

KEMPKERE TANK
STORAGE CAPACITY
= 12.00 MCFT

RISING MAIN
L = 6100.0 m

L = 6100m
V = 1.29 m/sec
Ø = 225 mm (OD)
t = 18.40 mm
Q = 0.036 Cumec
HF = 49.77m
HDPE PE100 PN10

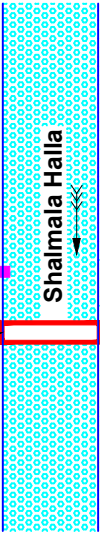
RECTANGULAR JACK
WELL CUM PUMP HOUSE
1 WORKING SUBMERCIBLE
PUMP
INTAKE LEVEL = 575.000 m
STATIC HEAD = 43.00 m

L = 6100m
V = 1.29 m/sec
Ø = 225 mm (OD)
t = 18.40 mm
Q = 0.036 Cumec
HF = 49.77m
HDPE PE100 PN10

RISING MAIN

L = 6100.0 m


Diversion Weir

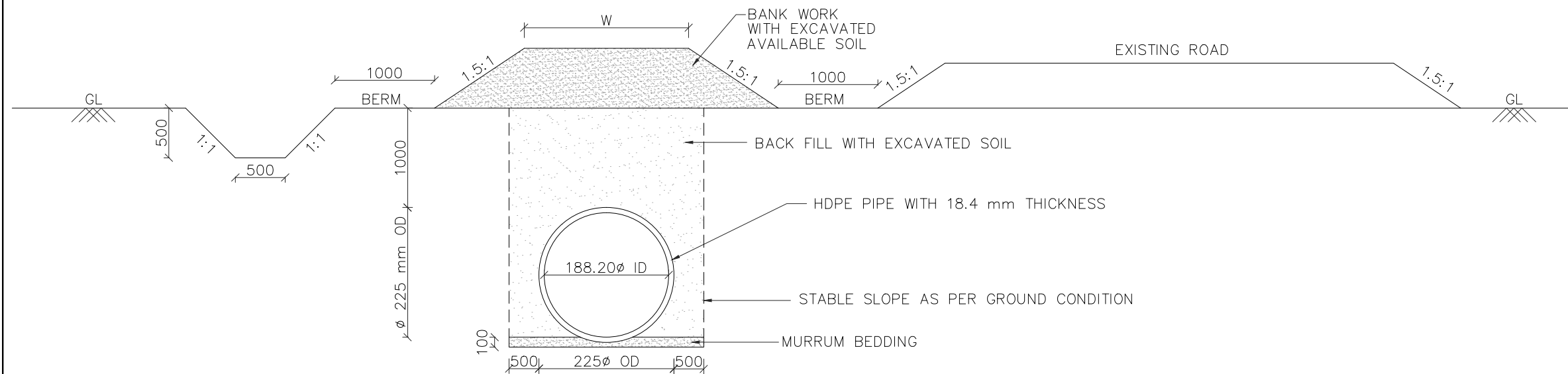


Shalmala Hala

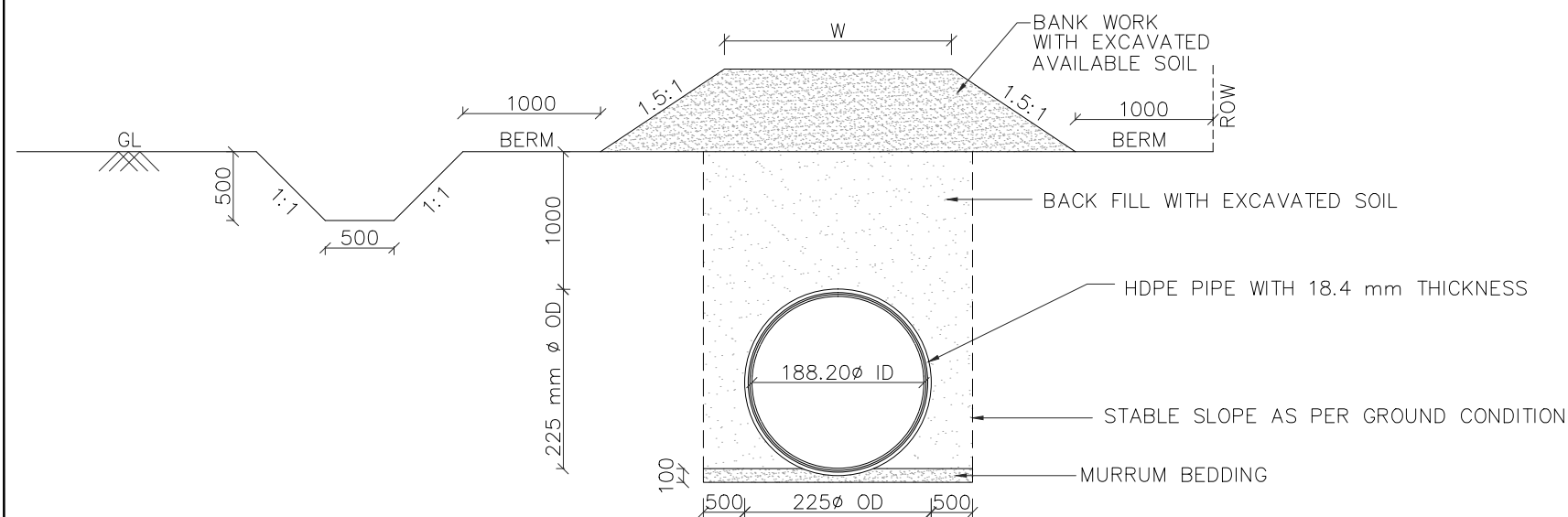
LEGEND	
Proposed Intake Canal	
Proposed Rising Main	
Jackwell/Pump house	
Kempkere Tank	

TENDER PURPOSE DRAWING ONLY

Client	
 Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001	
Project Title	
Filling of Kempkere Tank Filling Scheme	
Drawing Title	
Schematic Diagram	
Contractor.	Executive Engineer,



TYPICAL CROSS SECTION OF RISING MAIN IN CROSS COUNTRY
(SCALE 1:50)



TYPICAL CROSS SECTION OF RISING MAIN ALONG EXISTING ROAD
(SCALE 1:50)

NOTES:-

- 1) ALL DIMENSIONS ARE IN MM.
- 2) DO NOT SCALE THE DRAWING. FOLLOW WRITTEN DIMENSIONS ONLY.
- 3) THE PIPE LINE IS GENERALLY PLANNED ALONG THE EXISTING ROAD, HENCE NO SERVICE ROAD IS PROPOSED WHEREVER THE ALIGNMENT RUNS IN CROSS COUNTRY SERVICE ROAD OF 4.5m IS PROPOSED.

TENDER PURPOSE DRAWING ONLY

Client



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

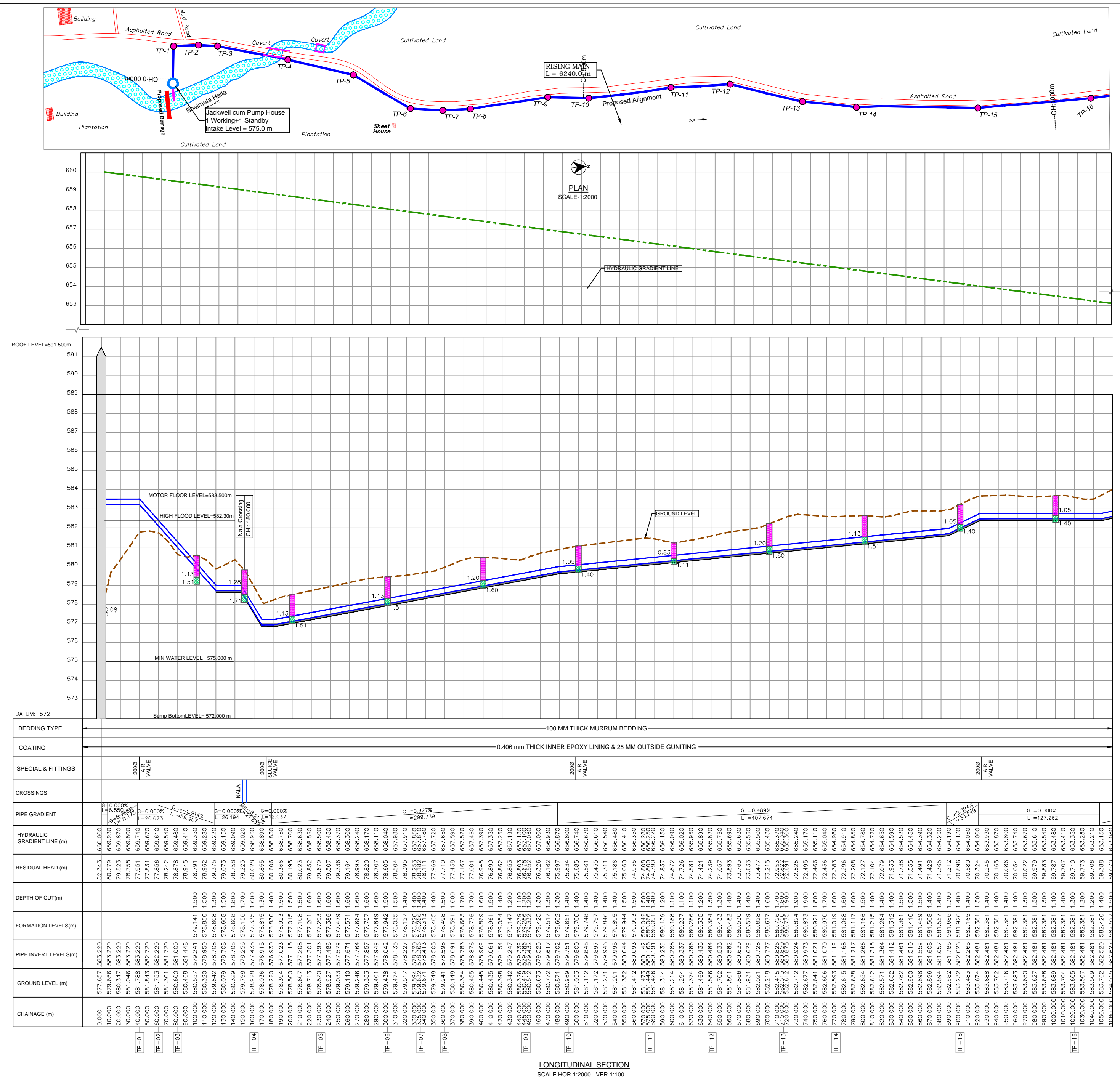
Filling of Kempkere Tank Filling Scheme

Drawing Title

Index Map for Kempkere tank by lifting water from
Shalmala halla in Hubli taluk, Dhawad district





Contractor.

Executive Engineer,



LEGEND

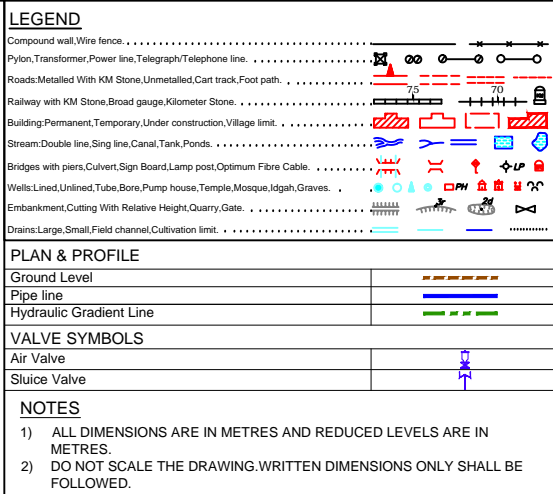
Compound wall, Wire fence, . . .	
Pylon, Transformer, Power line, Telegraph, Telephone line, . . .	
Roads Measured With KM Stone Broad gauge, Kilometer, Cross track, Foot path, . . .	
Railway with KM Stone Broad gauge, Kilometer, Cross track, . . .	
Building Permanent Temporary Under construction Village limit, . . .	
Stream Dumble line, Sing line, Canal, Tank, Ponds, . . .	
Bridges with piers, Culvert, Sign Board, Lamp post, Optimum Fibre Cable, . . .	
Well, Lined Unlined, Upland, Bore Pump, House, Temple, Mosque, Jail, Graves, . . .	
Embankment, Cutting With relative Height, Quarry, Gully, . . .	
Drain, Lane, Lane Small, Field Channel, Cultivation limit, . . .	

PLAN & PROFILE	
Ground Level	
Pipe line	
Hydraulic Gradient Line	
VALVE SYMBOLS	
Air Valve	
Sluice Valve	

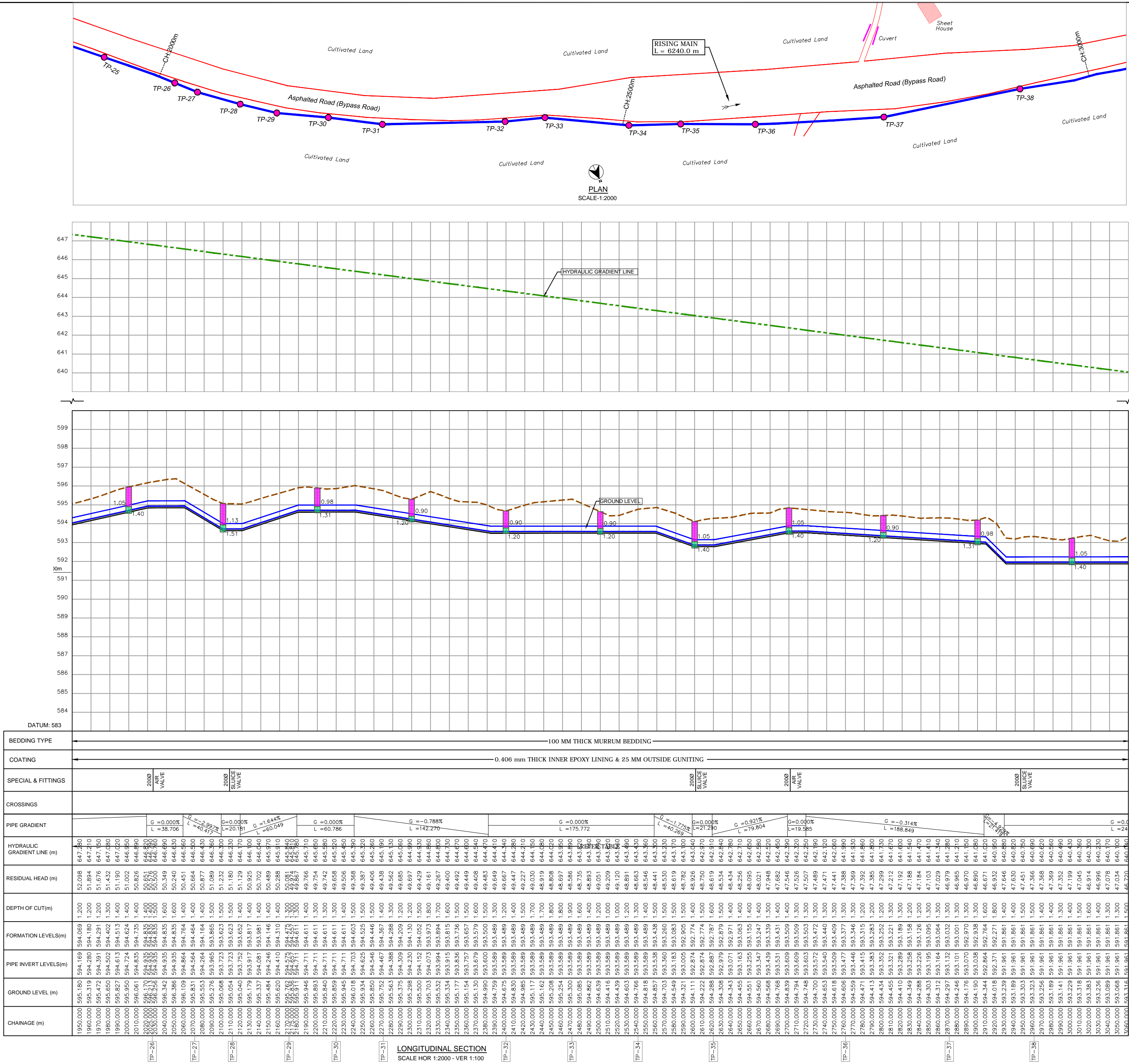
NOTES

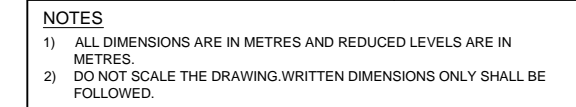
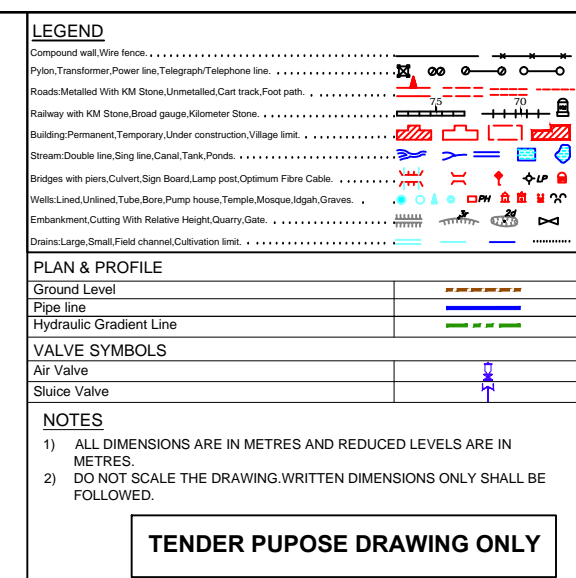
- NOTES
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 - 2) DO NOT SCALE THE DRAWING. WRITTEN DIMENSIONS ONLY SHALL BE FOLLOWED.


TENDER PUPOSE DRAWING ONLY

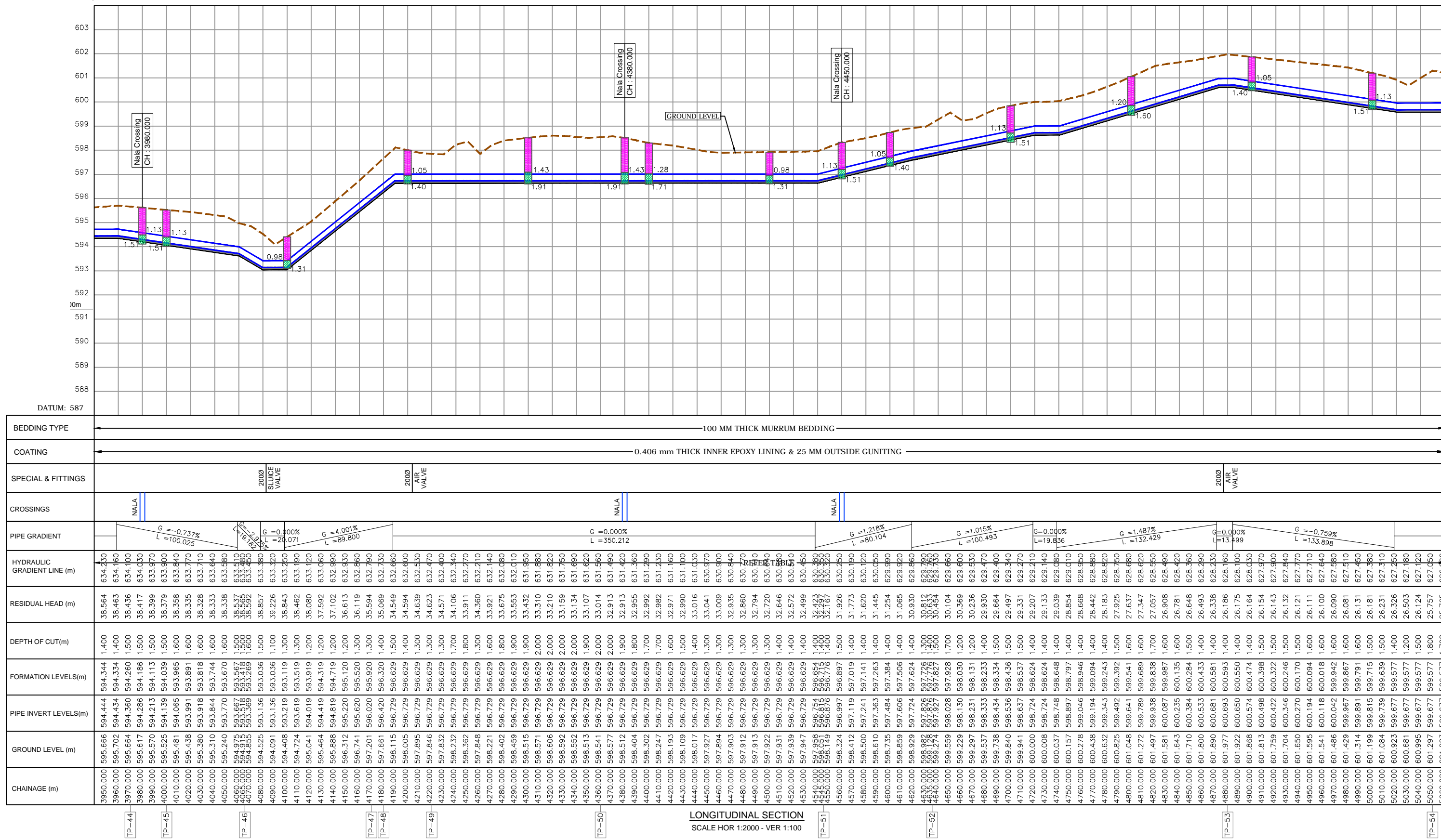
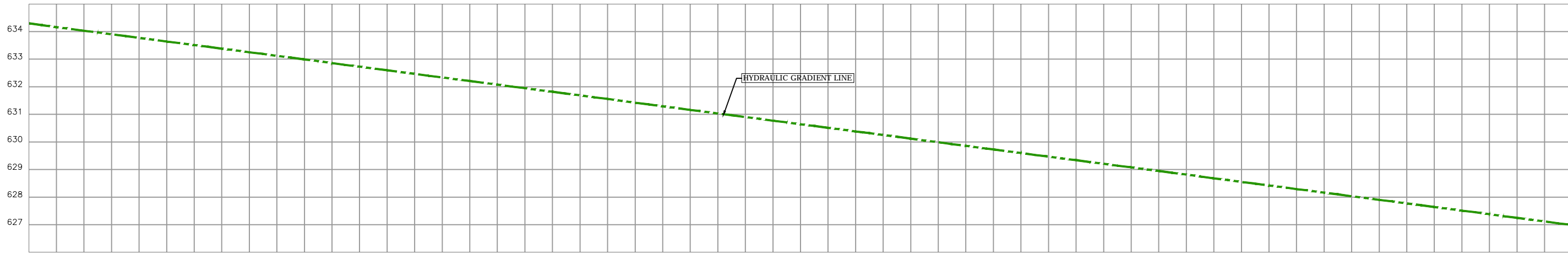
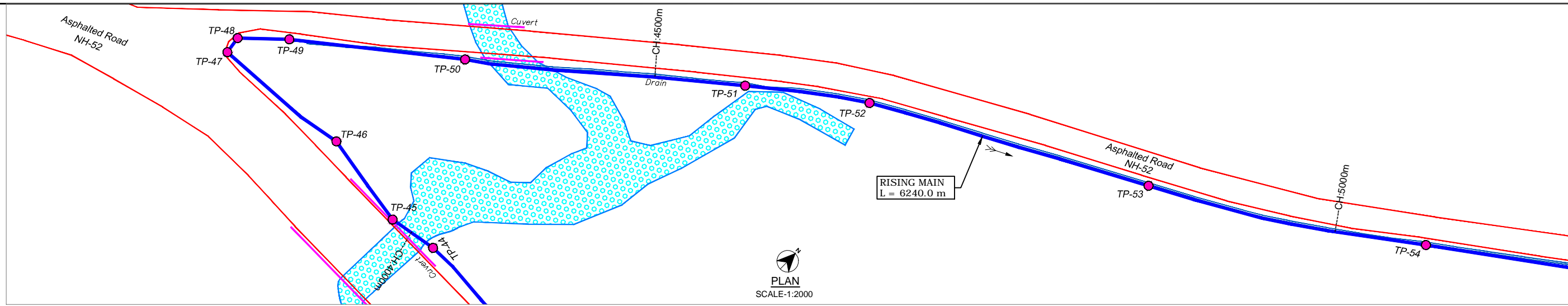


