



National Highways Authority of India
(Ministry of Road Transport & Highways)

PATEL CHOLOPURAM-THANJAVUR HIGHWAY PRIVATE LIMITED

Four laning of Cholopuram - Thanjavur from Km 116.440 to Km.164.275 section of NH-45C in the state of Tamilnadu under NHDP Phase-IV on Hybrid Annuity Mode.

INDEPENDENT ENGINEER
M/s. Theme Engineering Services Pvt. Ltd

MONTHLY PROGRESS REPORT
February 2019

Table of Content

Table of Content	02
List of Tables	03
List of Figures	03
Executive Summary	04
Project Synopsis	04
1. Background and Project Details	09
1.1. Project Overview.....	09
1.2. Salient Project Features	10
1.3. Contractual Project Milestones	11
1.4. Payment Milestones During Construction Period.....	11
1.5. Permits & Approvals.....	12
2. Right of Way Status	13
2.1. Land Acquisition	13
2.2. Removal of Religious Structures.....	60
2.3. Shifting of Utilities and Electrical HT/LT Lines	60
2.4. Tree felling.....	61
3. Progress Briefing – Contractor Activities	62
3.1. Pre-Construction Activities	62
4. Physical Progress of Work	63
4.1 Physical Progress of Work	63
5. Financial Progress of Work	87
6. Quality Control and Quality Assurance	89
6.1 List of Lab Equipment's	89
6.2 Quality Control Test Summary	93
7. Weather Report.....	100
8. Safety	101
9. Support required from NHAI	102
10. Important Events.....	103
11. Organization Chart.....	104
12. List of Plants, Machinery and Equipments.....	107
13. Change of Scope Proposals	108
14. Details of Correspondences.....	109
15. Progress Photographs.....	114

List of Tables

Table 1.1: Details of Project Alignment	07
Table 2.1-1: Details of proposed ROW as per Schedule-A	13
Table 2.1-2: Status of Land Acquisition	13
Table 2.1-3: Compensation disbursement for land	14
Table 2.1-4: Compensation disbursement for Structures	14
Table 2.1-5: Details of Stretches under Hindrance	15
Table 2.1-6: Hindrance Photographs	22
Table 2.2-1: Status of Removal of Religious structures	60
Table 2.3-1: Status of sanction of Estimates - Relocation of RWS Pipe Line	60
Table 2.3-2: Status of sanction of Estimates- Electrical Lines Relocation	60
Table 2.3-3: Status of Utility Relocation	60
Table 2.4-1: Status of Tree Cutting	61
Table 3.1-1: Status of Design and Drawings -Highway	62
Table 3.1-2: Status of Design and Drawings - Structures	62
Table 4.1 : Physical Progress of Works	63
Table 4.2 : Strip Chart for Highway Works	65
Table 4.3 - 1 : Strip Chart for status of Box Culverts on Existing Road	78
Table 4.3 - 2 : Strip Chart for status of Box Culverts on Bypass	79
Table 4.3 - 3 : Strip Chart for status of MNB	80
Table 4.3 - 4 : Strip Chart for status of PUP	82
Table 4.3 - 5 : Strip Chart for status of MNB	83
Table 4.3 - 6 : Strip Chart for status of FLYOVER	84
Table 4.3 - 7 : Strip Chart for status of VUP	85
Table 4.3 - 8 : Strip Chart for status of ROB	86
Table 6.1 - 1 QA/QC Lab Equipment at Pateeswaram Lab	89
Table 6.2-1: Summary of Quality Control Tests	94
Table 10.1 : Details of Important Events	103
Table 12.1 - List of Plants, Machinery and Equipment's	107
Table 13.1 - Status of Change of Scope Proposals	108
Table 14.1. - Concessionaire to NHAI	110
Table 14.2. - NHAI to Concessionaire	111
Table 14.3. - Concessionaire to Independent Engineer	112
Table 14.4. - Independent Engineer to Concessionaire	113

List of Figures

Figure 1 : Project Location Map	05
Figure 2 : Project Alignment Map	06
Figure 3 : Financial Progress - Planned vs Achieved	88
Figure 4 : Organization Chart - EPC Team	105
Figure 5 : Organization Chart - SPV Team	106

Executive Summary

The old National Highway (NH -36) runs through the state of Tamil Nadu. The project road is part of the 168 km long Vikravandi to Thanjavur section of the existing National Highway 36 (NH-36). Recently MORTH has amended the number and Length of the National Highways. The old NH 12 in the state of Tamil Nadu has become the part of the New National Highway 45C. It links Chennai with Thanjavur and is 418 km long.

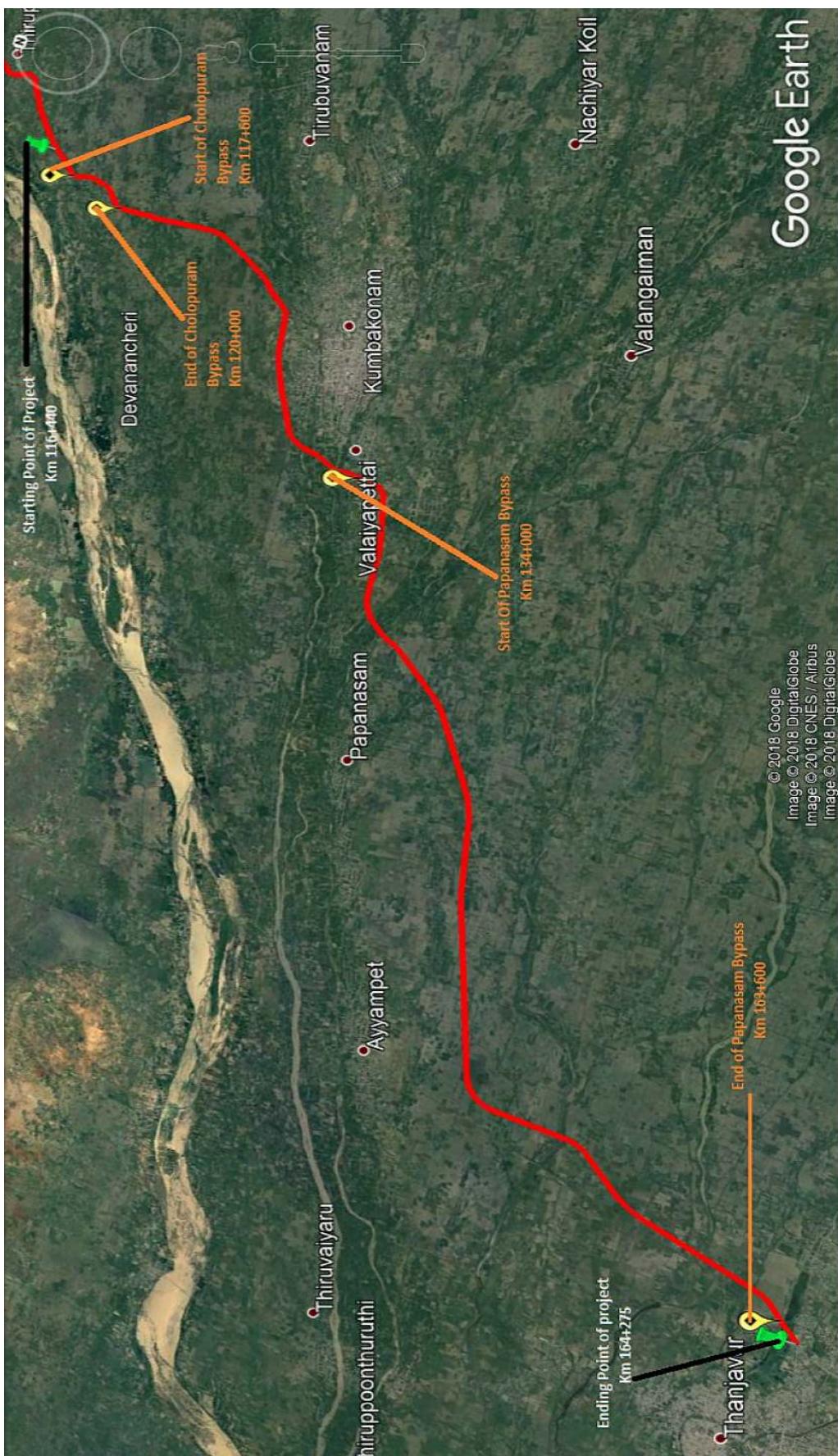
The Cholopuram to Thanjavur section of NH-45C is an important link to connect Metropolitan city of Chennai to religious and tourist places of Kumbakonam, Thanjavur, Tiruchirapalli. The project is also expected to provide improved connectivity to other religious places & other major cities like Thanjavur, Rameswaram, Madurai, Tiruchirappalli, etc.

Project Synopsis

The Government of India had entrusted to the National Highway Authority of India (NHAI) the development, maintenance and management of National Highway No. 45C including the section from km 116.440 to Km 164.275 (approx. 47.835 Km). The Authority had resolved to augment for four Laning of Cholopuram - Thanjavur from Km 116.440 to Km 164.275 section of NH - 45C in the State of Tamilnadu under NHDP Phase-IV on "Hybrid Annuity" basis.

The scope of work will broadly include rehabilitation, upgradation and widening of the existing carriageway to four - lane standards with construction of new pavement, rehabilitation of existing pavement, construction and/or rehabilitation of major and minor bridges, culverts, road intersections, interchanges, drains etc. Including those prescribed in the Concession Agreement and its Schedule and the operation and maintenance itself. The map of project road is given in Figures below. The details of habitations are given in table - 01.

Figure 1: Project Location Map



STRIP PLAN - CHOLAPURAM TO THANJAVUR HIGHWAY PROJECT OF NH45 C

CHENNAI

THANJAVUR

THANJAVUR

Design Chainage:

Existing Chianage:

STRIP PLAN - CHOLAPURAM TO THANJAVUR HIGHWAY PROJECT OF NH45C

Design Chainage: (116+440) to (164+275)

Existing Chainage: (111+000) to (164+000)

Key Symbols:

- Match Line A-A: Dashed line at the top.
- Match Line B-B: Dashed line at the bottom.
- VUP@Km: Kilometer markers along the highway.
- MB@Km: Kilometer markers for existing roads.
- GSI @ Km: Kilometer markers for geographical features.
- ROB @ Km: Kilometer markers for Right Of Way.
- Widening of Existing Road: A box indicating widening sections from Km: 116+440 to 117+600, 120+000 to 134+000, and 163+600 to 164+275.
- Table: A detailed table for the Cholapuram Bypass showing culvert details.
- Table: A detailed table for the Pappanam Bypass showing bridge and culvert details.

Landmarks and Features:

- Chennai (South) and Thanjavur (North).
- Cholapuram Bypass: (114+700) to (120+000).
- Pappanam Bypass: (134+000) to (164+000).
- MB@Km: Various markers for existing roads like Kumbakonam Road, Village Road, Saliyamangalam Road, Papanesam Road, etc.
- GSI @ Km: Various markers for geographical features like Nedathamallai, Thiruvayaru, etc.
- ROB @ Km: Kilometers for Right Of Way.
- Toll Plaza @ Km: 152+00.
- MB@Km: Kilometers for bridges and culverts.
- Match Line A-A: (116+600 to 120+000).
- Match Line B-B: (163+600 to 164+275).

SI No	Description	Unit	Quantity
1.	Culvert	Nos-	57
2.	Minor Bridge	Nos..	07
3.	Major Bridge	Nos..	01
4.	VUP/PUP	Nos..	05
5.	Grade Separator	Nos..	01

Papanasam By-pass				
Km: 134 + 000 to 163 + 600				
Sl No	Description	Unit	Quantity	
1.	Culvert	Nos..	45	
2.	Minor Bridge	Nos..	46	
3.	Major Bridge	Nos..	05	
4.	VUP/PUP	Nos..	07	
5.	Grade Separator	Nos..	03	
6.	ROB	Nos..	01	

Sl No	Description	Unit	Quantity
1.	Culvert	Nos	1
2.	Minor Bridge	Nos	06
3.	Major Bridge	Nos	-
4.	VUL/VUVP	Nos	-
5.	Gravel Separator	Nos	02

Salient Features of Project:			
	Description	Unit	Nos.
	Slab Culvert		
	Minor Bridge		
	Major Bridge		
	VLP/PUP		
	Grade Separated Structure		
	ROB		

SI No	Description	Unit	Scope
1.	Total Length of Project	Km	47.835
2.	Length of Widening Portion	Km	15.335
3.	Length of Bypass	Km	32.000
4.	Length of service/Slip Road	Km	27.100
5.	Culverts		9.
	Box Culvert	Nos.	74

Under Pass
P/VUP)
Plaza
Instruction of Existing
Pass/Newconstruction

Vehicle (LVU) Toll Reco Road Bypass

Structure

LEGEND:

- [] Major Bridge(MB)
- () Minor Bridge(MB)
- O Grade Separated S
- ROB

LEGEND:

Major Bridge(MJB)

Minor Bridge(MB)

Grade Separated Structure

ROB

Table- 01: Details of Project Alignments

Sr. no.	Design Chainage (Km)		LENGTH (Km)	TCS Type	Remarks
	From	To			
1	116.440	117.200	0.760	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
2	117.200	117.900	0.700	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
3	117.900	119.600	1.700	Type-A-3 (Fig 2.4 of the manual)	Bypass
4	119.600	120.420	0.820	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
5	120.420	122.000	1.580	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
6	122.000	125.300	3.300	Type-A-3 (Fig 2.4 of the manual)	Eccentric widening
7	125.300	125.700	0.400	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
8	125.700	127.700	2.000	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
9	127.700	128.300	0.600	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
10	128.300	129.100	0.800	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
11	129.100	129.970	0.870	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
12	129.970	130.700	0.730	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
13	130.700	131.050	0.350	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
14	131.050	131.850	0.800	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
15	131.850	132.100	0.250	Type-A-3 (Fig 2.4 of the manual)	Eccentric widening
16	132.100	133.580	1.480	Type-B (Fig 2.6 of the manual) without service road	Concentric widening
17	133.580	134.800	1.220	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
18	134.800	136.000	1.200	Type-A-3 (Fig 2.4 of the manual)	Bypass
19	136.000	136.600	0.600	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
20	136.600	138.500	1.900	Type-A-3 (Fig 2.4 of the manual)	Bypass
21	138.500	139.750	1.250	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
22	139.750	141.100	1.350	Type-A-3 (Fig 2.4 of the manual)	Bypass

Sr. no.	Design Chainage (Km)		LENGTH (Km)	TCS Type	Remarks
	From	To			
23	141.100	141.800	0.700	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
24	141.800	144.450	2.650	Type-A-3 (Fig 2.4 of the manual)	Bypass
25	144.450	145.580	1.130	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
26	145.580	147.600	2.020	Type-A-3 (Fig 2.4 of the manual)	Bypass
27	147.600	148.320	0.720	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
28	148.320	149.720	1.400	Type-A-3 (Fig 2.4 of the manual)	Bypass
29	149.720	150.450	0.730	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
30	150.450	152.700	2.250	Type-A-3 (Fig 2.4 of the manual)	Bypass
31	152.700	153.300	0.600	Toll Plaza	
32	153.300	156.000	2.700	Type-A-3 (Fig 2.4 of the manual)	Bypass
33	156.000	157.350	1.350	Figure 7.8- Grade separator and its approaches with RE wall and both side 7.5 m wide Slip road	
34	157.350	164.275	6.925	Type-A-3 (Fig 2.4 of the manual)	Bypass
			47.835		

1. Background and Project Details

1.1. Project Overview

Name of Work	Four Laning of Cholopuram-Thanjavur from km. 116.440 to Km.164.275 of NH-45C under NHDP-IV on Hybrid Annuity Mode Basis
Name of Employer	National Highways Authority of India (NHAI) G-5 & 6, Sector-10, Dwarka, New Delhi -110075
Name of Concessionaire	Patel Cholopuram-Thanjavur Highway Pvt Ltd, Patel House, Beside Prakruti Resorts, Chanani Road, Vadodara. Gujarat- 391740 Tel: +91-265 277 6678 Fax: +91-265 277 7878
Independent Engineer	M/s. Theme Engineering Services Pvt. Ltd, 8, Thomaiyammal Nagar, 6 th Street, R.S College (Post), Thanjavur-613005.
EPC Contractor	M/s. Patel Infrastructure Limited, Patel House, Beside Prakruti Resorts, Chanani Road,Vadodara Gujarat- 391740, Tel: +91-265 277 6678 Fax: +91-265 277 7878
Design Consultant	CTL Global Services Pvt. Ltd. 101, IST Floor, Krishna Chambers, HAL, Airport Road, Bangalore-560017
Senior Lender	Punjab National Bank, Large Corporate Branch, Neelkamal Building, Opp. Sales India, Ashram Road, Ahmedabad - 380009
Lenders Independent Engineers	Sharul Techno-Financial Consultancy Services Pvt. Ltd., 403, Aspire Tower 5, Amanora Park Town, Hadapsar, Pune - 411028.
Length of Road (Design Length)	47.835 Kms.
Total Bid Cost	Rs. 1345.60 Crores (as per concession agreement)
Date of Concession Agreement	October 12, 2017
Concession Period	17 Years (Construction Period 2 Years from Appointed date, Operation period 15 years from COD)
Appointed Date	06.09.2018
Construction Period	02 years from Appointed date
Completion Date	04.09.2020
Maintenance Period	15 years from COD

1.2. Salient Project Features

Besides the construction of new carriageways and widening and strengthening of existing carriageways, the following table summaries the major elements of the project construction:

4 - Lane Divided Carriage Way	47.835 Kms
Service Road/ Slip Road	27.100 Kms
Major Bridge	06 Nos.
Minor Bridge	56 Nos.
Grade Separate Intersection	06 Nos.
Vehicular Underpass	10 Nos.
Pedestrian Underpass	02 Nos.
Rail-road Bridges	01 Nos
Box Culverts	74 Nos.
Slab Culverts	29 Nos.
Major Intersections	20 Nos.
Minor Intersections	22 Nos.
Bus Bays	05 Nos.
Rest Area	01 Nos
Toll Plaza	01 Nos.

1.3. Contractual Project Milestones

Following is a listing of the Key Project Milestones:

Mile Stone	Description	Target Date
Mile Stone-I	Concessionaire shall expended not less than 20 % of the Total capital cost and shall have commenced construction of the project and achieved 20% of physical progress on 214 th day from the Appointed Date.	07 th April 2019
Mile Stone-II	Concessionaire shall expended not less than 35% of the Total capital cost and shall have commenced construction of the project and achieved 35% of physical progress on 334 th day from the Appointed Date	05 th August 2019
Mile Stone-III	Concessionaire shall expended not less than 75 % of the Total capital cost and shall have commenced construction of the project and achieved 75% of physical progress on 584 th day from the Appointed Date	11 th April 2020
Scheduled Completion	Concessionaire shall have completed Project on 730 th day from the Appointed Date	04 th September 2020

1.4. Payment milestone during Construction Period

Payment Milestone	Eligibility Criteria	Payment Amount (Rs.)
Milestone-I	On Achievement of 10% of Physical Progress	107.65 Crs.
Milestone-II	On Achievement of 30% of Physical Progress	107.65 Crs.
Milestone-III	On Achievement of 50% of Physical Progress	107.65 Crs.
Milestone-IV	On Achievement of 75% of Physical Progress	107.65 Crs.
Milestone-V	On Achievement of 90% of Physical Progress	107.65 Crs.

1.5. Permits & Approvals

Sr. No.	Details	Authority	Current Status	Remarks
1	Extraction of Boulders from Quarries	Distt. Mining Officer	Obtained	We have engaged Agate Infra Engineering for supply of boulders that is having a valid license for extraction of boulders and other required permission for the quarry at Kalpadi Village, Perambalur District.
2	Installation of Crusher	Village Panchayat Head	Obtained	
3	-----D O-----	Pollution Control Board	Obtained	
4	Use of Explosives	Distt. Collector	Obtained	
5	Labour License	Labour Commissioner	Obtained	
6	Environmental Clearance		NA	
7	Trees Cutting Permission	Forest department through NHAI	Obtained	Work in Progress, Felling Permission issued except Teak wood trees
8	Electric Poles Shifting	Tamilnadu Electricity Board	In progress	14 Nos. Estimates for shifting of electrical poles and transformers have been obtained from the concerned department in respect of Thanjavur District. All the 14 No of Estimates are approved by Competent Authority. Estimate for shifting of 03 towers has to be obtained from TANTRASCO. Joint inspection completed with field officers.
9	Water Pipes Shifting	Tamilnadu Water Supply and Drainage Board	In progress	30 Nos. Estimates have been received from Kumbakonam Union, 01 Estimate from Darasuram Municipality and 1 estimate from EE, TWAD Thanjavur has been received. All the estimates are approved by the RO, NHAI Madurai.
10	Drawing Water from river/ reservoir	-	NA	-

2. Right of Way Status

2.1. Land Acquisition

As per the Schedule – A of Concession Agreement, the Proposed Right of Way (ROW) is of 45 & 60 meters as per table below.

Table 2.1-1: Details of proposed ROW as per Schedule-A

	Design Chainage (Km)	Design Length (Km)	Width (m)	Remarks
(i) Full Right of Way (full width)				
Stretch	116.440 to 117.600	1.160	30	Within 15 (Fifteen) days from the date of Agreement.
Stretch	117.600 to 120.000	2.400	60	
Stretch	120.000 to 134.000	14.000	30	
Stretch	134.000 to 164.275	30.280	60	
Total Length		47.835		

Balance Right of way (width)

	Design Chainage (Km)	Design Length (Km)	Width (m)	
Stretch	116.440 to 117.600	1.160	30	Within 90(Ninety) days of the Appointed date
Stretch	120.000 to 120.340	0.34	20	
Stretch	124.700to 126.100	1.40	20	
Stretch	126. 700 to 127 .655	0.95	20	
Stretch	130.600 to 134.000	3.40	20	
Total Length		7.250		

Besides this, the Authority has to acquire additional land at Toll plaza location, Bus bays, turning radius at Major junctions.

Table 2.1-2: Status of Land Acquisition as per Site Condition

Sl. No.	Description	Unit	Present Status	Remarks
A)	Total Length of the Project Highway	Km	47.835	
i)	Use of Existing Road Portion	Km	15.835	
ii)	Proposed Bypass / Realignment portion	Km	32.000	
B)	Hindered Length			
i)	LA Issues	Km	8.820	
ii)	Existing Buildings	Km	2.515	
iii)	Pending for Disbursement of Payment	Km	5.475	
iv)	Electrical Lines	Km	7.300	
v)	Rural Water Supply lines	Km	11.205	
C)	Net Hindered Length (both Side)	Km	21.890	
D)	Total Project Length (both Side)	Km	47.835	
E)	% Hindered Length	%	45.76%	

The details of land acquisition status and available hindrances are produced on a strip chart under section 04.

