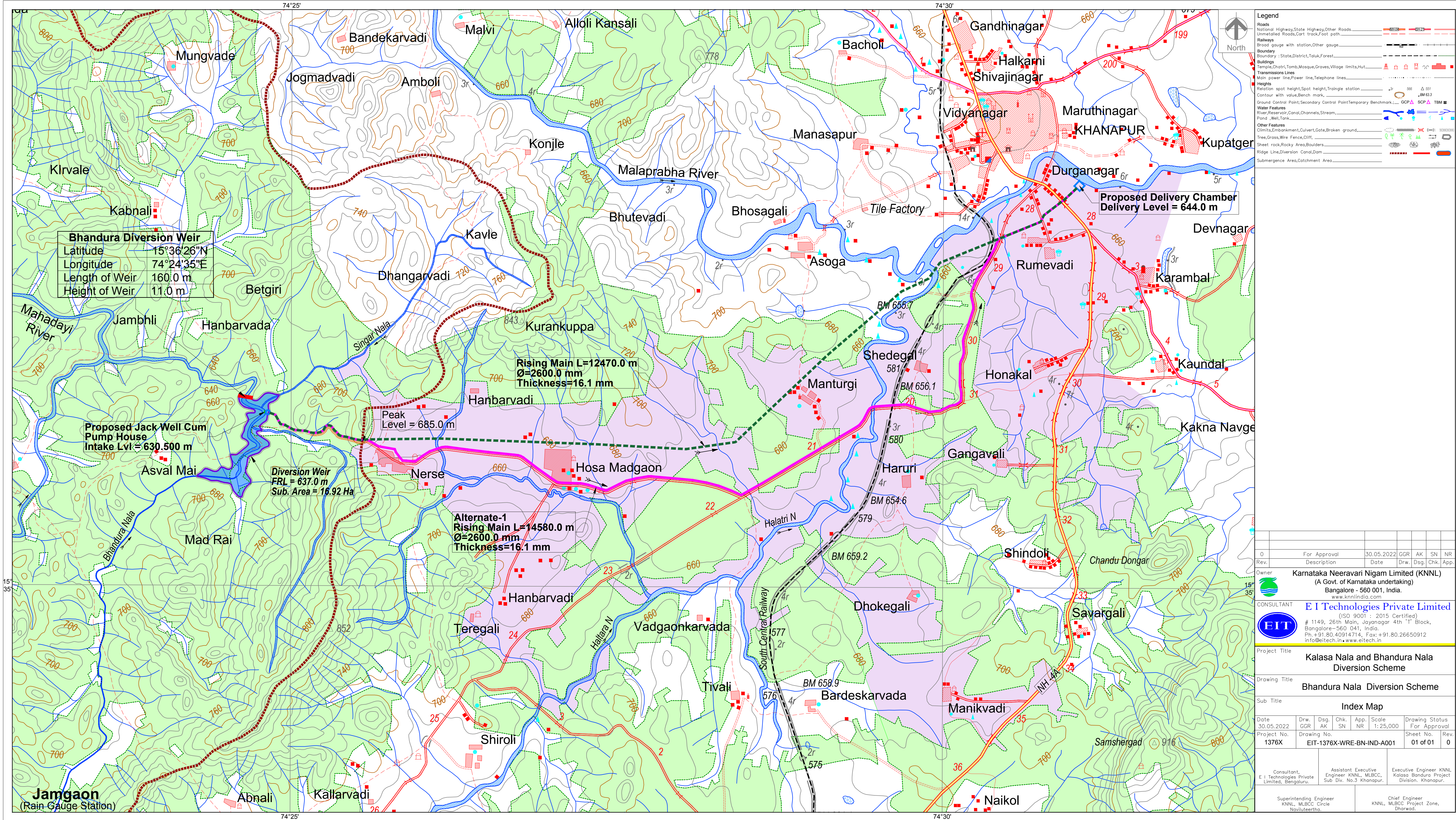
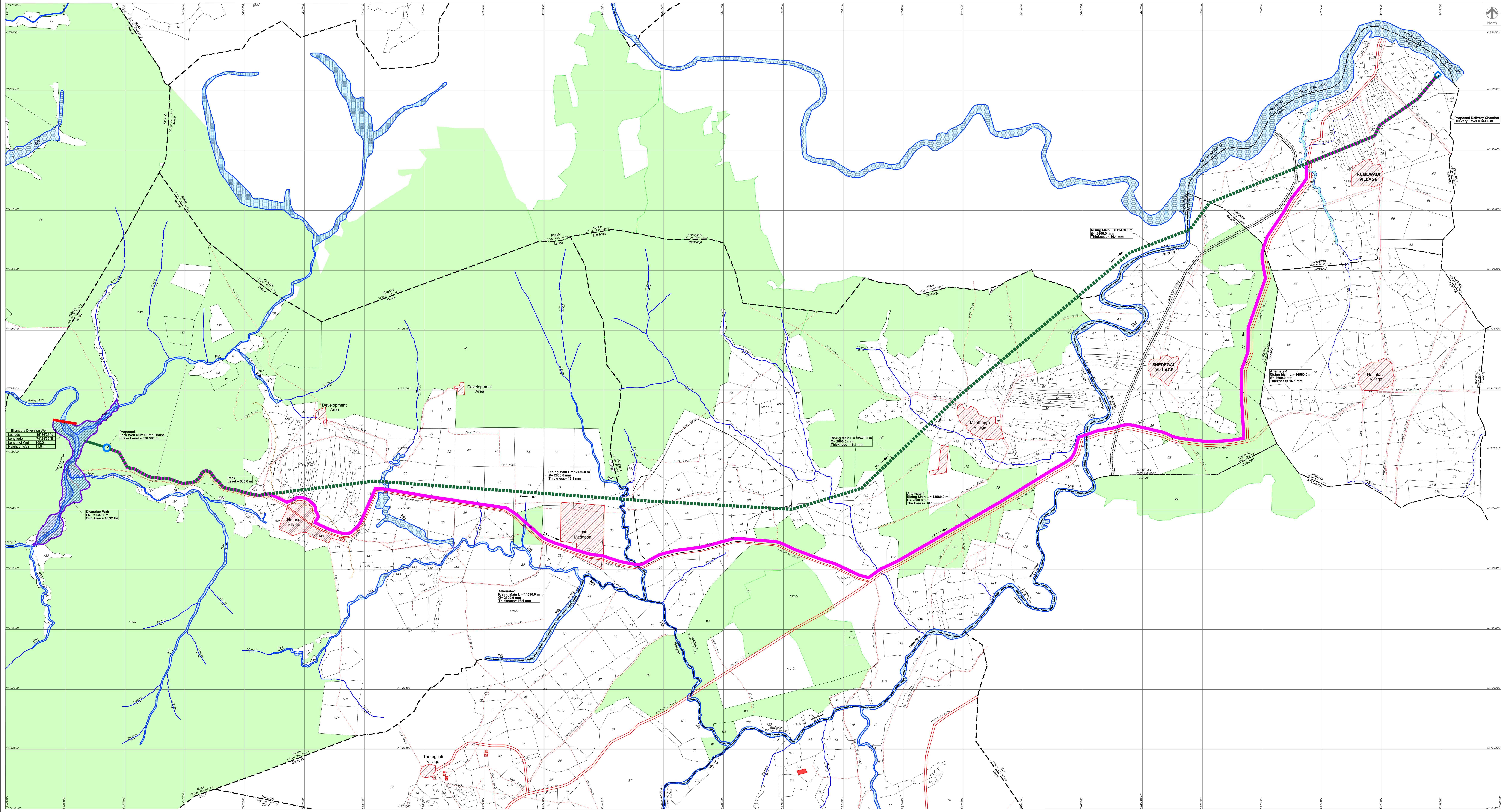




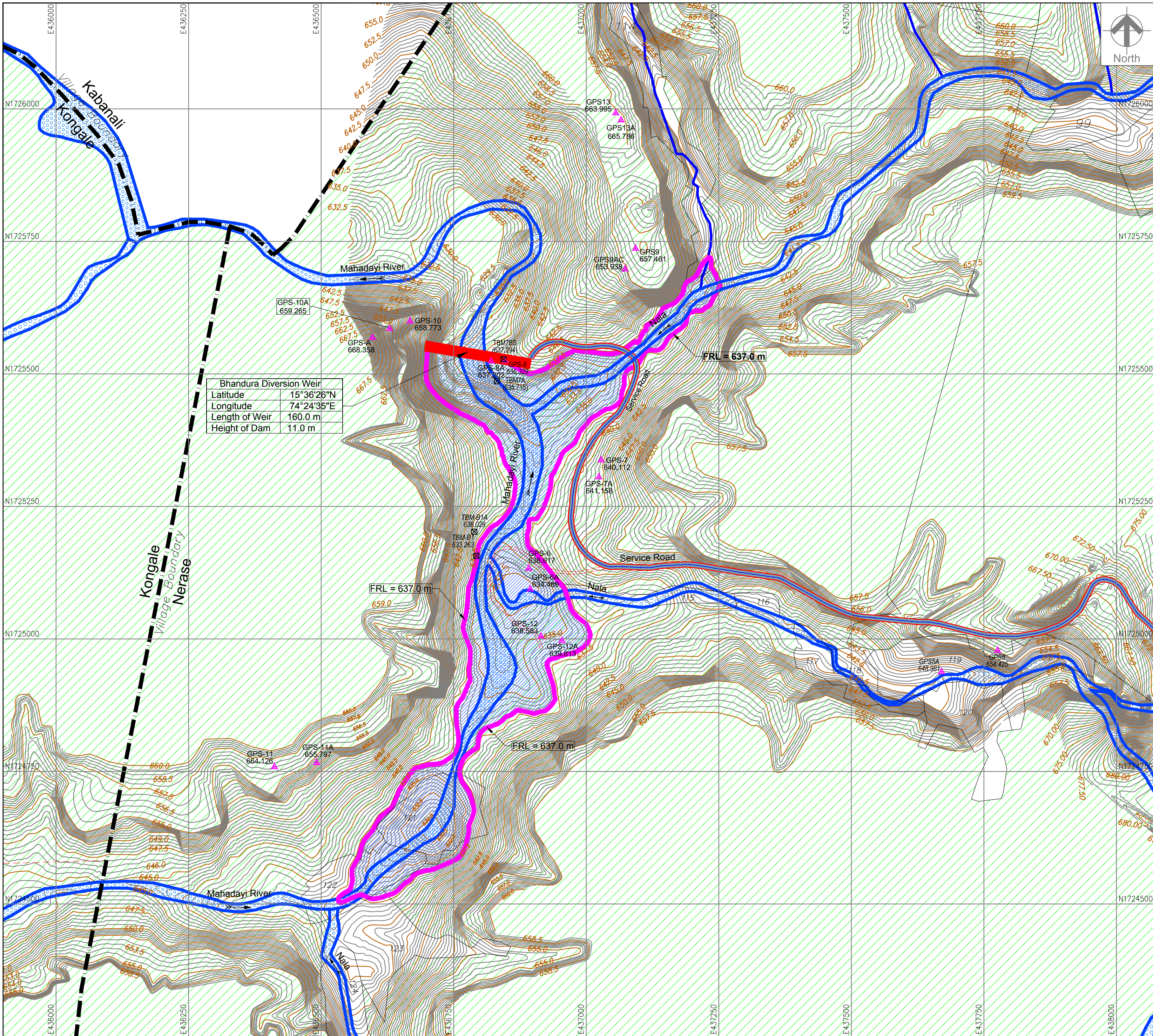
Legend	
Roads	National Highway, State Highway, Other Roads
Unmetalled Roads, Cart track, Foot path	
Railways	Broad gauge with station, Other gauge
Boundary	State, District, Taluk, Forest
Buildings	Temple, Chattri, Tomb, Mosque, Graves, Village limits, Hut
Transmissions Lines	Main power line, Power line, Telephone lines
Heights	Relation spot height, Spot height, Triangle station
Water Features	Ground Control Point, Secondary Control Point, Temporary Benchmark
Other Features	Climits, Embankment, Culvert, Gate, Broken ground
Sheet rock, Rocky Area, Boulders	
Ridge Line, Diversion Canal, Dam	
Submergence Area, Catchment Area	