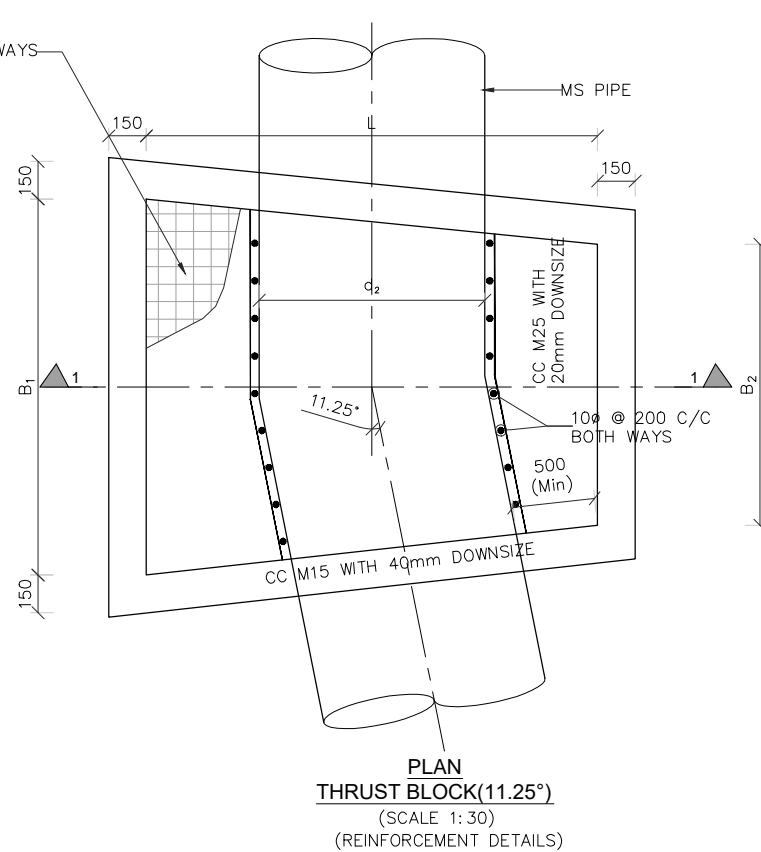
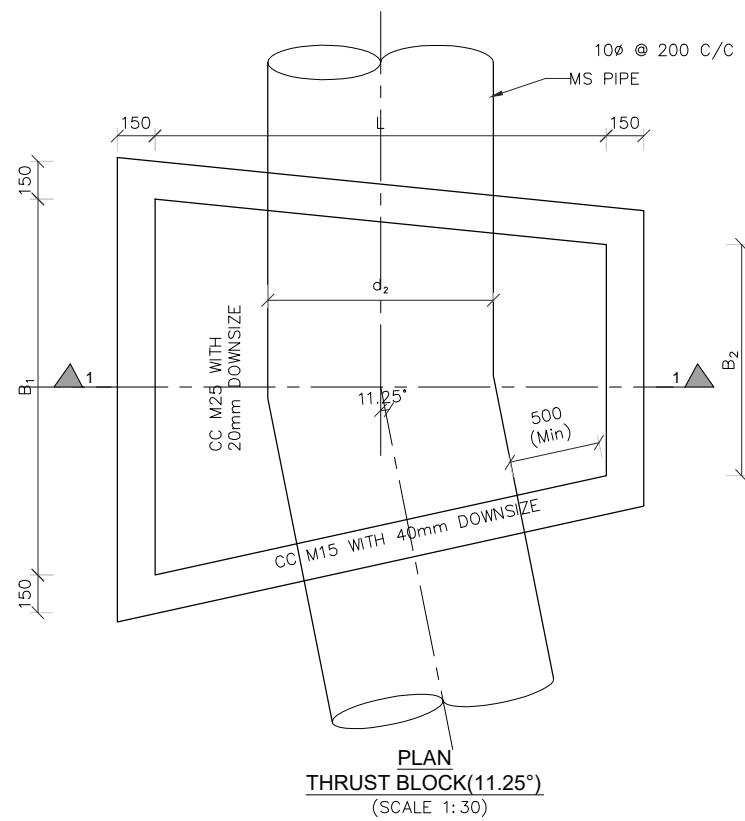
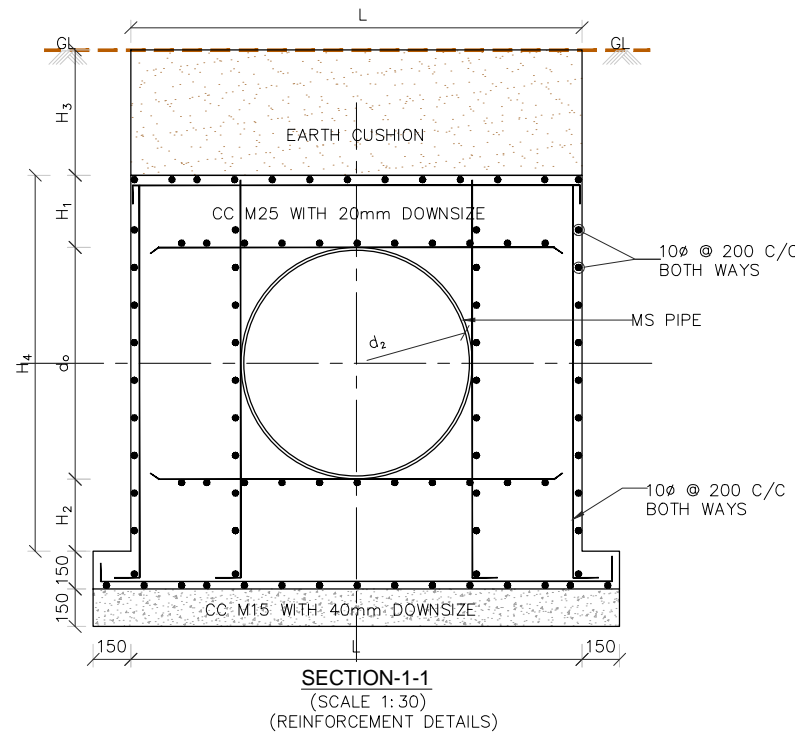
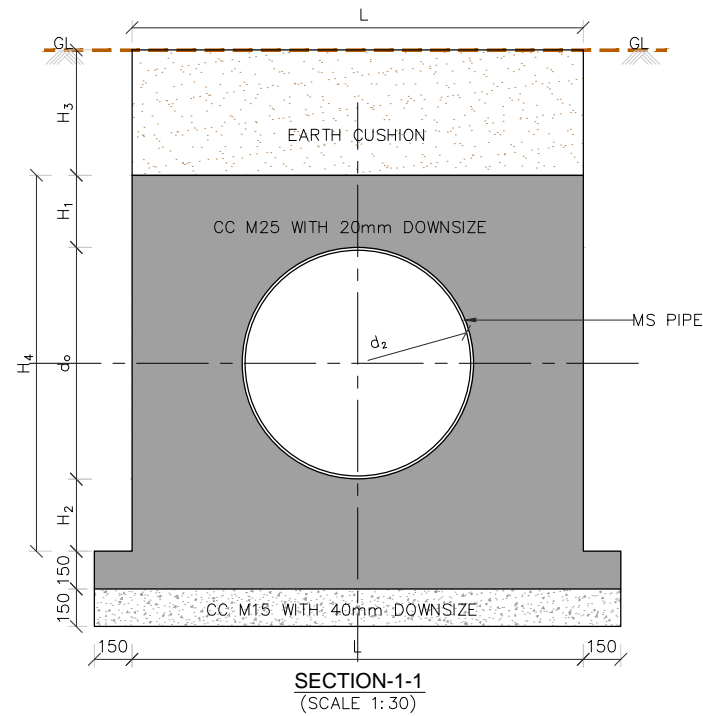
TENDER PUPOSE DRAWING ONLY





<p>CLIENT</p> 	<p>Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001</p>
<p>Project Title</p>	<p>(2-000 Km to 4-000 Km)</p>
<p>Filling of Kempkere Tank Filling Scheme</p>	
<p>Drawing Title</p>	<p>Plan & Longitudinal Section for Rising Main</p>
<p>Executive Engineer,</p>	<p>Contractor</p>





Details of Thrust Block		
1	Angle of pipe bend (α) in Degree	11.25 °
2	Inner diameter of pipe (d_2) in mm	188.20
3	Shell thickness of pipe (t_1) in mm	18.40
4	Outer diameter of Pipe (d_0) in m	225
5	Thickness of concrete at the top of the pipe (H_1) in mm	200
6	Thickness of concrete at the bottom of the pipe (H_2) in mm	200
7	Width of thrust block at thrust face (B_1) in mm	600
8	Width of thrust block at Other face (B_2) in mm	100
9	Length of Thrust block (L) in mm	200
10	Height of Thrust block (H_4) in mm	680
11	Overburden height (H_3) in mm (min)	1800
12	Pipe Type	HDPE

NOTES:-

- 1) All dimensions are in "mm".
- 2) Do not scale the drawing. Follow written dimensions only.
- 3) All bank works shall be thoroughly compacted as per standards.
- 4) Rollers shall not be directly allowed on barrel for compaction of backfill, 1m height of embankment above barrel shall be compacted thoroughly by manual means/vibratory compactors. only above 1m of embankment on barrel, wherever required rollers shall be allowed.
- 5) The thrust block foundation bearing capacity shall not be less than 30t/sqm. if it is found to be less the same has to be intimated to the designer.
- 6) The foundation strata considered is rock for designing. any variation is observed during execution the same shall be got reviewed by the designer.
- 7) P.C.C Thickness all around block is 150mm.

Abbreviations:

- | | | |
|-----|----------|---------------------------|
| 1. | AKS | — All kinds of soil. |
| 2. | B | — Breadth. |
| 3. | C/C | — Centre to centre. |
| 4. | Ch | — Chainage. |
| 5. | D | — Depth. |
| 6. | d_1 | — Outer diameter of pipe. |
| 7. | d_2 | — Inner diameter of pipe. |
| 8. | FL | — Formation level. |
| 9. | GL | — Ground Level. |
| 10. | H | — Over-burden height. |
| 11. | HR | — Hard rock. |
| 12. | Km | — Kilometre. |
| 13. | L | — Length. |
| 14. | Ld | — 50 X dia of bar. |
| 15. | m | — Metre. |
| 16. | P_L | — Pipe invert level. |
| 17. | P_H | — Pipe top level. |
| 18. | SR | — Soft rock. |
| 19. | α | — Angle of pipe bend. |

LEGEND

PCC M15	
CC M25	
Embankment	

TENDER PURPOSE DRAWING ONLY

Client



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

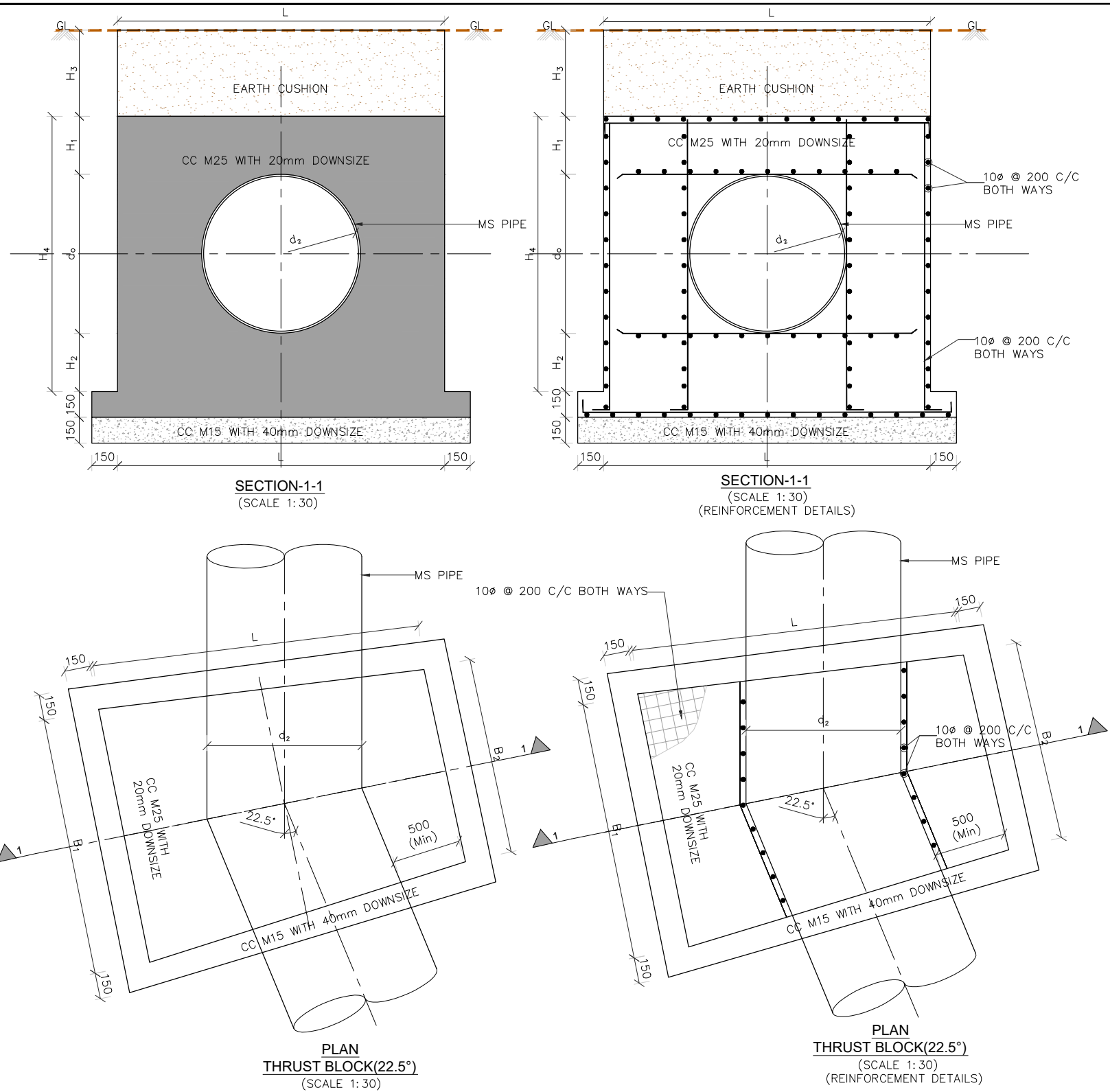
Filling of Kempkere Tank Filling Scheme

Drawing Title

Typical Thrust Block Drawing

Contractor.

Executive Engineer,



- NOTES:-**
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 - 4) Rollers shall not be directly allowed on barrel for compaction of backfill, 1m height of embankment above barrel shall be compacted thoroughly by manual means/vibratory compactors. only above 1m of embankment on barrel, wherever required rollers shall be allowed.
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 - 6) The foundation strata considered is rock for designing. any variation is observed during execution the same shall be got reviewed by the designer.
 - 7) P.C.C Thickness all around block is 150mm.

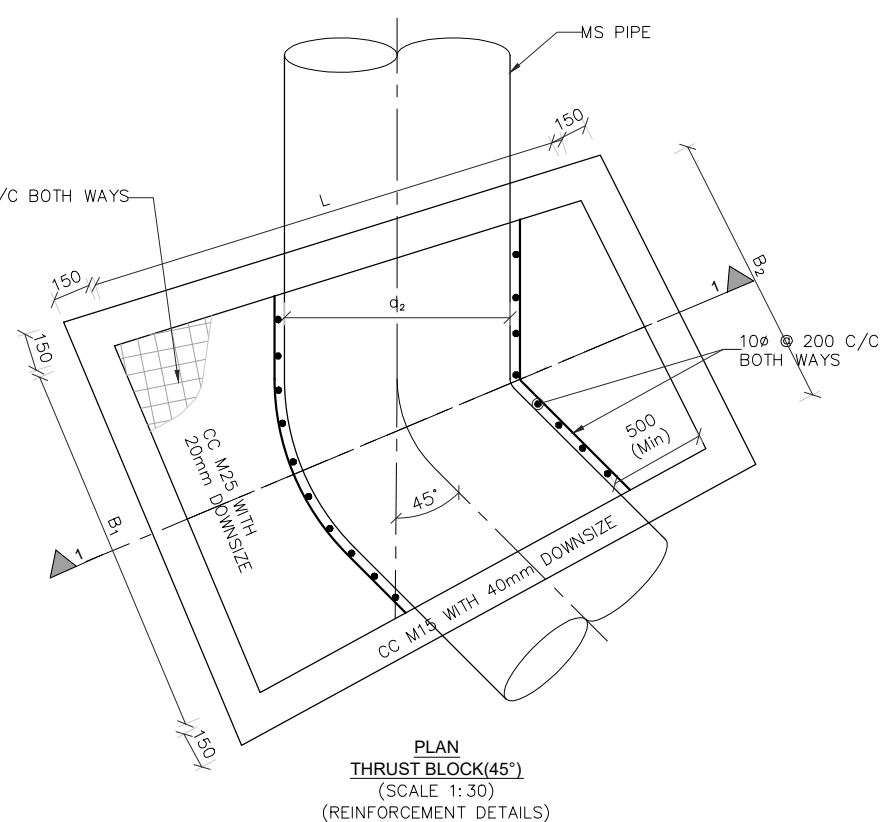
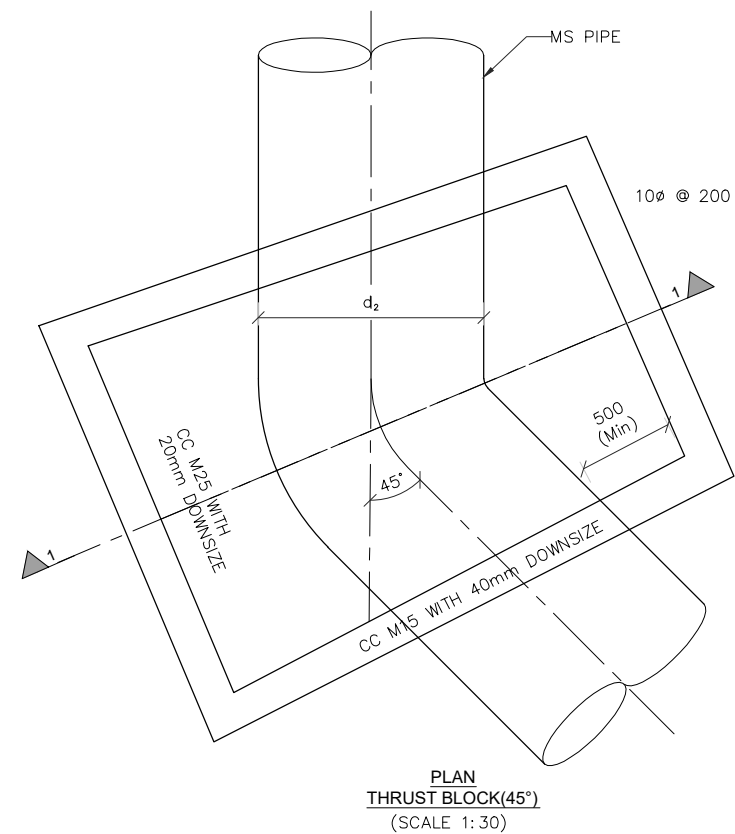
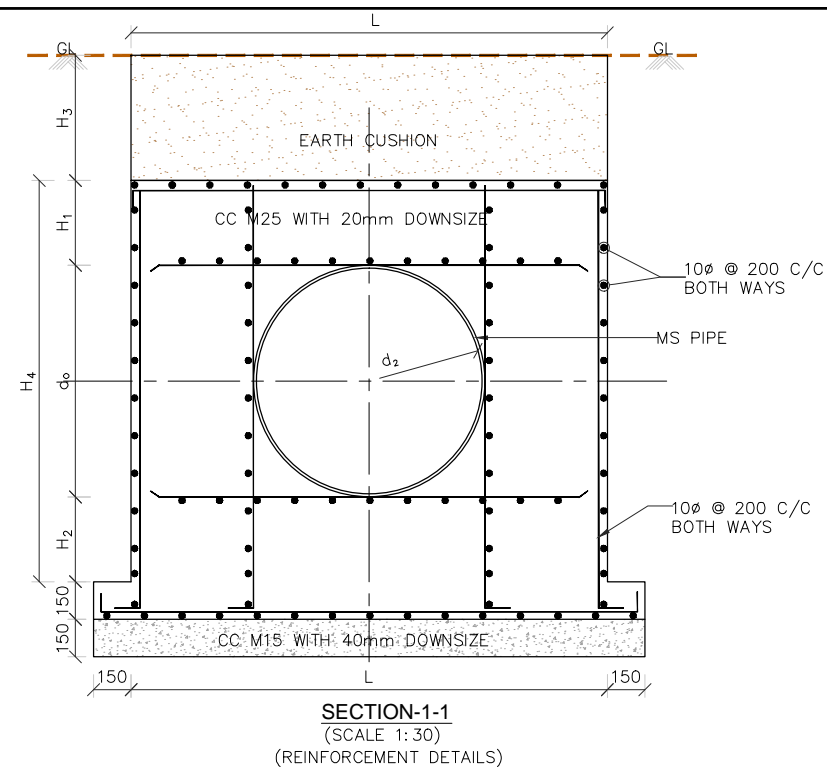
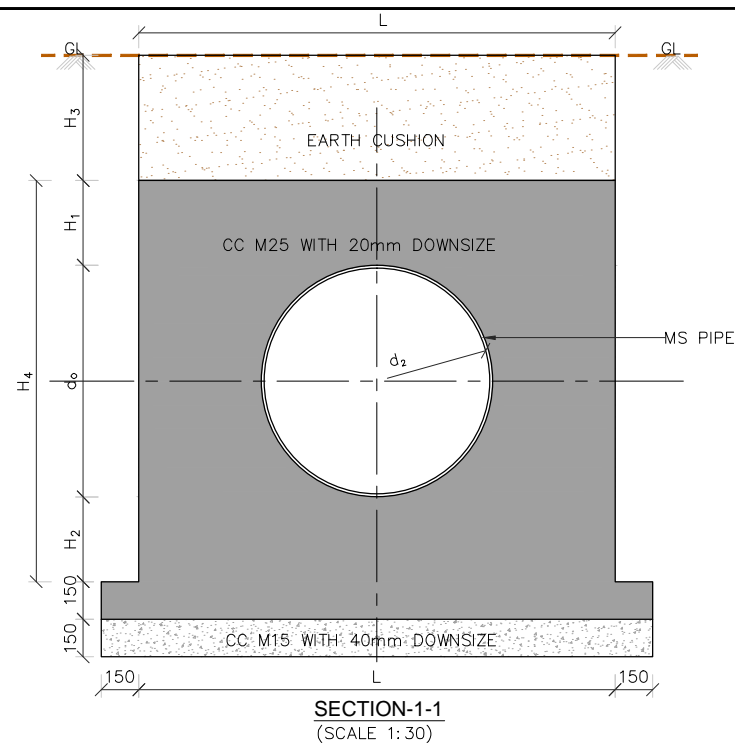
Abbreviations:	
1. AKS	– All kinds of soil.
2. B	– Breadth.
3. C/C	– Centre to centre.
4. Ch	– Chainage.
5. D	– Depth.
6. d _o	– Outer diameter of pipe.
7. d ₂	– Inner diameter of pipe.
8. FL	– Formation level.
9. GL	– Ground Level.
10. H	– Over-burden height.
11. HR	– Hard rock.
12. Km	– Kilometre.
13. L	– Length.
14. Ld	– 50 X dia of bar.
15. m	– Metre.
16. P _L	– Pipe invert level.
17. P _T	– Pipe top level.
18. SR	– Soft rock.
19. α	– Angle of pipe bend.

LEGEND	
PCC M15	
CC M25	
Embankment	

TENDER PURPOSE DRAWING ONLY

Details of Thrust Block		
1	Angle of pipe bend (α) in Degree	22.50 °
2	Inner diameter of pipe (d ₂) in mm	188.20
3	Shell thickness of pipe (t ₁) in mm	18.40
4	Outer diameter of Pipe (d ₀) in m	225
5	Thickness of concrete at the top of the pipe (H ₁) in mm	300
6	Thickness of concrete at the bottom of the pipe (H ₂) in mm	300
7	Width of thrust block at thrust face (B ₁) in mm	700
8	Width of thrust block at Other face (B ₂) in mm	200
9	Length of Thrust block (L) in mm	200
10	Height of Thrust block (H ₄) in mm	880
11	Overburden height (H ₃) in mm (min)	1700
12	Pipe Type	HDPE

	Client	Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001
	Project Title	Filling of Kempkere Tank Filling Scheme
	Drawing Title	Typical Thrust Block Drawing
Contractor.		Executive Engineer,



Details of Thrust Block		
1	Angle of pipe bend (α) in Degree	45 °
2	Inner diameter of pipe (d_2) in mm	188.20
3	Shell thickness of pipe (t_1) in mm	18.40
4	Outer diameter of Pipe (d_0) in m	225
5	Thickness of concrete at the top of the pipe (H_1) in mm	400
6	Thickness of concrete at the bottom of the pipe (H_2) in mm	400
7	Width of thrust block at thrust face (B_1) in mm	900
8	Width of thrust block at Other face (B_2) in mm	400
9	Length of Thrust block (L) in mm	400
10	Height of Thrust block (H_4) in mm	1080
11	Overburden height (H_3) in mm (min)	1600
12	Pipe Type	HDPE

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- 6) The foundation strata considered is rock for designing. any variation is observed during execution the same shall be got reviewed by the designer.
- 7) P.C.C Thickness all around block is 150mm.