The status of compensation disbursed is as below: -

Table 2.1-3: Compensation disbursement for land					
SL No.	Name of the District	Total No. of Land cases	Amount paid (in Nos.)	Balance to be Paid (in Nos.)	Remarks
1	Thanjavur	1467	1039	428	
	Total in Nos.	1467	1039	428	
	Total in %		70.82%	29.17%	

Table 2.1-4 - Compensation disbursement for Structures					
SI No.	Name of the District	Total No.of structures	Amount paid (in Nos)	Balance to be Paid (in Nos)	Remarks
1	Thanjavur	723	541	182	
	Total in Nos	723	541	182	
	Total in %			74.82%	25.18%

The details of Chainages under hindrance due to such balance compensation issues to their land owners, structure payment issues, standing crops, water pipe lines etc. are as below –

HINDRANCE STATEMENT						
Sr. No.	From	To	Length	Side	Effective Hindered Length	Remarks
1	116+440	117+600	1160	BHS	2320	Land Acquisition pending
2	117+760	118+480	720	BHS	1440	Obstruction of Existing irrigation canal needs to be relocated, Religious structures
3	120+000	120+340	340	BHS	680	Land Acquisition pending
4	124+150	124+700	550	BHS	1100	Obstruction of Existing irrigation canal needs to be relocated.
5	124+700	126+100	1400	BHS	2800	Land Acquisition pending, Religious structures
6	126+700	127+655	955	BHS	1910	Land Acquisition pending
7	128+350	128+400	50	LHS	50	Religious Structures
8	129+500	130+100	600	BHS	1200	Compensation Disbursement balance - Not allowed to work by owner, Religious structures
9	130+600	134+000	3400	BHS	6800	Land Acquisition pending
10	138+200	138+600	400	BHS	800	Court Stay of Land owners Mr.Dharmalingam & Mr.Shanmugam
11	138+600	139+000	400	BHS	800	Court Stay and Payment issue of Land owners Mr.Dhahshnamoorthy, Mr.Rajini, Mr.nagaraj
12	139+100	139+600	500	BHS	1000	Payment Issue of Land owners Mrs.Valarmathi Kailasam

HINDRANCE STATEMENT						
Sr. No.	From	To	Length	Side	Effective Hindered Length	Remarks
13	141+900	142+400	500	BHS	1000	Payment Issue of Land owners Mr.Pakir Mohammed
14	144+800	144+850	50	BHS	100	Obstruction of teak wood
15	146+600	148+100	1500	BHS	3000	Obstruction of Existing irrigation canal needs to be relocated. & Obstruction of teak wood
16	149+330	149+340	10	BHS	20	Obstruction of teak wood
17	150+600	150+900	300	BHS	600	Obstruction of existing irrigation sluices and teak wood
18	152+800	153+100	300	BHS	600	Obstruction of existing irrigation sluices
19	154+600	154+900	300	BHS	600	Obstruction of Existing irrigation canal needs to be relocated.
20	156+200	156+500	300	BHS	600	Obstruction of teak wood
21	158+500	158+700	200	BHS	400	Hindrances of High Tension Transmission Towers.
22	160+200	160+400	200	BHS	400	Compensation Disbursement balance - Not allowed to work by owner
23	161+000	162+000	1000	BHS	2000	LA issues - owner name Ms Tamilselvei
24	162+400	162+600	200	BHS	400	LA issues - owner name Mr. James P Raja

2.2. Removal of Religious Structures

The following structures coming within the ROW are to be demolished

Table 2.2-1: Status of Removal of Religious structures				
Sl. No.	Name of the District	Total No. of structures	Removed as on Date (in Nos.)	Balance (in Nos.)
1	Thanjavur	13	0	13
Valuation of Religious structures is in progress.				

2.3. Shifting of Utilities and Electrical HT/LT Lines

To proceed with the project construction, several utilities are required to be shifted under the supervision of the respective authorities. These include a water supply line, hand pumps, overhead water tanks, besides Electrical lines, as shown in the table below.

Table 2.3-1: Status of sanction of Estimates - Relocation of RWS Pipe line						
Sl. No	Name of the District	Chainages			Total Number of Estimates	Remarks
		From	To	Length in Km		
1	Thanjavur	116+440	164+275	47.835	32	Work is in Progress

Table 2.3-2: Status of sanction of Estimates - Electrical Lines Relocation							
Sl. No	Name of the District	Chainages			Number of Estimates	Present Status	Remarks
		From	To	Length in Km			
1	Thanjavur	116+440	164+275	47.835	14	Work in Progress	

Estimates for shifting of the above Electric lines have been prepared. The estimated cost is approximately Rs. 10.50 crores.

Estimates have been done for the shifting of the water supply pipeline & related items mentioned above. The estimated cost is approximately Rs. 6.8 crores.

Table 2.3-3: Status of Utility Relocation							
Sl. No.	Authority	Description	Unit	Total Length/ Nos.	Work done	Balance	Remarks
1	BDO & EE,TWAD	Water Supply Pipe Line	Kms.	31.04	1.68	29.36	Work in Progress
2	BDO of Concern Union	Hand Pump/Pump Room with Bore well	Nos.	16	0	16	
3	BDO of Concern Union	Over Head Tank	Nos.	2	0	2	Work in Progress
4	TNEB	Electrical Lines	Kms.	19.215	10.425	8.790	Work in Progress

2.4. Tree felling

Table 2.4-1: Status of Tree felling									
Sl.No .	Name of the District	Chainages			Effected Length in Kms	Total No. of Trees	Felled/ Removed as on Date	Balance no. of Trees	Remarks
		From	To	Length in Km					
1	Thanjavur	116+440	164+275	47.837	15.310	1461	1063	398	Work in Progress
Total				47.835					

CHOLOPURAM TO THANJAVUR HIGHWAY PROJECT

HINDRANCE STATEMENT

Sr.No.	From	To	Length	Side	Effective Hindered Length	Remarks
1	116+440	117+600	1160	BHS	2320	Land Acquisition pending
2	117+760	118+480	720	BHS	1440	Obstruction of Existing irrigation canal needs to be relocated, Religious structures
3	120+000	120+340	340	BHS	680	Land Acquisition pending
4	124+150	124+700	550	BHS	1100	Obstruction of Existing irrigation canal needs to be relocated.
5	124+700	126+100	1400	BHS	2800	Land Acquisition pending, Religious structures
6	126+700	127+655	955	BHS	1910	Land Acquisition pending
7	128+350	128+400	50	LHS	50	Religious Structures
8	129+500	130+100	600	BHS	1200	Compensation Disbursement balance - Not allowed to work by owner, Religious structures
9	130+600	134+000	3400	BHS	6800	Land Acquisition pending
10	138+200	138+600	400	BHS	800	Court Stay of Land owners Mr.Dharmalingam & Mr.Shannugam
11	138+600	139+000	400	BHS	800	Court Stay and Payment issue of Land owners Mr.Dhahshnamoorthy, Mr.Rajini, Mr.nagaraj
12	139+100	139+600	500	BHS	1000	Payment Issue of Land owners Mrs.Valarmathi Kailasam
13	141+900	142+400	500	BHS	1000	Payment Issue of Land owners Mr.Pakir Mohammed
14	144+800	144+850	50	BHS	100	Obstruction of teak wood
15	146+600	148+100	1500	BHS	3000	Obstruction of Existing irrigation canal needs to be relocated. & Obstruction of teak wood
16	149+330	149+340	10	BHS	20	Obstruction of teak wood
17	150+600	150+900	300	BHS	600	Obstruction of existing irrigation sluices and teak wood
18	152+800	153+100	300	BHS	600	Obstruction of existing irrigation sluices
19	154+600	154+900	300	BHS	600	Obstruction of Existing irrigation canal needs to be relocated.
20	156+200	156+500	300	BHS	600	Obstruction of teak wood
21	158+500	158+700	200	BHS	400	Hindrances of High Tension Transmission Towers.
22	160+200	160+400	200	BHS	400	Compensation Disbursement balance - Not allowed to work by owner
23	161+000	162+000	1000	BHS	2000	LA issues - owner name Ms Tamilselvei
24	162+400	162+600	200	BHS	400	LA issues - owner name Mr. James P Raja
Total Hindered Length (Km.)					30.62	
Total Project Length (Km.)					95.67	
% Hindered Length					32.01%	

MPR FEBRUARY 2019

Table 2.1.6 - Hindrance Photographs

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	30	Houses (2 nos)	116+440	116+470	Houses (6 nos), Mango farm, Cocunut farm	30		
	60	Houses (6 nos), Culvert & Trees	116+520	116+580				
			116+580	116+600	Canal crossing, culvert & Trees	20		
	50	Houses (4 nos), Electrical Pole & Trees	116+600	116+650	Canal crossing & Trees	50		
	50	Houses (2 nos), Electrical Pole & Trees	116+650	116+700	Bore Well, Pump set, Electrical Pole & Trees	50		
	50	Trees	116+700	116+750	Houses (7 nos), Electrical Pole & Trees	50		
	50	Houses (6 nos), Electrical Pole & Trees	116+750	116+800	Houses (4 nos) & Cocunut Trees	50		
	50	Vinayagar Temple, Houses (7 nos) & Electrical Pole (3 nos)	116+800	116+850	Houses (5 nos), & Cocunut Trees	50		
	50	Houses (7 nos), Electrical Poles & Trees	116+850	116+900	Houses (8 nos) & Cocunut Trees	50		
	50	Houses (5 nos), Culvert, Electrical Poles & Cocunut Trees	116+900	116+950	Houses (6 nos) & Cocunut Trees	50		
	30	Houses (2 nos), Electrical Pole (3 nos) & Trees	116+950	117+980	Cocunut Trees & Nala	30		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	20	Houses (2 nos), Electrical Poles & Trees	116+980	117+000	Cocunut Trees, Fencing & Electrical Pole	20		
	50	Houses (7 nos), Electrical Pole (4 nos) & Trees	117+000	117+050	Church & Shops (3 nos)	50		
	50	Houses (5 nos), Electrical Poles & Trees	117+050	117+100	Houses (7 nos), Electrical Poles & Trees	50		
	50	Houses (8 nos), Electrical Poles (3 nos) & Trees	117+150	117+200	Houses (6 nos), Ration Shop, Electrical Poles, Trees & Pond	50		
	50	Temple, Houses (2 nos) & Cocunut Trees	117+200	117+250	Houses (9 nos), Electrical Poles & Trees	50		
	50	Houses (3 nos), Electrical Poles & Trees	117+250	117+300	Houses (2 nos), Electrical Poles & Trees	50		
	50	Houses (3 nos), Electrical Poles & Trees	117+300	117+350	Houses (3 nos), Electrical Poles & Trees	50		
	50	Houses (4 nos), Electrical Poles & Trees	117+350	117+400	Houses (4 nos), Electrical Poles & Trees	50		
	50	Houses (5 nos), Electrical Poles & Trees	117+400	117+450	Houses (6 nos), Electrical Poles & Cocunut Trees	50		
	50	Houses (4 nos), Bus shelter, Water Tank, Electrical Poles & Trees	117+450	117+500	Houses (5 nos), Electrical Poles & Trees	50		
	50	Houses (4 nos), Electrical Poles & Trees	117+500	117+550	Trees & Electrical Poles	50		
	50	Trees & Electrical Poles	117+550	117+600	Houses (4 nos), Electrical Poles & Trees	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Houses (5 nos), Electrical Poles & Trees	117+600	117+650	Houses (3 nos), Electrical Poles & Trees	50		
	30	Teak Wood Trees	117+650	117+680	Demolished structure & Bamboo Trees	30		
	25	Pond	117+740					
	72	Existing Canal	117+760	118+480	Existing Canal	72		
			117+800		Teak wood Trees	20		
	-		117+830		Pump set	15		
	-		117+900		Canal	15		
	10	Electrical Pole	118+000	118+050	Canal & Culvert	15		
	15	Demolished House Structure	118+930		Demolished House Structure	15		
	-		119+600		Govt School Building Structures (Partly)	15		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	20	House (1 no.) & Cocunut Trees	120+000					
	50	House (3 nos), Teak wood Trees	120+050	120+100	Bus shelter, House (3 nos), Electrical Pole (3 nos) & Teak wood Trees	50		
	50	Cocunut farm, Pond & Trees	120+200	120+250	Temple, Houses (2 nos) & Electrical Pole	50		
	30	Houses (2 nos), Electrical Pole, Culvert & Cocunut farm	120+250	120+280	Houses (3 nos), Electrical Poles & Cocunut farm	30		
	20	Houses (1 no.), Electrical Pole, Culvert, Nala & Cocunut farm	120+280	120+300	Houses (2 nos), Electrical Poles & Cocunut farm	20		
	50	Houses (4 nos), Electrical Poles & Cocunut farm	120+300	120+350	Houses (3 nos), Electrical Poles, Culvert & Trees	50		
	50	Shops, Electrical Pole & Cocunut farm	120+350	120+400	House, Electrical Pole & Teak wood Trees	50		
	50	Houses (2 nos), Electrical Poles & Cocunut Trees	120+400	120+450	Houses (4 nos), Petrol Pump, Electrical Poles (2 nos) & Cocunut Trees	50		
	50	Houses (2 nos), Shops, Cocunut & Teak wood Trees	120+450	120+500	Houses (3 nos), Electrical Poles & Trees	50		
	50	Houses (8 nos), Electrical Poles, Cocunut & Teak wood Trees	120+500	120+550	Houses (8 nos), Electrical Poles, Cocunut & Teak wood Trees	50		
	50	Houses (4 nos) & Cocunut farm	120+550	120+600	House (1 no.), Electrical Pole & Cocunut Trees	50		
	50	Houses (6 nos), Fencing, Electrical Pole, Cocunut & Teak wood Trees	120+600	120+650	Houses (5 nos), Fencing, Electrical Pole, Cocunut, Mango Trees & Fish Pond	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	30	Houses, Cocunut & Teak wood Trees	120+650	120+680	Pond & Trees	30		
	40	Shops, Cocunut & Teak wood Trees	120+680	120+720	Next crop planted & Fencing	40		
	80	Next crop planted, Electrical Poles & Trees	120+720	120+800	House (1 no.), Transformer, Electrical Poles (4 nos) & Trees	80		
	50	Houses (3 nos), Culvert & Trees	120+800	120+850	Houses (2 nos), Electrical Poles (3 nos) & Trees	50		
	30	Houses (3 nos), Electrical Poles & Trees	120+900	121+930	Houses (1 no.), Fencing, Electrical Pole (4 nos) & Trees	30		
	20	Preparing for next crop, Electrical Pole & Trees	121+930	121+950	Houses (2 nos), Electrical Pole (2 nos) & Trees	20		
	50	Electrical Pole & Trees	121+950	121+000	Houses (2 nos), Electrical Pole (2 nos) & Trees	50		
	10	Electrical Pole & Trees	121+050		Transformer, Electrical Poles (3 nos) & Trees	20		
-	-		121+100		Electrical Pole	10		
	50	Cocunut Trees, Teak wood Trees & Jungle	121+150		Electrical Pole & Trees	20		
	50	Bus shelter, Houses (3 nos), Electrical Poles (2 nos) & Trees	121+200	121+250	Bus shelter, Trees & Jungle	50		
	50	House (1 no.), Electrical Pole & Trees	121+250	121+300	House (3 no.), Electrical Poles (5 nos) & Trees	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Electrical Pole, Trees & Jungle	121+300	121+350	House (2 nos), Electrical Pole & Trees	50		
	80	Electrical Pole, Trees & Jungle	121+350	121+430	Houses (9 nos), Electrical Poles (3 nos) & Trees	80		
	70	Electrical Poles, Trees & Jungle	121+430	121+500	Electrical Poles, Trees & Jungle	70		
	50	House (1 no.), Electrical Poles, Trees & Jungle	121+500	121+550	Electrical Poles, Culvert, Trees & Jungle	50		
	70	Temple, Houses (3 nos) & Cocunut Trees	121+550	121+620	Houses (2 nos), Electrical Pole, Mango Trees 7 Jungle	70		
	60	Shops, Houses, Electrical Poles, Cocunut Trees, Jungle & Culvert	121+620	121+680	Cocunut Trees (12 nos), Trees & Jungle	60		
	40	Pump set, Structure & Cocunut Trees (8 nos)	121+680	121+720	Electrical Pole & Trees	40		
	20	Trees & Jungle	121+720	121+800	Electrical Pole	10		
	50	Transformer, Electrical Poles & Trees	121+800	121+850	Church Gate, Boundary Wall	50		
	15	Transformer, Electrical Poles (4 nos)	121+930		Electrical Poles (2 nos)	15		
	20	Electrical Poles, existing bridge structure & Trees	122+020		Electrical Pole & Trees	10		
		River crossing & Trees	122+030		River crossing & Trees			

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	-	-	122+080		Temple, Electrical Pole, Canal & Banyan Trees	25		
	20	Electrical Pole & Trees	122+130		Trees (3 nos)	20		
	15	Electrical Poles, Canal, Banana farm & Teak wood Trees	122+200		Pump set & Electrical Poles	15		
	80	Banana farm, Canal, Teak wood Trees, Transformer & Electrical Poles	122+220	122+300	Teak wood Trees, Electrical Pole & Banana farm	80		
	100	Electrical Poles, Teak wood Trees & Canal	122+300	122+400	HP Petrol Bunk & Electrical Poles	100		
	100	Canal, Teak wood Trees	122+400	122+500	Cocunut farm, Canal, Teak wood Trees	100		
	100	Small structure (Entrance Arch), Teak wood Trees & canal	122+500	122+600	Teak wood Trees & Jungle	100		
	120	Teak Wood Trees, Canal & Jungle	122+700	122+820	-	-		
	10	Teak wood Trees & Canal	122+900		Electrical Pole & Jungle	10		
	100	Canal & Teak wood Trees	122+900	123+000	Electrical Pole, Trees & Jungle	100		
	150	Collage Boundary & Arch Structure, Lighting Posts & Canal crossings	123+000	123+150	Electrical Poles (3 nos)	150		
	70	Canal, Teak wood Trees & Jungle	123+230	123+300	Transformer, Electrical Poles (3 nos) & Trees	70		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Electrical Pole & line crossing, Teak wood Trees, Existing Culvert & Jungle	123+300	123+350	Electrical Poles & Trees & Jungle	50		
	25	Temple & Trees	123+850		Bus shelter, Godown, Overhead Tank & Electrical Poles	25		
	10	Canal crossing & Trees	123+900		Pump set & Electrical Poles	15		
	100	Electrical Pole & Trees	125+700	125+800	Compound Wall	100		
	50	Houses (3 nos), Electrical Poles & Trees	125+800	125+850	Houses (4 nos), Electrical Poles & Trees	50		
	50	Houses (4 nos), Electrical Poles & Trees	125+850	125+900	Houses (2 nos), Electrical Poles & Trees	50		
	50	Govt building, House (1 no), Electrical Poles & Trees	125+900	125+950	Houses (3 nos), Electrical Poles & Trees	50		
	100	House (1 no), Water tap & Trees	125+950	126+050	Houses (3 nos) & Trees	100		
	50	Building, Hut (2 nos) & Trees (21 nos)	126+050	126+100	Temple, Houses (5 nos), Electrical Pole (4 nos) & Trees (13 nos)	50		
	100	Pond & Trees	126+400	126+500	Pond & Trees	100		
	100	Bus shelter, Fencing, Houses (4 nos), Electrical Pole & Trees (7 nos)	126+700	126+800	Rice Mill, Houses (4 nos), Hut, Electrical Pole & Trees (13 nos)	100		
	100	Houses (4 nos), Hand pump, Transformer & Electrical Poles	126+800	126+900	Temple, Houses (4 nos), Electrical Pole (2 nos) & Trees (13 nos)	100		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	100	Bus shelter, Pump house, Electrical Pole (4 nos) & Trees (13 nos)	126+900	127+000	Electrical Pole (4 nos), Telephone Pole, Sign board & Trees (14 nos)	100		
	100	Building (4 nos), Electrical Pole (4 nos), Sign boards (4 nos) & Trees (14 nos)	127+100	127+200	Pump house, Electrical Poles (4 nos), Transformer, Sign boards & Trees (10 nos)	100		
	100	Building (2 nos), Electrical Pole (9 nos), Sign boards (4 nos) & Trees (10 nos)	127+200	127+300	Arch, Compound Wall, Electrical Pole (5 nos) & Trees (3 nos)	100		
	30	Commercial building (3 nos), Electrical Pole (6 nos) & Line crossing & Trees (3 nos)	127+650	127+800	Building Compnd Wall, Electrical Pole (6 nos) & Trees (2nos)	30		
	20	Trees (5 nos)	128+000	128+120	Pump house, Bore well, Transformer & Electrical Pole (3 nos)	30		
	10	Electrical Pole (1 no.)	128+120	128+200	Electrical Pole (4 nos)	40		
-	-		128+200	128+300	Electrical Pole (2 nos)	20		
	25	Small Temple with Gate & Trees (4 nos)	128+300	128+350	Electrical Pole (2 nos)	20		
	10	Tree	128+350	128+400	Electrical Pole (2 nos)	20		
	15	Electrical Pole, Tree & Existing Culvert	128+400	128+500	Electrical Poles (3 nos)	30		
	10	Tree	128+500	128+550	Electrical Poles (2 nos)	20		
-	-		128+550	128+600	Electrical Poles	10		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	30	Trees & Jungle	128+600	128+700	Shops (6 nos) & Houses (2 nos), Electrical Poles (5 nos) & Trees	40		
	60	Fencing, Trees & Jungle	128+700	128+800	-	-		
	40	Indian Oil Petrol Bunk, Small Temple, steel pole & Trees	128+800	128+900	Trees & Jungle	20		
	20	Under construction House, Electrical Pole (3 nos)	128+900	128+950	-	-		
	50	Shops (9 nos), Transformer & Electrical Poles (5 nos)	128+950	129+000	Electrical Pole & Trees	20		
	30	Electrical Pole (3 nos), Street light & Steel arch	129+120	129+200	Under construction house, Trees & Jungle	40		
	30	Electrical Pole, Trees & Jungle	129+200	129+300	Trees & Jungle	20		
	50	Wooden work factory, Electrical Pole (4 nos), Trees & Jungle	129+700	129+750	Banana farm, Trees & Electrical Pole	50		
	50	Building, Electrical Pole, Trees (4 nos)	129+900	129+950	Compound Wall, Electrical Pole & Trees	50		
	20	Trees (4 nos) & Jungle	129+950	130+000	Transformer, Electrical Poles (2 nos) & Jungle	20		
	20	Electrical Pole & Trees	130+000	130+120	Electrical Poles (5 nos), Arch & Trees	20		
	60	Houses (4 nos), Electrical Pole (3 nos), Coconut & teak wood Trees	130+120	130+200	Houses (3 nos), Electrical Poles (4 nos) & Transformer	60		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Houses (2 nos), Electrical Pole & Trees (4 nos)	130+200	130+250	Houses (6 nos), Electrical Poles (2 nos) & Cocunut Trees	50		
	50	Houses Fencing (1 nos), Electrical Pole & Trees (3 nos)	130+250	130+300	Houses (4 nos), Electrical Poles (2 nos) & Cocunut Trees	50		
	50	Shops, Electrical Pole & Trees	130+300	130+350	Compound Wall, Electrical Pole (3 nos) & Trees	50		
	50	Houses (3 nos), Electrical Poles (2 nos) & Trees	130+350	130+400	Houses (6 nos), Electrical Poles (2 nos) & Trees	50		
	50	Houses (7 nos), Electrical Poles (2 nos) & Trees	130+400	130+450	Houses (3 nos), Trees & Jungle	50		
	50	Under construction building, Electrical Pole & Teak wood Trees	130+450	130+500	Fencing, Trees, Electrical Pole & Jungle	50		
	20	Teak wood Trees & Jungle	130+500	130+550	Trees & Jungle	20		
	20	Fencing, Trees & Jungle	130+550	130+600	Fencing Pole preperation shop, Trees & Jungle	20		
	20	Trees & Jungle	130+600	130+700	Shops (6 nos), Electrical Poles (2 nos) & Trees	40		
	30	House with Gate (1 no), Electrical Pole (3 nos),	130+700	130+780	Trees, Electrical Poles & Culvert structure	30		
	10	Electrical Pole & Line crossing	130+780	130+800	Electrical Pole & Line crossing	10		
	40	Trees (10 nos), Trees & Jungle	130+800	130+900	Trees (6 nos), Electrical Pole, Trees & Jungle	40		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	20	Electrical Pole (3 nos), Existing culvert & Jungle	130+900	131+000	Arch, Existing culvert, Electrical Pole, Trees & Jungle	20		
	20	Trees (7 nos) & Electrical Pole	131+000	131+100	Building (4 nos), Shop, Trees (3 nos), Electrical Pole & Trees	40		
	20	Trees (6 nos) & Electrical Pole	131+100	131+200	Temple (1 no.), Trees (4 nos) & Jungle	25		
	25	Hotel (1 no.) & Electrical Pole (2 nos)	131+200	131+300	Trees (3 nos) & Electrical Pole	20		
	30	Carpenter Shop, Electrical Pole (4 nos) & Jungle	131+300	131+400	Under construction building, Electrical Pole, Pump set, Trees & Jungle	30		
	40	Electrical Poles (2 nos), Teak wood Trees & Jungle	131+400	131+500	Electrical Pole, Existing culvert & Jungle	35		
	20	Fencing, Trees (6 nos) & Jungle	131+500	131+600	Marble showroom, Electrical Poles & Line crossing (2 nos), Trees & Jungle	40		
	20	Fencing, Electrical Poles (2 nos), Existing culvert & Jungle	131+600	131+700	Electrical Pole, Trees & Jungle	20		
	40	High mast light, Sign boards, Houses (4 nos), Electrical Poles (3 nos) & Trees (8 nos)	131+700	131+800	Advertisement board, Fencing, Houses (4 nos), Electrical Poles (2 nos) & Trees	40		
	20	Houses (4 nos), Over head tank, Cocunut Trees & Jungle	131+800	131+920	Trees & Jungle	20		
	30	River crossing & Trees	131+920	132+000	River crossing & Trees	30		
	40	Cocunut farm	132+000	132+100	Trees & Jungle	40		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	60	Banana farm & Trees (10 nos)	132+100	132+200	Trees & Jungle	40		
	50	Houses (3 nos), Shop (1 no. & Electrical Pole)	132+200	132+250	Electrical Pole, Trees & Jungle	50		
	60	House, Teak wood Trees, Banana & Cocunut Trees	132+300	132+400	Teak wood Trees, Banana & Cocunut Trees, Electrical Pole & Jungle	60		
	40	Shop & Godown, Fencing with Gate	132+400	132+500	Teak wood Trees, Banana & Cocunut Trees, Electrical Pole & Jungle	50		
	30	Teak wood Trees & Trees (6 nos)	132+500	132+600	Compound wall, Trees (6 nos) & Jungle	30		
	30	Bore well, Pump set, Electrical Poles (9 nos) & Line crossing & Trees	132+600	132+730	Under construction House (1 no.), Electrical Poles (4 nos) & Line crossing & Trees	30		
	25	Overhead Water Tank	132+730	132+800	Trees & Jungle	20	-	
	50	Trees & Jungle	132+800	132+900	Coconut farm, Electrical Poles (2 nos), Teak wood Trees & Jungle	50		
	100	Banana farm, Pump set & Trees	132+900	133+000	Pump set, Banana farm, Electrical Poles (2 nos) & Line crossing & Cocunut Trees	100		
	100	Motor garage shop, Electrical Pole (2 nos) & Banana farm	133+000	133+100	Cocunut Trees, Existing culvert & Jungle	100		
	45	Temple, Hand pump, 1 no. of buildings, Electrical Poles (2 nos) & Trees	133+100	133+150	Electrical Poles (2 nos) & line crossing & Trees	20		
	50	High mast light, 3 no. of buildings, Electrical Poles (4 nos) & Trees	133+150	133+200	Houses (3 nos), Street lighting pole, Electrical Poles (2 nos) & Trees	50		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	30	River crossing & Trees (Approaches)	133+280	133+350	River crossing & Trees (Approaches)	30		
	50	Cocunut farm, Pump set & Trees	133+350	133+400	Trees & Jungle	50		
	50	Compound wall, Electrical Pole & Trees (7 nos)	133+400	133+500	Trees, Existing culvert & Jungle	30		
	60	Hotels (2 nos), Electrical Poles (2 nos) & Trees	133+500	133+600	School compound wall Fencing & Trees (12 nos)	50		
	30	Houses (2 nos), Electrical Pole (1 no.), School compound wall fencing	133+600	133+700	Compound wall, Transformer, Electrical Poles (2 nos), Arch & Trees (10 nos)	60		
	40	Compound Wall, Electrical Pole, Trees & Jungle	133+700	133+750	House (1 no.), Pond, Compound wall, building & Electrical Poles & Trees	40		
	30	House, Electrical Pole, Trees & Jungle	133+750	133+800	House, Electrical Poles & Trees	30		
	50	Houses (3 nos), Trees & Jungle	133+800	133+900	House (1 no.), Electrical Poles (3 nos), Trees & Jungle	40		
	30	Sign boards, Houses (2 nos), Building, Electrical Poles (2 nos),	133+900	133+950	Shops, Lighting Poles (2 nos) & Electrical Poles (2 nos)	30		
	30	High mast light, Sign boards & Electrical Poles	133+950	134+000	High mast light, Sign boards & Electrical Poles	30		
	10	Electrical Pole	134+030		Mayanam	10		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	30	House & Trees	134+080		House & Trees	30		Encroachment
	-	Railway Crossing	134+380		Railway Crossing	-		ROB @ CH: 134+345
	20	Regulator & Trees	134+710		-	-	-	water regulator sluice to be relocated
	40	HT Tower & Banana Farm	135+400		-	-	-	
	10	Electrical Pole & Line Crossing	135+750		Electrical Pole & Line Crossing	10		
	50	Electrical Pole & Line Crossing, Standing Crop & Trees	135+500		Electrical Pole & Line Crossing	20		
	10	Electrical Pole & Line Crossing	136+100		Electrical Pole & Line Crossing	10		
	100	Coconut farm & Electrical Pole	136+150	136+250	Coconut farm & Electrical Pole	100	-	
	10	Road crossing, Electrical pole & Trees	136+300		Patteswaram to Swamimalai Road	10		VUP @ CH: 136+282
			136+450		House & Coconut farm	50	-	
	90	Coconut farm & Vegetable farm	136+550	136+640	Houses (2 nos) & Coconut farm	90		
	20	Coconut farm	136+620	136+660	-	-	-	

