

# GOVERNMENT OF MIZORAM PUBLIC WORKS DEPARTMENT



## DETAILED PROJECT REPORT FOR WIDENING TO 2- LANE OF NH 54 BETWEEN KM 431/00 TO KM 562/00 IN THE STATE OF MIZORAM



### DETAILED PROJECT REPORT

VOLUME - II: DESIGN REPORT

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**MULTI MODAL PROJECT DIVISION-I**

**GOVERNMENT OF MIZORAM  
PUBLIC WORKS DEPARTMENT**

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**DETAILED PROJECT REPORT FOR WIDENING TO 2-LANE OF NH 54 BETWEEN  
KM 431/00 TO KM 562/00 IN THE STATE OF MIZORAM**

**Name of Road :NH-54 within Mizoram (KM 431+00 TO KM- 562+00)**

**Length of road : 122.636 Km**

**VOLUME - II  
DESIGN REPORT**

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## SECTION - 1

### DESIGN OF REPORT

#### GENERAL

##### Work Content

The main elements of this project under Engineering Design and Drawings are:

- 1.1 Road Alignment
- 1.2 Road Geometrics
- 1.3 Design of Road Formation
- 1.4 Design of Pavement
- 1.5 Design of Shoulders
- 1.6 Design of Junctions
- 1.7 Design of Culverts
- 1.8 Design of Drainage System
- 1.9 Design of Slope Protection Works
- 1.10 Road Signs, Marking & Furniture
- 1.11 Diversion of Existing Road during Construction
- 1.12 Maintenance of Existing Road

##### Design Standard and Specifications

Engineering and Design of these components is governed by the Design Standards and Specifications.

##### Design Approach

The total length of the Project Road passes through the Lunglei, Lawngtlai & Saiha District. The project objective is to develop the proposed road to NH double lane standard and specifications

The project road has been designed as National Highway based on Hill Road Manual IRC: SP-48-1998 for specification.

IRC: 52-2001 has been followed for alignment and geometric design of hill road.

Design standards are stipulated in the scope of work.

Specifications-5<sup>th</sup> Rev. 2013 of MORT&H is applied.

Gradients have been eased and brought within Ruling Gradient for safe and convenient movement of traffic.

The longitudinal profile generally follows the contours and the ground profile.

The cross sections are designed to accommodate the main carriageway and drainage system.

Geometric design is important for safe and economical operation of vehicles. The geometric design standards have been adopted as per IRC: SP-48-1998 and IRC: 38-1988.

The traffic volume and land-use are considered in traffic volume assessment.

The pavement design method utilized in the study is derived from IRC: 37-2001 & IRC: 2012 for New Pavements. The major parameters influencing pavement design include Traffic volume, Design life in years and Sub grade strength in terms of CBR of soil.

The Pavement thickness shall be built up in layers taking into consideration the as per design crust composition and equivalency factors as per provisions of IRC: 37-2001.

### Salient Features

Salient features based on design are as below:

- Length of Project Road Sector Km 122.636
- The road has a ROW of 24.00 m at open area & 20.0 m at built up area
- The formation width is 12.0 m
- The Highway is designed for 2-lane carriageway of 7.0 m width.
- The Highway is designed with flexible pavement
- Paved shoulders of 2.50m are provided both sides.
- All structures are matching to two lane NH roadway standard.
- Route Alignment: The Project Corridor Takes off from Lunglei district near Tawipui North Village-2 at Km 431+00 then passes through the 13 Nos of villages & Lawngtlai City from Km 472+00 to Km 480+00 and Terminate at km 562+000 at Tuipang Village within Saiha District.
- Lawngtlai Bye Pass 1.92 Km, Take of point at Km 4.40 of Multi model Transit Route to Km 475+500 on NH 54 near BRO Camp.
- Drains: Lined Drain.
- Landslide : 40 Nos.
- Junction – 45 Nos., Major Junction – 6 & Minor Junction – 39 Nos
- Bridges – 1 Nos Existing PSC Bridge over Tuipui River at Kaulchaw
- Items for Road Safety, Roadside Amenities and Road Furniture are provided.

### 1.1 ROAD ALIGNMENT

The existing NH-54 was originally constructed as ODR Standard road during the early part of seventies. It was constructed by the BRO .The road was constructed to provide connectivity between two Southern District of Mizoram. The road was upgraded to the status of National Highway in the year 1980. No substantial improvement of the road other than normal renewal works have been carried out since the road was declared a National Highway. The NH-54 road passes through heavily built-up areas which involve costly of Land Acquisition and serious resettlement problems in the existing road. The existing alignment also passes through steep terrains which are unstable and landslide prone area at many locations which could also posed serious problems in future.

The proposed realignment of the existing road from Km 535+070 to Km 539+330 at Theiva village to avoid the sharp zig of existing road and Km 473+300 to Km 478+400 Lawngtlai Bye pass which include 4.40 Km stretch of Multi Model Transit Route & 1.92 Km new alignment to avoid the

movement of heavy vehicle traffic & traffic conjunction within the built-up portion of Lawngtlai city.

The proposed realignment / Bye Pass take off points are very near due to which, it will not be effected and deprived the connectivity with villages and hence, the villagers would be the beneficiaries with the proposed alignment. Therefore, the proposed re-alignment does not pass through heavily built-up area and would involve much less L.A cost as well as resettlement problem as compared to the existing alignment. The re-alignment also passes through an area with a much better topographical as well as soil conditions. Hence, apart from the reduction in distance between Lunglei and Tuipang, which would greatly benefit both the neighbouring countries in terms of vehicle operating cost and travel time, the proposed re-alignment is technically far better and financially cost effective in the long run.

### **Alignment Option Study**

The objective of the alignment option study is to determine various alternative alignment options and to identify relative acceptability and preference of the alignment. With a view to appreciate the feasibility and relative strength, weakness of the alternative proposals marked on the toposheet, and site evaluation of the same have been carried out. This was manifested through identifying the problems, shortcomings along with probable route

### **Critical Factors in alignment selection**

The critical factors to be considered in the selection of the alignment are as follows:

- 1) The alignment should meet the geometric standards, particularly the gradients and curvature.
- 2) It should avoid acquisition of commercial and residential establishments.
- 3) It should avoid costly land acquisition.
- 4) It has the least number of curves.
- 5) It should be as directional as possible, i.e. least distance.
- 6) It should facilitate smooth traffic dispersal.
- 7) It should have minimum provision of structures.
- 8) It maintains the configuration of the hill.
- 9) It does not have zigs or hair-pin curves.
- 10) It should be environment friendly.
- 11) Junction points (start points) of the new aligned portion are well defined points for maintenance of smooth flow of the traffic on the proposed route.
- 12) The route does not create any social and rehabilitation problem

### **Detailed Topographical Survey**

Detailed topographical survey of the select route from Ch 431+000 to Ch 553+636 has been carried out. Important points are:

- Survey was carried out at 20 m interval
- Plan and profile is prepared for the levels at intervals of 20 m.

### **Analogous Sections**

The terrain, soil classification, topography and all other features are more or less same throughout the road. Only one analogous section is considered. However, during the packaging for the procurement of Civil Works Contract, the road sector will be divided into Sectors.

## **1.2 ROAD GEOMETRICS**

The geometric design of the corridor includes design of horizontal and vertical alignment. Digital data of Total Station topographic survey and reduced levels for the entire project corridor are basic input for geometric design. Geometric designs have been carried out as per IRC: SP-48-1998 and IRC: 38-1988/MORT&H recommendations. The alignment of the road has been examined to ensure its maximum possible safety for the vehicles and human beings with least negative impact on the environment.

### **Plan & Profile**

#### **Contours**

Contours have been derived from the topographical data and the design of Plan and Profile. These are super-imposed on the Plan and Profile.

#### **Plan and Profile**

The design of the road geometric has been detailed out by application of MX-Road Software. These are produced in the shape of Plan and Profile. These are placed in Volume containing the drawings.

#### **Road Plan**

The project road has been designed as a two-lane carriageway as per design standards. The longitudinal profile and the cross sections have been examined in detail and designed to accommodate carriageway, shoulders and drainage system. The ROW of 24m is considered. ROW doesn't affect the road cross-section elements. The geometric design is very important for safe and economical operation of vehicles. The traffic volume, operating speeds, land use are other important factors which have been taken into considerations.

#### **Road Profile**

During the detailed topographical survey, the trace-cut has been marked on the ground and survey details have been obtained on the trace-cut. However, in hard rock and hazardous areas the trace-cut is serving as reference line only. Consequent to the design of road profile the final road (FRL) will be transferred for execution purposes (Refer IRC 52-2001).

## **1.3 DESIGN OF ROAD FORMATION**

### **Design of Embankment / Hill Cutting**

Road is designed with roadway width of 12.00m. The design side slope is as given in Chapter – 01: Design Standard and Specifications. In the case of hill road the hill cutting / filling as well as embankment building is dependent upon the physical features, particularly the terrain, soil classification and hill slope line. Typical cross-sections have been developed for hill cutting / embankment building presented in drawing **Volume: IV**

### **Compaction of disposal material at dumping location**

Spreading & Compaction of Roadway cutting and excavation from drain and foundation of other structures surplus material at selected disposal location by Dozer at least four passes in layer wise not more than 300 mm thick.

## **1.4 PAVEMENT DESIGN**

The road is designed for flexible pavement.

Based on the existing traffic volume counts and traffic projection two-lane width carriageway for proposed road has been considered.

Pavement design has been based on CBR Values of sub-grade soil, vehicle damage factor consequent to number of commercial vehicles on the road corridor. Design life of the project is considered as 15 years.

The design shall be based on CBR Method of IRC Specifications. Pavement design has been carried out as per IRC-37, 2001 for 15 years design traffic.

The intensity of repeated axle loading on a pavement over a given period of time is denoted by the cumulative number of million standard axles during this period. As per IRC-37: 2001, the number of million standard axles for the design year is computed by the equation:

$$N = \frac{365[(1+r)^n - 1]}{r} \times A \times D \times F$$

Where:

- N = Cumulative number of standard axles to be catered for in the design in terms of msa.
- A = Initial traffic for the design lane in terms of specified type of commercial vehicles per day;
- D = Lane Distribution Factor
- r = Annual growth rate of the specified types of commercial vehicles;
- n = Design life in number of years;
- F = Vehicle Damage Factor of the type of Commercial vehicle.

The traffic in the year of completion is estimated using the following formula:

$$A = P(1+r)^x$$

Where

- P= Number of commercial vehicles as per last count.
- X= Number of years between the last count and the year of completion of construction.

Our analysis indicates that there are three typical cases for pavement design. The design of pavement for these typical cases is given below:

Type-I P : Proposed pavement on new formation.  
Type-II P : Proposed pavement for junction/village link road

Traffic intensity is too low on this existing road due to steep gradient and sharp curve. Loaded vehicles are unable to ply.

In view of the low intensity of traffic at present scenario, the traffic intensity for commercial vehicle per day is considered 312 Nos. Traffic intensity CVD 312 has been considered for pavement design.

Design period is considered 15 years.

CBR for pavement design is considered as 6%.

### **Pavement Design for New Construction**

#### **DATA**

Two lane single carriageway

Lane distribution factor = **D** = 0.75

Vehicle damage factor (Based on axle load survey) = **F** = 1.5

Design life in year = <b>n</b>	=	15	Years
Annual growth rate of commercial vehicles = <b>r</b>	=	7.5	%
Number of commercial vehicles as per last count = <b>P</b>	=	312	per day
Number of years between the last count and the year of completion of construction = <b>x</b>	=	8	Years
Design CBR of sub-grade soil	=	6	%

### DESIGN CALCULATIONS

Initial traffic in the year of completion of construction in terms of the number of commercial per day  $A=P(1+r)^x$

$$A=312 \times (1+0.075)^8 = 557 \text{ per day}$$

The cumulative number of standard axles to be catered for in the design in terms of msa  $N=365 \times [(1+r)^n-1] \times A \times D \times F/r$

$$N=365 \times [(1+0.075)^{15}-1] \times 557 \times 0.75 \times 1.5 / 0.075 = 5973743$$

$$= 6 \text{ msa}$$

Total thickness for CBR 6 % and Traffic 10 msa = 615 mm

### Pavement Composition interpolated

Bituminous surfacing

Bituminous Concrete (BC) = 40 mm

Dense Bituminous Macadam (DBM) = 65 mm

Granular base Wet Mix Macadam (WMM) = 250 mm

Granular sub-base (GSB) = 260 mm

### Pavement Composition Design:

Based on the design, the pavement composition is indicated as under :

Type - : Proposed pavement on new alignment

BC	:	40 mm
DBM	:	100 mm
WMM in 2-layers	:	250mm
GSB in 2-layers	:	300 mm
Total	:	690 mm

### Widening of Pavement at Curves

It is proposed to widen the pavement width at the sharp curves for road safety as per IRC SP:48 : 1998 provisions.



## 1.5 DESIGN OF SHOULDERS

The carriageway width of 7m and paved shoulder width of 1.5 m on each side shall have the same pavement as the carriageway. The remaining 1.0m on each side shall be used to accommodate side drain on hill side or parapet/soft shoulder on valley side. In the hill side, depending on the total width of side drain, there is a small width remaining between the wall of side drain and paved shoulder, therefore it is also paved to avoid erosion by surface water

## 1.6 DESIGN OF INTERSECTION/JUNCTIONS

Based on the survey there are four junctions/ intersections as mentioned below:-

### Road Junctions.

Provisions have been made for the improvement of road junctions along the project road. Based on the survey there are 45 junctions/ intersections as mentioned below:-

S/N	CHAINAGE	SIDE	SHAPE	DESCRIPTION	LOCATION	TYPE
1	433340	LHS	Y	Village Link Road	Tawipui North -2	Minor
2	433500	LHS	Y	Village Link Road	Tawipui North -2	Minor
3	433525	RHS	X	Village Link Road	Tawipui North -2	Minor
4	433865	LHS	Y	Village Link Road	Tawipui North -2	Minor
5	433895	LHS	Y	Village Link Road	Tawipui North -2	Minor
6	434230	LHS	Y	Village Link Road	Tawipui North -2	Minor
7	435950	LHS	Y	Village Link Road	Tawipui North -1	Minor
8	440200	RHS	Y	Agricultural Link Road		Minor
9	440670	LHS	Y	Agricultural Link Road		Minor
10	445000	RHS	Y	Village Link Road	Tawipui South	Minor
11	445290	RHS	Y	Village Link Road	Tawipui South	Minor
12	450990	RHS	Y	BPL COMPANY		Minor
13	459150	LHS	Y	Village Link Road	Thingfal	Minor
14	467280	LHS	Y	Village Link Road	Thingka	Minor
15	467360	LHS	Y	Village Link Road	Thingka	Minor
16	470550	RHS	Y	Multi Model Road	Lawngtlai city	Major
17	472360	LHS	Y	Bungtlanga Road	Lawngtlai city	Major
18	472850	RHS	Y	City Link Road	Lawngtlai city	Minor
19	473060	LHS	Y	City Link Road	Lawngtlai city	Minor
20	473070	RHS	Y	City Link Road	Lawngtlai city	Minor
21	473450	RHS	Y	City Link Road	Lawngtlai city	Minor
22	474200	RHS	Y	City Link Road	Lawngtlai city	Minor
23	474770	RHS	Y	City Link Road	Lawngtlai city	Minor
24	475000	RHS	Y	City Link Road	Lawngtlai city	Minor
25	475500	RHS	Y	Multi Model Road	Link road	Major
26	475610	LHS	Y	PWD Complex Link Road	Lawngtlai city	Minor
27	478130	LHS	Y	Village Link Road		Minor
28	483800	RHS	Y	Village Link Road	Saika	Major
29	490650	RHS	Y	Village Link Road	Kawlchaw	Minor

30	503430	RHS	Y	Village Link Road	Kawlchaw	Minor
31	503720	LHS	Y	Village Link Road	Kawlchaw	Minor
32	503850	LHS	Y	Village Link Road	Kawlchaw	Minor
33	515170	LHS	Y	NH 54 B takeoff point	Zero Point	Major
34	523050	RHS	Y	Agricultural Link Road		Minor
35	530470	LHS	Y	Diversion start	Theiva	Minor
36	531480	RHS	Y	Village Link Road	Theiva	Minor
37	532020	RHS	Y	Village Link Road	Theiva	Minor
38	533080	RHS	Y	Diversion end	Theiva	Minor
39	536440	RHS	Y	Agricultural Link Road		Minor
40	538700	LHS	Y	Village Link Road	Theihri	Minor
41	539040	LHS	Y	Village Link Road	Theihri	Minor
42	552410	RHS	Y	Village Link Road	Tuipang	Minor
43	552830	RHS	Y	Village Link Road	Tuipang	Minor
44	553604		X	Village Link Road	Tuipang	Minor
45	Lawngtlai Bye Pass		Y	MM Road Junction	Lawngtlai City	Major

These Junctions needed major improvement as compared

Sr. No.	Chainage in m	Design
1	470+550	Junction with Multi Model Transit Route Take off
2	472+360	Junction with Bungtlanga BRO Road
3	475+500	Merging of Lawngtlai Bye Pass with existing NH-54
4	483+800	Junction with NCV road
5	515+170	Junction with NH- 54 B serves as Approach road Saiha District
6	0+00	Take of point of Lawngtlai Bye Pass from Multi Model Transit Route at Km 4.40.
7		Other link road need to be improved by proper grading, widening & black topping.

### 1.0 Junction at Ch. 470+550

Location : Junction with Multi Model Transit Route Take off

Shape : Y-Shape

Design : This junction is designed as a simple meeting point with open space for the traffic. Regulation by rotary or traffic island is considered suitable.

## 2.0 Junction at Ch. 472+360

Location	:	Junction with Bungtlanga BRO Road
Shape	:	Y-Shape
Design	:	This junction is designed as a simple meeting point with open space for the traffic. Regulation by rotary or traffic island is not considered suitable.

## 3.0 Junction at Ch. 475+500

Location	:	Merging of Lawngtlai Bye Pass with existing NH-54
Shape	:	Y -Shape
Design	:	This junction is designed as a simple meeting point with open space for the traffic. Regulation by rotary or traffic island is not considered suitable.

## 4.0 Junction at Ch. 483+800

Location	:	Junction with NCV road
Shape	:	Y -Shape
Design	:	This junction is designed as a simple meeting point with open space for the traffic. Regulation by rotary or traffic island is not considered suitable.

## 5.0 Junction at Ch. 515+170

Location	:	Junction with NH- 54 B serves as Approach road Saiha District
Shape	:	Y-Shape
Design	:	This junction is designed as a simple meeting point with open space for the traffic. Regulation by rotary or traffic island is not considered suitable.

## 6.0 Junction at Ch. 0+00

Location	:	Take of point of Lawngtlai Bye Pass from Multi Model Transit Route at Km 4.40.
Shape	:	Y-Shape
Design	:	This junction is designed as a simple meeting point with open space for the traffic. Regulation by rotary or traffic island is not considered suitable.

## 7.0 Other Junction

Location	:	Other link road, Junctions to be improved
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## 1.7 DESIGN OF CULVERTS

The project corridor passes through mostly Hilly/Rolling terrain and does not have well-defined streams in the stretches. There is requirement of providing culverts for discharge of run-off as well as to act as balancing structures. Based on the ground studies and drainage pattern of the region, the requirements of culverts have been identified and are listed in Table below

### Design Considerations

- **Rainfall:** The proposed road is in high rainfall area.
- **Run Off:** The hill slope is quite steep. Consequently, the run-off is high.

- **General Hydrology:** All Culverts from Km 431+00 To Km 553+636 are for Drainage of the water to small river & Nullah.
- **Defined Major Streams:** The project corridor passes through hilly terrain. It has defined streams at eight locations where the bridges are proposed
- **Natural Drainage Lines :** Drainage locations are identified and surveyed for providing CD works for least interference with the natural drainage pattern
- **Natural Depressions on the hill slope:** Natural depressions are identified for providing culverts on the proposed road.
- **Cross-Drainage Facility:** CD facility is required for allowing free drainage.
- **Road Surface Drainage :** Culverts are provided at intervals so that the road is not damaged
- **Road Drainage at Curves:** The drainage line at curves are provided with CD works

### Identification of Sites for Culverts

Based on the above studies and surveys, the requirements of the Culverts have been identified.

#### Span & Vent way

It is proposed to provide HP culvert & Box culvert of varies spans from Km 431+00 to Km 553+604 on NH-54

LIST OF PROPOSED CULVERTS						
Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
1	431070	C	-30	BOX-Type-1	2 X 2	Re-construction
2	431348	C	55	BOX-Type-1	2 X 2	Re-construction
3	431518	C	75	BOX-Type-1	2 X 2	Re-construction
4	431808	C	66	BOX-Type-1	2 X 2	Re-construction
5	432028	C	55	BOX-Type-1	2 X 2	Re-construction
6	432187	C	34	BOX-Type-1	2 X 2	Re-construction
7	432385	C	-30	BOX-Type-1	2 X 2	Re-construction
8	432586	C	30	BOX-Type-1	2 X 2	Re-construction
9	432660	C	45	HPC-Type-2	1.2 X D NP4	Re-construction
10	432785	C	88	BOX-Type-1	2 X 2	Re-construction
11	432946	C	71	BOX-Type-1	2 X 2	Re-construction
12	433030	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
13	433140	C	226	BOX-Type-1	2 X 2	Re-construction
14	433299	C	55	HPC-Type-2	1.2 X D NP4	Proposed
15	433588	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
16	433862	C	100	HPC-Type-2	1.2 X D NP4	Proposed
17	434055	C	-94	BOX-Type-1	2 X 2	Re-construction
18	434167	C	45	BOX-Type-1	2 X 2	Re-construction
19	434314	C	35	BOX-Type-1	2 X 2	Re-construction
20	434611	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
21	434679	C	45	BOX-Type-1	2 X 2	Re-construction
22	434928	C	35	HPC-Type-2	1.2 X D NP4	Proposed

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
23	435087	S	1417	BOX-Type-1	2 X 2	Re-construction
24	435308	C	35	BOX-Type-1	2 X 2	Re-construction
25	435492	C	65	HPC-Type-2	1.2 X D NP4	Proposed
26	435629	C	55	BOX-Type-1	2 X 2	Re-construction
27	435765	C	76	HPC-Type-2	1.2 X D NP4	Proposed
28	435970	C	-35	BOX-Type-1	2 X 2	Re-construction
29	436222	C	75	BOX-Type-1	2 X 2	Re-construction
30	436290	S	1679	BOX-Type-1	2 X 2	Re-construction
31	436433	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
32	436598	C	52	HPC-Type-2	1.2 X D NP4	Proposed
33	436835	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
34	436972	C	-51	BOX-Type-1	2 X 2	Re-construction
35	437115	C	45	HPC-Type-2	1.2 X D NP4	Proposed
36	437324	C	30	BOX-Type-1	2 X 2	Re-construction
37	437478	C	-221	BOX-Type-1	2 X 2	Re-construction
38	437657	C	30	BOX-Type-3	4 X 4	Re-construction
39	437878	C	45	BOX-Type-1	2 X 2	Re-construction
40	438003	S	75	BOX-Type-1	2 X 2	Re-construction
41	438155	C	-420	HPC-Type-2	1.2 X D NP4	Re-construction
42	438258	C	-125	BOX-Type-1	2 X 2	Re-construction
43	438434	S	1605	BOX-Type-1	2 X 2	Re-construction
44	438576	C	45	BOX-Type-1	2 X 2	Re-construction
45	438704	S	45	BOX-Type-1	2 X 2	Re-construction
46	438759	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
47	438816	C	45	BOX-Type-1	2 X 2	Re-construction
48	438970	C	45	BOX-Type-1	2 X 2	Re-construction
49	439128	C	75	BOX-Type-1	2 X 2	Re-construction
50	439227	C	30	BOX-Type-1	2 X 2	Re-construction
51	439475	C	157	BOX-Type-1	2 X 2	Re-construction
52	439575	C	30	HPC-Type-2	1.2 X D NP4	Re-construction
53	439783	C	113	BOX-Type-1	2 X 2	Re-construction
54	439889	C	97	BOX-Type-1	2 X 2	Re-construction
55	440069	S	150	BOX-Type-1	2 X 2	Re-construction
56	440168	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
57	440351	C	65	BOX-Type-1	2 X 2	Re-construction
58	440533	C	45	BOX-Type-1	2 X 2	Re-construction
59	440838	C	45	HPC-Type-2	1.2 X D NP4	Proposed
60	441020	C	45	BOX-Type-1	2 X 2	Re-construction
61	441128	C	45	HPC-Type-2	1.2 X D NP4	Proposed
62	441507	C	30	BOX-Type-1	2 X 2	Re-construction
63	441597	C	-45	BOX-Type-1	2 X 2	Re-construction
64	441709	C	30	HPC-Type-2	1.2 X D NP4	Proposed
65	442026	C	150	BOX-Type-1	2 X 2	Re-construction
66	442308	S	45	HPC-Type-1	1.2 X D NP4	Proposed
67	442400	S	INFINITY	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
68	442468	C	-85	BOX-Type-1	2 X 2	Re-construction
69	442626	C	65	BOX-Type-1	2 X 2	Re-construction
70	442785	C	65	BOX-Type-1	2 X 2	Re-construction
71	442958	C	279	BOX-Type-1	2 X 2	Re-construction
72	443274	C	131	BOX-Type-1	2 X 2	Re-construction
73	443495	C	65	BOX-Type-1	2 X 2	Re-construction
74	443620	C	-50	BOX-Type-1	2 X 2	Re-construction
75	443808	C	30	BOX-Type-1	2 X 2	Re-construction
76	443996	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
77	444172	C	-55	BOX-Type-1	2 X 2	Re-construction
78	444330	C	82	HPC-Type-2	1.2 X D NP4	Re-construction
79	444387	C	105	BOX-Type-1	2 X 2	Re-construction
80	444571	S	66	BOX-Type-1	2 X 2	Re-construction
81	444851	C	80	BOX-Type-1	2 X 2	Re-construction
82	445135	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
83	445372	C	-87	BOX-Type-1	2 X 2	Re-construction
84	445575	C	-140	BOX-Type-1	2 X 2	Re-construction
85	445823	C	-45	BOX-Type-1	2 X 2	Re-construction
86	445932	C	-45	BOX-Type-1	2 X 2	Re-construction
87	446102	C	-68	BOX-Type-1	2 X 2	Re-construction
88	446325	S	-30	BOX-Type-1	2 X 2	Re-construction
89	446359	S	-30	BOX-Type-1	2 X 2	Re-construction
90	446589	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
91	446805	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
92	446899	C	-45	BOX-Type-1	2 X 2	Re-construction
93	447127	S	-46	BOX-Type-1	2 X 2	Re-construction
94	447243	C	-30	BOX-Type-1	2 X 2	Re-construction
95	447480	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
96	447671	C	-100	BOX-Type-1	2 X 2	Re-construction
97	447895	C	30	BOX-Type-1	2 X 2	Re-construction
98	448106	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
99	448321	C	65	BOX-Type-1	2 X 2	Re-construction
100	448558	C	-45	BOX-Type-1	2 X 2	Re-construction
101	448797	C	-133	BOX-Type-1	2 X 2	Re-construction
102	448868	C	-45	BOX-Type-1	2 X 2	Re-construction
103	448998	C	-47	BOX-Type-1	2 X 2	Re-construction
104	449196	C	-77	HPC-Type-2	1.2 X D NP4	Re-construction
105	449367	S	-45	HPC-Type-1	1.2 X D NP4	Re-construction
106	449421	C	-102	BOX-Type-1	2 X 2	Re-construction
107	449481	C	380	BOX-Type-1	2 X 2	Re-construction
108	449759	C	-75	BOX-Type-1	2 X 2	Re-construction
109	449955	C	-30	BOX-Type-1	2 X 2	Re-construction
110	450247	C	-57	BOX-Type-1	2 X 2	Re-construction
111	450429	C	65	BOX-Type-1	2 X 2	Re-construction
112	450542	C	-45	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
113	450845	C	-100	HPC-Type-2	1.2 X D NP4	Proposed
114	451051	C	-58	BOX-Type-1	2 X 2	Re-construction
115	451264	S	-65	BOX-Type-1	2 X 2	Re-construction
116	451438	S	-60	BOX-Type-1	2 X 2	Re-construction
117	451684	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
118	452048	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
119	452330	C	-45	BOX-Type-1	2 X 2	Re-construction
120	452358	C	-59	BOX-Type-1	2 X 2	Re-construction
121	452470	C	-300	BOX-Type-1	2 X 2	Re-construction
122	452608	C	30	BOX-Type-1	2 X 2	Re-construction
123	452925	C	-30	BOX-Type-1	2 X 2	Re-construction
124	453075	C	-45	BOX-Type-1	2 X 2	Re-construction
125	453289	C	-45	HPC-Type-2	1.2 X D NP4	Proposed
126	453420	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
127	453593	C	-53	HPC-Type-2	1.2 X D NP4	Re-construction
128	453829	C	-131	BOX-Type-1	2 X 2	Re-construction
129	453974	C	-36	BOX-Type-1	2 X 2	Re-construction
130	454120	C	30	BOX-Type-1	2 X 2	Re-construction
131	454337	S	-45	BOX-Type-1	2 X 2	Re-construction
132	454473	C	-56	BOX-Type-1	2 X 2	Re-construction
133	454682	C	48	BOX-Type-1	2 X 2	Re-construction
134	454824	C	148	BOX-Type-1	2 X 2	Re-construction
135	454956	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
136	455152	C	-66	BOX-Type-1	2 X 2	Re-construction
137	455376	C	-30	BOX-Type-1	2 X 2	Re-construction
138	455581	C	-45	BOX-Type-1	2 X 2	Re-construction
139	455647	C	-45	BOX-Type-1	2 X 2	Re-construction
140	455944	C	-45	BOX-Type-1	2 X 2	Re-construction
141	456035	S	-56	BOX-Type-1	2 X 2	Re-construction
142	456070	C	-36	BOX-Type-1	2 X 2	Re-construction
143	456158	C	49	BOX-Type-1	2 X 2	Re-construction
144	456305	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
145	456471	S	-205	BOX-Type-1	2 X 2	Re-construction
146	456612	C	99	BOX-Type-1	2 X 2	Re-construction
147	456800	S	-45	BOX-Type-1	2 X 2	Re-construction
148	456968	C	150	BOX-Type-1	2 X 2	Re-construction
149	457119	S	-48	BOX-Type-1	2 X 2	Re-construction
150	457460	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
151	457650	C	-35	BOX-Type-1	2 X 2	Re-construction
152	457768	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
153	457929	S	-66	BOX-Type-1	2 X 2	Re-construction
154	458091	S	155	BOX-Type-1	2 X 2	Re-construction
155	458243	S	-53	BOX-Type-1	2 X 2	Re-construction
156	458540	C	-45	BOX-Type-1	2 X 2	Re-construction
157	458700	C	129	HPC-Type-2	1.2 X D NP4	Proposed

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
158	458931	C	-80	HPC-Type-2	1.2 X D NP4	Proposed
159	459140	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
160	459330	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
161	459598	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
162	459910	C	138	HPC-Type-2	1.2 X D NP4	Proposed
163	460122	C	185	HPC-Type-2	1.2 X D NP4	Proposed
164	460348	C	-70	BOX-Type-1	2 X 2	Re-construction
165	460562	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
166	460825	C	38	BOX-Type-1	2 X 2	Re-construction
167	460914	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
168	461111	C	75	BOX-Type-1	2 X 2	Re-construction
169	461356	C	45	BOX-Type-1	2 X 2	Re-construction
170	461570	C	30	BOX-Type-1	2 X 2	Re-construction
171	461732	C	92	BOX-Type-1	2 X 2	Re-construction
172	461802	C	55	BOX-Type-1	2 X 2	Re-construction
173	462102	C	55	HPC-Type-2	1.2 X D NP4	Re-construction
174	462482	C	175	BOX-Type-1	2 X 2	Re-construction
175	462690	C	45	BOX-Type-1	2 X 2	Re-construction
176	462860	C	-50	BOX-Type-1	2 X 2	Re-construction
177	463075	C	75	HPC-Type-2	1.2 X D NP4	Proposed
178	463270	C	110	BOX-Type-1	2 X 2	Re-construction
179	463480	C	35	HPC-Type-2	1.2 X D NP4	Proposed
180	463620	C	45	BOX-Type-1	2 X 2	Re-construction
181	463790	C	75	BOX-Type-1	2 X 2	Re-construction
182	464018	C	255	HPC-Type-2	1.2 X D NP4	Proposed
183	464255	C	47	HPC-Type-2	1.2 X D NP4	Proposed
184	464518	S	3421	BOX-Type-1	2 X 2	Re-construction
185	464593	C	88	HPC-Type-2	1.2 X D NP4	Proposed
186	464892	C	75	HPC-Type-2	1.2 X D NP4	Proposed
187	465080	C	125	HPC-Type-2	1.2 X D NP4	Proposed
188	465222	C	35	BOX-Type-1	2 X 2	Re-construction
189	465603	C	55	HPC-Type-2	1.2 X D NP4	Proposed
190	465761	S	51	BOX-Type-1	2 X 2	Re-construction
191	465848	C	30	BOX-Type-1	2 X 2	Re-construction
192	465910	C	106	BOX-Type-1	2 X 2	Re-construction
193	466070	C	34	BOX-Type-1	2 X 2	Re-construction
194	466190	C	144	BOX-Type-1	2 X 2	Re-construction
195	466424	C	86	BOX-Type-1	2 X 2	Re-construction
196	466546	C	55	HPC-Type-2	1.2 X D NP4	Proposed
197	466776	S	87	HPC-Type-1	1.2 X D NP4	Proposed
198	467027	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
199	467175	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
200	467386	C	45	HPC-Type-2	1.2 X D NP4	Proposed
201	467670	S	45	HPC-Type-1	1.2 X D NP4	Proposed
202	467850	C	-38	HPC-Type-2	1.2 X D NP4	Proposed



Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
203	468078	C	67	HPC-Type-2	1.2 X D NP4	Proposed
204	468337	C	46	HPC-Type-2	1.2 X D NP4	Proposed
205	468542	C	52	HPC-Type-2	1.2 X D NP4	Proposed
206	468630	C	119	BOX-Type-1	2 X 2	Re-construction
207	468962	C	35	BOX-Type-1	2 X 2	Re-construction
208	469202	S	125	HPC-Type-1	1.2 X D NP4	Proposed
209	469360	C	60	BOX-Type-1	2 X 2	Proposed
210	469565	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
211	469795	C	92	HPC-Type-2	1.2 X D NP4	Proposed
212	469976	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
213	470235	C	-293	HPC-Type-2	1.2 X D NP4	Proposed
214	470405	C	-48	HPC-Type-2	1.2 X D NP4	Proposed
215	470605	C	-97	HPC-Type-2	1.2 X D NP4	Proposed
216	470885	S	-2256	HPC-Type-1	1.2 X D NP4	Proposed
217	470975	S	-90	HPC-Type-1	1.2 X D NP4	Proposed
218	471145	S	-30	BOX-Type-1	2 X 2	Re-construction
219	471282	C	-45	BOX-Type-1	2 X 2	Re-construction
220	471402	C	-512	BOX-Type-1	2 X 2	Re-construction
221	471538	C	-30	BOX-Type-1	2 X 2	Re-construction
222	471788	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
223	471910	C	-25	BOX-Type-1	2 X 2	Re-construction
224	472005	C	29	HPC-Type-2	1.2 X D NP4	Proposed
225	472342	C	-40	HPC-Type-2	1.2 X D NP4	Proposed
226	472612	C	-30	HPC-Type-2	1.2 X D NP4	Proposed
227	473012	S	-135	HPC-Type-1	1.2 X D NP4	Proposed
228	473282	C	-50	HPC-Type-2	1.2 X D NP4	Proposed
229	473624	S	-42	BOX-Type-1	2 X 2	Re-construction
230	474038	C	-30	BOX-Type-1	2 X 2	Re-construction
231	474215	C	-50	BOX-Type-1	2 X 2	Re-construction
232	474466	C	350	HPC-Type-2	1.2 X D NP4	Proposed
233	474742	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
234	475000	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
235	475222	C	69	BOX-Type-1	2 X 2	Re-construction
236	475388	C	-148	HPC-Type-2	1.2 X D NP4	Proposed
237	475592	C	-72	HPC-Type-2	1.2 X D NP4	Proposed
238	475947	S	301	BOX-Type-1	2 X 2	Re-construction
239	476270	C	41	BOX-Type-1	2 X 2	Re-construction
240	476407	C	-50	HPC-Type-2	1.2 X D NP4	Re-construction
241	476760	C	30	BOX-Type-1	2 X 2	Re-construction
242	476910	C	35	BOX-Type-1	2 X 2	Re-construction
243	477213	C	40	BOX-Type-1	2 X 2	Re-construction
244	477405	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
245	477603	S	INFINITY	BOX-Type-1	2 X 2	Proposed
246	477830	S	60	BOX-Type-1	2 X 2	Re-construction
247	477963	S	INFINITY	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
248	478182	C	53	BOX-Type-1	2 X 2	Re-construction
249	478522	C	60	BOX-Type-1	2 X 2	Re-construction
250	478685	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
251	478912	C	-472	BOX-Type-1	2 X 2	Re-construction
252	479180	C	-33	BOX-Type-1	2 X 2	Re-construction
253	479228	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
254	479382	C	32	BOX-Type-1	2 X 2	Re-construction
255	479430	C	-133	BOX-Type-1	2 X 2	Re-construction
256	479499	C	40	BOX-Type-1	2 X 2	Re-construction
257	479676	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
258	479800	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
259	479890	C	48	HPC-Type-2	1.2 X D NP4	Re-construction
260	479975	C	30	BOX-Type-1	2 X 2	Re-construction
261	480275	C	47	BOX-Type-1	2 X 2	Re-construction
262	480410	C	37	BOX-Type-1	2 X 2	Re-construction
263	480612	C	30	HPC-Type-2	1.2 X D NP4	Proposed
264	480794	C	150	BOX-Type-1	2 X 2	Re-construction
265	480892	C	61	BOX-Type-1	2 X 2	Re-construction
266	481155	C	-303	BOX-Type-1	2 X 2	Re-construction
267	481311	S	71	BOX-Type-1	2 X 2	Re-construction
268	481585	C	30	HPC-Type-2	1.2 X D NP4	Proposed
269	481683	C	94	BOX-Type-1	2 X 2	Re-construction
270	481888	C	45	BOX-Type-1	2 X 2	Re-construction
271	482048	C	76	BOX-Type-1	2 X 2	Re-construction
272	482338	C	101	HPC-Type-2	1.2 X D NP4	Proposed
273	482465	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
274	482708	C	133	HPC-Type-2	1.2 X D NP4	Proposed
275	482903	C	-55	HPC-Type-2	1.2 X D NP4	Proposed
276	483097	C	-66	BOX-Type-1	2 X 2	Re-construction
277	483238	S	-45	HPC-Type-1	1.2 X D NP4	Re-construction
278	483425	S	-30	BOX-Type-1	2 X 2	Re-construction
279	483583	C	35	BOX-Type-1	2 X 2	Re-construction
280	483725	C	-30	HPC-Type-2	1.2 X D NP4	Proposed
281	483875	C	-30	BOX-Type-1	2 X 2	Re-construction
282	483992	S	-60	BOX-Type-1	2 X 2	Re-construction
283	484145	C	-30	BOX-Type-1	2 X 2	Re-construction
284	484265	C	-31	HPC-Type-2	1.2 X D NP4	Re-construction
285	484365	C	-30	BOX-Type-1	2 X 2	Re-construction
286	484532	C	114	BOX-Type-1	2 X 2	Re-construction
287	484610	C	-30	HPC-Type-2	1.2 X D NP4	Proposed
288	484832	S	-30	HPC-Type-1	1.2 X D NP4	Proposed
289	485023	C	-35	BOX-Type-1	2 X 2	Re-construction
290	485192	C	150	HPC-Type-2	1.2 X D NP4	Re-construction
291	485438	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
292	485638	C	-82	HPC-Type-2	1.2 X D NP4	Proposed