Abbreviations:

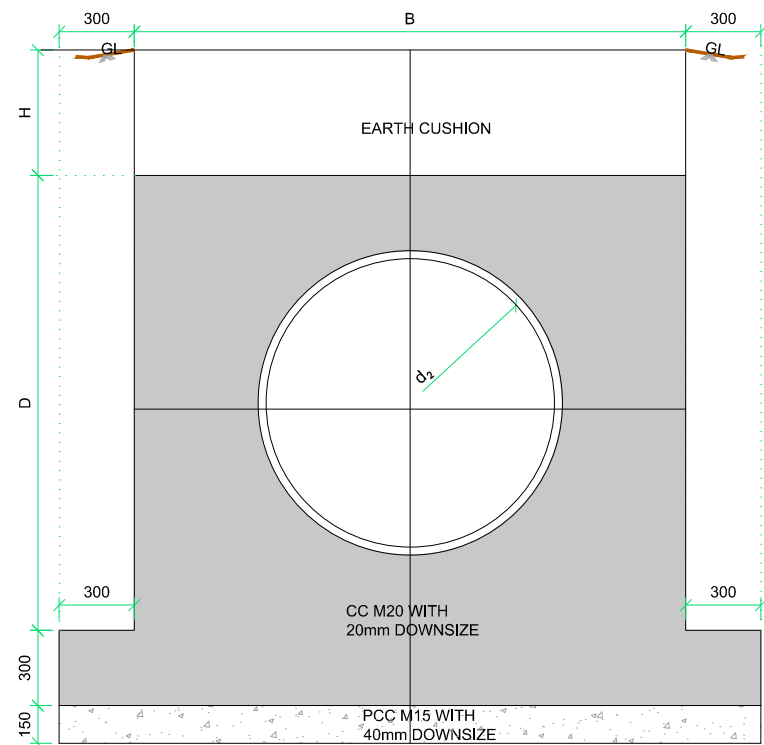
1. AKS - All kinds of soil.
2. B - Breadth.
3. C/C - Centre to centre.
4. Ch - Chainage.
5. D - Depth.
6. d_1 - Outer diameter of pipe.
7. d_2 - Inner diameter of pipe.
8. FL - Formation level.
9. GL - Ground Level.
10. H - Over-burden height.
11. HR - Hard rock.
12. Km - Kilometre.
13. L - Length.
14. L_d - 50 X dia of bar.
15. m - Metre.
16. P_L - Pipe invert level.
17. P_H - Pipe top level.
18. SR - Soft rock.
19. α - Angle of pipe bend.

LEGEND

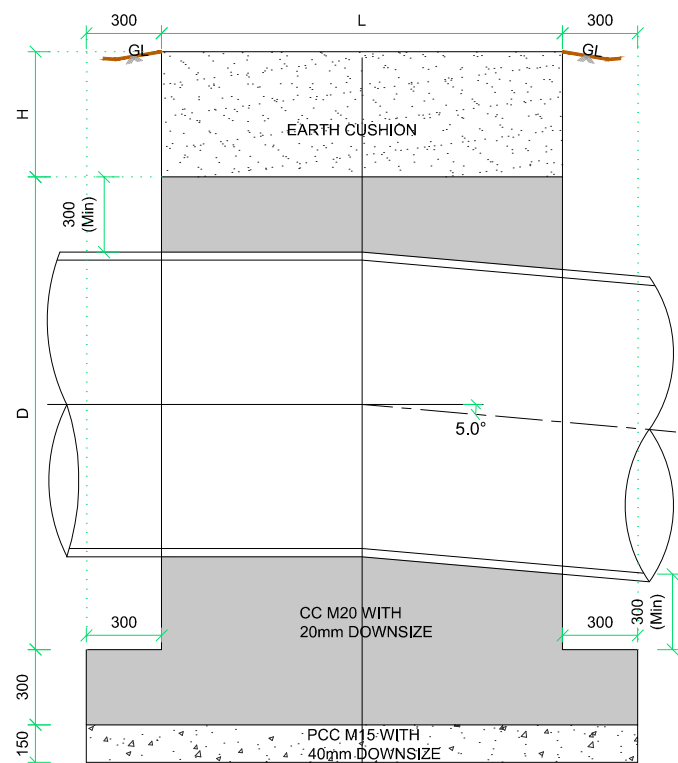
PCC M15	
CC M25	
Embankment	

TENDER PURPOSE DRAWING ONLY

Client	Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001	
Project Title	Filling of Kempkere Tank Filling Scheme	
Drawing Title	Typical Thrust Block Drawing	
Contractor.	Executive Engineer,	

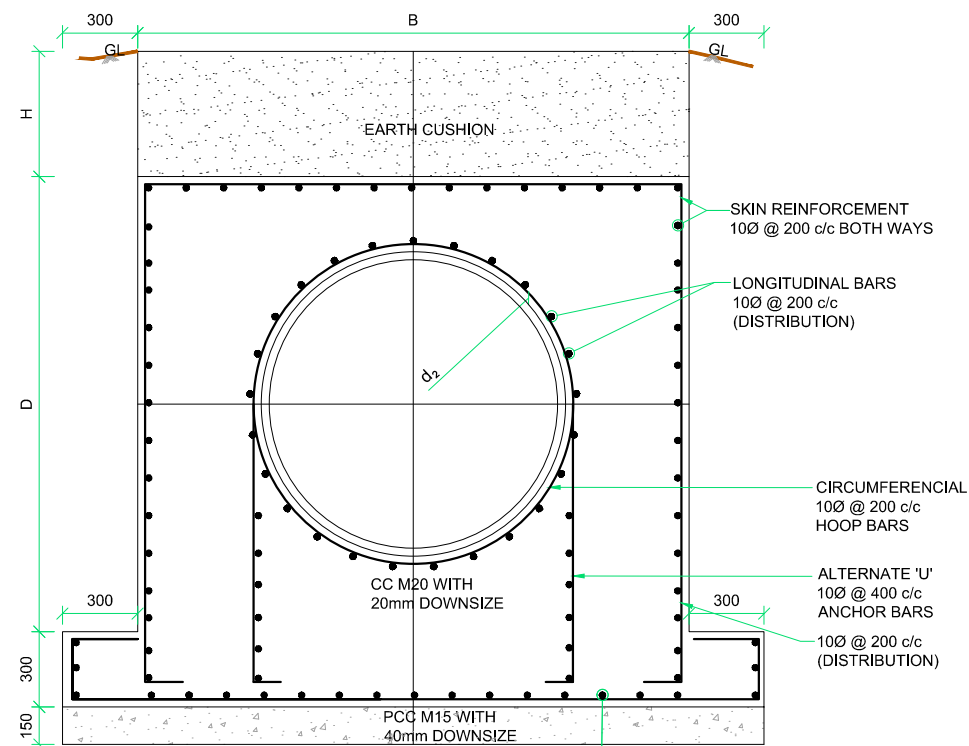


SECTION Y-Y
(SCALE 1:30)

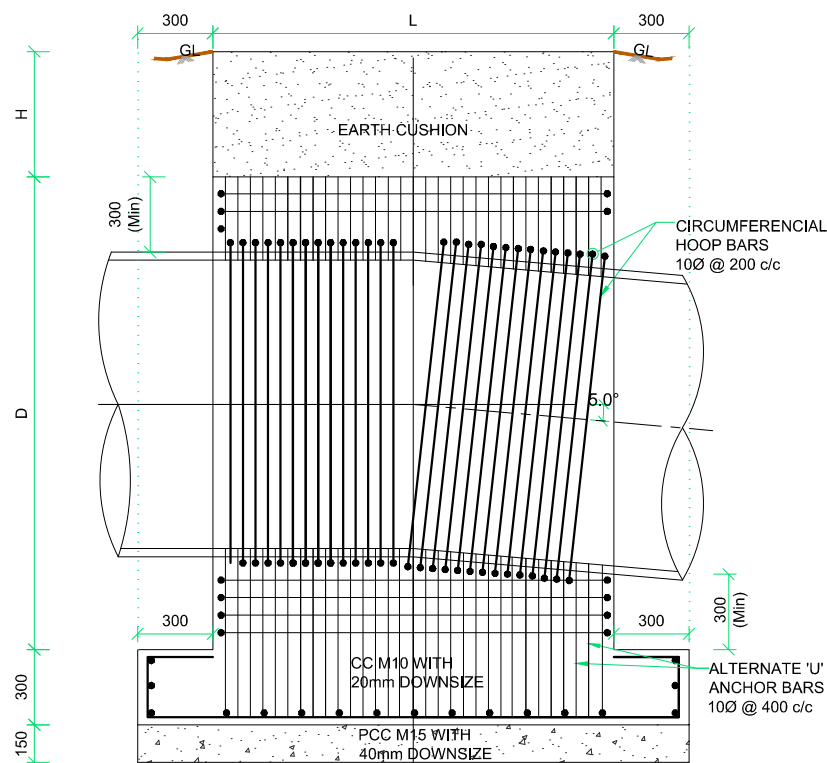


SECTION X-X FOR 5° BENDS
(SCALE 1:30)

	Details of Anchor Block	
1	Angle of pipe bend (α) in Degree	5 °
2	Inner diameter of pipe (d2) in mm	188.20
3	Shell thickness of pipe (t1) in mm	18.40
4	Outer diameter of Pipe (d1) in m	225
5	Length (L) in mm	300
6	Breadth (B) in mm	500
7	Height of Anchor block in mm	500
8	Overburden height (H) in mm (min)	900
9	Pipe Type	HDPE



SECTION Y-Y
(SCALE 1:30)



SECTION X-X FOR 5° BENDS
(SCALE 1:30)

NOTES AND SPECIFICATION

1. ALL DIMENSIONS ARE IN MILLIMETRES AND REDUCED LEVELS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. DO NOT MEASURE THE DIMENSION, ONLY WRITTEN DIMENSION SHALL BE FOLLOWED.
3. ALL BANK WORKS SHALL BE THOROUGHLY COMPACTED AS PER STANDARDS.
4. ROLLERS SHALL NOT BE DIRECTLY ALLOWED ON BARREL FOR COMPACTION OF BACKFILL, 1m HEIGHT OF EMBANKMENT ABOVE BARREL SHALL BE COMPACTED THOROUGHLY BY MANUAL MEANS/VIBRATORY COMPACTERS. ONLY ABOVE 1m OF EMBANKMENT ON BARREL, WHEREVER REQUIRED ROLLERS SHALL BE ALLOWED.
5. THE ANCHOR BLOCK FOUNDATION BEARING CAPACITY SHALL NOT BE LESS THAN 30T/Sqm. IF IT IS FOUND TO BE LESS THE SAME HAS TO BE INTIMATED TO THE DESIGNER.
6. THE FOUNDATION STRATA CONSIDERED IS SOIL FOR DESIGNING. ANY VARIATION IS OBSERVED DURING EXECUTION THE SAME SHALL BE GOT REVIEWED BY THE DESIGNER.
7. P.C.C THICKNESS ALL AROUND BLOCK IS 150mm.

TENDER PURPOSE DRAWING ONLY

ABBREVIATIONS:

B	- BREADTH.
c/c	- CENTRE TO CENTRE.
CC	- CEMENT CONCRETE.
D	- DEPTH.
GL	- GROUND LEVEL.
H	- HEIGHT.
L	- LENGTH.
AM	- MILD STEEL.
A	- ANGLE OF PIPE BEND.
d ₁	- OUTER DIAMETRE OF PIPE.
d ₂	- INNER DIAMETRE OF PIPE.
mm	- MILLIMETRE.
MIN	- MINIMUM.
PCC	- PLAIN CEMENT CONCRETE.
Ø	- DIA.
@	- AT.

Client



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

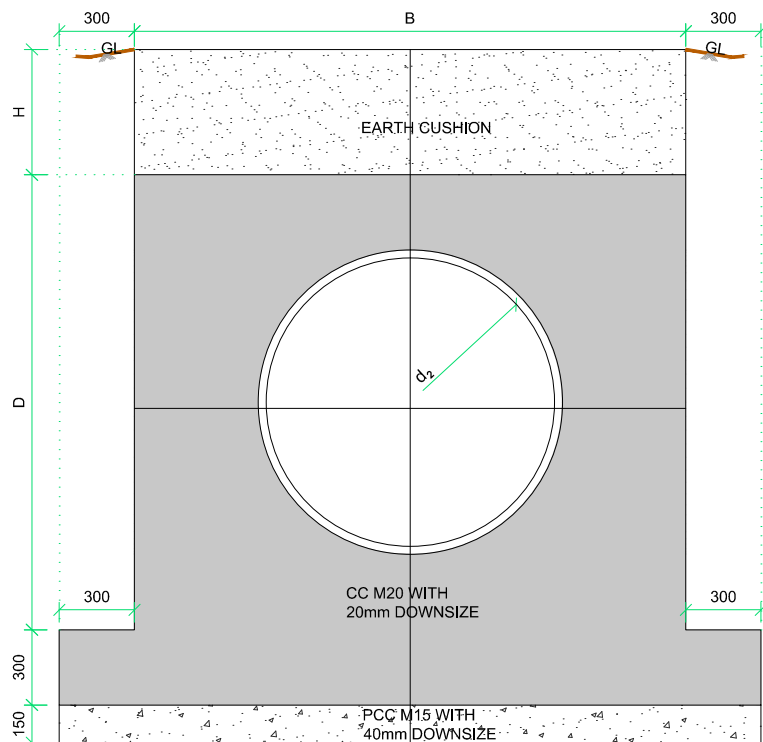
Typical Drawing of Anchor Block

Drawing Title

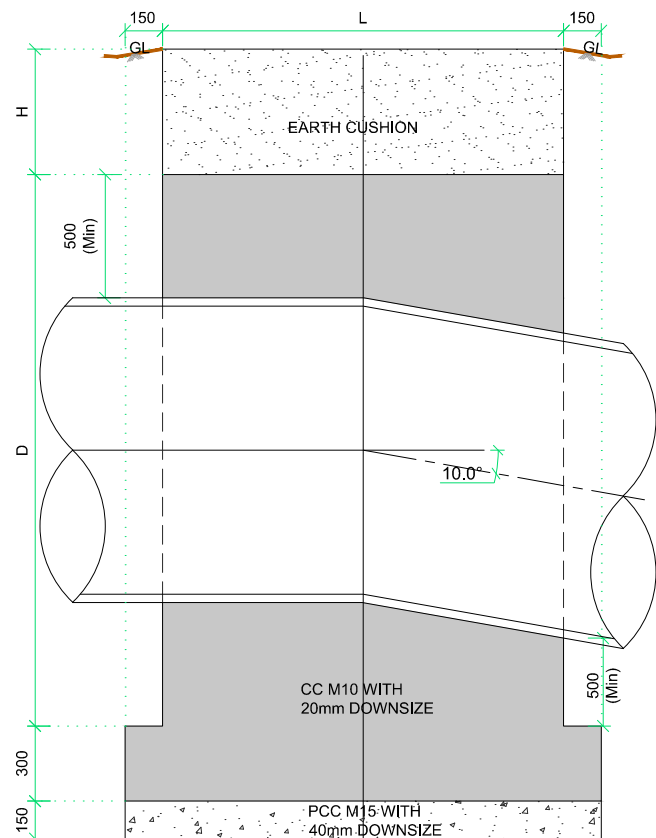
Index Map for Kempkere tank by lifting water from
Shalmala halla in Hubli taluk, Dhawad district

Executive Engineer,

Contractor.

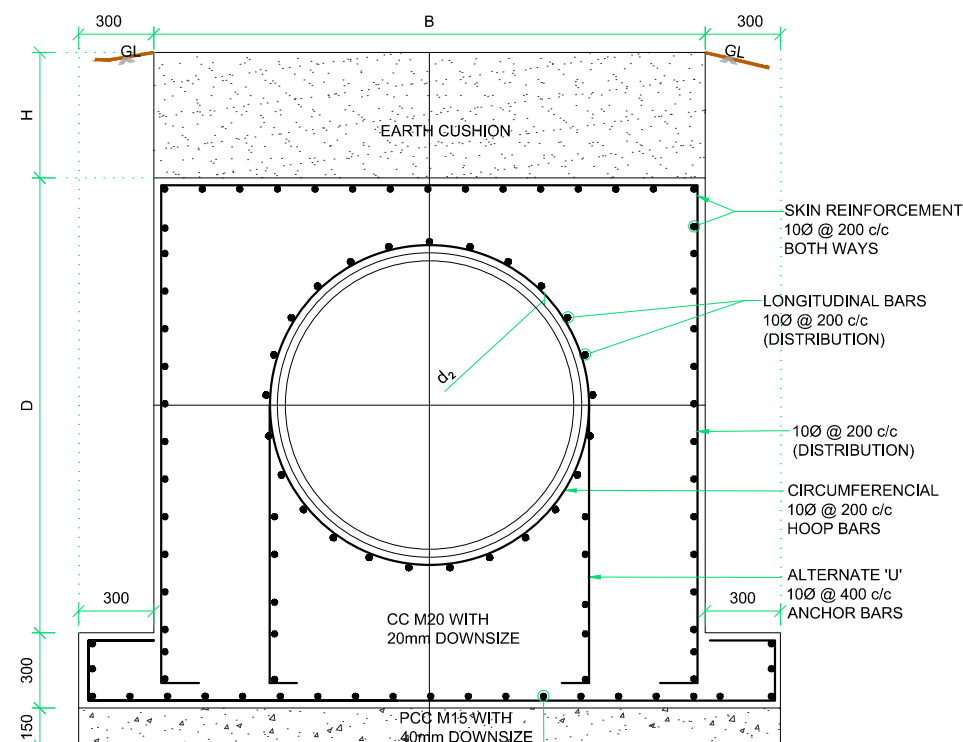


SECTION Y-Y
(SCALE 1:30)

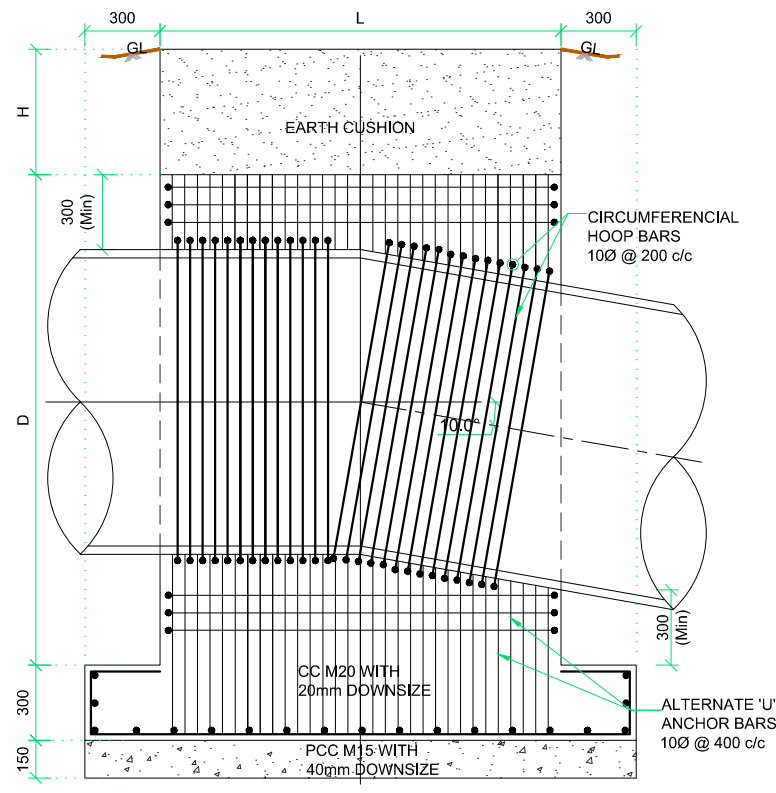


SECTION X-X FOR 10° BENDS
(SCALE 1:30)

	Details of Anchor Block	
1	Angle of pipe bend (α) in Degree	10 °
2	Inner diameter of pipe (d_2) in mm	188.20
3	Shell thickness of pipe (t_1) in mm	18.40
4	Outer diameter of Pipe (d_1) in m	225
5	Length (L) in mm	400
6	Breadth (B) in mm	900
7	Height of Anchor block in mm	900
8	Overburden height (H) in mm (min)	700
9	Pipe Type	HDPE



SECTION Y-Y
(SCALE 1:30)



SECTION X-X FOR 10° BENDS
(SCALE 1:30)

NOTES AND SPECIFICATION

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6. THE FOUNDATION STRATA CONSIDERED IS SOIL FOR DESIGNING.
ANY VARIATION IS OBSERVED DURING EXECUTION THE SAME SHALL BE GOT REVIEWED BY THE DESIGNER.
7. P.C.C THICKNESS ALL AROUND BLOCK IS 150mm.

ABBREVIATIONS:

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TENDER PURPOSE DRAWING ONLY

Client



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

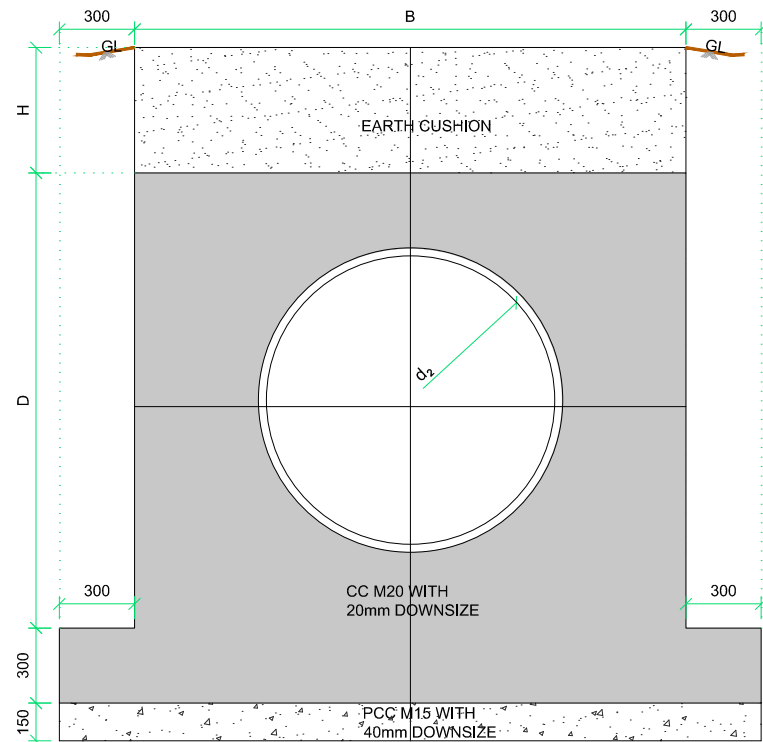
Typical Drawing of Anchor Block

Drawing Title

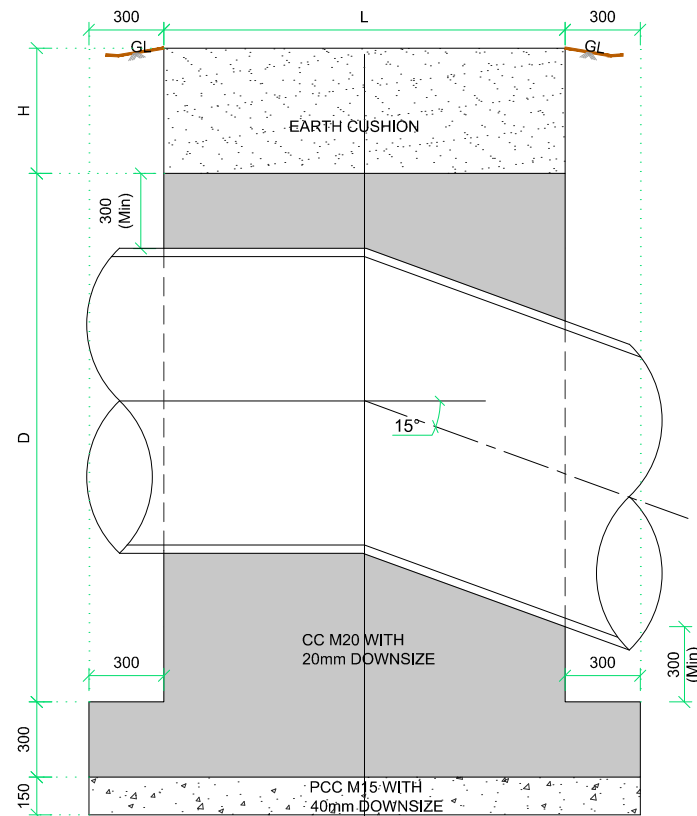
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Executive Engineer,