0	For Approval	30.05.2022	GGR	AK	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
Owner	Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com					
CONSULTANT	E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 1149, 26th Main, Jayanagar 4th "T" Block, Bangalore-560 041, India. Ph. +91.80.40914714, Fax: +91.80.26650912 info@eitech.in, www.eitech.in					
Project Title						
Kalasa Nala and Bhandura Nala Diversion Scheme						
Drawing Title						
Bhandura Nala Diversion Scheme						
Sub Title						
Index Map						
Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
30.05.2022	GGR	AK	SN	NR	1:25,000	For Approval
Project No.	Drawing No.				Sheet No.	Rev.
1376X	EIT-1376X-WRE-BN-IND-A001				01 of 01	0
Consultant, E I Technologies Private Limited, Bengaluru.		Assistant Executive Engineer KNNL, MLBC, Sub Div. No.3 Khanapur.			Executive Engineer KNNL Kalasa Bandura Project Division, Khanapur.	
Superintending Engineer KNNL, MLBC Circle Navilutethra.			Chief Engineer KNNL, MLBC Project Zone, Dharwad.			



Land Acquisition Area (LAA)		
Station	Components	Area (Ha)
1	Submergence Area (for FRL 635.00 m)	218.51
2	Diversion Canal	88.52
3	Dam (existing)	8.18
4	Dam Office and Guard House	1.53
5	WTP & STP At Dam Office	0.35
6	Batching Plant	2.50
7	Dam Staff Colony	6.33
8	WTP & STP At Dam Staff Colony	0.40
9	Approach Road (As-51)	46.45
10	Dumpy yard	71.31
11	Temporary Dumpy yard for Cut & Cover	31.84
Total Land Required		479.02

For Approval		25.05.2022	DRP	SRP	SN	NR
Description		Date	Drw	Eng	Drw	Eng
Karnataka Neeravni Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnl.org.in						
E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 1149, 2nd Floor, Main Road, 1st T. Block, Bangalore - 560 014, India. Ph: +91 80 4294 4714 / 4294 4361 info@eit-technologies.com						
Project Title Kalasa Nala and Bhandura Nala Diversion Scheme						
Drawing Title Bhandura Nala Diversion Scheme Master Plan						
Sub Title						
Date	Drw	Eng	App	Score	Drawing Status	
25.05.2022	DRP	SRP	SN	NR	For Approval	
Project No.	1378X	Drw No.	1378X	App No.	Drw No.	1378X
Consulted		Approved/Executive Engineer		Executive Engineer		
E I Technologies Pvt. Ltd., Bangalore		KNNL, Bangalore		KNNL, Bangalore		
Supervising Engineer		KNNL, Bangalore		KNNL, Bangalore		
KNNL, Bangalore		KNNL, Bangalore		KNNL, Bangalore		



Bhandura Diversion Weir	
Latitude	15°36'26"N
Longitude	74°24'35"E
Length of Weir	160.0 m
Height of Dam	11.0 m

Legend	
Roads	National Highway, State Highway, Other Roads, Unmetalled Roads, Cart track, Foot path.
Railways	Broad gauge with station, Other gauge.
Boundary	Boundary : State, District, Taluk, Forest.
Buildings	Temple, Chatri, Tomb, Mosque, Graves, Village limits, Hut.
Transmissions Lines	Main power line, Power line, Telephone lines.
Heights	Relation spot height, Spot height, Traingle station, Contour with value, Bench mark, Ground Control Point, Secondary Control Point, Temporary Benchmark.
Water Features	River, Reservoir, Canal, Channels, Stream, Pond, Well, Tank.
Other Features	Climts, Embankment, Culvert, Gate, Broken ground, Tree, Grass, Wire Fence, Cliff, Sheet rock, Rocky Area, Boulders, Ridge Line, Diversion Canal, Dam, Submergence Area, Catchment Area.

Rev.	For Approval	03.06.2022	GGR	SSR	SN	NR
	Description	Date	Drw.	Dsg.	Chk.	App.

Owner	Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com
-------	--

Consultant	E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 1149, 26th Main, Jayanagar 4th 'T' Block, Bangalore-560 041, India. Ph.+91.80.40914714 / 40914961 info@eitech.in, www.eitech.in
------------	---

Project Title	Kalasa Nala and Bhandura Nala Diversion Scheme
---------------	---

Drawing Title	Bhandura Nala Diversion Scheme
---------------	--------------------------------

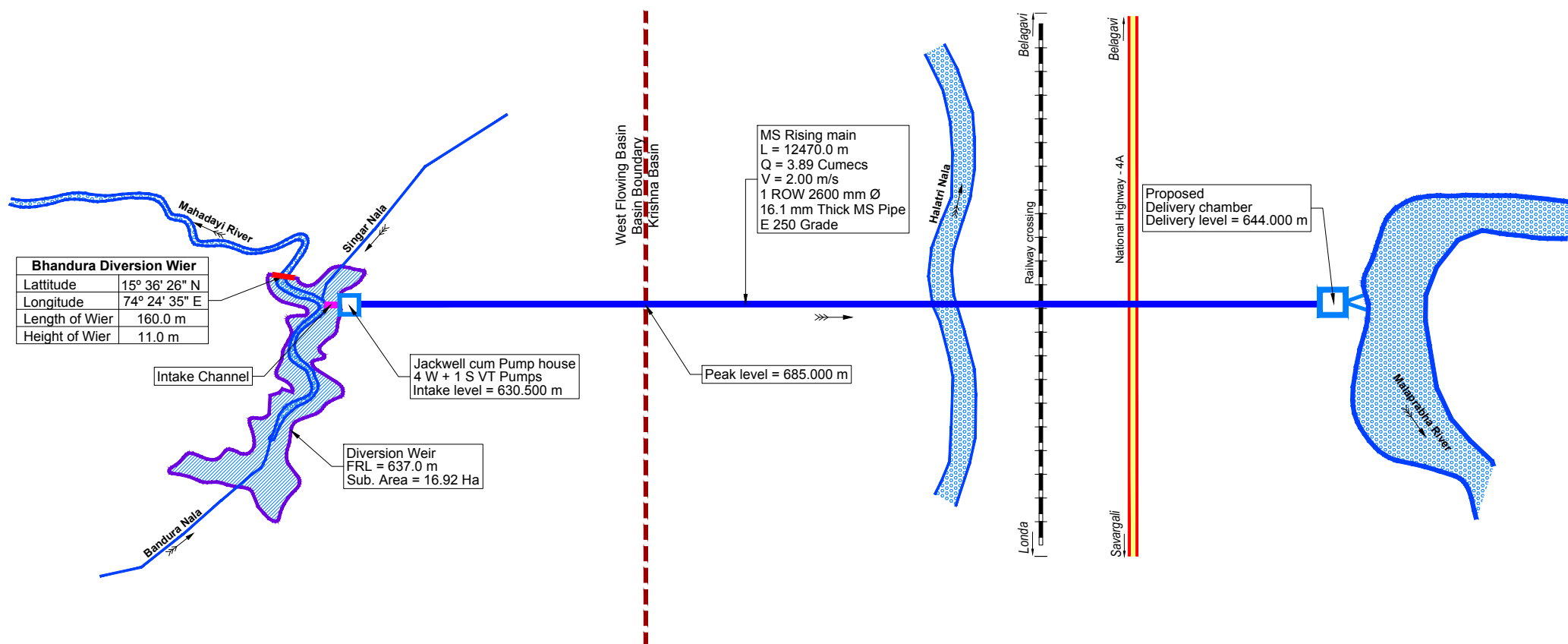
Sub Title	Capcity Contour Map for Bhandura Diversion Weir
-----------	--

Date	03.06.2022	Drw.	GGR	Dsg.	SSR	Chk.	SN	App.	NR	Scale	1:5000	Drawing Status	For Approval
------	------------	------	-----	------	-----	------	----	------	----	-------	--------	----------------	--------------

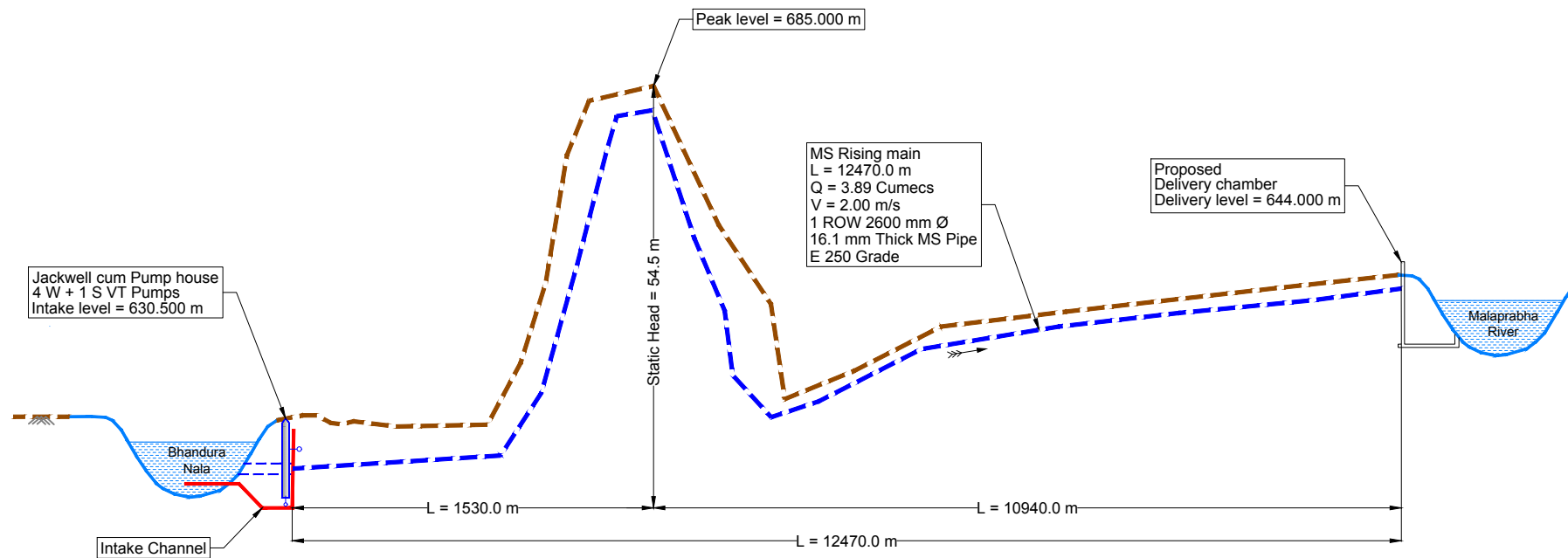
Project No.	1376X	Drawing No.	EIT-1376X-WRE-BN-CCM-A009	Sheet No.	01 of 01	Rev.	0
-------------	-------	-------------	---------------------------	-----------	----------	------	---

