



KARNATAKA NEERAVARI NIGAM LIMITED

(A Government of Karnataka Enterprise)

Land Line no. 08188 263641
E Mail: eeknnlmbr@gmail.com

Office of the Executive Engineer
Karnataka Neeravari Nigam Limited
No.3.Bhadra Canal Division,
Malebennur-577530.

Date : 19-11-2022

“To “

The Additional Chief Secretary to Government of Karnataka,
Forest, Ecology & Environment Department,
M.S.Building, Dr.Ambedkar Veedhi,
Bangalore – 560 001

Sir,

Subject: Diversion of 12.1801 ha. of forest land in F.Sy.No.17(new Sy.No.20) of Ittigehalli village, Holehonnur Hobli, Bhadravathi Taluk, Shimoga District(Bhadravathi Forest Division) for construction of new tank with check dam & connectivity road for recharge of ground water in surrounding villages of Ittigehalli in favour of the ExecutiveEngineer, Karnataka Neeravari Nigam Ltd (KNNL) No.3, Bhadra Canal Division, Malebennur.

Ref:- 1) This office online application dated: 24.08.2021.
2) Your Office F. No. 4-KRC1385/2022-BAN Dated the 04/11/2022 .

* * *

Sir,

With reference the above cited subject our proposal no. FP/KA/water/146299/2021 in continuation to this office letter of even number dated 4th November, 2022, the team inspection of the proposed forest area was carried out by the officers of IRO Bangalore on 9th November, 2022. During the site inspection, the Supdt. Engineer & others from the user agency They requested to furnish the following technical information; and we are submit the maps & information as per your noticed points we enclosed herewith.

This is for favor of kind information with a request to clear the proposal at the earliest.

Date:-19-11-2022

Place :- Bhadravathi

Yours faithfully

Executive Engineer
Karnataka Neeravari Nigam Niyamit
No.3 Bhadra Canal Division,
Malebennur-577530.



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Date : 19-11-2022

Diversion of 12.1801 ha. of forest land in F.Sy.No.17 (new Sy.No.20) of Ittigehalli village, Holehonnur Hobli, Bhadravathi Taluk, Shimoga District(Bhadravathi Forest Division) for construction of new tank with check dam & connectivity road for recharge of ground water in surrounding villages of Ittigehalli in favour of the Executive Engineer, Karnataka Neeravari Nigam Ltd (KNNL) No.3, Bhadra Canal Division, Malebennur.

Reference: Your Office F. No. 4-KRC1385/2022-BAN Dated the 04/11/2022

ReferenceItemF.No.4 KRC1385/2022-BAN	Observation	Compliance Replay
1	2	3
1-Copy of note containing justification for locating the tank And nalla bund with contours	The KML file of the area under submergence is shown as a trapezoid, which may not truly reflect the area under actual submergence and accordingly the Actual area required. Thus the KML file of the polygon showing the actual area under submergence on a contour map and revised area requirement details may be submitted.	The map enclosed proposed area of Tank & Nalla bund over lay on contours map . as per required area for construction of proposed new tank
2- Copy of note containing Justification for forest And non-forest area required.	The project involves utilization of both forests as well as non-forest land. Therefore, exact area of non- forest required for the project may be reworked and details may be furnished	The map enclosed the non-forest & forest area road & Area for Soil quarry required for construction of road & tank
3- Copy of note Containingjustificatio n for Road len x width . And cross section of approach road.	The details of the approach road such as length, width and also the cross sectional drawing may be provided	The map enclosed the non-forest & forest area road & Road cross section. 1)Road area measurement map 2)Road cross section map.
4- Copy of note Containing justification for Bund len x width . & cross section Bund	The details of dimensions of earthen bund viz length, width (top as well as bottom) and cross sectional drawing may be furnished	The map enclosed the cross section.& Bund Dimension is 4.50 m top width & 37.82 m bottom (It's Taken by Average).



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5- Copy of note Containing justification for Soil quarry area Required for Road & bund Construction	The details of soil quarry (earth excavation) for creation of pond and also the details of utilization of the excavated soil for bund construction/road Construction may be furnished.	The map enclosed the the Soil Quarry. 1) soil quarry area identified in Sy no. 12 (old is 14) in ettigehalli village
6- Copy of note Containing Related Technical Drawings	All other technical drawings associated with the project may also be furnished to understand and substantiate the diversion area figures sought.	The Project Related Technical maps area enclosed.

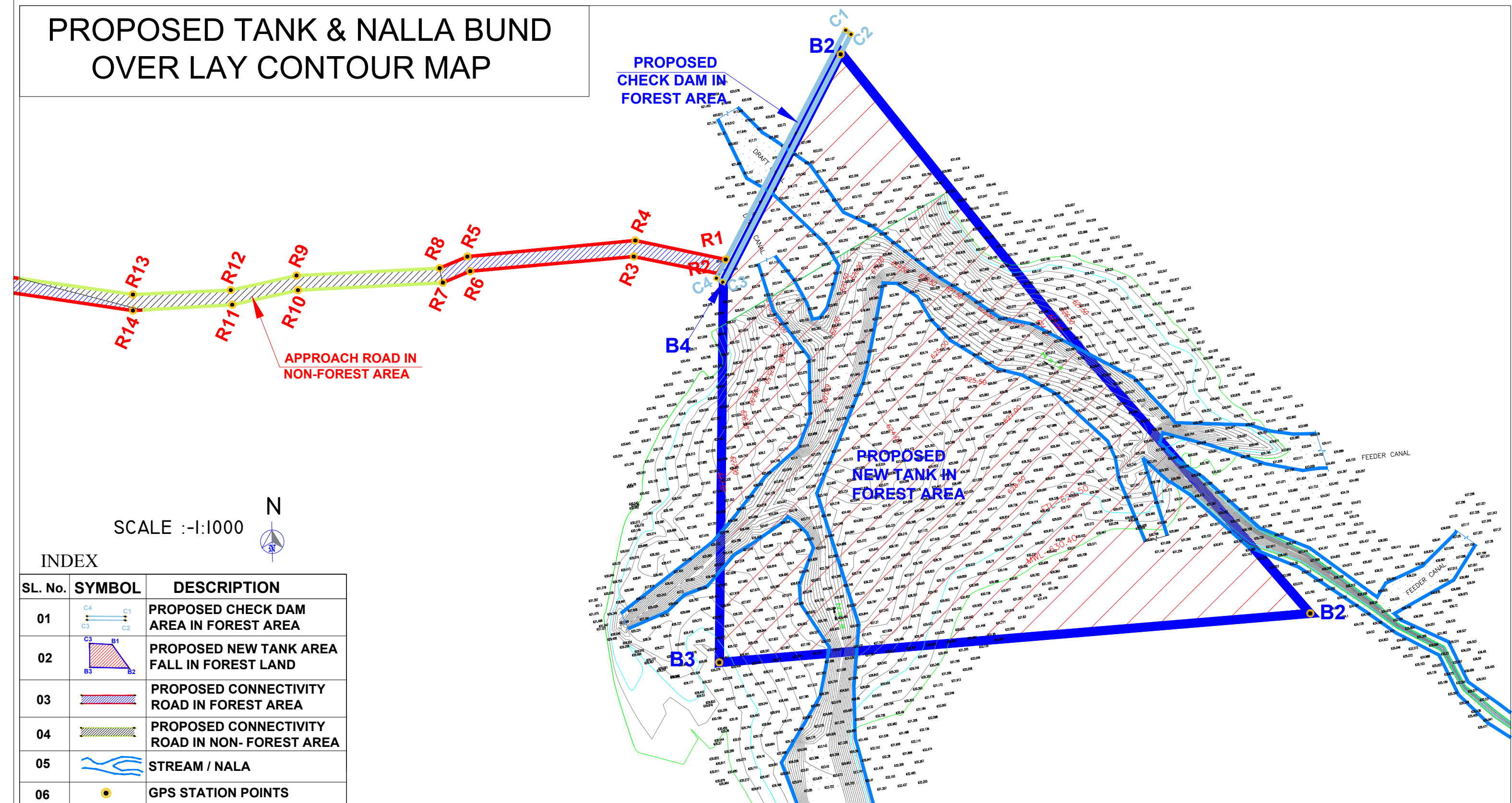
Encls: Compliance as above

Yours faithfully

Date:-19-11-2022
Place :- Bhadravathi


Executive Engineer
Karnataka Neeravari Nigam Niyamit
No.3 Bhadra Canal Division,
Malebennur-577530.

PROPOSED TANK & NALLA BUND OVER LAY CONTOUR MAP



THE VILLAGE MAP SHOWING SOIL QUARRY AREA IN F.SY. NO.12 (14 NEW) OF ITTIGEHALLI VILLAGE FOR CONSTRUCTION OF NEW TANK WITH CHECK DAM ALONG WITH CONNECTIVITY ROAD .

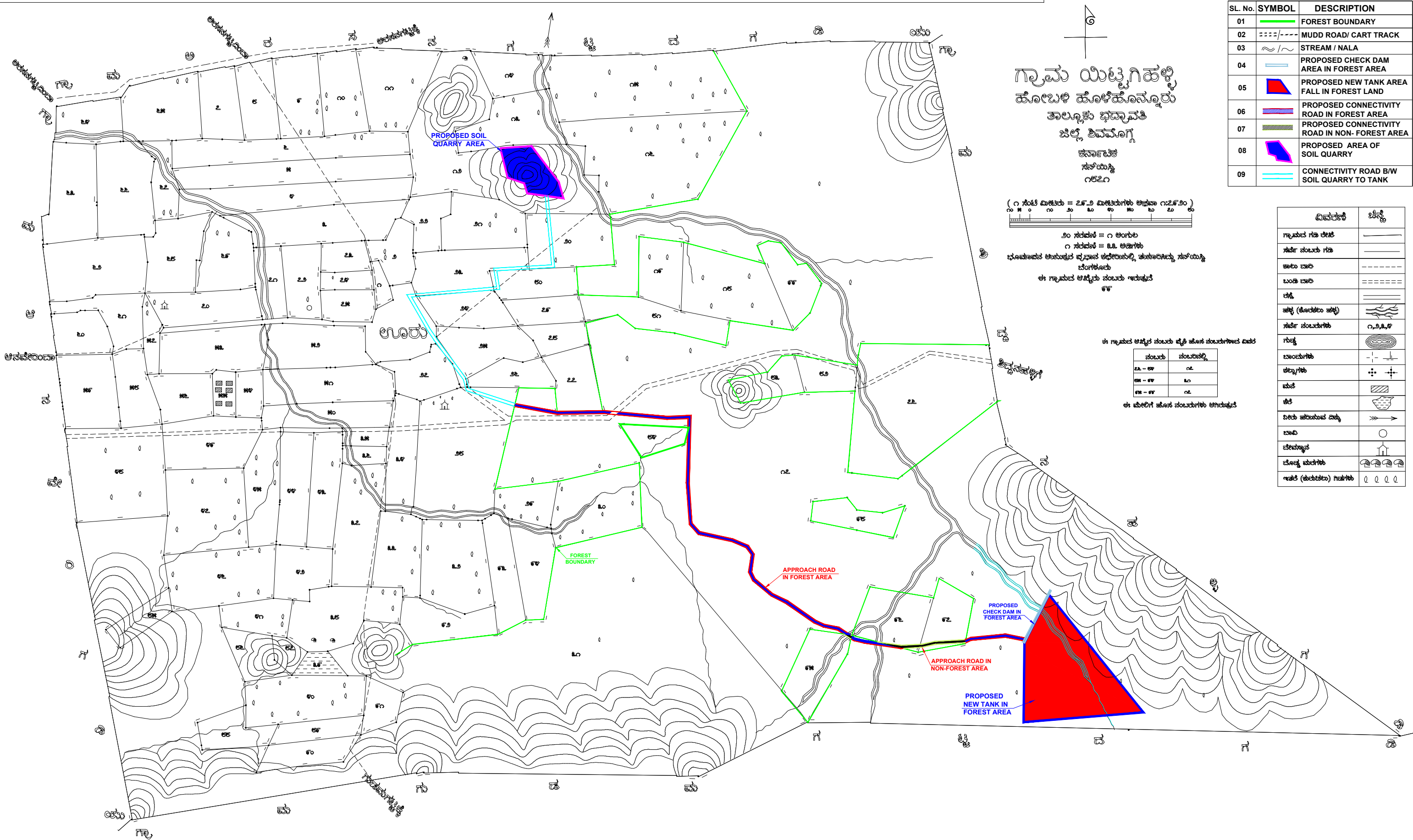
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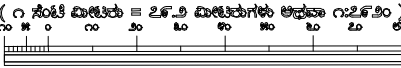
INDEX

SL. No.	SYMBOL	DESCRIPTION
01		FOREST BOUNDARY
02		MUDD ROAD/ CART TRACK
03		STREAM / NALA
04		PROPOSED CHECK DAM AREA IN FOREST AREA
05		PROPOSED NEW TANK AREA FALL IN FOREST LAND
06		PROPOSED CONNECTIVITY ROAD IN FOREST AREA
07		PROPOSED CONNECTIVITY ROAD IN NON- FOREST AREA
08		PROPOSED AREA OF SOIL QUARRY
09		CONNECTIVITY ROAD B/W SOIL QUARRY TO TANK

ವಿವರಣೆ	ಚಿಹ್ನೆ
ಗ್ರಾಮದ ಗಡಿ ರೇಖೆ	_____
ಸರ್ಕಾರಿ ನೆಲದ ಗಡಿ	_____
ಕಾಲುವೆ	_____
ಬಂಡಿ	_____
ಕೆರೆ	_____
ಪಕ್ಕ (ಕೊಡುಕೊಡು ಪಕ್ಕ)	_____
ಸರ್ಕಾರಿ ನೆಲದ ಗಡಿ	_____
ಗುಡ್ಡ	_____
ಬಾಂಜು	_____
ಕಲ್ಲು	_____
ಮನೆ	_____
ಕೆರೆ	_____
ನೀರಿನ ಪರಮಾನವ ದಿಕ್ಕು	_____
ಬಾವಿ	_____
ಪೇವಣ್ಣ	_____
ಪೊನ್ನ ಮರಗಳು	_____
ಇತರೆ (ಕುರುಕು) ಗಿಡಗಳು	_____



ಗ್ರಾಮ ಯಿಟ್ಟಿಹಳ್ಳಿ
ಹೋಬಳಿ ಹೊಳೆಹೊನ್ನೂರು
ತಾಲ್ಲೂಕು ಭದ್ರಾವತಿ
ಜಿಲ್ಲೆ ಶಿವಮೊಗ್ಗ
ಕರ್ನಾಟಕ
ಸರ್ಕಾರ
೧೯೭೧



೧ ಸೆಂಟಿ ಮೀಟರು = ೩೨.೮ ಮೀಟರುಗಳು ಅಥವಾ ೧೦೭.೬೨ ಮೀಟರುಗಳು
೧ ಸೆಂಟಿ ಮೀಟರು = ೩.೨೮ ಅಡಿಗಳು
ಭೂಮಾಲೀಕರ ಅನುಮೋದನೆ ಪಡೆದಿದ್ದು, ಅನುಮೋದನೆ ಸರ್ಕಾರದಿಂದ
ಈ ಗ್ರಾಮದ ಅಭಿವೃದ್ಧಿ ನೆಲದ ಆಯ್ಕೆ

ಈ ಗ್ರಾಮದ ಅಭಿವೃದ್ಧಿ ನೆಲದ ಆಯ್ಕೆ

ನಂಬರು	ನಂಬರದಲ್ಲಿ
೨೨ - ೨೪	೧೭
೨೫ - ೨೭	೩೦
೨೮ - ೩೦	೧೭

ಈ ಮೇಲೆಗೆ ಹೊಸ ನಂಬರುಗಳು ಆಯ್ಕೆ

FOREST & NON-FOREST AREA REQUIRED FOR CONSTRUCTION OF NEW TANK WITH CHECK DAM ALONG WITH CONNECTIVITY ROAD
FOR THE PURPOSE OF TO STORE OVER FLOOD WATER & INCREASED GROUND WATER SURROUNDING AREA OF ITTIGEHALLI
IN BHADRAPURA SF.& MF.IN SHANTHISAGARA RANGE, BHADRAVATHI DIVISION.

- IN FAVOR OF EXECUTIVE ENGINEER (EE), KARNATAKA NEERAVARI NIGAM NIYAMIT, NO.3, BHADRA CANAL DIVISION, MALBENNUR-577 530.

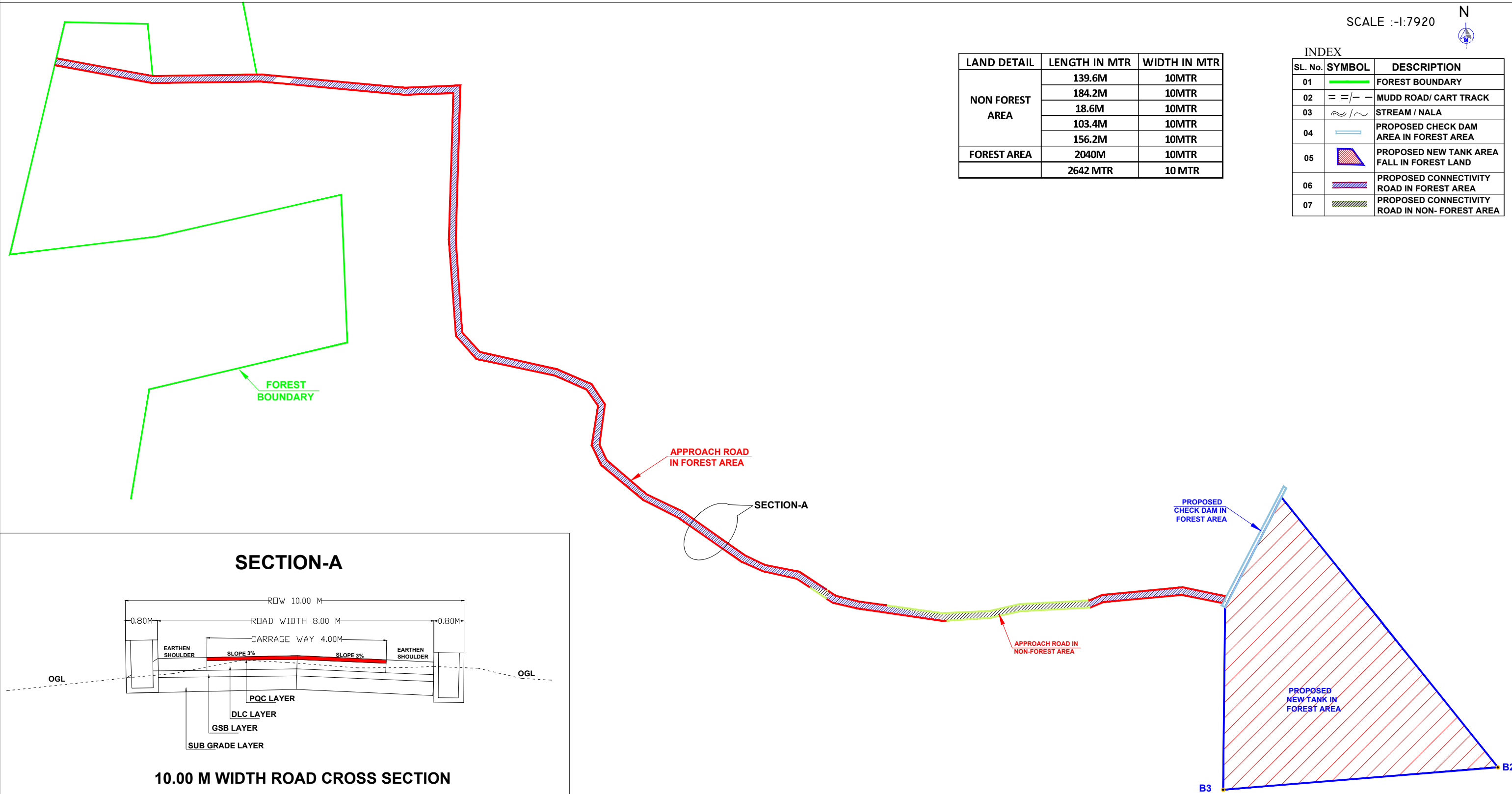
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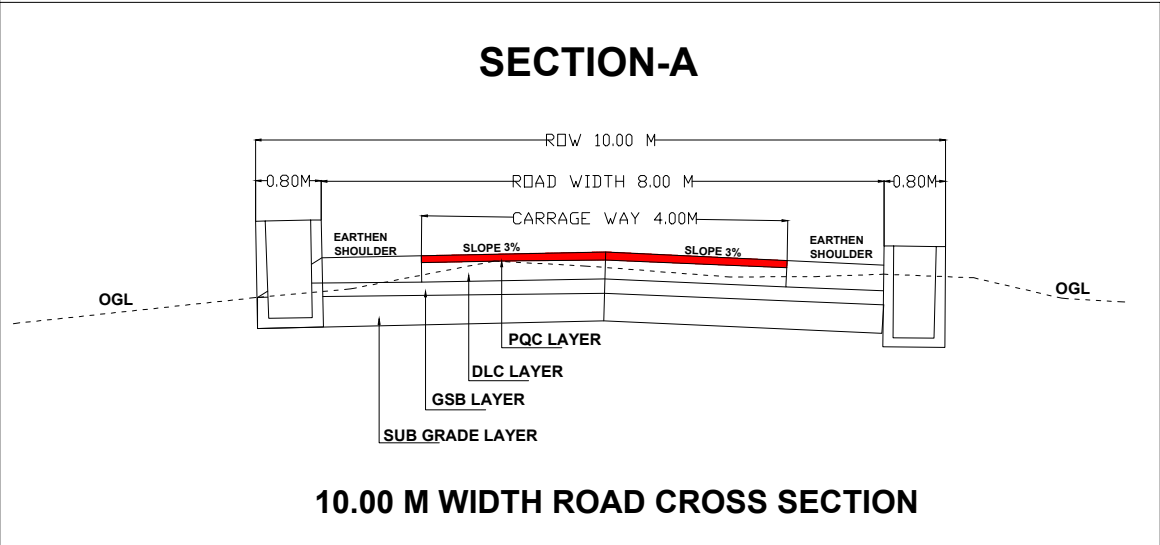
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06		PROPOSED CONNECTIVITY ROAD IN FOREST AREA
07		PROPOSED CONNECTIVITY ROAD IN NON- FOREST AREA

LAND DETAIL	LENGTH IN MTR	WIDTH IN MTR
NON FOREST AREA	139.6M	10MTR
	184.2M	10MTR
	18.6M	10MTR
	103.4M	10MTR
	156.2M	10MTR
FOREST AREA	2040M	10MTR
	2642 MTR	10 MTR

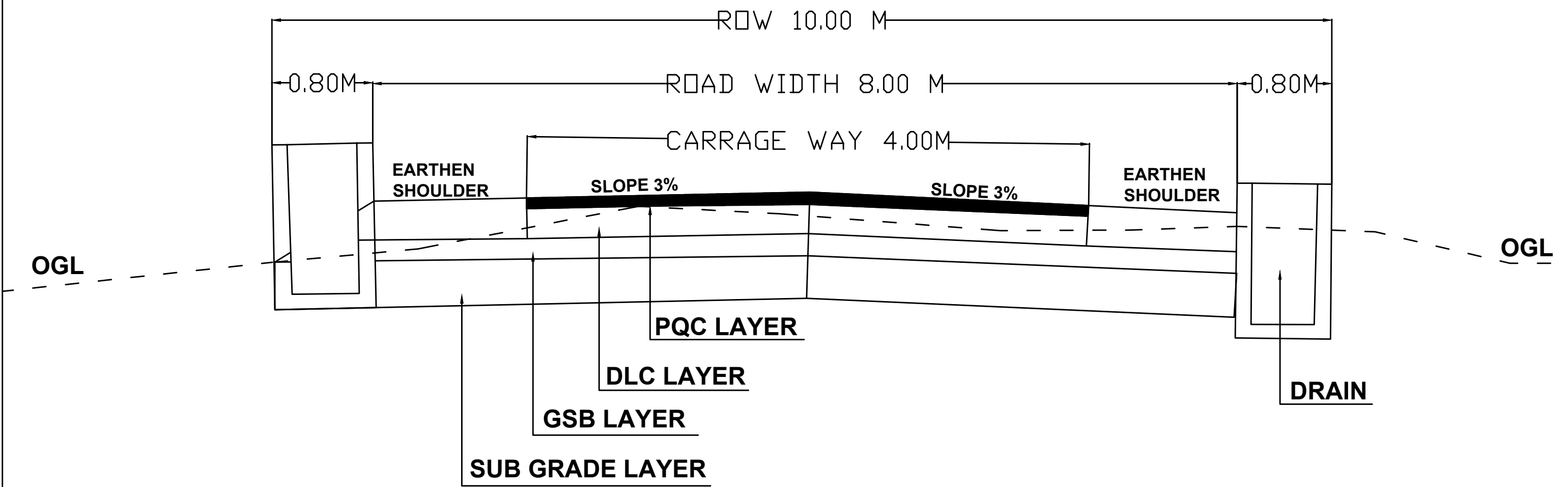


SECTION-A



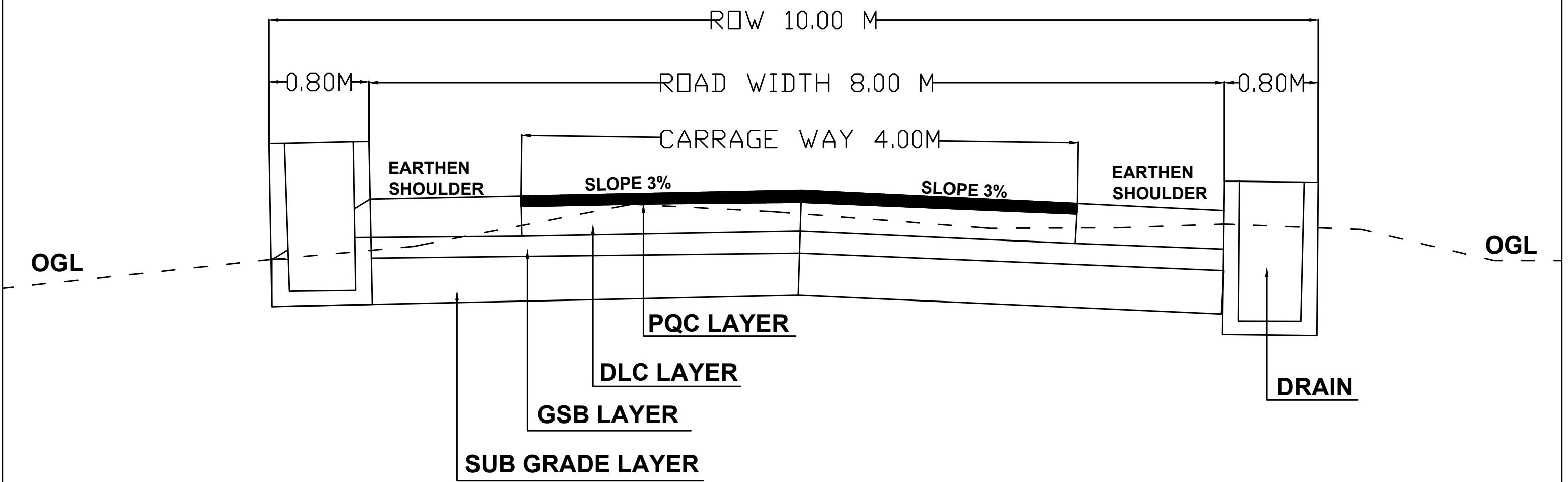
10.00 M WIDTH ROAD CROSS SECTION

APPROACH ROAD CROSS SECTION FROM EXISTING ROAD TO PROPOSED TANK IN ETTIGEHALLI VILLAGE.BHADRAVATHI DIVISION.

