

# Draft Environmental Impact Assessment

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Project Number: 43253-026  
June 2018

## India: Karnataka Integrated and Sustainable Water Resources Management Investment Program – Project 2 Vijayanagara Channels

Annex 3 (Part 2)

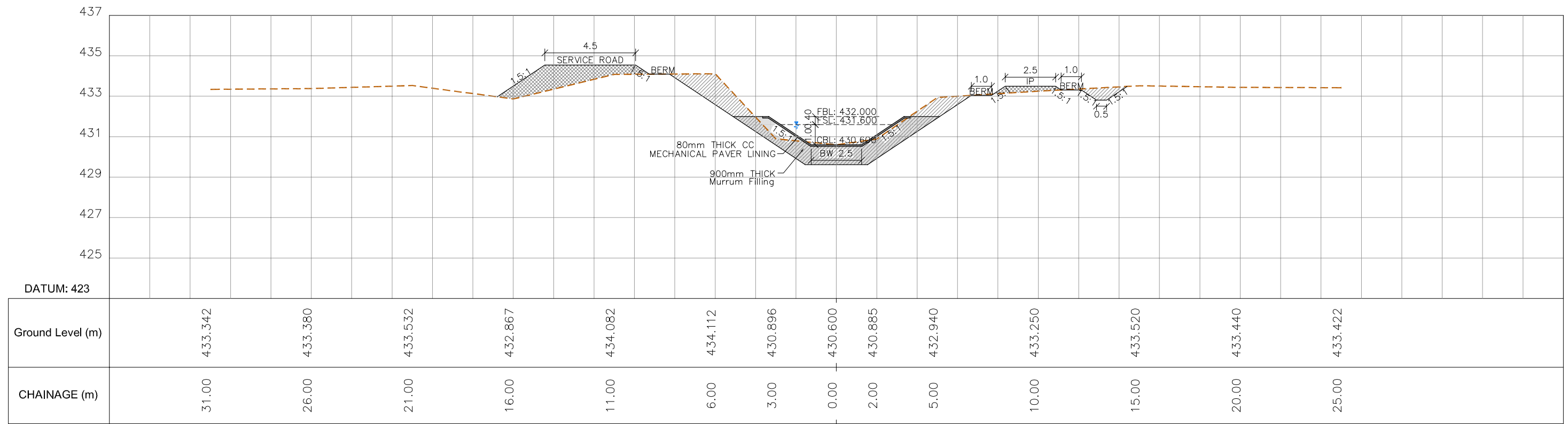
Prepared by the Karnataka Neeravari Nigam Limited for the State Government of Karnataka and the Asian Development Bank.

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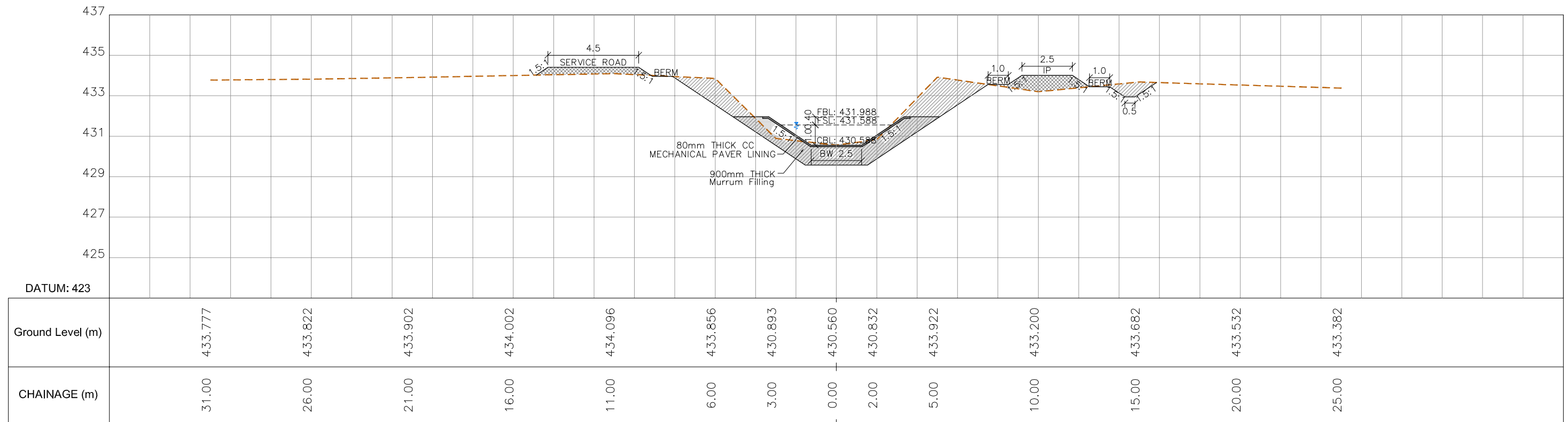
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*Annexure 3*

**STRUCTURES UNDERGOING  
REHABILITATION AND  
TYPICAL DRAWINGS**



CHAINAGE 0.00M



CHAINAGE 30.00M

**LEGEND**

CBL	- CANAL BED LEVEL
FSL	- FULL SUPPLY LEVEL
FBL	- FREE BOARD LEVEL
BW	- BED WIDTH
GROUND LEVEL	- DASHED LINE
	- CUTTING
	- FILLING
	- CNS FILLING

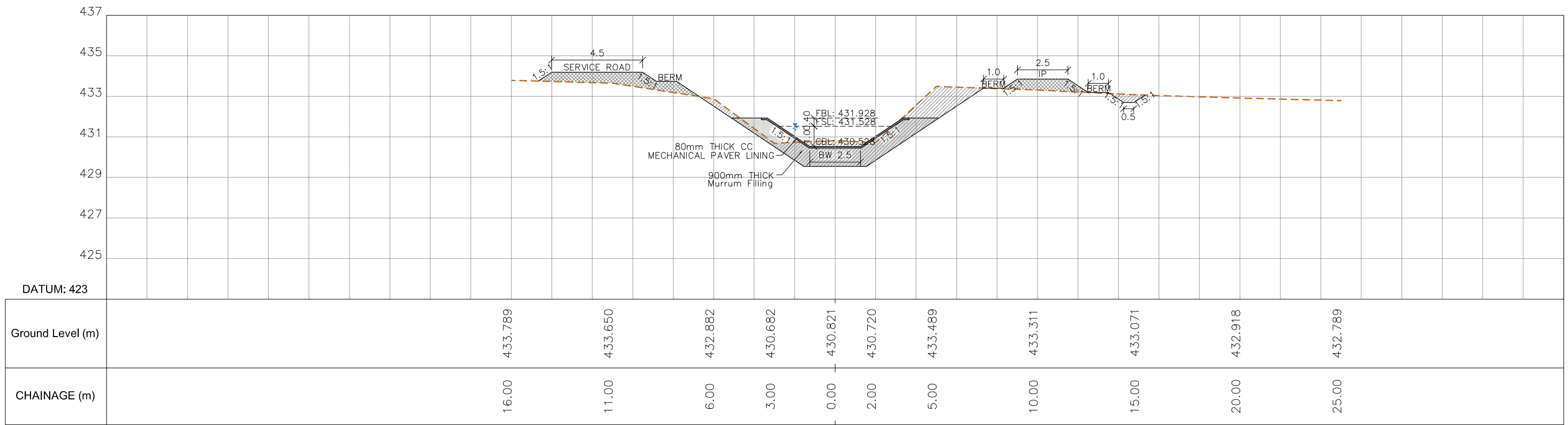
**NOTES:-**  
 1) ALL LEVELS AND CHAINAGES ARE IN METRES.  
 2) DO NOT SCALE THE DRAWING.

0		For Approval				DRAWING TITLE	
Rev.	Description.	Date.	Drw.	Pre.	Chk.	App.	<b>DETAILED CROSS SECTION OF Ramxagar CANAL</b>
CLIENT		KARNATAKA NEERAVARI NIGAM LIMITED (A GOVT. OF KARNATAKA UNDERTAKING) BANGALORE - 560 001		Date	Drw.	Pre.	Chk.
CONSULTANT		E I Technologies Pvt. Ltd., (ISO 9001 : 2008 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		Scale.	Drawing Status.		
				1:200	FOR APPROVAL		
Project No.	Drawing No.	KNNL-VNC-TC-CS-004		Sheet No.	Rev.		
				1 of 19	0		
PROJECT TITLE		MODERNISATION OF VIJAYANAGARA CHANNELS IN TUNGABHADRA PROJECT		 Superintending Engineer Tungabhadra Project Circle Muribabad		 Chief Engineer Irrigation Central Zone Muribabad	

