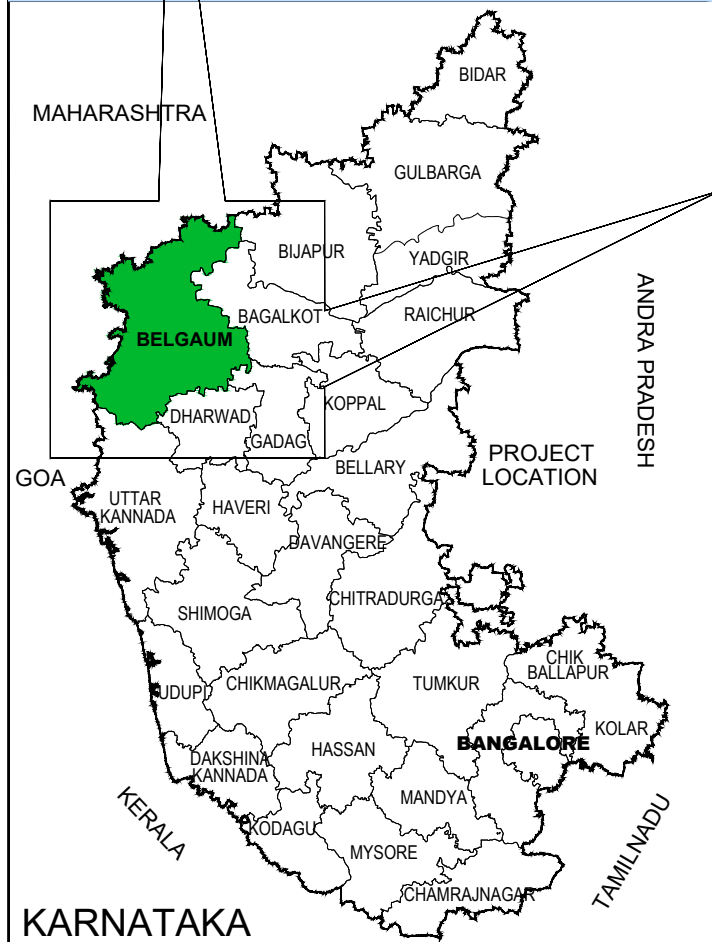
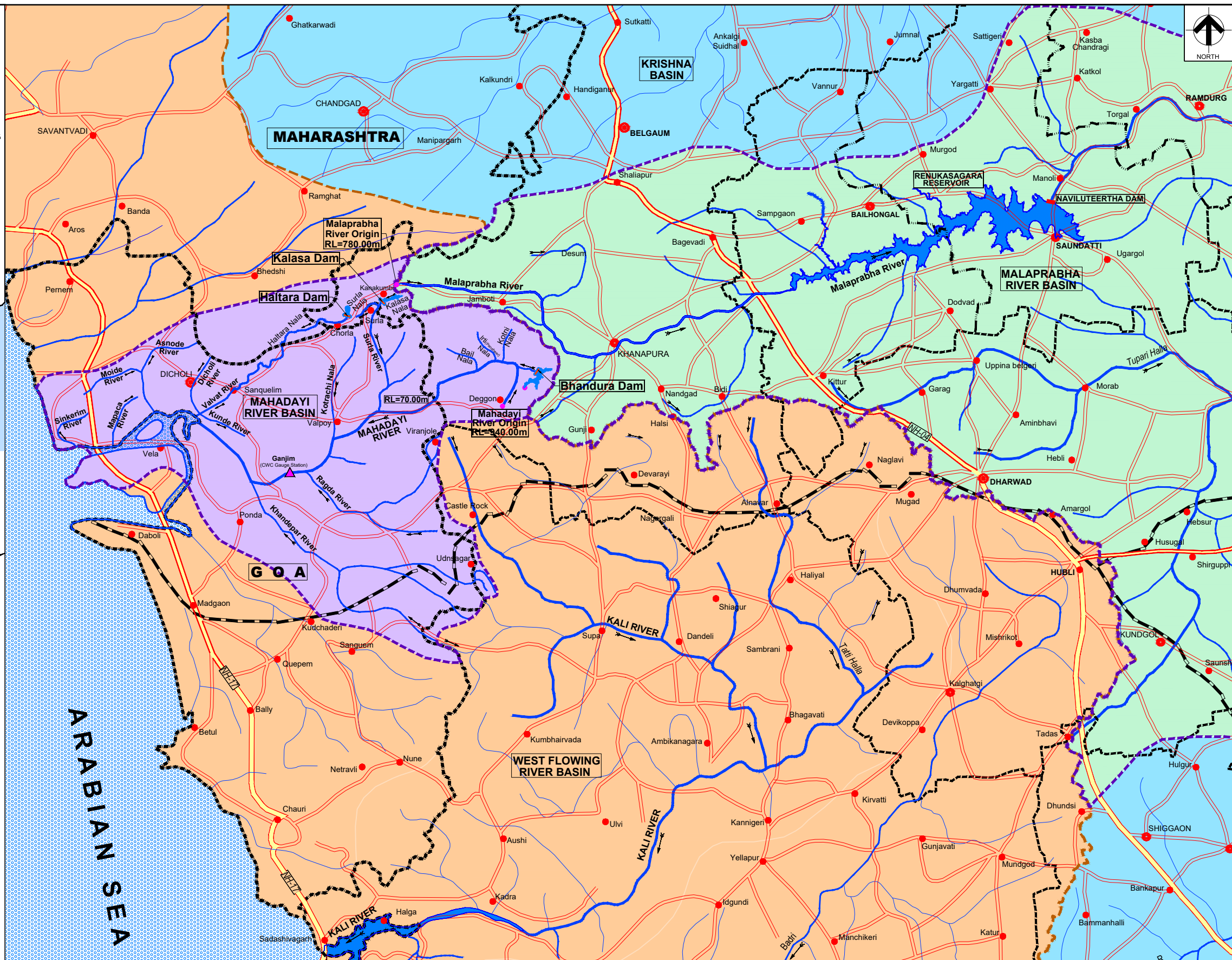


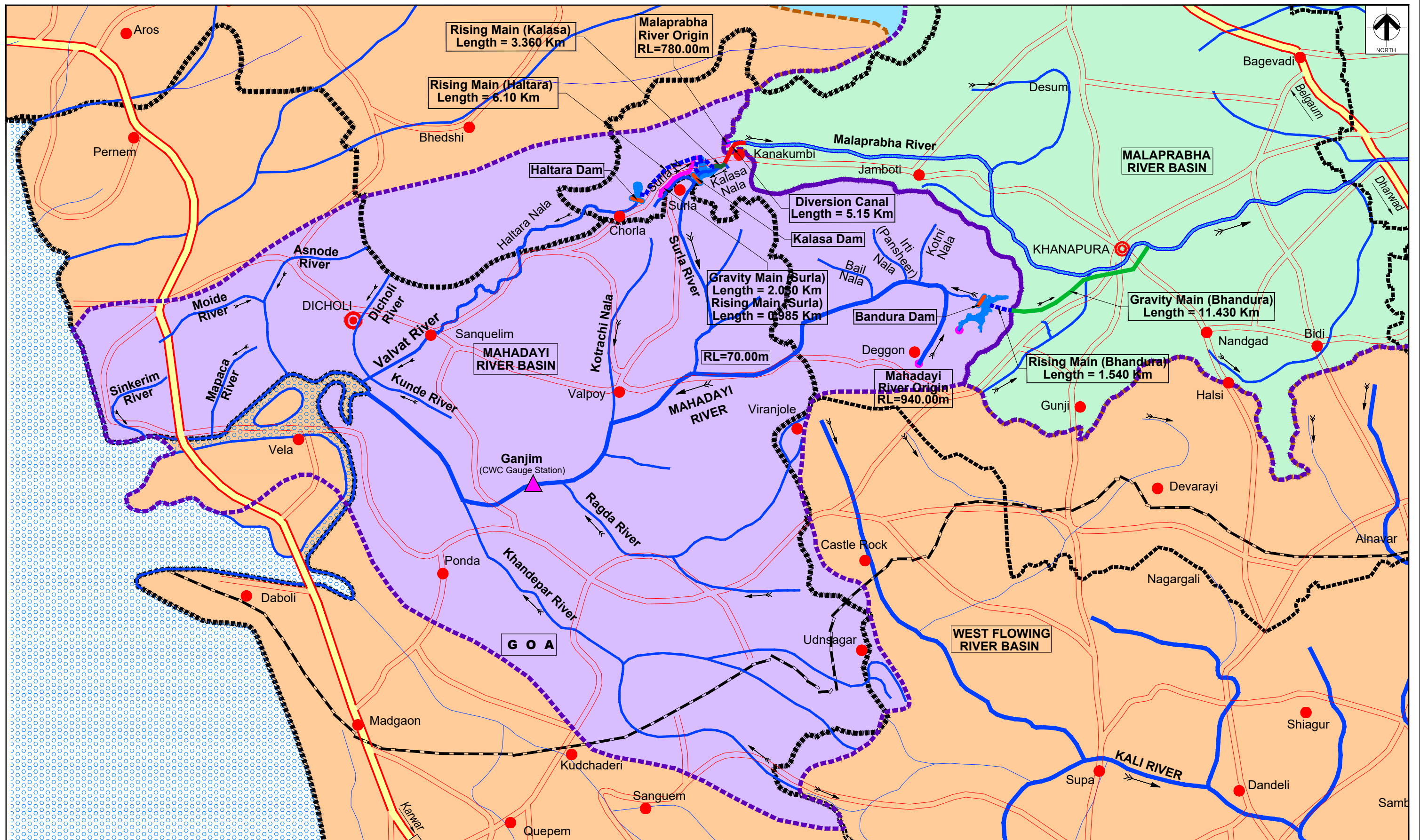


LEGEND	
ROADS	
National Highway	—————
State Highway	—————
Other Roads	—————
BOUNDARY	
State Boundary	—————
District Boundary	—————
Taluk Boundary	—————
NAMES	
District Name	●●●●●
Taluk Name	●●●●●
Village Name	●●●●●
WATER FEATURES	
River	~~~~~
Reservoir	~~~~~



Executive Engineer
KNKL, Kalasa Project Division Khanapur

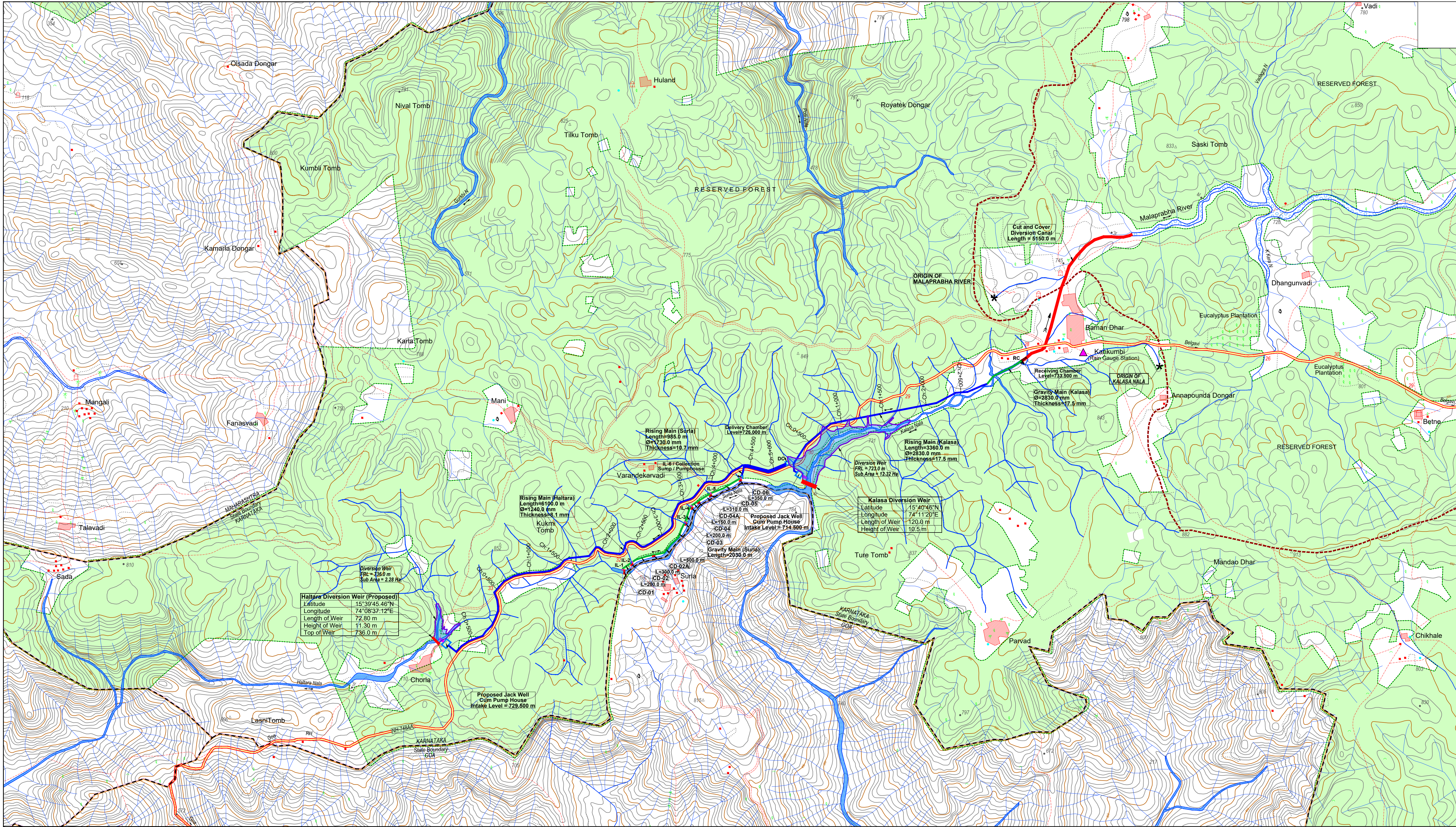
0	For Approval	15.12.22	GGR	AK	SN	NR	DRAWING TITLE	
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.	Index Map Showing Mahadayi & Malaprabha River Basin	
CLIENT							Date	15.12.2022
KARNATAKA NEERAVARI NIGAM LIMITED (A GOVT. OF KARNATAKA UNDERTAKING) BANGALORE - 560 001							Drw.	GGR
CONSULTANT							Dsg.	AK
E I Technologies Private Limited, (ISO 9001 : 2015 Certified) # 1149, 26th Main, Jayanagar 4th 'T' Block Bengaluru - 560 041, India. Ph: +91.80.40914714, Fax: +91.80.26650912 info@eitech.in • www.eitech.in							Chk.	SN
PROJECT TITLE							App.	NR
Kalasa Nala Diversion Scheme (Lift Scheme)							Scale	AS SHOWN
							Drawing Status	FOR APPROVAL
							Project No.	1376X
							Sheet No.	EIT-1376X-WRE-XX-IND-A001
							Rev.	0
							Rev. 0	
							Executive Engineer KNKL, Kalasa Project Division, Khanapur.	
							Superintending Engineer, KNKL, Malaprabha Project Zone, Dharwad.	



LEGEND	
ROADS	
National Highway	—
State Highway	—
Other Roads	—
BOUNDARY	
State Boundary	—
District Boundary	—
Taluk Boundary	—
NAMES	
District Name	•
Taluk Name	•
Village Name	•
WATER FEATURES	
River	—
Reservoir	—

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	15.12.22	GGR	AK	SN	NR	DRAWING TITLE	
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.	MASTER PLAN	
CLIENT							Date	15.12.2022
KARNATAKA NEERAVARI NIGAM LIMITED (A GOVT. OF KARNATAKA UNDERTAKING) BANGALORE - 560 001							Drw.	GGR
CONSULTANT							Dsg.	AK
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							Chk.	SN
PROJECT TITLE							App.	NR
Kalasa Nala Diversion Scheme (Lift Scheme)							Scale	AS SHOWN
							Drawing Status	FOR APPROVAL
							Project No.	1376X
							Drawing No.	EIT-1376X-WRE-KN-IND-A001A
							Sheet No.	01 of 01
							Rev.	0
							Executive Engineer KNNL, Kalasa Project Division, Khanapur.	
							Superintending Engineer, KNNL, Malaprabha Project Zone, Dharwad.	