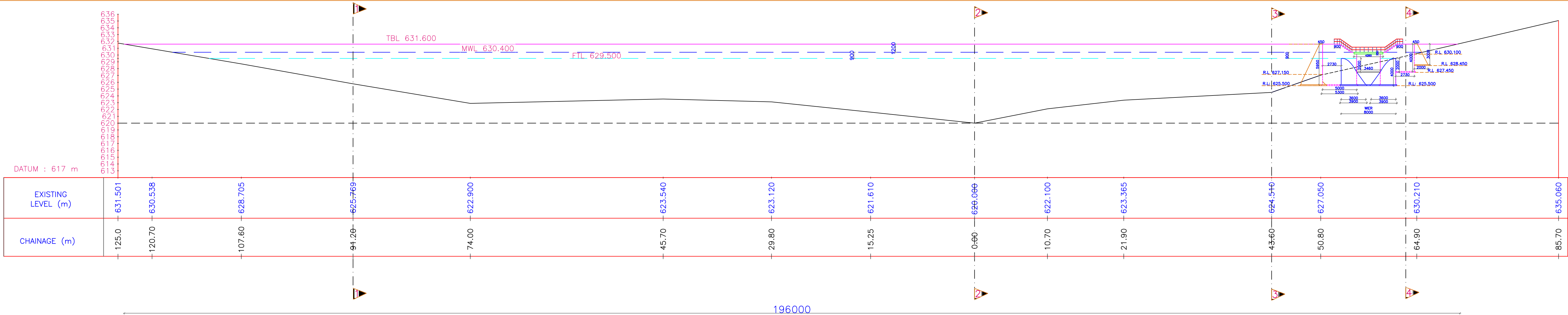


10.00 M WIDTH ROAD CROSS SECTION

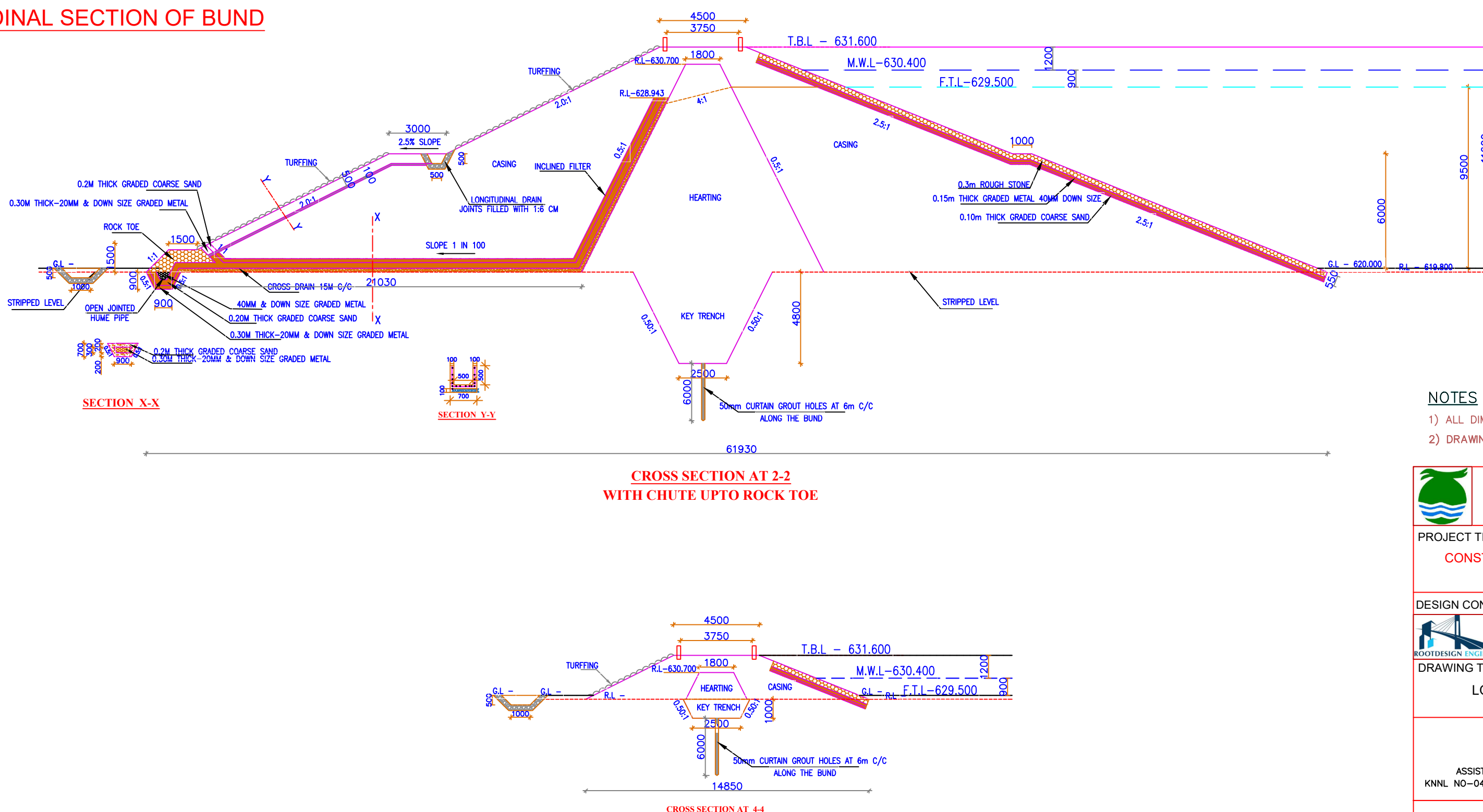
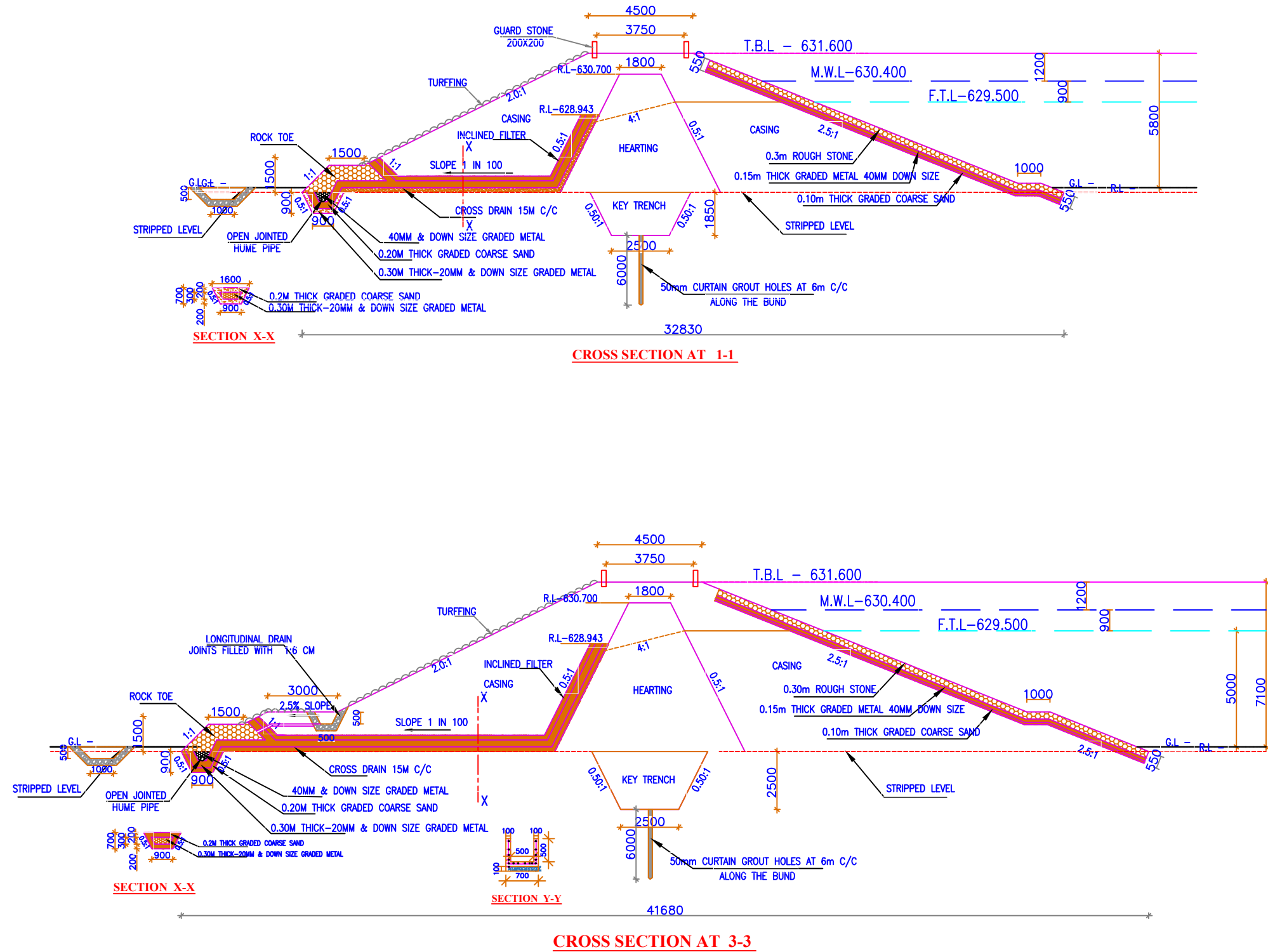
APPROACH ROAD CROSS SECTION FROM EXISTING ROAD TO PROPOSED TANK IN ETTIGEHALLI VILLAGE.BHADRAVATHI DIVISION.



10.00 M WIDTH ROAD CROSS SECTION

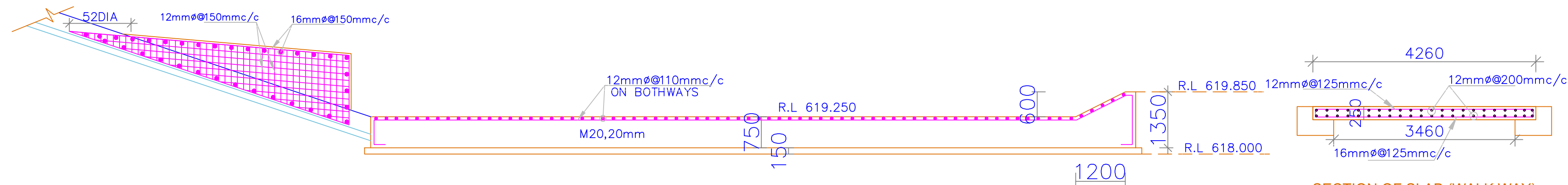


LONGITUDINAL SECTION OF BUND



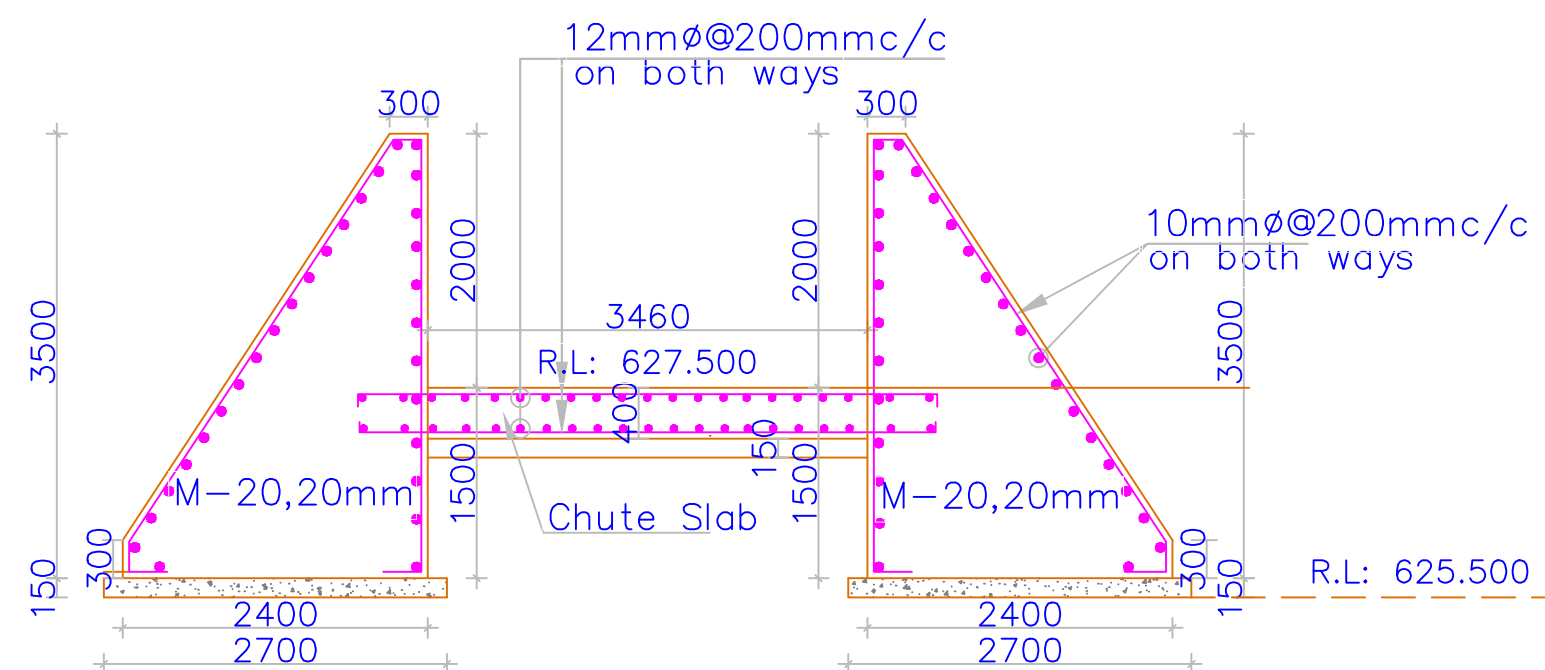
- NOTES
- 1) ALL DIMENSIONS ARE IN mm AND REDUCED LEVELS ARE IN MM
 - 2) DRAWING SHALL NOT BE MEASURED OR SCALED.

 KARNATAKA NEERAVARI NIGAMA LIMITED (A GOVT OF KARNATAKA UNDERTAKING) BANGALORE-560001	
PROJECT TITLE:- CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF BHADRAVATHI TALUK	
DESIGN CONSULTANT:-  ROOT DESIGN ENGINEERS AND TECHNOCRATS PVT LTD #L-128, H.T. Line, 2nd Main Road, Hebbal 2nd stage, Bangalore-560017. Email: info@rootdesign.org	
DRAWING TITLE:- LONGITUDINAL AND CROSS SECTION OF TANK BUND	
ASSISTANT EXECUTIVE ENGINEER KNNL NO-04, BHADRA CANAL SUB DIVISION SASVEHALLI	EXECUTIVE ENGINEER KNNL NO-03, BHADRA CANAL DIVISION MALEBENNURU
SUPERINTENDING ENGINEER KNNL, BHADRA PROJECT CIRCLE B.R.PROJECT	CHIEF ENGINEER KNNL, UTP ZONE SHIVAMOGGA

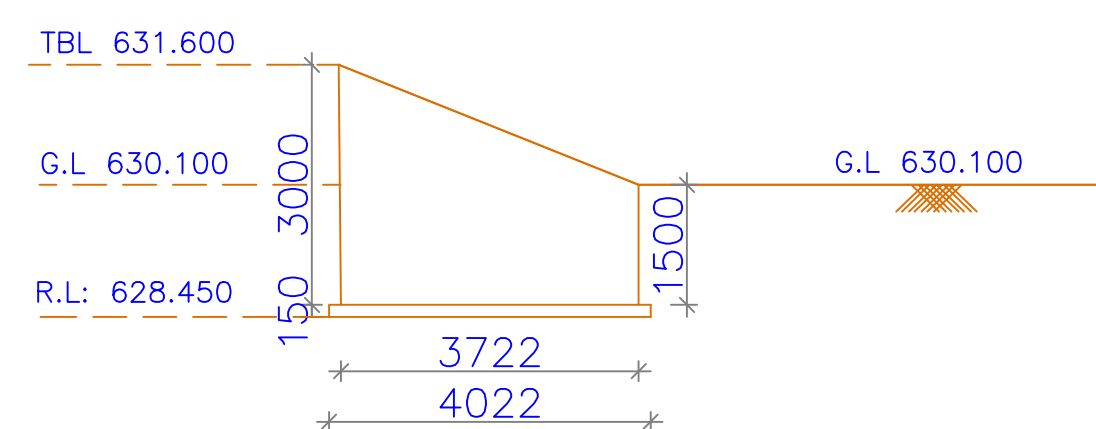


REINFORCEMENT DETAILS OF STILLING BASIN AND CHUTE BLOCK

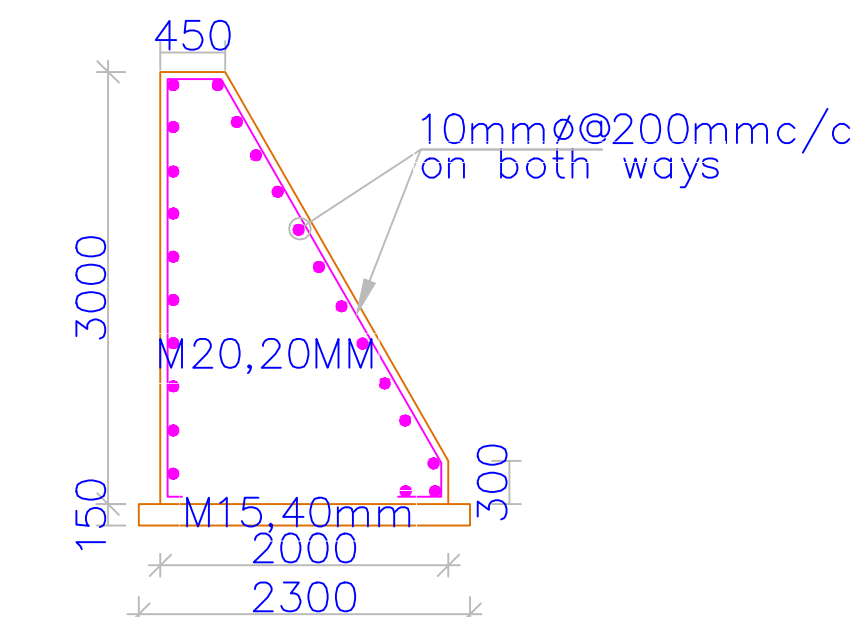
SECTION OF SLAB (WALK WAY)