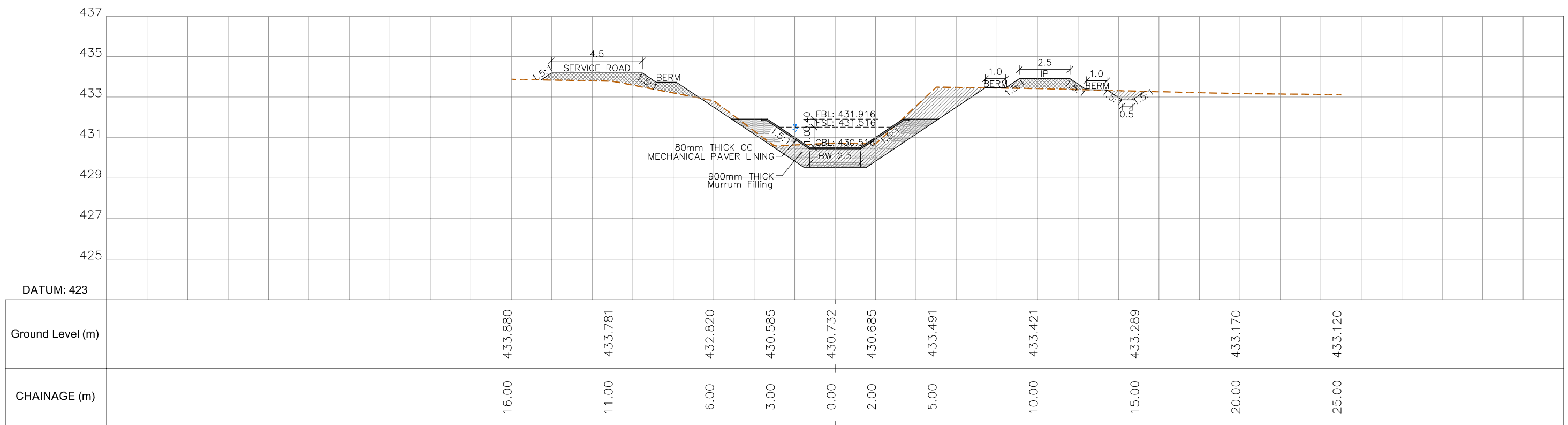








CHAINAGE 180.00M



CHAINAGE 210.00M

**LEGEND**

CBL	- CANAL BED LEVEL
FSL	- FULL SUPPLY LEVEL
FBL	- FREE BOARD LEVEL
BW	- BED WIDTH
GROUND LEVEL	- DASHED LINE
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PROJECT TITLE <b>MODERNISATION OF VIJAYANAGARA CHANNELS          IN TUNGABHADRA PROJECT</b>						

DRAWING TITLE						
<b>DETAILED CROSS SECTION OF Ramxagar CANAL</b>						
Date	Drw.	Pre.	Chk.	App.	Scale.	Drawing Status.
					1:200	FOR APPROVAL
Project No.	Drawing No.	Sheet No.		Rev.		
	KNNL-VNC-TC-CS-004	5 of 19		0		
 Consultant E I Technologies Pvt. Ltd., Bangalore		 Asst. Executive Engineer VNC Sub-Division Kamalapur		 Executive Engineer TB-Division No.1 Munirabad		
 Superintending Engineer Tungabhadra Project Circle Munirabad			 Chief Engineer Irrigation Central Zone Munirabad			





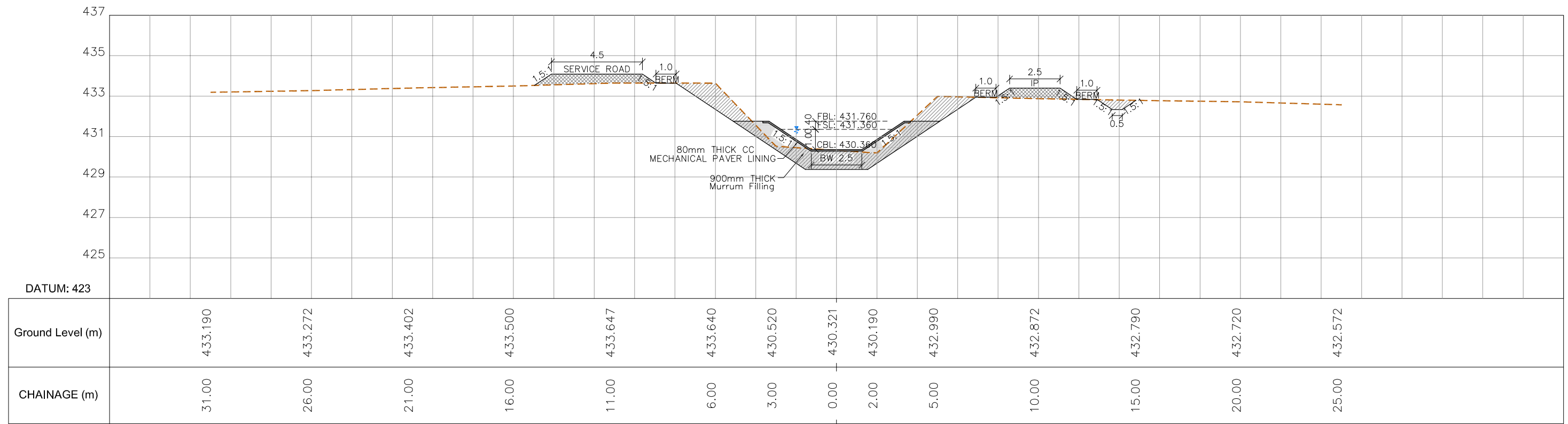




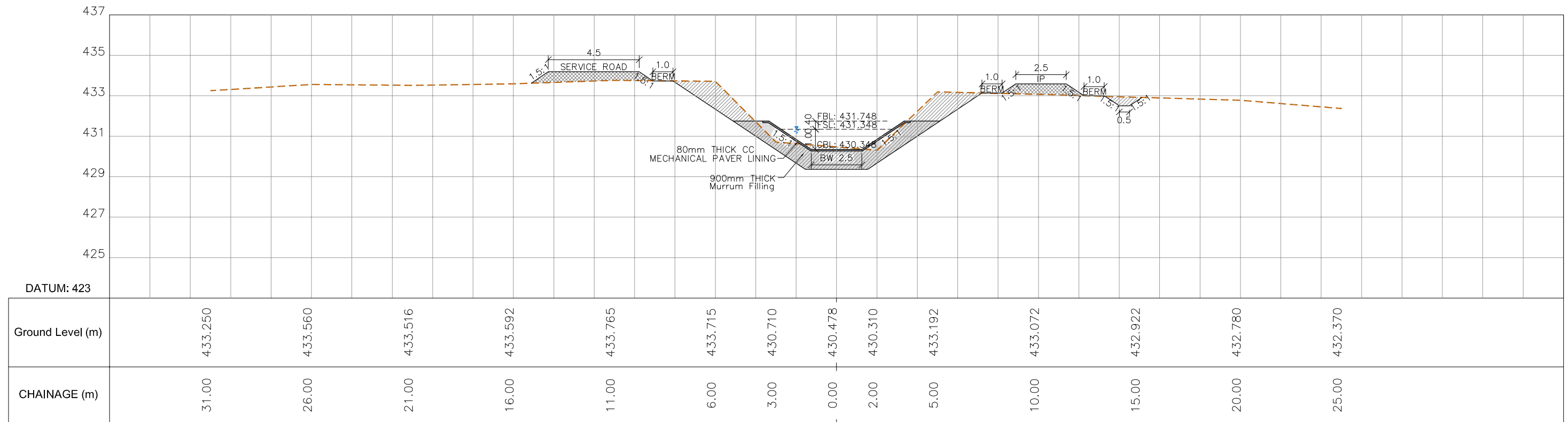








CHAINAGE 600.00M



CHAINAGE 630.00M

**LEGEND**

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FSL	- FULL SUPPLY LEVEL
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DRAWING TITLE					
<b>DETAILED CROSS SECTION OF Ramxagar CANAL</b>					
Date	Drw.	Pre.	Chk.	App.	Scale.
					1:200
Drawing Status.		FOR APPROVAL			
Project No.	Drawing No.	Sheet No.		Rev.	
	KNNL-VNC-TC-CS-004	12 of 19		0	
Consultant E I Technologies Pvt. Ltd. Bangalore		Asst. Executive Engineer W.C. Sub-Division Kamalapur		Executive Engineer T.C. Division No.1 Munirabad	
Superintending Engineer Tungabhadra Project Circle Munirabad			Chief Engineer Irrigation Control Zone Munirabad		