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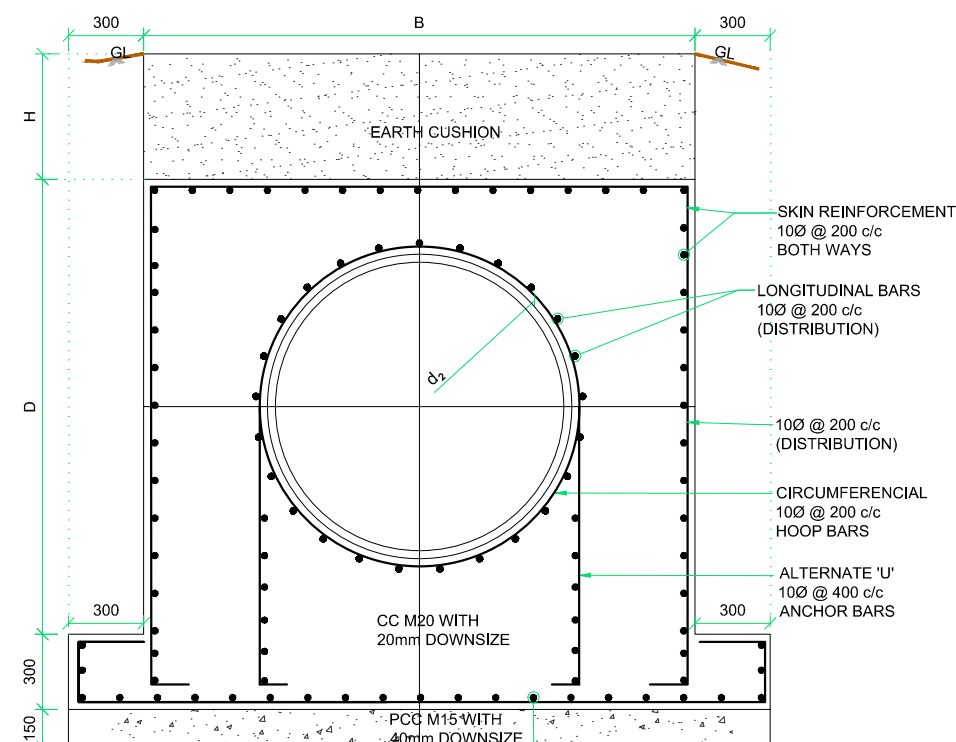


SECTION Y-Y
(SCALE 1:30)

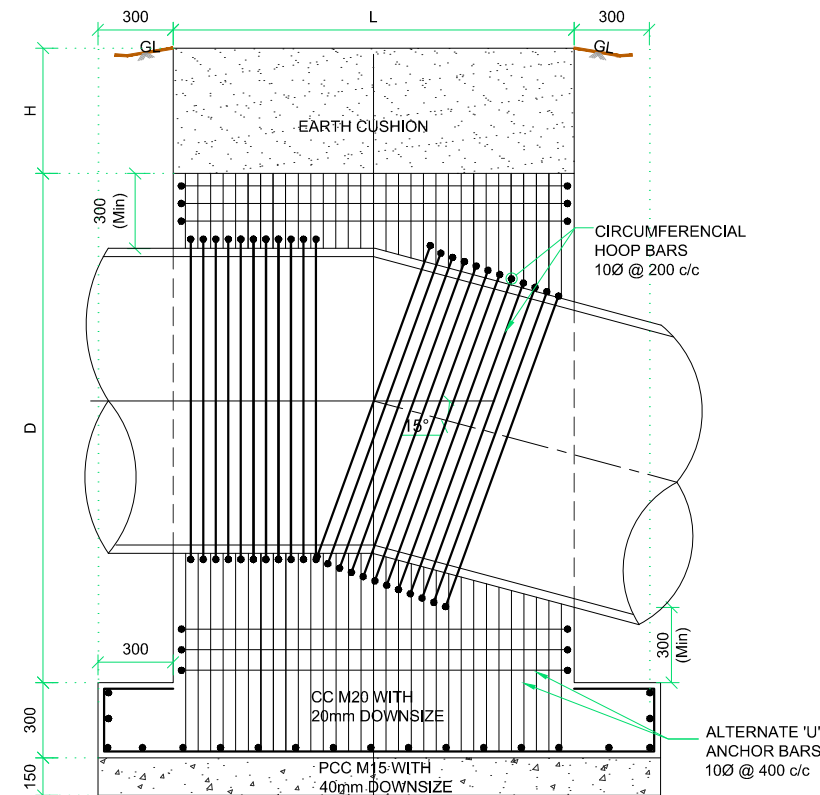


SECTION X-X FOR 15° BENDS
(SCALE 1:30)

	Details of Anchor Block	
1	Angle of pipe bend (α) in Degree	15 °
2	Inner diameter of pipe (d2) in mm	188.20
3	Shell thickness of pipe (t1) in mm	18.40
4	Outer diameter of Pipe (d1) in m	225
5	Length (L) in mm	400
6	Breadth (B) in mm	1100
7	Height of Anchor block in mm	1100
8	Overburden height (H) in mm (min)	600
9	Pipe Type	HDPE



SECTION Y-Y
(SCALE 1:30)



SECTION X-X FOR 15° BENDS
(SCALE 1:30)

NOTES AND SPECIFICATION

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- DO NOT MEASURE THE DIMENSION, ONLY WRITTEN DIMENSION SHALL BE FOLLOWED.
- ALL BANK WORKS SHALL BE THOROUGHLY COMPACTED AS PER STANDARDS.
- ROLLERS SHALL NOT BE DIRECTLY ALLOWED ON BARREL FOR COMPACTION OF BACKFILL, 1m HEIGHT OF EMBANKMENT ABOVE BARREL SHALL BE COMPACTED THOROUGHLY BY MANUAL MEANS/VIBRATORY COMPACTERS. ONLY ABOVE 1m OF EMBANKMENT ON BARREL, WHEREVER REQUIRED ROLLERS SHALL BE ALLOWED.
- THE ANCHOR BLOCK FOUNDATION BEARING CAPACITY SHALL NOT BE LESS THAN 30T/Sqm. IF IT IS FOUND TO BE LESS THE SAME HAS TO BE INTIMATED TO THE DESIGNER.
- THE FOUNDATION STRATA CONSIDERED IS SOIL FOR DESIGNING.
ANY VARIATION IS OBSERVED DURING EXECUTION THE SAME SHALL BE GOT REVIEWED BY THE DESIGNER.
- P.C.C THICKNESS ALL AROUND BLOCK IS 150mm.

ABBREVIATIONS:

B	- BREADTH.
c/c	- CENTRE TO CENTRE.
CC	- CEMENT CONCRETE.
D	- DEPTH.
GL	- GROUND LEVEL.
H	- HEIGHT.
L	- LENGTH.
AM	- MILD STEEL.
A	- ANGLE OF PIPE BEND.
d ₁	- OUTER DIAMETRE OF PIPE.
d ₂	- INNER DIAMETRE OF PIPE.
mm	- MILLIMETRE.
MIN	- MINIMUM.
PCC	- PLAIN CEMENT CONCRETE.
Ø	- DIA.
@	- AT.

TENDER PURPOSE DRAWING ONLY

Client	Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001
Project Title	Typical Drawing of Anchor Block
Drawing Title	Index Map for Kempkere tank by lifting water from Shalmala halla in Hubli taluk, Dhawad district
Executive Engineer,	Contractor.

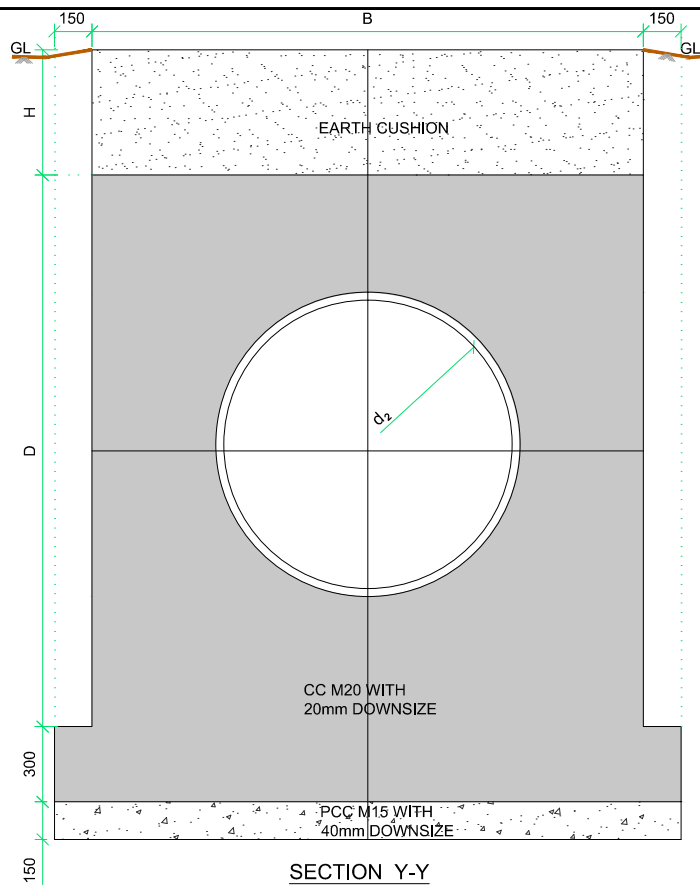
NOTES AND SPECIFICATION

1. ALL DIMENSIONS ARE IN MILLIMETRES AND REDUCED LEVELS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. DO NOT MEASURE THE DIMENSION, ONLY WRITTEN DIMENSION SHALL BE FOLLOWED.
3. ALL BANK WORKS SHALL BE THOROUGHLY COMPACTED AS PER STANDARDS.
4. ROLLERS SHALL NOT BE DIRECTLY ALLOWED ON BARREL FOR COMPACTION OF BACKFILL, 1m HEIGHT OF EMBANKMENT ABOVE BARREL SHALL BE COMPACTED THOROUGHLY BY MANUAL MEANS/VIBRATORY COMPACTERS. ONLY ABOVE 1m OF EMBANKMENT ON BARREL, WHEREVER REQUIRED ROLLERS SHALL BE ALLOWED.
5. THE ANCHOR BLOCK FOUNDATION BEARING CAPACITY SHALL NOT BE LESS THAN 30T/Sqm. IF IT IS FOUND TO BE LESS THE SAME HAS TO BE INTIMATED TO THE DESIGNER.
6. THE FOUNDATION STRATA CONSIDERED IS SOIL FOR DESIGNING.
ANY VARIATION IS OBSERVED DURING EXECUTION THE SAME SHALL BE GOT REVIEWED BY THE DESIGNER.
7. P.C.C THICKNESS ALL AROUND BLOCK IS 150mm.

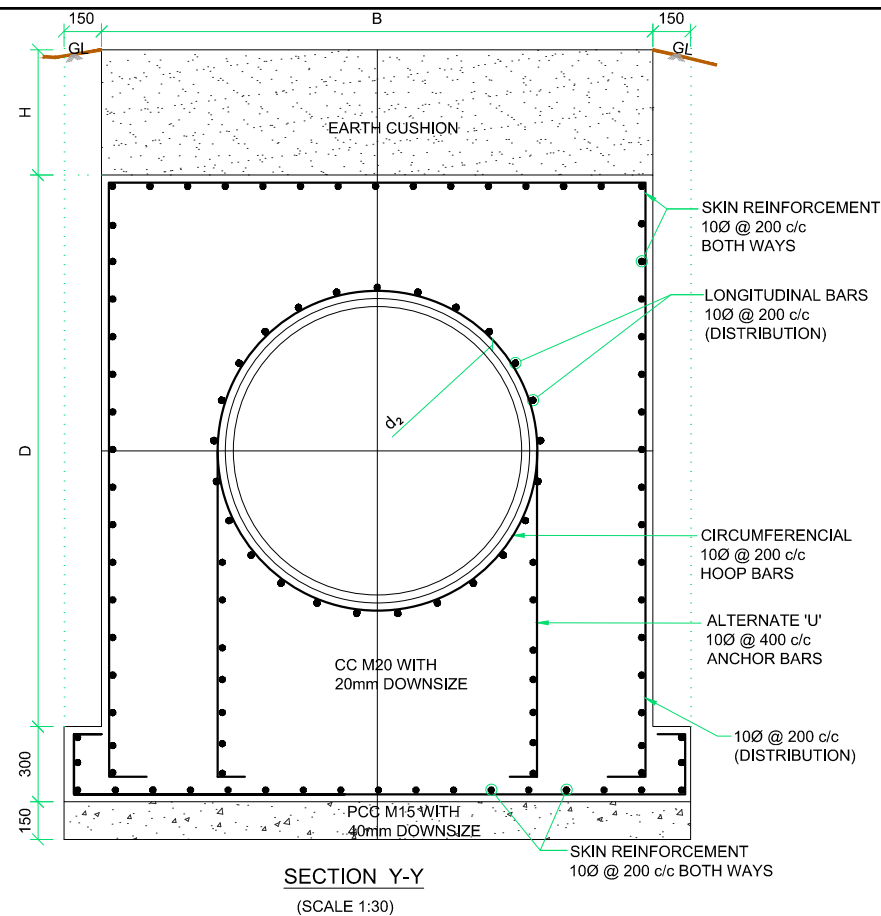
ABBREVIATIONS:

B	- BREADTH.
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A	- ANGLE OF PIPE BEND.
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mm	- MILLIMETRE.
MIN	- MINIMUM.
PCC	- PLAIN CEMENT CONCRETE.
Ø	- DIA.
@	- AT.

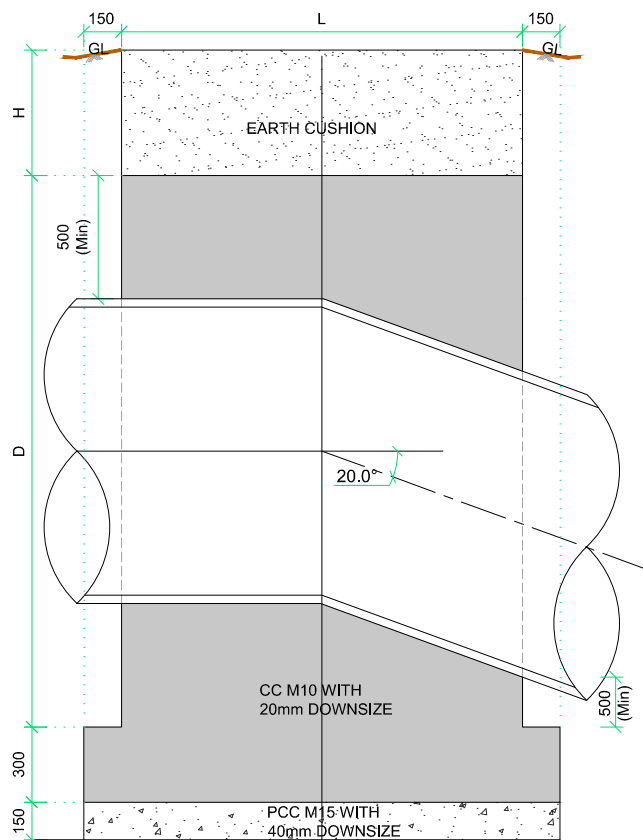
TENDER PURPOSE DRAWING ONLY



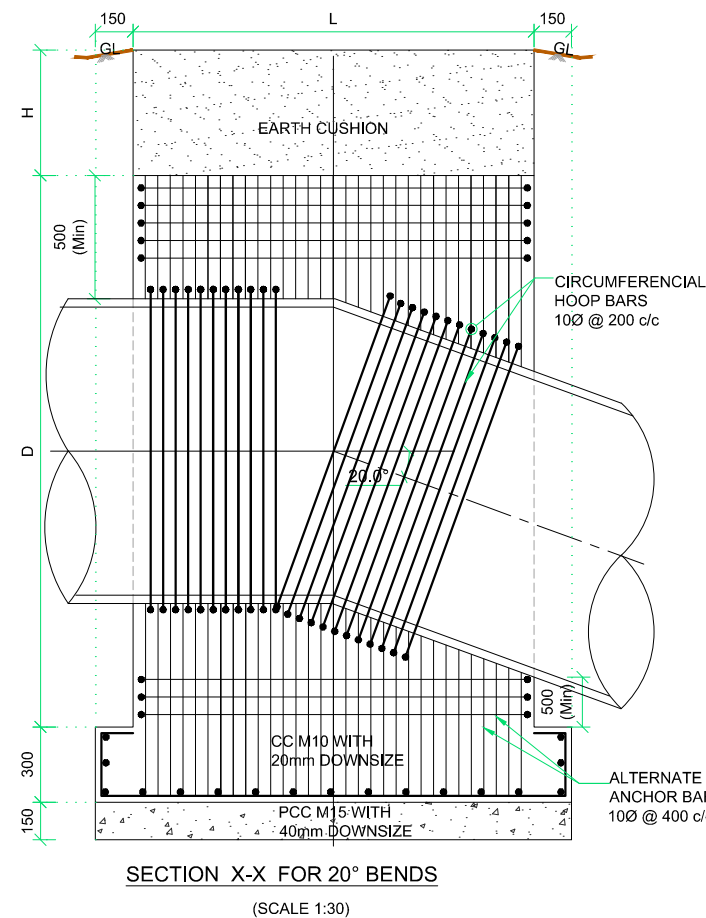
SECTION Y-Y
(SCALE 1:30)



SECTION Y-Y
(SCALE 1:30)



SECTION X-X FOR 20° BENDS
(SCALE 1:30)



SECTION X-X FOR 20° BENDS
(SCALE 1:30)

	Details of Anchor Block	
1	Angle of pipe bend (α) in Degree	20 °
2	Inner diameter of pipe (d2) in mm	188.20
3	Shell thickness of pipe (t1) in mm	18.40
4	Outer diameter of Pipe (d1) in m	225
5	Length (L) in mm	500
6	Breadth (B) in mm	1100
7	Height of Anchor block in mm	1100
8	Overburden height (H) iin mm (min)	600
9	Pipe Type	HDPE

Client



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

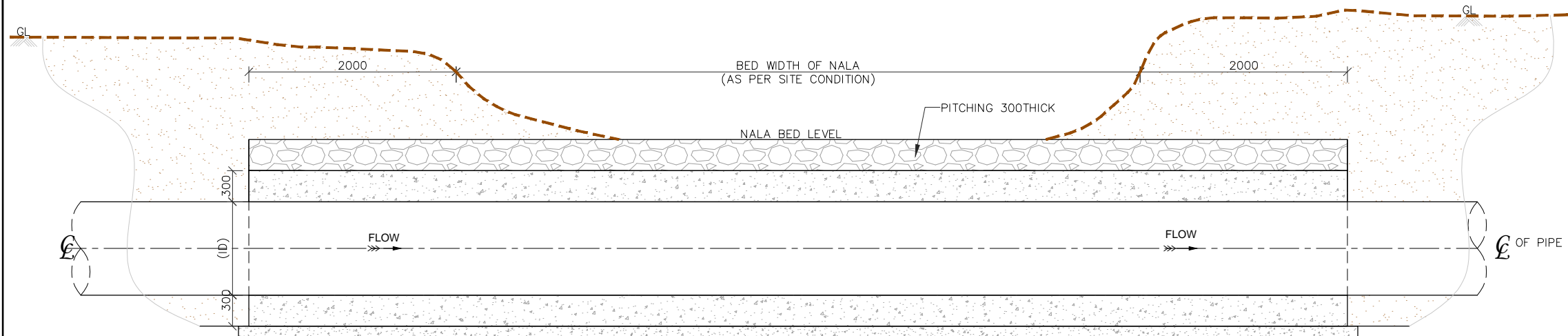
Typical Drawing of Anchor Block

Drawing Title

Index Map for Kempkere tank by lifting water from
Shalmala halla in Hubli taluk, Dhawad district

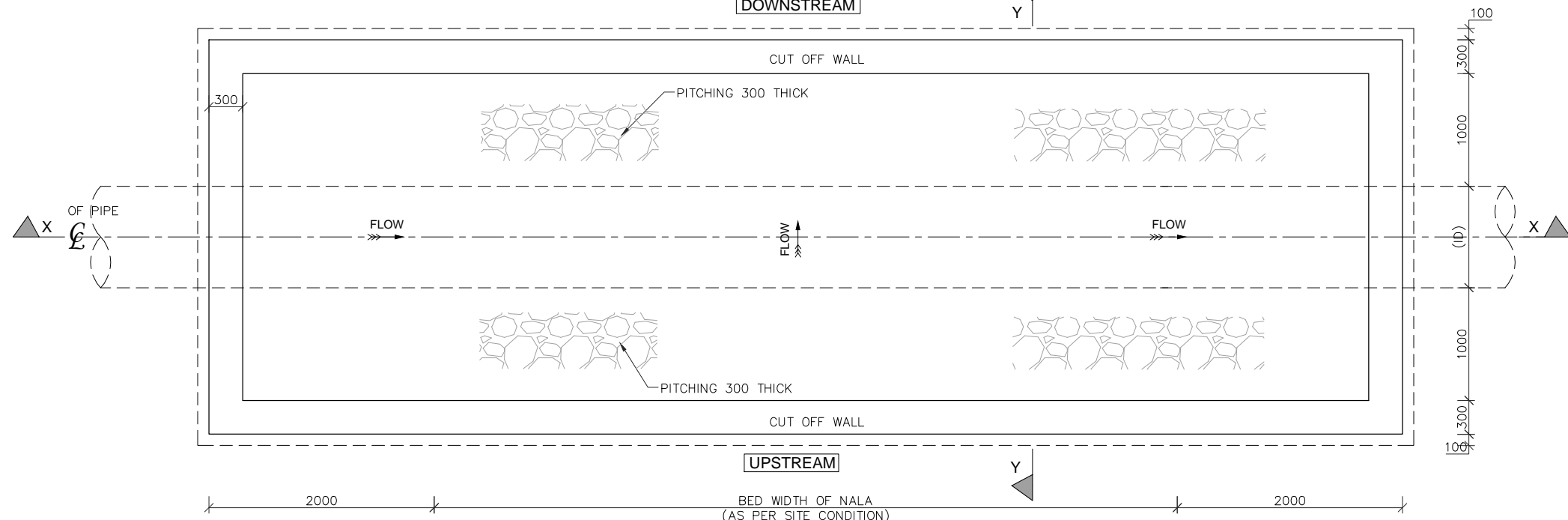
Executive Engineer,

Contractor.

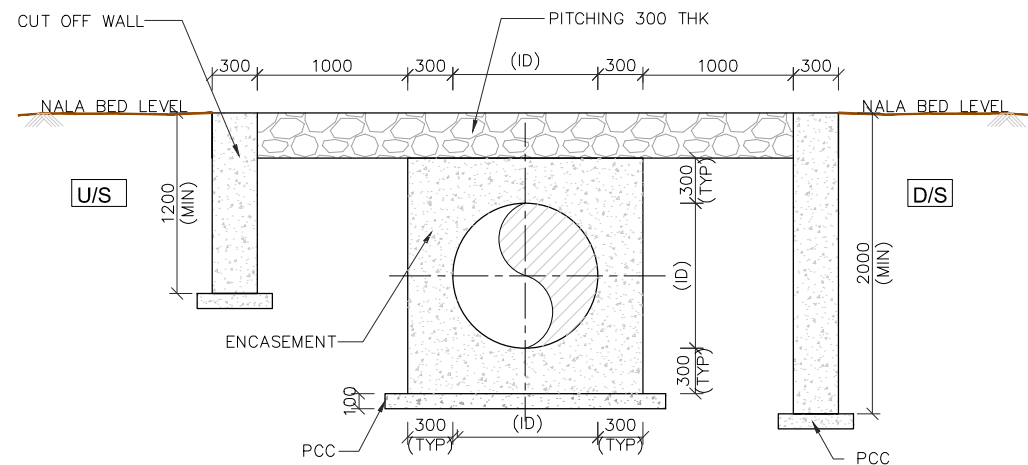


SECTION X-X
(SCALE 1:50)

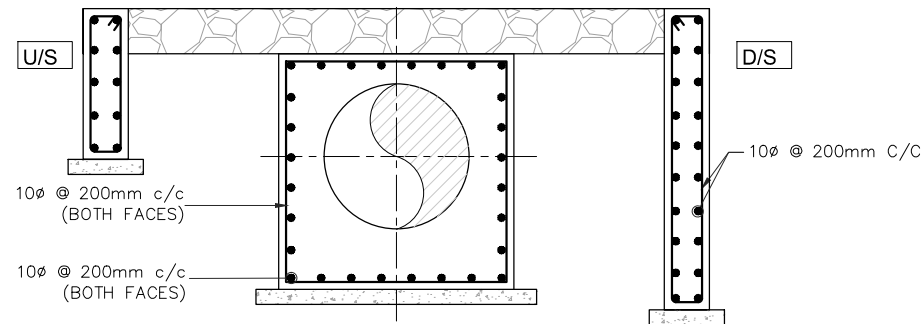
DOWNSTREAM



PLAN
(SCALE 1:50)



SECTION Y-Y
(DIMENSIONAL DETAILS)
(SCALE 1:50)



SECTION Y-Y
(REINFORCEMENT DETAILS)
(SCALE 1:50)

Hard Passage				
S.No.	Inner Dia in mm	Thickness in mm	Outer Dia in mm	Type of Pipe
1	188.20	18.40	225.00	HDPE

TENDER PURPOSE DRAWING ONLY

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS.
2. DO NOT MEASURE THE DRAWING, FOLLOW THE DIMENSION MENTIONED.
3. GRADE OF CONCRETE FOR RCC WORKS SHALL BE M20
4. GRADE OF STEEL SHALL BE Fe500.
5. 50mm COVER SHALL BE PROVIDED FOR REINFORCEMENT.
6. ALL PCC SHALL BE MINIMUM 150mm THK. OF GRADE M15
7. DEVELOPMENT LENGTH SHALL BE 50 TIMES THE BAR DIAMETER
8. FOR CROSSING DETAILS AND DIAMETER OF CROSSING PIPE, REFER ALIGNMENT PLAN & L-SECTION DRAWING.
9. AT CROSSING LOCATIONS, THE OVERBURDEN SOIL ABOVE PIPE SHALL BE WELL COMPACTED.
10. THE LENGTH OF CROSSING AND ITS PROJECTION SHOULD BE AS PER ACTUAL REQUIREMENT OF CROSSING AND AS PER SITE CONDITION.
11. THE ENCASING CONCRETE SHOULD BE LAID ON EXCAVATED NATURAL GROUND IF OVER EXCAVATION DONE IT SHALL BE FILLED WITH PCC.
12. PedestalBLOCKS SHOULD BE PROVIDED WHEN THE GRADIENT IN BOTH FALLING AND RISING BECOMES STEEPER THAN 1:6 OR $\theta > 10^\circ$
13. ANY DISCREPANCY IN THE DWG. SHOULD BROUGHT TO THE NOTICE OF THE CONSULTANTS PRIOR TO EXECUTION.