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
Contour with value, Bench mark
Ground Control Point, Secondary Control Point, Temporary Benchmark

Water Features
River, Reservoir, Canal, Channel, Stream
Pond, Well, Tank

Other Features
Climits, Embankment, Culvert, Gate, Broken ground
Tree, Cross, Wire Fence, Cliff
Sheet rock, Rocky Area, Boulders
Ridge Line, Diversion Canal, Diversion Weir
Submergence Area, Catchment Area

Legend:

Intake Channel
Rising Main
Gravity Main
CD (Check Dam)

Executive Engineer
KNNL, Kalasa Project Division, Khanapur

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.	Scale	For Approval
0		15.12.2022	GGR	RU	SN	NR	1:25,000	

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 Diversion Scheme
(Lift Scheme)

Drawing Title
Index Map of Scheme

Date
15.12.2022

Project No.
1376X

Drw.
GGR

Dsg.
RU

Chk.
SN

App.
NR

Scale
1:25,000

Drawing Status
For Approval

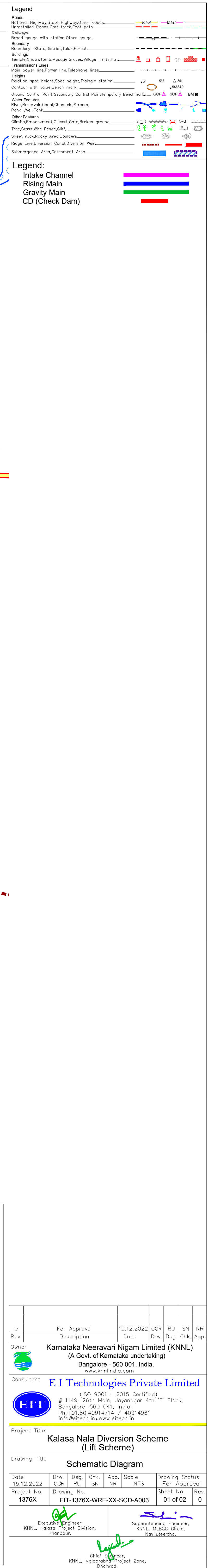
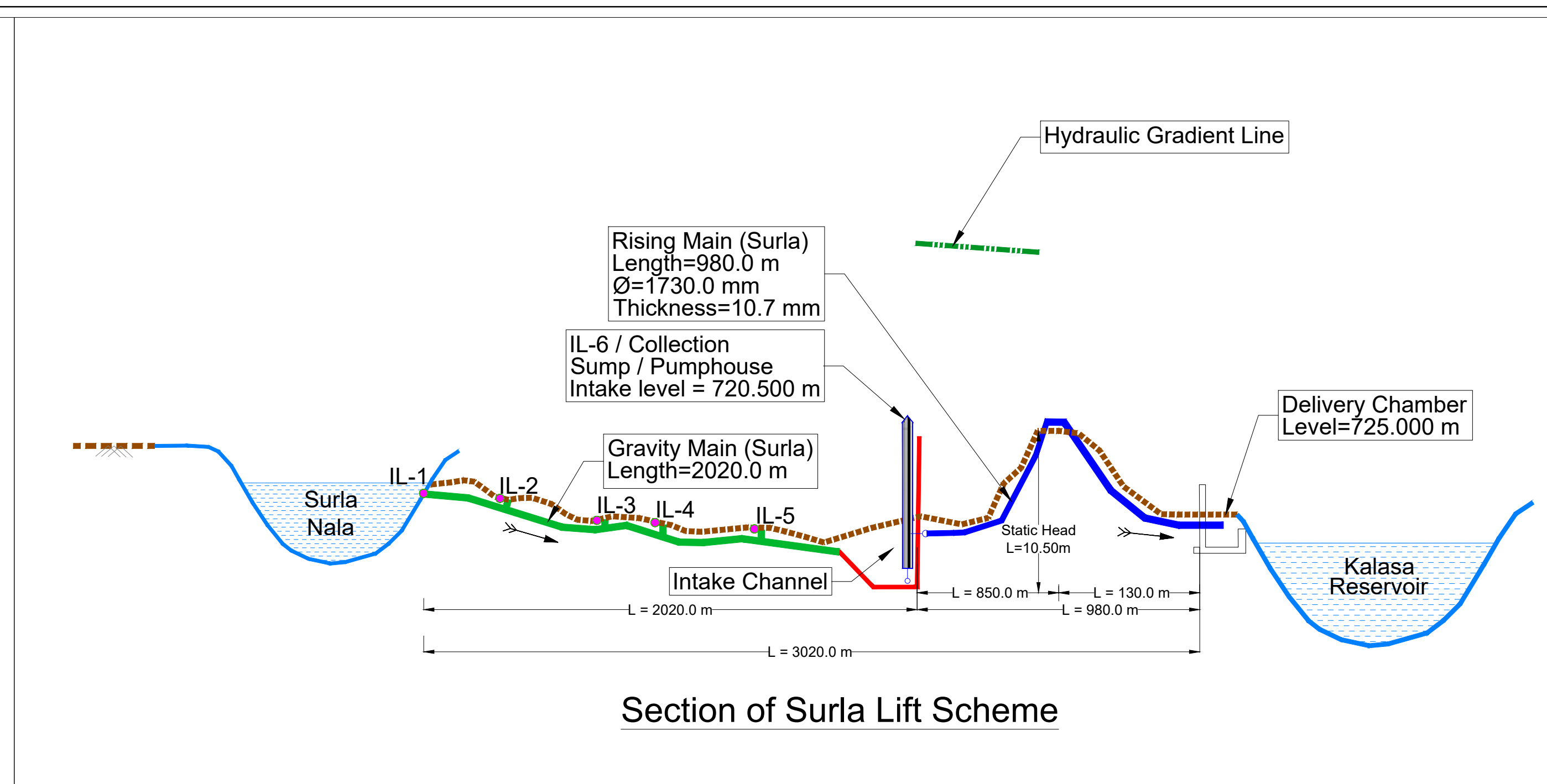
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01 of 01

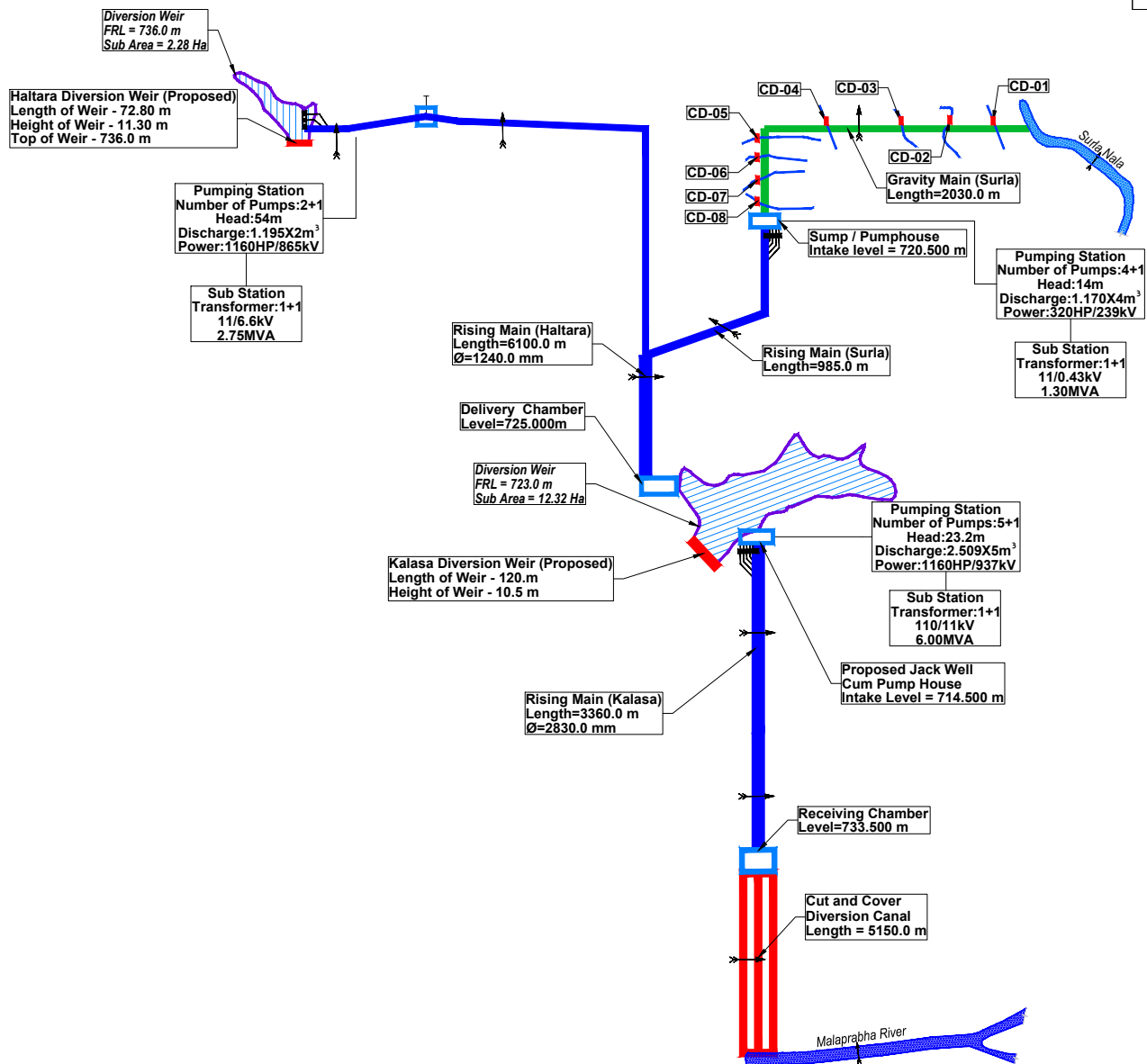
Rev.
0

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer
KNNL, MBCC Circle,
Naviyathirtha.

Chief Engineer
KNNL, Malaprabha Project Zone,
Dharwad.



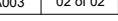


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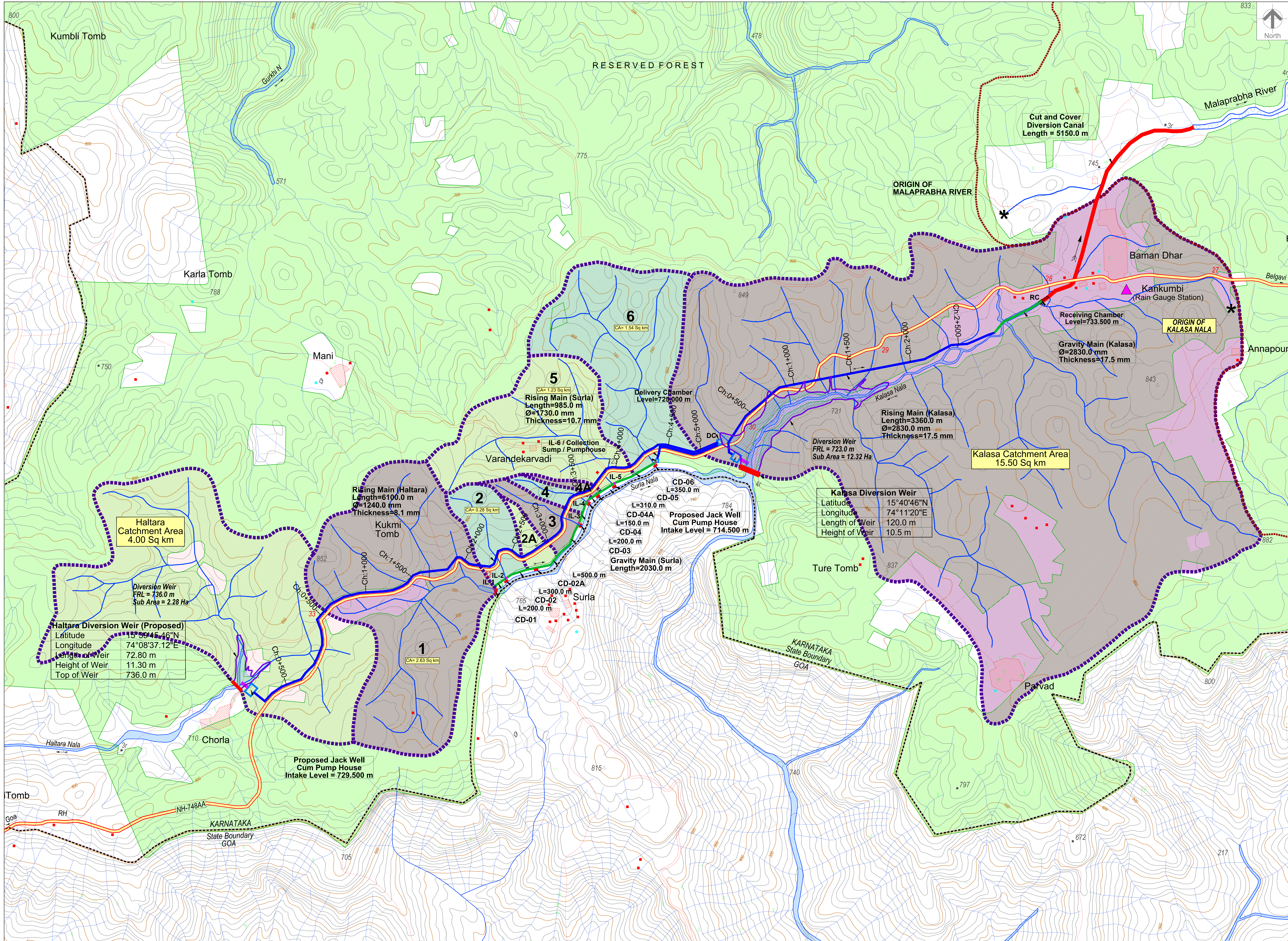
Rising Main
Gravity Main
CD (Check Dam)



Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	15.12.2022	GGR	RU	SN	NR
Owner						
Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com						
CONSULTANT						
E I Technologies Pvt. Ltd., (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						
Haltara Nala Diversion Scheme (Lift Scheme)						

DRAWING TITLE							
Kalasa Nala Diversion Scheme (Lift Scheme)							
Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status	
15.12.2022	GGR	RU	SN	NR	AS SHOWN	For Approval	
Project No.	Drawing No.		Sheet No.			Rev.	
1376X	EIT-1376X-WRE-XX-SCD-A003		02 of 02			0	
 Executive Engineer KNNL, Kalasa Project Division, Khanapur.				 Superintending Engineer, KNNL, MLBC Circle, Naviluteertha.			
 Chief Engineer, KNNL, Malaprabha Project Zone, Dharwad.							

EIT-QMS01-CAD-QSF-A006-R0



Legend

North

Intake Channel
Rising Main
Gravity Main
CD (Check Dam)

Suria Lift Catchment Area	
Suria Nala - 1	2.63 Sq Km.
Suria Nala - 2	0.28 Sq Km.
Suria Nala - 3	0.00 Sq Km.
Suria Nala - 4	0.00 Sq Km.
Suria Nala - 5	0.00 Sq Km.
Suria Nala - 6	0.00 Sq Km.
Suria Nala - 7	1.23 Sq Km.
Suria Nala - 8	1.54 Sq Km.
Total Suria Catchment Area	6.00 Sq Km.

Kalasa Diversion Weir	
Latitude	15°40'46"N
Longitude	74°11'20"E
Length of Weir	120.0 m
Height of Weir	10.5 m

Haltara Diversion Weir (Proposed)	
Latitude	15°39'45.46"N
Longitude	74°08'37.12"E
Length of Weir	72.80 m
Height of Weir	11.30 m
Top of Weir	736.0 m

Executive Engineer
KNL, Kalasa Project Division Khanapur

For Approval: 15.12.2022 GGR RUI SN NR
Drawn: Kamalaka Neeravani Nigam Limited (KNL)
(A Govt. of Karnataka undertaking)
Bangalore - 560 001, India.
www.knl.org.in

Consultant: E I Technologies Private Limited
(ISO 9001 : 2015 Certified)
1140, 20th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
Ph: +91 80 800 0714 / 74094961
info@eitech.in www.eitech.in

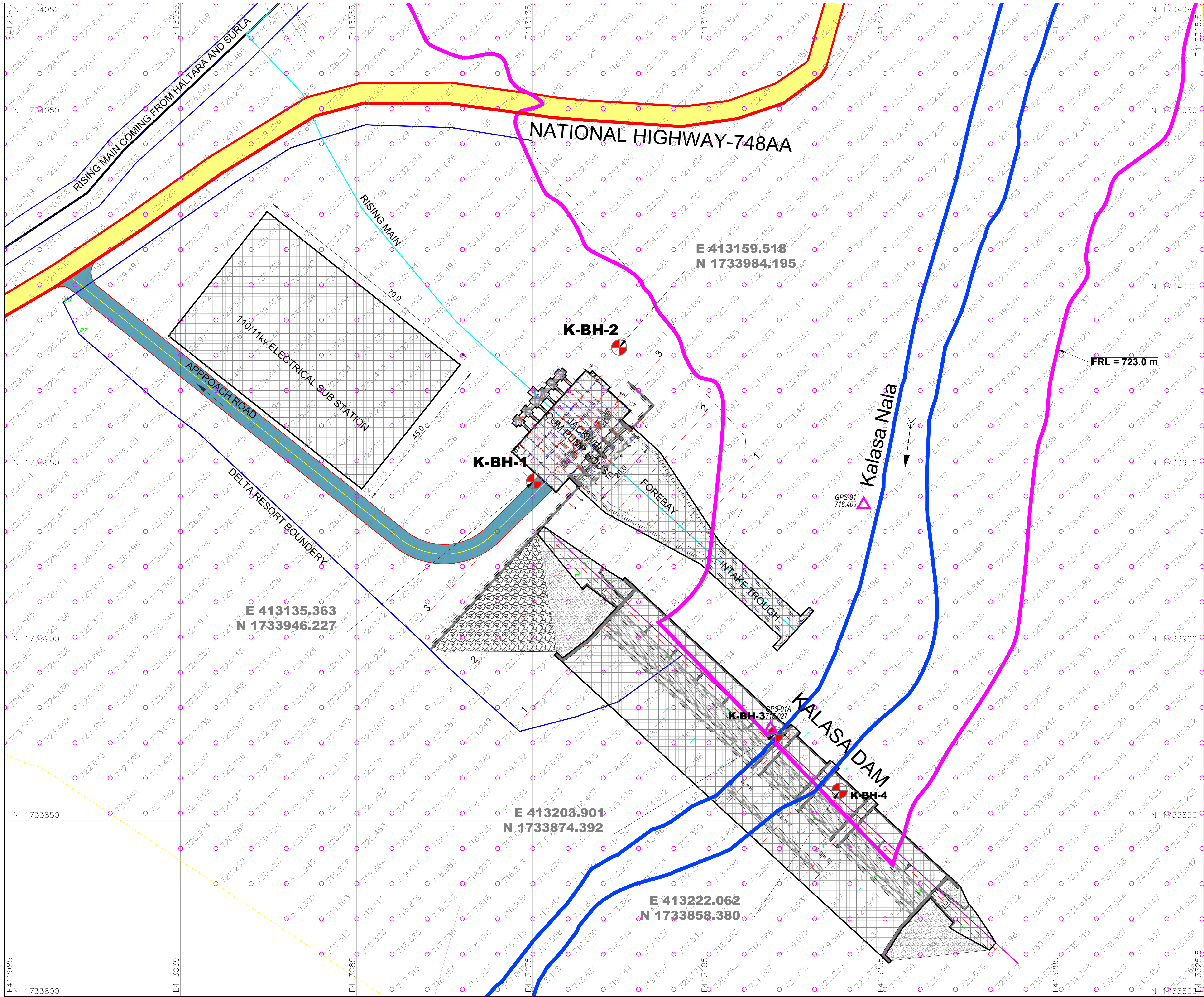
Project Title: Kalasa Nala Diversion Scheme (Lift Scheme)

Drawing Title: Catchment Area Map

Date: 15.12.2022	Drawn: GGR	Checked: SN	Approved: NR	Drawing Status: For Approval
Project No: 1370X	Drawing No: EIT-15XK-WRE-XX-CTA-A006	Sheet No: 01 of 01	Rev: 0	

Executed by: KNL, Kalasa Project Division, Khanapur.