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
293	485739	C	77	BOX-Type-1	2 X 2	Re-construction
294	485968	C	-65	BOX-Type-1	2 X 2	Re-construction
295	486058	C	-33	BOX-Type-1	2 X 2	Re-construction
296	486225	C	-56	HPC-Type-2	1.2 X D NP4	Re-construction
297	486380	S	1497	HPC-Type-1	1.2 X D NP4	Proposed
298	486561	C	-40	HPC-Type-2	1.2 X D NP4	Re-construction
299	486780	C	-100	HPC-Type-2	1.2 X D NP4	Proposed
300	486888	C	-70	HPC-Type-2	1.2 X D NP4	Proposed
301	487168	C	-60	BOX-Type-1	2 X 2	Re-construction
302	487480	C	-350	HPC-Type-2	1.2 X D NP4	Re-construction
303	487775	C	-112	HPC-Type-2	1.2 X D NP4	Proposed
304	487952	S	-151	HPC-Type-1	1.2 X D NP4	Proposed
305	488080	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
306	488390	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
307	488600	S	-86	BOX-Type-1	2 X 2	Re-construction
308	488730	S	2082	HPC-Type-1	1.2 X D NP4	Proposed
309	488930	C	-340	BOX-Type-1	2 X 2	Re-construction
310	489090	C	-37	BOX-Type-1	2 X 2	Re-construction
311	489270	C	-350	HPC-Type-2	1.2 X D NP4	Proposed
312	489449	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
313	489732	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
314	489880	C	-136	BOX-Type-1	2 X 2	Re-construction
315	489995	S	-45	BOX-Type-1	2 X 2	Re-construction
316	490155	C	-60	BOX-Type-1	2 X 2	Re-construction
317	490350	S	-112	HPC-Type-1	1.2 X D NP4	Re-construction
318	490530	S	INFINITY	HPC-Type-1	1.2 X D NP4	Re-construction
319	490692	S	-45	HPC-Type-1	1.2 X D NP4	Re-construction
320	490898	C	-30	BOX-Type-2	3 X 3	Re-construction
321	491058	C	-58	BOX-Type-2	3 X 3	Re-construction
322	491272	S	-52	BOX-Type-2	3 X 3	Re-construction
323	491408	C	-38	BOX-Type-1	2 X 2	Re-construction
324	491463	C	-75	BOX-Type-1	2 X 2	Re-construction
325	491620	S	98	HPC-Type-1	1.2 X D NP4	Proposed
326	491935	S	-56	BOX-Type-2	3 X 3	Re-construction
327	491985	C	-30	BOX-Type-3	4 X 4	Re-construction
328	492252	C	-57	BOX-Type-1	2 X 2	Re-construction
329	492380	C	-72	HPC-Type-2	1.2 X D NP4	Proposed
330	492572	C	-30	BOX-Type-1	2 X 2	Proposed
331	492793	C	-60	HPC-Type-2	1.2 X D NP4	Proposed
332	492925	C	-30	BOX-Type-1	2 X 2	Re-construction
333	493153	C	-77	BOX-Type-1	2 X 2	Re-construction
334	493378	C	-45	BOX-Type-1	2 X 2	Re-construction
335	493560	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
336	493809	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
337	494062	C	-50	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
338	494218	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
339	494357	C	-30	BOX-Type-3	4 X 4	Re-construction
340	494545	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
341	494832	C	-30	BOX-Type-1	2 X 2	Re-construction
342	495275	C	-50	HPC-Type-2	1.2 X D NP4	Proposed
343	495465	C	-30	BOX-Type-2	3 X 3	Proposed
344	495630	C	-38	BOX-Type-3	4 X 4	Re-construction
345	495825	C	-111	BOX-Type-1	2 X 2	Proposed
346	496035	C	-30	BOX-Type-1	2 X 2	Re-construction
347	496235	C	-101	HPC-Type-2	1.2 X D NP4	Proposed
348	496442	S	-373	BOX-Type-1	2 X 2	Re-construction
349	496516	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
350	496610	C	-30	BOX-Type-1	2 X 2	Re-construction
351	496775	S	-400	BOX-Type-1	2 X 2	Re-construction
352	496890	C	-35	BOX-Type-1	2 X 2	Re-construction
353	497010	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
354	497120	C	-125	BOX-Type-1	2 X 2	Re-construction
355	497260	S	-91	BOX-Type-1	2 X 2	Proposed
356	497398	C	-25	BOX-Type-3	4 X 4	Re-construction
357	497438	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
358	497693	C	-45	HPC-Type-2	1.2 X D NP4	Re-construction
359	497955	C	80	HPC-Type-2	1.2 X D NP4	Re-construction
360	498170	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
361	498305	C	-148	HPC-Type-2	1.2 X D NP4	Proposed
362	498500	S	1931	BOX-Type-1	2 X 2	Re-construction
363	498600	S	90	BOX-Type-1	2 X 2	Re-construction
364	498803	C	75	BOX-Type-1	2 X 2	Re-construction
365	498958	C	35	HPC-Type-2	1.2 X D NP4	Proposed
366	499084	C	79	HPC-Type-2	1.2 X D NP4	Proposed
367	499308	S	63	HPC-Type-1	1.2 X D NP4	Proposed
368	499642	C	-70	BOX-Type-1	2 X 2	Re-construction
369	499870	C	-60	BOX-Type-2	3 X 3	Re-construction
370	500070	S	-350	BOX-Type-1	2 X 2	Re-construction
371	500160	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
372	500290	C	-150	BOX-Type-1	2 X 2	Re-construction
373	500553	S	-30	BOX-Type-2	3 X 3	Proposed
374	500665	C	-454	HPC-Type-2	1.2 X D NP4	Proposed
375	500918	S	-60	BOX-Type-1	2 X 2	Re-construction
376	500992	S	-60	BOX-Type-1	2 X 2	Re-construction
377	501125	C	-60	BOX-Type-1	2 X 2	Re-construction
378	501450	C	-30	BOX-Type-1	2 X 2	Re-construction
379	501610	C	-127	BOX-Type-1	2 X 2	Re-construction
380	501848	C	-200	BOX-Type-1	2 X 2	Re-construction
381	502092	C	-101	BOX-Type-1	2 X 2	Re-construction
382	502164	C	-53	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
383	502432	C	-70	HPC-Type-2	1.2 X D NP4	Proposed
384	502722	C	-60	HPC-Type-2	1.2 X D NP4	Re-construction
385	503485	C	-149	BOX-Type-2	3 X 3	Re-construction
386	503652	C	365	BOX-Type-1	2 X 2	Re-construction
387	503922	S	INFINITY	BOX-Type-1	2 X 2	Proposed
388	504245	S	150	BOX-Type-1	2 X 2	Re-construction
389	504334	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
390	504568	C	-150	HPC-Type-2	1.2 X D NP4	Proposed
391	504842	C	-62	BOX-Type-1	2 X 2	Re-construction
392	504932	C	113	HPC-Type-2	1.2 X D NP4	Re-construction
393	505042	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
394	505101	S	-60	BOX-Type-1	2 X 2	Re-construction
395	505328	C	-35	BOX-Type-1	2 X 2	Re-construction
396	505361	C	-76	BOX-Type-1	2 X 2	Re-construction
397	505443	C	45	BOX-Type-1	2 X 2	Re-construction
398	505525	C	-34	BOX-Type-2	3 X 3	Re-construction
399	505722	C	-30	BOX-Type-3	4 X 4	Re-construction
400	505925	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
401	506135	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
402	506194	S	-50	BOX-Type-1	2 X 2	Re-construction
403	506215	C	-50	BOX-Type-1	2 X 2	Re-construction
404	506416	C	-60	BOX-Type-1	2 X 2	Re-construction
405	506592	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
406	506679	C	-45	BOX-Type-1	2 X 2	Re-construction
407	506980	C	-78	BOX-Type-1	2 X 2	Re-construction
408	507153	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
409	507250	S	-173	BOX-Type-1	2 X 2	Re-construction
410	507353	C	-31	BOX-Type-1	2 X 2	Re-construction
411	507473	C	201	BOX-Type-1	2 X 2	Re-construction
412	507692	C	-30	BOX-Type-4	6 X 4	Re-construction
413	507990	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
414	508243	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
415	508287	C	-45	BOX-Type-1	2 X 2	Re-construction
416	508368	C	174	BOX-Type-1	2 X 2	Re-construction
417	508538	S	-82	BOX-Type-1	2 X 2	Re-construction
418	508635	C	-31	BOX-Type-1	2 X 2	Re-construction
419	508768	C	95	BOX-Type-1	2 X 2	Re-construction
420	509039	C	-30	BOX-Type-3	4 X 4	Re-construction
421	509210	C	-121	HPC-Type-2	1.2 X D NP4	Proposed
422	509418	C	-77	BOX-Type-1	2 X 2	Re-construction
423	509525	S	-45	BOX-Type-1	2 X 2	Re-construction
424	509672	C	-65	BOX-Type-1	2 X 2	Re-construction
425	509719	C	-65	BOX-Type-1	2 X 2	Re-construction
426	509920	C	-60	HPC-Type-2	1.2 X D NP4	Proposed
427	510092	S	INFINITY	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
428	510254	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
429	510410	S	-183	HPC-Type-1	1.2 X D NP4	Proposed
430	510605	C	-125	HPC-Type-2	1.2 X D NP4	Proposed
431	510730	C	-90	BOX-Type-1	2 X 2	Re-construction
432	510802	C	-40	BOX-Type-4	6 X 4	Re-construction
433	511068	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
434	511218	C	-63	BOX-Type-1	2 X 2	Re-construction
435	511335	C	50	BOX-Type-1	2 X 2	Re-construction
436	511598	C	-60	BOX-Type-1	2 X 2	Re-construction
437	511865	S	-284	BOX-Type-1	2 X 2	Re-construction
438	512092	C	-100	BOX-Type-1	2 X 2	Re-construction
439	512222	S	-131	BOX-Type-1	2 X 2	Re-construction
440	512458	C	-36	BOX-Type-1	2 X 2	Re-construction
441	512655	C	209	BOX-Type-1	2 X 2	Re-construction
442	512867	C	-194	HPC-Type-2	1.2 X D NP4	Proposed
443	512998	C	-74	BOX-Type-1	2 X 2	Re-construction
444	513198	C	-329	HPC-Type-2	1.2 X D NP4	Proposed
445	513395	C	-263	HPC-Type-2	1.2 X D NP4	Re-construction
446	513575	C	-30	BOX-Type-2	3 X 3	Re-construction
447	513810	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
448	514112	C	-60	BOX-Type-1	2 X 2	Re-construction
449	514248	C	-56	BOX-Type-1	2 X 2	Re-construction
450	514517	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
451	514736	C	-35	BOX-Type-1	2 X 2	Proposed
452	515001	C	-59	HPC-Type-2	1.2 X D NP4	Proposed
453	515148	C	570	HPC-Type-2	1.2 X D NP4	Proposed
454	515418	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
455	515582	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
456	515823	C	-93	HPC-Type-2	1.2 X D NP4	Proposed
457	515962	S	-185	BOX-Type-1	2 X 2	Re-construction
458	516148	C	-25	BOX-Type-1	2 X 2	Re-construction
459	516276	S	-82	BOX-Type-1	2 X 2	Re-construction
460	516529	S	-30	BOX-Type-1	2 X 2	Re-construction
461	516705	C	-45	BOX-Type-1	2 X 2	Re-construction
462	516787	C	-34	BOX-Type-1	2 X 2	Re-construction
463	516938	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
464	517130	S	-45	BOX-Type-1	2 X 2	Re-construction
465	517490	C	-60	BOX-Type-1	2 X 2	Re-construction
466	517705	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
467	517840	S	-809	BOX-Type-1	2 X 2	Re-construction
468	518004	C	-55	HPC-Type-2	1.2 X D NP4	Proposed
469	518205	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
470	518400	C	-64	BOX-Type-1	2 X 2	Re-construction
471	518508	C	-239	BOX-Type-1	2 X 2	Re-construction
472	518750	S	-35	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
473	518918	S	-82	BOX-Type-1	2 X 2	Re-construction
474	519060	C	-33	BOX-Type-1	2 X 2	Re-construction
475	519296	C	-50	HPC-Type-2	1.2 X D NP4	Proposed
476	519492	C	187	BOX-Type-1	2 X 2	Re-construction
477	519653	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
478	519858	C	-30	BOX-Type-1	2 X 2	Re-construction
479	520095	S	-45	BOX-Type-1	2 X 2	Re-construction
480	520300	C	-30	BOX-Type-1	2 X 2	Re-construction
481	520372	C	-38	BOX-Type-1	2 X 2	Re-construction
482	520575	S	20	BOX-Type-1	2 X 2	Re-construction
483	520693	C	-171	BOX-Type-1	2 X 2	Re-construction
484	520910	C	-50	HPC-Type-2	1.2 X D NP4	Proposed
485	521320	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
486	521700	S	-75	HPC-Type-1	1.2 X D NP4	Proposed
487	521985	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
488	522212	S	-740	HPC-Type-1	1.2 X D NP4	Proposed
489	522412	C	-30	HPC-Type-2	1.2 X D NP4	Proposed
490	522545	C	30	BOX-Type-1	2 X 2	Re-construction
491	522700	C	-30	HPC-Type-2	1.2 X D NP4	Proposed
492	522850	C	-51	HPC-Type-2	1.2 X D NP4	Re-construction
493	523035	S	45	HPC-Type-1	1.2 X D NP4	Proposed
494	523182	C	60	HPC-Type-2	1.2 X D NP4	Proposed
495	523540	S	61	BOX-Type-1	2 X 2	Re-construction
496	523783	C	-35	BOX-Type-1	2 X 2	Re-construction
497	523874	S	50	BOX-Type-1	2 X 2	Re-construction
498	523988	C	45	BOX-Type-1	2 X 2	Re-construction
499	524113	C	-401	BOX-Type-1	2 X 2	Re-construction
500	524268	C	-66	BOX-Type-1	2 X 2	Re-construction
501	524352	C	30	BOX-Type-1	2 X 2	Re-construction
502	524535	C	40	BOX-Type-1	2 X 2	Re-construction
503	524640	C	85	BOX-Type-1	2 X 2	Re-construction
504	524745	C	54	BOX-Type-1	2 X 2	Re-construction
505	524990	C	-40	BOX-Type-1	2 X 2	Re-construction
506	525180	C	48	BOX-Type-1	2 X 2	Re-construction
507	525400	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
508	525670	C	176	BOX-Type-1	2 X 2	Re-construction
509	525905	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
510	526120	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
511	526310	C	102	BOX-Type-1	2 X 2	Re-construction
512	526515	C	59	BOX-Type-1	2 X 2	Re-construction
513	526705	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
514	526840	C	30	BOX-Type-1	2 X 2	Re-construction
515	527086	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
516	527300	S	-89	BOX-Type-1	2 X 2	Re-construction
517	527492	C	35	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
518	527615	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
519	527760	C	-187	HPC-Type-2	1.2 X D NP4	Proposed
520	527928	C	75	BOX-Type-1	2 X 2	Re-construction
521	527998	C	56	BOX-Type-1	2 X 2	Re-construction
522	528127	C	35	BOX-Type-1	2 X 2	Re-construction
523	528525	S	30	BOX-Type-1	2 X 2	Re-construction
524	528635	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
525	528840	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
526	529025	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
527	529196	C	80	BOX-Type-1	2 X 2	Re-construction
528	529395	C	50	HPC-Type-2	1.2 X D NP4	Proposed
529	529572	C	40	BOX-Type-1	2 X 2	Re-construction
530	529700	C	40	BOX-Type-1	2 X 2	Re-construction
531	529782	C	40	BOX-Type-1	2 X 2	Re-construction
532	530015	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
533	530242	C	40	BOX-Type-1	2 X 2	Re-construction
534	530465	C	40	BOX-Type-1	2 X 2	Proposed
535	530735	S	INFINITY	BOX-Type-1	2 X 2	Proposed
536	530928	C	30	BOX-Type-1	2 X 2	Re-construction
537	531220	S	40	BOX-Type-1	2 X 2	Re-construction
538	531400	C	179	HPC-Type-2	1.2 X D NP4	Re-construction
539	531482	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
540	531810	C	247	BOX-Type-1	2 X 2	Re-construction
541	532128	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
542	532450	C	45	BOX-Type-1	2 X 2	Re-construction
543	532529	C	55	BOX-Type-1	2 X 2	Re-construction
544	532672	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
545	532851	C	45	BOX-Type-1	2 X 2	Proposed
546	533074	C	85	BOX-Type-1	2 X 2	Re-construction
547	533320	C	166	BOX-Type-1	2 X 2	Re-construction
548	533542	C	-148	BOX-Type-1	2 X 2	Re-construction
549	533675	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
550	533830	C	55	BOX-Type-1	2 X 2	Re-construction
551	534038	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
552	534282	C	75	BOX-Type-1	2 X 2	Re-construction
553	534602	C	150	HPC-Type-2	1.2 X D NP4	Proposed
554	534918	C	30	BOX-Type-1	2 X 2	Re-construction
555	535080	C	237	BOX-Type-1	2 X 2	Re-construction
556	535360	C	40	BOX-Type-1	2 X 2	Re-construction
557	535610	S	30	BOX-Type-1	2 X 2	Re-construction
558	535870	C	60	BOX-Type-1	2 X 2	Re-construction
559	536082	S	200	BOX-Type-1	2 X 2	Re-construction
560	536255	S	75	HPC-Type-1	1.2 X D NP4	Proposed
561	536393	C	55	BOX-Type-1	2 X 2	Re-construction
562	536623	C	-53	BOX-Type-1	2 X 2	Re-construction



Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
563	536795	C	60	BOX-Type-1	2 X 2	Re-construction
564	537075	C	30	BOX-Type-1	2 X 2	Re-construction
565	537160	C	-75	HPC-Type-2	1.2 X D NP4	Re-construction
566	537310	C	30	BOX-Type-1	2 X 2	Re-construction
567	537402	C	40	BOX-Type-1	2 X 2	Re-construction
568	537563	C	-1401	BOX-Type-1	2 X 2	Re-construction
569	537828	C	53	BOX-Type-1	2 X 2	Re-construction
570	537968	C	107	BOX-Type-1	2 X 2	Re-construction
571	538170	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
572	538330	C	30	BOX-Type-1	2 X 2	Re-construction
573	538448	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
574	538760	S	-83	BOX-Type-1	2 X 2	Re-construction
575	539065	S	-20	HPC-Type-1	1.2 X D NP4	Proposed
576	539319	C	55	BOX-Type-1	2 X 2	Re-construction
577	539535	C	45	BOX-Type-1	2 X 2	Re-construction
578	539715	C	75	HPC-Type-2	1.2 X D NP4	Proposed
579	539885	S	-1883	BOX-Type-1	2 X 2	Re-construction
580	540048	S	100	BOX-Type-1	2 X 2	Re-construction
581	540215	S	-2009	BOX-Type-1	2 X 2	Re-construction
582	540292	C	84	HPC-Type-2	1.2 X D NP4	Proposed
583	540454	C	30	BOX-Type-1	2 X 2	Re-construction
584	540654	C	70	BOX-Type-1	2 X 2	Re-construction
585	540860	C	178	BOX-Type-1	2 X 2	Re-construction
586	541145	C	57	BOX-Type-1	2 X 2	Re-construction
587	541425	C	72	BOX-Type-1	2 X 2	Re-construction
588	541590	C	-61	BOX-Type-1	2 X 2	Re-construction
589	541672	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
590	541712	S	399	BOX-Type-1	2 X 2	Re-construction
591	541820	S	55	BOX-Type-1	2 X 2	Re-construction
592	542000	S	-175	BOX-Type-1	2 X 2	Re-construction
593	542180	C	40	HPC-Type-2	1.2 X D NP4	Re-construction
594	542262	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
595	542570	C	411	BOX-Type-1	2 X 2	Re-construction
596	542802	C	-30	BOX-Type-1	2 X 2	Re-construction
597	542942	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
598	543168	C	45	BOX-Type-1	2 X 2	Re-construction
599	543265	C	30	BOX-Type-1	2 X 2	Re-construction
600	543275	C	41	BOX-Type-1	2 X 2	Re-construction
601	543360	C	36	BOX-Type-1	2 X 2	Re-construction
602	543570	C	-57	BOX-Type-1	2 X 2	Re-construction
603	543798	C	238	BOX-Type-1	2 X 2	Re-construction
604	543880	C	54	BOX-Type-1	2 X 2	Re-construction
605	544088	C	45	BOX-Type-1	2 X 2	Re-construction
606	544165	C	127	BOX-Type-1	2 X 2	Re-construction
607	544410	C	162	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
608	544548	C	60	BOX-Type-2	3 X 3	Re-construction
609	544680	C	30	BOX-Type-1	2 X 2	Re-construction
610	544835	C	101	BOX-Type-1	2 X 2	Re-construction
611	545011	C	30	BOX-Type-1	2 X 2	Re-construction
612	545235	C	30	BOX-Type-1	2 X 2	Re-construction
613	545303	C	46	BOX-Type-1	2 X 2	Re-construction
614	545462	C	42	BOX-Type-1	2 X 2	Re-construction
615	545774	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
616	546005	C	-160	HPC-Type-2	1.2 X D NP4	Proposed
617	546132	C	100	BOX-Type-1	2 X 2	Re-construction
618	546435	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
619	546620	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
620	546840	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
621	547108	C	100	BOX-Type-1	2 X 2	Re-construction
622	547424	C	90	HPC-Type-2	1.2 X D NP4	Proposed
623	547632	S	INFINITY	HPC-Type-1	1.2 X D NP4	Proposed
624	547873	C	150	BOX-Type-1	2 X 2	Re-construction
625	547987	C	82	HPC-Type-2	1.2 X D NP4	Re-construction
626	548065	C	30	BOX-Type-1	2 X 2	Re-construction
627	548225	C	51	BOX-Type-1	2 X 2	Re-construction
628	548342	C	34	BOX-Type-1	2 X 2	Re-construction
629	548478	C	60	BOX-Type-1	2 X 2	Re-construction
630	548676	C	-147	BOX-Type-1	2 X 2	Re-construction
631	548925	C	30	BOX-Type-1	2 X 2	Re-construction
632	549055	C	75	BOX-Type-1	2 X 2	Re-construction
633	549210	C	-82	HPC-Type-2	1.2 X D NP4	Proposed
634	549385	C	60	BOX-Type-1	2 X 2	Re-construction
635	549509	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
636	549818	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
637	549930	C	70	BOX-Type-1	2 X 2	Re-construction
638	549986	C	-30	BOX-Type-1	2 X 2	Re-construction
639	550130	C	45	HPC-Type-2	1.2 X D NP4	Proposed
640	550276	C	-57	BOX-Type-1	2 X 2	Re-construction
641	550495	C	30	BOX-Type-1	2 X 2	Re-construction
642	550663	C	-45	BOX-Type-1	2 X 2	Re-construction
643	550744	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
644	550840	C	75	BOX-Type-1	2 X 2	Re-construction
645	551132	C	30	BOX-Type-1	2 X 2	Re-construction
646	551258	C	45	BOX-Type-1	2 X 2	Re-construction
647	551453	C	25	BOX-Type-1	2 X 2	Re-construction
648	551595	C	45	BOX-Type-1	2 X 2	Re-construction
649	551740	C	30	BOX-Type-1	2 X 2	Re-construction
650	551846	C	94	BOX-Type-1	2 X 2	Re-construction
651	551900	C	102	BOX-Type-1	2 X 2	Re-construction
652	552319	S	INFINITY	BOX-Type-1	2 X 2	Re-construction

Sr. No.	Chainage (m)	Curve /Straight	Radius	Type	Span X Depth	Remarks
653	552388	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
654	552508	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
655	552578	S	INFINITY	BOX-Type-1	2 X 2	Re-construction
656	552885	S	-1774	HPC-Type-1	1.2 X D NP4	Proposed
657	553147	C	-20	HPC-Type-2	1.2 X D NP4	Proposed
658	553398	C	-20	HPC-Type-2	1.2 X D NP4	Proposed
<b>LAWNGTLAI BYE PASS ROAD</b>						
1	50	C	30	HPC-Type-2	1.2 X D NP4	Proposed
2	180	C	35	HPC-Type-2	1.2 X D NP4	Proposed
3	225	C	30	HPC-Type-2	1.2 X D NP4	Proposed
4	304	C	45	HPC-Type-2	1.2 X D NP4	Proposed
5	590	C	109	HPC-Type-2	1.2 X D NP4	Proposed
6	710	C	-361	HPC-Type-2	1.2 X D NP4	Proposed
7	970	S		HPC-Type-1	1.2 X D NP4	Proposed
8	1280	C	30	HPC-Type-2	1.2 X D NP4	Proposed
9	1450	C	125	HPC-Type-2	1.2 X D NP4	Proposed
10	1650	C	65	HPC-Type-2	1.2 X D NP4	Proposed
11	1853	C	-85	HPC-Type-2	1.2 X D NP4	Proposed
<b>Summary</b>						
<b>Total number of culvert</b>						<b>669</b>
	<b>Description</b>					<b>Nos</b>
	<b>Box Culvert</b>	<b>Nos</b>	<b>487</b>	<b>SPAN in m</b>	<b>DEPTH in m</b>	
	<b>Type -1</b>			<b>2</b>	<b>2</b>	<b>467</b>
	<b>Type -2</b>			<b>3</b>	<b>3</b>	<b>11</b>
	<b>Type -3</b>			<b>4</b>	<b>4</b>	<b>7</b>
	<b>Type -4</b>			<b>6</b>	<b>4</b>	<b>2</b>
	<b>Pipe Culvert</b>	<b>Nos</b>	<b>182</b>	<b>Dia</b>	<b>Barrel Length</b>	
	<b>Type -1</b>			<b>1.2</b>	<b>12.5</b>	<b>60</b>
	<b>Type -2</b>				<b>15</b>	<b>122</b>

## 1.8 DESIGN OF DRAINAGE SYSTEM

### Approach

A cardinal rule while planning drainage is the least interference with natural drainage. Minimum interference with natural drainage means stable earth face / surface with some kind of vegetative cover preventing erosion and allowing free drainage. While aligned towards the road surface the water may be diverted and guided to flow in a definite path and the flow on the valley side controlled so that stability may not be affected. It helps in protecting the road bed and pavement. A network of drains helps in confining and controlling flow of water run and check adverse effects on road structure. In the case of hill the road acts as an interceptor and its longitudinal cut on hill slope obstructs the natural drainage and the road ledge and therefore acts as a collection area of all water from hill side. As such adequate drains in the form of catch water drains collecting flow from hill side to bring it to side drain leading to cross drains and further discharge in into natural drainage channels through valley side drains / chutes, are essential for stability of road.

In view of the above, the drainage system should consist of the following:

- Pavement drainage
- Road side drains
- Chutes
- Catch water drains
- Cross Drainage
- Rain cut drain

### Pavement Drainage

For quick dispersal of precipitation on road surface, it would be necessary that water travel the least distance. However, steep cross slope is objectionable from traffic comfort consideration. Thus, a judicious balance has to be kept between two conflicting requirements. A unidirectional camber of 2.5% away from the center of carriageway has been considered.

In the case of re-entrants it is necessarily to have cross drainage points, cross-fall is given towards the valley side. The surface run-off, which is mostly due to local rainfall on the roadway, is allowed to flow down quickly to the adjacent natural ground where appropriate cross fall is available.

Adequate care has to be taken in geometric to ensure channelized drainage to avoid damage to road shoulders. 3.5 % slopes have been considered for drainage for the shoulders.

### Road Side Drains

Inadequate cross drainage on a hill road causes softening of the sub-grade and renders it too weak to take the load of the moving traffic. Road side drains are therefore necessary on a hill road. Semi Trapezoidal shaped & V shaped 600 mm has been designed and provided on hill side of the road. Road side drains should generally form sections throughout irrespective of the location of the road on the hill. It is for the convenience of the construction. The frequency of the flow is regulated to road catchment area requirement. The road side drains which have been designed are as under:

**The roadside drains, which have been designed, are as under:**

Length of drain					
Sr.No.	Chainage in m		Length	Type	Remarks
	From	To			
1	431000	432700	1700.0	Type-1	Soil Mixed Boulder
2	432700	434600	1900.0	Type-2	Village portion
3	434600	435100	500.0	Type-1	Soil Mixed Boulder
4	435100	437900	2800.0	Type-2	Village portion
5	437900	443400	5500.0	Type-1	Soil Mixed Boulder
6	443400	446400	3000.0	Type-2	Village portion
7	446400	457850	11450.0	Type-1	Soil Mixed Boulder
8	457850	459250	1400.0	Type-2	Village portion
9	459250	467000	7750.0	Type-1	Soil Mixed Boulder
10	467000	468100	1100.0	Type-2	Village portion
11	468100	468900	800.0	Type-1	Soil Mixed Boulder
12	468900	470600	1700.0	Type-2	Village portion
13	470600	476000	5400.0	Type-2	Village portion
14	476000	483750	7750.0	Type-1	Soil Mixed Boulder
15	483750	484050	300.0	Type-2	Village portion
16	484050	494750	10700.0	Type-1	Soil Mixed Boulder
17	494750	495450	700.0	Type-2	Village portion

Sr.No.	Chainage in m		Length	Type	Remarks
	From	To			
18	495450	497400	1950.0	Type-1	Soil Mixed Boulder
19	497400	498900	1500.0	Type-2	Village portion
20	498900	502600	3700.0	Type-1	Soil Mixed Boulder
21	502600	505600	3000.0	Type-2	Village portion
22	505600	514800	9200.0	Type-1	Soil Mixed Boulder
23	514800	515900	1100.0	Type-2	Village portion
24	515900	520900	5000.0	Type-1	Soil Mixed Boulder
25	520900	522400	1500.0	Type-2	Village portion
26	522400	531300	8900.0	Type-1	Soil Mixed Boulder
27	531300	532030	730.0	Type-2	Village portion
28	532030	538600	6570.0	Type-1	Soil Mixed Boulder
29	538600	539400	800.0	Type-2	Village portion
30	539400	551100	11700.0	Type-1	Soil Mixed Boulder
31	551100	553636	2536.0	Type-2	Village portion
<b>LAWNGTLAI BYE PASS ROAD</b>					
32	0	1920	1920.0	Type-1	Soil Mixed Boulder
		<b>Total</b>	<b>124556.00</b>		
<b>Summary</b>					<b>Length of drain in m</b>
Length of drain on Hill side				=	124556.0
Length of drain on Valley side at Box Cutting portion				=	3840.0
Length of bridge				=	300.0
Catch water drain				=	2450.0
Culvert catch pit opening				=	3676.20
<b>Net length of line drain</b>				=	<b>126870.00</b>
	<b>Type-1</b>	<b>97404</b>	<b>Type-2</b>	<b>29466</b>	

### Chutes

Surface run off on a hill slope flows down in the form of natural gulleys / chutes. The water entrapped in the catch water drains is also brought down by connecting them with existing natural gulleys. It is therefore desired to provide lined chutes to lead the discharge to the catch pit of culvert or to a natural drainage channel. The chutes of the culverts form a part of the culvert structure and are given in the respective drawings of culverts.

<b>Location of culvert outlet required outlet drain to connect with natural nallah</b>									
Sr. No.	Chainage	Clear Width of Chute	Length of Chute	Remarks	Sr. No.	Chainage	Clear Width of Chute	Length of Chute	Remarks
1	433299	1.85	20	Type-1	83	492380	1.85	20	Type-1
2	433862	1.85	20	Type-1	84	492572	2.70	20	Type-2
3	434928	1.85	20	Type-1	85	492793	1.85	20	Type-1
4	435492	1.85	20	Type-1	86	493560	1.85	20	Type-1
5	435765	1.85	20	Type-1	87	494218	1.85	20	Type-1
6	436598	1.85	20	Type-1	88	495275	1.85	20	Type-1
7	437115	1.85	20	Type-1	89	495465	3.20	20	Type-3
8	440838	1.85	20	Type-1	90	495825	2.70	20	Type-2
9	441128	1.85	20	Type-1	91	496235	1.85	20	Type-1
10	441709	1.85	20	Type-1	92	497260	2.70	20	Type-2
11	442308	1.85	20	Type-1	93	498170	1.85	20	Type-1
12	443996	1.85	20	Type-1	94	498305	1.85	20	Type-1
13	450845	1.85	20	Type-1	95	498958	1.85	20	Type-1

14	453289	1.85	20	Type-1	96	499084	1.85	20	Type-1
15	453420	1.85	20	Type-1	97	499308	1.85	20	Type-1
Sr. No.	Chainage	Clear Width of Chute	Length of Chute	Remarks	Sr. No.	Chainage	Clear Width of Chute	Length of Chute	Remarks
16	454956	1.85	20	Type-1	98	500553	3.20	20	Type-3
17	456305	1.85	20	Type-1	99	500665	1.85	20	Type-1
18	458700	1.85	20	Type-1	100	502432	1.85	20	Type-1
19	458931	1.85	20	Type-1	101	503922	2.70	20	Type-2
20	459910	1.85	20	Type-1	102	504334	1.85	20	Type-1
21	460122	1.85	20	Type-1	103	504568	1.85	20	Type-1
22	463075	1.85	20	Type-1	104	505925	1.85	20	Type-1
23	463480	1.85	20	Type-1	105	509210	1.85	20	Type-1
24	464018	1.85	20	Type-1	106	509920	1.85	20	Type-1
25	464255	1.85	20	Type-1	107	510410	1.85	20	Type-1
26	464593	1.85	20	Type-1	108	510605	1.85	20	Type-1
27	464892	1.85	20	Type-1	109	511068	1.85	20	Type-1
28	465080	1.85	20	Type-1	110	512867	1.85	20	Type-1
29	465603	1.85	20	Type-1	111	513198	1.85	20	Type-1
30	466546	1.85	20	Type-1	112	514736	2.70	20	Type-2
31	466776	1.85	20	Type-1	113	515001	1.85	20	Type-1
32	467027	1.85	20	Type-1	114	515148	1.85	20	Type-1
33	467175	1.85	20	Type-1	115	515418	1.85	20	Type-1
34	467386	1.85	20	Type-1	116	515823	1.85	20	Type-1
35	467670	1.85	20	Type-1	117	517705	1.85	20	Type-1
36	467850	1.85	20	Type-1	118	518004	1.85	20	Type-1
37	468078	1.85	20	Type-1	119	518205	1.85	20	Type-1
38	468337	1.85	20	Type-1	120	519296	1.85	20	Type-1
39	468542	1.85	20	Type-1	121	520910	1.85	20	Type-1
40	469202	1.85	20	Type-1	122	521320	1.85	20	Type-1
41	469360	2.70	20	Type-2	123	521700	1.85	20	Type-1
42	469565	1.85	20	Type-1	124	521985	1.85	20	Type-1
43	469795	1.85	20	Type-1	125	522212	1.85	20	Type-1
44	469976	1.85	20	Type-1	126	522412	1.85	20	Type-1
45	470235	1.85	20	Type-1	127	522700	1.85	20	Type-1
46	470405	1.85	20	Type-1	128	523035	1.85	20	Type-1
47	470605	1.85	20	Type-1	129	523182	1.85	20	Type-1
48	470885	1.85	20	Type-1	130	525400	1.85	20	Type-1
49	470975	1.85	20	Type-1	131	526705	1.85	20	Type-1
50	472005	1.85	20	Type-1	132	527760	1.85	20	Type-1
51	472342	1.85	20	Type-1	133	528840	1.85	20	Type-1
52	472612	1.85	20	Type-1	134	529395	1.85	20	Type-1
53	473012	1.85	20	Type-1	135	530015	1.85	20	Type-1
54	473282	1.85	20	Type-1	136	530465	2.70	20	Type-2
55	474466	1.85	20	Type-1	137	530735	2.70	20	Type-2
56	474742	1.85	20	Type-1	138	532851	2.70	20	Type-2
57	475000	1.85	20	Type-1	139	533675	1.85	20	Type-1
58	475388	1.85	20	Type-1	140	534602	1.85	20	Type-1
59	475592	1.85	20	Type-1	141	536255	1.85	20	Type-1
60	477405	1.85	20	Type-1	142	539065	1.85	20	Type-1
61	477603	2.70	20	Type-2	143	539715	1.85	20	Type-1
62	478685	1.85	20	Type-1	144	540292	1.85	20	Type-1

63	479676	1.85	20	Type-1	145	542942	1.85	20	Type-1
64	480612	1.85	20	Type-1	146	546005	1.85	20	Type-1
<b>Sr. No.</b>	<b>Chainage</b>	<b>Clear Width of Chute</b>	<b>Length of Chute</b>	<b>Remarks</b>	<b>Sr. No.</b>	<b>Chainage</b>	<b>Clear Width of Chute</b>	<b>Length of Chute</b>	<b>Remarks</b>
65	481585	1.85	20	Type-1	147	546620	1.85	20	Type-1
66	482338	1.85	20	Type-1	148	547424	1.85	20	Type-1
67	482465	1.85	20	Type-1	149	547632	1.85	20	Type-1
68	482708	1.85	20	Type-1	150	549210	1.85	20	Type-1
69	482903	1.85	20	Type-1	151	550130	1.85	20	Type-1
70	483725	1.85	20	Type-1	152	552885	1.85	20	Type-1
71	484610	1.85	20	Type-1	153	553147	1.85	20	Type-1
72	484832	1.85	20	Type-1	154	553398	1.85	20	Type-1
73	485638	1.85	20	Type-1	<b>LAWNGTLAI BYE PASS ROAD</b>				
74	486380	1.85	20	Type-1	146	50	1.85	30	Type-1
75	486780	1.85	20	Type-1	147	180	1.85	35	Type-1
76	486888	1.85	20	Type-1	148	225	1.85	35	Type-1
77	487775	1.85	20	Type-1	149	304	1.85	35	Type-1
78	487952	1.85	20	Type-1	150	590	1.85	30	Type-1
79	488080	1.85	20	Type-1	151	710	1.85	40	Type-1
80	488730	1.85	20	Type-1	152	970	1.85	40	Type-1
81	489270	1.85	20	Type-1	153	1280	1.85	40	Type-1
82	491620	1.85	20	Type-1			Total	3365	
<b>Summary</b>									
<b>Total number of culvert</b>									
<b>Sr.No.</b>	<b>Description</b>			<b>Nos.</b>					
<b>1</b>	<b>Type -1</b>			<b>3125</b>					
<b>2</b>	<b>Type -2</b>			<b>200</b>					
<b>3</b>	<b>Type -3</b>			<b>40</b>					

### Catch-water Drains and Intercepting Drains

We have not identified any such requirement. Normally it is found that such requirement is generated after sometime.