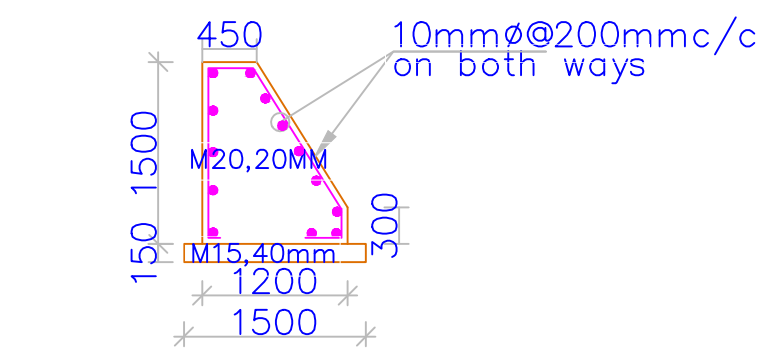
SECTION A-A



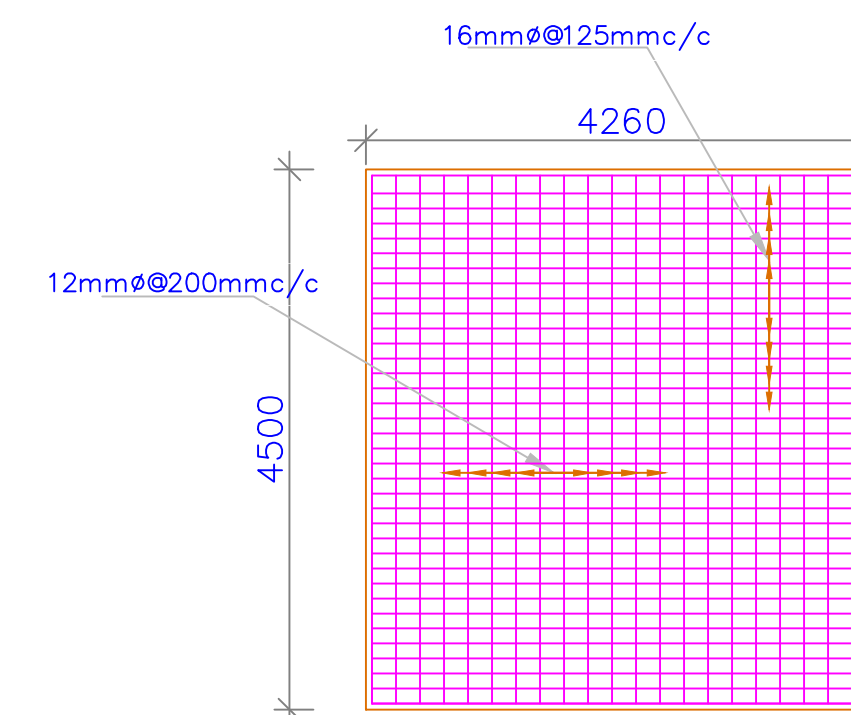
SECTION OF SIDE WALL
ON RIGHT SIDE OF SPILLWAY



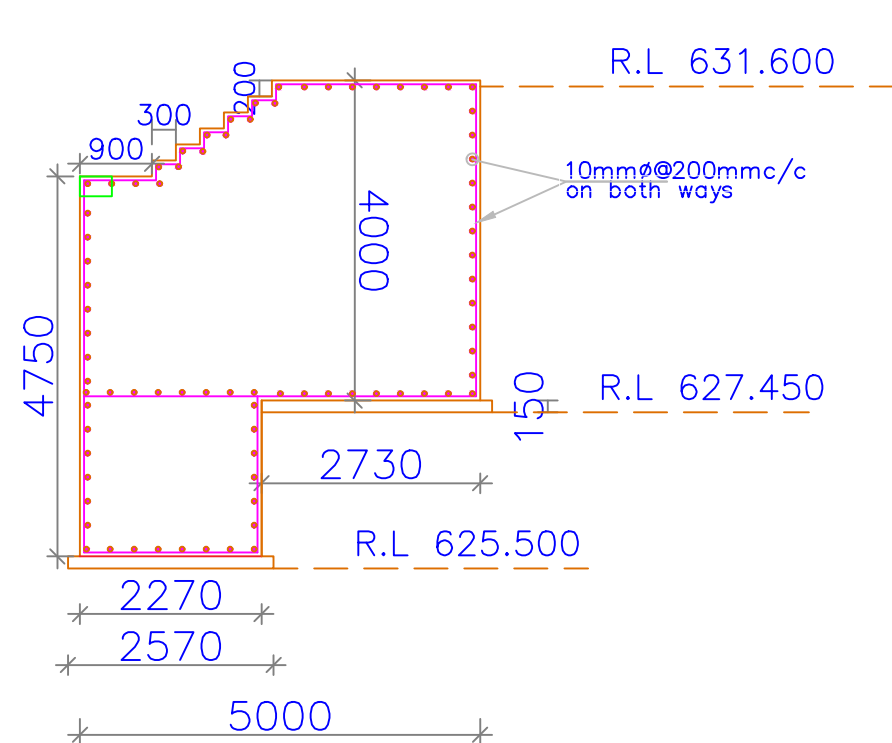
SECTION OF SIDE WALL ON RIGHT SIDE
@ MAXIMUM HEIGHT



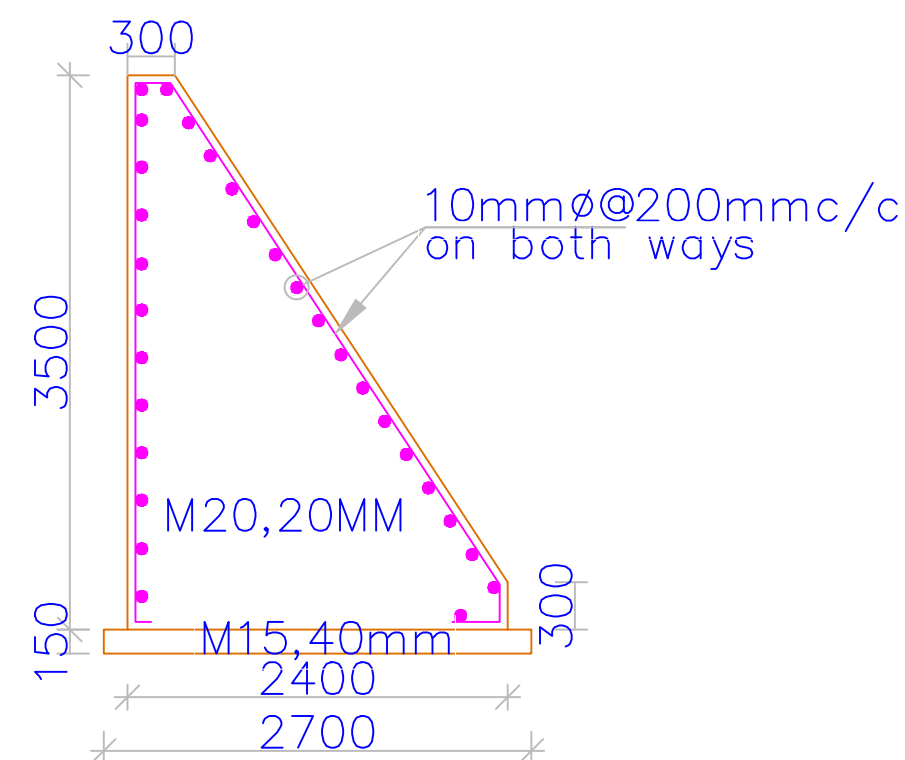
SECTION OF SIDE WALL ON RIGHT SIDE
@ MINIMUM HEIGHT



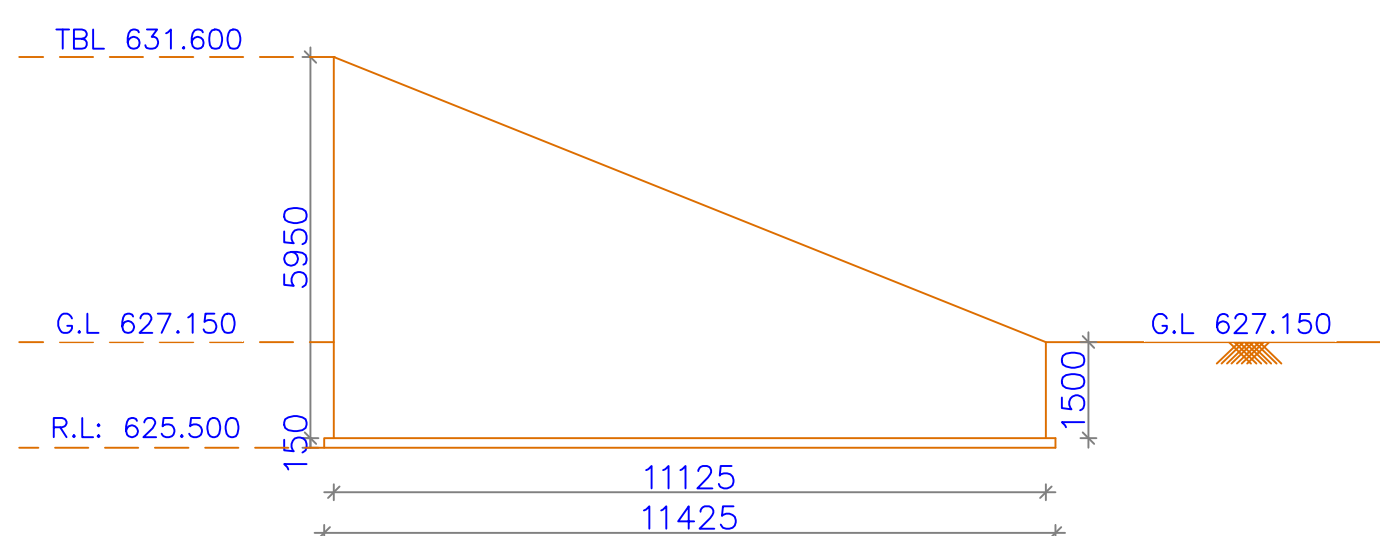
REINFORCEMENT DETAILS
OF BOTTOM SLAB



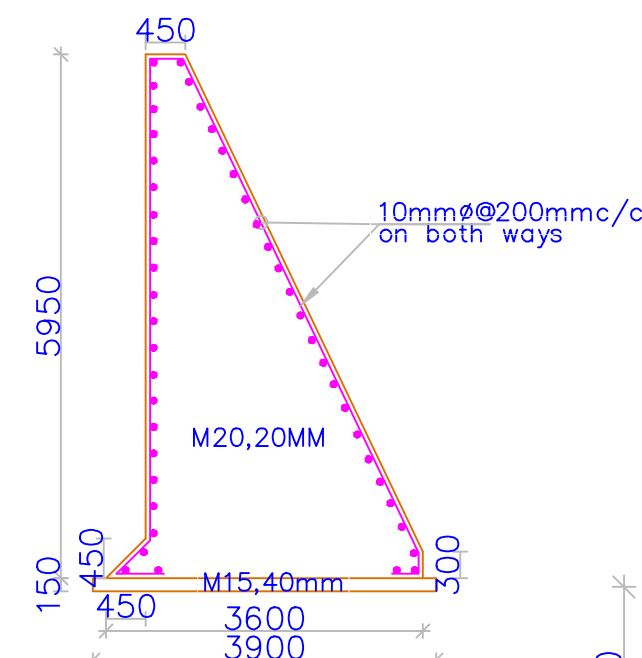
SECTION AT B-B



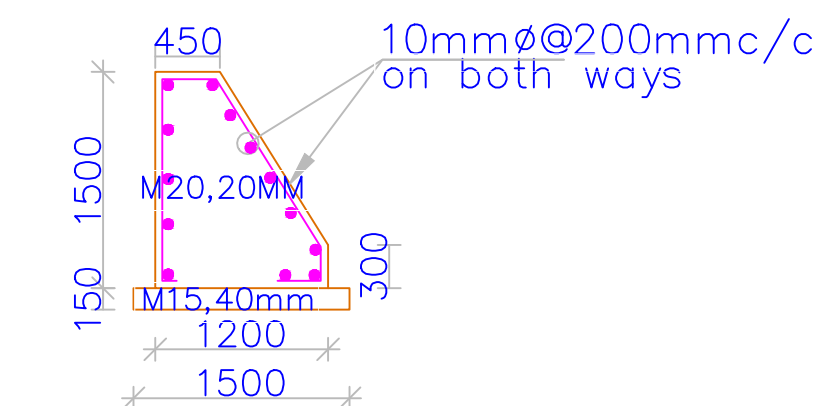
SECTION OF CHUTE WALL



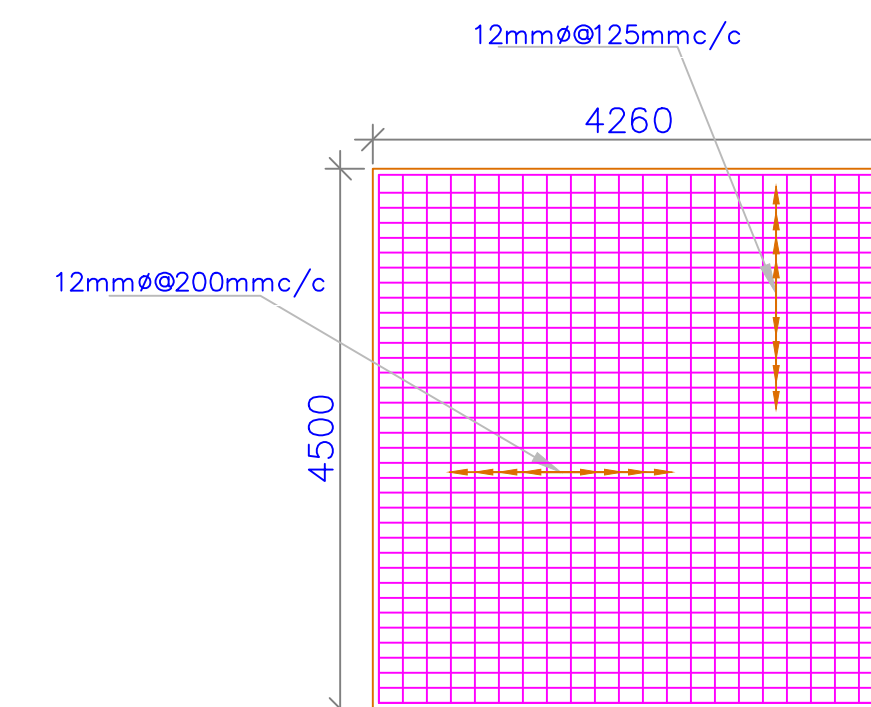
SECTION OF SIDE WALL
ON LEFT SIDE OF SPILLWAY



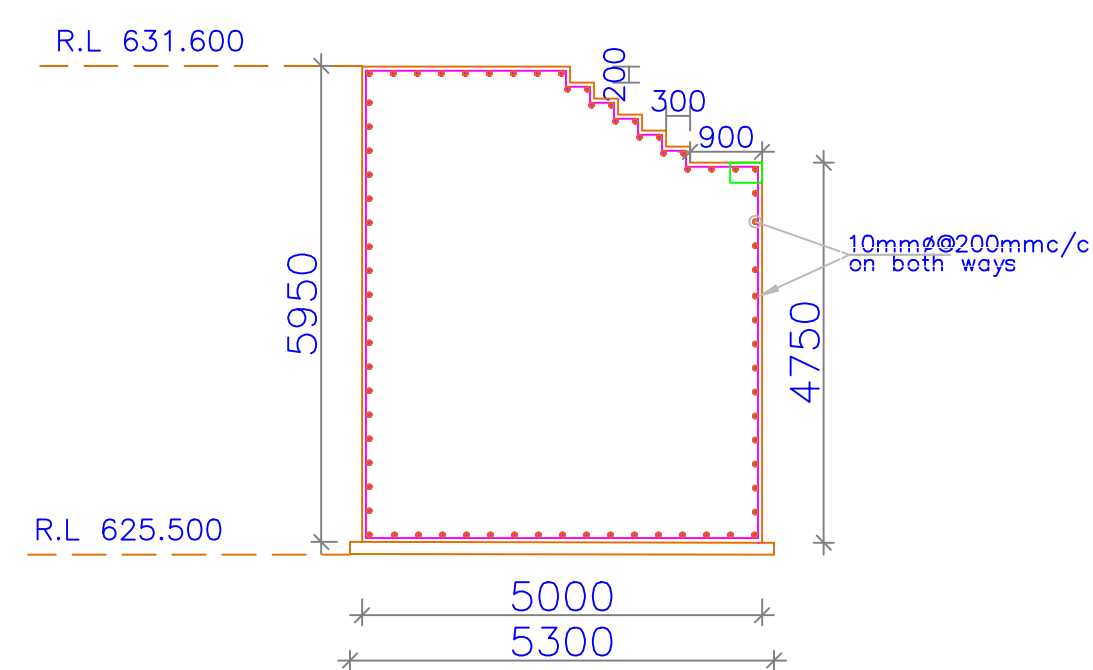
SECTION OF SIDE WALL ON LEFT SIDE
@ MAXIMUM HEIGHT



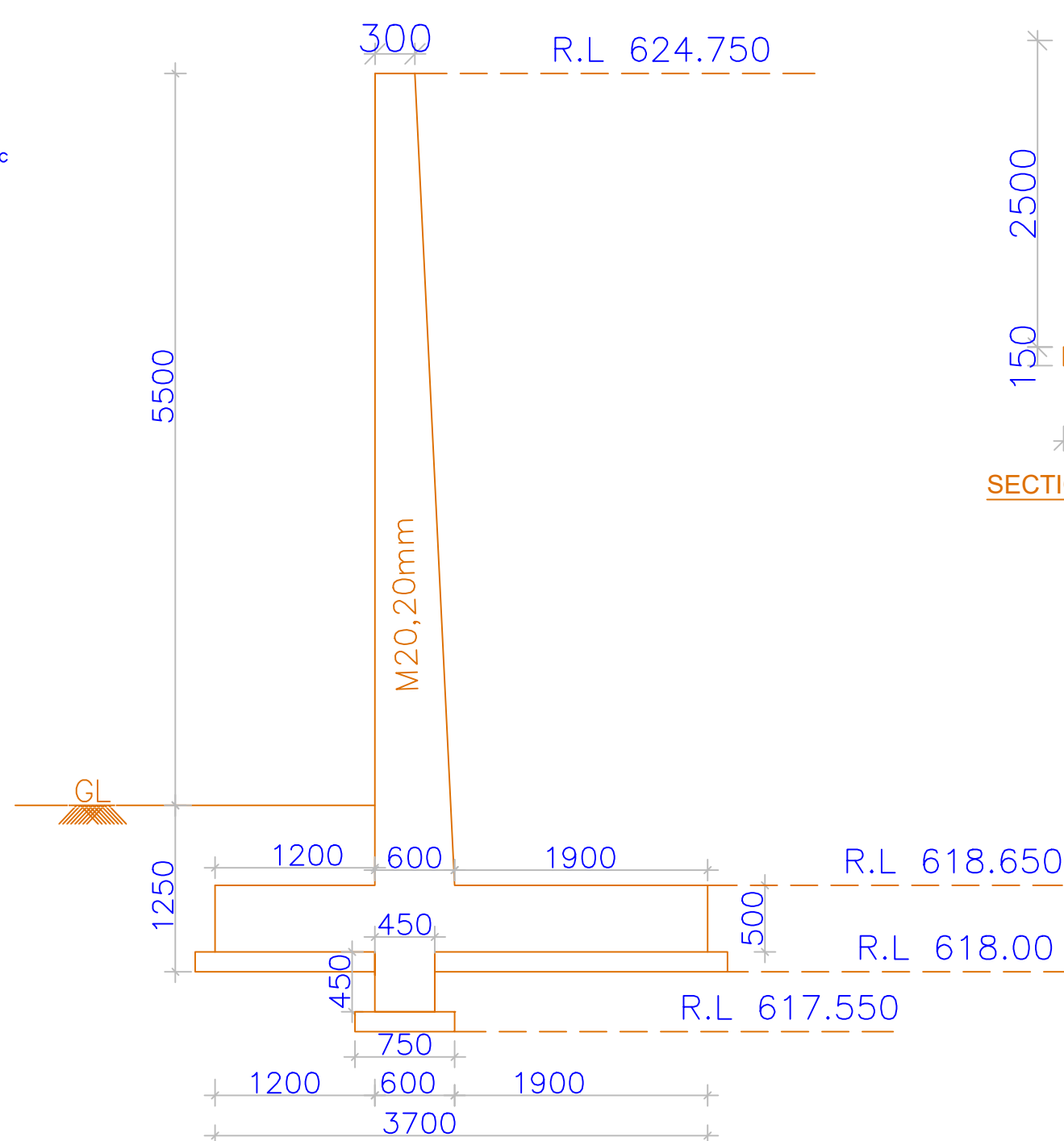
SECTION OF SIDE WALL ON LEFT SIDE
@ MINIMUM HEIGHT



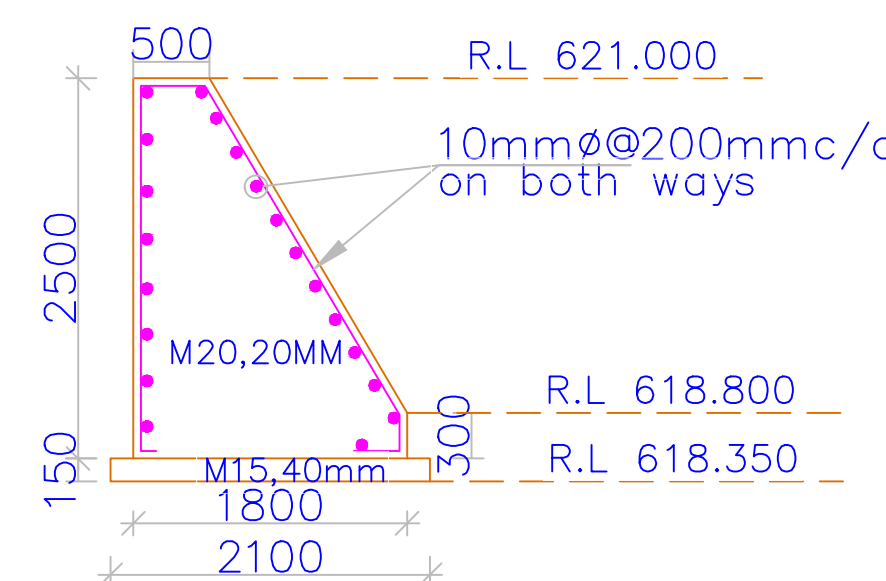
REINFORCEMENT DETAILS
OF TOP SLAB



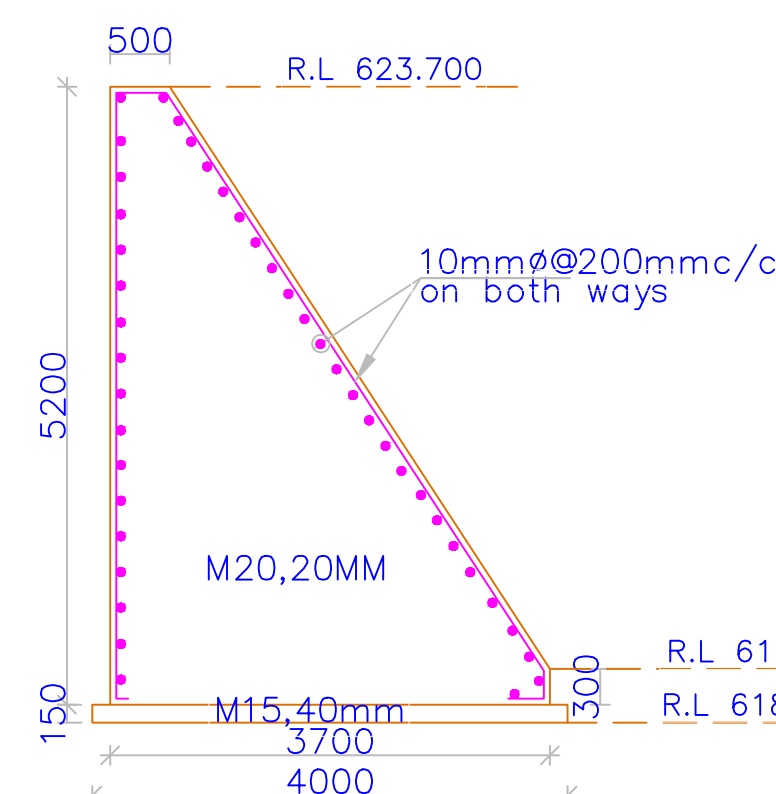
SECTION AT C-C



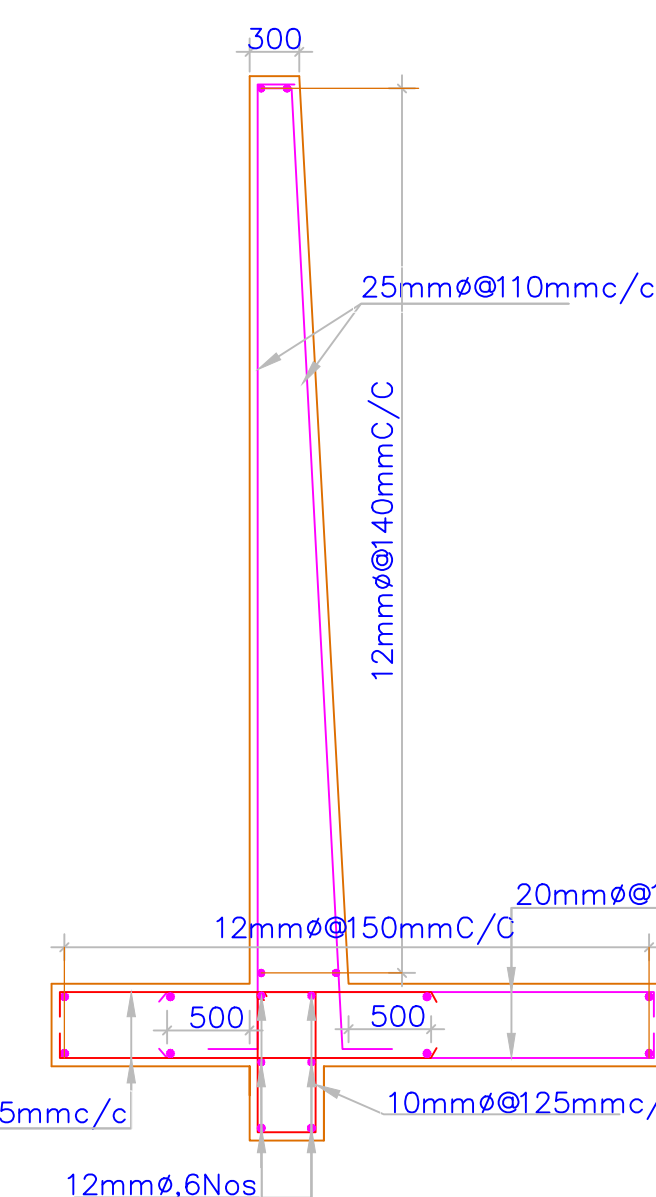
DIMENSION DETAILS OF
RCC STILLING BASIN SIDEWALL



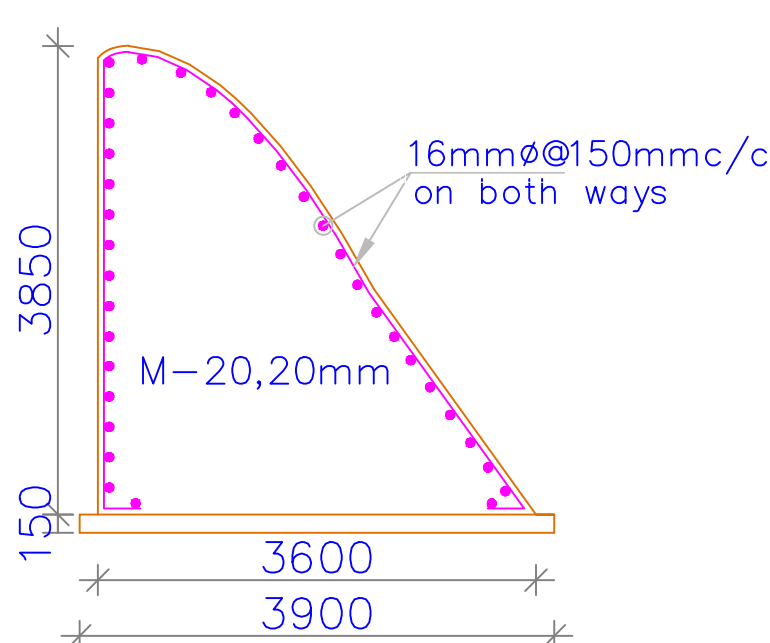
SECTION OF PROTECTION WALL
@ MINI HEIGHT



SECTION OF PROTECTION WALL
@ MAX HEIGHT



REINFORCEMENT DETAILS OF
RCC STILLING BASIN SIDEWALL



REINFORCEMENT DETAILS OF WIER

NOTES

- 1) ALL DIMENSIONS ARE IN mm AND REDUCED LEVELS ARE IN METRES
- 2) DRAWING SHALL NOT BE MEASURED OR SCALED.
- 3) GRADE OF CONCRETE : CONFORMING TO IS 6512-1984
 - (i) FOUNDATION BED CONCRETE - CC M15 WITH 40mm & D/S
 - (ii) RIVETMENT PROTECTION WALL, RETURN WALL - CC M20 WITH 20mm & D/S
 - (iii) CHUTE SIDEWALL, STILLING BASIN RCC SIDEWALL, WEIR BODY WALL & CHUTE TROUGH - CC M20 WITH 20mm & D/S
- 4) REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe 500 CONFORMING TO IS 1783-1985
- 5) MINIMUM COVER TO ANY REINFORCEMENT SHALL BE 50mm UNLESS OTHERWISE MENTIONED.
- 6) ALL BANKS SHALL BE COMPACTED THOROUGHLY AS PER SPECIFICATION AND FINISHED TO THE REQUIRED STANDARDS
- 7) DRY STONE PITCHING IS PROVIDED WHEREVER NECESSARY
- 8) PROVIDE CONTRACTION JOINTS AND CUTOFF WALLS AT 25.0m INTERVALS.

KARNATAKA NEERAVARI NIGAMA LIMITED
(A GOVT OF KARNATAKA UNDERTAKING)
BANGALORE-560001

PROJECT TITLE:-
**CONSTRUCTION OF NEW TANK IN ITTIGEHALI SURVEY NO.20
OF BHADRAVATHI TALUK**

DESIGN CONSULTANT:-
ROOT DESIGN ENGINEERS AND TECHNOCRATS PVT LTD
#L-128, H.T Line, 2nd Main Road, Hebbal 2nd stage,
Mysore-570017. Email: info@rootdesign.org

DRAWING TITLE:-
CONSTRUCTION OF DUCKBILL TYPE WEIR

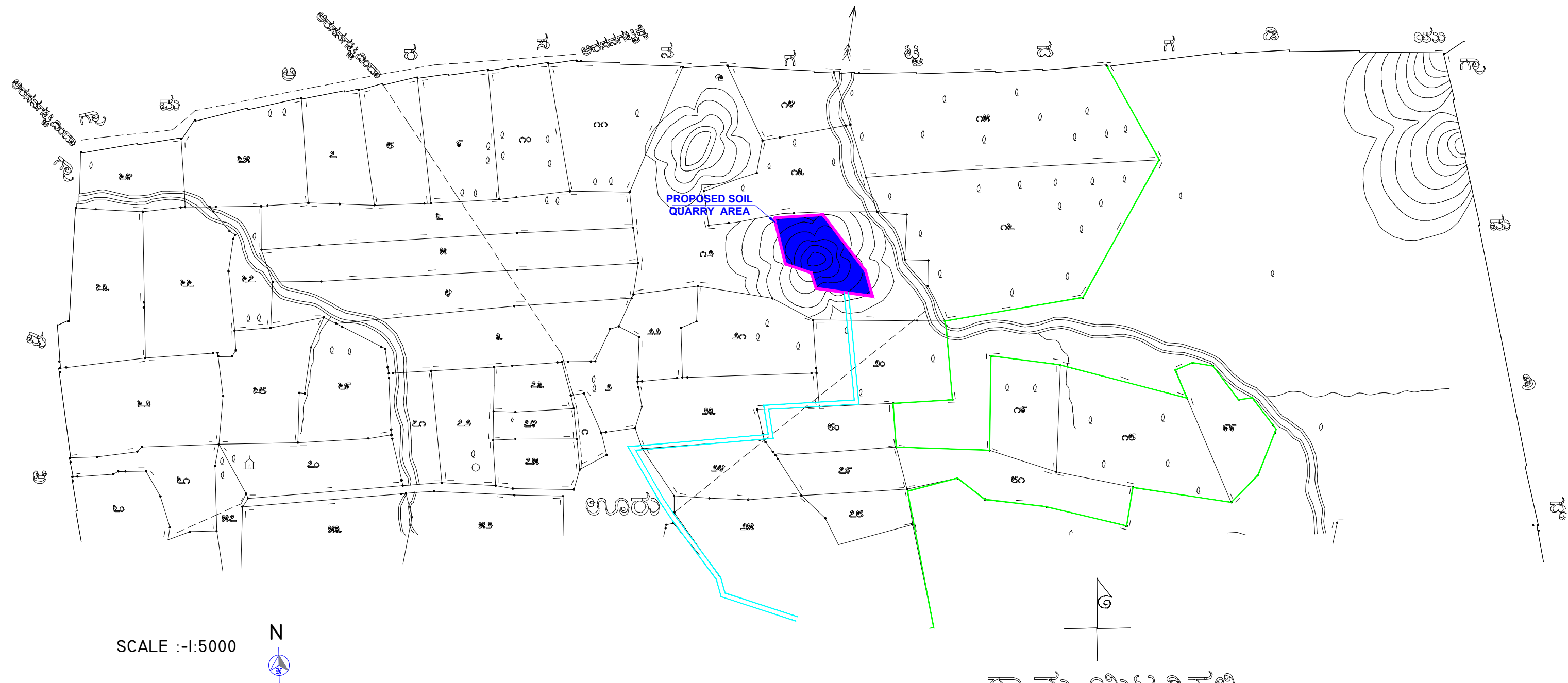
ASSISTANT EXECUTIVE ENGINEER
KNNL NO-04, BHADRA CANAL SUB DIVISION
SASVEHALI

EXECUTIVE ENGINEER
KNNL NO-03, BHADRA CANAL DIVISION
MALEBENNURU

SUPERINTENDING ENGINEER
KNNL, BHADRA PROJECT CIRCLE
B.R.PROJECT

CHIEF ENGINEER
KNNL, UTP ZONE
SHIVAMOGGA

THE VILLAGE MAP SHOWING SOIL QUARRY AREA IN F.SY. NO.12 (14 NEW) OF ITTIGEHALLI VILLAGE FOR CONSTRUCTION OF NEW TANK WITH CHECK DAM ALONG WITH CONNECTIVITY ROAD .