Supervising Engineer: KNL, Kalasa Project Division, Khanapur.



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, Chattri, Tomb, Mosque, Graves, Village limits, Hut
Transmission Lines
Main power line, Power line, Telephone lines
Heights
Relation spot height, Spot height, Training station
Ground Control Point, Secondary Control Point, Temporary Benchmark
Water Features
River, Reservoir, Canal, Channels, Stream
Pond, Well, Tank
Other Features
Climax, Embankment, Culvert, Gate, Broken ground
Tree, Grass, Wire Fence, Cliff
Sheet rock, Rocky Area, Boulders

Notes :

1. All dimensions are in metres unless otherwise specified.
2. Co-ordinates are based on UTM co-ordinates obtained using hand held GPS.

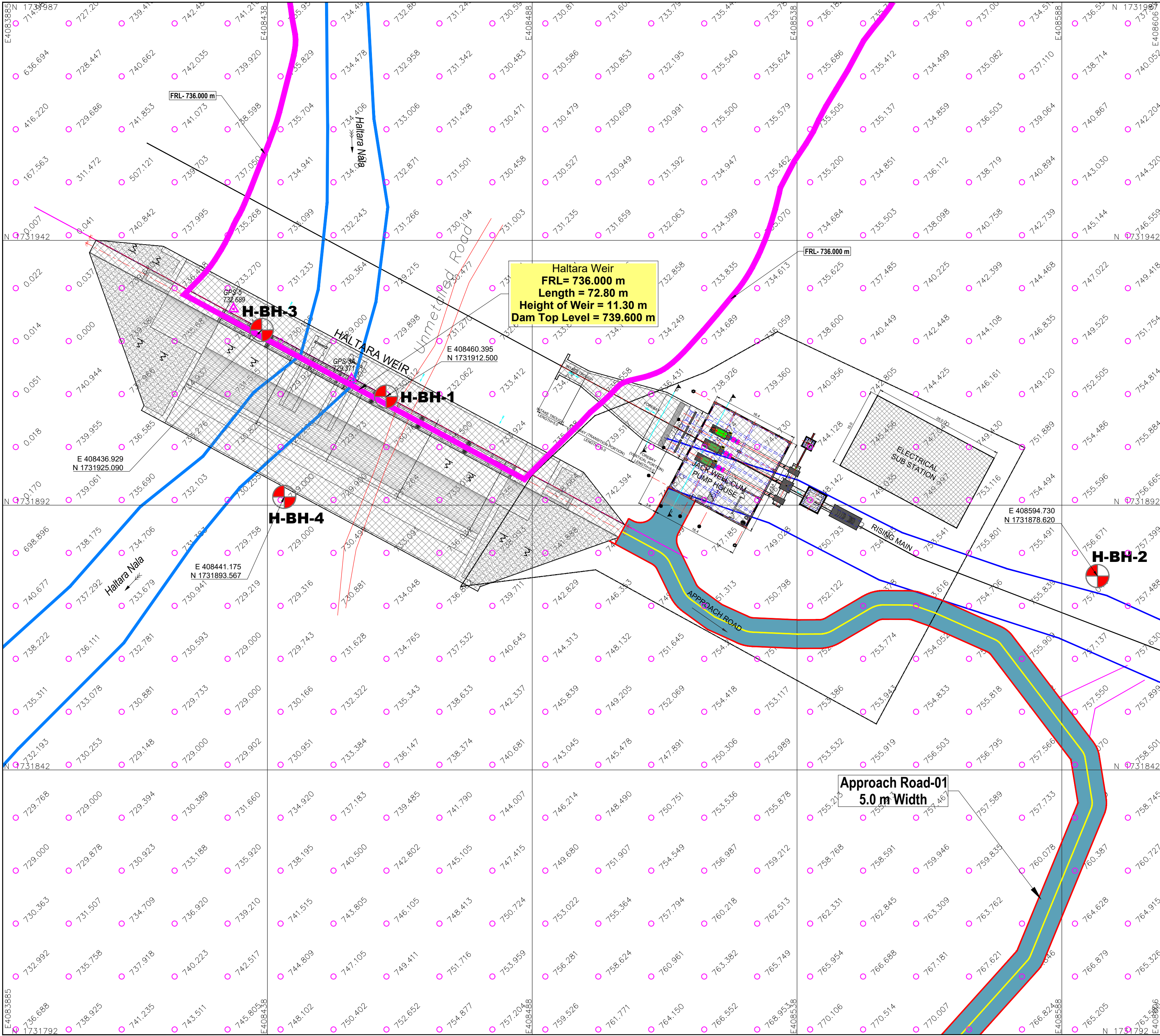
Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	Rev.	For Approval	15.12.2022	GGR	AK	SN	NR
0	Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	Rev.	Owner	Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com				
0	Rev.	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				
0	Rev.	Project Title	Kalasa Nala Diversion Scheme (Lift Scheme)				
0	Rev.	Sub Title	Kalasa Nala Diversion Dam				
0	Rev.	Drawing Title	Block Levels Plan				
0	Rev.	Date	15.12.2022	Drw.	GGR	AK	SN
0	Rev.	Project No.	1376X	Dsg.	AK	SN	NR
0	Rev.	Drawing No.	EIT-1376X-WRE-KN-BLP-A010	App.	Scale	1:500	Drawing Status
0	Rev.	Sheet No.	01 of 01	For Approval			
0	Rev.	Rev.	0				

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer
KNNL, MLBC Circle,
Navilurthi.

Chief Engineer
KNNL, Malaprabha Project Zone,
Dharwad.



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, Triangle station, Contour with value, Bench mark, Ground Control Point, Secondary Control Point, Temporary Benchmark.

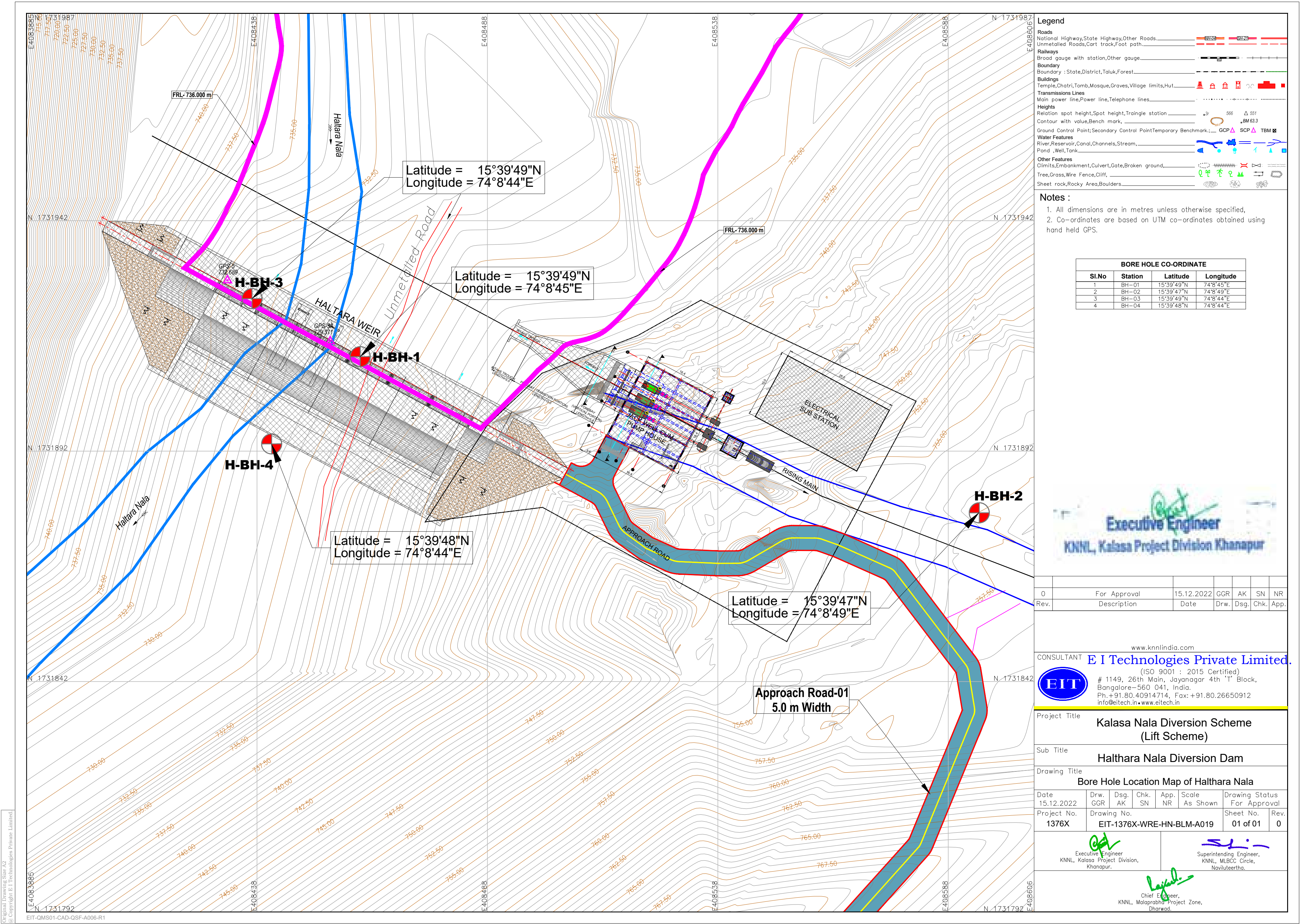
Water Features
River, Reservoir, Canal, Channels, Stream, Pond, Well, Tank.

Other Features
Limits, Embankment, Culvert, Gate, Broken ground, Tree, Grass, Wire Fence, Cliff, Sheet rock, Rocky Area, Boulders.

- Notes :**
1. All dimensions are in metres unless otherwise specified,
 2. Co-ordinates are based on UTM co-ordinates obtained using hand held GPS.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	15.12.2022	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 Diversion Scheme (Lift Scheme)						
Sub Title Haltara Nala Diversion Dam						
Drawing Title Block Levels Plan						
Date 15.12.2022	Drw. GGR	Dsg. AK	Chk. SN	App. NR	Scale 1:500	Drawing Status For Approval
Project No. 1376X	Drawing No. EIT-1376X-WRE-XX-BLP-A018				Sheet No. 01 of 01	Rev. 0
 Executive Engineer KNNL, Kalasa Project Division, Khanapur.				 Superintending Engineer, KNNL, MLBCC Circle, Naviluteertha.		
 Chief Engineer, KNNL, Malaprabha Project Zone, Dharwad.						



- 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, Chattri, Tomb, Mosque, Graves, Village limits, Hut.
- Transmissions Lines**
Main power line, Power line, Telephone lines.
- Heights**
Relation spot height, Spot height, Triangle 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**
Climits, Embankment, Culvert, Gate, Broken ground, Tree, Grass, Wire Fence, Cliff, Sheet rock, Rocky Area, Boulders.

- Notes :**
- All dimensions are in metres unless otherwise specified.
 - Co-ordinates are based on UTM co-ordinates obtained using hand held GPS.

BORE HOLE CO-ORDINATE			
Sl.No	Station	Latitude	Longitude
1	BH-01	15°39'49"N	74°8'45"E
2	BH-02	15°39'47"N	74°8'49"E
3	BH-03	15°39'49"N	74°8'44"E
4	BH-04	15°39'48"N	74°8'44"E

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	15.12.2022	GGR	AK	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

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 Diversion Scheme (Lift Scheme)

Sub Title
Halthara Nala Diversion Dam

Drawing Title
Bore Hole Location Map of Halthara Nala

Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
15.12.2022	GGR	AK	SN	NR	As Shown	For Approval
Project No.	Drawing No.	Sheet No.		Rev.		
1376X	EIT-1376X-WRE-HN-BLM-A019	01 of 01		0		

Executive Engineer
KNNL, Kalasa Project Division, Khanapur.

Superintending Engineer
KNNL, MLCC Circle, Navilteertha.

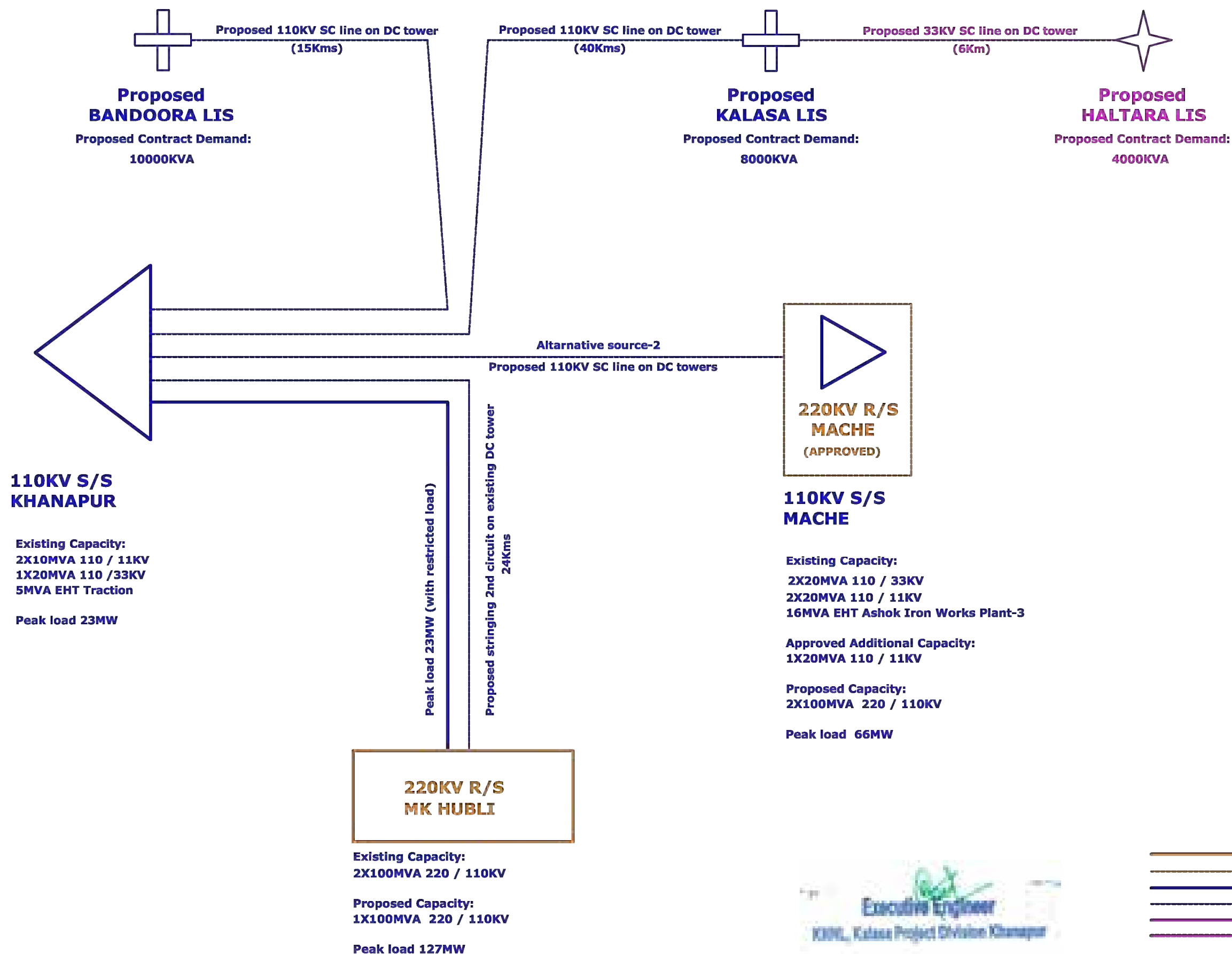
Chief Engineer
KNNL, Malaprabha Project Zone, Dharwad.