Consultant E I Technologies Pvt. Ltd., Bangaluru.	Assistant Executive Engineer, KNNL, MLBCC, Sub Div No.3, Khanapur.	Executive Engineer, KNNL, Kalasa Project Div, Khanapur.
---	--	---

Superintending Engineer, KNNL, MLBCC Circle, Naviluteertha.	Chief Engineer, KNNL, Malaprabha Project Zone, Dharwad.
---	---



PLAN



SECTION OF BHANDURA LIFT SCHEME

LEGEND	
GROUND LEVEL	
INTAKE CANAL	
RISING MAIN	
BLEEDER	
CANAL	
DISTRIBUTARY	
RECEIVING CHAMBER	
JACKWELL CUM PUMP HOUSE	

0	For Approval	02.06.2022	GGR	AK	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

Owner

Karnataka Neeravari Nigam Limited (KNNL)
(A Govt. of Karnataka undertaking)
Bangalore - 560 001, India.
www.knnlindia.com

CONSULTANT

E I Technologies Private Limited
(ISO 9001 : 2015 Certified)
1149, 26th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
Ph.+91.80.40914714, Fax: +91.80.26650912
info@eitech.in • www.eitech.in

Project Title
Kalasa Nala and Bhandura Nala
Diversion Scheme

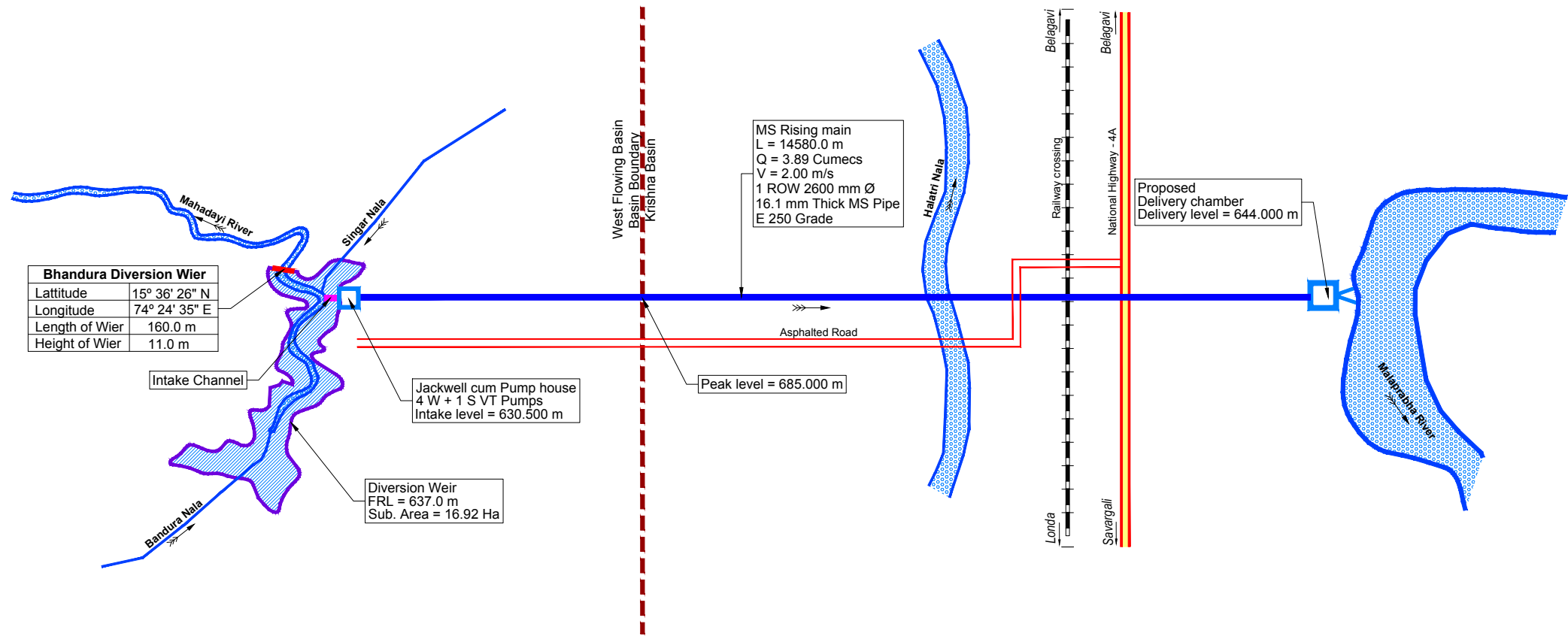
Drawing Title
Bhandura Nala Diversion Scheme

Sub Title
Schematic Diagram of
Bhandura Nala Diversion Scheme

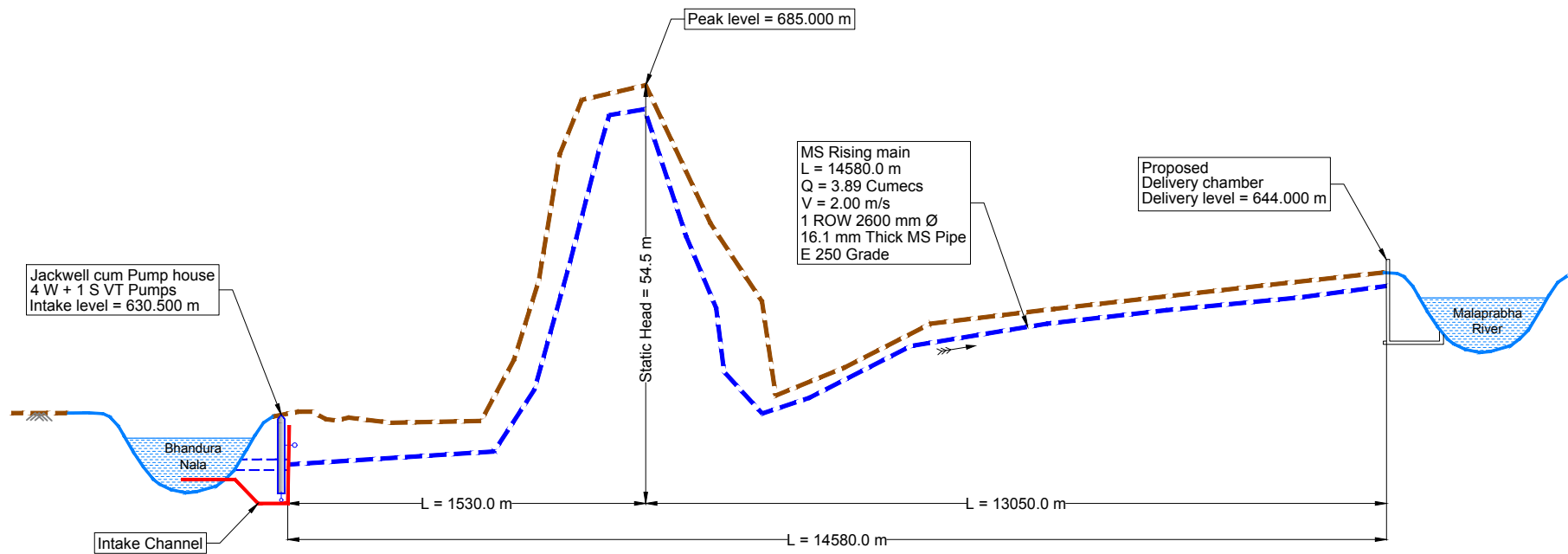
Date 02.06.2022	Drw. GGR	Dsg. AK	Chk. SN	App. NR	Scale NTS	Drawing Status For Approval
Project No. 1376X	Drawing No. EIT-1376X-WRE-BN-SCD-A007				Sheet No. 01 of 02	Rev. 0

Consultant, E I Technologies Private Limited, Bengaluru.	Assistant Executive Engineer KNNL, MLBCC, Sub Div. No.3 Khanapur.	Executive Engineer KNNL Kalasa Bandura Project Division: Khanapur.
--	---	--

Superintending Engineer KNNL, MLBCC Circle Naviluteertha.	Chief Engineer KNNL, MLBCC Project Zone, Dharwad.
---	---



PLAN



SECTION OF BHANDURA LIFT SCHEME - ALTERNATE-1

LEGEND	
GROUND LEVEL	
INTAKE CANAL	
RISING MAIN	
BLEEDER	
CANAL	
DISTRIBUTARY	
RECEIVING CHAMBER	
JACKWELL CUM PUMP HOUSE	

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	02.06.2022	GGR	AK	SN	NR

Owner
Karnataka Neeravari Nigam Limited (KNNL)
(A Govt. of Karnataka undertaking)
Bangalore - 560 001, India.
www.knnlindia.com

CONSULTANT
E I Technologies Private Limited
(ISO 9001 : 2015 Certified)
1149, 26th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
Ph.+91.80.40914714, Fax: +91.80.26650912
info@eitech.in • www.eitech.in