Client



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

Filling of Kempkere Tank Filling Scheme

Drawing Title

Typical Drawing for Hard Passage

Executive Engineer,

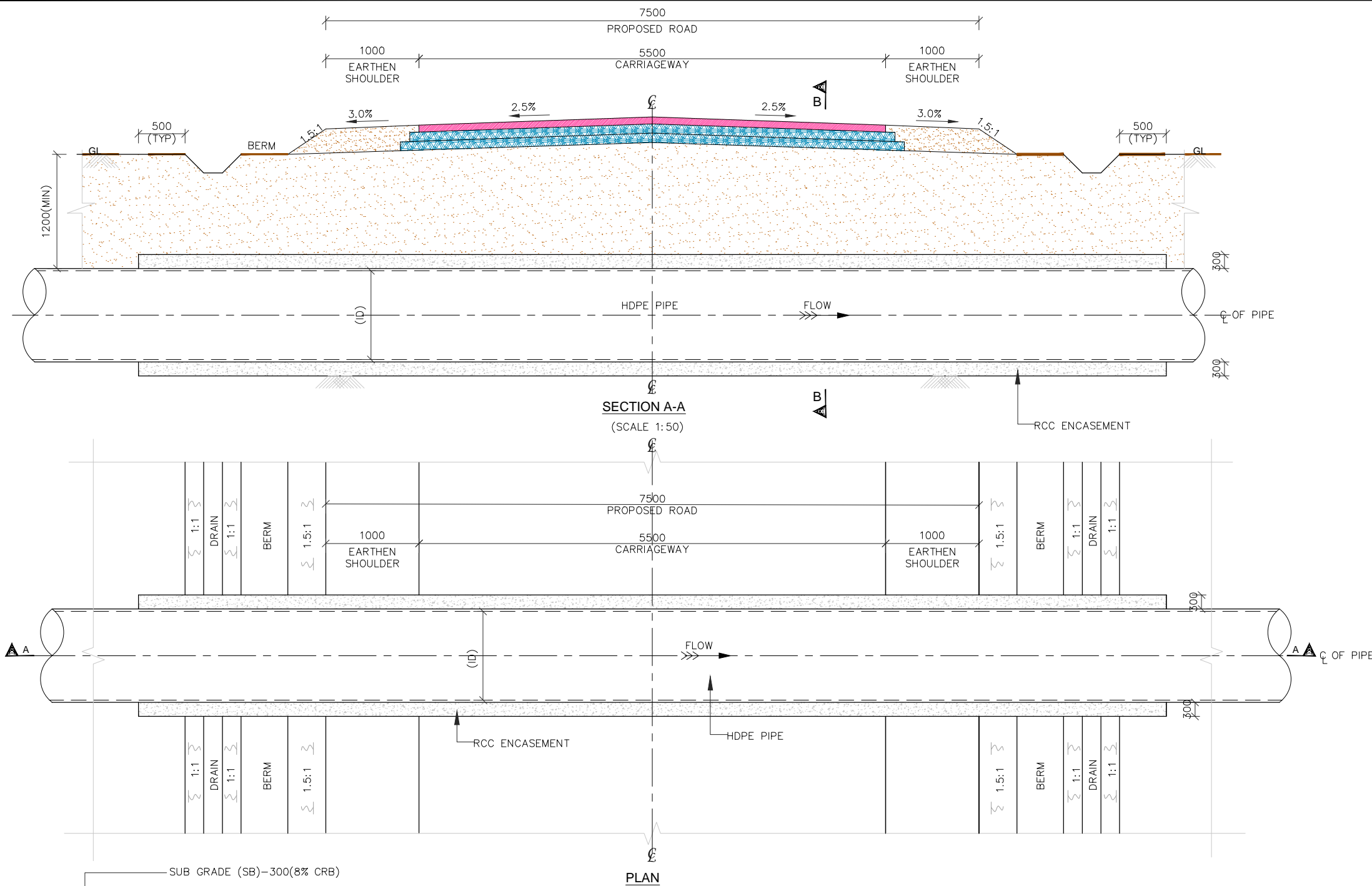
Contractor.

NOTES:-

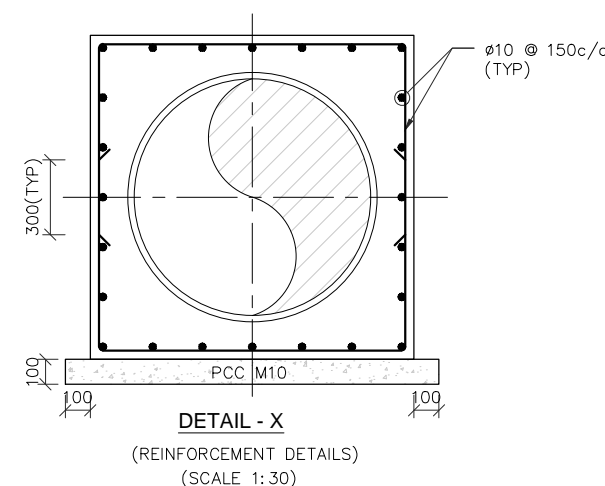
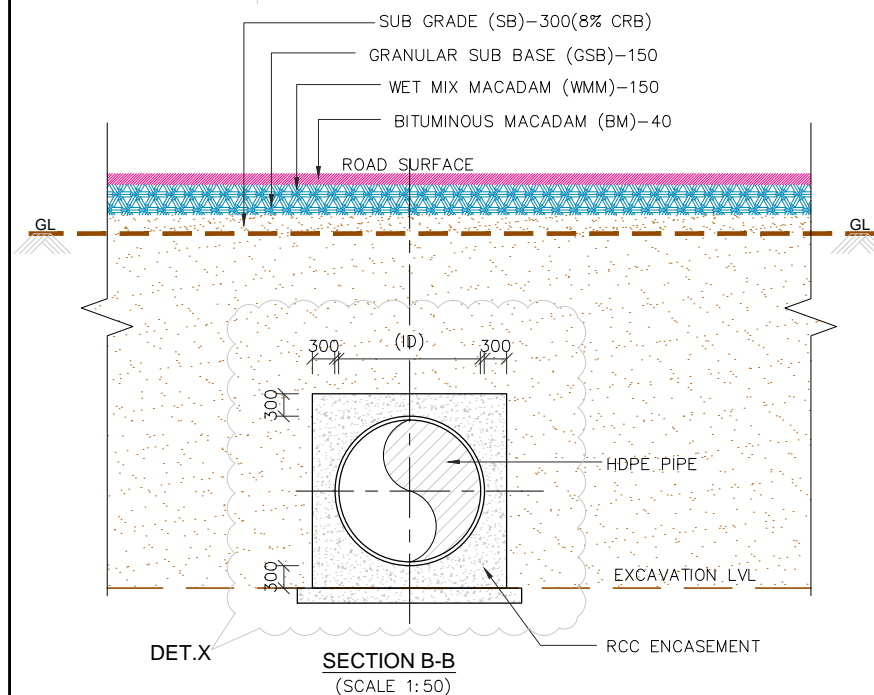
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS.
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12. ANCHOR BLOCKS SHOULD BE PROVIDED WHEN THE GRADIENT IN BOTH FALLING AND RISING BECOMES STEEPER THAN 1:6 OR $\theta > 10^\circ$
13. ALL NECESSARY ACTION FOR DIVERSION OF THE TRAFFIC SHALL BE ARRANGED AS PER SITE REQUIREMENT.
14. PERMISSION FROM RESPECTIVE ROAD AUTHORITY IS TO BE OBTAINED BEFORE EXECUTION.
15. ANY DISCREPANCY IN THE DWG. SHOULD BROUGHT TO THE NOTICE OF THE CONSULTANTS PRIOR TO EXECUTION.

TENDER PURPOSE DRAWING ONLY

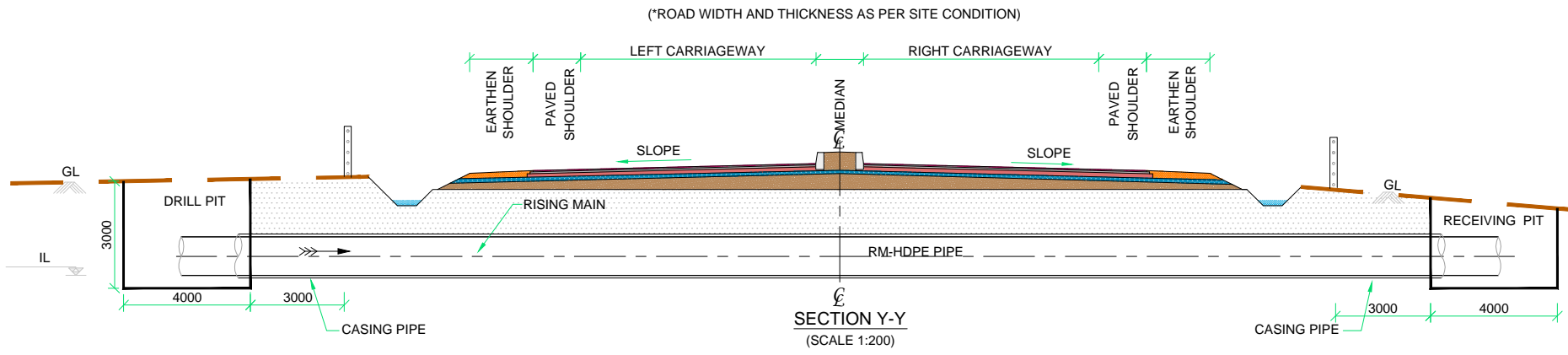
Client	Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001
Project Title	Filling of Kempkere Tank Filling Scheme
Drawing Title	Typical Cross Section of Asphalted Road Crossing
Executive Engineer,	Contractor.



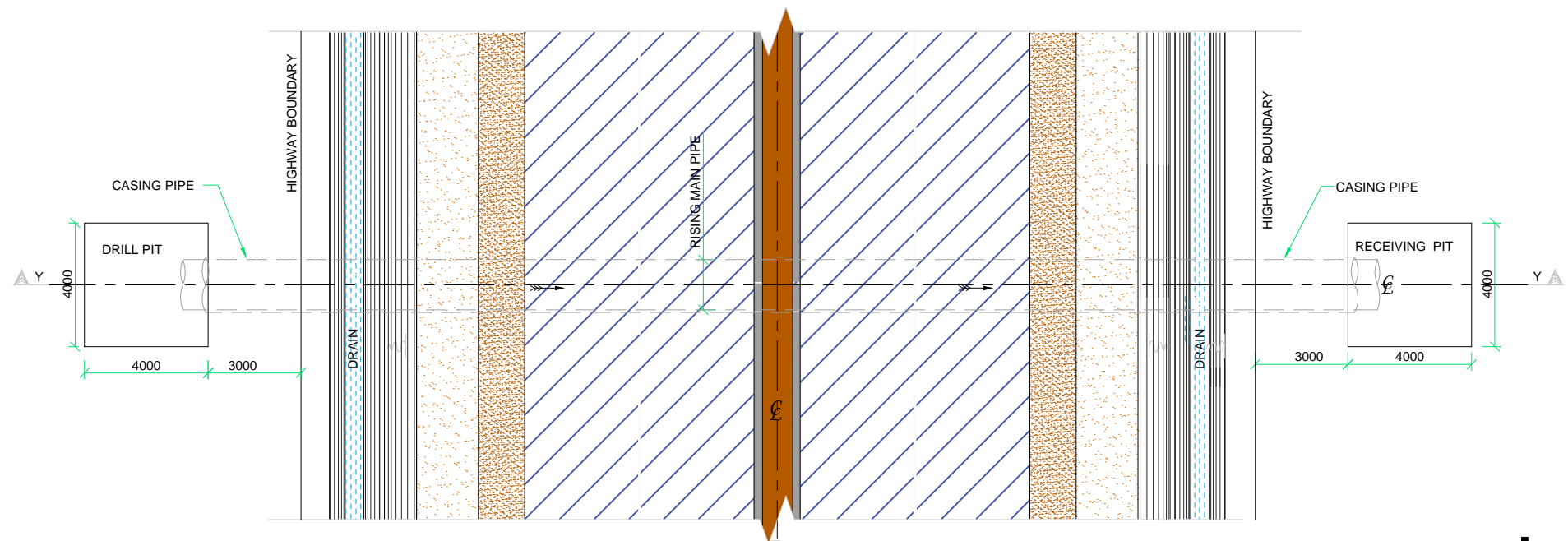
DETAILS OF ROAD CROSSINGS FOR MS PIPE
(SCALE 1:50)



Asphalted Road Crossing				
S.No.	Inner Dia in mm	Thickness in mm	Outer Dia in mm	Type of Pipe
1	188.20	18.40	225.00	HDPE

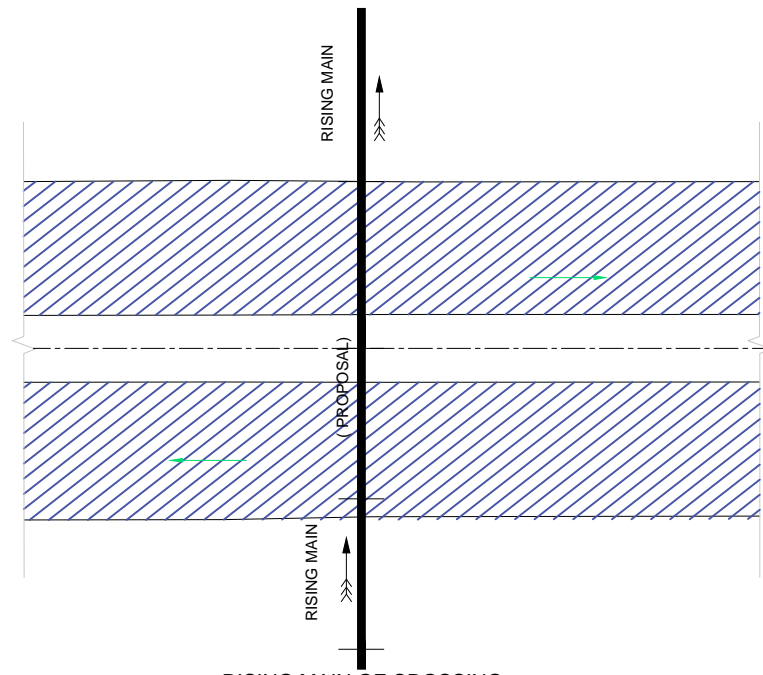


RISING MAIN OF CROSSING
NATIONAL HIGHWAY



RISING MAIN OF CROSSING
NATIONAL HIGHWAY

Sl No	Description	Innner Diameter in mm	Outer Diameter in mm	Thickness in mm	Class of pipe
1.	Rising main	188.20	225	18.40	HDPE




RISING MAIN OF CROSSING
NATIONAL HIGHWAY

REV.	NATURE OF REVISION AND DESCRIPTION	DATE	DRW.	DSG.	CHK.	APP.
-	-	-	-	-	-	-

- NOTES:-
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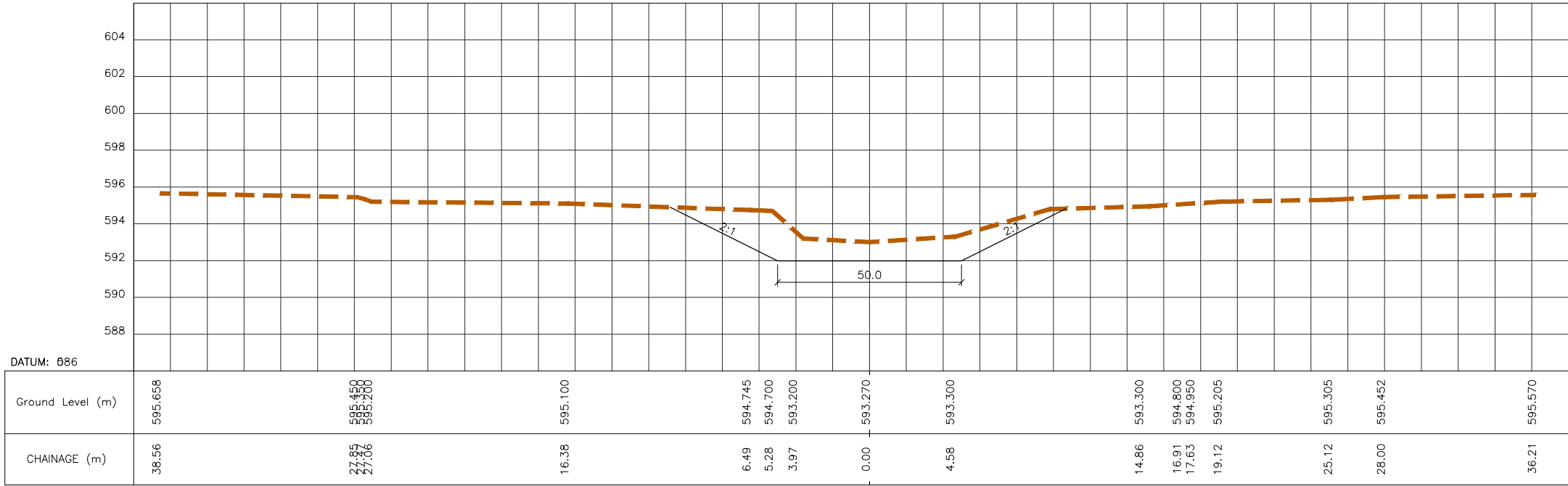
TENDER PURPOSE DRAWING ONLY

Client
 Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

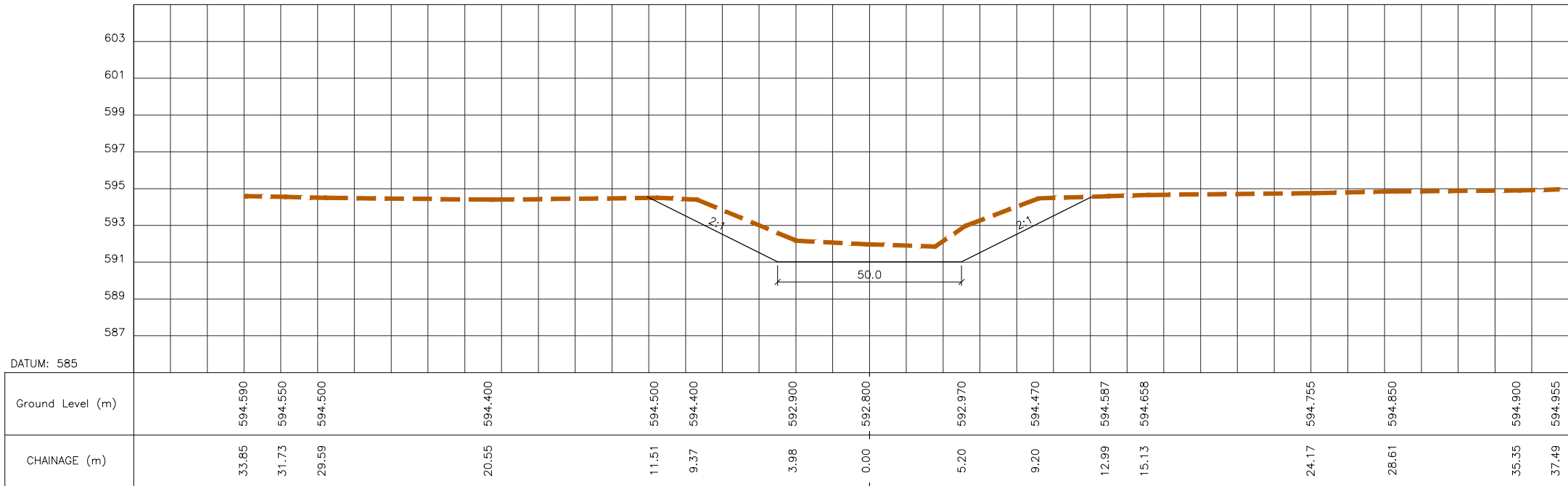
Project Title
Filling of Kempkere Tank Filling Scheme

Drawing Title
Typical Cross Section of National Highway Crossing

Executive Engineer,	Contractor.
---------------------	-------------



CROSS SECTION AT CH : 0.0




CROSS SECTION AT CH : 200.0

- NOTES:-**
- 1) ALL DIMENSIONS ARE IN MILLIMETRE
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 - 3) FOR SERVICE ROAD AND INSPECION PATH EXCAVATED EARTH MAY BE USED IF IT IS APPROVED BY THE ENGINEER INCHARGE AND SHALL BE AS PER SPECIFICATIONS.
 - 4) THE STORM WATER SHALL BE SUITABLY DRAINED TO THE NEAREST VALLEY.
 - 5) THE EXPANSION JOINT SHALL BE PROVIDED WHEREVER STRUCTURE INTERSECT THE CANAL LINING.
 - 6) THE SPACING OF CONTRACTION JOINTS SHALL BE 5m C/C AND PROVIDED WHEREVER LINING IS CONTINUOUS.
 - 7) WHERE GROUND WATER TABLE IS ABOVE C.B.L UNDER DRAINAGE ARRANGEMENT WITH NR.V. SHALL BE PROVIDED AS SHOWN IN SEPARATE DRAWING.
 - 8) CATCH WATER DRAINS ESPECIALLY ON U/S SIDE SHALL BE PROPERLY DESIGNED FOR INDIVIDUAL CATCHMENTS.
 - 9) A GAP OF 5m WIDTH SHALL BE LEFT IN SPOIL BANKS AT 150m INTERVAL FOR DRAINAGE.
 - 10) WHEREVER STRATA CHANGES BETWEEN BERMS, SIDE SLOPES IN THAT HEIGHT SHALL BE JUDICIOUSLY PROVIDED.
 - 11) * SERVICE ROAD WIDTH FOR INTAKE CANAL SHALL BE INCREASED FROM 4.5m TO 7.5m AFTER SH CROSSING AT CH:160.0m TO JACKWELL LOCATION AT CH:880.0m FOR EXTRA PROVISION OF APPROACH ROAD.

