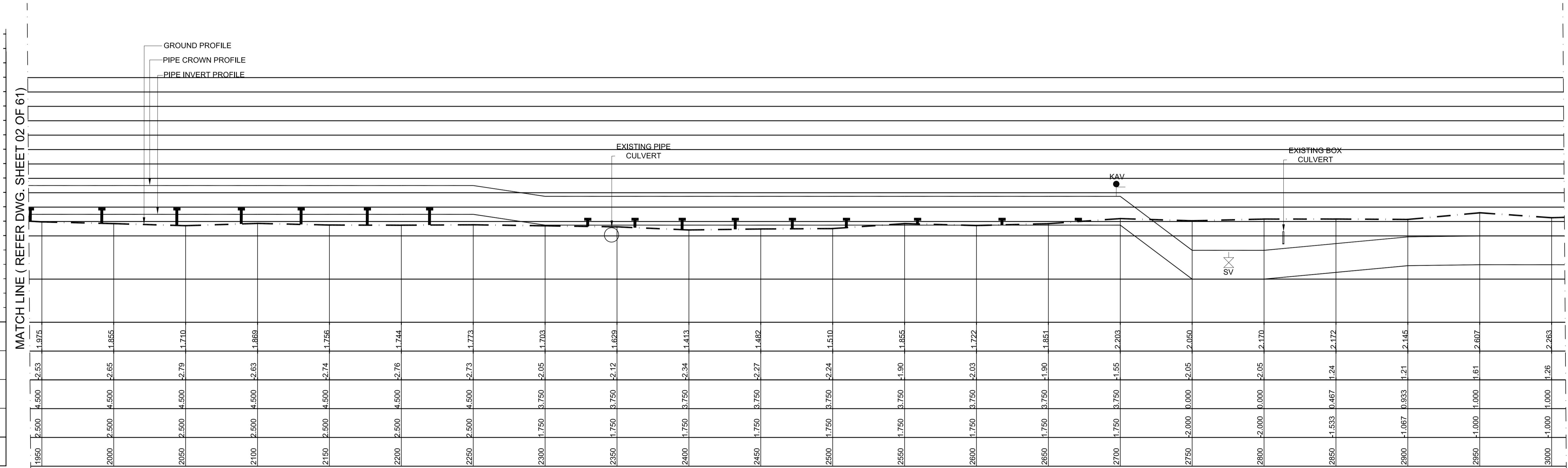
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (2/61)	SIZE A1

MATCH LINE (REFER DWG. SHEET 02 OF 61)

KEY PLAN
SCALE 1:1000PLAN-1
SCALE 1:1500

Datum -5.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

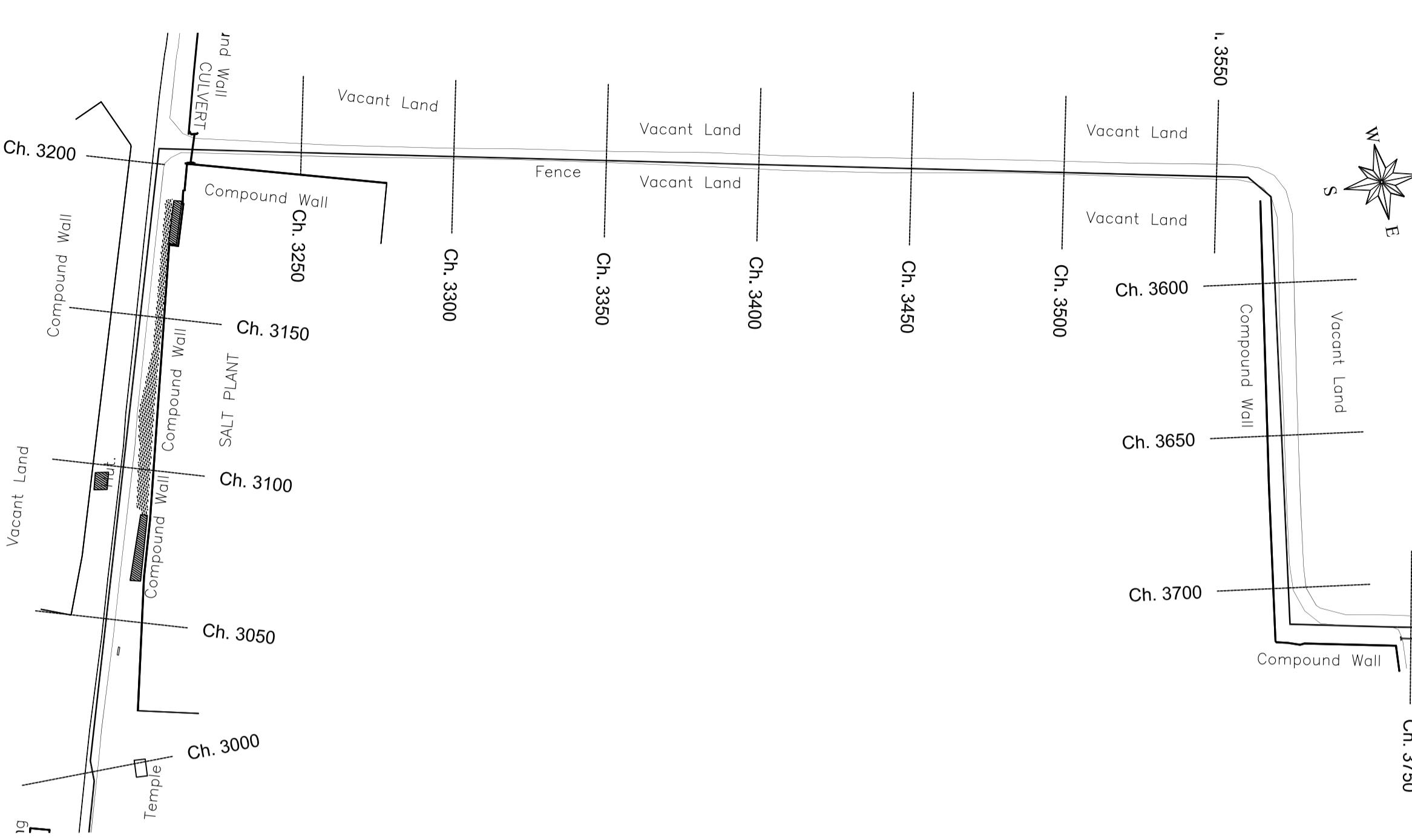


L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

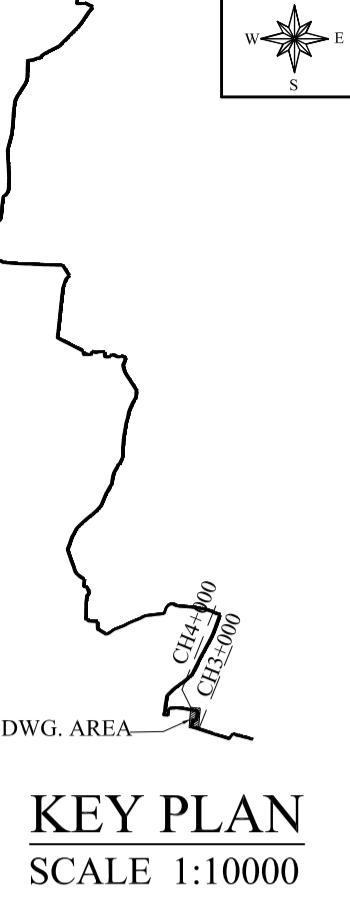
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (3/61)
SIZE	A1

MATCH LINE (REFER DWG. SHEET 03 OF 61)



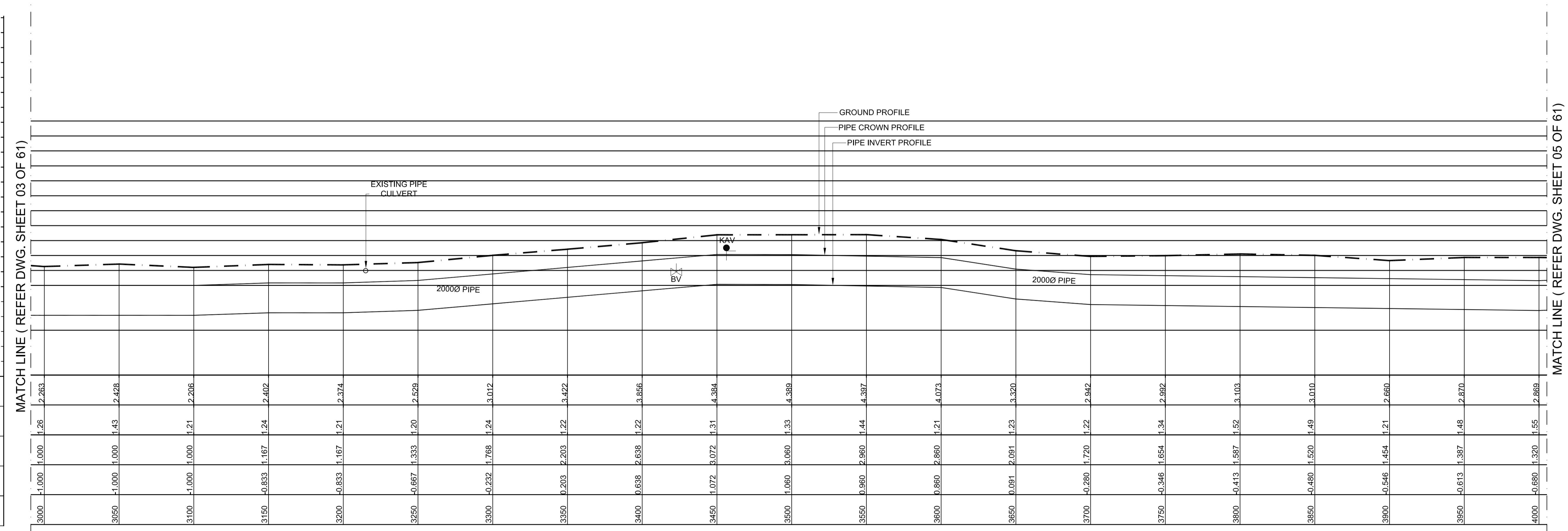
PLAN-1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 05 OF 61)



Datum -5.00

GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

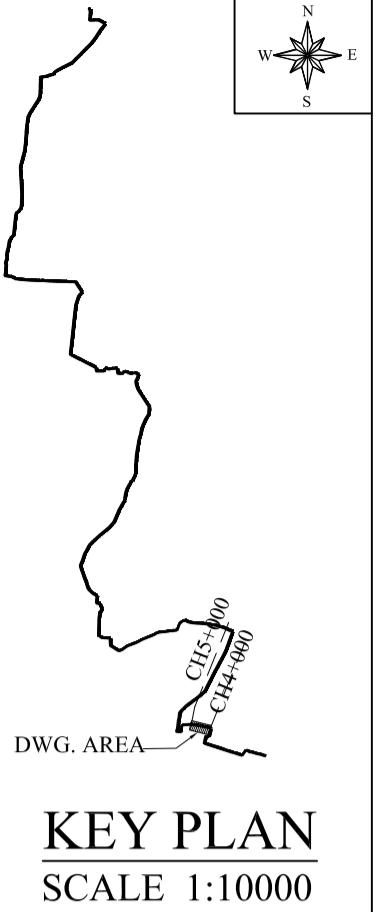


L - SECTION

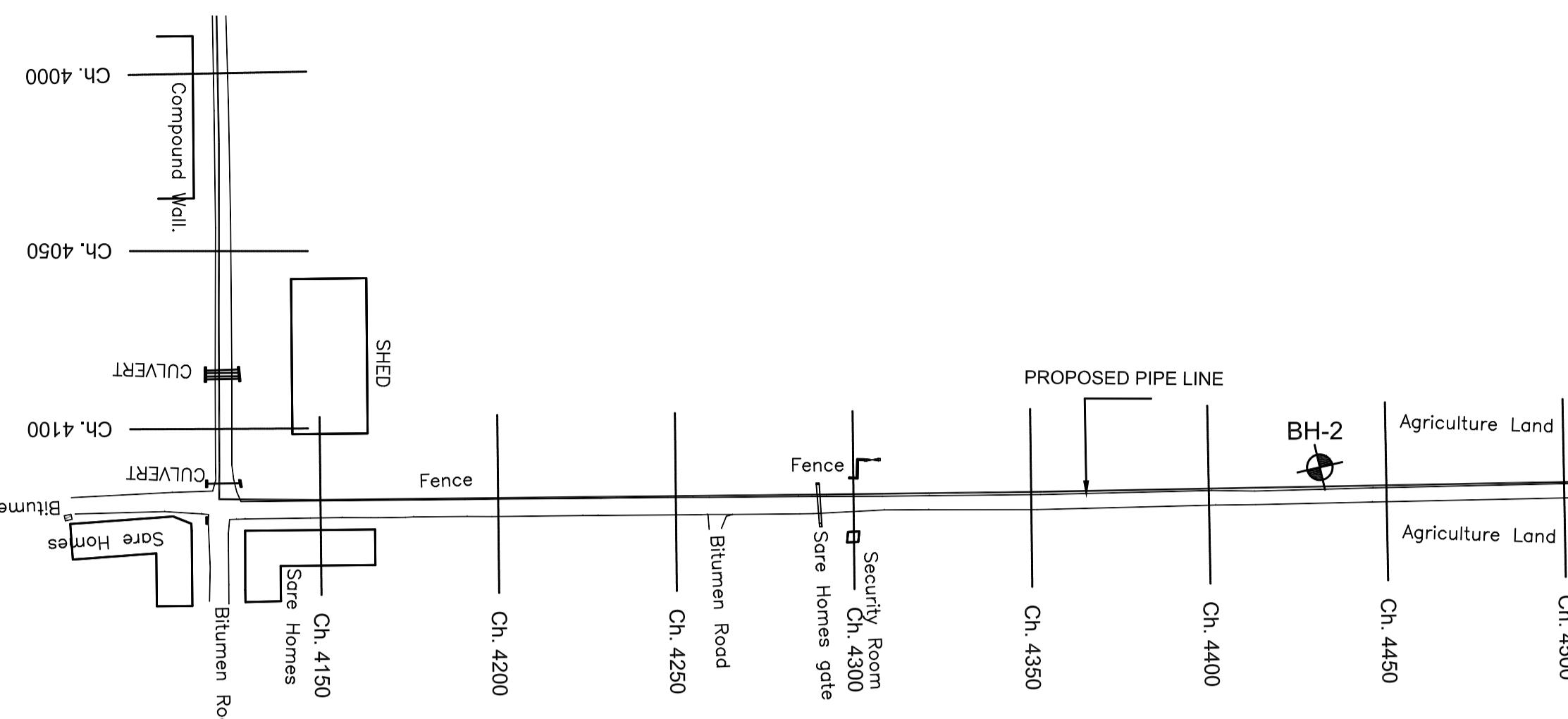
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (4/61)
SIZE	A1



MATCH LINE (REFER DWG. SHEET 04 OF 61)



P L A N - 1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 04 OF 61)

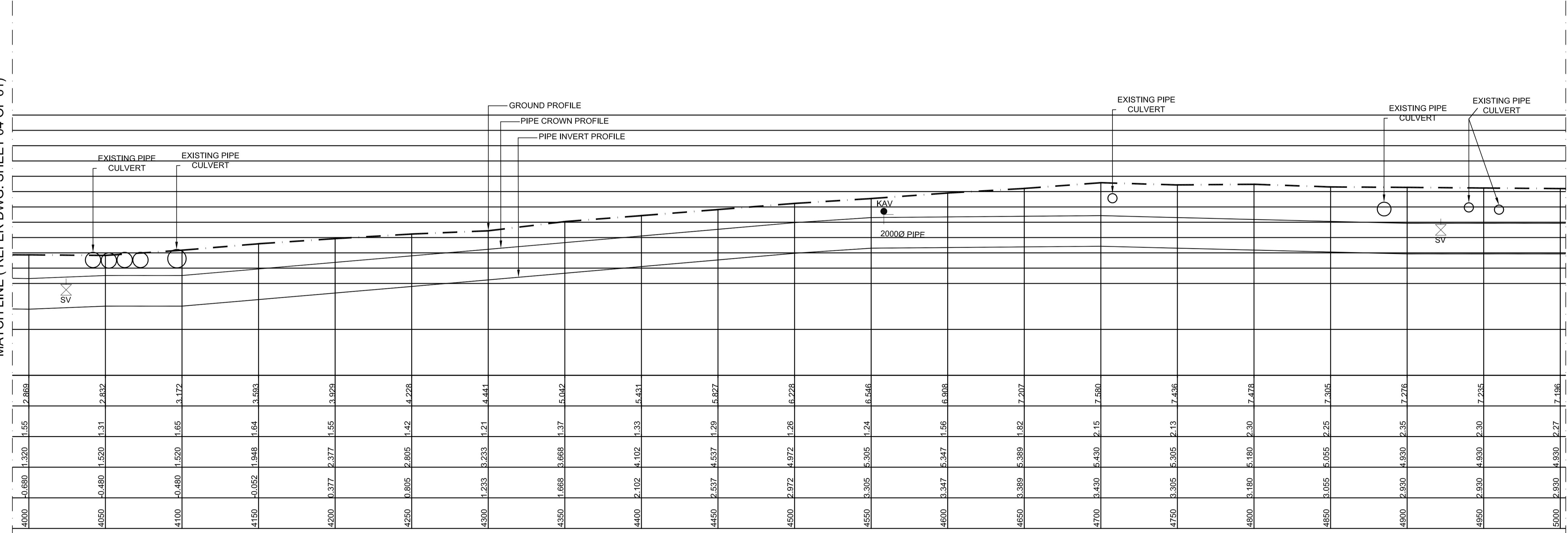
Datum -5.00	
GROUND LEVEL (M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
●	AIR VALVE

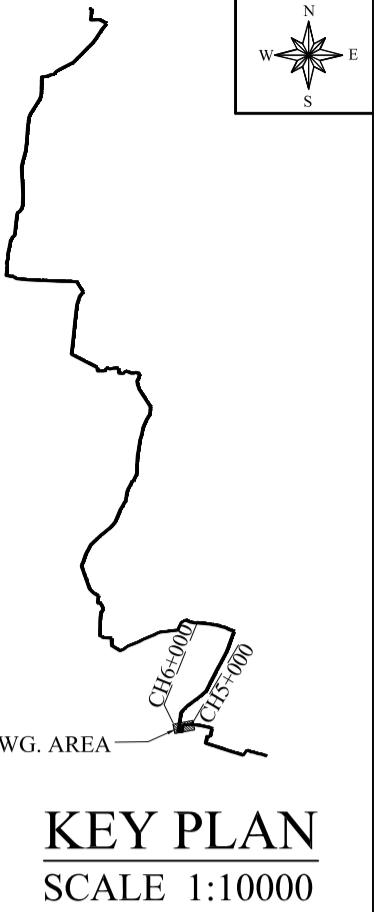
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

MATCH LINE (REFER DWG. SHEET 06 OF 61)

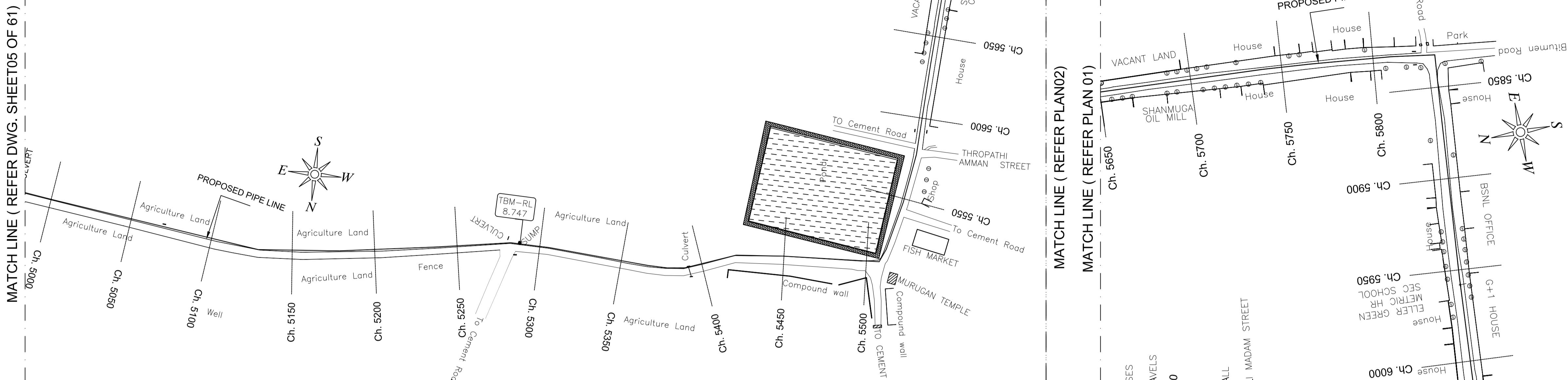


PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (5/61)
SIZE	A1

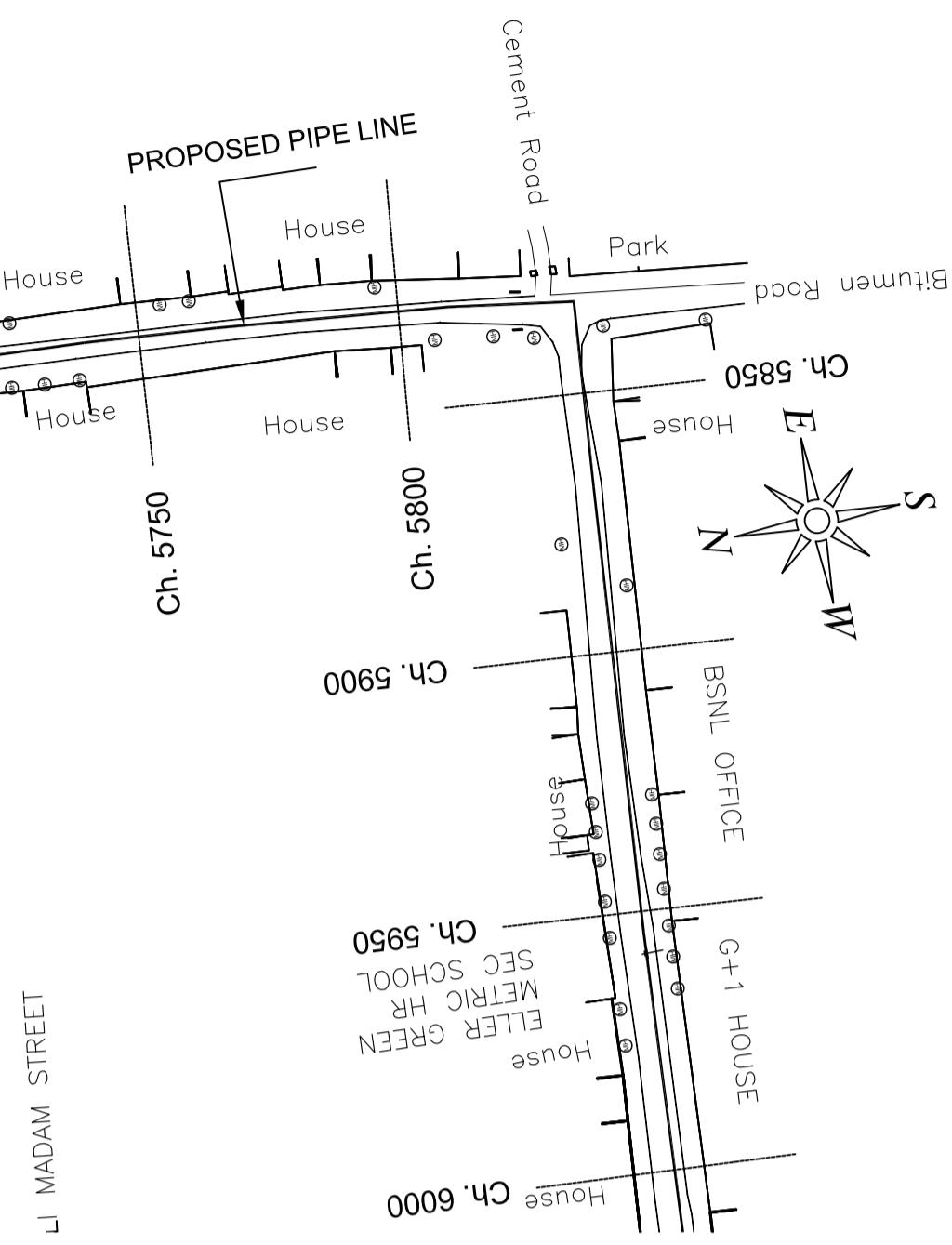


KEY PLAN
SCALE 1:10000

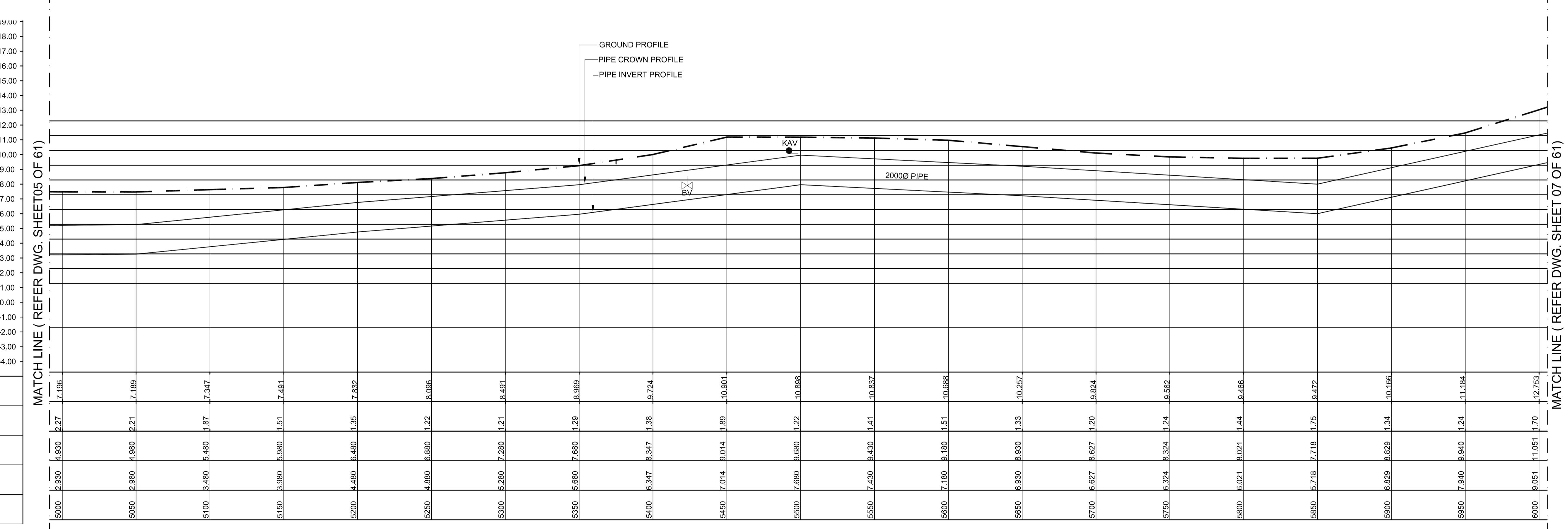
MATCH LINE (REFER DWG. SHEET 05 OF 61)



MATCH LINE (REFER PLAN 02)



MATCH LINE (REFER DWG. SHEET 07 OF 61)



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

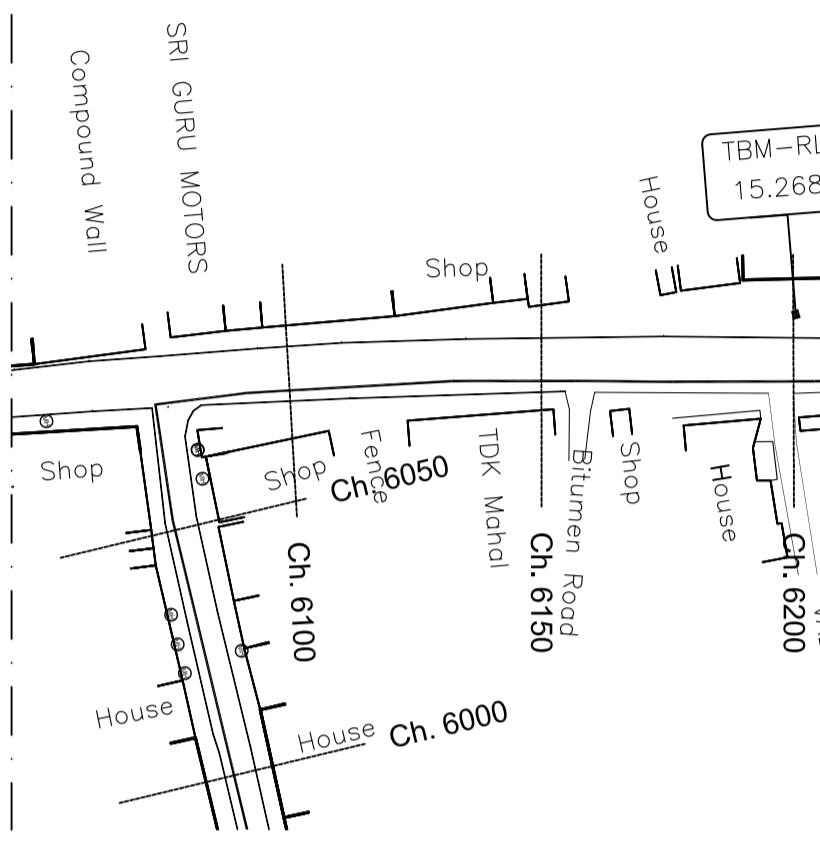
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (6/61)

SIZE
A1

Datum -5.00	GROUND LEVEL(M)
	EARTH COVERING (M)
	RISING MAIN CROWN LEVEL (M)
	RISING MAIN INVERT LEVEL (M)
	CHAINAGE (M)

LEGEND:-	
SYMBOLS	DESCRIPTION
AUGER BORE LOCATION	
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

MATCH LINE (REFER DWG. SHEET 06 OF 61)



atum -5

GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND

SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:150

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (7/61)	SIZE A1

MATCH LINE (REFER DWG. SHEET 08 OF 61)

The map displays a winding boundary line. In the top right corner, a compass rose indicates North (N), South (S), East (E), and West (W). At the bottom right, two survey points are marked: CH7+000 and CH6+000. A horizontal line extends from the left side of the map to a point on the boundary line, with the label "DWG. AREA" positioned above it.

KEY PLAN
SCALE 1:10000

P L A N-
SCALE 1:15

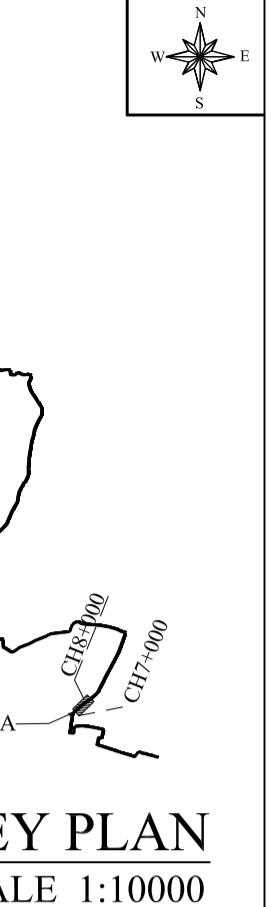
KEY PLAN
SCALE 1:10000

A black and white line drawing of the outline map of Chile. The map shows the country's long coastline and its various regions. In the top right corner, there is a compass rose enclosed in a square box. The compass rose indicates cardinal directions: North (N) at the top, South (S) at the bottom, East (E) on the right, and West (W) on the left.

The map displays a winding boundary line. In the top right corner, there is a compass rose indicating North (N), South (S), East (E), and West (W). At the bottom right, two survey points are marked: CH7+000 and CH6+000. A horizontal line extends from the left side of the map to point to the label "DWG. AREA".

KEY PLAN

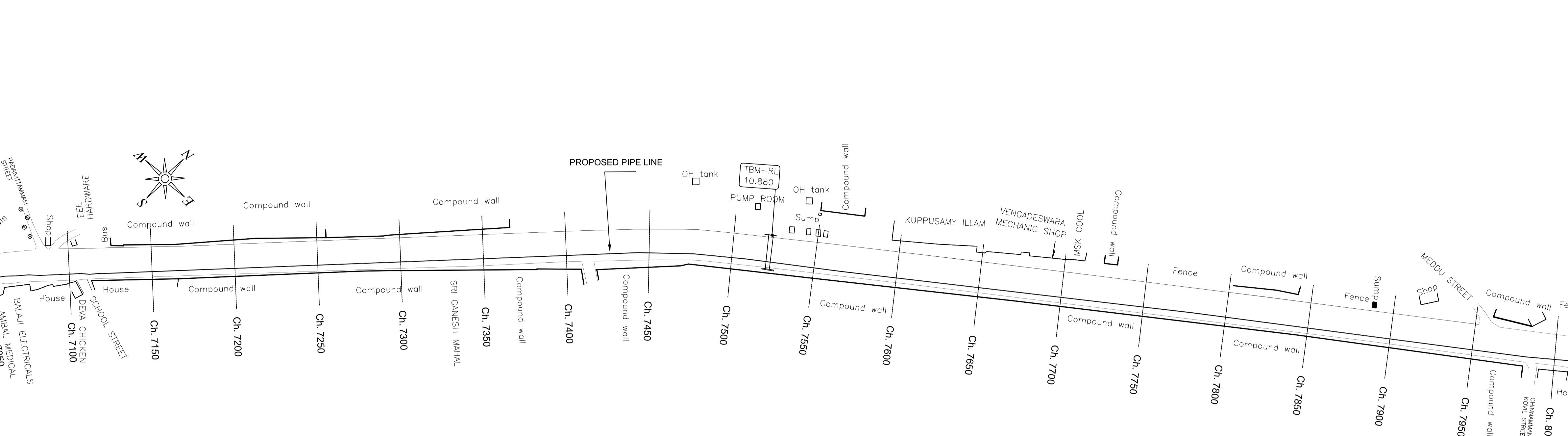
SCALE 1:10000



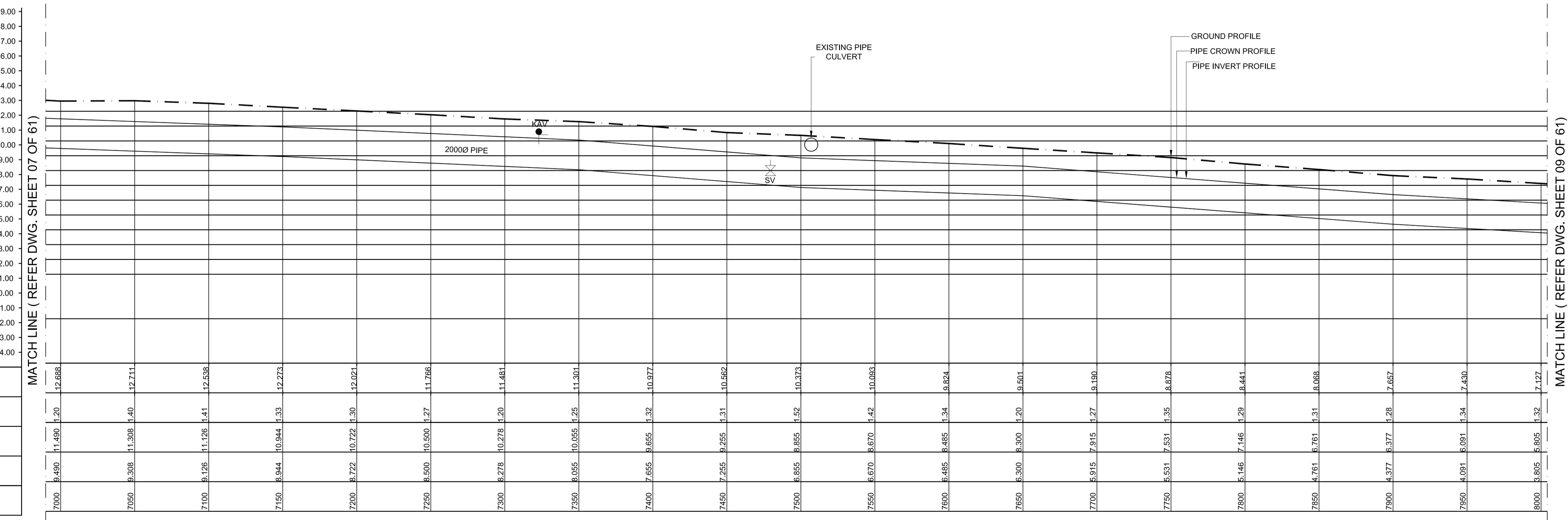
KEY PLAN

MATCH LINE (REFER DWG. SHEET 09 OF 61)

MATCH LINE (REFER DWG. SHEET 07 OF 61)



PLAN-1
SCALE 1:1500



Datum -5.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

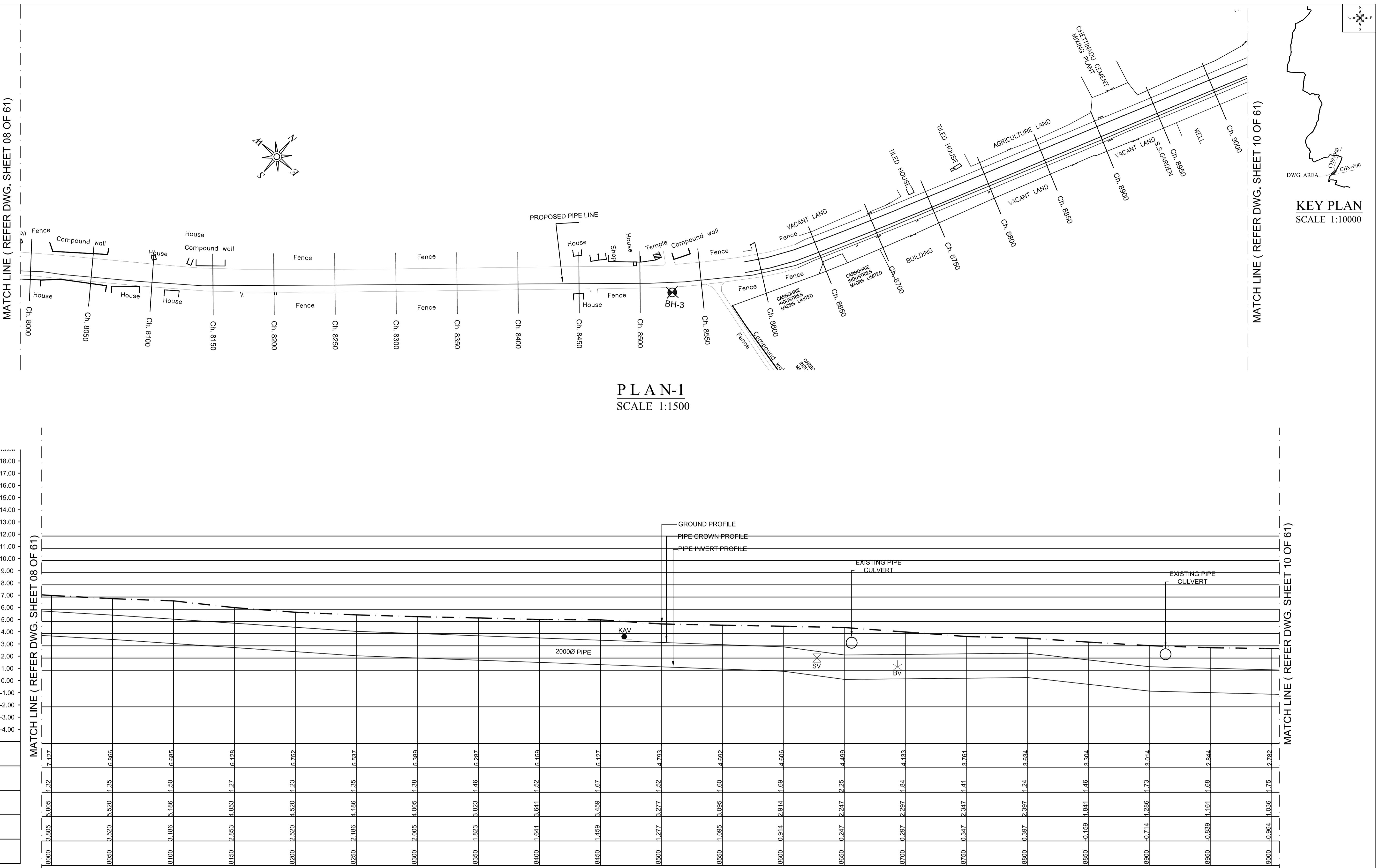
LEGEND:

SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (8/61)	SIZE A1

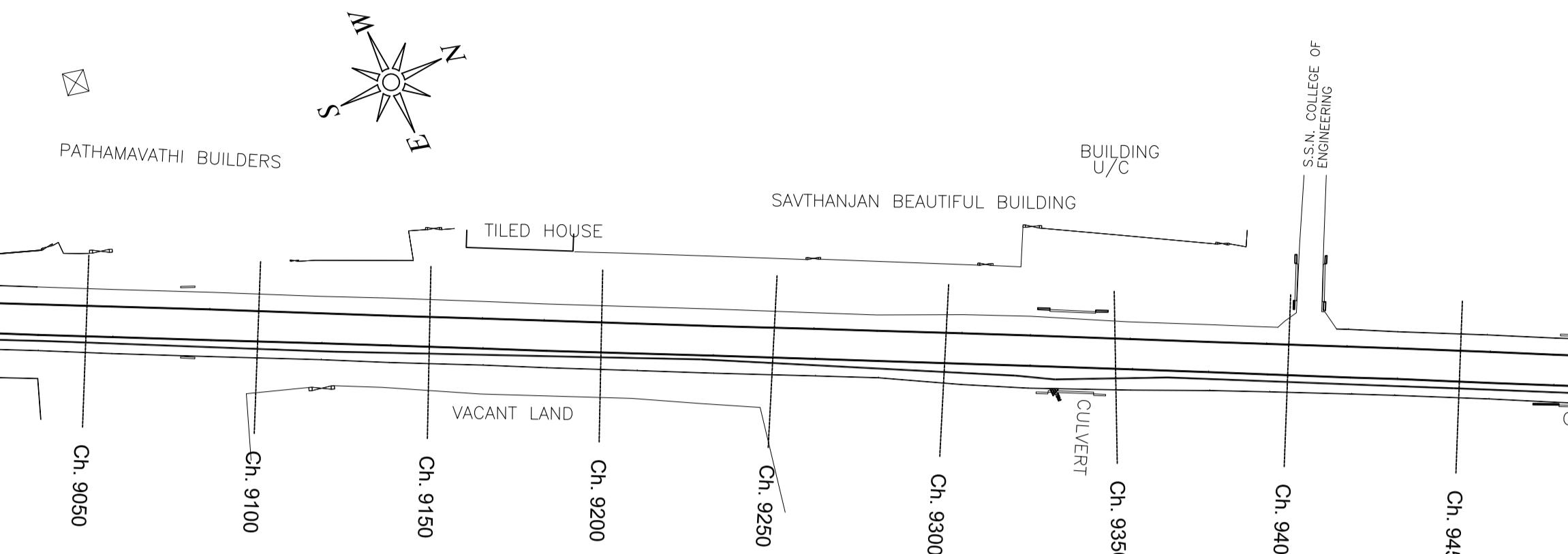


L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:150

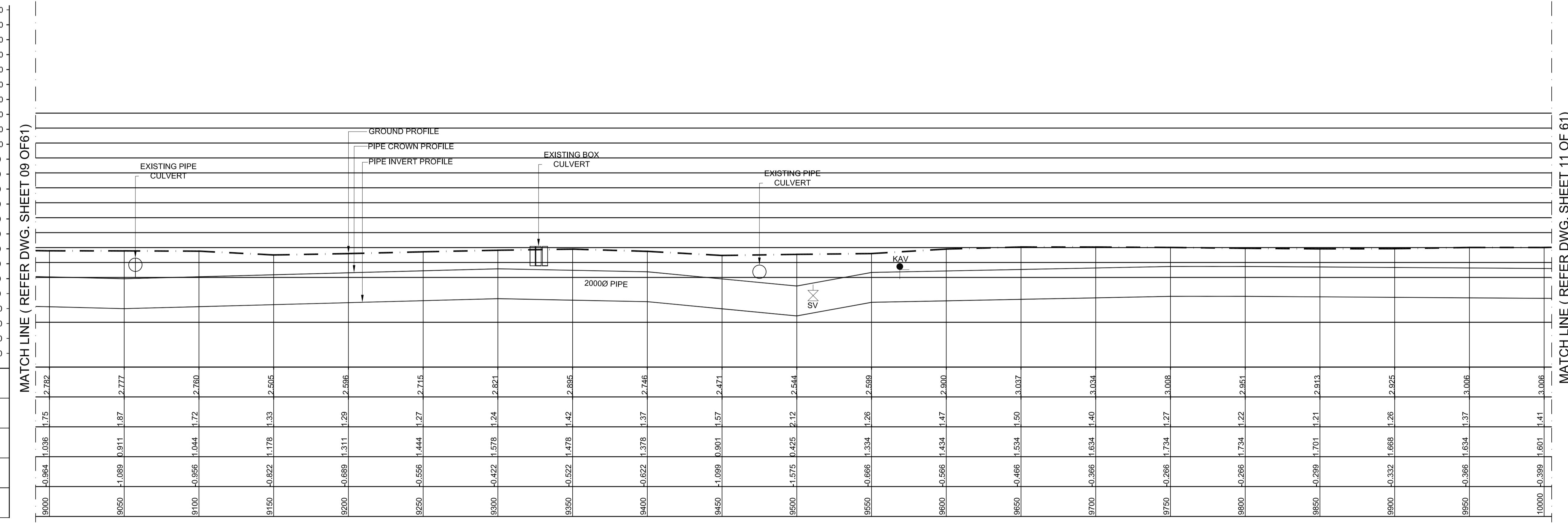
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (9/61)	SIZE A1

MATCH LINE (REFER DWG. SHEET 09 OF 61)



PLAN-1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 09 OF 61)



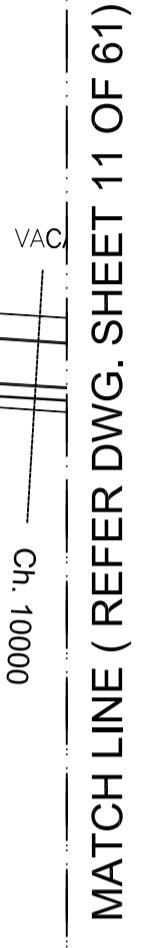
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

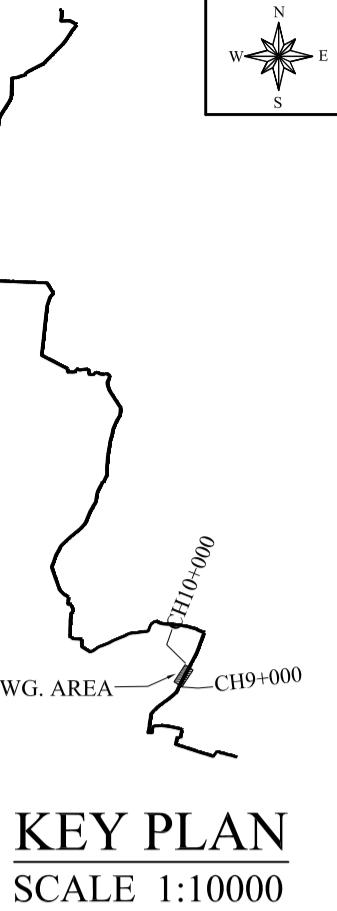
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (10/61)

SIZE
A1

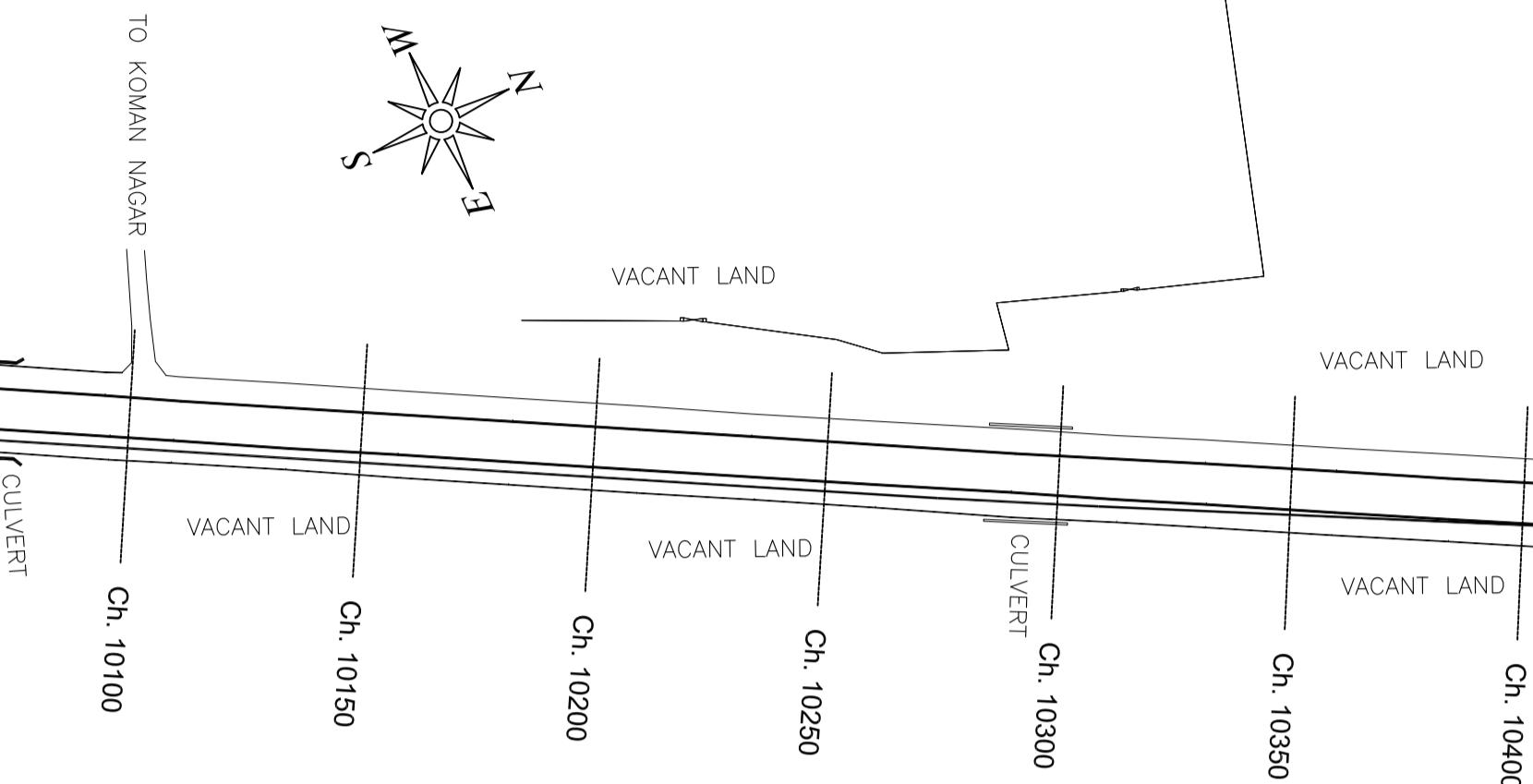
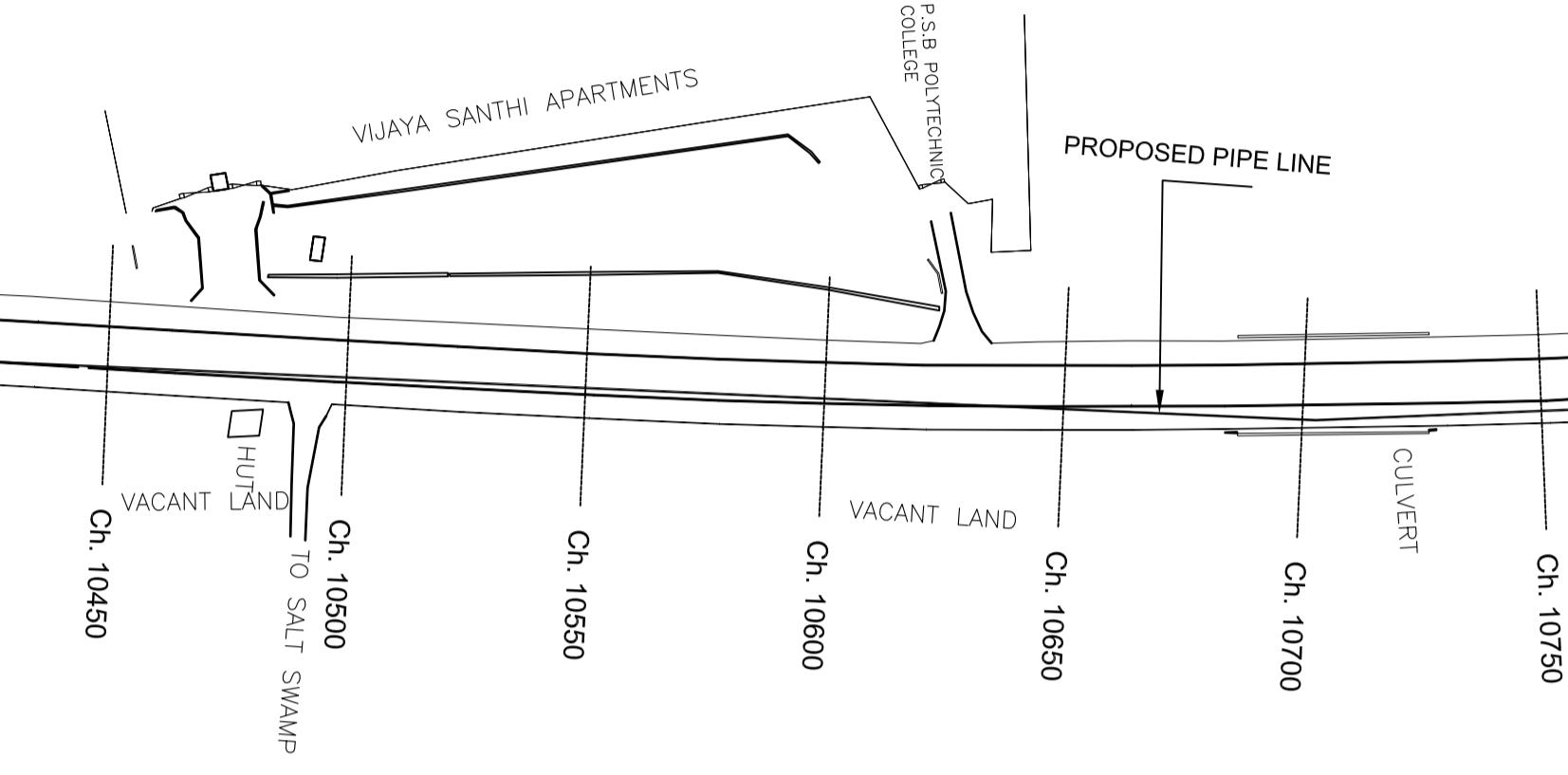
MATCH LINE (REFER DWG. SHEET 11 OF 61)



MATCH LINE (REFER DWG. SHEET 11 OF 61)

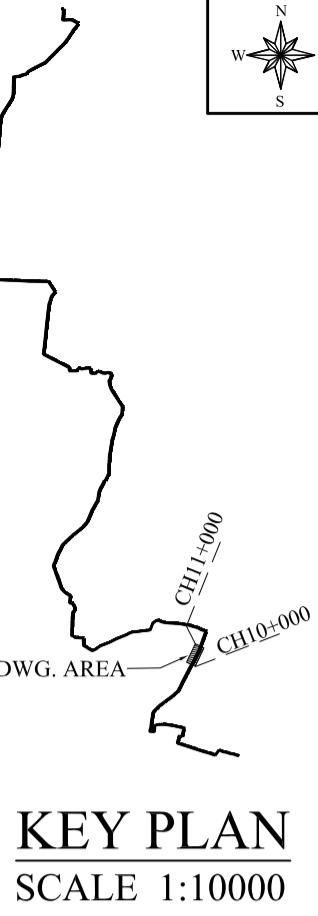
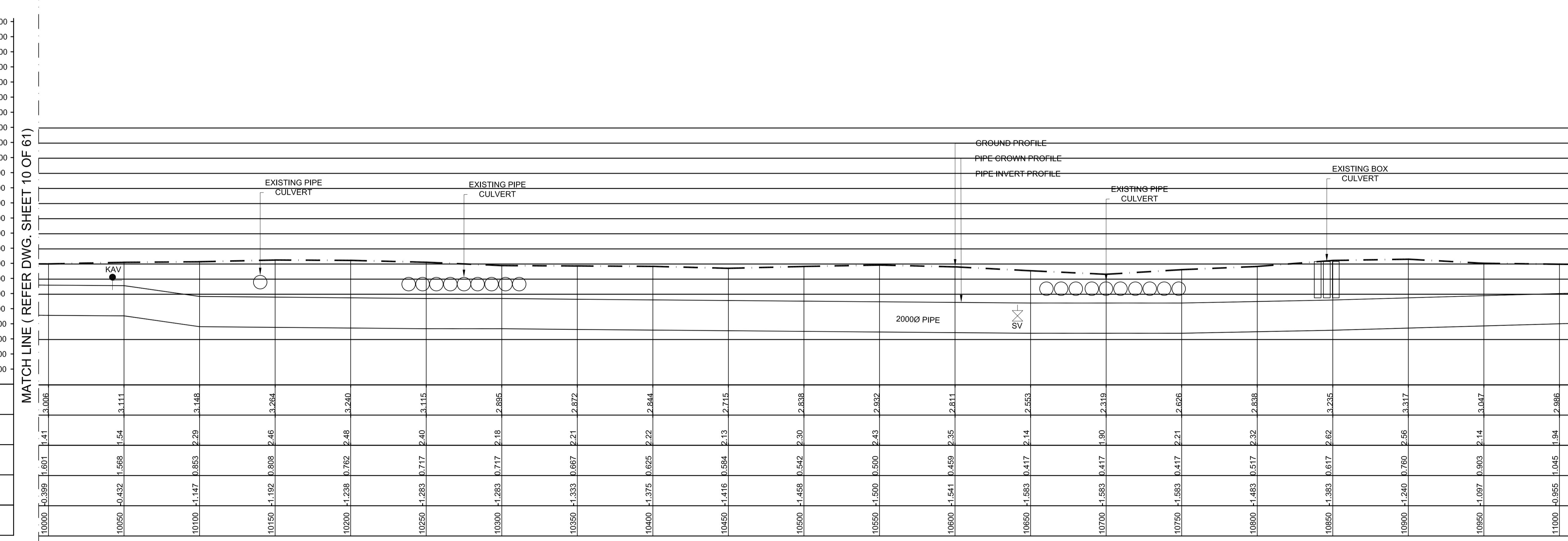


MATCH LINE (REFER DWG. SHEET 10 OF 61)

PLAN-1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 12 OF 61)

MATCH LINE (REFER DWG. SHEET 12 OF 61)

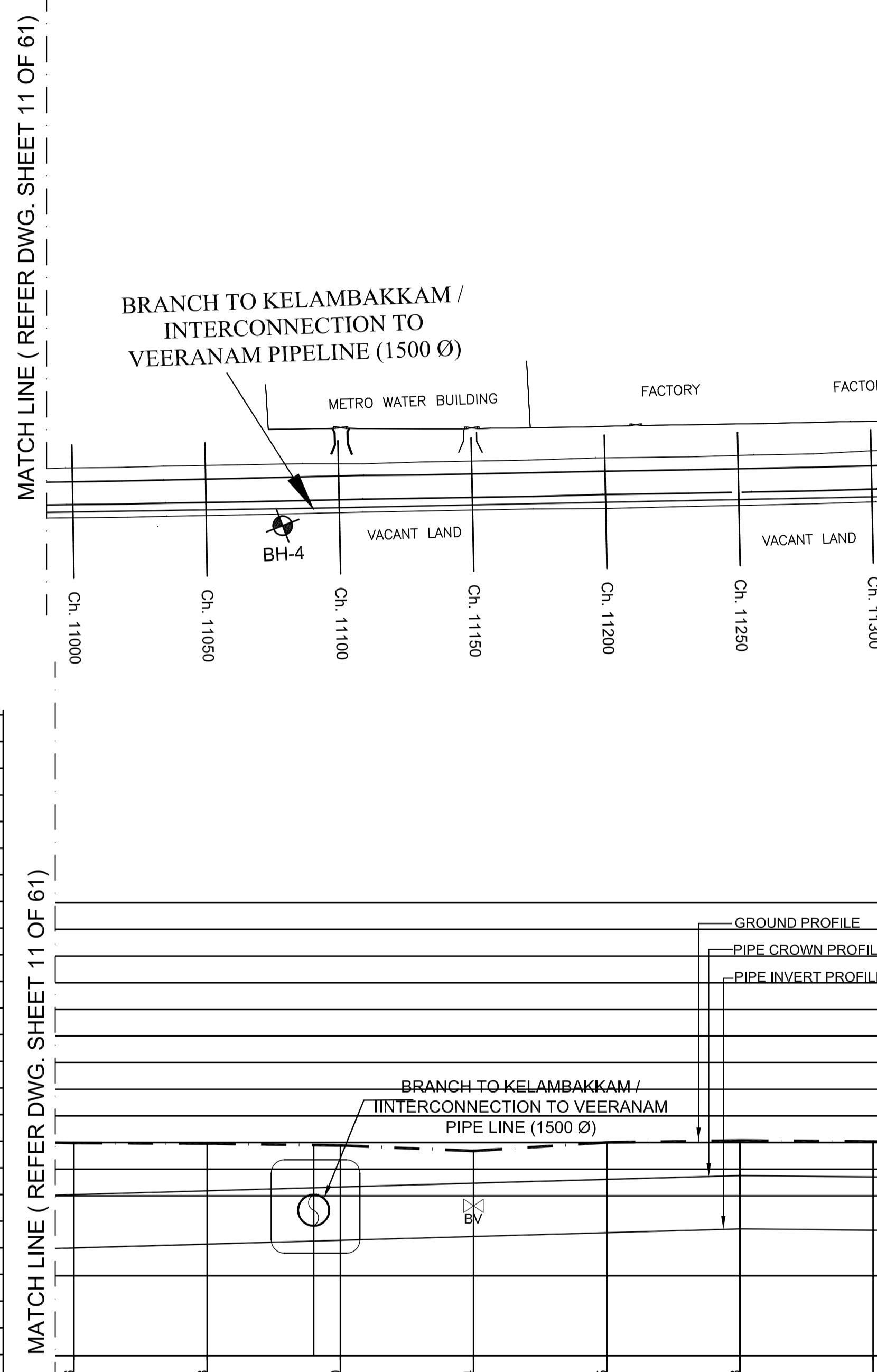
KEY PLAN
SCALE 1:10000

L - SECTION

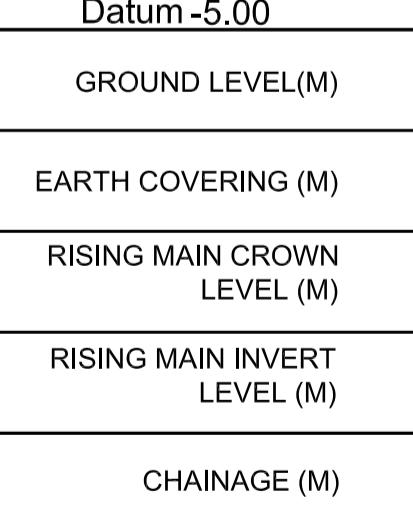
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (11/61)	
	SIZE	A1