Project Title
**Kalasa Nala and Bhandura Nala
Diversion Scheme**

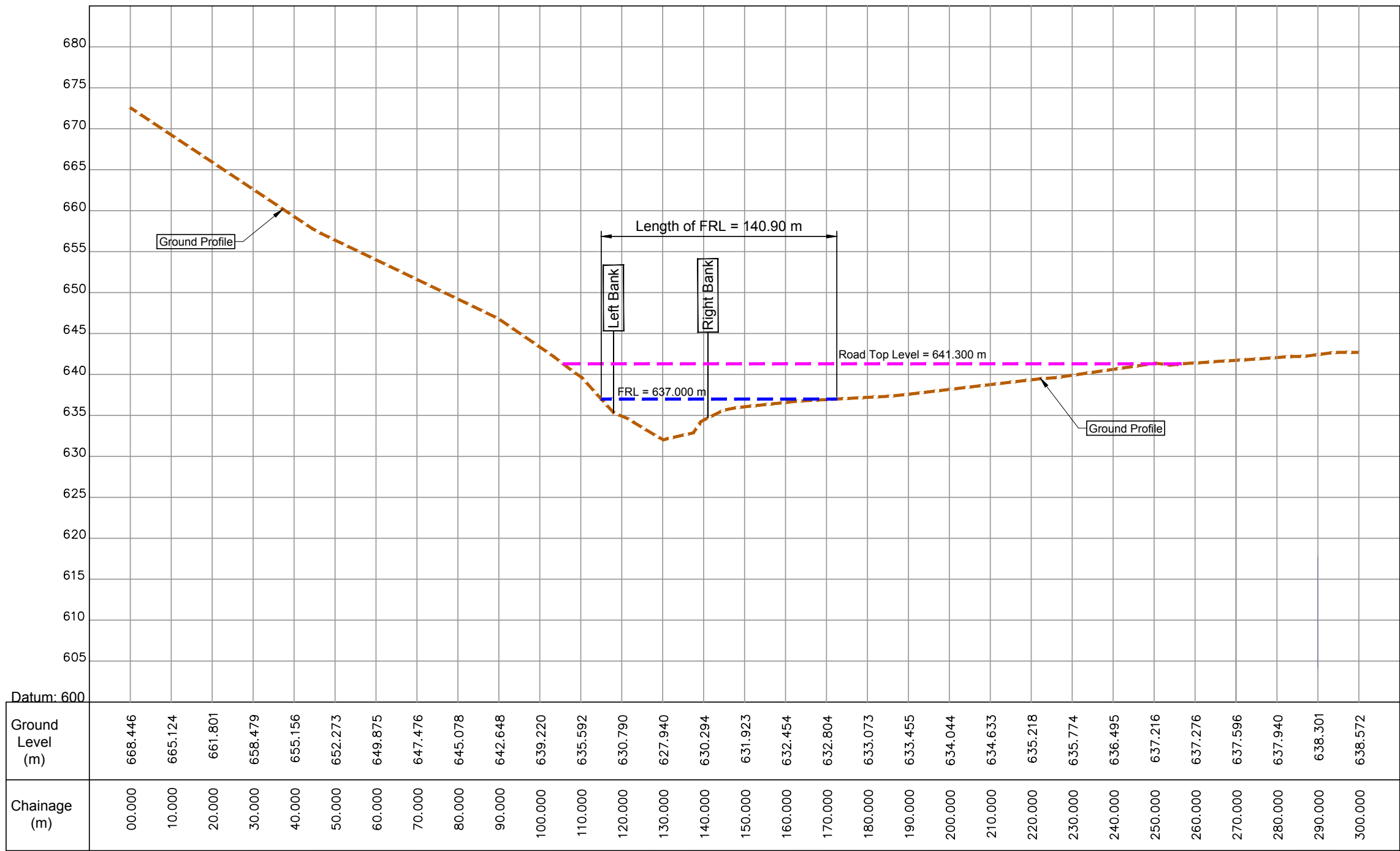
Drawing Title
Bhandura Nala Diversion Scheme

Sub Title
**Schematic Diagram of
Bhandura Nala Diversion Scheme-Alternate**

Date 02.06.2022	Drw. GGR	Dsg. AK	Chk. SN	App. NR	Scale NTS	Drawing Status For Approval
Project No. 1376X	Drawing No. EIT-1376X-WRE-BN-SCD-A007				Sheet No. 02 of 02	Rev. 0

Consultant, E I Technologies Private Limited, Bengaluru.	Assistant Executive Engineer KNNL, MLBCC, Sub Div. No.3 Khanapur.	Executive Engineer KNNL Kalasa Bandura Project Division: Khanapur.
--	---	--

Superintending Engineer KNNL, MLBCC Circle Naviluteertha.	Chief Engineer KNNL, MLBCC Project Zone, Dharwad.
---	---



- Notes and Specifications :
- 1) All dimensions, Chainages and contour intervals are in metres.
 - 2) All elevation are in metres.
 - 3) Drawing shall not to be scaled, only written dimensions shall be followed.
 - 4) For the gallery layout, Refer seperate drawing.
 - 5) For details of contraction joint refer seperate drawing.

Profile:-	
Ground Level	-----
FRL Level	-----
Dam Top Level	-----

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	24.05.2022	CTR	KD	SN	NR

Owner
 **Karnataka Neeravari Nigam Limited (KNNL)**
(A Govt. of Karnataka undertaking)
Bangalore - 560 001, India.
www.knnlindia.com

Consultant
 **E I Technologies Private Limited**
(ISO 9001 : 2015 Certified)
1149, 26th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
Ph.-+91.80.40914714 / 40914961
info@eitech.in - www.eitech.in

Project Title
**Kalasa Nala and Bhandura Nala
Diversion Scheme**

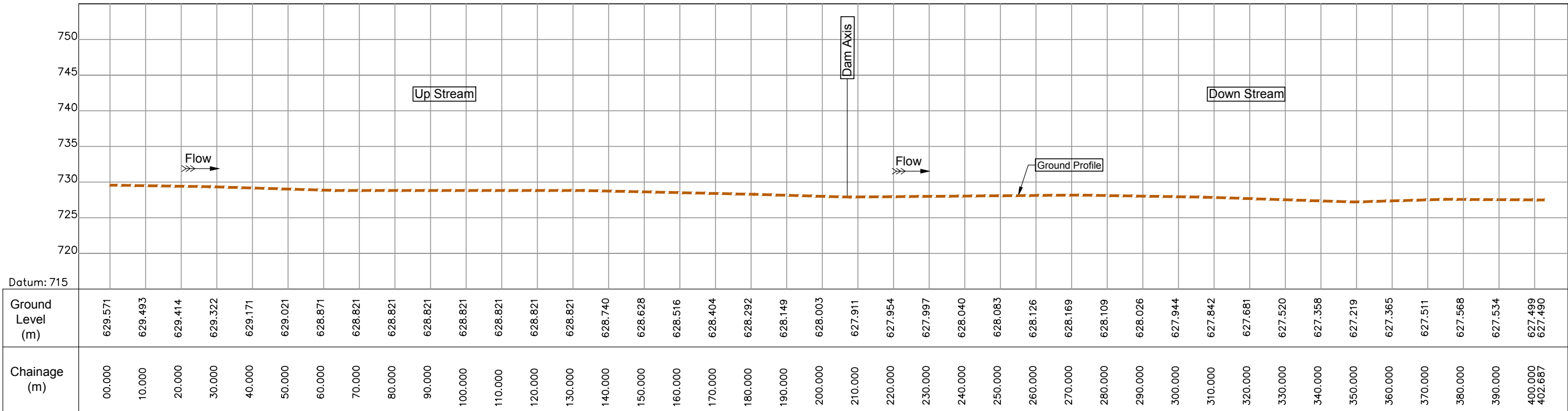
Drawing Title
Bhandura Nala Diversion Scheme

Sub Title
Cross Section of BhanduraNala

Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
24.05.2022	CTR	KD	SN	NR	AS SHOWN	For Approval
Project No.	Drawing No.	Sheet No.	Rev.			
1376X	EIT-1376X-WRE-BN-NCS-A004	01 of 01	0			

Consultant, E I Technologies Private Limited Bengaluru.	Assistant Executive Engineer KNNL, MLBCC, Sub Div. No.3 Khanapur.	Executive Engineer KNNL Kalasa Bandura Project Division, Khanapur.
---	---	--

Superintending Engineer KNNL, MLBCC Circle Naviluteertha.	Chief Engineer KNNL, MLBCC Project Zone, Dharwad.
---	---



Longitudinal Section of Bhandura Nala
Scale HOR 1:1000
VER 1:500

Notes and Specifications :

- 1) All dimensions, Chainages and contour intervals are in metres.
- 2) All elevation are in metres.
- 3) Drawing shall not to be scaled, only written dimensions shall be followed.
- 4) For the gallery layout, Refer separte drawing.
- 5) For details of contraction joint refer separte drawing.

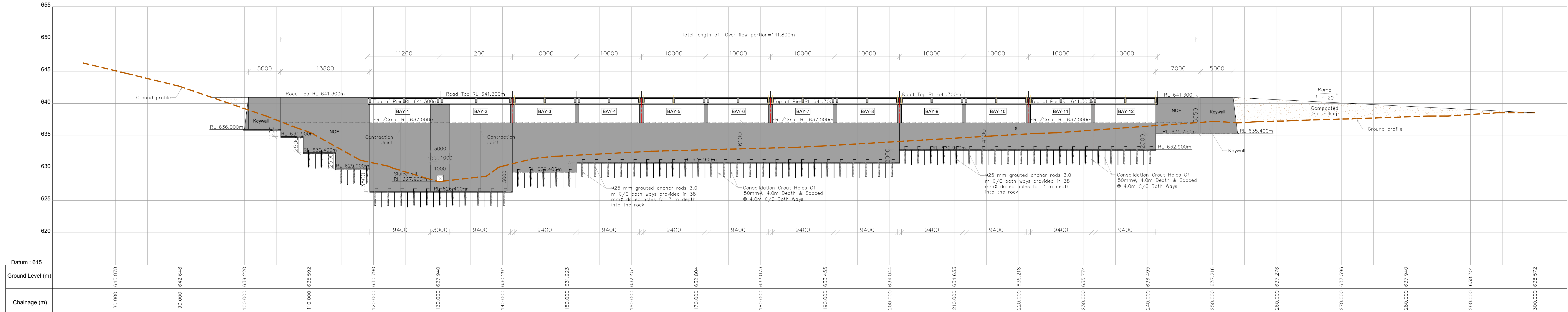
Project Title
Kalasa Nala and Bhandura Nala
Diversion Scheme

Drawing Title
Bhandura Nala Diversion Scheme

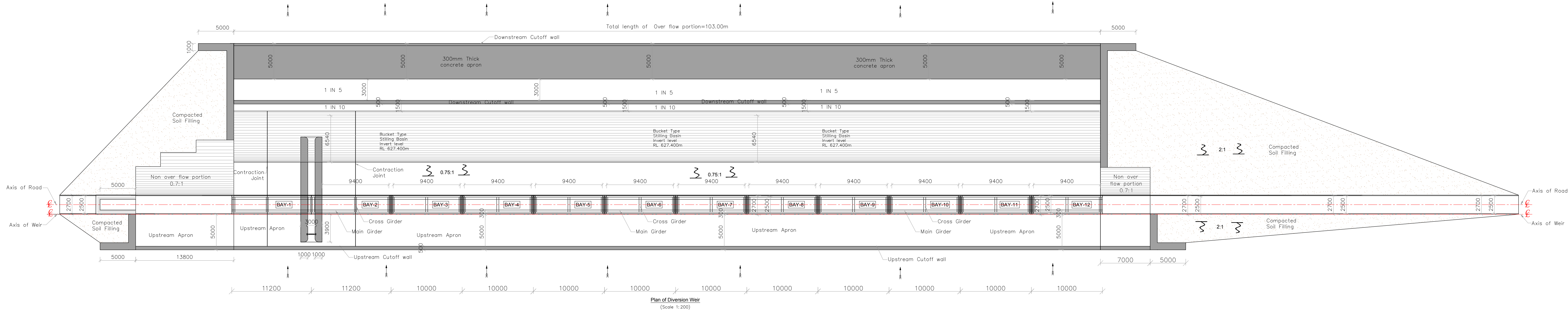
Sub Title
Longitudinal Section of Bhandura Nala

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	30.06.2021	HSK	SSR	SN	NR
Owner Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com						
Consultant E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 1149, 26th Main, Jayanagar 4th 'T' Block, Bangalore-560 041, India. Ph.+91.80.40914714 / 40914961 info@eitech.in • www.eitech.in						

Date 30.06.2021	Drw. HSK	Dsg. SSR	Chk. SN	App. NR	Scale AS SHOWN	Drawing Status For Approval	
Project No. 1376X	Drawing No. EIT-1376X-WRE-KN-NLS-A003					Sheet No. 01 of 01	Rev. 0
Consultant, E I Technologies Private Limited Bengaluru.			Assistant Executive Engineer KNNL, MLBCB, Sub Div. No.3 Khanapur.			Executive Engineer KNNL Kalasa Bandura Project Division, Khanapur.	
Superintending Engineer KNNL, MLBCB Circle Naviluteertha.					Chief Engineer KNNL, MLBCB Project Zone, Dharwad.		