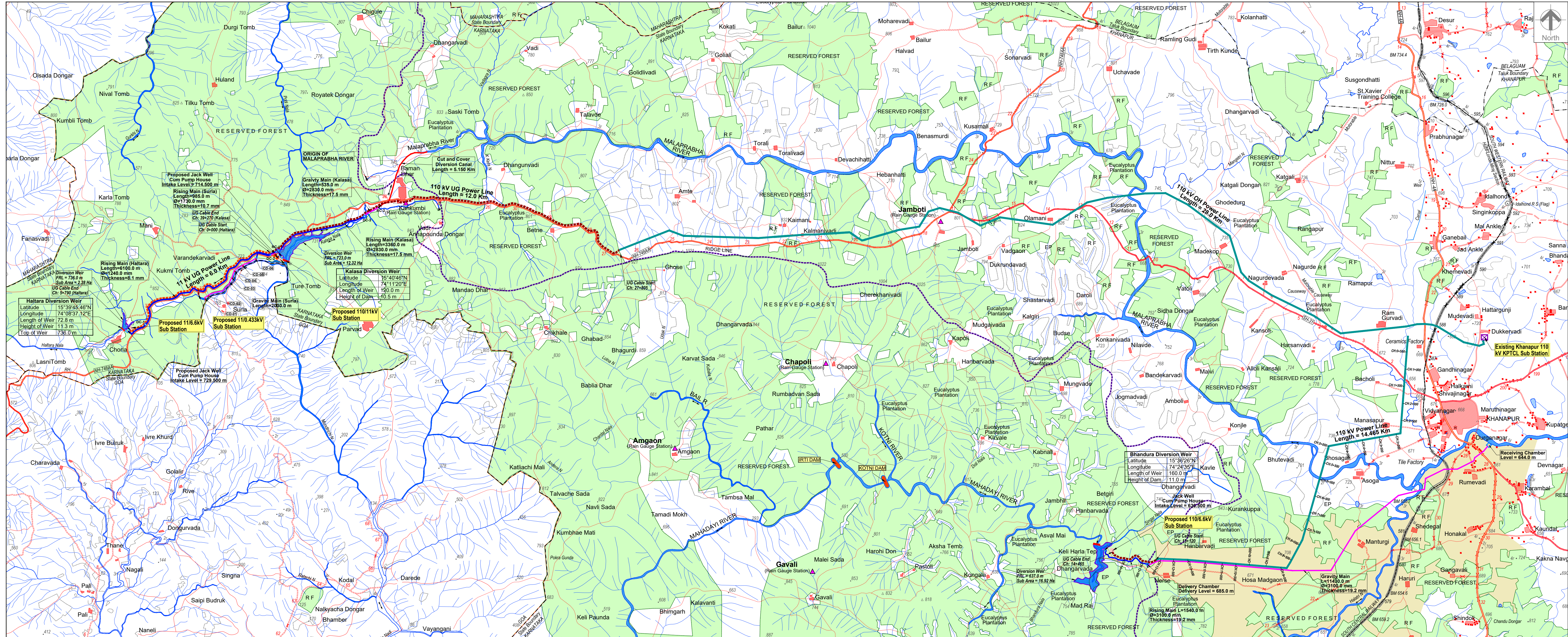


KARNATAKA POWER TRANSMISSION CORPORATION LIMITED

NETWORK DIAGRAM SHOWING 220KV/110KV /33KV LINES, SUB STATIONS CONNECTIVITY
FOR PROPOSED KALASA-BANDOORI LIFT IRRIGATION SCHEME

UPDATED AS ON 22.05.2022





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, Chatri, Tomb, Mosque, Graves, Village limits, Hut

Transmission Lines
Main power line, Power line, Telephone lines

Heights
Relation spot height, Spot height, Triangulation station
Contour with value, Bench mark

Water Features
River, Reservoir, Canal, Channels, Stream

Other Features
Limits, Embankment, Culvert, Gate, Broken ground
Tree, Grass, Wire, Fence, Cliff
Sheet rock, Rocky Area, Boulders
Ridge Line, Diversion Canal, Diversion Weir
Submergence Area, Catchment Area

LEGEND:

Over Head Tower (OHT)
Under Ground Cable (UG Cable)

Notes

1) All dimensions are in metres and reduced levels are in metres.
2) Do not scale the drawing, written dimensions only

Executive Engineer
KNNL, Kalasa Project Division Khanapur

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	15.12.2022	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 / 40914961
info@eitech.in • www.eitech.in

Project Title
Kalasa Nala and Haltara Nala Diversion Scheme (Lift Scheme)

Sub Title
Kalasa Lift and Haltara Lift

Drawing Title
Index Map Showing the Location of Substation and Alignment of Transmission Line for Kalasa, Haltara and Surla Diversion

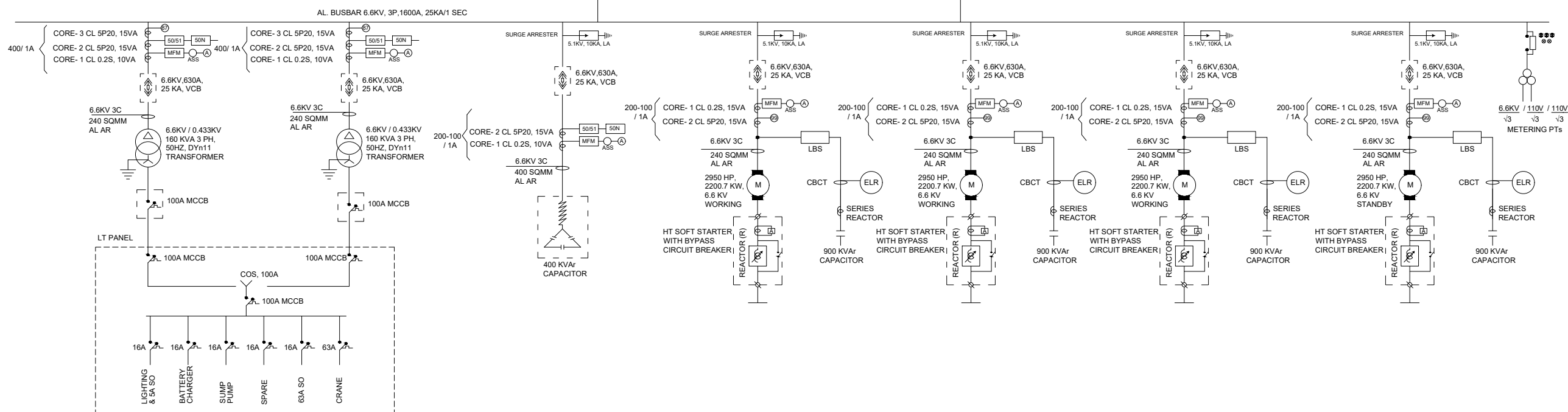
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	GGR	AK	SN	NR	1:50,000	For Approval
15.12.2022						

Project No. 1376X
Drawing No. EIT-1376X-WRE-XX-ELE-A069
Sheet No. 01 of 01
Rev. 0

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer,
KNNL, MLBC Circle,
Navluteertha.

Chief Engineer,
KNNL, Malaprabha Project Zone,
Dharwad.



Executive Engineer
KNNL, Kalasa Project Division Khanapur

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 Diversion Scheme (Lift Scheme)
---------------	---

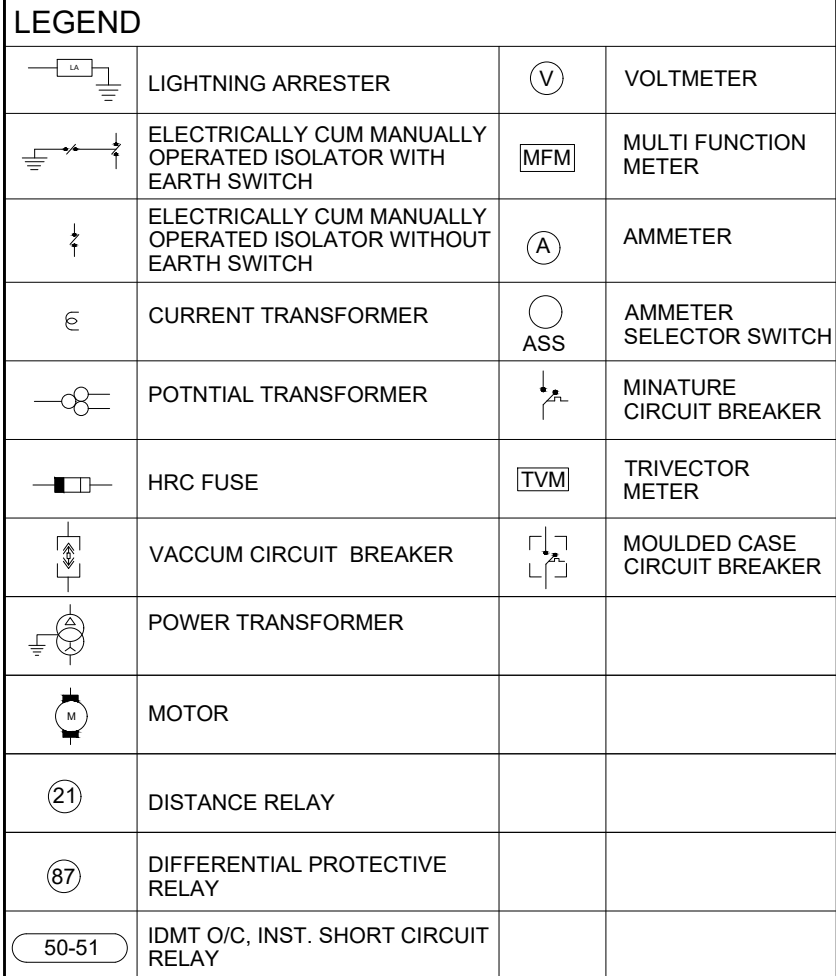
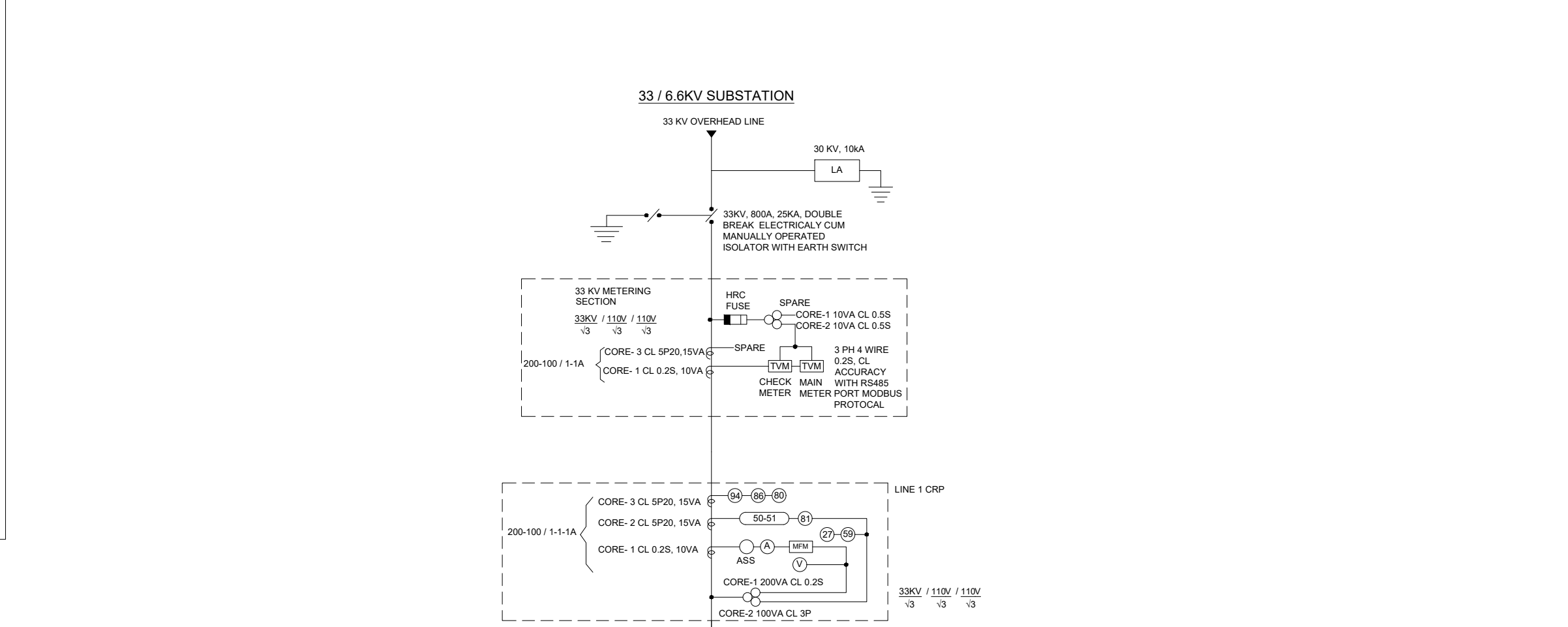
Sub Title	Kalasa Lift
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Drawing Title	Single Line Diagram of Electrical Substation for Kalasa
---------------	--

Date 15.12.2022	Drw. GGR	Dsg. AK	Chk. SN	App. NR	Scale As Shown	Drawing Status For Approval	
Project No. 1376X	Drawing No. EIT-1376X-WRE-KN-SLD-A070					Sheet No. 01 of 01	Rev. 0

 Executive Engineer KNNL, Kalasa Project Division, Khanapur.	 Superintending Engineer, KNNL, MLBCC Circle, Naviluteertha.
--	--

Chief Engineer,
KNNL, Malaprabha Project Zone,
Dharwad.



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	15.12.2022	GGR	AK	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

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

Sub Title	Haltara Lift
-----------	--------------

Date 15.12.2022	Drw. GGR	Dsg. AK	Chk. SN	App. NR	Scale As Shown	Drawing Status For Approval	
Project No. 1376X	Drawing No. EIT-1376X-WRE-HN-SLD-A071					Sheet No. 01 of 01	Rev. 0

Chief Engineer,
KNNL, Malaprabha Project Zone,
Dharwad.



Notes :

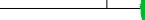
1. All dimensions are in millimeters and reduced levels are in meters.
2. Do not scale the drawing. Written dimensions only shall be followed

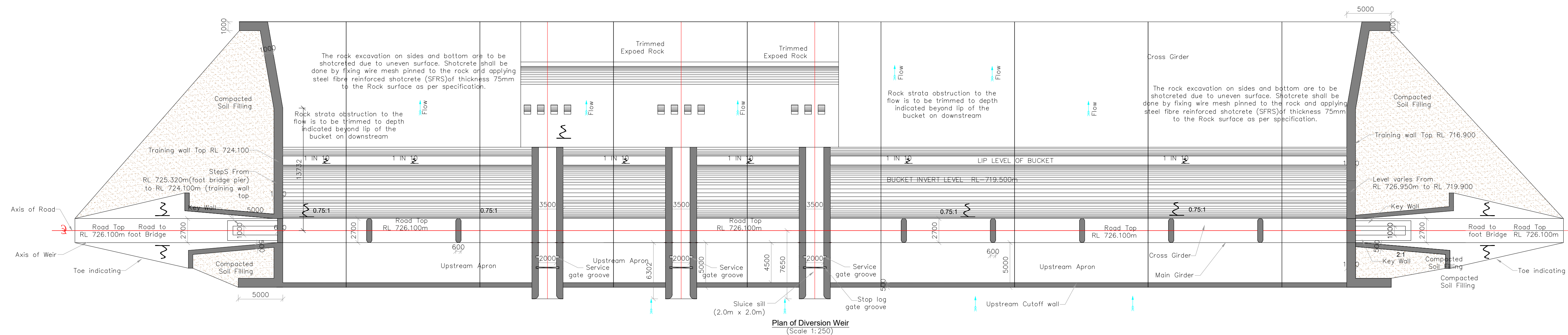
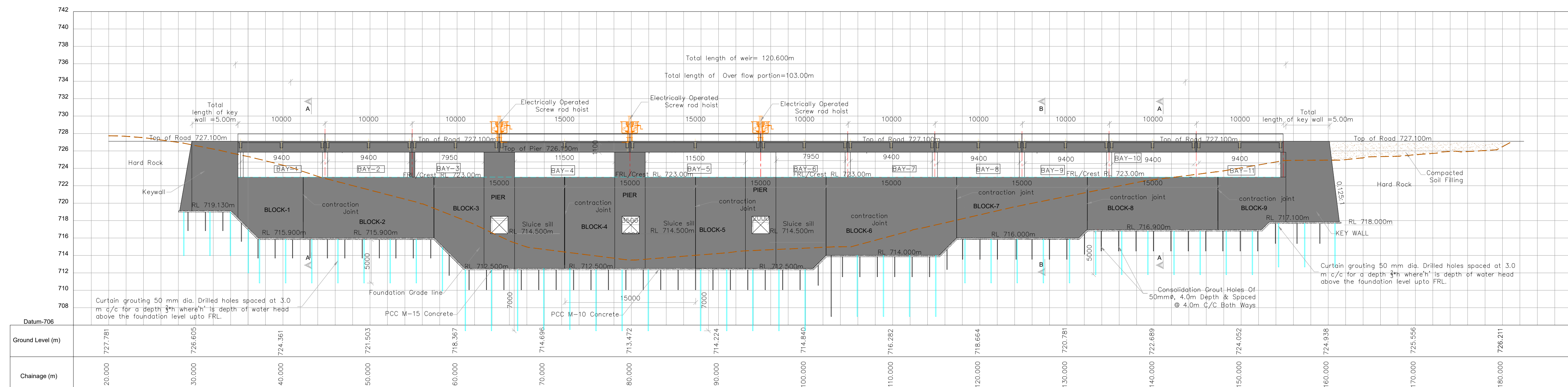
Executive Engineer
KNNL, Kalasa Project Division Khanapur

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



Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Executive Engineer KNNL, Kalasa Project Division, Khanapur.	Superintending Engineer, KNNL, MLBCC Circle, Navilteertha.
 Chief Engineer, KNNL, Malaprabha Project Zone, Dharwad.	