LEGEND:-	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE
+	



PLAN
SCALE 1:150

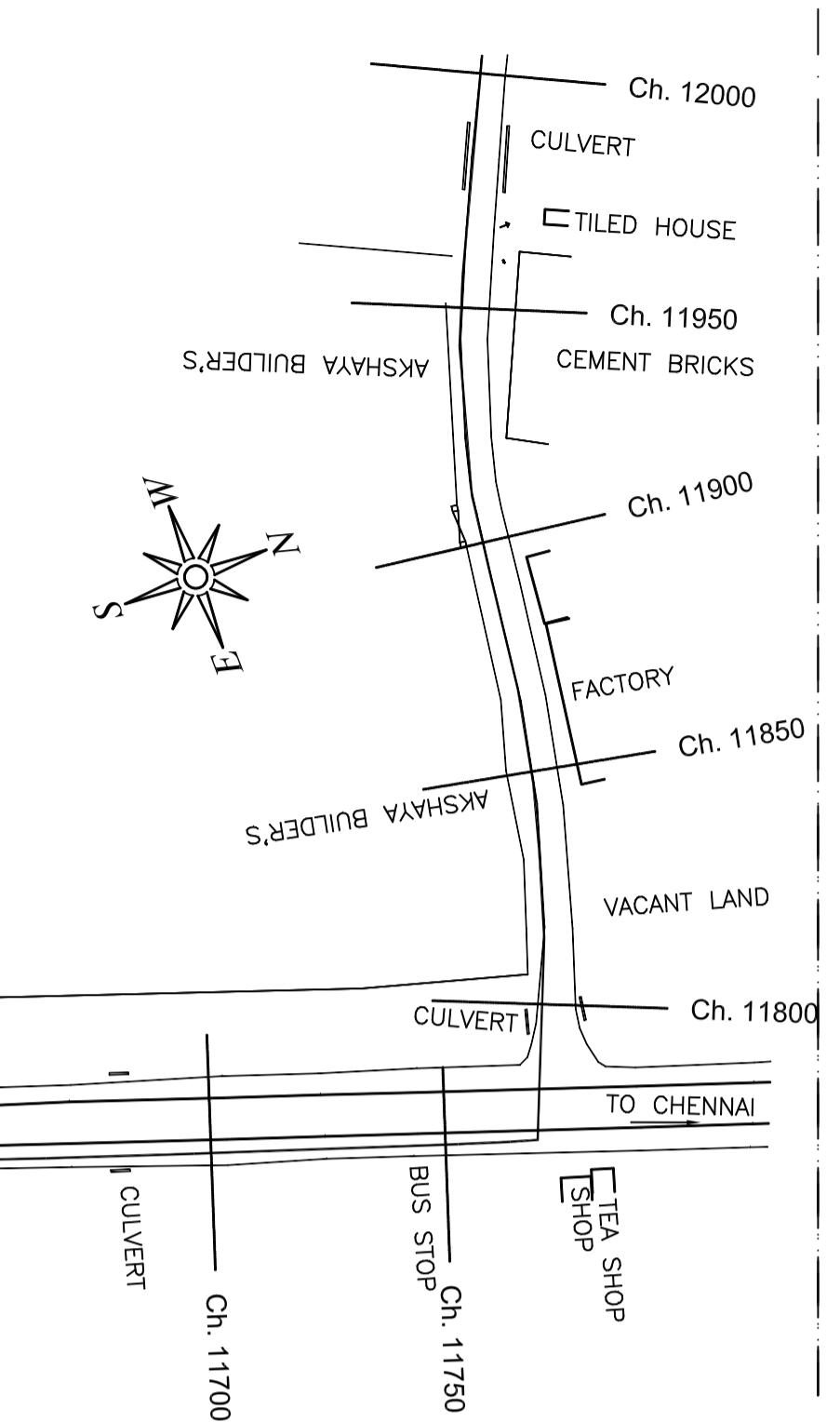


LEGEND:-	
SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

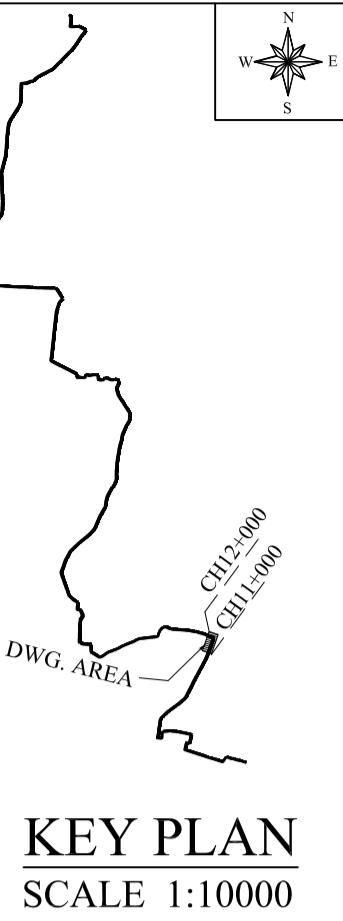


SCALE
VERTICAL 1:150
HORIZONTAL 1:150

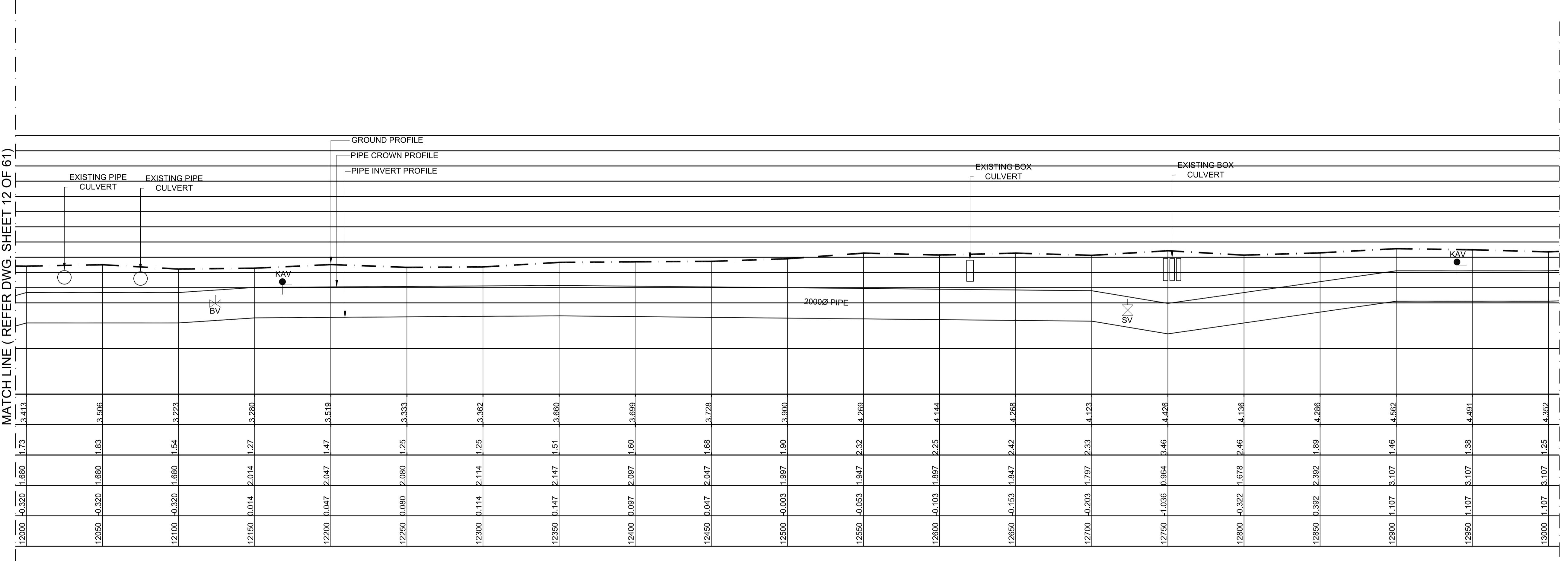
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (12/61)	SIZE A1



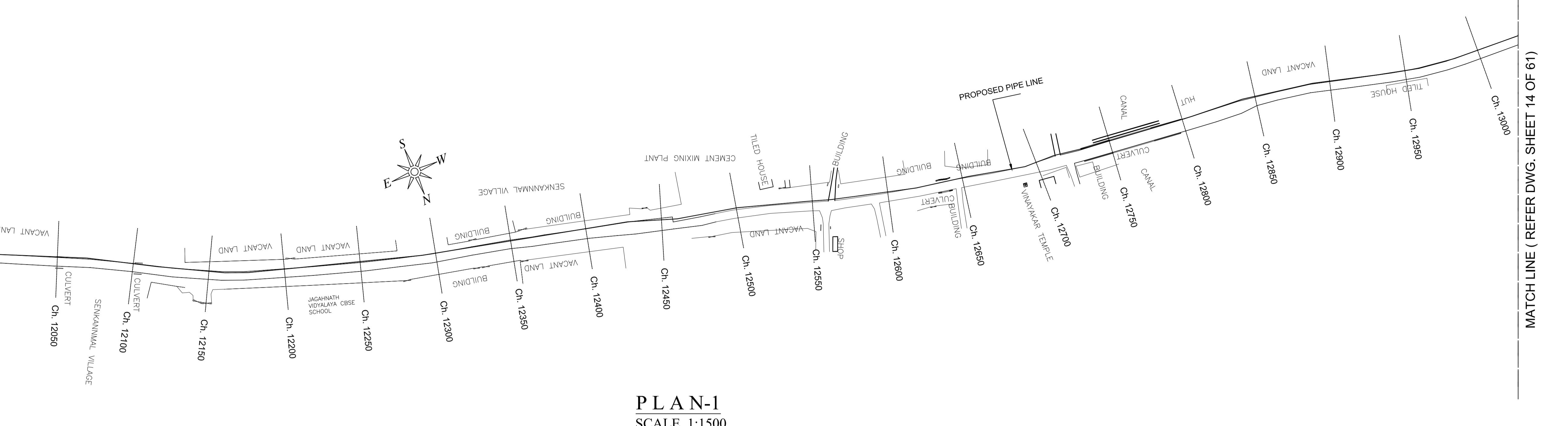
MATCH LINE (REFER
DWG. SHEET 13 OF 61)



MATCH LINE (REFER DWG. SHEET 12 OF 61)

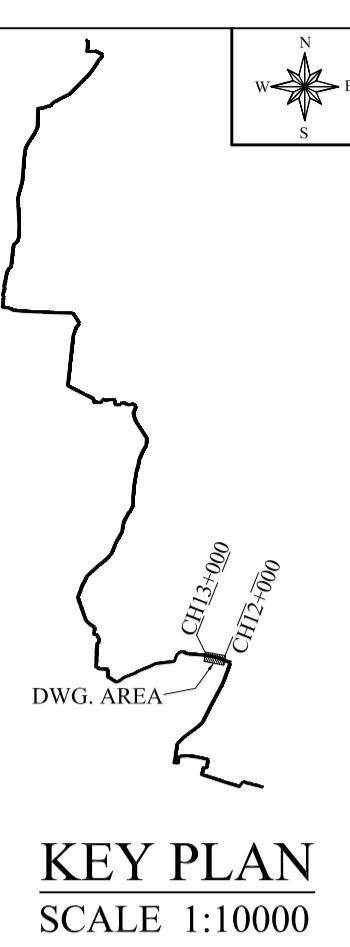


MATCH LINE (REFER DWG. SHEET 12 OF 61)



MATCH LINE (REFER DWG. SHEET 14 OF 61)

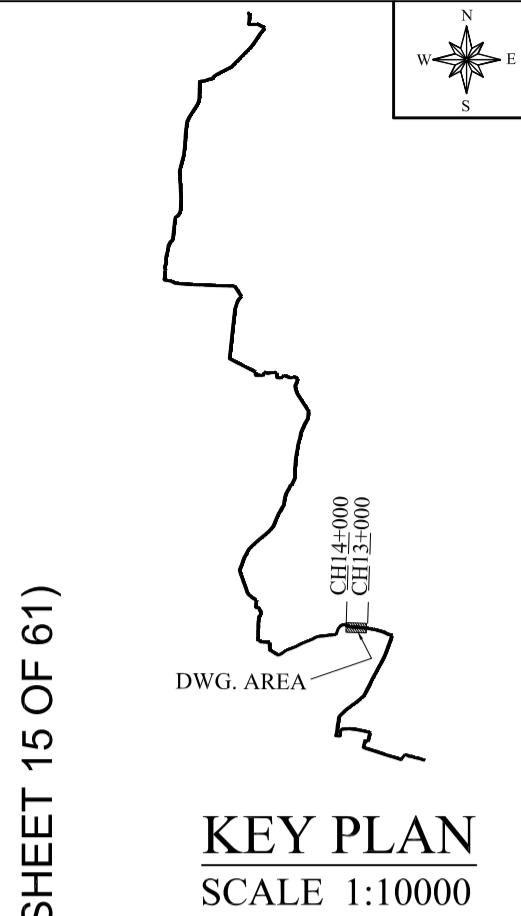
MATCH LINE (REFER DWG. SHEET 14 OF 61)



Datum -5.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

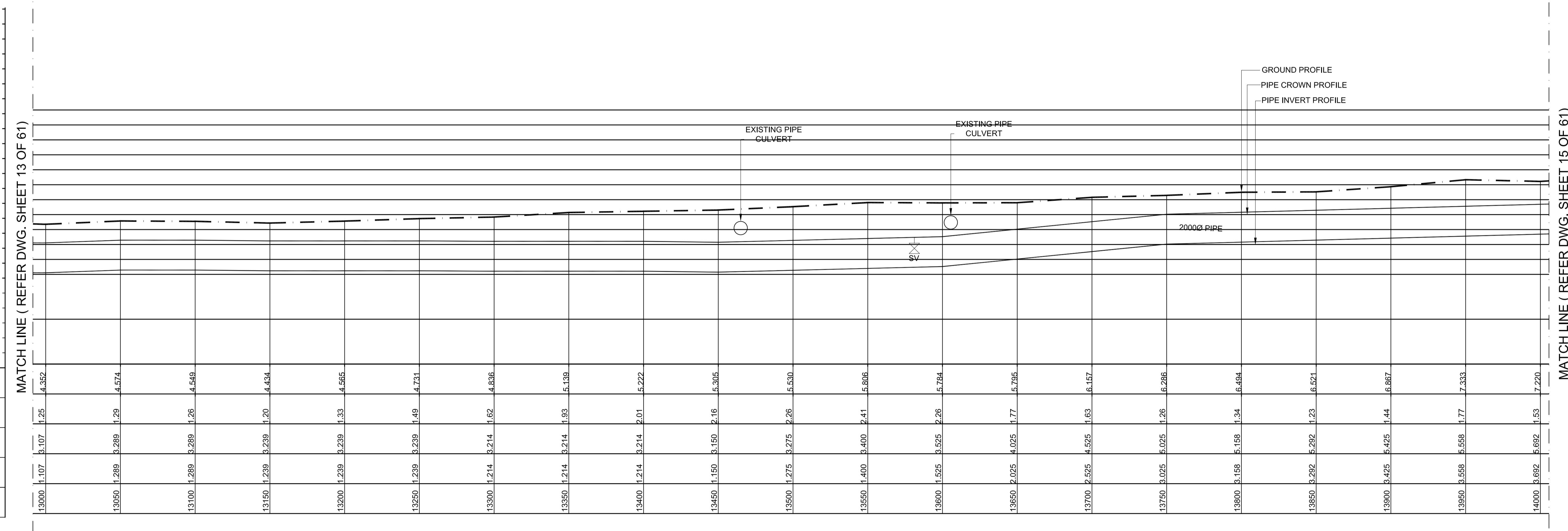
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (13/61)
SIZE	A1



KEY PLAN
SCALE 1:10000

PLAN-1
SCALE 1:1500

SCALE 1:150



L - SECTION

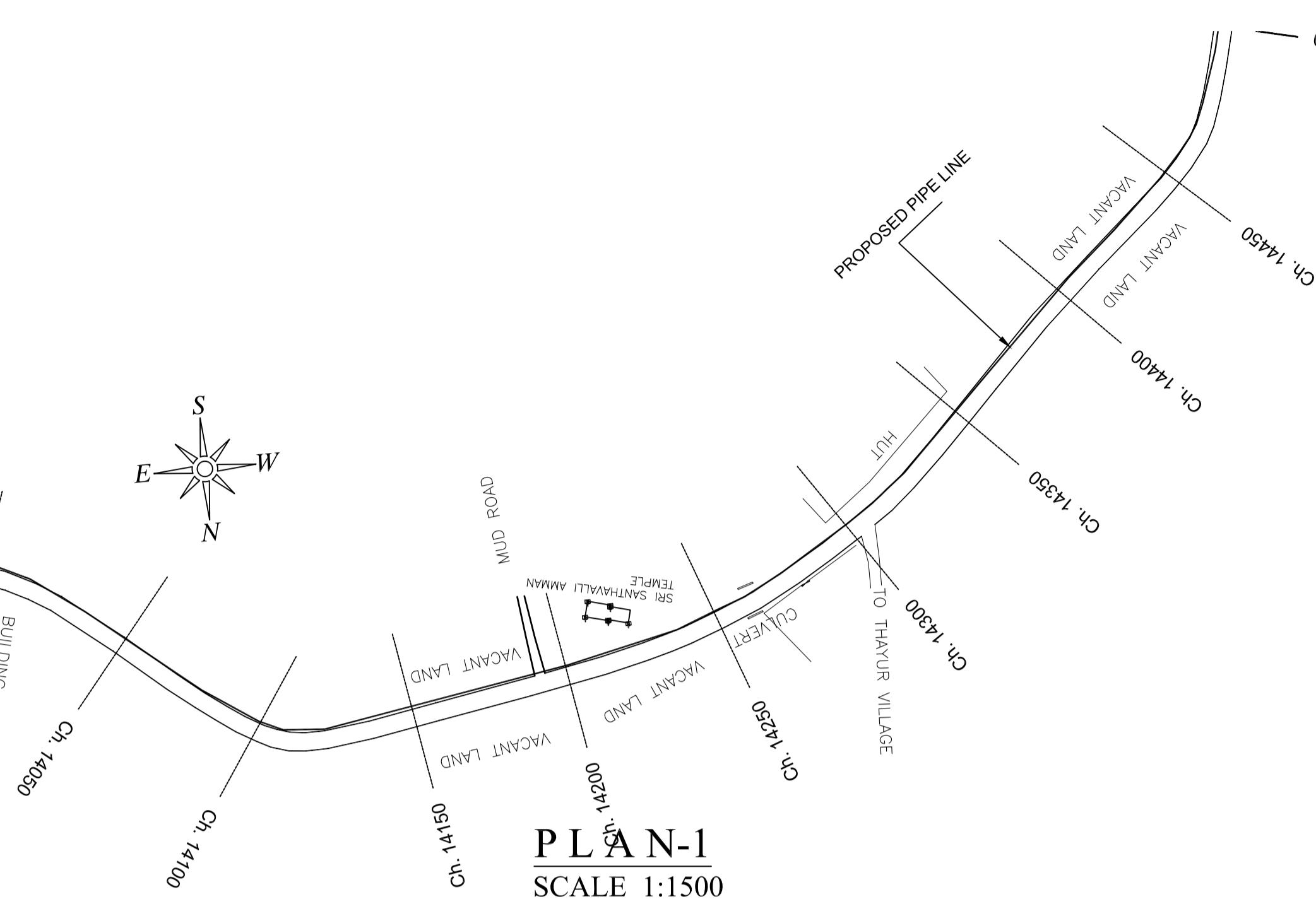
SCALE
VERTICAL 1:150
HORIZONTAL 1:150

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (14/61)	SIZE A1

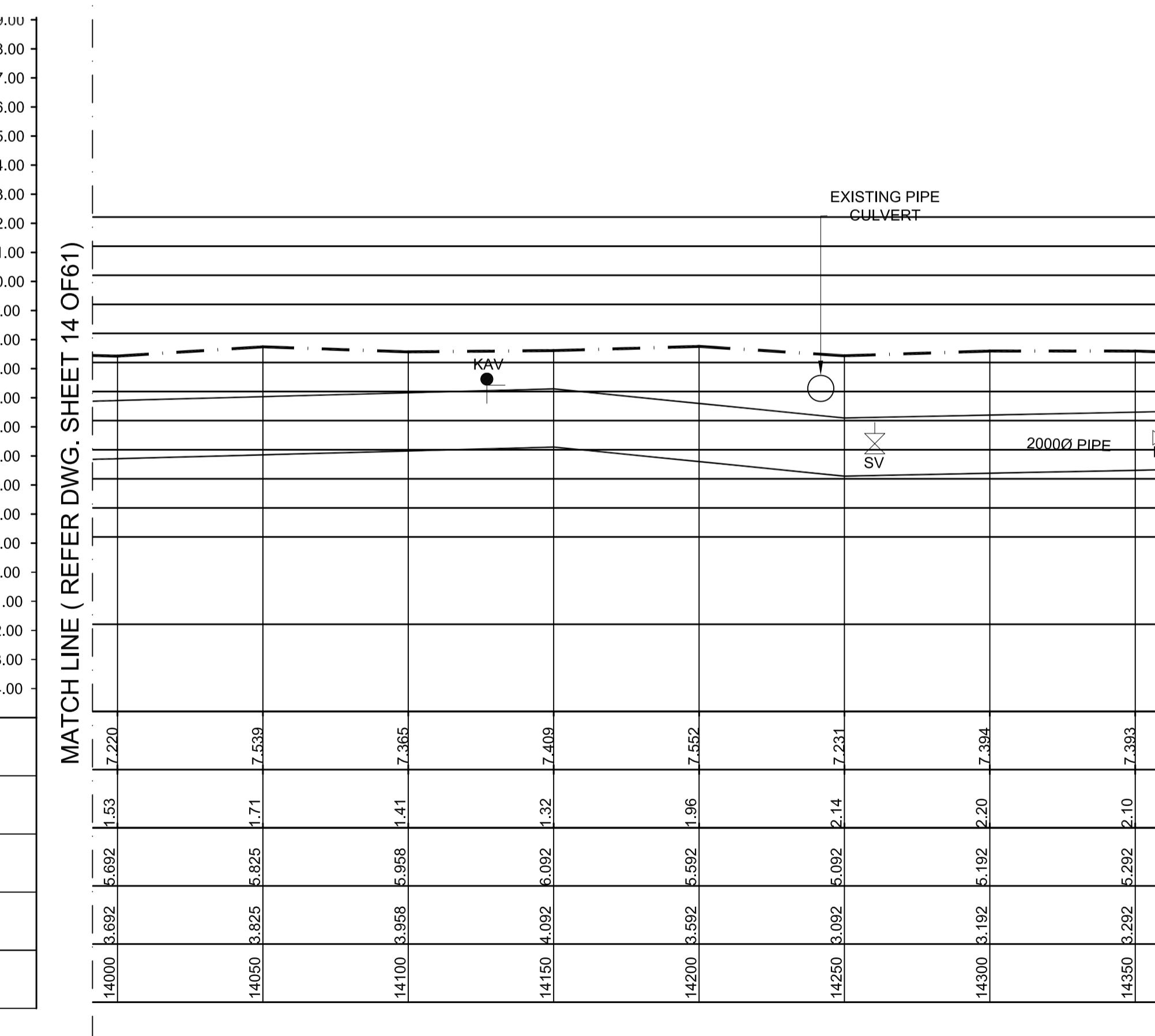
Datum -5.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-	
	DESCRIPTION AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

MATCH LINE (REFER DWG. SHEET 14 OF 61)



MATCH LINE (REFER DWG. SHEET 14 OF 61)

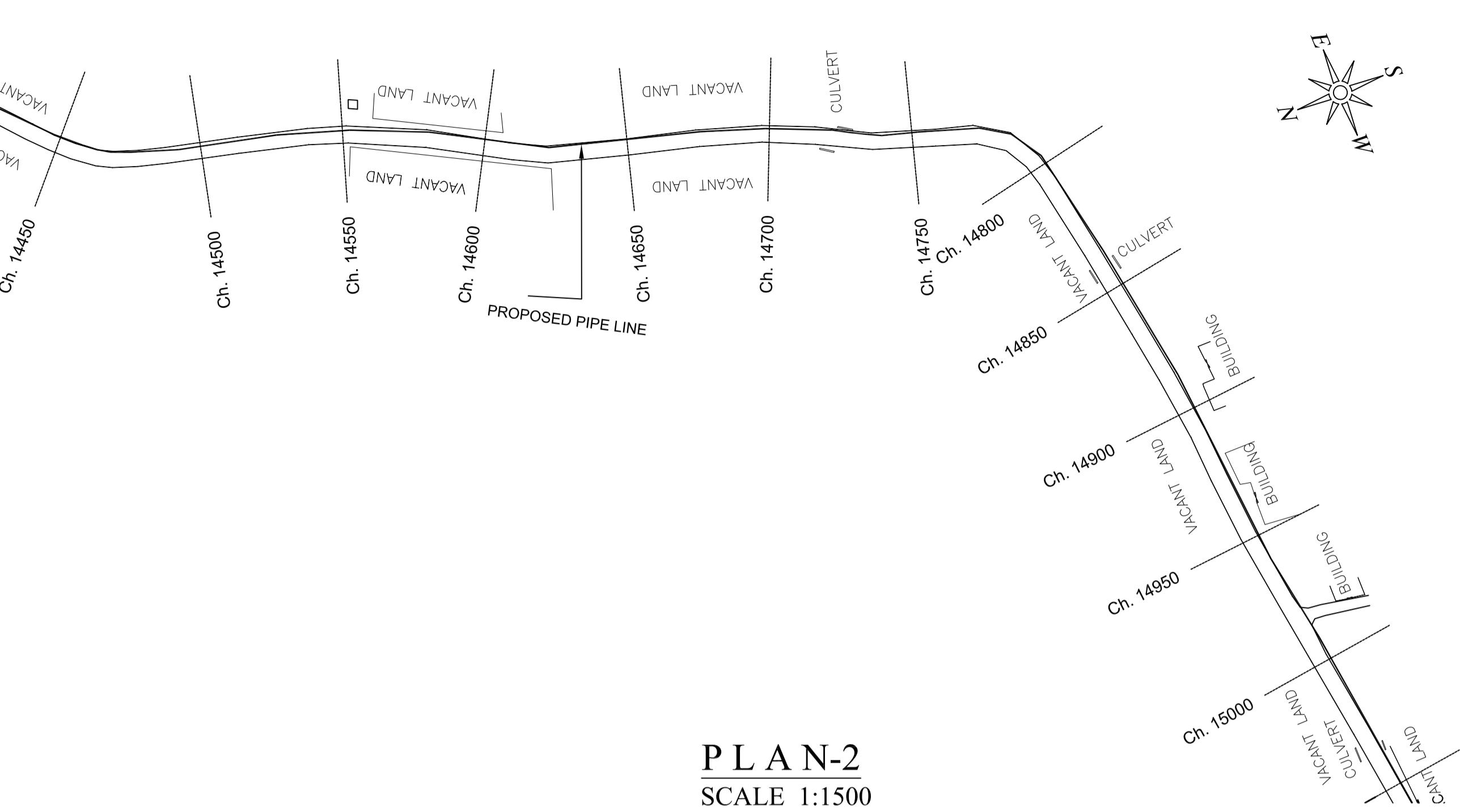


L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

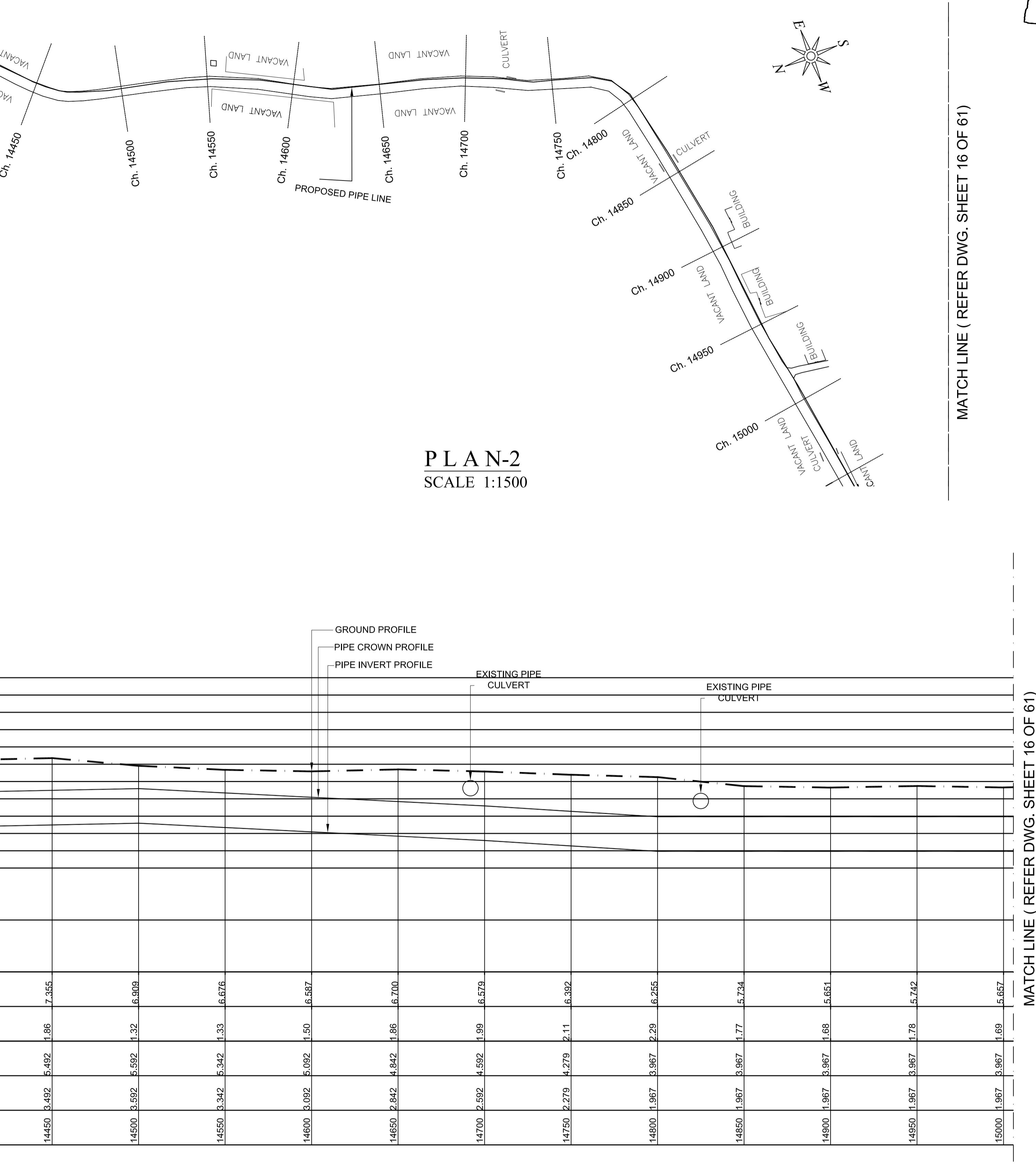
MATCH LINE (REFER PLAN 02)

MATCH LINE (REFER PLAN 01)



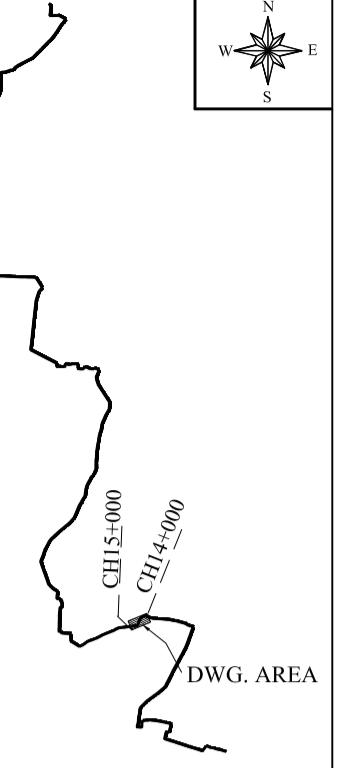
MATCH LINE (REFER PLAN 02)

MATCH LINE (REFER PLAN 01)



MATCH LINE (REFER DWG. SHEET 16 OF 61)

KEY PLAN
SCALE 1:10000

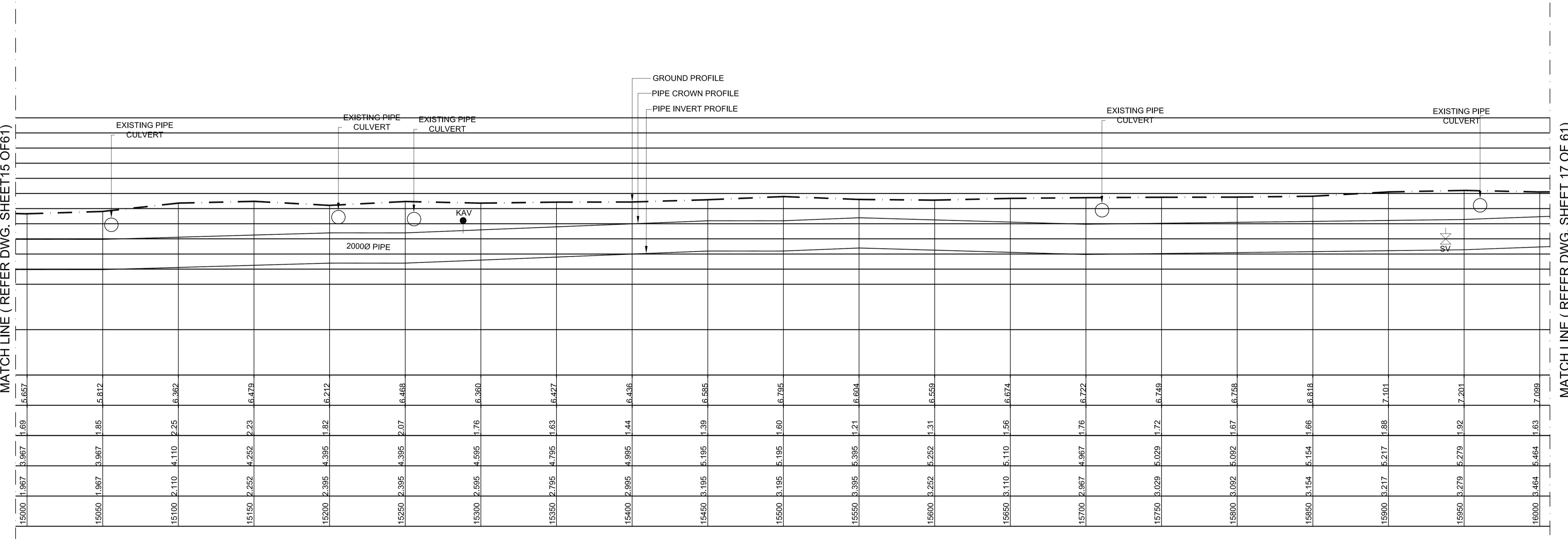


MATCH LINE (REFER DWG. SHEET 16 OF 61)

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (15/61)

SIZE
A1

MATCH LINE (REFER DWG. SHEET15 OF 61)



L - SECTION

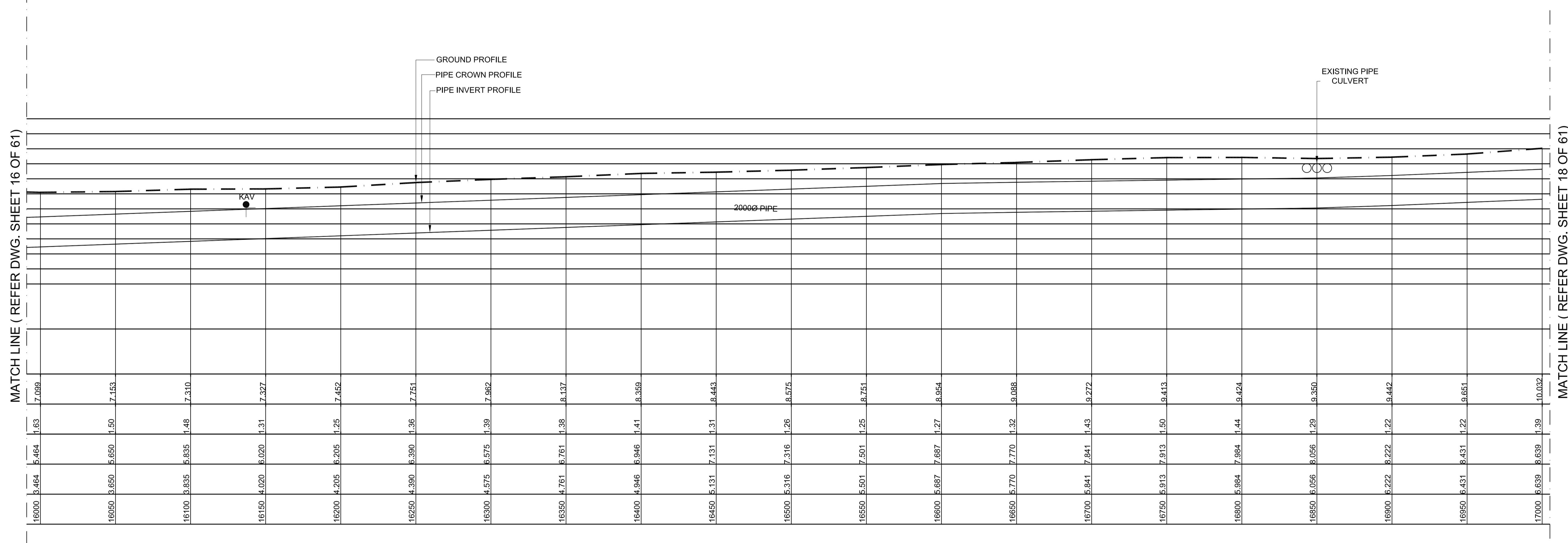
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (16/61)	SIZE A1

MATCH LINE (REFER DWG. SHEET15 OF 61)



MATCH LINE (REFER DWG. SHEET 16 OF 61)



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

LEGEND:-	
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT		
DRAWING TITLE:	Plan and Profile of Main Pipeline		
DRAWING NO:	II-1-2 (17/61)		
	SIZE A1		

MATCH LINE (REFER DWG. SHEET 16 OF 61)

Ch. 16000

Ch. 16050

Ch. 16100

Ch. 16150

Ch. 16200

Ch. 16250

Ch. 16300

Ch. 16350

Ch. 16400

Ch. 16450

Ch. 16500

Ch. 16550

Ch. 16600

Ch. 16650

Ch. 16700

Ch. 16750

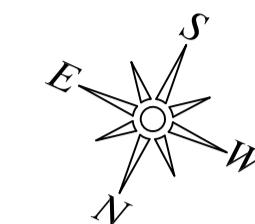
Ch. 16800

Ch. 16850

Ch. 16900

Ch. 16950

Ch. 17000



RESERVE FOREST

PROPOSED PIPE LINE

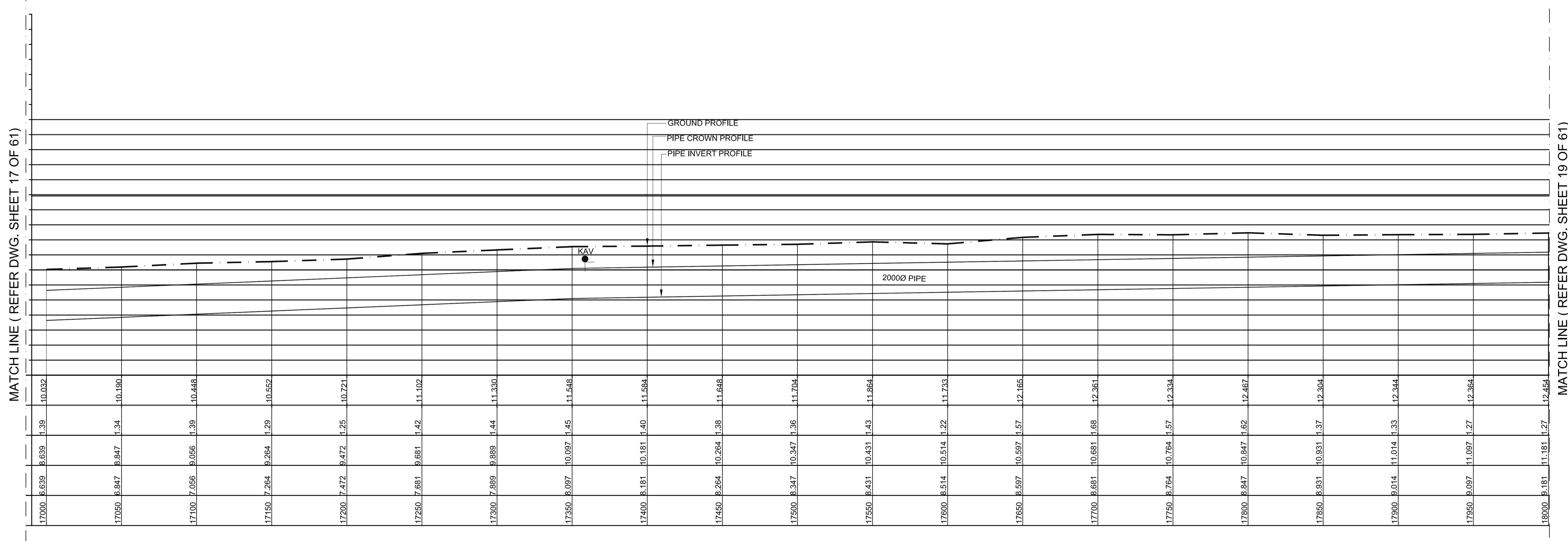
RESERVE FOREST

MATCH LINE (REFER DWG. SHEET 17 OF 61)

ANSWER

Datum 3.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-	
SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE



L - SECTION

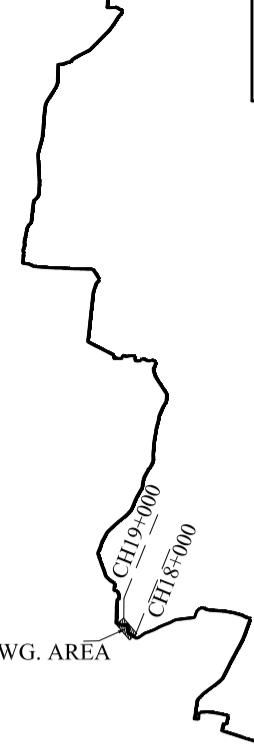
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (18/61)	SIZE A1

N
E
S
W

KEY PLAN

SCALE 1:10000

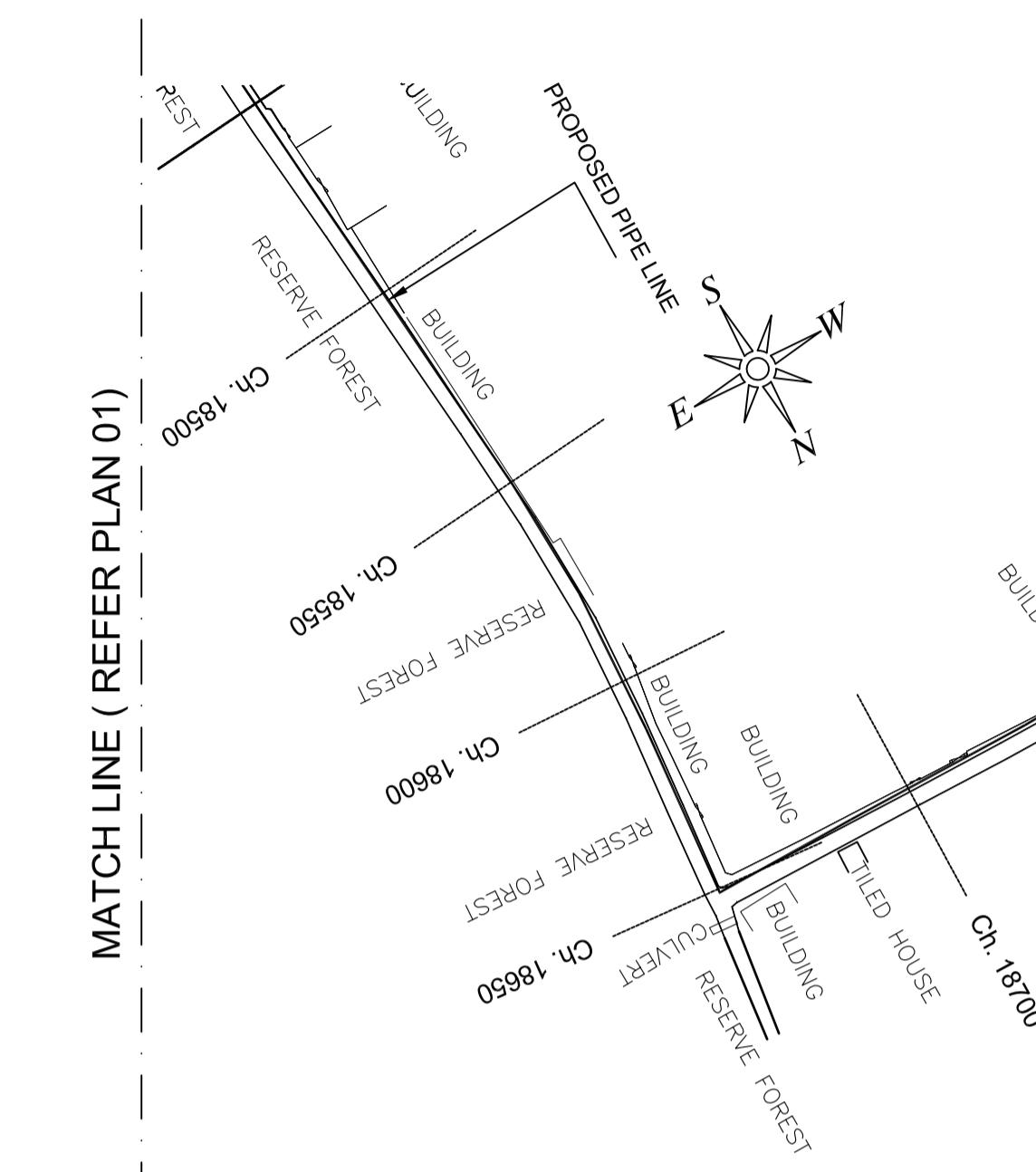


MATCH LINE (REFER DWG. SHEET 20 OF 61)

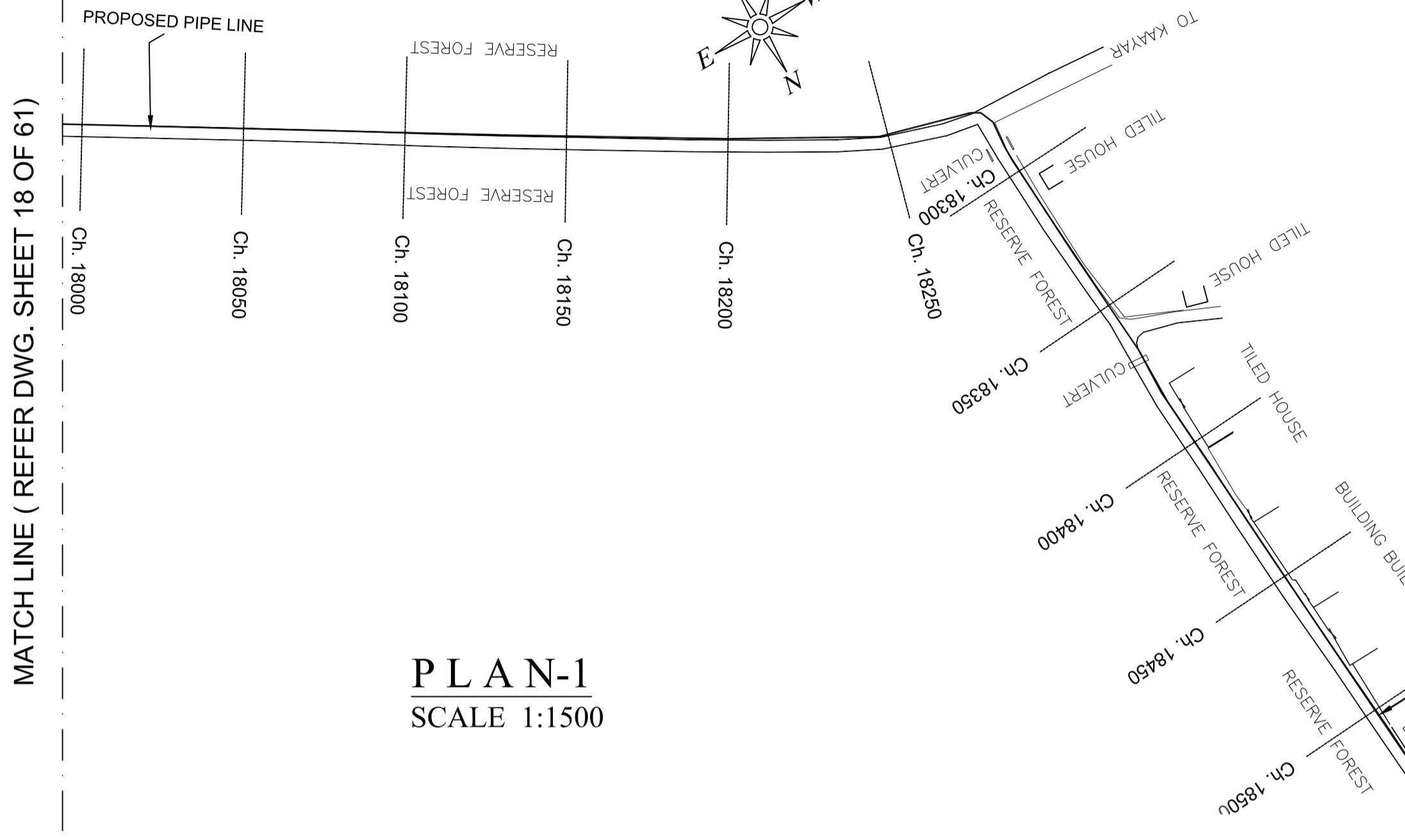


P L A N-2

SCALE 1:1500

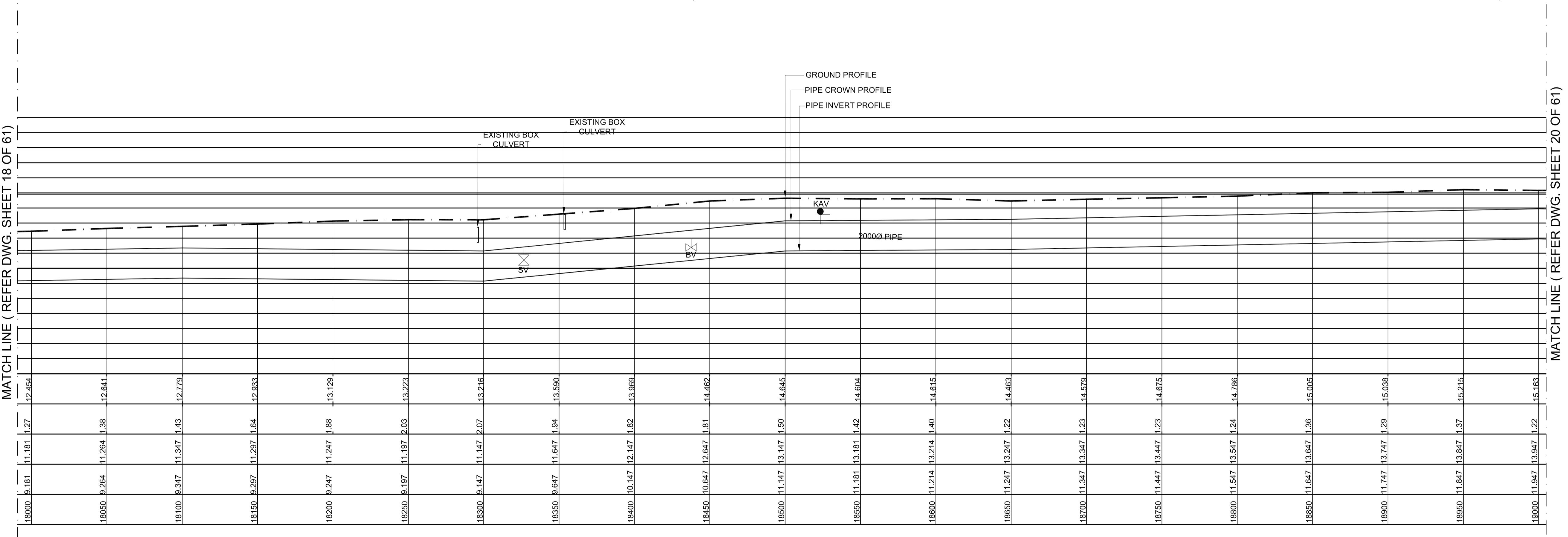


MATCH LINE (REFER PLAN 02)



P L A N-1

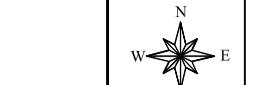
SCALE 1:1500



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (19/61)	SIZE A1



KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 21 OF 61)

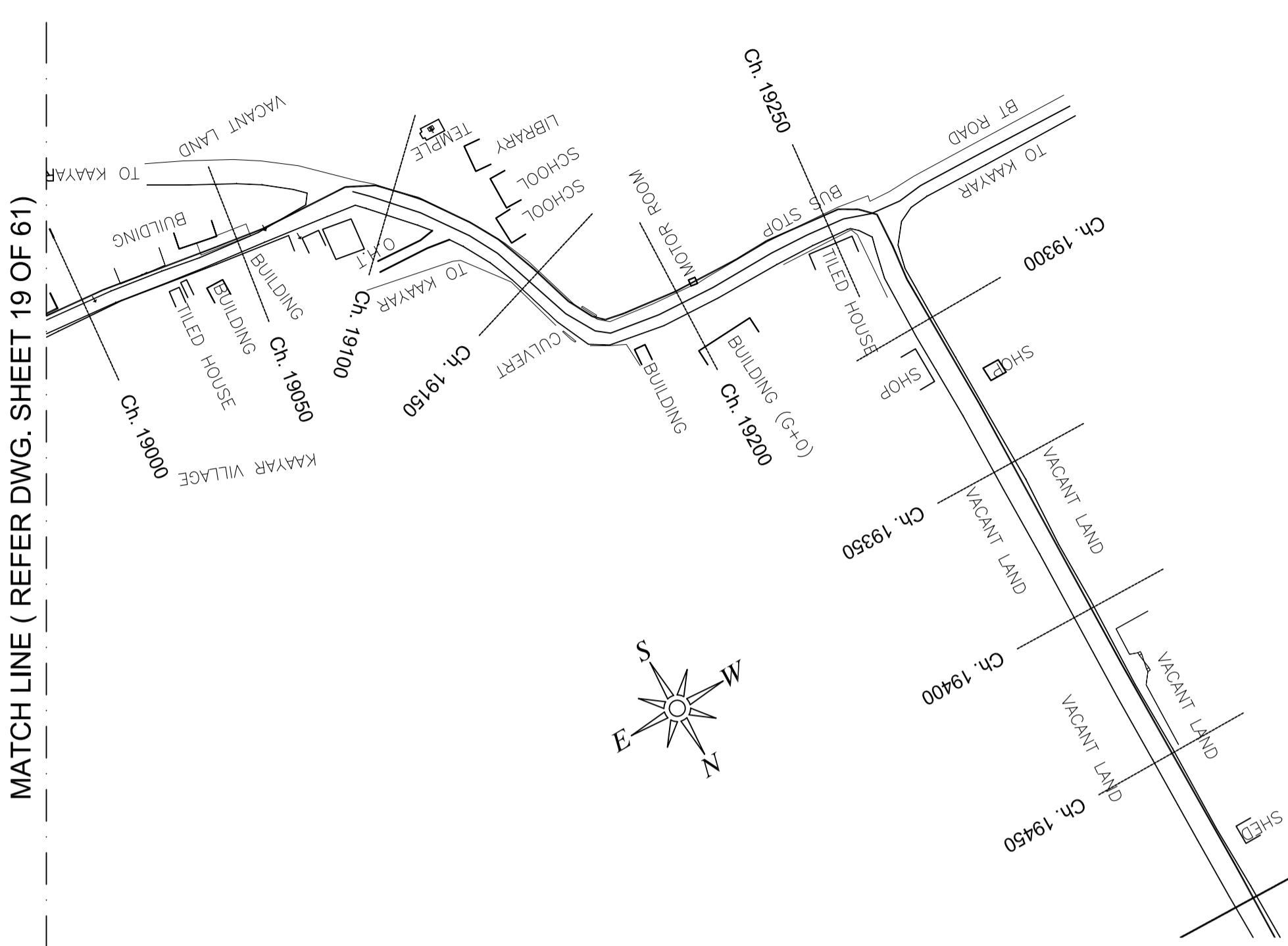
MATCH LINE (REFER DWG. SHEET 21 OF 61)

MATCH LINE (REFER DWG. SHEET 21 OF 61)

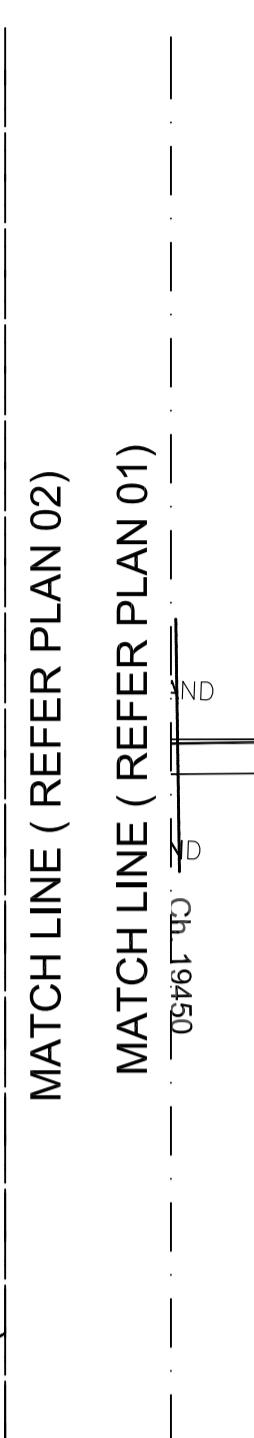
MATCH LINE (REFER DWG. SHEET 19 OF 61)

MATCH LINE (REFER DWG. SHEET 21 OF 61)

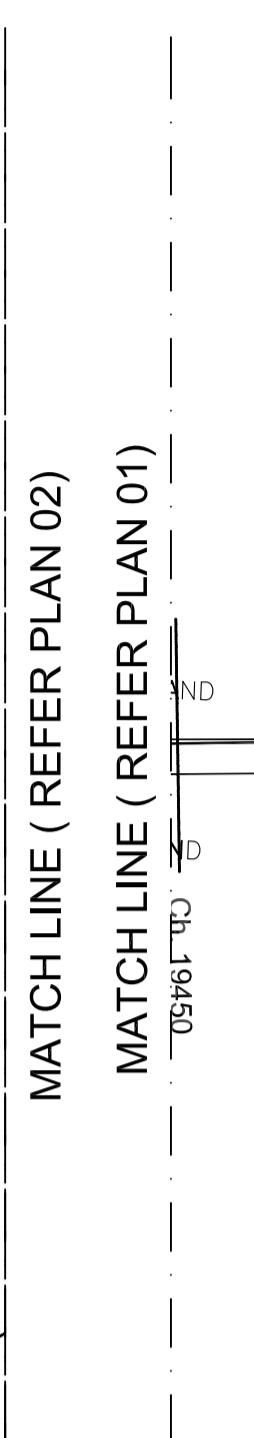
MATCH LINE (REFER DWG. SHEET 21 OF 61)



PLAN-1
SCALE 1:1500

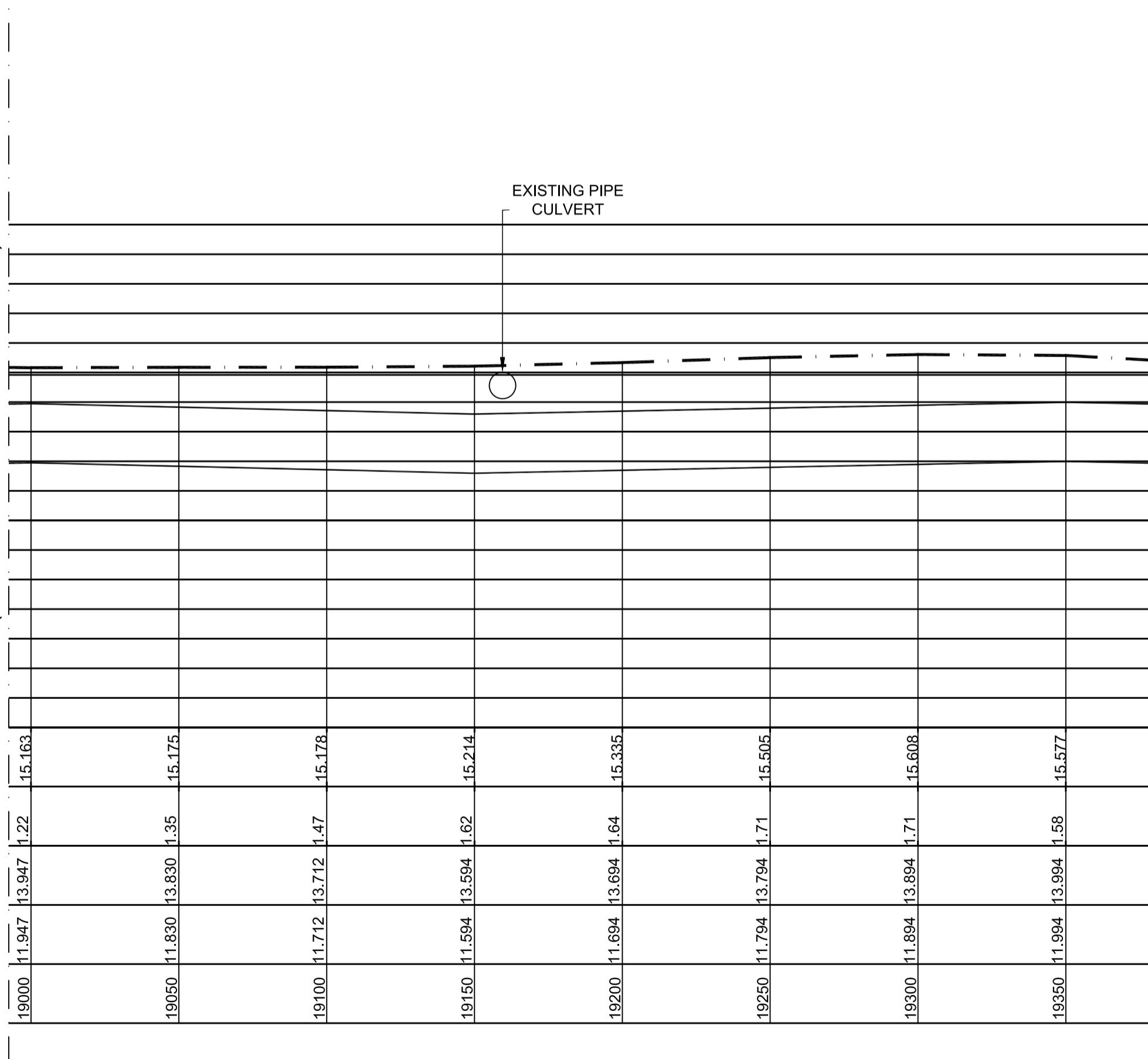


MATCH LINE (REFER PLAN 01)



MATCH LINE (REFER PLAN 02)

PLAN-2
SCALE 1:1500



MATCH LINE (REFER DWG. SHEET 19 OF 61)

Datum 3.00

GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
●	AIR VALVE

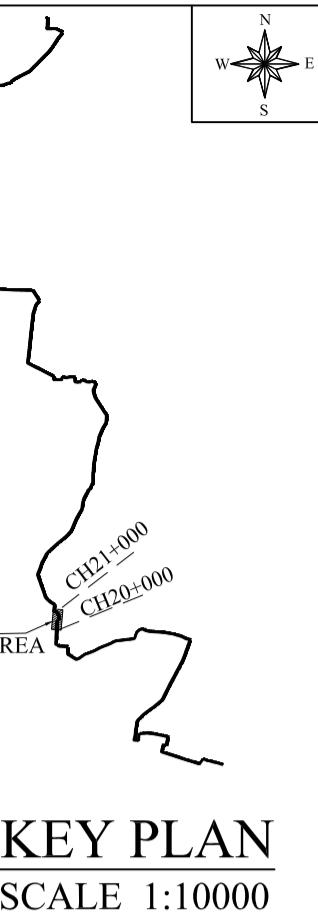
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