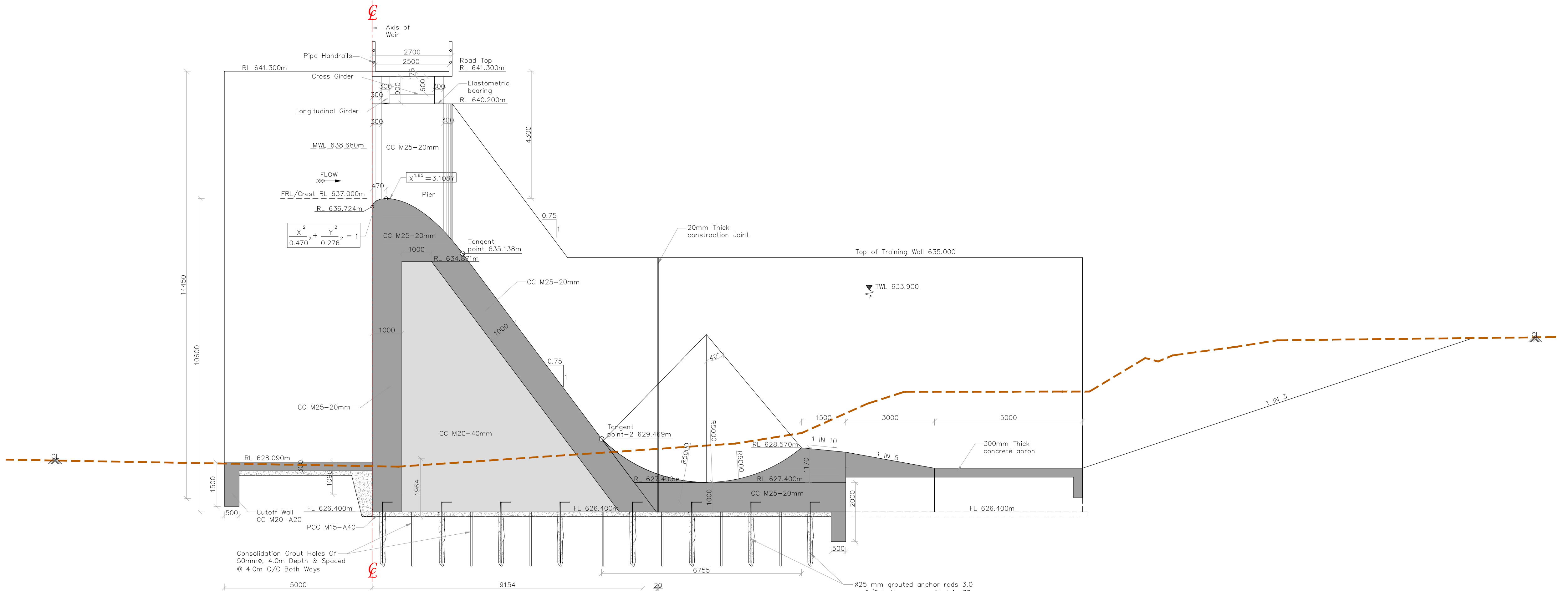
Longitudinal Section of Bhandura Diversion Weir
(Scale 1:250)



Plan of Diversion Weir
(Scale 1:200)

- NOTES:-
1. All dimensions are in millimeters except levels which are in meters, Unless otherwise mentioned.
 2. Do not scale the drawing. Follow written dimensions only.

0	For Approval	03.06.2022	CTR	SSR	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
Owner	Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com					
Consultant	 E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 1149, 26th Main, Jayanagar 4th 'T' Block, Bangalore-560 041, India. Ph.+91.80.40914714 / 40914961 info@eitech.in • www.eitech.in					
Project Title	Kalasa Nala and Bhandura Nala Diversion Scheme					
Drawing Title	Bhandura Nala Diversion Scheme					
Sub Title	General arrangement Drawing of Diversion Weir					
Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
03.06.2022	CTR	SSR	SN	NR	As Shown	For Approval
Project No.	Drawing No.				Sheet No.	Rev.
1376X	EIT-1376X-WRE-KN-STR-A010				01 of 02	0
Consultant, E I Technologies Pvt. Ltd., Bangaluru.		Assistant Executive Engineer KNNL, MLBCC Circle, Sub Div. No.3 Khanapur.			Executive Engineer KNNL Kalasa Bandura Project Division, Khanapur.	
Superintending Engineer KNNL, MLBCC Circle, Naviluteertha.				Chief Engineer KNNL, MLBCC Project Zone, Dharwad.		



Cross Sectional Details of weir
(Scale 1:75)

Ground profile (m)	628.118	627.908	627.940	628.364	628.588	628.588	630.467	630.927	632.181	632.404	633.564
Chainage (m)	10.000	10.000	15.000	15.000	20.000	25.000	30.000	35.000	40.000	35.000	35.000

Cross Sectional Details of weir
(Scale 1:75)

- NOTES:-
- All dimensions are in millimeters except levels which are in meters, Unless otherwise mentioned.
 - Do not scale the drawing. Follow written dimensions only.

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	03.06.2022	CTR	SSR	SN	NR

Owner
Karnataka Neeravari Nigam Limited (KNNL)
(A Govt. of Karnataka undertaking)
Bangalore - 560 001, India.
www.knnlindia.com

Consultant
E I Technologies Private Limited
(ISO 9001 : 2015 Certified)
1149, 26th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
Ph.+91.80.40914714 / 40914961
info@eitech.in • www.eitech.in

Project Title
**Kalasa Nala and Bhandura Nala
Diversion Scheme**

Drawing Title
Bhandura Nala Diversion Scheme

Sub Title
**Cross sectional Details of
Diversion Weir**

Date 03.06.2022	Drw. CTR	Dsg. SSR	Chk. SN	App. NR	Scale As Shown	Drawing Status For Approval	
Project No. 1376X	Drawing No. EIT-1376X-WRE-KN-STR-A010					Sheet No. 02 of 02	Rev. 0

Consultant, E I Technologies Pvt. Ltd., Bangalore.	Assistant Executive Engineer KNNL, MLBC, Sub Div. No.3 Khanapur.	Executive Engineer KNNL, Kalsas Bhandura Project Division, Khanapur.
Superintending Engineer KNNL, MLBC Circle Naviluteertha.	Chief Engineer KNNL, MLBC Project Zone, Dharwad.	

- NOTES:-
- ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS, UNLESS OTHERWISE SPECIFIED.
 - DO NOT MEASURE THE DRAWING, FOLLOW THE DIMENSION MENTIONED.
 - ALL STRUCTURAL DRAWINGS MUST READ IN CONJUNCTION WITH THE GENERAL ARRANGEMENT DRAWING.
 - GRADE OF CONCRETE FOR RCC WORKS SHALL BE M30 AND REINFORCEMENT OF GRADE Fe500.
 - COVER SHALL BE PROVIDED AS BELOW.
 - RAFT - 75MM
 - FOOTING - 40MM
 - COLUMN - 40MM
 - SLAB - 25MM
 - BEAM - 25MM
 - RETAINING WALL ON EARTH SIDE - 75MM, ON WATER SIDE - 50MM
 - ALL PCC/LEVELING COURSE/BED CONCRETE SHALL BE MINIMUM 150MM THK. OF GRADE M15 A40 UNLESS OTHERWISE SPECIFIED.
 - DEVELOPMENT LENGTH SHALL BE 50 TIMES THE BAR DIAMETER.
 - 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.
 - INSERT PLATES IF REQD. TO BE FOLLOWED ACCORDING TO SERVICE DRAWING.
 - ANY DISCREPANCY IN THE DWG. SHOULD BE BROUGHT TO THE NOTICE OF THE CONSULTANTS PRIOR TO EXECUTION.
 - BRICK WALLS-ALL EXTERNAL WALLS IN BUILDINGS SHALL BE 230MM THICK. KILN BURNED BRICK MASONRY IN CM 1:6 AND INTERNAL WALLS SHALL BE 115 MM THICK WITH CM 1:4 WITH RCC BANDS 200THK AT EVERY 2M HEIGHT OF WALL.
 - WATER PROOFING TREATMENT-SCREED CONCRETE MIXED WITH WATER PROOFING COMPOUND OVER A CEMENTIOUS, POLYMER MODIFIED, BITUMINOUS, ACRYLIC LIQUID APPLIED MEMBRANES WITH PROPER DRAINAGE SLOPE.
 - FLOOR FINISH:-
 - PUMP HOUSE AND SERVICE BAY-40 MM THICK HEAVY DUTY CEMENT CONCRETE (M25) FLOOR WITH NON-METALLIC HARDENER AND MATCHING SKIRTING.
 - ELECTRICAL SWITCH GEAR, BATTERY/ PLC ROOM-POLISHED SHAHABAD/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.
 - 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: 6MM 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.