SCALE :-1:5000



INDEX		
SL. No.	SYMBOL	DESCRIPTION
07		PROPOSED CONNECTIVITY ROAD IN NON- FOREST AREA
08		PROPOSED AREA OF SOIL QUARRY
09		CONNECTIVITY ROAD B/W SOIL QUARRY TO TANK

ಗ್ರಾಮ ಯಿಟ್ಟಿಗಿಹಳ್ಳಿ
ಹೋಬಳಿ ಹೊಳೆಹೊನ್ನೂರು
ತಾಲ್ಲೂಕು ಭದ್ರಾವತಿ
ಜಿಲ್ಲೆ ಶಿವಮೊಗ್ಗ
ಕರ್ನಾಟಕ
ಸರ್ಕಾರ
೧೯೭೧

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY
NO.20 OF BHADRAVATHI TALUK**

GENERAL ABSTRACT

Sl. No.	Description of Work	Amount (in Rs)
1	Desilting in Water Spread Area	12383074.00
2	Construction of New Bund	25244880.00
3	Construction of Feeder canal	673478.00
4	Construction of Waste weir & Draft channel	29754028.00
5	Construction of Road 000 to 2050m	12250436.00
6	Construction of CD Works For Road	
a	Construction of Causeway of 1No	820142.00
b	Construction of Culverts of 4Nos	571562.00
	SUB TOTAL	81697600.00
7	Add 18 % GST	14705568.00
8	Add Preparation of DPR Charges, forest clearence and Miscellaneous Rounding off	1596832.00
	TOTAL	98000000.00

Assistant Executive Engineer
KNNL No-04, Bhadra Canal Sub Division
Sasvehalli

Executive Engineer
KNNL No-03, Bhadra Canal Division
Malebennur

Superintending Engineer
KNNL, Bhadra Project Circle
B.R.Project

Chief Engineer
KNNL,UTP Zone
Shivamogga

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

ABSTRACT ESTIMATE (PROPOSED FEEDER CHANNEL)

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha	0.43	158044.00	67564.00
2	Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts.	m ³	1893.38	218.00	412756.00
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³	2646.00	73.00	193158.00
Total Amount Rs.					673478.00

Assistant Executive Engineer
KNNL No-04, Bhadra Canal Sub Division
Sasvehalli

Executive Engineer
KNNL No-03, Bhadra Canal Division
Malebennur

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

DETAILED ESTIMATE (PROPOSED FEEDER CHANNEL)

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha					
			1	500.00	$\frac{3.50+6.00}{2}$		2375
			1	400.00	$\frac{3.50+6.00}{2}$		1900
	Total						0.4275
2	Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts.	m ³					
	For Feeder canal		1	500.00	$\frac{5.35+4.00}{2}$	0.45	1051.88
			1	400.00	$\frac{5.35+4.00}{2}$	0.45	841.50
	Total						1893.38

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³					
	For Feeder canal		1	500.00	5.80+4.00 2	0.60	1470.00
			1	400.00	5.80+4.00 2	0.60	1176.00
	Total						2646.00

Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

ABSTRACT ESTIMATE CONSTRUCTION OF BUND

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha	0.86	158044.00	135918.00
2	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³	2680.03	73.00	195642.00
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In ordinary/soft rock without blasting	m ³	1148.59	272.00	312415.00
4	Providing hearting embankment using selected impervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials,machinery, labour,all other operations such as collection of soil, spreading soil in layer of specified thickness,sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting each layer to density control of not less than 95 percent or as stipulated using power roller etc., complete with lead upto 1 km and all lifts.	m ³	6425.84	458.00	2943035.00

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
5	Providing cut-off trench filling using selected impervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with lead upto 1 km and all lifts.	m ³	1983.40	468.00	928231.00
6	Providing casing embankment using semi-pervious / pervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges /sides, watering, compacting each layer to density control of not less than 95 percent or as stipulated using power roller etc., complete with lead upto 1 km and all lifts.	m ³	23547.09	471.00	11090681.00
7	Providing casing embankment using semi-pervious soil available from excavation in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with all lead and all lifts	m ³	2680.03	199.00	533327.00
8	Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery,Brief description of work chips from approved source including cost of all materials, machinery,labour, hand packing rubble and stone chips, finishing top and sides to required slopes as per approved drawings etc. complete with lead upto 1 km and all lifts	m ³	419.24	783.00	328265.00
9	Providing and laying 300 mm diameter open jointed hume pipes with collars in rock-toe for drainage including cost of all materials, machinery,labour etc., complete with lead upto 1 km and all lifts.	m	188.00	943.00	177284.00

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
10	Providing and constructing longitudinal / cross graded filter drains using sand, 80mm to 20 mm and 20 mm down clean, hard graded aggregates from approved source satisfying specified filter creteria in layers of specified thickness including cost of all materials, machinery,labour, laying to required slopes, compaction etc., complete as per specifications and approved drawings with lead upto 50 m and all lifts.	m ³	215.14	1862.00	400587.00
11	Providing and constructing graded filter media below and behind rock-toe consisting of 200 mm thick sand, 250 mm thick 20 to 4.75 mm and 400 mm thick 80 to 20 mm clean, hard, graded coarse aggregates from approved source satisfying specified filter creteria including cost of all materials, machinery, labour, laying to required thickness and slope,compacting etc., complete as per specifications and approved drawings with lead upto 50 m and all lifts.	m ³	309.80	1754.00	543394.00
12	Providing and constructing 550 mm thick hand packed rough stone revetment consisting of 300 mm thick rough stones with 400 to 450 mm long through stones at 1.5 m c / c over filter backing of 100 mm thick sand and 150 mm thick 40 mm down graded coarse aggregate layers including cost of all materials, machinery, labour, laying to specified slope, wedging	m ²	3549.68	895.00	3176959.00
13	Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting	Nos.	376.00	647.00	243272.00
14	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork,cleaning, batching, mixing, placing in position, levelling, vibrating,finishing, curing etc., complete with all leads and lifts .	m ³	12.27	5301.72	65040.00

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
15	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m ³	29.79	6266.40	186694.00
16	Providing, fabricating and placing in position steel reinforcement bars for RCC structures including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping /welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire etc., complete with all lead and lifts .	t	1.08	92987.00	100547.00
17	Drilling 50 mm dia. holes vertical or inclined upto 10 degrees to vertical in rock / masonry / concrete by percussion drilling method using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete Upto 6 m from surface.	m	198.00	315.00	62370.00
18	Curtain grouting with neat cement grout mix of suitable consistency under specified grout pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with all lead and all lifts.	t	198.00	13906.49	2753485.00

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
19	Providing and constructing 300 mm thick size stone pitching using 200 to 250 mm size stones with pin headers at 2 per sqm set in CM 1 : 5 proportion by volume with pointing joints in CM 1 : 3 proportion by volume including cost of all materials from approved source, labour, packing stone chips and mortar into joints,finishing,curing etc.,complete with all lead and lifts.	m ²	1206.02	787.08	949234.00
20	Turfing of Nala bund/other water harvesting structure's banks and side slopes over a layer of 5 cm thickness of sand layer, watering for 15 days, 0.5Km lead for turf and 5.0 Km lead for sand.	m ²	2384.31	49.70	118500.00
Total Amount Rs.					25244880.00

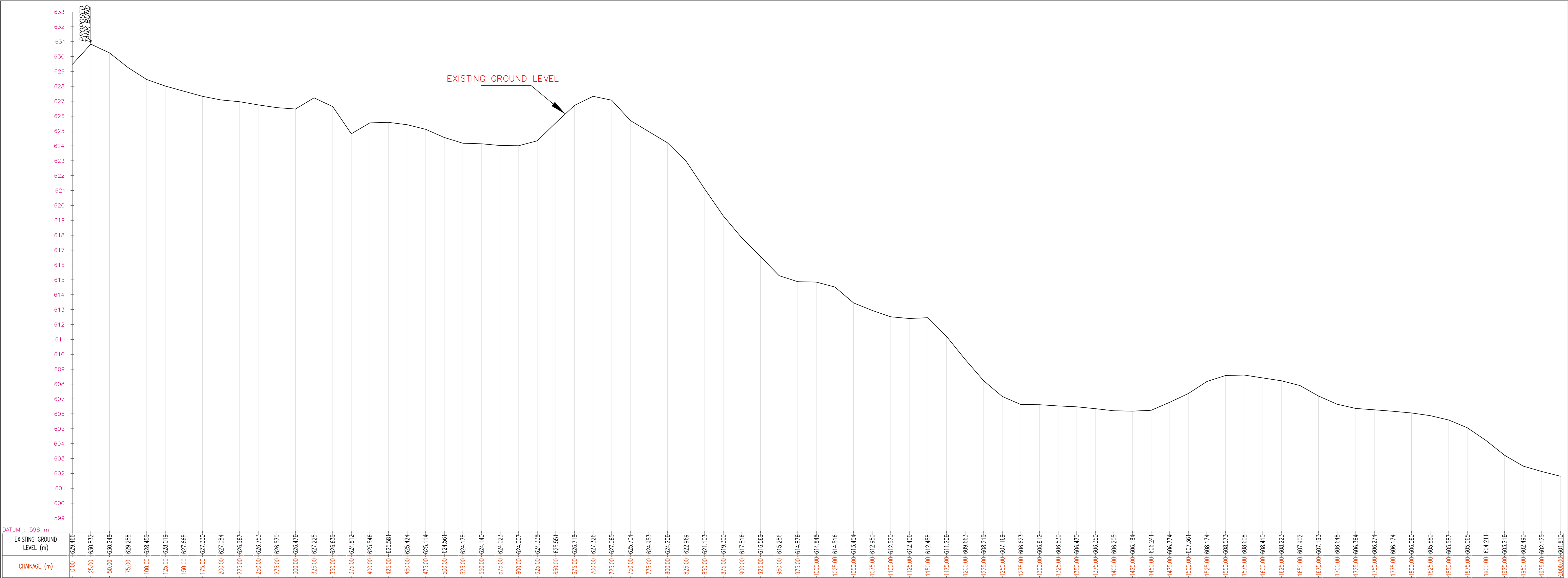
Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur

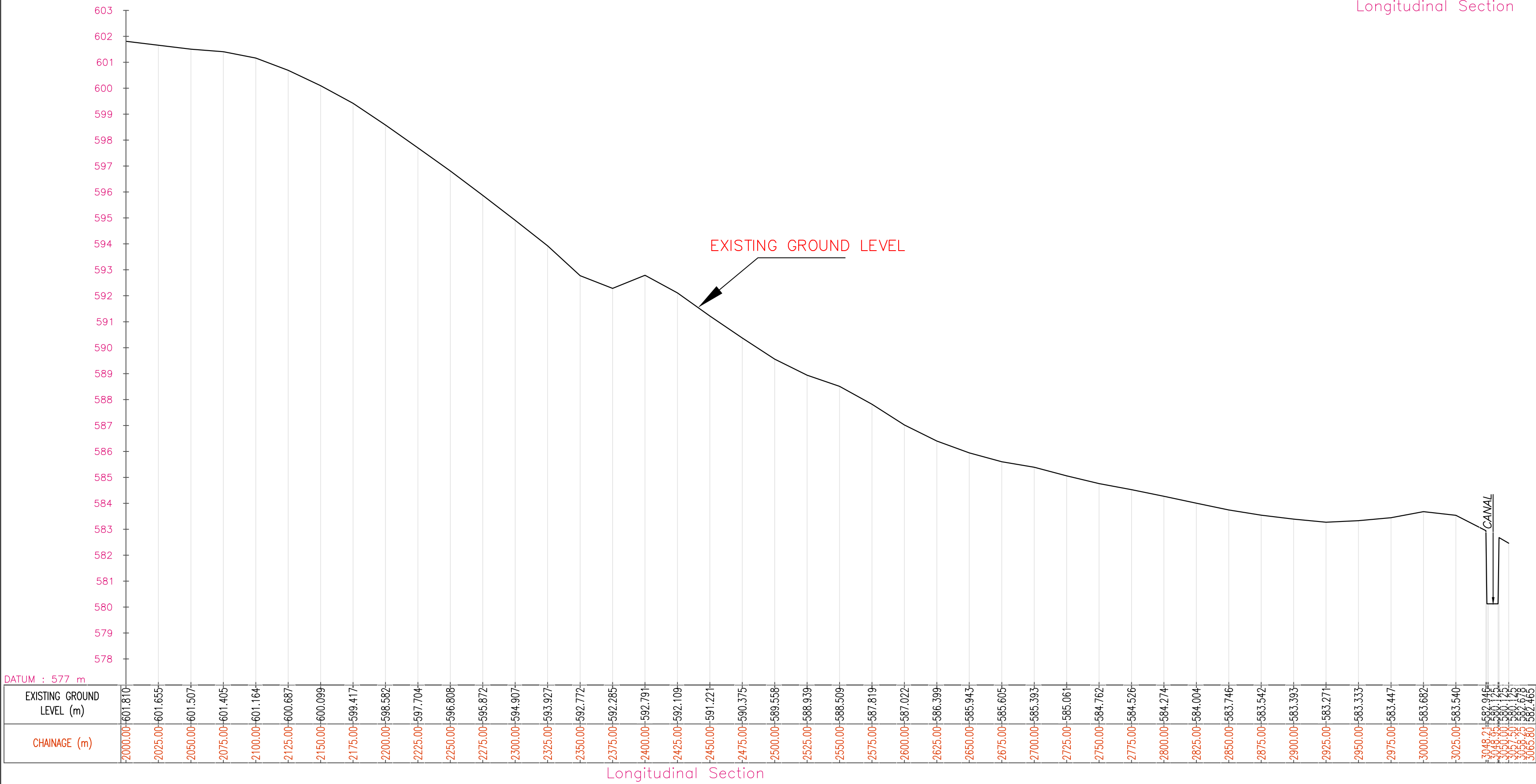
**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

DETAILED ESTIMATE CONSTRUCTION OF BUND

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha					
	Bund portion		1	200.00	43.00		8600.00
	Total						0.86
2	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³					
	For lift 0.00 to 3.00m lift						
	Stripping		1	188.00	43.00	0.20	1616.80
	Key Trench		1	188.00	10.55		1983.40
	Toe Drain		1	188.00	1.80+0.90 2	0.90	228.42
							3828.62
	70% of AKS in Total Qty						2680.03
	Total						2680.03



Longitudinal Section

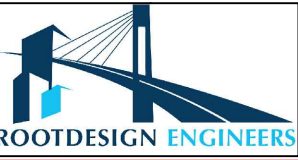


Longitudinal Section



KARNATAKA NEERAVARI NIGAMA LIMITED
(A GOVT OF KARNATAKA UNDERTAKING)
BANGALORE-560001

PROJECT TITLE:-
CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF BHADRAVATHI TALUK

DESIGN CONSULTANT:-


ROOT DESIGN ENGINEERS AND TECHNOCRATS PVT LTD
#L-128, H.T Line, 2nd Main Road, Hebbal 2nd stage,
Mysore-570017. Email:info@rootdesign.org

DRAWING TITLE:-
L-SECTION OF ROAD FROM CH:0+00 TO 3+050 KM

ASSISTANT EXECUTIVE ENGINEER
KNNL NO-04, BHADRA CANAL SUB DIVISION
SASVEHALLI

EXECUTIVE ENGINEER
KNNL NO-03, BHADRA CANAL DIVISION
MALEBENNURU

SUPERINTENDING ENGINEER
KNNL, BHADRA PROJECT CIRCLE
B.R.PROJECT

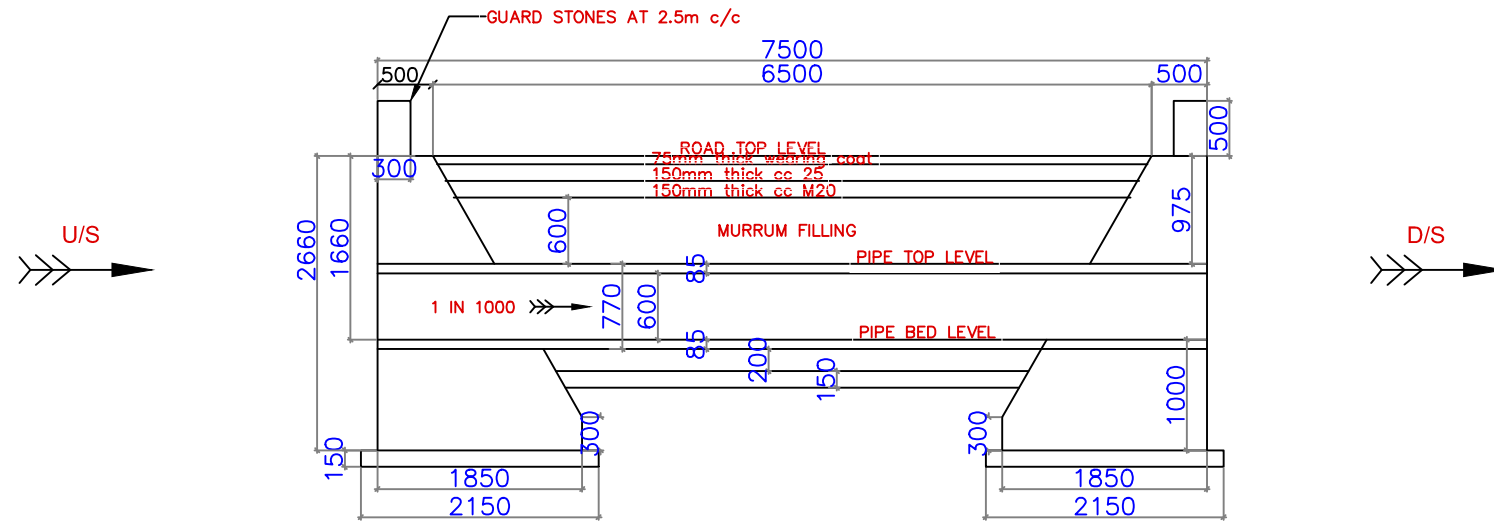
CHIEF ENGINEER
KNNL, UTP ZONE
SHIVAMOGGA

**NAME OF WORK : CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO-20.
OF BHADRAVATHI TALUK**

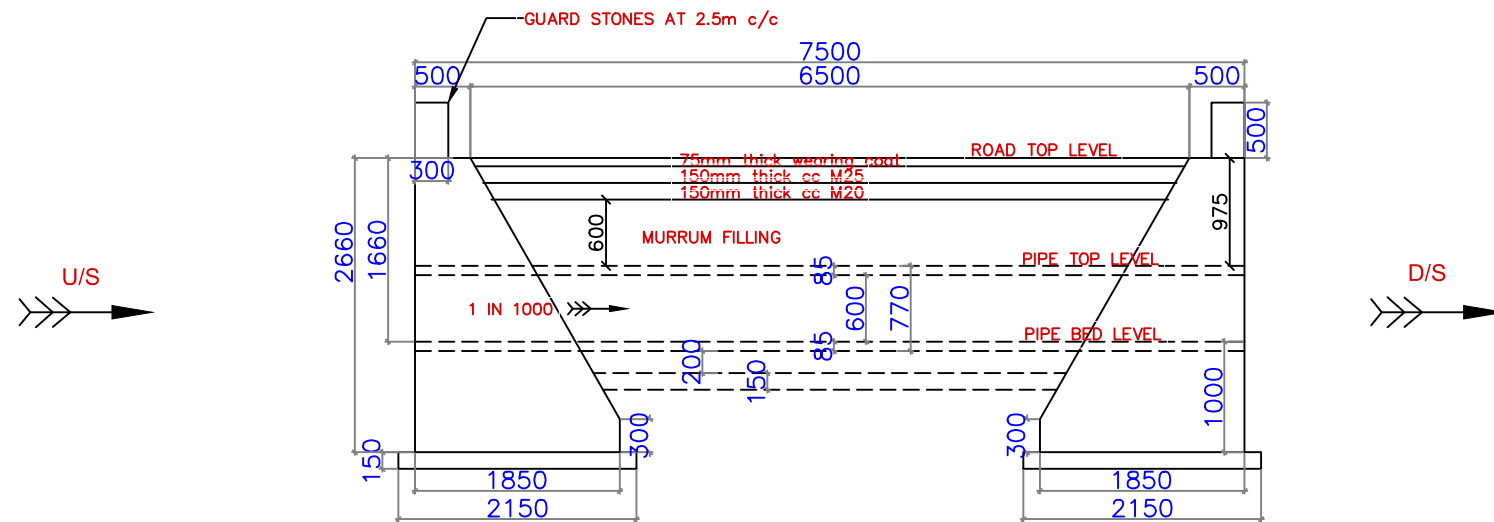
CONTOUR AREA / VOLUME STATEMENT:

SL.NO	CONTOUR VALUE (m)	AREA IN SQ.M	VOLUME OF WATER IN CU.M(CNT-CNT)
1	619.00	113.575	
2	619.50	677.253	178.028
3	620.00	1943.486	628.002
4	620.50	2679.232	1150.769
5	621.00	3450.243	1528.312
6	621.50	4658.893	2019.736
7	622.00	5880.139	2628.842
8	622.50	7354.793	3301.865
9	623.00	10198.293	4368.951
10	623.50	13440.302	5891.034
11	624.00	18922.883	8051.815
12	624.50	25482.895	11060.842
13	625.00	30539.696	13986.590
14	625.50	35775.664	16561.588
15	626.00	41291.615	19250.349
16	626.50	46835.759	22017.296
17	627.00	53372.4	25034.255
18	627.50	61034.795	28580.392
19	628.00	70656.358	32893.459
20	628.50	80258.819	37703.311
21	629.00	90086.804	42562.760
22	629.50	99782.423	47446.664
TOTAL VOLUME AT (F.T.L)			326844.859
23	630.00	110372.5	52516.481
24	630.4 (M.W.L)	121957.444	46446.721
TOTAL VOLUME			425808.062

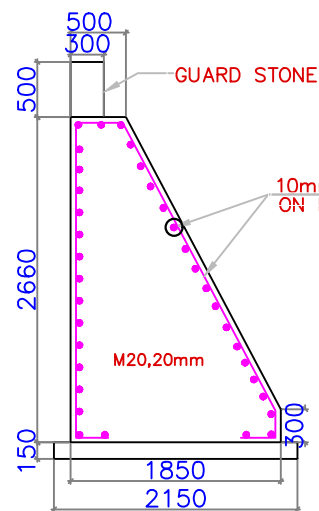
SL.NO	<u>DETAILS OF TANK CAPACITY & BUND LENGTH</u>		
1	EXISTING TANK CAPACITY	11.543	Mcft
2	WATER SPREAD AREA AT FTL	24.657	Acres
3	WATER SPREAD AREA AT MWL	30.137	Acres
4	SLUICE SILL LEVEL AREA	0.480	Acres
5	NO. OF SLUICE	-	Nos.
6	NO OF WASTE WEIR	1	Nos.



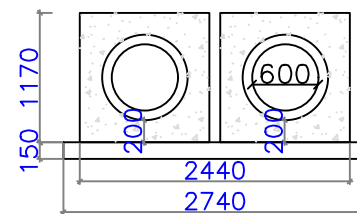
SECTION A-A



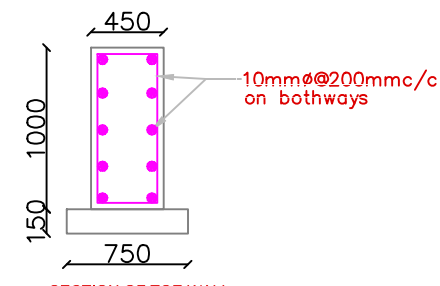
SECTION A1-A1



SECTION OF HEAD WALL
SECTION A-A



CROSS SECTION OF PIPE



SECTION OF TOE WALL

NOTES :

- 1) DRAWINGS NOT TO BE MEASURED, ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
- 2) GRADE OF CONCRETE :
 - i. M15 40mm AND DOWN SIZE METAL - PADDING CONCRETE
 - ii. M20 20mm AND DOWN SIZE METAL- PIPE JOINT, HEAD WALL
- 3) NP3 HUME PIPES ARE PROPOSED. .
- 4) REINFORCEMENT IS COLD TWISTED DEFORMED BARS CONFIRMING TO IS 1786 (LATEST REVISION)
- 5) THE COVER FOR CONCRETE SHALL BE 40mm. UNLESS OTHERWISE MENTIONED
- 6) THE LAP LENGTH SHOULD NOT BE LESS THAN 50 TIMES THE DIA OF THE BAR. LAPS SHALL BE AVOIDED AT THE CENTRE OF THE SPAN.
- 7) SKIN REINFORCEMENT OF 10mm@200mmC/C (MAIN STEEL)



KARNATAKA NEERAVARI NIGAMA LIMITED
(A GOVT OF KARNATAKA UNDERTAKING)
BANGALORE-560001

PROJECT TITLE:-

CONSTRUCTION OF NEW TANK IN ITTIGEHALI SURVEY NO.20
OF BHADRAVATHI TALUK

DESIGN CONSULTANT:-



ROOT DESIGN ENGINEERS AND TECHNOCRATS PVT LTD
#L-128, H.T Line, 2nd Main Road, Hebbal 2nd stage,
Mysore-570017. Email:info@rootdesign.org