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	40	Cocunut farm & Vegetable farm	136+660	136+700	Electrical Tower & Vegetable farm	40		
	10	Electrical Pole & Line crossing	137+040		Electrical Pole & Line crossing	10		
	20	Road crossing & Electrical pole	137+100		House & Trees	20		
	-		137+150		Electrical Pole	10		
	70	Fish Pond & Trees	137+180	137+250	Fish Pond & Trees	70		
	10	Electrical Pole	137+250		-	-		
	100	Fish Pond	137+300	137+400	Fish Pond & Trees (10 nos)	100		
	150	Standing Crop, Teak wood Trees & Electrical Pole	137+400	137+550	Standing Crop & Teak wood Trees & Electrical Pole	150		
	70	Standing crop, Transformer, Electrical Pole & Trees	137+550	137+620	Standing crop, Road crossing (Patteswaram to Sundaraperumalkoil) & Trees	70		
	80	Cocunut farm	137+620	137+700	Standing crop & Electrical Pole	80		
	50	Cocunut farm	137+700	137+750	Cocunut farm	50		
	10	Electrical Pole & Line Crossing	137+850		Electrical Pole & Line Crossing	10		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	10	Electrical Pole	137+900		Electrical Pole	10		
	100	Pump set, Mango farm & Teak Wood Trees	138+100	138+200	Mango farm & Teak Wood Trees	100		
	60	Pump set, Banana farm, Cocunut farm & Teak wood Trees	138+240	138+300	Banana farm, Cocunut farm & Teak wood Trees	60		
	150	Mango farm & Teak wood Trees	138+300	138+450	Pump set, Mango farm & Teak wood Trees	150		
	100	Pump set, Banana farm, Cocunut farm & Canal crossing	138+450	138+550	Pump set, Banana farm, Cocunut farm & Canal crossing	100		
	50	Fish pond, Banana farm & Trees	138+620	138+670	Pump set, Fish pond, Banana farm & Trees	50		
	10	Electrical Pole & Line Crossing & Trees	138+680		Electrical Pole & Line Crossing & Trees	10		
	20	Road Crossing, Trees & EB Pole	138+730					
	20	Cocunut farm, Electrical Pole & Trees	138+730	138+750	Cocunut farm, Electrical Pole & Trees	20		
	50	Houses (7 nos), Trees & Electrical Poles	138+750	138+800	Cocunut farm, Banana farm & Teak wood Trees	50		
	30	River crossing & Trees	139+250	139+280	River crossing & Trees	30		
	20	Electrical Poles & Line Crossing, Road crossing & Trees	139+450		Electrical Poles & Line Crossing, Road crossing & Trees	20		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	-	-	139+460		Sump, Pump house & Bore Well	30		
	20	Canal Crossing & Trees	140+860		Canal Crossing & Trees	20		
	20	Small Temple	140+900		EB Pole & Line Crossing	20		
	15	Road crossing & Trees	141+102		Nallur to Avuru Road	15		
	-	-	141+130	141+220	EB Pole & Line Crossing	90		
	100	Cocunut Trees & Electrical pole	141+300	141+400	Cocunut Trees & Electrical pole	100		
	-	Electrical Pole & Line Crossing & Trees	141+330		Electrical Pole & Line Crossing & Trees	-		
	30	Road crossing & Trees	141+550		-	-		
	-	Road crossing	142+000		Kotaichery to Kalachery	-		
	20	Bore well, Pump house & Trees	142+260		EB Pole & Line Crossing	10		
	20	Bore Well	142+500		Electrical Pole & Line Crossing	10		
	80	Bamboo, Mango trees & Sugarcane farm	142+570	142+650	Bamboo, Mango trees & Sugarcane farm	80		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	20	High Tension Tower	142+850		-	-		
	-	-	143+100		High Tension Tower	20		
	30	River crossing & Trees	143+115		River crossing & Trees	30		
	40	Pump set & Bamboo trees	143+300		Bamboo trees	40		
	20	EB Pole & Trees	143+600		EB Pole & Trees	20		
	-	-	143+850		Electrical Pole & Line Crossing & Trees	15		
	30	River crossing & Trees	144+050		River crossing & Trees	30		
	15	Bore Well & Tree	144+450		-	-		
	50	Teak wood trees	144+750		Teak wood trees	50		
	20	Temple	145+500		-	-		
			145+520		Pump Set & Electrical Pole	20		
			145+620		Trees	20		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	10	Electrical Pole & Line Crossing	146+000		Electrical Pole & Line Crossing	10		
	20	Pump set	146+050		Electrical Pole & Line Crossing	10		
	10	Electrical Pole & Line Crossing	146+070		Trees	10		
	20	Pump set & Trees	146+130		Electrical Pole & Line Crossing	10		
	10	Electrical Pole	146+200		-	-		
	20	Trees & Electrical Pole	146+300		Trees & Electrical Pole	20		
	-	River Crossing	146+630		River Crossing	-		
	20	Electrical Pole & Line Crossing	146+700	146+720	Electrical Pole & Line Crossing & Trees	20		
	1500	Existing Canal	146+600	148+100	Existing Canal	1500		
	10	Nala Crossing, Trees & Electrical Pole	146+780		Nala Crossing, Trees & Electrical Pole	10		
	20	Pump set, River Crossing, Trees & Electrical Pole	146+830		River Crossing, Trees & Electrical Pole	20		
	20	Pump set	146+900		Trees & EB Pole	20		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	30	Nala Crossing & Trees	146+900		Nala Crossing & Trees	30		
	15	Pump set	147+050		-	-		
			147+100		High Tension Tower	40		
	20	High Tension Tower	147+330		-	-		
	20	Bore well & Pump house	147+380		-	-		
	30	Nala Crossing & Trees	147+370	147+400	House	30		
			147+410	147+450	Houses, Trees & Electrical Line	40		
	20	Teak wood trees	147+520		Teak wood trees	20		
	30	Electrical Pole & Line Crossing	147+880		Electrical Pole & Line Crossing	30		
	20	Road Crossing, Trees & EB Pole	147+900		Road Crossing, Trees & EB Pole	20		
	120	Banana Farm & Nala crossing	147+900	148+020	Trees & EB Pole & Nala crossing	120		
	20	Canal Crossing & Trees	148+050		Canal Crossing & Trees	20		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
A photograph showing a banana farm with several trees and a pump set near an electrical pole.	250	Banana Farm, Pump set & EB Pole	148+300	148+550	Banana Farm, Pump set & EB Pole	250	A photograph of the same scene from a different angle, showing a small building and utility poles.	
A photograph of a field with five electrical poles standing in a row.	10	EB Pole & trees (5 nos)	149+100		Pump set & EB Pole	20	A photograph of the same field with utility poles and a nearby building.	
A photograph of a single electrical pole standing in a field.	10	EB Electrical Pole	149+150		EB Electrical Pole	10	A photograph of the same pole from a closer perspective.	
A photograph of a river crossing with trees on either side.	40	River crossing	149+300		Trees (4 nos)	40	A photograph of the same area with trees and a path.	
A photograph of a pump set installed next to a concrete structure.	20	Pump set	149+900		Pump set & Electrical Pole	20	A photograph of the same pump set and pole near a building.	
A photograph of a small pump house situated in a field.	20	Pump house	150+610		EB Pole & Line crossing & Trees (2 nos)	10	A photograph of the same pump house and utility poles in the background.	
A photograph of a river crossing with trees and an electrical pole.	70	River Crossing, Trees & EB Pole	150+780		Regulator & trees	70	A photograph of the same area with a concrete structure and utility poles.	
		Existing Sluice	150+800		Existing Sluice			
A photograph of a field with eight trees and a watercourse crossing.	50	Tress (8 nos) & Nala crossing	151+050	151+100	Tress (6 nos) & Nala crossing	50	A photograph of the same trees and crossing from a different angle.	
A photograph of a field where the next crop has been planted.	-	Next crop planted	151+200		Pump set & Trees (2 nos)	15	A photograph of the same field with utility poles and a sign.	
A photograph of a field with teak wood trees.	130	Teak wood trees	151+500	151+630	Teak wood trees	130	A photograph of a person pointing at one of the teak wood trees.	
A photograph of a pump set and utility poles.	20	Pump set & Electrical Pole & line crossing	151+650		Electrical Pole	20	A photograph of the same pump set and pole with utility lines.	

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	-	Road Crossing, Trees & EB Pole	152+350		Sulamangalam to Palasakudi	-		
	100	Cocunut Farm & Baniyan trees	152+400	152+500	Cocunut Farm & Baniyan trees	100		
	-	Existing Sluice	152+900		Existing Sluice	-		
	20	Canal Crossing & Trees	152+900		Canal Crossing & Trees	20		
	10	EB Pole & Trees	153+500		EB Pole & Trees	10		
	15	Electrical Tower	153+720		Electrical Pole & Trees	15		
	15	Road crossing & Trees	153+900		Road crossing & Trees	15		
	20	Canal Crossing & Trees	153+920		Canal Crossing & Trees	20		
	40	Houses (6 nos), Electrical pole & Trees	154+590	154+630	Houses (6 nos), Electrical pole & Trees	40		
	120	Bamboo trees & trees & Canal crossing	154+630	154+750	Bamboo trees & trees & Canal crossing	120		
	10	Electrical Pole	154+650		Electrical Pole & Trees	15		
	90	Houses (4 nos) & Trees	154+680	154+770	Bamboo trees	90		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	110	Coconut Farm	154+770	154+880	Coconut Farm	110		
	70	Canal Crossing & Trees	154+600	154+900	Canal Crossing & Trees	70		
	130	Coconut Farm, River crossing & Electrical poles	155+950	155+080	Coconut Farm, River crossing & Electrical poles	130		
	10	Pump set & Electrical poles	155+760	155+770	Road crossing	10		
	20	Water tank & Trees	155+780					
	10	Canal crossing & Electrical Pole & Line crossing	156+000		Canal crossing & Electrical Pole & Line crossing	10		
	20	Electrical Pole	156+420	156+440	Teak wood trees	20		
	10	Road Crossing, Trees & EB Pole	156+470	156+480	Kondavattanthidal & Perunakkallur	10		
	70	Road Crossing, Trees & EB Pole	156+480	156+550	Kondavattanthidal & Perunakkallur	70		
	50	River crossing & Trees	156+550	156+600	River crossing & Trees	50		
	60	River crossing & Trees	156+700		River crossing & Trees	60		
	60	Fish Pond, Water storage tank & Trees	157+100		Fish Pond, Water storage tank & Trees	60		

Photo	Obstruction Length (m)	LHS - Type of Hindrance	Chainage		RHS - Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	50	Road crossing, Electrical pole & Trees	157+150		Manakarambal to Thirukarunalur	50		
	50	Fish Pond, Electrical pole & Cocunut trees	157+460	157+510	Fish Pond, Electrical pole & Cocunut trees	50		
	60	Fish pond & Cocunut trees (15 nos)	157+720	157+780	Trees (20 nos)	60		
	70	Fish pond	157+780	157+850	Fish pond	70		
	70	Fish pond & Cocunut trees	157+850	157+920	Fish pond & Cocunut trees	70		
	40	Canal crossing, Jungle & Trees	159+120	159+180	Canal crossing, Jungle & Trees	40		
	20	Canal crossing, Jungle & Trees	159+510		Canal crossing, Jungle & Trees	10		
	100	Canal crossing, Electrical Poles	162+150	162+250	House, Trees (5 nos), Bore well & Pump Set	100		
	30	Temples (3 nos), Trees & Jungle	162+750	162+780	Trees & Jungle	30		
	-	-	163+620	163+650	Houses (2 nos), Electrical pole, Road Crossing & Trees	30		
	400	River crossing, Jungle & Trees	163+700	164+100	River crossing, Jungle & Trees	400		
	25	Shops (6 nos)	164+250	164+275	Trees (7 nos)	25		

3. Progress Briefing – Contractor Activities

3.1. Pre-Construction Activities

Detailed Design & Drawings

The Plan and Profile, as well as the Pavement Designs for the entire 47.835 km project length has been completed and reviewed by the Independent Engineer (IE). Construction Methodology, QA & QC procedures submitted to the IE has been reviewed and accepted.

Table 3.1-1: Status of Design and Drawings-Highway					
SI No.	Description	Unit	Total Scope as per Sch.B As per Sch. B	Design submitted	Drawing Approved
1	Pavement Design	Km	47.835	47.835	47.835
2	Plan & Profile	Km	47.835	47.835	47.835
3	Typical Cross Sections	Type	3	-	-
4	Major Intersections	No	20	-	-
5	Minor Intersections	No	22	-	-
6	Toll Plaza (Typical Details)	No	01	-	-
7	Rest Area	No	01	-	-
8	Bus Bay	No	05	-	-
9	Service Roads	No	27.10	27.10	-

Table 3.1-2 : Status of Design and Drawings –Structures					
Sr. No	Description	Unit	Total Scope As per Sch. B	Design Submitted	Drawing Approved
1	Major Bridges	No	06	0	-
2	Minor Bridges	No	56	44	44
3	Grade Separated Intersection	No	06	6	6
4	VUP/PUP	No	12	12	10
5	Box /Slab Culvert	No	103	80	47
6	ROB	No	01	0	GAD approved

4. Physical Progress of Work

4.1. Physical Progress of Work

The following table summarize the quantum of work achieved towards the construction of the various elements of the highway.

The Progress of the Major Works carried out at the Site in the Month of February 2019 is as follows.

CUMMULATIVE STATEMENT

For Main Carriageway

Sr. No.	Description	Total Length of Highway Excluding Toll Plaza (in. Km.)	Progress up to Previous Month (in Km)	Progress during this Month (In Km.)	Cumulative Progress Achieved up to this Month (In Km)	In Progress (In Km.)	Balance Length to be Completed	Cumulative % of Progress Achieved
1	Clearing and Grubbing							
	LHS	46.925	19.08	0.80	19.88	0	27.045	54.00%
	RHS	46.925	18.75	0.80	19.55	0	27.375	51.87%
2	Embankment							
	LHS	46.925	0	0	0	3.72	46.925	0.00%
	RHS	46.925	0	0	0	3.37	46.925	0.00%
3	Sub grade							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%
4	GSB/ Cement Treated Base							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%
5	Wet Mix Macadam							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%
6	Dense Bitumen Macadam							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%
7	Bituminous Concrete							
	LHS	46.925	0	0	0	0	46.925	0.00%
	RHS	46.925	0	0	0	0	46.925	0.00%

For Service Road

Sr. No.	Description	Total Length of Service Road (Km.)	Progress up to Previous Month (in Km)	Progress during this Month (In Km.)	Cumulative Progress Achieved up to this Month (In Km)	In Progress (In Km.)	Balance Length to be Completed	Cumulative % of Progress Achieved
1	Embankment	27.1	0	0	0	0	27.1	0.00%
2	Sub grade	27.1	0	0	0	0	27.1	0.00%
3	GSB/ Cement Treated Base	27.1	0	0	0	0	27.1	0.00%
4	Wet Mix Macadam	27.1	0	0	0	0	27.1	0.00%
5	Dense Bitumen Macadam	27.1	0	0	0	0	27.1	0.00%
6	Bituminous Concrete	27.1	0	0	0	0	27.1	0.00%

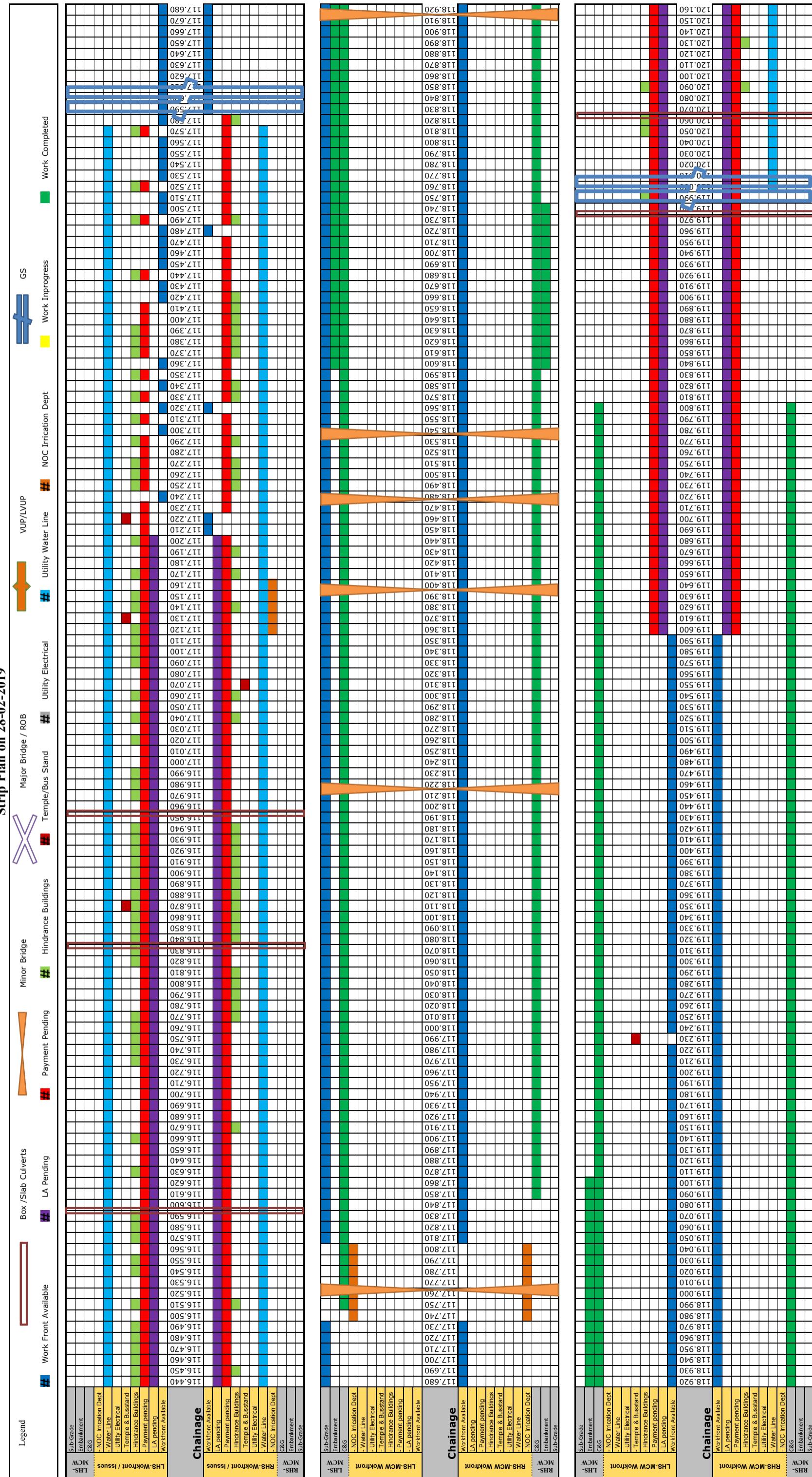
Structure Work

Sr. No.	Type of Structure	Total No. of Structures	No. of Structures		
			Completed	In Progress	Balance
1	Culvert	103	0	22	81
2	Light Vehicular Underpass	2	0	0	2
3	Vehicular Underpass	10	0	1	9
4	Minor Bridges	56	0	14	42
5	Major Bridge	5	0	0	5
6	Flyover	6	0	0	6