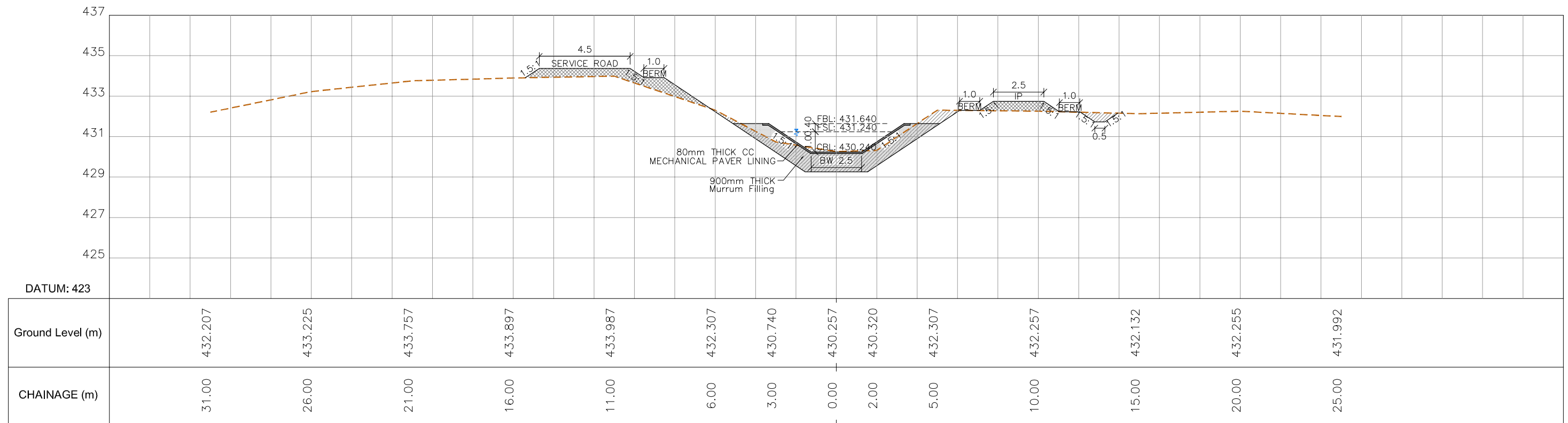




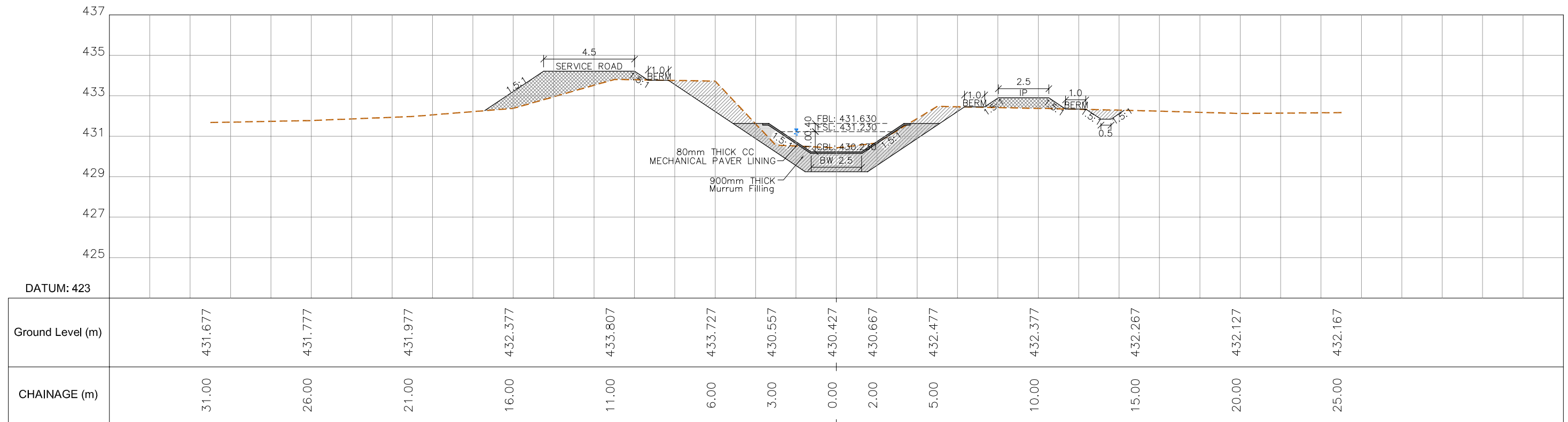








CHAINAGE 900.00M



CHAINAGE 924.00M

**LEGEND**

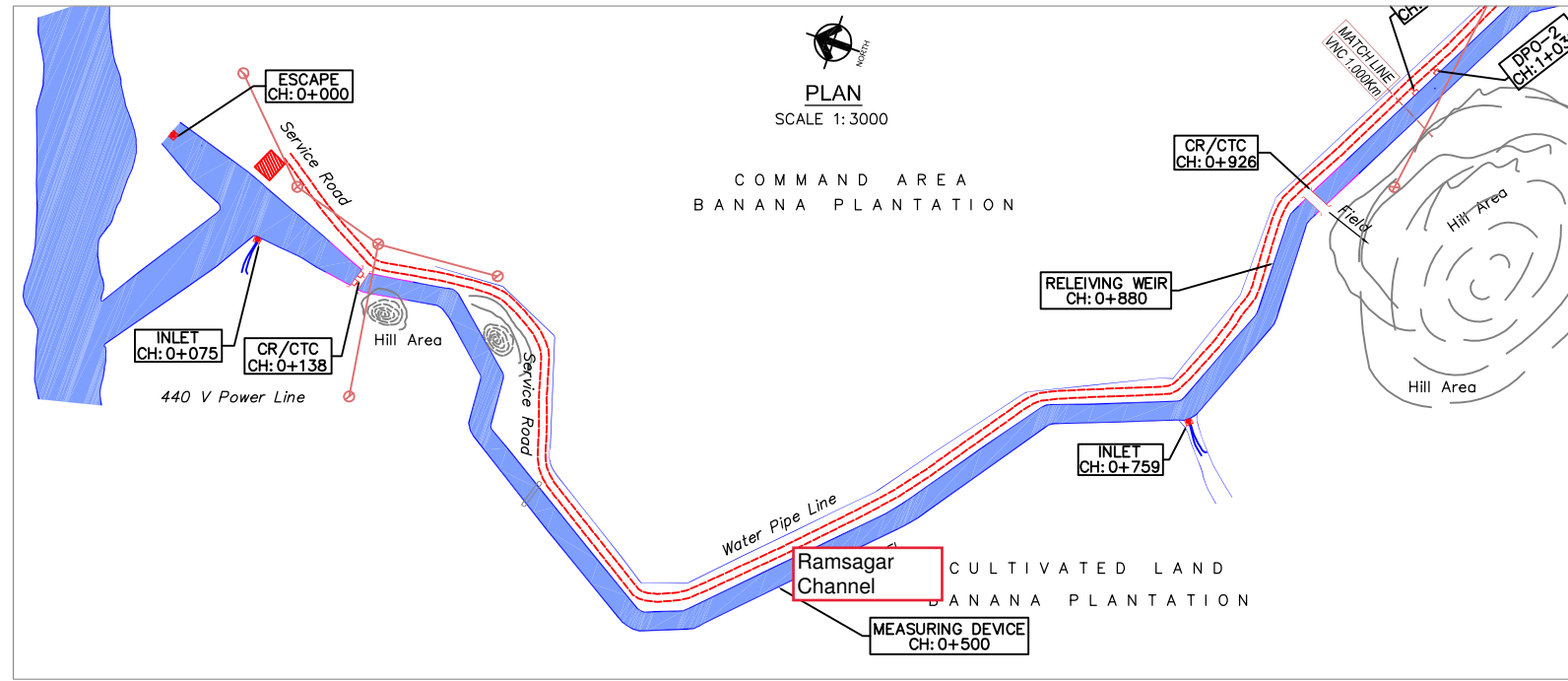
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0		For Approval								DRAWING TITLE	
Rev.	Description.	Date.	Drw.	Pre.	Chk.	App.	DETAILED CROSS SECTION OF Ramxagar CANAL				
CLIENT		KARNATAKA NEERAVARI NIGAM LIMITED (A GOVT. OF KARNATAKA UNDERTAKING) BANGALORE - 560 001		Date	Drw.	Pre.	Chk.	App.	Scale.	Drawing Status.	
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				KNNL-VNC-TC-CS-004		KNNL-VNC-TC-CS-004		1:200		FOR APPROVAL	
				Sheet No.		Rev.					
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				Superintending Engineer Tungabhadra Project Circle Munirabad		Chief Engineer Irrigation Central Zone Munirabad					





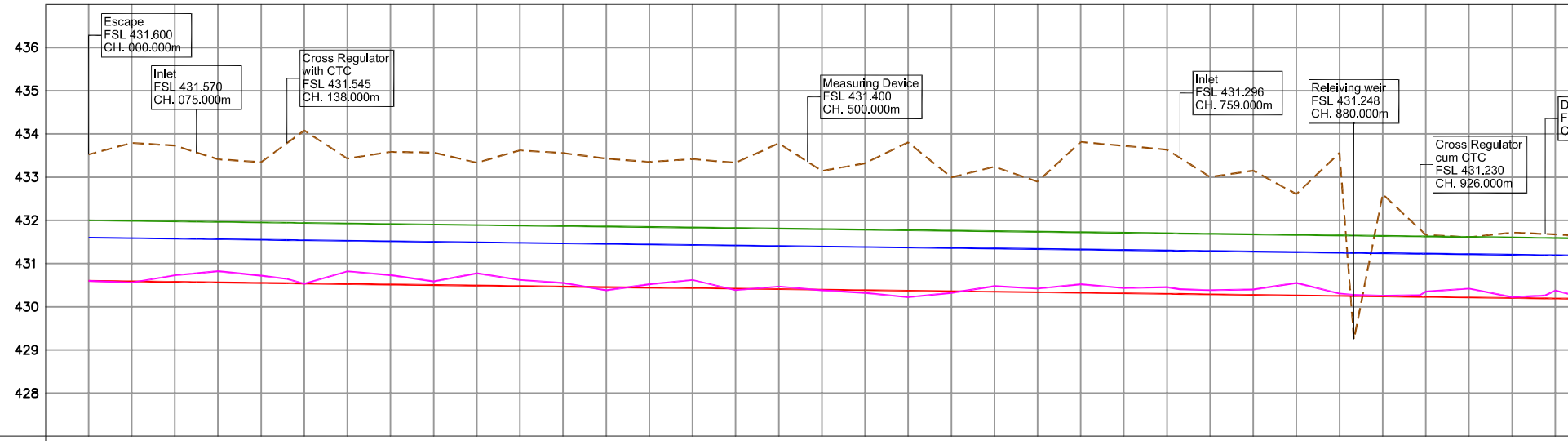


**NOTES:**

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- DO NOT SCALE THE DRAWING

LEGENDS	SYMBOL
Compound wall. Wire fence. Cultivation limit.	— — — — —
Pylon Electric Pole, Transformer, Telegraph/Telephone line.	— — — — —
Power Line.	— — — — —
Roads, Road centreline, Canal, Streams	— — — — —
Railway with KM Stone: Broad gauge; Other gauges.	— — — — —
Building: Permanent; Temporary; Under construction; Village	— — — — —
Bridges with piers, Culvert, KM pillar, Sub-KM pillar.	— — — — —
Lamp post.	— — — — —
Well: Lined; Unlined; Tube; Bore; Pump House; Temple.	— — — — —
Mosque, Idgah.	— — — — —
Embankment, Cutting, Quarry, Hedge.	— — — — —
Field bund, Grass, Bamboo.	— — — — —
Kilometer Stone, Graveyard, Sign Board, Gate	— — — — —
Ground Level	— — — — —
Existing Canal bed level	— — — — —
Proposed Canal bed level	— — — — —
Proposed Full supply level	— — — — —
Proposed Free board level	— — — — —