NOTES :-

1. All dimensions are in millimeters and levels are in meters, unless otherwise mentioned.
 2. Do not scale the drawing. Follow written dimensions only.
 3. Foundation bed for wall shall be prepared by removing all loose materials by wedging/chiselling.
 4. Different grades of concrete shall be placed simultaneously avoiding line of separation.
 5. Surface reinforcement shall be provided on U/S and D/S face of the weir.
 6. High yield strength deformable base(HYSD) bars of grade Fe500 shall be used for reinforcement.
 7. Curtain grout holes shall be of $\phi 45$ mm at 3000 mm C/C vertical or inclined upto 10° approx. Depth of curtain grout holes from the foundation level shall be $(2H/3)+8.0m$, (where H is depth from FRL to the Foundation level.)
 8. Foundation drainage holes shall be of $\phi 75$ mm at 3000 mm C/C.
- Depth of the drainage holes foundation level shall be $H/2$, (where H is depth from FRL to the foundation level.)
9. Grade of concrete to be used is as under:
 - a. Body wall surface concrete — M25 with 20 mm & downsize
 - b. Body wall inner surface concrete — M15 with 40 mm & downsize.
 - c. Deck slab bridge — M25 with 40 mm & downsize.
 - d. Piers — M25 with 20 mm & downsize.
 - e. Gallery wall — M20 with 40 mm & downsize.
 - f. Key wall — M15 with 40 mm & downsize.
 - g. Training wall — M15 with 40 mm & downsize.
 - h. Stilling basin (Top) — M25 with 40 mm & down size
 - i. Stillng basin (Bottom) — M15 with 40 mm & down size

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	22.11.2022	CTR	KD	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

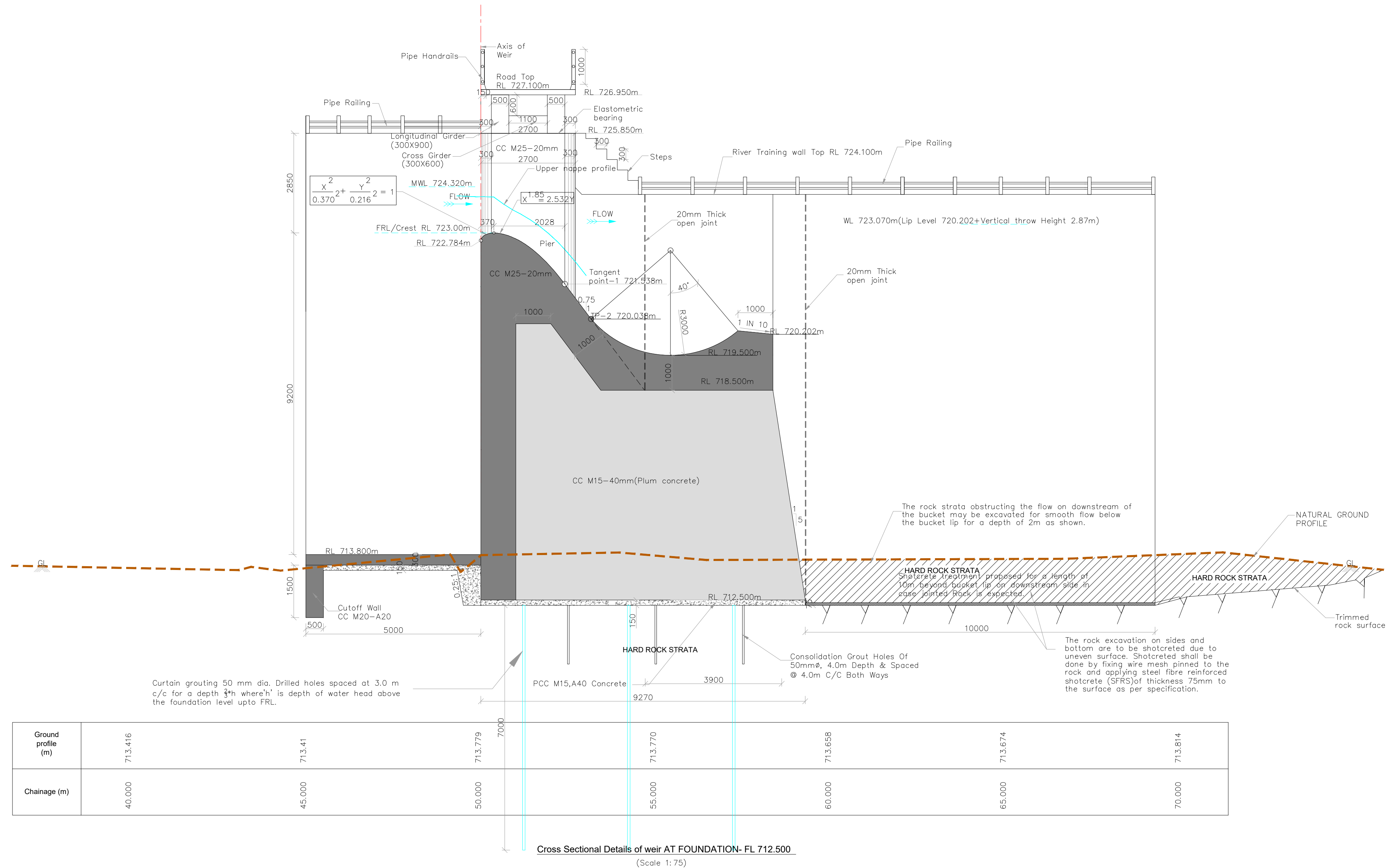
Project Title	Kalasa Nala Diversion Scheme (Lift Scheme)
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Sub Title	Kalasa Nala Diversion Dam
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Drawing Title	General arrangement Drawing for Kalasa Dam
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Date 22.11.2022	Drw. CSH	Dsg. KD	Chk. SN	App. NR	Scale NTS	Drawing Status For Approval	
Project No. 1376X	Drawing No. EIT-1376X-WRE-KN-STR-A012					Sheet No. 01 of 07	Rev. 0

 Executive Engineer KNNL, Kalasa Project Division, Khanapur.	 Superintending Engineer, KNNL, MLBC Circle, Naviluteertha.
 Chief Engineer, KNNL, Malaprabha Project Zone, Phorwad.	



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.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

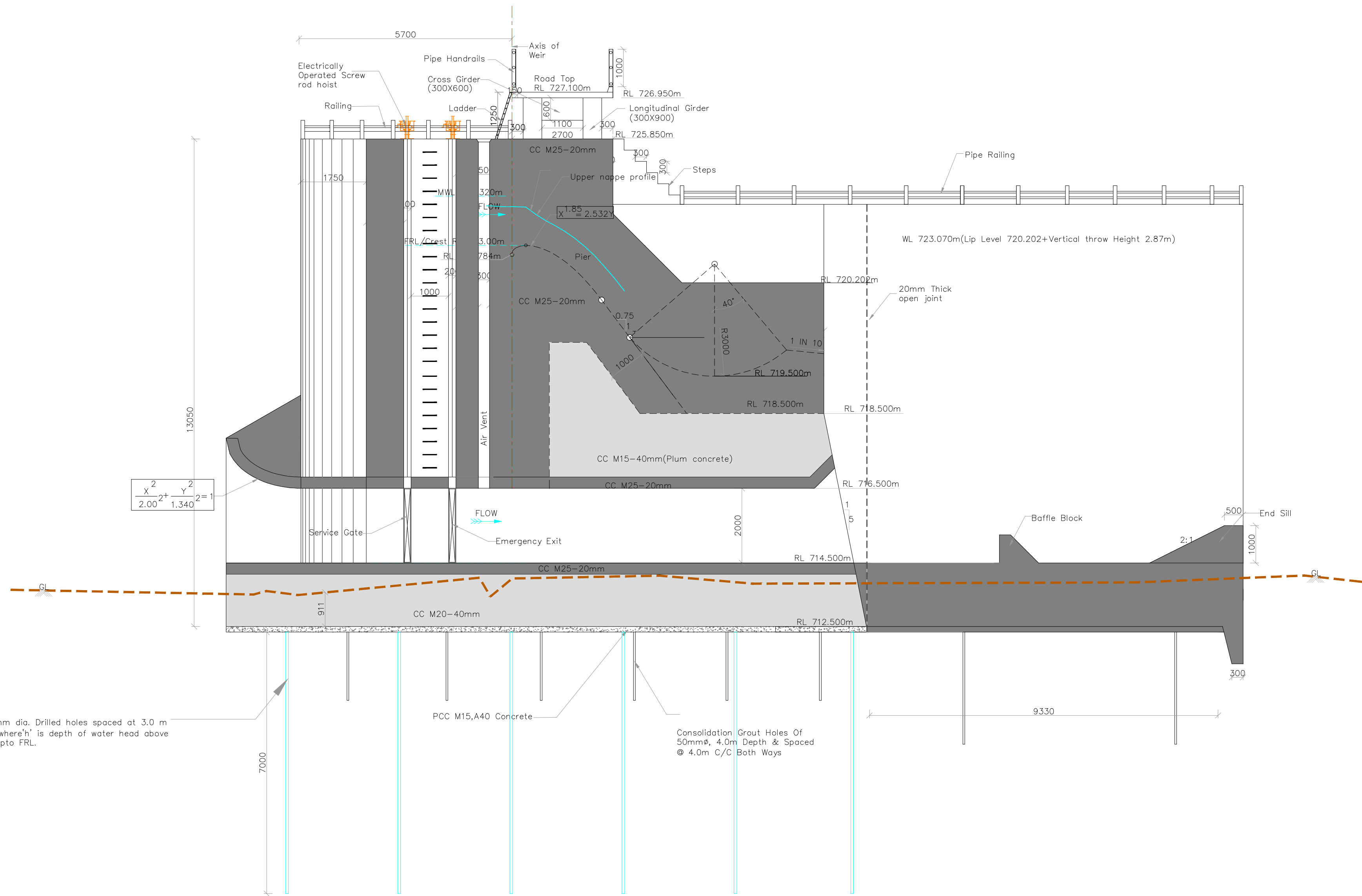
0	For Approval	22.11.2022	CTR	KD	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

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

Consultant **E I Technologies Private Limited**
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1149, 26th Main, Jayanagar 4th 'T' Block,
Bangalore-560 041, India.
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Project Title							
Kalasa Nala Diversion Scheme (Lift Scheme)							
Sub Title							
Kalasa Nala Diversion Dam							
Drawing Title							
Cross Sectional Details of Weir							
Date 22.11.2022	Drw. CSH	Dsg. KD	Chk. SN	App. NR	Scale NTS	Drawing Status For Approval	
Project No. 1376X	Drawing No. EIT-1376X-WRE-KN-STR-A012					Sheet No. 02 of 07	Rev. 0

 Executive Engineer KNNL, Kalasa Project Division, Khanapur.	 Superintendent Engineer, KNNL, MLBC Circle, Navilteertha.
 Chief Engineer, KNNL, Malaprabha Project Zone, Dhargwad.	



Curtain grouting 50 mm dia. Drilled holes spaced at 3.0 m c/c for a depth 3h where 'h' is depth of water head above the foundation level upto FRL.

Ground profile (m)	713.416	713.41	713.779	713.770	713.658	713.674	713.814
Chainage (m)	40.000	45.000	50.000	55.000	60.000	65.000	70.000

Cross Sectional Details of weir With Sluice
(Scale 1:75)

- 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.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
0	For Approval	22.11.2022	CTR	KD	SN	NR

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

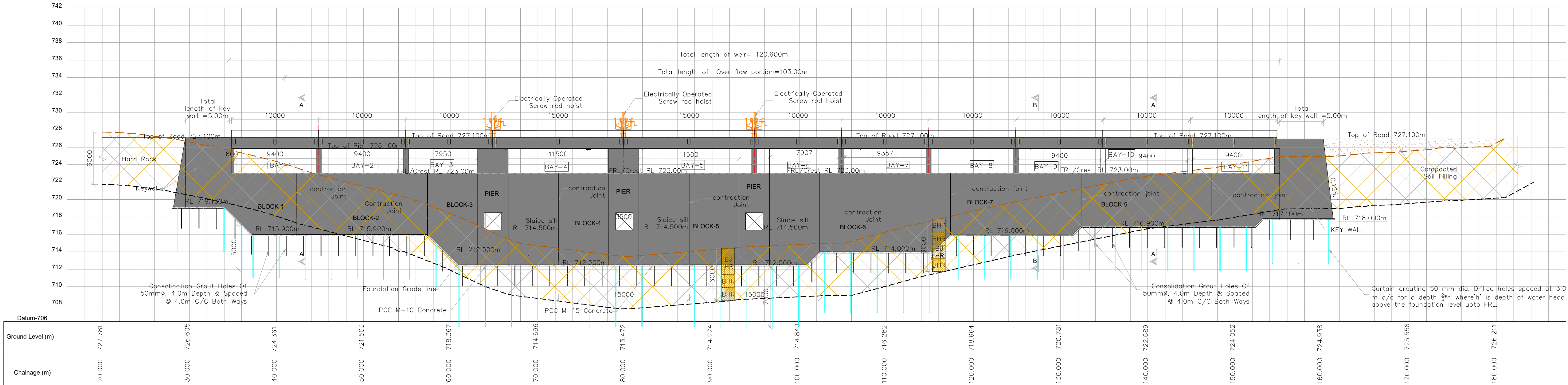
Consultant
E I Technologies Private Limited
(ISO 9001 : 2015 Certified)
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Bangalore-560 041, India.
Ph.+91.80.40914714 / 40914961
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Project Title						
Kalasa Nala Diversion Scheme (Lift Scheme)						
Sub Title						
Kalasa Nala Diversion Dam						
Drawing Title						
Cross Sectional Details of Weir						
Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
22.11.2022	CSH	KD	SN	NR	NTS	For Approval
Project No.	Drawing No.				Sheet No.	Rev.
1376X	EIT-1376X-WRE-KN-STR-A012				03 of 07	0

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer,
KNNL, MLBCC Circle,
Naviluteertha.

Chief Engineer,
KNNL, Malaprabha Project Zone,
Dharwad.