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

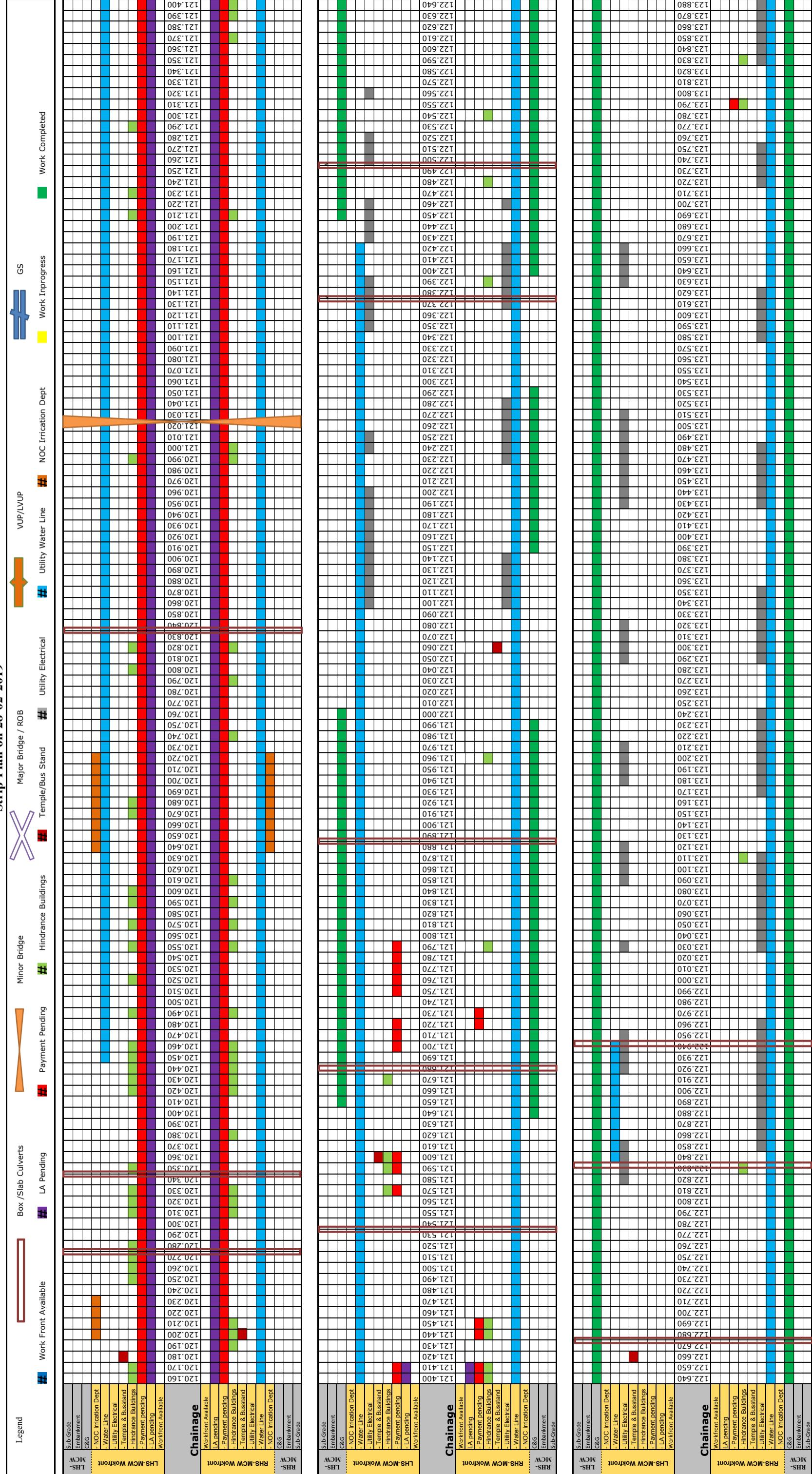
Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

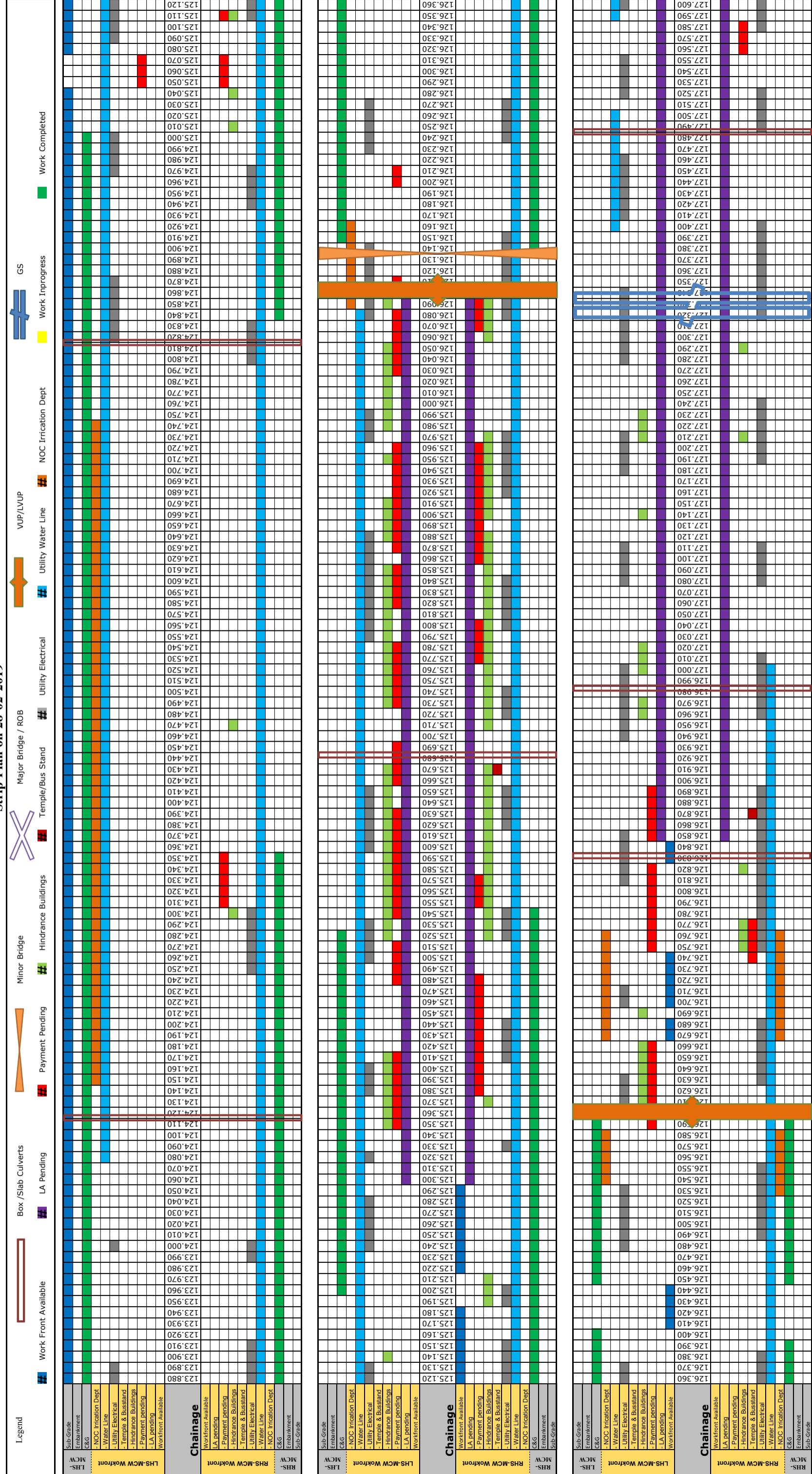
Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

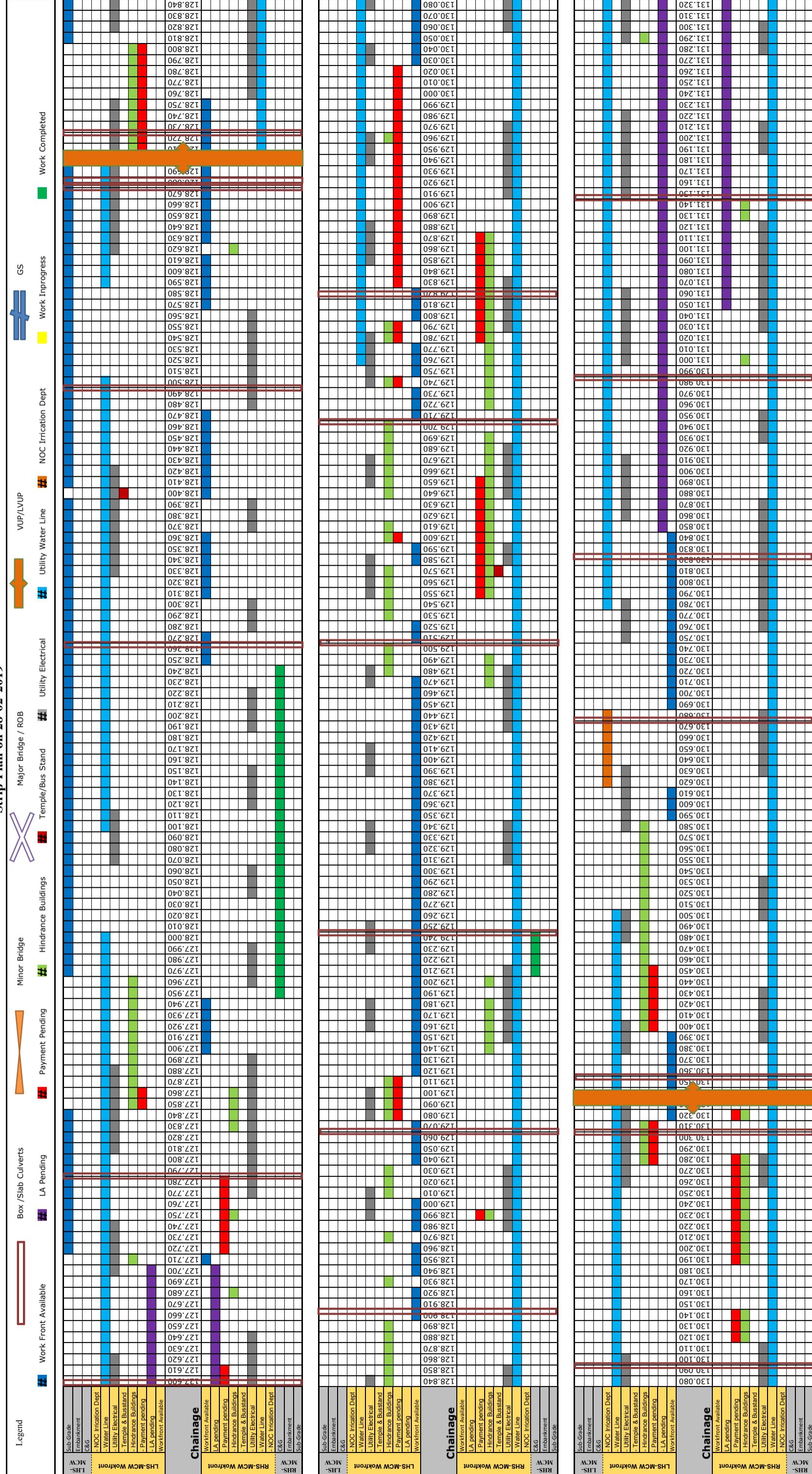
Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

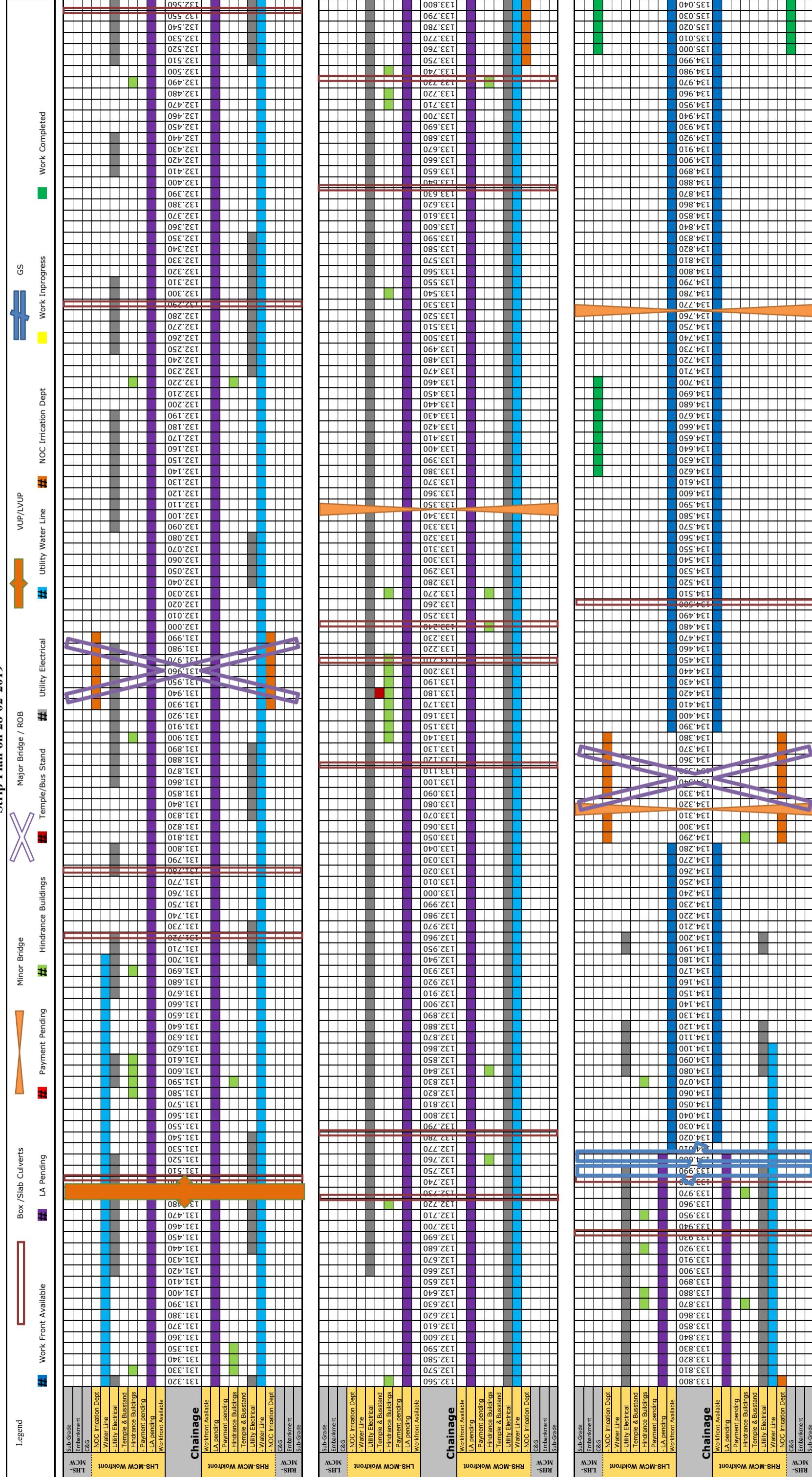
Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

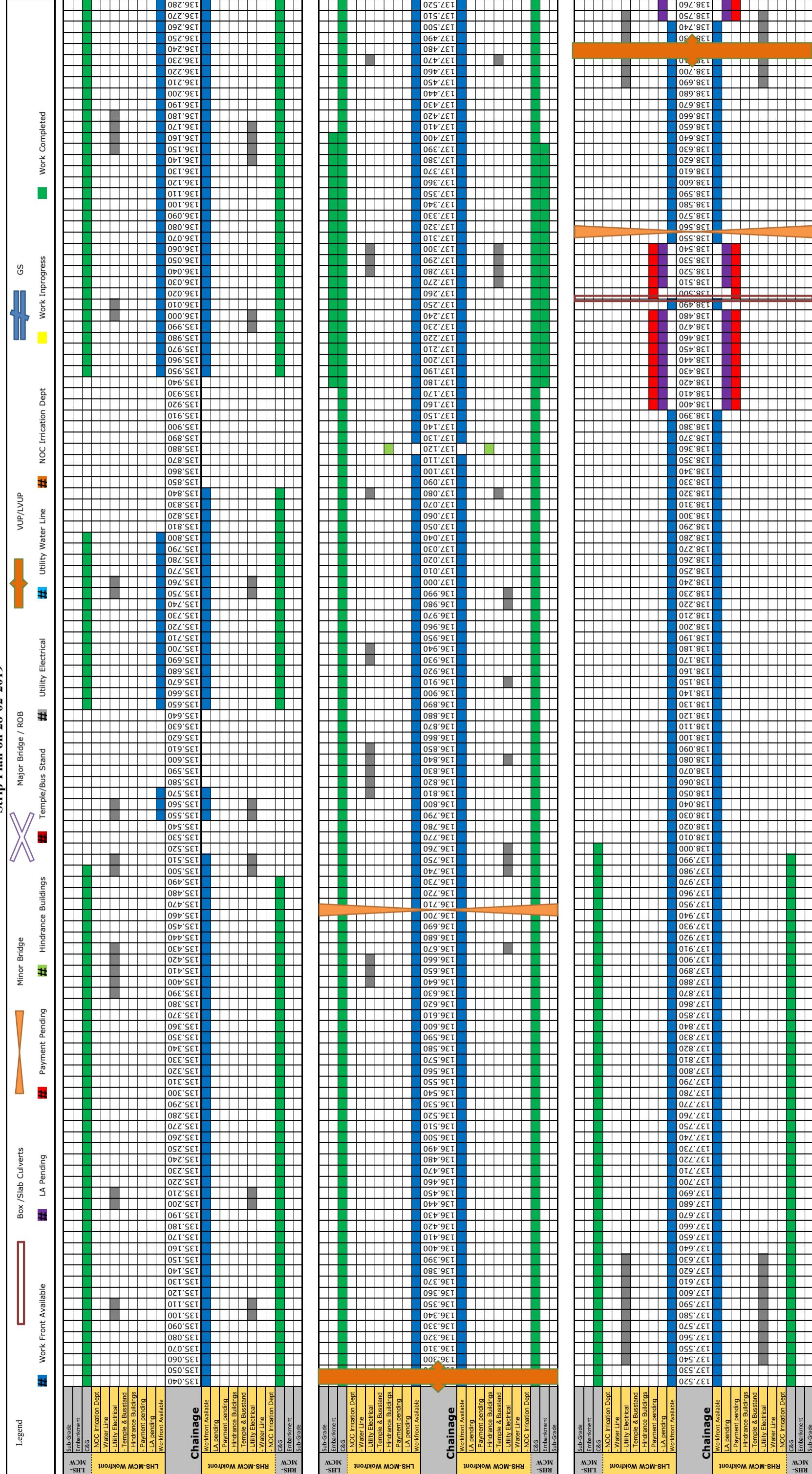
Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

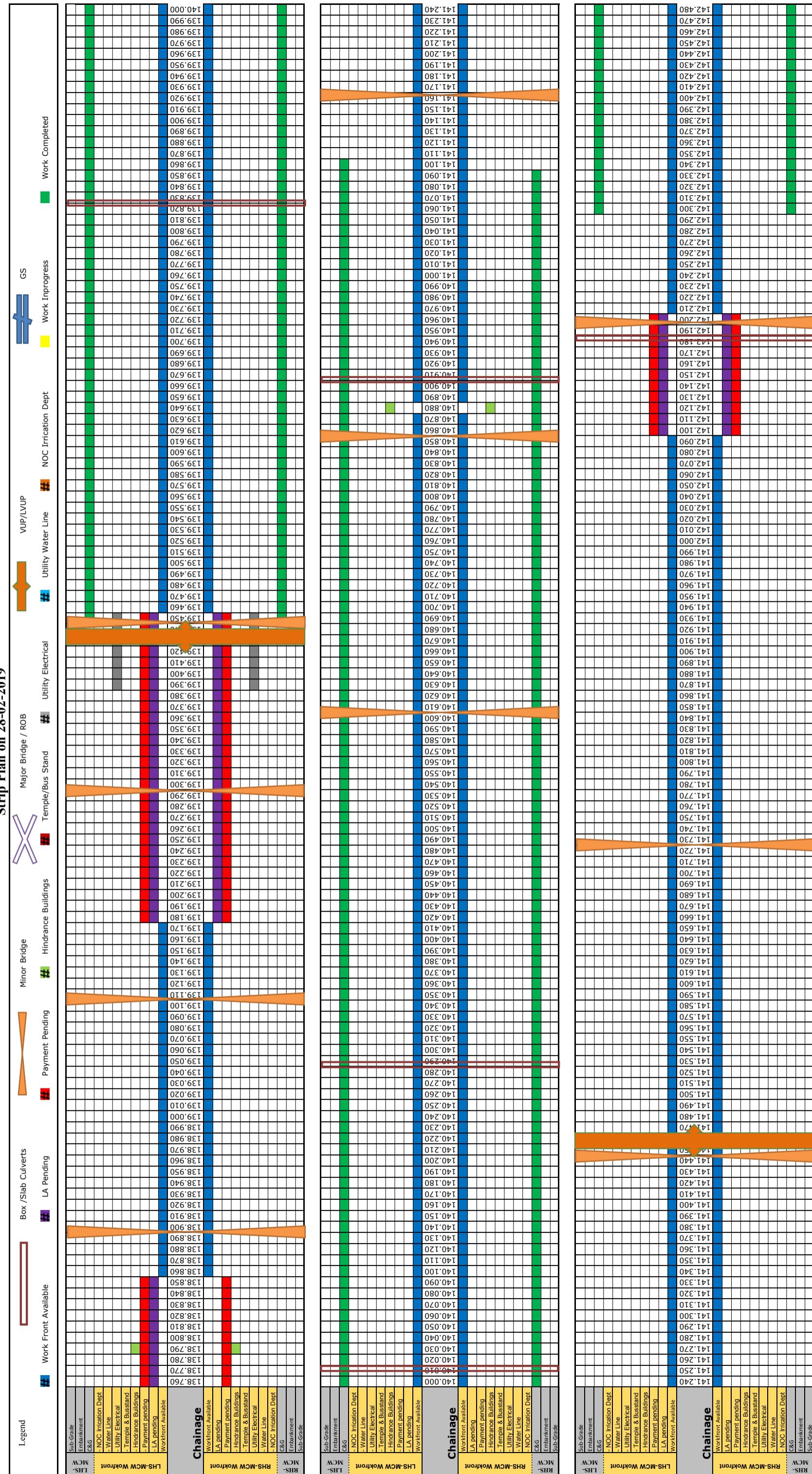
Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Chelomiram - Thanjavur Road Projects