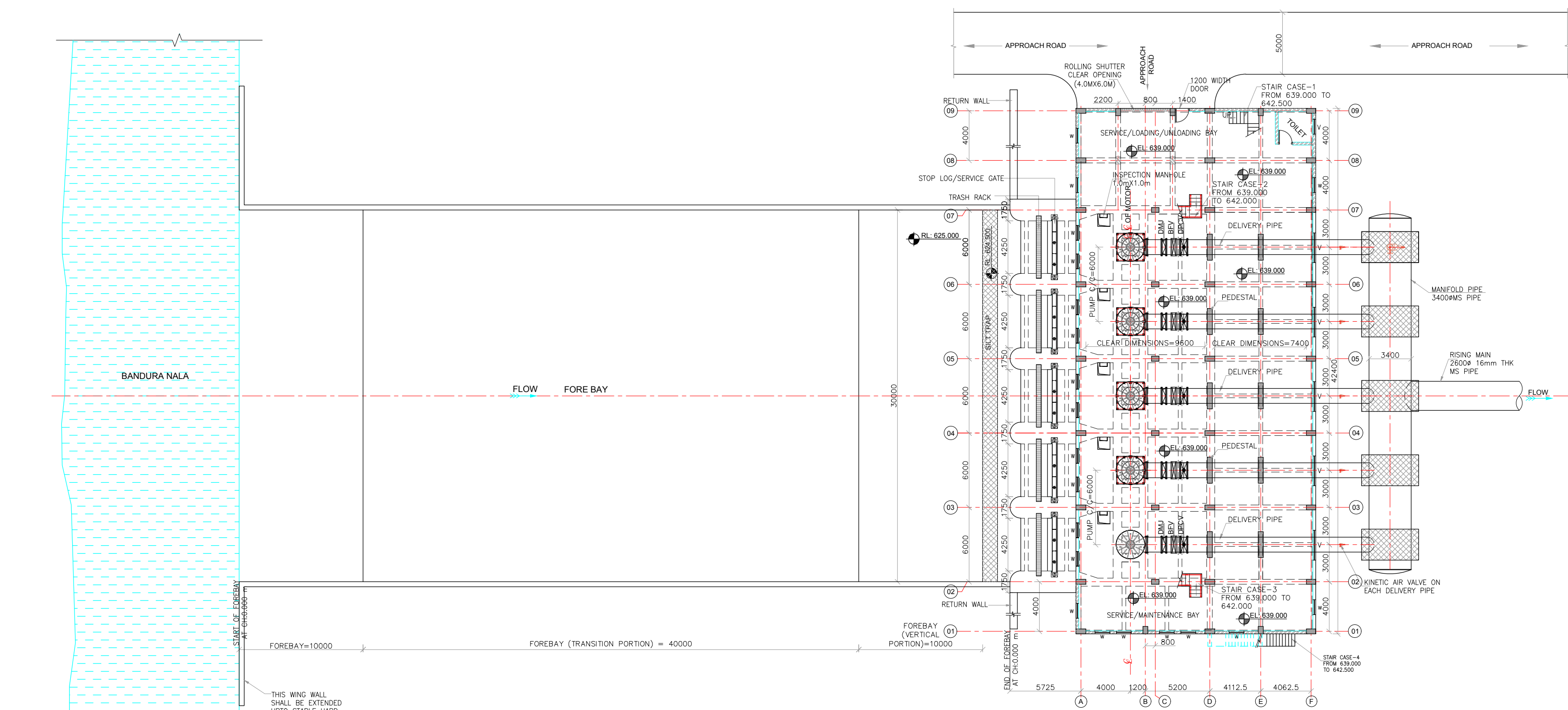
CEILING-TWO COATS OF CEMENT PAINT OVER A COAT OF PRIMER.
 - PLINTH PROTECTION-MIN. 1000MM WIDE AND MIN. 100MM THICK PCC M15 LAID OVER SUB GRADE AND BASE FORMED OF BROKEN BRICKS OR RUBBLE OF 175MM THICK.
 - SKIRTING- 150 HIGH WITH MATERIAL SAME AS FLOORING.
 - FOR VT PUMP FOUNDATION POCKET DETAILS AND INSERT OR EMBEDDED PARTS FOR THRUST WALL SHALL BE CONFIRMED WITH APPROVED VENDOR DRAWING BEFORE EXECUTION.
 - 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. IF REQUIRED SAND BAGS SHALL BE PLACED TO AVOID HEAVING.
 - BEFORE PLACING OF CONCRETE CONCURRENCE OF ENGINEER-IN-CHARGE OF E & M WORKS AT SITE SHALL OBTAINED TO ENSURE PROPER FIXING OF FIRST STAGE CONCRETE EMBEDMENT.
 - ALL REINFORCEMENT BARS DIAMETER & SPACING ARE IN MM.
 - THE SLAB REINFORCEMENT SHALL BE ADJUSTED/ TRIMMED AROUND THE CUTOUTS SO AS TO MAKE PROVISION FOR ADDITIONAL REINFORCEMENT.
 - 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.
 - ALL LAPS IN THE REINFORCEMENT SHALL BE STAGGERED.
 - ALL FOOTINGS/RAFT SUPPORTING COLUMNS INTURN SUPPORTING CRANE BEAMS SHALL BE FOUNDED ON HARD VIRGIN SOIL LIMITING SETTLEMENT 12MM.

0	For Approval	21.05.2021	NMS	HSC	SN	NR
Rev.	Description	Date	Drw.	Desg.	Chk.	App.

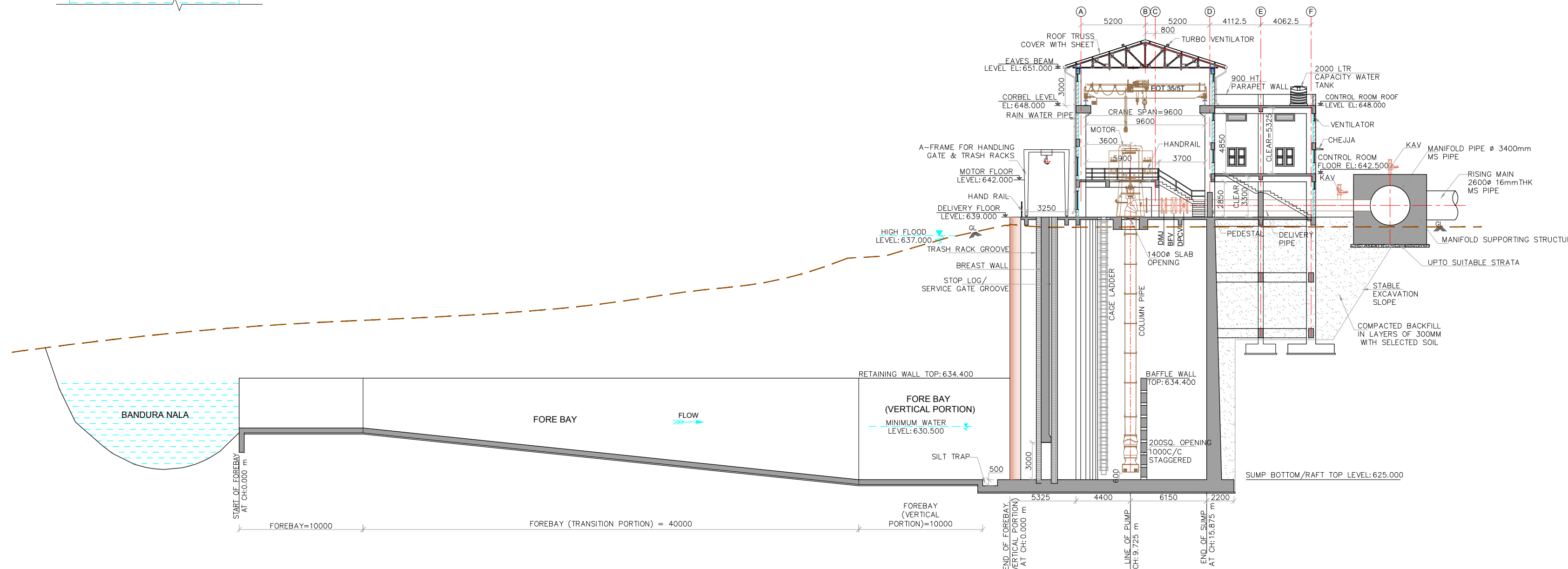
Owner
Karnataka Neeravari Nigam Limited (KNNL)
(A Govt. of Karnataka undertaking)
Bangalore - 560 001, India.
www.knnlindia.com

CONSULTANT
E I Technologies Private Limited
(ISO 9001 : 2015 Certified)
1149, 26th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
Ph:+91.80.40914714, Fax:+91.80.26650912
info@eitech.in+ www.eitech.in