HYDRAULIC PARTICULARS		
No.	CANAL DETAILS	REACH in 'm'
		CH: 0000-1000m
1	REQUIRED DISCHARGE (CUMECs)	3.311
2	DESIGNED DISCHARGE (CUMECs)	3.353
3	BED WIDTH (m)	2.5
4	FULL SUPPLY DEPTH (m)	1.0
5	SIDE SLOPE (H:V)	1.5:1
6	TOTAL FREE BOARD (m)	0.4
7	LINED FREE BOARD (m)	0.4
8	BED GRADIENT	1:2500
9	VELOCITY (m/s)	0.838
10	RUGOSITY COEFFICIENT (n)	0.018



DATUM: 427

CHAINAGE (m)	GROUND LEVEL (m)	EXISTING CANAL BED LEVEL (m)	DESIGNED CANAL BED LEVEL (m)	DESIGNED FULL SUPPLY LEVEL (m)	DEPTH OF CUTTING (m)	HEIGHT OF BANK (m)	BED GRADIENT		VILLAGE LIMIT	
							←	→	←	→
0.000	433.526	430.600	430.600	431.600	2.926		←		←	
30.000	433.792	430.560	430.588	431.588	3.204		←		←	
60.000	433.732	430.730	430.576	431.576	3.156		←		←	
75.000	433.573	430.776	430.570	431.570	3.003		←		←	
90.000	433.415	430.822	430.564	431.564	2.851		←		←	
120.000	433.347	430.720	430.552	431.552	2.795		←		←	
138.000	433.788	430.645	430.545	431.545	3.243		←		←	
150.000	434.082	430.532	430.540	431.540	3.542		←		←	
180.000	433.430	430.821	430.528	431.528	2.902		←		←	
210.000	433.585	430.732	430.516	431.516	3.069		←		←	
240.000	433.570	430.587	430.504	431.504	3.066		←		←	
270.000	433.335	430.775	430.492	431.492	2.843		←		←	
300.000	433.621	430.621	430.480	431.480	3.141		←		←	
330.000	433.558	430.550	430.468	431.468	3.090		←		←	
360.000	433.429	430.380	430.456	431.456	2.973		←		←	
390.000	433.354	430.520	430.444	431.444	2.910		←		←	
420.000	433.419	430.620	430.432	431.432	2.987		←		←	
450.000	433.334	430.385	430.420	431.420	2.914		←		←	
480.000	433.783	430.470	430.408	431.408	3.375		←		←	
510.000	433.144	430.380	430.396	431.396	2.748		←		←	
540.000	433.322	430.320	430.384	431.384	2.938		←		←	
570.000	433.806	430.222	430.372	431.372	3.434		←		←	
600.000	432.996	430.321	430.360	431.360	2.636		←		←	
630.000	433.241	430.478	430.348	431.348	2.893		←		←	
660.000	432.895	430.422	430.336	431.336	2.559		←		←	
690.000	433.814	430.520	430.324	431.324	3.490		←		←	
720.000	433.726	430.432	430.312	431.312	3.414		←		←	
750.000	433.638	430.454	430.300	431.300	3.338		←		←	
759.000	433.448	430.406	430.296	431.296	3.152		←		←	
780.000	433.004	430.385	430.288	431.288	2.716		←		←	
810.000	433.151	430.400	430.276	431.276	2.875		←		←	
840.000	432.607	430.552	430.264	431.264	2.343		←		←	
870.000	433.567	430.307	430.252	431.252	3.315	2.401	←		←	
880.000	429.247	430.275	430.248	431.248	-1.001		←		←	
900.000	432.609	430.257	430.240	431.240	2.369		←		←	
926.000	431.790	430.270	430.230	431.230	1.560		←		←	
930.000	431.664	430.352	430.228	431.228	1.436		←		←	
960.000	431.608	430.421	430.216	431.216	1.392	0.008	←		←	
990.000	431.719	430.225	430.204	431.204	1.515		←		←	
1013.000	431.696	430.299	430.192	431.192	1.484		←		←	
1020.000	431.676	430.375	430.187	431.187	1.481		←		←	
1032.000	431.646	430.276	430.187	431.187	1.459		←		←	

**LONGITUDINAL SECTION**  
SCALE HOR 1:3000  
VER 1:100

LIST OF STRUCTURES							
No.	Type of Structure	Chainage	C.B.L		F.S.L		Head Loss
			U/S 'm'	D/S 'm'	U/S 'm'	D/S 'm'	
1	Escape	000	430.600	430.600	431.600	431.600	0.0
2	Inlet	75	430.570	430.570	431.570	431.570	0.0
3	CR / CTC	138	430.545	430.545	431.545	431.545	0.0
4	Measuring Device	500	430.400	430.400	431.400	431.400	0.0
5	Inlet	759	430.296	430.296	431.296	431.296	0.0
6	Relieving Weir	880	430.248	430.248	431.248	431.248	0.0
7	CR / CTC	926	430.230	430.230	431.230	431.230	0.0

0	For Approval				
Rev.	Description	Date	Drw.	Pre.	Chk., App.

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BANGALORE - 560 001

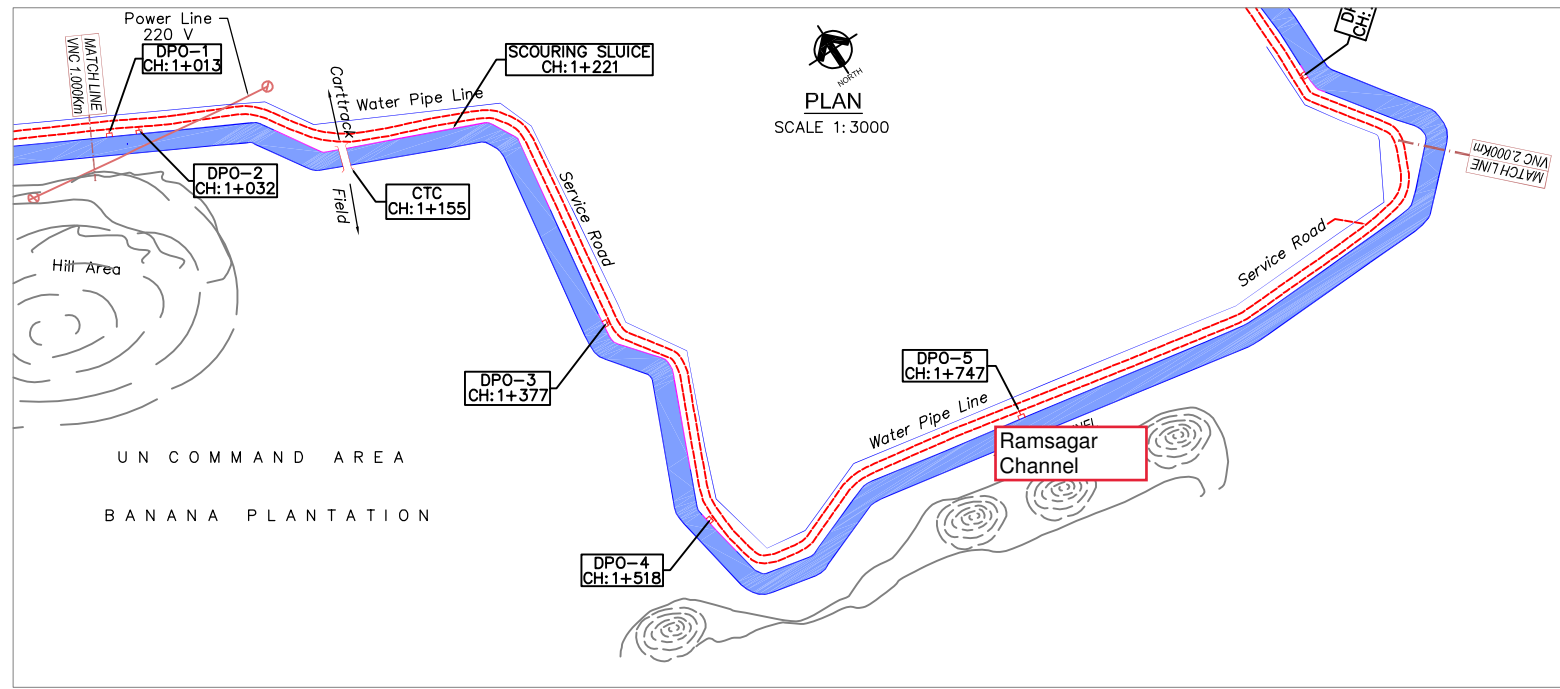
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Bengaluru-560 041, India.  
Ph. +91.80.40914714, Fax: +91.80.26650912  
info@eitech.in • www.eitech.in