DRAWING TITLE:-

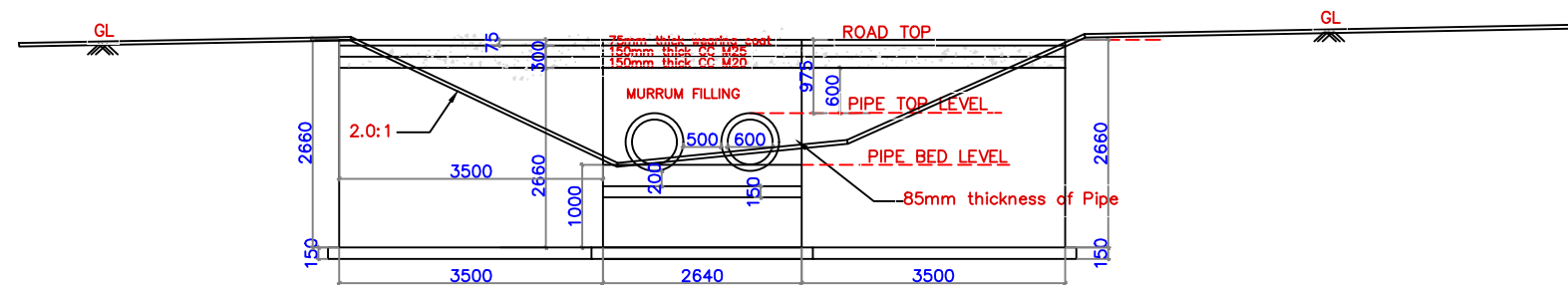
CONSTRUCTION OF CAUSEWAY AT CH:575M

ASSISTANT EXECUTIVE ENGINEER
KNNL NO-04, BHADRA CANAL SUB DIVISION
SASVEHALI

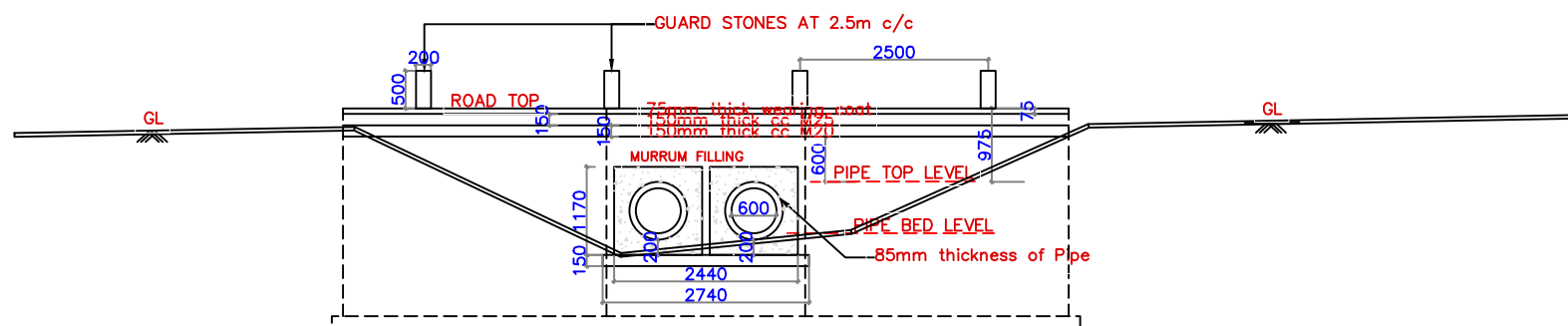
EXECUTIVE ENGINEER
KNNL NO-03, BHADRA CANAL DIVISION
MALEBENNURU

SUPERINTENDING ENGINEER
KNNL, BHADRA PROJECT CIRCLE
B.R.PROJECT

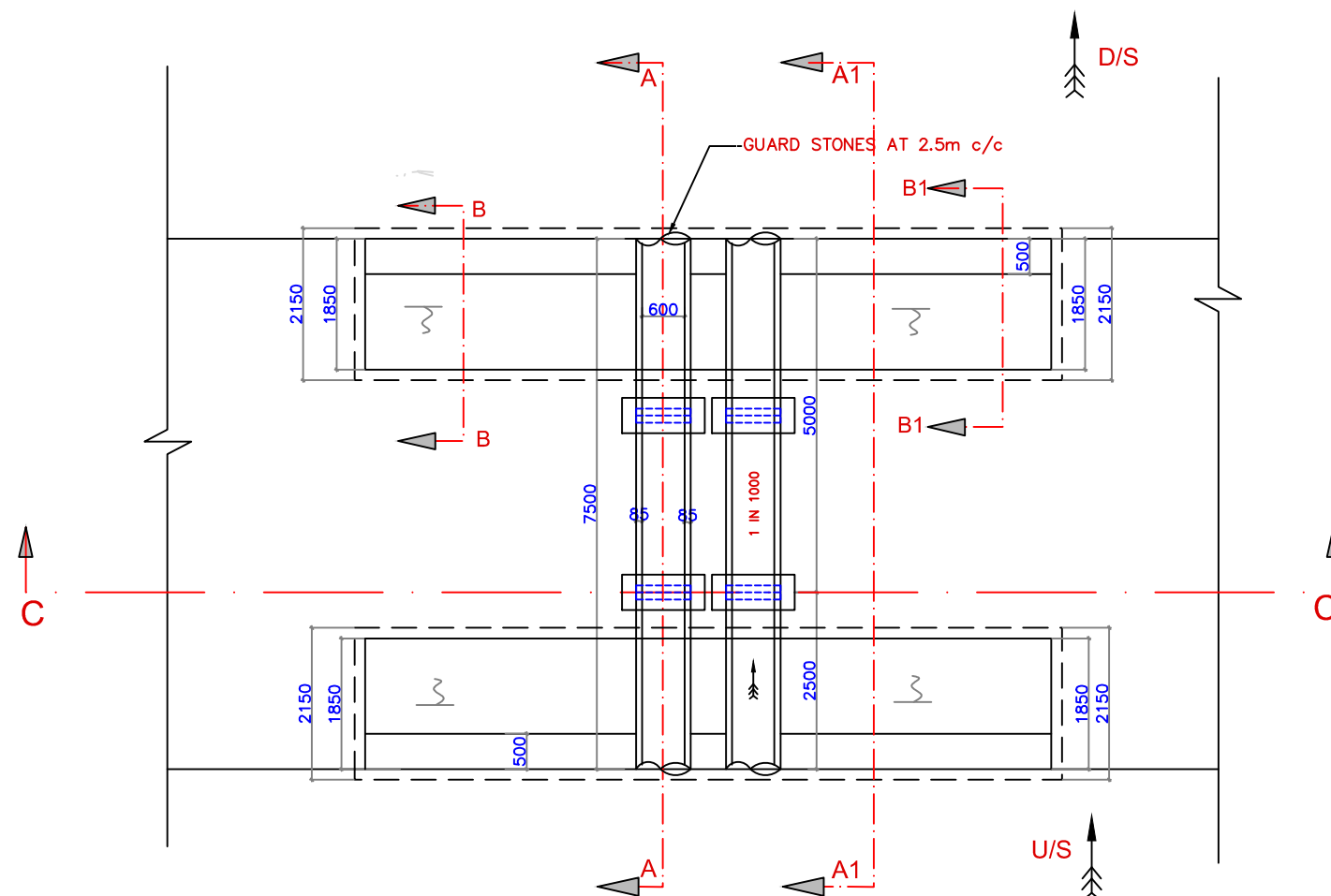
CHIEF ENGINEER
KNNL, UTP ZONE
SHIVAMOGGA



LONGITUDINAL SECTIONAL ELEVATION



SECTION C-C



PLAN

NOTES :

- 1) DRAWINGS NOT TO BE MEASURED, ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
- 2) GRADE OF CONCRETE :
i. M15 40mm AND DOWN SIZE METAL - PADDING CONCRETE
ii. M20 20mm AND DOWN SIZE METAL- PIPE JOINT, HEAD WALL
- 3) NP3 HUME PIPES ARE PROPOSED. .
- 4) REINFORCEMENT IS COLD TWISTED DEFORMED BARS CONFIRMING TO IS 1786 (LATEST REVISION)
- 5) THE COVER FOR CONCRETE SHALL BE 40mm. UNLESS OTHERWISE MENTIONED
- 6) THE LAP LENGTH SHOULD NOT BE LESS THAN 50 TIMES THE DIA OF THE BAR. LAPS SHALL BE AVOIDED AT THE CENTRE OF THE SPAN.
- 7) SKIN REINFORCEMENT OF 10mm@200mmC/C (MAIN STEEL)



KARNATAKA NEERAVARI NIGAMA LIMITED

(A GOVT OF KARNATAKA UNDERTAKING)
BANGALORE-560001

PROJECT TITLE:-

**CONSTRUCTION OF NEW TANK IN ITTIGEHALI SURVEY NO.20
OF BHADRAVATHI TALUK**

DESIGN CONSULTANT:-



ROOT DESIGN ENGINEERS AND TECHNOCRATS PVT LTD
#L-128, H.T Line, 2nd Main Road, Hebbal 2nd stage,
Mysore-570017. Email:info@rootdesign.org

DRAWING TITLE:-

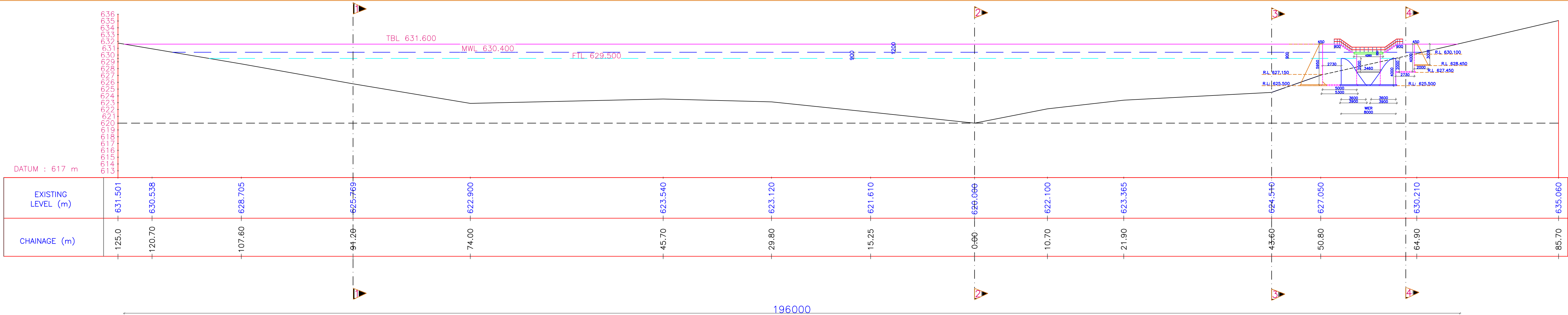
CONSTRUCTION OF CAUSEWAY AT CH:575M

ASSISTANT EXECUTIVE ENGINEER
KNNL NO-04, BHADRA CANAL SUB DIVISION
SASVEHALI

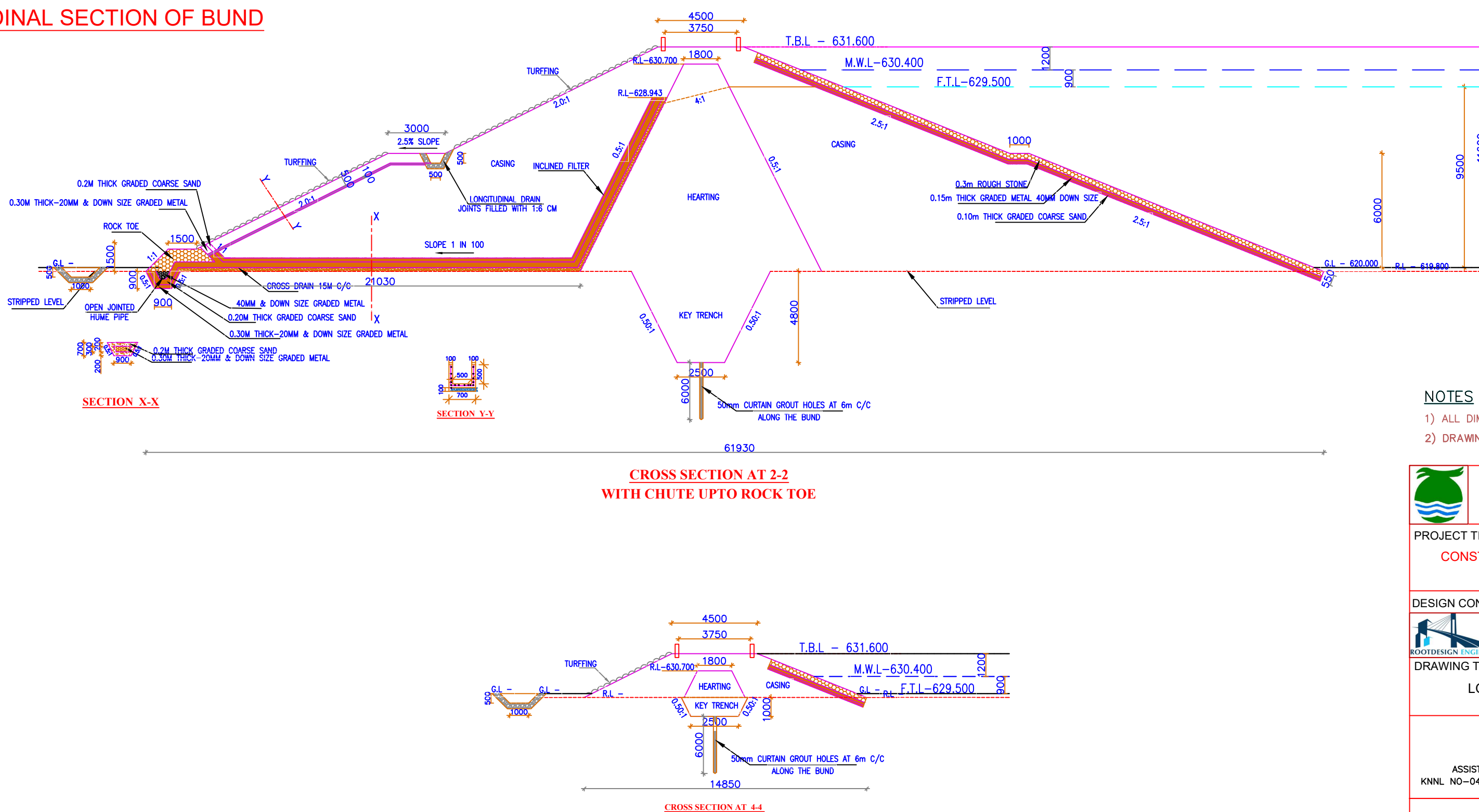
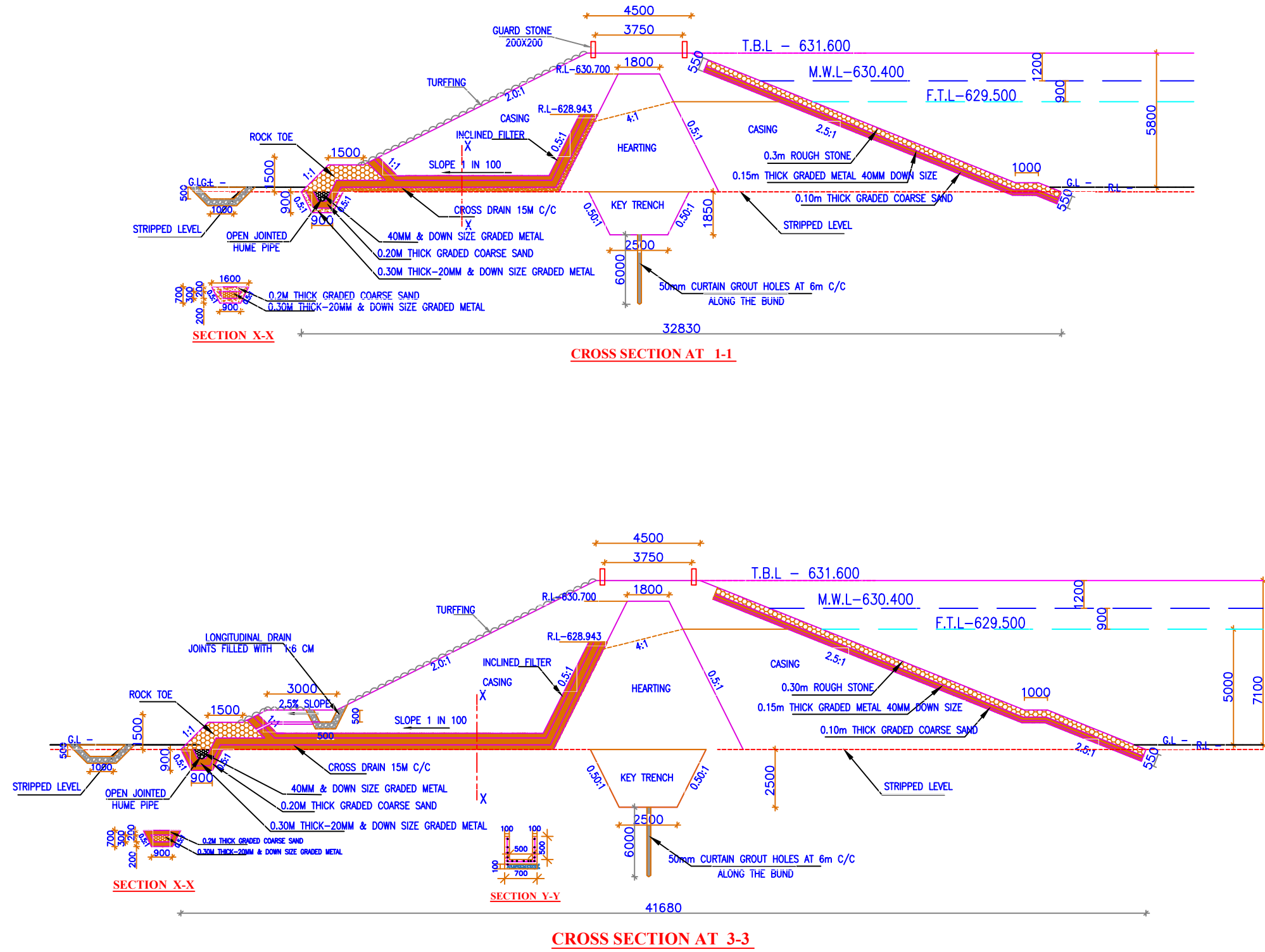
EXECUTIVE ENGINEER
KNNL NO-03, BHADRA CANAL DIVISION
MALEBENNURU

SUPERINTENDING ENGINEER
KNNL, BHADRA PROJECT CIRCLE
B.R.PROJECT

CHIEF ENGINEER
KNNL, UTP ZONE
SHIVAMOGGA



LONGITUDINAL SECTION OF BUND



- NOTES
- 1) ALL DIMENSIONS ARE IN mm AND REDUCED LEVELS ARE IN MM
 - 2) DRAWING SHALL NOT BE MEASURED OR SCALED.

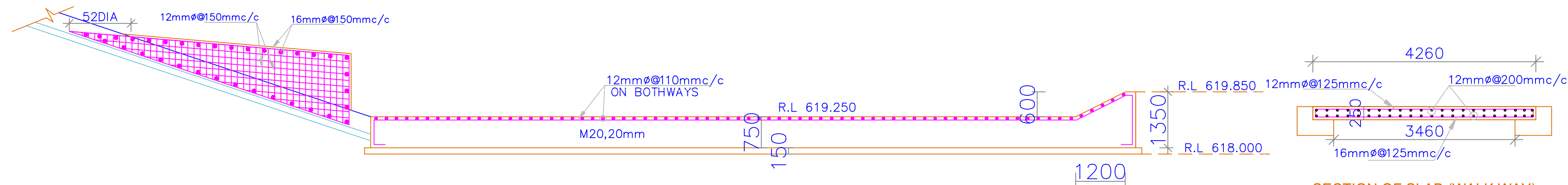
KARNATAKA NEERAVARI NIGAMA LIMITED
(A GOVT OF KARNATAKA UNDERTAKING)
BANGALORE-560001

PROJECT TITLE:-
CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF BHADRAVATHI TALUK

DESIGN CONSULTANT:-
ROOT DESIGN ENGINEERS AND TECHNOCRATS PVT LTD
#L-128, H.T. Line, 2nd Main Road, Hebbal 2nd stage,
BANGALORE-560017. Email:info@rootdesign.org

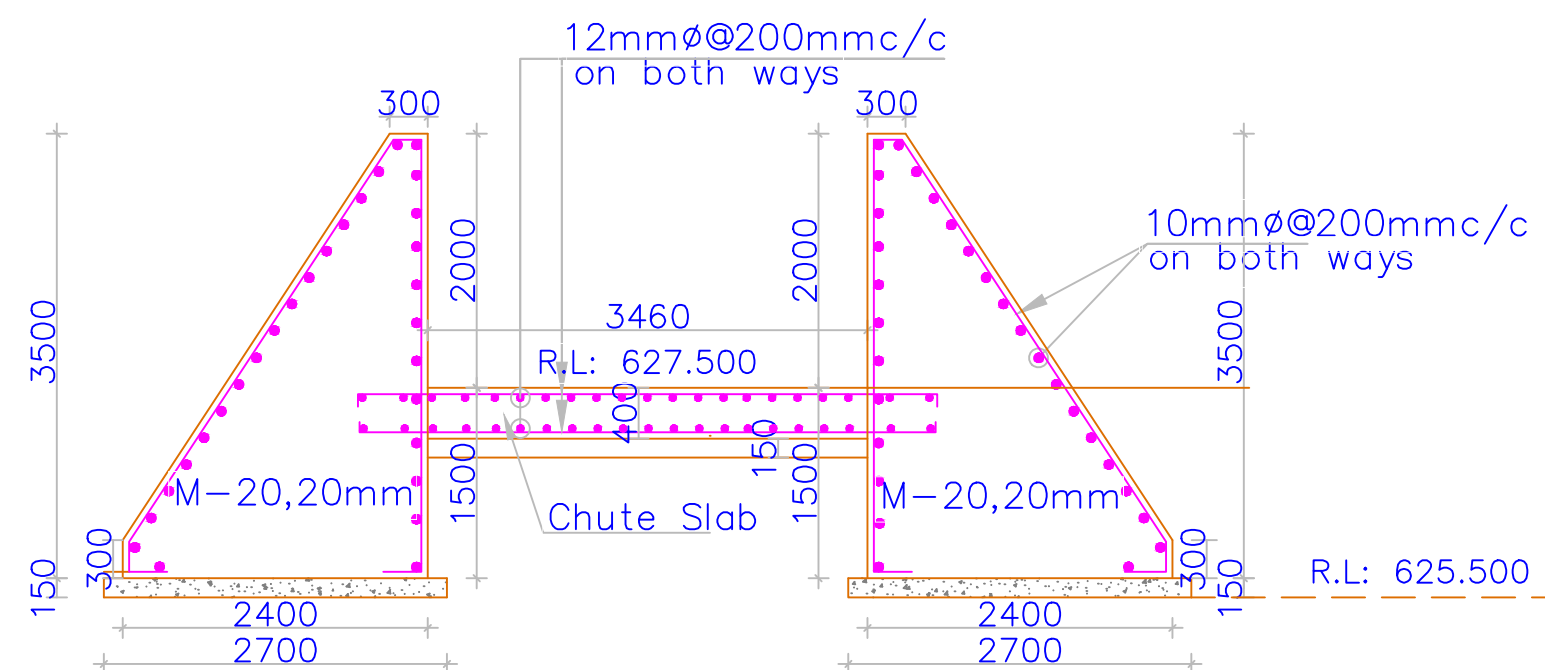
DRAWING TITLE:-
LONGITUDINAL AND CROSS SECTION OF TANK BUND

ASSISTANT EXECUTIVE ENGINEER KNNL NO-04, BHADRA CANAL SUB DIVISION SASVEHALLI	EXECUTIVE ENGINEER KNNL NO-03, BHADRA CANAL DIVISION MALEBENNURU
SUPERINTENDING ENGINEER KNNL, BHADRA PROJECT CIRCLE B.R.PROJECT	CHIEF ENGINEER KNNL, UTP ZONE SHIVAMOGGA

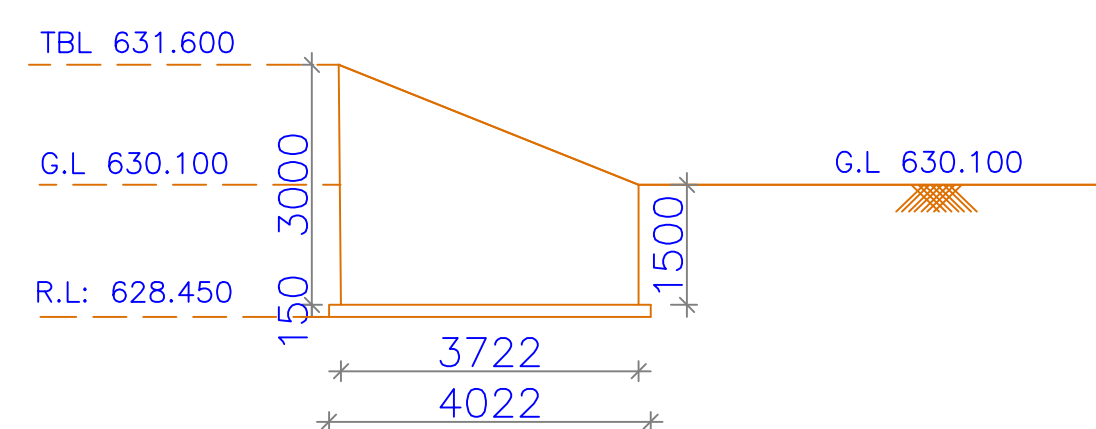


REINFORCEMENT DETAILS OF STILLING BASIN AND CHUTE BLOCK

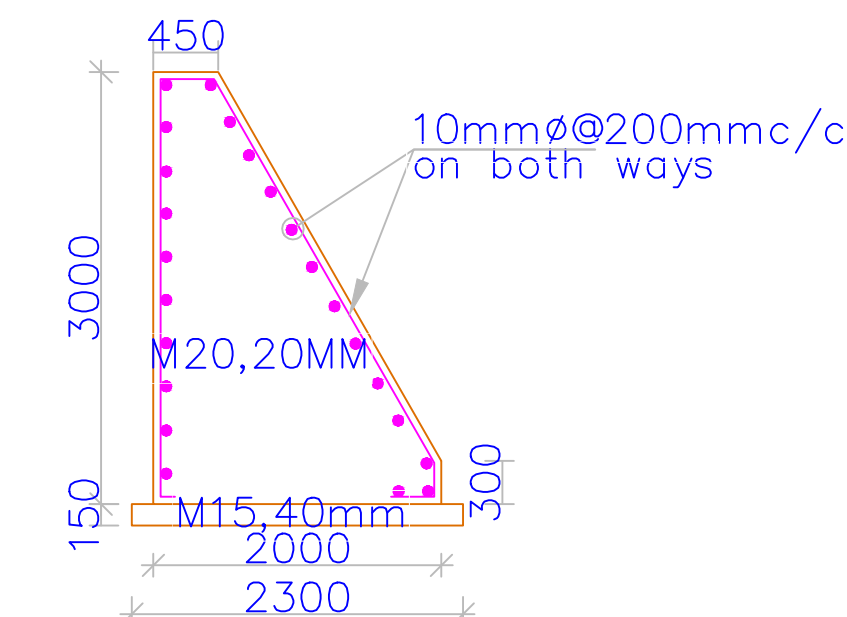
SECTION OF SLAB (WALK WAY)