- SIDE SLOPES:**
- a. IN CUTTING
WATER PRISM = 1:1
 - i. IN NORMAL CUTTING
a. IN HR/SR = 1:1
b. IN AKS/BC SOIL = 1.5:1
 - ii. IN DEEP CUT REACHES
a. HR = 0.5:1
b. SR = 1:1
c. AKS/BC SOIL = 1.5:1
 - b. IN PARTIAL BANKING/BANKING
i. INNER n=1.5
ii. OUTER n=1.5

- LEGEND**
- BW - BED WIDTH
 - CBL - CANAL BED LEVEL
 - FSL - FULL SUPPLY LEVEL
 - FBL - FREE BOARD LEVEL
 - FSD - FULL SULLY DEPTH
 - FB - FREE BOARD
 - GL - GROUND LEVEL
 - CC - CEMENT CONCRETE
 - IP - INSPECTION PATH

TENDER PURPOSE DRAWING ONLY



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

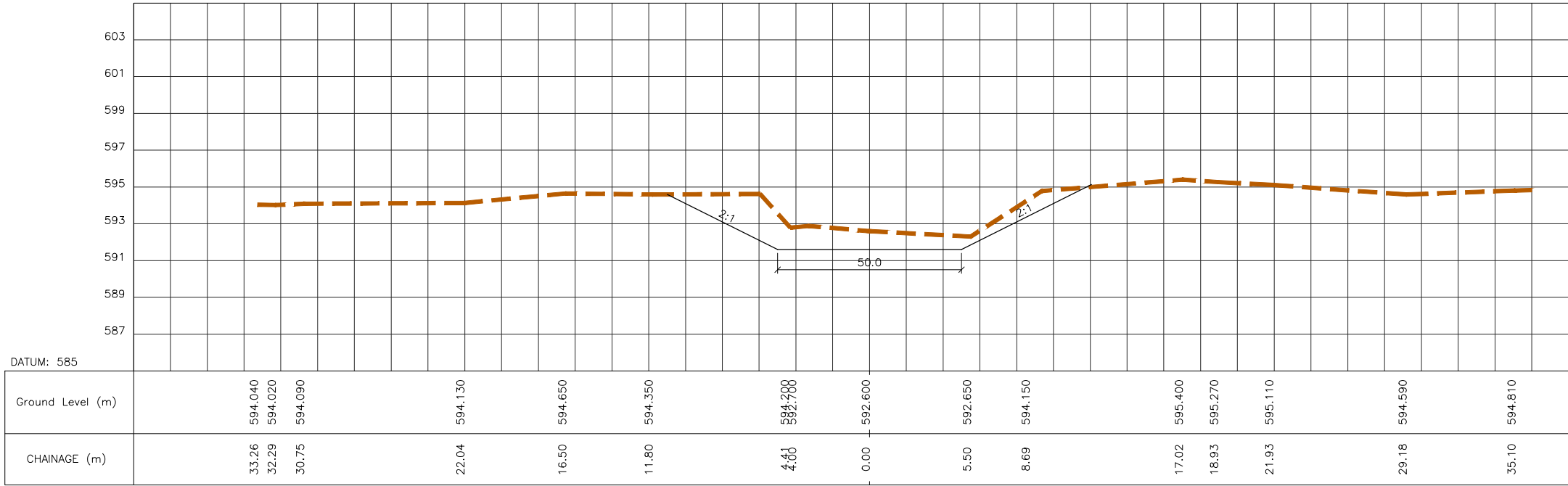
Client

Project Title
Filling of Kempkere Tank Filling Scheme

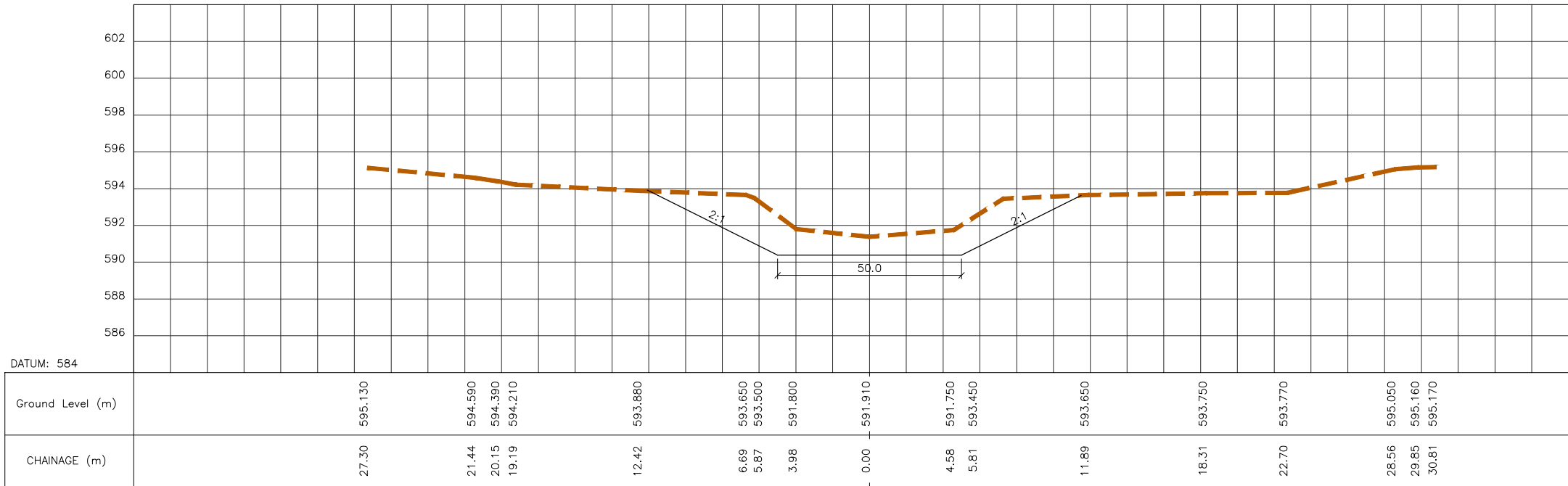
Drawing Title
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 400.0




CROSS SECTION AT CH : 600.0

- NOTES:-**
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 - IP - INSPECTION PATH

TENDER PURPOSE DRAWING ONLY

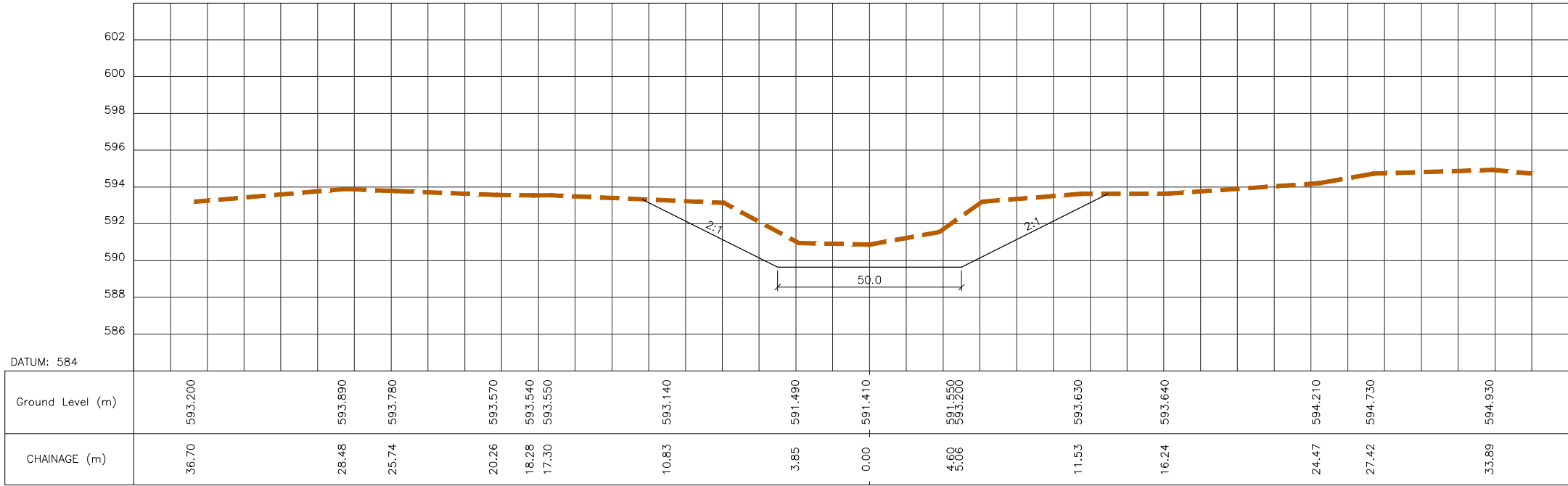
Client  **Karnataka Neeravari Nigam Limited**
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title
Filling of Kempkere Tank Filling Scheme

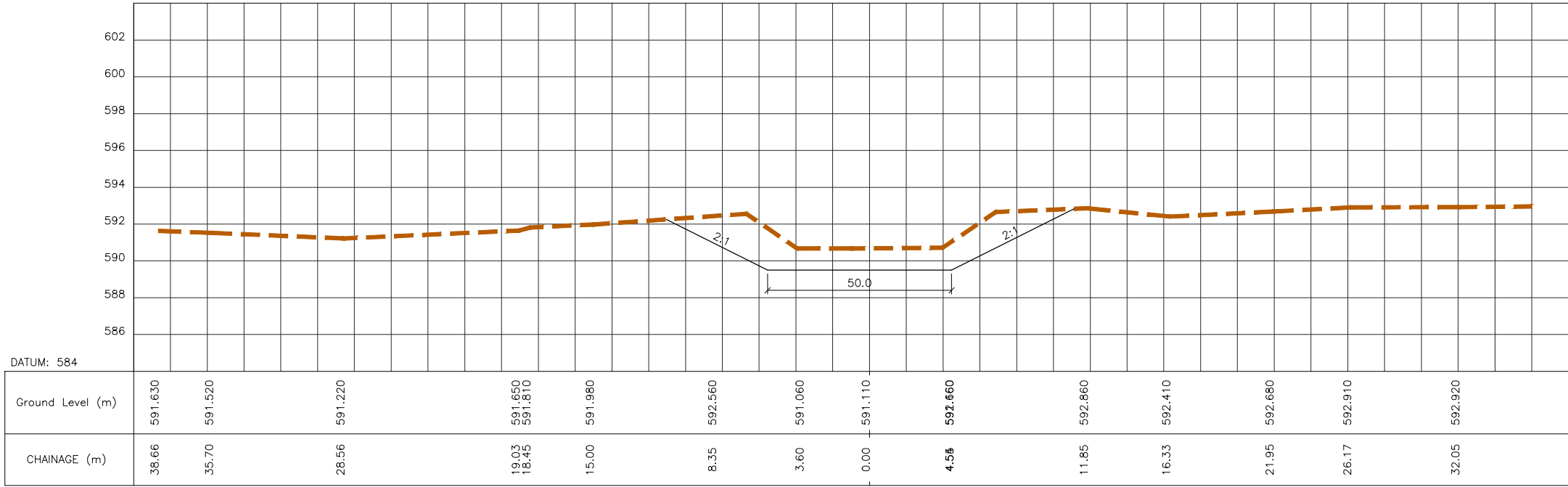
Drawing Title
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 800.0




CROSS SECTION AT CH : 1000.0

- NOTES:-**
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 - IP – INSPECTION PATH

TENDER PURPOSE DRAWING ONLY

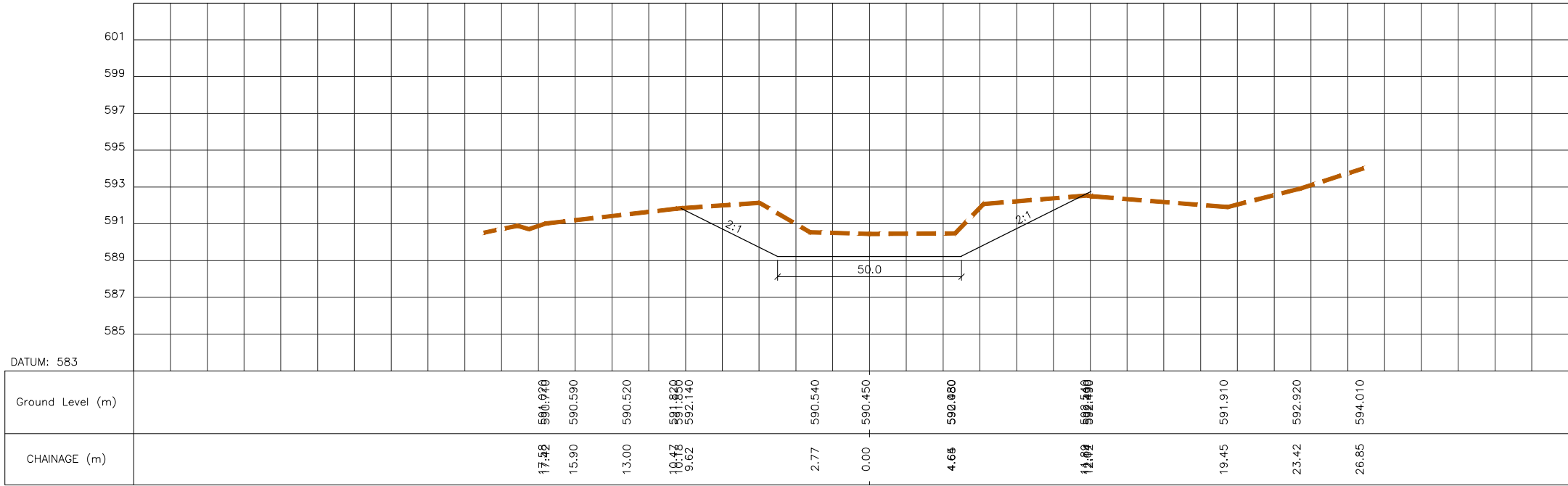
Client
 **Karnataka Neeravari Nigam Limited**
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title
Filling of Kempkere Tank Filling Scheme

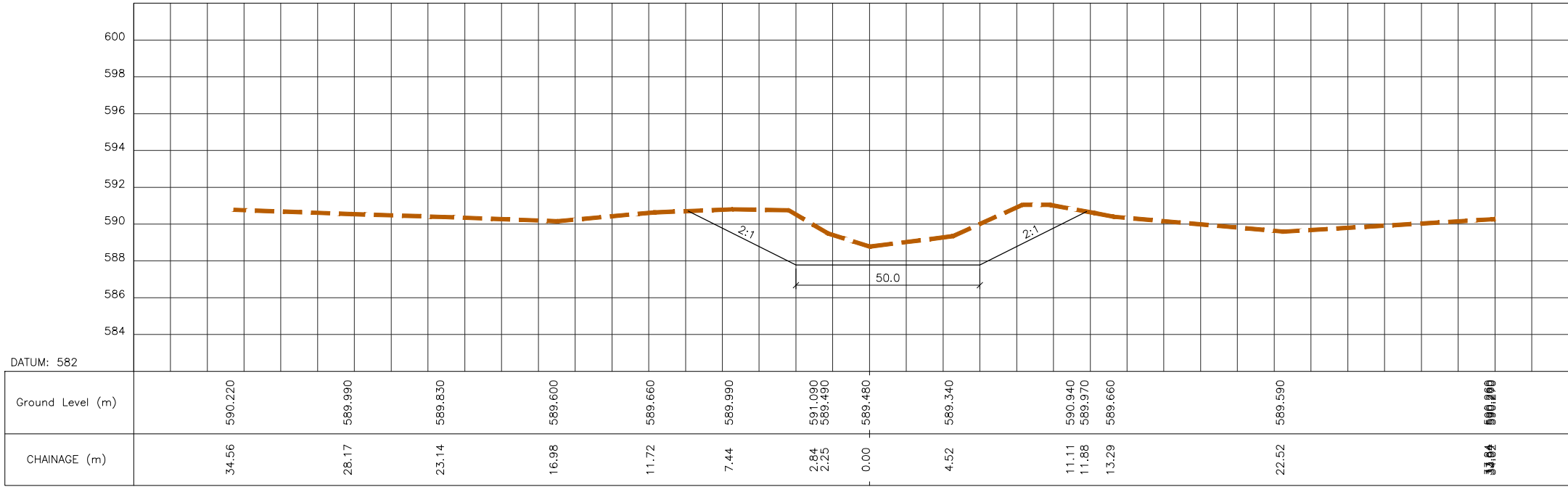
Drawing Title
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 1200.0




CROSS SECTION AT CH : 1400.0

- NOTES:-
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 - b. IN PARTIAL BANKING/BANKING
i. INNER n=1.5
ii. OUTER n=1.5

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 - CBL - CANAL BED LEVEL
 - FSL - FULL SUPPLY LEVEL
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TENDER PURPOSE DRAWING ONLY



Client

Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

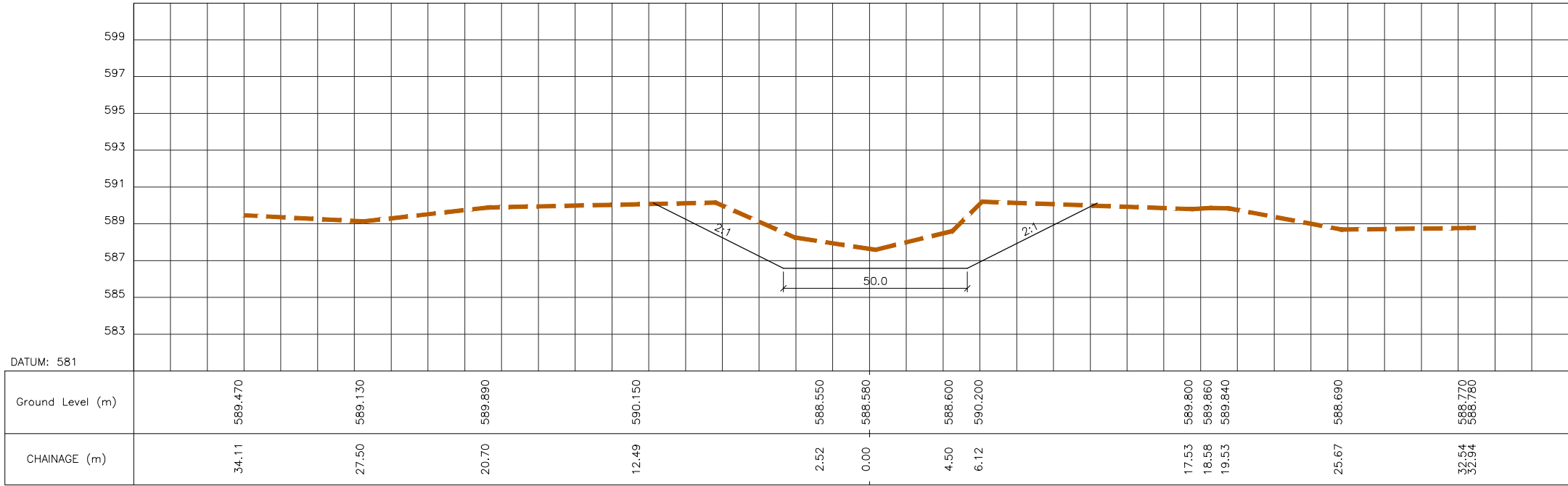
Filling of Kempkere Tank Filling Scheme

Drawing Title

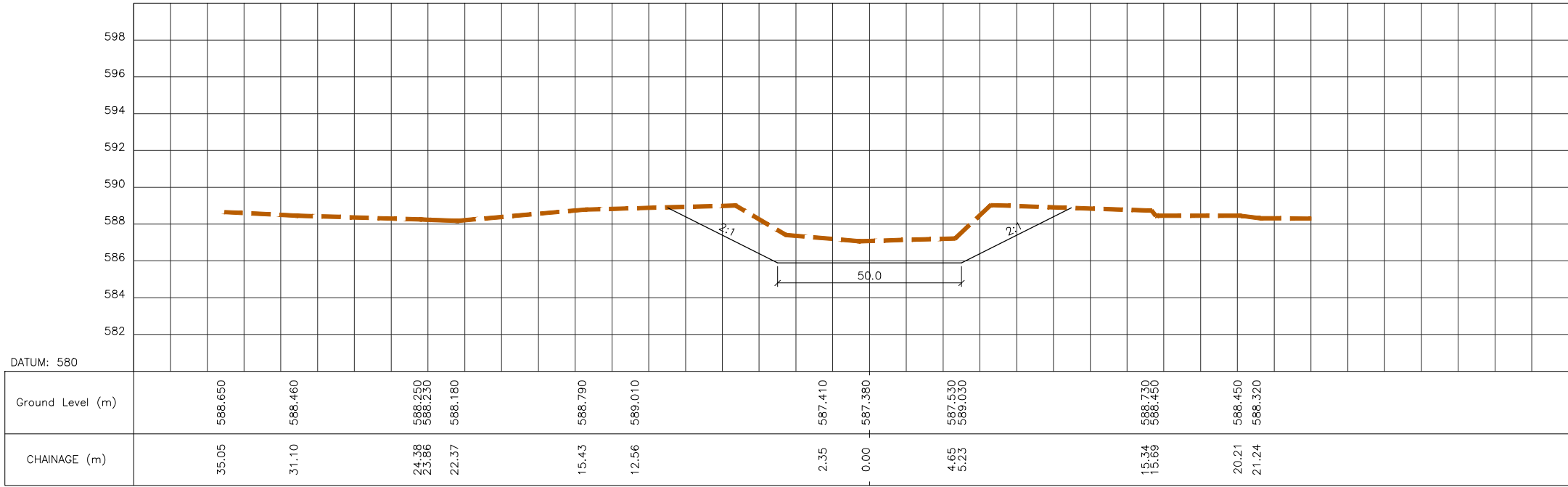
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 1600.0



CROSS SECTION AT CH : 1800.0


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TENDER PURPOSE DRAWING ONLY

Client

 **Karnataka Neeravari Nigam Limited**
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

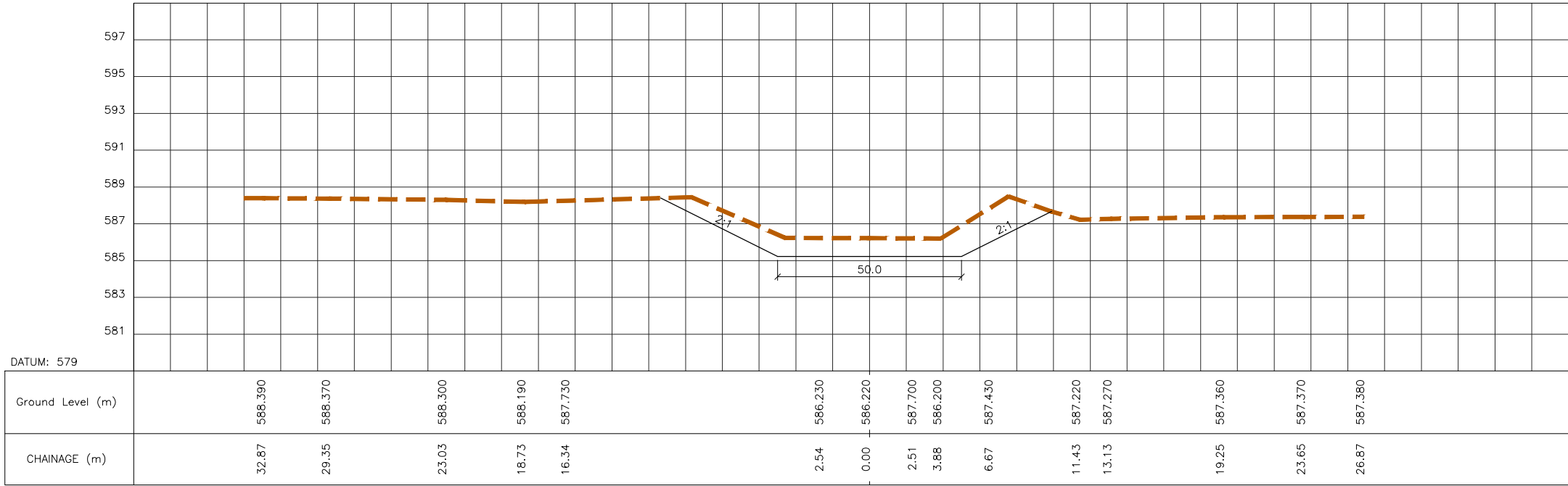
Filling of Kempkere Tank Filling Scheme

Drawing Title

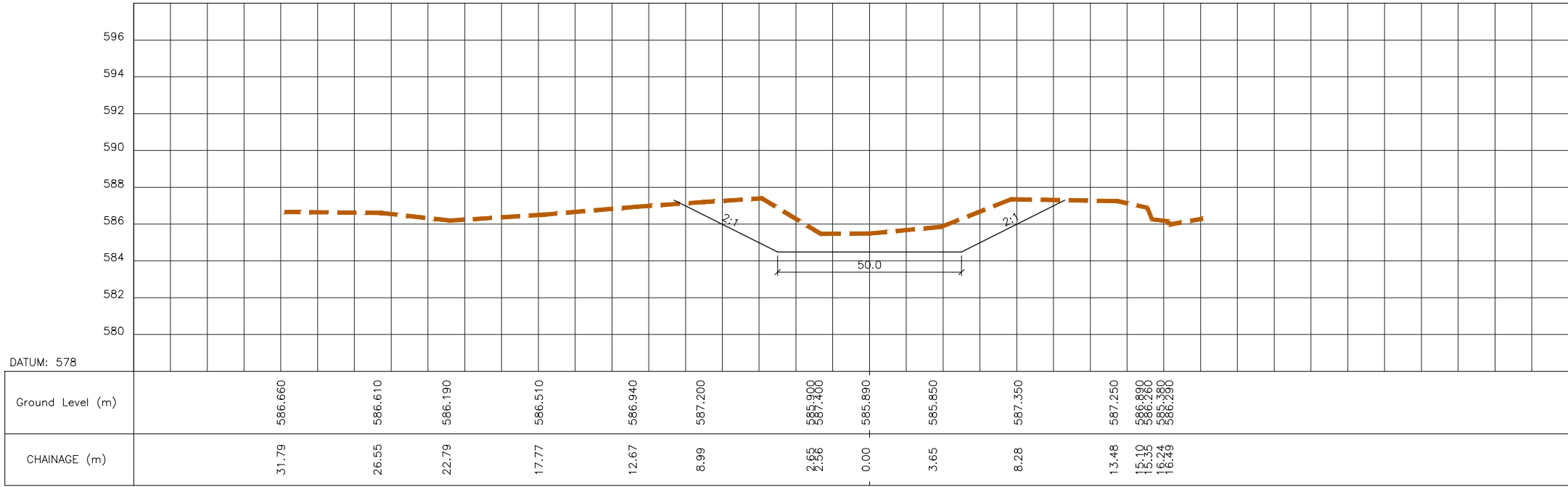
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 2000.0




CROSS SECTION AT CH : 2200.0

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TENDER PURPOSE DRAWING ONLY

Client	
<div><div>Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001</div></div>	
Project Title	
Filling of Kempkere Tank Filling Scheme	
Drawing Title	
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Contractor	Executive Engineer,