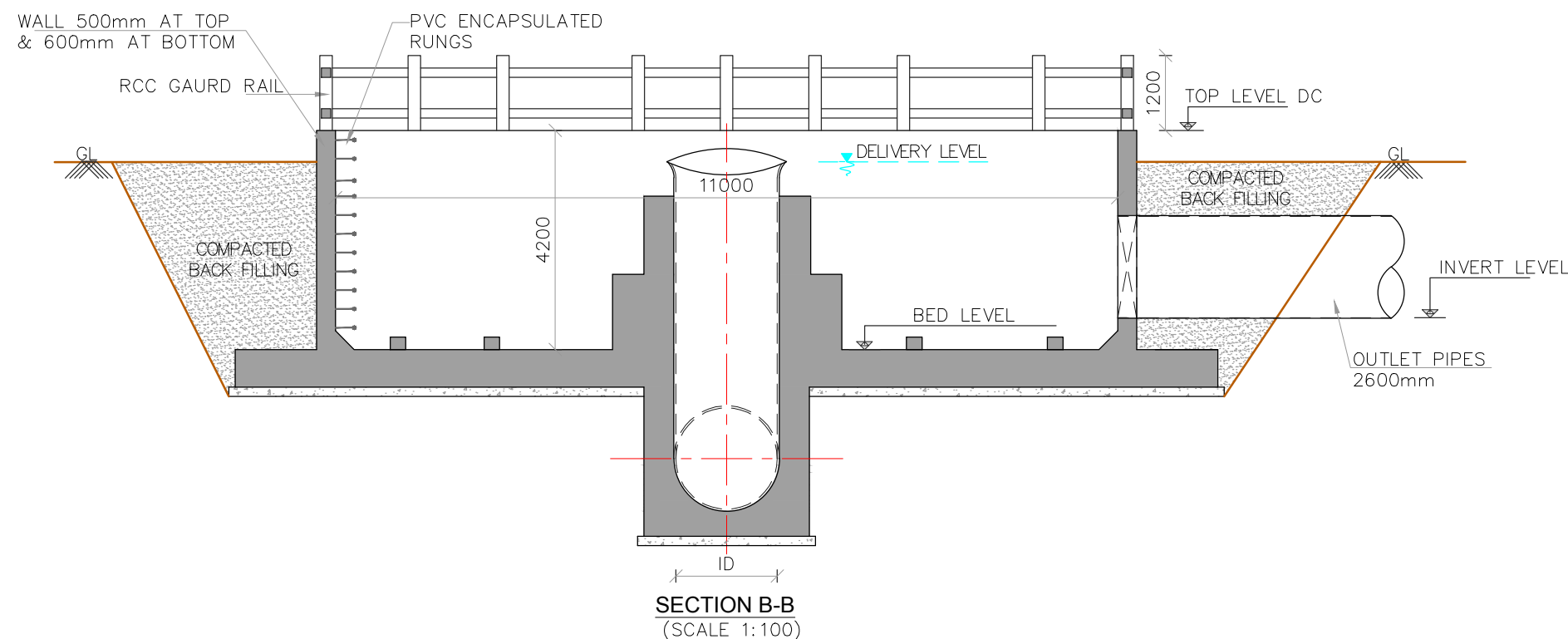
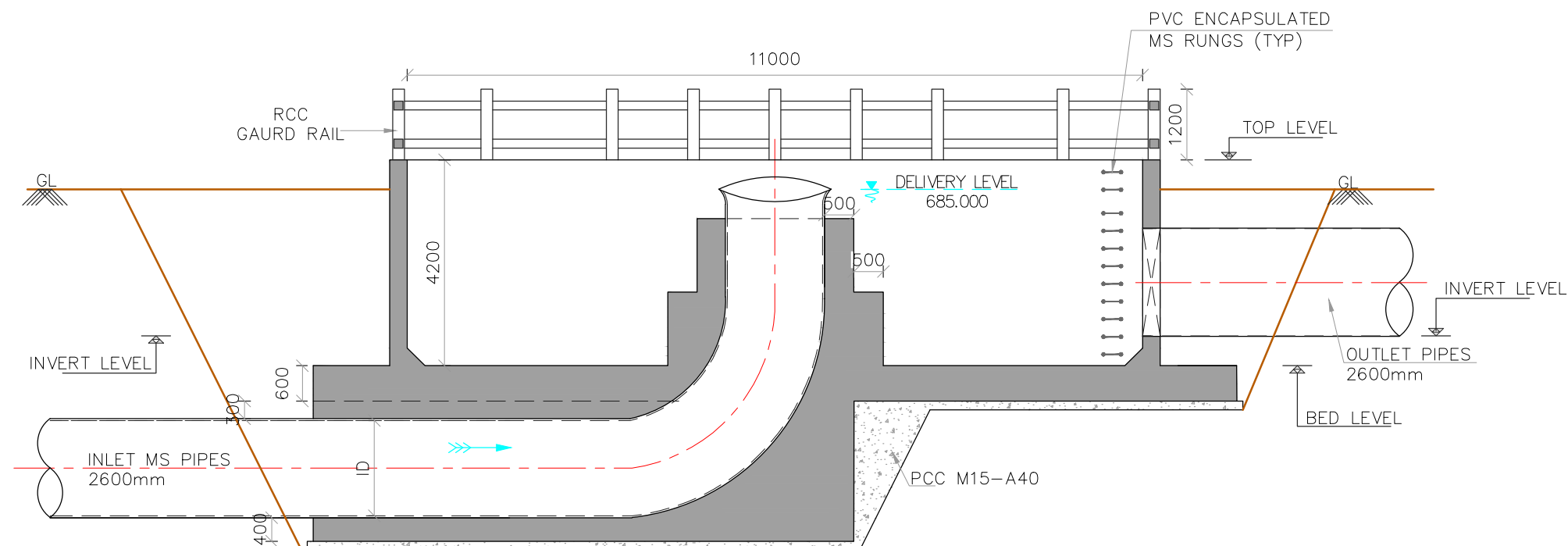
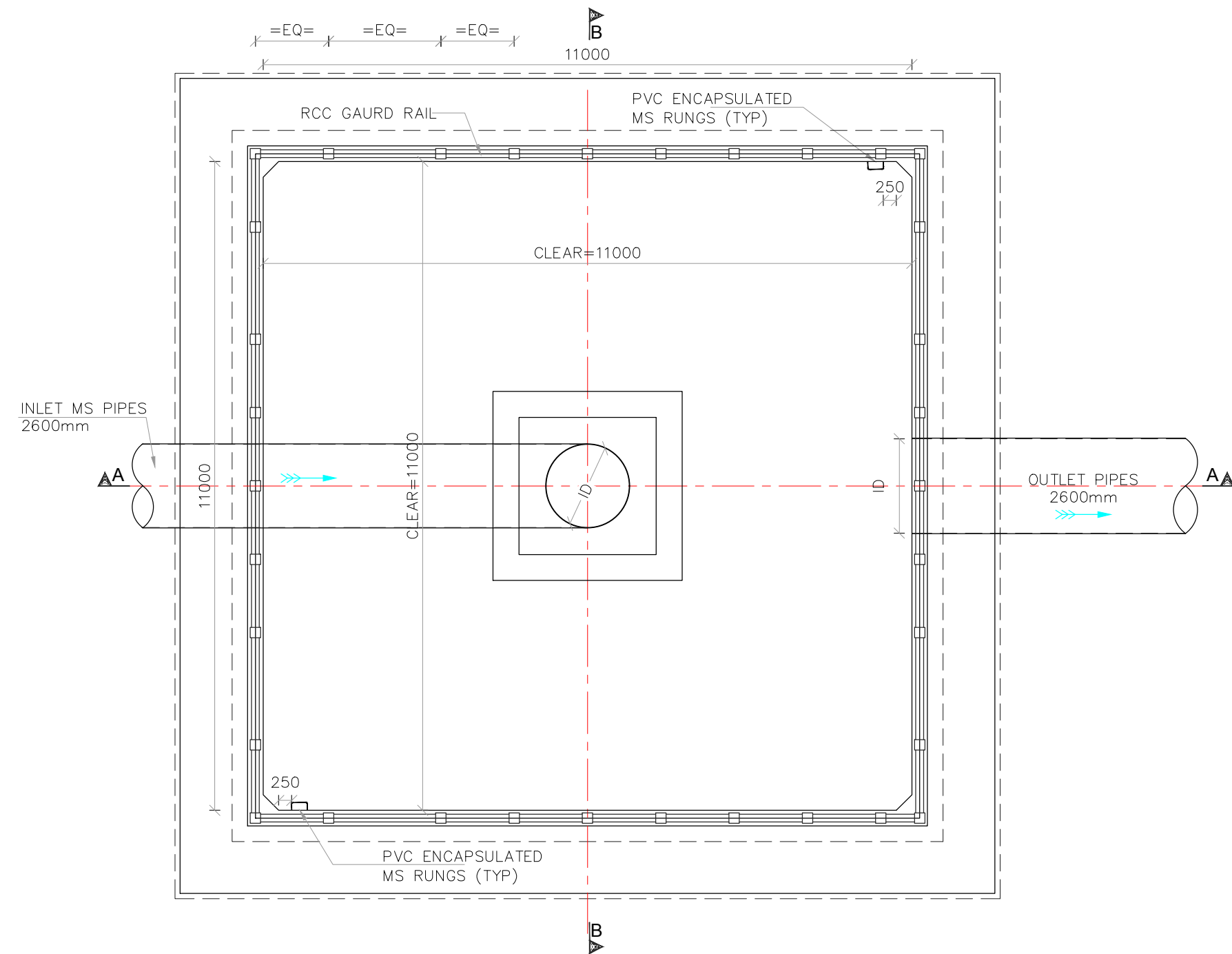
Project Title							
Kalasa Nala and Bhandura Nala Diversion Scheme							
Drawing Title							
General Arrangement Drawing for Jackwell Cum Pump House Bhandura Nala Diversion Scheme							
Date	Drw.	Desg.	Chk.	App.	Scale	Drawing Status	
21.05.2022	NMS	HSC	SN	NR	As Shown	For Approval	
Project No.	Drawing No.					Sheet No.	Rev.
1376X	EIT-1376X-WRE-BN-JW-A001					01 of 01	0
Consultant, E I Technologies Private Limited, Bengaluru.			Assistant Executive Engineer KNNL, MLBC, Sub Div. No.3 Khorapur.			Executive Engineer KNNL Kalsas Bhandura Project Division, Khorapur.	
Superintending Engineer KNNL, MLBC Circle Navilteertha.				Chief Engineer KNNL, MLBC Project Zone, Dharwad.			



PLAN OF PUMP HOUSE AT DELIVERY FLOOR LEVEL
(SCALE 1:200)



LONGITUDINAL SECTION OF PUMP HOUSE
(SCALE 1:200)



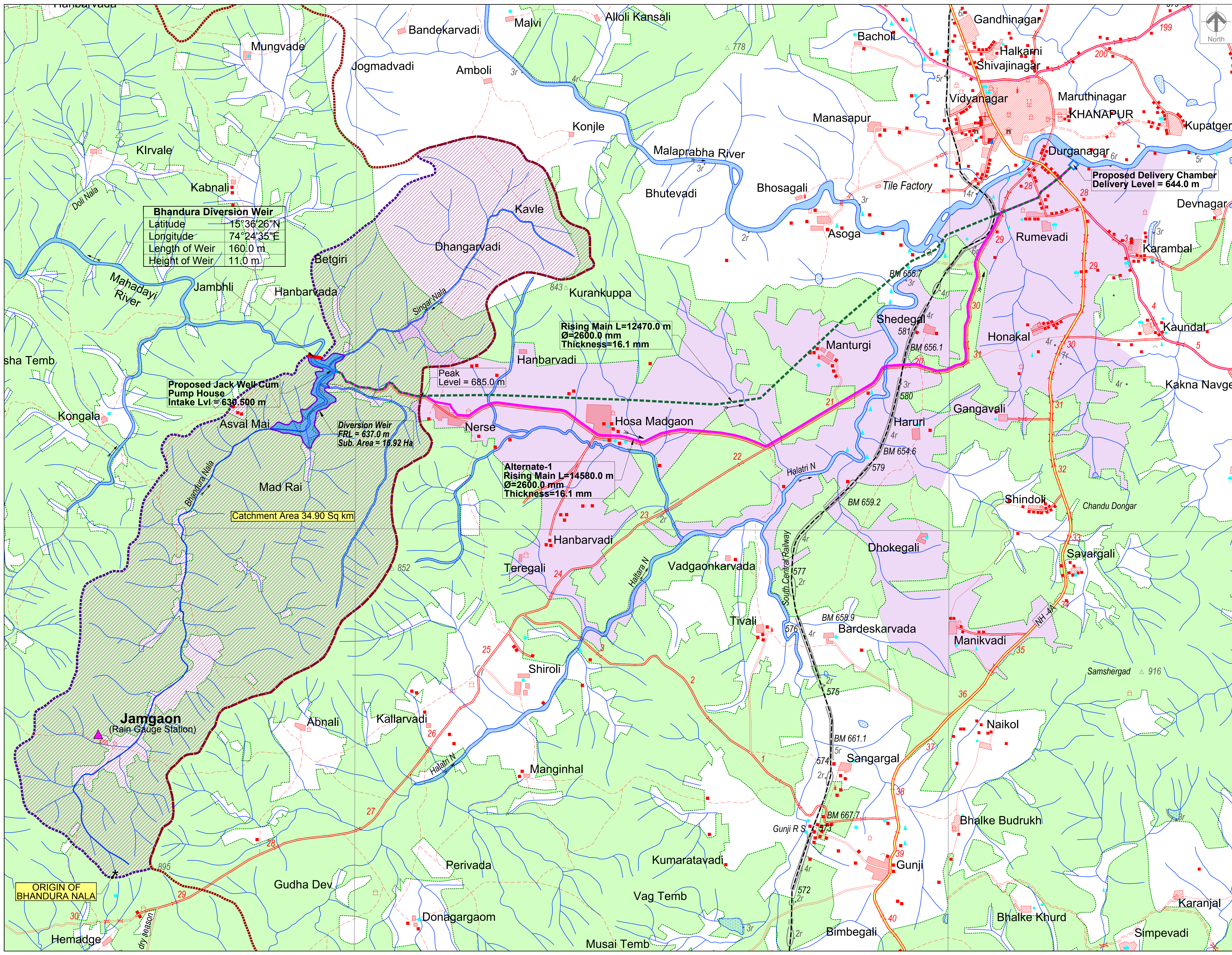
NOTES :