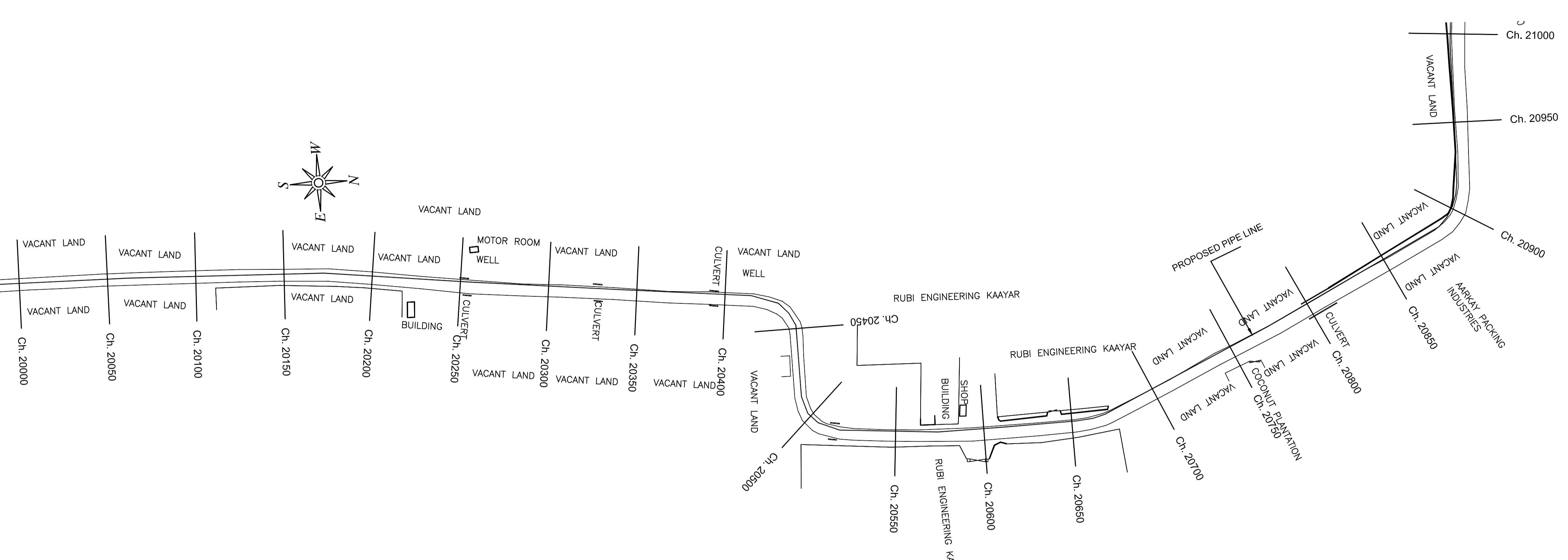
L - SECTION

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (20/61)

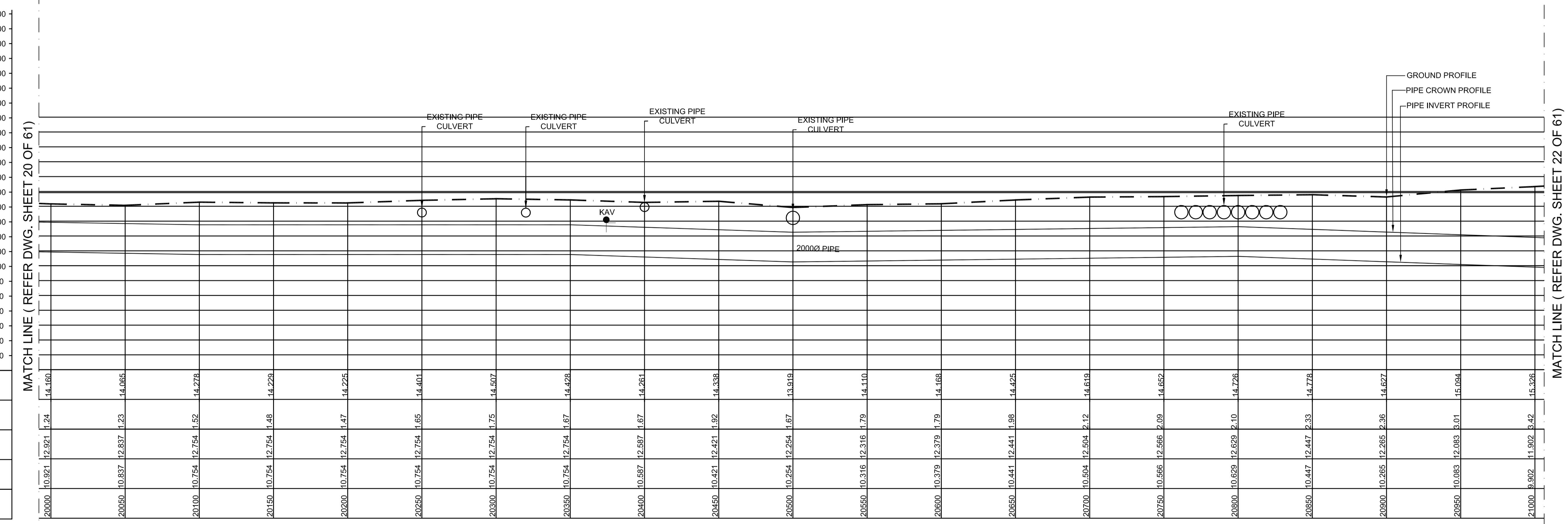
SIZE
A1



MATCH LINE (REFER DWG. SHEET 20 OF 61)



MATCH LINE (REFER DWG. SHEET 22 OF 61)



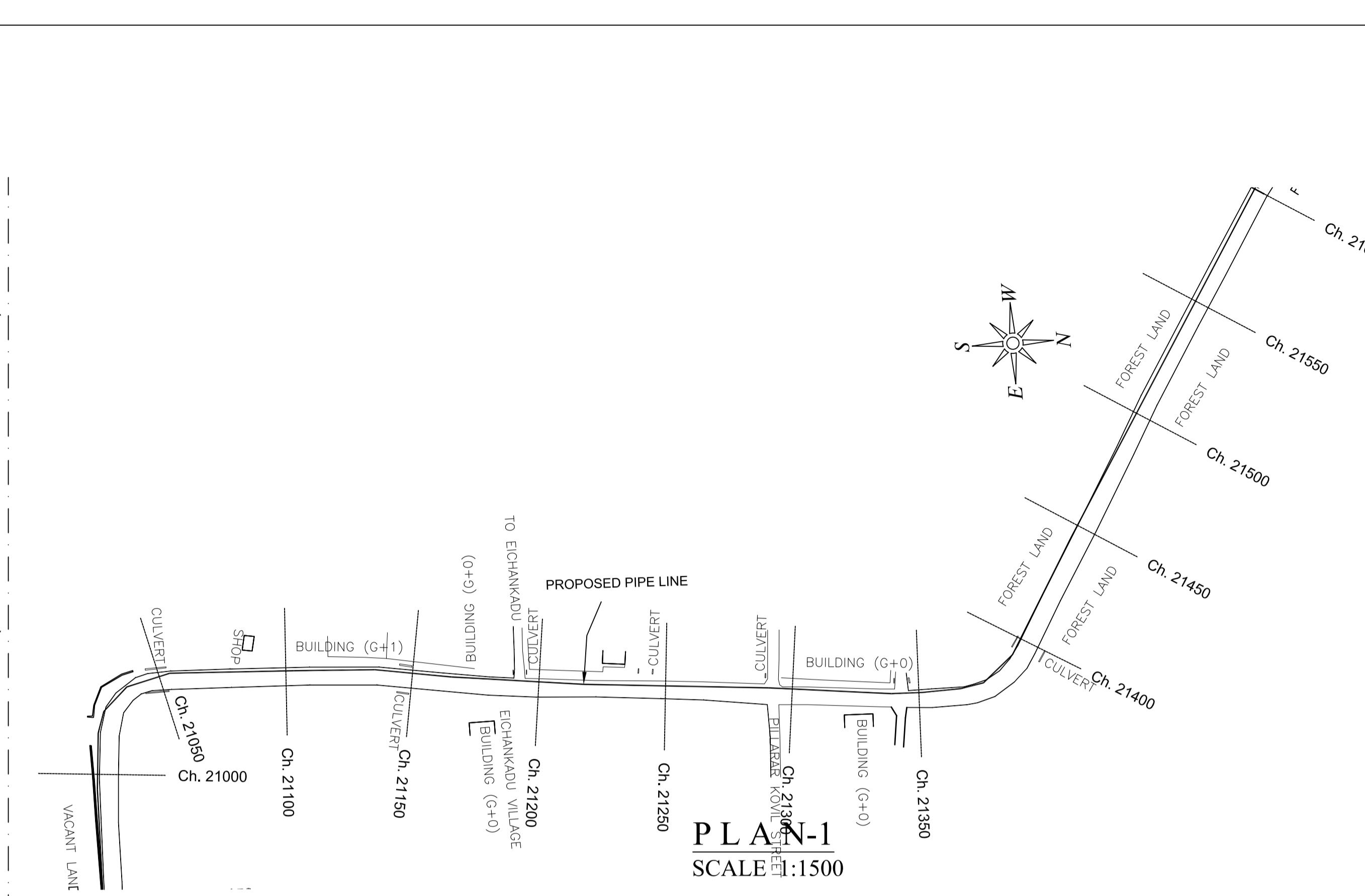
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (21/61)

SIZE
A1

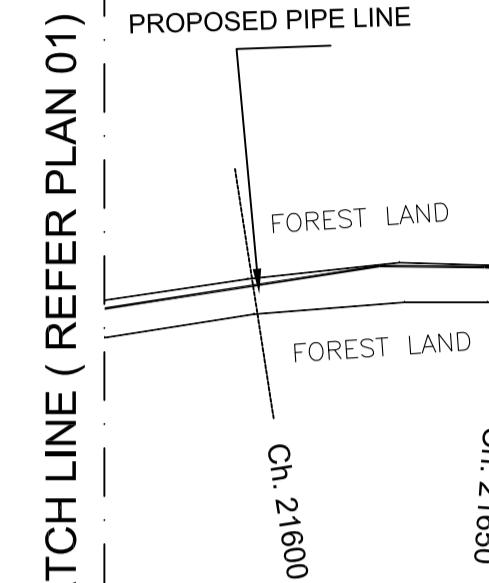
MATCH LINE (REFER DWG. SHEET 21 OF 61)



MATCH LINE (REFER PLAN 01)



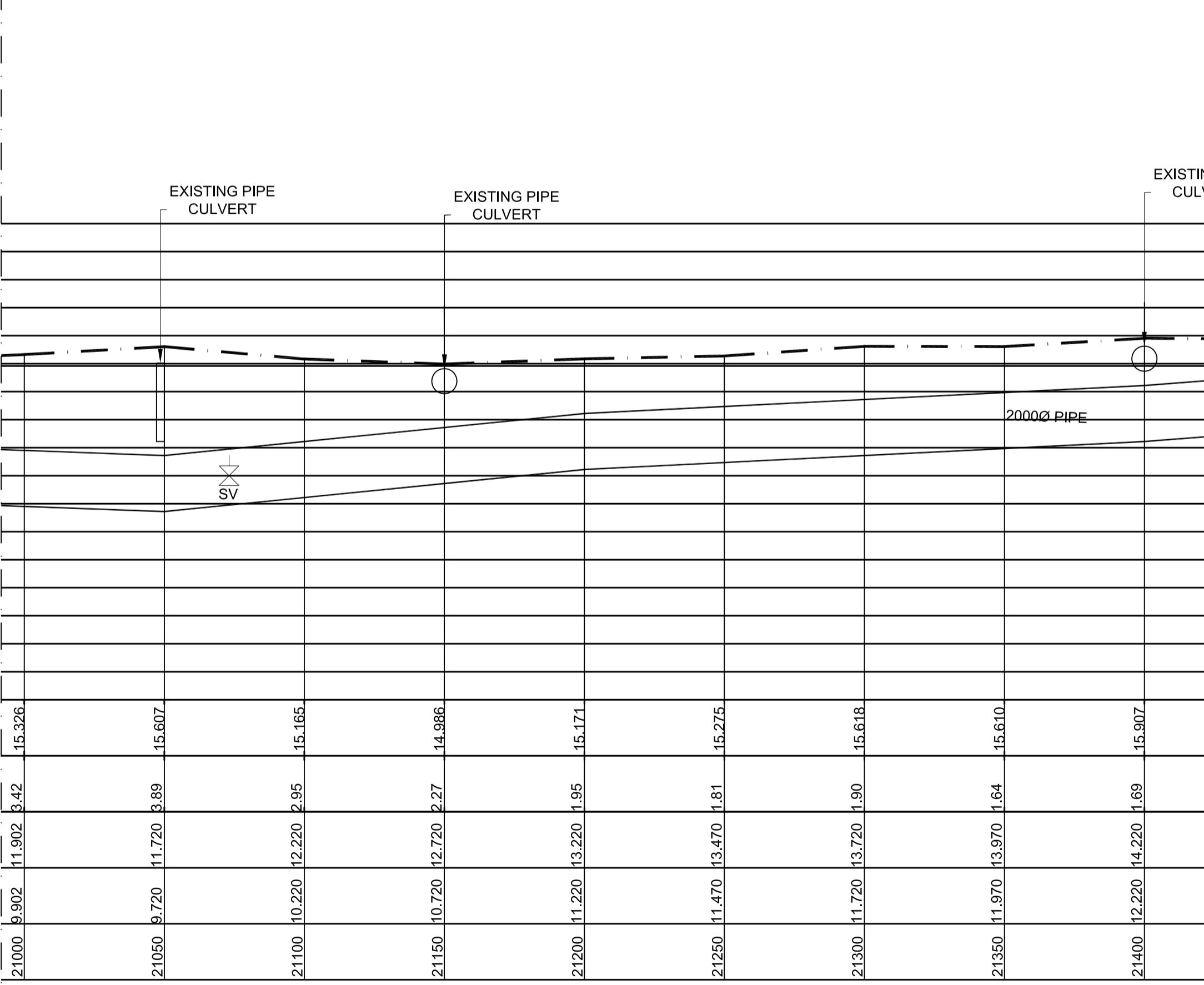
MATCH LINE (REFER PLAN 02)



PLAN-2
SCALE 1:1500

Datum 3.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

MATCH LINE (REFER DWG. SHEET 21 OF 61)

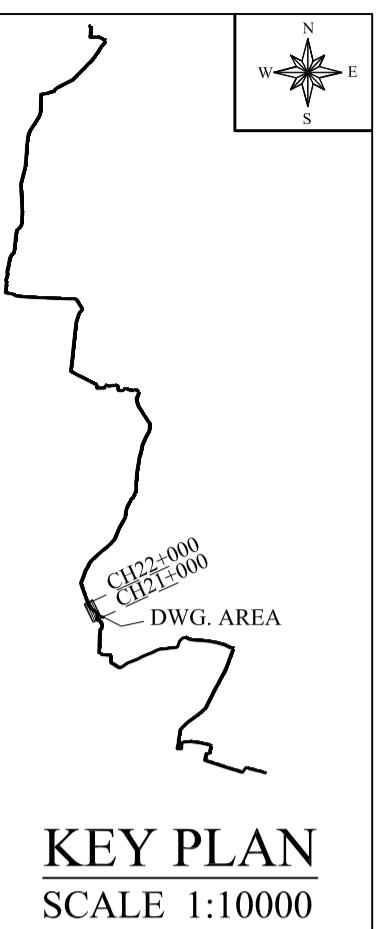


L - SECTION

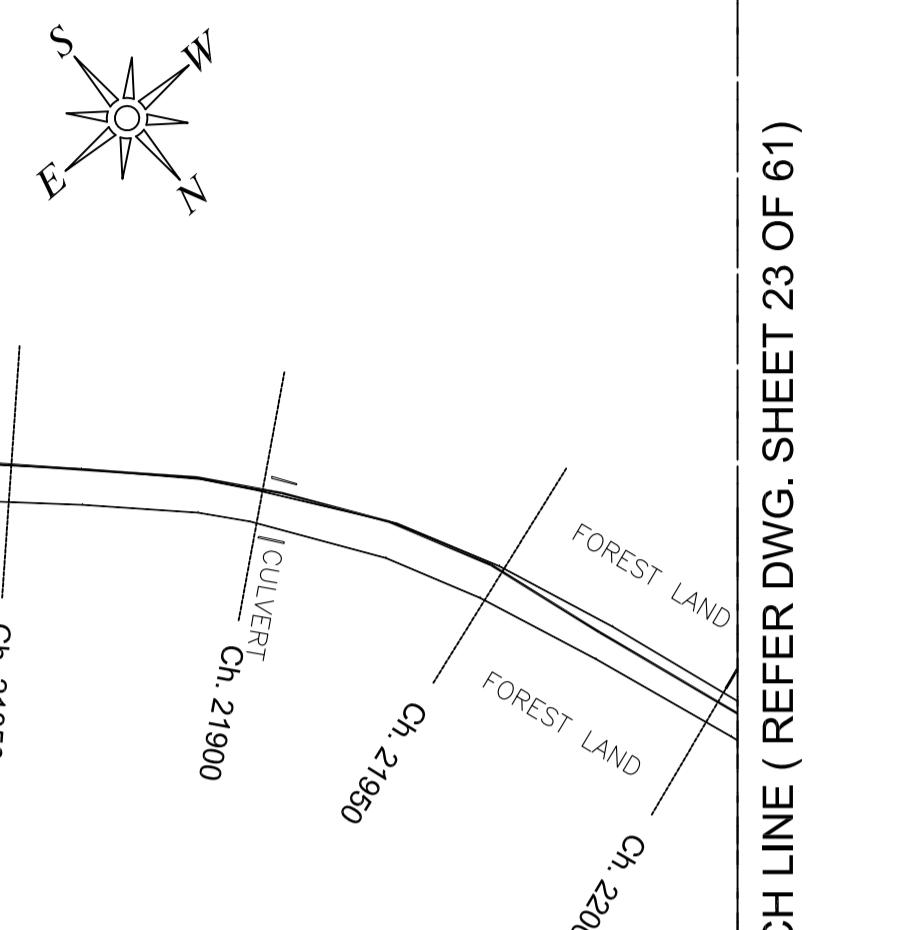
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (22/61)

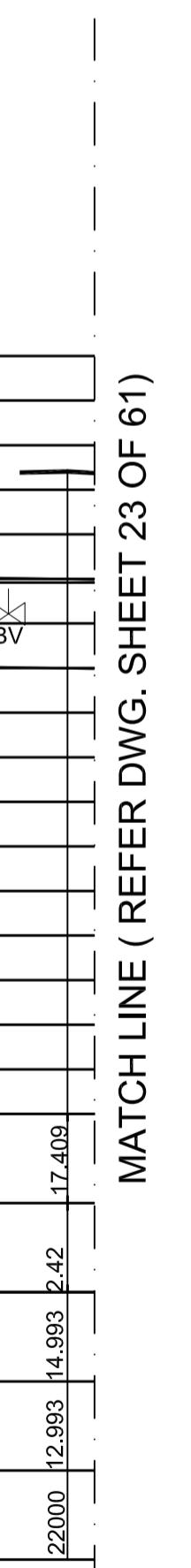
SIZE
A1

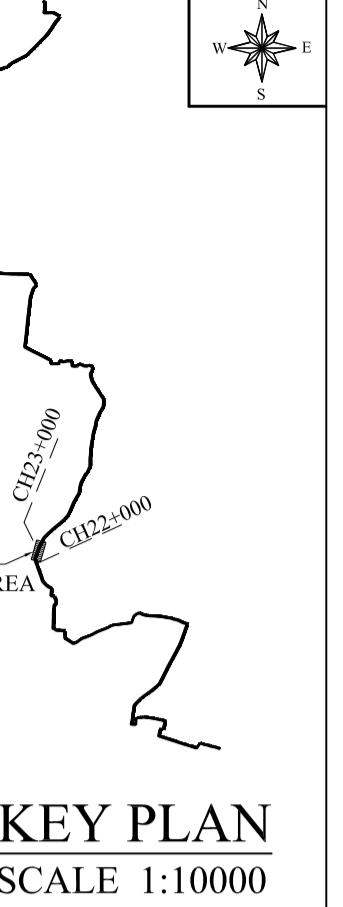


MATCH LINE (REFER DWG. SHEET 23 OF 61)



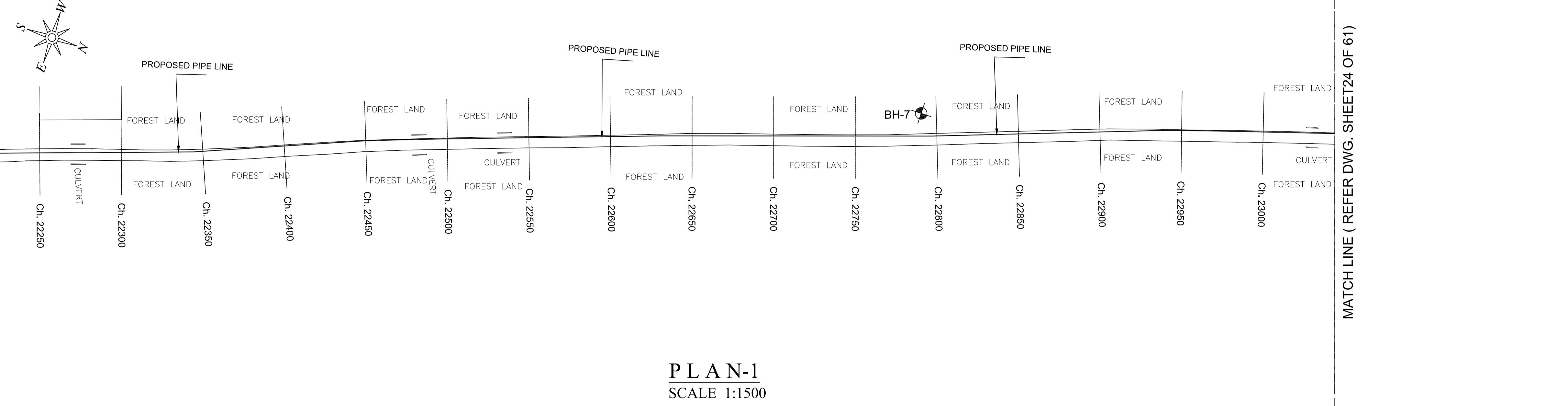
MATCH LINE (REFER DWG. SHEET 23 OF 61)





KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 22 OF 61)



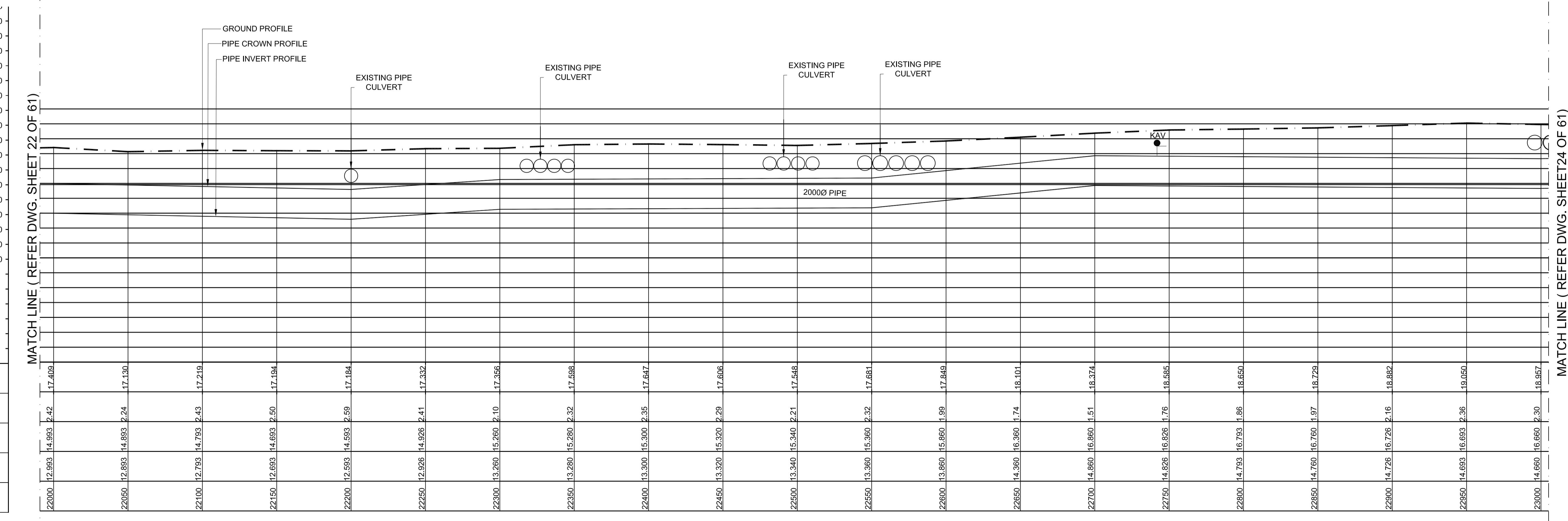
MATCH LINE (REFER DWG. SHEET 22 OF 61)

Datum 3.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-	
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

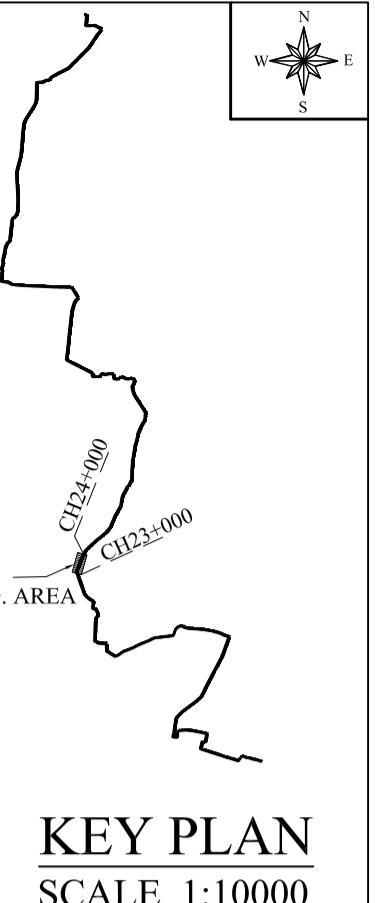
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500



MATCH LINE (REFER DWG. SHEET 24 OF 61)

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (23/61)
SIZE	A1

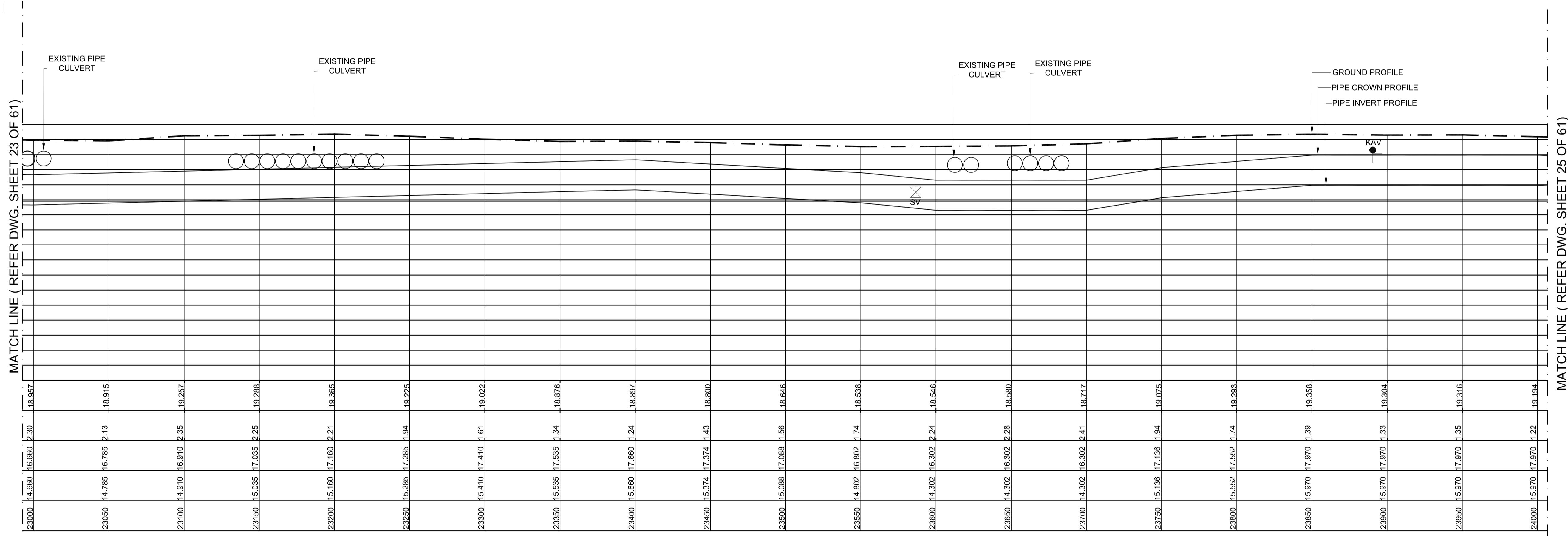


KEY PLAN

SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 23 OF 81)

MATCH LINE (REFER DWG. SHEET 23 OF 61)

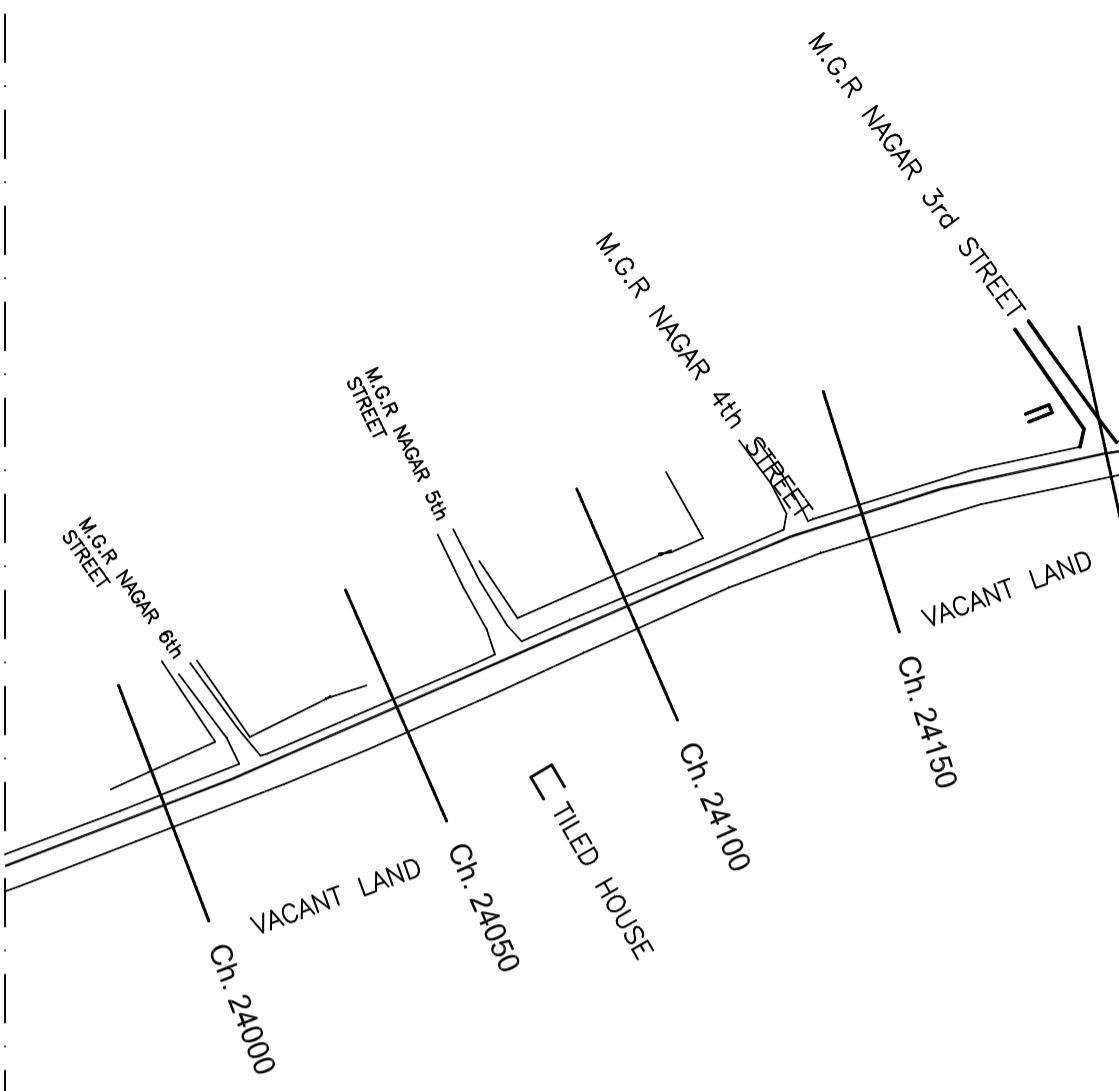


L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (24/61)	SIZE A1

MATCH LINE (REFER DWG. SHEET 24 OF 61)



M.G.R. NAGAR 3rd STREET
M.G.R. NAGAR 4th STREET

TO PANANGATTUPAKKAM
STREET

V.R. WATER SUPPLY

WELL

CULVERT

Ch. 24350

BUS STOP

Ch. 24400

VACANT LAND

Ch. 24450

VACANT LAND

Ch. 24500

VACANT LAND

Ch. 24550

VACANT LAND

Ch. 24600

VACANT LAND

Ch. 24650

VACANT LAND

Ch. 24700

VACANT LAND

Ch. 24750

VACANT LAND

Ch. 24800

VACANT LAND

Ch. 24850

VACANT LAND

Ch. 24900

VACANT LAND

Ch. 24950

VACANT LAND

Ch. 25000

VACANT LAND

Ch. 25050

VACANT LAND

Ch. 25100

VACANT LAND

Ch. 25150

VACANT LAND

Ch. 25200

VACANT LAND

Ch. 25250

VACANT LAND

Ch. 25300

VACANT LAND

Ch. 25350

VACANT LAND

Ch. 25400

VACANT LAND

Ch. 25450

VACANT LAND

Ch. 25500

VACANT LAND

Ch. 25550

VACANT LAND

Ch. 25600

VACANT LAND

Ch. 25650

VACANT LAND

Ch. 25700

VACANT LAND

Ch. 25750

VACANT LAND

Ch. 25800

VACANT LAND

Ch. 25850

VACANT LAND

Ch. 25900

VACANT LAND

Ch. 25950

VACANT LAND

Ch. 26000

VACANT LAND

Ch. 26050

VACANT LAND

Ch. 26100

VACANT LAND

Ch. 26150

VACANT LAND

Ch. 26200

VACANT LAND

Ch. 26250

VACANT LAND

Ch. 26300

VACANT LAND

Ch. 26350

VACANT LAND

Ch. 26400

VACANT LAND

Ch. 26450

VACANT LAND

Ch. 26500

VACANT LAND

Ch. 26550

VACANT LAND

Ch. 26600

VACANT LAND

Ch. 26650

VACANT LAND

Ch. 26700

VACANT LAND

Ch. 26750

VACANT LAND

Ch. 26800

VACANT LAND

Ch. 26850

VACANT LAND

Ch. 26900

VACANT LAND

Ch. 26950

VACANT LAND

Ch. 27000

VACANT LAND

Ch. 27050

VACANT LAND

Ch. 27100

VACANT LAND

Ch. 27150

VACANT LAND

Ch. 27200

VACANT LAND

Ch. 27250

VACANT LAND

Ch. 27300

VACANT LAND

Ch. 27350

VACANT LAND

Ch. 27400

VACANT LAND

Ch. 27450

VACANT LAND

Ch. 27500

VACANT LAND

Ch. 27550

VACANT LAND

Ch. 27600

VACANT LAND

Ch. 27650

VACANT LAND

Ch. 27700

VACANT LAND

Ch. 27750

VACANT LAND

Ch. 27800

VACANT LAND

Ch. 27850

VACANT LAND

Ch. 27900

VACANT LAND

Ch. 27950

VACANT LAND

Ch. 28000

VACANT LAND

Ch. 28050

VACANT LAND

Ch. 28100

VACANT LAND

Ch. 28150

VACANT LAND

Ch. 28200

VACANT LAND

Ch. 28250

VACANT LAND

Ch. 28300

VACANT LAND

Ch. 28350

VACANT LAND

Ch. 28400

VACANT LAND

Ch. 28450

VACANT LAND

Ch. 28500

VACANT LAND

Ch. 28550

VACANT LAND

Ch. 28600

VACANT LAND

Ch. 28650

VACANT LAND

Ch. 28700

VACANT LAND

Ch. 28750

VACANT LAND

Ch. 28800

VACANT LAND

Ch. 28850

VACANT LAND

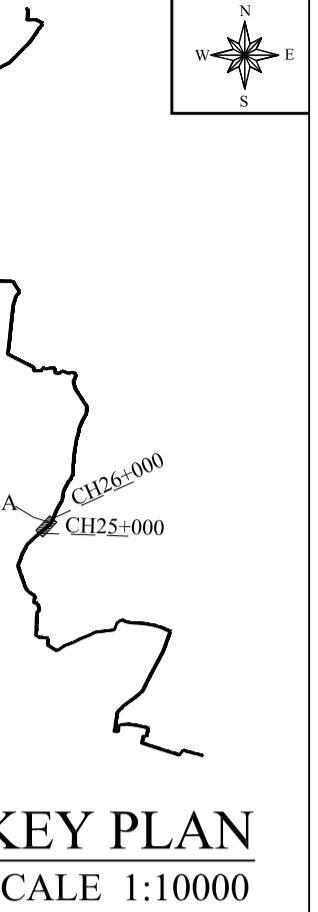
Ch. 28900

VACANT LAND

Ch. 28950

VACANT LAND

Ch. 29000



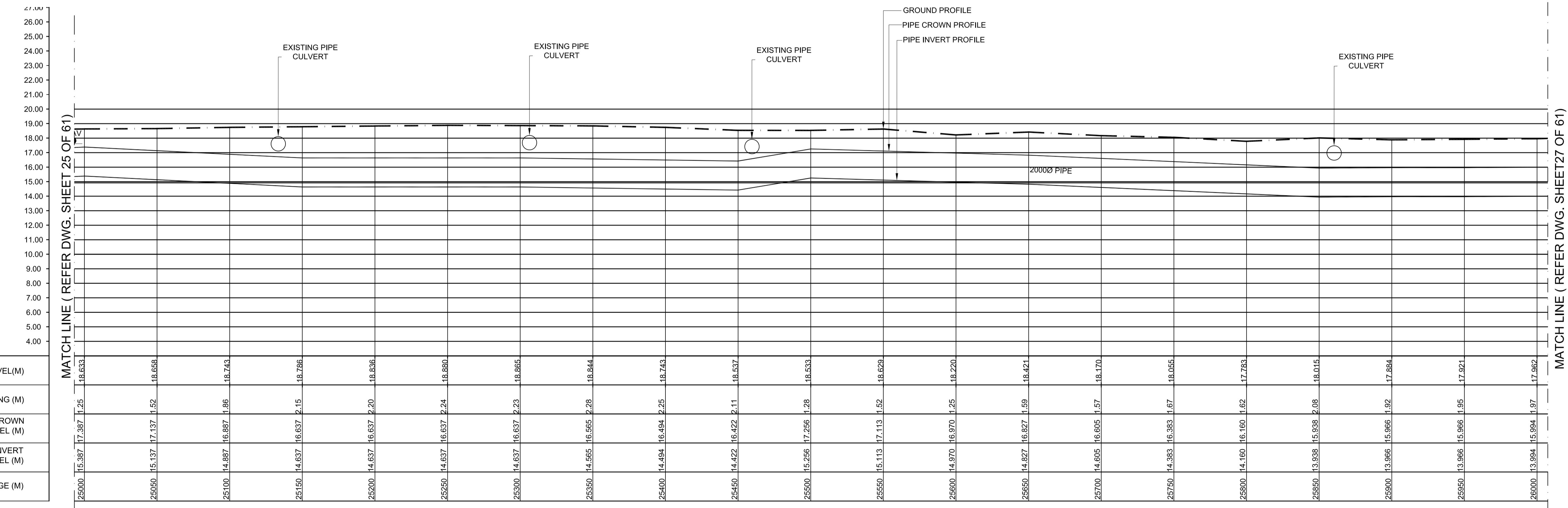
KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 25 OF 61)



MATCH LINE (REFER DWG. SHEET 25 OF 61)

P L A N - 1
SCALE 1:1500



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

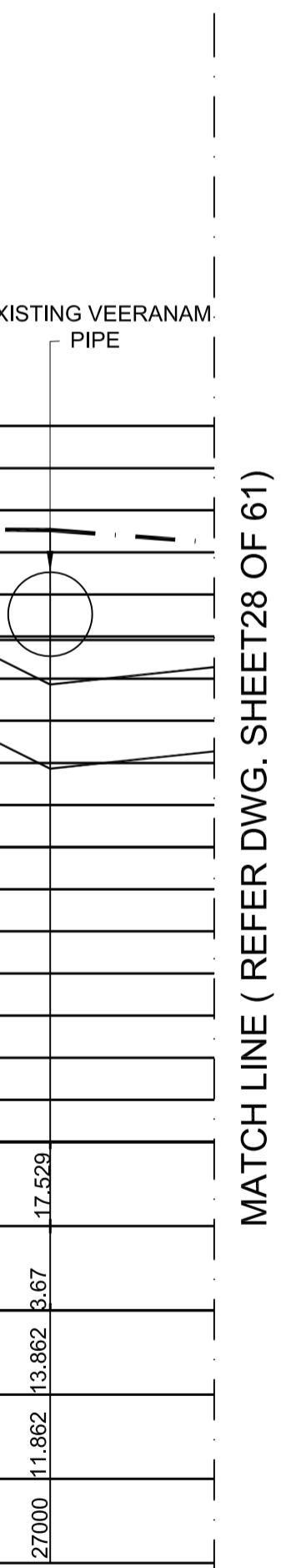
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (26/61)

SIZE
A1

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

KEY PLAN
SCALE 1:10000

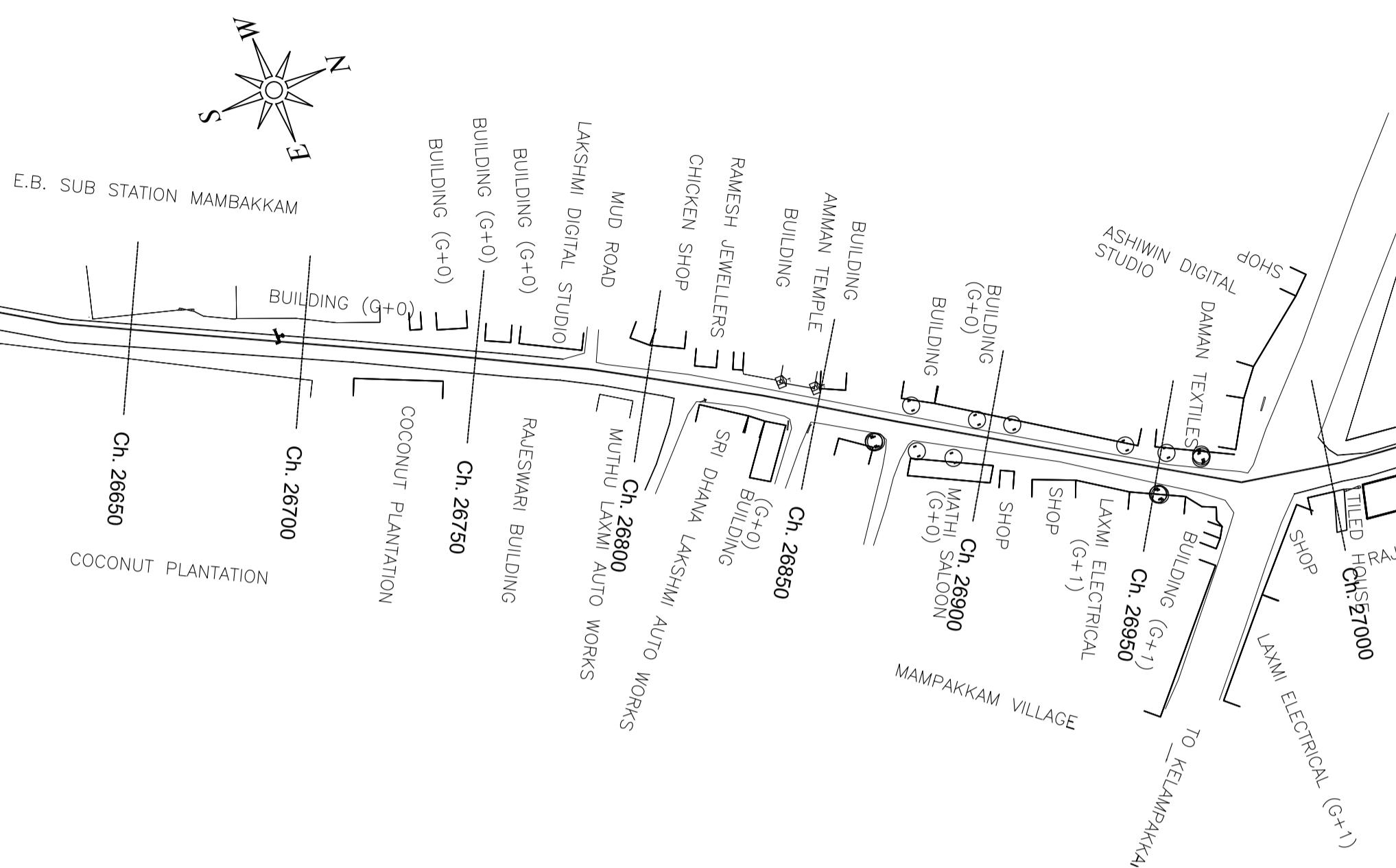
MATCH LINE (REFER DWG. SHEET 26 OF 61)



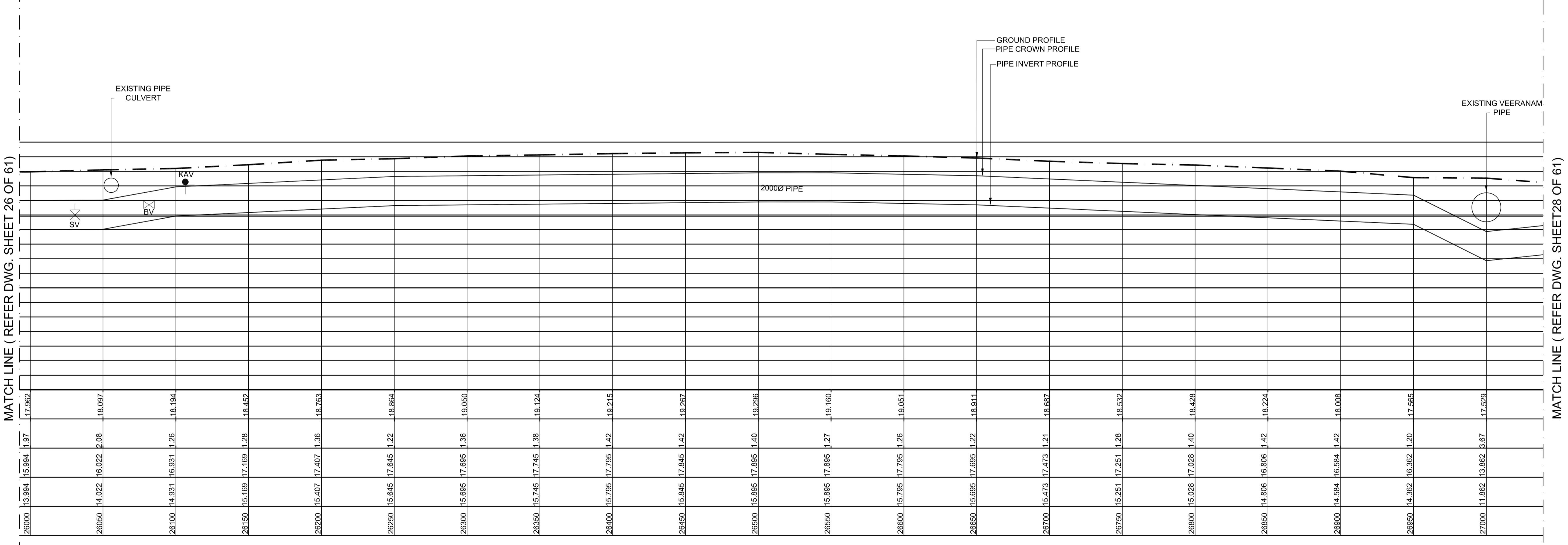
1

MATCH LINE (REFER DWG. SHEET 28 OF 61)

MATCH LINE (REFER DWG. SHEET 28 OF 61)



PLAN-1
SCALE 1:1500



L - SECTION

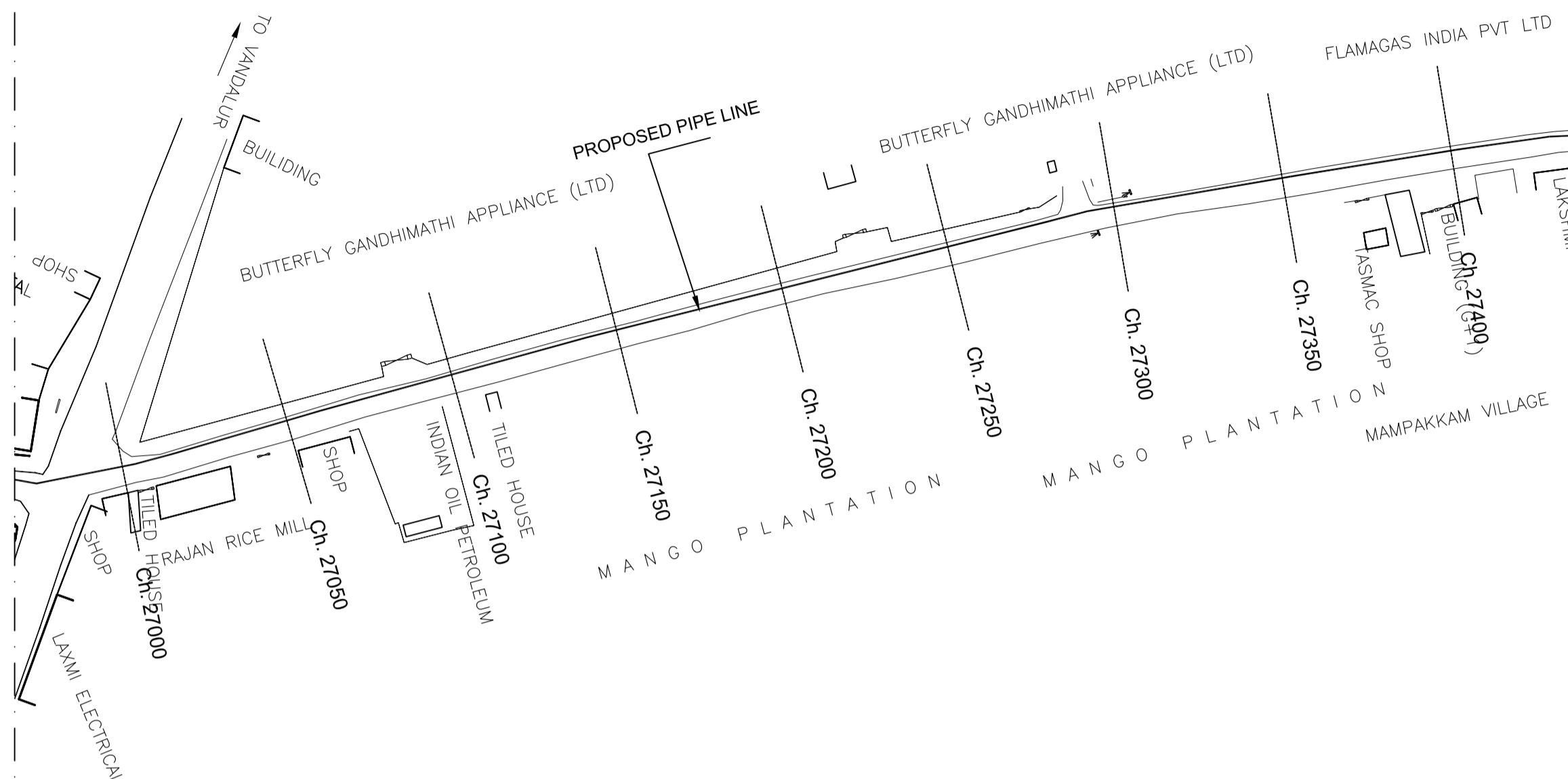
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (27/61)

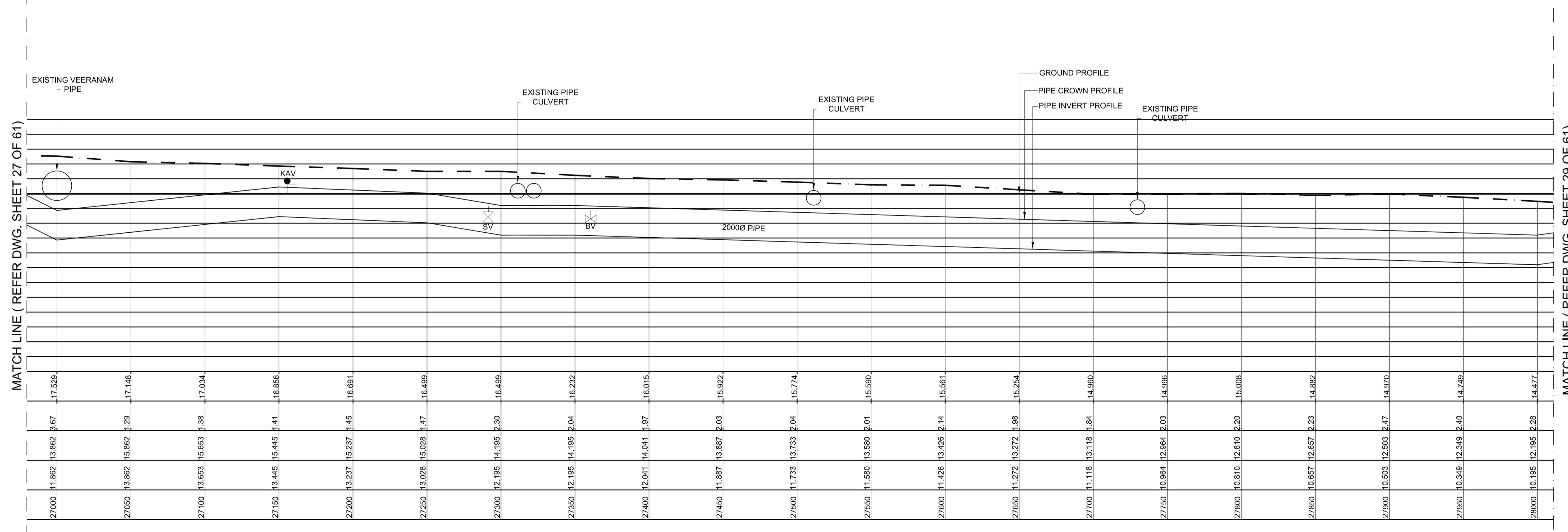
SIZE
A1

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

MATCH LINE (REFER DWG. SHEET 27 OF 61)



PLAN-1
SCALE 1:1500

**L - SECTION**

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

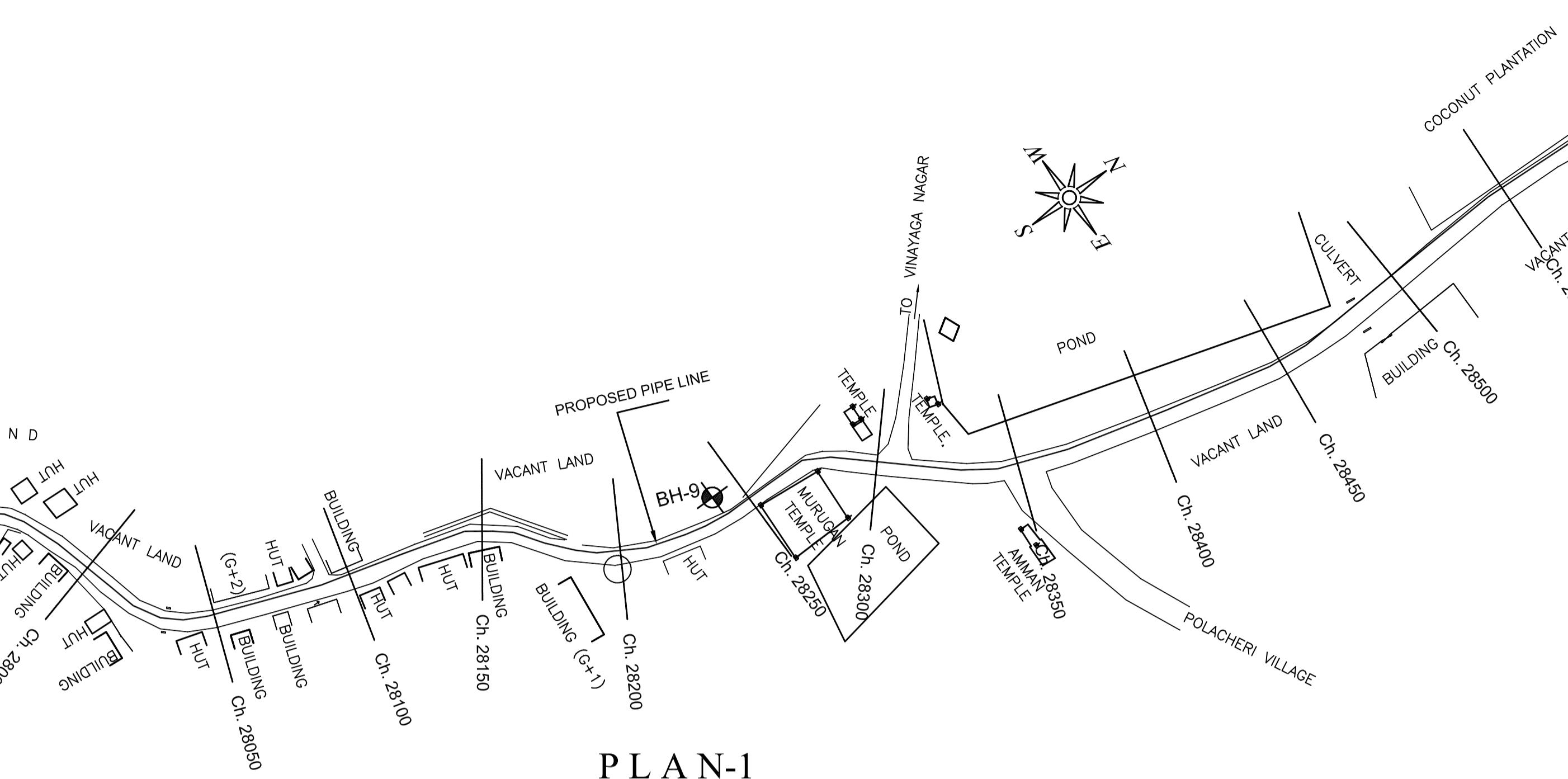
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (28/61)

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

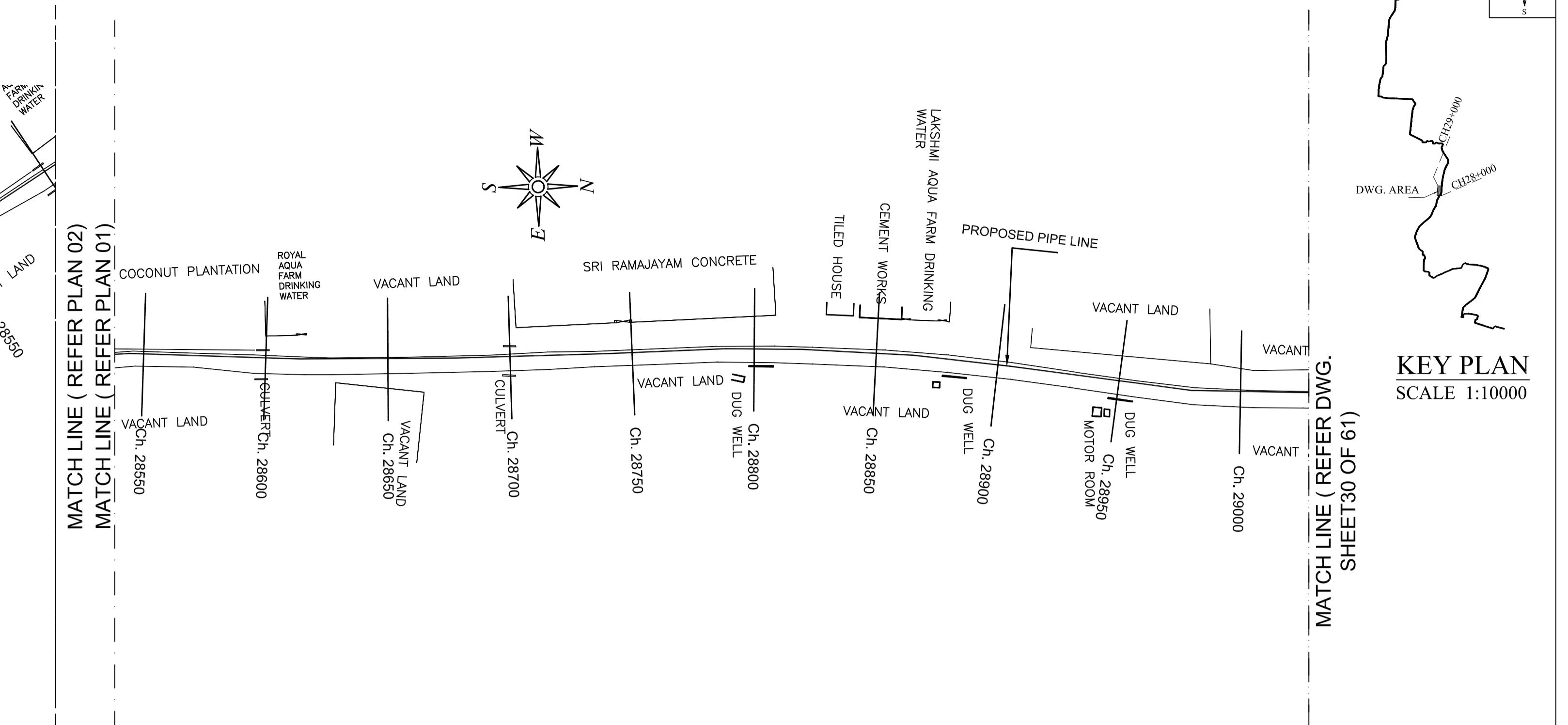
MATCH LINE (REFER DWG. SHEET 29 OF 61)



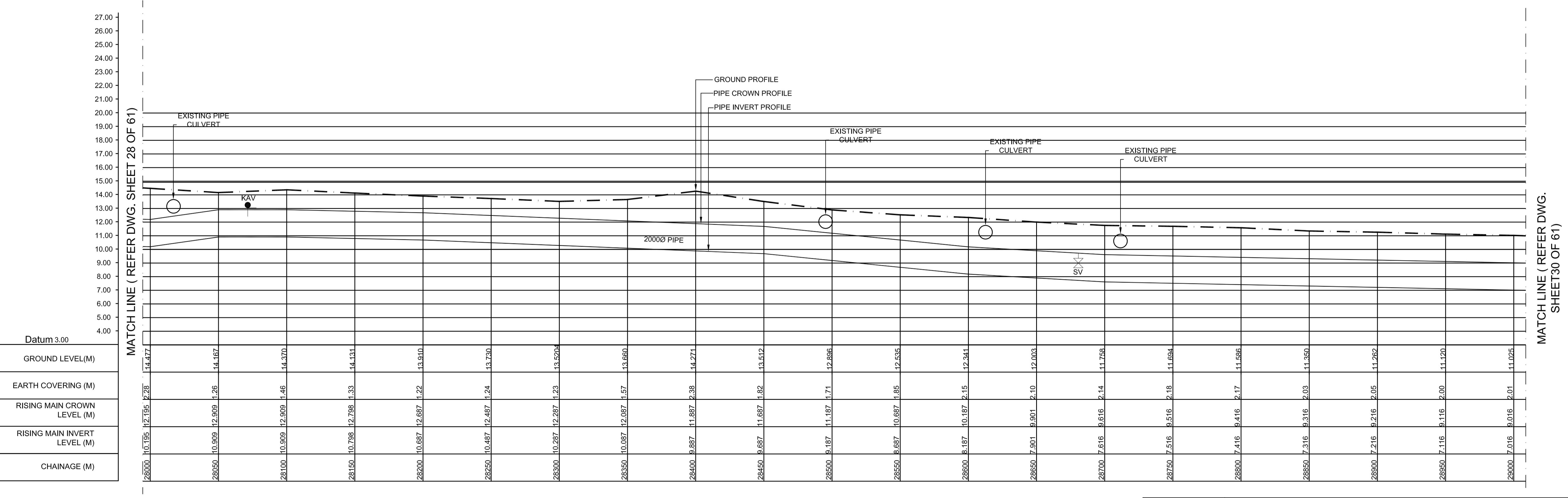
MATCH LINE (REFER DWG. SHEET 28 OF 61)