PROJECT TITLE  
**MODERNISATION OF VIJAYANAGARA CHANNELS  
IN TUNGABHADRA PROJECT**

DRAWING TITLE  
**PLAN AND LONGITUDINAL SECTION OF  
TURTHA CHANNEL  
(0+000 Km to 1+000 Km)**

Date	Drw.	Pre.	Chk.	App.	Scale	Drawing Status.
					AS SHOWN	FOR APPROVAL
Project No.	Drawing No.			Sheet No.	Rev.	
	KNNL-VNC-TC-P&L-002			01 of 19	0	

 Consultant <b>E I Technologies Pvt. Ltd.</b> Bangalore	 Asst. Executive Engineer VNC Sub-Division Kamalapur	 Executive Engineer TB Division No.1 Munirabad
 Superintending Engineer Tungabhadra Project Circle Munirabad	 Chief Engineer Irrigation Control Zone Munirabad	

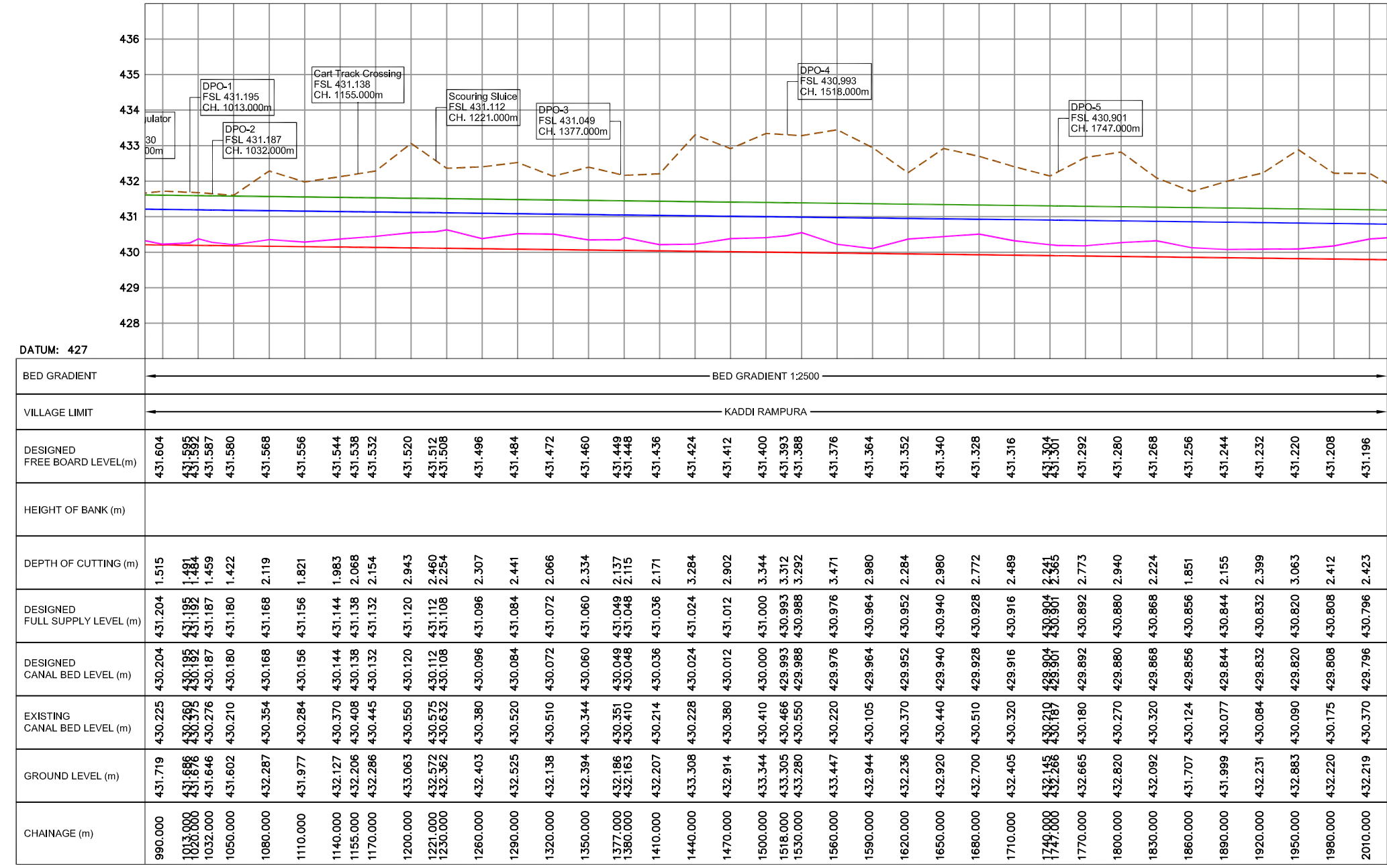


**NOTES:**

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- DO NOT SCALE THE DRAWING

LEGENDS	SYMBOL
Compound wall. Wire fence. Cultivation limit.	— — — — —
Pyon. Electric Pole. Transformer. Telegraph/Telephone line. Power Line..	— — — — —
Roads, Road centreline, Canal, Streams	— — — — —
Railway with KM Stone: Broad gauge; Other gauges.	— — — — —
Building: Permanent; Temporary; Under construction. Village	— — — — —
Bridges with piers. Culvert. KM pillar. Sub-KM pillar.	— — — — —
Lamp post.	— — — — —
Well: Lined; Unlined; Tube; Bore. Pump House. Temple. Mosque. Idgah.	— — — — —
Embankment. Cutting. Quarry. Hedge.	— — — — —
Field bund.. Grass. Bamboo.	— — — — —
Kilometer Stone. Graveyard. Sign Board. Gate	— — — — —
Ground Level	— — — — —
Existing Canal bed level	— — — — —
Proposed Canal bed level	— — — — —
Proposed Full supply level	— — — — —
Proposed Free board level	— — — — —

HYDRAULIC PARTICULARS		
No.	CANAL DETAILS	REACH in 'm'
1	REQUIRED DISCHARGE(CUMECs)	3.311
2	DESIGNED DISCHARGE(CUMECs)	3.353
3	BED WIDTH(m)	2.5
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6	TOTAL FREE BOARD(m)	0.4
7	LINED FREE BOARD(m)	0.4
8	BED GRADIENT	1:2500
9	VELOCITY(m/s)	0.838
10	RUGOSITY COEFFICIENT (n)	0.018



**LONGITUDINAL SECTION**  
SCALE HOR 1:3000  
VER 1:100

LIST OF STRUCTURES							
No.	Type of Structure	Chainage	C.B.L		F.S.L		Head Loss
8	Direct Pipe Outlet-1	1013	430.195	430.195	431.195	431.195	0.0
9	Direct Pipe Outlet-2	1032	430.187	430.187	431.187	431.187	0.0
10	Cart Track Crossing	1155	430.138	430.138	431.138	431.138	0.0
11	Scouring sluice	1221	430.112	430.112	431.112	431.112	0.0
12	Direct Pipe Outlet-3	1377	430.049	430.049	431.049	431.049	0.0
13	Direct Pipe Outlet-4	1518	429.993	429.993	430.993	430.993	0.0
14	Direct Pipe Outlet-5	1747	429.901	429.901	430.901	430.901	0.0

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**PROJECT TITLE**  
**MODERNISATION OF VIJAYANAGARA CHANNELS  
IN TUNGABHADRA PROJECT**

**DRAWING TITLE**  
**PLAN AND LONGITUDINAL SECTION OF  
TURTHA CHANNEL  
(1+000 Km to 2+000 Km)**

Date	Drw.	Pre.	Chk.	App.	Scale.	Drawing Status.
					AS SHOWN	FOR APPROVAL
Project No.	Drawing No.			Sheet No.	Rev.	
	KNNL-VNC-TC-P&L-002			02 of 19	0	