## 1.5 DESIGN OF SLOPE PROTECTION WORKS

The slope protection work includes the following:

Sr. No.	Type of Structure	Unit	Quantity		Remarks
			NH 54	Lawngtlai Bye Pass	
1	Retaining Wall	Rm	19400.00	390.00	Height varying between 3.0m to 6.0 m
2	Breast Wall	Rm	720.00	100.00	Height varying between 2.0m to 3.0 m
3	Gabion Wall	Rm	2790.00		Height varying between 2.0m to 3.0 m
4	Toe Wall	Rm	13490.00	100.00	Height varying between 2.0m to 3.0 m
<b>Sr.</b>	<b>Type of Structure</b>	<b>Unit</b>	<b>Quantity</b>		<b>Remarks</b>

No.			NH 54	Lawngtlai Bye Pass	
5	Reinforced Earth Wall	Rm	750.00		Height varying between 7.0 m to 10.0 m
6	Cut Slope Wall	Rm	70000.00		Height upto 3.0 m
7	Gabion Wall (1:0.3)	cum	10428.00		
8	Rock fall Prevention Wall (H=3m)	Rm	9647.50		
9	Rock fall Prevention Fence (H=2m)	Rm	2410.00		
10	Hydro seeding (t=5cm)	sqm	5377.00		
11	Seeding and Mulching (Soil Cut Slope)	sqm	448043.00		
12	Vegetation Mat (Steep Slope)	sqm	1237.00		
13	Crib Work (F300)	sqm	1756.16		
14	Crib Work (F500)	sqm	3510.00		
15	Earth Removal	cum	12970.00		
16	Groundwater Drainage Work	Rm	9924.00		
17	Anchor Work	Rm	3072.00		
18	Rock-bolt Work	Rm	702.00		
19	Bamboo crib wall	Rm	22320.00		Height 1.5 m at Embankment & disposal location.

### Retaining Wall (RW)

It is proposed to provide minimum number of structures keeping in view the economy, cost as well as the essentiality of the requirement. The requirements of Retaining have been identified and are listed in Table below .It is identified to provide total length of the Retaining wall is 19790.00 m as under:

LOCATION OF RETAINING WALL											
Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
1	431805	431815	10	3	LHS	991	512475	512485	10	3	RHS
2	431845	431855	10	3	LHS	992	512485	512495	10	3	RHS
3	431855	431865	10	3	LHS	993	512495	512505	10	3	RHS
4	431995	432005	10	3	LHS	994	512505	512515	10	3	RHS
5	432005	432015	10	3	LHS	995	512975	512985	10	3	RHS
6	432015	432025	10	3	LHS	996	512985	512995	10	4	RHS
7	432025	432035	10	5	LHS	997	512995	513005	10	3	LHS
8	432165	432175	10	3	LHS	998	512995	513005	10	5	RHS
9	432175	432185	10	5	LHS	999	513005	513015	10	3	RHS
10	432185	432195	10	4	LHS	1000	513015	513025	10	3	RHS
11	432225	432235	10	3	LHS	1001	513025	513035	10	3	RHS
12	432235	432245	10	3	LHS	1002	513375	513385	10	3	RHS
13	432565	432575	10	4	LHS	1003	513385	513395	10	5	RHS
14	432575	432585	10	6	LHS	1004	513395	513405	10	4	RHS
15	432585	432595	10	5	LHS	1005	513405	513415	10	3	RHS
16	432595	432605	10	3	LHS	1006	513415	513425	10	3	RHS
17	432655	432665	10	3	LHS	1007	513805	513815	10	4	LHS
Sr.No.	Chainage		Length	Height	Remarks	Sr.No.	Chainage		Length	Height	Remarks



	From	To	in m	in m	ks		From	To	in m	in m	ks
18	432935	432945	10	4	LHS	1008	514245	514255	10	3	RHS
19	433125	433135	10	3	LHS	1009	514255	514265	10	3	RHS
20	433165	433175	10	3	LHS	1010	514515	514525	10	3	RHS
21	433255	433265	10	3	LHS	1011	514565	514575	10	3	RHS
22	433265	433275	10	4	LHS	1012	514575	514585	10	3	RHS
23	433275	433285	10	3	LHS	1013	514945	514955	10	3	RHS
24	433285	433295	10	3	LHS	1014	514955	514965	10	3	RHS
25	433295	433305	10	3	LHS	1015	514965	514975	10	3	RHS
26	433755	433765	10	3	LHS	1016	514975	514985	10	3	RHS
27	433765	433775	10	3	LHS	1017	514985	514995	10	3	RHS
28	434015	434025	10	3	LHS	1018	514995	515005	10	3	RHS
29	434025	434035	10	3	LHS	1019	515005	515015	10	3	RHS
30	434035	434045	10	3	LHS	1020	515015	515025	10	3	RHS
31	434135	434145	10	3	LHS	1021	515045	515055	10	3	RHS
32	434155	434165	10	3	LHS	1022	515055	515065	10	3	RHS
33	434165	434175	10	3	LHS	1023	515065	515075	10	3	RHS
34	434305	434315	10	5	LHS	1024	515085	515095	10	4	RHS
35	434315	434325	10	5	LHS	1025	515095	515105	10	3	RHS
36	434325	434335	10	3	LHS	1026	515105	515115	10	3	RHS
37	434605	434615	10	4	LHS	1027	515115	515125	10	3	RHS
38	434675	434685	10	3	LHS	1028	515475	515485	10	3	LHS
39	434685	434695	10	3	LHS	1029	515485	515495	10	5	LHS
40	434925	434935	10	3	LHS	1030	515495	515505	10	6	LHS
41	434965	434975	10	3	LHS	1031	515505	515515	10	5	LHS
42	435045	435055	10	3	LHS	1032	515515	515525	10	5	LHS
43	435055	435065	10	5	LHS	1033	515525	515535	10	4	LHS
44	435065	435075	10	5	LHS	1034	515645	515655	10	3	RHS
45	435075	435085	10	5	LHS	1035	515655	515665	10	4	RHS
46	435085	435095	10	6	LHS	1036	515665	515675	10	3	RHS
47	435095	435105	10	4	LHS	1037	515805	515815	10	3	RHS
48	435105	435115	10	5	LHS	1038	515815	515825	10	3	RHS
49	435115	435125	10	5	LHS	1039	515825	515835	10	4	RHS
50	435125	435135	10	6	LHS	1040	515835	515845	10	4	RHS
51	435135	435145	10	6	LHS	1041	515845	515855	10	4	RHS
52	435145	435155	10	3	LHS	1042	515855	515865	10	4	RHS
53	435195	435205	10	3	LHS	1043	515865	515875	10	4	RHS
54	435205	435215	10	4	LHS	1044	515945	515955	10	3	RHS
55	435215	435225	10	5	LHS	1045	515955	515965	10	3	RHS
56	435225	435235	10	5	LHS	1046	515965	515975	10	3	RHS
57	435235	435245	10	4	LHS	1047	515975	515985	10	3	RHS
58	435245	435255	10	4	LHS	1048	515985	515995	10	4	RHS
59	435255	435265	10	3	LHS	1049	515995	516005	10	4	RHS
60	435265	435275	10	3	LHS	1050	516115	516125	10	3	RHS
61	435275	435285	10	3	LHS	1051	516125	516135	10	3	RHS
62	435285	435295	10	4	LHS	1052	516135	516145	10	3	RHS
63	435295	435305	10	6	LHS	1053	516145	516155	10	4	RHS
64	435305	435315	10	4	LHS	1054	516155	516165	10	4	RHS
65	435355	435365	10	4	LHS	1055	516165	516175	10	3	RHS
66	435365	435375	10	3	LHS	1056	516175	516185	10	3	RHS
67	435755	435765	10	4	LHS	1057	516185	516195	10	3	RHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
68	435765	435775	10	4	LHS	1058	516285	516295	10	3	RHS
69	435775	435785	10	3	LHS	1059	516295	516305	10	3	RHS
70	435855	435865	10	3	LHS	1060	516305	516315	10	4	RHS
71	435865	435875	10	3	LHS	1061	516315	516325	10	4	RHS
72	436105	436115	10	3	LHS	1062	516325	516335	10	4	RHS
73	436265	436275	10	3	LHS	1063	516335	516345	10	3	RHS
74	436275	436285	10	4	LHS	1064	516495	516505	10	4	RHS
75	436285	436295	10	4	LHS	1065	516505	516515	10	4	RHS
76	436625	436635	10	3	LHS	1066	516515	516525	10	3	RHS
77	436635	436645	10	5	LHS	1067	516525	516535	10	6	RHS
78	436775	436785	10	4	LHS	1068	516535	516545	10	5	RHS
79	436785	436795	10	3	LHS	1069	516675	516685	10	3	RHS
80	436835	436845	10	3	LHS	1070	516685	516695	10	6	RHS
81	436905	436915	10	3	LHS	1071	516695	516705	10	3	LHS
82	437095	437105	10	3	LHS	1072	516705	516715	10	6	RHS
83	437105	437115	10	4	LHS	1073	516715	516725	10	3	RHS
84	437115	437125	10	4	LHS	1074	516765	516775	10	4	RHS
85	437305	437315	10	4	LHS	1075	516775	516785	10	6	RHS
86	437315	437325	10	6	LHS	1076	516785	516795	10	6	LHS
87	437325	437335	10	6	LHS	1077	516795	516805	10	6	RHS
88	437335	437345	10	4	LHS	1078	516875	516885	10	3	RHS
89	437635	437645	10	4	LHS	1079	516885	516895	10	4	RHS
90	437645	437655	10	6	LHS	1080	516895	516905	10	3	RHS
91	437655	437665	10	6	LHS	1081	517055	517065	10	3	RHS
92	437665	437675	10	5	LHS	1082	517065	517075	10	4	RHS
93	437675	437685	10	4	LHS	1083	517125	517135	10	5	RHS
94	437705	437715	10	3	LHS	1084	517135	517145	10	5	RHS
95	437715	437725	10	4	LHS	1085	517145	517155	10	4	RHS
96	437725	437735	10	4	LHS	1086	517155	517165	10	3	RHS
97	437735	437745	10	3	LHS	1087	517235	517245	10	3	RHS
98	437865	437875	10	3	LHS	1088	517245	517255	10	3	RHS
99	437875	437885	10	5	LHS	1089	517465	517475	10	4	RHS
100	437885	437895	10	3	LHS	1090	517475	517485	10	6	RHS
101	437965	437975	10	3	LHS	1091	517485	517495	10	6	RHS
102	437975	437985	10	3	LHS	1092	517495	517505	10	3	RHS
103	437985	437995	10	3	LHS	1093	517825	517835	10	4	RHS
104	437995	438005	10	4	LHS	1094	517835	517845	10	6	RHS
105	438245	438255	10	5	LHS	1095	517845	517855	10	3	RHS
106	438255	438265	10	3	RHS	1096	518005	518015	10	3	RHS
107	438265	438275	10	6	LHS	1097	518015	518025	10	3	RHS
108	438275	438285	10	5	LHS	1098	518025	518035	10	3	RHS
109	438415	438425	10	3	LHS	1099	518035	518045	10	3	RHS
110	438425	438435	10	4	LHS	1100	518045	518055	10	3	RHS
111	438565	438575	10	4	LHS	1101	518055	518065	10	3	RHS
112	438675	438685	10	3	LHS	1102	518725	518735	10	3	RHS
113	438685	438695	10	4	LHS	1103	518735	518745	10	4	RHS
114	438695	438705	10	5	LHS	1104	518745	518755	10	4	RHS
115	438705	438715	10	3	RHS	1105	518755	518765	10	3	RHS
116	438705	438715	10	3	LHS	1106	518805	518815	10	3	RHS
117	438795	438805	10	3	LHS	1107	518905	518915	10	3	RHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
118	438805	438815	10	3	LHS	1108	519055	519065	10	6	RHS
119	438815	438825	10	5	LHS	1109	519065	519075	10	4	RHS
120	438825	438835	10	4	LHS	1110	519175	519185	10	3	RHS
121	439205	439215	10	4	LHS	1111	519395	519405	10	3	RHS
122	439215	439225	10	6	LHS	1112	519425	519435	10	3	RHS
123	439225	439235	10	5	LHS	1113	519455	519465	10	3	RHS
124	439455	439465	10	4	LHS	1114	519465	519475	10	4	RHS
125	439465	439475	10	6	LHS	1115	519475	519485	10	4	RHS
126	439475	439485	10	4	LHS	1116	519485	519495	10	4	RHS
127	439485	439495	10	3	LHS	1117	519545	519555	10	3	RHS
128	439545	439555	10	3	LHS	1118	519625	519635	10	3	RHS
129	439555	439565	10	5	LHS	1119	519635	519645	10	3	RHS
130	439565	439575	10	6	LHS	1120	519645	519655	10	4	RHS
131	439575	439585	10	6	LHS	1121	519655	519665	10	4	RHS
132	439585	439595	10	4	LHS	1122	519795	519805	10	3	RHS
133	439595	439605	10	3	LHS	1123	519835	519845	10	3	RHS
134	439605	439615	10	3	LHS	1124	519845	519855	10	6	RHS
135	439765	439775	10	3	LHS	1125	519855	519865	10	6	RHS
136	439775	439785	10	4	LHS	1126	519865	519875	10	5	RHS
137	439845	439855	10	3	LHS	1127	519945	519955	10	3	RHS
138	439855	439865	10	6	LHS	1128	520085	520095	10	3	RHS
139	439875	439885	10	5	RHS	1129	520165	520175	10	4	RHS
140	439885	439895	10	6	RHS	1130	520175	520185	10	4	RHS
141	439895	439905	10	4	RHS	1131	520185	520195	10	3	RHS
142	439905	439915	10	5	LHS	1132	520285	520295	10	5	RHS
143	440065	440075	10	3	LHS	1133	520305	520315	10	6	RHS
144	440145	440155	10	3	LHS	1134	520315	520325	10	3	RHS
145	440155	440165	10	3	LHS	1135	520365	520375	10	4	RHS
146	440165	440175	10	3	LHS	1136	520375	520385	10	3	RHS
147	440245	440255	10	3	LHS	1137	520385	520395	10	3	RHS
148	440255	440265	10	4	LHS	1138	520445	520455	10	3	RHS
149	440265	440275	10	5	LHS	1139	520455	520465	10	5	RHS
150	440275	440285	10	5	LHS	1140	520465	520475	10	5	RHS
151	440345	440355	10	5	LHS	1141	520475	520485	10	4	RHS
152	440355	440365	10	5	LHS	1142	520515	520525	10	3	RHS
153	440365	440375	10	5	LHS	1143	520555	520565	10	3	RHS
154	440375	440385	10	4	LHS	1144	520565	520575	10	4	RHS
155	440515	440525	10	3	LHS	1145	520625	520635	10	3	RHS
156	440525	440535	10	3	LHS	1146	520635	520645	10	4	RHS
157	440535	440545	10	3	LHS	1147	520645	520655	10	4	RHS
158	440675	440685	10	3	LHS	1148	520655	520665	10	3	RHS
159	440985	440995	10	3	LHS	1149	520705	520715	10	3	RHS
160	440995	441005	10	6	LHS	1150	520715	520725	10	3	RHS
161	441005	441015	10	6	LHS	1151	520765	520775	10	4	RHS
162	441015	441025	10	4	RHS	1152	520775	520785	10	4	RHS
163	441015	441025	10	6	LHS	1153	520905	520915	10	3	RHS
164	441025	441035	10	5	LHS	1154	520985	520995	10	3	RHS
165	441105	441115	10	5	LHS	1155	520995	521005	10	3	RHS
166	441115	441125	10	3	RHS	1156	521445	521455	10	3	RHS
167	441125	441135	10	4	RHS	1157	521455	521465	10	3	RHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
168	441135	441145	10	3	RHS	1158	521685	521695	10	3	RHS
169	441135	441145	10	6	LHS	1159	521695	521705	10	3	RHS
170	441145	441155	10	3	LHS	1160	521705	521715	10	4	RHS
171	441495	441505	10	4	LHS	1161	521715	521725	10	4	RHS
172	441505	441515	10	6	LHS	1162	521725	521735	10	4	RHS
173	441515	441525	10	6	LHS	1163	521775	521785	10	3	RHS
174	441525	441535	10	4	LHS	1164	521785	521795	10	4	RHS
175	441535	441545	10	3	LHS	1165	521795	521805	10	4	RHS
176	441685	441695	10	4	LHS	1166	521805	521815	10	5	RHS
177	441695	441705	10	4	LHS	1167	521815	521825	10	4	RHS
178	441705	441715	10	4	LHS	1168	521825	521835	10	4	RHS
179	441715	441725	10	4	LHS	1169	521835	521845	10	4	RHS
180	441725	441735	10	3	LHS	1170	522135	522145	10	3	LHS
181	441995	442005	10	3	LHS	1171	522135	522145	10	4	RHS
182	442015	442025	10	3	LHS	1172	522145	522155	10	3	LHS
183	442025	442035	10	4	LHS	1173	522145	522155	10	5	RHS
184	442035	442045	10	3	LHS	1174	522155	522165	10	5	RHS
185	442165	442175	10	4	LHS	1175	522165	522175	10	5	RHS
186	442175	442185	10	5	LHS	1176	522175	522185	10	5	RHS
187	442185	442195	10	5	LHS	1177	522185	522195	10	4	RHS
188	442195	442205	10	6	LHS	1178	522195	522205	10	3	RHS
189	442205	442215	10	4	LHS	1179	522825	522835	10	3	RHS
190	442305	442315	10	4	LHS	1180	522835	522845	10	4	RHS
191	442775	442785	10	3	LHS	1181	522845	522855	10	4	RHS
192	442785	442795	10	3	LHS	1182	522905	522915	10	3	RHS
193	443145	443155	10	3	LHS	1183	523175	523185	10	3	LHS
194	443155	443165	10	3	LHS	1184	523275	523285	10	3	LHS
195	443225	443235	10	3	LHS	1185	523425	523435	10	3	LHS
196	443235	443245	10	4	LHS	1186	523435	523445	10	3	LHS
197	443235	443245	10	4	RHS	1187	523445	523455	10	3	LHS
198	443245	443255	10	5	LHS	1188	523455	523465	10	3	LHS
199	443255	443265	10	4	LHS	1189	523535	523545	10	3	LHS
200	443265	443275	10	3	LHS	1190	523715	523725	10	3	LHS
201	443445	443455	10	4	LHS	1191	523815	523825	10	3	LHS
202	443785	443795	10	3	LHS	1192	523825	523835	10	3	LHS
203	443795	443805	10	4	LHS	1193	523835	523845	10	3	LHS
204	443805	443815	10	6	LHS	1194	523845	523855	10	4	LHS
205	443815	443825	10	4	LHS	1195	523855	523865	10	5	LHS
206	444325	444335	10	3	LHS	1196	523875	523885	10	6	LHS
207	444385	444395	10	4	LHS	1197	523885	523895	10	3	LHS
208	444565	444575	10	5	LHS	1198	523975	523985	10	4	LHS
209	444575	444585	10	4	LHS	1199	523985	523995	10	5	LHS
210	444685	444695	10	3	LHS	1200	523995	524005	10	3	LHS
211	444695	444705	10	5	LHS	1201	524235	524245	10	3	LHS
212	444705	444715	10	5	LHS	1202	524245	524255	10	3	LHS
213	444715	444725	10	4	LHS	1203	524335	524345	10	3	LHS
214	444725	444735	10	4	LHS	1204	524345	524355	10	6	LHS
215	444735	444745	10	4	LHS	1205	524355	524365	10	5	LHS
216	444765	444775	10	4	LHS	1206	524365	524375	10	3	LHS
217	444775	444785	10	4	LHS	1207	524495	524505	10	3	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
218	444785	444795	10	4	LHS	1208	524515	524525	10	3	LHS
219	444795	444805	10	4	LHS	1209	524525	524535	10	4	LHS
220	444805	444815	10	3	LHS	1210	524635	524645	10	4	LHS
221	444815	444825	10	4	LHS	1211	524645	524655	10	3	LHS
222	444825	444835	10	4	LHS	1212	524655	524665	10	4	LHS
223	444835	444845	10	3	LHS	1213	524665	524675	10	3	LHS
224	444845	444855	10	6	LHS	1214	524675	524685	10	3	LHS
225	444855	444865	10	5	LHS	1215	524735	524745	10	3	LHS
226	444865	444875	10	4	LHS	1216	524745	524755	10	4	LHS
227	444875	444885	10	3	LHS	1217	524755	524765	10	3	LHS
228	444885	444895	10	3	LHS	1218	524815	524825	10	3	LHS
229	444895	444905	10	3	LHS	1219	524825	524835	10	5	LHS
230	445645	445655	10	4	RHS	1220	524835	524845	10	5	LHS
231	445655	445665	10	5	RHS	1221	524845	524855	10	4	LHS
232	445665	445675	10	5	RHS	1222	524855	524865	10	3	LHS
233	445675	445685	10	4	RHS	1223	524885	524895	10	3	LHS
234	445685	445695	10	4	RHS	1224	524895	524905	10	3	LHS
235	445695	445705	10	4	RHS	1225	524905	524915	10	3	LHS
236	445705	445715	10	3	RHS	1226	524915	524925	10	3	LHS
237	445715	445725	10	5	RHS	1227	524935	524945	10	3	LHS
238	445735	445745	10	3	RHS	1228	524955	524965	10	5	LHS
239	445745	445755	10	4	RHS	1229	525075	525085	10	3	LHS
240	445755	445765	10	5	RHS	1230	525175	525185	10	4	LHS
241	445765	445775	10	5	RHS	1231	525185	525195	10	4	LHS
242	445775	445785	10	6	RHS	1232	525255	525265	10	4	LHS
243	445785	445795	10	6	RHS	1233	525265	525275	10	4	LHS
244	445795	445805	10	6	RHS	1234	525275	525285	10	3	LHS
245	445805	445815	10	6	RHS	1235	525355	525365	10	4	LHS
246	445815	445825	10	5	RHS	1236	525365	525375	10	4	LHS
247	445915	445925	10	4	RHS	1237	525375	525385	10	4	LHS
248	445925	445935	10	6	RHS	1238	525385	525395	10	6	LHS
249	445935	445945	10	3	RHS	1239	525395	525405	10	5	LHS
250	446045	446055	10	3	RHS	1240	525405	525415	10	3	LHS
251	446055	446065	10	3	RHS	1241	525485	525495	10	3	LHS
252	446085	446095	10	4	RHS	1242	525495	525505	10	3	LHS
253	446095	446105	10	6	RHS	1243	525505	525515	10	3	LHS
254	446105	446115	10	4	RHS	1244	525515	525525	10	3	LHS
255	446185	446195	10	4	RHS	1245	525655	525665	10	3	LHS
256	446195	446205	10	6	RHS	1246	525665	525675	10	4	LHS
257	446355	446365	10	3	RHS	1247	525675	525685	10	3	LHS
258	446575	446585	10	3	RHS	1248	525685	525695	10	3	LHS
259	446585	446595	10	6	RHS	1249	525755	525765	10	3	LHS
260	446795	446805	10	3	RHS	1250	525765	525775	10	3	LHS
261	446805	446815	10	3	RHS	1251	525775	525785	10	3	LHS
262	446895	446905	10	4	RHS	1252	525815	525825	10	3	LHS
263	447125	447135	10	3	RHS	1253	525825	525835	10	4	LHS
264	447225	447235	10	3	RHS	1254	525835	525845	10	3	LHS
265	447235	447245	10	3	RHS	1255	525925	525935	10	3	LHS
266	447245	447255	10	3	RHS	1256	526015	526025	10	3	LHS
267	447555	447565	10	3	RHS	1257	526305	526315	10	4	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
268	447665	447675	10	3	RHS	1258	526465	526475	10	3	LHS
269	448295	448305	10	3	RHS	1259	526475	526485	10	3	LHS
270	448305	448315	10	3	RHS	1260	526485	526495	10	3	LHS
271	448315	448325	10	3	RHS	1261	526495	526505	10	4	LHS
272	448325	448335	10	3	RHS	1262	526505	526515	10	6	LHS
273	448345	448355	10	3	RHS	1263	526605	526615	10	3	LHS
274	448355	448365	10	3	RHS	1264	526615	526625	10	3	LHS
275	448365	448375	10	3	RHS	1265	526625	526635	10	3	LHS
276	448375	448385	10	3	RHS	1266	526715	526725	10	3	LHS
277	448385	448395	10	3	RHS	1267	526725	526735	10	3	LHS
278	448395	448405	10	3	RHS	1268	526735	526745	10	3	LHS
279	448405	448415	10	3	RHS	1269	526745	526755	10	3	LHS
280	448415	448425	10	3	RHS	1270	526985	526995	10	3	LHS
281	448545	448555	10	6	RHS	1271	526995	527005	10	3	LHS
282	448555	448565	10	6	RHS	1272	527005	527015	10	4	LHS
283	448565	448575	10	4	RHS	1273	527015	527025	10	3	LHS
284	448765	448775	10	3	RHS	1274	527025	527035	10	4	LHS
285	448775	448785	10	4	RHS	1275	527035	527045	10	4	LHS
286	448785	448795	10	4	RHS	1276	527045	527055	10	4	LHS
287	448795	448805	10	3	RHS	1277	527055	527065	10	4	LHS
288	448845	448855	10	6	RHS	1278	527065	527075	10	3	LHS
289	448855	448865	10	6	RHS	1279	527075	527085	10	3	LHS
290	448865	448875	10	3	LHS	1280	527085	527095	10	5	LHS
291	448865	448875	10	6	RHS	1281	527295	527305	10	4	LHS
292	448955	448965	10	4	RHS	1282	527305	527315	10	5	LHS
293	448965	448975	10	3	RHS	1283	527315	527325	10	4	LHS
294	448975	448985	10	5	RHS	1284	527325	527335	10	5	LHS
295	448985	448995	10	6	RHS	1285	527335	527345	10	4	LHS
296	448995	449005	10	6	RHS	1286	527355	527365	10	3	LHS
297	449005	449015	10	3	RHS	1287	527475	527485	10	5	LHS
298	449115	449125	10	3	RHS	1288	527485	527495	10	6	LHS
299	449125	449135	10	5	RHS	1289	527495	527505	10	6	LHS
300	449135	449145	10	4	RHS	1290	527595	527605	10	3	LHS
301	449185	449195	10	4	RHS	1291	527605	527615	10	3	LHS
302	449415	449425	10	3	RHS	1292	527705	527715	10	3	LHS
303	449745	449755	10	3	RHS	1293	527825	527835	10	3	LHS
304	449755	449765	10	6	RHS	1294	527915	527925	10	5	LHS
305	449765	449775	10	3	RHS	1295	527925	527935	10	3	LHS
306	449865	449875	10	3	RHS	1296	527985	527995	10	5	LHS
307	449875	449885	10	4	RHS	1297	527995	528005	10	6	LHS
308	449885	449895	10	3	RHS	1298	528005	528015	10	4	LHS
309	449895	449905	10	3	RHS	1299	528105	528115	10	4	LHS
310	449955	449965	10	3	RHS	1300	528115	528125	10	5	LHS
311	450055	450065	10	3	RHS	1301	528125	528135	10	4	LHS
312	450105	450115	10	3	RHS	1302	528185	528195	10	3	LHS
313	450115	450125	10	3	RHS	1303	528395	528405	10	3	LHS
314	450125	450135	10	4	RHS	1304	528405	528415	10	3	LHS
315	450145	450155	10	3	RHS	1305	528415	528425	10	3	LHS
316	450155	450165	10	4	RHS	1306	528515	528525	10	3	LHS
317	450165	450175	10	4	RHS	1307	528535	528545	10	4	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
318	450175	450185	10	4	RHS	1308	528625	528635	10	3	LHS
319	450185	450195	10	4	RHS	1309	528635	528645	10	4	LHS
320	450195	450205	10	3	RHS	1310	529035	529045	10	4	LHS
321	450205	450215	10	3	RHS	1311	529045	529055	10	4	LHS
322	450215	450225	10	3	RHS	1312	529055	529065	10	3	LHS
323	450315	450325	10	3	RHS	1313	529065	529075	10	3	LHS
324	450325	450335	10	3	RHS	1314	529075	529085	10	3	LHS
325	450335	450345	10	3	RHS	1315	529085	529095	10	4	LHS
326	450395	450405	10	3	RHS	1316	529175	529185	10	3	LHS
327	450405	450415	10	3	RHS	1317	529185	529195	10	4	LHS
328	450435	450445	10	3	RHS	1318	529205	529215	10	3	LHS
329	450475	450485	10	3	RHS	1319	529215	529225	10	3	LHS
330	450485	450495	10	3	RHS	1320	529255	529265	10	3	LHS
331	450495	450505	10	3	RHS	1321	529315	529325	10	3	LHS
332	450505	450515	10	3	RHS	1322	529335	529345	10	5	LHS
333	450515	450525	10	3	RHS	1323	529375	529385	10	3	LHS
334	450525	450535	10	3	RHS	1324	529385	529395	10	3	LHS
335	450535	450545	10	4	RHS	1325	529395	529405	10	3	LHS
336	450615	450625	10	3	RHS	1326	529405	529415	10	3	LHS
337	450625	450635	10	3	RHS	1327	529475	529485	10	4	LHS
338	450635	450645	10	3	RHS	1328	529485	529495	10	3	LHS
339	450645	450655	10	3	RHS	1329	529565	529575	10	5	LHS
340	450655	450665	10	3	RHS	1330	529575	529585	10	5	LHS
341	450675	450685	10	3	RHS	1331	529585	529595	10	3	LHS
342	450685	450695	10	3	RHS	1332	529625	529635	10	3	LHS
343	450695	450705	10	3	RHS	1333	529685	529695	10	5	LHS
344	450845	450855	10	3	RHS	1334	529705	529715	10	4	LHS
345	451035	451045	10	3	RHS	1335	529745	529755	10	4	LHS
346	451045	451055	10	3	LHS	1336	529755	529765	10	6	LHS
347	451045	451055	10	6	RHS	1337	529765	529775	10	6	LHS
348	451055	451065	10	4	RHS	1338	529775	529785	10	5	LHS
349	451145	451155	10	3	RHS	1339	529785	529795	10	3	LHS
350	451155	451165	10	6	RHS	1340	529915	529925	10	3	LHS
351	451175	451185	10	5	RHS	1341	530005	530015	10	3	LHS
352	451255	451265	10	4	RHS	1342	530015	530025	10	3	LHS
353	451425	451435	10	3	RHS	1343	530085	530095	10	3	LHS
354	451675	451685	10	3	RHS	1344	530095	530105	10	3	LHS
355	451825	451835	10	3	RHS	1345	530165	530175	10	3	LHS
356	451835	451845	10	3	RHS	1346	530175	530185	10	3	LHS
357	451845	451855	10	3	RHS	1347	530185	530195	10	3	LHS
358	451855	451865	10	3	RHS	1348	530225	530235	10	4	LHS
359	452045	452055	10	3	RHS	1349	530235	530245	10	6	LHS
360	452545	452555	10	3	RHS	1350	530245	530255	10	4	LHS
361	452555	452565	10	3	RHS	1351	530255	530265	10	3	LHS
362	452565	452575	10	3	RHS	1352	530265	530275	10	3	LHS
363	452575	452585	10	3	RHS	1353	530455	530465	10	3	LHS
364	452905	452915	10	4	RHS	1354	530465	530475	10	3	LHS
365	452915	452925	10	6	RHS	1355	530505	530515	10	3	LHS
366	452925	452935	10	6	RHS	1356	530525	530535	10	3	LHS
367	452935	452945	10	5	RHS	1357	530535	530545	10	3	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
368	452945	452955	10	3	RHS	1358	530565	530575	10	4	LHS
369	453075	453085	10	3	RHS	1359	530735	530745	10	4	LHS
370	453385	453395	10	3	RHS	1360	530785	530795	10	3	LHS
371	453395	453405	10	3	RHS	1361	530805	530815	10	3	LHS
372	453405	453415	10	5	RHS	1362	530825	530835	10	6	LHS
373	453415	453425	10	5	RHS	1363	530835	530845	10	5	LHS
374	453575	453585	10	3	RHS	1364	530885	530895	10	3	LHS
375	453585	453595	10	4	RHS	1365	530895	530905	10	4	LHS
376	453895	453905	10	3	RHS	1366	530905	530915	10	3	LHS
377	453905	453915	10	3	RHS	1367	530915	530925	10	4	LHS
378	453965	453975	10	3	RHS	1368	530925	530935	10	6	LHS
379	453975	453985	10	3	RHS	1369	530935	530945	10	5	LHS
380	454135	454145	10	3	RHS	1370	530975	530985	10	4	LHS
381	454145	454155	10	6	RHS	1371	530995	531005	10	4	LHS
382	454155	454165	10	4	LHS	1372	531045	531055	10	5	LHS
383	454165	454175	10	6	LHS	1373	531095	531105	10	6	LHS
384	454175	454185	10	5	LHS	1374	531105	531115	10	6	LHS
385	454185	454195	10	3	LHS	1375	531175	531185	10	4	LHS
386	454195	454205	10	4	RHS	1376	531185	531195	10	4	LHS
387	454205	454215	10	3	RHS	1377	531215	531225	10	5	LHS
388	454215	454225	10	4	RHS	1378	531225	531235	10	4	LHS
389	454225	454235	10	4	RHS	1379	531235	531245	10	3	LHS
390	454235	454245	10	4	RHS	1380	531245	531255	10	3	LHS
391	454245	454255	10	3	RHS	1381	531375	531385	10	4	LHS
392	454255	454265	10	3	RHS	1382	531385	531395	10	5	LHS
393	454465	454475	10	4	RHS	1383	531395	531405	10	6	LHS
394	454475	454485	10	3	RHS	1384	531405	531415	10	5	LHS
395	454895	454905	10	3	RHS	1385	531645	531655	10	3	LHS
396	454905	454915	10	5	RHS	1386	531655	531665	10	4	LHS
397	454915	454925	10	5	RHS	1387	531665	531675	10	3	LHS
398	454925	454935	10	5	RHS	1388	531675	531685	10	4	LHS
399	454935	454945	10	4	RHS	1389	531685	531695	10	4	LHS
400	455085	455095	10	3	RHS	1390	531695	531705	10	4	LHS
401	455145	455155	10	5	RHS	1391	531705	531715	10	4	LHS
402	455155	455165	10	5	RHS	1392	531715	531725	10	3	LHS
403	455165	455175	10	4	RHS	1393	531725	531735	10	4	LHS
404	455175	455185	10	3	RHS	1394	531735	531745	10	5	LHS
405	455365	455375	10	4	RHS	1395	531745	531755	10	4	LHS
406	455375	455385	10	4	RHS	1396	531755	531765	10	5	LHS
407	455555	455565	10	3	RHS	1397	531765	531775	10	5	LHS
408	455565	455575	10	4	RHS	1398	531775	531785	10	4	LHS
409	455575	455585	10	6	RHS	1399	531785	531795	10	3	LHS
410	455585	455595	10	3	RHS	1400	531795	531805	10	4	LHS
411	455645	455655	10	4	RHS	1401	531805	531815	10	4	LHS
412	455655	455665	10	4	RHS	1402	531815	531825	10	3	LHS
413	455665	455675	10	3	RHS	1403	531885	531895	10	4	LHS
414	455885	455895	10	3	RHS	1404	531895	531905	10	3	LHS
415	455925	455935	10	4	RHS	1405	532035	532045	10	3	LHS
416	455935	455945	10	6	RHS	1406	532045	532055	10	3	LHS
417	455945	455955	10	6	RHS	1407	532315	532325	10	3	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar



	From	To	in m	in m	ks		From	To	in m	in m	ks
418	456035	456045	10	3	RHS	1408	532325	532335	10	3	LHS
419	456045	456055	10	4	RHS	1409	532515	532525	10	3	LHS
420	456055	456065	10	4	LHS	1410	532525	532535	10	3	LHS
421	456055	456065	10	6	RHS	1411	532535	532545	10	3	LHS
422	456065	456075	10	6	LHS	1412	532545	532555	10	4	LHS
423	456075	456085	10	3	LHS	1413	532555	532565	10	4	LHS
424	456075	456085	10	6	RHS	1414	532565	532575	10	3	LHS
425	456085	456095	10	6	RHS	1415	532575	532585	10	3	LHS
426	456305	456315	10	3	RHS	1416	532645	532655	10	3	LHS
427	456315	456325	10	3	RHS	1417	532655	532665	10	3	LHS
428	456325	456335	10	4	RHS	1418	532665	532675	10	3	LHS
429	456335	456345	10	4	RHS	1419	532715	532725	10	3	LHS
430	456345	456355	10	4	RHS	1420	532725	532735	10	3	LHS
431	456355	456365	10	4	RHS	1421	532865	532875	10	4	LHS
432	456365	456375	10	4	RHS	1422	532875	532885	10	3	LHS
433	456375	456385	10	5	RHS	1423	532925	532935	10	4	LHS
434	456385	456395	10	5	RHS	1424	532935	532945	10	4	LHS
435	456395	456405	10	5	RHS	1425	532945	532955	10	4	LHS
436	456405	456415	10	5	RHS	1426	532955	532965	10	3	LHS
437	456415	456425	10	5	RHS	1427	532965	532975	10	4	LHS
438	456425	456435	10	5	RHS	1428	532975	532985	10	4	LHS
439	456435	456445	10	5	RHS	1429	532985	532995	10	4	LHS
440	456445	456455	10	5	RHS	1430	532995	533005	10	4	LHS
441	456455	456465	10	5	LHS	1431	533005	533015	10	3	LHS
442	456455	456465	10	6	RHS	1432	533015	533025	10	3	LHS
443	456465	456475	10	5	LHS	1433	533075	533085	10	4	LHS
444	456465	456475	10	6	RHS	1434	533085	533095	10	4	LHS
445	456475	456485	10	5	RHS	1435	533095	533105	10	4	LHS
446	456475	456485	10	5	LHS	1436	533525	533535	10	3	LHS
447	456485	456495	10	5	RHS	1437	533535	533545	10	3	LHS
448	456485	456495	10	5	LHS	1438	533815	533825	10	3	LHS
449	456495	456505	10	4	RHS	1439	533825	533835	10	5	LHS
450	456685	456695	10	3	RHS	1440	533835	533845	10	3	LHS
451	456695	456705	10	3	RHS	1441	534295	534305	10	3	LHS
452	456705	456715	10	3	RHS	1442	534305	534315	10	3	LHS
453	456715	456725	10	3	RHS	1443	534565	534575	10	3	LHS
454	456795	456805	10	3	LHS	1444	534575	534585	10	3	LHS
455	456905	456915	10	3	RHS	1445	534585	534595	10	3	LHS
456	456915	456925	10	3	RHS	1446	534595	534605	10	3	LHS
457	456925	456935	10	3	RHS	1447	534625	534635	10	3	LHS
458	457025	457035	10	3	RHS	1448	534635	534645	10	3	LHS
459	457455	457465	10	3	LHS	1449	534645	534655	10	3	LHS
460	457455	457465	10	4	RHS	1450	534655	534665	10	3	LHS
461	457575	457585	10	3	RHS	1451	534665	534675	10	3	LHS
462	458015	458025	10	3	RHS	1452	534675	534685	10	3	LHS
463	458395	458405	10	3	RHS	1453	534685	534695	10	3	LHS
464	458405	458415	10	3	RHS	1454	534715	534725	10	3	LHS
465	458535	458545	10	3	RHS	1455	534785	534795	10	3	LHS
466	458825	458835	10	3	LHS	1456	534795	534805	10	3	LHS
467	458835	458845	10	3	LHS	1457	534805	534815	10	3	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
468	459125	459135	10	3	LHS	1458	534815	534825	10	3	LHS
469	459265	459275	10	3	LHS	1459	534885	534895	10	4	LHS
470	459635	459645	10	3	LHS	1460	534895	534905	10	6	LHS
471	459645	459655	10	3	LHS	1461	534905	534915	10	4	RHS
472	459785	459795	10	3	LHS	1462	534915	534925	10	6	LHS
473	459835	459845	10	3	LHS	1463	534925	534935	10	4	LHS
474	459885	459895	10	3	LHS	1464	534975	534985	10	3	LHS
475	459895	459905	10	6	LHS	1465	534985	534995	10	3	LHS
476	459905	459915	10	5	LHS	1466	535045	535055	10	3	LHS
477	459915	459925	10	6	LHS	1467	535055	535065	10	5	LHS
478	459985	459995	10	4	LHS	1468	535065	535075	10	6	LHS
479	459995	460005	10	5	LHS	1469	535085	535095	10	5	LHS
480	460075	460085	10	4	LHS	1470	535095	535105	10	3	LHS
481	460095	460105	10	3	LHS	1471	535165	535175	10	3	LHS
482	460115	460125	10	5	LHS	1472	535175	535185	10	3	LHS
483	460125	460135	10	5	LHS	1473	535185	535195	10	3	LHS
484	460415	460425	10	5	LHS	1474	535195	535205	10	3	LHS
485	460425	460435	10	6	LHS	1475	535275	535285	10	4	LHS
486	460505	460515	10	3	RHS	1476	535285	535295	10	5	LHS
487	460815	460825	10	3	LHS	1477	535295	535305	10	4	LHS
488	461555	461565	10	3	LHS	1478	535305	535315	10	3	LHS
489	461565	461575	10	6	LHS	1479	535315	535325	10	3	LHS
490	461785	461795	10	3	RHS	1480	535325	535335	10	3	LHS
491	461795	461805	10	6	RHS	1481	535345	535355	10	3	RHS
492	462095	462105	10	4	LHS	1482	535355	535365	10	6	RHS
493	462475	462485	10	6	RHS	1483	535375	535385	10	5	LHS
494	462675	462685	10	3	LHS	1484	535595	535605	10	5	LHS
495	462685	462695	10	3	LHS	1485	535605	535615	10	5	LHS
496	462855	462865	10	3	LHS	1486	535615	535625	10	3	LHS
497	462985	462995	10	3	LHS	1487	535805	535815	10	3	LHS
498	463585	463595	10	6	RHS	1488	535815	535825	10	3	LHS
499	463715	463725	10	3	LHS	1489	535865	535875	10	4	LHS
500	464695	464705	10	3	LHS	1490	535875	535885	10	3	LHS
501	465035	465045	10	3	LHS	1491	536015	536025	10	3	LHS
502	465045	465055	10	4	LHS	1492	536405	536415	10	3	LHS
503	465055	465065	10	5	LHS	1493	536415	536425	10	3	LHS
504	465065	465075	10	6	LHS	1494	536675	536685	10	3	LHS
505	465085	465095	10	6	LHS	1495	536685	536695	10	3	LHS
506	465095	465105	10	4	LHS	1496	536695	536705	10	3	LHS
507	465595	465605	10	3	LHS	1497	536705	536715	10	3	LHS
508	465745	465755	10	3	LHS	1498	536715	536725	10	3	LHS
509	465755	465765	10	3	RHS	1499	536725	536735	10	3	LHS
510	465755	465765	10	3	LHS	1500	536735	536745	10	3	LHS
511	465765	465775	10	3	LHS	1501	536745	536755	10	3	LHS
512	465835	465845	10	3	LHS	1502	536795	536805	10	3	LHS
513	465845	465855	10	4	LHS	1503	536805	536815	10	3	LHS
514	465855	465865	10	4	LHS	1504	536835	536845	10	3	LHS
515	465905	465915	10	4	LHS	1505	537045	537055	10	3	LHS
516	465915	465925	10	3	LHS	1506	537055	537065	10	5	LHS
517	466065	466075	10	3	RHS	1507	537075	537085	10	6	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
518	466175	466185	10	4	LHS	1508	537085	537095	10	3	LHS
519	466185	466195	10	4	LHS	1509	537215	537225	10	3	LHS
520	466195	466205	10	3	LHS	1510	537235	537245	10	3	LHS
521	466765	466775	10	3	LHS	1511	537265	537275	10	3	LHS
522	466775	466785	10	3	LHS	1512	537275	537285	10	3	LHS
523	466835	466845	10	3	LHS	1513	537285	537295	10	4	LHS
524	467115	467125	10	3	LHS	1514	537295	537305	10	6	LHS
525	467615	467625	10	3	LHS	1515	537315	537325	10	6	LHS
526	467695	467705	10	3	LHS	1516	537325	537335	10	4	LHS
527	467705	467715	10	3	LHS	1517	537385	537395	10	3	LHS
528	468045	468055	10	4	LHS	1518	537395	537405	10	4	LHS
529	468055	468065	10	3	LHS	1519	537405	537415	10	4	LHS
530	468075	468085	10	5	LHS	1520	537415	537425	10	3	LHS
531	468305	468315	10	4	LHS	1521	537755	537765	10	3	LHS
532	468315	468325	10	3	LHS	1522	537765	537775	10	3	LHS
533	468325	468335	10	3	LHS	1523	537775	537785	10	3	LHS
534	468335	468345	10	4	LHS	1524	538225	538235	10	3	LHS
535	468345	468355	10	5	LHS	1525	538235	538245	10	3	LHS
536	468355	468365	10	3	LHS	1526	538245	538255	10	3	LHS
537	468415	468425	10	3	LHS	1527	538285	538295	10	4	LHS
538	468515	468525	10	3	LHS	1528	538295	538305	10	5	LHS
539	468525	468535	10	3	LHS	1529	538305	538315	10	6	LHS
540	468555	468565	10	4	LHS	1530	538315	538325	10	6	LHS
541	468565	468575	10	3	LHS	1531	538325	538335	10	4	LHS
542	468575	468585	10	3	LHS	1532	538365	538375	10	3	LHS
543	468965	468975	10	3	LHS	1533	538375	538385	10	3	LHS
544	470045	470055	10	3	RHS	1534	538385	538395	10	3	LHS
545	470305	470315	10	3	RHS	1535	538505	538515	10	3	LHS
546	470395	470405	10	4	LHS	1536	538515	538525	10	3	LHS
547	470405	470415	10	6	LHS	1537	538675	538685	10	3	LHS
548	470415	470425	10	6	LHS	1538	538685	538695	10	4	LHS
549	470425	470435	10	6	LHS	1539	538695	538705	10	5	LHS
550	470435	470445	10	6	LHS	1540	538705	538715	10	4	LHS
551	470445	470455	10	5	LHS	1541	539315	539325	10	5	LHS
552	470455	470465	10	3	LHS	1542	539455	539465	10	3	LHS
553	470465	470475	10	4	LHS	1543	539465	539475	10	3	LHS
554	470475	470485	10	3	LHS	1544	539525	539535	10	6	LHS
555	470485	470495	10	3	LHS	1545	539535	539545	10	4	LHS
556	470495	470505	10	3	LHS	1546	539545	539555	10	3	LHS
557	471135	471145	10	3	RHS	1547	539605	539615	10	3	LHS
558	471145	471155	10	4	RHS	1548	539785	539795	10	3	LHS
559	471155	471165	10	4	RHS	1549	539865	539875	10	3	LHS
560	471425	471435	10	3	RHS	1550	539875	539885	10	3	LHS
561	471905	471915	10	4	RHS	1551	539885	539895	10	3	LHS
562	473555	473565	10	3	LHS	1552	539895	539905	10	3	LHS
563	473565	473575	10	3	LHS	1553	539905	539915	10	3	LHS
564	473575	473585	10	5	LHS	1554	539915	539925	10	3	LHS
565	473605	473615	10	3	LHS	1555	540125	540135	10	3	LHS
566	473615	473625	10	3	LHS	1556	540135	540145	10	4	LHS
567	473625	473635	10	3	LHS	1557	540145	540155	10	4	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
568	473625	473635	10	3	RHS	1558	540155	540165	10	4	LHS
569	473635	473645	10	3	RHS	1559	540165	540175	10	3	LHS
570	473825	473835	10	3	RHS	1560	540205	540215	10	3	LHS
571	473835	473845	10	3	RHS	1561	540215	540225	10	4	LHS
572	473845	473855	10	3	LHS	1562	540265	540275	10	3	LHS
573	473845	473855	10	3	RHS	1563	540275	540285	10	3	LHS
574	473855	473865	10	3	RHS	1564	540305	540315	10	3	LHS
575	473855	473865	10	3	LHS	1565	540315	540325	10	4	LHS
576	473895	473905	10	3	LHS	1566	540325	540335	10	3	LHS
577	473905	473915	10	3	RHS	1567	540335	540345	10	3	LHS
578	473915	473925	10	3	LHS	1568	540395	540405	10	4	LHS
579	473925	473935	10	3	LHS	1569	540405	540415	10	5	LHS
580	474025	474035	10	3	RHS	1570	540415	540425	10	6	LHS
581	475085	475095	10	3	RHS	1571	540425	540435	10	5	LHS
582	475095	475105	10	3	RHS	1572	540435	540445	10	5	LHS
583	475485	475495	10	3	RHS	1573	540445	540455	10	6	LHS
584	475645	475655	10	3	LHS	1574	540455	540465	10	6	LHS
585	475655	475665	10	5	LHS	1575	540465	540475	10	5	LHS
586	475665	475675	10	4	RHS	1576	540475	540485	10	5	LHS
587	475665	475675	10	4	LHS	1577	540485	540495	10	4	LHS
588	475675	475685	10	3	RHS	1578	540545	540555	10	3	LHS
589	475685	475695	10	5	LHS	1579	540555	540565	10	3	LHS
590	475705	475715	10	5	LHS	1580	540635	540645	10	3	LHS
591	476265	476275	10	3	LHS	1581	540645	540655	10	4	LHS
592	476275	476285	10	4	LHS	1582	540655	540665	10	4	LHS
593	476285	476295	10	3	LHS	1583	540665	540675	10	4	LHS
594	476745	476755	10	3	LHS	1584	540675	540685	10	3	LHS
595	476755	476765	10	4	LHS	1585	540745	540755	10	4	LHS
596	477205	477215	10	3	LHS	1586	540755	540765	10	3	LHS
597	478175	478185	10	3	LHS	1587	540935	540945	10	3	LHS
598	478515	478525	10	3	LHS	1588	540965	540975	10	3	LHS
599	479005	479015	10	3	LHS	1589	540975	540985	10	3	LHS
600	479015	479025	10	3	LHS	1590	540985	540995	10	3	LHS
601	479085	479095	10	3	LHS	1591	541065	541075	10	3	LHS
602	479095	479105	10	4	LHS	1592	541095	541105	10	3	LHS
603	479105	479115	10	4	LHS	1593	541105	541115	10	3	LHS
604	479295	479305	10	6	LHS	1594	541125	541135	10	3	LHS
605	479365	479375	10	3	LHS	1595	541135	541145	10	5	LHS
606	479375	479385	10	4	LHS	1596	541145	541155	10	6	LHS
607	479385	479395	10	3	LHS	1597	541155	541165	10	3	LHS
608	479605	479615	10	5	LHS	1598	541185	541195	10	3	LHS
609	479615	479625	10	5	LHS	1599	541195	541205	10	3	LHS
610	479665	479675	10	3	LHS	1600	541245	541255	10	3	LHS
611	479675	479685	10	4	LHS	1601	541255	541265	10	3	LHS
612	479785	479795	10	3	LHS	1602	541265	541275	10	3	LHS
613	479855	479865	10	3	LHS	1603	541275	541285	10	3	LHS
614	479865	479875	10	4	LHS	1604	541285	541295	10	3	LHS
615	479875	479885	10	3	LHS	1605	541295	541305	10	3	LHS
616	479885	479895	10	3	RHS	1606	541305	541315	10	3	LHS
617	480185	480195	10	3	LHS	1607	541315	541325	10	3	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
618	480195	480205	10	4	LHS	1608	541325	541335	10	3	LHS
619	480265	480275	10	3	LHS	1609	541395	541405	10	4	LHS
620	480885	480895	10	3	LHS	1610	541405	541415	10	6	LHS
621	480935	480945	10	3	LHS	1611	541415	541425	10	4	RHS
622	480945	480955	10	3	LHS	1612	541425	541435	10	3	RHS
623	481295	481305	10	6	LHS	1613	541435	541445	10	5	LHS
624	481305	481315	10	6	LHS	1614	541505	541515	10	5	LHS
625	481315	481325	10	5	LHS	1615	541515	541525	10	5	LHS
626	481325	481335	10	4	LHS	1616	541765	541775	10	3	LHS
627	481385	481395	10	3	LHS	1617	541805	541815	10	4	LHS
628	481395	481405	10	3	LHS	1618	541815	541825	10	3	LHS
629	481405	481415	10	3	LHS	1619	541825	541835	10	3	LHS
630	481575	481585	10	4	LHS	1620	541885	541895	10	3	LHS
631	481585	481595	10	4	LHS	1621	542005	542015	10	3	LHS
632	481595	481605	10	4	LHS	1622	542055	542065	10	5	LHS
633	481605	481615	10	3	LHS	1623	542065	542075	10	3	LHS
634	481655	481665	10	3	LHS	1624	542095	542105	10	3	LHS
635	481665	481675	10	3	LHS	1625	542105	542115	10	5	LHS
636	481675	481685	10	3	LHS	1626	542115	542125	10	5	LHS
637	481705	481715	10	4	LHS	1627	542125	542135	10	4	LHS
638	482525	482535	10	6	LHS	1628	542155	542165	10	4	LHS
639	482535	482545	10	5	LHS	1629	542165	542175	10	5	LHS
640	482545	482555	10	4	LHS	1630	542175	542185	10	6	LHS
641	482555	482565	10	3	LHS	1631	542185	542195	10	4	LHS
642	482655	482665	10	3	LHS	1632	542195	542205	10	3	LHS
643	482675	482685	10	4	LHS	1633	542255	542265	10	5	LHS
644	482825	482835	10	4	LHS	1634	542265	542275	10	5	LHS
645	482835	482845	10	3	LHS	1635	542315	542325	10	3	LHS
646	482845	482855	10	3	LHS	1636	542525	542535	10	3	LHS
647	482855	482865	10	3	LHS	1637	542565	542575	10	3	LHS
648	482885	482895	10	3	RHS	1638	542595	542605	10	3	LHS
649	483175	483185	10	3	RHS	1639	543005	543015	10	3	LHS
650	483245	483255	10	4	RHS	1640	543015	543025	10	3	LHS
651	483255	483265	10	3	RHS	1641	543025	543035	10	3	LHS
652	483365	483375	10	3	RHS	1642	543035	543045	10	3	LHS
653	483375	483385	10	3	RHS	1643	543045	543055	10	3	LHS
654	483525	483535	10	6	RHS	1644	543055	543065	10	3	LHS
655	483535	483545	10	6	LHS	1645	543065	543075	10	3	LHS
656	483565	483575	10	5	RHS	1646	543075	543085	10	3	LHS
657	483575	483585	10	3	RHS	1647	543085	543095	10	3	LHS
658	483875	483885	10	3	RHS	1648	543095	543105	10	3	LHS
659	483885	483895	10	3	RHS	1649	543105	543115	10	3	LHS
660	483995	484005	10	6	LHS	1650	543115	543125	10	3	LHS
661	484125	484135	10	6	RHS	1651	543235	543245	10	3	LHS
662	484145	484155	10	6	RHS	1652	543245	543255	10	5	LHS
663	484275	484285	10	3	RHS	1653	543285	543295	10	3	LHS
664	484315	484325	10	3	RHS	1654	543325	543335	10	3	LHS
665	484335	484345	10	3	LHS	1655	543345	543355	10	3	LHS
666	484335	484345	10	4	RHS	1656	543355	543365	10	6	LHS
667	484345	484355	10	6	RHS	1657	543365	543375	10	6	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
668	484355	484365	10	6	LHS	1658	543375	543385	10	5	LHS
669	484375	484385	10	5	LHS	1659	543385	543395	10	3	LHS
670	484385	484395	10	6	RHS	1660	543785	543795	10	3	LHS
671	484395	484405	10	3	RHS	1661	543795	543805	10	3	LHS
672	484405	484415	10	4	RHS	1662	543865	543875	10	4	LHS
673	484415	484425	10	3	RHS	1663	543875	543885	10	5	LHS
674	484425	484435	10	3	RHS	1664	543885	543895	10	5	LHS
675	484515	484525	10	3	RHS	1665	543895	543905	10	3	LHS
676	484525	484535	10	5	RHS	1666	543905	543915	10	3	LHS
677	484825	484835	10	3	RHS	1667	543955	543965	10	3	LHS
678	484835	484845	10	3	RHS	1668	544055	544065	10	4	LHS
679	484925	484935	10	3	RHS	1669	544065	544075	10	6	LHS
680	484935	484945	10	3	RHS	1670	544085	544095	10	3	LHS
681	484945	484955	10	3	RHS	1671	544395	544405	10	3	LHS
682	484955	484965	10	4	RHS	1672	544405	544415	10	3	LHS
683	485005	485015	10	3	RHS	1673	544435	544445	10	3	LHS
684	485015	485025	10	5	RHS	1674	544445	544455	10	3	LHS
685	485025	485035	10	6	RHS	1675	544465	544475	10	3	LHS
686	485035	485045	10	5	RHS	1676	544475	544485	10	3	LHS
687	485195	485205	10	3	LHS	1677	544485	544495	10	3	LHS
688	485255	485265	10	3	RHS	1678	544495	544505	10	4	LHS
689	485265	485275	10	3	RHS	1679	544505	544515	10	3	LHS
690	485315	485325	10	5	RHS	1680	544525	544535	10	3	LHS
691	485325	485335	10	4	RHS	1681	544535	544545	10	4	LHS
692	485575	485585	10	3	RHS	1682	544545	544555	10	5	LHS
693	485585	485595	10	3	RHS	1683	544555	544565	10	4	LHS
694	485615	485625	10	3	RHS	1684	544575	544585	10	3	LHS
695	485805	485815	10	3	RHS	1685	544585	544595	10	3	LHS
696	485965	485975	10	3	RHS	1686	544675	544685	10	3	LHS
697	485975	485985	10	4	RHS	1687	544685	544695	10	6	LHS
698	486065	486075	10	3	RHS	1688	544695	544705	10	3	LHS
699	486075	486085	10	4	RHS	1689	544815	544825	10	4	LHS
700	486085	486095	10	6	RHS	1690	545015	545025	10	3	LHS
701	486095	486105	10	5	RHS	1691	545115	545125	10	3	LHS
702	486105	486115	10	4	RHS	1692	545125	545135	10	3	LHS
703	486115	486125	10	4	RHS	1693	545135	545145	10	3	LHS
704	486205	486215	10	3	RHS	1694	545235	545245	10	6	LHS
705	486215	486225	10	3	RHS	1695	545245	545255	10	5	LHS
706	486225	486235	10	3	RHS	1696	545305	545315	10	5	LHS
707	486235	486245	10	3	RHS	1697	545315	545325	10	3	LHS
708	486565	486575	10	5	RHS	1698	545355	545365	10	3	LHS
709	486575	486585	10	4	RHS	1699	545395	545405	10	3	LHS
710	486685	486695	10	3	RHS	1700	545435	545445	10	4	LHS
711	486695	486705	10	3	RHS	1701	545445	545455	10	5	LHS
712	486945	486955	10	3	RHS	1702	545455	545465	10	6	LHS
713	486955	486965	10	4	RHS	1703	545465	545475	10	3	LHS
714	486965	486975	10	5	RHS	1704	545525	545535	10	3	LHS
715	487155	487165	10	3	RHS	1705	545535	545545	10	3	LHS
716	487225	487235	10	3	RHS	1706	545545	545555	10	3	LHS
717	487245	487255	10	3	RHS	1707	545615	545625	10	3	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
718	487255	487265	10	3	RHS	1708	545755	545765	10	3	LHS
719	487265	487275	10	4	RHS	1709	545765	545775	10	5	LHS
720	487275	487285	10	4	RHS	1710	545775	545785	10	5	LHS
721	487285	487295	10	4	RHS	1711	545785	545795	10	4	LHS
722	487295	487305	10	3	RHS	1712	545795	545805	10	4	LHS
723	487375	487385	10	3	RHS	1713	545805	545815	10	4	LHS
724	487385	487395	10	3	RHS	1714	545815	545825	10	4	LHS
725	487395	487405	10	3	RHS	1715	545825	545835	10	3	LHS
726	487405	487415	10	3	RHS	1716	545835	545845	10	3	LHS
727	487435	487445	10	4	RHS	1717	545905	545915	10	3	LHS
728	487475	487485	10	3	RHS	1718	545915	545925	10	3	LHS
729	487505	487515	10	3	RHS	1719	545925	545935	10	3	LHS
730	487665	487675	10	3	RHS	1720	545935	545945	10	3	LHS
731	487755	487765	10	3	RHS	1721	545945	545955	10	3	LHS
732	487765	487775	10	3	RHS	1722	545955	545965	10	3	LHS
733	488105	488115	10	3	RHS	1723	545965	545975	10	3	LHS
734	488195	488205	10	3	RHS	1724	545975	545985	10	3	LHS
735	488205	488215	10	3	RHS	1725	545985	545995	10	3	LHS
736	488295	488305	10	3	RHS	1726	545995	546005	10	3	LHS
737	488305	488315	10	3	RHS	1727	546005	546015	10	3	LHS
738	488385	488395	10	3	LHS	1728	546025	546035	10	3	LHS
739	488385	488395	10	4	RHS	1729	546035	546045	10	3	LHS
740	488595	488605	10	3	RHS	1730	546045	546055	10	3	LHS
741	488705	488715	10	4	RHS	1731	546055	546065	10	3	LHS
742	488715	488725	10	3	RHS	1732	546065	546075	10	3	LHS
743	488725	488735	10	3	RHS	1733	546075	546085	10	3	LHS
744	488775	488785	10	5	RHS	1734	546085	546095	10	3	LHS
745	488785	488795	10	4	RHS	1735	546095	546105	10	3	LHS
746	489015	489025	10	3	RHS	1736	546105	546115	10	3	LHS
747	489025	489035	10	3	RHS	1737	546115	546125	10	3	LHS
748	489045	489055	10	3	RHS	1738	546125	546135	10	3	LHS
749	489085	489095	10	4	RHS	1739	546135	546145	10	4	LHS
750	489205	489215	10	3	RHS	1740	546145	546155	10	3	LHS
751	489215	489225	10	3	RHS	1741	546735	546745	10	3	LHS
752	489225	489235	10	3	RHS	1742	546745	546755	10	3	LHS
753	489235	489245	10	3	RHS	1743	547085	547095	10	3	LHS
754	489245	489255	10	4	RHS	1744	547095	547105	10	3	LHS
755	489255	489265	10	4	RHS	1745	547105	547115	10	3	LHS
756	489265	489275	10	3	RHS	1746	547115	547125	10	3	LHS
757	489275	489285	10	3	RHS	1747	547125	547135	10	3	LHS
758	489285	489295	10	3	RHS	1748	547425	547435	10	3	LHS
759	489645	489655	10	3	RHS	1749	547545	547555	10	3	LHS
760	489695	489705	10	3	RHS	1750	547555	547565	10	3	LHS
761	489705	489715	10	3	RHS	1751	547565	547575	10	3	LHS
762	489715	489725	10	3	RHS	1752	547575	547585	10	3	LHS
763	489725	489735	10	3	RHS	1753	547605	547615	10	3	LHS
764	489725	489735	10	4	LHS	1754	547615	547625	10	3	LHS
765	489865	489875	10	4	RHS	1755	547655	547665	10	3	LHS
766	489875	489885	10	3	LHS	1756	547665	547675	10	3	LHS
767	490205	490215	10	3	RHS	1757	547675	547685	10	4	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
768	490525	490535	10	4	LHS	1758	547685	547695	10	3	LHS
769	490885	490895	10	4	RHS	1759	547695	547705	10	3	LHS
770	490895	490905	10	5	RHS	1760	547715	547725	10	3	LHS
771	491115	491125	10	3	RHS	1761	547725	547735	10	3	LHS
772	491125	491135	10	3	RHS	1762	547845	547855	10	3	LHS
773	491135	491145	10	3	RHS	1763	547855	547865	10	3	LHS
774	491255	491265	10	3	RHS	1764	547865	547875	10	4	LHS
775	491265	491275	10	3	RHS	1765	547875	547885	10	5	LHS
776	491395	491405	10	4	RHS	1766	547885	547895	10	3	LHS
777	491405	491415	10	5	RHS	1767	547895	547905	10	3	LHS
778	491585	491595	10	3	RHS	1768	547905	547915	10	5	LHS
779	491975	491985	10	4	RHS	1769	547915	547925	10	5	LHS
780	491985	491995	10	4	RHS	1770	547925	547935	10	5	LHS
781	492185	492195	10	3	RHS	1771	547935	547945	10	3	LHS
782	492235	492245	10	3	RHS	1772	547945	547955	10	4	LHS
783	492245	492255	10	3	RHS	1773	547955	547965	10	5	LHS
784	492345	492355	10	3	RHS	1774	547965	547975	10	3	RHS
785	492355	492365	10	6	RHS	1775	547965	547975	10	6	LHS
786	492365	492375	10	5	RHS	1776	547975	547985	10	5	RHS
787	492395	492405	10	4	RHS	1777	547985	547995	10	5	RHS
788	492405	492415	10	4	RHS	1778	547995	548005	10	3	LHS
789	492625	492635	10	3	LHS	1779	548075	548085	10	5	LHS
790	492635	492645	10	3	LHS	1780	548085	548095	10	3	LHS
791	493195	493205	10	3	RHS	1781	548215	548225	10	4	LHS
792	493205	493215	10	3	RHS	1782	548485	548495	10	4	LHS
793	493285	493295	10	3	RHS	1783	548495	548505	10	3	LHS
794	493295	493305	10	3	RHS	1784	548925	548935	10	5	LHS
795	493305	493315	10	3	RHS	1785	548935	548945	10	3	LHS
796	493315	493325	10	3	RHS	1786	548945	548955	10	3	LHS
797	493365	493375	10	4	RHS	1787	548955	548965	10	5	LHS
798	493385	493395	10	4	RHS	1788	548965	548975	10	4	LHS
799	493395	493405	10	4	RHS	1789	549035	549045	10	4	LHS
800	493405	493415	10	4	RHS	1790	549045	549055	10	5	LHS
801	493545	493555	10	4	RHS	1791	549055	549065	10	3	LHS
802	493555	493565	10	3	RHS	1792	549065	549075	10	3	LHS
803	493655	493665	10	3	RHS	1793	549075	549085	10	3	LHS
804	493665	493675	10	3	RHS	1794	549115	549125	10	3	LHS
805	493675	493685	10	4	RHS	1795	549235	549245	10	3	LHS
806	493685	493695	10	3	RHS	1796	549255	549265	10	3	LHS
807	494045	494055	10	3	RHS	1797	549265	549275	10	3	LHS
808	494055	494065	10	4	RHS	1798	549275	549285	10	3	LHS
809	494195	494205	10	4	RHS	1799	549285	549295	10	3	LHS
810	494205	494215	10	4	RHS	1800	549295	549305	10	3	LHS
811	494215	494225	10	4	RHS	1801	549355	549365	10	4	LHS
812	494225	494235	10	4	RHS	1802	549365	549375	10	4	LHS
813	494235	494245	10	3	RHS	1803	549375	549385	10	5	LHS
814	494285	494295	10	3	RHS	1804	549385	549395	10	4	LHS
815	494345	494355	10	5	RHS	1805	549395	549405	10	4	LHS
816	494355	494365	10	6	LHS	1806	549405	549415	10	3	LHS
817	494365	494375	10	6	RHS	1807	549435	549445	10	5	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar



	From	To	in m	in m	ks		From	To	in m	in m	ks
818	494375	494385	10	5	RHS	1808	549445	549455	10	3	LHS
819	494385	494395	10	4	RHS	1809	549485	549495	10	4	LHS
820	494525	494535	10	3	RHS	1810	549495	549505	10	6	LHS
821	494555	494565	10	3	RHS	1811	549505	549515	10	5	LHS
822	494565	494575	10	3	RHS	1812	549555	549565	10	3	LHS
823	494635	494645	10	3	RHS	1813	549565	549575	10	4	LHS
824	494645	494655	10	3	RHS	1814	549575	549585	10	3	LHS
825	494675	494685	10	4	RHS	1815	549615	549625	10	3	LHS
826	494685	494695	10	4	RHS	1816	549625	549635	10	3	LHS
827	494695	494705	10	3	RHS	1817	549635	549645	10	3	LHS
828	494815	494825	10	3	RHS	1818	549665	549675	10	3	LHS
829	494825	494835	10	6	RHS	1819	549675	549685	10	3	LHS
830	494835	494845	10	4	RHS	1820	549685	549695	10	3	LHS
831	495455	495465	10	3	RHS	1821	549695	549705	10	3	LHS
832	496015	496025	10	4	RHS	1822	549715	549725	10	3	LHS
833	496025	496035	10	5	RHS	1823	549725	549735	10	4	LHS
834	496035	496045	10	5	RHS	1824	549735	549745	10	3	LHS
835	496045	496055	10	3	RHS	1825	549815	549825	10	3	LHS
836	496505	496515	10	3	LHS	1826	549925	549935	10	3	LHS
837	496515	496525	10	4	LHS	1827	549935	549945	10	3	LHS
838	496605	496615	10	4	LHS	1828	549995	550005	10	3	LHS
839	496605	496615	10	6	RHS	1829	550015	550025	10	3	LHS
840	496615	496625	10	3	LHS	1830	550025	550035	10	3	LHS
841	496615	496625	10	6	RHS	1831	550035	550045	10	5	LHS
842	496625	496635	10	6	RHS	1832	550045	550055	10	4	RHS
843	496635	496645	10	4	RHS	1833	550045	550055	10	6	LHS
844	496885	496895	10	6	RHS	1834	550055	550065	10	6	LHS
845	496895	496905	10	6	RHS	1835	550065	550075	10	5	LHS
846	496905	496915	10	5	RHS	1836	550075	550085	10	3	LHS
847	496915	496925	10	3	RHS	1837	550085	550095	10	4	LHS
848	497005	497015	10	4	LHS	1838	550095	550105	10	3	LHS
849	497115	497125	10	3	LHS	1839	550105	550115	10	6	LHS
850	497115	497125	10	3	RHS	1840	550115	550125	10	3	RHS
851	497375	497385	10	3	RHS	1841	550125	550135	10	4	RHS
852	497395	497405	10	3	LHS	1842	550145	550155	10	6	LHS
853	497445	497455	10	3	RHS	1843	550155	550165	10	6	LHS
854	498045	498055	10	3	RHS	1844	550165	550175	10	5	LHS
855	498065	498075	10	3	RHS	1845	550175	550185	10	6	LHS
856	498075	498085	10	3	RHS	1846	550185	550195	10	6	LHS
857	498415	498425	10	3	LHS	1847	550195	550205	10	6	LHS
858	498425	498435	10	3	LHS	1848	550205	550215	10	6	LHS
859	498435	498445	10	3	LHS	1849	550215	550225	10	6	LHS
860	498495	498505	10	3	LHS	1850	550225	550235	10	6	LHS
861	499285	499295	10	3	LHS	1851	550425	550435	10	3	LHS
862	499295	499305	10	3	LHS	1852	550435	550445	10	3	LHS
863	499305	499315	10	4	LHS	1853	550445	550455	10	3	LHS
864	499315	499325	10	3	LHS	1854	550455	550465	10	3	LHS
865	499325	499335	10	3	LHS	1855	550465	550475	10	4	LHS
866	499665	499675	10	3	RHS	1856	550475	550485	10	5	LHS
867	499845	499855	10	3	RHS	1857	550485	550495	10	4	RHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
868	499855	499865	10	5	RHS	1858	550495	550505	10	4	RHS
869	499865	499875	10	5	RHS	1859	550505	550515	10	5	LHS
870	499985	499995	10	3	RHS	1860	550515	550525	10	5	LHS
871	500875	500885	10	3	RHS	1861	550525	550535	10	5	LHS
872	500885	500895	10	3	RHS	1862	550535	550545	10	5	LHS
873	500985	500995	10	3	RHS	1863	550545	550555	10	6	LHS
874	500995	501005	10	3	RHS	1864	550555	550565	10	6	LHS
875	501245	501255	10	3	RHS	1865	550565	550575	10	6	LHS
876	501265	501275	10	3	RHS	1866	550575	550585	10	6	LHS
877	501445	501455	10	4	RHS	1867	550585	550595	10	3	RHS
878	501445	501455	10	4	LHS	1868	550595	550605	10	5	RHS
879	501935	501945	10	3	RHS	1869	550605	550615	10	5	RHS
880	502095	502105	10	3	RHS	1870	550615	550625	10	4	RHS
881	502305	502315	10	3	RHS	1871	550645	550655	10	4	LHS
882	502315	502325	10	3	RHS	1872	550665	550675	10	3	LHS
883	502325	502335	10	3	RHS	1873	550735	550745	10	5	LHS
884	502705	502715	10	4	RHS	1874	550835	550845	10	4	LHS
885	502715	502725	10	4	RHS	1875	550885	550895	10	3	LHS
886	502725	502735	10	3	RHS	1876	550895	550905	10	3	LHS
887	502735	502745	10	4	RHS	1877	550905	550915	10	3	LHS
888	503475	503485	10	3	RHS	1878	551005	551015	10	3	LHS
889	503485	503495	10	3	LHS	1879	551015	551025	10	4	LHS
890	503485	503495	10	5	RHS	1880	551025	551035	10	6	LHS
891	504125	504135	10	3	RHS	1881	551035	551045	10	6	LHS
892	504155	504165	10	3	RHS	1882	551045	551055	10	6	LHS
893	504855	504865	10	3	RHS	1883	551105	551115	10	3	LHS
894	504865	504875	10	3	RHS	1884	551115	551125	10	6	LHS
895	504995	505005	10	3	RHS	1885	551135	551145	10	6	LHS
896	505005	505015	10	3	LHS	1886	551215	551225	10	3	LHS
897	505005	505015	10	3	RHS	1887	551255	551265	10	6	LHS
898	505015	505025	10	3	RHS	1888	551445	551455	10	6	LHS
899	505105	505115	10	3	RHS	1889	551455	551465	10	6	LHS
900	505355	505365	10	4	RHS	1890	551485	551495	10	3	LHS
901	505435	505445	10	3	LHS	1891	551505	551515	10	3	LHS
902	505495	505505	10	4	RHS	1892	551515	551525	10	3	LHS
903	505505	505515	10	6	RHS	1893	551525	551535	10	4	LHS
904	505515	505525	10	5	LHS	1894	551535	551545	10	3	LHS
905	505515	505525	10	6	RHS	1895	551545	551555	10	3	LHS
906	505525	505535	10	6	RHS	1896	551555	551565	10	3	LHS
907	505535	505545	10	3	RHS	1897	551565	551575	10	6	LHS
908	505695	505705	10	3	RHS	1898	551575	551585	10	3	RHS
909	505705	505715	10	4	RHS	1899	551585	551595	10	6	RHS
910	505715	505725	10	5	RHS	1900	551595	551605	10	6	RHS
911	505725	505735	10	6	RHS	1901	551605	551615	10	4	RHS
912	505735	505745	10	5	RHS	1902	551615	551625	10	5	LHS
913	506585	506595	10	3	LHS	1903	551705	551715	10	3	LHS
914	506675	506685	10	3	RHS	1904	551715	551725	10	5	LHS
915	506965	506975	10	3	RHS	1905	551725	551735	10	6	LHS
916	506975	506985	10	4	RHS	1906	551735	551745	10	4	RHS
917	507105	507115	10	3	RHS	1907	551735	551745	10	6	LHS
Sr.No	Chainage		Length	Height	Remar	Sr.No	Chainage		Length	Height	Remar