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

NOTES :-

- All dimensions are in millimeters and levels are in meters, unless otherwise mentioned.
- Do not scale the drawing. Follow written dimensions only.
- Foundation bed for weir shall be prepared by removing all loose materials by wedging/chiselling.
- Different grades of concrete shall be placed simultaneously avoiding line of separation.
- Surface reinforcement shall be provided on U/S and D/S face of the weir.
- High yield strength deformable base(HYSD) bars of grade Fe500 shall be used for reinforcement.
- Curtain grout holes shall be of $\phi 45$ mm at 3000 mm C/C vertical or inclined upto 10° approx. Depth of curtain grout holes from the foundation level shall be $(2H/3)+8.0m$, (where H is depth from FRL to the Foundation level.)
- Foundation drainage holes shall be of $\phi 75$ mm at 3000 mm C/C.
Depth of the drainage holes foundation level shall be $H/2$, (where H is depth from FRL to the foundation level.)
- Grade of concrete to be used is as under:
 - Body wall surface concrete — M25 with 20 mm & downsize
 - Body wall inner surface concrete — M15 with 40 mm & downsize.
 - Deck slab bridge — M25 with 40 mm & downsize.
 - Piers — M25 with 20 mm & downsize.
 - Gallery wall — M20 with 40 mm & downsize.
 - Key wall — M15 with 40 mm & downsize.
 - Training wal — M15 with 40 mm & downsize.
 - Stilling basin (Top) — M25 with 40 mm & down size
 - Stilling basin (Bottom) — M15 with 40 mm & down size.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	22.11.2022	CTR	KD	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

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

Consultant
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Bangalore-560 041, India.
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Project Title
**Kalasa Nala Diversion Scheme
(Lift Scheme)**

Sub Title
Kalasa Nala Diversion Dam

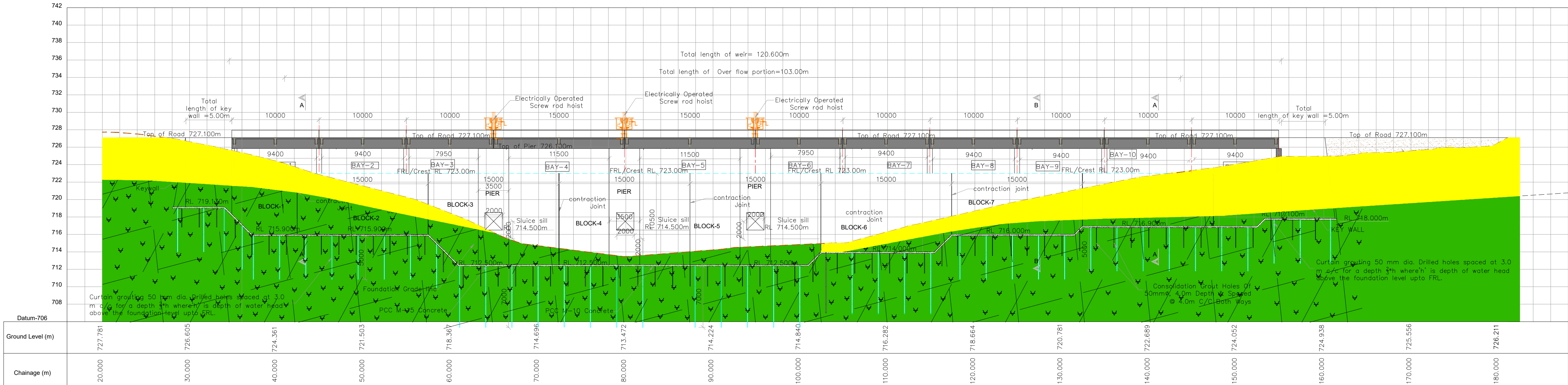
Drawing Title
**L-Section of kalasa Diversion
Dam Showing Bore Hole Details**

Date 14.12.2022	Drw. CSH	Dsg. KD	Chk. SN	App. NR	Scale NTS	Drawing Status For Approval	
Project No. 1376X	Drawing No. EIT-1376X-WRE-KN-BH-A013					Sheet No. 01 of 1	Rev. 0

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer,
KNNL, MLBCC Circle,
Noluviteerthi.

Chief Engineer,
KNNL, Malaprabha Project Zone,
Dharwad.



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

NOTES :-

- All dimensions are in millimeters and levels are in meters, unless otherwise mentioned.
- Do not scale the drawing. Follow written dimensions only.
- Foundation bed for weir shall be prepared by removing all loose materials by wedging/chiselling.
- Different grades of concrete shall be placed simultaneously avoiding line of separation.
- Surface reinforcement shall be provided on U/S and D/S face of the weir.
- High yield strength deformable base(HYSD) bars of grade Fe500 shall be used for reinforcement.
- Curtain grout holes shall be of $\phi 45$ mm at 3000 mm C/C vertical or inclined upto 10° approx. Depth of curtain grout holes from the foundation level shall be $(2H/3)+8.0m$, (where H is depth from FRL to the Foundation level.)
- Foundation drainage holes shall be of $\phi 75$ mm at 3000 mm C/C.
Depth of the drainage holes foundation level shall be $H/2$, (where H is depth from FRL to the foundation level.)
- Grade of concrete to be used is as under:
 - Body wall surface concrete — M25 with 20 mm & downsize
 - Body wall inner surface concrete — M15 with 40 mm & downsize.
 - Deck slab bridge — M25 with 40 mm & downsize.
 - Piers — M25 with 20 mm & downsize.
 - Gallery wall — M20 with 40 mm & downsize.
 - Key wall — M15 with 40 mm & downsize.
 - Training wal — M15 with 40 mm & downsize.
 - Stilling basin (Top) — M25 with 40 mm & down size
 - Stilling basin (Bottom) — M15 with 40 mm & down size.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	22.11.2022	CTR	KD	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

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

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info@eitech.in • www.eitech.in

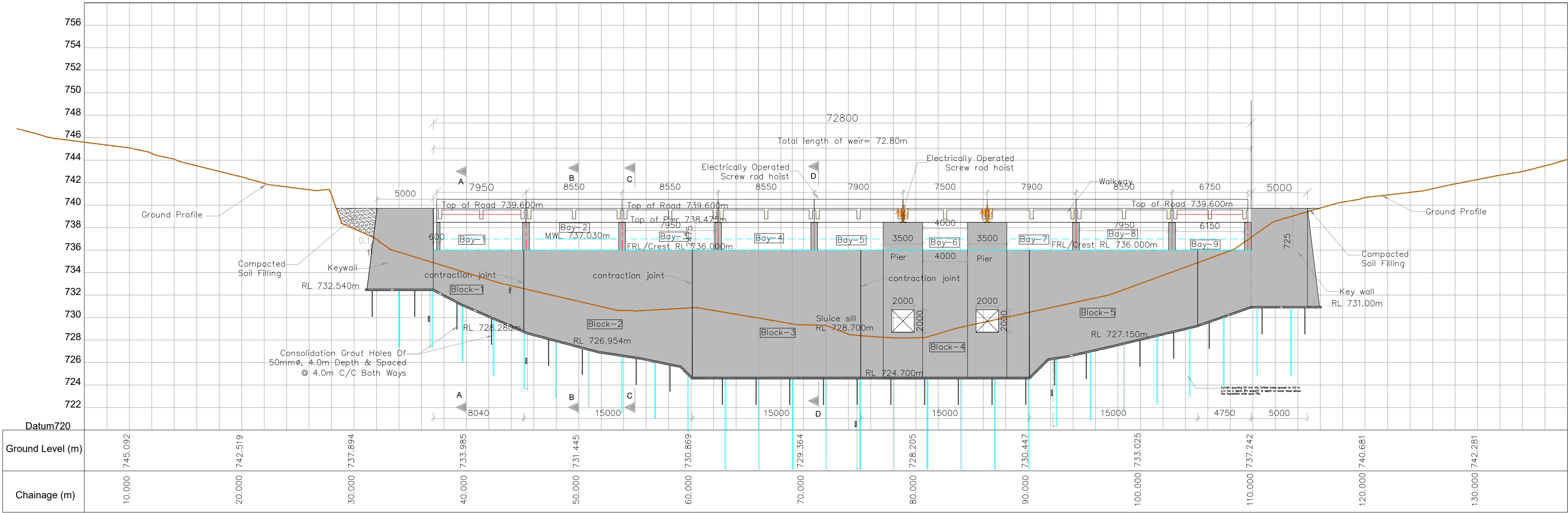
Project Title
**Kalasa Nala Diversion Scheme
(Lift Scheme)**

Sub Title
Kalasa Nala Diversion Dam

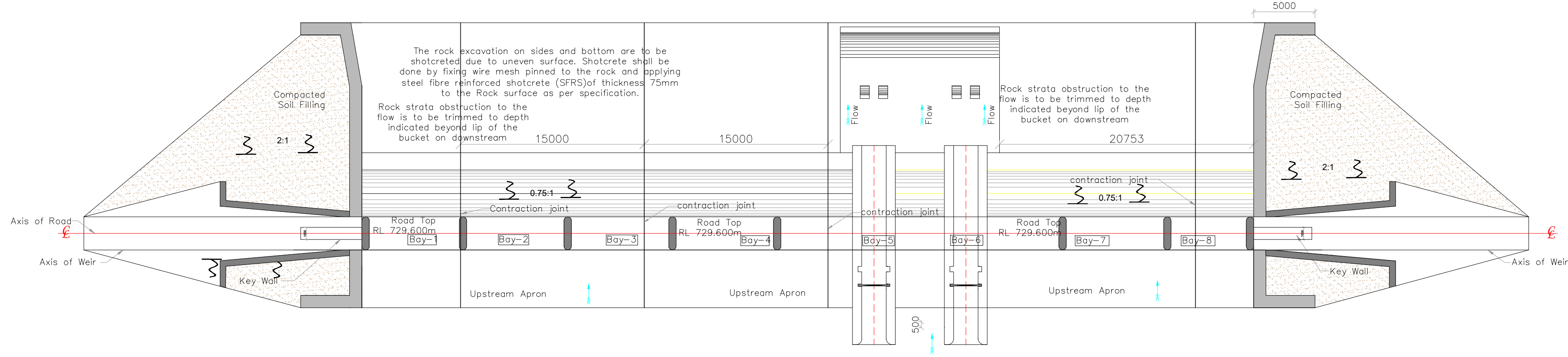
Drawing Title
**L-Section of Kalasa Diversion Dam
Showing Bore Hole Details**

Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
14.12.2022	CSH	KD	SN	NR	NTS	For Approval
Project No.	Drawing No.	Sheet No.	Rev.			
1376X	EIT-1376X-WRE-KN-GO-A014	01 of 01	0			

Executive Engineer KNNL, Kalasa Project Division, Khanapur.	Superintending Engineer, KNNL, MLBC Circle, Navalur.
Chief Engineer, KNNL, Malaprabha Project Zone, Dharwad.	



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



Plan of Diversion Weir
(Scale 1:250)

- 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.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

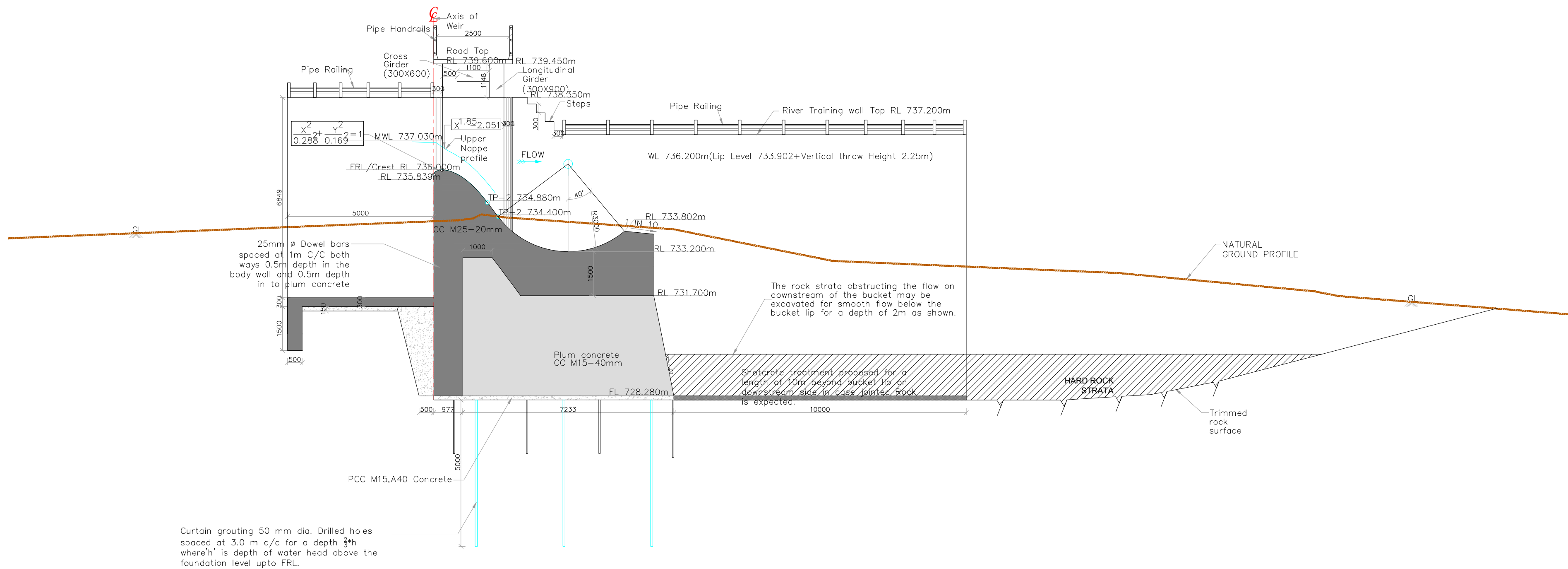
0	For Approval	14.12.2022	CSH	KD	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.
Owner						
Karnataka Neeravari Nigam Limited (KNNL) (A Govt. of Karnataka undertaking) Bangalore - 560 001, India. www.knnlindia.com						
Consultant						
E I Technologies Private Limited (ISO 9001 : 2015 Certified) # 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 Diversion Scheme (Lift Scheme)						
Sub Title						
Haltara Lift						
Drawing Title						
General arrangement Drawing of Haltara Dam						
Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
14.12.2022	CSH	KD	SN	NR	As Shown	For Approval
Project No.	Drawing No.				Sheet No.	Rev.
1376X	EIT-1376X-WRE-HN-STR-A020				01 of 06	0

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer,
KNNL, MLBC Circle,
Naviluteertha.

Chief Engineer,
KNNL, Malaprabha Project Zone,
Dharwad.



Ground profile (m)	733.784	734.054	734.852	734.208	733.624	731.410	732.631	730.909	730.440
Chainage (m)	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000

Cross Sectional Details of weir at CH:728.280
(Scale 1:100)

- 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.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	09.08.2022	CSH	KD	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

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

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Project Title
**Kalasa Nala Diversion Scheme
(Lift Scheme)**

Sub Title
Haltara Lift

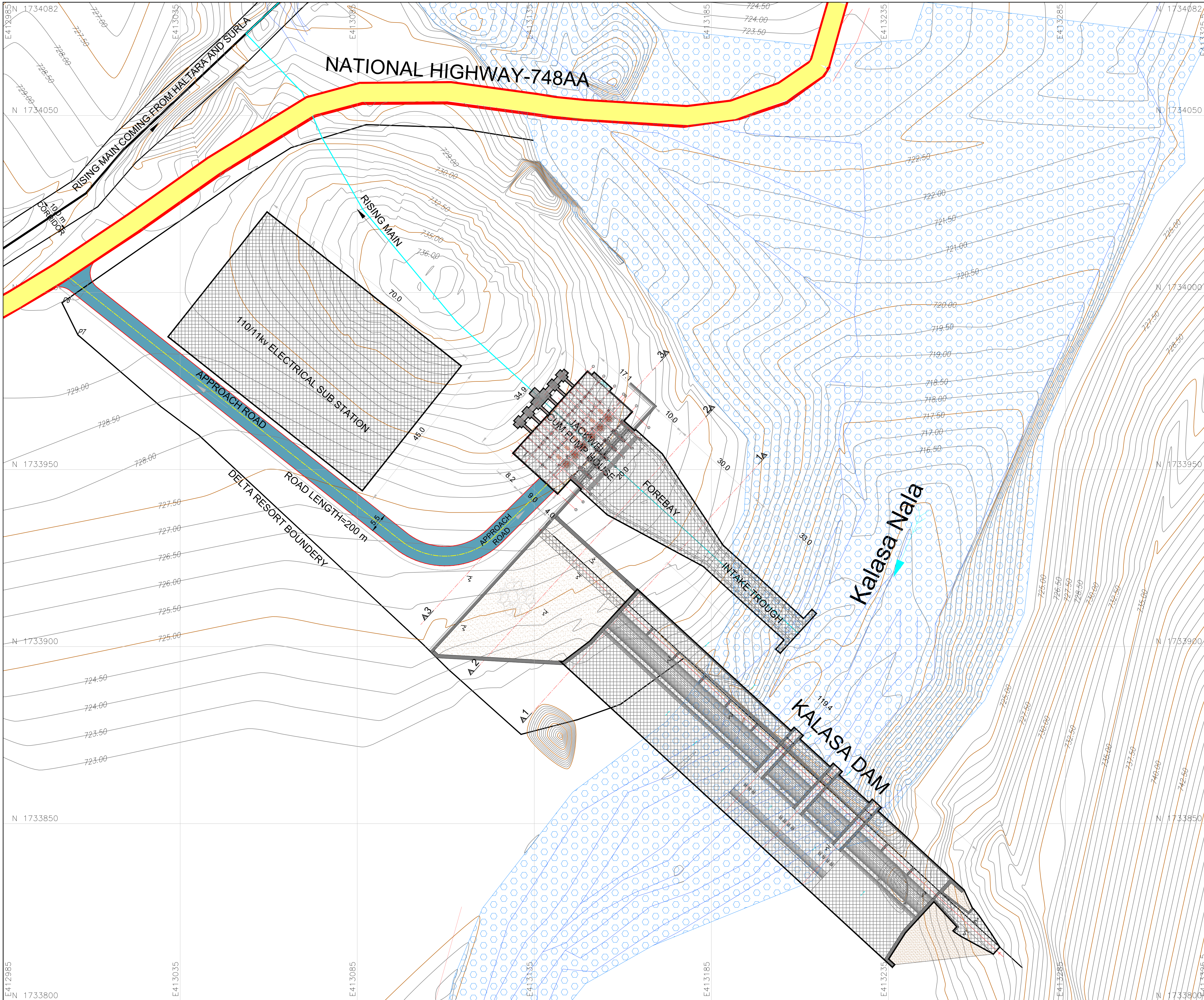
Drawing Title
Cross sectional Details of Dam

Date 14.12.2022	Drw. CSH	Dsg. KD	Chk. SN	App. NR	Scale As Shown	Drawing Status For Approval
Project No. 1376X	Drawing No. EIT-1376X-WRE-HN-STR-A020				Sheet No. 02 of 06	Rev. 0

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer,
KNNL, MLBCC Circle,
Naviluteertha.