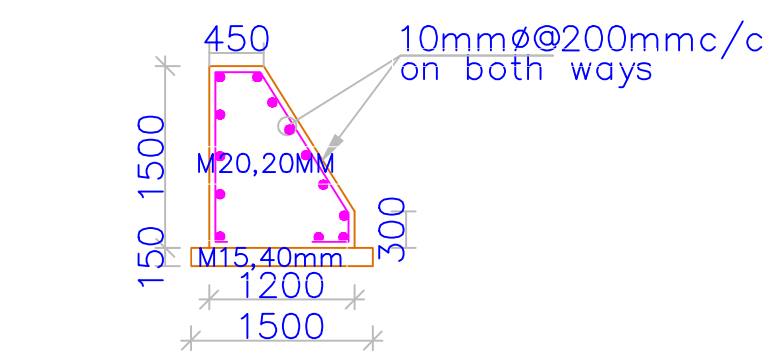
SECTION A-A



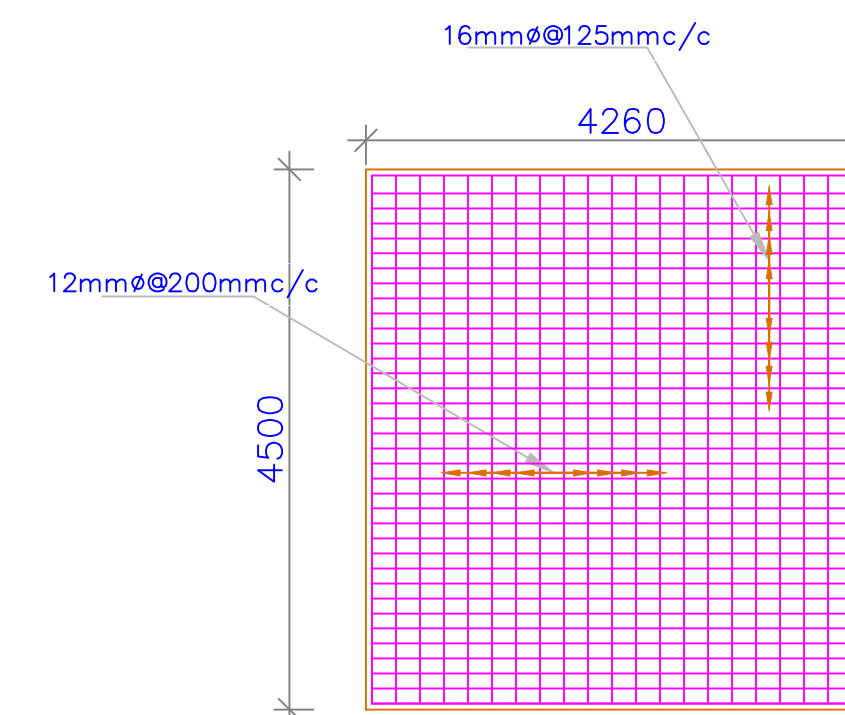
SECTION OF SIDE WALL
ON RIGHT SIDE OF SPILLWAY



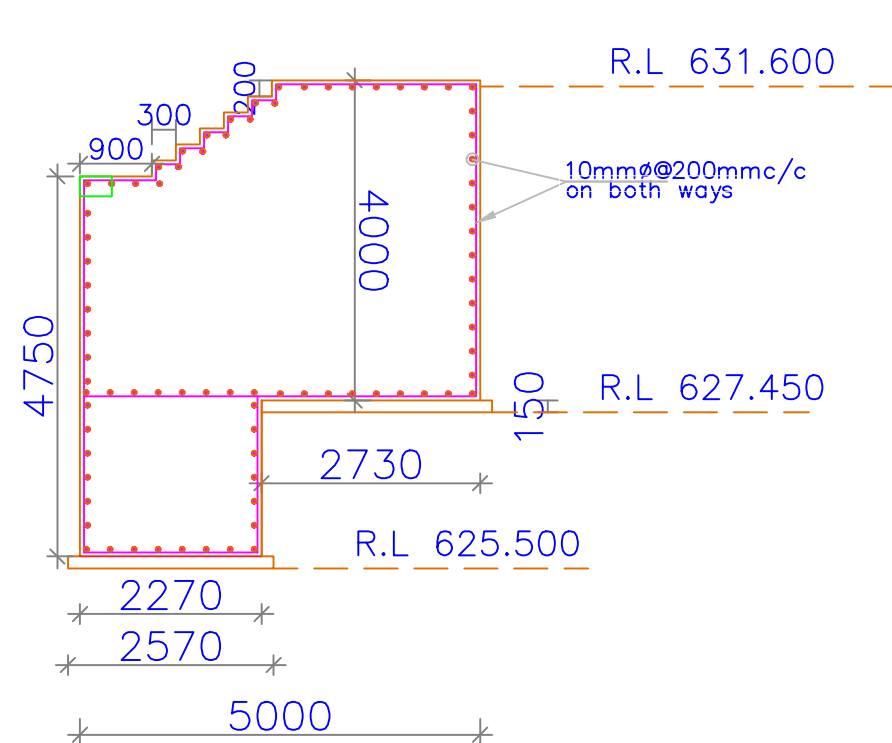
SECTION OF SIDE WALL ON RIGHT SIDE
@ MAXIMUM HEIGHT



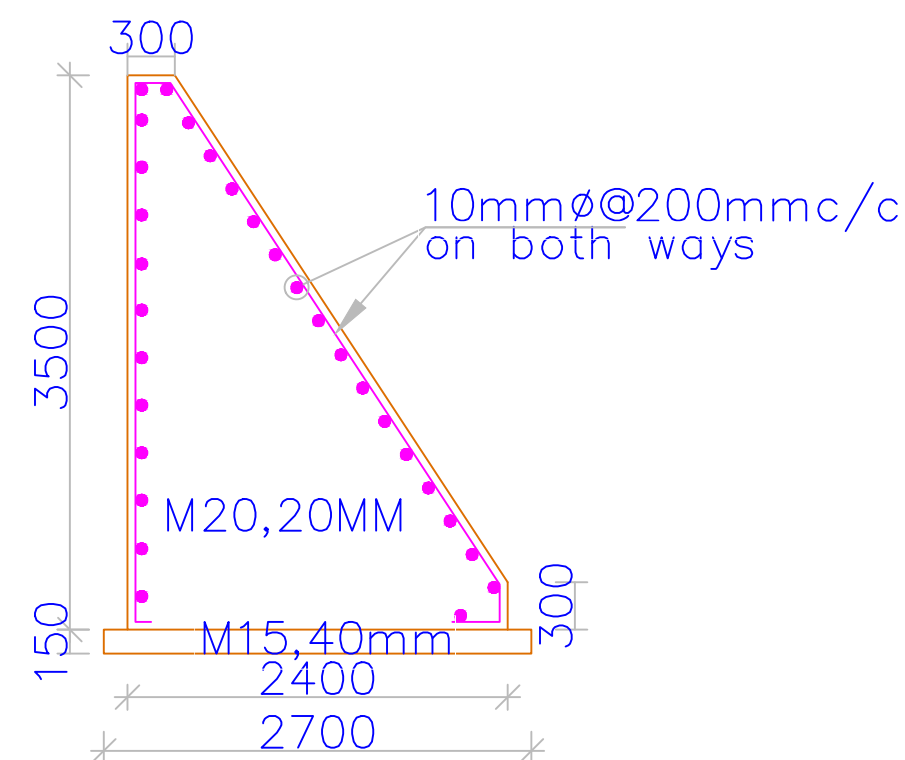
SECTION OF SIDE WALL ON RIGHT SIDE
@ MINIMUM HEIGHT



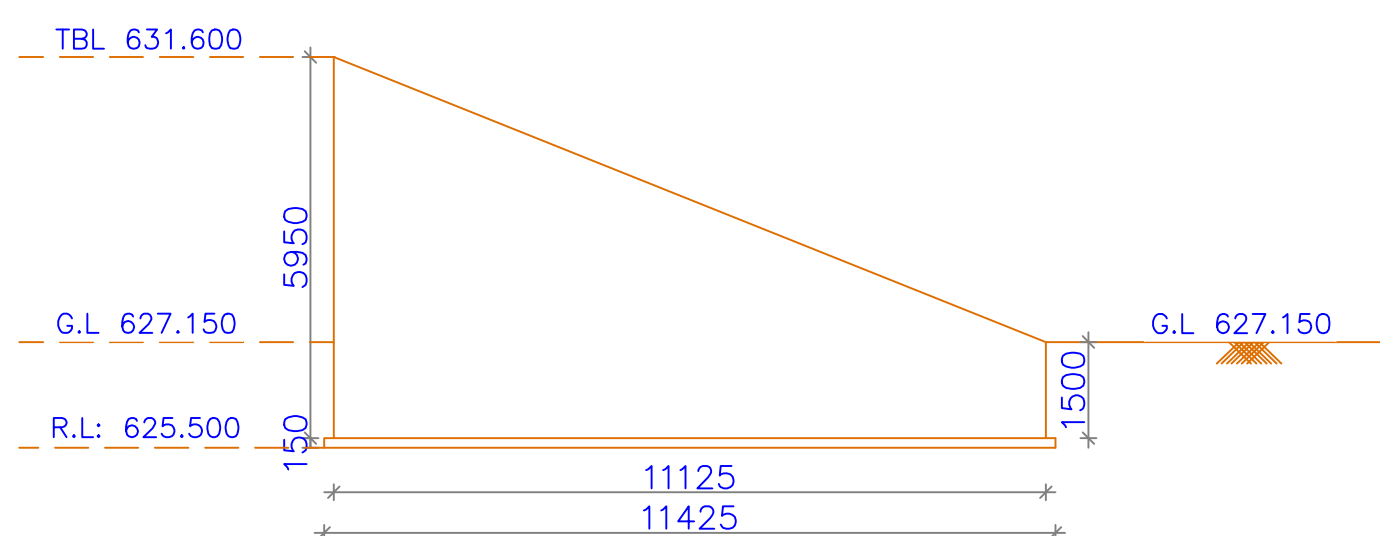
REINFORCEMENT DETAILS
OF BOTTOM SLAB



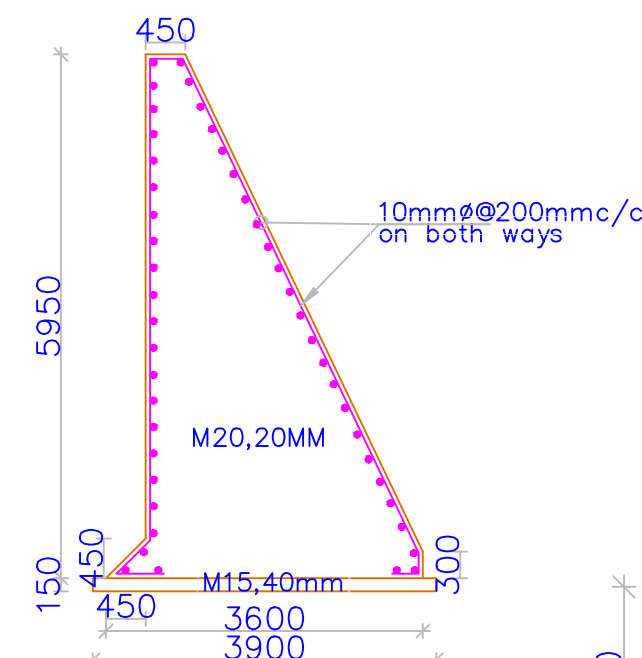
SECTION AT B-B



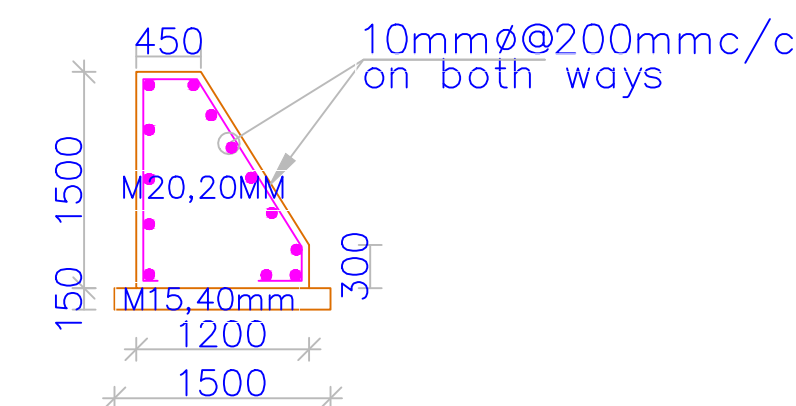
SECTION OF CHUTE WALL



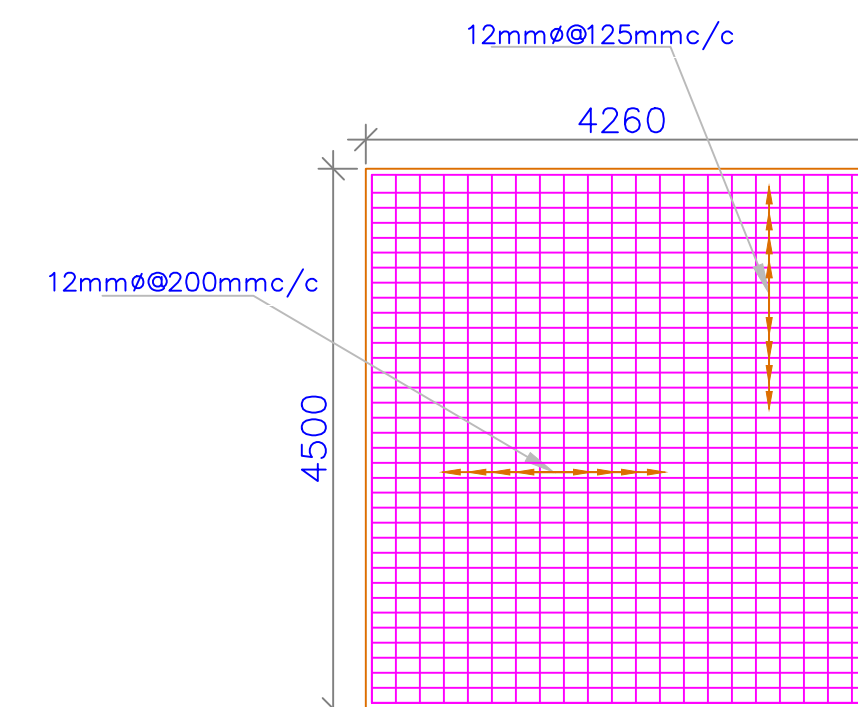
SECTION OF SIDE WALL
ON LEFT SIDE OF SPILLWAY



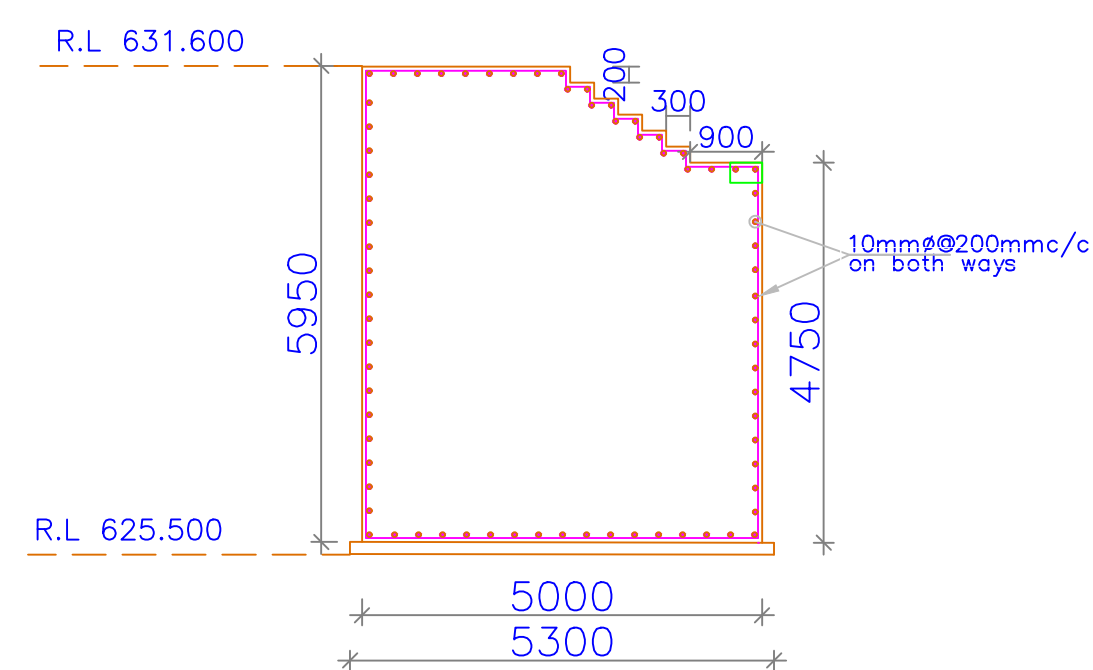
SECTION OF SIDE WALL ON LEFT SIDE
@ MAXIMUM HEIGHT



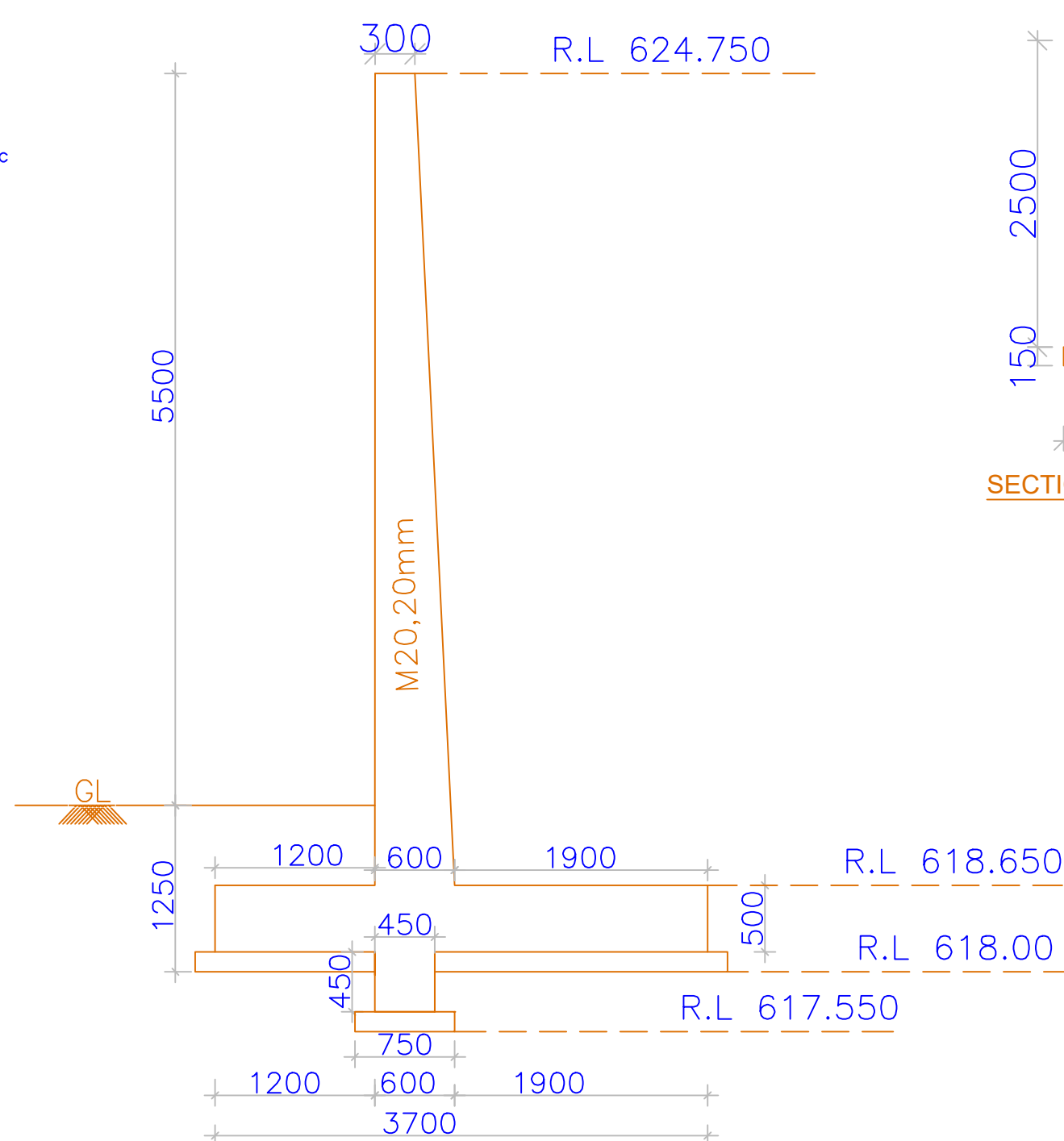
SECTION OF SIDE WALL ON LEFT SIDE
@ MINIMUM HEIGHT



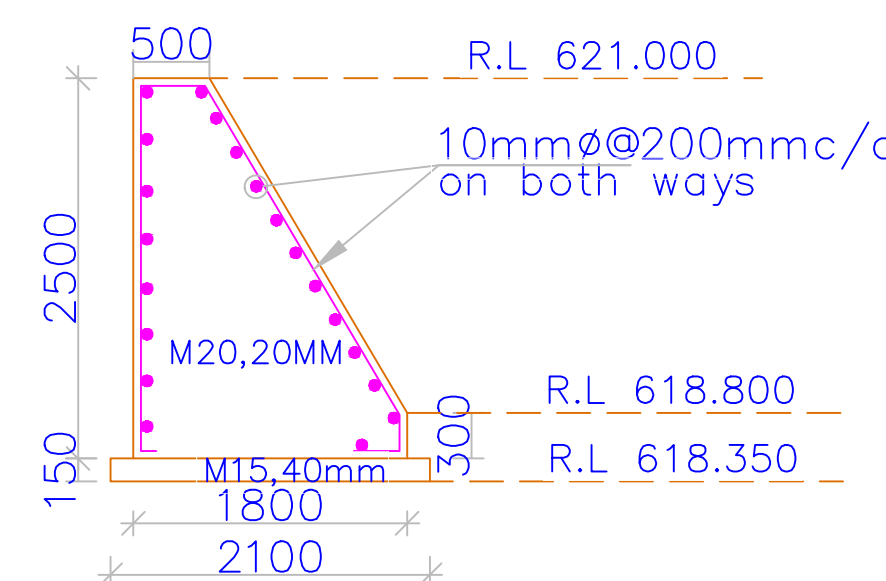
REINFORCEMENT DETAILS
OF TOP SLAB



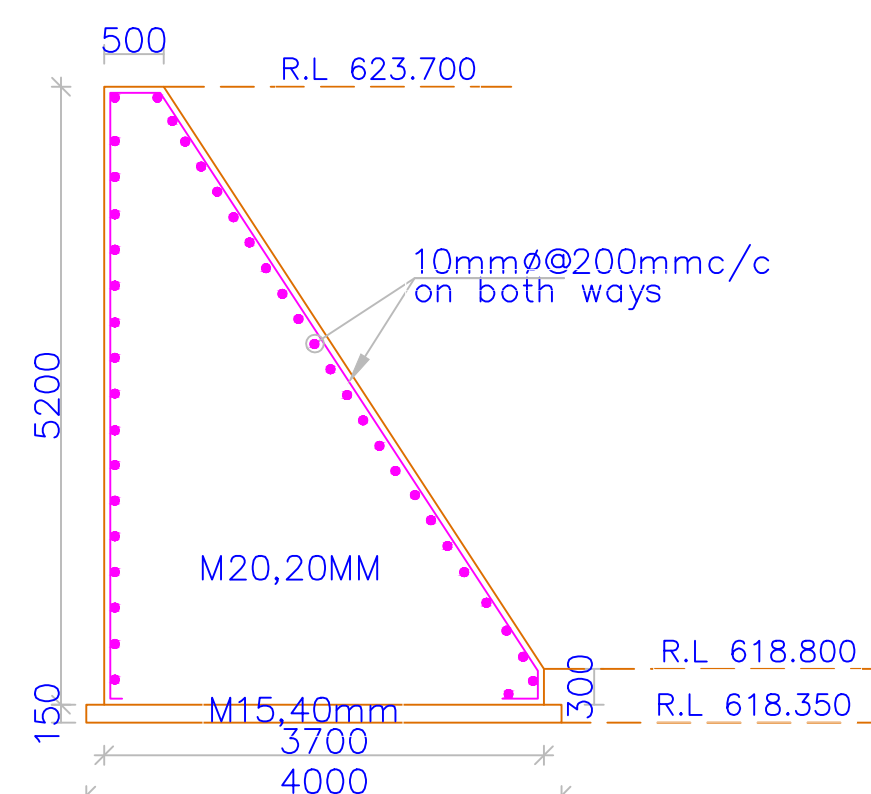
SECTION AT C-C



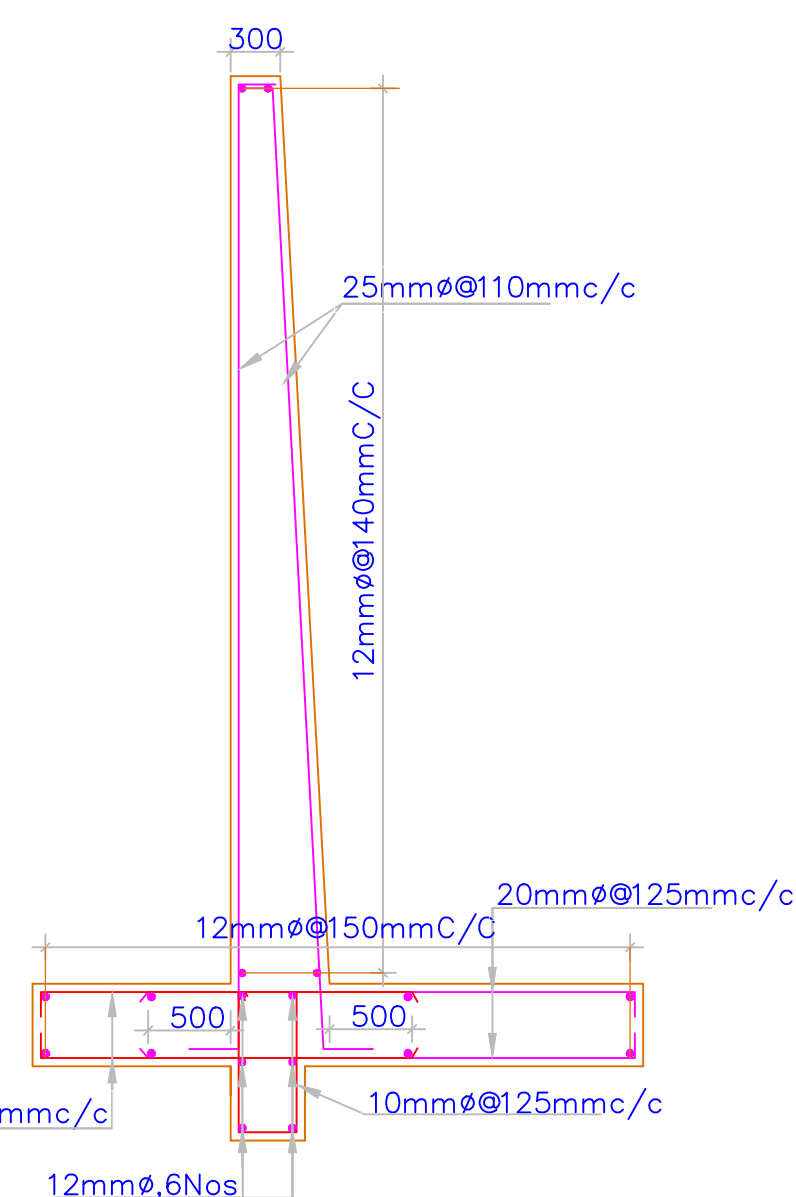
DIMENSION DETAILS OF
RCC STILLING BASIN SIDEWALL



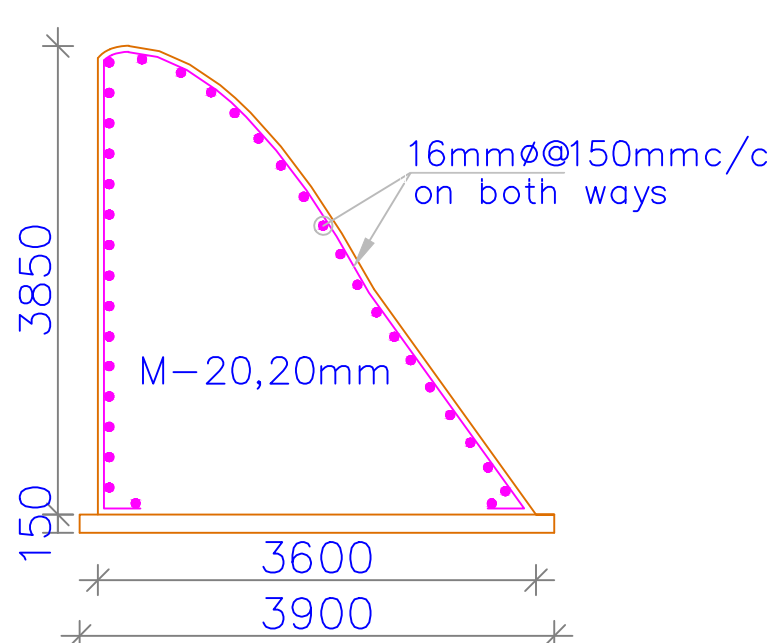
SECTION OF PROTECTION WALL
@ MINI HEIGHT



SECTION OF PROTECTION WALL
@ MAX HEIGHT



REINFORCEMENT DETAILS OF
RCC STILLING BASIN SIDEWALL



REINFORCEMENT DETAILS OF WIER

- NOTES**
- 1) ALL DIMENSIONS ARE IN mm AND REDUCED LEVELS ARE IN METRES
 - 2) DRAWING SHALL NOT BE MEASURED OR SCALED.
 - 3) GRADE OF CONCRETE : CONFORMING TO IS 6512-1984
 - (i) FOUNDATION BED CONCRETE - CC M15 WITH 40mm & D/S
 - (ii) RIVEMENT PROTECTION WALL, RETURNWALL - CC M20 WITH 20mm & D/S
 - (iii) CHUTE SIDEWALL, STILLING BASIN RCC SIDEWALL, WEIR BODY WALL & CHUTE TROUGH - CC M20 WITH 20mm & D/S
 - 4) REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe 500 CONFORMING TO IS 1783-1985
 - 5) MINIMUM COVER TO ANY REINFORCEMENT SHALL BE 50mm UNLESS OTHERWISE MENTIONED.
 - 6) ALL BANKS SHALL BE COMPACTED THOROUGHLY AS PER SPECIFICATION AND FINISHED TO THE REQUIRED STANDARDS
 - 7) DRY STONE PITCHING IS PROVIDED WHEREVER NECESSARY
 - 8) PROVIDE CONTRACTION JOINTS AND CUTOFF WALLS AT 25.0m INTERVALS.