Consultant E I Technologies Pvt. Ltd. Bangalore	ASSE Executive Engineer VNC Sub-Division Kamalgapur	Executive Engineer TB Division No.1 Munirabad
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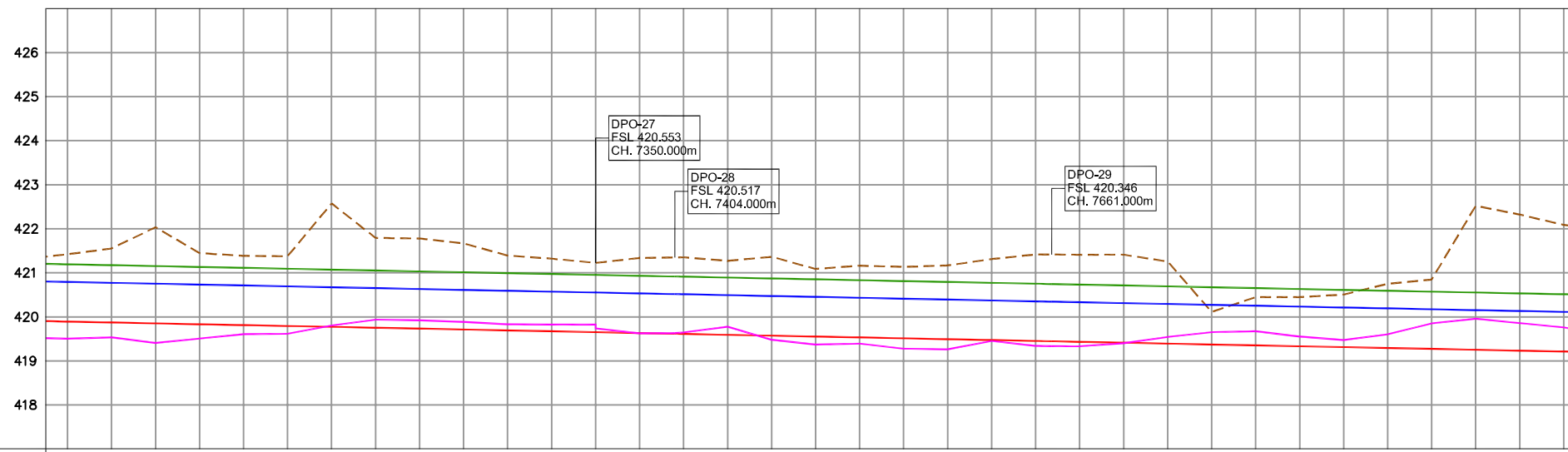
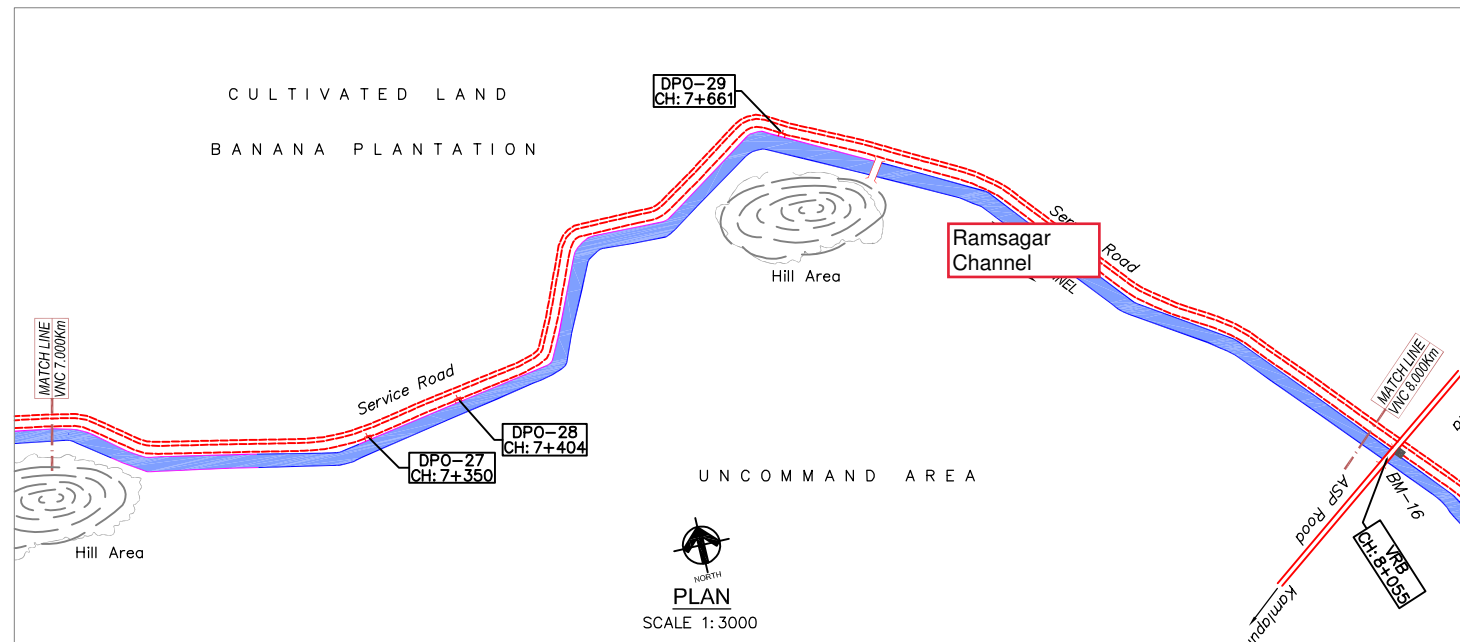












DATUM: 417

REV.	DESCRIPTION	DATE	DRW.	PRE.	CHK.	APP.	SCALE	DRAWING STATUS
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<p>PROJECT TITLE: MODERNISATION OF VIJAYANAGARA CHANNELS IN TUNGABHADRA PROJECT</p>								
<p>DRAWING TITLE: PLAN AND LONGITUDINAL SECTION OF TURTHA CHANNEL (7+000 Km to 8+000 Km)</p>								
Date	Drw.	Pre.	Chk.	App.	Scale	Drawing Status.		
						FOR APPROVAL		
Project No.	Drawing No.		Sheet No.	Rev.				
	KNNL-VNC-TC-P&L-002		08 of 19	0				
<p>Consultant E I Technologies Pvt. Ltd. Bangalore</p>			<p>Asst. Executive Engineer VNC Sub-Division Kamalgapur</p>			<p>Executive Engineer TB Division No.1 Munirabad</p>		
<p>Superintending Engineer Tungabhadra Project Circle Munirabad</p>				<p>Chief Engineer Irrigation Control Zone Munirabad</p>				

LONGITUDINAL SECTION

SCALE HOR 1:3000  
VER 1:100

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- DO NOT SCALE THE DRAWING

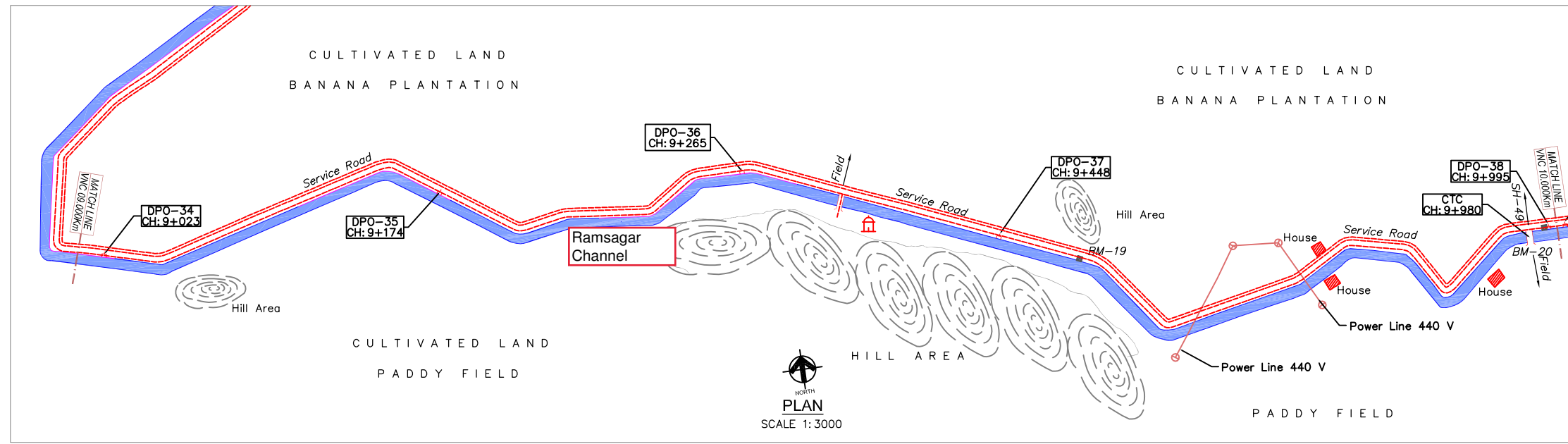
LEGENDS	SYMBOL
Compound wall. Wire fence. Cultivation limit.	---x---
Pylon, Electric Pole, Transformer, Telegraph/Telephone line, Power Line.	.....
Roads, Road centreline, Canal, Streams	---
Railway with KM Stone: Broad gauge; Other gauges.	75 70
Building: Permanent; Temporary; Under construction; Village	--- ---
Bridges with piers, Culvert, KM pillar, Sub-KM pillar, Lamp post.	--- ---
Well: Lined; Unlined; Tube; Bore; Pump House; Temple, Mosque, Idgah.	--- ---
Embankment, Cutting, Quarry, Hedge.	--- ---
Field bund., Grass, Bamboo.	--- ---
Kilometer Stone, Graveyard, Sign Board, Gate	--- ---
Ground Level	---
Existing Canal bed level	---
Proposed Canal bed level	---
Proposed Full supply level	---
Proposed Free board level	---

HYDRAULIC PARTICULARS	
No.	CANAL DETAILS
	REACH in 'm'
1	REQUIRED DISCHARGE(CUMECs)
2	DESIGNED DISCHARGE(CUMECs)
3	BED WIDTH(m)
4	FULL SUPPLY DEPTH(m)
5	SIDE SLOPE(H:V)
6	TOTAL FREE BOARD(m)
7	LINED FREE BOARD(m)
8	BED GRADIENT
9	VELOCITY(m/s)
10	RUGOSITY COEFFICIENT (n)

LIST OF STRUCTURES

No.	Type of Structure	Chainage	C.B.L		F.S.L		Head Loss
			U/S 'm'	D/S 'm'	U/S 'm'	D/S 'm'	
50	Direct Pipe Outlet-27	7350	419.653	419.653	420.553	420.553	0.0
51	Direct Pipe Outlet-28	7404	419.617	419.617	420.517	420.517	0.0
52	Direct Pipe Outlet-29	7661	419.446	419.446	420.346	420.346	0.0