PLAN-1
SCALE 1:150



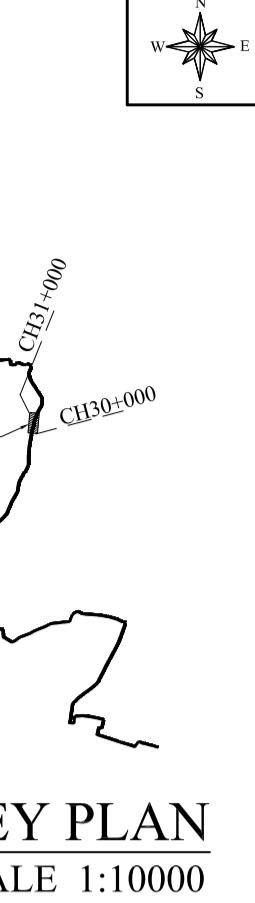
PLAN-2
SCALE 1:1500



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

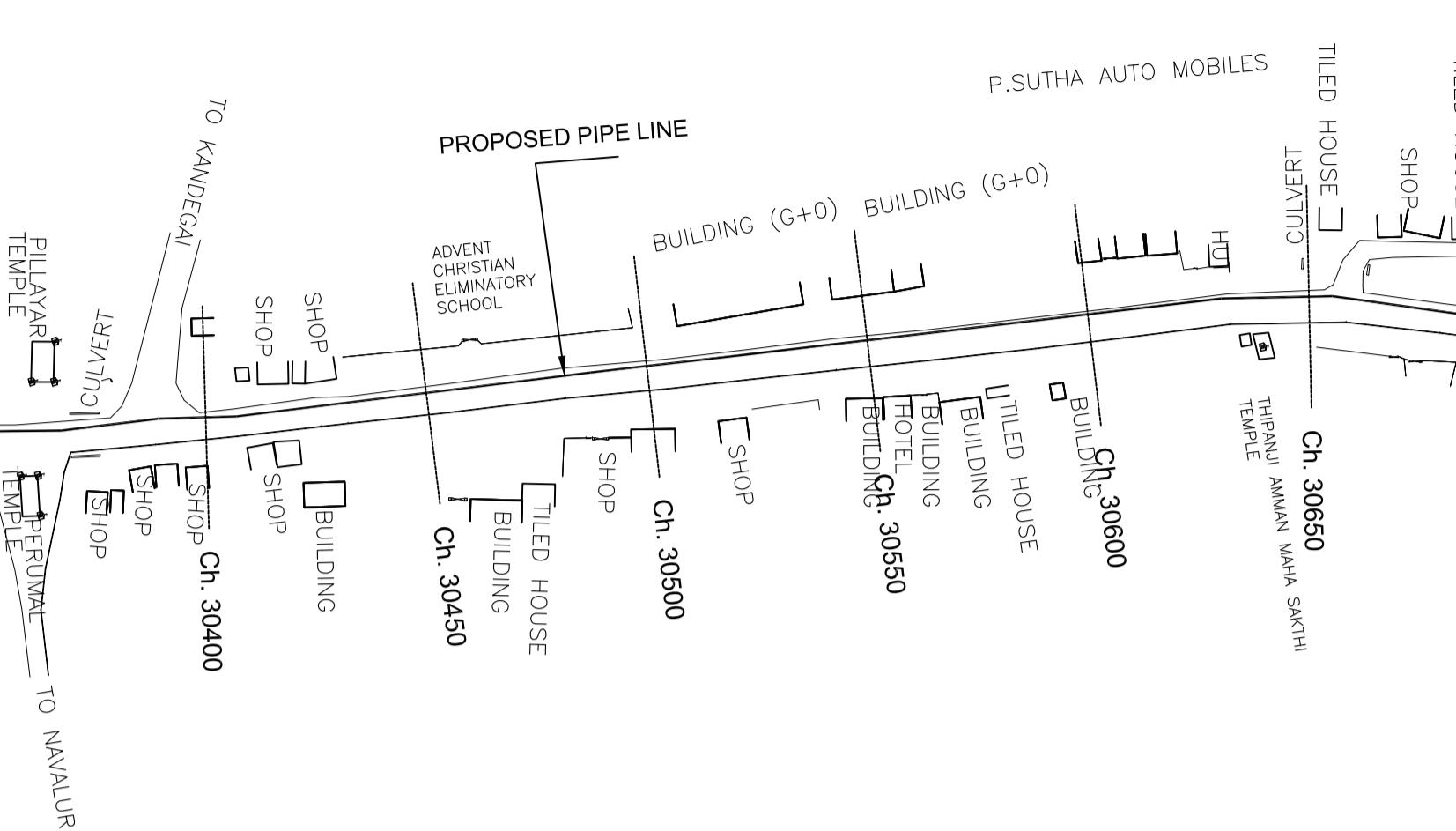
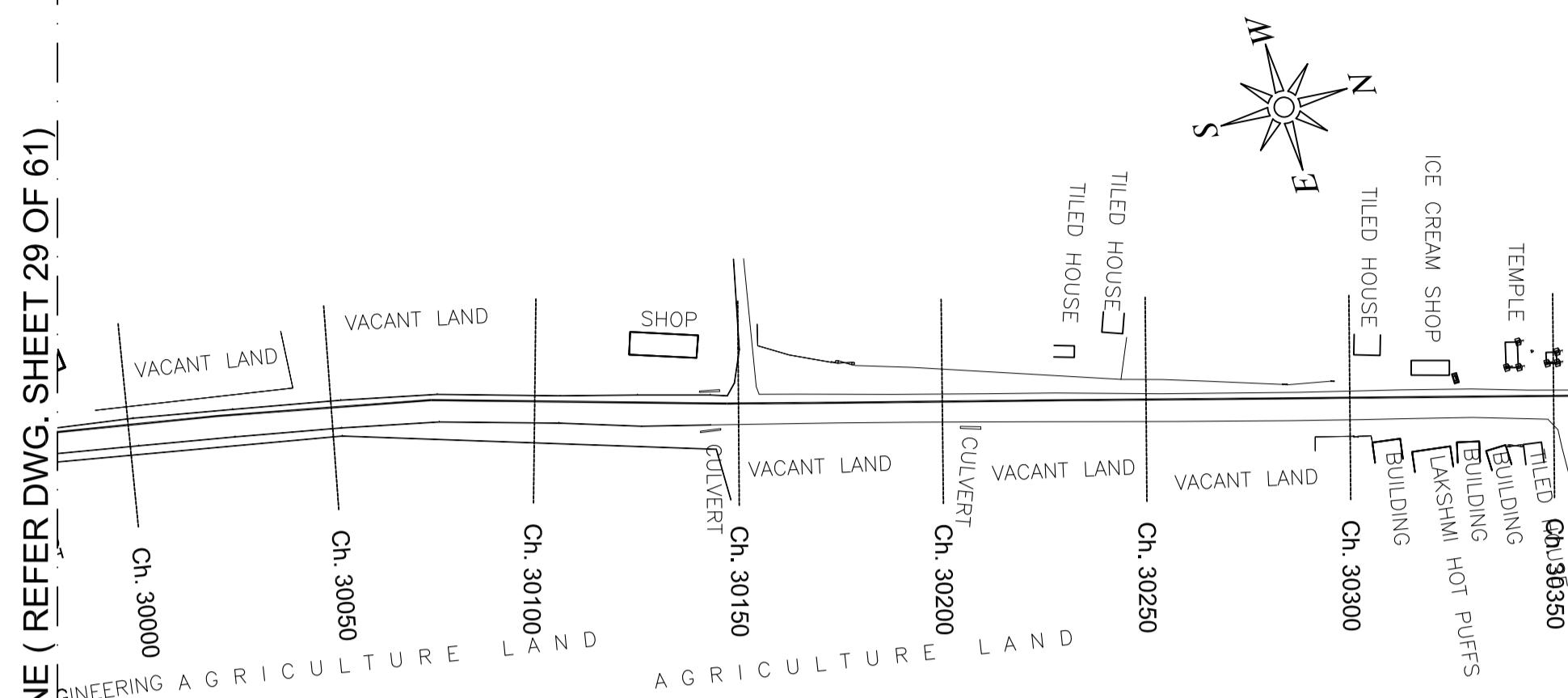
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (29/61)	SIZE A1



KEY PLAN
SCALE 1:1000

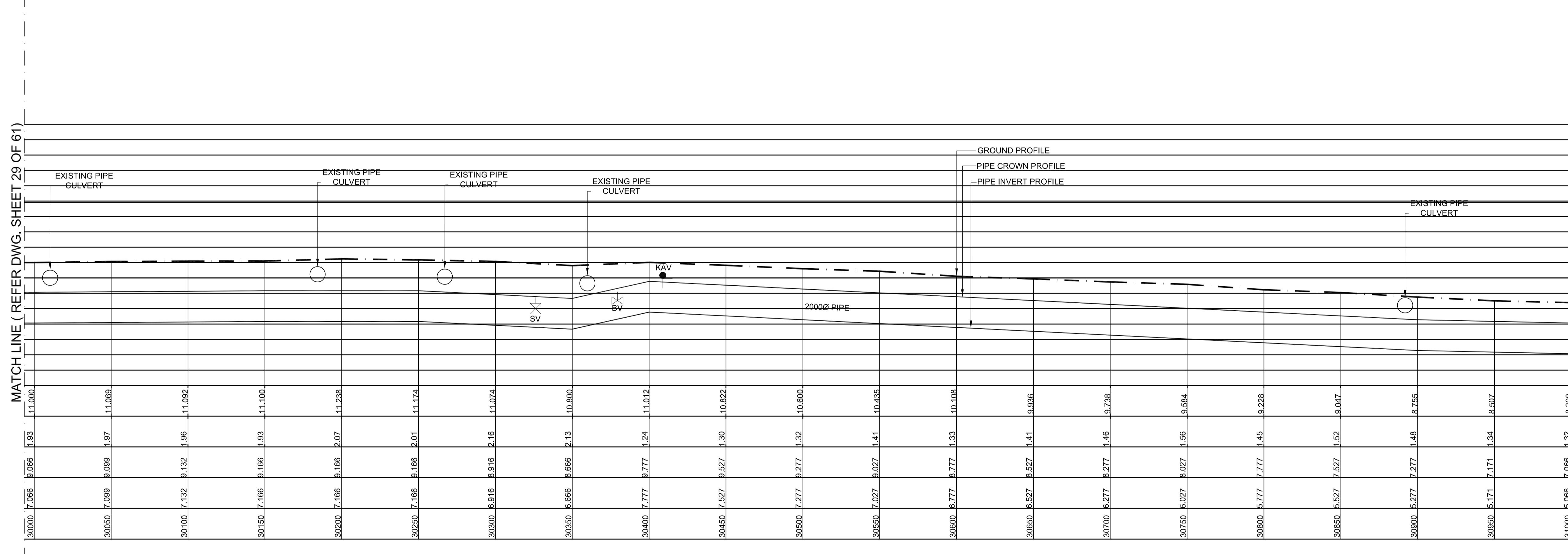
MATCH LINE (REFER DWG. SHEET 32 OF 61)

MATCH LINE (REFER DWG. SHEET 29 OF 61)



PLAN-1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 32 OF 61)



L - SECTION

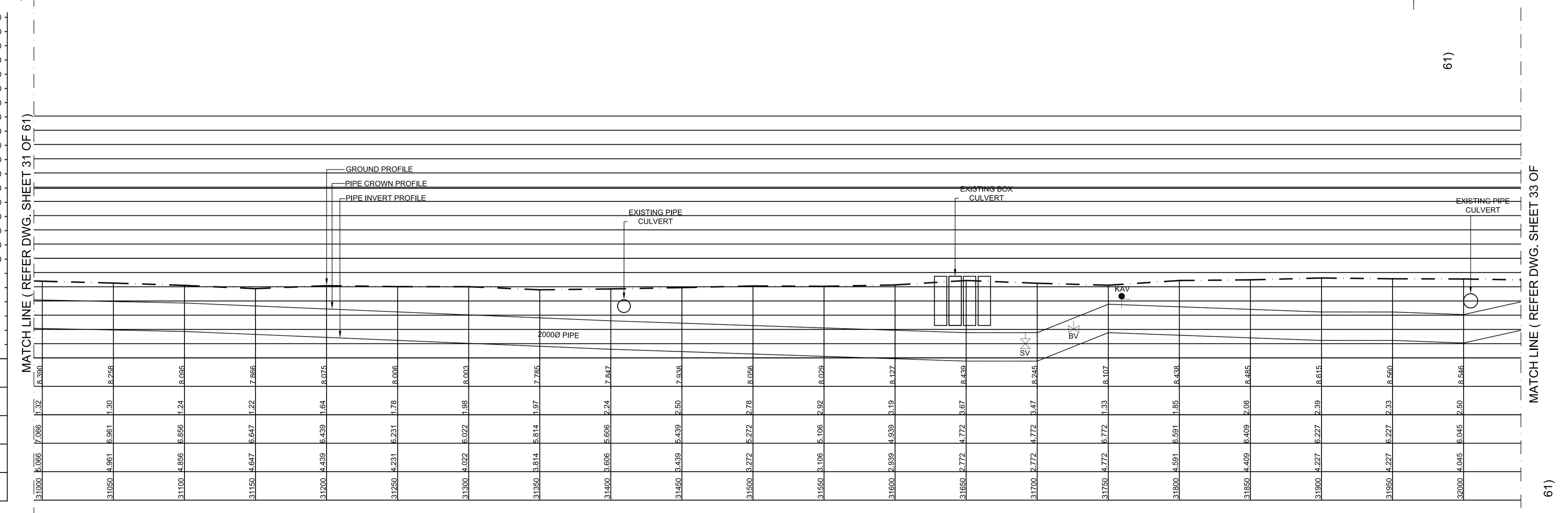
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (31/61)

SIZE
A1

Datum 3.00	
GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

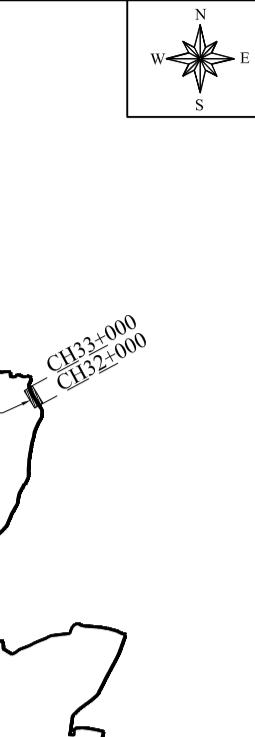
LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:150

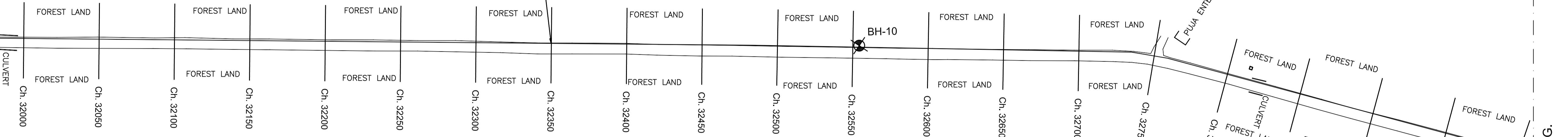
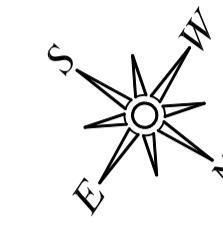
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (32/61)	SIZE A1



KEY PLAN
SCALE 1:10000

DWG. AREA
CH353-000
CH352-000

MATCH LINE (REFER DWG. SHEET 32 OF 61)

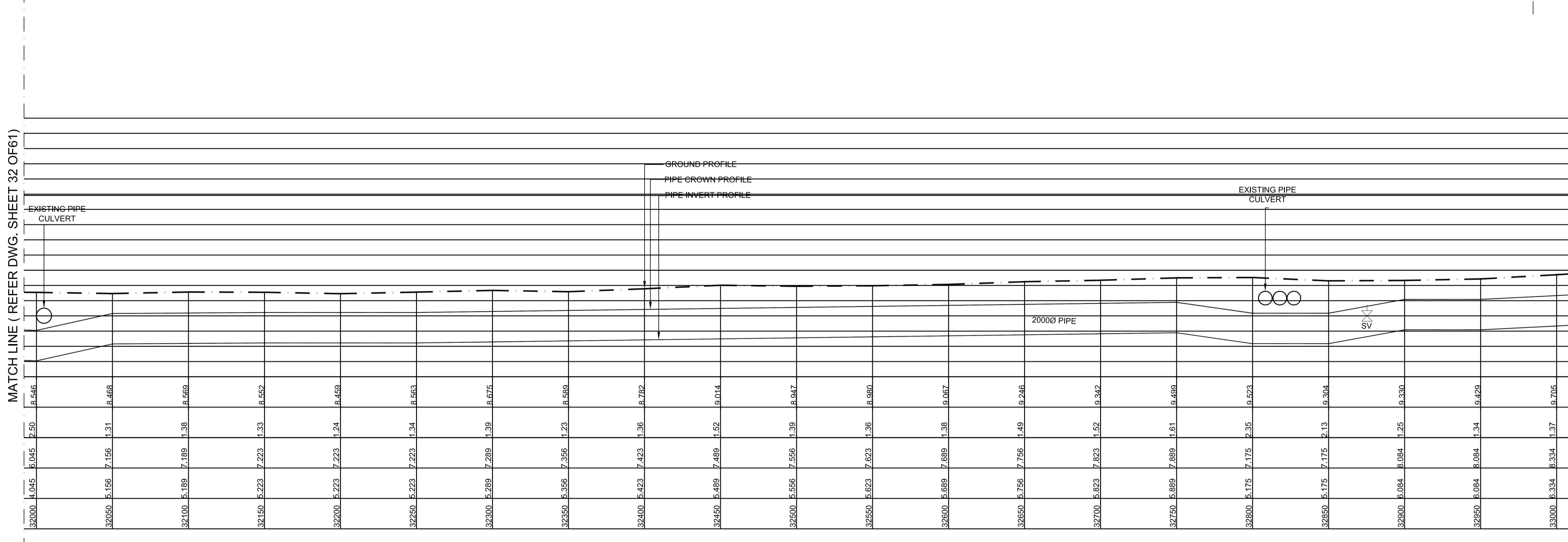


PLAN-1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 32 OF 61)

Datum 3.00
GROUND LEVEL(M)

EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)



MATCH LINE (REFER DWG. SHEET 32 OF 61)

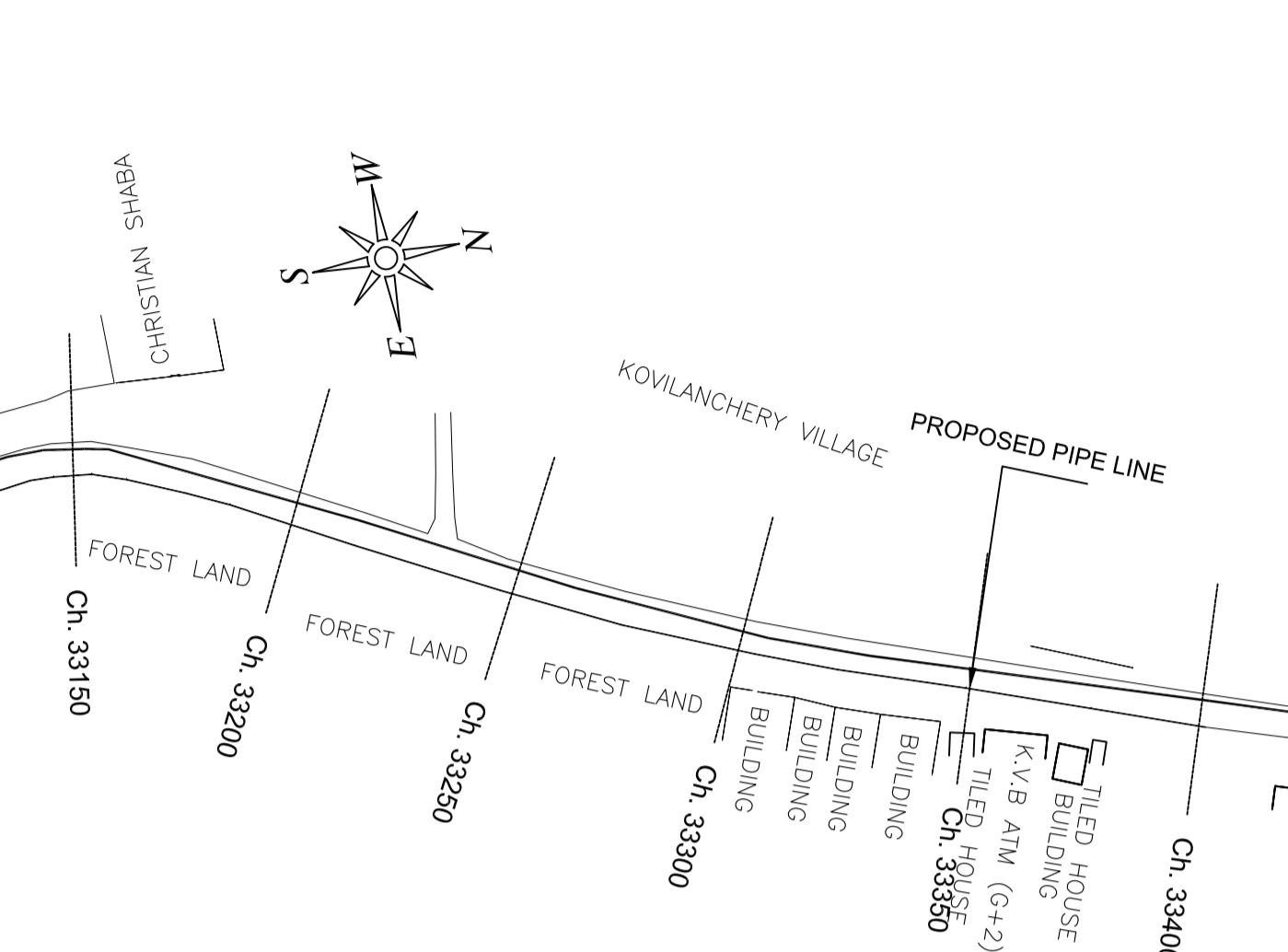
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

LEGEND:-	
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (33/61)

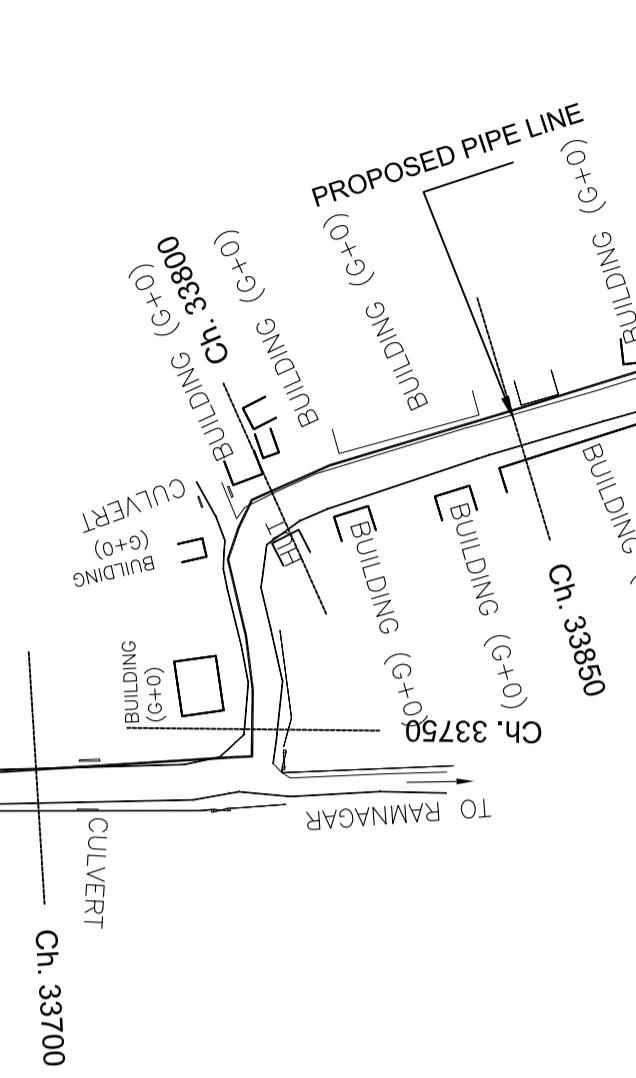
MATCH LINE (REFER DWG. SHEET 33 OF 61)



PLAN-1
SCALE 1:1500

BRANCH LINE TO
MEDAVAKKAM (1000 mm)
Diameter)

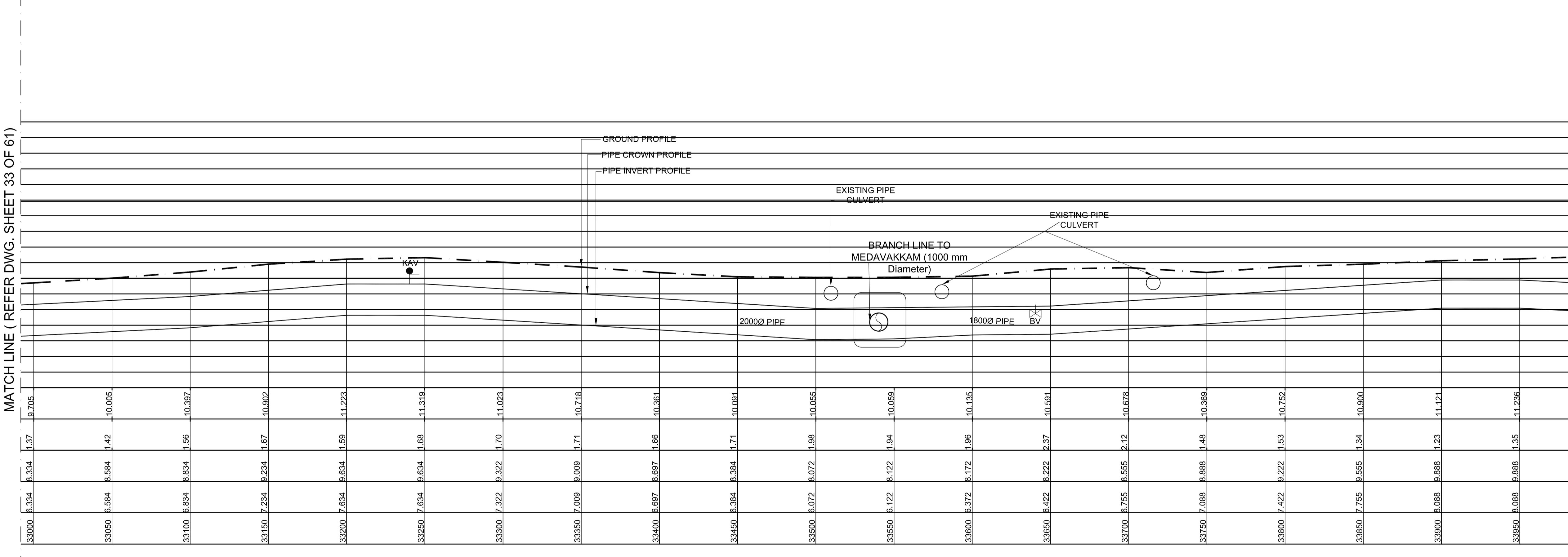
MATCH LINE (REFER PLAN 02)



PLAN-2
SCALE 1:1500

KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 35 OF 61)



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (34/61)

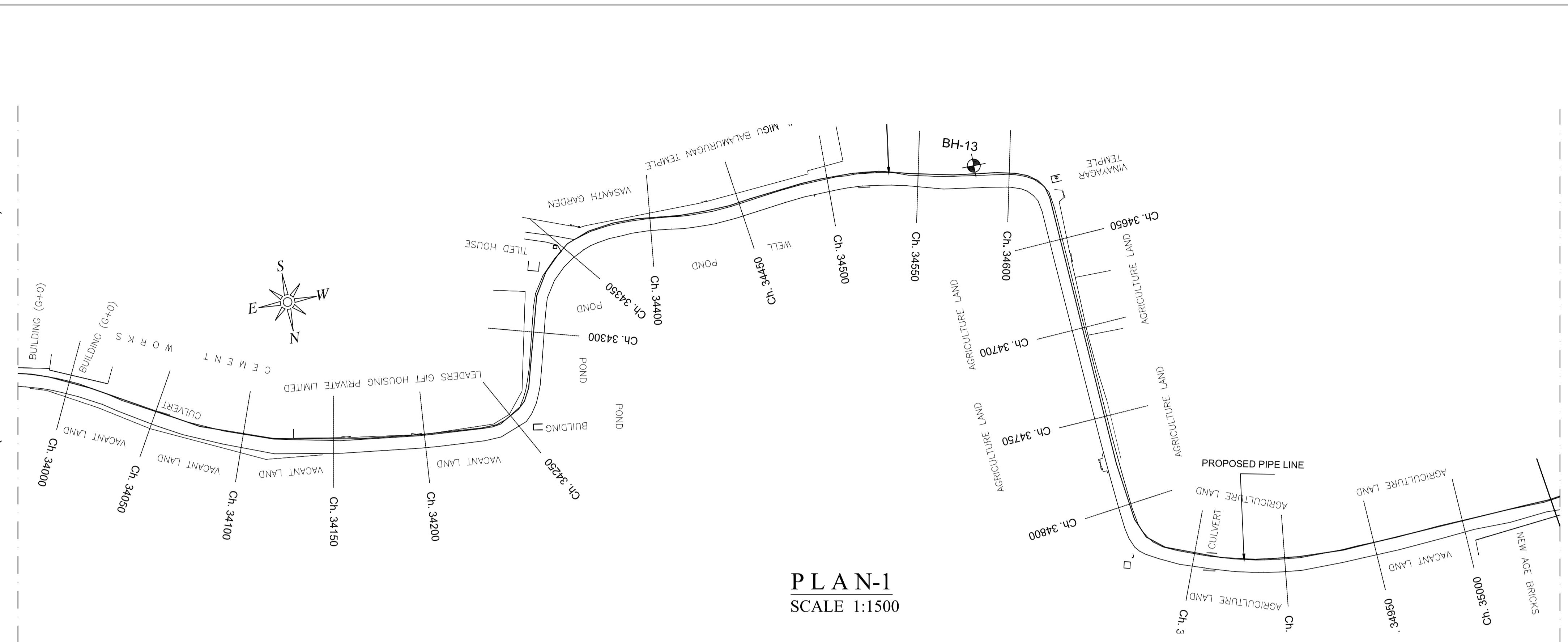
SIZE
A1

LEGEND:-	SYMBOLS	DESCRIPTION
	●	AUGER BORE LOCATION
	SV	SCOUR VALVE
	BV	BUTTERFLY VALVE
	KAV	AIR VALVE

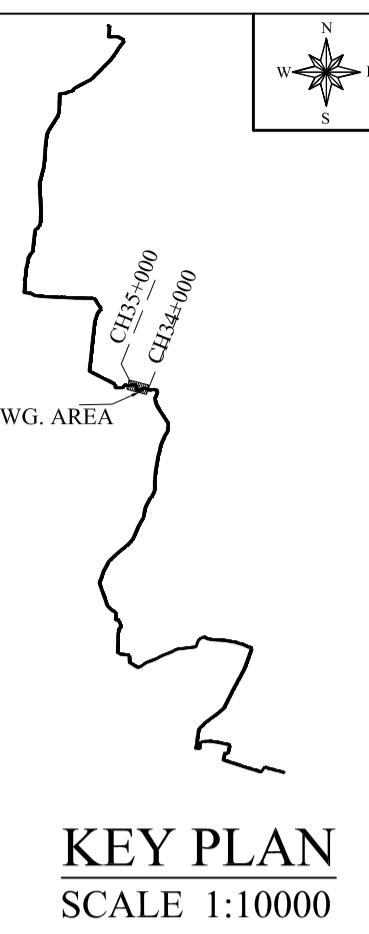
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

MATCH LINE (REFER DWG. SHEET 35 OF 61)

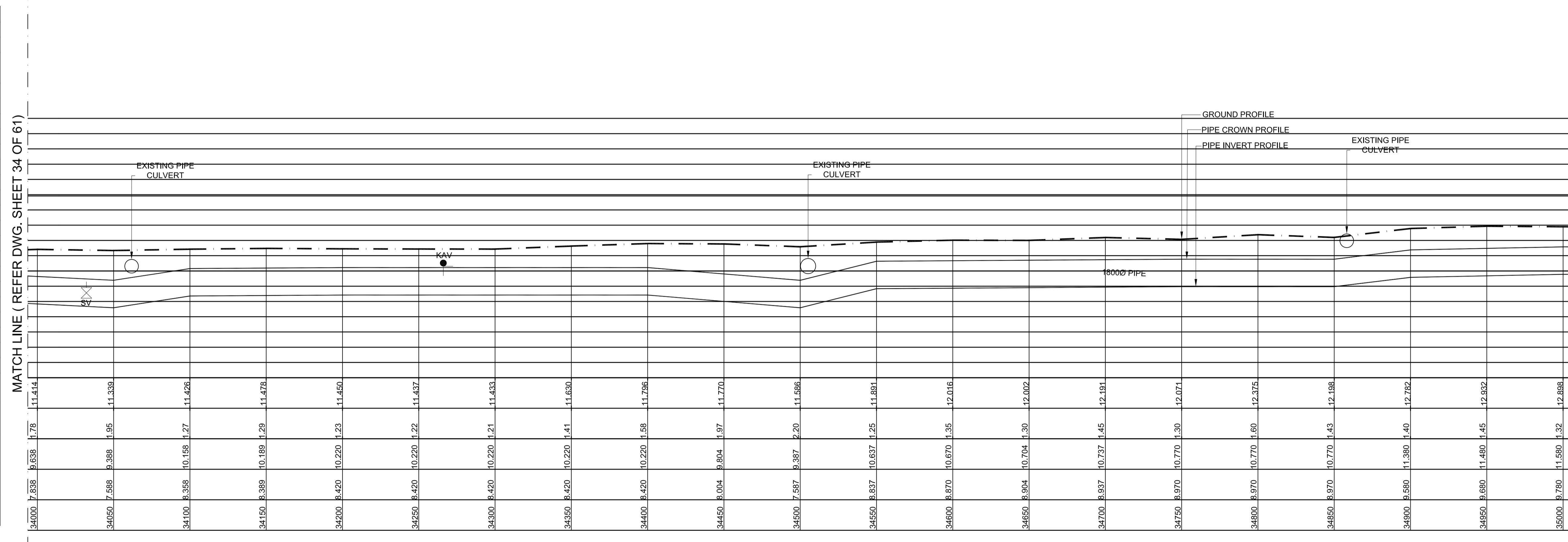
MATCH LINE (REFER DWG. SHEET 34 OF 61)



MATCH LINE (REFER DWG.SHEET 36 OF 61)



MATCH LINE (REFER DWG.SHEET 36 OF 61)



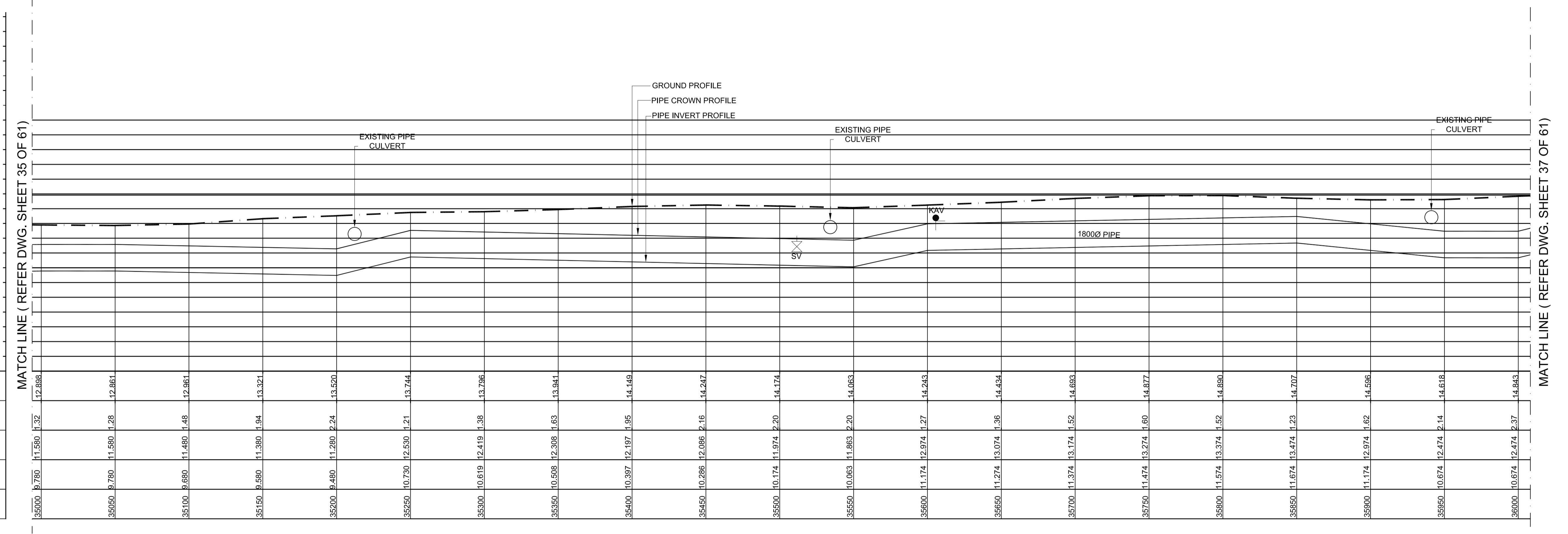
LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
×	SCOUR VALVE
△	BUTTERFLY VALVE
KAV	AIR VALVE

L - SECTION

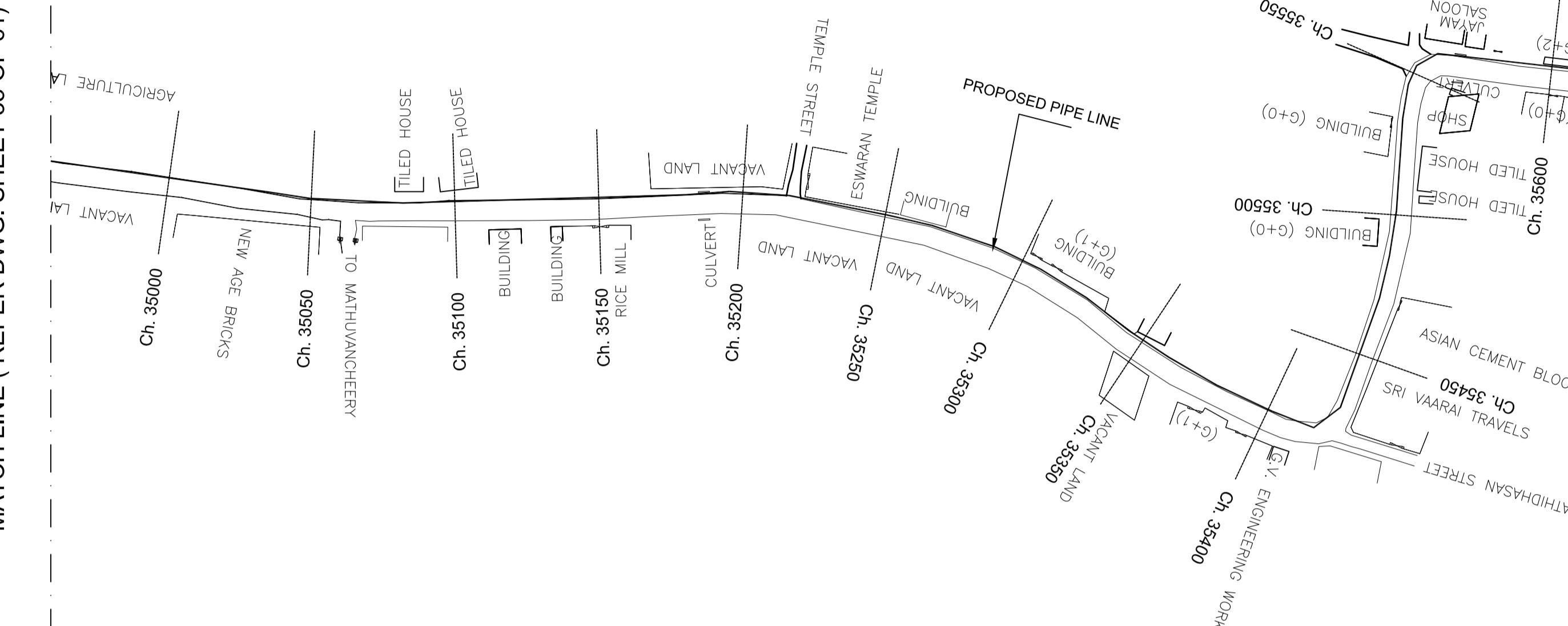
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (35/61)

SIZE
A1



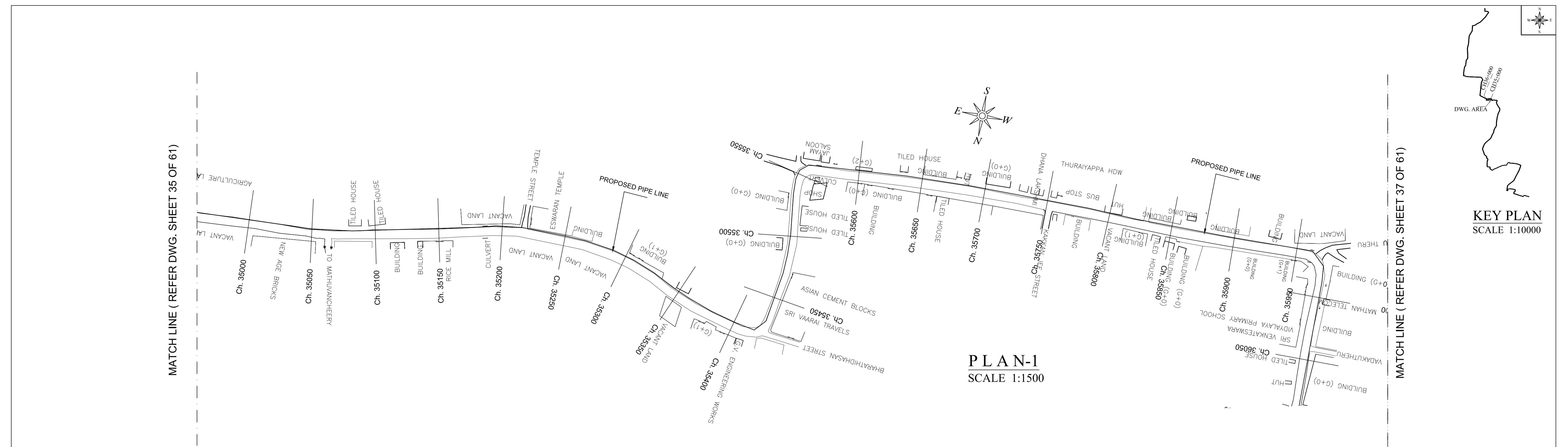
MATCH LINE (REFER DWG. SHEET 35 OF 61)



PLAN-1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 37 OF 61)

KEY PLAN
SCALE 1:10000

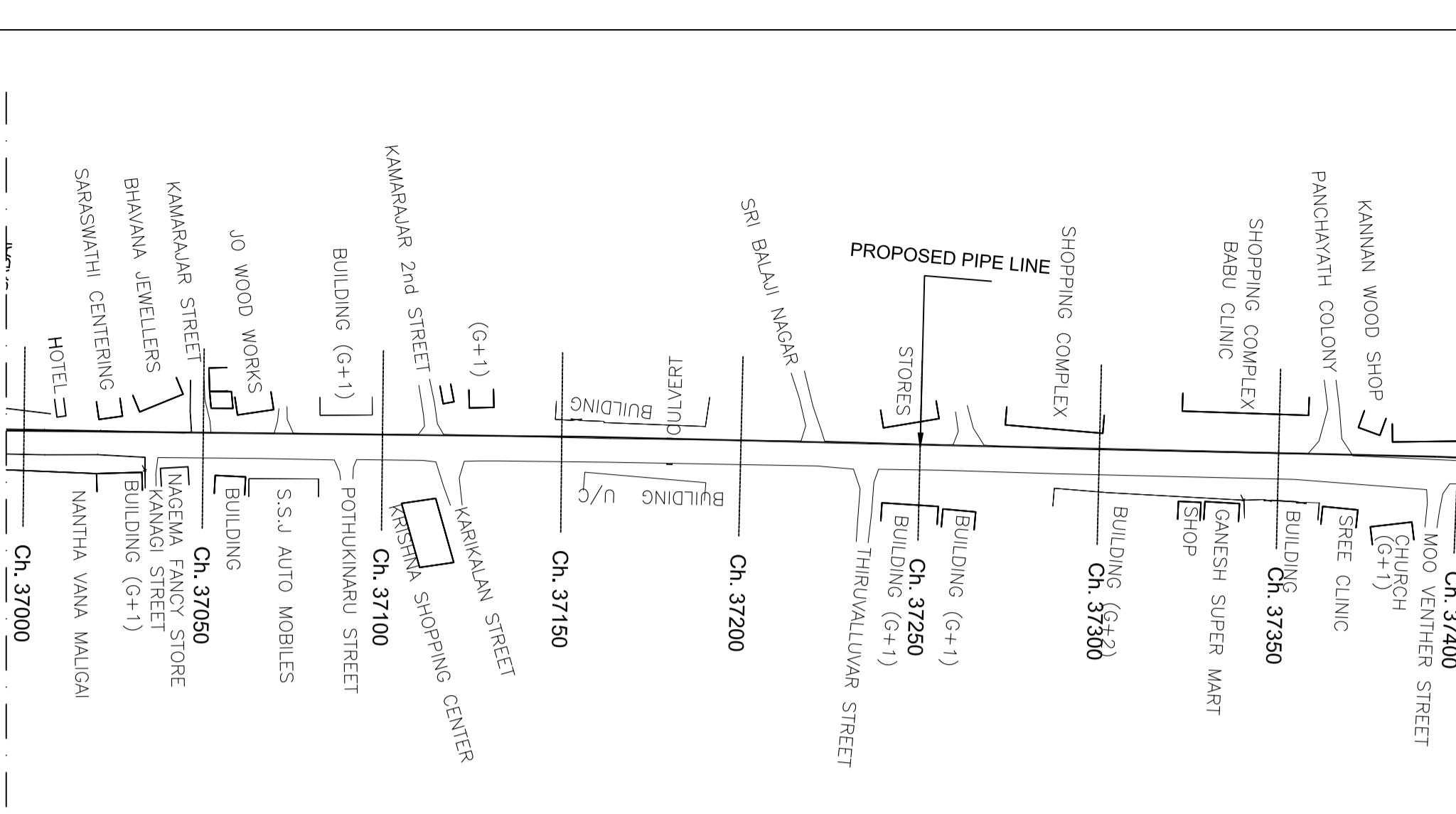


MATCH LINE (REFER DWG. SHEET 37 OF 61)

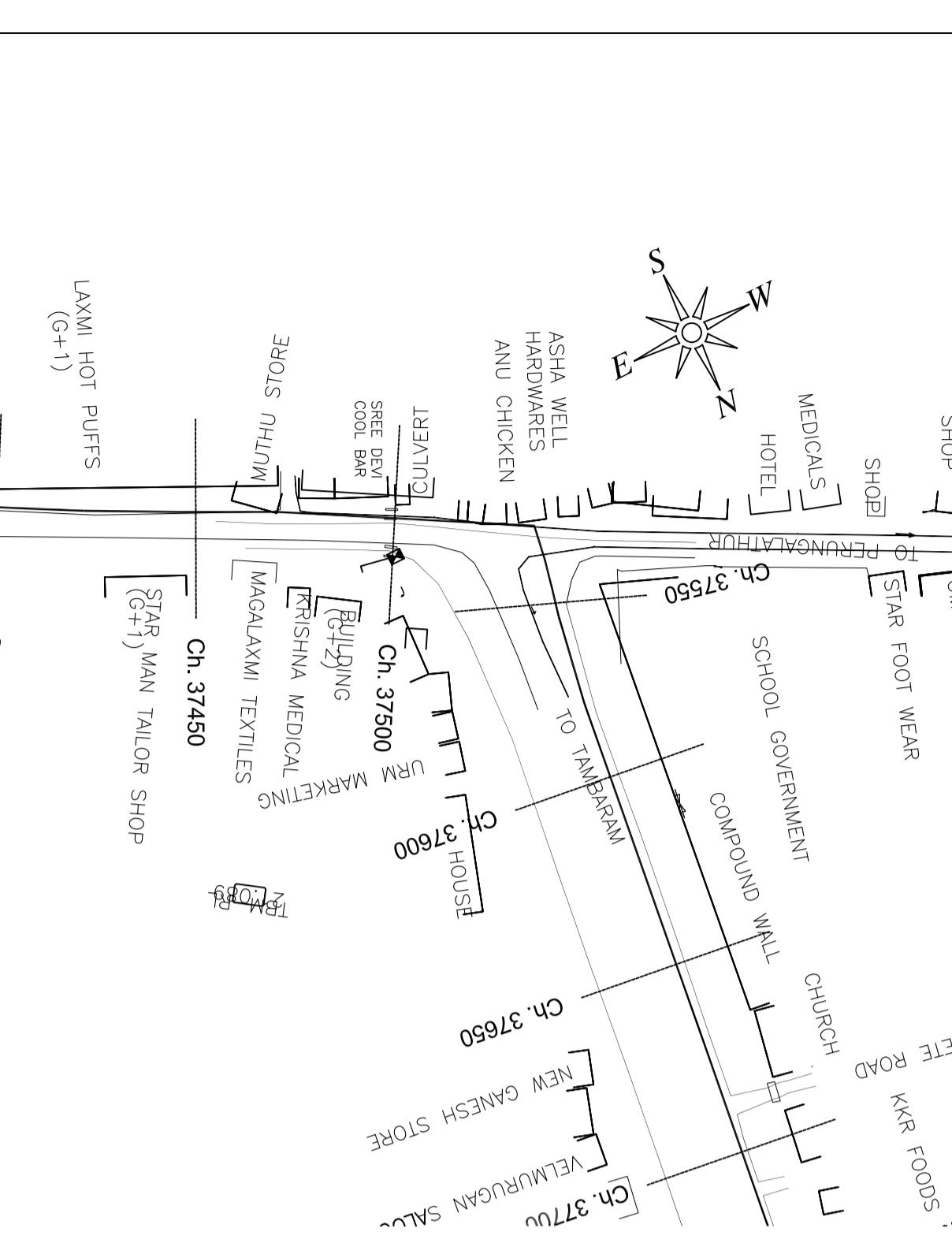
LEGEND:-	
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (36/61)	SIZE A1

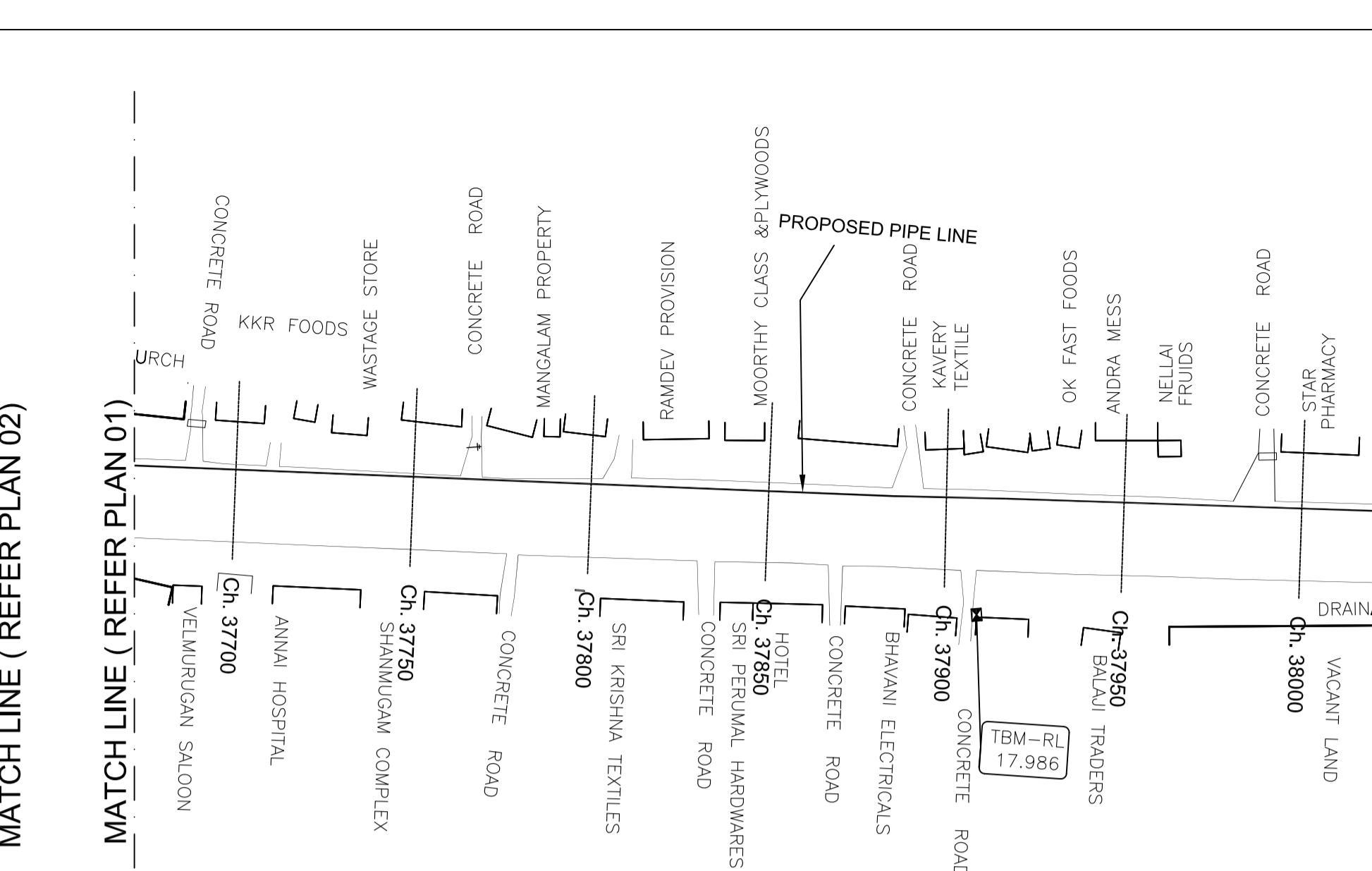
MATCH LINE (REFER DWG. SHEET 37 OF 61)



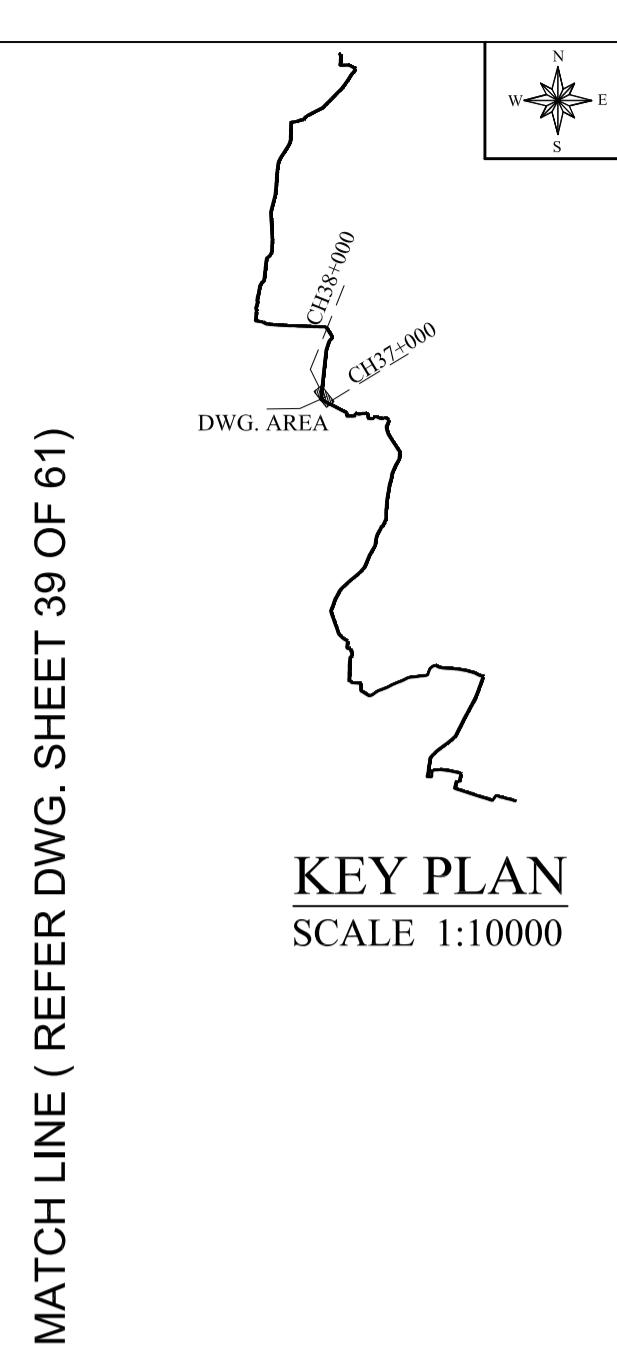
PLAN-1
SCALE 1:1500



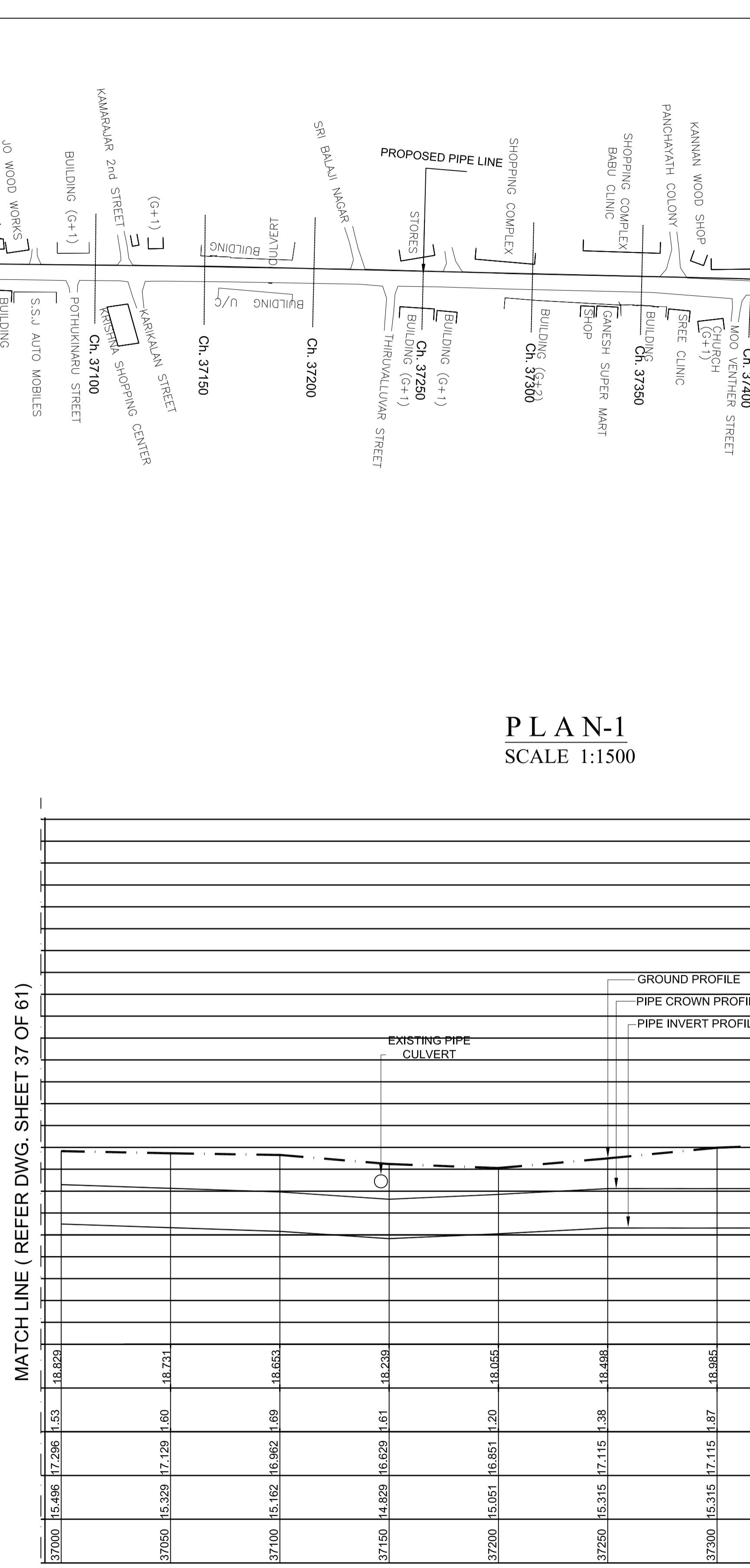
SARAVANA AGENCY



PLAN-2
SCALE 1:1500



MATCH LINE (REFER DWG. SHEET 39 OF 61)

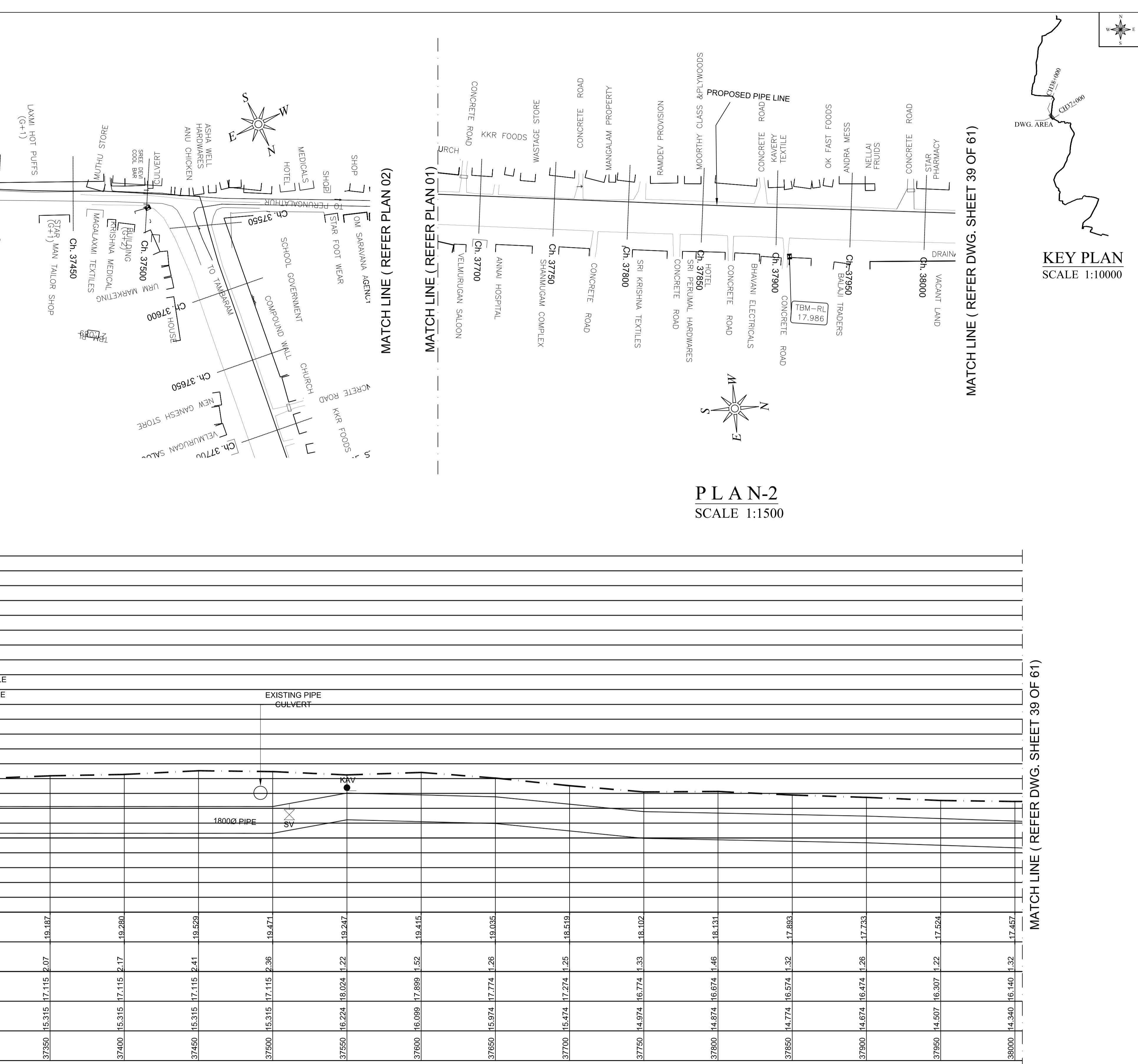


MATCH LINE (REFER DWG. SHEET 37 OF 61)