String Plan on 28-02-2019

Section 1: Reading Comprehension

Legend

- Minor Bridge
- Major Bridge / ROB
- Box / Slab Culverts
- Payment Pending
- Work Front Available
- LA Pending
- Hindrance Buildings
- Utility Electrical
- Utility Water Line
- NOC Irrigation Dept
- Work In Progress
- Work Completed

Panel 1: South 1 Run on 26-02-2021

Panel 2: South 1 Run on 26-02-2021

Panel 3: South 1 Run on 26-02-2021

Chainage

Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront	Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront	Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront
Embankment	142.480	142.760	Embankment	143.720	143.730	Embankment	144.960	144.970
C&G	142.490	142.740	C&G	143.730	143.740	C&G	144.970	145.000
- Water Line	-	-	- NOC Irrigation Dept	-	-	- NOC Irrigation Dept	-	-
- Utility Electrical	-	-	- Utility Electrical	-	-	- Utility Electrical	-	-
- Temple & Bussland	-	-	- Temple & Bussland	-	-	- Temple & Bussland	-	-
- Hindrance Buildings	-	-	- Hindrance Buildings	-	-	- Hindrance Buildings	-	-
Payment Pending	142.490	142.500	Payment Pending	143.740	143.750	Payment Pending	144.970	145.000
LA pending	142.490	142.500	LA pending	143.740	143.750	LA pending	144.970	145.000
Workfront Available	142.480	142.760	Workfront Available	143.720	143.730	Workfront Available	144.960	144.970

Chainage

Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront	Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront	Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront
Embankment	142.550	142.560	Embankment	143.770	143.780	Embankment	144.980	144.990
C&G	142.560	142.570	C&G	143.780	143.790	C&G	144.980	145.000
- Water Line	-	-	- NOC Irrigation Dept	-	-	- NOC Irrigation Dept	-	-
- Utility Electrical	-	-	- Utility Electrical	-	-	- Utility Electrical	-	-
- Temple & Bussland	-	-	- Temple & Bussland	-	-	- Temple & Bussland	-	-
- Hindrance Buildings	-	-	- Hindrance Buildings	-	-	- Hindrance Buildings	-	-
Payment Pending	142.550	142.560	Payment Pending	143.770	143.780	Payment Pending	144.980	145.000
LA Pending	142.550	142.560	LA Pending	143.770	143.780	LA Pending	144.980	145.000
Workfront Available	142.550	142.560	Workfront Available	143.770	143.780	Workfront Available	144.980	144.990

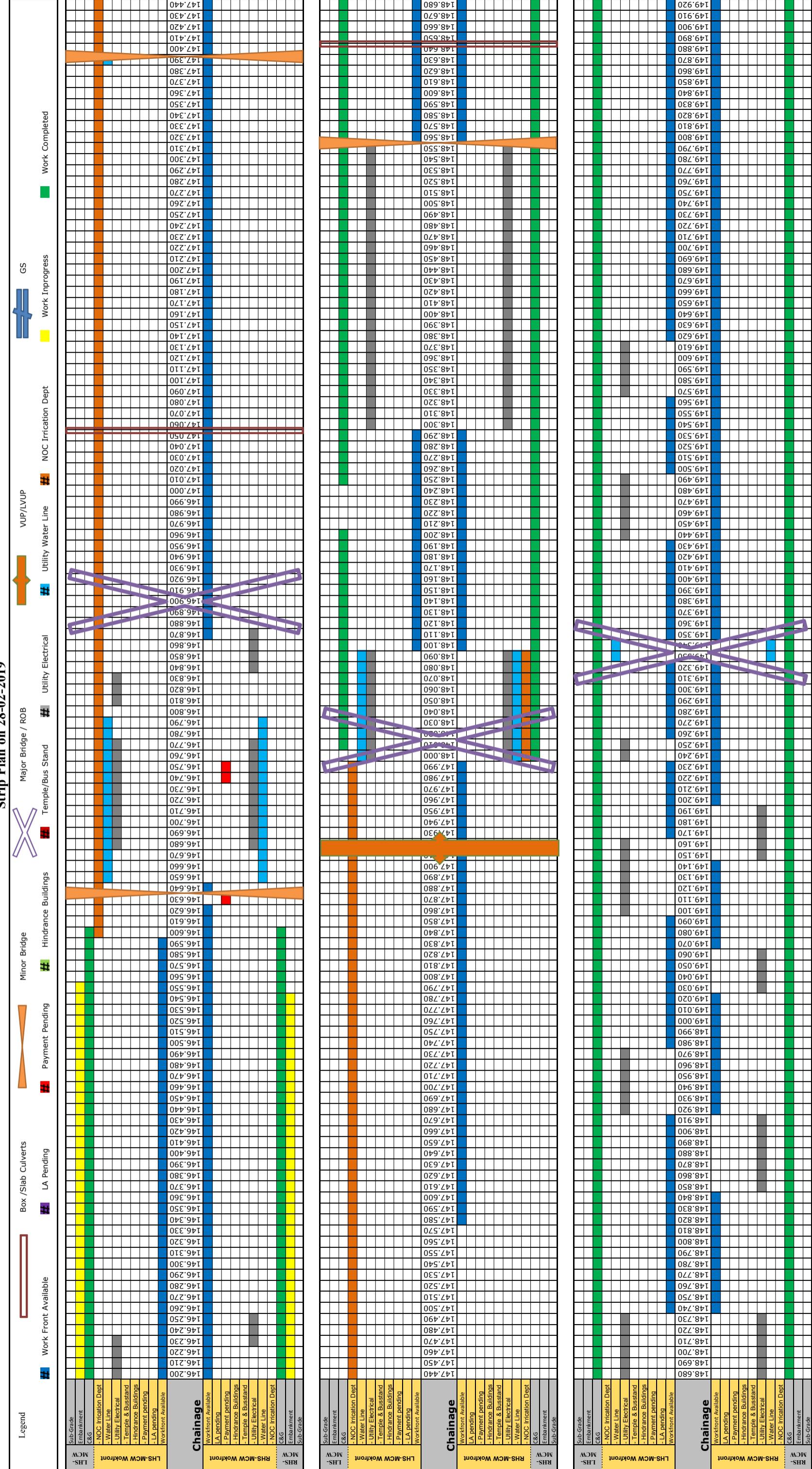
Chainage

Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront	Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront	Sub-Grade	RHS-MCW Workfront	LHS-MCW Workfront
Embankment	142.650	142.660	Embankment	143.870	143.880	Embankment	144.990	145.000
C&G	142.660	142.670	C&G	143.870	143.880	C&G	144.990	145.000
- Water Line	-	-	- NOC Irrigation Dept	-	-	- NOC Irrigation Dept	-	-
- Utility Electrical	-	-	- Utility Electrical	-	-	- Utility Electrical	-	-
- Temple & Bussland	-	-	- Temple & Bussland	-	-	- Temple & Bussland	-	-
- Hindrance Buildings	-	-	- Hindrance Buildings	-	-	- Hindrance Buildings	-	-
Payment Pending	142.650	142.660	Payment Pending	143.870	143.880	Payment Pending	144.990	145.000
LA Pending	142.650	142.660	LA Pending	143.870	143.880	LA Pending	144.990	145.000
Workfront Available	142.650	142.660	Workfront Available	143.870	143.880	Workfront Available	144.990	144.990

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.116.475 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

Strip Plan on 28-02-2019

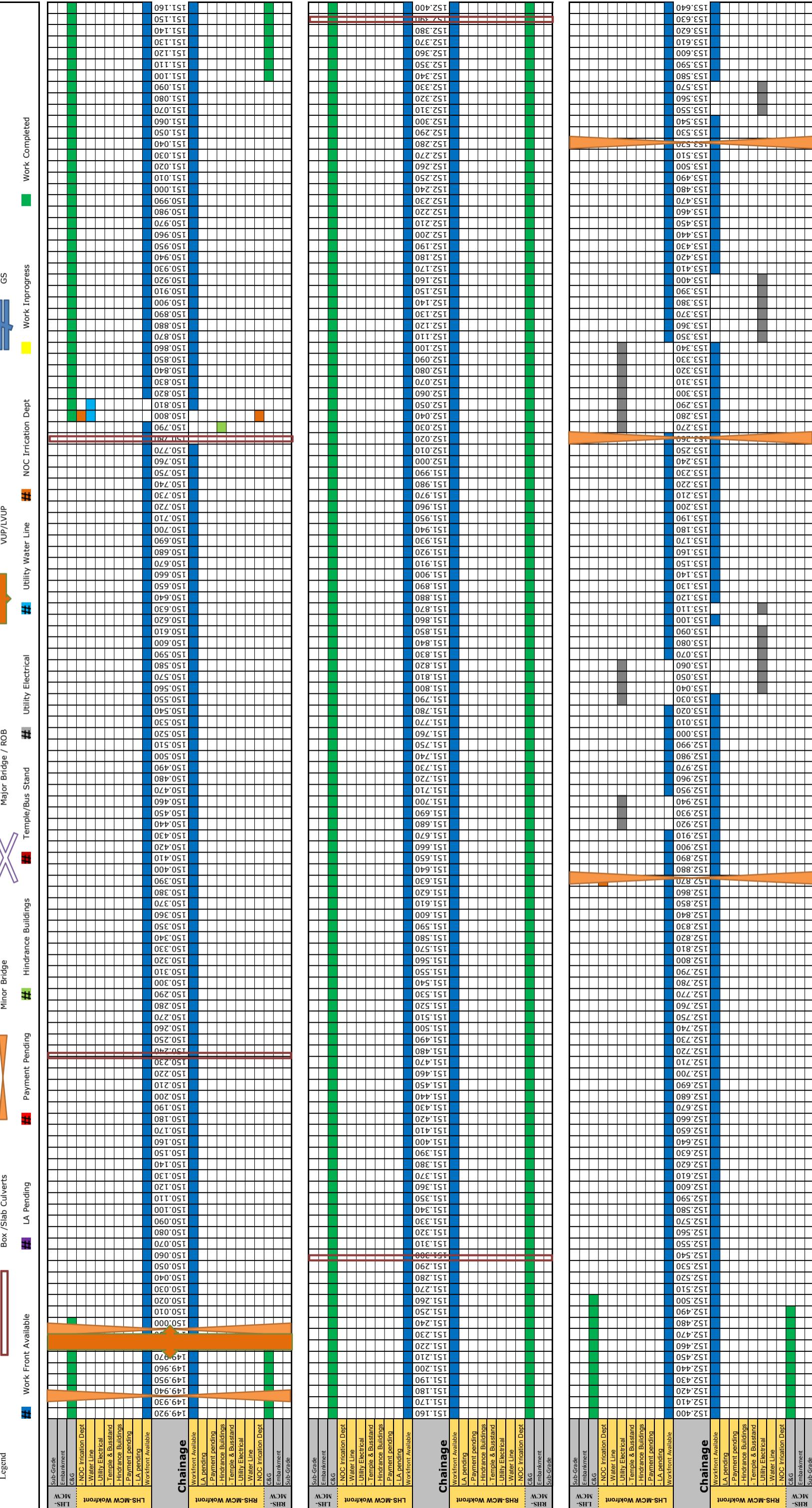


Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Cholomurram - Thanjavur Road Projects

String Plan on 28-02-2019

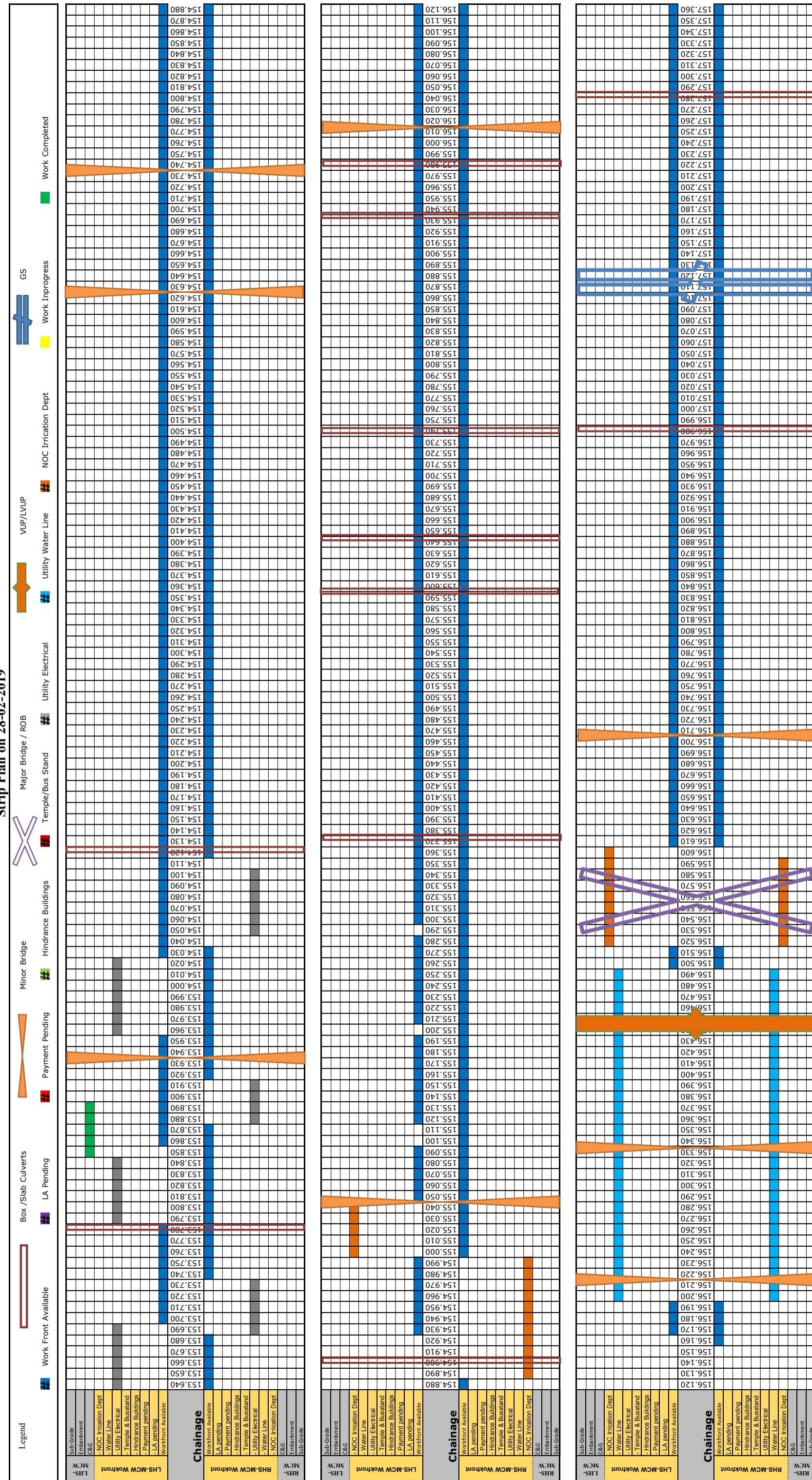
100



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

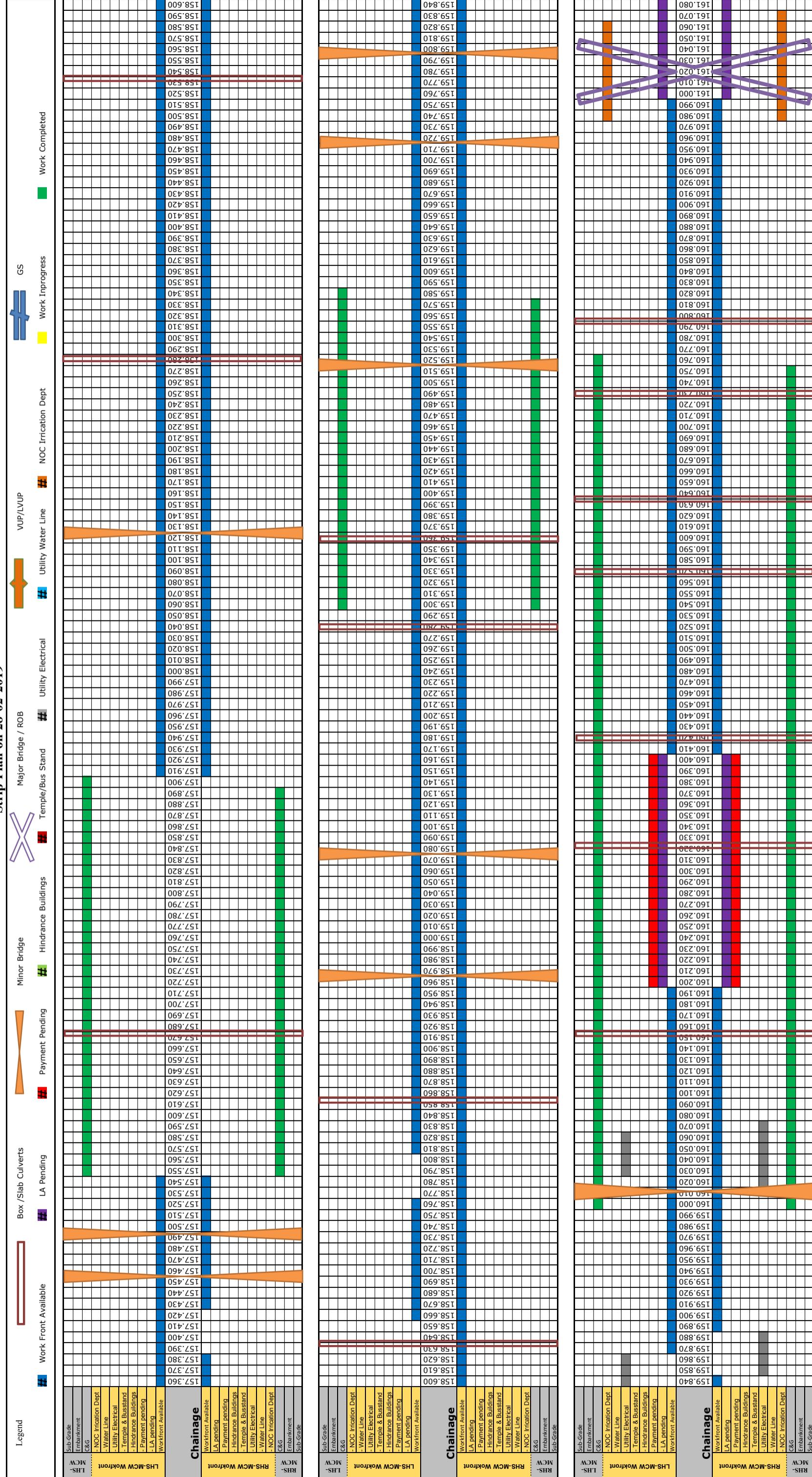
Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode

Cholopuram - Thanjavur Road Projects

Strip Plan on 28-02-2019



Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Cholomurram - Thanjavur Road Projects

String Plan on 28-02-2019

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Anuity Mode

Table 4.2 - 1 : Strip Chart for status of Box Culverts on Existing Road

Sr. No.	Design Chainage As per CA	Revised Design Chainage	Number and Length of Spans (m)	Remarks (As per Schd B)	Type of Existing Structure	IN PROGRESS			COMPLETED			RHS
						Protection Work	Excavation	Excavation	Granular Filling	PCC	Raft	
1	116.602		1x 2.0m	Widening	Slab Culvert							
2	116.837		1x 2.0m	Widening	Slab Culvert							
3	116.954		1x 1.6m	Widening	Slab Culvert							
4	120.068		1x 3.0	Reconstruction	Slab Culvert							
5	120.280		1x 1.5	Reconstruction	Slab Culvert							
6	120.346		1x 1.5	Reconstruction	Box Culvert							
7	120.836		1x 2.0m	Widening	Box Culvert							
8	121.540		1x 3.0m	Widening	Slab Culvert							
9	121.683		1x 1.5m	Widening	Slab Culvert							
10	121.885		2x 1.0m	Widening	Pipe Culvert							
11	122.375		1x 1.0m	Widening	Pipe Culvert							
12	122.497		1x 1.0m	Widening	Pipe Culvert							
13	122.678		2x 1.0m	Widening	Pipe Culvert							
14	122.835		1x 3.0m	Widening	Slab Culvert							
15	122.943		2x 1.0m	Widening	Pipe Culvert							
16	124.118		1x 1.5m	Widening	Slab Culvert							
17	124.820		1x 1.0m	Widening	Pipe Culvert							
18	125.682		1x 1.5m	Widening	Slab Culvert							
19	126.836		1x 3.0	Reconstruction	Slab Culvert							
20	126.987		1x 2.0	Reconstruction	Slab Culvert							
21	127.488		1x 1.2	Reconstruction	Pipe Culvert							
22	127.600		3x 1.2	Reconstruction	Pipe Culvert							
23	127.788		1x 1.9m	Widening	Pipe Culvert							
24	128.267		1x 0.9m	Widening	Pipe Culvert							
25	128.494		1x 1.2	Reconstruction	Pipe Culvert							
26	128.675		1x 2.0	Reconstruction	Box Culvert							
27	128.682		1x 2.0	Reconstruction	Slab Culvert							
28	128.727		3x 1.2	Reconstruction	Pipe Culvert							
29	128.904		1x 1.2	Reconstruction	Pipe Culvert							
30	129.067		1x 1.2	Reconstruction	Pipe Culvert							
31	129.246		1x 0.9m	Widening	Pipe Culvert							
32	129.507		1x 1.0m	Widening	Slab Culvert							
33	129.707		1x 2.5m	Widening	Slab Culvert							
34	129.823		1x 0.9m	Widening	Pipe Culvert							
35	130.096		1x 1.2	Reconstruction	Pipe Culvert							
36	130.307		1x 1.5	Reconstruction	Slab Culvert							
37	130.357		1x 1.5	Reconstruction	Slab Culvert							
38	130.680		2x 1.2	Reconstruction	Pipe Culvert							
39	130.827		1x 0.9m	Widening	Pipe Culvert							
40	130.989		1x 3.0m	Widening	Slab Culvert							
41	131.146		1x 0.9m	Widening	Pipe Culvert							
42	131.505		1x 3.0	Reconstruction	Slab Culvert							
43	131.722		1x 1.2	Reconstruction	Pipe Culvert							
44	131.780		1x 1.2	Reconstruction	Pipe Culvert							
45	132.300		1x 0.9m	Widening	Slab Culvert							
46	132.557		1x 2.0m	Widening	Slab Culvert							
47	132.730		1x 2.0	Reconstruction	Slab Culvert							
48	132.89		1x 2.0m	Widening	Slab Culvert							
49	133.115		1x 5.0m	Widening	Slab Culvert							
50	133.210		1x 2.0m	Widening	Slab Culvert							
51	133.240		1x 0.9m	Widening	Pipe Culvert							
52	133.635		1x 2.0	Reconstruction	Slab Culvert							
53	133.734		1x 2.0	Reconstruction	Slab Culvert							
54	133.935		1x 1.2	Reconstruction	Pipe Culvert							
55	133.987		1x 1.5	Reconstruction	Slab Culvert							
56	163.700		2x 0.9m	Widening	Pipe Culvert							
57	163.793		1x 0.9m	Widening	Pipe Culvert							