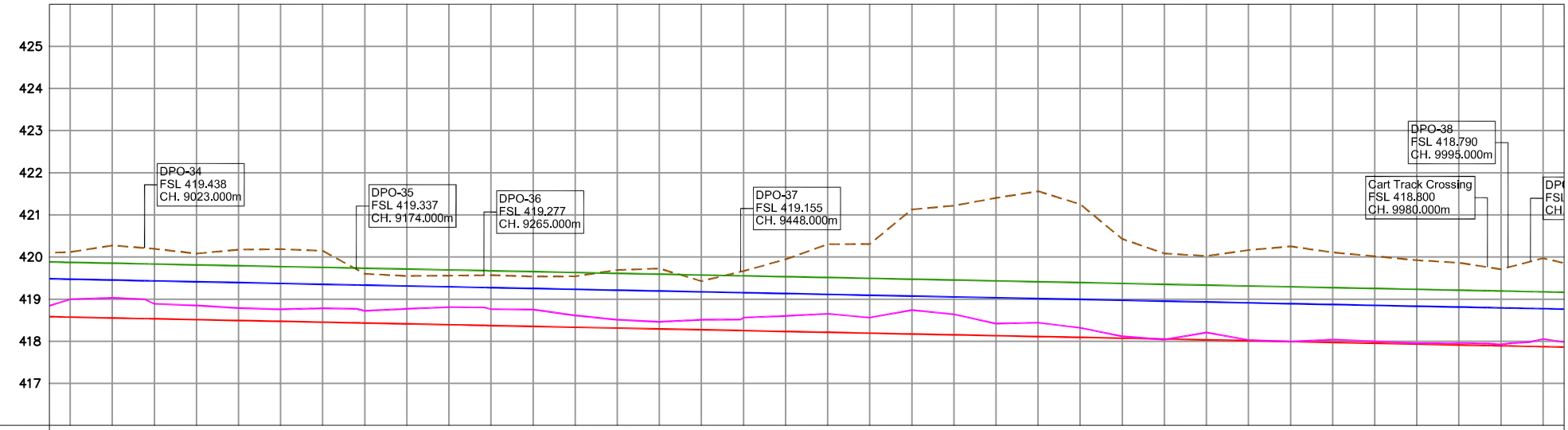


**NOTES:**

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LEGENDS	SYMBOL
Compound wall. Wire fence. Cultivation limit.	— * — *
Pyon. Electric Pole. Transformer. Telegraph/Telephone line. Power Line..	.....
Roads, Road centreline, Canal, Streams	— — — — —
Railway with KM Stone: Broad gauge; Other gauges.	— 75 — 70 —
Building: Permanent; Temporary; Under construction. Village	▭ ▭ ▭ ▭ ▭
Bridges with piers. Culvert. KM pillar. Sub-KM pillar.	— — — — —
Lamp post.	⊙ ⊙ ⊙
Well: Lined; Unlined; Tube; Bore. Pump House. Temple. Mosque. Idgah.	⊙ ⊙ ⊙ ⊙ ⊙
Embankment. Cutting. Quarry. Hedge.	▭ ▭ ▭ ▭ ▭
Field bund.. Grass. Bamboo.	— — — — —
Kilometer Stone. Graveyard. Sign Board. Gate	▭ ▭ ▭ ▭ ▭
Ground Level	— — — — —
Existing Canal bed level	— — — — —
Proposed Canal bed level	— — — — —
Proposed Full supply level	— — — — —
Proposed Free board level	— — — — —

HYDRAULIC PARTICULARS		
No.	CANAL DETAILS	REACH in 'm'
		CH: 9000-10000m
1	REQUIRED DISCHARGE(CUMECs)	2.015
2	DESIGNED DISCHARGE(CUMECs)	2.879
3	BED WIDTH(m)	1.9
4	FULL SUPPLY DEPTH(m)	0.9
5	SIDE SLOPE(H:V)	1.5:1
6	TOTAL FREE BOARD(m)	0.4
7	LINED FREE BOARD(m)	0.4
8	BED GRADIENT	1:1500
9	VELOCITY(m/s)	0.984
10	ROUGHNESS COEFFICIENT (n)	0.018



DATUM: 416

CHAINAGE (m)	DESIGNED FREE BOARD LEVEL (m)	HEIGHT OF BANK (m)	DEPTH OF CUTTING (m)	DESIGNED FULL SUPPLY LEVEL (m)	DESIGNED CANAL BED LEVEL (m)	EXISTING CANAL BED LEVEL (m)	GROUND LEVEL (m)
8970.000	419.873		1.545	419.473	418.573	418.998	420.118
9000.000	419.853		1.721	419.453	418.553	419.030	420.274
9023.000	419.838		1.863	419.438	418.538	418.997	420.214
9030.000	419.833		1.876	419.433	418.533	418.990	420.196
9060.000	419.813		1.568	419.413	418.513	418.851	420.081
9090.000	419.793		1.683	419.393	418.493	418.790	420.176
9120.000	419.773		1.714	419.373	418.473	418.760	420.187
9150.000	419.753	0.027	1.695	419.353	418.453	418.781	420.148
9174.000	419.737	0.104	1.273	419.337	418.437	418.769	419.710
9180.000	419.733	0.132	1.168	419.333	418.433	418.722	419.601
9210.000	419.713	0.162	1.138	419.313	418.413	418.772	419.551
9240.000	419.693	0.134	1.166	419.293	418.393	418.811	419.559
9265.000	419.677	0.110	1.190	419.277	418.377	418.803	419.567
9270.000	419.673	0.104	1.196	419.273	418.373	418.762	419.569
9300.000	419.653	0.116	1.184	419.253	418.353	418.752	419.537
9330.000	419.633	0.091	1.209	419.233	418.333	418.612	419.542
9360.000	419.613		1.379	419.213	418.313	418.512	419.692
9390.000	419.593		1.434	419.193	418.293	418.461	419.727
9420.000	419.573	0.146	1.154	419.173	418.273	418.512	419.427
9448.000	419.555		1.396	419.155	418.255	418.515	419.651
9450.000	419.553		1.414	419.153	418.253	418.562	419.667
9480.000	419.533		1.711	419.133	418.233	418.602	419.944
9510.000	419.513		2.090	419.113	418.213	418.653	420.303
9540.000	419.493		2.115	419.093	418.193	418.562	420.308
9570.000	419.473		2.955	419.073	418.173	418.740	421.128
9600.000	419.453		3.066	419.053	418.153	418.640	421.219
9630.000	419.433		3.269	419.033	418.133	418.421	421.402
9660.000	419.413		3.448	419.013	418.113	418.441	421.561
9690.000	419.393		3.161	418.993	418.093	418.321	421.254
9720.000	419.373		2.356	418.973	418.073	418.119	420.429
9750.000	419.353		2.032	418.953	418.053	418.039	420.085
9780.000	419.333		1.991	418.933	418.033	418.209	420.024
9810.000	419.313		2.151	418.913	418.013	418.029	420.164
9840.000	419.293		2.259	418.893	417.993	417.990	420.252
9870.000	419.273		2.137	418.873	417.973	418.039	420.110
9900.000	419.253		2.065	418.853	417.953	418.000	420.018
9930.000	419.233		1.990	418.833	417.933	417.954	419.923
9960.000	419.213		1.951	418.813	417.913	417.958	419.864
9980.000	418.900		1.861	418.900	417.900	417.947	419.761
9990.000	418.800		1.863	418.800	417.800	417.927	419.709
9995.000	418.790		1.863	418.790	417.790	417.947	419.753
10014.000	419.179		2.014	418.779	417.879	417.879	419.893
10020.000	419.173		2.099	418.773	417.873	418.054	419.972

LONGITUDINAL SECTION  
SCALE HOR 1:3000  
VER 1:100

LIST OF STRUCTURES							
No.	Type of Structure	Chainage	C.B.L.		F.S.L.		Head Loss
			U/S 'm'	D/S 'm'	U/S 'm'	D/S 'm'	
58	Direct Pipe Outlet-34	9023	418.538	418.538	419.438	419.438	0.0
59	Direct Pipe Outlet-35	9174	418.437	418.437	419.337	419.337	0.0
60	Direct Pipe Outlet-36	9265	418.377	418.377	419.277	419.277	0.0
61	Direct Pipe Outlet-37	9448	418.255	418.255	419.155	419.155	0.0
62	Cart Track Crossing	9980	417.900	417.900	418.800	418.800	0.0
63	Direct Pipe Outlet-38	9995	417.890	417.890	418.790	418.790	0.0