KARNATAKA NEERAVARI NIGAMA LIMITED
(A GOVT OF KARNATAKA UNDERTAKING)
BANGALORE-560001

PROJECT TITLE:-
**CONSTRUCTION OF NEW TANK IN ITTIGEHALI SURVEY NO.20
OF BHADRAVATHI TALUK**

DESIGN CONSULTANT:-
ROOT DESIGN ENGINEERS AND TECHNOCRATS PVT LTD
#L-128, H.T Line, 2nd Main Road, Hebbal 2nd stage,
Mysore-570017. Email: info@rootdesign.org

DRAWING TITLE:-
CONSTRUCTION OF DUCKBILL TYPE WEIR

ASSISTANT EXECUTIVE ENGINEER
KNNL NO-04, BHADRA CANAL SUB DIVISION
SASVEHALI

EXECUTIVE ENGINEER
KNNL NO-03, BHADRA CANAL DIVISION
MALEBENNURU

SUPERINTENDING ENGINEER
KNNL, BHADRA PROJECT CIRCLE
B.R.PROJECT

CHIEF ENGINEER
KNNL, UTP ZONE
SHIVAMOGGA

NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF BHADRAVATHI TALUK

SUB ESTIMATE : CONSTRUCTION OF 750MM DIA 1 ROW PIPE CULVERT (7.50m width). AT Ch. 375M, 975M, 1300M & 1700M Across Road

Sl. No.	Item of work	Unit	Quantity	Rate	Amount
1	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³	50.24	73.00	3668.00
2	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with all leads and lifts .	m ³	10.55	5301.72	55933.00
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately). (M20) Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m ³	46.29	6266.40	290072.00

Sl. No.	Item of work	Unit	Quantity	Rate	Amount
4	Providing, fabricating and placing in position reinforcement steel bars for RCC works including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required, tying with 1.25 mm dia soft annealed steel wire, etc., complete with all lead and lifts.	t	0.85886	92987.00	79863.00
5	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1101.6.	m	30.00	3194.00	95820.00
6	Providing and filling murrum / gravely soil (CNS soil) for foundation or around pipes including cost of all materials, labour, spreading soil in layers of 100 to 150 mm, breaking clods, watering, compaction by earth masters to achieve density control of not less than 90 percent etc.,complete with lead upto 50 m and all lifts.	m ³	65.82	702.00	46206.00
				Total	571562.00

Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

**SUB ESTIMATE : CONSTRUCTION OF 750mm DIA 1R PIPE CULVERT (7.50m width). AT Ch.
175M, 375M, 450 & 625M Across Road**

Sl. No.	Item of work	No.	Length	Width	Depth	Qty.	Unit
1	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils						
	Head walls	2	3.30	1.50	1.05	10.40	
	Pipe laying portion	1	4.80	1.50	0.30	2.16	
					Total	12.56	
				For	4 Nos	50.24	m³
2	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with all leads and lifts .						
	Head walls	2	3.30	1.50	0.15	1.49	
	Padding	1	5.10	1.50	0.15	1.15	
					Total	2.64	
				For	4 Nos	10.55	m³
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately). (M20) Design Mix Using 20 mm nominal size graded crushed coarse aggregates						
				(0.30+1.20)/2			
	Head walls	2	3.00	0.75	1.65	7.43	
		2	3.00	1.20	0.30	2.16	
	Parapet	2	3.00	0.30	0.45	0.81	
	Deduct Pipe			(0.75x0.75)/4		(0.68+1.12)/2	
	Pipe	-2	3.14	0.14	0.900	-0.79	
	Craddle bedding	1	5.10	0.39		1.96	
					Total	11.57	
				For	4 Nos	46.29	m³

Sl. No.	Item of work	No.	Length	Width	Depth	Qty.	Unit
4	Providing, fabricating and placing in position reinforcement steel bars for RCC works including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required, tying with 1.25 mm dia soft annealed steel wire, etc., complete with all lead and lifts.						
	Head Wall	2	3.00	4.80		28.80	
	Parapet	2	3.00	1.00		6.00	
						34.80	
	6.17Kg/Sqm			34.800	6.17	214.72	/Kg
				For	4 Nos	858.86	Kg
				For	4 Nos	0.85886	t
5	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1101.6.						
	NP3 750mm Dia	3	2.50			7.50	
					Total	7.50	
				For	4 Nos	30.00	m ³
6	Providing and filling murrum / gravely soil (CNS soil) for foundation or around pipes including cost of all materials, labour, spreading soil in layers of 100 to 150 mm, breaking clods, watering, compaction by earth masters to achieve density control of not less than 90 percent etc.,complete with lead upto 50 m and all lifts.						
	Head wall	2	3.30	$\frac{0.15+1.05}{2}$	1.95	7.72	
	Pipe portion	1	4.80	1.50	1.78	12.82	
	Deduct Pipe						
	(1x 3.142 x (0.75x 0.75)/4 x 4.80					-2.12	
	Deduct craddle bedding qty					-1.96	
					Total	16.46	
				For	4 Nos	65.82	m ³

Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

**SUB ESTIMATE : CONSTRUCTION OF 600MM DIA 2 ROW LOW LEVEL CAUSEWAY (7.50m width).
AT Ch. 575M**

Sl. No.	Item of work	Unit	Quantity	Rate	Amount
1	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³	103.63	73.00	7565.00
2	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with all leads and lifts .	m ³	8.14	5301.72	43156.00
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately). (M20) Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m ³	66.55	6266.40	417038.00

Sl. No.	Item of work	Unit	Quantity	Rate	Amount
4	Providing, fabricating and placing in position reinforcement steel bars for RCC works including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required, tying with 1.25 mm dia soft annealed steel wire, etc., complete with all lead and lifts.	t	0.9287368	92987.00	86360.00
5	Supplying S&S RCC SPUN / VIBRATED CAST PIPES (REINFORCED) pipes NP-3 Class conforming to IS:458 1988 with latest amendments using ordinary portland cement, for sanitary works and conveying to work site,rolling and lowering into trenches, laying true to line and level including loading and unloading at both destinations and jointing of pipes and specials,perfect linking of joints with jack to correct position including cost of jointing materials, i.e, rubber rings conforming to IS: 5382 for S&S RCC pipes,with all leads and lifts as directed and giving necessary hydraulic test as per ISS to the required pressure and commissioning etc. complete. (Contractor will make his own arrangements for procuring water for testing). Before the execution of the work, the contractor shall carry out the survey.	m	15.00	2745.00	41175.00
6	Providing and laying in position Reinforced cement concrete for all Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) M20 Design Mix Using 20 mm and down size graded crushed coarse aggregates	m ³	9.23	6240.15	57565.00

Sl. No.	Item of work	Unit	Quantity	Rate	Amount
7	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes finishing concrete structure in line, all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm and down size graded crushed coarse aggregates	m ³	9.49	6495.30	61624.00
8	Providing and laying Cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and Technical Specifications. (Batching Plant)	m ³	4.84	14047.00	67952.00
9	Providing and filling murrum / gravely soil (CNS soil) for foundation or around pipes including cost of all materials, labour, spreading soil in layers of 100 to 150 mm, breaking clods, watering, compaction by earth masters to achieve density control of not less than 90 percent etc.,complete with lead upto 50 m and all lifts.	m ³	53.71	702.00	37707.00
				Total	820142.00

Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

**SUB ESTIMATE : CONSTRUCTION OF 600MM DIA 2 ROW LOW LEVEL CAUSEWAY (7.50m
width). AT Ch. 575M**

Sl. No.	Item of work	No.	Length	Width	Depth	Qty.	Unit
1	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils						
	Head walls	2	10.00	2.15	2.10	90.30	
	Pipe laying portion	1	3.50	2.74	1.39	13.33	
						103.63	m ³
2	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with all leads and lifts .						
	Head walls	2	10.00	2.15	0.15	6.45	
	Craddle bedding padding	1	4.10	2.74	0.15	1.69	
						8.14	m ³
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately). (M20) Design Mix Using 20 mm nominal size graded crushed coarse aggregates						
				(0.50+1.85)/2			
	Head walls	2	9.70	1.18	2.66	60.63	
	Parapet	2	9.70	0.30	0.50	2.91	
	Craddle bedding	2	4.28	0.37		3.15	
	Craddle bedding @ joints	2	0.50	0.54		0.54	
	Deduct Pipe			(0.6x0.6)/4		(0.995+1.385)/2	
	Pipe	-2	3.14	0.09	1.19	-0.67	
						66.55	m ³

Sl. No.	Item of work	No.	Length	Width	Depth	Qty.	Unit
4	Providing, fabricating and placing in position reinforcement steel bars for RCC works including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required, tying with 1.25 mm dia soft annealed steel wire, etc., complete with all lead and lifts.						
	Head Wall	2	9.70	6.48		125.69	
	Parapet	2	9.70	1.28		24.83	
						150.52	m ²
	6.17Kg/Sqm			150.525	6.17	928.74	/Kg
5	Supplying S&S RCC SPUN / VIBRATED CAST PIPES (REINFORCED) pipes NP-3 Class conforming to IS:458 1988 with latest amentments using ordinary portland cement, for sanitary works and conveying to work site,rolling and lowering into trenches, laying true to line and level including loading and unloading at both destinations and jointing of pipes and specials,perfect linking of joints with jack to correct position including cost of jointing materials, i.e, rubber rings conforming to IS: 5382 for S&S RCC pipes,with all leads and lifts as directed and giving necessary hydraulic test as per ISS to the required pressure and commissioning etc. complete. (Contractor will make his own arrangements for procuring water for testing). Before the execution of the work, the contractor shall carry out the survey.						
	NP3 600mm Dia	6	2.50			15.00	
						15.00	m ³
6	Providing and laying in position Reinforced cement concrete for all Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) M20 Design Mix Using 20 mm and down size graded crushed coarse aggregates						
	Cement concrete Pavement	1	6.15	10.00	0.15	9.23	
						9.23	m ³
7	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes finsishing concrete structure in line, all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour,Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm and down size graded crushed coarse aggregates						
	Cement concrete Pavement	1	6.33	10.00	0.15	9.49	
						9.49	m ³

Sl. No.	Item of work	No.	Length	Width	Depth	Qty.	Unit
8	Providing and laying Cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and Technical Specifications. (Batching Plant)						
	Cement concrete Pavement	1	6.45	10.00	0.075	4.84	
						4.84	m ³
9	Providing and filling murrum / gravely soil (CNS soil) for foundation or around pipes including cost of all materials, labour, spreading soil in layers of 100 to 150 mm, breaking clods, watering, compaction by earth masters to achieve density control of not less than 90 percent etc.,complete with lead upto 50 m and all lifts.						
	Head wall	2	10.00	$\frac{0.15+1.50}{2}$	2.66	43.89	
	Pipe portion	1	3.50	$\frac{2.00+3.50}{2}$	1.72	16.56	
	Deduct Pipe						
	$(1 \times 3.142 \times 0.6 \times 0.6) / 4 \times (3.50 + 6.12) / 2$					-1.36	
	Deduct craddle bedding qty					-5.37	
						53.71	m ³

Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

ABSTRACT ESTIMATE OF ROAD

I.No.	Description of Item	Unit	Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha	0.92	158044.00	145796.00
2	Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction.	m ³	2306.25	87.00	200644.00
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work	Cum	3090.21	73.00	225585.00
4	Construction of Embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded with desired compaction.	m ³	1818.55	113.00	205496.00
5	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2	m ³	2156.98	413.00	890834.00
6	Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401	m ³	913.07	2397.00	2188629.00

I.No.	Description of Item	Unit	Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
7	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. Wet Mix Macadam (Plant mix method),	m ³	1276.74	2394.00	3056516.00
8	Providing and applying primer coat with SS1 grade Bituminous Emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.90 kg/m ² using mechanical means. Prime Coat over Stabilised soil base /Crusher Run Macadam	m ²	8511.60	53.00	451115.00
9	Providing and applying tack coat with VG-10 Bitumen using pressure distributor at the rate of 0.20 kg/m ² on the prepared bituminous surface cleaned with mechanical broom	m ²	7896.60	13.00	102656.00
10	Providing and laying Bituminous Macadam with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.4% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction	m ³	394.83	7368.00	2909107.00
11	Providing and laying Semi Dense Bituminous Concrete with 40/60 TPH capacity hot mix plant batch type using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 5% by weight of mix and filler, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per MoRTH V revision.	m ³	192.29	9746.00	1874058.00
GRAND TOTAL (in Rs)					1,22,50,436.00

Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK
DETAILED ESTIMATE**

ESTIMATE FOR APPROACH ROAD

- 1 Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle

For road	1	x	2050.00	x	7.50	=	15375.00	
							15375.00	
Deduct 40% Void							-6150.00	
							9225.00	m²
							0.92	Ha

- 2 Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction.

For road	1	x	2050.00	x	7.50	x	0.15	=	2306.25	m³
									2306.25	m³

- 3 Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work

Cutting qty as per statement							=	3090.21	m³
								3090.21	m³

- 4 Construction of Embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded with desired compaction.

Cutting qty as per statement								1818.55	m³
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- 5 Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2

For Road	1	x	500	x	5.700	x	0.600	=	1710.00	
For BC Shoulders	2	x	500	x	0.316	x	0.345	=	109.02	
	2	x	1550	x	0.316	x	0.345	=	337.96	
								2156.98	m³	

- 6 Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401

$$\begin{array}{rcccccccccc} \text{For road} & & 1 & \times & 2050 & \times & 4.45 & \times & 0.10 & = & 913.07 \text{ m}^3 \\ & & & & & & & & & & \mathbf{913.07 \text{ m}^3} \end{array}$$

- 7 Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. Wet Mix Macadam (Plant mix method),

$$\begin{array}{rcccccccccc} \text{For road} & & 1 & \times & 2050 & \times & 4.15 & \times & 0.15 & = & 1276.74 \text{ m}^3 \\ & & & & & & & & & & \mathbf{1276.74 \text{ m}^3} \end{array}$$

- 8 Providing and applying primer coat with SS1 grade Bituminous Emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.90 kg/m² using mechanical means. Prime Coat over Stabilised soil base /Crusher Run Macadam

$$\begin{array}{rcccccccccc} \text{For road} & & 1 & \times & 2050.00 & \times & 4.15 & & & = & 8511.60 \\ & & & & & & & & & & \mathbf{8511.60 \text{ m}^2} \end{array}$$

- 9 Providing and applying tack coat with VG-10 Bitumen using pressure distributor at the rate of 0.20 kg/m² on the prepared bituminous surface cleaned with mechanical broom

$$\begin{array}{rcccccccccc} \text{For road} & & 1 & \times & 2050.00 & \times & 3.85 & & & = & 7896.60 \\ & & & & & & & & & & \mathbf{7896.60 \text{ m}^2} \end{array}$$

- 10 Providing and laying Bituminous Macadam with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.4% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction

$$\begin{array}{rcccccccccc} \text{For road} & & 1 & \times & 2050 & \times & 3.85 & \times & 0.050 & = & 394.83 \\ & & & & & & & & & & \mathbf{394.83 \text{ m}^3} \end{array}$$

- 11 Providing and laying Semi Dense Bituminous Concrete with 40/60 TPH capacity hot mix plant batch type using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 5% by weight of mix and filler, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per MoRTH V revision.

$$\begin{array}{rcccccccccc} \text{For road} & & 1 & \times & 2050 & \times & 3.75 & \times & 0.025 & = & 192.29 \\ & & & & & & & & & & \mathbf{192.29 \text{ m}^3} \end{array}$$

Assistant Executive Engineer
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Sasvehalli

Executive Engineer
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NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF BHADRAVATHI TALUK					
EXCAVATION AND EMBANKMENT QUANTITY					
Chainage	Length	Cutting Area	Filling Area	Cutting Quantity	Filling Quantity
0	25	2.28	0.00	56.93	0.00
25	25	0.93	1.14	23.14	28.49
50	25	0.83	0.78	20.68	19.46
75	25	1.44	0.07	36.12	1.80
100	25	2.13	0.00	53.18	0.00
125	25	1.55	0.00	38.87	0.00
150	25	1.39	0.06	34.69	1.41
175	25	1.36	1.32	33.95	32.99
200	25	1.89	0.00	47.26	0.00
225	25	2.02	0.00	50.44	0.00
250	25	1.34	0.09	33.55	2.32
275	25	1.43	0.05	35.64	1.26
300	25	1.87	0.00	46.82	0.00
325	25	1.08	0.34	26.89	8.54
350	25	1.10	0.13	27.46	3.35
375	25	1.45	0.00	36.23	0.00
400	25	1.52	0.00	37.96	0.00
425	25	1.21	0.08	30.37	2.01
450	25	1.56	0.11	39.02	2.86
475	25	1.50	0.01	37.46	0.29
500	25	1.81	0.06	45.23	1.39
525	25	0.66	0.19	16.58	4.68
550	25	0.03	1.34	0.77	33.59
575	25	0.23	0.52	5.69	13.00
600	25	0.04	0.80	1.12	20.12
625	25	0.01	1.34	0.32	33.40
650	25	0.08	0.81	1.93	20.26
675	25	0.74	1.09	18.45	27.27
700	25	0.59	1.22	14.68	30.57
725	25	0.55	1.15	13.86	28.74
750	25	1.93	0.21	48.17	5.26
775	25	1.65	1.25	41.25	31.22
800	25	2.68	2.62	66.97	65.48
825	25	2.54	2.86	63.49	71.52
850	25	3.17	2.47	79.25	61.71
875	25	1.46	1.94	36.56	48.62
900	25	0.64	1.15	15.99	28.81
925	25	0.47	1.65	11.79	41.24
950	25	1.32	0.40	32.88	10.07
975	25	1.00	1.19	24.98	29.69
1000	25	1.03	1.86	25.75	46.58
1025	25	1.76	0.52	44.12	12.93
1050	25	2.74	0.00	68.45	0.00
1075	25	2.10	0.00	52.50	0.00
1100	25	1.76	0.13	43.98	3.19
1125	25	0.87	2.95	21.64	73.76

Chainage	Length	Cutting Area	Filling Area	Cutting Quantity	Filling Quantity
1150	25	0.26	8.16	6.58	204.00
1175	25	0.00	9.50	0.00	237.52
1200	25	0.69	5.78	17.37	144.38
1225	25	0.72	8.20	18.04	204.92
1250	25	1.76	3.49	44.10	87.22
1275	25	1.98	1.46	49.38	36.61
1300	25	2.49	0.12	62.19	3.07
1325	25	2.49	0.09	62.16	2.30
1350	25	2.23	0.09	55.64	2.28
1375	25	1.72	0.31	42.99	7.71
1400	25	1.76	0.05	44.09	1.37
1425	25	1.26	0.15	31.56	3.82
1450	25	1.12	0.00	28.08	0.00
1475	25	0.97	0.03	24.17	0.65
1500	25	1.12	0.04	28.11	0.91
1525	25	1.83	0.04	45.84	0.89
1550	25	1.43	0.06	35.71	1.44
1575	25	1.69	0.16	42.29	3.94
1600	25	1.71	0.11	42.78	2.64
1625	25	1.45	0.10	36.20	2.54
1650	25	1.78	0.00	44.51	0.00
1675	25	1.78	0.00	44.38	0.00
1700	25	1.40	0.09	34.99	2.23
1725	25	1.53	0.00	38.21	0.01
1750	25	1.49	0.14	37.24	3.41
1775	25	1.98	0.08	49.55	1.99
1800	25	2.25	0.01	56.15	0.34
1825	25	1.94	0.08	48.58	1.95
1850	25	1.85	0.06	46.21	1.43
1875	25	2.43	0.00	60.83	0.00
1900	25	2.16	0.00	53.91	0.00
1925	25	1.28	0.22	32.00	5.55
1950	25	1.76	0.00	43.95	0.00
1975	25	1.58	0.07	39.53	1.74
2000	25	1.96	0.00	49.05	0.00
2025	25	1.41	0.00	35.23	0.00
2050	25	1.18	0.15	29.60	3.87
			Total quantity	3090.21	1818.55

**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

ABSTRACT ESTIMATE OF WASTE WEIR

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha	0.40	158044.00	63060.00
2	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³			
	0.00 to 3.00 m lift		2292.28	73.00	167336.00
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In ordinary/soft rock without blasting	m ³			
	0.00 to 1.50 m lift		525.48	272.00	142930.00
	1.50 to 3.00 m lift		628.57	320.00	201144.00
	3.00 to 4.50 m lift		6.99	349.00	2439.00
4	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork,cleaning, batching, mixing, placing in position, levelling, vibrating,finishing, curing etc., complete with all leads and lifts .	m ³	291.40	5301.72	1544935.00

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
5	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m ³	2685.18	6266.40	16826390.00
6	Providing, fabricating and placing in position steel reinforcement bars for RCC structures including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping /welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire etc., complete with all lead and lifts .	kg	114.07	92987.00	10606900.00
7	Providing casing embankment using semi-pervious soil available from excavation in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with all lead and all lifts	m ³	419.07	199.00	83395.00
8	Providing and constructing contraction joints by fixing 230 mm wide central bulb type PVC water stop in single line supported by 10 mm dia. steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, vulcanizing water seal joints etc., complete with all leads and lifts.	m	97.90	521.00	51006.00

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
9	Providing and constructing protective railing consisting of cast in-situ railing posts of size 150 x 150 mm at bottom, 100 x 100 mm at top and 750 mm height, placed approximately at 2 m centre to centre in M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down approved clean, hard, graded aggregates with each post reinforced by 4 numbers 8 mm dia.main bars embedded in kerb concrete for 400 mm depth and 5 numbers 6 mm dia. stirrups and fixing 3 rows of 40 mm dia. GI pipes with two coats of synthetic enamel painting over a coat of red oxide primer paint including cost of all materials, machinery, labour, formwork, supports, fabricating and placing reinforcement bars, batching, mixing, placing in position, compacting, finishing, curing etc., complete with all lead and lifts	m	21.64	1627.00	35208.00
10	Providing and constructing 450 mm thick dry size stone pitching using 200 to 250 mm size stones with pin headers at 2 per sqm using stones and stone chips from approved source including cost of all materials, labour, hand packing / wedging stone chips into joints, finishing etc., complete with all lead and lifts.	m ²	72.31	405.00	29285.00
Total Amount Rs.					29754028.00

Assistant Executive Engineer
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**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

DETAILED ESTIMATE OF WASTE WEIR

Sl. No	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha					
	Near Draft Channel		1	199.50	$\frac{15.0+25.0}{2}$		3990.00
	Total						0.40
2	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³					
	0.00 to 1.50 m lift						
	Waste weir		1	12.80	3.90	1.20	59.90
	Chute section(Side walls)		2	160.50	2.70	1.20	1040.04
	Chute section-Bed		1	146.63	3.46	1.20	608.81
	Chute section-Bed at Joints		11	1.67	3.46	1.20	76.27
	Concrete wall Connecting Embankment at Left side		1	5.30	4.80	1.20	30.53
	Concrete wall Connecting Embankment at Right side		1	5.30	4.80	1.20	30.53
	Section of Side wall on Left side of Spillway		1	11.43	3.90	1.20	53.47
	Section of Side wall on Right side of Spillway		1	4.02	2.15	1.20	10.38
	Stilling Basin side wall (Base Portion)		2	18.50	4.00	1.20	177.60
	Stilling Basin Bed		1	18.50	1.00	0.90	16.65
	Wing walls		2	12.21	$\frac{4.0+2.10}{2}$	1.20	89.34
	Between Wings		1	10.00	8.23	1.20	98.76
	Total						2292.28

Sl. No	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In ordinary/soft rock without blasting	m ³					
	0.00 to 1.50 m lift						
	Waste weir		1	12.80	3.90	0.30	14.98
	Chute section(Side walls)		2	160.50	2.70	0.30	260.01
	Chute section-Bed		1	146.63	3.46	0.30	152.20
	Chute section-Bed at Joints		11	1.67	3.46	0.30	19.07
	Concrete wall Connecting Embankment at Left side		1	5.30	4.80	0.30	7.63
	Concrete wall Connecting Embankment at Right side		1	5.30	4.80	0.30	7.63
	Section of Side wall on Right side of Spillway		1	4.02	2.15	0.30	2.59
	Stilling Basin side wall (Base Portion)		2	18.50	4.00	0.05	7.40
	Stilling Basin side wall (shear Key)		2	18.50	0.75	0.25	6.94
	Wing walls		2	12.21	$\frac{4.0+2.10}{2}$	0.30	22.34
	Between Wings		1	10.00	8.23	0.30	24.69
	Total						525.48
	1.50 to 3.00 m lift	m ³					
	Waste weir		1	12.80	3.90	1.50	74.88
	Chute section(Side walls)		2	160.50	2.70	0.30	260.01
	Chute section-Bed		1	146.63	3.46	0.30	152.20
	Chute section-Bed at Joints		11	1.67	3.46	0.80	50.85
	Concrete wall Connecting Embankment at Left side		1	5.30	4.80	0.68	17.30
	Concrete wall Connecting Embankment at Right side		1	5.30	4.80	0.68	17.30
	Section of Side wall on Right side of Spillway		1	4.02	2.15	0.40	3.46
	Stilling Basin side wall (shear Key)		2	18.50	0.75	0.20	5.55
	Wing walls		2	12.21	$\frac{4.0+2.10}{2}$	0.30	22.34
	Wing walls		1	10.00	8.23	0.30	24.69
	Total						628.57
	3.00 to 4.50 m lift						
	Waste weir		1	12.80	3.90	0.14	6.99
	Total						6.99

Sl. No	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
4	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with all leads and lifts .	m ³					
	Waste Weir		1	12.80	3.90	0.15	7.49
	Chute section(Side walls)		2	160.50	2.70	0.15	130.01
	Chute section-Bed		1	146.63	3.46	0.15	76.10
	Chute section-Bed at Joints		11	1.67	3.46	0.15	9.55
	Concrete wall Connecting Embankment at Left side		1	5.30	4.80	0.15	3.82
	Concrete wall Connecting Embankment at Right side		1	5.30	4.80	0.15	3.82
	Section of Side wall on Left side of Spillway		1	11.43	3.90	0.15	6.68
	Section of Side wall on Right side of Spillway		1	4.02	2.15	0.15	1.30
	Stilling Basin side wall (Base Portion)		2	18.50	4.00	0.15	22.20
	Stilling Basin side wall (shear Key)		2	18.50	0.75	0.15	4.16
	Stilling Basin Bed		1	18.50	1.00	0.15	2.78
	Wing walls		2	12.21	$\frac{4.0+2.10}{2}$	0.15	11.17
	Between Wings		1	10.00	8.23	0.15	12.35
	Total						291.40