Four Laning of Cholapuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid

Annuity Mode

Table 4.2 - 2 : Strip Chart for status of Box Culverts on Bypass

Sr. No.	Design Chainage As per CA	Revised Design Chainage	Number and Length of Spans (m)	Remarks	Type of Structure	Protection Work	IN PROGRESS			COMPLETED			RHS	
							LHS	Slab	Wall	Raft	PCC	Granular Filling	Excavation	
1	119.971		1 x 1.5	Reconstruction	Slab Culvert									
2	134.500		1 x 2.0m x 2.0m	New Construction	Box Culvert									
3	138.492		1 x 4.0m x 2.0m	New Construction	Box Culvert									
4	139.827	139.856	1 x 2.0m x 2.0m	New Construction	Box Culvert									
5	140.010	140.040	1 x 2.0m x 2.0m	New Construction	Box Culvert									
6	140.292	140.322	1 x 3.0m x 2.0m	New Construction	Box Culvert									
7	140.911	140.945	1 x 4.0m x 2.0m	New Construction	Box Culvert									
8	142.189	142.048	1 x 4.0m x 2.0m	New Construction	Box Culvert									
9	142.776	142.812	1 x 4.0m x 2.0m	New Construction	Box Culvert									
10	144.426		1 x 4.0m x 2.0m	New Construction	Box Culvert									
11	146.049	146.079	1 x 3.0m x 2.0m	New Construction	Box Culvert									
12	147.060	147.093	1 x 4.0m x 2.0m	New Construction	Box Culvert									
13	148.650		1 x 4.0m x 2.0m	New Construction	Box Culvert									
14	150.237		1 x 4.0m x 2.0m	New Construction	Box Culvert									
15	150.780		1 x 4.0m x 2.0m	New Construction	Box Culvert									
16	152.390		1 x 4.0m x 2.0m	New Construction	Box Culvert									
17	153.781		1 x 2.0m x 2.0m	New Construction	Box Culvert									
18	154.129		1 x 4.0m x 2.0m	New Construction	Box Culvert									
19	154.900		1 x 3.0m x 2.0m	New Construction	Box Culvert									
20	155.381		1 x 3.0m x 2.0m	New Construction	Box Culvert									
21	155.601		1 x 4.0m x 2.0m	New Construction	Box Culvert									
22	155.645		1 x 3.0m x 2.0m	New Construction	Box Culvert									
23	155.743		1 x 2.0m x 2.0m	New Construction	Box Culvert									
24	155.938		1 x 4.0m x 2.0m	New Construction	Box Culvert									
25	156.984		1 x 3.0m x 2.0m	New Construction	Box Culvert									
26	157.283		1 x 4.0m x 2.0m	New Construction	Box Culvert									
27	157.678		1 x 4.0m x 2.0m	New Construction	Box Culvert									
28	158.283		1 x 2.0m x 2.0m	New Construction	Box Culvert									
29	158.531		1 x 2.0m x 2.0m	New Construction	Box Culvert									
30	158.639		1 x 4.0m x 2.0m	New Construction	Box Culvert									
31	158.832		1 x 5.0m x 2.0m	New Construction	Box Culvert									
32	159.282		1 x 4.0m x 2.0m	New Construction	Box Culvert									
33	159.361		1 x 3.0m x 2.0m	New Construction	Box Culvert									
34	160.157		1 x 4.0m x 2.0m	New Construction	Box Culvert									
35	160.326		1 x 3.0m x 2.0m	New Construction	Box Culvert									
36	160.420		1 x 2.0m x 2.0m	New Construction	Box Culvert									
37	160.572		1 x 2.0m x 2.0m	New Construction	Box Culvert									
38	160.635		1 x 2.0m x 2.0m	New Construction	Box Culvert									
39	160.733		1 x 2.0m x 2.0m	New Construction	Box Culvert									
40	160.798		1 x 2.0m x 2.0m	New Construction	Box Culvert									
41	161.288	161.310	1 x 4.0m x 2.0m	New Construction	Box Culvert									
42	161.499	161.501	1 x 2.0m x 2.0m	New Construction	Box Culvert									
43	161.573	161.595	1 x 4.0m x 2.0m	New Construction	Box Culvert									
44	161.693	161.717	1 x 2.0m x 2.0m	New Construction	Box Culvert									
45	161.757		1 x 2.0m x 2.0m	New Construction	Box Culvert									
46	162.243	162.255	1 x 4.0m x 2.0m	New Construction	Box Culvert									

Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP
Phase-IV on Hybrid Annuity Mode

Table 4.2 - 3 : Strip Chart for status of MNB -
Deck Type

SR.NO.	MNB at Chainage	Span	IN PROGRESS		COMPLETED		RHS	
			FEBRUARY	2019	LHS		Pile	Pile Cap
1	126+134	1x20.0m	A1	A2			Piercap/A btcap	Girder Casting
2	138+901	3x15.0m	A1	P1			Pile	Pile Cap
3	139+105	2x15.0m	A1	P2			Pile	Pile Cap
4	139+299	2x15.0m	A1	P1			Pier/A bt	Girder Launchig
5	143+115	3x15.0m	A1	P1			Pile	Pile Cap
6	144+880	2x15.0m	A1	P1			Piercap/A btcap	Girder Casting
7	155+049	1x15.0m	A1	A2			Pile	Pile Cap
8	159+522	1x15.0m	A1	A2			Pier/A bt	Girder Launchig
9	162+595	2x15.0m	A1	P1			Pile	Pile Cap

Four Lining of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4.2 - 3 : Strip Chart for status of MNB - Box

Sr. No.	Design Chainage As per CA	Revised Chainage	Number and Length of Spans (m)	Type of Structure	IN PROGRESS				COMPLETED				RHS	
					LHS	Protection Work	Slab	Wall	Rat ^f	PCC	Granular Filling	Excavation		
MNB IN EXISTING LENGTH														
1	121.024		1 x 6.0m	MNBB										
2	122.046		3 x 7.5m	MNBB	Existing									
3	133.345		3 x 12.5m	MNBB	Existing									
MNB IN BYPASS														
1	117.764		2 x 10.0m	MNBB	Bypass									
2	118.217		1 x 8.0m	MNBB	Bypass									
3	118.400	119.570	1 x 6.0m	MNBB	Bypass									
4	118.480	118.480	1 x 6.0m	MNBB	Bypass									
5	118.539		1 x 8.0m	MNBB	Bypass									
6	118.919	119.100	1 x 6.0m	MNBB	Bypass									
7	134.320		2x 10.0m	MNBB	Bypass									
8	134.770		1 x 10.0m	MNBB	Bypass									
9	136.705	136.738	1 x 6.0m	MNBB	Bypass									
10	138.555		1 x 6.0m	MNBB	Bypass									
11	139.453		1 x 7.0m	MNBB	Bypass									
12	140.405		1 x 6.0m	MNBB	Bypass									
13	140.860		1 x 8.0m	MNBB	Bypass									
14	141.164		1 x 10.0m	MNBB	Bypass									
15	141.445		1 x 8.0m	MNBB	Bypass									
16	141.727	141.760	1 x 8.0m	MNBB	Bypass									
17	142.204		1 x 8.0m	MNBB	Bypass									
18	142.657		1 x 6.0m	MNBB	Bypass									
19	142.897		2 x 8.0m	MNBB	Bypass									
20	143.823		2 x 8.0m	MNBB	Bypass									
21	144.000		2 x 10.0m	MNBB	Bypass									
22	146.639		1 x 10.0m	MNBB	Bypass									
23	147.396		1 x 8.0m	MNBB	Bypass									
24	148.560		1 x 8.0m	MNBB	Bypass									
25	149.940		1 x 10.0m	MNBB	Bypass									
26	149.997		1 x 6.0m	MNBB	Bypass									
27	152.876		2 x 10.0m	MNBB	Bypass									
28	153.263		1 x 10.0m	MNBB	Bypass									
29	153.528		1 x 6.0m	MNBB	Bypass									
30	153.939		1 x 10.0m	MNBB	Bypass									
31	154.626		1 x 6.0m	MNBB	Bypass									
32	154.739		1 x 10.0m	MNBB	Bypass									
33	156.014		1 x 8.0m	MNBB	Bypass									
34	156.216		1 x 6.0m	MNBB	Bypass									
35	156.336		1 x 6.0m	MNBB	Bypass									
36	156.707		1 x 10.0m	MNBB	Bypass									
37	157.458		1 x 7.0m	MNBB	Bypass									
38	157.494		1 x 8.0m	MNBB	Bypass									
39	158.128		1 x 7.0m	MNBB	Bypass									
40	158.972		1 x 6.0m	MNBB	Bypass									
41	159.076		1 x 8.0m	MNBB	Bypass									
42	159.723		1 x 6.0m	MNBB	Bypass									
43	159.801		1 x 6.0m	MNBB	Bypass									
44	161.208		1 x 8.0m	MNBB	Bypass									

**Four Laning of Cholapuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu
Under NHDP Phase-IV on Hybrid Annuity Mode**

Table 4.2 - 4 : Strip Chart for status of PUP

Sr. No.	Design Chainage As per CA	Number and Length of Spans (m)	Protection Work	IN PROGRESS				COMPLETED				RHS
				LHS	RHS	Excavation	PCC	Raft	Wall	Slab	Protection Work	
1	147.917	1 X 7 m	BYPASS									
2	149.988	1 X 7 m	BYPASS									

Four Laning of Cholapuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Table 4.2 - 5 : Strip Chart for status of MJB

MPR FEBRUARY 2019

MJB at Chainage 146+902 (4x20) - BYPASS

LHS/LSR

Cross Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt Cap	Pier/Abt Cap	RHS/LSR
A1											
P1											
P2											
P3											
A2											

MJB at Chainage 148+017 (3x20)- BYPASS

LHS/LSR

Cross Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt Cap	Pier/Abt Cap	RHS/LSR
A1											
P1											
P2											
A2											

MJB at Chainage 149+334 (3x20)- BYPASS

LHS/LSR

Cross Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt Cap	Pier/Abt Cap	RHS/LSR
A1											
P1											
P2											
A2											

MJB at Chainage 156+559 (6x20)- BYPASS

LHS/LSR

Cross Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt Cap	Pier/Abt Cap	RHS/LSR
A1											
P1											
P2											
P3											
P4											
P5											
A2											

MJB at Chainage 161+019 (6x20)- BYPASS

LHS/LSR

Cross Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt Cap	Pier/Abt Cap	RHS/LSR
A1											
P1											
P2											
P3											
P4											
P5											
A2											

Four Laning of Cholapuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDTP Phase-IV on Hybrid Annuity Mode										
Table 4.2 - 6 : Strip Chart for status of FLYOVER			IN PROGRESS				COMPLETED			
Sr.No.	FO at Chainage	Span	LHS				RHS			
			Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap/A bitcap	Pile Cap	Pile Cap	Crash Barrier
1	117+600	1 x 30 m	BYPASS+E EXISTING	A1 A2						
2	120+000	1 x 30 m	BYPASS+E EXISTING	A1 A2						
3	127+300	1 x 30 m	EXISTING	A1 A2						
4	134+000	1 x 30 m	BYPASS+E EXISTING	A1 A2						
5	145+140	1 x 30 m	BYPASS	A1 A2						
6	157+100	1 x 30 m	BYPASS	A1 A2						

**Four Laning of Cholopuram to Thanjavur from Km. 116.440 to Km. 164.275 Section of NH45C in the state of Tamil Nadu
Under NHDTP Phase-IV on Hybrid Annuity Mode**

Table 4.2 - 7 : Strip Chart for status of VJP

SR.NO.	VJP at Chainage	Span		IN PROGRESS		COMPLETED		RHS				
				LHS		Pile Cap	Pile	Pile Cap	Pier/A bt	Piercap/A btcap	Girder Casting	Crash Barrier
1	126+100	1x25	EXISTING	A1	A2							
2	126+600	1x25	EXISTING	A1	A2							
3	128+700	1x25	EXISTING	A1	A2							
4	130+335	1x25	EXISTING	A1	A2							
5	131+500	1x25	EXISTING	A1	A2							
6	136+282	1x25	BYPASS	A1	A2							
7	138+720	1x25	BYPASS	A1	A2							
8	139+440	1x25	BYPASS	A1	A2							
9	141+450	1x25	BYPASS	A1	A2							
10	156+446	1x25	BYPASS	A1	A2							

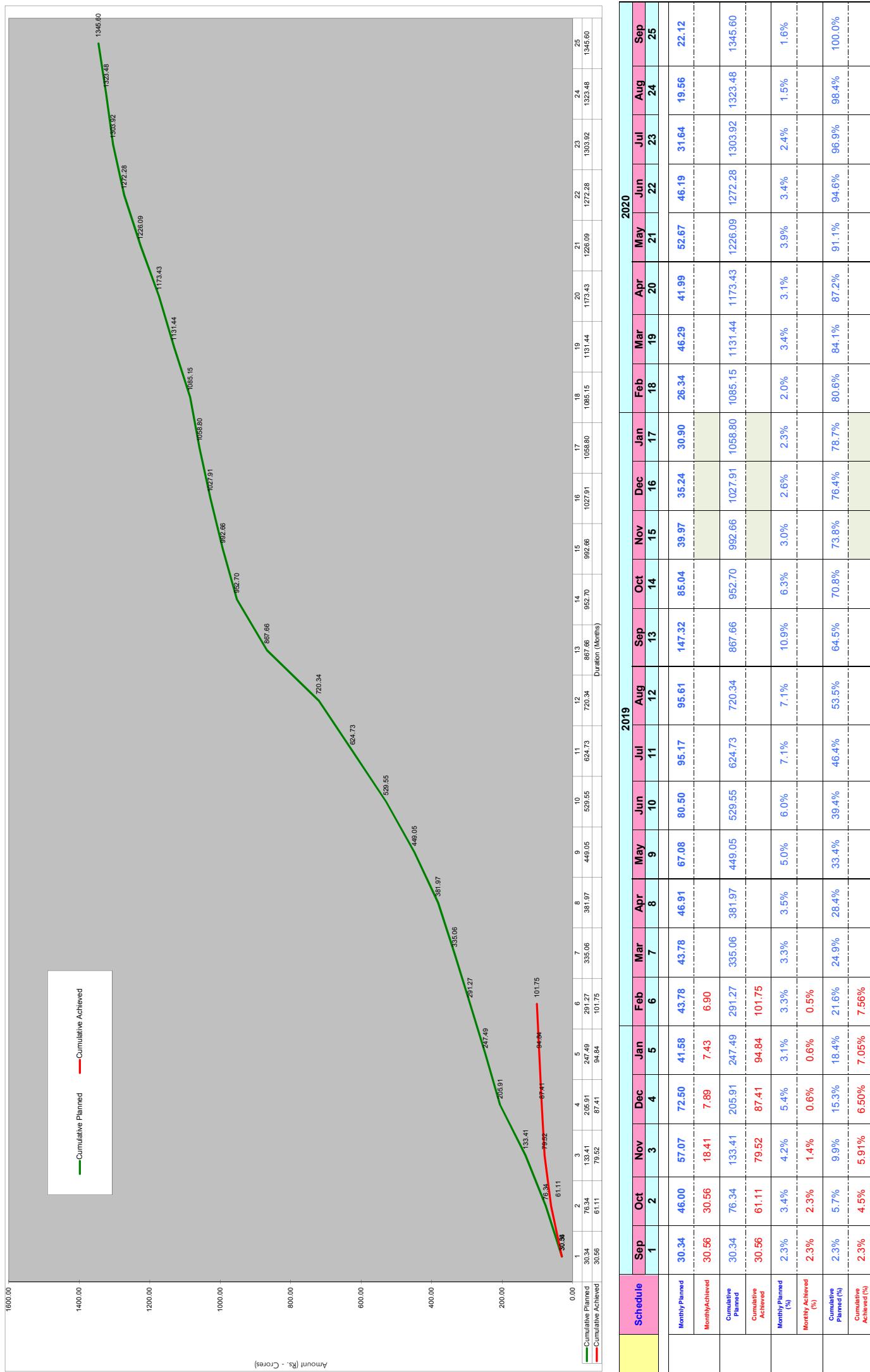
Four Laning of Cholopuram to Thanjavur from Km.116.440 to Km.164.275 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode									
MPR FEBRUARY 2019	Table 4.2 - 8 : Strip Chart for status of ROB			IN PROGRESS			COMPLETED		
	ROB at Chainage 134+345 (1 x 20.285m+1 x 30.426m+1 x 20.285m (Skew 9.6 °))- EXISTING			RHS/LSR			LHS/LSR		
	Crash Barrier	Slab	Steel Girder Launchina	Steel Girder Erection	Girder Launchina	Girder Casting	Pier Cap/Abt Cap	Pile Cap	Pile Cap
A1									
P1									
P2									
A2									

5. Financial Progress of Work

Figure 3: Financial Progress - Planned vs Achieved - S Curve

Four Laning of Cholapuram – Thanjavur from Km. 116.440 to 164.275 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity Mode

Fig. 03- Financial Progress (S-Curve)



6. Quality Control and Quality Assurance

6.1. List of Lab Equipment's

A site laboratory has been set up with all equipment required for testing soil, GSB, WMM, Bitumen, aggregate and concrete. Following tables represents the list of QA/QC equipment's available at Pateeswaram Lab.

Table 6.1 - 2 QA/QC Lab Equipment at Pateeswaram Lab

Sl. No	Equipment List	Quantity
A) SOIL		
1	Proctor Moulds (Big) Collar or Base plate & Rammer 4.89 kg	6
2	Proctor Moulds (Small) Collar or Base plate & Rammer 2.6 kg	4
3	Atterberg Limits Test(Apparatus)	1
4	Soil Cone Penetrometer	1
5	CBR Moulds with collar or Base Plate	60
6	CBR Plunger	4
7	Proving Ring(25 KN)	1
8	Proving Ring(10 KN)	1
9	Proving Ring(2.5 KN)	1
10	FSI JARS BOROSIL -100 ml	40
11	Spacer Disc(with Handle)	4
12	CBR Testing Machine	1
13	CBR Surcharge Central Hole Weights 2.5 kg	60
14	CBR Surcharge Slotted Weights 2.5 kg	60
15	CBR Perforated Brass plates	60
16	Sand Pouring Cylinders (100 mm Dia) Complete with Calibrating Container with Trays	2
17	Sand Pouring Cylinders (150 mm Dia) Complete with Calibrating Container with Trays	2
18	Sand Pouring Cylinders (200 mm Dia) Complete with Calibrating Container with Trays	2
19	Rapid Moisture Meters	4
20	Calcium Carbide Bottles	10
21	Spatula Big	10
22	Spatula Small	10
23	Hammers big	4
24	Chisels big	20
25	Electronic Balance Capacity 100 kg (10 gram accuracy)	1
26	Electronic Balance Capacity 50 kg (1 gram accuracy)	2
27	Electronic Balance Capacity 30 kg (1 gram accuracy)	2
28	Electronic Balance Capacity 10 kg (1 gram accuracy)	1
29	Electronic Balance Capacity 5 kg (0.5 gram accuracy)	1
30	Electronic Balance Capacity 600gram(0.01 gram accuracy)	2
31	Hot Air Oven (Big)250°C	1
32	Hot Air Oven (Small)250°C	1
33	Direct Shear Test Apparatus	1

Sl. No	Equipment List	Quantity
34	Filter Paper Dia 100 mm	10
35	Filter Paper Dia 150 mm	10
36	Pipettes	4
37	Plastic Bottles	4
38	Enamel tray -450x300x40 mm	12
39	G.I tray-1500x1500x100mm	4
40	French Curves	2
B) CONCRETE WORKS		
41	Compressive Testing machine(2000KN)	1
42	Flextural strength testing machine digital	1
43	Concrete Cube Moulds With Base Plate(15cm)	200
44	Concrete Cube Moulds With Base Plate(10cm)	18
45	Motor Cube Moulds (7.06cm) with Base Plate	12
46	Motor Cube Vibrating Machine(12000 Rmp)	1
47	Concrete Mixer Electrically Operated	1
48	Cube Vibrating Machine (Big)	1
49	Slump Cone Testing Appratus	10
50	Vicat Needle Apparatus , with dash pot complete with set of needles and brass mould	2
51	Soundness Testing Apparatus	2
52	Trowels With Wodden Handles	4
53	A I V Testing Machine	1
54	Loss Angels abrasion Testing Machine	1
55	Sand Equivalant Testing Apparatus	1
56	Flakiness Index Test Guage	1
57	Elongation Index Test Guage	1
58	Density Basket	2
59	Bulk Density Cylinder (5lt)	1
60	Bulk Density Cylinder (15lt)	1
61	Bulk Density Cylinder (30lt)	1
62	Gi trays -450x600x50mm	9
63	Enamal trays -300x250x40 mm	9
64	Trays for Samples Collections	12
65	Riffle Box (40 MM)	1
66	Riffle Box (20 MM)	1
67	PYcnometer Bottels (1000 ml)	4
68	Specific Gravity & water absorotion test apparatus with Electronic balance	1
69	DLC Compaction vibrating hammer	1
70	Cement mortar cube mould 5.0 cm	12
71	Standard Sand Grade-1 bag of 25 kg	2
72	Standard Sand Grade-2 bag of 25 kg	2
73	Standard Sand Grade-3 bag of 25 kg	2
C) BITUMINOUS WORKS		
74	Specific Gravity Bottels (50 ml)	2
75	Specific Gravity Bottels (100 ml)	2

Sl. No	Equipment List	Quantity
76	Pen Sky- Martins closed Tester (Flash & Fire point)	2
77	Dial gauge 0.01x30 mm adis make	4
78	Ring & Ball Apparatus (Softening Point)	1
79	Bitumen Penetrometer (automatic)	1
80	Marshall Stability Apparatus (set)	1
81	Marshall Compaction Pedestal	2
82	Marshall Compaction Rammer 4.53 KG	4
83	Marshall Moulds (101.6 mm Dia)	30
84	Modified Marshall Compaction Pedestal	1
85	Modified Marshall Compaction Rammer 10.2 KG	4
86	viscometer u tub size no 12	2
87	Breaker - glass 600 ml for ring and ball apparatus	4
88	Bitumen Extraction Apparatus (centrifuge Type)	1
89	Proving Ring(50 KN)	1
90	Proving Ring(100 KN)	1
91	Digital Thermometers	10
92	Glass Thermometer	10
93	IR Thermometer	5
94	Core Cutting Machine With Apparatus (set)	1
95	Diamond Core Cutting Bit (100mm Dia)	1
96	Core Barrels for Core Cutting Machine	1
97	Vacuum Pump (specific Gravity of Bitumen Mix GMM)	1
98	Constant temperature Water bath (Digital)	2
99	Penetration cup 55x70 mm	2
100	penetration cup 55x35 mm	2
101	Specific Gravity Flask (2000 ml)	1
102	Specific Gravity Flask (5000 ml)	1
103	Specimen Extractor (Tikki, Goli & Rod)Marshall	1
104	Emulsion Trays	6
105	Viscometer viscosity of emulsified bitumen	1
106	Stop Watch	4
107	Hot Plates Electrical	2
108	Viscometer viscosity of bitumen	1
FOR I.S SIEVES 450 MM DIA		
109	100MM	2
110	90MM	2
111	75MM	2
112	63MM	2
113	53MM	2
114	50MM	2
115	45MM	2
116	40MM	2
117	37.5MM	2
118	31.5MM	2
119	26.5MM	2

Sl. No	Equipment List	Quantity
120	25MM	2
121	22.4MM	2
122	20MM	2
123	19MM	2
124	16 MM	2
125	14MM	2
126	13.2MM	2
127	12.5MM	2
128	11.2MM	2
129	10MM	2
130	9.5MM	2
131	6.3MM	2
132	5.6MM	2
133	4.75MM	2
134	2.36 MM	2
FOR I.S SIEVES 200 MM DIA		
135	37.5MM	2
136	26.5MM	2
137	22.4MM	2
138	19MM	2
139	16MM	2
140	14 MM	2
141	13.2MM	2
142	12.5MM	2
143	11.2MM	2
144	10MM	2
145	9.5MM	2
146	5.6MM	2
147	4.75MM	2
148	2.80MM	2
149	2.36MM	2
150	2.00MM	2
151	1.80MM	2
152	1.40MM	2
153	1.18MM	2
154	1.00MM	2
155	0.710 mc	1
156	0.600 mc	2
157	0.500 mc	1
158	0.45 mc	1
159	0.425 mc	2
160	0.355 mc	2
161	0.300 mc	2
162	0.150 mc	2
163	0.090 mc	2
164	0.075mc	6

Sl. No	Equipment List	Quantity
GENERAL & CONTROL OF PROFILE AND SURFACE EVENNESS		
165	Rain Guage	1
166	Vernier Calliper	1
167	Glass Measuring Cylinder -1000 ml	2
168	Glass Measuring Cylinder -500 ml	2
169	Glass Measuring Cylinder -250 ml	2
170	Glass Measuring Cylinder -250 ml	2
171	Plastic Measuring Cylinder- 1000 ml	2
172	Plastic Measuring Cylinder- 500 ml	2
173	Plastic Measuring Cylinder- 250 ml	2
174	Plastic Measuring Cylinder- 250 ml	2
175	Depth gauge	4
176	Digital thermo hygrometer	2
177	Sampling containers 100 gms	200
178	3 Meter straight edge and measuring wedge	1
179	Camber template board	2
180	5 mtr tape	2
181	10 mtr tape	2
182	30 mtr tape	4
183	50 mtr tape	4

6.2. Quality Control Test Summary

GSB material, soil samples from borrow areas, aggregates, cement and bitumen are being tested regularly. Trial mix design for concrete with different admixtures is also in progress.