0	For Approval				
Rev.	Description.	Date.	Drw.	Pre.	Chk.

CLIENT  
**KARNATAKA NEERAVARI NIGAM LIMITED**  
(A GOVT. OF KARNATAKA UNDERTAKING)  
BANGALORE - 560 001

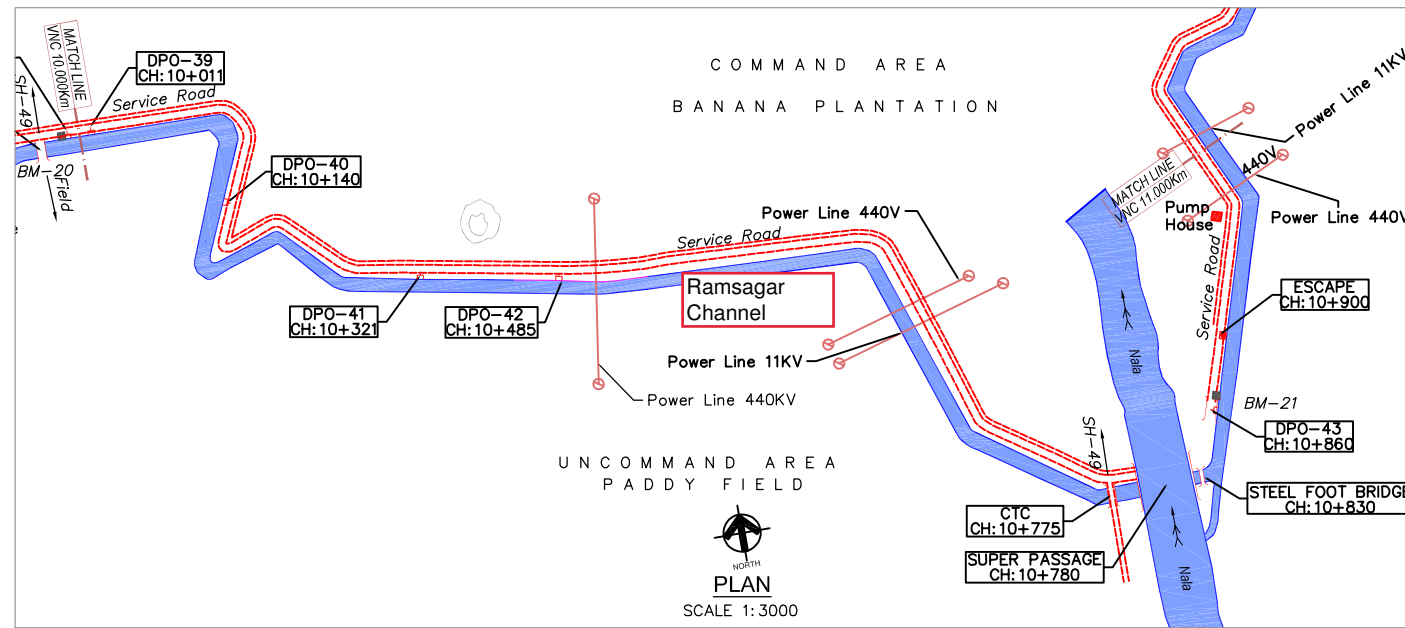
CONSULTANT  
**E I Technologies Pvt. Ltd.,**  
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info@eitech.in • www.eitech.in

PROJECT TITLE  
**MODERNISATION OF VIJAYANAGARA CHANNELS  
IN TUNGABHADRA PROJECT**

DRAWING TITLE  
**PLAN AND LONGITUDINAL SECTION OF  
TURTHA CHANNEL  
(9+000 Km to 10+000 Km)**

Date	Drw.	Pre.	Chk.	App.	Scale.	Drawing Status.
					AS SHOWN	FOR APPROVAL
Project No.	Drawing No.				Sheet No.	Rev.
	KNNL-VNC-TC-P&L-002				10 of 19	0

 Consultant E I Technologies Pvt. Ltd. Bangalore	 VNC Sub-Division Engineer Kamalapur	 Executive Engineer TB Division No.1 Munirabad
 Superintending Engineer Tungabhadra Project Circle Munirabad	 Chief Engineer Irrigation Central Zone Munirabad	

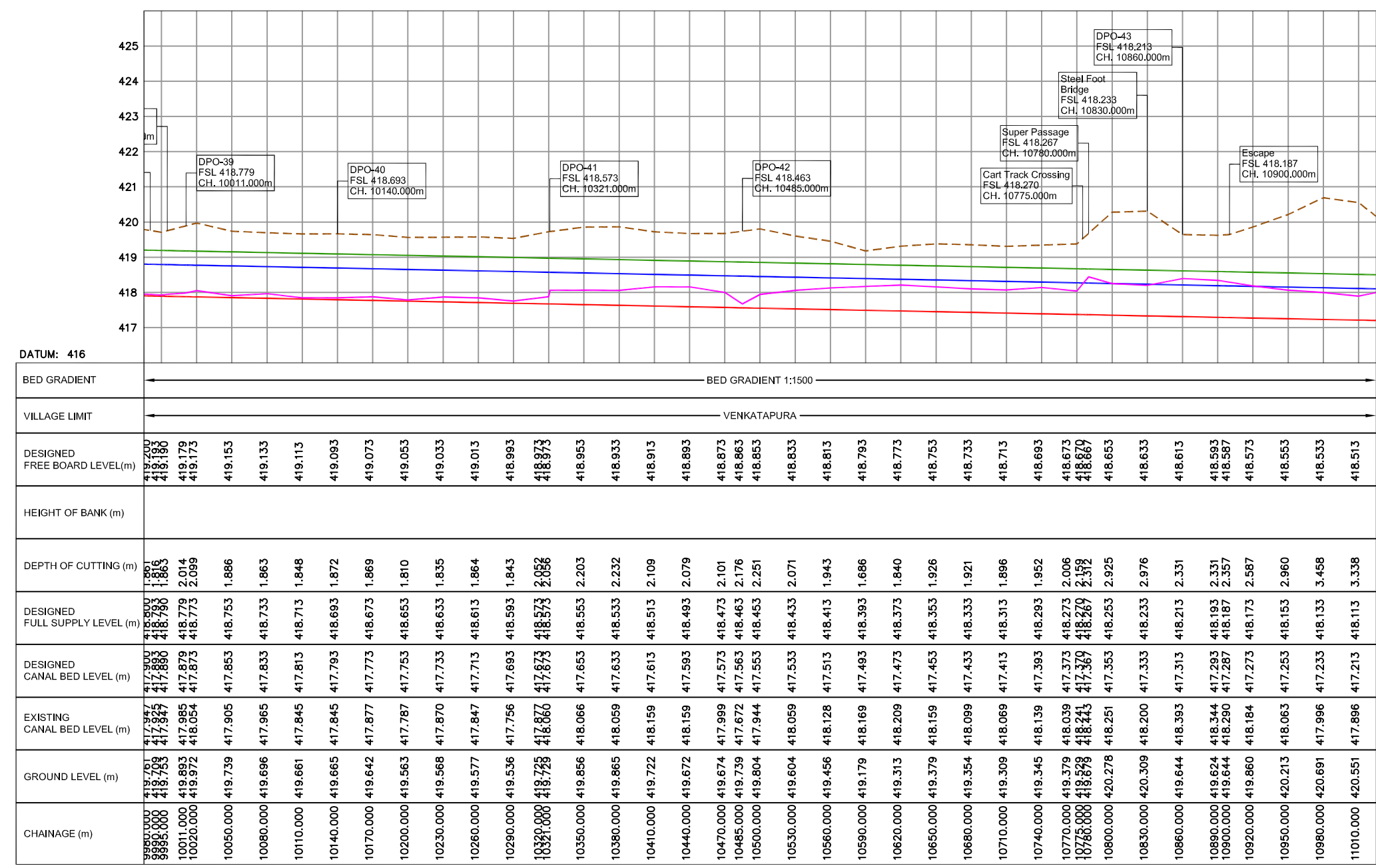


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LEGENDS	SYMBOL
Compound wall. Wire fence. Cultivation limit.	— — — — —
Pylon. Electric Pole. Transformer. Telegraph/Telephone line. Power Line.	— — — — —
Roads, Road centreline, Canal, Streams	— — — — —
Railway with KM Stone: Broad gauge; Other gauges.	— — — — —
Building: Permanent; Temporary; Under construction. Village	— — — — —
Bridges with piers. Culvert. KM pillar. Sub-KM pillar. Lamp post.	— — — — —
Well: Lined; Unlined; Tube; Bore. Pump House. Temple. Mosque. Idgah.	— — — — —
Embankment. Cutting. Quarry. Hedge.	— — — — —
Field bund. Grass. Bamboo.	— — — — —
Kilometer Stone. Graveyard. Sign Board. Gate	— — — — —
Ground Level	— — — — —
Existing Canal bed level	— — — — —
Proposed Canal bed level	— — — — —
Proposed Full supply level	— — — — —
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HYDRAULIC PARTICULARS	
No.	REACH in 'm'
1	REQUIRED DISCHARGE (CUMECs)
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3	BED WIDTH (m)
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7	LINED FREE BOARD (m)
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9	VELOCITY (m/s)
10	RUGOSITY COEFFICIENT (n)



LIST OF STRUCTURES							
No.	Type of Structure	Chainage	C.B.L.		F.S.L.		Head Loss
			U/S 'm'	D/S 'm'	U/S 'm'	D/S 'm'	
64	Direct Pipe Outlet-39	10011	417.879	417.879	418.779	418.779	0.0
65	Direct Pipe Outlet-40	10140	417.793	417.793	418.693	418.693	0.0
66	Direct Pipe Outlet-41	10321	417.673	417.673	418.573	418.573	0.0
67	Direct Pipe Outlet-42	10485	417.563	417.563	418.463	418.463	0.0
68	Cart Track Crossing	10775	417.370	417.370	418.270	418.270	0.0
69	Super Passage	10780	417.367	417.367	418.267	418.267	0.0
70	Steel Foot Bridge	10830	417.333	417.333	418.233	418.233	0.0
71	Direct Pipe Outlet-43	10860	417.313	417.313	418.213	418.213	0.0
72	Escape	10900	417.287	417.287	418.187	418.187	0.0

0	For Approval				
Rev.	Description	Date	Drw.	Pre.	Chk., App.

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 info@eitech.in • www.eitech.in

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**DRAWING TITLE**  
**PLAN AND LONGITUDINAL SECTION OF**  
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Project No.	Drawing No.			Sheet No.	Rev.	
	KNNL-VNC-TC-P&L-002			11 of 19	0	

Consultant <b>E I Technologies Pvt. Ltd.</b> Bangalore	Asst. Executive Engineer <b>VNC Sub-Division</b> Kamalapur	Executive Engineer <b>TB Division No.1</b> Muniarabadi
Superintending Engineer <b>Tungabhadra Project Circle</b> Muniarabadi	Chief Engineer <b>Irrigation Control Zone</b> Muniarabadi	

**LONGITUDINAL SECTION**  
 SCALE HOR 1:3000  
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