	From	To	in m	in m	ks		From	To	in m	in m	ks
918	507245	507255	10	3	RHS	1908	551745	551755	10	6	LHS
919	507345	507355	10	6	RHS	1909	551755	551765	10	4	LHS
920	507355	507365	10	6	RHS	1910	551825	551835	10	3	LHS
921	507365	507375	10	4	RHS	1911	551835	551845	10	3	LHS
922	507675	507685	10	3	RHS	1912	551885	551895	10	3	LHS
923	507685	507695	10	4	RHS	1913	551905	551915	10	6	LHS
924	508535	508545	10	3	LHS	1914	551915	551925	10	5	LHS
925	508615	508625	10	4	RHS	1915	551935	551945	10	3	LHS
926	508625	508635	10	4	RHS	1916	551955	551965	10	3	LHS
927	508635	508645	10	4	RHS	1917	551965	551975	10	3	LHS
928	508645	508655	10	4	RHS	1918	552095	552105	10	3	LHS
929	508905	508915	10	3	RHS	1919	552105	552115	10	4	LHS
930	508965	508975	10	3	RHS	1920	552155	552165	10	3	LHS
931	508975	508985	10	3	RHS	1921	552305	552315	10	3	LHS
932	509025	509035	10	4	RHS	1922	552315	552325	10	5	LHS
933	509035	509045	10	4	RHS	1923	552325	552335	10	4	LHS
934	509045	509055	10	3	RHS	1924	552335	552345	10	3	LHS
935	509055	509065	10	3	RHS	1925	552345	552355	10	3	LHS
936	509065	509075	10	3	RHS	1926	552355	552365	10	3	LHS
937	509335	509345	10	3	RHS	1927	552365	552375	10	3	LHS
938	509385	509395	10	5	RHS	1928	552385	552395	10	3	LHS
939	509395	509405	10	6	RHS	1929	552395	552405	10	3	LHS
940	509405	509415	10	6	RHS	1930	552405	552415	10	3	LHS
941	509415	509425	10	6	RHS	1931	552415	552425	10	4	LHS
942	509425	509435	10	3	RHS	1932	552515	552525	10	3	RHS
943	509505	509515	10	4	RHS	1933	552545	552555	10	3	RHS
944	509515	509525	10	6	RHS	1934	552625	552635	10	3	RHS
945	509525	509535	10	5	RHS	1935	552825	552835	10	3	RHS
946	509535	509545	10	5	RHS	1936	552835	552845	10	3	RHS
947	509555	509565	10	3	RHS	1937	552865	552875	10	3	RHS
948	509565	509575	10	3	RHS	1938	553055	553065	10	3	RHS
949	509585	509595	10	3	RHS	1939	553065	553075	10	3	RHS
950	509605	509615	10	3	RHS	1940	553185	553195	10	3	RHS
951	509695	509705	10	4	RHS	LAWNGTLAI BYE PASS ROAD					
952	509705	509715	10	5	RHS	1941	25	35	10	3	RHS
953	509725	509735	10	6	RHS	1942	35	45	10	3	RHS
954	509735	509745	10	4	RHS	1943	45	55	10	4	RHS
955	509935	509945	10	3	RHS	1944	55	65	10	4	RHS
956	509945	509955	10	5	RHS	1945	65	75	10	3	RHS
957	509965	509975	10	3	RHS	1946	95	105	10	3	RHS
958	509975	509985	10	3	RHS	1947	105	115	10	3	RHS
959	509985	509995	10	3	RHS	1948	115	125	10	5	RHS
960	509995	510005	10	3	RHS	1949	125	135	10	5	RHS
961	510005	510015	10	3	RHS	1950	135	145	10	4	RHS
962	510405	510415	10	4	RHS	1951	145	155	10	6	RHS
963	510415	510425	10	3	RHS	1952	155	165	10	3	RHS
964	510715	510725	10	4	RHS	1953	165	175	10	3	RHS
965	510725	510735	10	5	RHS	1954	175	185	10	3	RHS
966	510735	510745	10	3	RHS	1955	245	255	10	4	RHS
Sr.No	Chainage		Length in m	Height in m	Remar ks	Sr.No	Chainage		Length in m	Height in m	Remar ks
	From	To					From	To			

967	510745	510755	10	3	RHS	1956	245	255	10	6	LHS
968	510755	510765	10	3	RHS	1957	255	265	10	6	RHS
969	510765	510775	10	3	RHS	1958	255	265	10	6	LHS
970	510805	510815	10	3	RHS	1959	265	275	10	5	RHS
971	510805	510815	10	3	LHS	1960	265	275	10	6	LHS
972	511035	511045	10	3	RHS	1961	275	285	10	3	RHS
973	511215	511225	10	3	RHS	1962	275	285	10	6	LHS
974	511225	511235	10	3	RHS	1963	345	355	10	5	RHS
975	511235	511245	10	3	RHS	1964	355	365	10	4	RHS
976	511245	511255	10	4	RHS	1965	465	475	10	3	RHS
977	511255	511265	10	3	RHS	1966	475	485	10	4	RHS
978	511265	511275	10	3	RHS	1967	485	495	10	4	RHS
979	511275	511285	10	3	RHS	1968	705	715	10	5	RHS
980	511585	511595	10	3	RHS	1969	1405	1415	10	3	LHS
981	511595	511605	10	5	RHS	1970	1415	1425	10	4	LHS
982	511605	511615	10	4	RHS	1971	1435	1445	10	4	RHS
983	511615	511625	10	3	RHS	1972	1835	1845	10	3	RHS
984	511865	511875	10	5	LHS	1973	1845	1855	10	4	RHS
985	512095	512105	10	3	RHS	1974	1855	1865	10	4	RHS
986	512215	512225	10	3	RHS	1975	1865	1875	10	3	RHS
987	512415	512425	10	3	RHS	1976	1875	1885	10	4	RHS
988	512445	512455	10	4	RHS	1977	1885	1895	10	4	RHS
989	512455	512465	10	4	RHS	1978	1895	1905	10	4	RHS
990	512465	512475	10	3	RHS	1979	1905	1915	10	4	RHS
								<b>Total</b>	<b>19790</b>		
<b>SUMMARY</b>											
<b>TOTAL LENGTH OF RETAINING FOR 3M HEIGHT</b>									=	11030	m
<b>TOTAL LENGTH OF RETAINING FOR 4M HEIGHT</b>									=	4510	m
<b>TOTAL LENGTH OF RETAINING FOR 5M HEIGHT</b>									=	2330	m
<b>TOTAL LENGTH OF RETAINING FOR 6M HEIGHT</b>									=	1920	m

### Breast Wall:

The requirement of the breast walls is generated only when the road has been in use and problems of the slope line have been identified. These are proposed at locations having hill with steep slope, having soil matrix Soil Mixed with Boulders and sharp curve portion. It is also proposed where the rain water spills all around causing mud flow. These situations have been considered on the basis of visual investigations for a total length of 820.00 m. The requirements of Breast wall have been identified and are listed in Table below

<b>LOCATION OF BREAST WALL</b>						
Sr.No.	Chainage		Length in m	Height in m	Side	Remarks
	From	To				
1	433325	433355	15.00	3.00	LHS	Village Link Road
2	433485	433515	15.00	2.00	LHS	Village Link Road
3	433510	433540	15.00	2.00	RHS	Village Link Road
4	433850	433880	15.00	2.00	LHS	Village Link Road
5	433880	433910	15.00	2.00	LHS	Village Link Road
6	434215	434245	15.00	2.00	LHS	Village Link Road
7	435935	435965	15.00	2.00	LHS	Village Link Road
8	440185	440215	15.00	2.00	RHS	Agricultural Link Road
Sr.No.	Chainage		Length in m	Height in m	Side	Remarks
	From	To				

9	440655	440685	15.00	2.00	LHS	Agricultural Link Road
10	444985	445015	15.00	2.00	RHS	Village Link Road
11	445275	445305	15.00	2.00	RHS	Village Link Road
12	450975	451005	15.00	3.00	RHS	BPL COMPANY
13	459135	459165	15.00	3.00	LHS	Village Link Road
14	463052	463247	15.00	3.00	LHS	Sliding Zone
15	467265	467295	15.00	3.00	LHS	Village Link Road
16	467345	467375	15.00	3.00	LHS	Village Link Road
17	470535	470565	15.00	3.00	RHS	Multi Model Road
18	472345	472375	15.00	2.00	LHS	Bungtlanga Road
19	472835	472865	15.00	2.00	RHS	City Link Road
20	473045	473075	15.00	2.00	LHS	City Link Road
21	473055	473085	15.00	2.00	RHS	City Link Road
22	473435	473465	15.00	2.00	RHS	City Link Road
23	474185	474215	15.00	2.00	RHS	City Link Road
24	474755	474785	15.00	2.00	RHS	City Link Road
25	474985	475015	15.00	2.00	RHS	City Link Road
26	475485	475515	15.00	2.00	RHS	Multi Model Road
27	475595	475625	15.00	2.00	LHS	PWD Complex Link Road
28	478115	478145	15.00	2.00	LHS	Village Link Road
29	483785	483815	15.00	2.00	RHS	Village Link Road
30	490635	490665	15.00	2.00	RHS	Village Link Road
31	503415	503445	15.00	2.00	RHS	Village Link Road
32	503705	503735	15.00	3.00	LHS	Village Link Road
33	503835	503865	15.00	2.00	LHS	Village Link Road
34	507800	507870	15.00	3.00	RHS	Sliding Zone
35	515155	515185	15.00	3.00	LHS	NH 54 B takeoff point
36	523035	523065	15.00	2.00	RHS	Agricultural Link Road
37	530455	530485	15.00	2.00	LHS	Diversion start
38	531465	531495	15.00	2.00	RHS	Village Link Road
39	532005	532035	15.00	2.00	RHS	Village Link Road
40	533065	533095	15.00	2.00	RHS	Diversion end
41	536425	536455	15.00	3.00	RHS	Agricultural Link Road
42	538685	538715	15.00	3.00	LHS	Village Link Road
43	539025	539055	15.00	3.00	LHS	Village Link Road
44	539510	539530	15.00	3.00	LHS	Sliding Zone
45	540980	541060	15.00	3.00	LHS	Sliding Zone
46	552395	552425	15.00	2.00	RHS	Village Link Road
47	552815	552845	15.00	2.00	RHS	Village Link Road
48	553589	553619	15.00	2.00	RHS	Village Link Road
<b>LAWNGTLAI BYE PASS ROAD</b>						
49	0.0	100.0	100.00	3.00	RHS	MM Road Junction
			<b>820.000</b>			
<b>SUMMARY</b>						
<b>TOTAL LENGTH OF BREAST WALL FOR 2M HEIGHT</b>					=	495
<b>TOTAL LENGTH OF BREAST WALL FOR 3M HEIGHT</b>					=	325

### Toe Wall:

The requirement of the Toe walls is generated only when the road has been in use and problems of the slope line have been identified. These are proposed at locations having hill with steep slope & height of filling are more and retaining wall height more than 6.0 m along with valley side toe protection. These situations have been considered on the basis of visual investigations for a total length of 13590 m. The requirements of Breast wall have been identified and are listed in Table below

LOCATION OF TOE WALL											
Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
1	431165	431175	10	3	LHS	681	500915	500925	10	3	LHS
2	431175	431185	10	3	LHS	682	501275	501285	10	3	RHS
3	431185	431195	10	2	LHS	683	501345	501355	10	3	RHS
4	431305	431315	10	2	LHS	684	501355	501365	10	3	RHS
5	431315	431325	10	3	LHS	685	501365	501375	10	3	RHS
6	431325	431335	10	3	LHS	686	501375	501385	10	3	RHS
7	431335	431345	10	3	LHS	687	501435	501445	10	3	RHS
8	431345	431355	10	3	LHS	688	501585	501595	10	2	RHS
9	431355	431365	10	3	LHS	689	501825	501835	10	2	RHS
10	431365	431375	10	2	LHS	690	501875	501885	10	2	RHS
11	431405	431415	10	2	LHS	691	501945	501955	10	2	RHS
12	431415	431425	10	3	LHS	692	502085	502095	10	2	RHS
13	431425	431435	10	3	LHS	693	502125	502135	10	2	RHS
14	431495	431505	10	2	LHS	694	502155	502165	10	3	RHS
15	431505	431515	10	3	LHS	695	502165	502175	10	3	RHS
16	431515	431525	10	3	LHS	696	502205	502215	10	2	RHS
17	431525	431535	10	3	LHS	697	502295	502305	10	3	RHS
18	431605	431615	10	3	LHS	698	502525	502535	10	3	RHS
19	431625	431635	10	2	LHS	699	502905	502915	10	2	RHS
20	431645	431655	10	2	LHS	700	502945	502955	10	2	RHS
21	431655	431665	10	2	LHS	701	503475	503485	10	3	LHS
22	431665	431675	10	2	LHS	702	503495	503505	10	3	RHS
23	431675	431685	10	3	LHS	703	504015	504025	10	3	RHS
24	431685	431695	10	2	LHS	704	504145	504155	10	3	RHS
25	431795	431805	10	3	LHS	705	504165	504175	10	2	RHS
26	431815	431825	10	3	LHS	706	504355	504365	10	2	RHS
27	431825	431835	10	3	LHS	707	504525	504535	10	3	RHS
28	431835	431845	10	3	LHS	708	504535	504545	10	3	RHS
29	431865	431875	10	3	LHS	709	504585	504595	10	3	RHS
30	431905	431915	10	2	LHS	710	504595	504605	10	3	RHS
31	431985	431995	10	3	LHS	711	504605	504615	10	2	RHS
32	432035	432045	10	2	LHS	712	504755	504765	10	2	RHS
33	432195	432205	10	2	LHS	713	504845	504855	10	3	RHS
34	432205	432215	10	3	LHS	714	504875	504885	10	3	LHS
35	432215	432225	10	3	LHS	715	504875	504885	10	3	RHS
36	432245	432255	10	3	LHS	716	504885	504895	10	3	RHS
37	432255	432265	10	3	LHS	717	504895	504905	10	2	RHS
38	432265	432275	10	3	LHS	718	504985	504995	10	3	RHS
39	432275	432285	10	3	LHS	719	505025	505035	10	3	RHS
40	432285	432295	10	2	LHS	720	505035	505045	10	3	RHS
41	432475	432485	10	2	LHS	721	505095	505105	10	3	RHS
42	432485	432495	10	2	LHS	722	505485	505495	10	3	RHS
43	432555	432565	10	3	LHS	723	506205	506215	10	3	RHS
44	432645	432655	10	2	LHS	724	506215	506225	10	3	LHS
45	432765	432775	10	2	LHS	725	506225	506235	10	3	LHS
46	432775	432785	10	3	LHS	726	506355	506365	10	3	RHS
47	432905	432915	10	2	LHS	727	506415	506425	10	2	RHS
48	432915	432925	10	3	LHS	728	506685	506695	10	2	RHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
49	432925	432935	10	3	LHS	729	507055	507065	10	3	RHS
50	433105	433115	10	3	LHS	730	507085	507095	10	3	RHS
51	433135	433145	10	3	LHS	731	507095	507105	10	3	RHS
52	433175	433185	10	3	LHS	732	507115	507125	10	3	RHS
53	433195	433205	10	3	LHS	733	507125	507135	10	3	RHS
54	433205	433215	10	3	LHS	734	507135	507145	10	3	RHS
55	433215	433225	10	3	LHS	735	507145	507155	10	3	RHS
56	433385	433395	10	3	LHS	736	507155	507165	10	2	RHS
57	433515	433525	10	2	LHS	737	507165	507175	10	3	RHS
58	433525	433535	10	3	LHS	738	507175	507185	10	3	RHS
59	433775	433785	10	3	LHS	739	507635	507645	10	3	RHS
60	433865	433875	10	2	RHS	740	507665	507675	10	3	RHS
61	434005	434015	10	3	LHS	741	507695	507705	10	3	RHS
62	434295	434305	10	3	LHS	742	507705	507715	10	2	RHS
63	434395	434405	10	3	LHS	743	508275	508285	10	3	RHS
64	434695	434705	10	2	LHS	744	508285	508295	10	2	RHS
65	434855	434865	10	2	LHS	745	508365	508375	10	3	LHS
66	434865	434875	10	3	LHS	746	508535	508545	10	2	RHS
67	434875	434885	10	3	LHS	747	508985	508995	10	3	RHS
68	434885	434895	10	3	LHS	748	509075	509085	10	3	RHS
69	434895	434905	10	3	LHS	749	509205	509215	10	2	RHS
70	434905	434915	10	3	LHS	750	509215	509225	10	2	RHS
71	434915	434925	10	3	LHS	751	509225	509235	10	2	RHS
72	434935	434945	10	3	LHS	752	509265	509275	10	2	RHS
73	434945	434955	10	2	LHS	753	509285	509295	10	2	RHS
74	434955	434965	10	2	LHS	754	509295	509305	10	2	RHS
75	435085	435095	10	2	RHS	755	509375	509385	10	3	RHS
76	435235	435245	10	3	RHS	756	509405	509415	10	3	LHS
77	435625	435635	10	3	LHS	757	509525	509535	10	3	LHS
78	435845	435855	10	3	LHS	758	509595	509605	10	3	RHS
79	435875	435885	10	3	LHS	759	509615	509625	10	3	RHS
80	435885	435895	10	3	LHS	760	509625	509635	10	2	RHS
81	435895	435905	10	2	LHS	761	509675	509685	10	3	RHS
82	435905	435915	10	3	LHS	762	509685	509695	10	3	RHS
83	435965	435975	10	3	LHS	763	509955	509965	10	3	RHS
84	436575	436585	10	3	LHS	764	510015	510025	10	3	RHS
85	436585	436595	10	3	LHS	765	510025	510035	10	3	RHS
86	436615	436625	10	3	LHS	766	510095	510105	10	3	RHS
87	436645	436655	10	3	LHS	767	510425	510435	10	2	RHS
88	436825	436835	10	3	LHS	768	510595	510605	10	3	RHS
89	437025	437035	10	3	LHS	769	510705	510715	10	2	RHS
90	437115	437125	10	2	RHS	770	510725	510735	10	3	LHS
91	437125	437135	10	3	LHS	771	510795	510805	10	3	RHS
92	437245	437255	10	3	LHS	772	510815	510825	10	3	RHS
93	437685	437695	10	3	LHS	773	510825	510835	10	3	RHS
94	437805	437815	10	3	LHS	774	510835	510845	10	3	RHS
95	437815	437825	10	3	LHS	775	510845	510855	10	3	RHS
96	437825	437835	10	2	LHS	776	510855	510865	10	2	RHS
97	437955	437965	10	3	LHS	777	510865	510875	10	3	RHS
98	438285	438295	10	3	LHS	778	510875	510885	10	3	RHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
99	438575	438585	10	2	RHS	779	510885	510895	10	2	RHS
100	438575	438585	10	3	LHS	780	511205	511215	10	3	RHS
101	438775	438785	10	3	LHS	781	511515	511525	10	2	RHS
102	438785	438795	10	3	LHS	782	511545	511555	10	3	RHS
103	438835	438845	10	3	LHS	783	511555	511565	10	3	RHS
104	439195	439205	10	3	LHS	784	511565	511575	10	3	RHS
105	439315	439325	10	3	LHS	785	511575	511585	10	3	RHS
106	439445	439455	10	2	LHS	786	511625	511635	10	3	RHS
107	440055	440065	10	3	LHS	787	511855	511865	10	3	RHS
108	440075	440085	10	2	LHS	788	511865	511875	10	3	RHS
109	440285	440295	10	2	LHS	789	511925	511935	10	2	RHS
110	440645	440655	10	3	LHS	790	512075	512085	10	3	RHS
111	440655	440665	10	3	LHS	791	512085	512095	10	3	RHS
112	440665	440675	10	2	LHS	792	512105	512115	10	3	RHS
113	440685	440695	10	3	LHS	793	512115	512125	10	3	RHS
114	441595	441605	10	2	LHS	794	512125	512135	10	3	RHS
115	441675	441685	10	3	LHS	795	512135	512145	10	2	RHS
116	442315	442325	10	3	LHS	796	512145	512155	10	2	RHS
117	442325	442335	10	2	LHS	797	512155	512165	10	2	RHS
118	442405	442415	10	3	LHS	798	512225	512235	10	3	RHS
119	442635	442645	10	3	LHS	799	512355	512365	10	2	RHS
120	442645	442655	10	2	LHS	800	512365	512375	10	2	RHS
121	442945	442955	10	2	LHS	801	512425	512435	10	3	RHS
122	442955	442965	10	3	LHS	802	512435	512445	10	3	RHS
123	442965	442975	10	3	LHS	803	512515	512525	10	3	RHS
124	443135	443145	10	3	LHS	804	512525	512535	10	2	RHS
125	443505	443515	10	2	LHS	805	512725	512735	10	2	RHS
126	443825	443835	10	3	LHS	806	512735	512745	10	3	RHS
127	444035	444045	10	3	LHS	807	512745	512755	10	2	RHS
128	444315	444325	10	3	LHS	808	512875	512885	10	2	RHS
129	444585	444595	10	3	LHS	809	512965	512975	10	2	RHS
130	444745	444755	10	3	LHS	810	513065	513075	10	2	RHS
131	444755	444765	10	3	LHS	811	513085	513095	10	2	RHS
132	445015	445025	10	2	RHS	812	513115	513125	10	3	RHS
133	445025	445035	10	3	RHS	813	513125	513135	10	3	RHS
134	445135	445145	10	3	RHS	814	513135	513145	10	3	RHS
135	445635	445645	10	2	RHS	815	513145	513155	10	2	RHS
136	445825	445835	10	2	RHS	816	513155	513165	10	2	RHS
137	446035	446045	10	2	RHS	817	513215	513225	10	2	RHS
138	446595	446605	10	3	RHS	818	513225	513235	10	2	RHS
139	446905	446915	10	2	RHS	819	513255	513265	10	3	RHS
140	447045	447055	10	3	RHS	820	513395	513405	10	2	LHS
141	447115	447125	10	2	RHS	821	513425	513435	10	3	RHS
142	447135	447145	10	3	RHS	822	513435	513445	10	2	RHS
143	447255	447265	10	3	RHS	823	513505	513515	10	3	RHS
144	447265	447275	10	2	RHS	824	513535	513545	10	2	RHS
145	447295	447305	10	2	RHS	825	513545	513555	10	2	RHS
146	447565	447575	10	3	RHS	826	513555	513565	10	3	RHS
147	447575	447585	10	2	RHS	827	513565	513575	10	3	RHS
148	447585	447595	10	2	RHS	828	513575	513585	10	3	RHS



Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
149	447595	447605	10	2	RHS	829	513585	513595	10	2	RHS
150	447605	447615	10	3	RHS	830	513735	513745	10	3	RHS
151	447615	447625	10	3	RHS	831	513745	513755	10	3	RHS
152	447645	447655	10	2	RHS	832	513755	513765	10	2	RHS
153	447655	447665	10	3	RHS	833	513855	513865	10	2	RHS
154	447675	447685	10	2	RHS	834	513865	513875	10	3	RHS
155	447845	447855	10	2	RHS	835	514315	514325	10	2	RHS
156	448055	448065	10	3	RHS	836	514325	514335	10	3	RHS
157	448085	448095	10	2	RHS	837	514335	514345	10	3	RHS
158	448095	448105	10	3	RHS	838	514345	514355	10	2	RHS
159	448105	448115	10	3	RHS	839	514375	514385	10	2	RHS
160	448205	448215	10	2	RHS	840	514545	514555	10	3	RHS
161	448255	448265	10	2	RHS	841	514555	514565	10	3	RHS
162	448265	448275	10	3	RHS	842	514585	514595	10	3	RHS
163	448285	448295	10	3	RHS	843	514595	514605	10	3	RHS
164	448335	448345	10	3	RHS	844	514605	514615	10	3	RHS
165	448425	448435	10	3	RHS	845	514615	514625	10	3	RHS
166	448435	448445	10	2	RHS	846	514625	514635	10	3	RHS
167	448835	448845	10	3	RHS	847	514665	514675	10	2	RHS
168	448875	448885	10	3	RHS	848	514695	514705	10	2	RHS
169	448945	448955	10	3	RHS	849	514705	514715	10	3	RHS
170	448985	448995	10	3	LHS	850	514715	514725	10	3	RHS
171	448995	449005	10	2	LHS	851	514725	514735	10	3	RHS
172	449195	449205	10	2	RHS	852	514735	514745	10	2	RHS
173	449405	449415	10	3	RHS	853	514935	514945	10	3	RHS
174	449485	449495	10	2	RHS	854	515075	515085	10	3	RHS
175	449565	449575	10	2	RHS	855	515125	515135	10	3	RHS
176	449605	449615	10	2	RHS	856	515145	515155	10	2	RHS
177	449905	449915	10	3	RHS	857	515395	515405	10	2	LHS
178	449915	449925	10	3	RHS	858	515535	515545	10	3	LHS
179	449925	449935	10	3	RHS	859	515675	515685	10	3	RHS
180	449935	449945	10	3	RHS	860	515905	515915	10	3	RHS
181	449945	449955	10	3	RHS	861	515915	515925	10	3	RHS
182	449965	449975	10	3	RHS	862	515925	515935	10	3	RHS
183	450035	450045	10	2	RHS	863	515935	515945	10	3	RHS
184	450045	450055	10	3	RHS	864	516005	516015	10	2	RHS
185	450225	450235	10	3	RHS	865	516105	516115	10	3	RHS
186	450235	450245	10	2	RHS	866	516345	516355	10	3	RHS
187	450245	450255	10	2	RHS	867	516355	516365	10	3	RHS
188	450285	450295	10	2	RHS	868	516545	516555	10	2	RHS
189	450295	450305	10	3	RHS	869	516665	516675	10	3	RHS
190	450305	450315	10	3	RHS	870	517025	517035	10	2	RHS
191	450345	450355	10	2	RHS	871	517045	517055	10	3	RHS
192	450415	450425	10	3	RHS	872	517075	517085	10	2	RHS
193	450425	450435	10	3	RHS	873	517255	517265	10	3	RHS
194	450545	450555	10	3	RHS	874	517745	517755	10	3	RHS
195	450665	450675	10	3	RHS	875	517975	517985	10	2	RHS
196	450705	450715	10	3	RHS	876	517985	517995	10	2	RHS
197	450715	450725	10	3	RHS	877	517995	518005	10	3	RHS
198	450725	450735	10	3	RHS	878	518065	518075	10	3	RHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
199	450785	450795	10	3	RHS	879	518575	518585	10	2	RHS
200	450795	450805	10	3	RHS	880	518585	518595	10	3	RHS
201	450815	450825	10	2	RHS	881	518595	518605	10	2	RHS
202	450825	450835	10	3	RHS	882	518605	518615	10	2	RHS
203	450835	450845	10	3	RHS	883	518615	518625	10	2	RHS
204	450855	450865	10	3	RHS	884	518645	518655	10	2	RHS
205	450905	450915	10	3	RHS	885	518655	518665	10	3	RHS
206	450955	450965	10	2	RHS	886	518665	518675	10	2	RHS
207	451355	451365	10	3	RHS	887	518765	518775	10	3	RHS
208	451365	451375	10	3	RHS	888	518785	518795	10	3	RHS
209	451375	451385	10	3	RHS	889	518815	518825	10	3	RHS
210	451385	451395	10	2	RHS	890	518915	518925	10	3	RHS
211	451395	451405	10	2	RHS	891	519075	519085	10	3	RHS
212	451415	451425	10	3	RHS	892	519285	519295	10	3	RHS
213	451435	451445	10	2	RHS	893	519295	519305	10	3	RHS
214	451495	451505	10	2	RHS	894	519305	519315	10	2	RHS
215	451505	451515	10	2	RHS	895	519385	519395	10	2	RHS
216	451805	451815	10	2	RHS	896	519405	519415	10	3	RHS
217	451815	451825	10	3	RHS	897	519415	519425	10	3	RHS
218	451915	451925	10	2	RHS	898	519445	519455	10	3	RHS
219	451925	451935	10	3	RHS	899	519535	519545	10	2	RHS
220	451935	451945	10	3	RHS	900	519585	519595	10	2	RHS
221	452335	452345	10	2	RHS	901	519595	519605	10	2	RHS
222	452465	452475	10	3	RHS	902	519605	519615	10	2	RHS
223	452475	452485	10	2	RHS	903	519615	519625	10	3	RHS
224	452495	452505	10	2	RHS	904	519785	519795	10	3	RHS
225	452505	452515	10	3	RHS	905	519805	519815	10	2	RHS
226	452515	452525	10	3	RHS	906	519815	519825	10	3	RHS
227	452525	452535	10	3	RHS	907	519825	519835	10	3	RHS
228	452535	452545	10	3	RHS	908	519855	519865	10	2	LHS
229	452665	452675	10	2	RHS	909	520275	520285	10	3	RHS
230	452675	452685	10	2	RHS	910	520505	520515	10	2	RHS
231	452835	452845	10	3	RHS	911	520535	520545	10	2	RHS
232	452845	452855	10	3	RHS	912	520615	520625	10	2	RHS
233	452925	452935	10	2	LHS	913	520685	520695	10	3	RHS
234	453065	453075	10	2	RHS	914	520695	520705	10	3	RHS
235	453085	453095	10	2	RHS	915	520725	520735	10	3	RHS
236	453195	453205	10	3	RHS	916	520735	520745	10	2	RHS
237	453205	453215	10	3	RHS	917	520865	520875	10	3	RHS
238	453215	453225	10	2	RHS	918	520875	520885	10	2	RHS
239	453225	453235	10	2	RHS	919	520885	520895	10	2	RHS
240	453245	453255	10	3	RHS	920	520895	520905	10	2	RHS
241	453255	453265	10	2	RHS	921	520915	520925	10	3	RHS
242	453275	453285	10	3	RHS	922	520925	520935	10	3	RHS
243	453285	453295	10	3	RHS	923	520935	520945	10	3	RHS
244	453295	453305	10	2	RHS	924	520945	520955	10	2	RHS
245	453375	453385	10	2	RHS	925	520975	520985	10	2	RHS
246	453435	453445	10	3	RHS	926	521005	521015	10	2	RHS
247	453705	453715	10	2	RHS	927	521015	521025	10	3	RHS
248	453725	453735	10	3	RHS	928	521305	521315	10	2	RHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
249	453735	453745	10	3	RHS	929	521315	521325	10	3	RHS
250	453745	453755	10	3	RHS	930	521325	521335	10	3	RHS
251	453915	453925	10	3	RHS	931	521335	521345	10	3	RHS
252	453945	453955	10	2	RHS	932	521435	521445	10	2	RHS
253	453985	453995	10	2	RHS	933	521465	521475	10	3	RHS
254	454325	454335	10	3	RHS	934	521485	521495	10	2	RHS
255	454335	454345	10	3	RHS	935	521645	521655	10	3	RHS
256	454555	454565	10	2	RHS	936	521655	521665	10	3	RHS
257	454945	454955	10	3	RHS	937	521665	521675	10	3	RHS
258	455185	455195	10	2	RHS	938	521675	521685	10	3	RHS
259	455195	455205	10	2	RHS	939	521735	521745	10	3	RHS
260	455345	455355	10	3	RHS	940	521835	521845	10	2	LHS
261	455355	455365	10	3	RHS	941	522175	522185	10	2	LHS
262	455465	455475	10	2	RHS	942	522405	522415	10	2	RHS
263	455575	455585	10	2	LHS	943	522415	522425	10	2	RHS
264	455735	455745	10	2	RHS	944	522435	522445	10	3	RHS
265	455875	455885	10	2	RHS	945	522685	522695	10	2	RHS
266	456095	456105	10	3	RHS	946	522695	522705	10	3	RHS
267	456565	456575	10	3	RHS	947	522705	522715	10	2	RHS
268	456675	456685	10	3	RHS	948	522715	522725	10	3	RHS
269	456795	456805	10	2	RHS	949	522725	522735	10	3	RHS
270	456815	456825	10	3	RHS	950	522895	522905	10	2	RHS
271	456835	456845	10	2	RHS	951	523105	523115	10	2	LHS
272	456885	456895	10	3	RHS	952	523125	523135	10	3	LHS
273	456895	456905	10	3	RHS	953	523165	523175	10	3	LHS
274	456935	456945	10	3	RHS	954	523185	523195	10	2	LHS
275	457305	457315	10	3	RHS	955	523195	523205	10	3	LHS
276	457315	457325	10	3	RHS	956	523285	523295	10	2	LHS
277	457335	457345	10	2	RHS	957	523395	523405	10	3	LHS
278	457395	457405	10	2	RHS	958	523405	523415	10	2	LHS
279	457415	457425	10	2	RHS	959	523415	523425	10	3	LHS
280	457425	457435	10	2	RHS	960	523465	523475	10	3	LHS
281	457435	457445	10	2	RHS	961	523475	523485	10	3	LHS
282	457445	457455	10	2	RHS	962	523625	523635	10	3	LHS
283	457495	457505	10	2	RHS	963	523655	523665	10	3	LHS
284	457505	457515	10	3	RHS	964	523705	523715	10	3	LHS
285	457515	457525	10	3	RHS	965	523725	523735	10	3	LHS
286	457585	457595	10	3	RHS	966	523735	523745	10	3	LHS
287	457685	457695	10	2	RHS	967	523765	523775	10	2	LHS
288	457715	457725	10	2	RHS	968	523895	523905	10	3	LHS
289	457725	457735	10	2	RHS	969	524155	524165	10	3	LHS
290	457745	457755	10	2	RHS	970	524255	524265	10	2	LHS
291	457915	457925	10	3	RHS	971	524265	524275	10	2	LHS
292	457925	457935	10	3	RHS	972	524505	524515	10	3	LHS
293	458005	458015	10	3	RHS	973	524535	524545	10	2	LHS
294	458025	458035	10	3	RHS	974	524545	524555	10	3	LHS
295	458035	458045	10	2	RHS	975	524685	524695	10	2	LHS
296	458045	458055	10	3	RHS	976	524695	524705	10	3	LHS
297	458055	458065	10	3	RHS	977	524875	524885	10	3	LHS
298	458065	458075	10	2	RHS	978	524945	524955	10	2	LHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
299	458225	458235	10	3	RHS	979	524965	524975	10	2	LHS
300	458235	458245	10	3	RHS	980	525045	525055	10	3	LHS
301	458245	458255	10	3	RHS	981	525055	525065	10	3	LHS
302	458355	458365	10	3	RHS	982	525065	525075	10	2	LHS
303	458375	458385	10	3	RHS	983	525085	525095	10	3	LHS
304	458385	458395	10	3	RHS	984	525105	525115	10	3	LHS
305	458525	458535	10	3	RHS	985	525195	525205	10	3	LHS
306	458935	458945	10	2	LHS	986	525235	525245	10	3	LHS
307	459135	459145	10	3	LHS	987	525245	525255	10	3	LHS
308	459405	459415	10	3	LHS	988	525295	525305	10	2	LHS
309	459595	459605	10	2	LHS	989	525315	525325	10	3	LHS
310	459715	459725	10	2	LHS	990	525335	525345	10	3	LHS
311	459815	459825	10	2	LHS	991	525525	525535	10	3	LHS
312	459955	459965	10	2	LHS	992	525585	525595	10	3	LHS
313	459975	459985	10	2	LHS	993	525745	525755	10	3	LHS
314	460085	460095	10	3	LHS	994	525865	525875	10	2	LHS
315	460105	460115	10	3	LHS	995	525985	525995	10	3	LHS
316	460635	460645	10	2	LHS	996	525995	526005	10	2	LHS
317	460645	460655	10	3	LHS	997	526295	526305	10	3	LHS
318	460805	460815	10	3	LHS	998	526315	526325	10	3	LHS
319	460815	460825	10	2	RHS	999	526325	526335	10	2	LHS
320	461115	461125	10	2	LHS	1000	526355	526365	10	3	LHS
321	461715	461725	10	3	LHS	1001	526365	526375	10	3	LHS
322	461795	461805	10	2	LHS	1002	526375	526385	10	3	LHS
323	461805	461815	10	2	LHS	1003	526385	526395	10	3	LHS
324	462085	462095	10	2	LHS	1004	526395	526405	10	2	LHS
325	462385	462395	10	3	LHS	1005	526565	526575	10	3	LHS
326	462395	462405	10	2	LHS	1006	526705	526715	10	3	LHS
327	462405	462415	10	2	LHS	1007	526755	526765	10	2	LHS
328	462415	462425	10	2	LHS	1008	526835	526845	10	3	LHS
329	462425	462435	10	2	LHS	1009	526965	526975	10	3	LHS
330	462435	462445	10	2	LHS	1010	526975	526985	10	2	LHS
331	462445	462455	10	2	LHS	1011	527135	527145	10	3	LHS
332	462865	462875	10	3	LHS	1012	527345	527355	10	3	LHS
333	462935	462945	10	2	LHS	1013	527545	527555	10	2	LHS
334	463435	463445	10	2	LHS	1014	527555	527565	10	2	LHS
335	463445	463455	10	2	LHS	1015	527615	527625	10	3	LHS
336	463455	463465	10	2	LHS	1016	527715	527725	10	2	LHS
337	463465	463475	10	2	LHS	1017	527765	527775	10	3	LHS
338	463515	463525	10	2	LHS	1018	527815	527825	10	3	LHS
339	463535	463545	10	3	LHS	1019	527835	527845	10	3	LHS
340	463625	463635	10	3	LHS	1020	527905	527915	10	3	LHS
341	463655	463665	10	3	LHS	1021	528055	528065	10	2	LHS
342	463665	463675	10	3	LHS	1022	528085	528095	10	2	LHS
343	463675	463685	10	3	LHS	1023	528115	528125	10	2	RHS
344	463685	463695	10	3	LHS	1024	528125	528135	10	3	RHS
345	463695	463705	10	3	LHS	1025	528135	528145	10	3	LHS
346	463705	463715	10	3	LHS	1026	528175	528185	10	3	LHS
347	463725	463735	10	2	LHS	1027	528245	528255	10	3	LHS
348	463735	463745	10	2	LHS	1028	528255	528265	10	3	LHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
349	463945	463955	10	3	LHS	1029	528265	528275	10	3	LHS
350	463955	463965	10	3	LHS	1030	528425	528435	10	2	LHS
351	463965	463975	10	3	LHS	1031	528545	528555	10	3	LHS
352	463975	463985	10	2	LHS	1032	528865	528875	10	3	LHS
353	463985	463995	10	2	LHS	1033	528875	528885	10	3	LHS
354	463995	464005	10	2	LHS	1034	529015	529025	10	2	LHS
355	464005	464015	10	3	LHS	1035	529145	529155	10	3	LHS
356	464015	464025	10	3	LHS	1036	529155	529165	10	3	LHS
357	464025	464035	10	3	LHS	1037	529165	529175	10	3	LHS
358	464035	464045	10	2	LHS	1038	529195	529205	10	3	LHS
359	464085	464095	10	2	LHS	1039	529225	529235	10	3	LHS
360	464095	464105	10	3	LHS	1040	529235	529245	10	3	LHS
361	464105	464115	10	3	LHS	1041	529245	529255	10	3	LHS
362	464115	464125	10	3	LHS	1042	529265	529275	10	3	LHS
363	464505	464515	10	2	LHS	1043	529345	529355	10	3	LHS
364	464515	464525	10	2	LHS	1044	529415	529425	10	3	LHS
365	464575	464585	10	2	LHS	1045	529425	529435	10	3	LHS
366	464585	464595	10	3	LHS	1046	529465	529475	10	3	LHS
367	464705	464715	10	3	LHS	1047	529555	529565	10	3	LHS
368	464715	464725	10	3	LHS	1048	529615	529625	10	3	LHS
369	464815	464825	10	3	LHS	1049	529895	529905	10	2	LHS
370	464825	464835	10	3	LHS	1050	529905	529915	10	3	LHS
371	464895	464905	10	3	LHS	1051	529925	529935	10	3	LHS
372	464905	464915	10	3	LHS	1052	529935	529945	10	2	LHS
373	464925	464935	10	2	LHS	1053	529985	529995	10	3	LHS
374	465205	465215	10	2	LHS	1054	529995	530005	10	3	LHS
375	465215	465225	10	3	LHS	1055	530025	530035	10	3	LHS
376	465585	465595	10	2	LHS	1056	530035	530045	10	2	LHS
377	465605	465615	10	3	LHS	1057	530075	530085	10	2	LHS
378	465615	465625	10	2	LHS	1058	530105	530115	10	3	LHS
379	465865	465875	10	2	LHS	1059	530115	530125	10	3	LHS
380	466205	466215	10	2	LHS	1060	530195	530205	10	3	LHS
381	466315	466325	10	3	LHS	1061	530205	530215	10	3	LHS
382	466325	466335	10	2	LHS	1062	530215	530225	10	2	LHS
383	466405	466415	10	3	LHS	1063	530275	530285	10	3	LHS
384	466755	466765	10	2	LHS	1064	530325	530335	10	3	LHS
385	466785	466795	10	3	LHS	1065	530475	530485	10	3	LHS
386	466795	466805	10	3	LHS	1066	530485	530495	10	3	LHS
387	466805	466815	10	2	LHS	1067	530495	530505	10	3	LHS
388	466815	466825	10	3	LHS	1068	531075	531085	10	3	LHS
389	466845	466855	10	3	LHS	1069	531195	531205	10	2	LHS
390	467415	467425	10	3	LHS	1070	531875	531885	10	3	LHS
391	467605	467615	10	3	LHS	1071	531905	531915	10	3	LHS
392	467625	467635	10	2	LHS	1072	532295	532305	10	2	LHS
393	467665	467675	10	2	LHS	1073	532435	532445	10	3	LHS
394	467685	467695	10	3	LHS	1074	532735	532745	10	3	LHS
395	468085	468095	10	2	LHS	1075	532745	532755	10	3	LHS
396	468405	468415	10	3	LHS	1076	532855	532865	10	3	LHS
397	468435	468445	10	3	LHS	1077	533025	533035	10	3	LHS
398	468445	468455	10	3	LHS	1078	533065	533075	10	3	LHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
399	468455	468465	10	3	LHS	1079	533105	533115	10	2	LHS
400	468475	468485	10	2	LHS	1080	533165	533175	10	3	LHS
401	468495	468505	10	3	LHS	1081	533495	533505	10	2	LHS
402	468505	468515	10	3	LHS	1082	533805	533815	10	2	LHS
403	468625	468635	10	3	LHS	1083	534025	534035	10	2	LHS
404	468905	468915	10	2	LHS	1084	534185	534195	10	3	LHS
405	468935	468945	10	2	LHS	1085	534225	534235	10	3	LHS
406	468975	468985	10	3	LHS	1086	534235	534245	10	3	LHS
407	469125	469135	10	2	LHS	1087	534245	534255	10	2	LHS
408	469195	469205	10	2	LHS	1088	534275	534285	10	2	LHS
409	469215	469225	10	3	LHS	1089	534285	534295	10	3	LHS
410	469315	469325	10	2	LHS	1090	534555	534565	10	3	LHS
411	469335	469345	10	3	LHS	1091	534605	534615	10	2	LHS
412	469405	469415	10	3	LHS	1092	534615	534625	10	3	LHS
413	469495	469505	10	3	LHS	1093	534695	534705	10	3	LHS
414	469545	469555	10	3	LHS	1094	534705	534715	10	3	LHS
415	469555	469565	10	3	LHS	1095	534735	534745	10	3	LHS
416	469565	469575	10	3	LHS	1096	534965	534975	10	2	LHS
417	469575	469585	10	2	LHS	1097	534995	535005	10	3	LHS
418	469585	469595	10	2	LHS	1098	535005	535015	10	2	LHS
419	469605	469615	10	2	LHS	1099	535255	535265	10	2	LHS
420	469655	469665	10	2	LHS	1100	535415	535425	10	3	LHS
421	469665	469675	10	2	LHS	1101	535445	535455	10	3	LHS
422	469675	469685	10	3	LHS	1102	535485	535495	10	3	LHS
423	469745	469755	10	3	LHS	1103	535535	535545	10	2	LHS
424	469755	469765	10	3	LHS	1104	535585	535595	10	3	LHS
425	469765	469775	10	3	LHS	1105	535795	535805	10	3	LHS
426	469775	469785	10	3	LHS	1106	535825	535835	10	3	LHS
427	469785	469795	10	3	LHS	1107	536135	536145	10	3	LHS
428	469805	469815	10	3	LHS	1108	536165	536175	10	2	LHS
429	469825	469835	10	2	LHS	1109	536395	536405	10	2	LHS
430	469985	469995	10	3	RHS	1110	536425	536435	10	3	LHS
431	470035	470045	10	3	RHS	1111	536545	536555	10	2	LHS
432	470315	470325	10	3	RHS	1112	536555	536565	10	2	LHS
433	470505	470515	10	3	LHS	1113	536585	536595	10	2	LHS
434	471365	471375	10	3	RHS	1114	536605	536615	10	2	LHS
435	471505	471515	10	2	RHS	1115	536615	536625	10	3	LHS
436	471515	471525	10	3	RHS	1116	536625	536635	10	3	LHS
437	471755	471765	10	2	LHS	1117	536635	536645	10	3	LHS
438	471915	471925	10	3	RHS	1118	536645	536655	10	2	LHS
439	472265	472275	10	2	LHS	1119	536655	536665	10	3	LHS
440	472275	472285	10	2	LHS	1120	536665	536675	10	3	LHS
441	472795	472805	10	2	RHS	1121	536755	536765	10	3	LHS
442	473055	473065	10	3	RHS	1122	536865	536875	10	2	LHS
443	473105	473115	10	2	LHS	1123	536915	536925	10	2	LHS
444	473185	473195	10	3	LHS	1124	536965	536975	10	2	LHS
445	473535	473545	10	3	LHS	1125	536975	536985	10	2	LHS
446	473545	473555	10	3	LHS	1126	537065	537075	10	3	RHS
447	473585	473595	10	3	LHS	1127	537175	537185	10	2	LHS
448	473595	473605	10	3	LHS	1128	537375	537385	10	3	LHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
449	473605	473615	10	3	RHS	1129	537985	537995	10	3	LHS
450	473615	473625	10	3	RHS	1130	538135	538145	10	2	LHS
451	473645	473655	10	2	RHS	1131	538255	538265	10	3	LHS
452	473805	473815	10	2	LHS	1132	538495	538505	10	2	LHS
453	473805	473815	10	2	RHS	1133	538665	538675	10	3	LHS
454	473835	473845	10	3	LHS	1134	538715	538725	10	3	LHS
455	473865	473875	10	3	LHS	1135	538765	538775	10	3	LHS
456	473895	473905	10	3	RHS	1136	538875	538885	10	3	LHS
457	473905	473915	10	3	LHS	1137	538905	538915	10	3	LHS
458	473915	473925	10	3	RHS	1138	538915	538925	10	2	LHS
459	473925	473935	10	3	RHS	1139	539325	539335	10	3	LHS
460	474005	474015	10	2	RHS	1140	539435	539445	10	2	LHS
461	474015	474025	10	3	RHS	1141	539445	539455	10	2	LHS
462	475075	475085	10	3	RHS	1142	539475	539485	10	3	LHS
463	475105	475115	10	3	RHS	1143	539485	539495	10	3	LHS
464	475125	475135	10	2	RHS	1144	539495	539505	10	2	LHS
465	475135	475145	10	2	RHS	1145	539555	539565	10	3	LHS
466	475155	475165	10	3	RHS	1146	539565	539575	10	3	LHS
467	475465	475475	10	3	RHS	1147	539575	539585	10	2	LHS
468	475475	475485	10	3	RHS	1148	539585	539595	10	2	LHS
469	475495	475505	10	3	RHS	1149	539595	539605	10	3	LHS
470	475515	475525	10	3	RHS	1150	539615	539625	10	3	LHS
471	475525	475535	10	3	RHS	1151	539825	539835	10	3	LHS
472	475535	475545	10	3	RHS	1152	539835	539845	10	3	LHS
473	475545	475555	10	2	RHS	1153	539845	539855	10	3	LHS
474	475555	475565	10	2	RHS	1154	540005	540015	10	3	LHS
475	475565	475575	10	2	RHS	1155	540015	540025	10	2	LHS
476	475575	475585	10	3	RHS	1156	540025	540035	10	3	LHS
477	475585	475595	10	3	RHS	1157	540035	540045	10	2	LHS
478	475675	475685	10	3	LHS	1158	540255	540265	10	3	LHS
479	475685	475695	10	3	RHS	1159	540285	540295	10	2	LHS
480	475715	475725	10	3	LHS	1160	540345	540355	10	3	LHS
481	475775	475785	10	3	LHS	1161	540385	540395	10	2	LHS
482	476005	476015	10	2	LHS	1162	540535	540545	10	2	LHS
483	476015	476025	10	3	LHS	1163	540595	540605	10	3	LHS
484	476145	476155	10	3	LHS	1164	540605	540615	10	3	LHS
485	476155	476165	10	3	LHS	1165	540765	540775	10	3	LHS
486	476175	476185	10	3	LHS	1166	540775	540785	10	2	LHS
487	476185	476195	10	2	LHS	1167	540905	540915	10	3	LHS
488	476195	476205	10	2	LHS	1168	540915	540925	10	3	LHS
489	476735	476745	10	3	LHS	1169	540925	540935	10	3	LHS
490	476915	476925	10	2	LHS	1170	540945	540955	10	3	LHS
491	477665	477675	10	3	LHS	1171	540955	540965	10	2	LHS
492	477675	477685	10	2	LHS	1172	540995	541005	10	3	LHS
493	477685	477695	10	2	LHS	1173	541005	541015	10	3	LHS
494	477825	477835	10	3	LHS	1174	541075	541085	10	3	LHS
495	478995	479005	10	3	LHS	1175	541085	541095	10	2	LHS
496	479645	479655	10	2	LHS	1176	541115	541125	10	3	LHS
497	479795	479805	10	3	LHS	1177	541175	541185	10	3	LHS
498	480205	480215	10	3	LHS	1178	541205	541215	10	3	LHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
499	480215	480225	10	2	LHS	1179	541335	541345	10	3	LHS
500	480255	480265	10	3	LHS	1180	541345	541355	10	3	LHS
501	481545	481555	10	2	LHS	1181	541615	541625	10	2	LHS
502	481625	481635	10	2	LHS	1182	541625	541635	10	2	LHS
503	481635	481645	10	3	LHS	1183	541655	541665	10	3	LHS
504	481645	481655	10	3	LHS	1184	541665	541675	10	3	LHS
505	481685	481695	10	3	LHS	1185	541675	541685	10	2	LHS
506	481695	481705	10	2	LHS	1186	541705	541715	10	3	LHS
507	481715	481725	10	3	LHS	1187	541715	541725	10	3	LHS
508	482255	482265	10	3	LHS	1188	541725	541735	10	3	LHS
509	482795	482805	10	2	LHS	1189	541755	541765	10	2	LHS
510	482905	482915	10	2	RHS	1190	541785	541795	10	3	LHS
511	483235	483245	10	3	RHS	1191	541835	541845	10	2	LHS
512	483415	483425	10	3	RHS	1192	541845	541855	10	2	LHS
513	483425	483435	10	3	RHS	1193	541855	541865	10	2	LHS
514	483505	483515	10	2	RHS	1194	541865	541875	10	3	LHS
515	483515	483525	10	3	RHS	1195	541895	541905	10	2	LHS
516	483545	483555	10	2	LHS	1196	541905	541915	10	3	LHS
517	483705	483715	10	2	RHS	1197	542015	542025	10	2	LHS
518	483865	483875	10	2	RHS	1198	542085	542095	10	3	LHS
519	483895	483905	10	3	RHS	1199	542135	542145	10	2	LHS
520	483945	483955	10	2	RHS	1200	542215	542225	10	2	LHS
521	483965	483975	10	3	RHS	1201	542225	542235	10	2	LHS
522	483975	483985	10	3	RHS	1202	542455	542465	10	2	LHS
523	483985	483995	10	3	RHS	1203	542465	542475	10	3	LHS
524	483995	484005	10	2	RHS	1204	542475	542485	10	3	LHS
525	484135	484145	10	3	LHS	1205	542485	542495	10	3	LHS
526	484145	484155	10	3	LHS	1206	542495	542505	10	3	LHS
527	484265	484275	10	2	LHS	1207	542505	542515	10	3	LHS
528	484325	484335	10	3	RHS	1208	542515	542525	10	3	LHS
529	484345	484355	10	3	LHS	1209	542535	542545	10	2	LHS
530	484965	484975	10	3	RHS	1210	542545	542555	10	3	LHS
531	484975	484985	10	2	RHS	1211	542555	542565	10	3	LHS
532	485565	485575	10	3	RHS	1212	542675	542685	10	2	LHS
533	485625	485635	10	3	RHS	1213	542685	542695	10	2	LHS
534	485875	485885	10	2	RHS	1214	543125	543135	10	2	LHS
535	486055	486065	10	2	RHS	1215	543135	543145	10	3	LHS
536	486125	486135	10	3	RHS	1216	543155	543165	10	3	LHS
537	486195	486205	10	3	RHS	1217	543165	543175	10	3	LHS
538	486975	486985	10	3	RHS	1218	543225	543235	10	2	LHS
539	487075	487085	10	3	RHS	1219	543295	543305	10	2	LHS
540	487445	487455	10	3	RHS	1220	543305	543315	10	2	LHS
541	487515	487525	10	3	RHS	1221	543315	543325	10	3	LHS
542	487535	487545	10	2	RHS	1222	543335	543345	10	2	LHS
543	487965	487975	10	2	RHS	1223	543615	543625	10	2	LHS
544	488095	488105	10	3	RHS	1224	543625	543635	10	2	LHS
545	488115	488125	10	3	RHS	1225	543915	543925	10	3	LHS
546	488165	488175	10	2	RHS	1226	543925	543935	10	3	LHS
547	488175	488185	10	3	RHS	1227	543935	543945	10	2	LHS
548	488185	488195	10	3	RHS	1228	543945	543955	10	3	LHS



Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
549	488225	488235	10	2	RHS	1229	543965	543975	10	3	LHS
550	488395	488405	10	2	RHS	1230	543975	543985	10	3	LHS
551	488435	488445	10	2	RHS	1231	543995	544005	10	3	LHS
552	488545	488555	10	2	RHS	1232	544075	544085	10	3	LHS
553	488635	488645	10	2	RHS	1233	544365	544375	10	2	LHS
554	488665	488675	10	2	RHS	1234	544375	544385	10	2	LHS
555	488845	488855	10	3	RHS	1235	544385	544395	10	3	LHS
556	488855	488865	10	2	RHS	1236	544415	544425	10	3	LHS
557	488865	488875	10	2	RHS	1237	544425	544435	10	3	LHS
558	488915	488925	10	2	RHS	1238	544455	544465	10	3	LHS
559	488925	488935	10	2	RHS	1239	544565	544575	10	3	LHS
560	489005	489015	10	3	RHS	1240	544595	544605	10	3	LHS
561	489035	489045	10	3	RHS	1241	544605	544615	10	2	LHS
562	489065	489075	10	3	RHS	1242	545145	545155	10	3	LHS
563	489075	489085	10	3	RHS	1243	545155	545165	10	3	LHS
564	489095	489105	10	3	RHS	1244	545165	545175	10	2	LHS
565	489105	489115	10	2	RHS	1245	545175	545185	10	2	LHS
566	489185	489195	10	3	RHS	1246	545185	545195	10	2	LHS
567	489195	489205	10	3	RHS	1247	545205	545215	10	2	LHS
568	489595	489605	10	2	RHS	1248	545225	545235	10	2	LHS
569	489605	489615	10	3	RHS	1249	545385	545395	10	3	LHS
570	489685	489695	10	3	RHS	1250	545405	545415	10	3	LHS
571	489735	489745	10	3	RHS	1251	545425	545435	10	3	LHS
572	489745	489755	10	3	RHS	1252	545475	545485	10	3	LHS
573	489855	489865	10	3	RHS	1253	545485	545495	10	3	LHS
574	489875	489885	10	3	RHS	1254	545505	545515	10	3	LHS
575	490145	490155	10	2	RHS	1255	545515	545525	10	3	LHS
576	490155	490165	10	3	RHS	1256	545555	545565	10	3	LHS
577	490195	490205	10	3	RHS	1257	545565	545575	10	3	LHS
578	490425	490435	10	2	RHS	1258	545605	545615	10	3	LHS
579	490905	490915	10	3	RHS	1259	545625	545635	10	2	LHS
580	491145	491155	10	3	RHS	1260	545655	545665	10	2	LHS
581	491235	491245	10	2	RHS	1261	545705	545715	10	3	LHS
582	491245	491255	10	3	RHS	1262	545895	545905	10	3	LHS
583	491265	491275	10	3	LHS	1263	546155	546165	10	3	LHS
584	491275	491285	10	3	RHS	1264	546175	546185	10	2	LHS
585	491575	491585	10	3	RHS	1265	546185	546195	10	2	LHS
586	491595	491605	10	3	RHS	1266	546285	546295	10	2	LHS
587	491865	491875	10	3	RHS	1267	546295	546305	10	2	LHS
588	491885	491895	10	3	RHS	1268	546305	546315	10	3	LHS
589	491925	491935	10	3	RHS	1269	546315	546325	10	3	LHS
590	491935	491945	10	2	LHS	1270	546325	546335	10	3	LHS
591	491935	491945	10	3	RHS	1271	546335	546345	10	3	LHS
592	491945	491955	10	3	RHS	1272	546345	546355	10	3	LHS
593	492165	492175	10	3	RHS	1273	546355	546365	10	3	LHS
594	492175	492185	10	3	RHS	1274	546365	546375	10	3	LHS
595	492255	492265	10	3	RHS	1275	546395	546405	10	2	LHS
596	492415	492425	10	3	RHS	1276	546405	546415	10	2	LHS
597	492765	492775	10	3	RHS	1277	546605	546615	10	2	LHS
598	492775	492785	10	3	RHS	1278	546725	546735	10	3	LHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
599	492785	492795	10	3	RHS	1279	547075	547085	10	2	LHS
600	492795	492805	10	3	RHS	1280	547105	547115	10	2	RHS
601	492805	492815	10	2	RHS	1281	547115	547125	10	2	RHS
602	492925	492935	10	3	RHS	1282	547135	547145	10	2	LHS
603	493055	493065	10	2	RHS	1283	547415	547425	10	3	LHS
604	493065	493075	10	3	RHS	1284	547435	547445	10	3	LHS
605	493075	493085	10	2	RHS	1285	547515	547525	10	3	LHS
606	493085	493095	10	2	RHS	1286	547525	547535	10	3	LHS
607	493275	493285	10	3	RHS	1287	547535	547545	10	3	LHS
608	493375	493385	10	2	LHS	1288	547585	547595	10	3	LHS
609	493535	493545	10	2	RHS	1289	547595	547605	10	3	LHS
610	493565	493575	10	3	RHS	1290	547625	547635	10	3	LHS
611	493645	493655	10	2	RHS	1291	547705	547715	10	2	LHS
612	493805	493815	10	2	LHS	1292	547805	547815	10	3	LHS
613	494065	494075	10	3	RHS	1293	547815	547825	10	3	LHS
614	494245	494255	10	3	RHS	1294	547825	547835	10	3	LHS
615	494255	494265	10	3	RHS	1295	547835	547845	10	3	LHS
616	494265	494275	10	3	RHS	1296	548225	548235	10	3	LHS
617	494275	494285	10	3	RHS	1297	548355	548365	10	3	LHS
618	494475	494485	10	3	RHS	1298	548455	548465	10	3	LHS
619	494515	494525	10	3	RHS	1299	548465	548475	10	3	LHS
620	494535	494545	10	3	RHS	1300	548475	548485	10	3	LHS
621	494545	494555	10	3	RHS	1301	548505	548515	10	2	LHS
622	494705	494715	10	3	RHS	1302	548745	548755	10	2	LHS
623	494845	494855	10	2	RHS	1303	548755	548765	10	2	LHS
624	495465	495475	10	3	RHS	1304	549005	549015	10	2	LHS
625	495805	495815	10	3	RHS	1305	549015	549025	10	2	LHS
626	495815	495825	10	3	RHS	1306	549025	549035	10	3	LHS
627	495825	495835	10	3	RHS	1307	549085	549095	10	3	LHS
628	496595	496605	10	3	RHS	1308	549095	549105	10	3	LHS
629	496625	496635	10	2	LHS	1309	549105	549115	10	3	LHS
630	496645	496655	10	3	RHS	1310	549125	549135	10	3	LHS
631	497205	497215	10	3	RHS	1311	549505	549515	10	2	RHS
632	497215	497225	10	3	RHS	1312	549515	549525	10	3	LHS
633	497385	497395	10	3	RHS	1313	549585	549595	10	3	LHS
634	497395	497405	10	3	RHS	1314	549655	549665	10	3	LHS
635	497685	497695	10	3	RHS	1315	549705	549715	10	3	LHS
636	498055	498065	10	3	RHS	1316	549755	549765	10	2	LHS
637	498485	498495	10	2	LHS	1317	549765	549775	10	2	LHS
638	498495	498505	10	3	RHS	1318	549845	549855	10	3	LHS
639	498505	498515	10	3	RHS	1319	550005	550015	10	3	LHS
640	498575	498585	10	3	LHS	1320	550035	550045	10	3	RHS
641	498585	498595	10	3	LHS	1321	550375	550385	10	3	LHS
642	498595	498605	10	3	LHS	1322	550405	550415	10	3	LHS
643	498605	498615	10	3	LHS	1323	550415	550425	10	3	LHS
644	498615	498625	10	3	LHS	1324	550675	550685	10	3	LHS
645	498625	498635	10	3	LHS	1325	550795	550805	10	3	LHS
646	498635	498645	10	3	LHS	1326	551435	551445	10	3	LHS
647	498645	498655	10	3	LHS	1327	551465	551475	10	3	LHS
648	498655	498665	10	3	LHS	1328	551495	551505	10	3	LHS

Sr.No.	Chainage		Length in m	Height in m	Remarks	Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To					From	To			
649	498665	498675	10	3	LHS	1329	551565	551575	10	3	RHS
650	498675	498685	10	3	LHS	1330	551805	551815	10	3	LHS
651	498685	498695	10	3	LHS	1331	551815	551825	10	3	LHS
652	498695	498705	10	3	LHS	1332	551985	551995	10	2	LHS
653	498705	498715	10	3	LHS	1333	552115	552125	10	3	LHS
654	498725	498735	10	3	LHS	1334	552145	552155	10	3	LHS
655	498735	498745	10	2	LHS	1335	552165	552175	10	3	LHS
656	498745	498755	10	2	LHS	1336	552265	552275	10	3	LHS
657	498755	498765	10	3	LHS	1337	552375	552385	10	3	RHS
658	498765	498775	10	2	LHS	1338	552375	552385	10	3	LHS
659	498775	498785	10	2	LHS	1339	552385	552395	10	2	RHS
660	498785	498795	10	2	LHS	1340	552405	552415	10	3	RHS
661	499055	499065	10	2	LHS	1341	552425	552435	10	3	RHS
662	499335	499345	10	2	LHS	1342	552495	552505	10	3	RHS
663	499345	499355	10	2	LHS	1343	552505	552515	10	3	RHS
664	499625	499635	10	3	RHS	1344	552535	552545	10	2	RHS
665	499635	499645	10	3	RHS	1345	552565	552575	10	2	RHS
666	499645	499655	10	3	RHS	1346	553035	553045	10	3	RHS
667	499655	499665	10	3	RHS	1347	553045	553055	10	2	RHS
668	499675	499685	10	3	RHS	1348	553175	553185	10	3	RHS
669	499685	499695	10	3	RHS	1349	553195	553205	10	3	RHS
670	499715	499725	10	3	RHS	<b>LAWNGTLAI BYE PASS ROAD</b>					
671	499995	500005	10	2	RHS	1350	115	125	10	2	RHS
672	500625	500635	10	3	LHS	1351	145	155	10	3	RHS
673	500685	500695	10	2	LHS	1352	245	255	10	3	LHS
674	500695	500705	10	3	LHS	1353	255	265	10	3	RHS
675	500795	500805	10	3	LHS	1354	255	265	10	3	LHS
676	500845	500855	10	2	RHS	1355	265	275	10	2	RHS
677	500855	500865	10	3	RHS	1356	265	275	10	3	LHS
678	500865	500875	10	3	RHS	1357	275	285	10	2	LHS
679	500895	500905	10	3	RHS	1358	345	355	10	2	RHS
680	500905	500915	10	3	RHS	1359	705	715	10	2	RHS
<b>SUMMARY</b>											
<b>TOTAL LENGTH OF TOE WALL FOR 2M HEIGHT</b>									=	4920	m
<b>TOTAL LENGTH OF TOE WALL FOR 3M HEIGHT</b>									=	8670	m
<b>Total</b>									=	13590	m

### Gabion Wall:

The requirement of the Gabion wall is generated only where the road is aligned along a saddle portion, Near bus stand & river bank or a nallah (stream) slope failure and erosion of toe has also to be prevented and valley side slope made stable These are proposed at locations having hill with steep slope, having soil matrix Soil Mixed with Boulders and sharp curve portion. It is also proposed where the road side excavated spoils dumping area and embankment toe. These situations have been considered on the basis of visual investigations for a total length of 2790 m.

### LOCATION OF GABION WALL

Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To			
1	431860	431920	45	2	Dumping Location
2	433030	433090	45	3	Dumping Location
3	435820	435880	45	2	Dumping Location
4	438920	438980	45	3	Dumping Location
5	439290	439350	45	2	Dumping Location
6	441270	441330	45	2	Dumping Location
7	443350	443410	45	2	Dumping Location
8	444200	444260	45	3	Dumping Location
9	445240	445300	45	3	Dumping Location
10	448330	448390	45	2	Dumping Location
11	450620	450680	45	2	Dumping Location
12	453280	453340	45	2	Dumping Location
13	454970	455030	45	2	Dumping Location
14	456750	456810	45	2	Dumping Location
15	457300	457360	45	3	Dumping Location
16	460120	460180	45	3	Dumping Location
17	462940	463000	45	2	Dumping Location
18	466870	466930	45	3	Dumping Location
19	476780	476840	45	3	Dumping Location
20	477390	477450	45	2	Dumping Location
21	479790	479850	45	2	Dumping Location
22	482250	482310	45	3	Dumping Location
23	484090	484150	45	3	Dumping Location
24	486820	486880	45	3	Dumping Location
25	488150	488210	45	2	Dumping Location
26	491050	491110	45	2	Dumping Location
27	492570	492630	45	3	Dumping Location
28	494450	494510	45	3	Dumping Location
29	495930	495990	45	3	Dumping Location
30	499300	499360	45	3	Dumping Location
31	500920	500980	45	2	Dumping Location
32	502170	502230	45	2	Dumping Location
33	506740	506800	45	2	Dumping Location
34	507470	507530	45	2	Dumping Location
35	509300	509360	45	3	Dumping Location
36	509550	509610	45	3	Dumping Location
37	510570	510630	45	3	Dumping Location
38	514050	514110	45	3	Dumping Location
39	515830	515890	45	3	Dumping Location
40	517680	517740	45	2	Dumping Location
41	518060	518120	45	2	Dumping Location
42	519800	519860	45	2	Dumping Location
43	520800	520860	45	2	Dumping Location
44	522630	522690	45	2	Dumping Location
45	524570	524630	45	2	Dumping Location
46	526370	526430	45	3	Dumping Location
Sr.No.	Chainage		Length in m	Height in m	Remarks
	From	To			

47	526800	526860	45	2	Dumping Location
48	528710	528770	45	3	Dumping Location
49	530640	530700	45	2	Dumping Location
50	533220	533280	45	2	Dumping Location
51	534810	534870	45	2	Dumping Location
52	535770	535830	45	2	Dumping Location
53	536720	536780	45	2	Dumping Location
54	540470	540530	45	2	Dumping Location
55	542470	542530	45	2	Dumping Location
56	543870	543930	45	3	Dumping Location
57	544940	545000	45	2	Dumping Location
58	546070	546130	45	3	Dumping Location
59	547640	547700	45	3	Dumping Location
60	549220	549280	45	2	Dumping Location
61	550090	550150	45	2	Dumping Location
62	551030	551090	45	3	Dumping Location
			<b>2790.000</b>		
<b>SUMMARY</b>					
<b>Total length of gabion wall for 2m height</b>				<b>=</b>	<b>1620</b>
<b>Total length of gabion wall for 3m height</b>				<b>=</b>	<b>1170</b>

### Design of Retaining Wall/Breast Wall

Following types of RW/BW have been designed.

- Random Rubble Masonry RW/TW
- Random Rubble Masonry BW

However, the drawings are placed for application, if considered necessary.

### Vegetated bamboo crib wall:

It is a proposed where the road side excavated spoils dumping area and embankment toe. These situations have been considered on the basic of visual investigations for a total length of 22320 m. Construction of Vegetated bamboo crib wall width 1.2m & height 1.5 m including providing & supplying bamboo, binding wire, cutting, plantation of vegetation / grass, making benching & backfilling.

### Turfing with Sods

Furnishing and laying of the live sods of perennial turf forming grass on embankment slope, verges or other locations.

### Land Slide Prone Area

Major land slide prone areas were not noticed during the field visit to the project stretch. However some minor land slide location noticed and subsequence measures are proposed.