Sl. No	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
5	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m ³					
	Waste Weir		1	12.80	8.54		109.29
	Chute section(Side walls)		2	160.50	$\frac{2.4+0.3}{2}$	3.20	1386.72
			2	160.50	2.40	0.30	231.12
	Chute section-Bed		1	165.00	3.46	0.40	228.36
	Chute section-Bed at Joints		11	1.67	3.46	0.35	22.27
	Chute Block		2	5.53	1.00	0.68	7.55
	Concrete wall Connecting Embankment at Left side		1	4.50	27.67		124.52
	Concrete wall Connecting Embankment at Right side		1	4.50	22.34		100.53
	Section of Side wall on Left side of Spillway		1	11.13	2.18	0.30	7.26
			1	11.13	1.31	3.43	49.99
			1	5.56	0.5 x 0.45 x 0.45		0.56
	Section of Side wall on Right side of Spillway		1	3.72	1.60	0.30	1.79
			1	3.72	1.03	2.25	8.58
	Slab (walkway)		1	4.26	4.50	0.25	4.79
	Stilling Basin side wall		2	18.50	0.45	6.10	101.57
	Stilling Basin side wall (Base Portion)		2	18.50	3.70	0.50	68.45
	Stilling Basin side wall (shear Key)		2	18.50	0.45	0.45	7.49
	Stilling Basin Bed		1	17.05	3.46	0.75	44.24
	Stilling Basin Bed (@ End Sill)		1	1.45	3.46	1.05	5.27
	Wing walls Rectangular Section		2	11.73	2.75	0.30	19.35
	Wing walls Trapezoidal section		2	11.73	1.63	3.75	142.93
	Cut off walls at stilling basin End		1	7.58	0.45	0.60	2.05
	Cut off walls B/W Wing walls		2	9.55	0.45	0.60	5.16
	Cut off walls At End		1	11.88	0.45	1.00	5.34
	Total						2685.18

Sl. No	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
6	Providing, fabricating and placing in position steel reinforcement bars for RCC structures including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping /welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire etc., complete with all lead and lifts .	Kg					
	Concrete wall Connecting Embankment at Left side		1	4.50	24.2		108.90
	Concrete wall Connecting Embankment at Right side		1	4.50	23.62		106.29
	Section of Side wall on Left side of Spillway		1	11.13	10.41		115.81
	Section of Side wall on Right side of Spillway		1	3.72	6.46		24.04
	Total						355.05
	Providing skin reinforcement of 10mm Φ @ 200mm C/C (Quantity of Reinforcement at the rate of 6.17Kg/m ²)					355.05x6.17	
						Total	2190.63
	As per Sheet enclosed BBS						
	Steel Qty for waste wier, Chute & Stilling Basin bed As per Statement						75500.00
	Steel Qty for Stilling Basin Side wall As per Statement						35800.00
	Steel Qty for Slab (walkway)						578.00
	Total						114.07
7	Providing casing embankment using semi-pervious soil available from excavation in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with all lead and all lifts	m ³					
	Waste weir		1	12.80	0.15	2.99	5.74
	Chute section(Side walls)						
	Outer portion		2	160.50	0.54	1.65	288.13
	Inner Portion		2	160.50	0.15	0.95	45.74
	Section of Side wall on Left side of Spillway		1	11.43	0.38	1.05	4.56
	Section of Side wall on Right side of Spillway		1	4.02	0.61	1.9	4.65
	Stilling Basin side wall		2	18.50	1.93	0.60	42.85
	Stilling Basin side wall (Base Portion)		2	18.50	0.15	0.50	2.78
	Stilling Basin side wall (shear Key)		2	18.50	0.15	0.30	1.67
	Wing walls		2	12.21	0.57	1.65	22.96
	Total						419.07

Sl. No	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
8	Providing and constructing contraction joints by fixing 230 mm wide central bulb type PVC water stop in single line supported by 10 mm dia. steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, vulcanizing water seal joints etc., complete with all leads and lifts.	m					
			11	8.90			97.9
9	Providing and constructing protective railing consisting of cast in-situ railing posts of size 150 x 150 mm at bottom, 100 x 100 mm at top and 750 mm height, placed approximately at 2 m centre to centre in M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down approved clean, hard, graded aggregates with each post reinforced by 4 numbers 8 mm dia. main bars embedded in kerb concrete for 400 mm depth and 5 numbers 6 mm dia. stirrups and fixing 3 rows of 40 mm dia. GI pipes with two coats of synthetic enamel painting over a coat of red oxide primer paint including cost of all materials, machinery, labour, formwork, supports, fabricating and placing reinforcement bars, batching, mixing, placing in position, compacting, finishing, curing etc., complete with all lead and lifts	m	4	5.41			21.64
10	Providing and constructing 450 mm thick dry size stone pitching using 200 to 250 mm size stones with pin headers at 2 per sqm using stones and stone chips from approved source including cost of all materials, labour, hand packing / wedging stone chips into joints, finishing etc., complete with all lead and lifts.	m ²					
	For Transition D/S		1	9.55	7.57		72.31
	Total						72.31

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**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

ABSTRACT ESTIMATE (PROPOSED FEEDER CHANNEL)

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	2	3	4	5	6
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha	0.43	158044.00	67564.00
2	Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts.	m ³	1893.38	218.00	412756.00
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³	2646.00	73.00	193158.00
Total Amount Rs.					673478.00

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**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

DETAILED ESTIMATE (PROPOSED FEEDER CHANNEL)

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha					
			1	500.00	$\frac{3.50+6.00}{2}$		2375
			1	400.00	$\frac{3.50+6.00}{2}$		1900
	Total						0.4275
2	Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts.	m ³					
	For Feeder canal		1	500.00	$\frac{5.35+4.00}{2}$	0.45	1051.88
			1	400.00	$\frac{5.35+4.00}{2}$	0.45	841.50
	Total						1893.38

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³					
	For Feeder canal		1	500.00	5.80+4.00 2	0.60	1470.00
			1	400.00	5.80+4.00 2	0.60	1176.00
	Total						2646.00

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Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
3	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In ordinary/soft rock without blasting	m ³					
	30% of SR in Total Qty						1148.59
	Total						1148.59
4	Providing hearting embankment using selected impervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials,machinery, labour,all other operations such as collection of soil, spreading soil in layer of specified thickness,sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting each layer to density control of not less than 95 percent or as stipulated using power roller etc., complete with lead upto 1 km and all lifts.	m ³					
	Hearting qty		1	188.00	34.18		6425.84
	Total						6425.84
5	Providing cut-off trench filling using selected impervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with lead upto 1 km and all lifts.	m ³					
	Key Trench		1	188.00	10.55		1983.40
	Total						1983.40

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
6	Providing casing embankment using semi-pervious / pervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges /sides, watering, compacting each layer to density control of not less than 95 percent or as stipulated using power roller etc., complete with lead upto 1 km and all lifts.	m ³					
	Embankment		1	188.00	139.51		26227.13
	Deducting 70% Excavated AKS for Reusing						-2680.03
	Total						23547.09
7	Providing casing embankment using semi-pervious soil available from excavation in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with all lead and all lifts	m ³					
	70% of Total AKS Qty						2680.03
	Total						2680.03
8	Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes as per approved drawings etc. complete with lead upto 1 km and all lifts	m ³					
			1	188.00	2.23		419.24
	Total						419.24

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
9	Providing and laying 300 mm diameter open jointed hume pipes with collars in rock-toe for drainage including cost of all materials, machinery,labour etc., complete with lead upto 1 km and all lifts.	m					
			1	188.00			188.00
	Total						188.00
10	Providing and constructing longitudinal / cross graded filter drains using sand, 80mm to 20 mm and 20 mm down clean, hard graded aggregates from approved source satisfying specified filter creteria in layers of specified thickness including cost of all materials, machinery,labour, laying to required slopes, compaction etc., complete as per specifications and approved drawings with lead upto 50 m and all lifts.	m ³					
	Below Toe		1	188.00	1.35	0.90	228.42
	Deduct Pipe area		1	188.00	0.07		-13.28
	Total						215.14
11	Providing and constructing graded filter media below and behind rock-toe consisting of 200 mm thick sand, 250 mm thick 20 to 4.75 mm and 400 mm thick 80 to 20 mm clean, hard, graded coarse aggregates from approved source satisfying specified filter creteria including cost of all materials, machinery, labour, laying to required thickness and slope,compacting etc., complete as per specifications and approved drawings with lead	m ³					
			14	25.29	$\frac{1.60+0.90}{2}$	0.70	309.80
	Total						309.80

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
12	Providing and constructing 550 mm thick hand packed rough stone revetment consisting of 300 mm thick rough stones with 400 to 450 mm long through stones at 1.5 m c / c over filter backing of 100 mm thick sand and 150 mm thick 40 mm down graded coarse aggregate layers including cost of all materials, machinery, labour, laying to specified slope, wedging with chips, finishing etc., complete with all lead and lifts.	m ²					
			1	188.00	18.88		3549.68
	Total						3549.68
13	Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting	Nos					
			2	188.00			376.00
	Total						376.00
14	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with all leads and lifts .	m ³					
	For Chute drain @ D/S Through Berm		14	12.52	0.70	0.10	12.27
	Total						12.27

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
15	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m ³					
	Side wall of Chute Drain through Berm		28	12.52	0.10	0.50	17.53
	Slab of Chute Drain through Berm		14	12.52	0.70	0.10	12.27
	Total						29.79
16	Providing, fabricating and placing in position steel reinforcement bars for RCC structures including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping /welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire etc., complete with all lead and lifts .	m					
	Steel for Chute drain		14	12.52	1.60		175.25
	Providing skin reinforcement of 10mm Φ @ 200mm C/C (Quantity of Reinforcement at the rate of 6.17Kg/m ²					175.25x6.17	
	Total						1.08
17	Drilling 50 mm dia. holes vertical or inclined upto 10 degrees to vertical in rock / masonry / concrete by percussion drilling method using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete Upto 6 m from surface.	m					
			33	6.00			198.00
	Total						198.00

Sl. No.	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
18	Curtain grouting with neat cement grout mix of suitable consistency under specified grout pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with all lead and all lifts.	t					
	Curtain Grouting @ 175 kg/m		1	175.00	1128.00		197400.00
							197.40
	Total						198.00
19	Providing and constructing 300 mm thick size stone pitching using 200 to 250 mm size stones with pin headers at 2 per sqm set in CM 1 : 5 proportion by volume with pointing joints in CM 1 : 3 proportion by volume including cost of all materials from approved source, labour, packing stone chips and mortar into	m ²					
	Drain @ Berm		1	188.00	2.91		546.14
	Drain @ D/S		1	188.00	3.51		659.88
	Total						1206.02
20	Turfing of Nala bund/other water harvesting structure's banks and side slopes over a layer of 5 cm thickness of sand layer, watering for 15 days, 0.5Km lead for turf and 5.0 Km lead for sand.	m ²					
	D/S Side of Bund		1	188.00	12.68		2384.31
	Total						2384.31

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**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20
OF BHADRAVATHI TALUK**

ABSTRACT ESTIMATE (DESILTING IN WATER SPREAD AREA)

Sl. No.	Item of work	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m ³	169631.15	73.00	12383074.00
Total Amount Rs.					12383074.00

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**NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF
BHADRAVATHI TALUK**

DESILTING OF SUBMERGENCE AREA

Sl. No	Particulars	Unit	No.	Length (m)	Breadth (m)	Depth (m)	Quantity
1	2	3	4	5	6	7	8
1	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils	m³					
	Water Sprea area up to FTL		1	99782.42		1.50	149673.63
	Water Sprea area RL630.40m to 629.50m (FTL to MWL)		1	22175.02		0.90	19957.52
	Total						169631.15

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NAME OF WORK: CONSTRUCTION OF NEW TANK IN ITTIGEHALLI SURVEY NO.20 OF BHADRAVATHI TALUK

CUMULATIVE ABSTRACT

I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
	STRUCTURES				
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. in area of light jungle	Ha	2.61	158044.00	412336.80
2	Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts.	m ³	1893.38	218.00	412755.75
3	Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction.	m ³	2306.25	87.00	200643.75
4	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. In all kinds of soils				
	0 to 3.00m Lift.	m ³	180493.55	73.00	13176028.93
5	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights,including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work In ordinary/soft rock without blasting				
	0 to 1.50m Lift.	m ³	1674.06	272.00	455345.34
	1.50 to 3.00m Lift.	m ³	628.57	320.00	201143.52
	3.00 to 4.50m Lift.	m ³	6.99	349.00	2439.09
	Wtd Avg Rate	m ³	2309.63	285.30	658927.95

I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
6	Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork,cleaning, batching, mixing, placing in position, levelling, vibrating,finishing, curing etc., complete with all leads and lifts .	m ³	322.36	5301.72	1709064.11
7	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m ³	2827.81	6266.40	17720193.36
8	Providing and laying in position Reinforced cement concrete for all Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) M20 Design Mix Using 20 mm and down size graded crushed coarse aggregates	m ³	9.23	6240.15	57565.38

I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
9	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes finishing concrete structure in line, all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M25 Design Mix Using 20 mm and down size graded crushed coarse aggregates	m ³	9.49	6495.30	61624.16
10	Providing and laying Cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and Technical Specifications. (Batching Plant)	m ³	4.84	14047.00	67952.36
11	Providing, fabricating and placing in position steel reinforcement bars for RCC structures including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, lapping /welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire etc., complete with all lead and lifts .	t	116.94	92987.00	10873670.25
12	Supplying S&S RCC SPUN / VIBRATED CAST PIPES (REINFORCED) pipes NP-3 Class conforming to IS:458 1988 with latest amentments using ordinary portland cement, for sanitary works and conveying to work site, rolling and lowering into trenches, laying true to line and level including loading and unloading at both destinations and jointing of pipes and specials, perfect linking of joints with jack to correct position including cost of jointing materials, i.e, rubber rings conforming to IS: 5382 for S&S RCC pipes, with all leads and lifts as directed and giving necessary hydraulic test as per ISS to the required pressure and commissioning etc. complete. (Contractor will make his own arrangements for procuring water for testing). Before the execution of the work, the contractor shall carry out the survey.				
	600mm dia	m	15.00	2745.00	41175.00
13	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1101.6.				
	750mm dia	m	30.00	3194.00	95820.00

I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
14	Construction of Embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded with desired compaction.	m ³	1818.55	113.00	205495.84
15	Providing hearting embankment using selected impervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting each layer to density control of not less than 95 percent or as stipulated using power roller etc., complete with lead upto 1 km and all lifts.	m ³	6425.84	458.00	2943034.72
16	Providing cut-off trench filling using selected impervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with lead upto 1 km and all lifts.	m ³	1983.40	468.00	928231.20
17	Providing casing embankment using semi-pervious / pervious soil from approved borrow areas in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges /sides, watering, compacting each layer to density control of not less than 95 percent or as stipulated using power roller etc., complete with lead upto 1 km and all lifts.	m ³	23547.09	471.00	11090681.27
18	Providing casing embankment using semi-pervious soil available from excavation in layers of 250 to 300 mm (before compaction) including cost of all materials, machinery, labour, all other operations such as collection of soil, spreading soil in layer of specified thickness, sorting out, breaking clods, levelling, sectioning edges / sides, watering, compacting to density control of not less than 95 percent using power roller etc., complete with all lead and all lifts	m ³	3099.10	199.00	616721.67

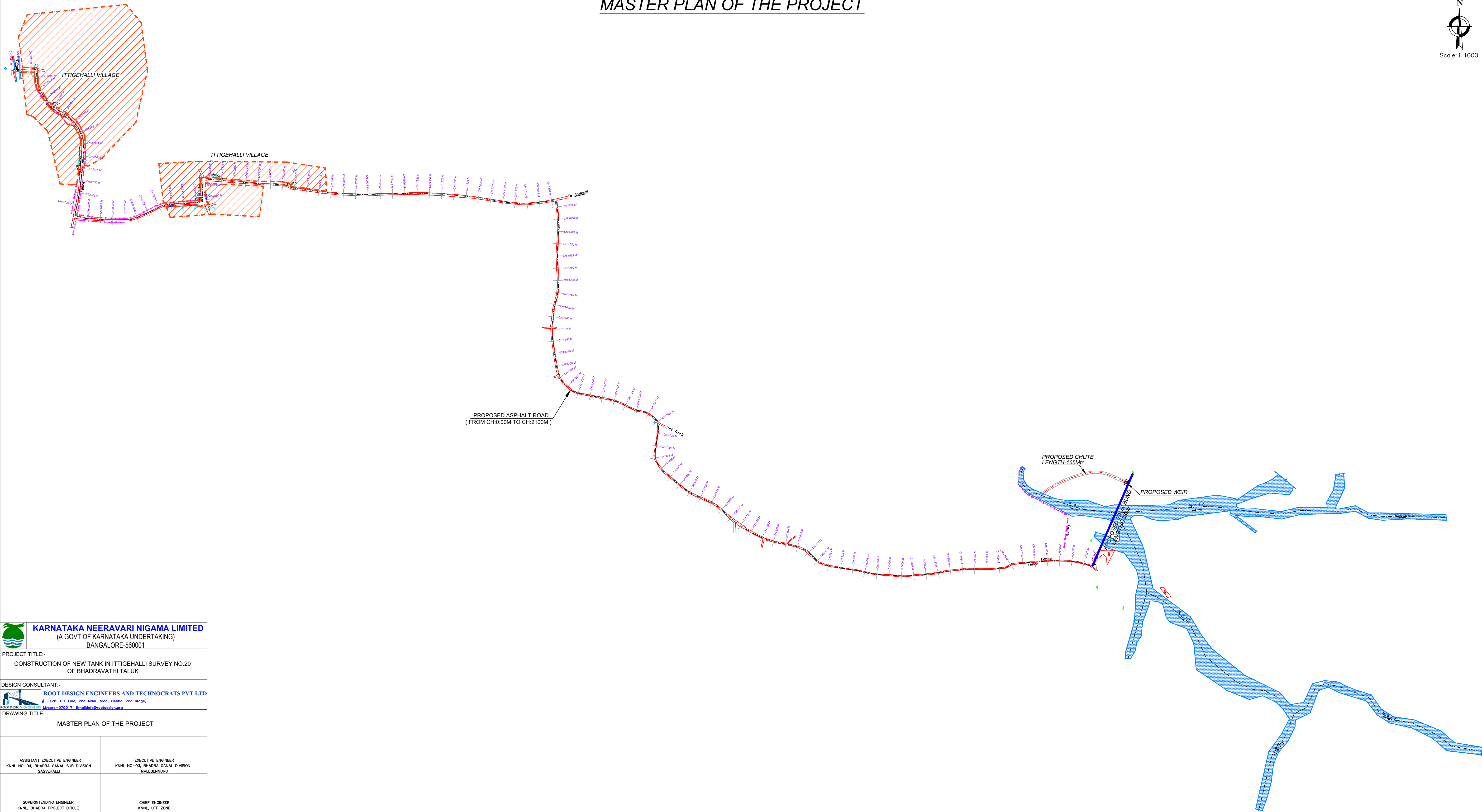
I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
19	Providing and filling murrum / gravely soil (CNS soil) for foundation or around pipes including cost of all materials, labour, spreading soil in layers of 100 to 150 mm, breaking clods, watering, compaction by earth masters to achieve density control of not less than 90 percent etc.,complete with lead upto 50 m and all lifts.	m ³	119.53	702.00	83913.07
20	Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery,Brief description of work chips from approved source including cost of all materials, machinery,labour, hand packing rubble and stone chips, finishing top and sides to required slopes as per approved drawings etc. complete with lead upto 1 km and all lifts	m ³	419.24	783.00	328264.92
21	Providing and laying 300 mm diameter open jointed hume pipes with collars in rock-toe for drainage including cost of all materials, machinery,labour etc., complete with lead upto 1 km and all lifts.	m	188.00	943.00	177284.00
22	Providing and constructing longitudinal / cross graded filter drains using sand, 80mm to 20 mm and 20 mm down clean, hard graded aggregates from approved source satisfying specified filter creteria in layers of specified thickness including cost of all materials, machinery,labour, laying to required slopes, compaction etc., complete as per specifications and approved drawings with lead upto 50 m and all lifts.	m ³	215.14	1862.00	400586.58
23	Providing and constructing graded filter media below and behind rock-toe consisting of 200 mm thick sand, 250 mm thick 20 to 4.75 mm and 400 mm thick 80 to 20 mm clean, hard, graded coarse aggregates from approved source satisfying specified filter creteria including cost of all materials, machinery, labour, laying to required thickness and slope,compacting etc., complete as per specifications and approved drawings with lead upto 50 m and all lifts.	m ³	309.80	1754.00	543393.59
24	Providing and constructing 450 mm thick dry size stone pitching using 200 to 250 mm size stones with pin headers at 2 per sqm using stones and stone chips from approved source including cost of all materials, labour, hand packing / wedging stone chips into joints, finishing etc., complete with all lead and lifts.	m ²	72.31	405.00	29284.67

I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
25	Providing and constructing 550 mm thick hand packed rough stone revetment consisting of 300 mm thick rough stones with 400 to 450 mm long through stones at 1.5 m c / c over filter backing of 100 mm thick sand and 150 mm thick 40 mm down graded coarse aggregate layers including cost of all materials, machinery, labour, laying to specified slope, wedging with chips, finishing etc., complete with all lead and lifts.	m ²	3549.68	895.00	3176959.13
26	Providing and constructing 300 mm thick size stone pitching using 200 to 250 mm size stones with pin headers at 2 per sqm set in CM 1 : 5 proportion by volume with pointing joints in CM 1 : 3 proportion by volume including cost of all materials from approved source, labour, packing stone chips and mortar into joints,finishing,curing etc.,complete with all lead and lifts.	m ²	1206.02	787.08	949234.22
27	Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting	each	376.00	647.00	243272.00
28	Providing and constructing contraction joints by fixing 230 mm wide central bulb type PVC water stop in single line supported by 10 mm dia. steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, vulcanizing water seal joints etc.,complete with all leads and lifts.	m	97.90	521.00	51005.90
29	Providing and constructing protective railing consisting of cast in-situ railing posts of size 150 x 150 mm at bottom, 100 x 100 mm at top and 750 mm height, placed approximately at 2 m centre to centre in M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down approved clean, hard, graded aggregates with each post reinforced by 4 numbers 8 mm dia.main bars embedded in kerb concrete for 400 mm depth and 5 numbers 6 mm dia. stirrups and fixing 3 rows of 40 mm dia. GI pipes with two coats of synthetic enamel painting over a coat of red oxide primer paint including cost of all materials, machinery, labour, formwork, supports, fabricating and placing reinforcement bars, batching, mixing, placing in position,compacting, finishing, curing etc., complete with all lead and lifts	m	21.64	1627.00	35208.28
30	Drilling 50 mm dia. holes vertical or inclined upto 10 degrees to vertical in rock / masonry / concrete by percussion drilling method using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete Upto 6 m from surface.	m	198.00	315.00	62370.00

I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
31	Curtain grouting with neat cement grout mix of suitable consistency under specified grout pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with all lead and all lifts.	t	198.00	13906.49	2753485.02
32	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2	m ³	2156.98	413.00	890833.57
33	Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401	m ³	913.07	2397.00	2188628.79
34	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. Wet Mix Macadam (Plant mix method),	m ³	1276.74	2394.00	3056515.56
35	Providing and applying primer coat with SS1 grade Bituminous Emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.90 kg/m ² using mechanical means. Prime Coat over Stabilised soil base /Crusher Run Macadam	m ²	8511.60	53.00	451114.80
36	Providing and applying tack coat with VG-10 Bitumen using pressure distributor at the rate of 0.20 kg/m ² on the prepared bituminous surface cleaned with mechanical broom.	m ²	7896.60	13.00	102655.80
37	Providing and laying Bituminous Macadam with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.4% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction	m ³	394.83	7368.00	2909107.44

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Scale: 1: 1000



I.No.	Description of Item	Unit	ITEMWISE TOTAL		
			Qty	Rate	Amount (in Rs)
1	2	3	4	5	6
38	Providing and laying Semi Dense Bituminous Concrete with 40/60 TPH capacity hot mix plant batch type using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 5% by weight of mix and filler, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per MoRTH V revision.	m ³	192.29	9746.00	1874058.34
39	Turfing of Nala bund/other water harvesting structure's banks and side slopes over a layer of 5 cm thickness of sand layer, watering for 15 days, 0.5Km lead for turf and 5.0 Km lead for sand.	m ²	2384.31	49.70	118500.21
	Total cost of Structures in Rs.				81697598.37

Assistant Executive Engineer
 KNNL No-04, Bhadra Canal Sub Division
 Sasvehalli

Executive Engineer
 KNNL No-03, Bhadra Canal Division
 Malebennur



भारत सरकार
GOVERNMENT OF INDIA
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
MINISTRY OF ENVIRONMENT, FORESTS &
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BY SPEED POST/E-mail

F. No. 4-KRC1385/2022-BAN

Dated the 15/04/2022

To

The Additional Chief Secretary to Government of Karnataka,
Forest, Ecology & Environment Department,
M.S.Building, Dr.Ambedkar Veedhi,
Bangalore – 560 001.

Subject: Diversion of 12.1801 ha. of forest land in F.Sy.No.17 (new Sy.No.20) of Ittigehalli village, Holehonnur Hobli, Bhadravathi Taluk, Shimoga District (Bhadravathi Forest Division) for construction of new tank with check dam & connectivity road for recharge of ground water in surrounding villages of Ittigehalli in favour of the Executive Engineer, Karnataka Neeravari Nigam Ltd (KNNL) No.3, Bhadra Canal Division, Malebennur.

Sir,

In continuation to this office letter of even number dated 4th November, 2022, I am directed to inform that the site inspection of the proposed forest area was carried out by the officers of IRO Bangalore on 9th November, 2022. During the site inspection, the Supdt. Engineer & others from the user agency were requested to furnish the following technical information;

1. The KML file of the area under submergence is shown as a trapezoid, which may not truly reflect the area under actual submergence and accordingly the actual area required. Thus the KML file of the polygon showing the actual area under submergence on a contour map and revised area requirement details may be submitted.
2. The project involves utilization of both forest as well as non-forest land.

Therefore, exact area of non forest required for the project may be reworked and details may be furnished.

3. The details of the approach road such as length, width and also the cross sectional drawing may be provided
4. The details of dimensions of earthen bund viz length, width (top as well as bottom) and cross sectional drawing may be furnished.
5. The details of soil quarry (earth excavation) for creation of pond and also the details of utilization of the excavated soil for bund construction/road construction may be furnished.
6. All other technical drawings associated with the project may also be furnished to understand and substantiate the diversion area figures sought.

It was requested to them that the above details along with the information sought under vide letter dated 4.11.2022 may please be furnished before **22/11/2022** for consideration of the proposal in the REC meeting scheduled in this month. However it is still awaited. Therefore I am directed to request you to kindly get the submission of the same expedited.

Yours faithfully,



(B N Anjan Kumar)

Asst. Inspector General of Forests (C)

Copy to:

1. The Principal Chief Conservator of Forests (HoFF), Forests Department, Govt. of Karnataka, Aranya Bhavan, 18th Cross, Malleswaram, Bangalore – 560 003.
2. The Principal Chief Conservator of Forests (FC) / Nodal Officer (FCA), Office of the Principal Chief Conservator of Forests, Forests Department, Govt. of Karnataka, Aranya Bhavan, 18th Cross, Malleswaram, Bangalore – 560 003.
3. The Executive Engineer, Karnataka Neeravari Nigam Ltd (KNNL) No.3, Bhadra Canal Division, Malebennur -577 530, Davanagere.



(B N Anjan Kumar)

Asst. Inspector General of Forests (C)