The detailed list of quality control test conducted up to the month of January - 2019 are tabulated below -

Four Laning of Chalapuram - Thanjavur From km 116.440 to km 164.275 Section of NH-45C in the State of TamilNadu Under NHDP Phase-IV on Hybrid Annuity Mode.

Summary of Quality Control Report / Monthly Progress Report (QC)

MONTH : FEBRUARY-2019

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month		Tests conducted during reporting month upto 25 th Feb-2019		Test conducted upto this month	
				No. of test Conducted EPC/ Concessionaire	Passed	Failed	Nos.of test witnessed by IE	No. of test Conducted EFC/ Concessionaire	Passed
1.0 Tests on OGL									
1.1	Grain size analysis	IS:2720 (Part4)	1 test / 250 meters	190	0	56	0	0	0
1.2	Atterberg Limits	IS:2720 (Part5)	1 test / 250 meters	190	0	56	0	0	0
1.3	Proctor	IS:2720 (Part8)	1 test / 250 meters	190	0	56	0	0	0
1.4	Free Swell index	IS:2720 (Part40)	1 test / 250 meters	190	0	56	0	0	0
1.5	California bearing ratio	IS:2720 (Part16)	As required	0	0	0	0	0	0
2.0 Borrow Area for EMB/Subgrade (MoRTH & H 305)									
2.1	Grain size analysis	IS:2720 (Part4)	1 test / 1500 m ³	175	0	26	17	0	5
2.2	Atterberg Limits	IS:2720 (Part5)	1 test / 1500 m ³	175	0	26	17	0	5
2.3	Proctor	IS:2720 (Part8)	1 test / 1500 m ³	175	0	26	17	0	5
2.4	Free Swell index	IS:2720 (Part40)	1 test / 1500 m ³	175	0	26	17	0	5
2.5	California bearing ratio	IS:2720 (Part16)	1 test / 3000 m ³	0	0	0	0	0	0
3.0 Field Density Test MORT&H 305									
3.1	Field density (OGL)	IS:2720 (Part28)	1 test / 3000 sqm	1946	0	1170	0	0	0
3.2	Field density (EMB)	IS:2720 (Part28)	1 test / 3000 sqm	1266	6	392	0	0	0
3.3	Field density (SG)	IS:2720 (Part28)	1 test / 2000 sqm	0	0	0	0	0	0
3.4	Field density (Shoulder)	IS:2720 (Part28)	1 test / 2000 sqm	0	0	0	0	0	0
4.0 Safe Bearing capacity of soil									
4.1	Free Swell index	IS:2720 (Part40)	As required	72	72	0	16	10	0
4.2	Grain size analysis	IS:2720 (Part4)	As required	72	72	0	16	10	0
4.3	Atterberg limits	IS:2720 (Part5)	As required	72	72	0	16	10	0
4.4	Proctor	IS:2720 (Part8)	As required	72	72	0	16	10	0
4.5	Direct shear Test	IS:2720 (Part13)	As required	72	72	0	16	10	0
4.6	Bearing Capacity	IS:6403 / IS 1888	As required	72	1	71	16	10	3
4.7	Plate Load Test	IS:6403 / IS 1888	As required	2	2	0	2	0	0
5.0 Granular Bedding Material (For Structures-Ground Improvement)- Mix Design									
5.1	Gradation	Table 400-1	As required	5	5	0	5	0	5
5.2	Atterberg Limits	IS:2720 (Part5)	As required	3	3	0	3	0	3
5.3	Proctor	IS:2720 (Part8)	As required	3	3	0	3	0	3
5.4	CBR Test	IS:2720 (Part16)	As required	1	1	0	0	1	0
5.5	Aggregate Impact value	IS:2386 Part-4	As required	3	3	0	0	3	0

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month			Tests conducted during reporting month upto 25 th Feb 2019			Test conducted upto this month		
				No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test Conducted EPC/ Concessionaire	Passed	Failed
5.1 Granular Bedding Material (For Structures-Ground Improvement)- Site Frequency												
5.1	Gradation	Table 400-1	As required	28	28	0	17	10	10	0	3	38
5.2	Atterberg Limits	IS:2720 (Part5)	As required	28	28	0	17	10	10	0	3	38
5.3	Proctor	IS:2720 (Part8)	As required	4	4	0	4	0	0	0	0	4
5.4	CBR Test	IS:2720 (Part16)	As required	4	4	0	4	0	0	0	0	4
5.5	Aggregate Impact value	IS:2386 Part-4	As required	4	4	0	4	0	0	0	0	4
5.6	Field Density	IS:2720 (Part28)	As required	429	429	0	86	93	93	0	24	522
											522	0
6.0 WMM Mix (Design)												
6.1	Individual / Combined Gradation	Table 400-3	1 test/200m ³	47	47	0	47	0	0	0	0	47
6.2	Aggregate Impact Value	IS:2386 Part-4	1 test/ 1000 m ³	8	8	0	8	0	0	0	0	8
6.3	Flakiness & Elagation index	IS:2386 Part1	1 test/ 500 m ³	8	8	0	8	0	0	0	0	8
6.4	Atterberg Limits	IS:2720 (Part5)	1 test/200m ³	6	6	0	6	0	0	0	0	6
6.5	Water absorption	IS:2386 Part2	As required	3	3	0	3	0	0	0	0	3
6.6	Proctor	IS:2720 (Part8)	As required	3	3	0	3	0	0	0	0	3
6.7	CBR	IS:2720 (Part16)	As required	3	3	0	3	0	0	0	0	3
6.8	Field Density/Trial stretch	IS:2720 (Part28)	1 set Test per 1000Sq.m / 3 pits	0	0	0	0	0	0	0	0	0
6.1 WMM Site Frequency MORT&H 406												
6.1	Individual / Combined Gradation	Table 400-3	1 test/200m ³	0	0	0	0	0	0	0	0	0
6.2	Aggregate Impact Value	IS:2386 Part-4	1 test/ 1000 m ³	0	0	0	0	0	0	0	0	0
6.3	Flakiness & Elagation index	IS:2386 Part1	1 test/ 500 m ³	0	0	0	0	0	0	0	0	0
6.4	Atterberg Limits	IS:2720 (Part5)	1 test/200m ³	0	0	0	0	0	0	0	0	0
6.5	Water absorption	IS:2386 Part2	As required	0	0	0	0	0	0	0	0	0
6.6	Proctor	IS:2720 (Part8)	As required	0	0	0	0	0	0	0	0	0
6.7	CBR	IS:2720 (Part16)	As required	0	0	0	0	0	0	0	0	0
7.0 Fine Aggregate MORT&H 1008												
7.1	Grade / Sieve analysis	IS:2386 (Part1)	As required	63	63	0	28	22	22	0	9	85
7.2	Specific gravity& Water absorption	IS:2386 (Part2)	As required	5	5	0	2	0	0	0	0	5
7.3	Fineness Modulus	MORT&H Sec. 1008&383 As required		63	63	0	28	22	22	0	9	85
7.4	Alkali aggregate reactivity test	IS:2386 (Part-7)IS : 456	1 test per source	2	2	0	0	0	0	0	0	2
7.5	Deleterious material/silt	IS:2386 (Part2)	1 test per source	2	2	0	0	0	0	0	0	2

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month			Tests conducted during reporting month upto 25 th Feb 2019			Test conducted upto this month			
				No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test Conducted EPC/ Concessionaire	Passed	Failed	Nos. of test witnessed by IF
8.0 Coarse Aggregate MORT&H 1007													
8.1	<i>Gradation</i>	IS:2386 (Part2)	As required	80	0	38	22	22	0	9	102	0	47
8.2	<i>Specific gravity& Water absorption</i>	IS:2386 (Part3)	As required	6	0	3	0	0	0	0	6	6	3
8.3	<i>Aggregate Impact Value</i>	IS:2386 (Part4)	As required	25	0	11	3	3	0	1	28	0	12
8.4	<i>Flakiness index</i>	IS:2386 (Part1)	As required	25	0	11	3	3	0	1	28	0	12
8.5	<i>Soundness</i>	IS:2386 (Part5)	As required	1	0	1	0	0	0	0	1	0	1
8.6	<i>Alkali aggregate reactivity test</i>	IS:2386 (Part-7)IS :456	1 test per source	1	1	0	0	0	0	1	1	0	1
8.7	<i>Deleterious constituents</i>	IS:2386 (Part2)	1 test per source	1	1	0	0	0	0	1	1	0	1
8.8	<i>Petrographic Examination</i>	IS:2386 (Part8)	1 test per source	1	0	1	0	0	0	1	1	0	1
9.0 Cement MORT&H 1006													
9.1	<i>Chemical test / Physical test</i>	IS:4031,4032	1 test per source	4	4	0	4	0	0	0	4	4	4
9.2	<i>Fineness</i>	IS:4031 (Part1)	500mt (or) Every week	26	26	0	11	6	6	0	6	32	32
9.3	<i>Normal Consistency</i>	IS:4031 (Part4)	500mt (or) Every week	26	26	0	14	6	6	0	6	32	32
9.4	<i>Initial/Final setting time</i>	IS:4031 (Part5)	500mt (or) Every week	26	26	0	14	6	6	0	6	32	32
9.5	<i>Soundness of Cement</i>	IS:4031 (Part3)	500mt (or) Every week	26	26	0	14	6	6	0	6	32	32
9.6	<i>Compressive Strength-set</i>	IS:4031 (Part6)											
9.7			500mt (or) Every week	26	26	0	19	7	7	0	7	33	33
9.8			500mt (or) Every week	23	23	0	17	7	7	0	7	30	30
9.9			500mt (or) Every week	23	23	0	17	8	8	0	8	31	31
10.0 Water													
10.1	<i>Chemical test</i>	IS 2386	1 test per source	5	5	0	2	1	1	0	0	6	6
11.1	<i>Chemical Test</i>	IS 9103	1 test per source	1	1	0	0	1	1	0	0	2	2

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month			Tests conducted during reporting month upto 25 th Feb 2019			Test conducted upto this month		
				No. of test Conducted EPC/ Concessionaire	Passed	Failed	Nos.of test witnessed by IF	No. of test Conducted EPC/ Concessionaire	Passed	Failed	Nos.of test witnessed by IF	No. of test Conducted EPC/ Concessionaire
12.0 Steel												
12.1	8 mm Dia	IS 1786		4	4	0	3	0	0	0	4	0
12.2	10 mm Dia	IS 1786	Physical &Chemical Properties (1) Test on first lot,(2) Further supply will be provided with mtc. (3) As required by engineer.	6	6	0	5	0	0	0	6	0
12.3	12 mm Dia	IS 1786		5	5	0	4	0	0	0	5	0
12.4	16 mm Dia	IS 1786		4	4	0	3	0	0	0	4	0
12.5	20 mm Dia	IS 1786		5	5	0	5	0	0	0	5	0
12.6	25 mm Dia	IS 1786		4	4	0	3	0	0	0	4	0
12.7	32 mm Dia	IS 1786		1	1	0	1	0	0	0	1	0
13.(A) Concrete Cube Strength of Design Mix												
M15 PCC				27	27	0	27	0	0	0	27	0
7Days Compressive Strength				27	27	0	21	0	0	0	27	0
28Days Compressive Strength											27	0
M20 PCC											21	
7Days Compressive Strength				24	24	0	24	0	0	0	24	0
28Days Compressive Strength				21	21	0	21	0	0	0	21	0
M25 RCC											21	
7Days Compressive Strength				27	27	0	27	0	0	0	27	0
28Days Compressive Strength				24	24	0	24	0	0	0	24	0
M30 RCC											21	
7Days Compressive Strength				30	30	0	30	0	0	0	30	0
28Days Compressive Strength				30	30	0	30	0	0	0	30	0
M30 RCC PUMPABLE											30	
7Days Compressive Strength				12	12	0	12	0	0	0	12	0
28Days Compressive Strength				9	9	0	9	0	0	0	9	0
M35 RCC											9	
7Days Compressive Strength				27	27	0	27	0	0	0	27	0
28Days Compressive Strength				27	27	0	27	0	0	0	27	0
M35 RCC PIILING											9	
7Days Compressive Strength				30	30	0	30	0	0	0	30	0
28Days Compressive Strength				30	30	0	30	0	0	0	30	0
M35 RCC PUMPABLE											30	
7Days Compressive Strength				12	12	0	12	0	0	0	12	0
28Days Compressive Strength				9	9	0	9	0	0	0	9	0
M35 RE BLOCK											9	
7Days Compressive Strength				33	33	0	33	0	0	0	33	0
28Days Compressive Strength				33	33	0	33	0	0	0	33	0

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month			Tests conducted during reporting month upto 25 th Feb 2019			Test conducted upto this month		
				No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test witnessed by IF	Concessionaire	No. of test Conducted EPC/ Concessionaire
	M40 RCC											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	21	0	21	0	0	0	0	21	0
	28Days Compressive Strength			9	9	0	9	0	0	0	9	0
	M40 RCC PUMPABLE											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	12	12	0	12	0	0	0	12	0
	28Days Compressive Strength			12	12	0	12	12	0	12	24	0
	M45 RCC PUMPABLE											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	6	6	0	6	0	0	0	6	0
	28Days Compressive Strength			6	6	0	6	6	0	6	12	0
	13(B) Concrete Cube Strength of Site Cubes											
	M15 PCC											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	35	35	0	29	10	0	7	45	0
	28Days Compressive Strength			67	67	0	55	24	0	24	91	0
	M20 PCC											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	0	0	0	0	0	0	0	0	0
	28Days Compressive Strength			0	0	0	0	0	0	0	0	0
80	M25 RCC											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	0	0	0	0	0	0	0	0	0
	28Days Compressive Strength			0	0	0	0	0	0	0	0	0
109	M30 RCC											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	39	39	0	24	28	0	8	67	0
	28Days Compressive Strength			63	63	0	43	56	0	8	119	0
	M30 RCC PUMPABLE											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	0	0	0	0	1	0	1	1	0
	28Days Compressive Strength			0	0	0	0	0	0	0	0	0
	M35 RCC											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	10	10	0	5	13	0	7	23	0
	28Days Compressive Strength			14	14	0	8	8	0	4	22	0
	M35 RCC PIILING											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	9	9	0	6	24	0	6	33	0
	28Days Compressive Strength			3	3	0	3	15	0	5	18	0
	M35 RCC PUMPABLE											
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	0	0	0	0	14	0	7	14	0
	28Days Compressive Strength			0	0	0	0	14	0	7	14	0

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month			Tests conducted during reporting month upto 25 th Feb 2019			Test conducted upto this month		
				No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test Conducted EPC/ Concessionaire	Passed	Failed	No. of test Conducted EPC/ Concessionaire	Passed	Failed
M35 RE BLOCK												
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	74	74	0	54	57	0	15	131	0
	28Days Compressive Strength			89	89	0	63	75	0	15	164	0
M40 RCC												
	7Days Compressive Strength	IS:516 / IS:456	MORT&H Sec. 1700	0	0	0	0	0	0	0	0	0
	28Days Compressive Strength			0	0	0	0	0	0	0	0	0
14.0 BENTONITE												
14.1	Density			6	6	0	3	18	0	4	24	0
14.2	Marsh Cone Viscosity			6	6	0	3	18	0	4	24	0
14.3	pH Value	MORT&H Sec. 1115.2.3	As required	6	6	0	3	18	0	4	24	0
14.4	Silt Content			1	1	0	0	0	0	0	1	0
14.5	Liquid Limit			1	1	0	0	0	0	0	1	0
15.0 Fine Aggregate MORT&H 1008-(RE-Block)												
15.1	Grade / Sieve analysis	IS:2386 (Part1)	As required	87	87	0	24	52	0	12	139	0
15.2	Specific gravity& Water absorption	IS:2386 (Part2)	As required	0	0	0	0	0	0	0	0	0
16.0 Coarse Aggregate MORT&H 1007-(RE-Block)												
16.1	Gradation	IS:2386 (Part2)	As required	87	87	0	24	52	0	12	139	0
16.2	Specific gravity& Water absorption	IS:2386 (Part3)	As required	0	0	0	0	0	0	0	0	0
16.3	Aggregate Impact Value	IS:2386 (Part4)	1 test/ each source & monthly	0	0	0	0	0	0	0	0	0
16.4	Flakiness index	IS:2386 (Part1)	1 test/ each source & monthly	0	0	0	0	0	0	0	0	0

7. Weather Report

Date	Temperature (Celsius)		Humidity (%)		Rainfall (mm)	Remarks
	Min	Max	Min	Max		
01-02-19	21.3	35.4	44	80	0.00	Sunny
02-02-19	22.4	36.2	40	85	0.00	Sunny
03-02-19	23.1	37.3	37	80	0.00	Sunny
04-02-19	24.4	33.6	52	83	0.00	Sunny
05-02-19	22.9	36.7	42	82	0.00	Sunny
06-02-19	22.4	38.1	35	80	0.00	Sunny
07-02-19	23.1	37.4	39	83	0.00	Sunny
08-02-19	25.5	39.5	36	82	0.00	Sunny
09-02-19	25.5	37.9	39	82	0.00	Sunny
10-02-19	25.0	36.1	46	84	0.00	Sunny
11-02-19	24.8	36.5	40	84	0.00	Sunny
12-02-19	23.6	37.1	37	77	0.00	Sunny
13-02-19	23.5	37.1	40	75	0.00	Sunny
14-02-19	24.6	35.5	45	80	0.00	Sunny
15-02-19	23.6	35.9	45	87	0.00	Sunny
16-02-19	23.8	39.4	36	87	0.00	Sunny
17-02-19	26.8	39.7	40	84	0.00	Sunny
18-02-19	26.4	38.4	38	76	0.00	Sunny
19-02-19	24.8	38.9	40	82	0.00	Sunny
20-02-19	23.2	39.2	34	86	0.00	Sunny
21-02-19	22.5	38.8	30	88	0.00	Sunny
22-02-19	21.7	37.5	30	80	0.00	Sunny
23-02-19	22.2	36.9	27	83	0.00	Sunny
24-02-19	21.8	38.6	33	79	0.00	Sunny
25-02-19	23.8	38.2	32	79	0.00	Sunny
26-02-19	26.4	38.4	38	76	0.00	Sunny
27-02-19	24.8	38.9	40	82	0.00	Sunny
28-02-19	23.2	39.2	34	86	0.00	Sunny

8. Safety

Various issues related to environment and safety, such as traffic management, safety signage's, disposal of waste materials and oil spillage, housekeeping, area barricading and traffic management, etc., are being taken care of during the execution of the project.

9. Support required from NHAI

Concessionaire requests NHAI to take early action on the following issues:

1. Pending Disbursement of Payment to the beneficiaries from CALA towards Land and Buildings in Thanjavur District. – Request Authority to advise/instruct the Competent Authority of Land Acquisition to speed up the process of disbursement of pending payment.
2. Relocation of High Tension transmission tower lines.
3. NOC from PWD/WRO for commencement of construction activities for Irrigation Structures.
4. Permission from Local Authorities for procurement of Borrow Earth for Irrigation Tanks.
5. Rerouting of existing canal between Km:124+150 to 124+750 Km:117+760 to 118+480 and 146+600 to 148+100
6. Removal/relocation of existing irrigation sluice and regulator in the locations of Km:150+800, Km:152+900.
7. Additional land acquisition for Toll plaza location, Bus bays. Turning radius at Major junctions.
8. Removal of Teak wood trees from the Project Highway.
9. Removal of Religious structures and Bus stand to be removed from the carriage way.

10. Important Events**Table 10.1. Details of Important Events**

Sl. No	Date of Events	Description of Events	Remarks
1)	04.02.2019 to 10.02.2019	National Road Safety Week 2019	
2)	11.02.2019	Competent Authority (LA) Meeting at Thiruvarur	
3)	12.02.2019	Principal Secretary Meeting at Secretariat Chennai	
4)	20.2.2019 & 21.02.2019	LA Officials Site Inspection	

11. Organization Chart

The following figures represent the organization structure of the EPC and SPV Team.