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TENDER PURPOSE DRAWING ONLY

Client



Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

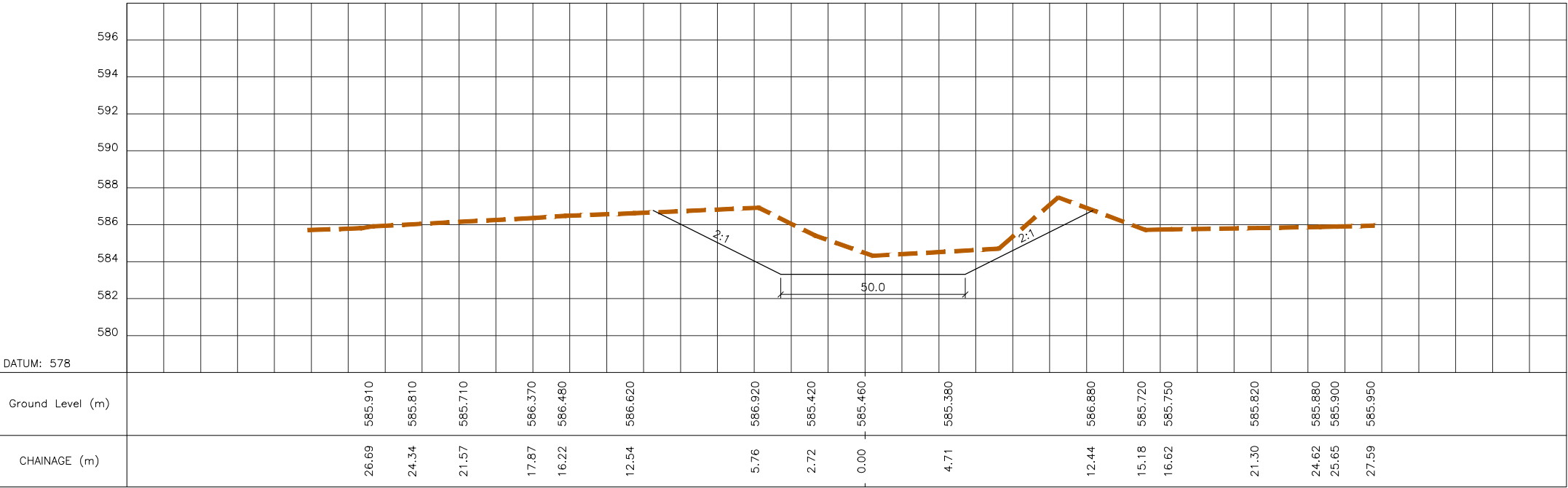
Filling of Kempkere Tank Filling Scheme

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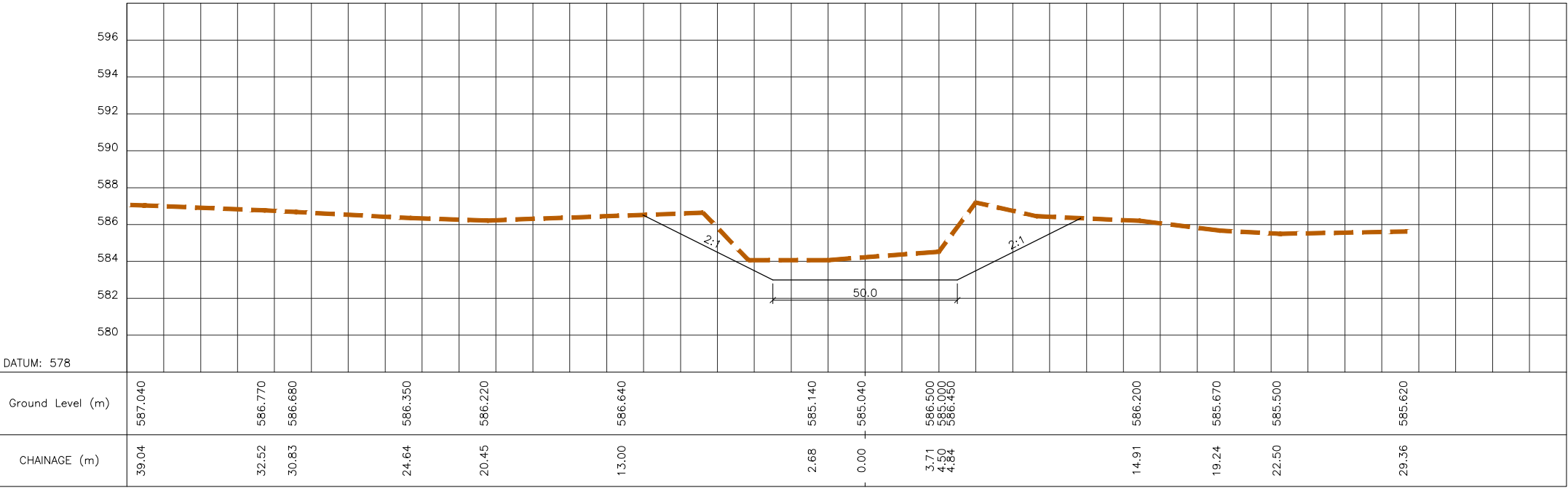
Shalmala Halla Detailed Cross Section

Contractor

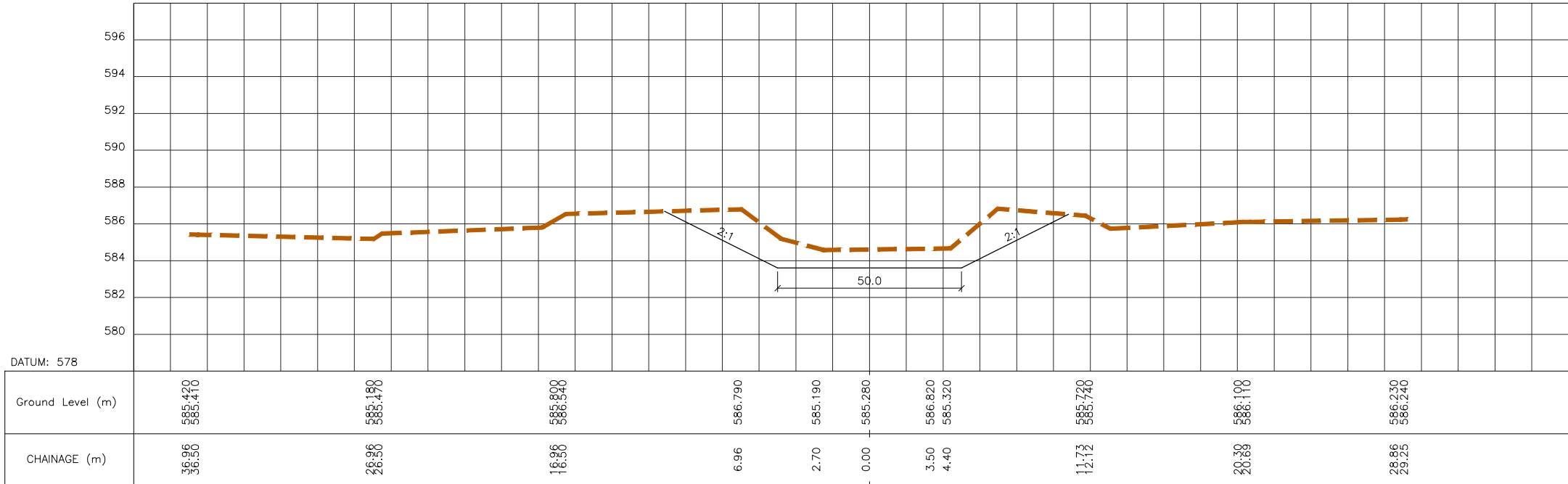
Executive Engineer,



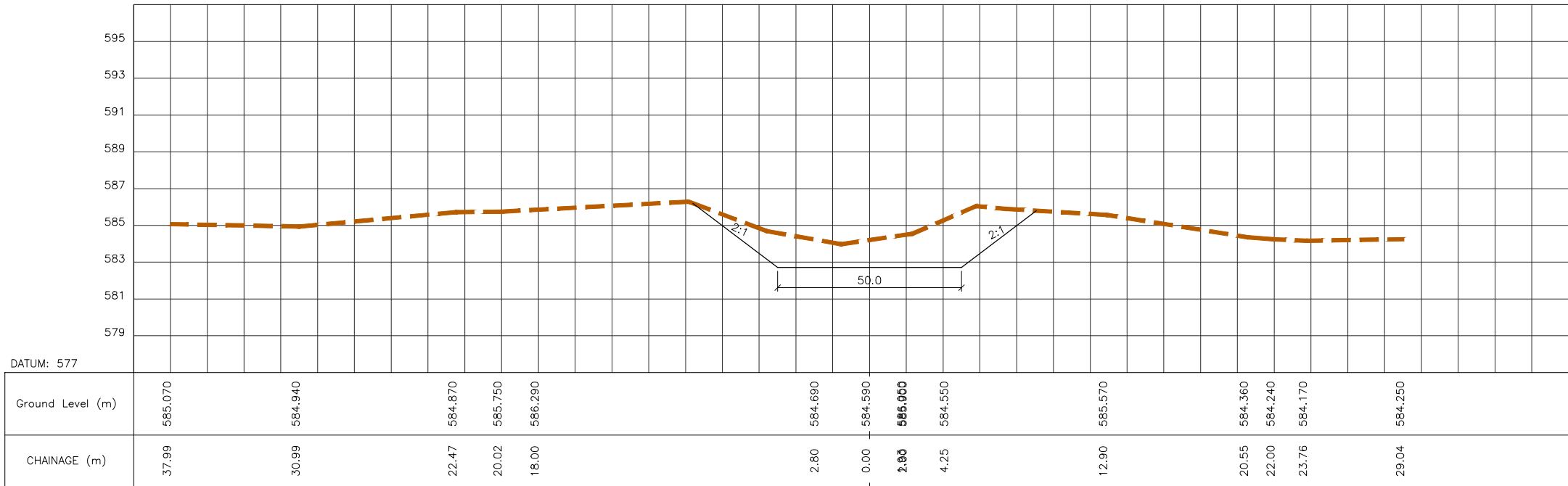
CROSS SECTION AT CH : 2400.0



CROSS SECTION AT CH : 2600.0



CROSS SECTION AT CH : 2800.0



CROSS SECTION AT CH : 3000.0


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TENDER PURPOSE DRAWING ONLY

Client

 Karnataka Neeravari Nigam Limited
(A Govt. of Karnataka Undertaking)
Bangalore - 560 001

Project Title

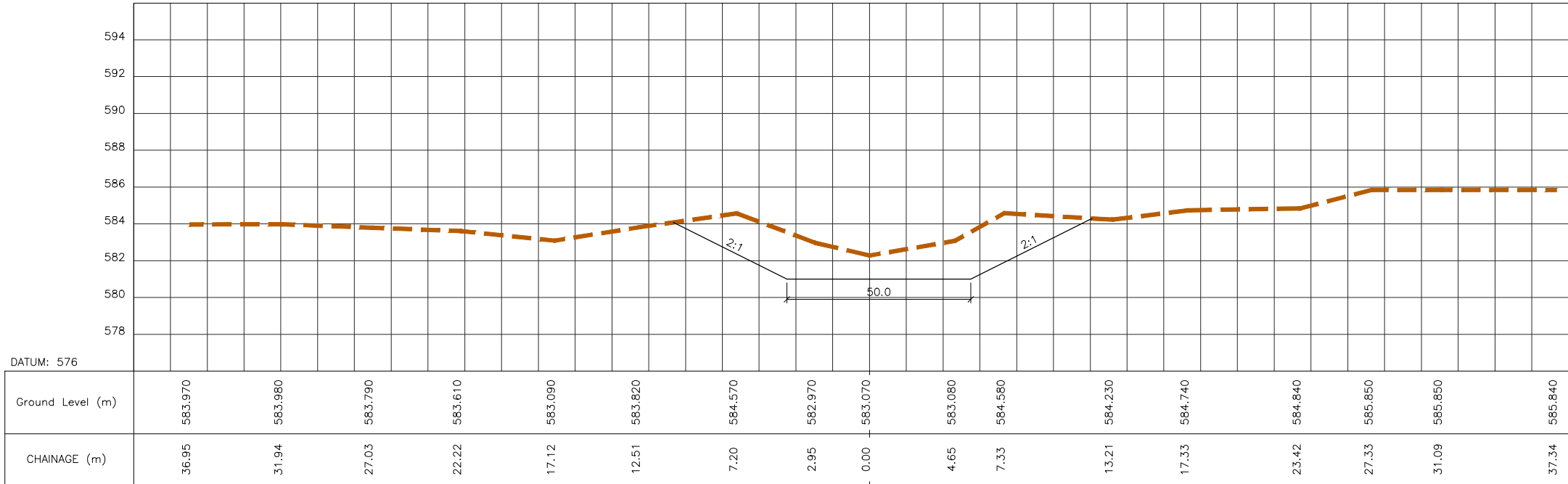
Filling of Kempkere Tank Filling Scheme

Drawing Title

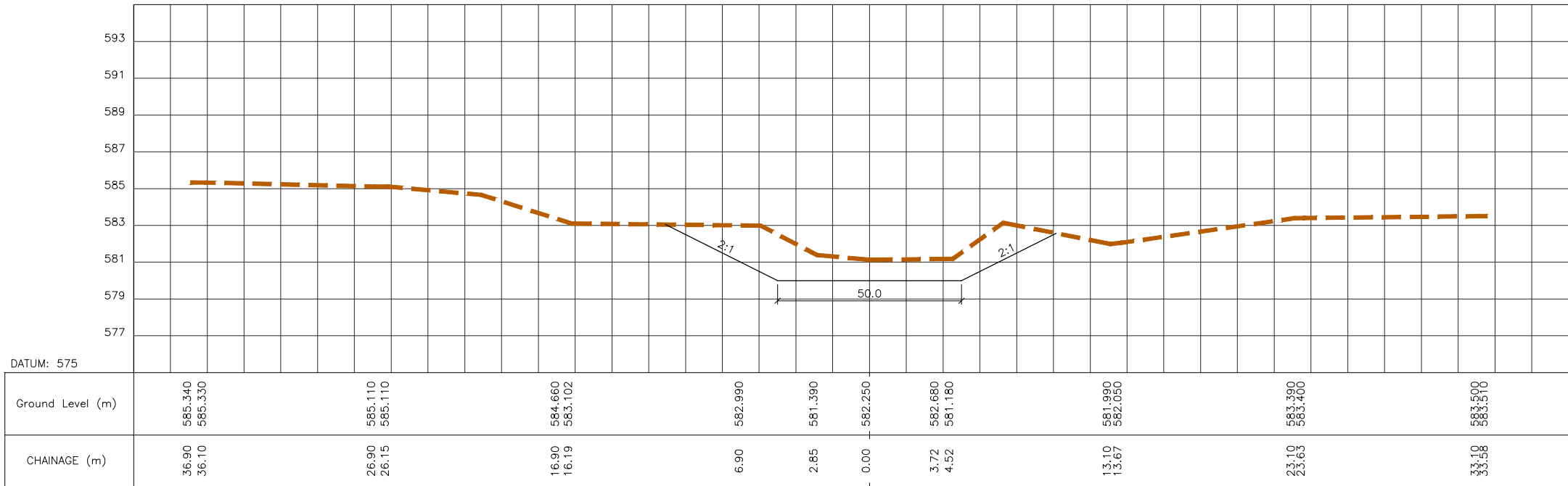
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 3200.0




CROSS SECTION AT CH : 3400.0

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TENDER PURPOSE DRAWING ONLY

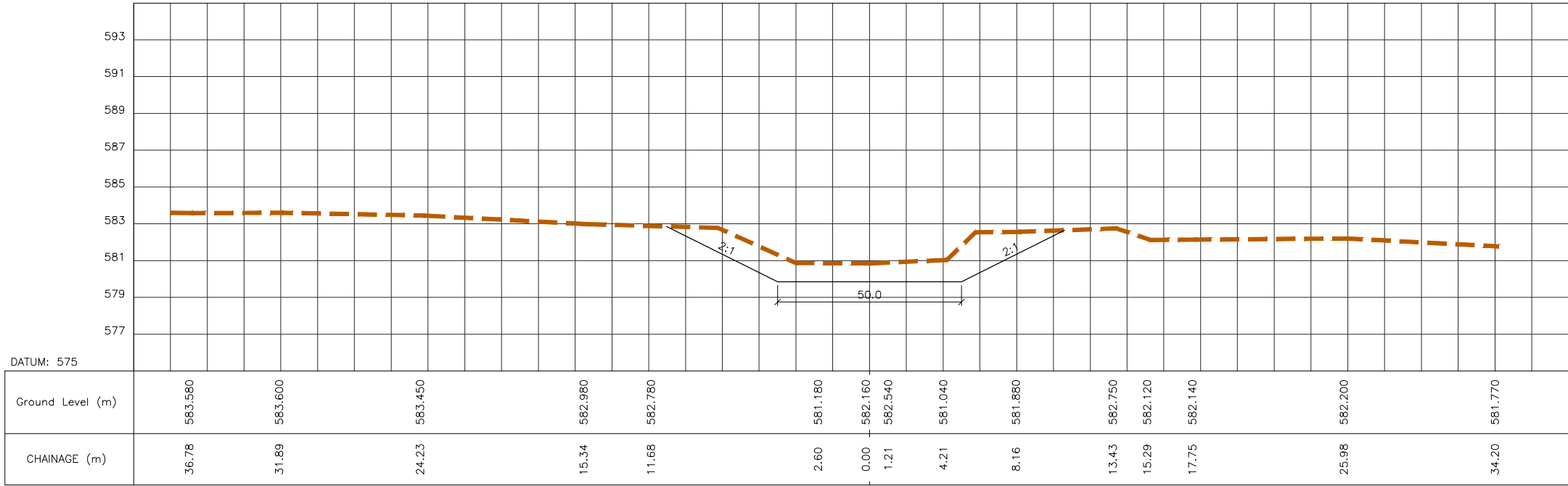
Client
 **Karnataka Neeravari Nigam Limited**
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Bangalore - 560 001

Project Title
Filling of Kempkere Tank Filling Scheme

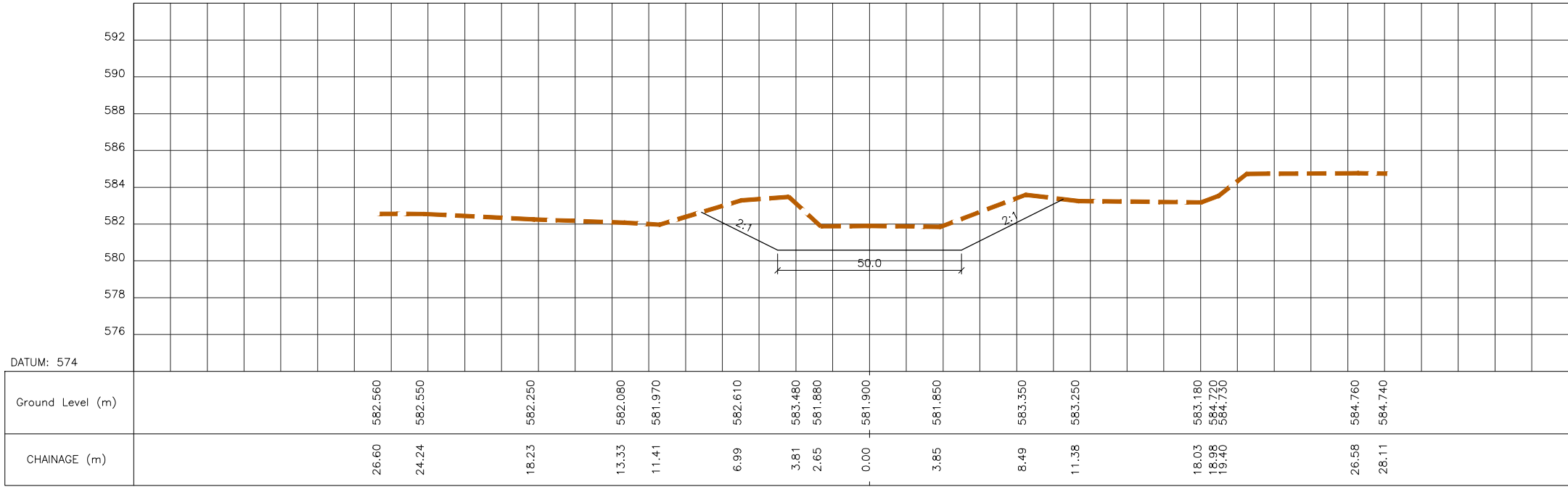
Drawing Title
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 3600.0



CROSS SECTION AT CH : 3800.0


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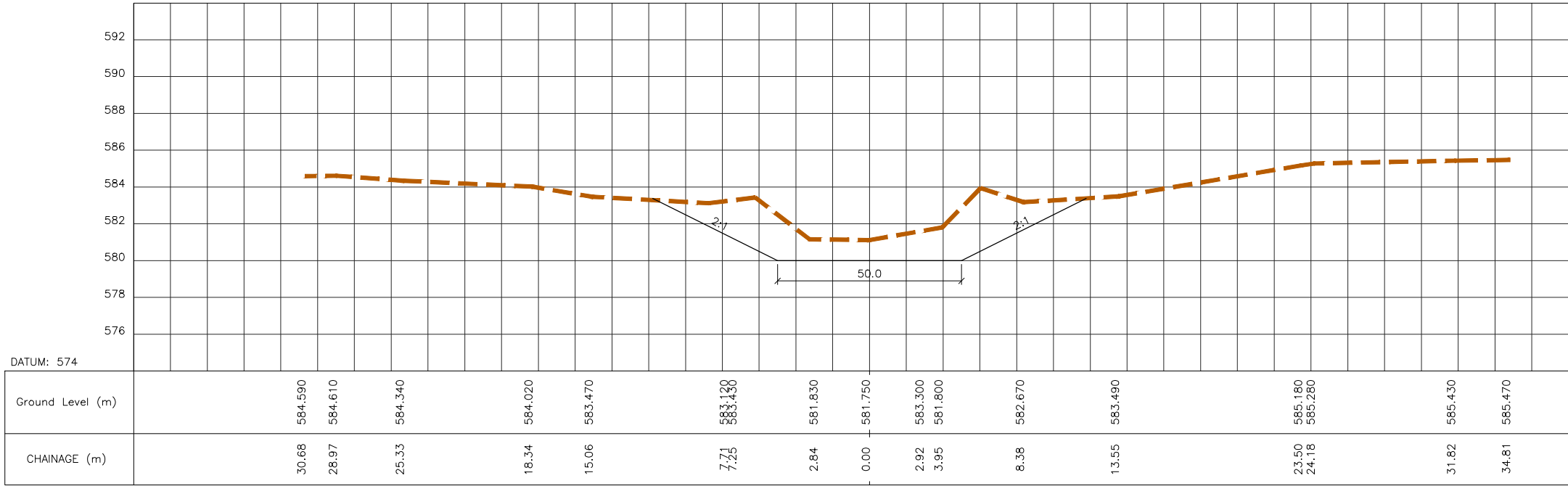
Filling of Kempkere Tank Filling Scheme

Drawing Title

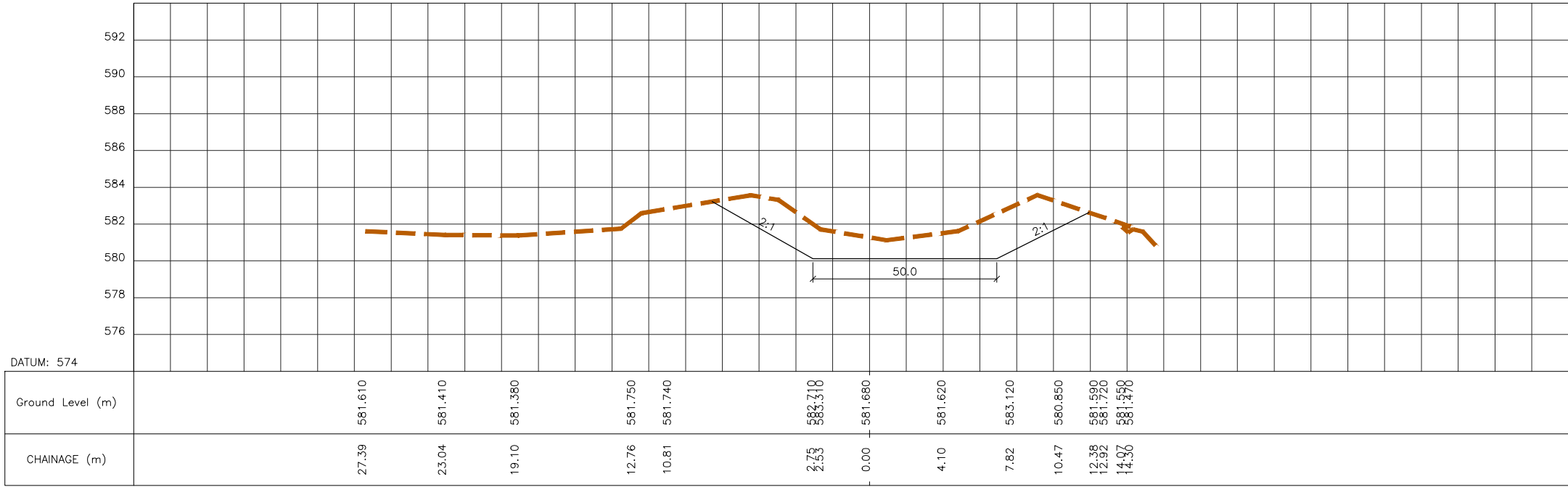
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 4000.0