Datum	10.00
GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

LEGEND:

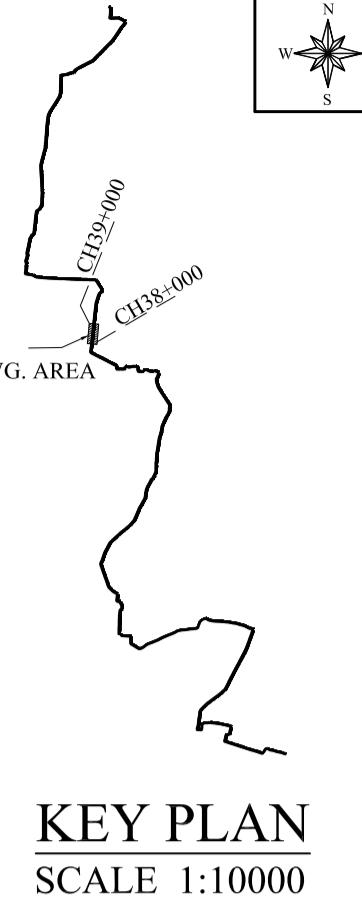
SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:150

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (38/61)	SIZE A1

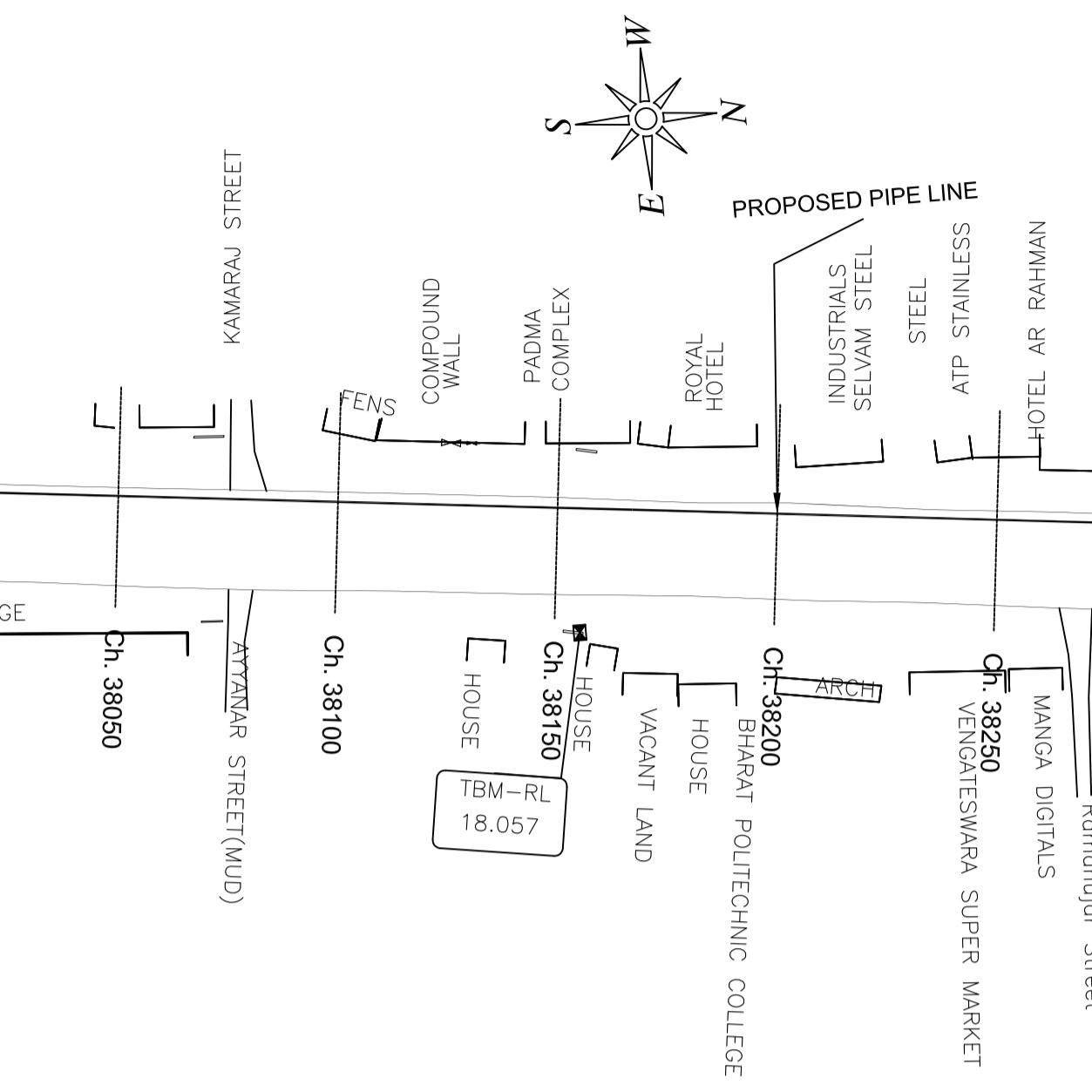


NEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 40 OF 61)

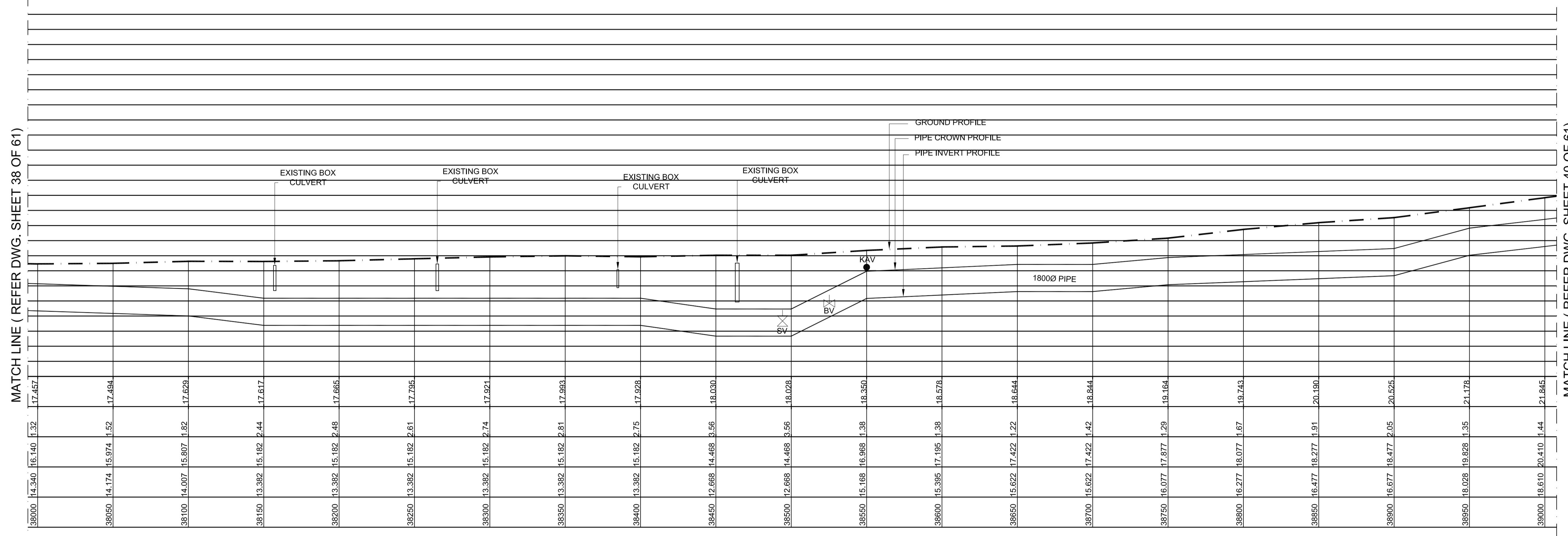
MATCH LINE (REFER DWG. SHEET 40 OF 61)

MATCH LINE (REFER DWG. SHEET 38 OF 61)



PLAN-1
SCALE 1:1500

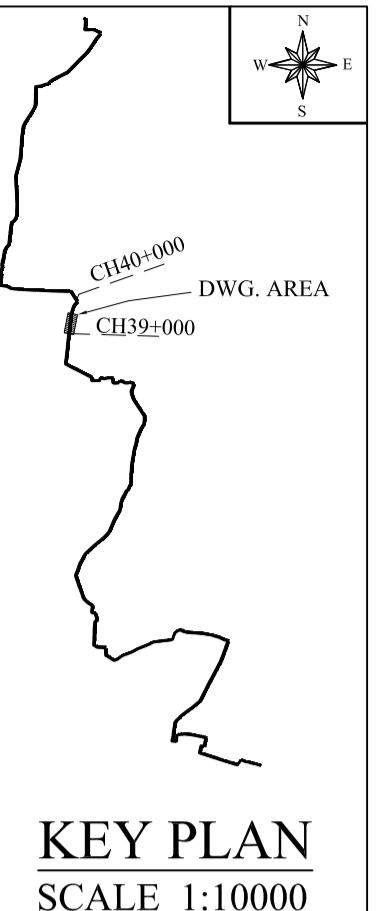
SCALE 1:150



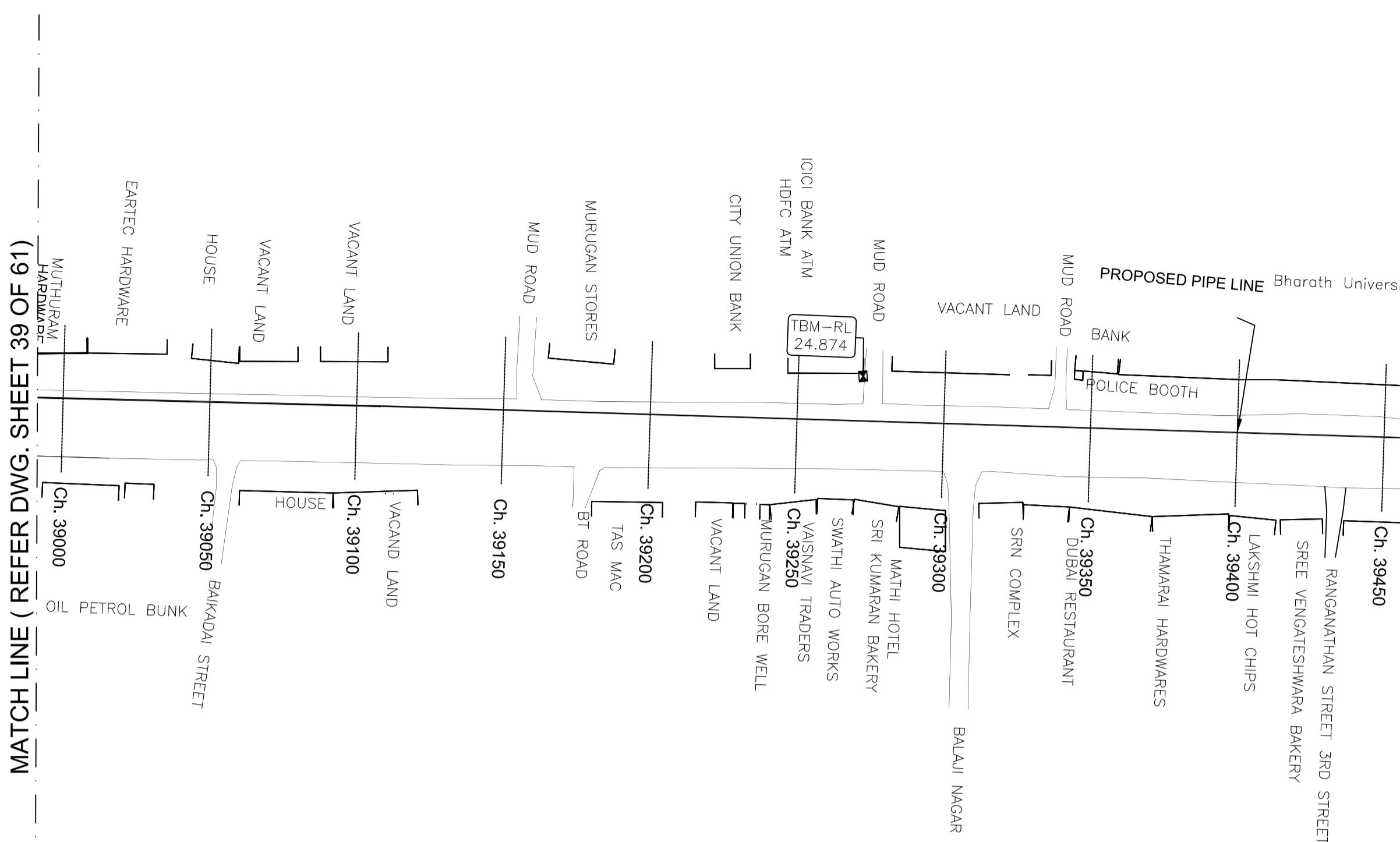
L - SECTION

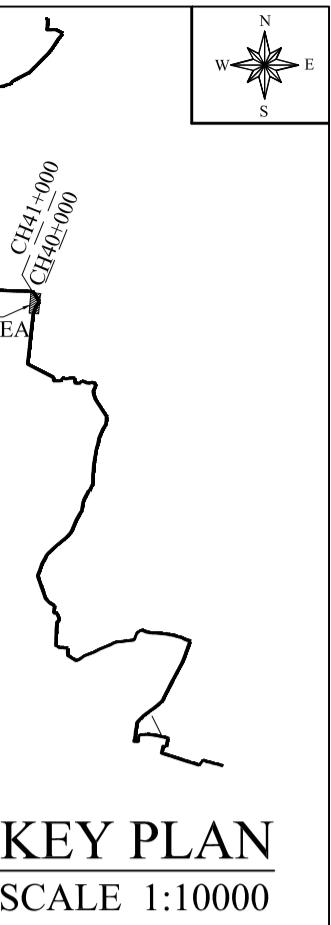
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (39/61)	SIZE A1



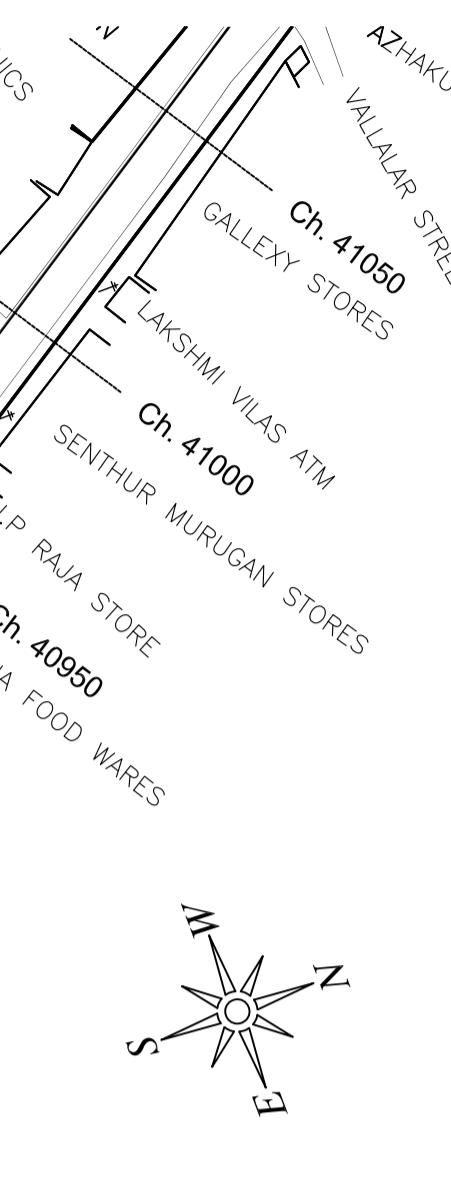
MATCH LINE (REFER DWG.SHEET 41 OF 61)



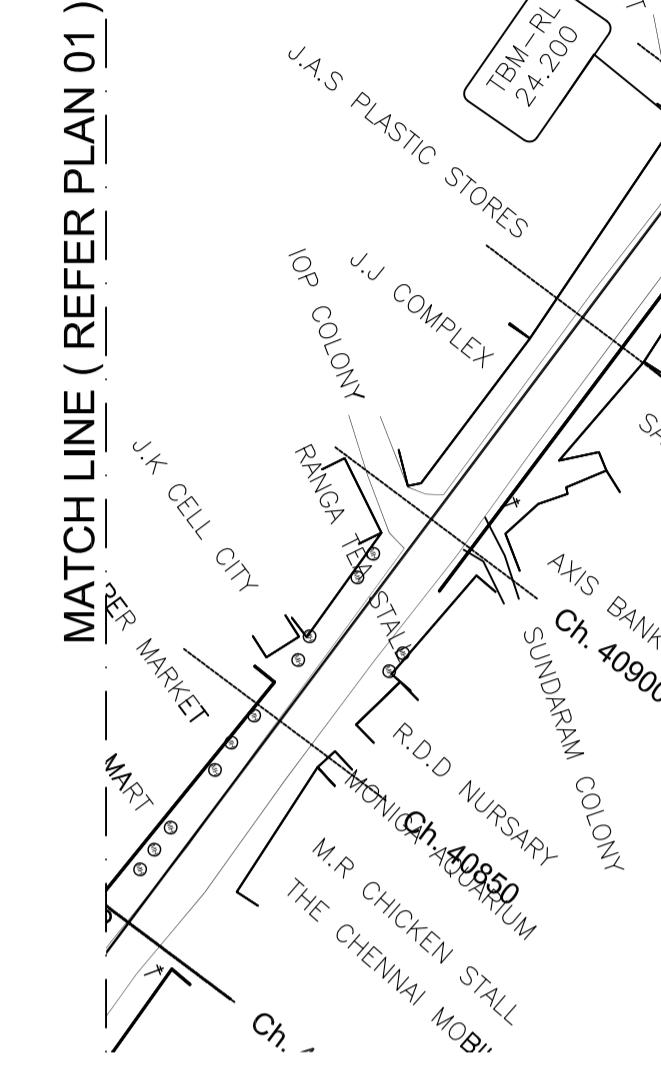


KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG.SHEET 42 OF 61)



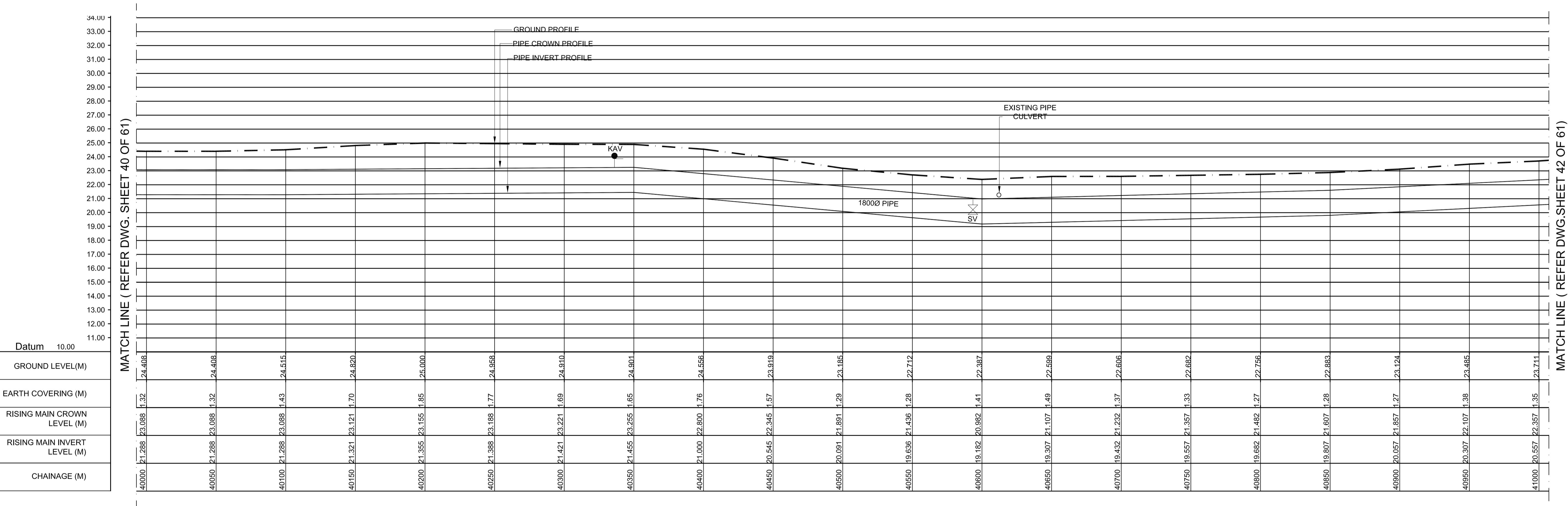
MATCH LINE (REFER DWG.SHEET 42 OF 61)



MATCH LINE (REFER PLAN 01)

PLAN-2
SCALE 1:1500

PLAN-1
SCALE 1:1500



SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

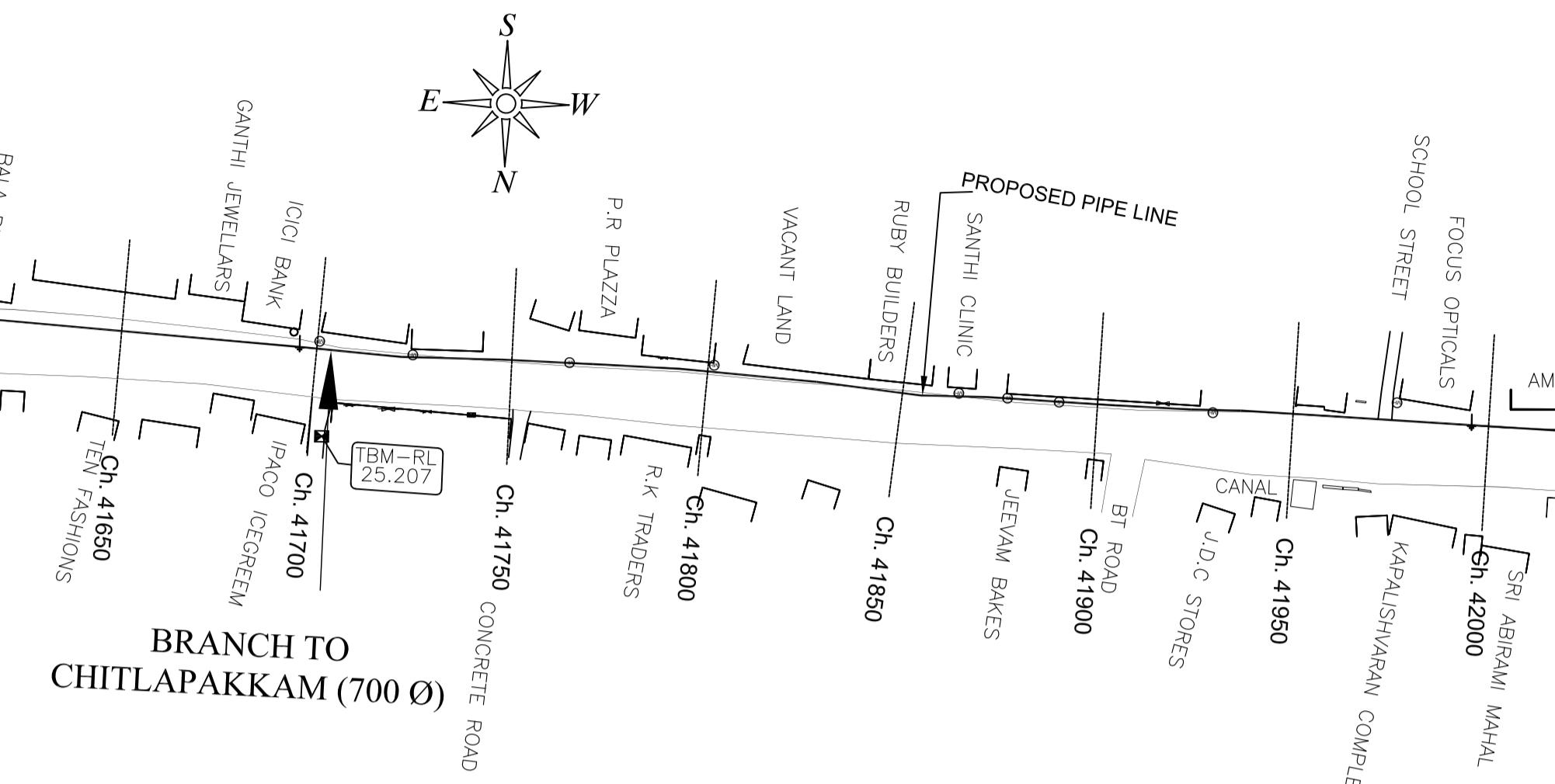
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (41/61)	
	SIZE	A1

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

N
W
S
E

KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG.SHEET 43 OF 61)



MATCH LINE (REFER DWG.SHEET 43 OF 61)

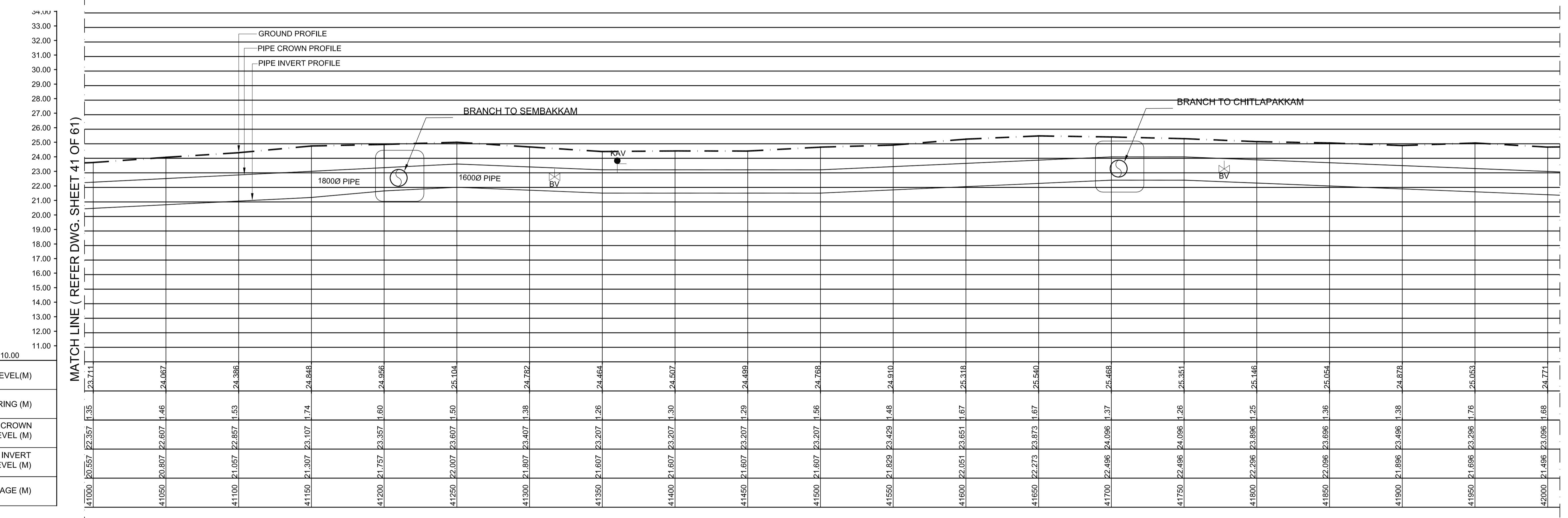
MATCH LINE (REFER PLAN 01)

MATCH LINE (REFER PLAN 02)

PLAN-2
SCALE 1:1500

PLAN-1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 41 OF 61)



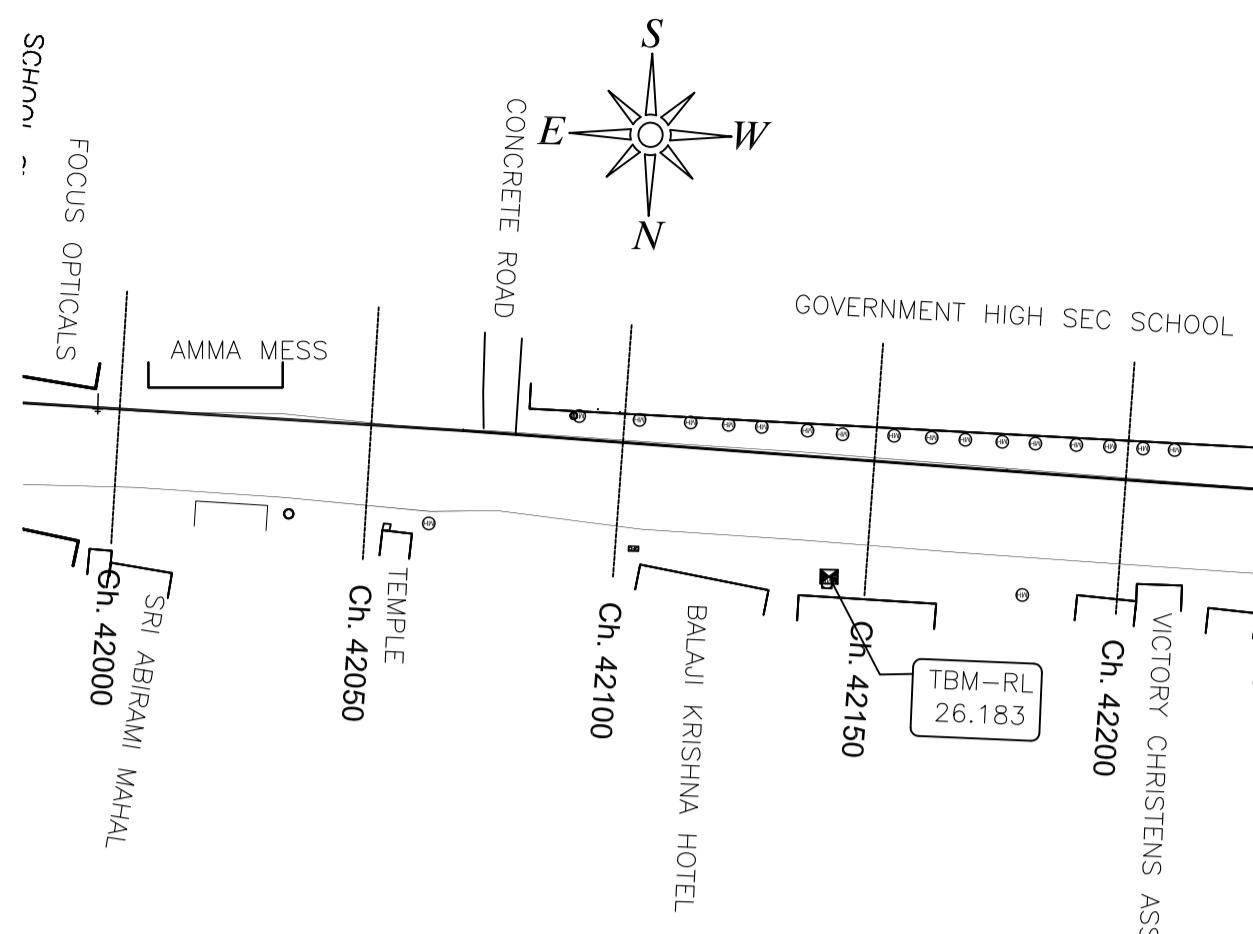
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (42/61)

LEGEND:-	
●	DESCRIPTION
○	AUGER BORE LOCATION
×	SCOUR VALVE
△	BUTTERFLY VALVE
KAV	AIR VALVE

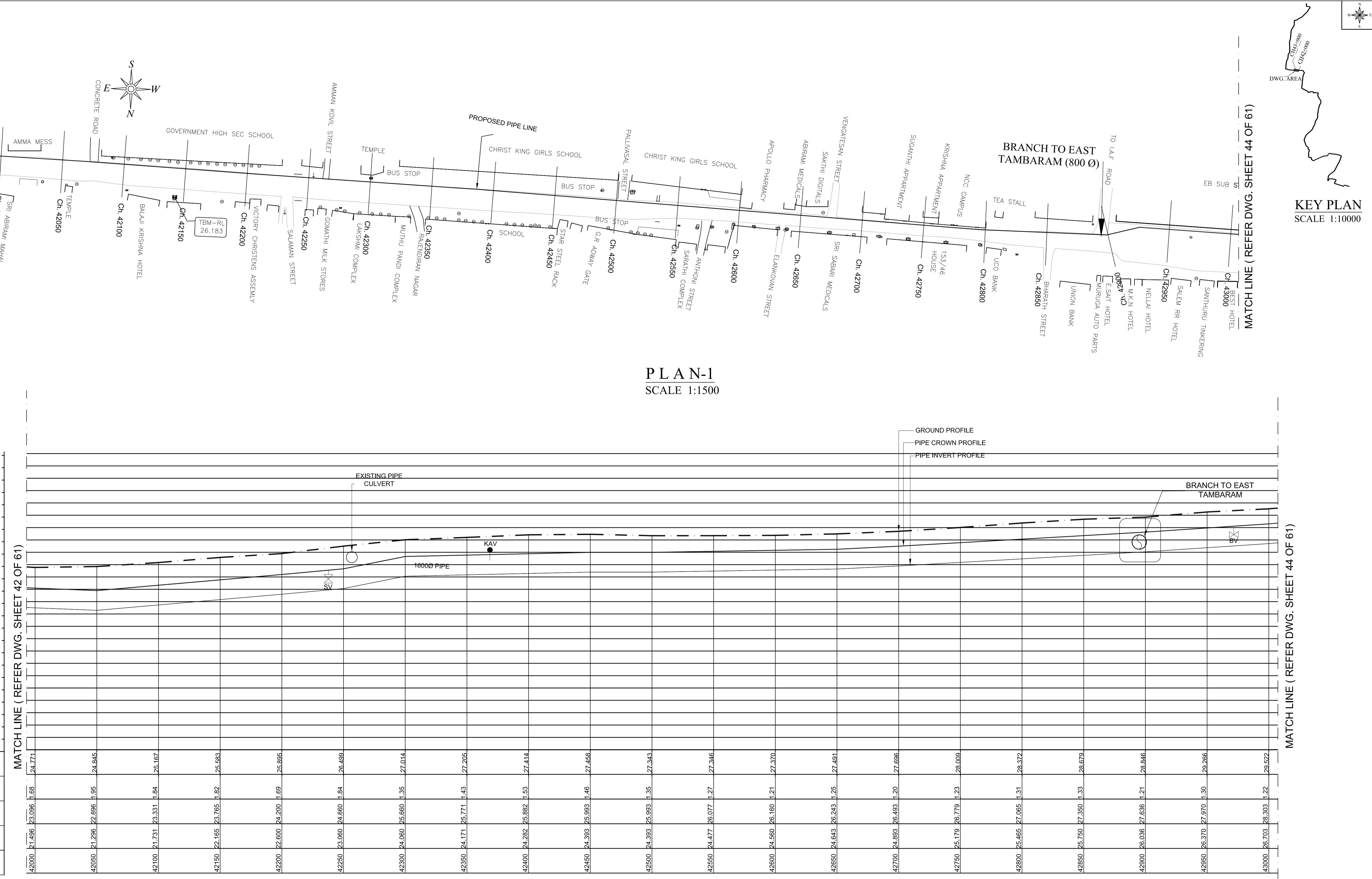
MATCH LINE (REFER DWG. SHEET 42 OF 61)



PLAN-1
SCALE 1:150

Datum	10.00
GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

LEGEND:-	
SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

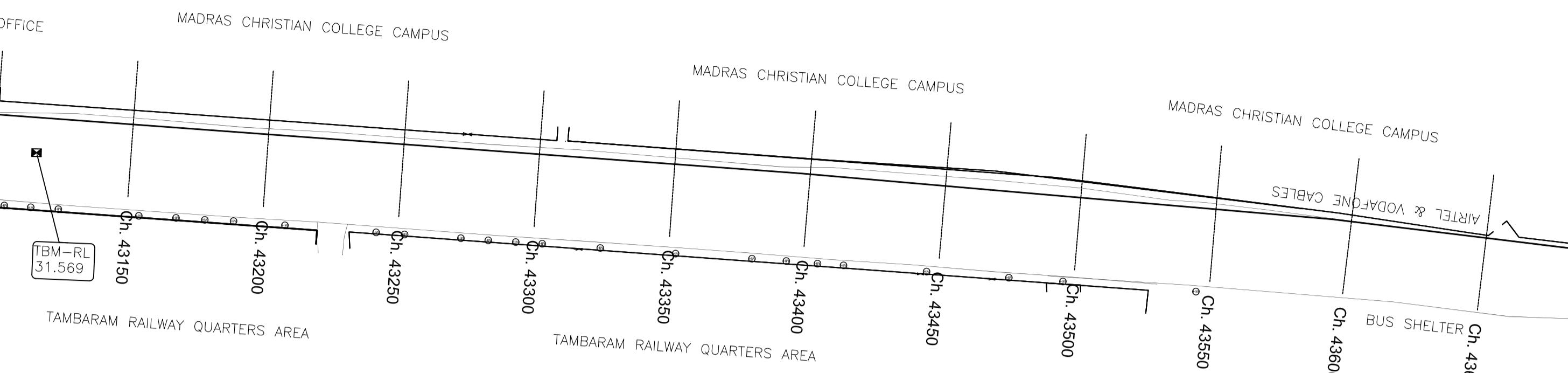


L - SECTION

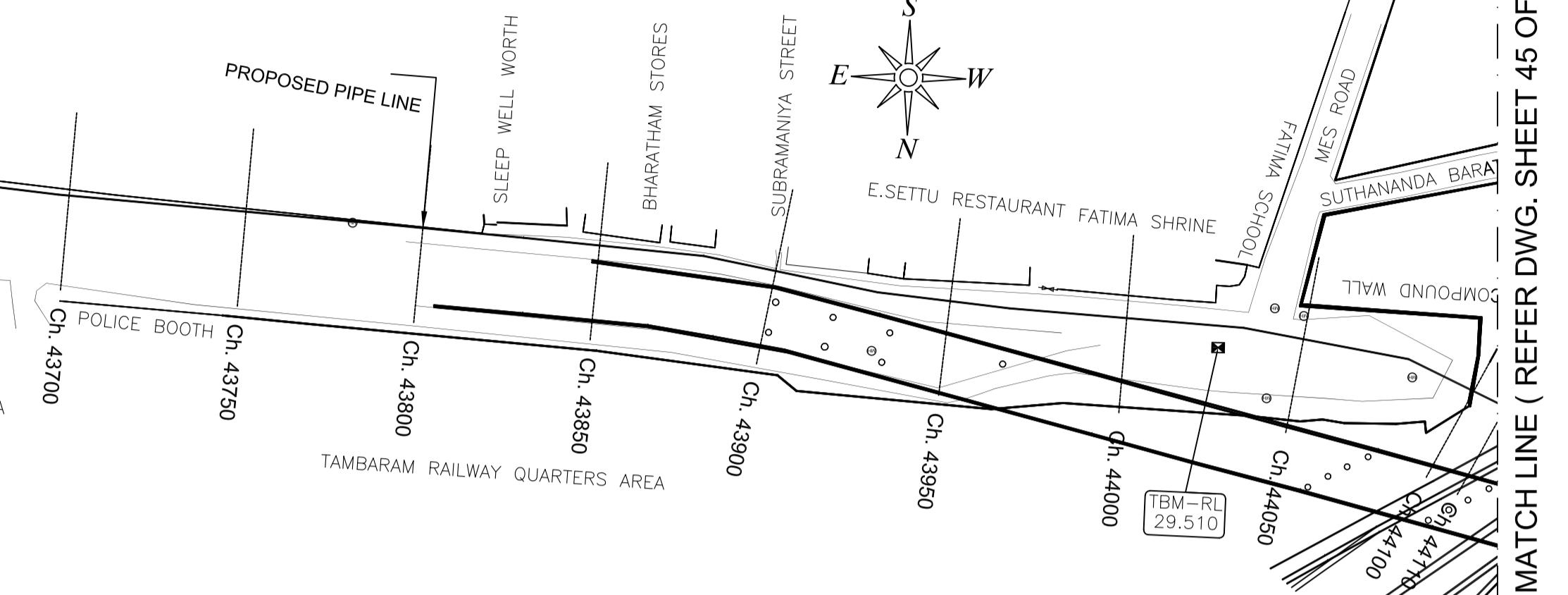
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (43/61)	SIZE A1

MATCH LINE (REFER DWG. SHEET 43 OF 61)



PLAN-1
SCALE 1:1500



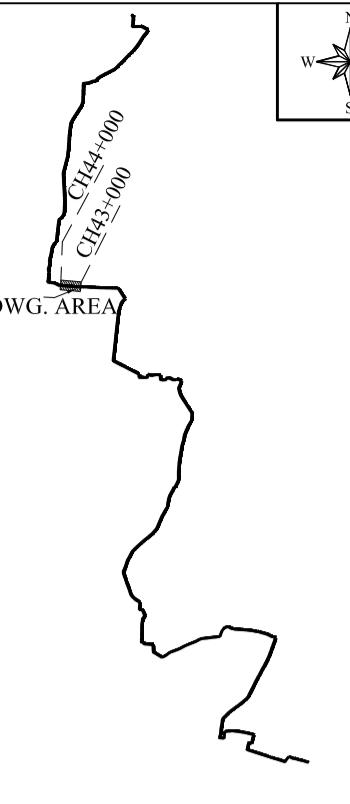
MATCH LINE (REFER DWG. SHEET 45 OF 61)

GROUND PROFILE

PIPE CROWN PROFILE

PIPE INVERT PROFILE

KEY PLAN
SCALE 1:10000



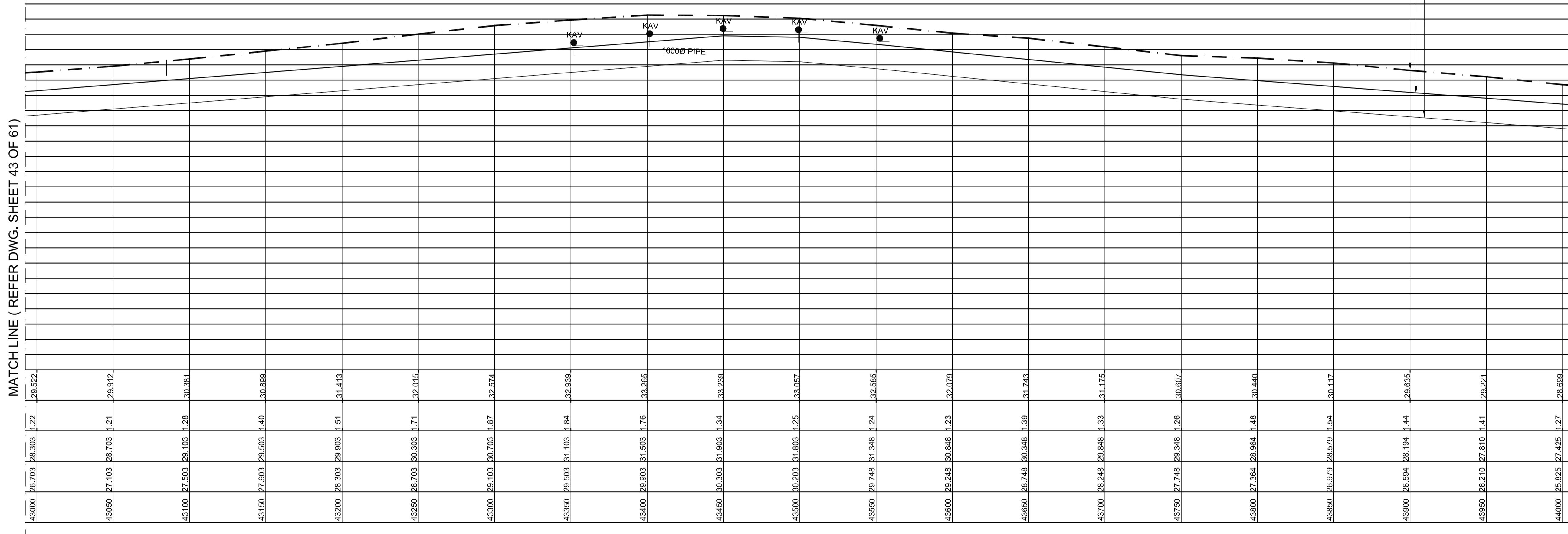
Datum 10.00

GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

LEGEND:-

SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
△	SCOUR VALVE
▽	BUTTERFLY VALVE
●	AIR VALVE

MATCH LINE (REFER DWG. SHEET 43 OF 61)



L - SECTION

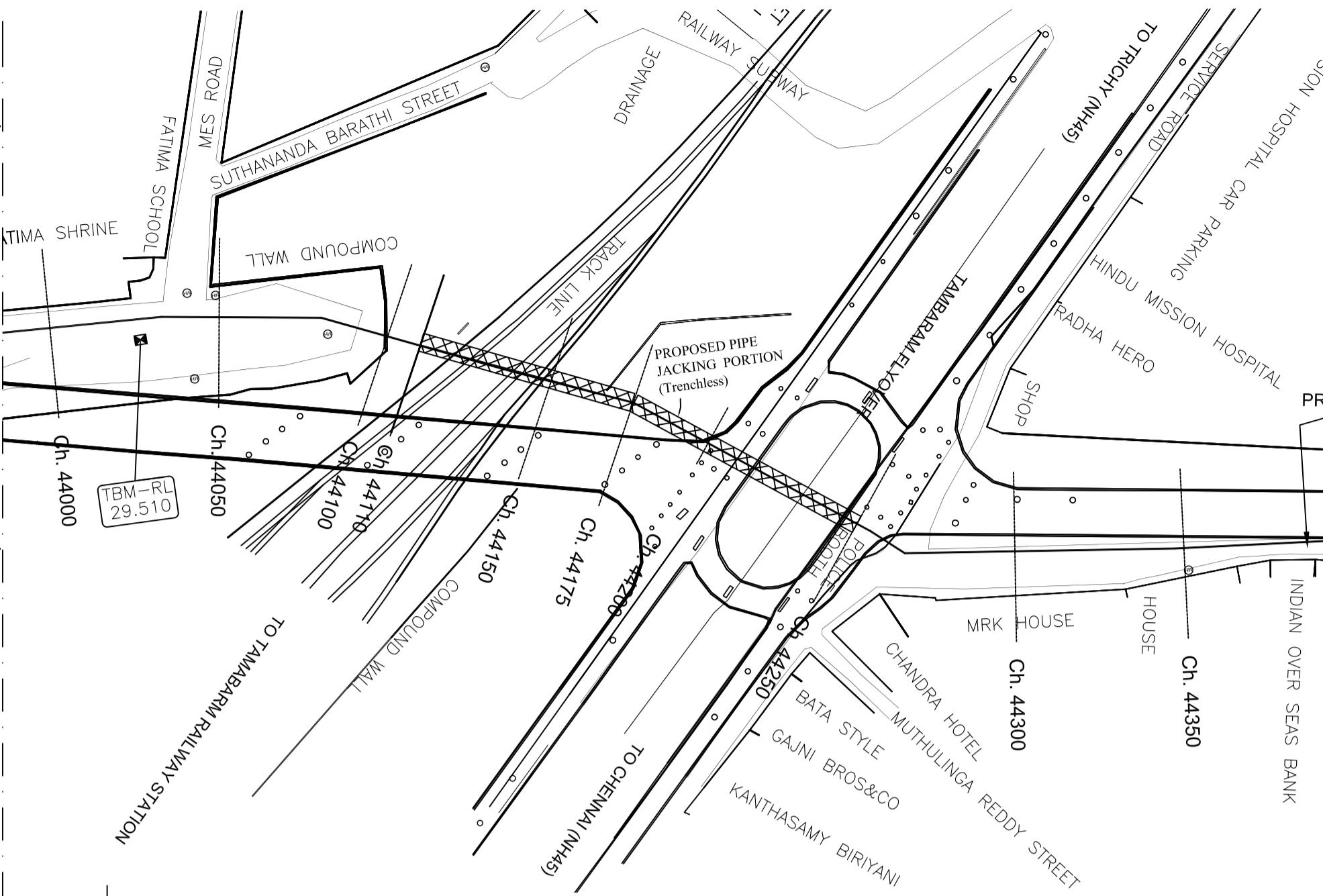
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (44/61)

SIZE
A1

KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 46 OF 61)



PLAN-1
SCALE 1:1500

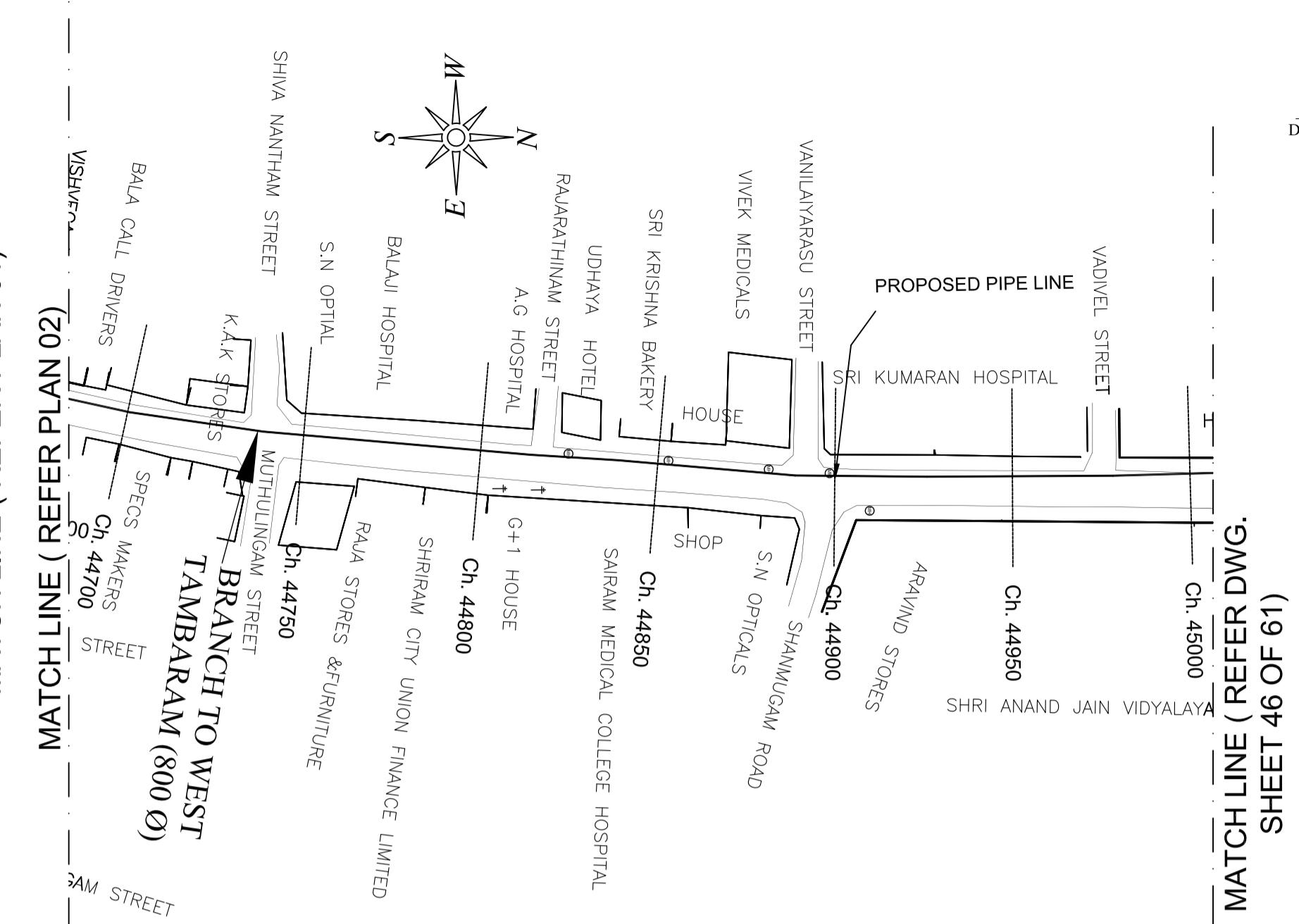
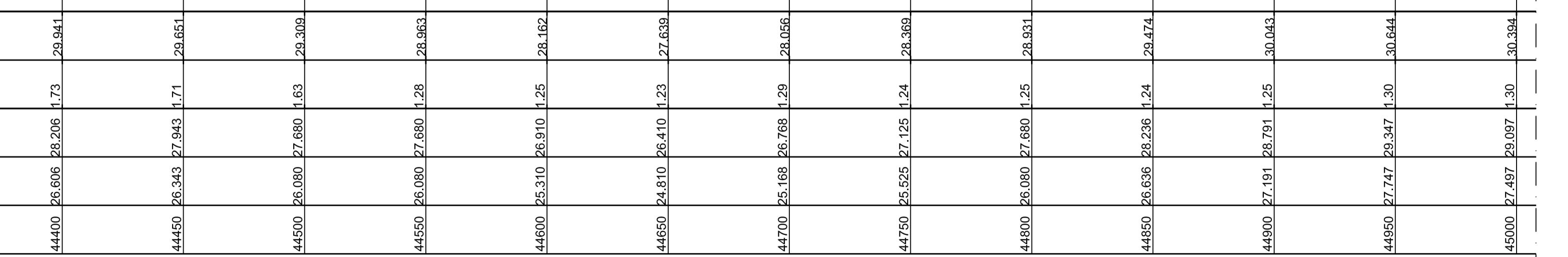
MATCH LINE (REFER DWG. SHEET 44 OF 61)

Datum	10.00
GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

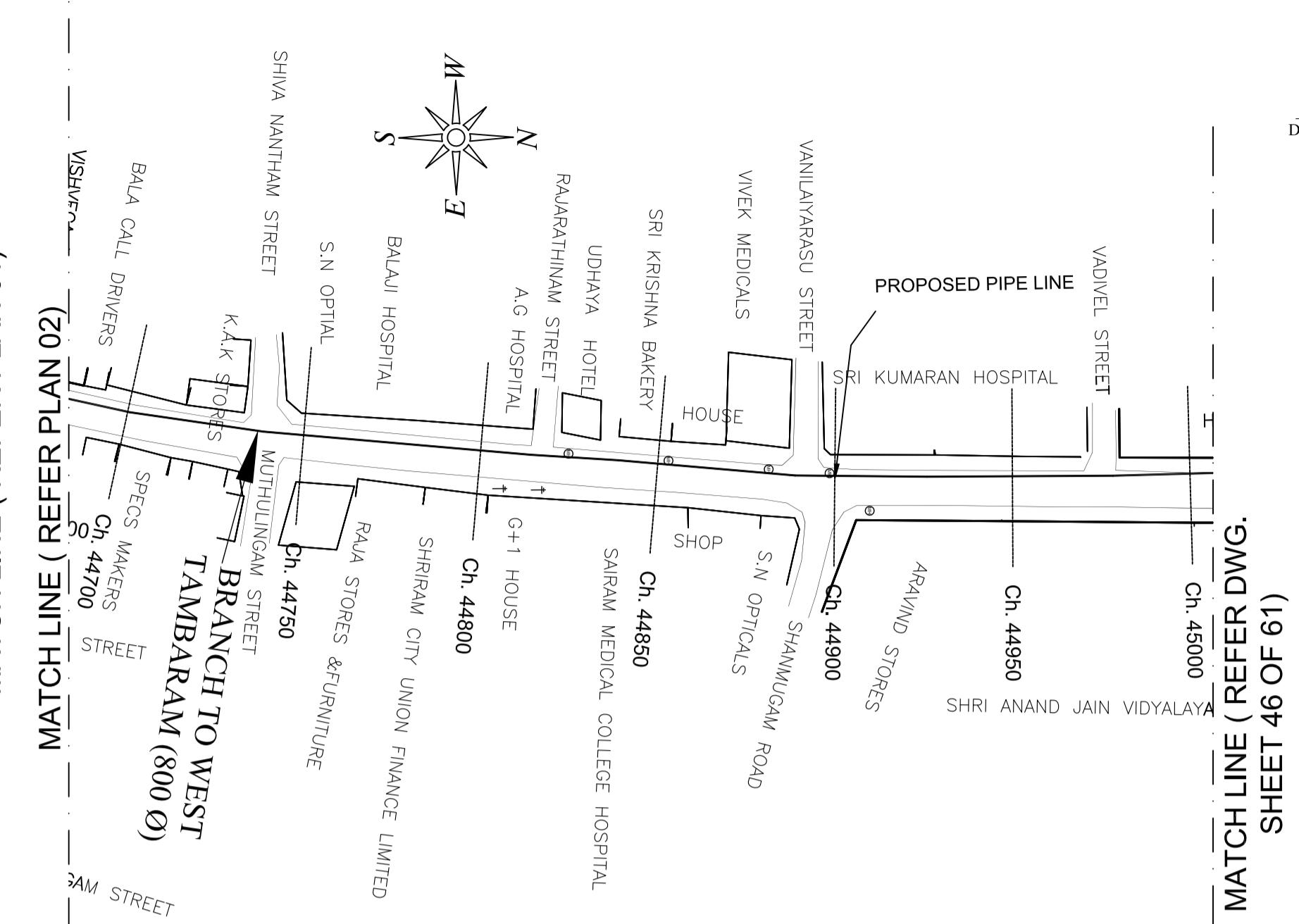
LEGEND:-	
	DESCRIPTION AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE

L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500



PLAN-2
SCALE 1:1500



PLAN-2
SCALE 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (45/61)

KEY PLAN
SCALE 1:10000

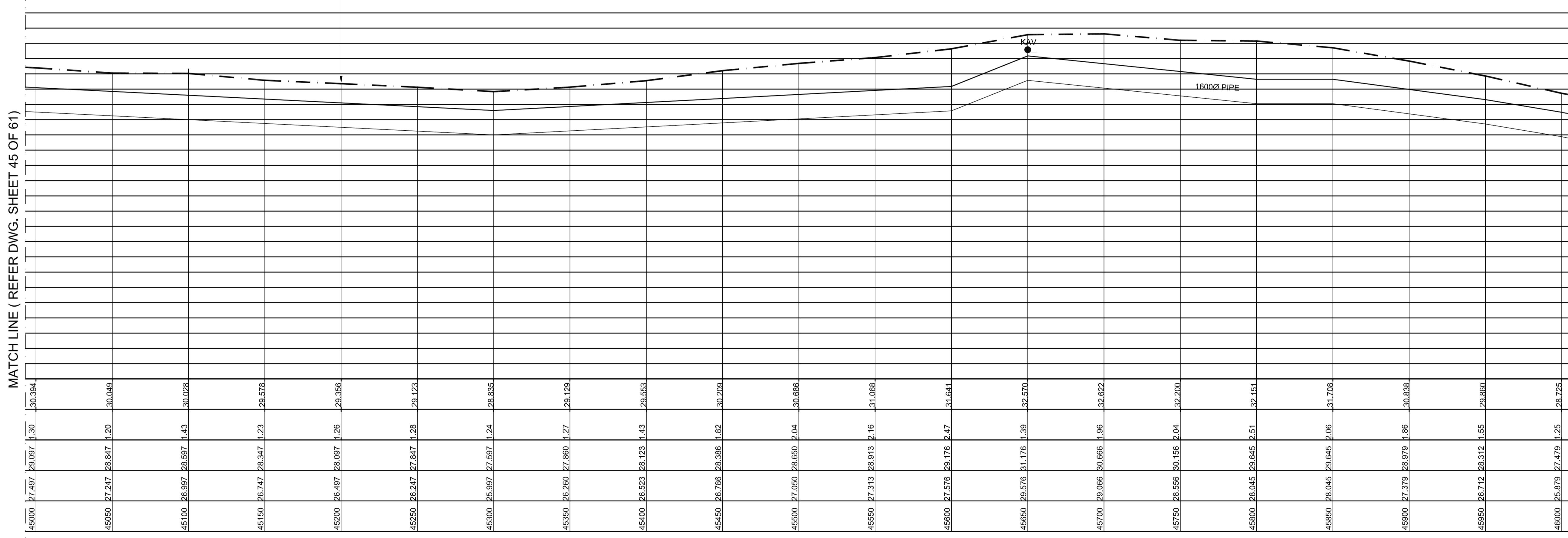
MATCH LINE (REFER DWG. SHEET 47 OF 61)

OF61)

MATCH LINE (REFER DWG. SHEET 45 OF 61)

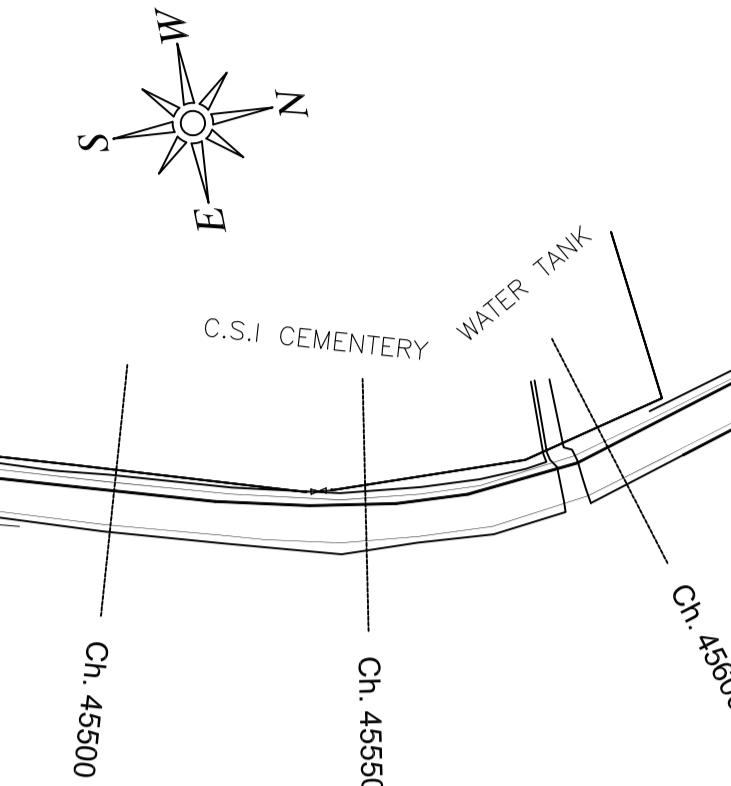
Datum	10.00
GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
×	SCOUR VALVE
SV	BUTTERFLY VALVE
BV	
KAV	AIR VALVE

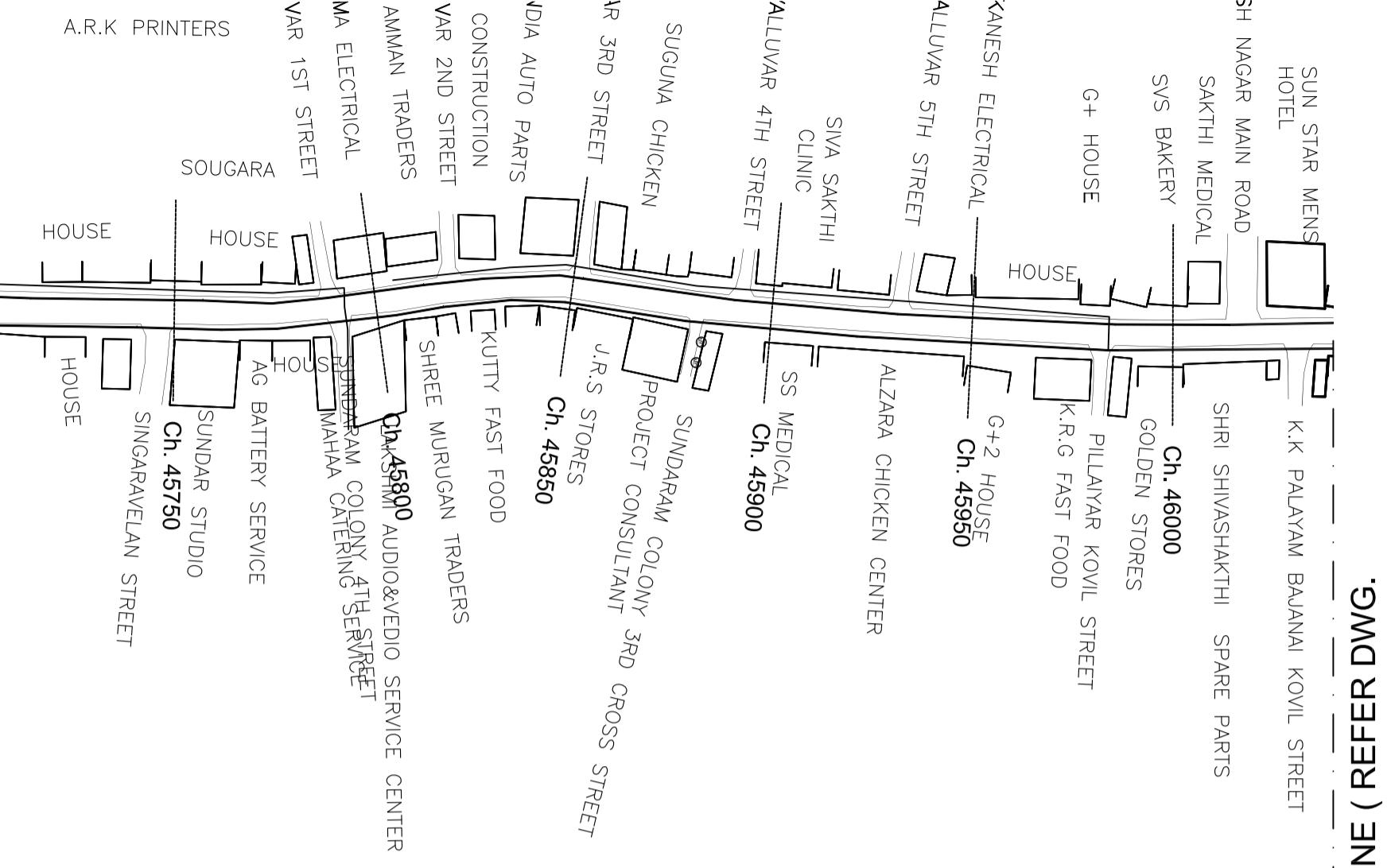
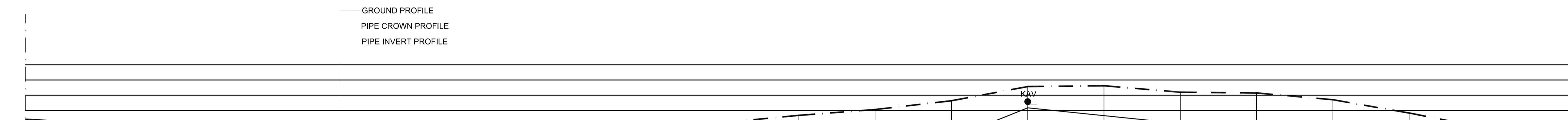