1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS.
2. DO NOT SCALE THE DRAWING, FOLLOW THE WRITTEN DIMENSION.
3. GRADE OF CONCRETE:
 - i) LEVELING COURSE - M15 WITH- A40 DOWN SIZE COARSE AGGREGATE.
 - ii) FOR ALL R C C WORKS - M30 WITH- A20 DOWN SIZE COARSE AGGREGATE.
4. ALL REINFORCEMENT BARS SHALL BE HYSD BARS OF GRADE FE-500 CONFIRMING TO IS-1786.
5. MINIMUM COVER TO ANY REINFORCEMENT SHALL BE 50 MM UNLESS OTHERWISE MENTIONED.
6. ALL LAPS AND DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF THE BARS AND STAGGERED.
7. SUITABLE CURTAILMENT FOR REINFORCEMENT SHALL BE DONE AT ALL OPENING LOCATIONS.
8. CONSTRUCTION JOINTS LOCATIONS SHALL BE DECIDED TO SUIT AT SITE
9. PROTECTING RAILS SHALL BE FOLLOWED AS PER STANDARD DETAILS.
10. CONSTRUCTION OF WATER RETAINING STRUCTURES SHALL BE DONE AS PER IS: 3370.
11. ANY DISCREPANCIES IN THE DRAWING AND EXECUTION SHOULD BE BROUGHT TO THE NOTICE OF THE APPROVING AUTHORITY/ DESIGN TEAM.
12. INLET/OUTLET OF PIPE DETAILS ARE TO BE FOLLOWED ACCORDING TO VENDOR DRAWINGS.
13. INSERT PLATES IF REQUIRED AS PER VENDOR DRAWING AND SHOULD BE PROVIDED BEFORE CONCRETING.
14. THE ENGINEER IN CHARGE SHALL ENSURE THAT THE ACTIVITY OF TESTING PIPELINE IS CARRIED OUT ONLY AFTER 28 DAYS OF CASTING.
15. PIPE AND SPECIALS SHALL BE SUITABLY SUPPORTED WHILE CONCRETING BLOCK.
16. THE SOIL USED FOR BACKFILLING SHALL NOT BE CLAYEY SOIL.
17. THE SOIL SHALL BE COMPACTED IN LAYERS OF NOT EXCEEDING THICKNESS OF 200MM.
18. THE COMPACTION SHALL BE DONE USING 8 -10T ROLLER/PLATE COMPACTOR WITH MIN 6 TO 8 PASSES.
19. PROPER SHEAR KEY SHOULD BE PROVIDED AS PER STANDARDS ALL AROUND THE EMBEDDED PIPES FOR PROPER BOND WITH CONCRETE BLOCKS BEFORE CASTING

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	20.05.2021	NMS	HSC	SN	NR

Owner	Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com
CONSULTANT	E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 1149, 26th Main, Jayanagar 4th 'T' Block, Bangalore-560 041, India. Ph.+91.80.40914714, Fax:+91.80.26650912 info@eitech.in • www.eitech.in

Project Title						
Kalasa Nala and Bhandura Nala Diversion Scheme						
Drawing Title						
General Arrangement Drawing for Delivery Chamber Bhandura Nala Diversion Scheme						
Date 20.05.2022	Drw. NMS	Dsg. HSC	Chk. SN	App. NR	Scale As Shown	Drawing Status For Approval
Project No. 1376X	Drawing No. EIT-1376X-WRE-BN-JW-A001				Sheet No. 01 of 01	Rev. 0
Consultant, E I Technologies Private Limited, Bengaluru.		ASSISTANT EXECUTIVE ENGINEER KNNL, MLBCC, SUB DIV. NO.3 KHANAPUR.			Executive Engineer KNNL Kalasa Bandura Project Division, Khanapur.	
Superintending Engineer KNNL, MLBCC Circle Nagvilluteertha.				Chief Engineer KNNL, MLBCC Project Zone, Dharwad.		



Bhandura Diversion Weir
Latitude 15°36'26"N
Longitude 74°24'35"E
Length of Weir 160.0 m
Height of Weir 11.0 m

Proposed Jack Well-Cum Pump House
Intake Lvl = 630.500 m

Diversion Weir
FRL = 637.0 m
Sub. Area = 16.92 Ha

Rising Main L=12470.0 m
Ø=2600.0 mm
Thickness=16.1 mm

Peak Level = 685.0 m

Alternate-1 Rising Main L=14580.0 m
Ø=2600.0 mm
Thickness=16.1 mm

Catchment Area 34.90 Sq km

ORIGIN OF BHANDURA NALA

Legend

Roads
National Highway, State Highway, Other Roads
Unmetalled Roads, Cart track, Foot path
Railways
Broad gauge with station, Other gauge
Boundary
State, District, Taluk, Forest
Buildings
Temple, Chattri, Tomb, Mosque, Graves, Village limits, Hut
Transmission Lines
Main power line, Power line, Telephone lines
Heights
Relation spot height, Spot height, Triangle station
Ground Control Point, Secondary Control Point, Temporary Benchmark
Water Features
River, Reservoir, Canal, Channel, Stream, Pond, Well, Tank
Other Features
Climax, Embankment, Culvert, Gate, Broken ground, Trees, Grass, Wire Fence, Cliff
Sheet rock, Rocky Area, Boulders
Ridge Line, Diversion Canal, Dam
Submergence Area, Catchment Area

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	01.06.2022	GGR	AK	SN	NR

Owner
Karnataka Neeravari Nigam Limited (KNNL)
(A Govt. of Karnataka undertaking)
Bangalore - 560 001, India.
www.knnlindia.com

CONSULTANT
E I Technologies Private Limited
(ISO 9001 : 2015 Certified)
1149, 26th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
Ph. +91 80 40914714, Fax: +91 80 26650912
info@eitech.in • www.eitech.in

Project Title
Kalasa Nala and Bhandura Nala Diversion Scheme

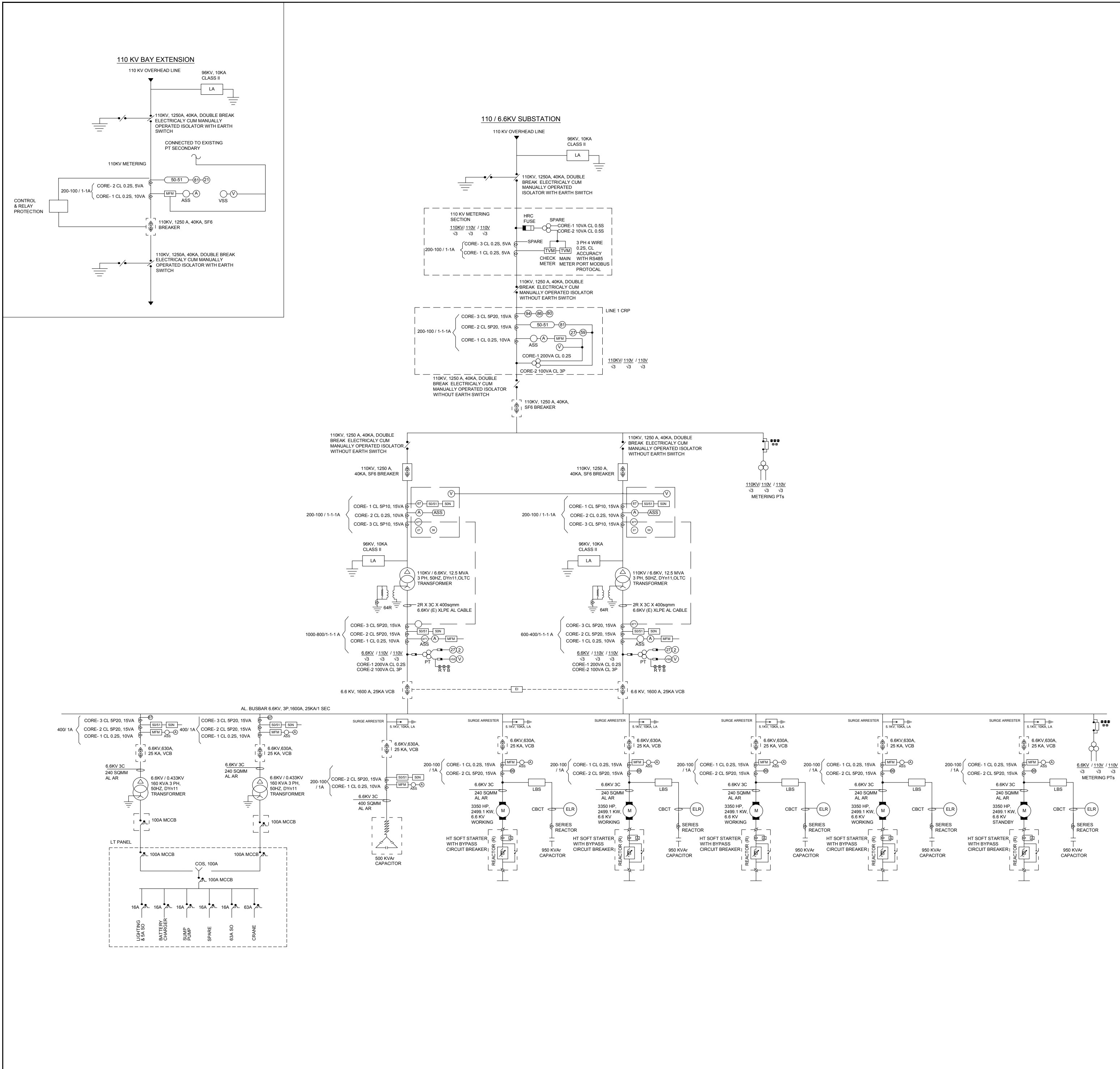
Drawing Title
Bhandura Nala Diversion Scheme

Sub Title
Catchment Area Map

Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
01.06.2022	GGR	AK	SN	NR	1:25,000	For Approval

Project No.	Drawing No.	Sheet No.	Rev.
1376X	EIT-1376X-WRE-BN-CTA-A006	01 of 01	0

Consultant, E I Technologies Private Limited, Bengaluru.	Assistant Executive Engineer KNNL, MLBC, Sub Div. No.3 Khanapur.	Executive Engineer KNNL Kalasa Bhandura Project Division, Khanapur.
Superintending Engineer KNNL, MLBC, Circle Nasiruddeen	Chief Engineer KNNL, MLBC Project Zone, Dharwad.	



LEGEND			
	LIGHTNING ARRESTER		VOLTMETER
	ELECTRICALLY CUM MANUALLY OPERATED ISOLATOR WITH EARTH SWITCH		MULTI FUNCTION METER
	ELECTRICALLY CUM MANUALLY OPERATED ISOLATOR WITHOUT EARTH SWITCH		AMMETER
	CURRENT TRANSFORMER		AMMETER SELECTOR SWITCH
	POTNTIAL TRANSFORMER		MINATURE CIRCUIT BREAKER
	HRC FUSE		TRIVECTOR METER
	VACCUM CIRCUIT BREAKER		MOULDED CASE CIRCUIT BREAKER
	POWER TRANSFORMER		
	MOTOR		
	DISTANCE RELAY		
	DIFFERENTIAL PROTECTIVE RELAY		
	IDMT O/C, INST. SHORT CIRCUIT RELAY		

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

0	For Approval	01.06.2022	GGR	AK	SN	NR			
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.			
Owner  Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com									
Consultant E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 1149, 26th Main, Jayanagar 4th 'T' Block, Bangalore-560 041, India. Ph.+91.80.40914714 / 40914961 info@eitech.in • www.eitech.in									
Project Title Kalasa Nala and Bhandura Nala Diversion Scheme									
Drawing Title Bhandura Nala Diversion Scheme									
Sub Title Single Line Diagram of Electrical Substation for Bhandura									
Date 01.06.2022	Drw. GGR	Dsg. AK	Chk. SN	App. NR	Scale 1:25,000	Drawing Status For Approval			
Project No. 1376X	Drawing No. EIT-1376X-WRE-BN-SLD-A007					Sheet No. 01 of 01	Rev. 0		
Consultant, E I Technologies Private Limited Bengaluru.			Assistant Executive Engineer KNNL, MLBCC, Sub Div. No.3 Khanapur.			Executive Engineer KNNL Kalasa Bandura Project Division, Khanapur.			
Superintending Engineer KNNL, MLBCC Circle Naviluteertha.					Chief Engineer KNNL, MLBCC Project Zone, Dharwad.				