CROSS SECTION AT CH : 4200.0

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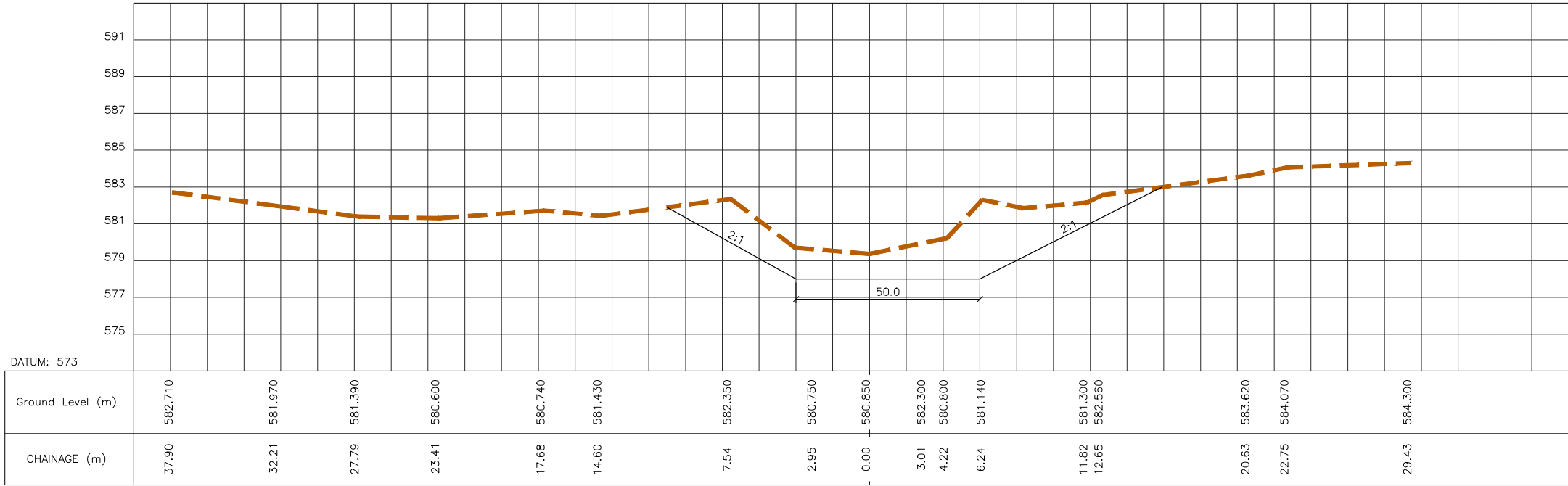
Filling of Kempkere Tank Filling Scheme

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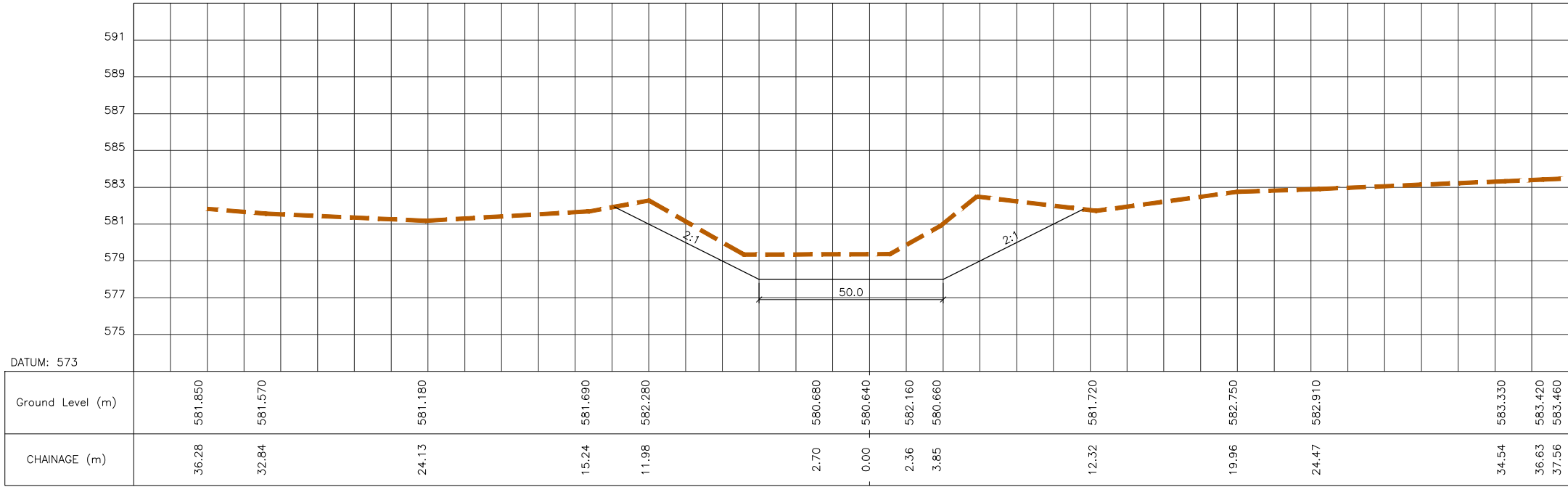
Shalmala Halla Detailed Cross Section

Contractor

Executive Engineer,



CROSS SECTION AT CH : 4400.0




CROSS SECTION AT CH : 4500.0

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TENDER PURPOSE DRAWING ONLY



Karnataka Neeravari Nigam Limited
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Bangalore - 560 001

Client

Project Title

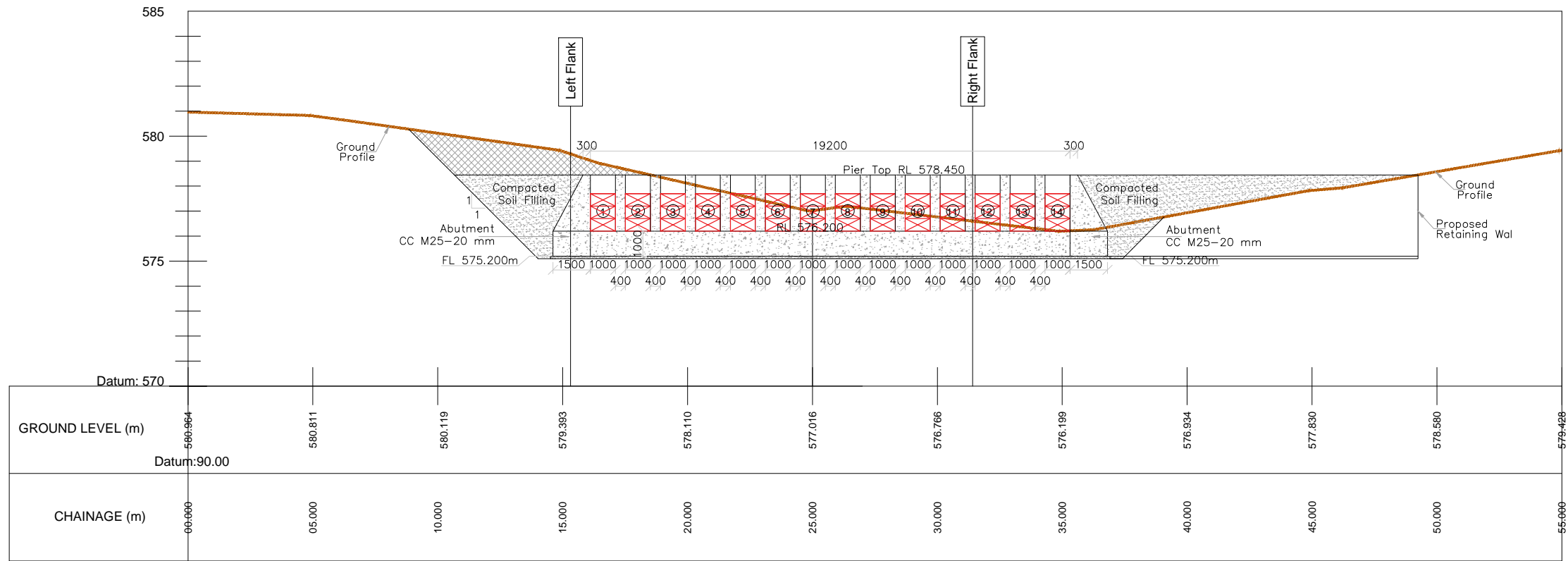
Drawing Title

Contractor

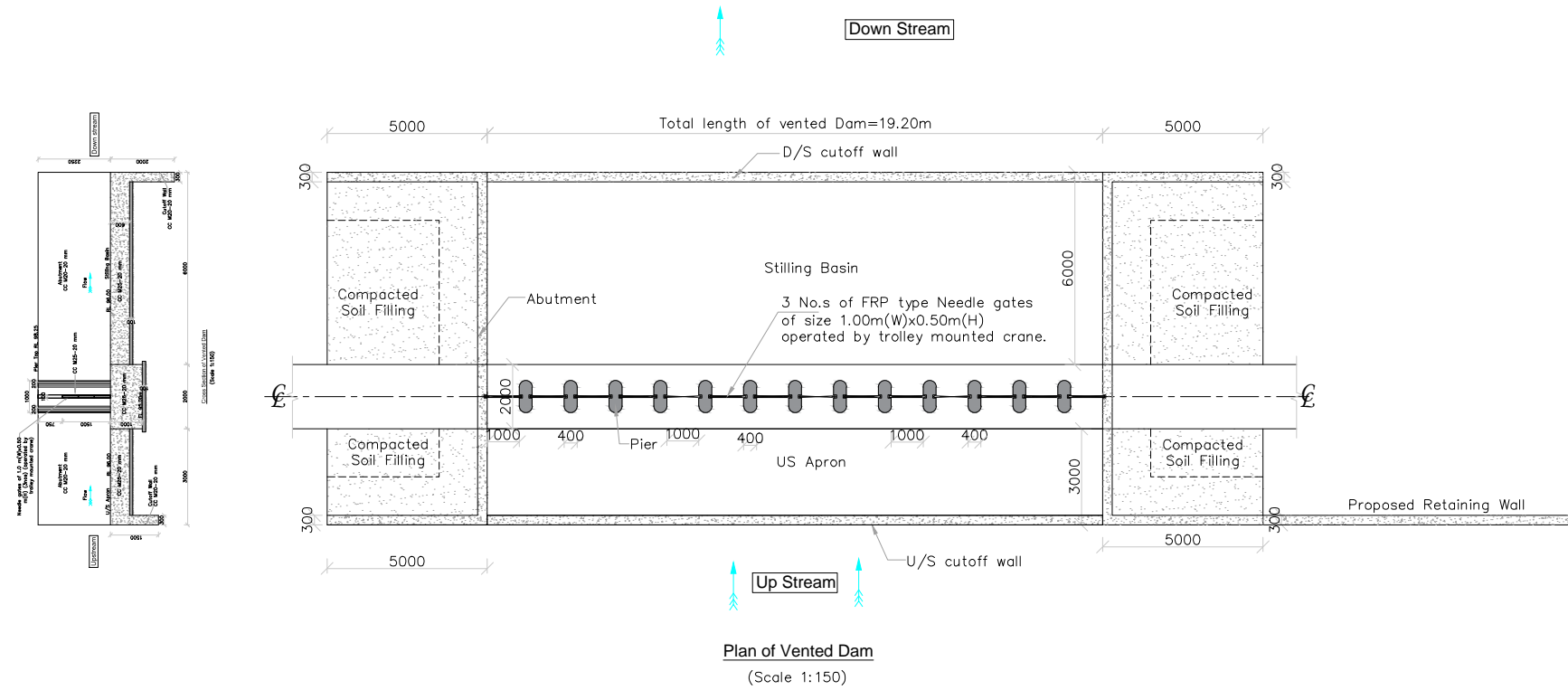
Executive Engineer,

Filling of Kempkere Tank Filling Scheme

Shalmala Halla Detailed Cross Section

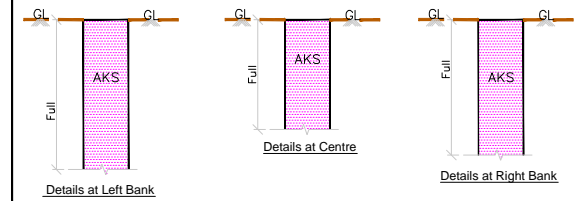


Longitudinal Section of Vented Dam
(Scale 1:150)




Plan of Vented Dam
(Scale 1:150)

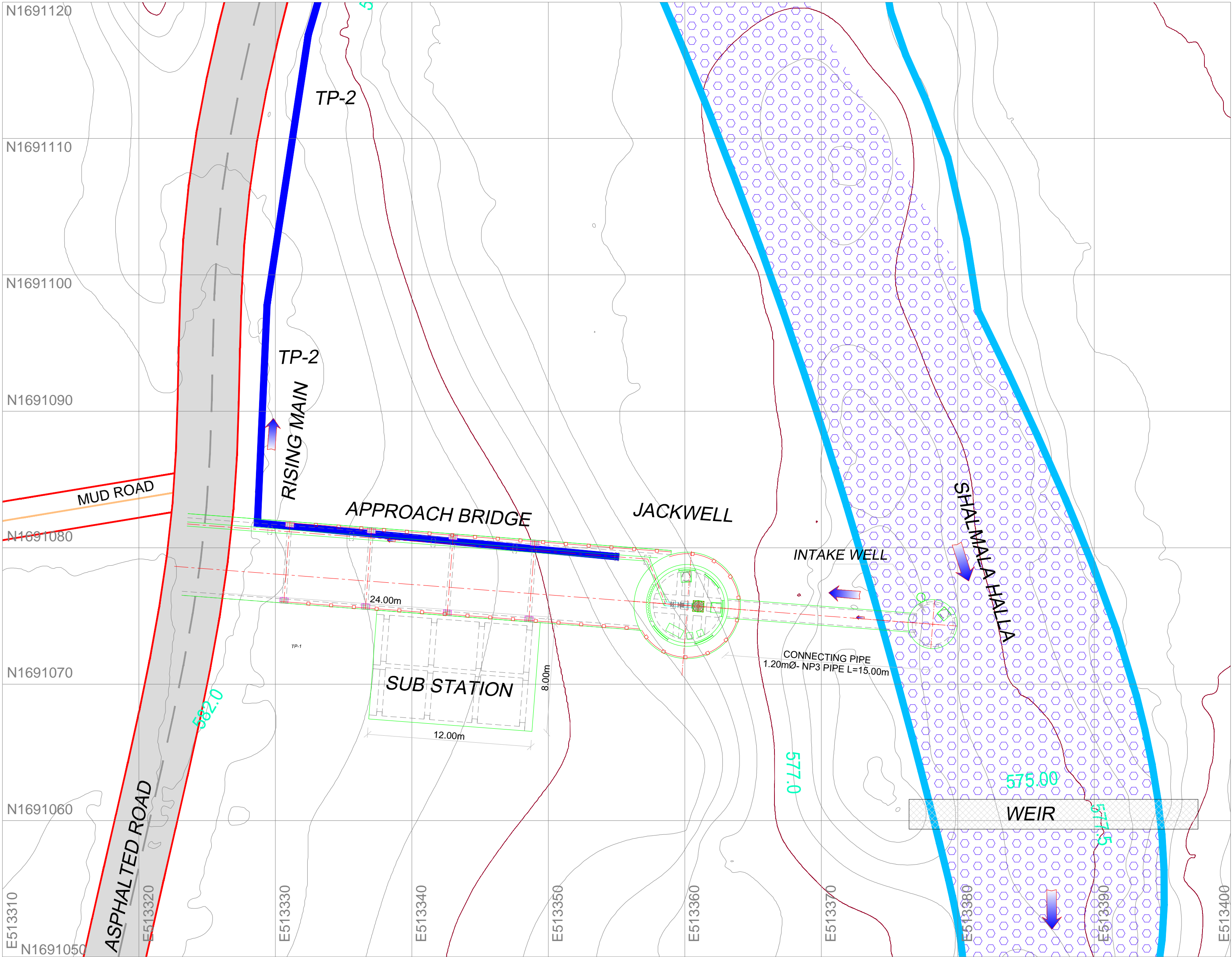
- Notes:
- 1) All dimensions are in millimeters and reduced levels are in meters.
 - 2) Do not scale the drawing. written dimensions only shall be followed.



Trail Pit Details


TENDER PURPOSE DRAWING ONLY

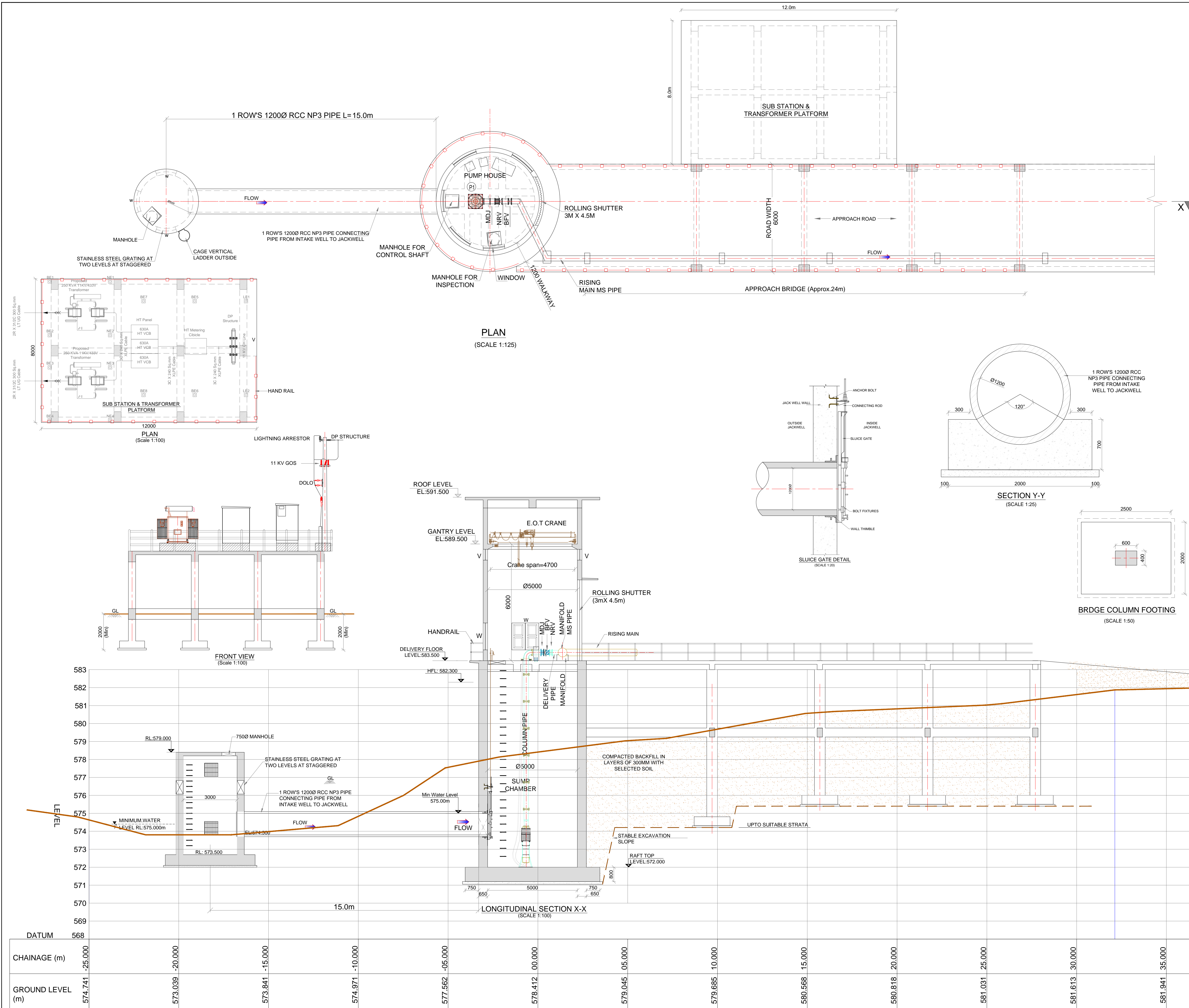
Client	
 Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001	
Project Title	
Filling of Kempkere Tank Filling Scheme	
Drawing Title	
Diversion Weir GAD	
Contractor	Executive Engineer



- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS.
 2. DO NOT MEASURE THE DRAWING, FOLLOW THE DIMENSION MENTIONED.
 3. ALL STRUCTURAL DRAWINGS MUST READ IN CONJUNCTION WITH THE GENERAL ARRANGEMENT DRAWING
 4. GRADE OF CONCRETE FOR RCC WORKS SHALL BE M30
 5. COVER SHALL BE PROVIDED AS BELOW.
A) FOOTING - 75MM
B) COLUMN - 40MM
C) SLAB - 25MM
D) BEAM - 25MM
E) RETAINING WALL ON EARTH SIDE - 75MM, ON WATER SIDE - 50MM
 6. ALL PCC SHALL BE MINIMUM 150MM THK. OF GRADE M15 UNLESS OTHERWISE SPECIFIED.
 7. DEVELOPMENT LENGTH SHALL BE 50 TIMES THE BAR DIAMETER
 8. CONSTRUCTION JOINTS SHALL BE PROVIDED AT EVERY 2M HEIGHT FOR THE CONCRETE WALLS BELOW THE GROUND LEVEL. APPROVED PVC WATER STOPS OF 230MM WIDE AND 8MM THICK SHALL BE USED.
 9. INSERT PLATES IF REQD. TO BE FOLLOWED ACCORDING TO SERVICE DRAWING.
 10. ANY DISCREPANCY IN THE DWG. SHOULD BROUGHT TO THE NOTICE OF THE CONSULTANTS PRIOR TO EXECUTION.
 11. BRICK WALLS-ALL EXTERNAL WALLS IN BUILDINGS SHALL BE 230MM THICK. KILN BURNT BRICK MASONRY IN CM 1:5 AND INTERNAL WALLS SHALL BE 115 MM THICK WITH CM 1:4.
 12. WATER PROOFING TREATMENT-SCREED CONCRETE MIXED WITH WATER PROOFING COMPOUND OVER A CEMENTIOUS, POLYMER MODIFIED, BITUMINOUS, ACRYLIC LIQUID APPLIED MEMBRANES WITH PROPER DRAINAGE SLOPE.
 13. FLOOR FINISH:
A) PUMP HOUSE AND SERVICE BAY-40 MM THICK HEAVY DUTY CEMENT CONCRETE (M30) FLOOR WITH NON-METALLIC HARDENER AND MATCHING SKIRTING.
B) ELECTRICAL SWITCH GEAR, BATTERY/ PLC ROOM-POLISHED SHAHABADI/TANDOR KOTA STONE FLOORING 25MM TO 30MM THICK. ON TOP OF SLAB ON A BED OF 1:4 CEMENT MORTAR (20 MM THICK) SHALL BE PROVIDED.
 14. PLASTERING-EXTERIOR WALL: 20MM THICK CEMENT PLASTER IN CM 1:3 IN TWO COATS. FIRST COAT SHALL BE 14MM THICK AND SECOND COAT 6MM THICK WITH WATER PROOFING COMPOUND. INTERIOR WALL: 20MM THICK IN CM 1:3.
CEILING: 8MM THICK IN CM 1:3.
PAINTING/WALL FINISH-INTERNAL-TWO COATS OF WATER PROOF CEMENT PAINT OVER A COAT OF PRIMER.
EXTERNAL-TWO COATS OF WEATHER COATS OVER A COAT OF PRIMER.
CEILING-TWO COATS OF CEMENT PAINT OVER A COAT OF PRIMER.
 15. PLINTH PROTECTION-MIN. 100MM WIDE AND MIN. 100MM THICK PCC M15 LAID OVER SUB GRADE AND BASE FORMED OF BROKEN BRICKS OR RUBBLE OF 175MM THICK.
 16. SKIRTING- 150 HIGH WITH MATERIAL SAME AS FLOORING.
 17. FOR VT PUMP FOUNDATION POCKET DETAILS AND INSERT OR EMBEDDED PARTS FOR THRUST WALL SHALL BE CONFIRMED WITH APPROVED VENDOR DRAWING BEFORE EXECUTION.
 18. DURING CONSTRUCTION CONDITION SINCE SUPER STRUCTURE WEIGHT WILL NOT BE THERE, HENCE THE STOP LOG GATE SHALL BE KEPT OPEN ALWAYS DURING ANY FLOODS TO HAVE WATER IN THE SUMP.
 19. BEFORE PLACING OF CONCRETE CONCURRENCE OF ENGINEER-IN-CHARGE OF E & M WORKS AT SIT SHALL OBTAINED TO ENSURE PROPER FIXING OF FIRST STAGE CONCRETE EMBEDMENT.
 20. ALL REINFORCEMENT BARS DIAMETER & SPACING ARE IN MM.
 21. THE SLAB REINFORCEMENT SHALL BE ADJUSTED/ TRIMMED AROUND THE CUTOUTS SO AS TO MAKE PROVISION FOR ADDITIONAL REINFORCEMENT.
 22. BEFORE EACH CONCRETE POUR, E & M SITE REPRESENTATIVE SHALL CONFIRM THAT ALL EMBEDMENTS OR BLOCK OUT ARE IN PLACE. ALL STRUCTURAL DRAWINGS MUST READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWING.
 23. ALL LAPS IN THE REINFORCEMENT SHALL BE STAGGERED.

TENDER PURPOSE DRAWING ONLY

 Karnataka Neeravari Nigam Limited (A Govt. of Karnataka Undertaking) Bangalore - 560 001	
DRAWING TITLE GENERAL ARRANGEMENT DRAWING OF JACK WELL CUM PUMP HOUSE	
Contractor	Executive Engineer



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