L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500



PLAN-1
SCALE 1:1500

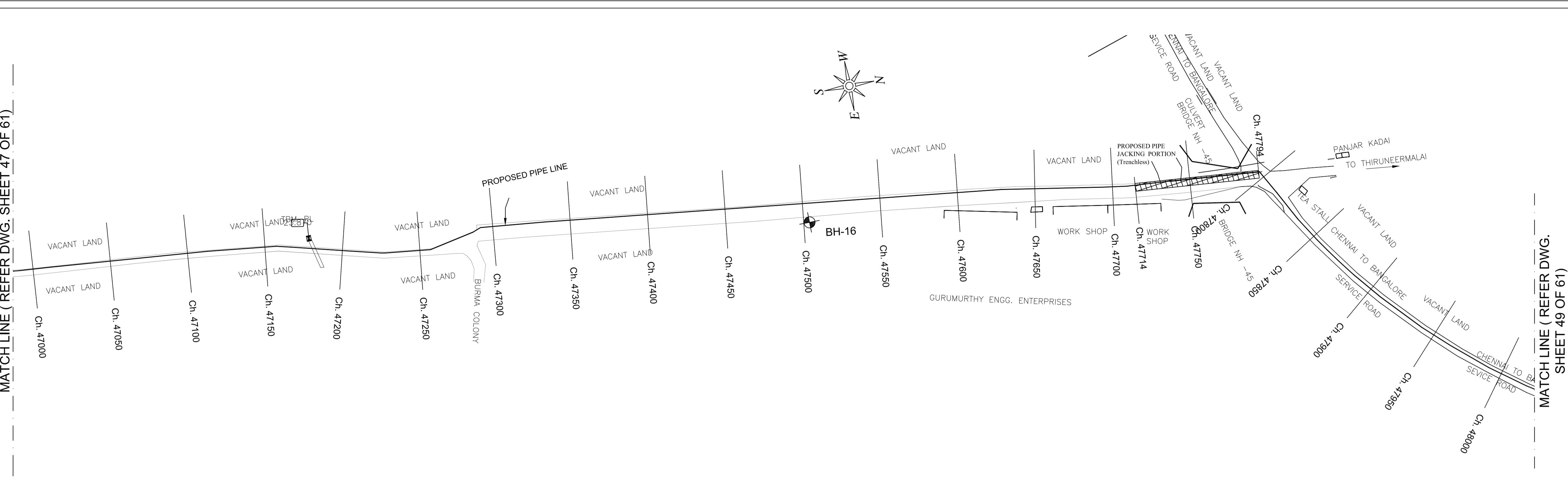


PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (46/61)

MATCH LINE (REFER DWG. SHEET 47)

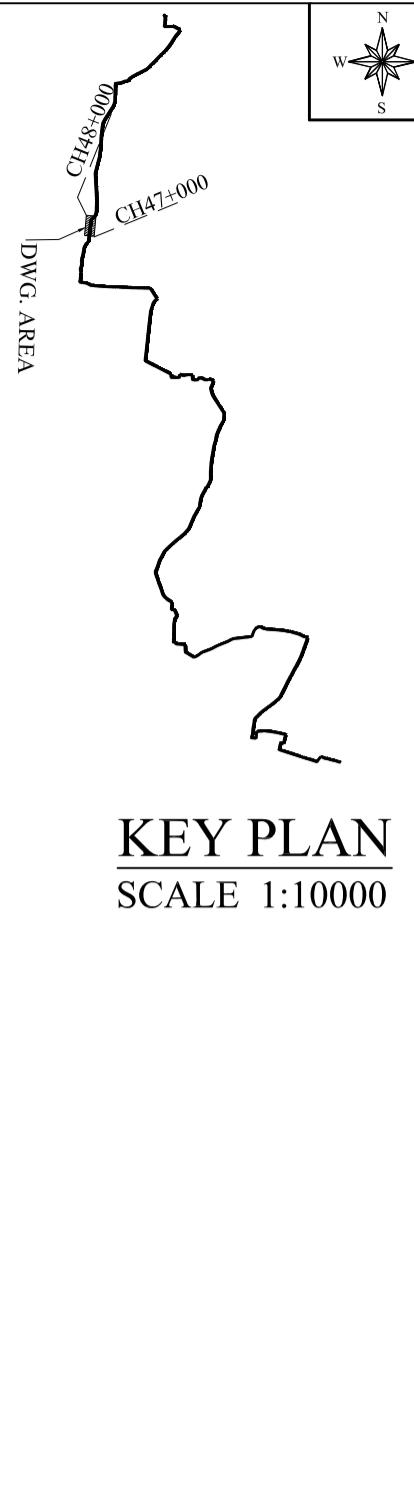
OF61)

MATCH LINE (REFER DWG. SHEET 47 OF 61)



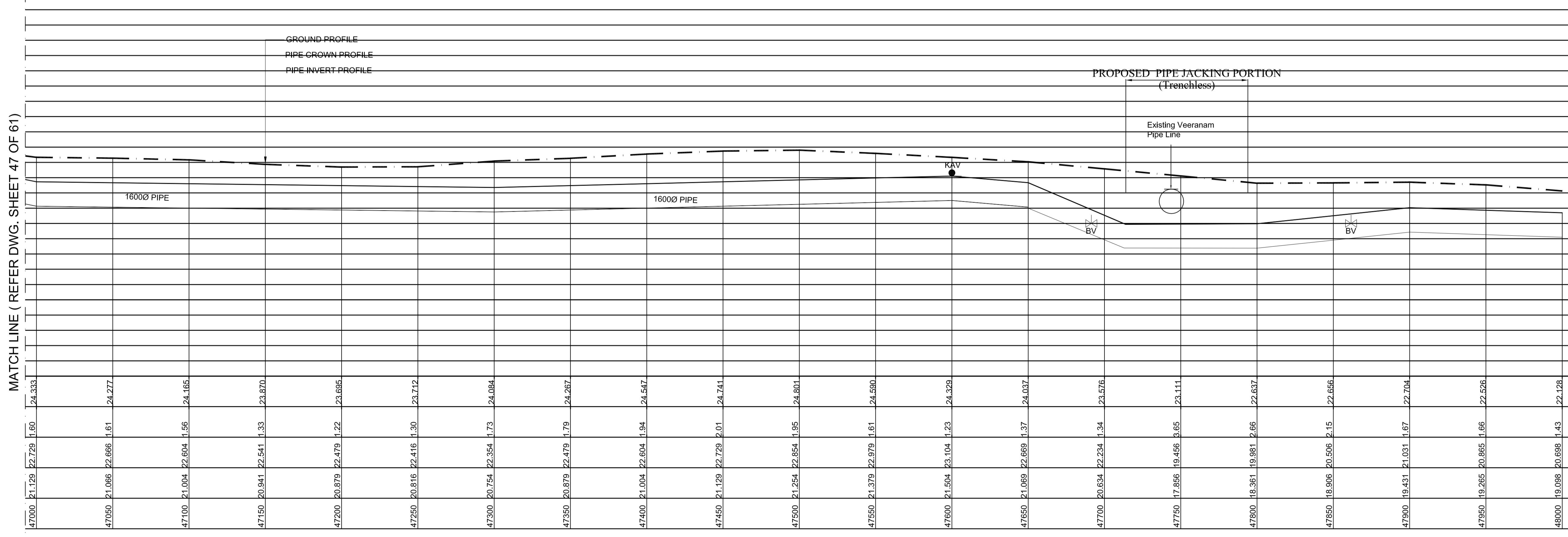
KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG.
SHEET 49 OF 61)



PLAN-1

SCALE 1:1500



Datum	10.00
GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
RISING MAIN INVERT LEVEL (M)	
CHAINAGE (M)	

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
△	SCOUR VALVE
▽	BUTTERFLY VALVE
KAV	AIR VALVE

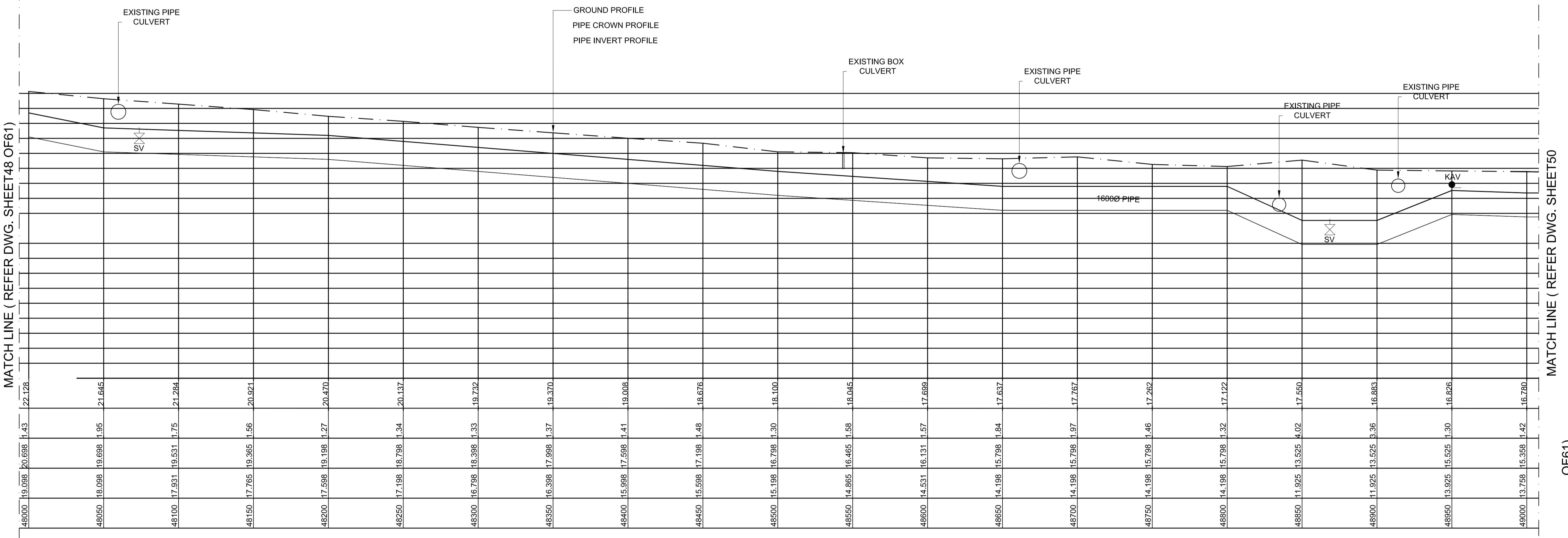
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (48/61)

SIZE
A1

MATCH LINE (REFER DWG. SHEET48 OF61)



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (49/61)

MATCH LINE (REFER DWG. SHEET50 OF61)



MATCH LINE (REFER DWG.
SHEET50 OF61)

MATCH LINE (REFER DWG. SHEET50 OF61)

VERY DWD
Ch.49000
Ch.48800

EXISTING PIPE
CULVERT

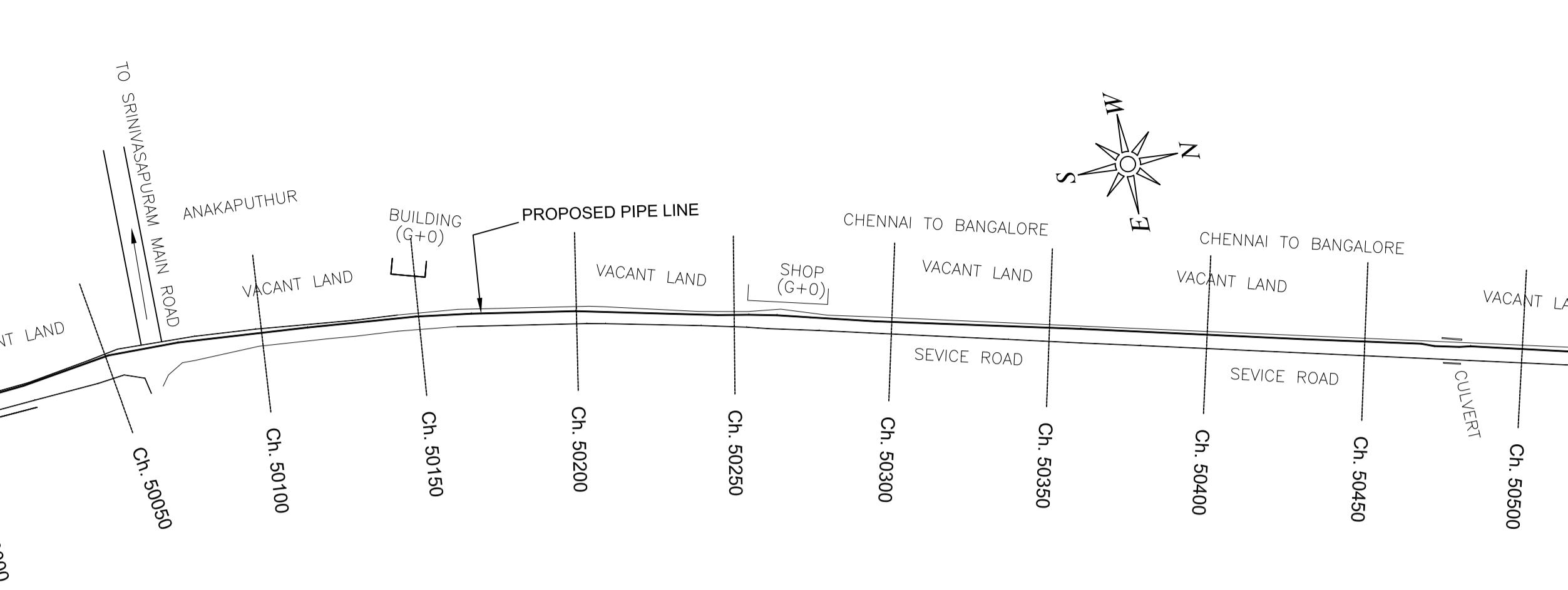
EXISTING BOX
CULVERT

EXISTING PIPE
CULVERT

KAV

SV

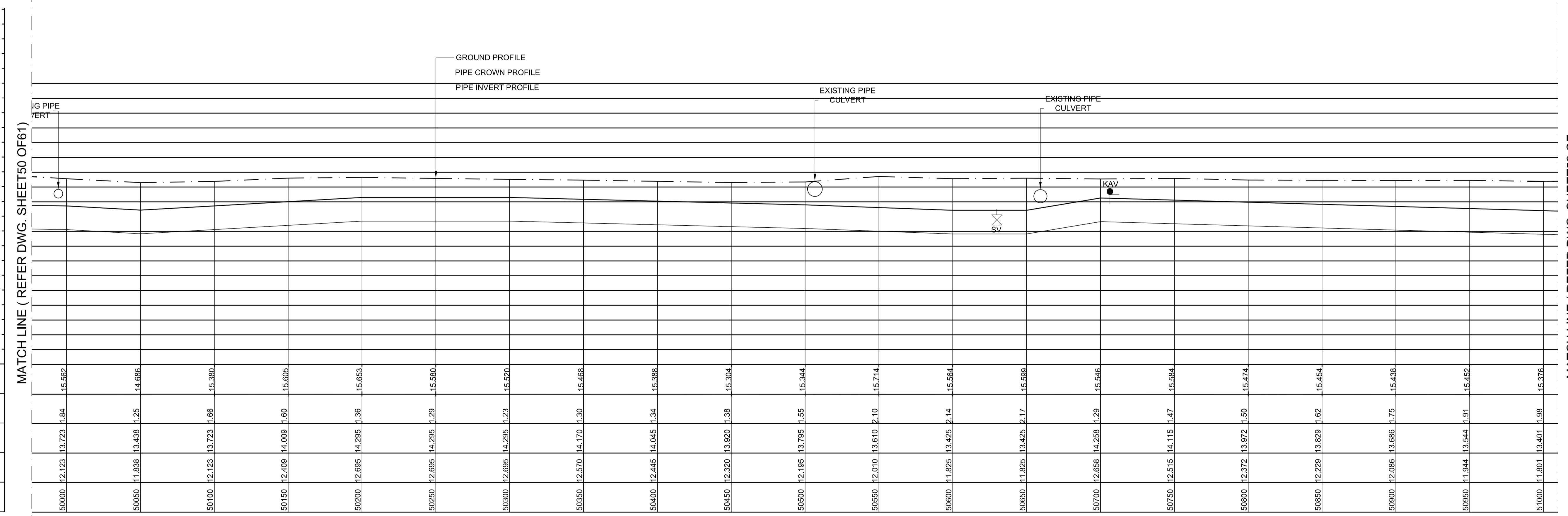
MATCH LINE (REFER DWG. SHEET50 OF 61)



P L A N - 1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET52 OF 61)

61)

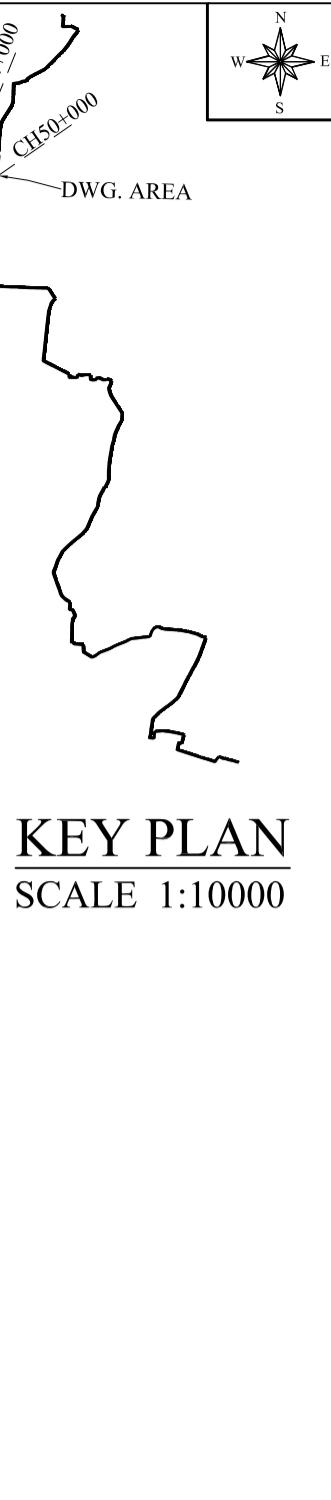


L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (51/61)

SIZE
A1



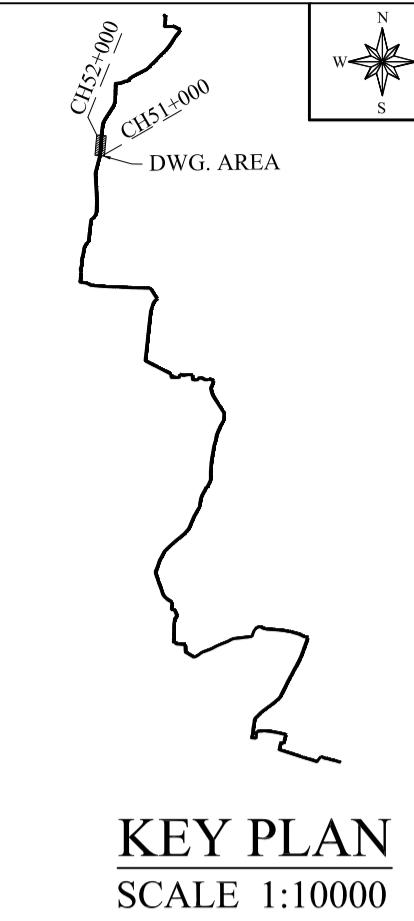
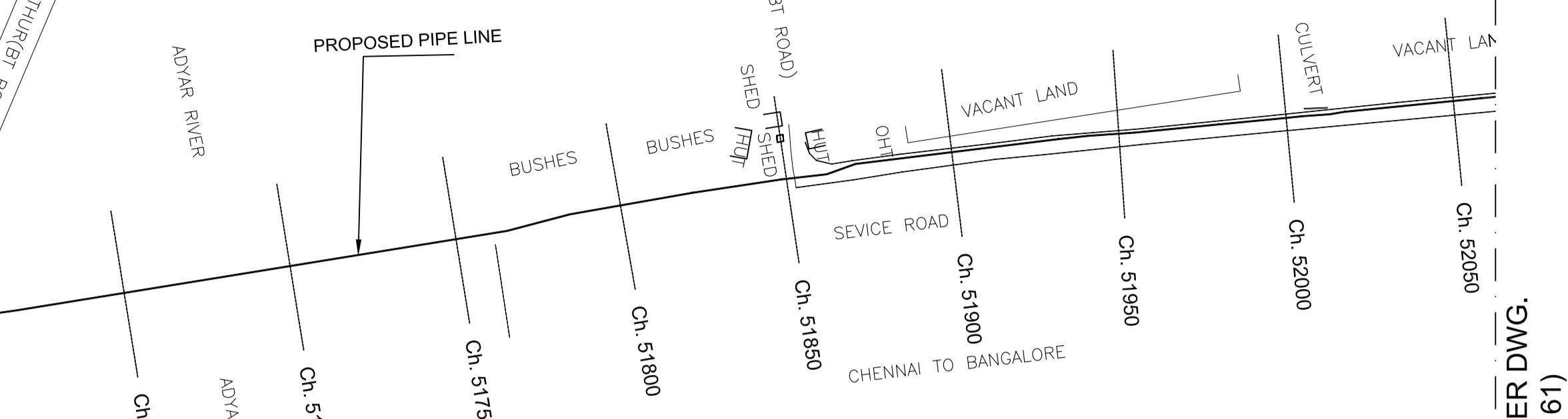
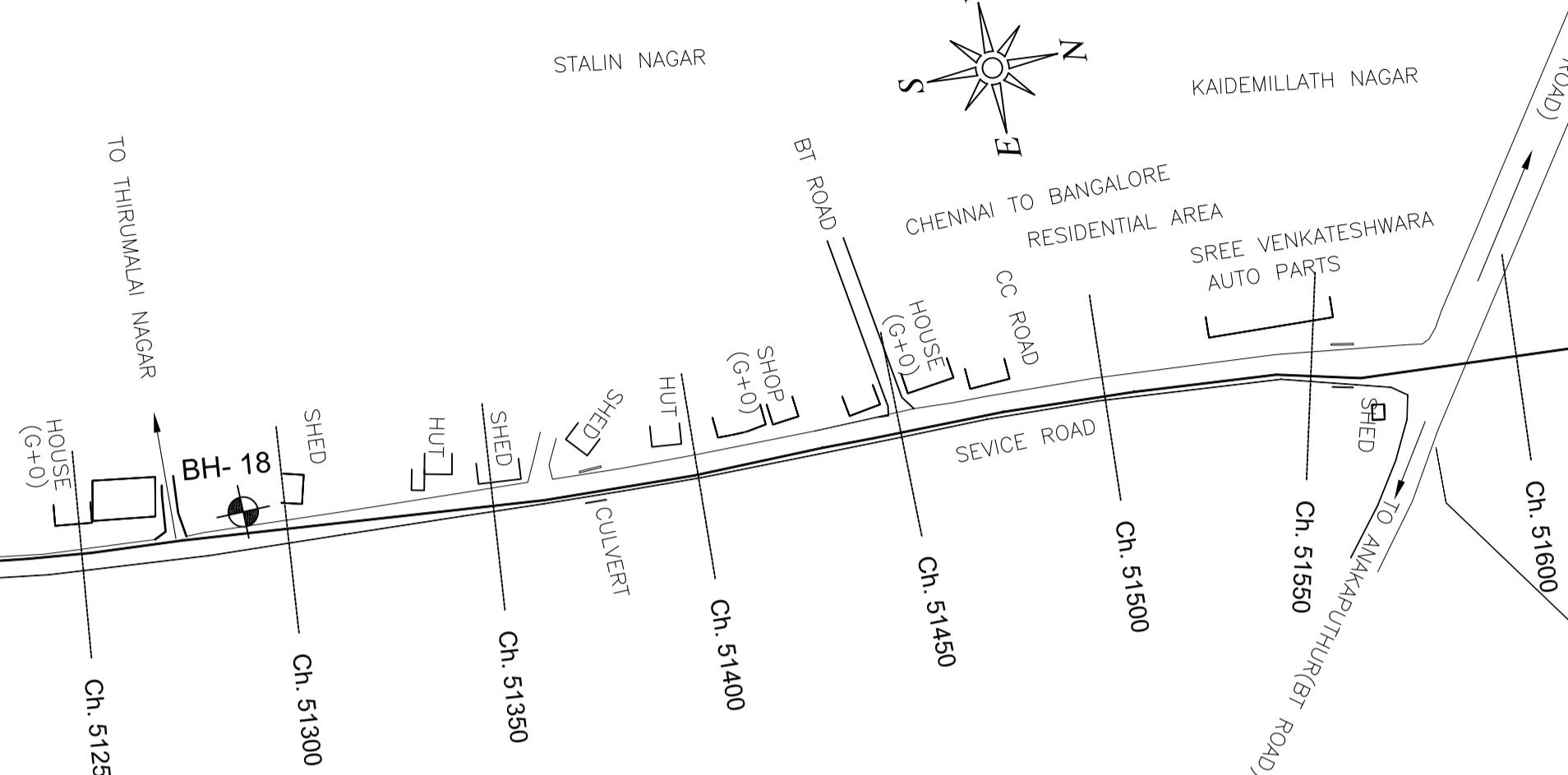
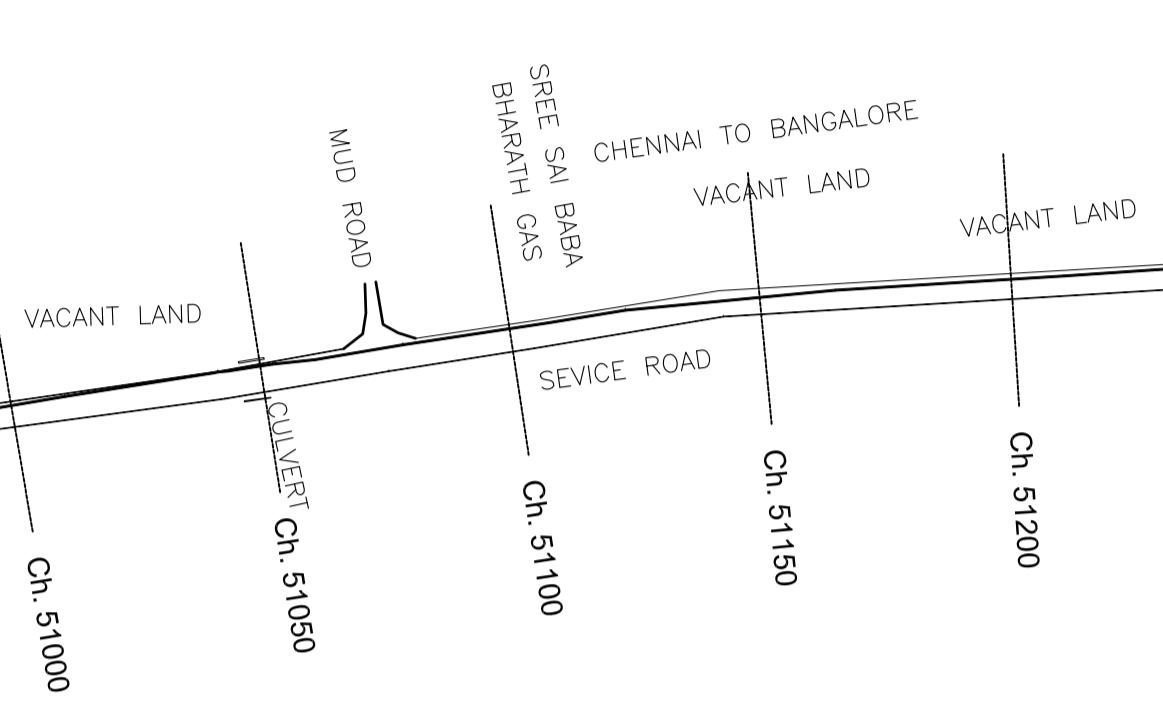
KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET52 OF 61)

MATCH LINE (REFER DWG. SHEET51 OF 61)

Datum 3.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
×	SCOUR VALVE
△	BUTTERFLY VALVE
KAV	AIR VALVE



KEY PLAN
SCALE 1:10000

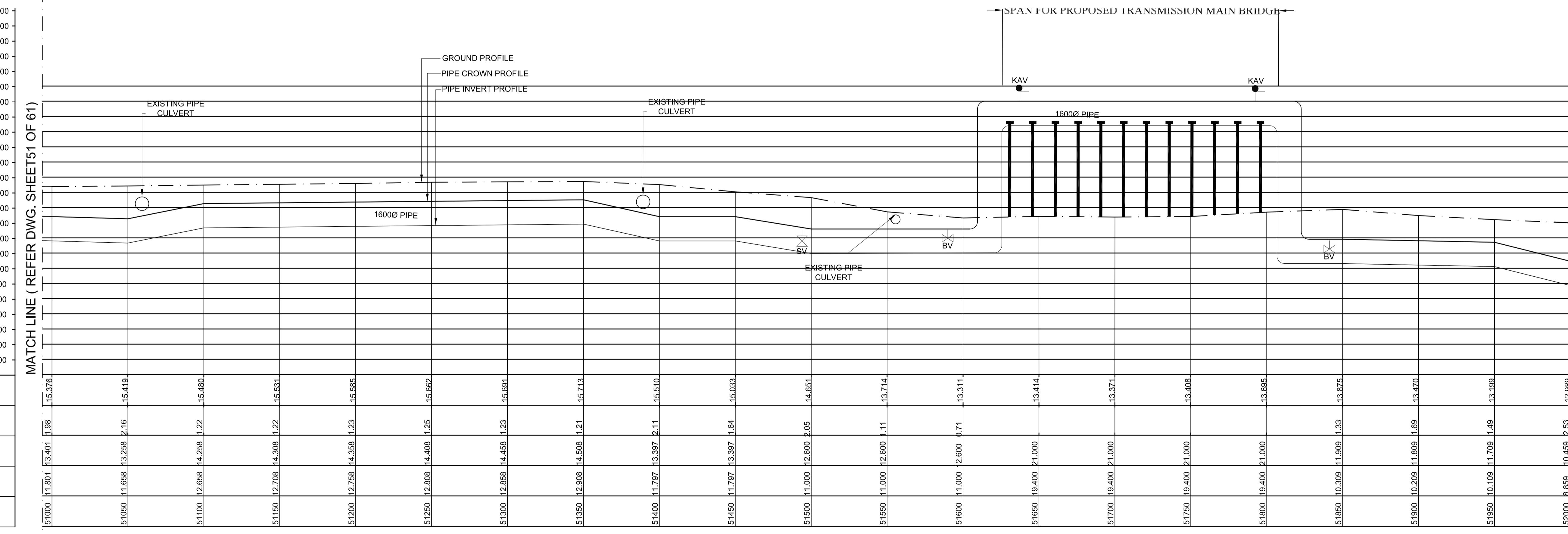
MATCH LINE (REFER DWG. SHEET53 OF 61)

61)

PLAN-1
SCALE 1:1500

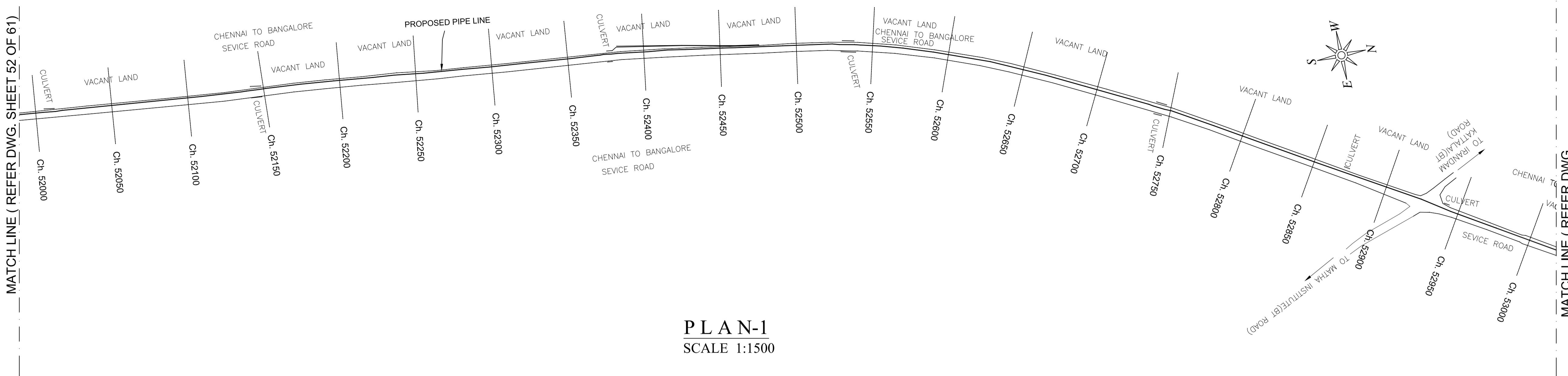
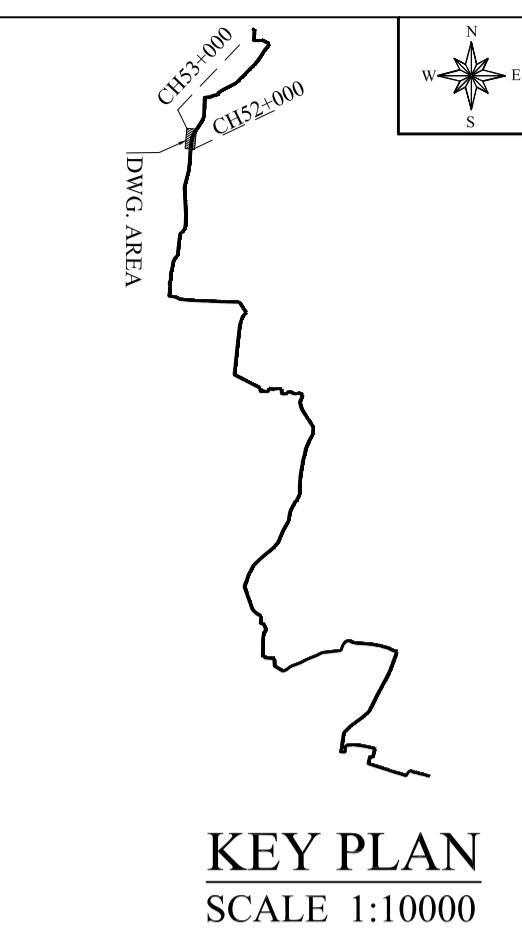
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500



PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (52/61)

SIZE
A1

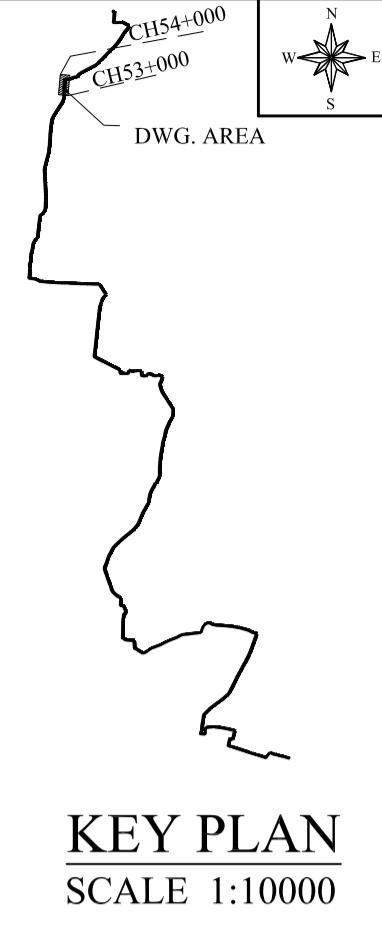


LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
△	SCOUR VALVE
▽	BUTTERFLY VALVE
●	AIR VALVE

L - SECTION

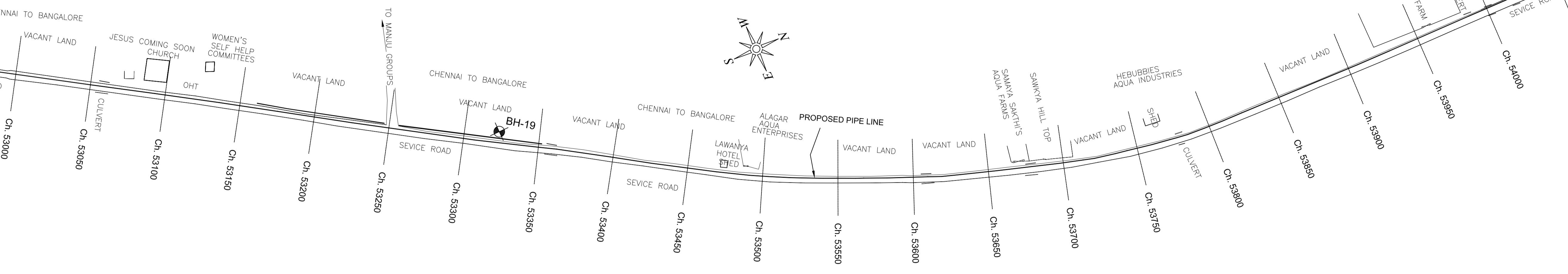
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (53/61)



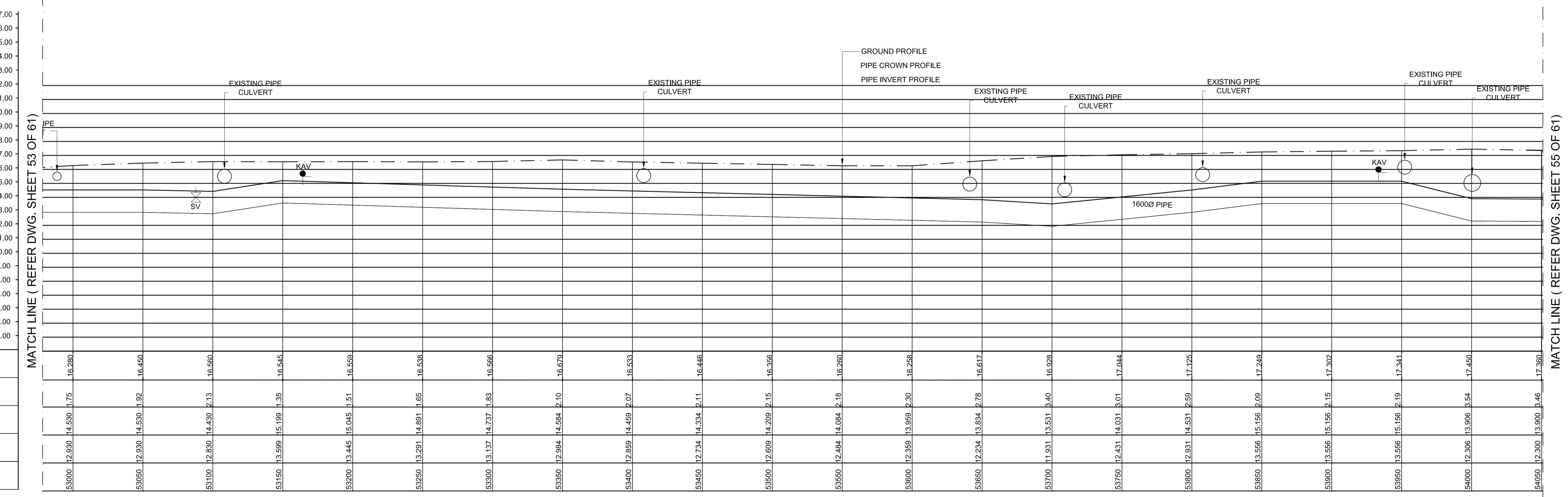
KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 53 OF 61)



P L A N - 1
SCALE 1:1500

MATCH LINE (REFER DWG. SHEET 55 OF 61)



Datum 3.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
×	SCOUR VALVE
△	BUTTERFLY VALVE
KAV	AIR VALVE

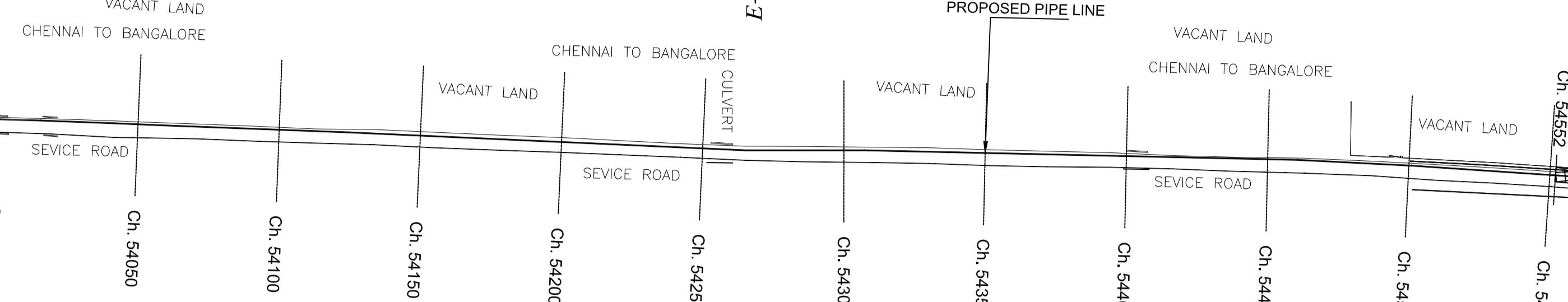
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

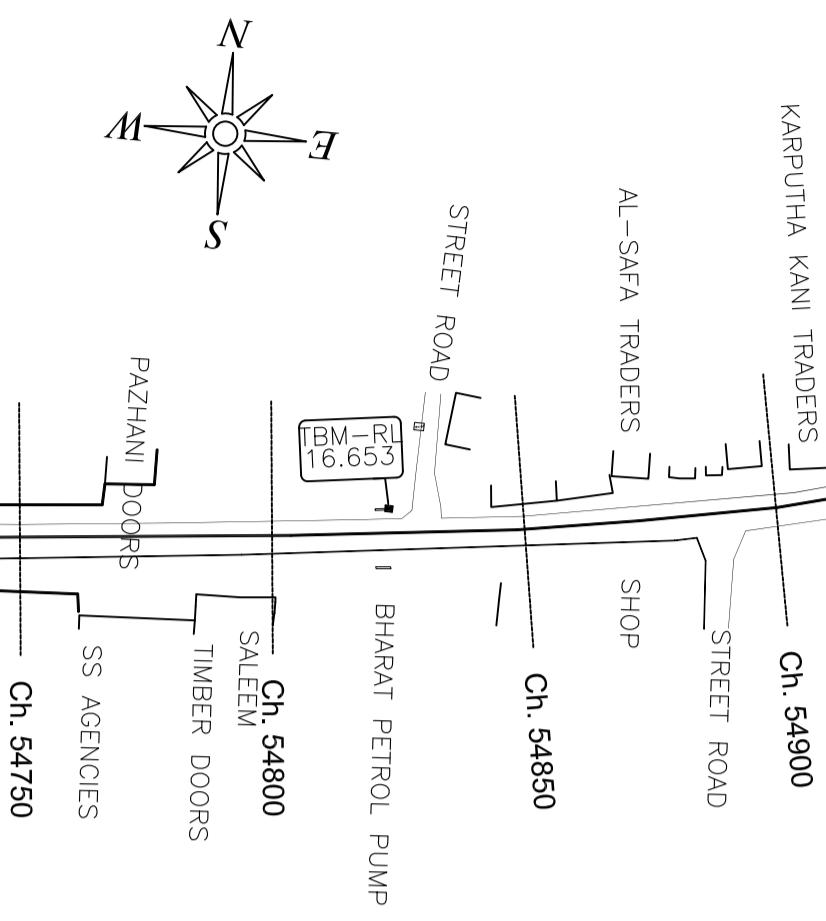
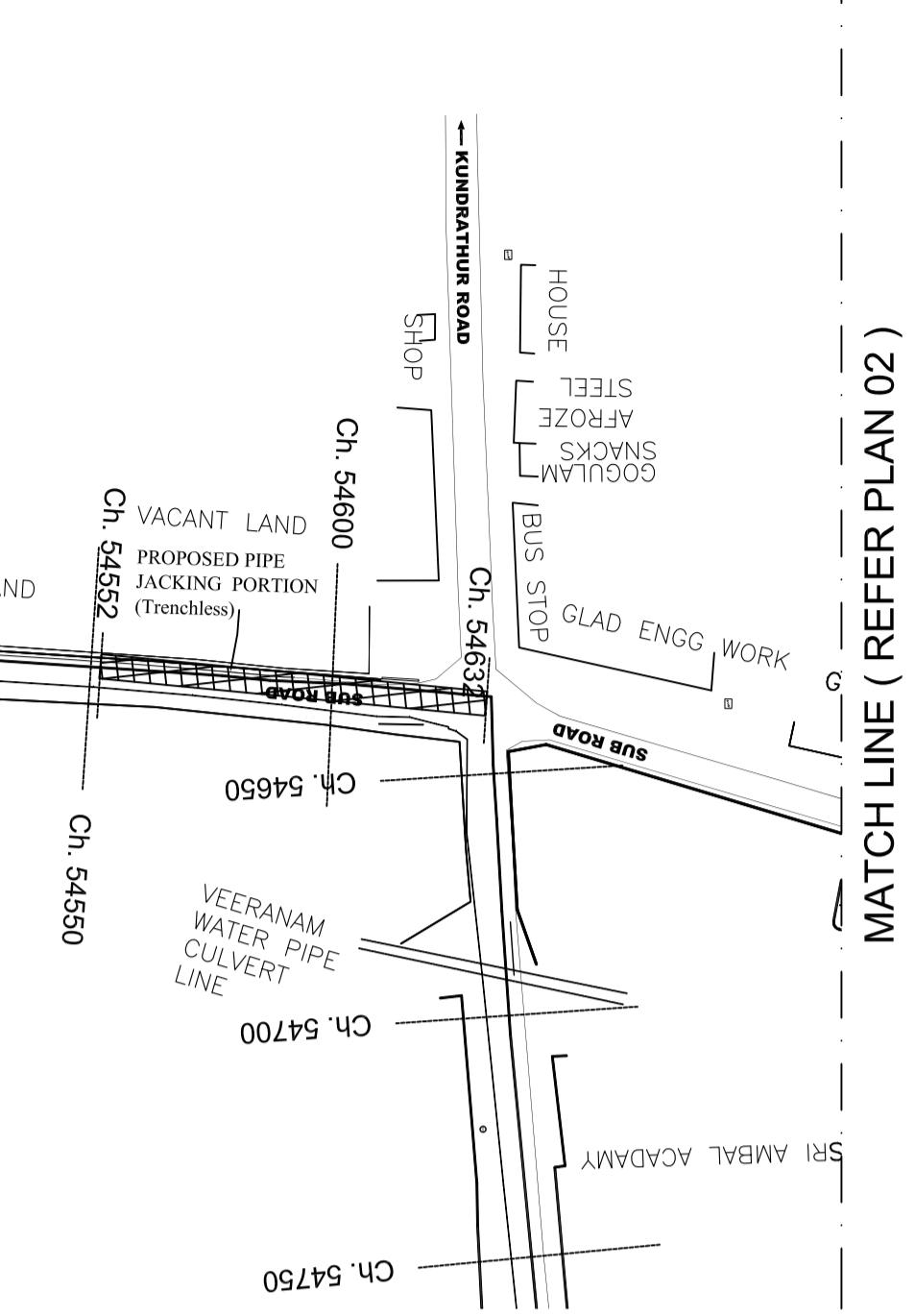
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (54/61)

SIZE
A1

MATCH LINE (REFER DWG. SHEET 54 OF 61)



PLAN-1
SCALE 1:1500



PLAN-2
SCALE 1:1500

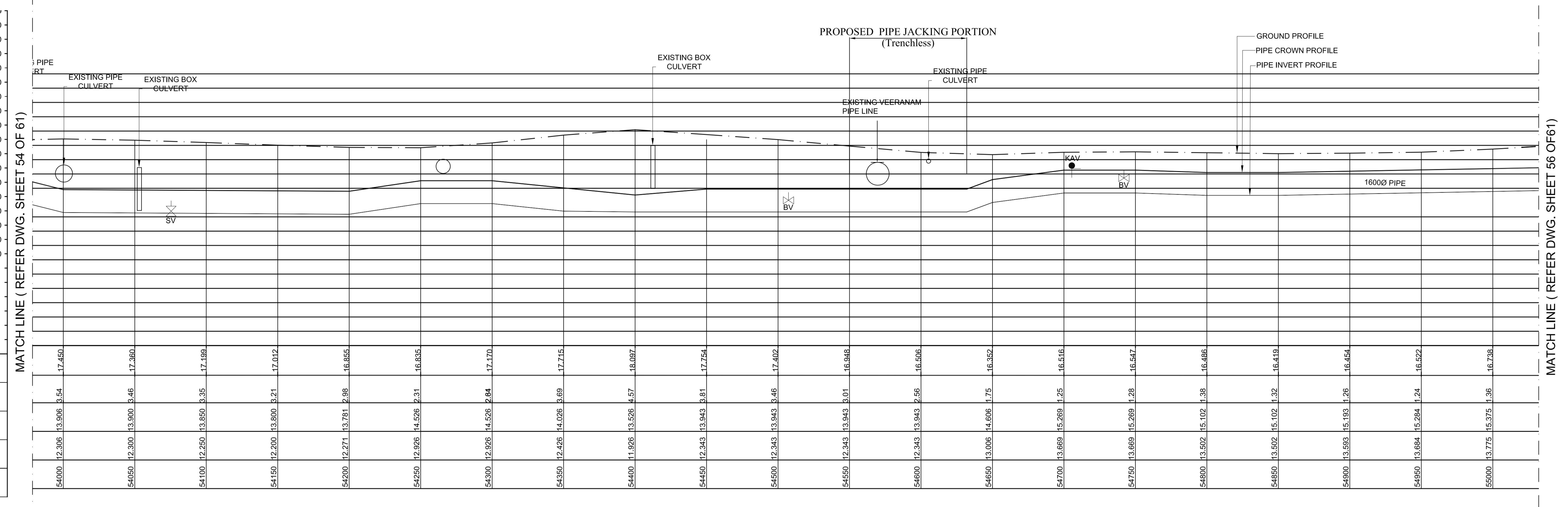


KEY PLAN
SCALE 1:10000

Datum 3.00
GROUND LEVEL(M)
EARTH COVERING (M)
RISING MAIN CROWN LEVEL (M)
RISING MAIN INVERT LEVEL (M)
CHAINAGE (M)

LEGEND:-

SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	KAV
	AIR VALVE



L - SECTION

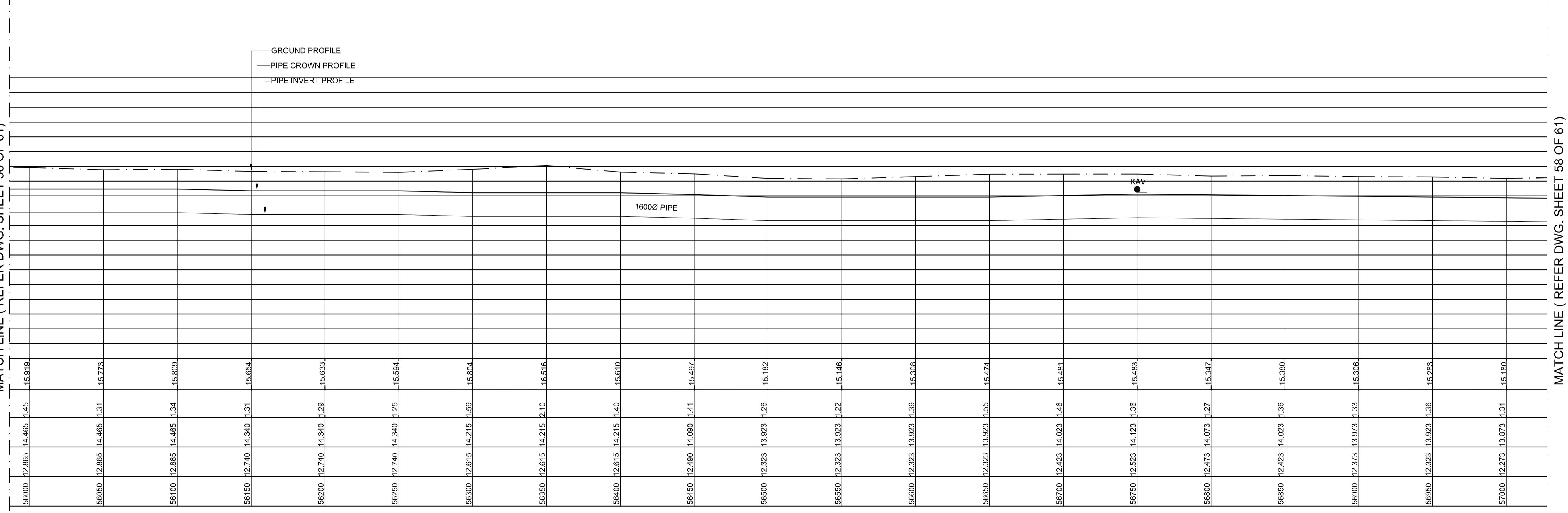
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (55/61)	SIZE A1

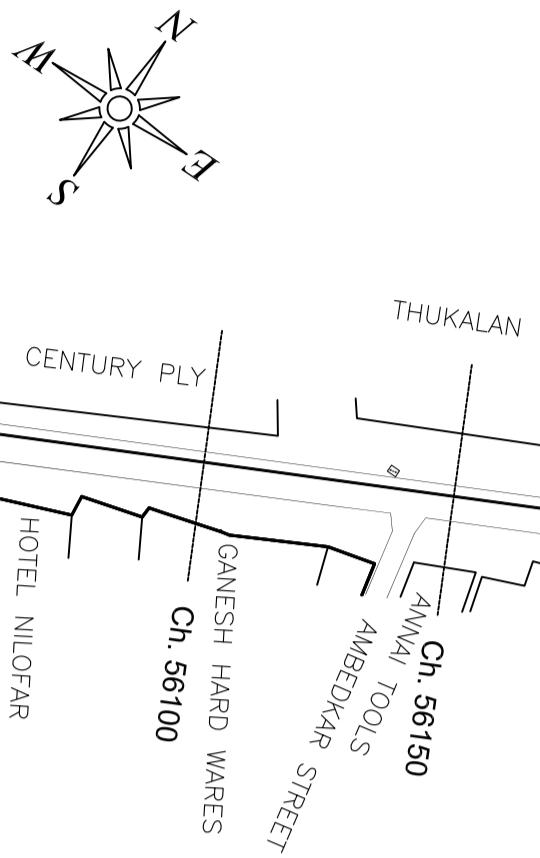
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

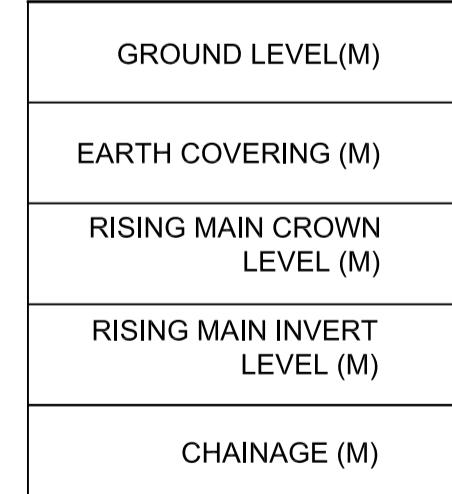
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (57/61)	SIZE A1



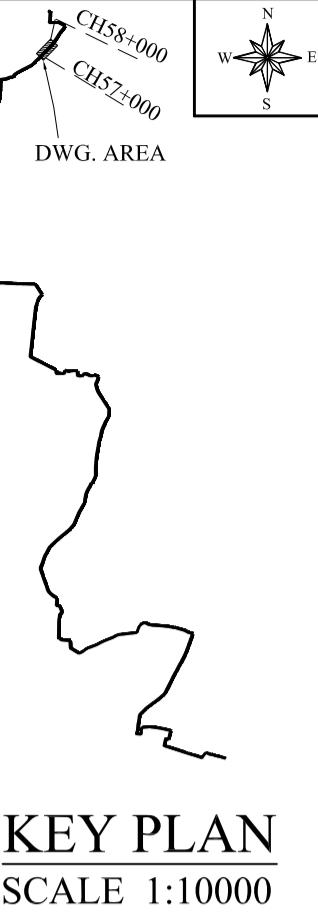
PLAN-1
SCALE 1:1500



MATCH LINE (REFER DWG. SHEET 56 OF 61)



LEGEND:-	
SYMBOLS	DESCRIPTION
	AUGER BORE LOCATION
	SCOUR VALVE
	BUTTERFLY VALVE
	AIR VALVE



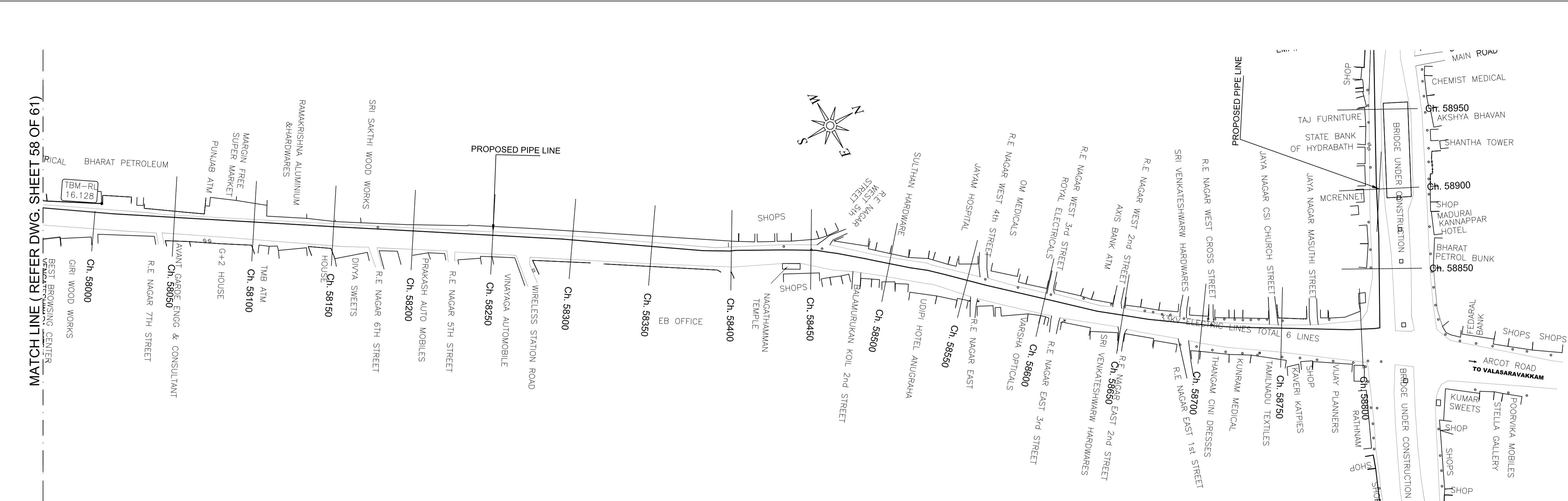
KEY PLAN
SCALE 1:10000

MATCH LINE (REFER DWG. SHEET 59 OF 61)

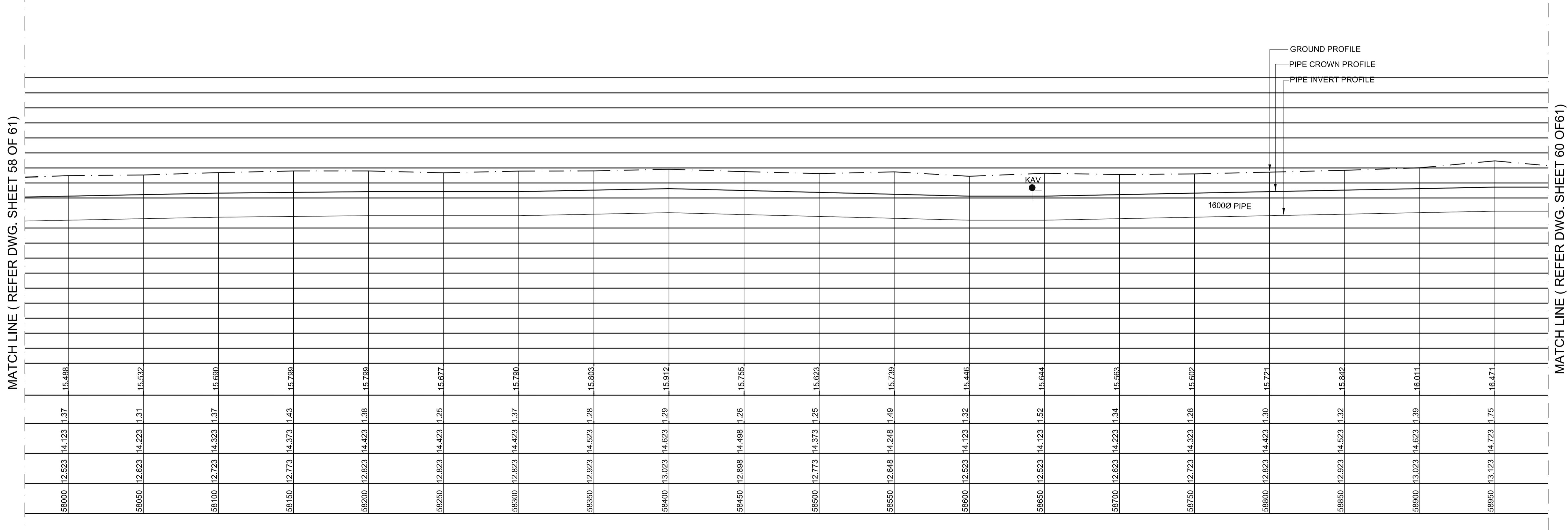


KEY PLAN
SCALE 1:10000

MATCHLINE (REFER DWG. SHEET 60 OF 61)