1. Fig. 4 - Organization Chart - EPC Team

2. Fig. 5 - Organization Chart - SPV Team

Figure 4 - ORGANIZATION CHART - EPC TEAM

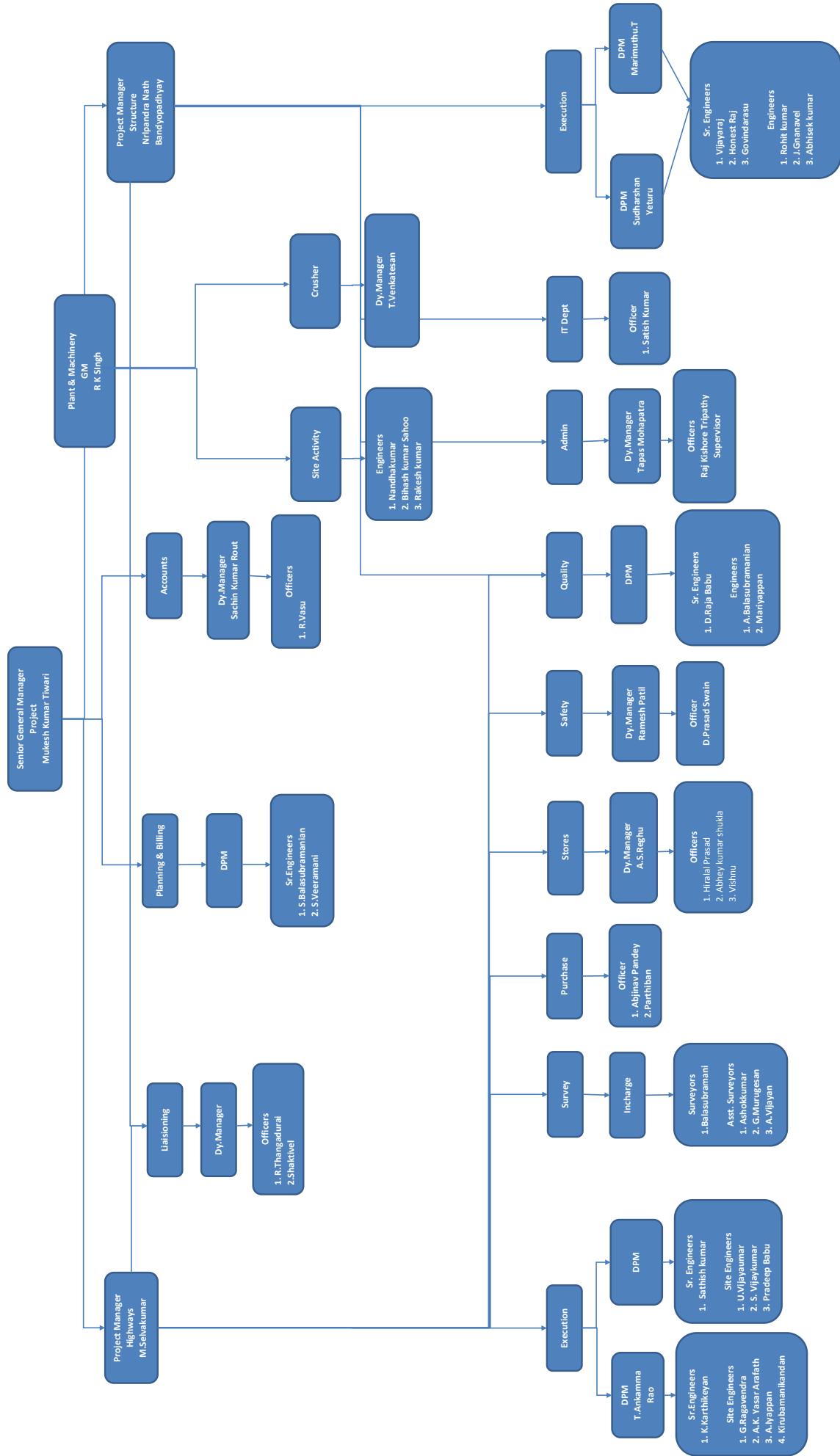
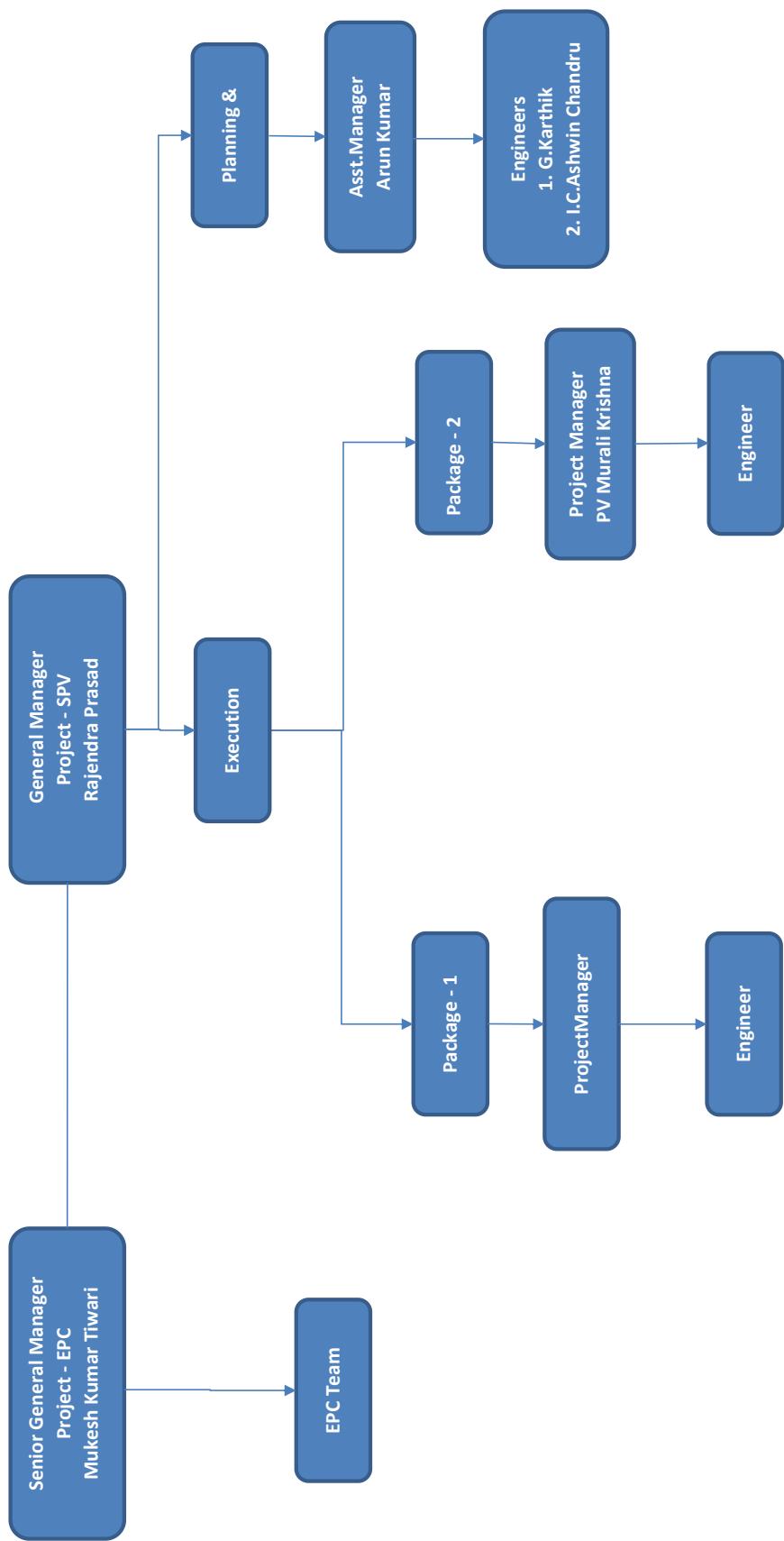


Figure 5 - ORGANIZATION CHART - SPV TEAM



12. List of Plants, Machinery and Equipment's**Table 12.1 - List of Plants, Machinery and Equipment's**

S.No	Name of the Machinery	Capacity / Model	Mobilized in Nos.	Remarks
1	Grader	120K2	4	
2	Excavator	JCB-220	2	
3	Dozer			
4	Soil Compactor	HAMM 311	4	
5	Backhoe Loader	JCB 3DX	2	
6	Tipper	Bharat Benz- 3128C	21	
7	Transit Mixer	2523C		
8	Loader	455 ZX	6	
9	Trailer		1	
10	Water Tanker		6	
11	Boom Placer	S-36	1	
12	Tractor	5036 D V-2	4	
13	Mobile Service Van		1	
14	Tower Light	AJASKY	1	
11	Hydra Crane		1	
12	Asphalt Batch Mix Plant		1	
13	Wet Mix Plant	250 TPH	1	
14	Concrete Batch Mix Plant 45 cum	45 cum	1	
15	Concrete Batch Mix Plant 60 cum	60 cum	1	
16	Crusher Plant (3 Stage)	250 TPH	2	
17	Weigh Bridge for Camp 100MT	100MT	2	
18	Weigh Bridge for Crusher 100MT	100MT	1	
19	Genset Base Camp	25KV	3	
20	Genset 63KVA Boiler	63KVA Boile	1	
21	Genset (H.M & B/P)	82.50KV	1	
22	Genset (B/P-CP-45)	125KV	1	
23	Genset Concrete Plant-180 KVA	180 KVA	1	
24	Genset (Structure)		3	
25	Genset (Gantry)		1	
26	Genset (Crusher)	1010KVA	3	

13. Change of Scope Proposals**Table 13.1 - Status of Change of Scope Proposals**

Sl. No	Proposal Details	Date of Proposal	Current Status	COS Amount	Actual Date of Approval
1	Replacement of Pipe Culvert with box Culvert	25.04.2018	Approved in-principle by Authority. Preparation of Details Quantities in proper order is in Progress	NA	NA

14. Details of Correspondences

The following tables list out the correspondences between the parties.

Table 14.1. - Concessionaire to NHAI

Table 14.2. - NHAI to Concessionaire

Table 14.3. - Concessionaire to Independent Engineer

Table 14.4. - Independent Engineer to Concessionaire

TABLE 14.1 - CORRESPONDANCE - CONCESSIONAIRE TO NHAI

S.No	Date	Letter No	Subject	Remarks
1	02-02-19	PCTHPL/CTP/NHAI/2019/248	Extraction of Soil - Request for recommendation to District Collector for Granting of permission	
2	05-02-19	PCTHPL/CTP/NHAI/2019/252	Borrowing of ordinary Earth for Highway Construction - Request for recommendation to District Collector for Granting of permission	
3	12-02-19	PCTHPL/CTP/NHAI/2019/259	Filing of Annual Return by the contractors through Shram Suvidha Portal	
4	12-02-19	PCTHPL/CTP/NHAI/2019/260	National Road Safety Week during 04th to 10th February 2019 – Activities & Action Plan	
5	25-02-19	PCTHPL/CTP/NHAI/2019/267	Submission of General Arrangement Drawings (GAD) for 07 nos. of Minor Bridge for the concurrences of Tamil Nadu PWD WRO	
6	25-02-19	PCTHPL/CTP/NHAI/2019/268	Submission of General Arrangement Drawings (GAD) for 05 nos. of Minor Bridge for the concurrences of Tamil Nadu PWD WRO	

TABLE 14.2 - CORRESPONDANCE - NHAI TO CONCESSIONAIRE

S.No	Date	Letter No	Subject	Remarks
1	01-02-19	NHAI/PIU/Thani/11026/15/2018/244	Pending compensation payment for Structures in Thanjavur District Package III -Encumbrance free land requested by Concessionaire	
2	01-02-19	NHAI/PIU/Thani/11026/12/2018/265	Shifting of Electrical Utilities like HT LT Lines & Structures in Kumarakomam & Orathanadu Divisions	
3	02-02-19	NHAI/PIU/Thani/11026/21/2018/266	Maintenance of existing road of NH45C Compliance report submitted	
4	04-02-19	NHAI/PIU/Thani/11026/15/2018/270	Land Acquired handing over of possession of land for Road construction work	
5	11-02-19	NHAI/PIU/Thani/11026/22/2018/308	Submission of GAD for 11 Nos of Proposed Minor Bridges for the Concurrences of Tamilnadu PWD-WRO-NOC Issued Communicated	
6	11-02-19	NHAI/PIU/Thani/11026/22/2018/309	Submission of GAD for 16 Nos of Proposed Minor Bridges for the Concurrences of Tamilnadu PWD-WRO-NOC Issued Communicated	
7	11-02-19	NHAI/PIU/Thani/11026/22/2018/324	Submission of GAD for 02 Nos of Proposed Minor Bridges for the Concurrences of Tamilnadu PWD-WRO-NOC Issued Communicated	
8	11-02-19	NHAI/PIU/Thani/11026/22/2018/325	Submission of GAD for 08 Nos of Proposed Minor Bridges for the Concurrences of Tamilnadu PWD-WRO-NOC Issued Communicated	
9	11-02-19	NHAI/PIU/Thani/11026/22/2018/326	Submission of GAD for 07 Nos of Proposed Minor Bridges for the Concurrences of Tamilnadu PWD-WRO-NOC Issued Communicated	

TABLE 14.3 - CORRESPONDANCE - CONCESSIONAIRE TO INDEPENDENT ENGINEER

S.No	Date	Letter No	Subject	Remarks
1	02-02-19	PCTHPL/CTP/IE/2019/247	Procurement of Bitumen and Bitumen Emulsion	
2	04-02-19	PCTHPL/CTP/IE/2019/249	Submission of Concrete Mix Design for M-35 RE Blocks	
3	04-02-19	PCTHPL/CTP/IE/2019/250	Submission of Concrete Mix Design Reports- Chettinadu OPC 53 Grade	
4	04-02-19	PCTHPL/CTP/IE/2019/251	Submission of Concrete Mix Design Reports- Ramco OPC 53 Grade	
5	06-02-19	PCTHPL/CTP/IE/2019/253	Submission of Drawings of proposed Irrigation channel/duct at Km 162 + 115	
6	06-02-19	PCTHPL/CTP/IE/2019/254	Regarding details of stretches under hindrance in Project Highway.	
7	06-02-19	PCTHPL/CTP/IE/2019/255	Submission of Monthly Progress Report for the Month of January 2019	
8	09-02-19	PCTHPL/CTP/IE/2019/256	Procurement of Waterproofing Membranes for Bridge Decks from Tiki Tar Danosa (India) Private Ltd	
9	09-02-19	PCTHPL/CTP/IE/2019/257	Third Party Test Report on Analysis of Water	
10	12-02-19	PCTHPL/CTP/IE/2019/258	Submission of Escrow Account Details	
11	13-02-19	PCTHPL/CTP/IE/2019/261	Submission of Drawings for 28 Nos of Box Culverts	
12	18-02-19	PCTHPL/CTP/IE/2019/262	Submission of GFC Drawings of 47 Nos. of Box Culverts	
13	18-02-19	PCTHPL/CTP/IE/2019/263	Submission of GFC Drawings of 44 Nos. of Minor Bridges	
14	18-02-19	PCTHPL/CTP/IE/2019/264	Submission of Plate load Test Reports for 2 Box Culverts	
15	20-02-19	PCTHPL/CTP/IE/2019/265	Source approval for HT Strands from Ms Usha martin Limited Joint Factory inspection requested	
16	20-02-19	PCTHPL/CTP/IE/2019/266	Procurement of Chemical Admixture from Ms CBS Chemicals	
17	25-02-19	PCTHPL/CTP/IE/2019/269	Regarding slow progress in achieving the Project Targets of Milestone - I	

TABLE 14.4 - CORRESPONDANCE - INDEPENDENT ENGINEER TO CONCESSIONAIRE / NHAI

S.No	Date	Letter No	Subject	Remarks
1	01-02-19	THEME/NHAI/CHO-TNR/CON/0219/180	Review for HT Strands from Ms. Kataria Industries Pvt Ltd	
2	01-02-19	THEME/NHAI/CHO-TNR/CON/0219/181	Review for HT Strands from Ms. Usha Martin Ltd	
3	01-02-19	THEME/NHAI/CHO-TNR/CON/0219/182	Utilization of Utility Ducts along the National Highways in Urban areas	
4	02-02-19	THEME/NHAI/CHO-TNR/CON/0219/183	Escrow Account Details	
5	02-02-19	THEME/NHAI/CHO-TNR/CON/0219/184	Slow Progress against the planned program	
6	02-02-19	THEME/NHAI/CHO-TNR/CON/0219/185	Minutes of Project Review Meeting No.4	
7	04-02-19	THEME/NHAI/CHO-TNR/ATH/0219/074	Irrigation and Drainage facilities-construction of Bridge in Kadakkadappai Village of Thanjavur Taluk and District requested	
8	05-02-19	THEME/NHAI/CHO-TNR/CON/0219/186	Sadak Suraksha Jeevan Raksha – Observance Celebration of 30th "National Road Safety Week 2019" from 04th to 10th February 2019	
9	05-02-19	THEME/NHAI/CHO-TNR/CON/0219/187	Maintenance of existing road of NH45C Compliance report submitted	
10	06-02-19	THEME/NHAI/CHO-TNR/CON/0219/188	Submission of Projected Expenditure of the Projects	
11	07-02-19	THEME/NHAI/CHO-TNR/CON/0219/189	Slow Progress in achieving the Project Target of Milestone-I	
12	09-02-19	THEME/NHAI/CHO-TNR/CON/0219/190	Source Approval for Procurement of Bitumen and Bitumen Emulsion from Ms. Indian Oil Corporation Ltd	
13	12-02-19	THEME/NHAI/CHO-TNR/CON/0219/191	Review for the drawings of proposed irrigation channel duct at km 163+382	
14	12-02-19	THEME/NHAI/CHO-TNR/CON/0219/192	Hindrance/obstruction of Irrigation Structures and Existing Canal Passing//located within the proposed Carrigeway	
15	14-02-19	THEME/NHAI/CHO-TNR/CON/0219/193	Review of Water Proofing Membrane for Bridge Decks from Tiki Tar Danosa (India) Pvt Ltd	
16	14-02-19	THEME/NHAI/CHO-TNR/CON/0219/194	Source Approval for Water Submission of Design of Staging and formwork for the Structures and Directions	
17	14-02-19	THEME/NHAI/CHO-TNR/CON/0219/195	from Ministry	
18	14-02-19	THEME/NHAI/CHO-TNR/CON/0219/196	Work Program and Compliance of Physical Progress and Resource Allocation	
19	14-02-19	THEME/NHAI/CHO-TNR/CON/0219/197	Non Compliance Report No-1 - Regarding Quality of Aggregate used or using in Production of RE Wall Blocks	
20	15-02-19	THEME/NHAI/CHO-TNR/CON/0219/198	Provisional Approval of Concrete Mix Design for M-35 RE wall Modular Blocks	
21	15-02-19	THEME/NHAI/CHO-TNR/CON/0219/199	Provisional Approval of Concrete Mix Design M-15PCC, M-20PCC, M-25RCC, M-30RCC & M-30 pumpable	
22	15-02-19	THEME/NHAI/CHO-TNR/CON/0219/200	Provisional Approval of Concrete Mix Design M-15PCC, M-20PCC, M-25RCC, M-30RCC & M-30 pumpable	

15. Progress Photographs

Sl. No	Description	Location	Side	Remarks
1.	Patteeswaram Base Camp	138+200	RHS	



Sl. No	Description	Location	Side	Remarks
2	Patteswaram Base camp with RMC Plant and Aggregate Stockyard	138+200	RHS	



Sl. No	Description	Location	Side	Remarks
3.	Mobilized Machineries	138+200	RHS	



Sl. No	Description	Location	Side	Remarks
4.	Mobilized Machineries	138+200	RHS	



Sl. No	Description	Location	Side	Remarks
5.	RMC plant in operation at Base camp	138+200	RHS	
				
6.	HM Plant erection in progress	138+200	LHS	
				

Sl. No	Description	Location	Side	Remarks
7.	Crusher Erection In Progress			



Sl. No	Description	Location	Side	Remarks
8.	RE Wall Blocks Casting in progress			

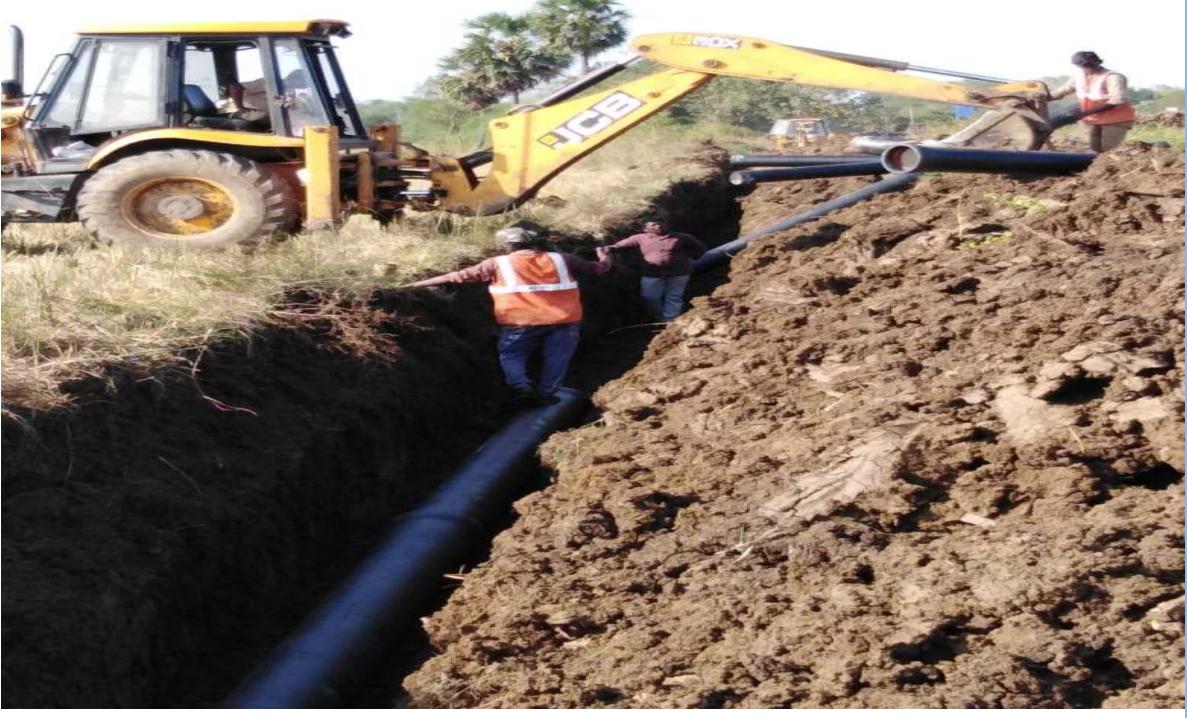


Sl. No	Description	Location	Side	Remarks
9.	Dismantling of Existing Structures	132+520	LHS	



Sl. No	Description	Location	Side	Remarks
10.	Dismantling of Existing Structures	125+530	LHS	



Sl. No	Description	Location	Side	Remarks
11.	Pipeline Utility shifting In Progress Report			
				
12.	Embankment In Progress	161+300		
				

Sl. No	Description	Location	Side	Remarks
13.	Embnkment in Progress	162+620	RHS	



Sl. No	Description	Location	Side	Remarks
14.	Minor Bridge Wall In Progress	119+100		



Sl. No	Description	Location	Side	Remarks
15.	Minor bridge Granular Filling in Progress	118+480		



Sl. No	Description	Location	Side	Remarks
16.	Box Culvert Slab-In Progress	122+952		



Sl. No	Description	Location	Side	Remarks
17.	Box Culvert Raft Work in Progress	124+120	LHS	



Sl. No	Description	Location	Side	Remarks
18.	VU-Piling In Progress	128+715		



Sl. No	Description	Location	Side	Remarks
19.	Box Culvert Raft Work Completed	146+079	LHS	
				
Sl. No	Description	Location	Side	Remarks
20.	Box Culvert Return Wall and Parapet wall completed	142+048	BHS	
				

Sl. No	Description	Location	Side	Remarks
21.	Pile Load test carried out at Flyover	134+020		



Sl. No	Description	Location	Side	Remarks
22	Patwork @ Ammapettai towards Papanasam And thiruvanazuli towards Thanjavur		BHS	



Sl. No	Description	Location	Side	Remarks
23.	Existing Road Maintenance			



Sl. No	Description	Location	Side	Remarks
24	Electrical Utility shifting Work started			



Sl. No	Description	Location	Side	Remarks
25.	Existing Bridge repairs			



Sl. No	Description	Location	Side	Remarks
26.	Road Safety Week Celebrations	Base Camp		



Sl. No	Description	Location	Side	Remarks
27.	Road Safety Week Celebrations	Base Camp		

A photograph showing a large group of construction workers standing in a long line outdoors. They are wearing yellow hard hats and various colored safety vests (orange, green, blue). The background shows a construction site with a white trailer labeled "ROAD SAFETY WEEK CELEBRATION", some trees, and a train on tracks. A watermark "B612" with stars is visible in the bottom right corner of the image.