Chief Engineer,
KNNL, Malaprabha Project Zone,
Dharwad.



- 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 1:6 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 (M25) FLOOR WITH NON-METALLIC HARDENER AND MATCHING SKIRTING.
 - b) 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.
 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: 6mm THICK IN CM 1:3.

PAINTING/WALL FINISH:-

INTERNAL-TWO COATS OF WATER PROOF CEMENT PAINT OVER COAT OF PRIMER

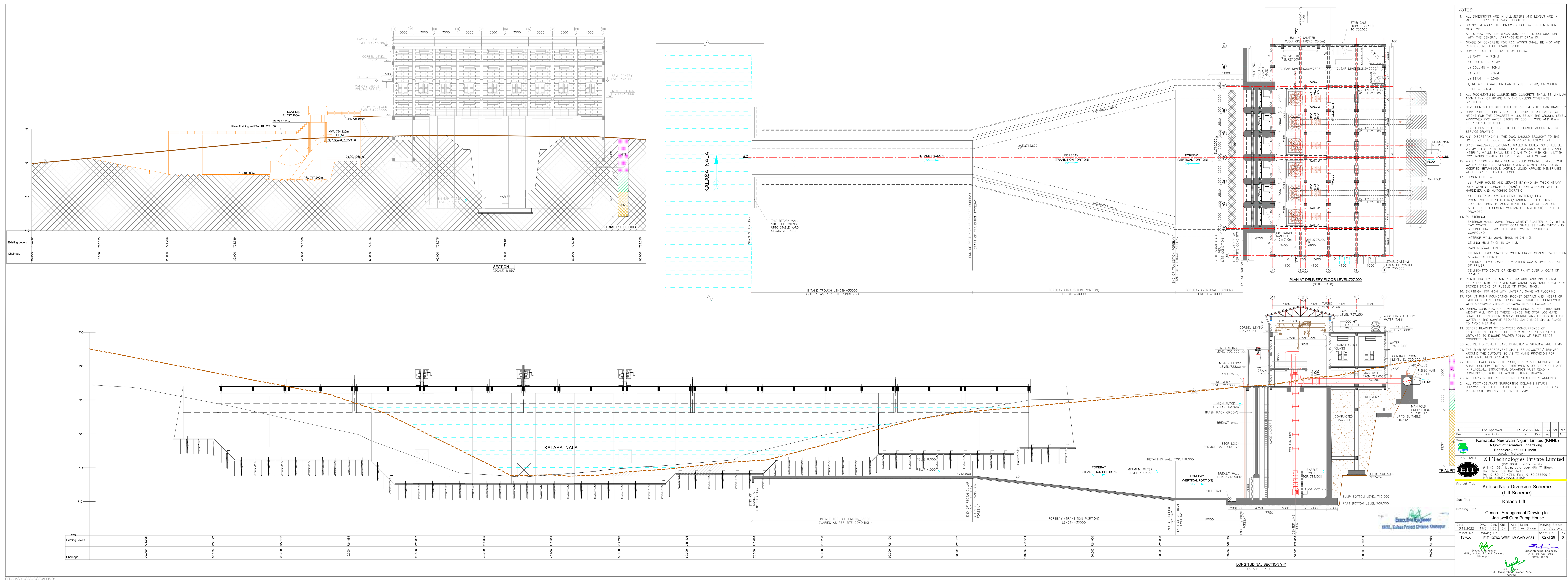
EXTERNAL-TWO COATS OF WEATHER COATS OVER A COAT OF PRIMER.

CEILING-TWO COATS OF CEMENT PAINT OVER A COAT OF PRIMER.
 15. PLINTH PROTECTION-MIN. 1000mm 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.

Executive Engineer
KNNL, Kalasa Project Division Khanapur

0	For Approval	13.12.2022	NMS	HSC	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 'F' Block, Bangalore-560 041, India. Ph:+91.80.40914714, Fax: +91.80.26650912 info@eltech.in, www.eltech.in				
Project Title		Kalasa Nala Diversion Scheme (Lift Scheme)				
Sub Title		Kalasa Lift				
Drawing Title		General Arrangement Drawing for Jackwell Cum Pump House				
Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
13.12.2022	NMS	HSC	SN	NR	As Shown	For Approval
Project No.	Drawing No.				Sheet No.	Rev.
1376X	EIT-1376X-WRE-JW-GAD-A031				01 of 29	0
Executive Engineer, KNNL, Kalasa Project Division, Khanapur.				Superintending Engineer, KNNL, MLBCB Circle, Navaluturtha.		
Chief Engineer, KNNL, Malaprabha Project Zone, Pharwad.						

ETI-QMS01-CAD-QSF-A006-R1



NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
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 RIG WORKS SHALL BE M30 AND REINFORCEMENT OF GRADE F4500.
5. COVER SHALL BE PROVIDED AS BELOW:
a) RAFT - 75MM
b) FOOTING - 40MM
c) COLUMN - 40MM
d) SLAB - 25MM
e) BEAM - 25MM
f) RETAINING WALL ON EARTH SIDE - 75MM, ON WATER SIDE - 50MM
6. ALL PCC/LEVELING COURSE/RED CONCRETE SHALL BE MINIMUM 150MM THK. OF GRADE M15 A40 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 CONSULTANT'S PRIOR TO EXECUTION.
11. BRICK WALLS-ALL EXTERNAL WALLS IN BUILDINGS SHALL BE 230MM THICK. KULI BRICK MASONRY IN CM 1:6 AND INTERNAL WALLS SHALL BE 115 MM THICK WITH CM 1:4 WITH RCC BANDS 200MM AT EVERY 2M HEIGHT OF WALL.
12. WATER PROOFING TREATMENT-SCREED CONCRETE MIXED WITH WATER PROOFING COMPOUND OVER A CEMENTITIOUS, 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 (M25) FLOOR WITH NON-METALLIC HARDENER AND MATCHING SKIRTING.
b) 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.
14. PLASTERING:-
EXTERIOR WALL: 20MM THICK CEMENT PLASTER IN CM 1:3 IN TWO COATS.
FIRST COAT SHALL BE 10MM THICK AND WATER PROOFING COMPOUND.
INTERIOR WALL: 20MM THICK IN CM 1:3.
CEILING: RAIN 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. FLINTH PROTECTION-MIN. 1000MM WIDE AND MIN. 100MM THICK PCC M15 LAD OVER SUB GRAD AND BASE FORMED OF BROKEN BRICKS OR RUBBLE OF 175MM THICK.
16. SKIRTING-150 HIGH WITH MATERIAL SAME AS FLOORING.
17. FOR VIT 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 IF REQUIRED SAND BAGS SHALL PLACE TO AVOID HEAVING.
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.
24. ALL FOOTINGS/RAFT SUPPORTING COLUMNS IN/ON SUPPORTING CRANE BEAMS SHALL BE FOUND ON HARD VIRGIN SOL. LIMITING SETTLEMENT 12MM.

Rev.	Description	Date	Drw.	Disg.	Chk.	App.
0	For Approval	13.12.2022	NMS	HSC	SN	NR

Danner
Karnataka Neeravani Nigam Limited (KNNL)
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Project Title
Kalasa Nala Diversion Scheme (Lift Scheme)

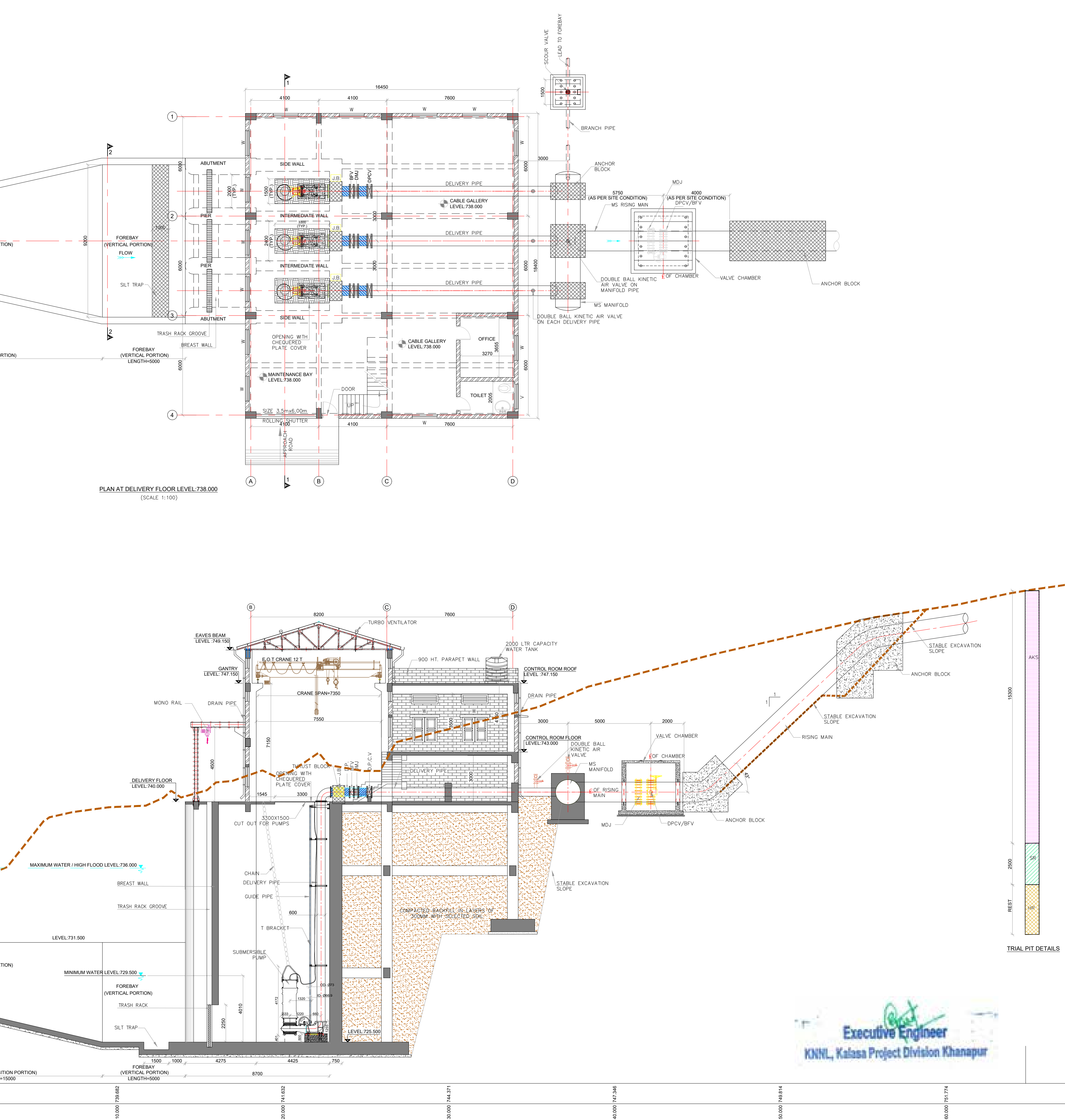
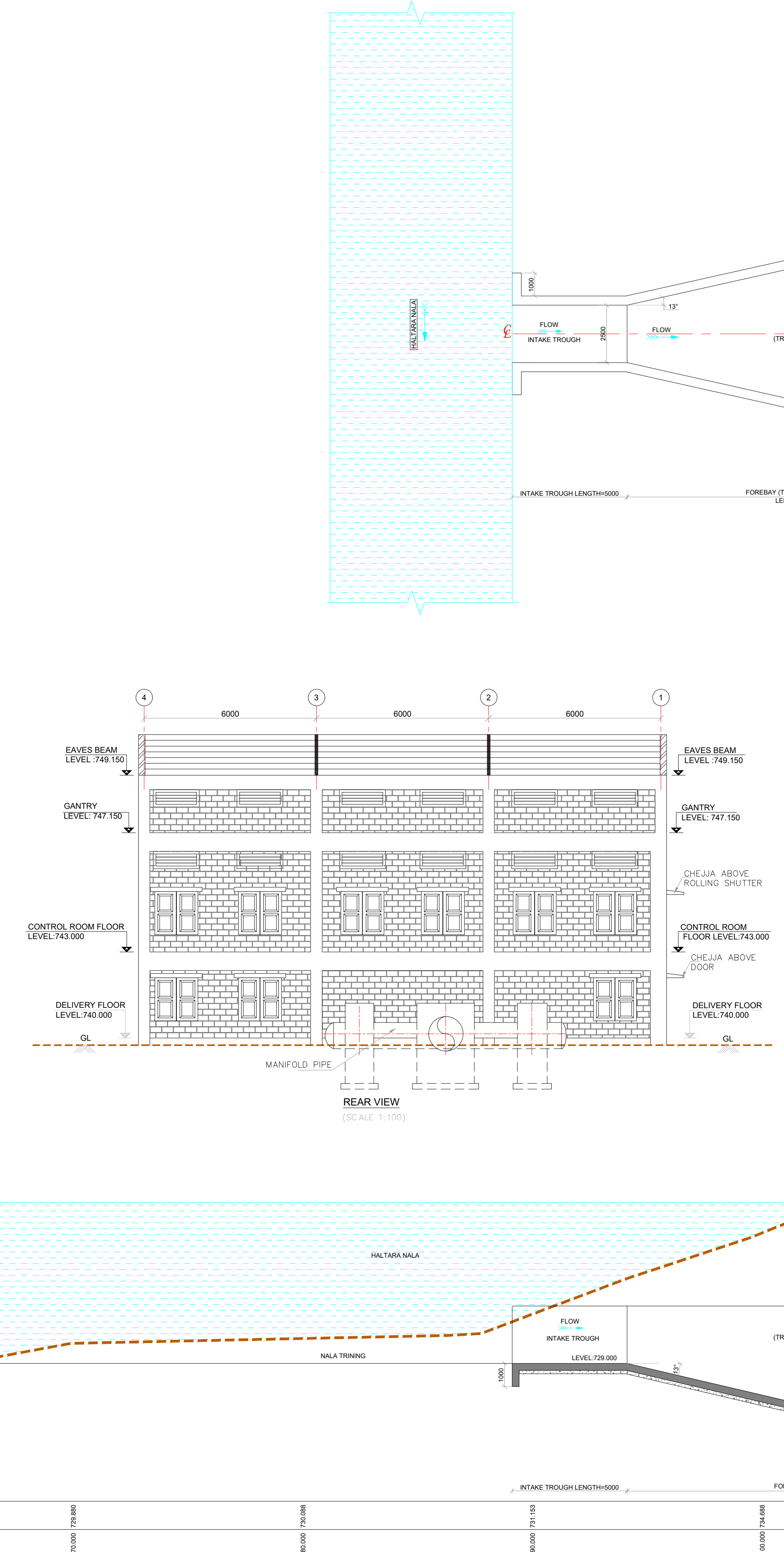
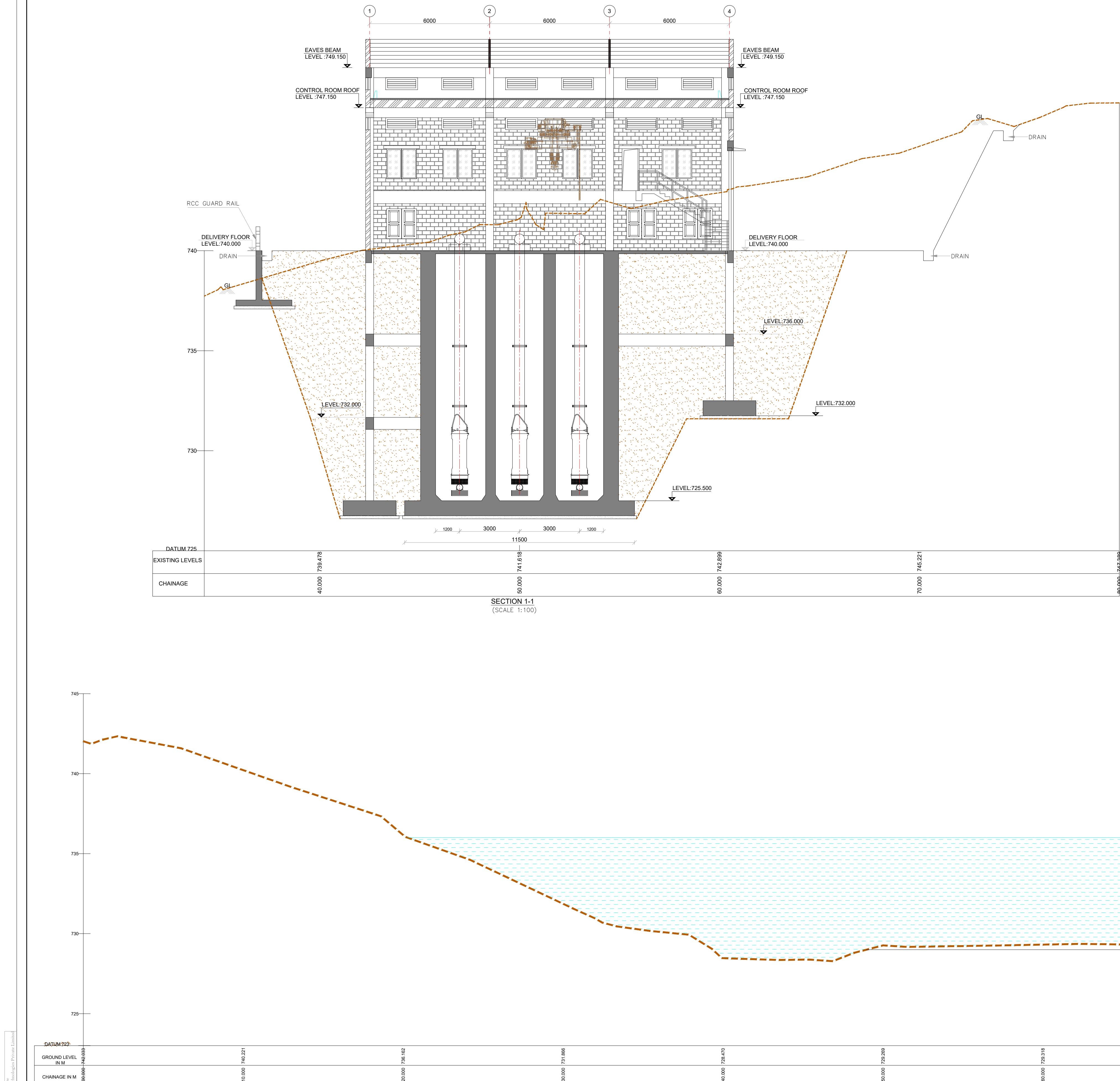
Sub Title
Kalasa Lift

Drawing Title
General Arrangement Drawing for Jodwell Cum Pump House

Date	Drw.	Disg.	Chk.	App.	Scale	Drawing Status
13.12.2022	NMS	HSC	SN	NR	As Shown	For Approval
Project No.	1370X	Drawing No.	ETI-1370X-WRE-JW-GAD-A031	Sheet No.	02 of 29	Rev. 0

Executed by
KNNL, Koppa Project Division, Koppur.