PLAN-1
SCALE 1:1500

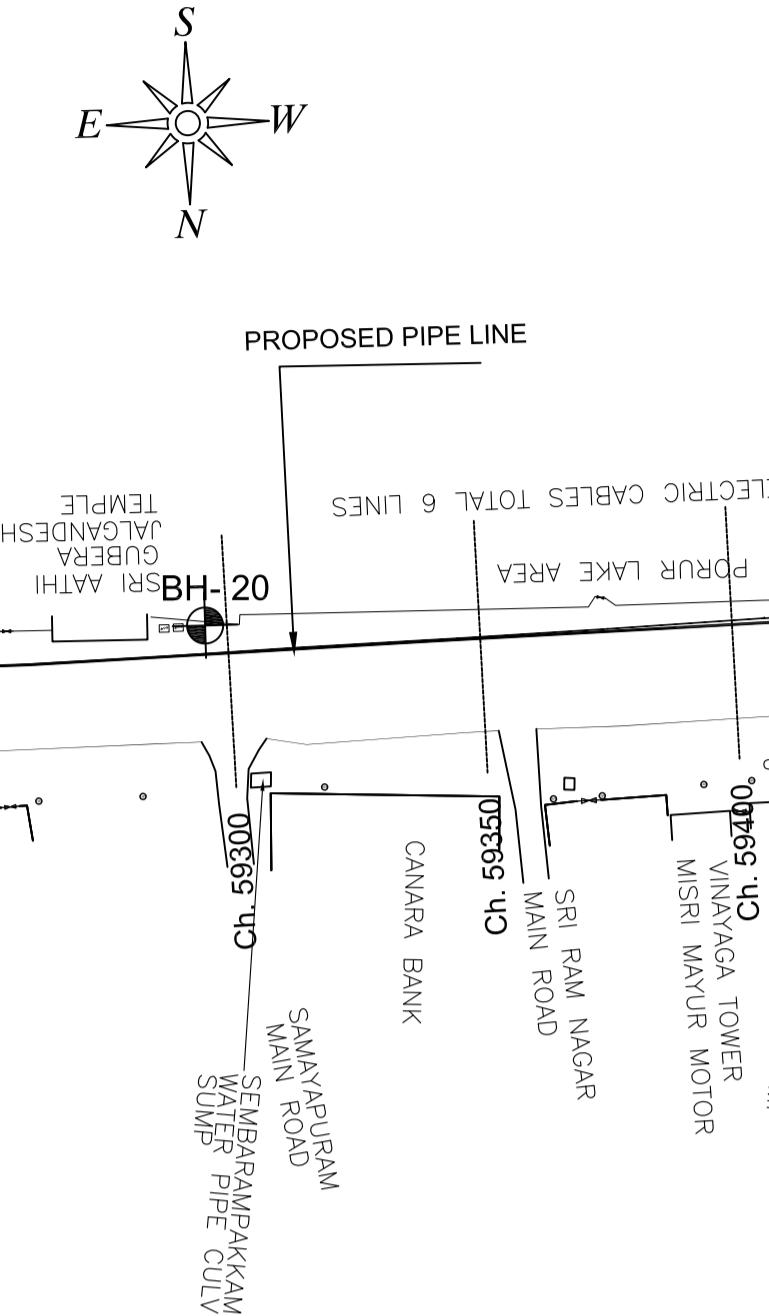
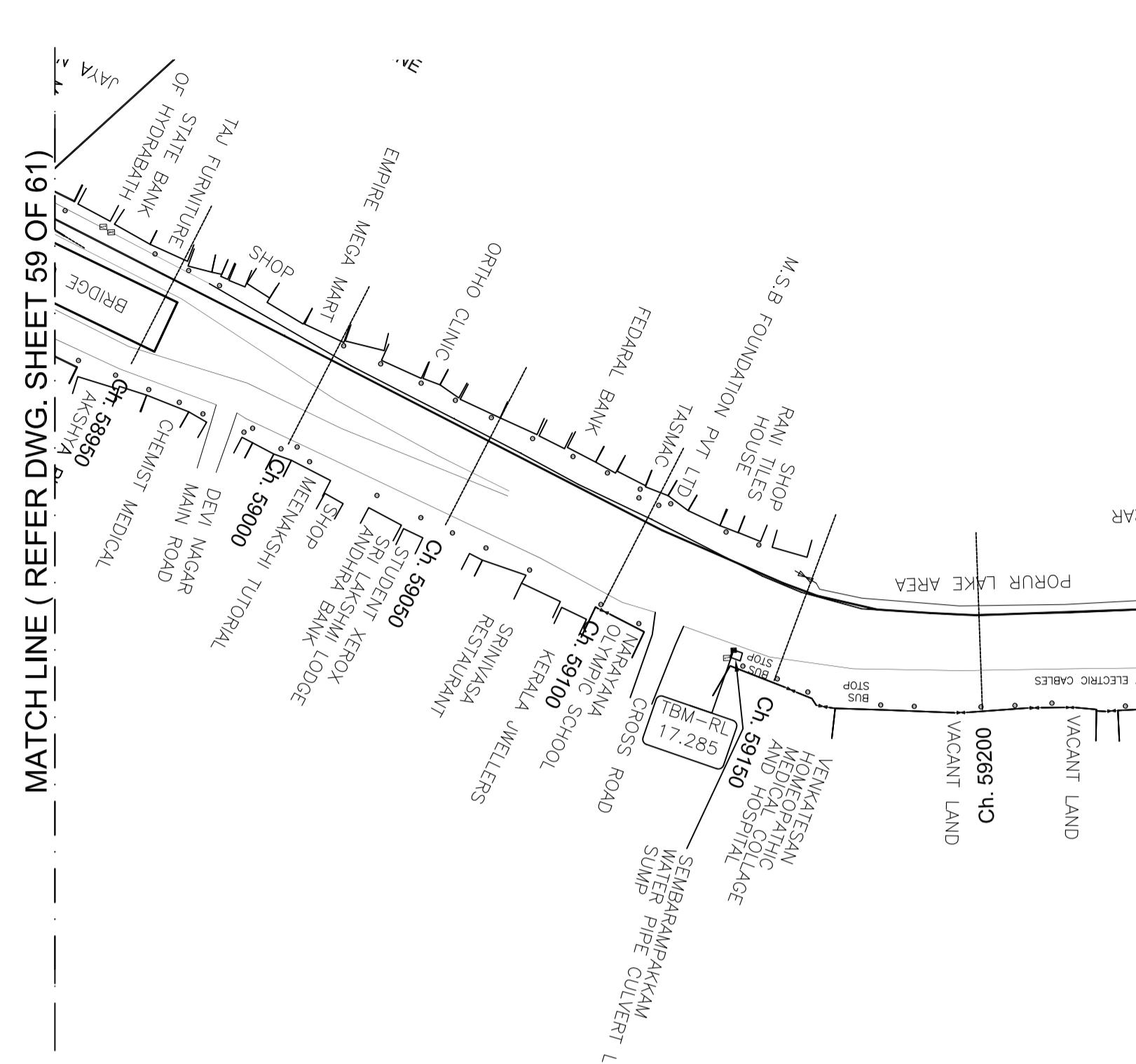


L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (59/61)

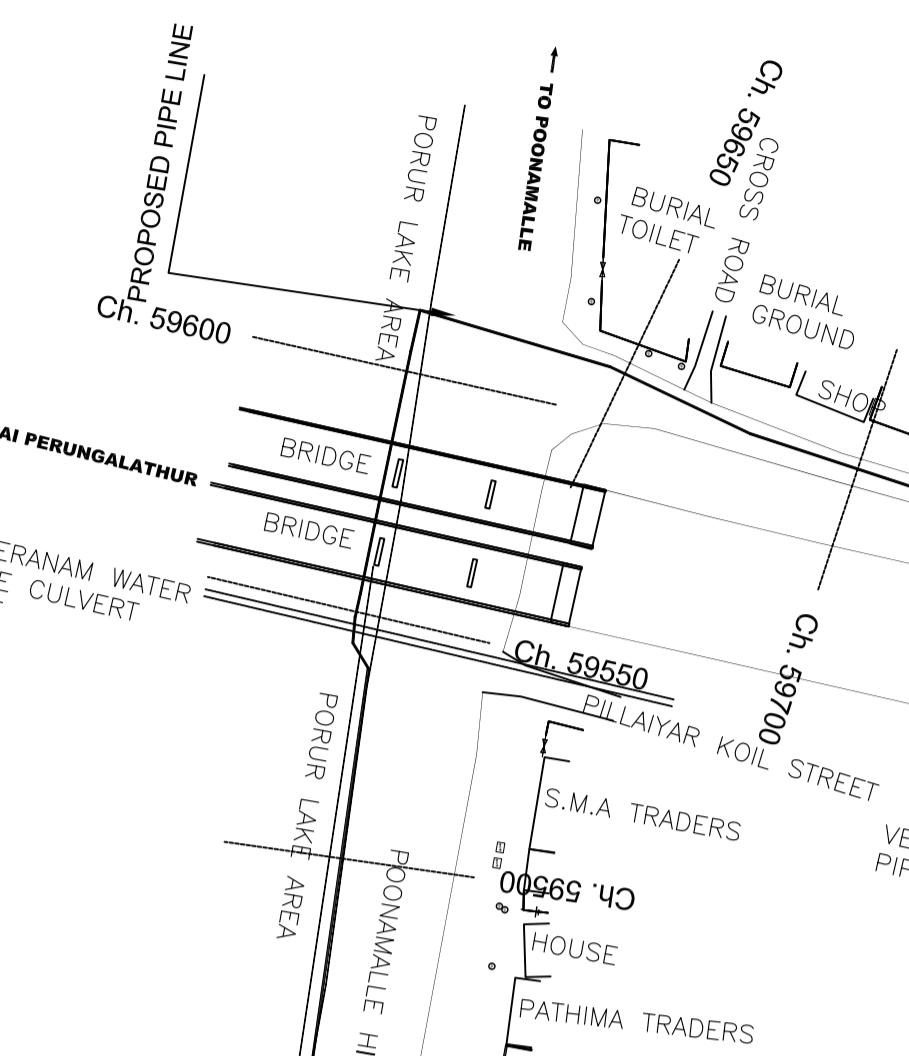
SIZE
A1



PLAN
SCALE 1:15

SCALE 1:15

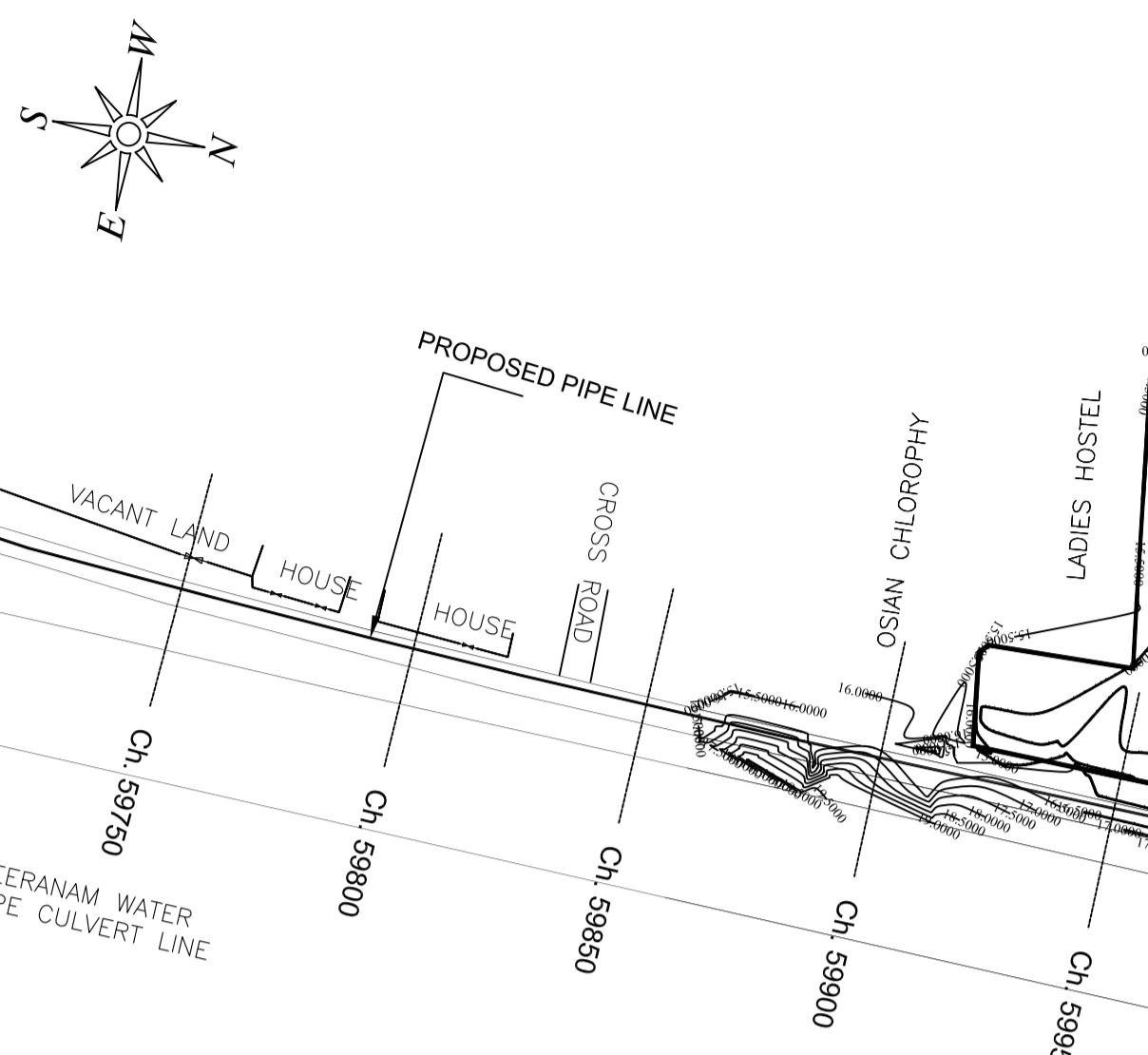
Ch. 59500 LAKE PO



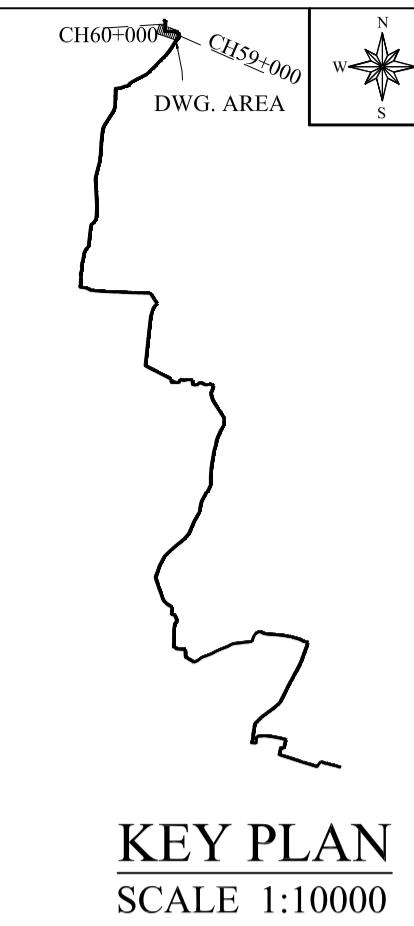
PLAN-2

SCALE 1:150

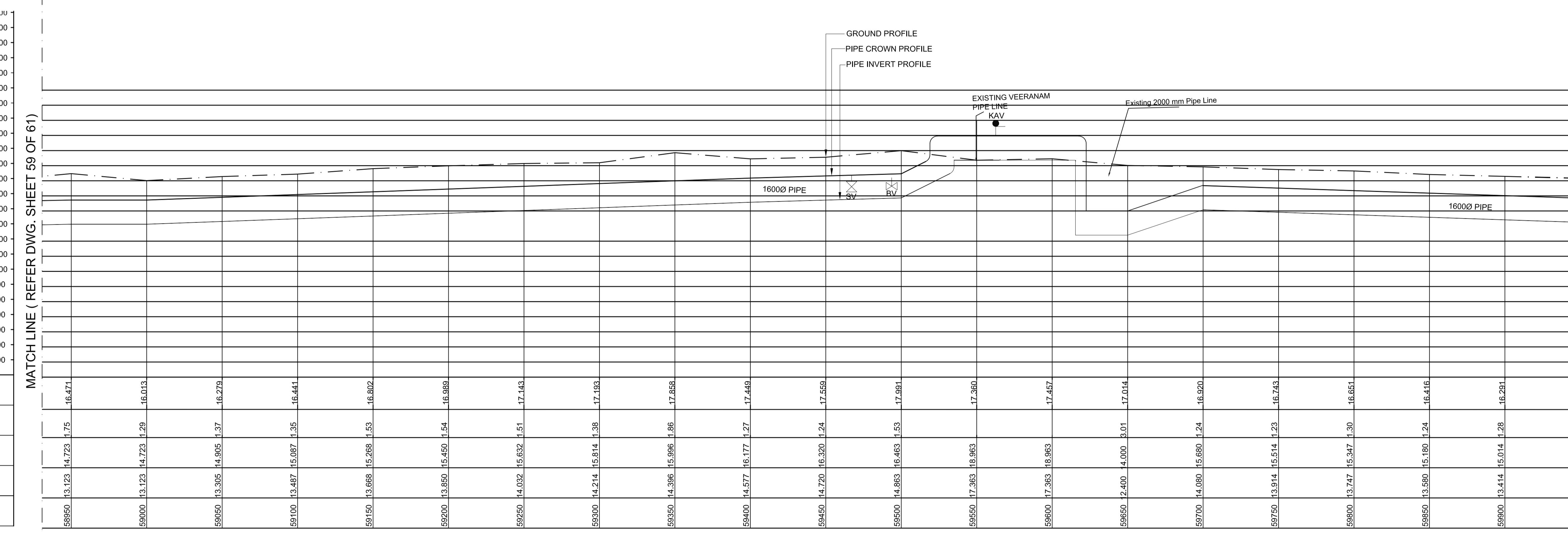
SCALE 1:150



MATCH | INF (REFFER DWG. SHEET61 OF 61)



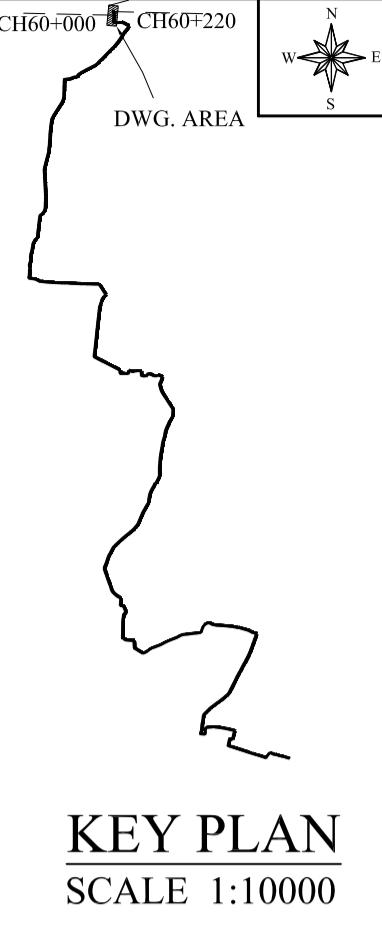
KEY PLAN
SCALE 1:10000



L - SECTION

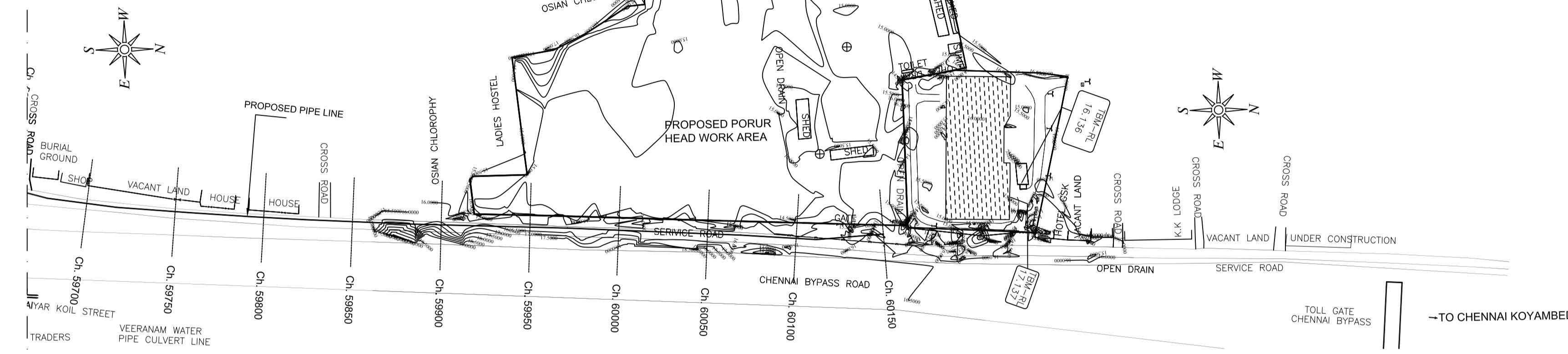
SCALE
VERTICAL 1:150
HORIZONTAL 1:150

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Main Pipeline	
DRAWING NO:	II-1-2 (60/61)	SIZE A1



KEY PLAN
SCALE 1:10000

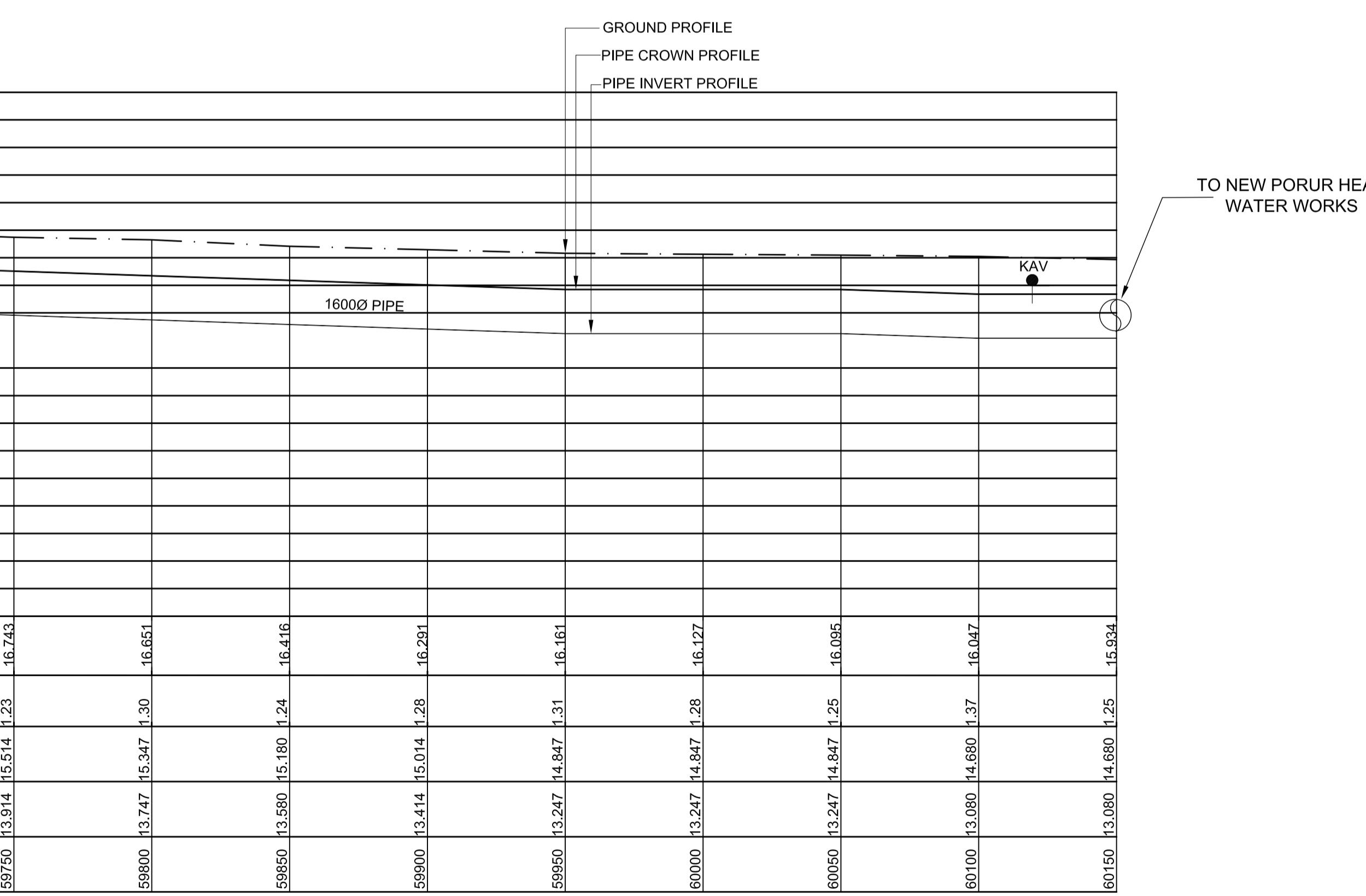
MATCH LINE (REFER DWG.SHEET 60 OF 61)



PLAN-1
SCALE 1:1500

PIPE LINE JOIN PORUR HEAD WORKS

MATCH LINE (REFER DWG.SHEET 60 OF 61)



PIPE LINE JOIN PORUR HEAD WORKS

L - SECTION

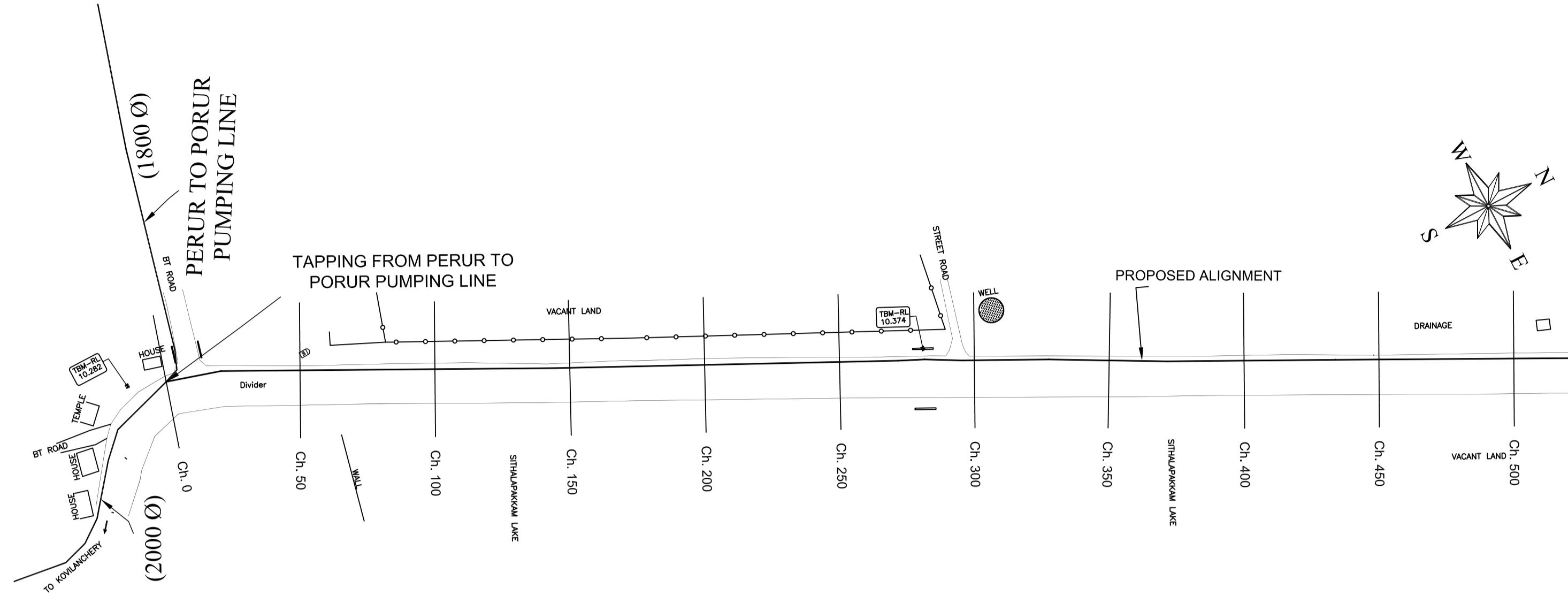
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

Datum 3.00	GROUND LEVEL(M)
	EARTH COVERING (M)
	RISING MAIN CROWN LEVEL (M)
	RISING MAIN INVERT LEVEL (M)
	CHAINAGE (M)

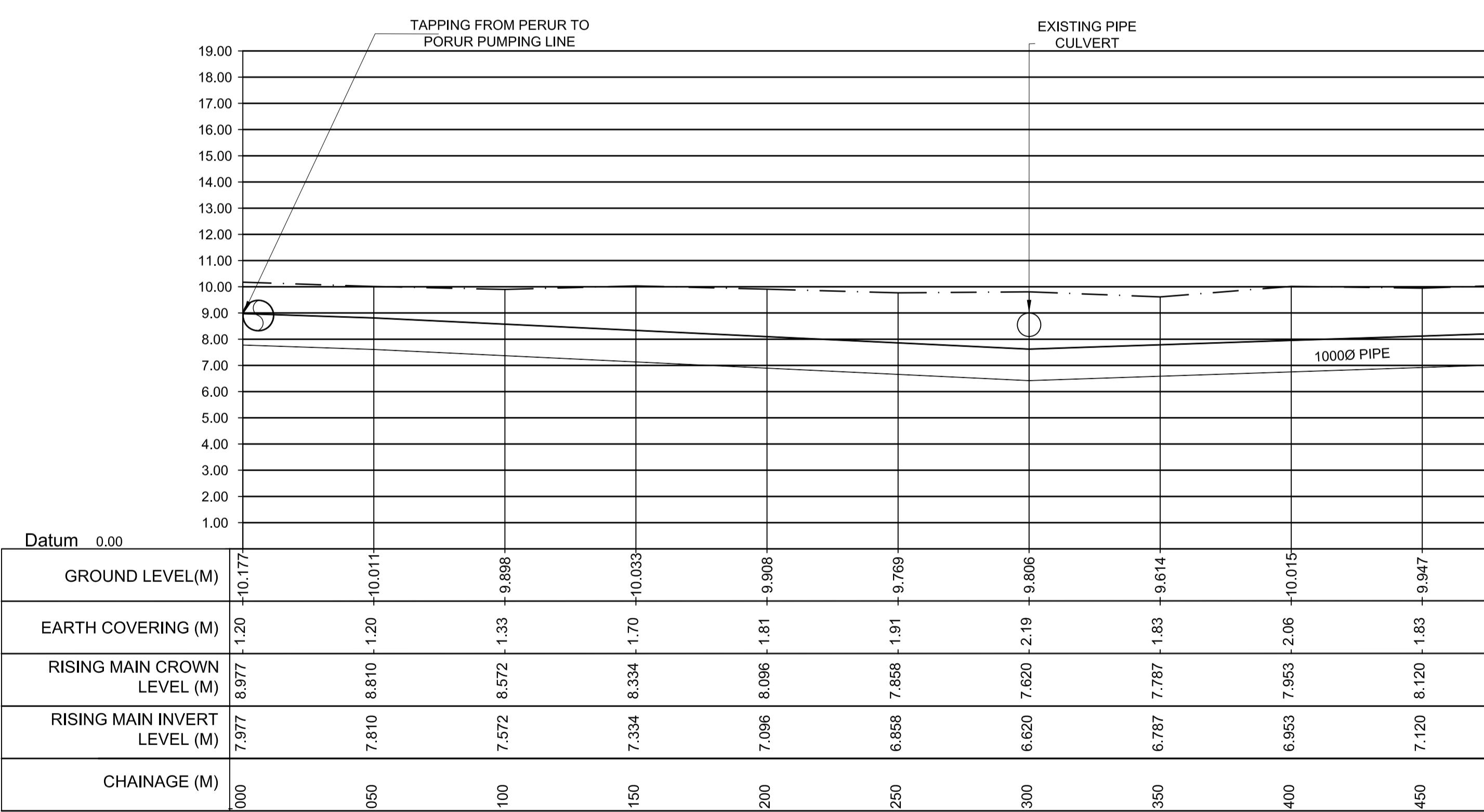
LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
△	SCOUR VALVE
▽	BUTTERFLY VALVE
KAV	AIR VALVE

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Main Pipeline
DRAWING NO:	II-1-2 (61/61)

SIZE
A1



PLAN
SCALE 1:1500



L - SECTION

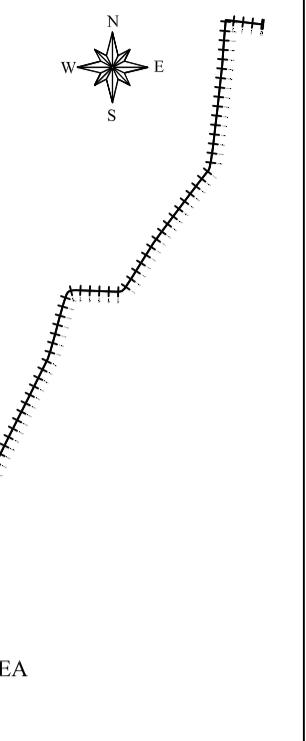
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Branch Pipeline
DRAWING NO:	II-1-3 (1/5)

KEY PLAN
SCALE 1:4000

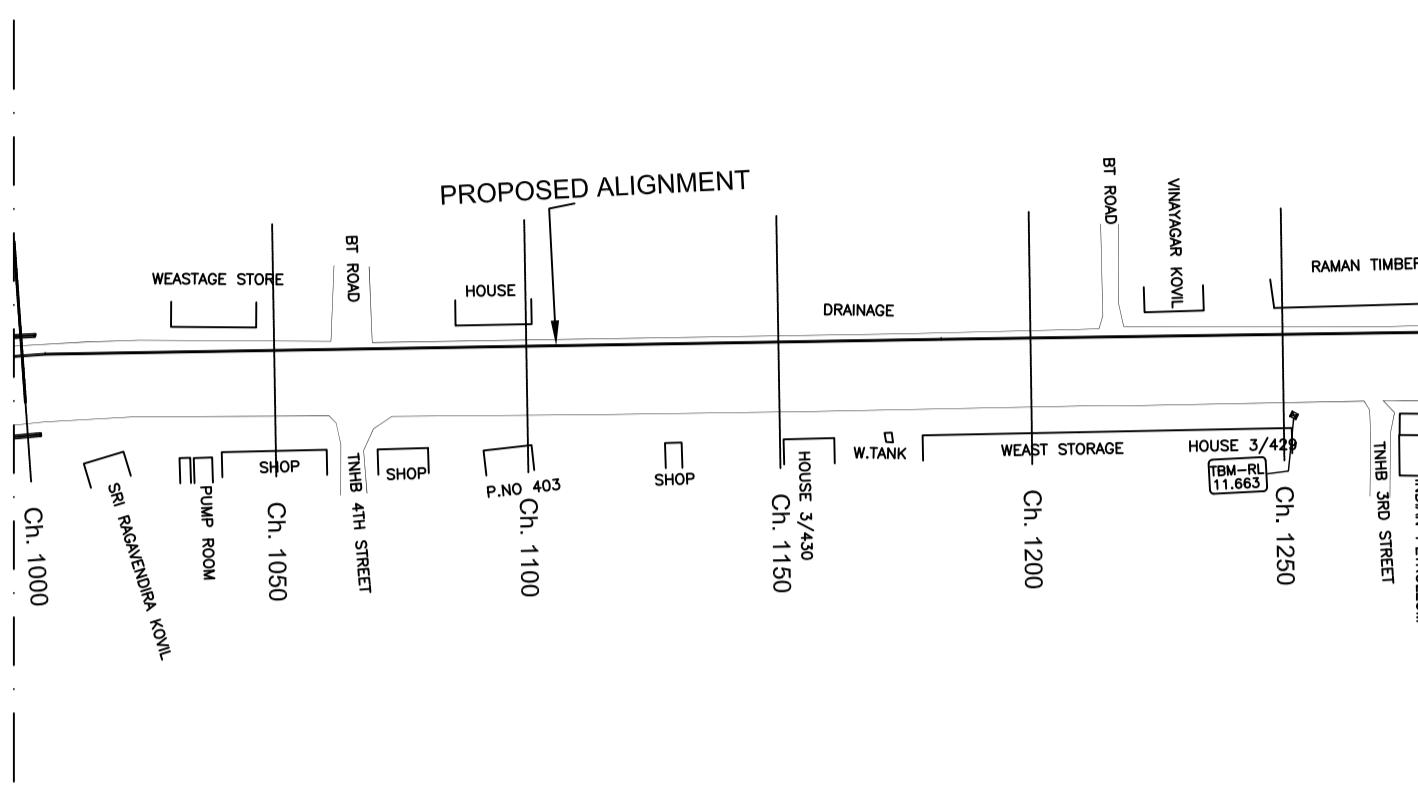
MATCH LINE (REFER)
DWG. SHEET 02 OF 05

MATCH LINE (REFER DWG. SHEET 02 OF 05)

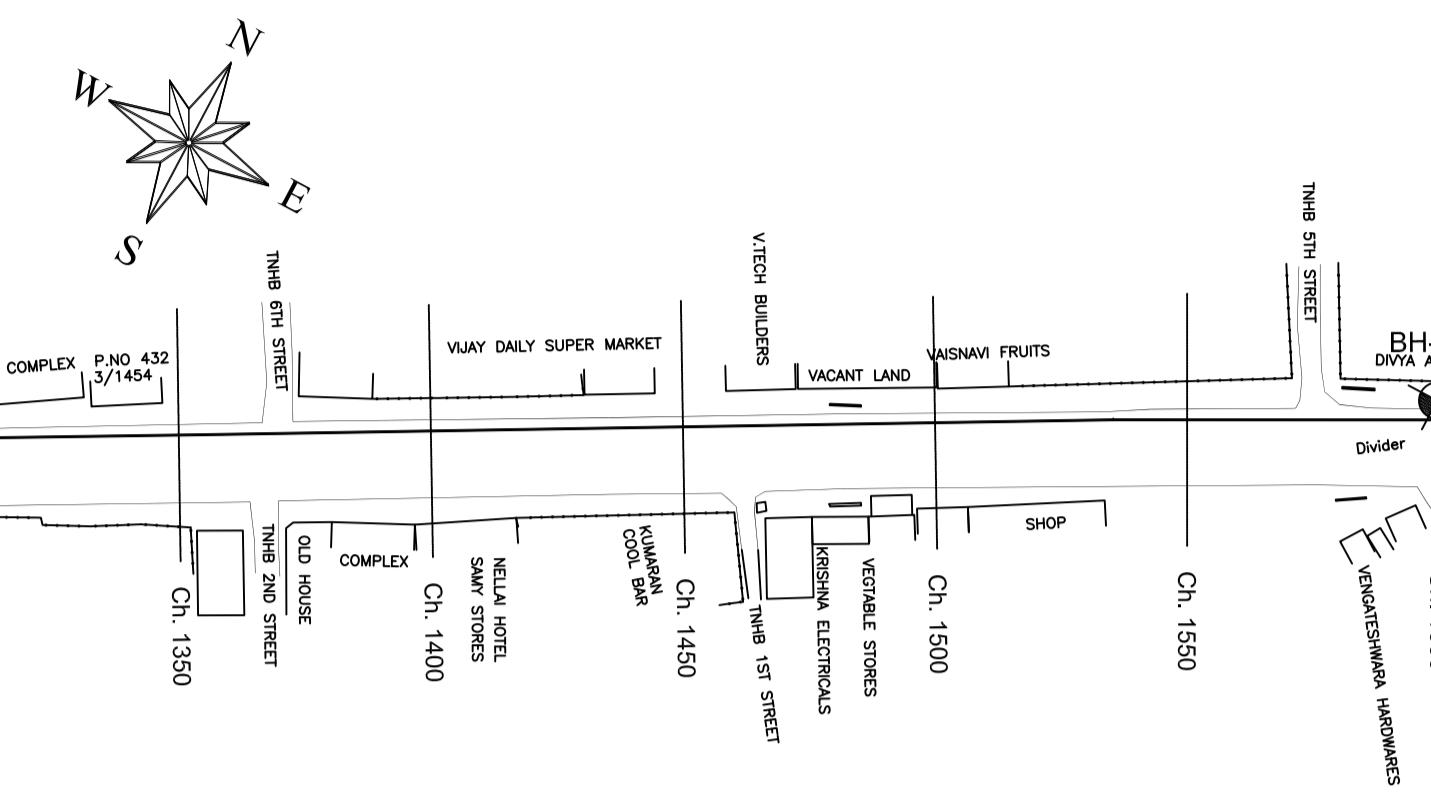


LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE

MATCH LINE (REFER DWG. SHEET 01 OF 05)

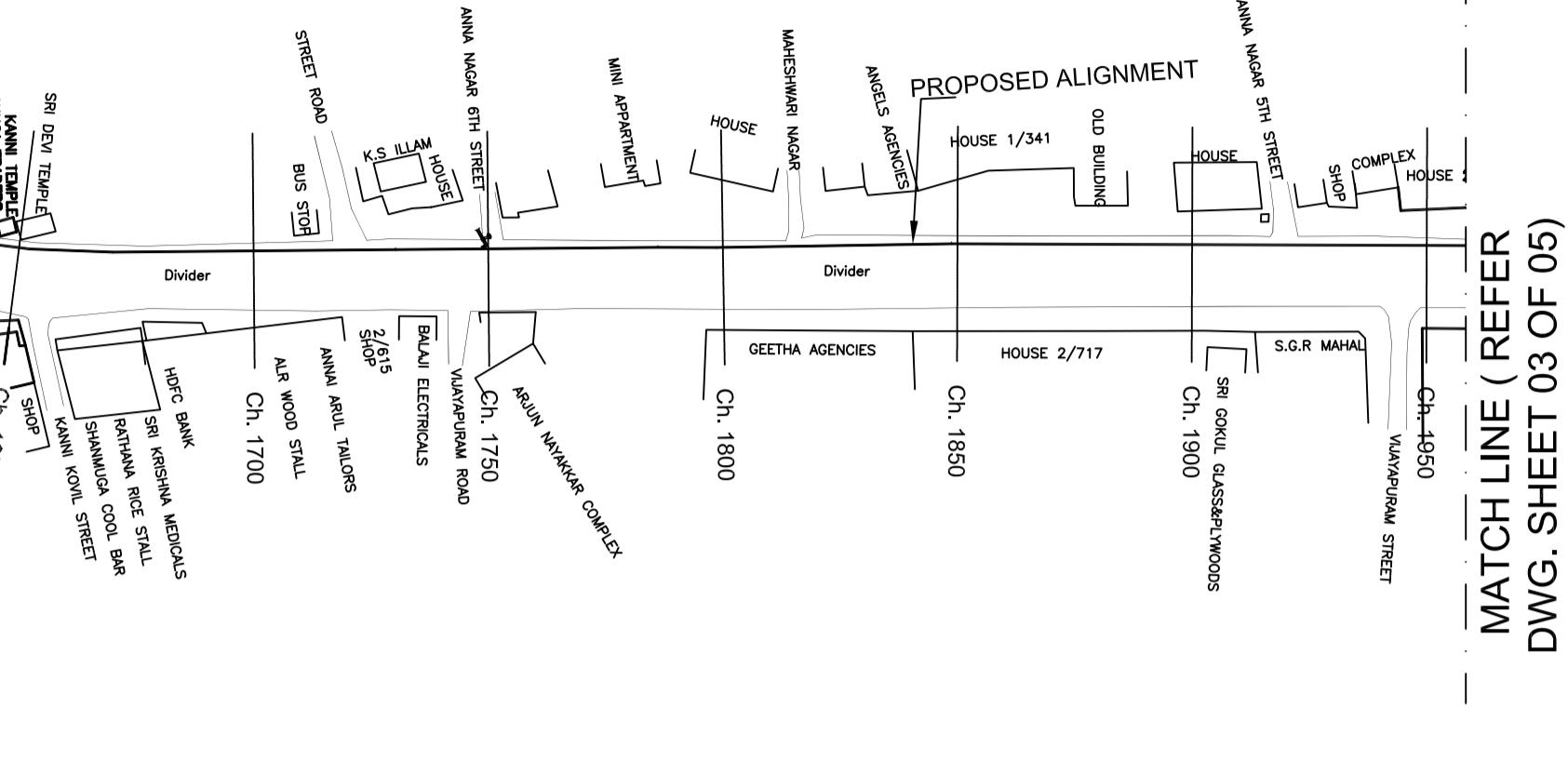


PLAN-1
SCALE 1:1500



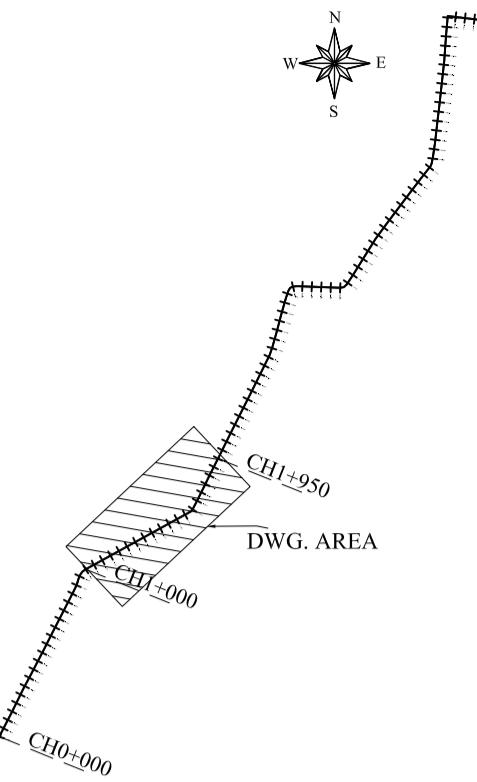
PLAN-2
SCALE 1:1500

MATCH LINE (REFER PLAN -1)



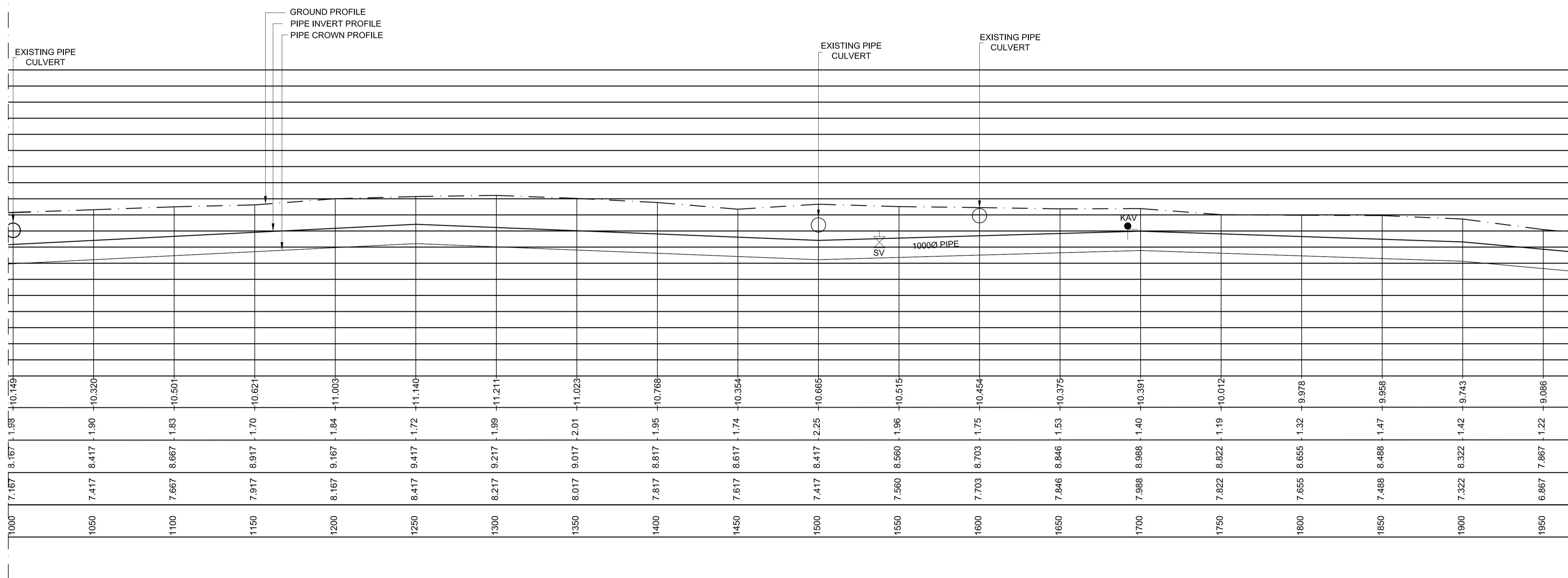
MATCH LINE (REFER DWG. SHEET 03 OF 05)

KEY PLAN
SCALE 1:4000



Datum	
GROUND LEVEL(M)	
EARTH COVERING (M)	
RISING MAIN CROWN LEVEL (M)	
TRENCH BOTTOM LEVEL (M)	
CHAINAGE (M)	

MATCH LINE (REFER DWG. SHEET 01 OF 05)



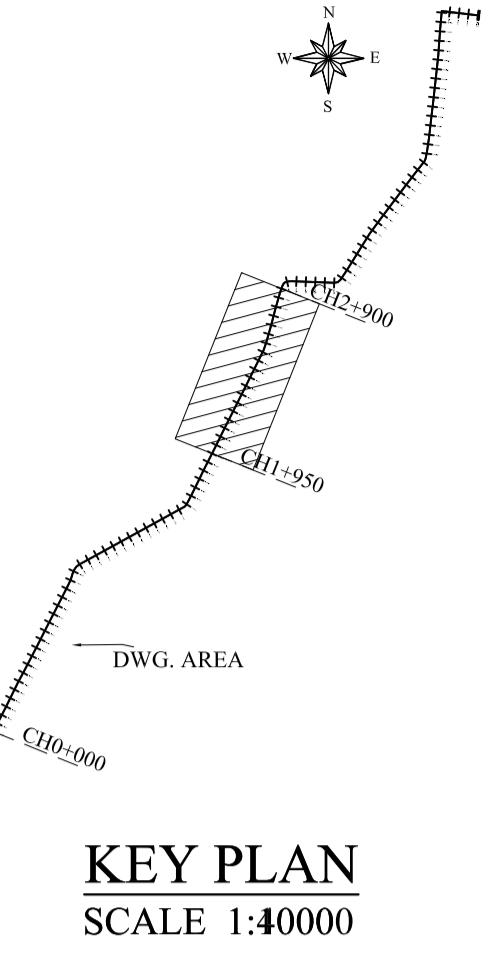
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Branch Pipeline
DRAWING NO:	II-1-3 (2/5)

SIZE
A1

LEGEND:-	SYMBOLS	DESCRIPTION
	●	AUGER BORE LOCATION
	✗	SCOUR VALVE
	▼	BUTTERFLY VALVE
KAV	●	AIR VALVE



MATCH LINE (REFER DWG. SHEET 04 OF 05)

MATCH LINE (REFER DWG. SHEET 04 OF 05)

MATCH LINE (REFER DWG. SHEET 02 OF 05)

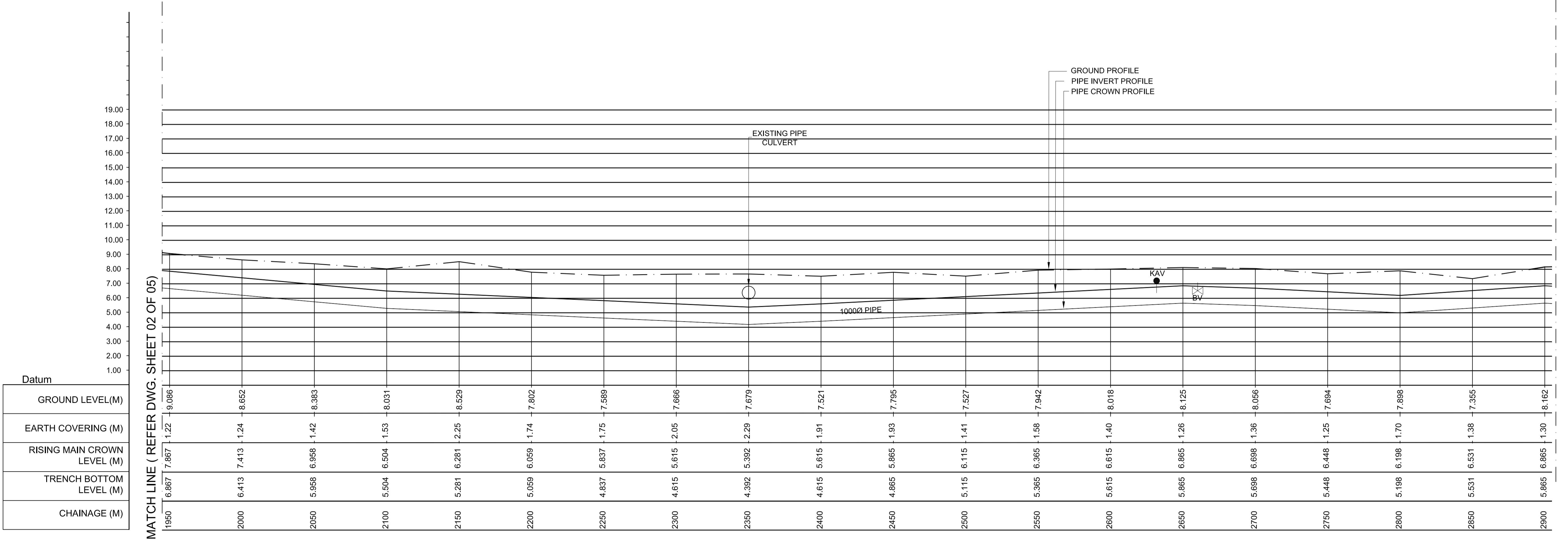
PLAN
SCALE 1:1500

L - SECTION

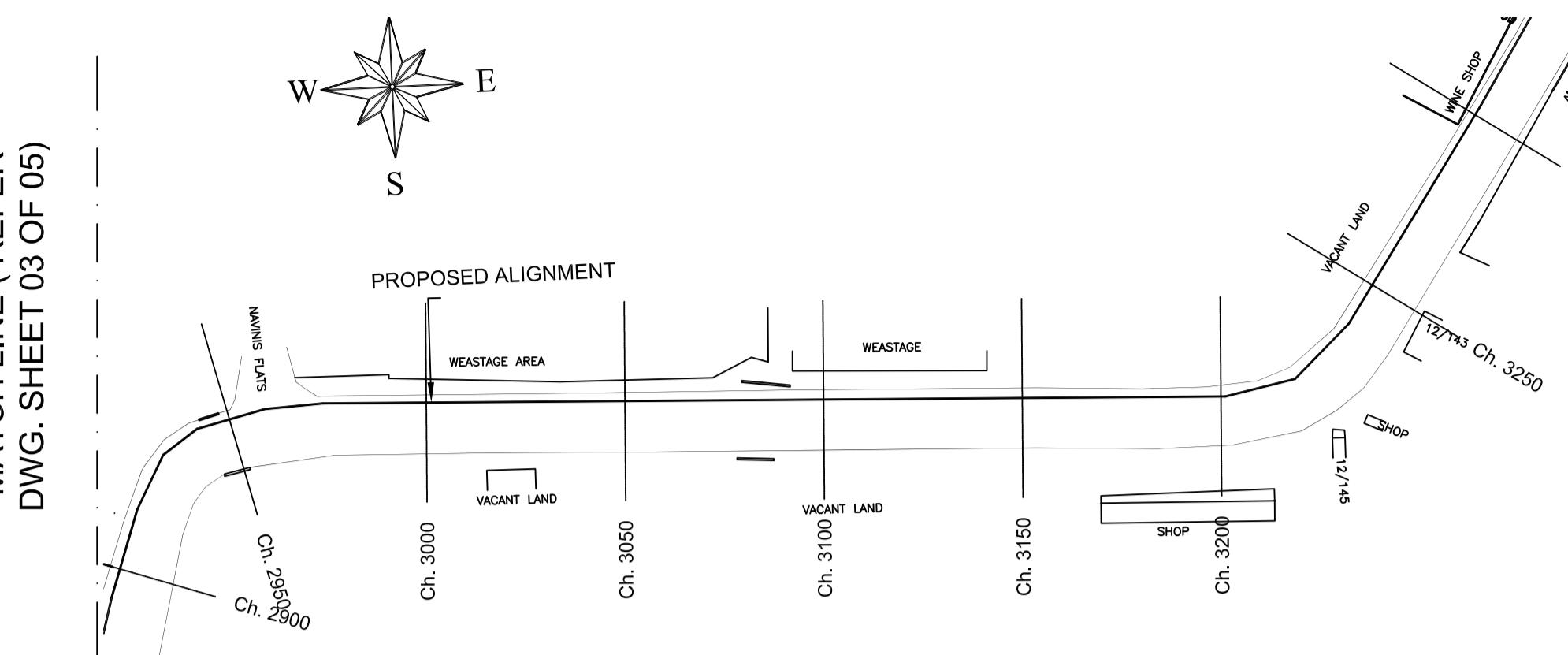
SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and Profile of Branch Pipeline
DRAWING NO:	II-1-3 (3/5)

SIZE
A1



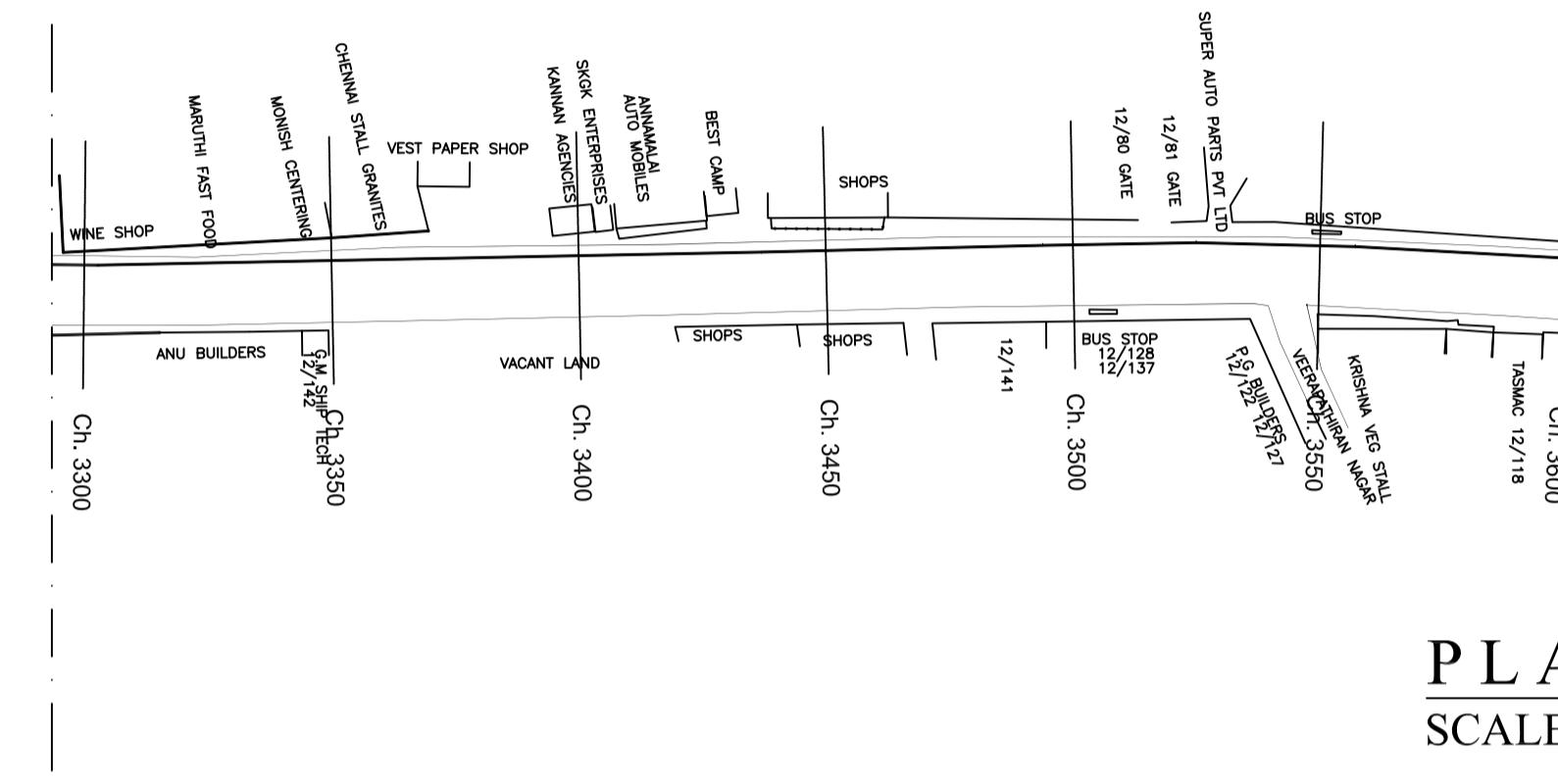
LEGEND:-	
SYMBOLS	DESCRIPTION
●	AUGER BORE LOCATION
SV	SCOUR VALVE
BV	BUTTERFLY VALVE
KAV	AIR VALVE



PLAN-1
SCALE 1:1500

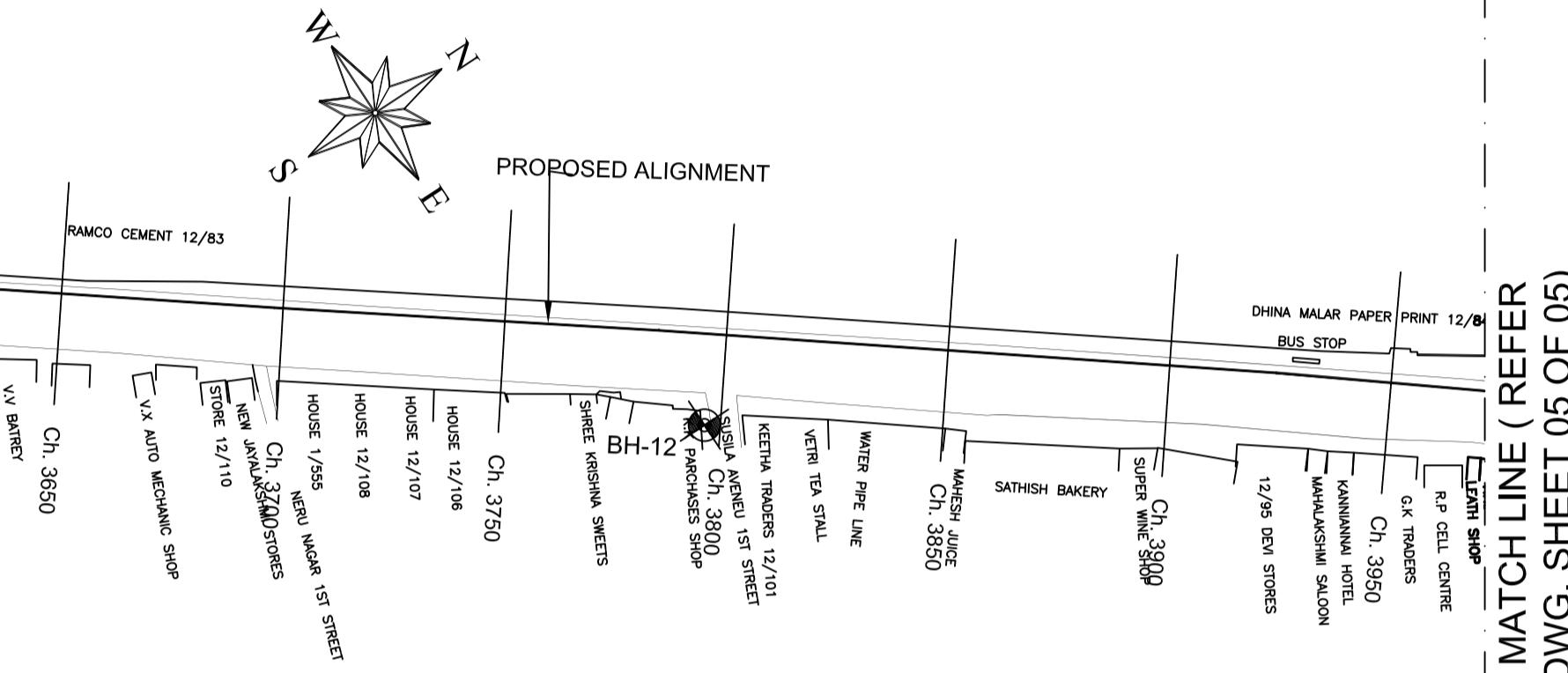
SCALE 1:1500

MATCHLINE (REFER PAGE -1)