Landslide Countermeasure Work														
Sec	LS No.	Landslide Location			Disaster Type	Soil/Rock Condition	Landslide Size		Remarks Existing Structure	Landslide Countermeasure	Qty per m	Unit	Qty	Remarks
		Slope No.	Start	End			Length	Width						
C	13	80	436200	436250	MM	Soft	45	50		Gabion wall	3	m3	165.0	
										Groundwater drainage	32	m	160.0	
C	14	93	441700	441710	DF	Very Soft	10	100		Box culvert	-	-	-	Box Culvert List
C	15	97	442900	443300	MM-p	Soft	40	30	Retaining wall	Gabion wall	4	m3	200.0	
C	16	97	443100	443180	MM-p	Soft	75	80	Retaining wall	Gabion wall	4	m3	340.0	
C	17	133	457250	457720	MM	Soft	200	180		Gabion wall	4	m3	840.0	
										Groundwater drainage	336	m	6720.0	
C	18	140	461600	462950	SF	Bed Rock	810	30		Rockfall prevention wall	4.5	m3	3690.0	
										Rockfall prevention fence	1	m	820.0	
C	19	143	462650	462700	MM-p	Soft	50	60	Retaining wall	No need	-	-	-	
C	20	145	463300	463590	SF	Bed Rock	290	20		Rockfall prevention wall	4.5	m3	1350.0	
										Rockfall prevention fence	1	m	300.0	
D	1	4	476500	476610	MM-p	Soft	100	100		Gabion wall	6	m3	660.0	
D	2	19	482950	483170	SF	Bed Rock	260	10		Rockfall prevention fence	1	m	270.0	
D	3	28	486550	486580	MM-p	Soft	30	55		Gabion wall	6	m3	240.0	
D	4	29	486800	486850	MM	Soft	50	60		Gabion wall	6	m3	360.0	
										Groundwater drainage	36	m	180.0	
D	5	30	487120	487210	MM-p	Soft	90	100		Gabion wall	8	m3	800.0	
D	6	37	490600	490660	MM-p	Soft	60	95		Gabion wall	5	m3	350.0	
D	7	40	491800	491980	MM-p	Soft	110	120		Gabion wall	5	m3	600.0	
D	8	48	494800	495600	MM	Soft	60	110		Reinforced earth wall	1	m	70.0	RE-Wall (H=10m)
										Gabion wall	8	m3	560.0	
D	9	48	494980	495600	MM	Soft	66	80		Earth removal	60	m3	3960.0	
										Gabion wall	3	m3	228.0	

Sec	LS No.	Landslide Location			Disaster Type	Soil/Rock Condition	Landslide Size		Remarks Existing Structure	Landslide Countermeasure	Qty per m	Unit	Qty	Remarks
		Slope No.	Start	End			Length	Width						
D	10	50	496120	496190	MM	Soft	70	70		Anchor work	36	m	540.0	Lower natural slope
										Crib work (F500)	9	m2	630.0	
										Hydroseeding	7.5	m2	290.0	
D	11	52	496560	496660	MM-p	Soft	90	200		Groundwater drainage	196	m	1764.0	
										Gabion wall	3	m3	300.0	
D	12	64	502200	502450	MM-p	Hard	250	200		Gabion wall	8	m3	2080.0	
D	13	65	502460	502540	MM	Soft	75	120		Gabion wall	7	m3	595.0	
										Groundwater drainage	100	m	800.0	
D	14	67	503700	502940	MM	Soft	55	50		Gabion wall	7	m3	455.0	
										Groundwater drainage	38	m	228.0	
D	15	71	505680	505740	MM-p	Soft	50	60		Gabion wall	4	m3	240.0	
D	16	72	506160	506180	MM-p	Soft	30	50		Gabion wall	5	m3	200.0	
D	17	76	507940	507990	MM	Soft	50	70	Retaining wall	Crib work (F300)	15.68	m2	522.7	
										Vegetation mat	12.68	m2	356.7	
D	18	77	508120	508205	MM	Soft	90	130		Earth removal	300	m3	9010.0	
										Hydroseeding	62.72	m2	3767.4	
D	19	79	509000	509050	MM	Soft	33	72		Crib work (F300)	15.68	m2	345.0	2 steps
										Rock-bolt work	18	m	198.0	
										Vegetation mat	13.28	m2	244.4	
D	20	80	509400	509420	SF	Soft	40	110	Retaining wall	Rockfall prevention fence	1	m	50.0	
D	21	87	512450	512490	MM	Soft	40	50	Retaining wall	Gabion wall	6	m3	300.0	
D	22	87	512860	512900	MM	Soft	25	60		Gabion wall	7	m3	245.0	
										Groundwater drainage	24	m	72.0	
D	23	115	525060	526490	SF	Bed Rock	890	20		Rockfall prevention wall	4.75	m3	4275.0	
										Rockfall prevention fence	1	m	900.0	

Sec	LS No.	Landslide Location			Disaster Type	Soil/Rock Condition	Landslide Size		Remarks Existing Structure	Landslide Countermeasure	Qty per m	Unit	Qty	Remarks
		Slope No.	Start	End			Length	Width						
D	24	118	526680	526730	MM	Soft	50	115		Anchor work	27	m	297.0	
										Crib work (F500)	9	m2	450.0	
										Hydroseeding	7.5	m2	205.0	
D	25	119	526920	527400	MM	Soft	100	125		Anchor work	48	m	1056.0	
										Crib work (F500)	9	m2	900.0	
										Hydroseeding	7.5	m2	415.0	
D	26	122	528060	528660	MM	Soft	50	85		Anchor work	27	m	297.0	
										Crib work (F500)	9	m2	450.0	
										Hydroseeding	7.5	m2	205.0	
D	27	139	535280	535370	MM-p	Soft	85	80		Crib work (F300)	15.68	m2	888.5	
										Rock-bolt work	18	m	504.0	
										Vegetation mat	13.28	m2	635.7	
D	28	141	535720	535820	SF	Hard	70	80		Anchor work	39	m	585.0	
										Crib work (F500)	9	m2	630.0	
										Hydroseeding	7.5	m2	290.0	
D	29	141	535860	535910	MM-p	Soft	50	60		Anchor work	27	m	297.0	
										Crib work (F500)	9	m2	450.0	
										Hydroseeding	7.5	m2	205.0	
D	30	147	538660	539180	SF	Hard	60	50		Gabion wall	5	m3	350.0	
D	31	151	540180	540260	SF	Soft	70	60		Gabion wall	4	m3	320.0	
D	32	153	541420	541490	SF	Hard	60	30		Rockfall prevention wall	4.75	m3	332.5	
										Rockfall prevention fence	1	m	70.0	



## 1.10 ROAD SIGNS, MARKING & FURNITURE

### General

Road signs, road marking and furniture are important components of the project corridor. The road signs are categorized as mandatory, cautionary and informatory. The road signs, marking and furniture serve the purpose of regulating the road users and provide psychological inputs for an organized user response. The drawings of signs, marking and furniture are enclosed in the drawing folder. The items of road signs, marking and furniture are briefly discussed in the subsequent paragraphs.

#### • Road Signs

The methodology to be followed in the use, sitting with respect to carriageway, orientation, materials, ports, mountings, colours, sizes, letters etc. shall be as per IRC: 67-2001. Road signs have been selected for particular application to this project. These are summarized in the following Table:

S/n	Description	Nos
<b>A.</b>	<b>MANDATORY / REGULATING SIGNS</b>	
1	STOP	16
2	GIVE WAY	14
3	SPEED LIMIT	20
4	ROUTE MARKER SIGN FOR NH	3
<b>B</b>	<b>CAUTIONARY / WARNING SIGNS</b>	
1	RIGHT-HAND CURVE	51
2	LEFT-HAND CURVE	49
3	HAIR-PIN BEND	-
4	REVERSE BEND (RIGHT)	10
5	REVERSE BEND (LEFT)	11
6	CROSS ROAD	-
7	SIDE ROAD (R & L)	-
8	T-INTERSECTION	-
9	Y-INTERSECTION	45
<b>C</b>	<b>INFORMATION SIGNS</b>	
1	DIRECTION OF PLACE IDENTIFICATION SIGNS	20
2	PLACE IDENTIFICATION SIGNS	20
3	FLOOD GAUGE	1

#### • Route Marker Signs for National Highways

The design, location, materials, definitions plate, route marker assembly at junctions with numbered routes, colour of back sign of port and inscription will be done as per IRC: 2-1968. Centre-line marking for a 2-Lane Road has been provided.

- **Type design for KM stone**

The design, materials, script and sequence of inscription; size, shape and spacing of letters / numerals, colour, background, inscription and placement of 200m, kilometer and 5 - kilometer stone will be done as per IRC: 8 - 1980.

Sr.No.	Category	Nos
1	Kilometer Stone	99
2	5-Km Stone	25
3	200 m Stone	498

- **Standard letters and numerals of different heights for use on highways signs:**

The shape, spacing in between and use of letters / numerals of different heights for use on highway signs shall be as per IRC: 30-1968.

- **Numbering of bridges and culverts:**

The materials method of numbering, manner of inscription and placing of numbering of culverts and bridges shall be as per IRC: 7-1971.

- **Road Marking:**

Road Markings perform important functions of guiding and controlling traffic on a highway. The markings serve as a psychological barrier and signify the delineation of traffic hazards for safe movement of traffic. Road markings channelize, ensure smooth and orderly flow of traffic. The materials, colour, size etc of road marking shall be as per IRC: 35-1997.

- **Street Furniture**

A modern highway facility requires a number of items of street furniture. The provisions of these shall be made on the basis of recent Guidelines evolved under the Ministry of Road Transport & Highway's Research Project R-63: "Development of Aesthetic Design for Road side Furniture'. The provision of these considerations is based generally on:

1. The designs are aesthetically pleasing and blending with the surrounding environment
2. They are utilitarian.
3. They do not intrude into the overall appearance of the facility.
4. The materials and specifications adopted are of a high quality so that the IR maintenance is minimum.
5. They enhance the safety of travel.

Metal Beam Crash Barrier	6500 m	In between selected stretches .As these portion of stretches are steep & rocky portion.
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- **Design of wayside amenity:**

### General

The continuous long distance travel on highways at speed is liable to cause fatigue as also mental tension to the road users. Moreover, the monotony of driving over long sections in the rural areas with no likelihood of any cross traffic brings sense of complacency in many drivers. And such distractions could result in serious accidents. Further, the motor vehicles also need to be checked up or repaired to withstand continuous run and may also need refueling enroute. It is from these considerations that the provision of proper service and rest facilities along the high speed corridor,

permitting direct entry/exit to and from it to facilitate a comfortable travel has assumed a great relevance. Such facilities will basically enable the drivers and passengers to rest and refresh themselves and at the same time all vehicles to be checked and refuel if necessary. The common wayside amenities provided along the highway are of three types namely, rest areas, service areas and lay-byes. An amenity centre provides facilities of fuel-cum-service station, restaurant, workshop etc. in addition to parking, a lay-bye on roadside beyond shoulders for road users in case of breakdown of vehicles for taking rest for short duration. The proposed locations of amenity centers, their demand estimation and proposed layouts and facilities to be adopted along with provisions of truck lay-byes and bus stops are described in following paragraphs:

### Proposed Locations and Wayside Amenities

Sr.No.	Description	Nos.	Location
1	Public Toilet	15	Tawipui North village-2,Tawipui North village-1,Tawipui South village,Thingfal village,Thingka village,Aoc village,Lawngtlai city,Saika village,Chawntlangpui village,Sihtlangpui village,Kawlchaw village,Zero point,Maubawk village,Theiva village,Theihri village & Tuipang village
2	Bus Shed	30	
3	Bazar Shed	15	

### 1.12 DIVERSION OF EXISTING ROAD DURING CONSTRUCTION

For improvement of existing road some stretches localized, relocation and re-grading are proposed. Due to which traffic movement on existing road will be hamper .Therefore diversions are proposed in the following stretches during construction period:

#### Scope of Diversion of Existing Road during Construction:

- 1) Formation cutting for diversion of existing road (6.0 m wide).
- 2) Sub-base course level 150 mm thick GSB Gr-1
- 3) Base course level 150 mm thick WMM
- 4) Wear course 20 mm thick MSS
- 5) Earthen shoulder.

### 1.13 MAINTENANCE OF EXISTING ROAD:

The existing road is the main route to provide connectivity between district headquarters and International boarder of Indo Myanmar for international trading but also for Southern part of Mizoram. The minimum construction time provided for completion of the project is 4(four) years during which maintenance by the PIU will be no longer convenient as the site possession is resorted to hand over to the contractor till completion of the project. Under this circumstance, it is inevitable to keep provision for yearly maintenance of the existing road during construction and hence a provision of Rs.78.60 lakhs per year is kept to make the road payable for all type of vehicles without serious interruption of the traffic flow throughout the year.

#### Scope of maintenance:

- 1) Maintenance of Earthen Shoulder (filling with fresh soil).
- 2) Filling Pot- holes and Patch Repairs with open - graded Premix surfacing, 20mm.
- 3) Hill Side Drain Clearance.
- 4) Land Slide Clearance in soil/ rock

- 5) Clearing Grass and Removal of Rubbish.
- 6) Maintenance/repair of culvert/Retaining wall.
- 7) Clearance of culvert before monsoon
- 8) Removal of land slide

## SECTION - 2

### HYDROLOGY AND DRAINAGE STUDY

#### 2.1 General

Topography of hill generates numerous water courses. Uncontrolled water is the primary cause of problems and even failures of complete sections of roadway structures. A hill road is good if the degree of drainage achieved is good. A cardinal rule while planning drainage would be least interference with natural drainage. In addition to this the road acts as an interceptor and its longitudinal cut on hill slope obstructs the natural drainage and the road ledge therefore acts as a collection area of all water from hill side. As such adequate drainage system is essential for the stability of the road.

#### 2.2 Hydrological Study of Rain

##### a) Rainfall

The amount of precipitation is expressed as the depth in centimeter. Proposed road alignment is in high rainfall area. The recorded rainfall is round 2540 mm.

##### b) Run-off

The run-off of catchment area in the proposed road alignment has been studied on the basis of the following:

- **Shape and size of the catchment**

The proposed road alignment is located in hilly terrain, wherein the water drains to Tuipui River. The shape and size of the catchment with respect to major rivers like R. Tuipui are defined on the ground. However, the shape and size of the catchment of other rivers / nallah are moderately defined and remain within confines of the stream. The shape and size of the catchment of small streams and water lanes is not defined on the hill slope and therefore, the observations are only based on the contour mapping as well as the visual inspection at site. In some places, there are depressions caused by water lines which are marked in shape and size.

- **Topography**

Proposed Widening to 2-lane with geometric improvement and re-alignment of NH 54 from Km 431+000 to 562+000 Km as per design road. The Project Corridor takes off from Lunglei district near Tawipui North Village-2 at Km 431+00 and runs towards southern direction. The road passes through number of villages like Tawipui North village-1, Tawipui South village, Thingfal village, Thingka village, Aoc village, Lawngtlai city, Saika village, Chawntlangpui village, Sihtlangpui village, Kawlchaw village, Zero point, Maubawk village, Theiva village, Theihri village, Tuipang village etc. And numbers of villages like Chawnhu, Paithar Rulkual & many other Southern part of villages etc which are located in the area adjoining to this road. The topographical area of the road under this report i.e. from Km 431+00 to Km 553.604 is divided into seven segments depended upon terrain condition of hill.

**Table: Project road segment**

Sr.No.	Design Chainage		Name of River along / across	Location	Type of Terrain
	From	To			
1	431000	445980	Mengpui Lui	Tawipui North -2 ,Tawipui North -1 & Tawipui South Village	Mountainous to Steep
2	445980	459350	Kamhuai Lui & Ngengrual Lui	Thingfal village	Mountainous & Saddle from 449+400 to 449+800
3	459350	470220	Servapui Lui	Thingka village & Aoc village	Steep
4	470220	475700	Sahri Lui & Chengkawl Lui	Lawngtlai city	Mountainous
5	475700	483730	Tuiphal Lui	Saika village	Steep
6	483730	523070	River Tuipui	Chawntlangpui,Sihtlangpui ,Kawlchaw , Zero point & Maubawk village	Mountainous to Rolling near Tuipui river.
7	523070	553604	Kawlchaw Chava	Theiva ,Theihri & Tuipang village	Mountainous to Steep

Segment	Remarks	Drainage System
Segment-I	In this segment the general topography are Mountainous to Steep terrain .Most of the stretches in this segment are built up. Catchment area is very high. Most of the stretch sandstone types & numbers of small quarry are available at road site. Few stretches are exposed weathered disintegrated rock Therefore to obtain the formation width blasting will be required to widen the existing road.	Mengpui Lui
Segment-II	In this segment the general topography are Mountainous terrain. Most of the stretch siltstone & shale types. Few stretches are exposed weathered disintegrated rock .From Km 449+400 to Km 449+800 proposed road passing through the ridge line. Catchment area is very small because almost entire road passing through small hill lock or hill top / ridge line.	Kamhuai Lui & Ngengrual Lui
Segment-III	In this segment the general topography is Steep terrain. Catchment area is medium because almost entire road passing through high structure hill. Most of the stretch soil types are mixed soil boulder with sandstone & two nos small quarry is available at road site	Servapui Lui
Segment-IV	In this segment the general topography are Mountainous terrain. Almost entire road passing through medium structure hill. Most of the stretch siltstone & shale types. Most of the stretches in this segment are built up. Few stretches are sinking within Lawngtlai City.	Sahri Lui & Chengkawl Lui

Segment-V	In this segment the general topography is that the Steep terrain & most of the stretches passing through the soil mixed boulder & highly weathered sandstone. Catchment area is very high because almost entire road passing through high structure hill.	Tuiphal Lui
Segment-VI	In this segment the general topography is that the Mountainous to rolling terrain to Tuipui River flood plain & most of the stretches passing through the cultivated land. Most of the stretch soil types are mixed soil boulder, siltstone & shale types. Proposed road passing through the high hill structure. Catchment area is very high.	River Tuipui
Segment-VII	In this segment the general topography is that the Mountainous terrain to steep terrain & most of the stretches passing through the cultivated land. Most of the stretch soil types are mixed soil boulder & siltstone & shale types. Proposed road passing through the medium hill structure. Catchment area is very high.	Kawlchaw Chava

All above drainage systems are distributor of Tuipui River. The height of the road at various locations varies from 585 m near Tawipui North Village-2 to 1335.0 m near Tuipang Village above mean sea level (MSL). Lowest MSL along the project is at Kawlchaw River Bridge 140.00 m

- **Geological Characteristics**

Geological characteristics of the sub-sector are varying from ordinary soil including hard soil, clayey soil, soft rock and hard rock. The run-off characteristics in this area vary in direct proportion to the geological characteristics of the area. The hard rock areas pose specific problems in determining the run-off characteristics because of high vertical cliff and / or deep gorge. We have surveyed and detailed out the geological characteristics. The hill soil classification is taken as a guide in determining the run-off catchments areas.

- **Meteorological Characteristics**

The rainfall is high in this Sub-sector. The duration of the rainfall is fairly spread over a longer period. The intensity of rainfall is also observed to be normal to high. The instances of cloud burst have not been recorded. Fog and Mist have been observed.

- **Catchment Surfaces**

It is moderate changing the contours. The flow of the rivers is moderate in these rivers. There is no record of the toe erosion.

- **Storage characteristics**

Storage of run-off is very little

### c) Study Areas

In view of the above observations the drainage system has been studied for the following:

- Identification of the cross drainage works like culverts
- Identification of the drains

### 2.3 Identification of Culverts

Survey has been conducted in order to identify location, shape and size of the culverts required for the drainage of the run-off. All culverts from Km 431+00 to Km 553.6 are for drainage of the water to small river and nallah.

## 2.4 Identification of the Drains

The proposed road more than 1.62 % stretches are new formation and hence there are no drains to be surveyed. The requirement of drains has been identified.

## 2.5 Hydrological Survey and Assessment

### General

This includes the general enquiry, visual inspection, analysis of available data, and historical background in order to make assessment of hydrological behavior and design parameters. It is to lead to the conclusion with respect to:

- Terrain
- Runoff
- Cloud Burst or such factor
- Gorge/ Cliff
- Discharge
- Velocity of Flow
- Scour Condition
- Bed slope
- Stream configuration
- Stability of Banks
- Factor with negative Impact

We have carried out our examination and evaluated the data made available by the client as well as data collected by local enquiry

We undertook desk study of available data on topography, topsoil characteristics, vegetation cover, siltation, etc., so as to assess the characteristics of the catchment area and hydraulic parameters for drainage provision. The finding of the desk study is further supplemented and augmented by a reconnaissance along the area.

It is carried out on the following terms

- Location study
- Stream Condition
- Peak Flood Condition
- Deck level/ adequacy
- Adequacy of span
- Road geometrics of the approaches
- Adequacy of design for smooth and comfort to the traffic
- Bridge/ Road width matching to the requirement (double lane) and future assessment.
- Protection work

Based on the above, the parameters have been identified for carrying out the hydraulic study for aiming at the design parameter of the cross drainage structure.

### Rainy Season

- Annual Rainfall : 254 cms average
- Rainy season is mostly May – October
- Flood is normally during July & August



## CULVERTS

There are existing culverts along the project road. Some of the existing culverts are either silted or having inadequate waterway. Therefore, these are replaced by suitable Hume pipe / box culverts. In addition, new culverts are proposed. Under mentioned Table gives Design discharge for the varying catchment areas and discharging capacity for the various sizes of box culverts.

**Table: Design Discharge for Different Values of Catchments Area**

Catchment Area (ha)	Discharge By		Design Discharge (m <sup>3</sup> /s)
	Dicken's Formula (m <sup>3</sup> /s)	Rational Formula (m <sup>3</sup> /s)	
10	2.31	1.16	2.31
20	3.89	2.29	3.89
30	5.27	3.41	5.27
40	6.54	4.52	6.54
50	7.73	5.61	7.73
60	8.86	6.70	8.86
70	9.95	7.78	9.95
80	11.00	8.85	11.00
90	12.01	9.92	12.01
100	13.00	10.98	13.00

**Table: Discharge Carrying Capacity of the Box Culverts**

Dimension		Depth of flow in m	Area in m <sup>2</sup>	Perimeter in m	R in m	V in m	Q in m <sup>3</sup> /s
a in m	b in m						
1.50	1.50	1.35	2.03	4.20	0.48	1.83	3.71
2.00	1.00	0.85	1.70	3.70	0.46	1.78	3.02
2.00	1.50	1.05	2.10	4.10	0.51	1.65	3.47
2.00	2.00	1.55	3.10	5.10	0.61	1.85	5.74
2.50	1.50	0.90	2.25	4.30	0.52	1.37	3.08
3.00	1.50	0.90	2.70	4.80	0.56	1.44	3.88
3.00	2.00	1.40	4.20	5.80	0.72	53.79	225.90
4.00	1.50	0.90	3.60	5.80	0.62	68.62	247.03
4.00	2.00	1.40	5.60	6.80	.82	101.47	568.22
6.00	2.00	1.40	8.40	8.80	0.95	129.28	1085.93
6.00	3.00	2.40	14.40	10.80	1.33	180.60	2600.71

## SECTION - 3

### SOIL, MATERIAL AND GEO-TECHNICAL INVESTIGATION

#### MATERIALS REPORT:

##### Introduction

This chapter covers the details of test and investigation carried out for evaluating the characteristics of the sub-grade along the project corridor to establish the basis for the design of various elements of the road including pavement and sub grade, embankment and structures.

The main task carried out for soil and material investigation includes:

- Collection and Review of available soil data from various division of Mizoram
- Soil classification along the proposed road
- Investigation of sub grade soil
- Investigation of construction material including identification and inspection of potential source of construction material and extraction sites; testing and evaluating of construction material for suitability for project road construction.
- Geo-technical investigation for bridges and other structures.
- Pit test for foundation of structures

##### Investigations

The detailed investigations include both field and laboratory testing. Field work covered field density test, sub-grade soil sampling by excavating test pits, identification of rock sources and soil borrow sources/ quarries within reasonable short haulage distances of the project road. Test pits were also excavated wherever necessary to obtain samples for testing.

Appropriate laboratory tests were carried out on the representative samples of the soil and material obtained during field investigations to determine relevant engineering properties.

##### Standard Test Procedures

The following standard test procedures were followed for field testing, soil sampling and laboratory testing:

##### Type of Test

S. No	Type of Test	Method
1	Field density using Sand Replacement method	IS:2720 Part 28
2	Water Content	IS: 2720 Part 2
3	Atterberg limits	IS: 2720 Part 5
4	Sieve Analysis	
(a)	Natural Soil	IS: 2720 Part 4
(b)	Rock aggregate	IS: 2386 Part 1
5	Heavy Compaction Test	IS: 2720 Part 8
6	CBR	IS: 2720 Part 16
7	Soundness by Sodium Sulphate (Na <sub>2</sub> SO <sub>4</sub> )	IS: 2386 Part 5
8	Aggregate Impact Value	IS: 2386 Part 4
9	Specific Gravity and Water Absorption of Coarse Aggregate	IS: 2386 Part 3

## Notations

CBR	:	California Bearing Ratio
LL	:	Liquid Limit
PL	:	Plastic Limit
PI	:	Plasticity Index
NP	:	Non – Plastic
MDD	:	Maximum Dry Density
OMC	:	Optimum Moisture Content
FMC	:	Field Moisture Content
FDD	:	Field Dry Density
DCP	:	Dynamic Cone Penetration

## **Soil Classification**

In case of hill road, the soil classification of the hill face (hill/ valley side) plays an important part. Soil classifications consist of the following:

- Ordinary Soil
- Soft Rock
- Hard Rock

The classification is mostly done visually. The classification is tabulated as follows:

Sr. No.	Chainage		Classification of Soil in %			Soil Classification
	To	From	Ordinary soil	Ordinary rock	Hard rock	
1	431	432	40	45	15	Soil Mixed Boulder
2	432	433	39	45	16	Soil Mixed Boulder
3	433	434	36	47	17	Soil Mixed Boulder
4	434	435	37	45	18	Soil Mixed Boulder
5	435	436	36	46	18	Soil Mixed Boulder
6	436	437	38	42	20	Soil Mixed Boulder
7	437	438	36	43	21	Soil Mixed Boulder
8	438	439	35	45	20	Soil Mixed Boulder
9	439	440	36	45	19	Soil Mixed Boulder
10	440	441	38	42	20	Soil Mixed Boulder
11	441	442	35	44	21	Soil Mixed Boulder
12	442	443	37	43	20	Soil Mixed Boulder
13	443	444	36	44	20	Soil Mixed Boulder
14	444	445	36	43	21	Soil Mixed Boulder
15	445	446	39	41	20	Soil Mixed Boulder
16	446	447	37	43	20	Soil Mixed Boulder
17	447	448	41	40	19	Soil Mixed Boulder
18	448	449	37	46	17	Soil Mixed Boulder
19	449	450	37	45	18	Soil Mixed Boulder
20	450	451	35	47	18	Soil Mixed Boulder
21	451	452	43	40	17	Soil Mixed Boulder
22	452	453	41	42	17	Soil Mixed Boulder
23	453	454	42	40	18	Soil Mixed Boulder
24	454	455	46	35	19	Soil Mixed Boulder
25	455	456	42	40	18	Soil Mixed Boulder
26	456	457	46	35	19	Soil Mixed Boulder
27	457	458	43	37	20	Soil Mixed Boulder

28	458	459	35	47	18	Soil Mixed Boulder
29	459	460	33	48	19	Soil Mixed Boulder
30	460	461	38	44	18	Soil Mixed Boulder
31	461	462	49	33	18	Soil Mixed Boulder
32	462	463	46	35	19	Soil Mixed Boulder
33	463	464	46	36	18	Soil Mixed Boulder
34	464	465	43	37	20	Soil Mixed Boulder
35	465	466	44	38	18	Soil Mixed Boulder
36	466	467	41	40	19	Soil Mixed Boulder
37	467	468	39	41	20	Soil Mixed Boulder
38	468	469	38	44	18	Soil Mixed Boulder
39	469	470	37	45	18	Soil Mixed Boulder
40	470	471	37	44	19	Soil Mixed Boulder
41	471	472	40	44	16	Soil Mixed Boulder
42	472	473	51	32	17	Soil Mixed Boulder
43	473	474	43	40	17	Soil Mixed Boulder
44	474	475	42	41	17	Soil Mixed Boulder
45	475	476	37	44	19	Soil Mixed Boulder
46	476	477	37	45	18	Soil Mixed Boulder
47	477	478	36	44	20	Soil Mixed Boulder
48	478	479	38	44	18	Soil Mixed Boulder
49	479	480	37	44	19	Soil Mixed Boulder
50	480	481	37	45	18	Soil Mixed Boulder
51	481	482	37	44	19	Soil Mixed Boulder
52	482	483	37	45	18	Soil Mixed Boulder
53	483	484	35	42	23	Soil Mixed Boulder
54	484	485	36	44	20	Soil Mixed Boulder
55	485	486	36	43	21	Soil Mixed Boulder
56	486	487	37	43	20	Soil Mixed Boulder
57	487	488	36	42	22	Soil Mixed Boulder
58	488	489	36	43	21	Soil Mixed Boulder
59	489	490	38	44	18	Soil Mixed Boulder
60	490	491	38	45	17	Soil Mixed Boulder
61	491	492	37	44	19	Soil Mixed Boulder
62	492	493	35	42	23	Soil Mixed Boulder
63	493	494	37	43	20	Soil Mixed Boulder
64	494	495	36	44	20	Soil Mixed Boulder
65	495	496	36	43	21	Soil Mixed Boulder
66	496	497	36	43	21	Soil Mixed Boulder
67	497	498	36	43	21	Soil Mixed Boulder
68	498	499	35	43	22	Soil Mixed Boulder
69	499	500	37	43	20	Soil Mixed Boulder
70	500	501	37	45	18	Soil Mixed Boulder
71	501	502	35	42	23	Soil Mixed Boulder
72	502	503	36	44	20	Soil Mixed Boulder
73	503	504	36	43	21	Soil Mixed Boulder
74	504	505	37	43	20	Soil Mixed Boulder
75	505	506	36	42	22	Soil Mixed Boulder
76	506	507	35	43	22	Soil Mixed Boulder

77	507	508	36	43	21	Soil Mixed Boulder
78	508	509	37	44	19	Soil Mixed Boulder
79	509	510	36	44	20	Soil Mixed Boulder
80	510	511	38	42	20	Soil Mixed Boulder
81	511	512	36	44	20	Soil Mixed Boulder
82	512	513	34	46	20	Soil Mixed Boulder
83	513	514	37	44	19	Soil Mixed Boulder
84	514	515	37	44	19	Soil Mixed Boulder
85	515	516	39	44	17	Soil Mixed Boulder
86	516	517	45	35	20	Soil Mixed Boulder
87	517	518	48	32	20	Soil Mixed Boulder
88	518	519	45	35	20	Soil Mixed Boulder
89	519	520	33	47	20	Soil Mixed Boulder
90	520	521	34	45	21	Soil Mixed Boulder
91	521	522	33	46	21	Soil Mixed Boulder
92	522	523	24	52	24	Soil Mixed Boulder
93	523	524	25	50	25	Soil Mixed Boulder
94	524	525	34	45	21	Soil Mixed Boulder
95	525	526	37	45	18	Soil Mixed Boulder
96	526	527	39	42	19	Soil Mixed Boulder
97	527	528	38	44	18	Soil Mixed Boulder
98	528	529	38	43	19	Soil Mixed Boulder
99	529	530	36	44	20	Soil Mixed Boulder
100	530	531	37	43	20	Soil Mixed Boulder
101	531	532	38	41	21	Soil Mixed Boulder
102	532	533	44	37	19	Soil Mixed Boulder
103	533	534	35	47	18	Soil Mixed Boulder
104	534	535	38	45	17	Soil Mixed Boulder
105	535	536	37	46	17	Soil Mixed Boulder
106	536	537	40	42	18	Soil Mixed Boulder
107	537	538	38	43	19	Soil Mixed Boulder
108	538	539	35	45	20	Soil Mixed Boulder
109	539	540	35	45	20	Soil Mixed Boulder
110	540	541	39	42	19	Soil Mixed Boulder
111	541	542	36	44	20	Soil Mixed Boulder
112	542	543	38	43	19	Soil Mixed Boulder
113	543	544	37	44	19	Soil Mixed Boulder
114	544	545	38	43	19	Soil Mixed Boulder
115	545	546	40	41	19	Soil Mixed Boulder
116	546	547	44	37	19	Soil Mixed Boulder
117	547	548	38	42	20	Soil Mixed Boulder
118	548	549	36	43	21	Soil Mixed Boulder
119	549	550	37	45	18	Soil Mixed Boulder
120	550	551	34	45	21	Soil Mixed Boulder
121	551	552	38	42	20	Soil Mixed Boulder
122	552	553	37	44	19	Soil Mixed Boulder
123	553	553.6	43	38	19	Soil Mixed Boulder

## Investigation on Sub Grade

The following laboratory tests were conducted on samples of soils below the road level.

- Grain Size Analysis
- Liquid Limit
- Plastic Limit
- Maximum Dry Density
- CBR Test on 4 days soaked samples.

The results of the above field and laboratory investigations for various test pits are reported in the following:

NH 54		Result of Laboratory Test of Soil															
Chainage		Sieve Analysis, percent Passing									Atterberg Limit			Standard Proctor Test		04 Days Soaked CBR in (%) 2.5mm penetration	04 Days Soaked CBR in (%) 5mm penetration
From	To	100 mm	63 mm	22 mm	6.3 mm	4.75 mm	2.00 mm	600 micron	300 micron	75 micron	LL (%)	PL (%)	PI	OMC in %	MDD in gm/cc		
431.00	432.00	100.00	95.97	89.00	67.74	43.36	27.11	17.99	11.98	9.83	31.25	21.36	9.89	11.15	1.84	8.34	7.24
432.00	433.00	100.00	97.02	82.83	66.74	52.21	37.13	25.98	17.96	11.66	31.30	21.59	9.71	10.85	1.84	7.14	6.38
432.00	434.00	100.00	98.44	82.70	66.66	47.51	33.34	23.11	15.64	10.05	31.98	21.52	10.46	11.50	1.84	9.97	8.29
434.00	435.00	100.00	95.79	82.79	68.69	53.78	35.01	23.98	15.22	9.60	31.10	21.73	9.37	11.70	1.81	7.70	6.51
433.00	436.00	100.00	95.98	80.19	63.97	46.88	35.15	24.33	14.26	8.57	30.20	21.64	8.56	11.50	1.83	8.41	7.31
436.00	437.00	100.00	96.10	87.11	66.62	52.39	40.20	24.82	16.42	11.55	31.05	21.51	9.54	13.00	1.79	7.67	6.27
434.00	438.00	100.00	98.62	82.28	63.17	45.32	35.10	24.69	16.96	10.90	31.10	20.22	10.88	11.70	1.83	9.40	8.19
438.00	439.00	100.00	95.42	87.87	66.59	44.33	29.09	19.63	13.04	7.81	30.05	20.52	9.53	11.20	1.88	8.93	7.76
435.00	440.00	100.00	97.19	83.33	67.05	52.32	37.04	23.29	13.32	7.41	30.80	22.44	8.36	10.50	1.85	9.41	9.03
440.00	441.00	100.00	97.69	82.02	67.39	47.75	34.20	21.02	11.98	8.31	31.20	21.30	9.90	10.98	1.88	10.26	9.14
436.00	442.00	100.00	95.97	89.00	67.74	43.36	27.11	17.99	11.98	9.83	31.25	21.36	9.89	11.15	1.84	8.34	7.24
442.00	443.00	100.00	97.02	82.83	66.74	52.21	37.13	25.98	17.96	11.66	31.30	21.59	9.71	10.85	1.84	7.14	6.38
437.00	444.00	100.00	98.44	82.70	66.66	47.51	33.34	23.11	15.64	10.05	31.98	21.52	10.46	11.50	1.84	9.97	8.29
444.00	445.00	100.00	95.79	82.79	68.69	53.78	35.01	23.98	15.22	9.60	31.10	21.73	9.37	11.70	1.81	7.70	6.51
438.00	446.00	100.00	95.98	80.19	63.97	46.88	35.15	24.33	14.26	8.57	30.20	21.64	8.56	11.50	1.83	8.41	7.31
446.00	447.00	100.00	96.10	87.11	66.62	52.39	40.20	24.82	16.42	11.55	31.05	21.51	9.54	13.00	1.79	7.67	6.27
439.00	448.00	100.00	98.62	82.28	63.17	45.32	35.10	24.69	16.96	10.90	31.10	20.22	10.88	11.70	1.83	9.40	8.19
448.00	449.00	100.00	98.17	79.32	64.67	49.17	30.36	17.91	9.92	5.29	33.78	20.47	13.31	12.02	1.87	7.43	6.46
440.00	450.00	100.00	95.16	79.89	58.73	47.66	33.52	18.97	11.84	7.32	33.55	19.76	13.79	11.70	1.80	6.21	5.57
450.00	451.00	100.00	95.97	80.16	66.84	50.19	36.25	23.98	12.49	7.09	32.92	20.76	12.16	11.79	1.82	7.70	7.03
441.00	452.00	100.00	98.53	80.12	63.80	51.41	32.19	22.20	14.30	8.93	31.43	19.46	11.97	13.35	1.87	8.27	7.74
452.00	453.00	100.00	93.84	82.35	75.26	62.48	42.84	23.60	12.12	7.58	32.05	19.25	12.80	13.00	1.83	9.26	8.74
442.00	454.00	100.00	96.57	79.51	62.04	50.26	34.50	22.42	11.36	7.26	33.02	20.59	12.43	11.30	1.83	9.40	8.19
454.00	455.00	100.00	95.77	88.89	69.38	46.02	29.48	19.19	11.22	6.64	34.50	20.56	13.94	11.50	1.86	5.56	5.37