Checked by
KNNL, Water Project Unit Zone, Koppur.



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 BE READ IN CONJUNCTION WITH THE GENERAL ARRANGEMENT DRAWING.
- GRADE OF CONCRETE FOR RCC WORKS SHALL BE M30 AND REINFORCEMENT OF GRADE F4500
- COVER SHALL BE PROVIDED AS BELOW.
a) RAFT - 75MM
b) FOOTING - 40MM
c) COLUMN - 40MM
d) SLAB - 25MM
e) BEAM - 25MM
f) RETAINING WALL ON EARTH SIDE - 75MM, ON WATER SIDE - 50MM
- ALL RCC/LEVELING COURSE/SED CONCRETE SHALL BE MINIMUM 150MM THK. OF GRADE M15 AND 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 200mm 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 CONSULTANT PRIOR TO EXECUTION.
- BLOCK 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 1:6 WITH RCC BANDS 200THK AT EVERY 2M HEIGHT OF WALL.
- WATER PROOFING TREATMENT-SCREED CONCRETE MIXED WITH WATER PROOFING COMPOUND OVER A CONTINUOUS, POLYMER MODIFIED, BITUMINOUS, ACRYLIC LIQUID APPLIED MEMBRANES WITH PROPER DRAINAGE SLOPE.
- FLOOR FINISH:-
a) PUMP HOUSE AND SERVICE BAY-40 MM THICK HEAVY DUTY CEMENT CONCRETE (M25) FLOOR WITHIN-METALLIC HARDENER AND MATCHING SKIRTING.
b) 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 COAT OF PRIMER.
EXTERNAL-TWO COATS OF WEATHER COATS OVER A COAT OF PRIMER.
- PLINTH PROTECTION-MIN. 1000MM WIDE AND MIN. 100MM THICK RCC MTS LAID OVER SUB GRADE AND BASE FORMED OF BROKEN BRICKS OR RUBBLE OF 150MM THICK.
- SKIRTING- 150 HIGH WITH MATERIAL SAME AS FLOORING.
- FOR VT PUMP FOUNDATION POCKET DETAILS AND INSERT OR EMBEDDED PARTS FOR THIRST 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 PLACE TO AVOID HEAVING.
- BEFORE PLACING OF CONCRETE CONCURRENCE OF ENGINEER-IN-CHARGE OF E & M WORKS AT ST 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 BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS.
- ALL LAPS IN THE REINFORCEMENT SHALL BE STAGGERED.
- ALL FOOTINGS/RAFT SUPPORTING COLUMN, INTERM SUPPORTING CRANE BEAMS SHALL BE FOUND ON HARD VIRGIN SOIL LIMITING SETTLEMENT 12MM.

LEGENDS:

1	BBV	-HORO BUTTERFLY VALVE
2	DPV	-DUAL PLATE CHECK VALVE
3	MDJ	-METALLIC DISMANTLING JOINT
4	GL	-NATURAL GROUND LEVEL
5	NW	-NON RETURN VALVE
6	DP	-DISTANCE PIECE
7	JB	-JUNCTION BOX

Rev.	Description	Date	Drawn	Checked	Appr.
0	For Approval	13.12.2022	NMS	HSC	SN
1					

Owner: **Karnataka Neeravani Nigam Limited (KNNL)**
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Project Title: **Kalasa Nala Diversion Scheme (Lift Scheme)**

Sub Title: **Haltara Lift**

Drawing Title: **General Arrangement Drawing for Jackwell Cum Pump House**

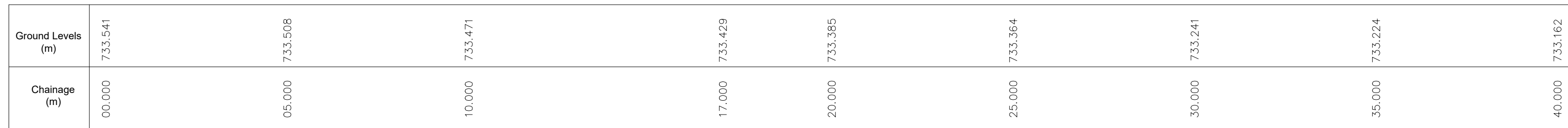
Date	Drawn	Checked	Appr.	Scale	Drawing Status
13.12.2022	NMS	HSC	SN	As Shown	For Approval

Project No.: **1376X** Drawing No.: **EIT-1376X-WRE-JV-GAD-A032** Sheet No.: **02** of **23**

Executive Engineer, KNNL, Kalasa Project Division, Khanapur.	Superintending Engineer, KNNL, M&C Group, Nallajerla.
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Chief Engineer,
KNNL, Meenager Project Zone,
Dharwad.

Executive Engineer
KNNL, Kalasa Project Division, Khanapur



Technical cross-section drawing of a dam structure. The drawing shows a central dam body with a crest width of 1500mm and a crest level of 737.200. The upstream face (left) has a vertical guide wall (739.143) and a training wall (739.143). The downstream face (right) has a vertical training wall (739.143) and a cutoff wall (730.065). The dam body is constructed with concrete (CC M20-20mm) and has a slope of 0.85 vertical to 1 horizontal. The upstream face has a height of 4110mm and is reinforced with 12 bars at 200mm center-to-center (C/C) and 16 bars at 200mm C/C. The downstream face has a height of 3000mm and is reinforced with 12 bars at 200mm C/C. The dam body is also reinforced with 16 bars at 200mm C/C and 12 bars at 200mm C/C. The upstream face has a curtain wall (CC M20-20mm) and two layers of 300mm thick rubble stone pitching. The downstream face has a cutoff wall (CC M20-20mm) and two layers of 300mm thick rubble stone pitching. The dam body is also reinforced with 12 bars at 200mm C/C. The drawing includes various levels: HFL 738.243, FRL/Crest Level 737.200, RL 733.090, and TWL 734.690. The total length of the dam is 20000mm. The drawing is labeled 'Dam' and 'Flow'.

Ground Levels (m)	733.541	733.508	733.471	733.429	733.385	733.364	733.241	733.224	733.162
Chainage (m)	00.000	05.000	10.000	17.000	20.000	25.000	30.000	35.000	40.000

Executive Engineer
KNNL, Kalasa Project Division Khanapur

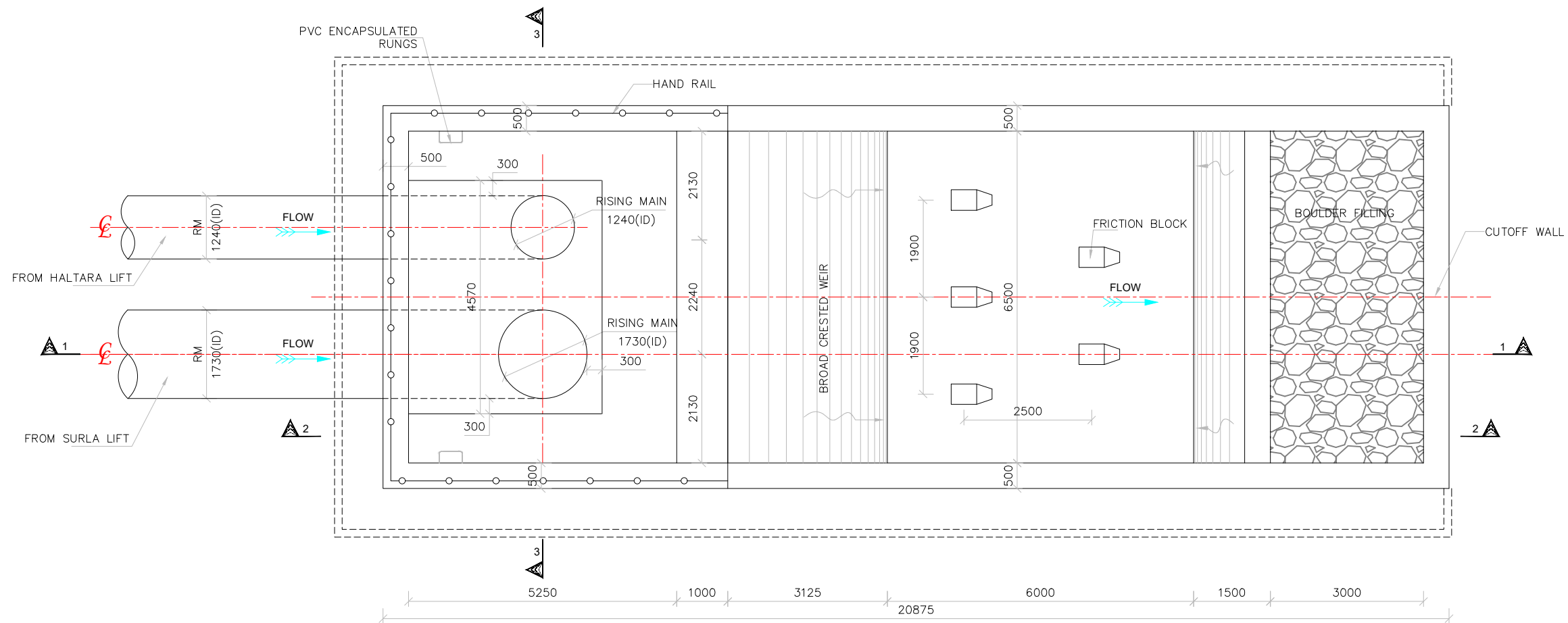
Owner  **Karnataka Neeravari Nigam Limited (KNNL)**
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Bangalore - 560 001, India.
www.knnlindia.com

Project Title	Kalasa Nala Diversion Scheme (Lift Scheme)
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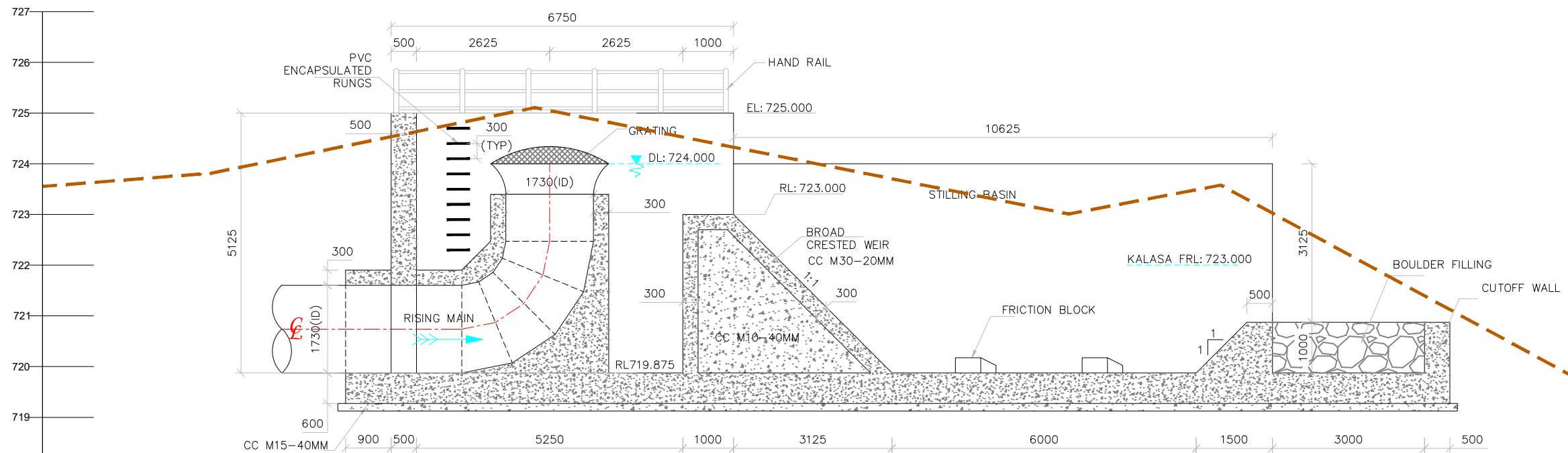
Drawing Title
Cross section of Surla Checkdam-1 and Reinforcement Details

15/03/2024	22/03/2024	22/03/2024
 Executive Engineer KNNL, Kalasa Project Division, Khanapur.	 Superintending Engineer, KNNL, MLBCC Circle, Naviluteertha.	

EIT-QMS01-CAD-QSF-A006-R1



PLAN OF DELIVERY CHAMBER
(SCALE 1:100)



SECTION 1-1
(SCALE 1:100)

Notes

- ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METERS.
- DO NOT MEASURE THE DRAWING, FOLLOW THE DIMENSION MENTIONED.
- GRADE OF CONCRETE FOR RCC WORKS SHALL BE M30.
- GRADE OF STEEL SHALL BE FE500.
- COVER SHALL BE PROVIDED AS BELOW.
A) BASE SLAB – 50MM,
B) PRECAST SLAB – 20MM,
C) WALL ON EARTH SIDE–50MM,
D) WALL ON INNER SIDE– 30MM.
- ALL PCC SHALL BE MINIMUM 100MM THICK OF GRADE M15.
- DEVELOPMENT LENGTH SHALL BE 50 TIMES THE BAR DIAMETER AND SHALL BE STAGGERED.
- CONSTRUCTION JOINTS SHALL BE PROVIDED AT EVERY 2M HEIGHT FOR THE CONCRETE WALLS BELOW THE GROUND LEVEL. APPROVED PVC WATER STOPPER OF 230MM WIDE 8MM THICK SHALL BE USED.
- INLET/OUTLET DETAILS ARE TO BE FOLLOWED ACCORDING TO SERVICE DRAWING.
- INSERT PLATES IF REQUIRED, TO BE FOLLOWED ACCORDING TO ARCH/SERVICE DRAWING.
- WATER PROOFING OF APPROVED MAKE SHOULD BE USED AS PER SPECIFICATIONS.
- ANY DISCREPANCY IN THE DRAWING, SHOULD BE BROUGHT TO THE NOTICE OF THE CONSULTANTS PRIOR TO EXECUTION.
- NET SBC OF SOIL IS CONSIDERED AS 15T/SQM.
- FOR LOCATING VALVE CHAMBER ALONG RISING MAIN REFER APPROVED SURGE REPORT AND L-SECTION OF RISING MAIN.
- SIZE AND PRESSURE RATING OF THE VALVES ARE AS PER SURGE REPORT.

EXISTING CANAL PARAMETERS LIKE CANAL BED WIDTH, FULL SUPPLY DEPTH , FREE BOARD, SIDE SLOPES, CANAL BED SLOPES, ROAD WIDTH INDICATIVE-AS PER SITE CONDITION



0	For Approval	22.11.2022	NMS	HSC	SN	NR
Rev.	Description	Date	Drw.	Dsg.	Chk.	App.

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Project Title **Kalasa Nala Diversion Scheme (Lift Scheme)**

Sub Title **Haltara Lift**

Drawing Title **General Arrangement Drawing for Delivery Chamber**

Date	Drw.	Dsg.	Chk.	App.	Scale	Drawing Status
22.11.2022	NMS	HSC	SN	NR	As Shown	For Approval
Project No.	Drawing No.	Sheet No.	Rev.			
1376X	EIT-1376X-WRE-DC-GAD-A051	02 of 03	0			

Executive Engineer
KNNL, Kalasa Project Division,
Khanapur.

Superintending Engineer,
KNNL, MLBCC Circle,
Naviluteertha.

Chief Engineer,
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Dharwad.