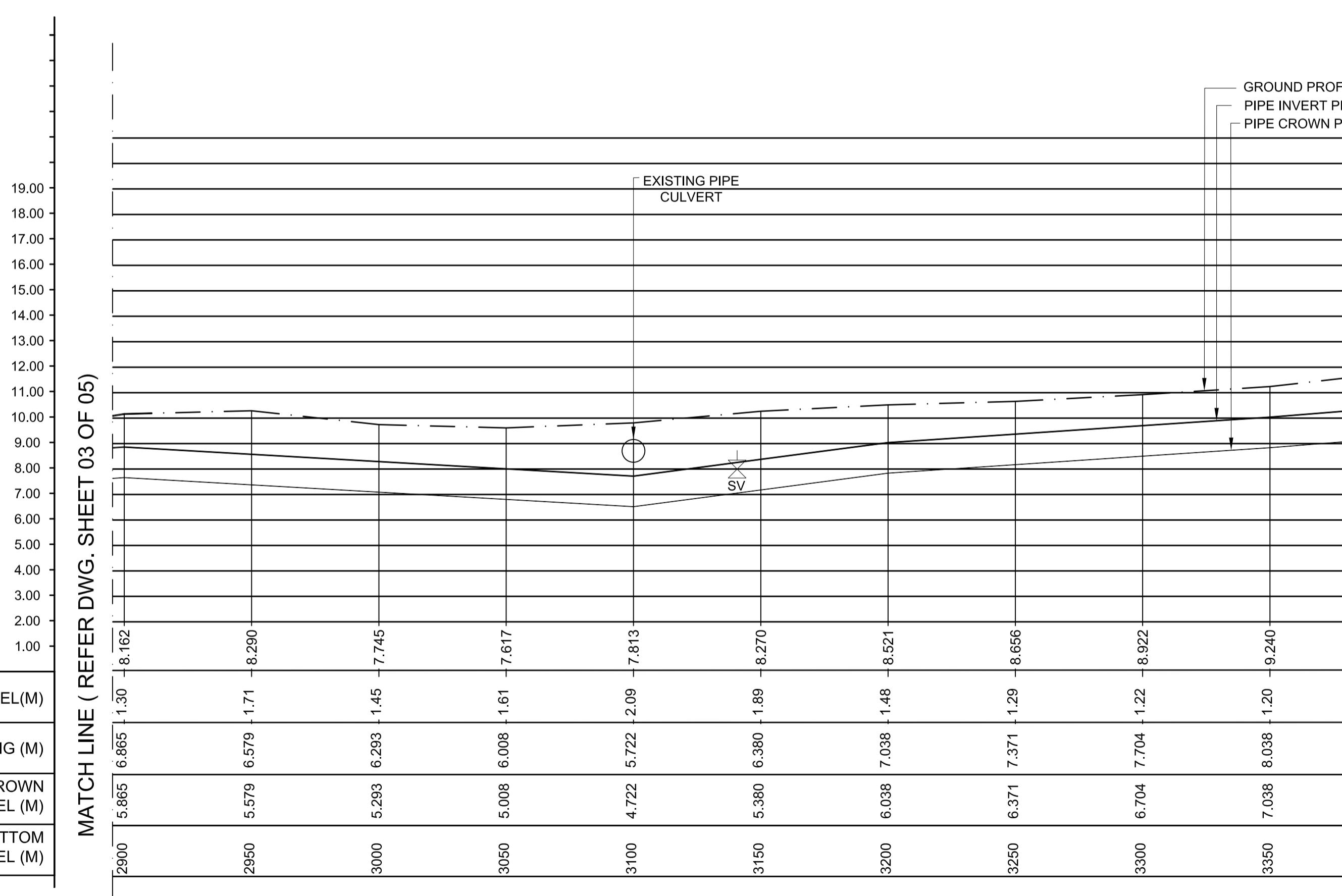
P L A N-2
SCALE 1:1500

SCALE 1:1500



KEY PLAN
SCALE 1:10000

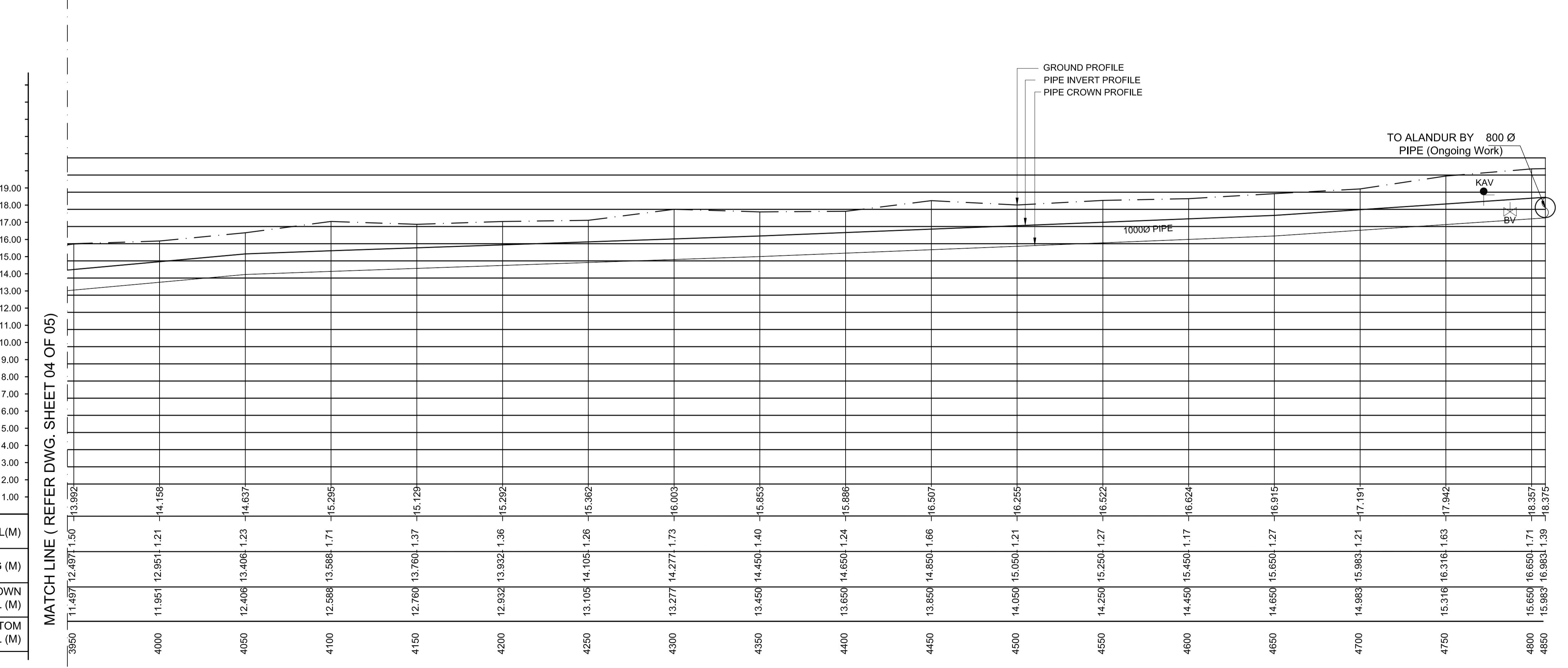
SCALE 1:10000



L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:150

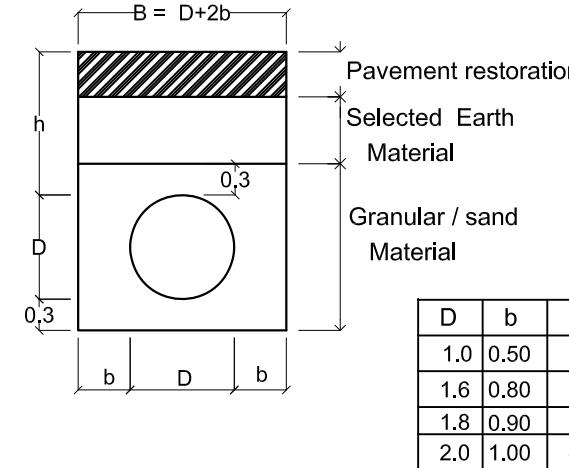
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Branch Pipeline	
DRAWING NO:	II-1-3 (4/5)	SIZE A1



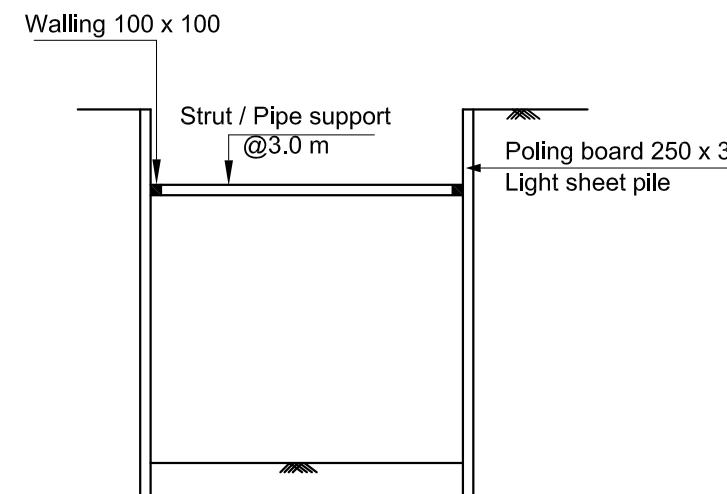
L - SECTION

SCALE
VERTICAL 1:150
HORIZONTAL 1:1500

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan and Profile of Branch Pipeline	
DRAWING NO:	II-1-3 (5/5)	SIZE A1

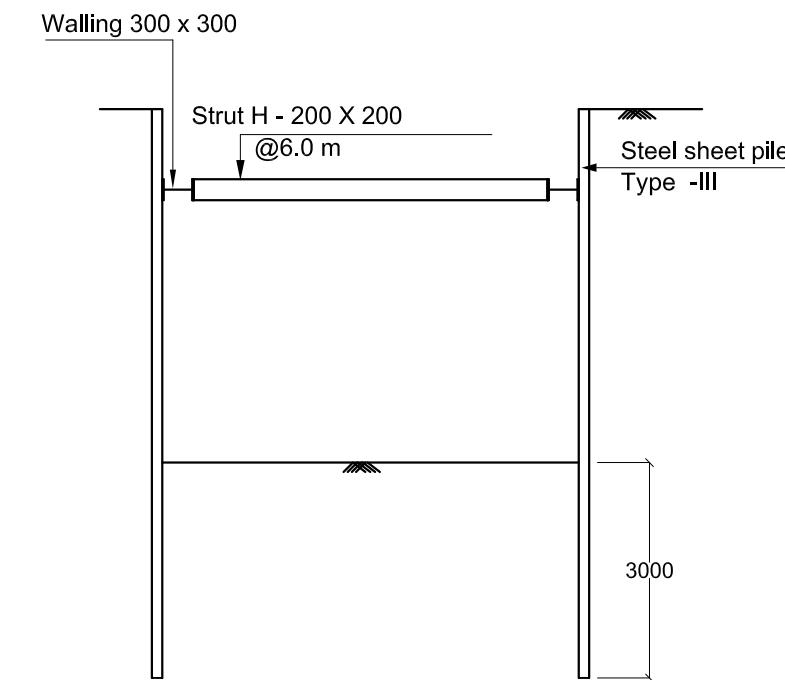


Standard cross section



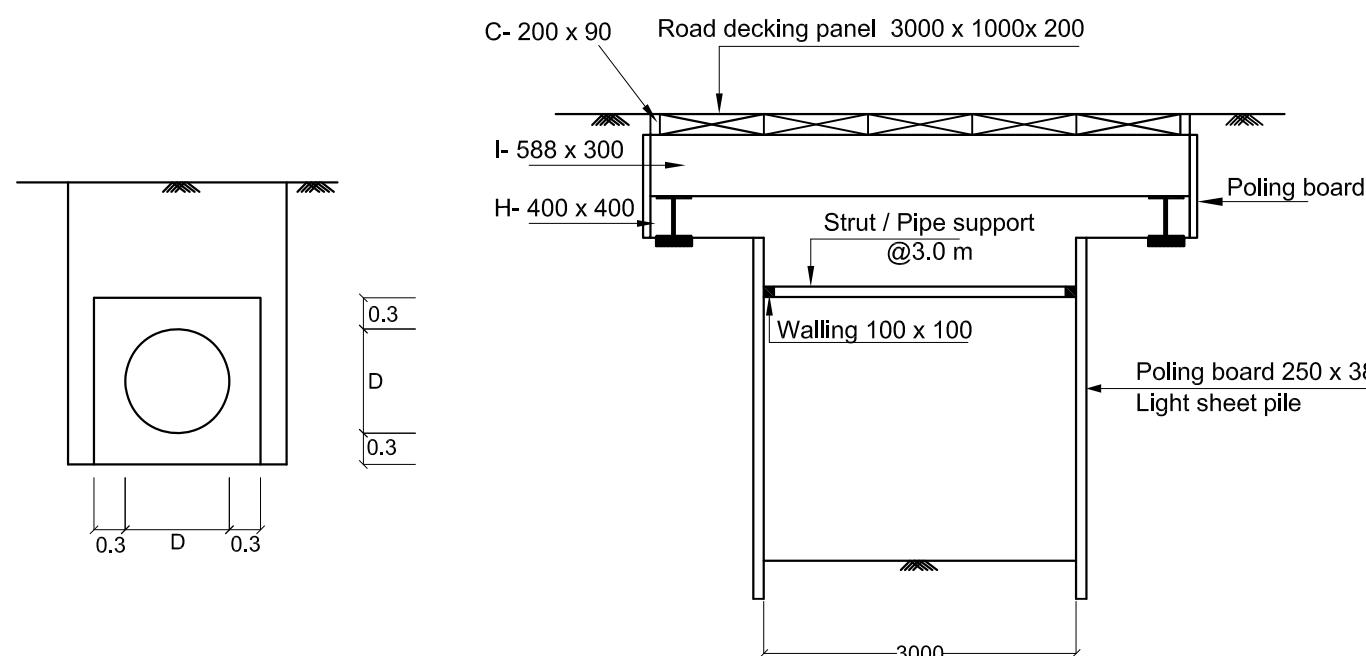
Temporary works

(Close Timbering)



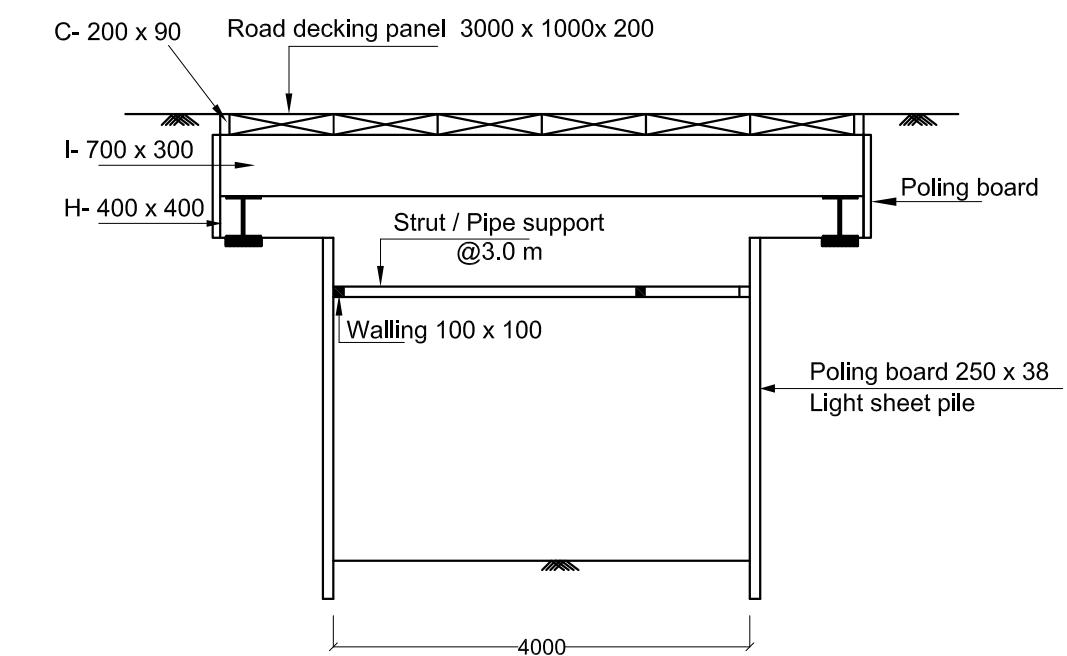
Temporary works

(Steel sheet pile)



Protection concrete for road crossing

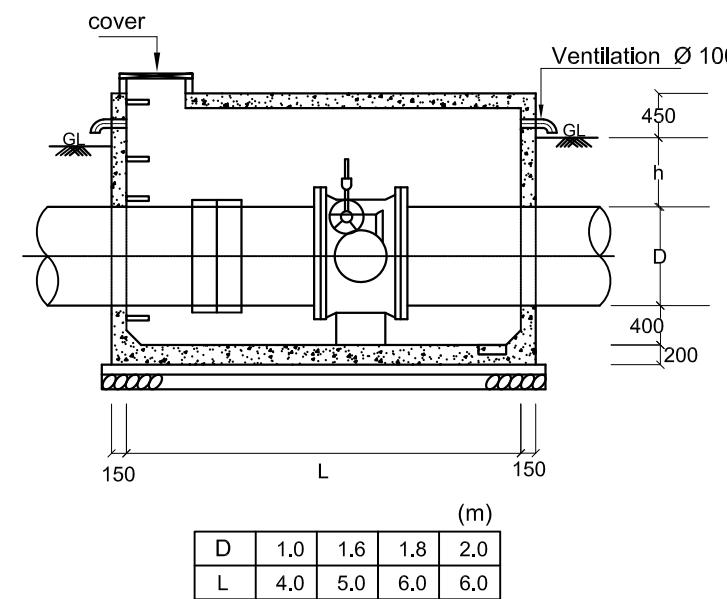
Road decking for crossing state / national road (B = 3.0 m)



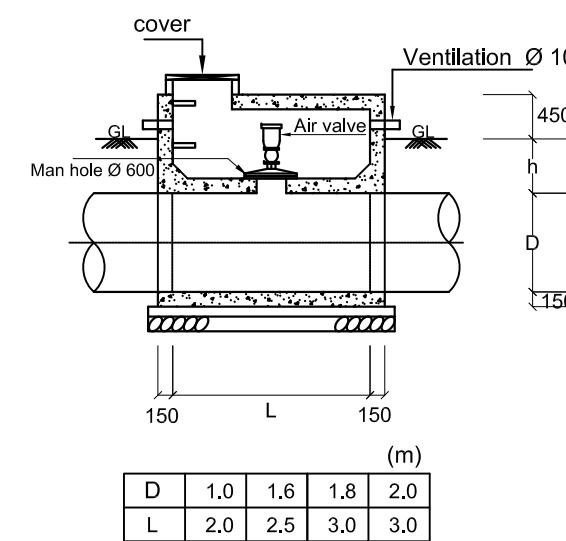
Road decking for crossing state / national road (B = 4.0 m)

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Typical drawings of cross section
DRAWING NO:	II-1-4

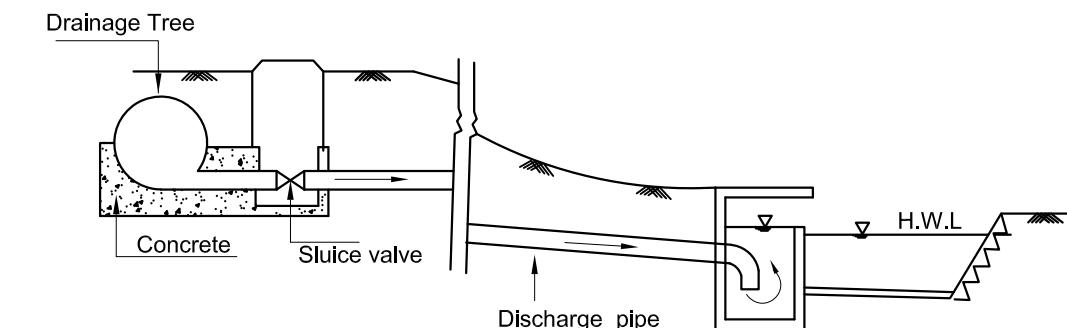
SIZE
A1



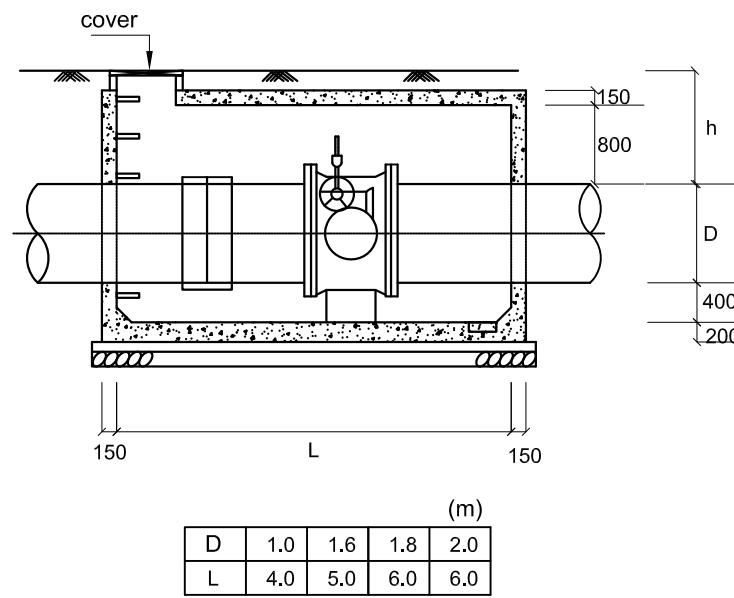
Butterfly valve chamber (Type -1)



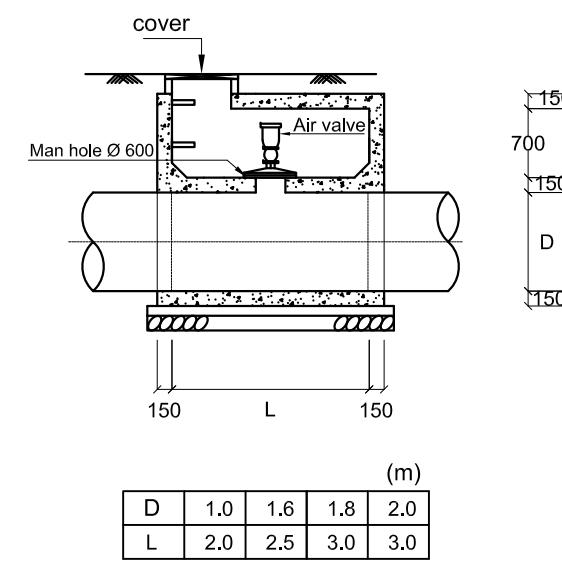
Manhole & airvalve chamber (Type -1)



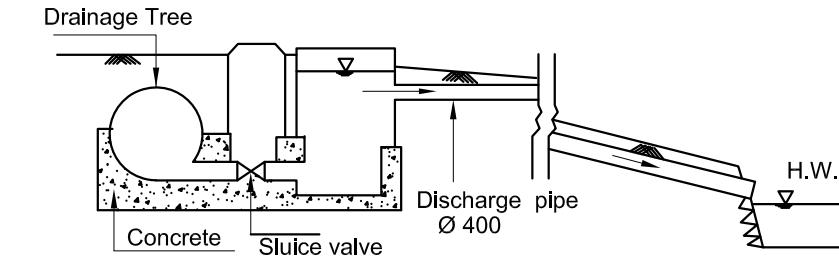
Discharge facility (Type -1)



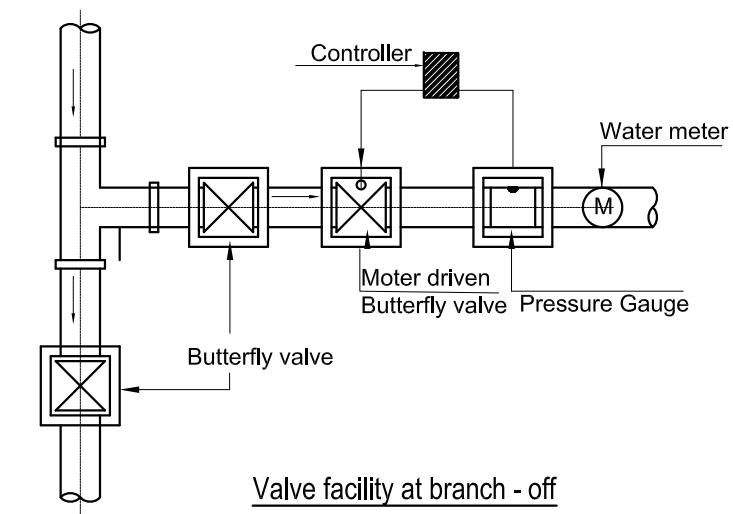
Butterfly valve chamber (Type -2)



Manhole & airvalve chamber (Type -2)



Discharge facility (Type -2)



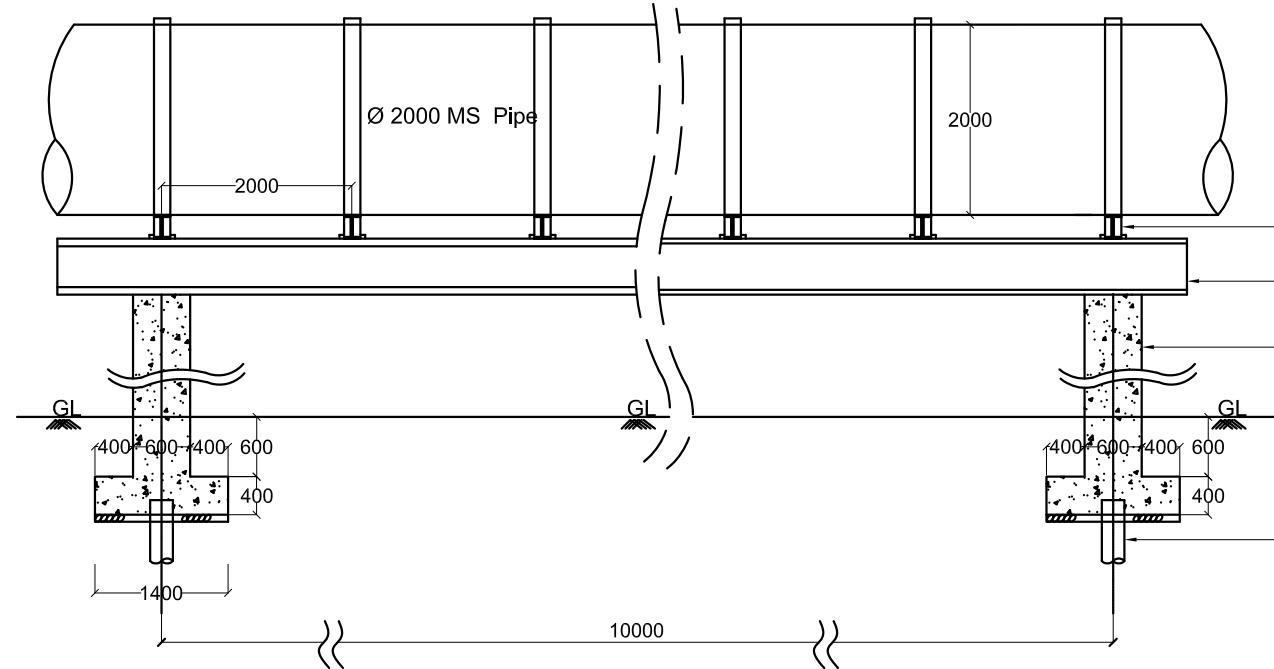
Valve facility at branch - off

Chainage m	Branch of / Bulk supply Facility	Main pipe dia (mm)	Branch pipe dia (mm)
11k 105	Branch off at Kelambakkam -WDS	2000	1500
33k 542	Branch line to Medavakkam	2000	1000
36k 432	Bulk supply to Madabakkam TP	1800	700
41k 205	Bulk supply to Sembakkam Municipality	1800	700
41k 695	Bulk supply to Chitlapakkam TP	1600	700
42k 888	Bulk supply to Tambaram Municipality (west)	1600	800
44k 824	Bulk supply to Tambaram Municipality (East)	1600	800

List of branch off / tapping to bulk supply

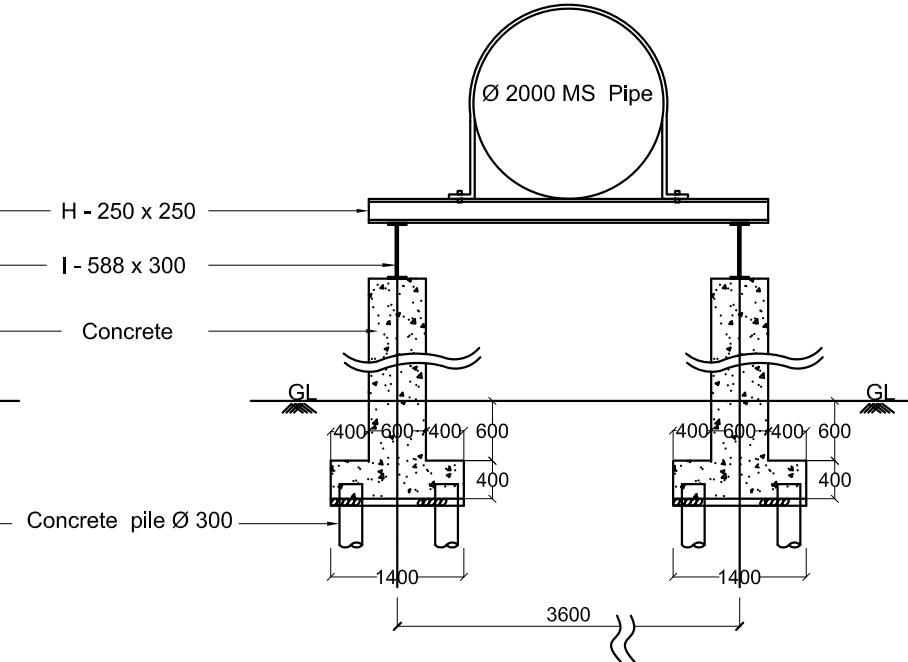
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Typical drawings of valve facility
DRAWING NO:	II-1-5

SIZE
A1



Longitudinal section

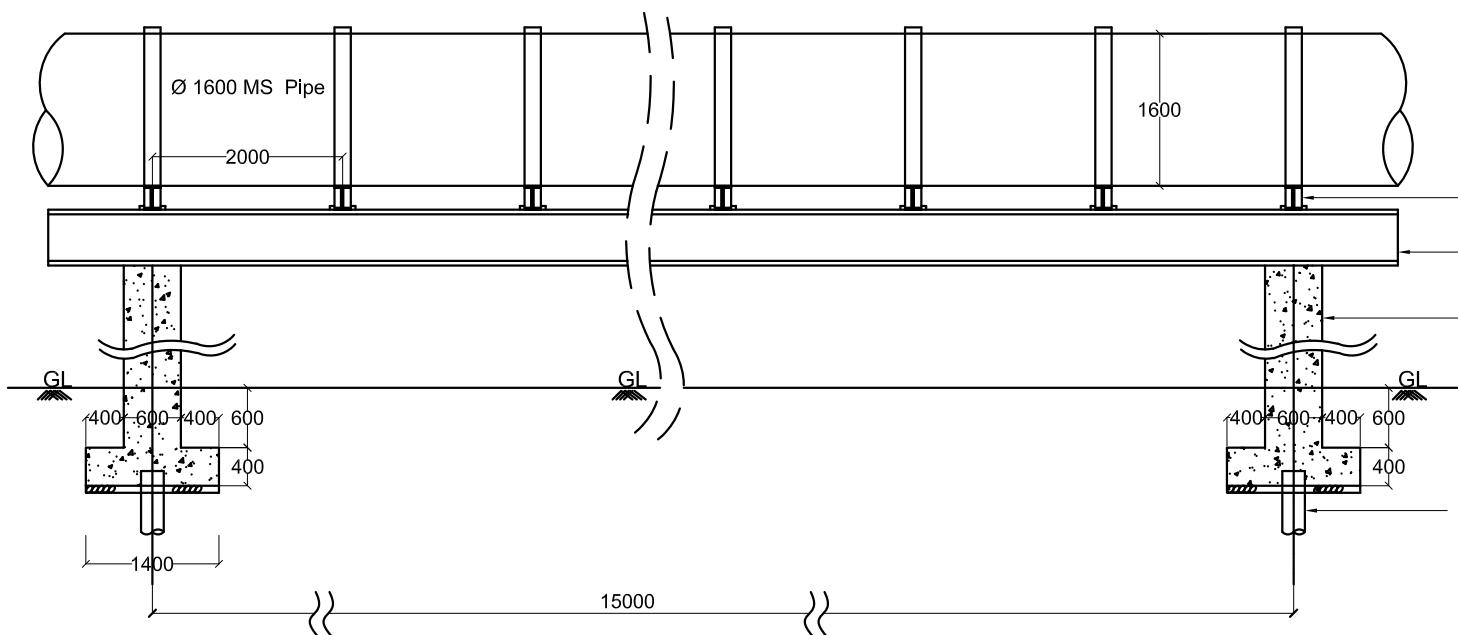
Not to scale



Cross section

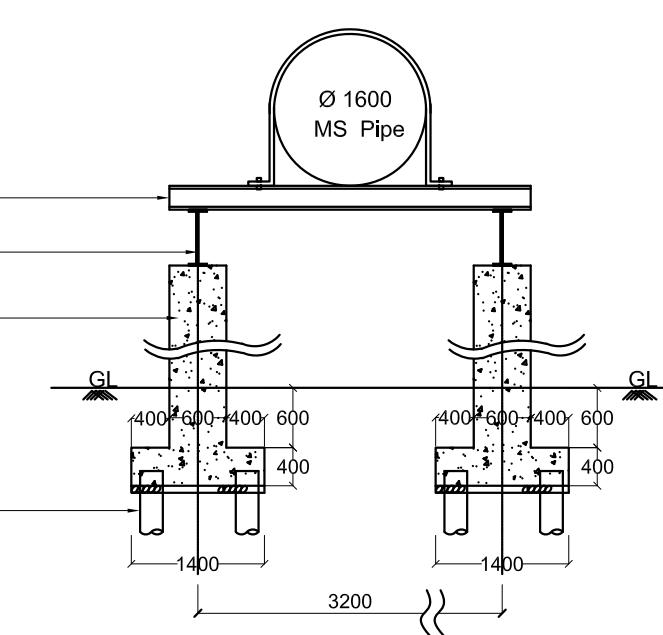
Not to scale

Pipe pedestal for salt pan crossing Ø 2000



Longitudinal section

Not to scale



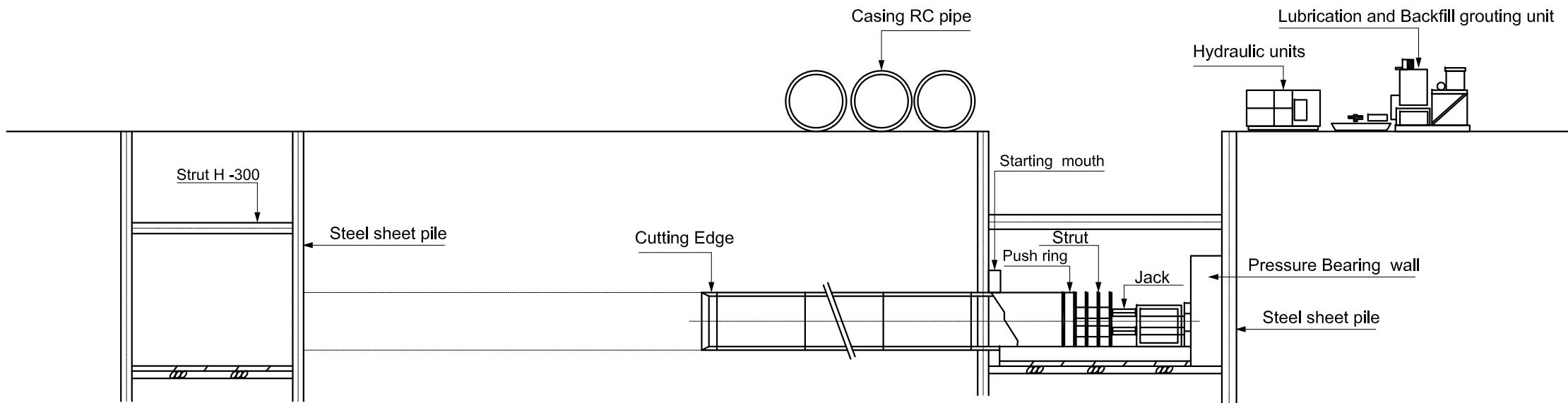
Cross section

Not to scale

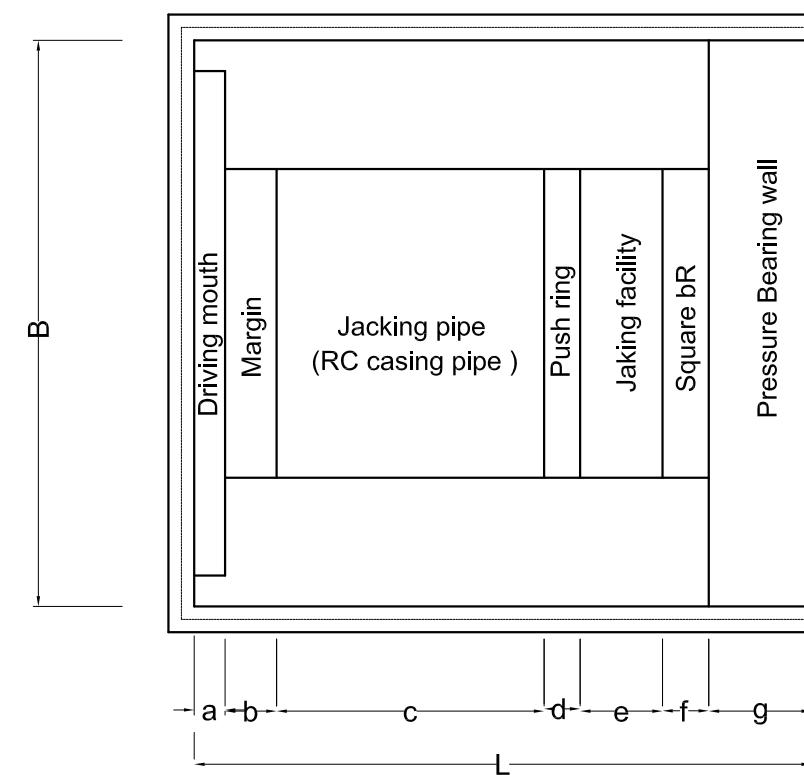
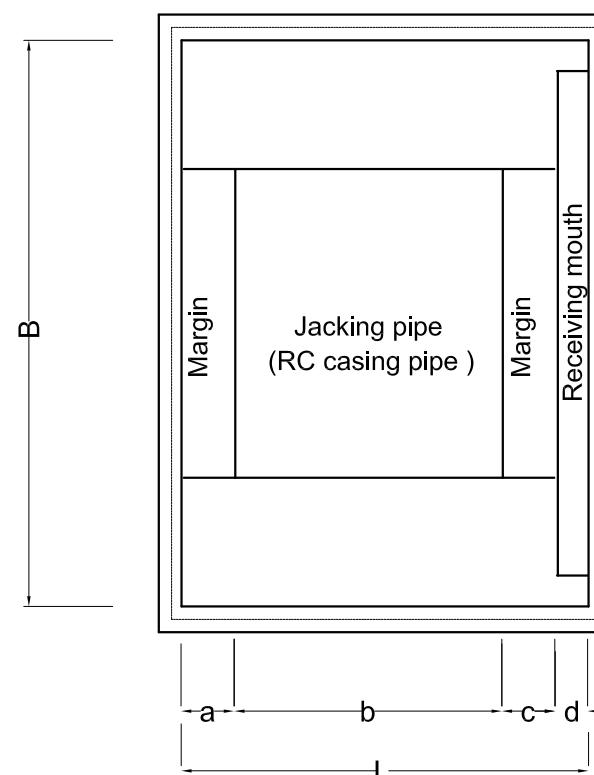
Pipe bridge for river crossing Ø 1600

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Typical drawings of pipe pedestal and pipe bridge
DRAWING NO:	II-1-6

SIZE
A1



Receiving shaft



(m)

Transmission Main	Jcking pipe		B	Longitudinal size				
	ID	OD		a	b	c	d	e
Ø 2000	3.0	3.5	5.50	0.5	2.6	0.5	0.3	3.9
Ø 1600	2.6	3.04	5.04	0.5	2.6	0.5	0.3	3.9

Plan of receiving shaft

Transmission Main	Jcking pipe		B	Longitudinal size							
	ID	OD		a	b	c	d	e	f	g	
Ø 2000	3.0	3.5	5.50	0.3	0.5	2.6	0.35	0.8	0.45	1.0	6.0
Ø 1600	2.6	3.04	5.04	0.3	0.5	2.6	0.35	0.8	0.35	1.0	5.90

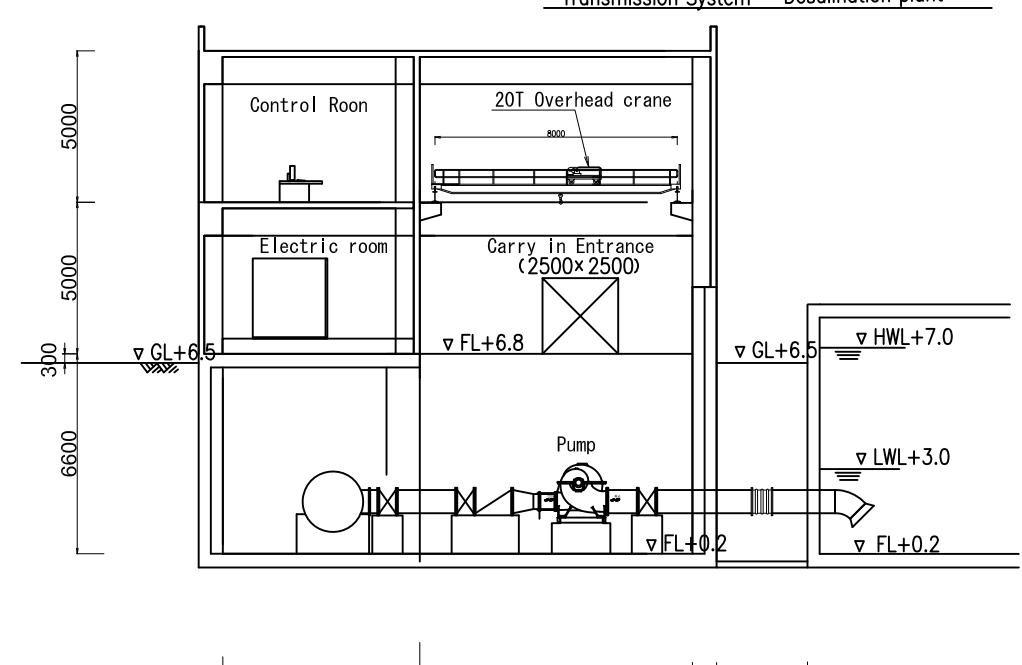
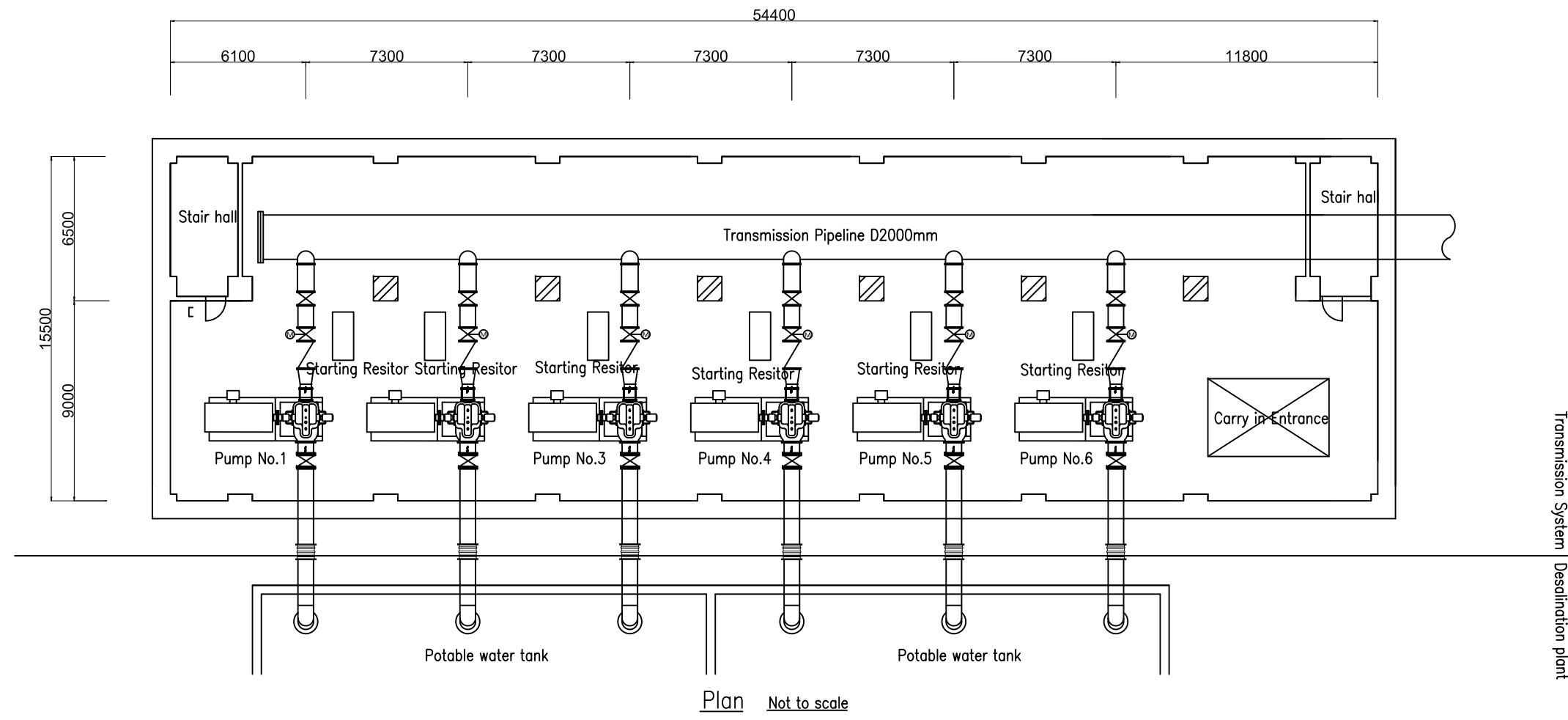
Plan of driving shaft

Chainage	Crossing Facility	Transmission main	Length of pipe jacking (m)
00k 010 - 00k 090	ECR Road	Ø 2000	80
44k 110 - 44k 175	Railway	Ø 1600	65
44k 175 - 44k 250	NH - 45	Ø 1600	75
47k 714 - 47k 794	Chennai By pass	Ø 1600	80
54k 552 - 54k 632	Chennai By pass	Ø 1600	80

List of pipe jacking section

PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Typical drawings of trenchless pipe jacking
DRAWING NO:	II-1-7

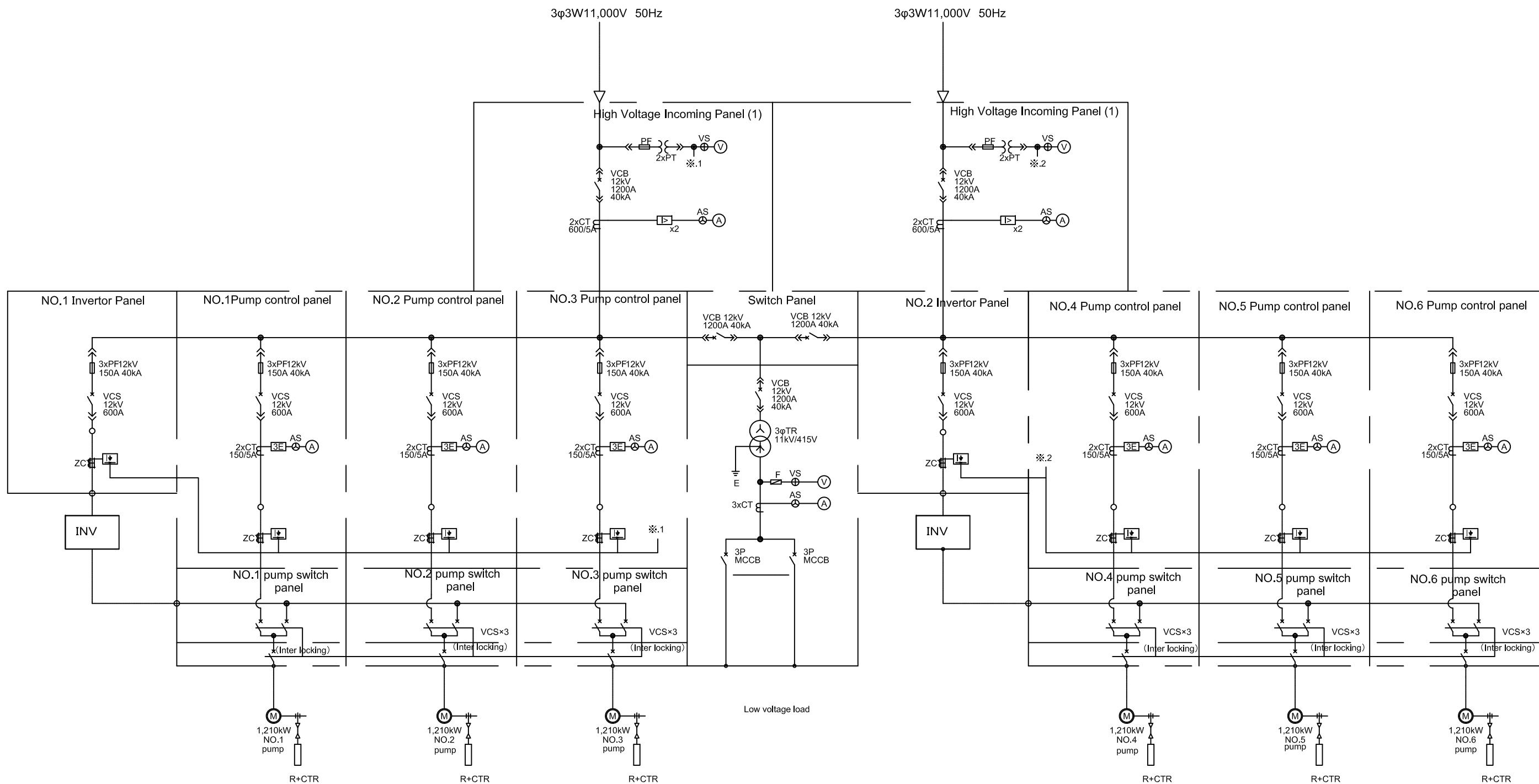
SIZE
A1



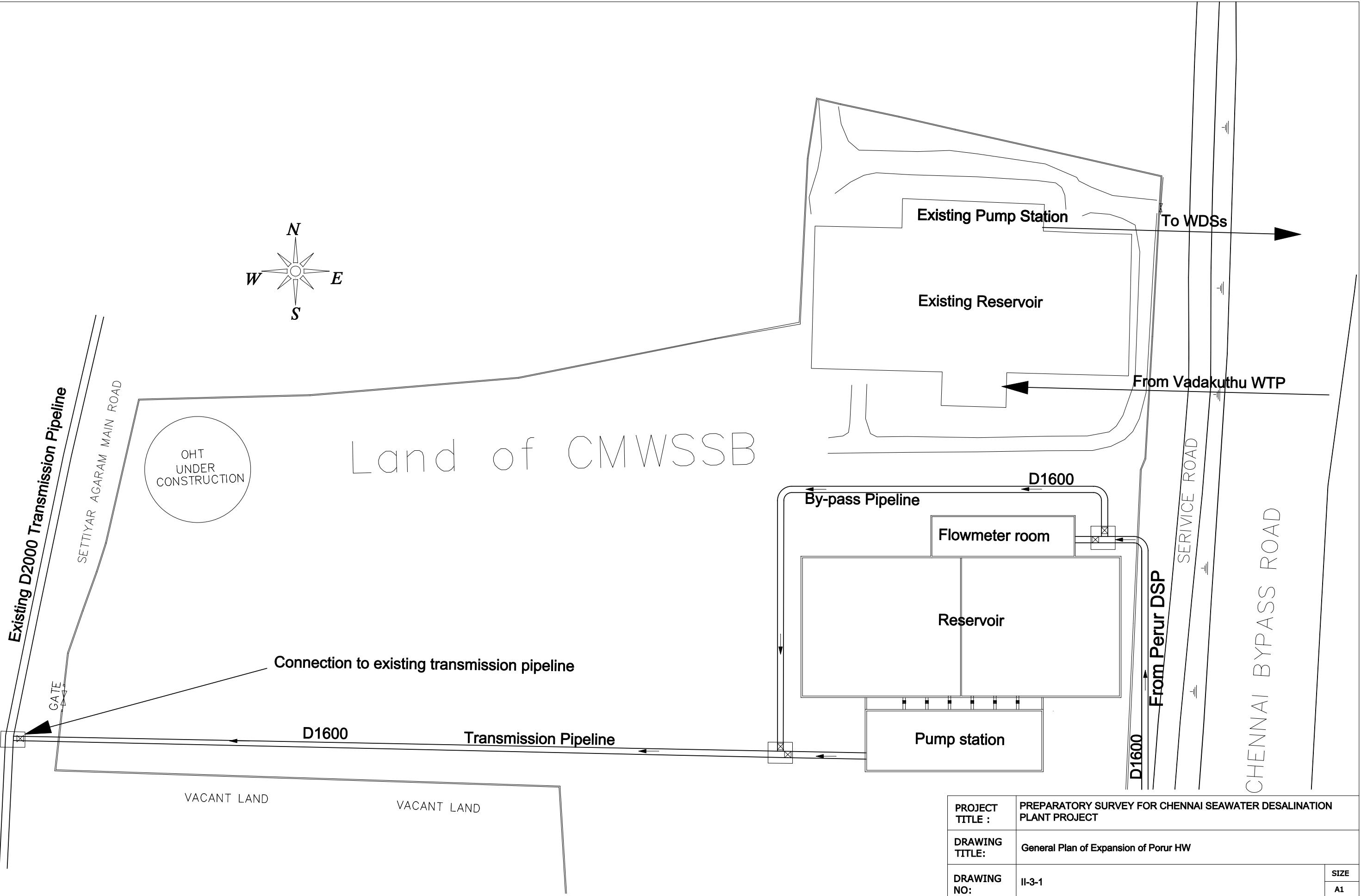
Cross Section Not to scale

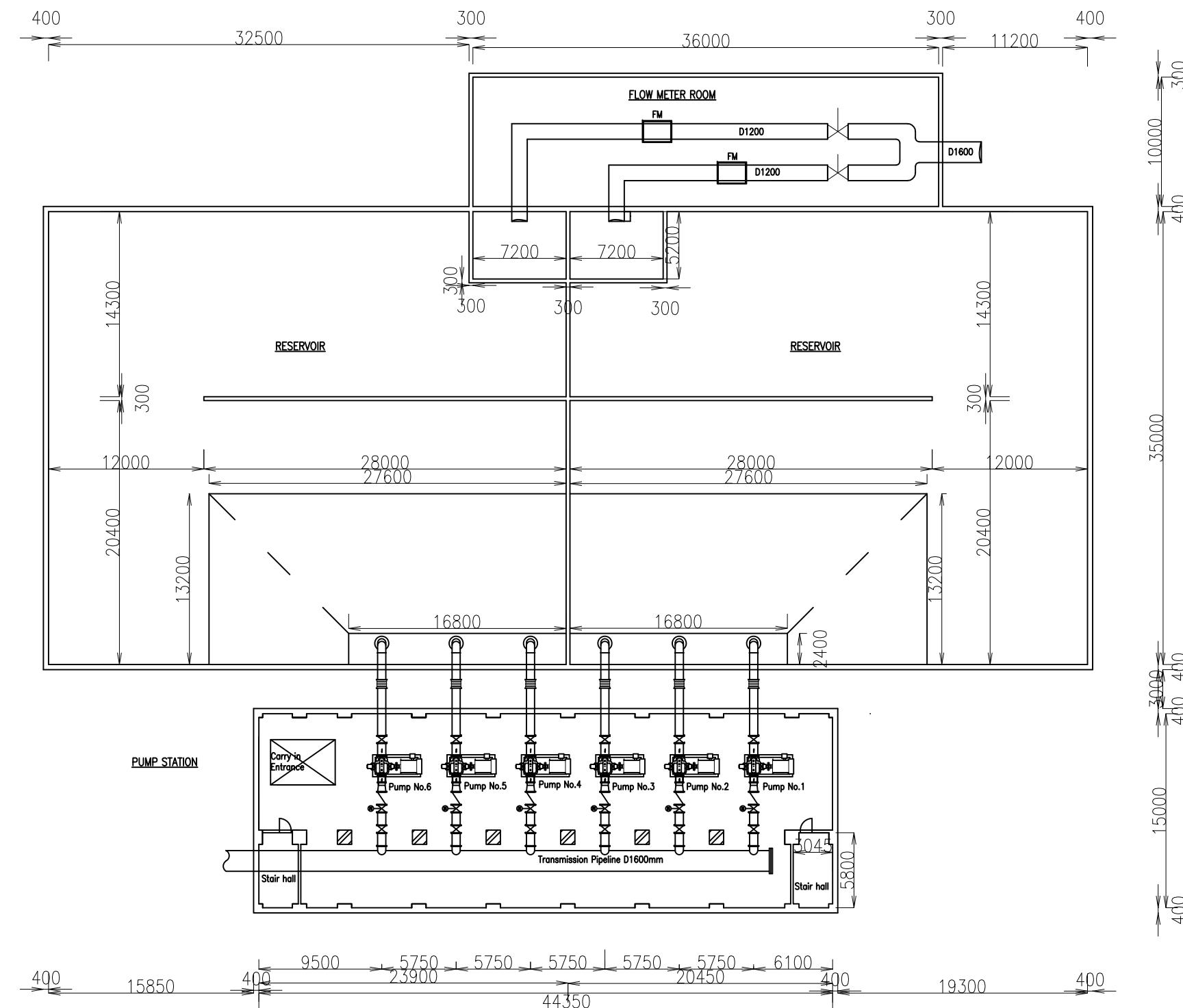
PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Plan and cross section of pump station at Perur DSP
DRAWING NO:	II-2-1

SIZE
A1

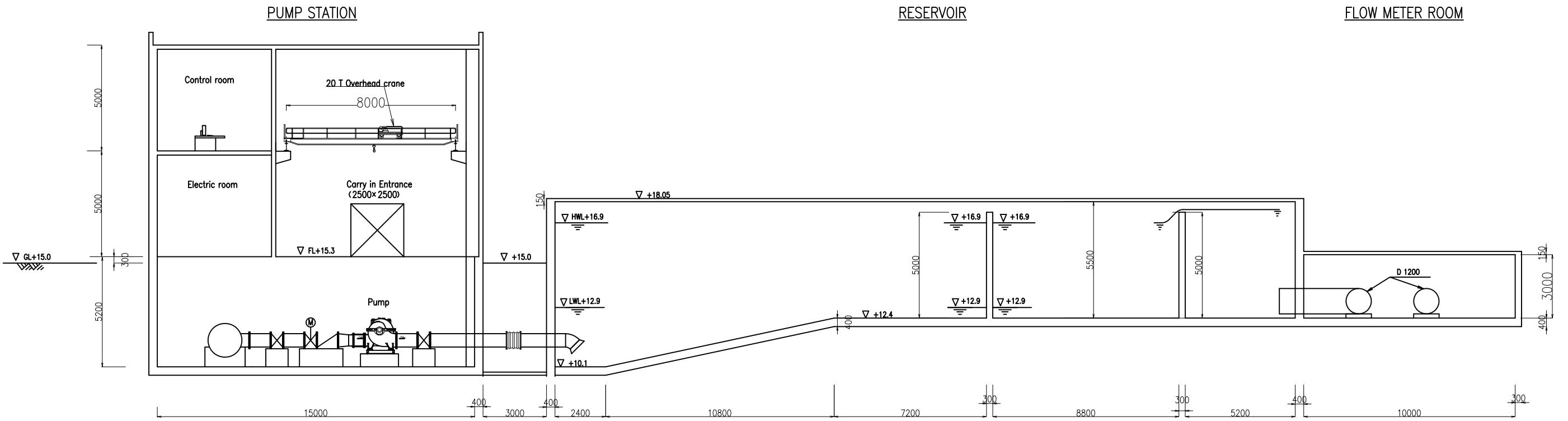


PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Single line diagram of pump station at Perur DSP	
DRAWING NO:	II-2-2	SIZE A1



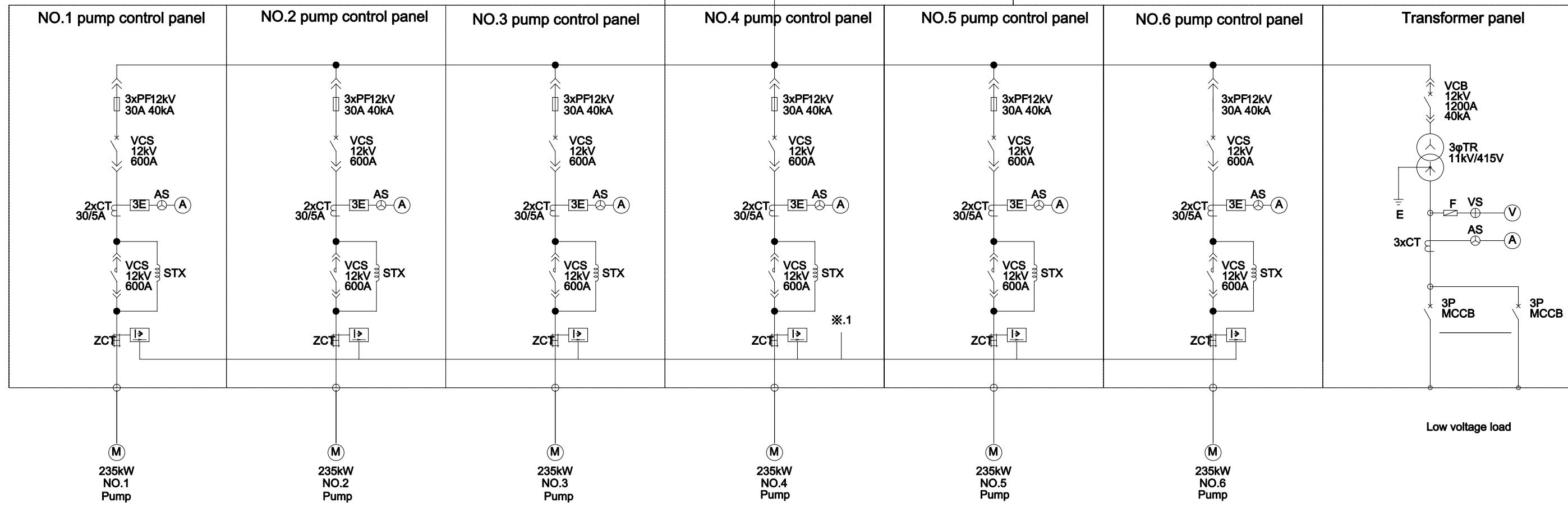
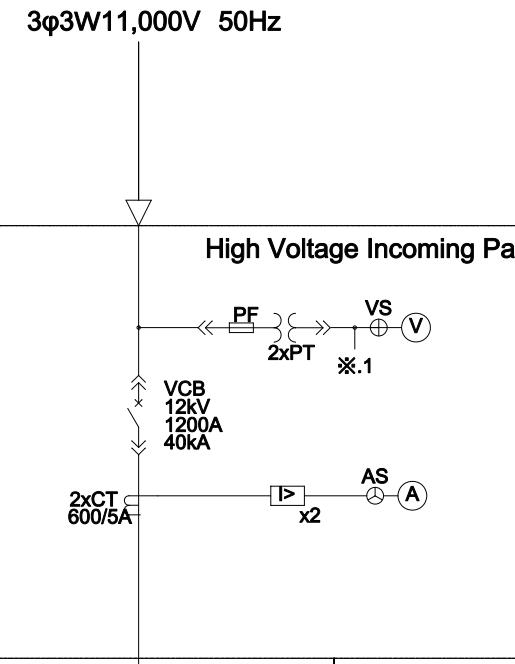


PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Plan of reservoir and pump station	
DRAWING NO:	II-3-2	SIZE A1



PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT
DRAWING TITLE:	Cross section of reservoir and pump station
DRAWING NO:	II-3-3

SIZE
A1



PROJECT TITLE :	PREPARATORY SURVEY FOR CHENNAI SEAWATER DESALINATION PLANT PROJECT	
DRAWING TITLE:	Single line diagram of pump station at Porur HW	
DRAWING NO:	II-3-4	
	SIZE	A1