443.00	456.00	100.00	98.08	83.29	68.09	53.32	37.22	23.27	13.32	7.16	33.40	18.18	15.22	11.00	1.84	6.26	5.70
456.00	457.00	100.00	97.89	80.71	57.34	44.68	35.62	22.65	13.24	8.46	33.60	19.48	14.12	13.20	1.81	6.34	5.47
444.00	458.00	100.00	97.52	80.94	55.29	38.06	28.75	17.28	9.78	5.64	34.10	20.48	13.62	11.40	1.88	7.97	6.65
458.00	459.00	100.00	100.00	83.47	59.03	47.20	37.74	21.76	11.73	6.11	32.84	19.52	13.32	12.60	1.82	8.57	7.33
445.00	460.00	100.00	95.64	84.81	67.10	55.69	43.68	29.51	18.42	10.98	33.15	19.44	13.71	12.35	1.84	10.04	9.55
460.00	461.00	100.00	100.00	85.18	67.87	51.47	36.22	22.42	14.75	7.50	32.05	20.52	11.53	11.10	1.86	9.97	8.08
446.00	462.00	100.00	97.64	81.77	58.62	42.15	35.55	22.46	14.42	10.31	31.98	21.39	10.59	10.98	1.93	10.83	9.46
462.00	463.00	100.00	98.07	82.25	65.79	50.70	36.43	24.32	16.09	12.24	31.60	20.44	11.16	11.58	1.89	9.43	9.05
447.00	464.00	100.00	98.31	84.30	62.71	52.30	41.74	27.64	17.91	13.71	31.50	20.35	11.15	11.60	1.84	8.77	8.55
464.00	465.00	100.00	96.11	81.21	67.68	55.37	40.42	28.00	16.26	12.53	31.98	19.38	12.60	11.98	1.87	9.63	9.27
448.00	466.00	100.00	97.07	84.11	66.53	51.48	38.52	27.02	17.96	13.14	32.30	19.42	12.88	12.50	1.78	7.49	7.03
466.00	467.00	100.00	96.39	81.57	61.23	48.07	37.90	25.26	17.32	12.51	33.05	19.78	13.27	12.20	1.76	6.70	6.51
449.00	468.00	100.00	98.30	84.47	70.22	51.12	38.06	25.93	17.80	14.73	32.30	20.22	12.08	11.70	1.76	5.91	5.61
468.00	469.00	100.00	97.00	80.23	62.76	50.23	34.10	22.65	12.62	8.14	32.38	19.55	12.83	10.68	1.87	8.56	7.93
450.00	470.00	100.00	97.71	81.67	53.78	42.27	35.48	20.93	11.53	6.36	33.40	21.42	11.98	11.20	1.92	10.69	9.36
470.00	471.00	100.00	98.04	81.92	65.21	49.71	35.49	21.78	13.78	7.72	32.78	21.60	11.18	11.38	1.90	11.04	9.70
451.00	472.00	100.00	97.55	83.19	61.71	50.47	40.08	23.31	11.81	7.00	32.10	19.12	12.98	10.05	1.91	11.83	10.67
472.00	473.00	100.00	96.04	79.47	65.01	50.93	36.89	23.21	10.43	4.12	30.78	20.50	10.28	12.08	1.85	10.19	9.55
452.00	474.00	100.00	100.00	84.63	65.94	49.27	35.40	22.87	14.18	7.62	31.95	19.61	12.34	9.68	1.93	11.69	9.89
474.00	475.00	100.00	94.85	81.08	53.35	40.33	31.12	17.89	9.65	6.11	31.88	19.46	12.42	10.06	1.92	12.26	11.02
453.00	476.00	100.00	96.64	80.93	65.69	50.03	35.34	22.10	12.38	8.16	32.07	20.28	11.79	11.37	1.85	10.14	9.05
476.00	477.00	100.00	96.48	85.18	61.76	52.95	40.55	24.58	14.33	6.63	31.98	20.25	11.73	10.40	1.91	10.26	9.31
454.00	478.00	100.00	96.16	81.28	61.11	52.22	39.79	22.92	13.09	6.61	33.40	19.53	13.87	11.05	1.89	9.63	9.12
478.00	479.00	100.00	100.00	79.67	52.87	42.98	31.61	17.83	8.78	4.24	31.75	19.35	12.40	11.35	1.86	9.41	8.17
455.00	480.00	100.00	95.46	82.24	67.27	53.88	40.93	23.35	12.34	7.81	31.32	19.64	11.68	10.80	1.88	8.49	7.22
480.00	481.00	100.00	96.73	85.44	54.73	41.48	31.92	18.82	10.38	6.13	32.78	20.26	12.52	12.40	1.74	6.70	6.04
456.00	482.00	100.00	98.55	79.34	53.68	43.96	32.82	19.41	9.91	5.89	31.65	18.73	12.92	12.15	1.77	7.63	7.50
482.00	483.00	100.00	93.71	80.04	63.13	50.74	38.30	20.77	9.14	4.29	33.02	19.29	13.73	10.90	1.86	8.86	8.17
457.00	484.00	100.00	98.61	83.30	59.86	41.30	30.38	18.21	9.70	5.78	33.40	20.63	12.77	9.15	1.92	10.86	9.52



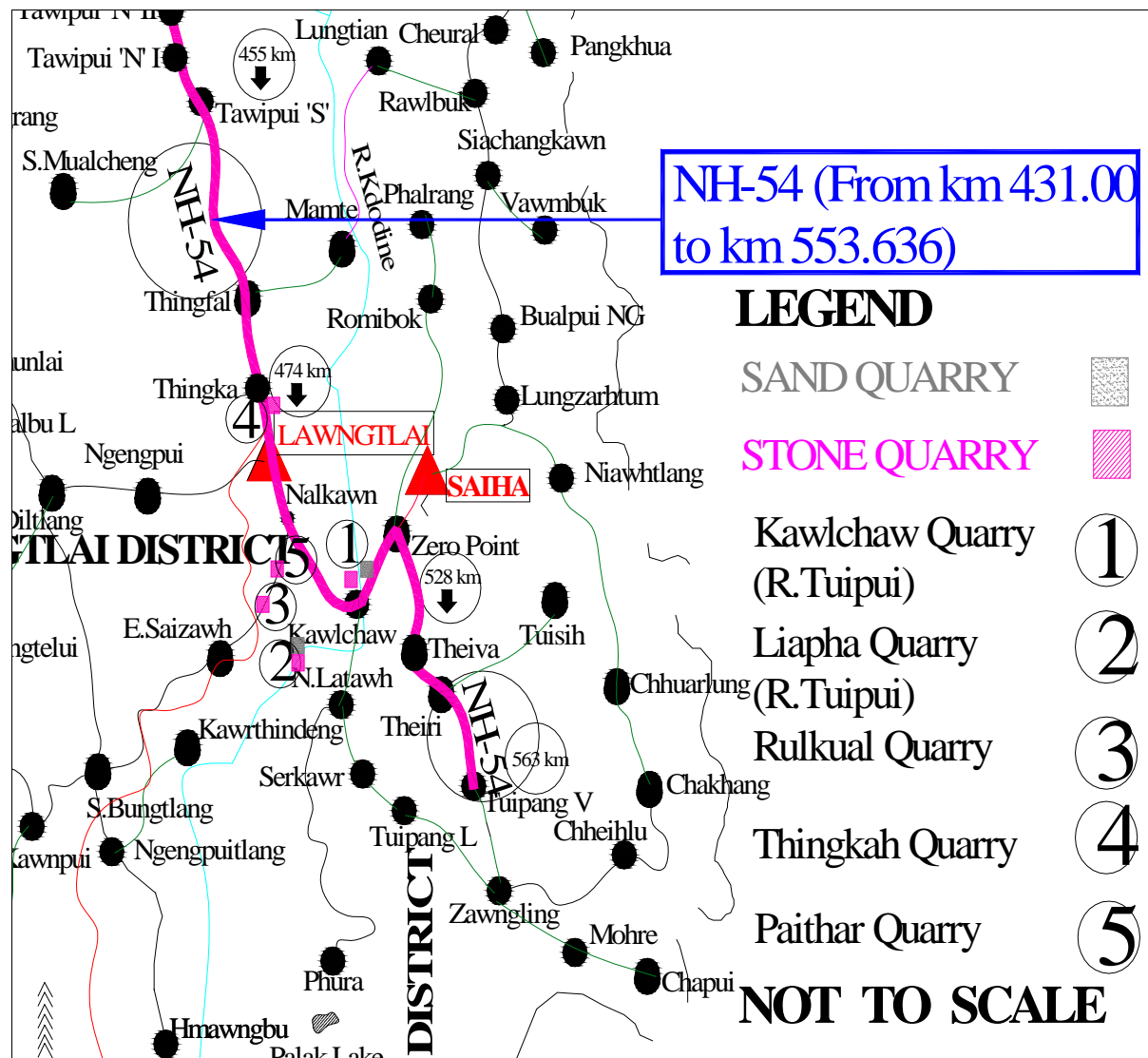
484.00	485.00	100.00	95.56	79.10	59.91	48.53	34.89	22.53	11.74	5.52	32.68	20.84	11.84	13.05	1.87	9.27	8.98
458.00	486.00	100.00	100.00	93.43	72.60	51.01	32.48	20.57	11.94	6.37	31.98	19.27	12.71	13.00	1.85	9.64	8.08
486.00	487.00	100.00	95.30	78.70	65.71	48.27	35.16	23.19	12.06	6.40	32.75	20.85	11.90	13.50	1.83	7.63	6.42
459.00	488.00	100.00	98.13	89.82	59.88	53.58	43.09	22.65	12.25	7.32	33.15	20.45	12.70	13.40	1.78	5.84	5.61
488.00	489.00	100.00	94.60	77.45	63.65	49.19	32.61	21.95	12.47	7.43	32.35	18.59	13.76	12.60	1.82	6.77	6.47
460.00	490.00	100.00	97.67	86.03	77.48	65.73	44.76	25.82	14.15	8.52	32.58	20.83	11.75	12.50	1.80	7.54	6.90
490.00	491.00	100.00	98.09	80.90	57.60	39.65	29.51	18.10	9.87	5.82	31.78	19.52	12.26	13.25	1.79	5.70	5.56
461.00	492.00	100.00	96.48	85.18	61.76	52.95	40.55	24.58	14.33	6.63	34.25	19.49	14.76	12.15	1.79	6.34	5.75
492.00	493.00	100.00	96.16	81.28	61.11	52.22	39.79	22.92	13.09	6.61	35.68	20.37	15.31	12.65	1.75	5.70	5.47
462.00	494.00	100.00	100.00	79.67	52.87	42.98	31.61	17.83	8.78	4.24	34.20	19.60	14.60	12.30	1.79	6.91	5.57
494.00	495.00	100.00	95.46	82.24	67.27	53.88	40.93	23.35	12.34	7.81	33.60	20.50	13.10	11.60	1.84	7.99	6.89
463.00	496.00	100.00	96.73	85.44	54.73	41.48	31.92	18.82	10.38	6.13	32.56	20.04	12.52	10.98	1.88	8.27	6.84
496.00	497.00	100.00	98.55	79.34	53.68	43.96	32.82	19.41	9.91	5.89	34.97	20.39	14.58	12.72	1.77	6.84	6.55
464.00	498.00	100.00	93.71	80.04	63.13	50.74	38.30	20.77	9.14	4.29	33.68	20.64	13.04	11.47	1.82	7.86	6.84
498.00	499.00	100.00	98.17	87.68	72.24	56.45	44.02	29.25	19.35	16.30	35.85	20.62	15.23	12.85	1.76	5.91	5.56
465.00	500.00	100.00	97.95	82.23	67.22	58.14	45.91	30.97	19.57	14.59	33.65	20.61	13.04	12.00	1.80	7.49	6.18
500.00	501.00	100.00	97.99	85.46	63.35	53.98	41.65	27.47	16.56	13.32	32.95	20.67	12.28	11.58	1.86	8.13	7.14
466.00	502.00	100.00	95.53	81.38	68.09	55.85	42.79	28.11	17.91	14.78	33.55	19.98	13.57	11.45	1.82	7.77	6.70
502.00	503.00	100.00	97.96	83.72	62.67	53.08	42.43	29.38	19.85	14.84	33.50	20.35	13.15	11.20	1.84	8.70	7.98
467.00	504.00	100.00	98.53	81.14	59.94	50.99	38.94	25.84	15.55	10.25	30.95	21.64	9.31	10.00	1.92	11.97	9.84
504.00	505.00	100.00	97.24	83.33	64.25	54.94	43.61	29.04	19.35	15.17	34.62	20.38	14.24	12.62	1.80	7.49	6.42
468.00	506.00	100.00	96.45	83.20	68.39	54.25	43.03	27.64	16.68	13.43	32.00	19.53	12.47	11.35	1.86	9.34	8.12
506.00	507.00	100.00	95.58	83.94	65.00	51.56	41.06	27.13	17.96	14.72	33.15	19.90	13.25	12.45	1.77	6.77	6.04
469.00	508.00	100.00	97.71	81.67	53.78	42.27	35.48	20.93	11.53	6.36	33.40	21.42	11.98	11.20	1.92	10.69	9.36
508.00	509.00	100.00	98.04	81.92	65.21	49.71	35.49	21.78	13.78	7.72	32.78	21.60	11.18	11.38	1.90	11.04	9.70
470.00	510.00	100.00	97.55	83.19	61.71	50.47	40.08	23.31	11.81	7.00	32.10	19.12	12.98	10.05	1.91	11.83	10.67
510.00	511.00	100.00	96.04	79.47	65.01	50.93	36.89	23.21	10.43	4.12	30.78	20.50	10.28	12.08	1.85	10.19	9.55
471.00	512.00	100.00	100.00	84.63	65.94	49.27	35.40	22.87	14.18	7.62	31.95	19.61	12.34	9.68	1.93	11.69	9.89
512.00	513.00	100.00	94.85	81.08	53.35	40.33	31.12	17.89	9.65	6.11	31.88	19.46	12.42	10.06	1.92	12.26	11.02

472.00	514.00	100.00	96.64	80.93	65.69	50.03	35.34	22.10	12.38	8.16	32.07	20.28	11.79	11.37	1.85	10.14	9.05
514.00	515.00	100.00	96.48	85.18	61.76	52.95	40.55	24.58	14.33	6.63	31.98	20.25	11.73	10.40	1.91	10.26	9.31
473.00	516.00	100.00	96.16	81.28	61.11	52.22	39.79	22.92	13.09	6.61	33.40	19.53	13.87	11.05	1.89	9.63	9.12
516.00	517.00	100.00	100.00	79.67	52.87	42.98	31.61	17.83	8.78	4.24	31.75	19.35	12.40	11.35	1.86	9.41	8.17
474.00	518.00	100.00	95.46	82.24	67.27	53.88	40.93	23.35	12.34	7.81	31.32	19.64	11.68	10.80	1.88	8.49	7.22
518.00	519.00	100.00	96.73	85.44	54.73	41.48	31.92	18.82	10.38	6.13	32.78	20.26	12.52	12.40	1.74	6.70	6.04
475.00	520.00	100.00	98.55	79.34	53.68	43.96	32.82	19.41	9.91	5.89	31.65	18.73	12.92	12.15	1.77	7.63	7.50
520.00	521.00	100.00	93.71	80.04	63.13	50.74	38.30	20.77	9.14	4.29	33.02	19.29	13.73	10.90	1.86	8.86	8.17
476.00	522.00	100.00	98.61	83.30	59.86	41.30	30.38	18.21	9.70	5.78	33.40	20.63	12.77	9.15	1.92	10.86	9.52
522.00	523.00	100.00	95.56	79.10	59.91	48.53	34.89	22.53	11.74	5.52	32.68	20.84	11.84	13.05	1.87	9.27	8.98
477.00	524.00	100.00	100.00	93.43	72.60	51.01	32.48	20.57	11.94	6.37	31.98	19.27	12.71	13.00	1.85	9.64	8.08
524.00	525.00	100.00	95.30	78.70	65.71	48.27	35.16	23.19	12.06	6.40	32.75	20.85	11.90	13.50	1.83	7.63	6.42
478.00	526.00	100.00	98.13	89.82	59.88	53.58	43.09	22.65	12.25	7.32	33.15	20.45	12.70	13.40	1.78	5.84	5.61
526.00	527.00	100.00	94.60	77.45	63.65	49.19	32.61	21.95	12.47	7.43	32.35	18.59	13.76	12.60	1.82	6.77	6.47
479.00	528.00	100.00	97.67	86.03	77.48	65.73	44.76	25.82	14.15	8.52	32.58	20.83	11.75	12.50	1.80	7.54	6.90
528.00	529.00	100.00	98.09	80.90	57.60	39.65	29.51	18.10	9.87	5.82	31.78	19.52	12.26	13.25	1.79	5.70	5.56
480.00	530.00	100.00	96.00	88.04	66.39	46.00	29.75	20.77	13.64	10.07	33.35	21.58	11.77	10.40	1.81	9.41	8.55
530.00	531.00	100.00	98.76	85.08	70.07	53.47	38.49	26.32	16.66	12.52	32.30	21.33	10.97	11.00	1.82	9.93	9.12
481.00	532.00	100.00	98.81	84.17	66.96	51.37	31.82	21.83	14.39	9.46	30.98	22.56	8.42	10.60	1.83	11.07	10.82
532.00	533.00	100.00	96.13	84.38	67.77	52.88	39.32	27.02	17.57	12.58	32.05	20.59	11.46	11.35	1.79	9.13	8.31
482.00	534.00	100.00	98.64	85.53	66.20	49.94	39.35	26.21	16.08	11.27	31.78	21.58	10.20	11.40	1.76	8.70	8.08
534.00	535.00	100.00	96.00	87.96	71.23	50.25	34.51	24.74	16.71	13.96	34.20	19.53	14.67	12.30	1.82	10.33	9.22
483.00	536.00	100.00	97.55	83.16	69.16	52.99	37.82	26.78	17.51	12.60	33.15	19.49	13.66	11.70	1.83	11.61	9.71
536.00	537.00	100.00	98.00	82.19	67.32	47.74	34.49	25.11	16.99	13.81	32.98	19.44	13.54	12.30	1.82	10.47	9.29
484.00	538.00	100.00	96.57	81.99	64.55	50.17	33.41	20.93	11.67	7.55	30.98	20.86	10.12	10.40	1.92	13.04	11.97
538.00	539.00	100.00	98.58	84.89	67.23	51.93	40.15	27.10	16.01	13.26	32.99	20.71	12.28	11.67	1.85	10.11	9.17
485.00	540.00	100.00	96.90	86.25	66.89	51.68	40.96	22.61	10.80	7.69	31.50	18.33	13.17	12.10	1.83	9.71	8.00
540.00	541.00	100.00	98.68	82.93	63.13	45.45	35.44	24.03	16.47	13.92	32.05	18.56	13.49	11.50	1.86	8.14	7.05
486.00	542.00	100.00	96.15	88.11	70.74	51.21	36.77	26.10	18.34	13.81	36.05	20.56	15.49	14.10	1.79	6.77	5.85

542.00	543.00	100.00	98.71	84.45	69.59	53.46	39.30	27.90	18.76	14.52	35.78	20.83	14.95	11.70	1.81	7.34	6.19
487.00	544.00	100.00	95.53	81.58	66.02	51.89	38.90	27.67	18.73	13.73	36.67	21.51	15.16	12.50	1.78	6.20	5.51
544.00	545.00	100.00	98.68	84.05	64.49	51.47	41.44	28.89	20.20	15.55	35.75	21.60	14.15	11.70	1.81	7.34	6.42
488.00	546.00	100.00	98.18	87.76	64.38	54.35	42.35	26.06	18.30	10.98	31.25	19.44	11.81	12.75	1.83	6.20	5.80
546.00	547.00	100.00	98.32	81.32	66.26	55.18	41.49	30.82	19.32	13.51	32.65	20.52	12.13	12.58	1.80	7.07	6.10
489.00	548.00	100.00	97.48	84.00	69.41	56.14	44.32	29.56	18.32	12.89	31.92	19.42	12.50	13.45	1.83	9.13	8.17
548.00	549.00	100.00	96.51	84.19	69.43	53.31	38.51	24.99	11.40	7.50	32.18	20.30	11.88	9.40	1.94	9.13	8.79
490.00	550.00	100.00	97.11	81.10	64.30	51.32	36.19	25.17	13.09	6.26	32.38	19.55	12.83	10.68	1.86	9.64	9.12
550.00	551.00	100.00	94.66	81.72	67.55	51.97	35.16	25.20	12.01	7.31	33.78	20.30	13.48	10.70	1.87	7.99	7.22
491.00	552.00	100.00	95.46	82.24	67.27	53.88	40.93	23.35	12.34	7.81	33.60	20.50	13.10	11.60	1.84	7.99	6.89
552.00	553.00	100.00	96.73	85.44	54.73	41.48	31.92	18.82	10.38	6.13	32.56	20.04	12.52	10.98	1.88	8.27	6.84
492.00	554.00	100.00	98.55	79.34	53.68	43.96	32.82	19.41	9.91	5.89	34.97	20.39	14.58	12.72	1.77	6.84	6.55
554.00	555.00	100.00	93.71	80.04	63.13	50.74	38.30	20.77	9.14	4.29	33.68	20.64	13.04	11.47	1.82	7.86	6.84
493.00	556.00	100.00	98.17	87.68	72.24	56.45	44.02	29.25	19.35	16.30	35.85	20.62	15.23	12.85	1.76	5.91	5.56
556.00	557.00	100.00	97.95	82.23	67.22	58.14	45.91	30.97	19.57	14.59	33.65	20.61	13.04	12.00	1.80	7.49	6.18
494.00	558.00	100.00	97.99	85.46	63.35	53.98	41.65	27.47	16.56	13.32	32.95	20.67	12.28	11.58	1.86	8.13	7.14
558.00	559.00	100.00	95.53	81.38	68.09	55.85	42.79	28.11	17.91	14.78	33.55	19.98	13.57	11.45	1.82	7.77	6.70
495.00	560.00	100.00	97.96	83.72	62.67	53.08	42.43	29.38	19.85	14.84	33.50	20.35	13.15	11.20	1.84	8.70	7.98
560.00	561.00	100.00	95.68	88.30	64.82	57.39	42.75	35.60	25.34	14.84	33.50	21.22	12.28	10.98	1.82	8.92	7.85

## Inspection of Quarry Material

The availability of the stone in rock quarries & sand quarry are indicated in the map.



The rock deposits are available along or the vicinity of the project road alignment. Besides, cobbles, pebbles and sand deposits are available in the rivers or streams crossing the main alignment. Construction materials for GSB, Cross drainage & Masonry R/Wall etc. works, will be available at local quarry within the project corridor and WMM, DBM & BC material from Tuipui River at Kawlchaw on NH 54 at Km 506 and Liapha on Multi Model Transit Route. Water Absorption and AIV of these quarries are within the limit of the Ministry's Specifications. Bitumen, steel and cement will have to be taken from Aizawl.

Aggregate for sub base, base, surface courses have been collected from the identified rock quarries and rock metal from the crusher under operation in the existing / potential quarries. The location, estimated quantity and the approximate distance of each quarry from the nearest point on the Project Corridor are compiled below.

### Source of Quarry Material

Sr.No.	Name of Source	Type of Material	Location	Quantity
1	Kawlchaw (R.Kaladan)	Sand, GSB,WMM,DBM,BC & Stone aggregates	On NH 54 at Km 506+650	Plenty
2	Liapha (R.Kaladan)	Sand, GSB,WMM,DBM,BC & Stone aggregates	NH-54 at Km 473+300 on Multi Model Transit Route at 37 Km then 5 km earthen road	Plenty
3	Rulkual Quarry	Masonry Stone ,DBM,BC & Stone aggregates	NH-54 at Km 486+900 on NCV Road at 18 Km surface road	Plenty
4	Thingkah Quarry	Masonry Stone	On NH 54 at Km 469+700	Plenty
5	Paithar Quarry	Masonry Stone	NH-54 at Km 486+900 on NCV Road at 8 Km surface road	Plenty
6	Near Saika Village	Masonry Stone	On NH 54 at Km483+450	Plenty
7	Near Zero point	Masonry Stone	On NH 54 at Km 517+000	Plenty
8	Near Maubawk village	Masonry Stone	On NH 54 at Km 529+500	Plenty

The following tests have been conducted on rock aggregate from the quarry:

- Specific gravity
- Water Absorption
- Impact Value
- Los Angeles Abrasion Value

The results of the above field and laboratory investigations for various test pits are reported in the following:

The test sheet is as follows:

## SPECIFIC GRAVITY TEST & WATER ABSORPTION

(As per IS 2386 Part III)

Source : Tuipui River

Location :- On NH 54 at Km 506+650 (Kawlchaw)

Serial No. : 1

Sr.No.	MEASUREMENT	TRAIL - 1	TRAIL - 2	AVERAGE
1	Wt. Of SSD Sample in air	524	532	
2	Wt. Of Pycno.+ water at 25 <sup>o</sup> c	1554	1578	
3	Wt. Of Pycno.+ water + SSD sample	1870	1900	
4	Moisture Content			
	a. Wt. Of Cont.+ SSD sample	524	532	
	b. Wt. Of Cont.+ DRY sample	513	521	
	c. Wt. Of Cont.			
	d. Wt. Of DRY sample (b-c)	513	521	
	e. Wt. Of Moisture (a-b)	11	11	
5	Water Absorption $e/d \times 100$	2.144	2.111	2.128
6	DRY wt. Of SG Sample	513	521	
7	Bulk Specific Gravity (Dry) $6/(1+2 - 3)$	2.466	2.111	2.289
8	Bulk Specific Gravity (SSD) $1/(1+2 - 3)$	2.519	2.533	2.526
9	Apparent Specific Gravity $6/(6+2 - 3)$	2.604	2.618	2.611

Source : Tuipui River

Location :- Liapha near Multi Model Transit Route

Serial No. : 2

Sr.No.	MEASUREMENT	TRAIL - 1	TRAIL - 2	AVERAGE
1	Wt. Of SSD Sample in air	630	680	
2	Wt. Of Pycno.+ water at 25 <sup>o</sup> c	1554	1578	
3	Wt. Of Pycno.+ water + SSD sample	1928	1956	
4	Moisture Content			
	a. Wt. Of Cont.+ SSD sample	630	680	
	b. Wt. Of Cont.+ DRY sample	617	665	
	c. Wt. Of Cont.			
	d. Wt. Of DRY sample (b-c)	617	665	
	e. Wt. Of Moisture (a-b)	13	15	
5	Water Absorption $e/d \times 100$	2.107	2.256	2.181
6	DRY wt. Of SG Sample	617	665	
7	Bulk Specific Gravity (Dry) $6/(1+2 - 3)$	2.410	2.111	2.261
8	Bulk Specific Gravity (SSD) $1/(1+2 - 3)$	2.461	2.252	2.356
9	Apparent Specific Gravity $6/(6+2 - 3)$	2.539	2.317	2.428

**Source : Rulkual Quarry**

**Location :- NH-54 at Km 486+900 on NCV Road at 18 Km**

**Serial No. : 3**

Sr.No.	MEASUREMENT	TRAIL - 1	TRAIL - 2	AVERAGE
1	Wt. Of SSD Sample in air	580	625	
2	Wt. Of Pycno.+ water at 25 <sup>o</sup> c	1554	1578	
3	Wt. Of Pycno.+ water + SSD sample	1906	1935	
4	Moisture Content			
	a. Wt. Of Cont.+ SSD sample	580	625	
	b. Wt. Of Cont.+ DRY sample	567	612	
	c. Wt. Of Cont.			
	d. Wt. Of DRY sample (b-c)	567	612	
	e. Wt. Of Moisture (a-b)	13	13	
5	Water Absorption $e/d \times 100$	2.293	2.124	2.208
6	DRY wt. Of SG Sample	567	612	
7	Bulk Specific Gravity (Dry) $6/(1+2 - 3)$	2.487	2.111	2.299
8	Bulk Specific Gravity (SSD) $1/(1+2 - 3)$	2.544	2.332	2.438
9	Apparent Specific Gravity $6/(6+2 - 3)$	2.637	2.400	2.519

### AGGREGATE IMPACT VALUE TEST

(AS PER IS 2386 Pt.IV)

**Source : Tuipui River**

**Location :- On NH 54 at Km 506+650 (Kawlchaw)**

**Serial No. : 1**

**Sample :- 12.5 mm passing & 10.0 mm retained**

Particulars	TRIAL - I	TRIAL - II	AVERAGE
Total wt. of Sample (g) ( 12.5 mm - 10.0 mm ) <b>A</b>	342	342	25.28%
Wt. of material passing on 2.36 mm after test (g) <b>B</b>	82.8	90.1	
Agg. Impact Value (%) $A.I.V. = (B * 100) / A$	24.21	26.35	

**Source : Tuipui River**

**Location :- Liapha near Multi Model Transit Route**

**Serial No. : 2**

**Sample :- 12.5 mm passing & 10.0 mm retained**

Particulars	TRIAL - I	TRIAL - II	AVERAGE
Total wt. of Sample (g) ( 12.5 mm - 10.0 mm ) <b>A</b>	335	335	24.21%
Wt. of material passing on 2.36 mm after test (g) <b>B</b>	82.1	80.1	
Agg. Impact Value (%) $A.I.V. = (B * 100) / A$	24.51	23.91	

**Source : Rulkual Quarry**

**Location :- NH-54 at Km 486+900 on NCV Road at 18 Km**

**Serial No. : 3**

**Sample :- 12.5 mm passing & 10.0 mm retained**

Particulars	TRIAL - I	TRIAL - II	AVERAGE
Total wt. of Sample (g) ( 12.5 mm - 10.0 mm ) <b>A</b>	342	342	22.05%
Wt. of material passing on 2.36 mm after test (g) <b>B</b>	77.63	73.16	
Agg. Impact Value (%) $A.I.V. = (B * 100) / A$	22.70	21.39	



## LOSS ANGELES ABRASION TEST REPORT

(AS PER IS 2386 Pt.IV)

**Source : Tuipui River**

**Location :- On NH 54 at Km 506+650 (Kawlchaw)**

**Serial No. : 1**

**Sample :- 12.5 mm passing & 10.0 mm retained**

Passing	Retained	Weight of Material	
40.00	25.00	1250	
25.00	20.00	1250	
20.00	12.50	1250	
12.50	10.00	1250	
DESCRIPTION		TRIAL - I	TRIAL - II
Total wt. of Sample (g) A		5000	5000
Wt. of material passing on 1.70 mm after test (g) B		1520	1521
Los Angeles Abrasion Value (%) L A A. = (B * 100) / A		30.40	30.42
		LIMITS - 40%	AVERAGE 30.41

**Source : Tuipui River**

**Location :- Liapha near Multi Model Transit Route**

**Serial No. : 2**

Passing	Retained	Weight of Material	
40.00	25.00	1250	
25.00	20.00	1250	
20.00	12.50	1250	
12.50	10.00	1250	
DESCRIPTION		TRIAL - I	TRIAL - II
Total wt. of Sample (g) A		5000	5000
Wt. of material passing on 1.70 mm after test (g) B		1628	1650
Los Angeles Abrasion Value (%) L A A. = (B * 100) / A		32.56	33.00
		LIMITS - 40%	AVERAGE 32.78

**Source : Rulkual Quarry**

**Location :- NH-54 at Km 486+900 on NCV Road at 18 Km**

**Serial No. : 3**

Passing	Retained	Weight of Material	
40.00	25.00	1250	
25.00	20.00	1250	
20.00	12.50	1250	
12.50	10.00	1250	
DESCRIPTION		TRIAL - I	TRIAL - II
Total wt. of Sample (g) A		5000	5000
Wt. of material passing on 1.70 mm after test (g) B		1938	1988
Los Angeles Abrasion Value (%) L A A. = (B * 100) / A		38.76	39.76
		LIMITS - 40%	AVERAGE 39.26

**Fine Aggregates:** Fine Aggregate for Structural work have been collected from Tuipui River. The gradation tests have been conducted on fine aggregate from Tuipui River Gradation test results are as follows:

**SIEVE ANALYSIS FOR C.Agg./F.Agg./GSB/WMM**

**Source :-** Tuipui River

**Location :-** On NH 54 at Km 506+650 (Kawlchaw)

**Material :-** Sand

**Weight of Dry Material:-** 1000 gms.

Sample No.:- 1					
Sieve Size (mm)	Weight Retained (g)	% of Retained	Cumulative % of Retained	% of Passing	Spec. % of Passing as per MORT&H
10.00	nil	nil	nil	100	100
4.75	22	2.20	2.20	97.80	90 - 100
2.36	259	25.90	28.10	78.90	75 - 100
1.18	135	13.50	41.60	58.40	55 - 90
600 micron	187	18.70	60.30	39.70	35 - 59
300 micron	102	10.20	70.50	29.50	08 - 30
150 micron	75	7.50	78.00	8.70	0 - 10
			FM = 2.81		

Sample No.:- 2					
Sieve Size (mm)	Weight Retained (g)	% of Retained	Cumulative % of Retained	% of Passing	Spec. % of Passing as per MORT&H
10.00	nil	nil	nil	100	100
4.75	4	0.40	0.40	99.60	90 - 100
2.36	145	14.50	14.90	85.10	85- 100
1.18	100	10.00	24.90	75.10	75-100
600 micron	135	13.50	38.40	61.60	60 - 79
300 micron	245	24.50	62.90	37.10	12 - 40
150 micron	289	28.90	91.80	8.20	0- 10
			FM = 2.33		

Sample No.:- 3					
Sieve Size (mm)	Weight Retained (g)	% of Retained	Cumulative % of Retained	% of Passing	Spec. % of Passing as per MORT&H
10.00	nil	nil	nil	100	100
4.75	21	2.10	2.10	97.90	90 - 100
2.36	79	7.90	10.00	90.00	85- 100
1.18	109	10.90	20.90	79.10	75-100
600 micron	134	13.40	34.30	65.70	60 - 79
300 micron	305	30.50	64.80	35.20	12 - 40
150 micron	268	26.80	91.60	8.40	0- 10
			FM = 2.24		

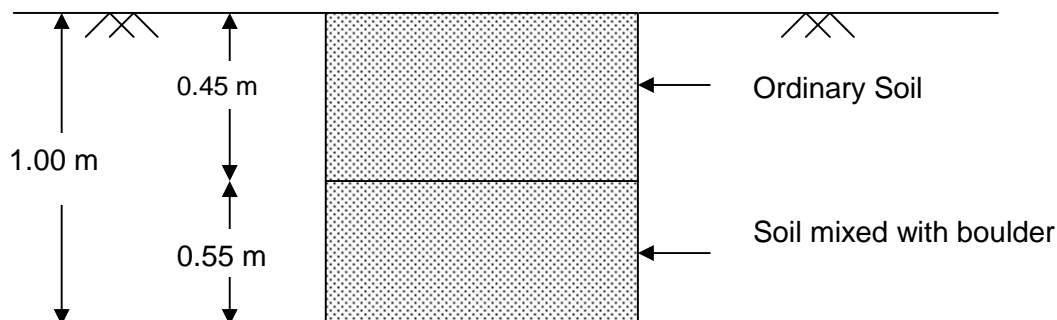
## Investigation of Water Tables

The water table depth along the road corridor has been measured at suitable locations. The water table depth is dependent upon the season and the precipitation. There is no location where the water is directly affecting the road bank.

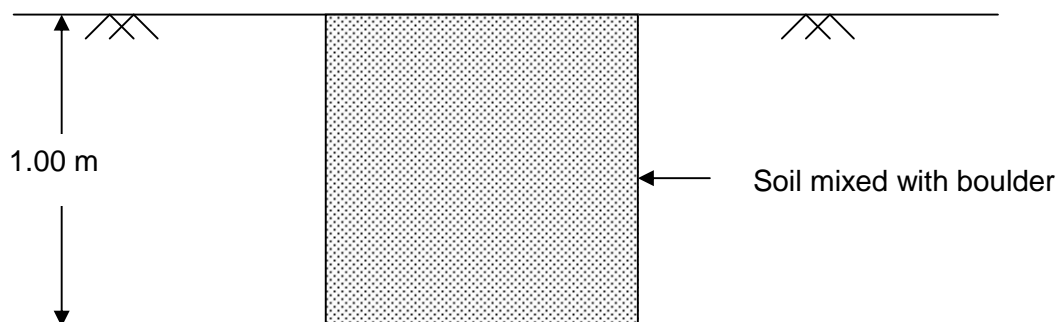
## Trial Pit Investigation

The trial pit is dug at every 5.00kms interval and at the end chainage.

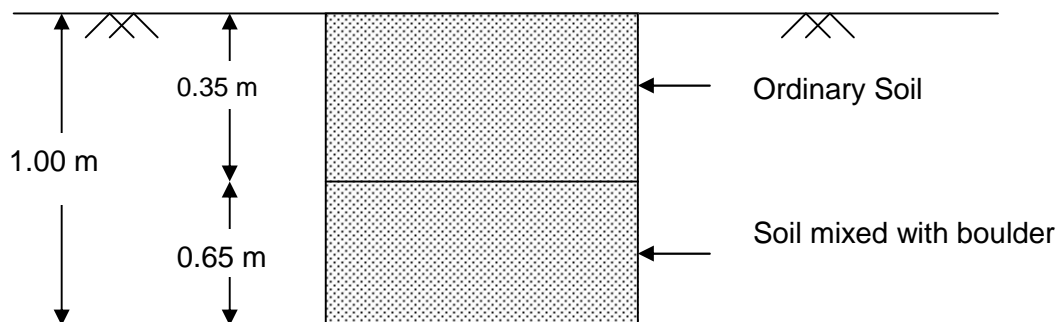
**Chainage 431+00** : The soil is of ordinary soil upto a depth of about 45 cms, and then followed with a soil mixed with some boulder materials.



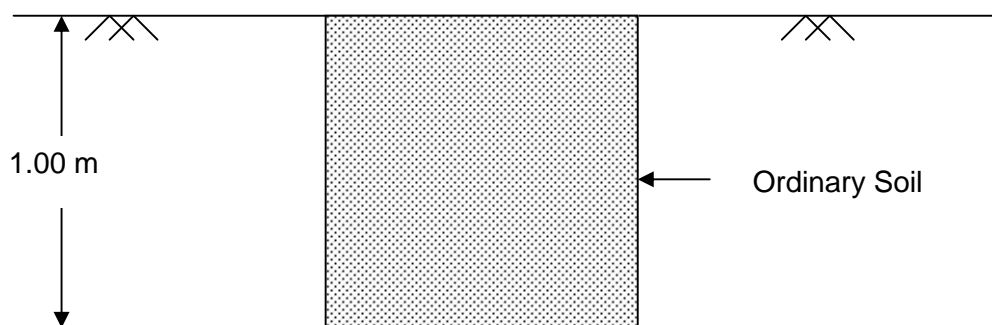
**Chainage 436+00** : From the surface the soil is found mixed with boulders



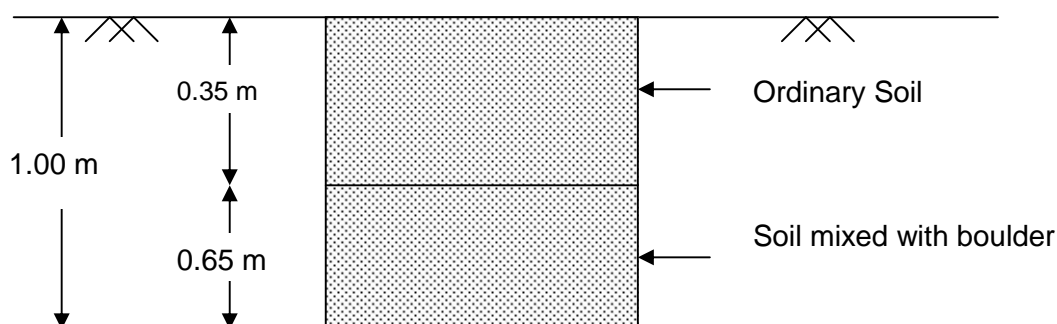
**Chainage 441+000** : The soil is of ordinary soil upto a depth of about 35 cms, and then followed with a soil mixed with some boulder materials.



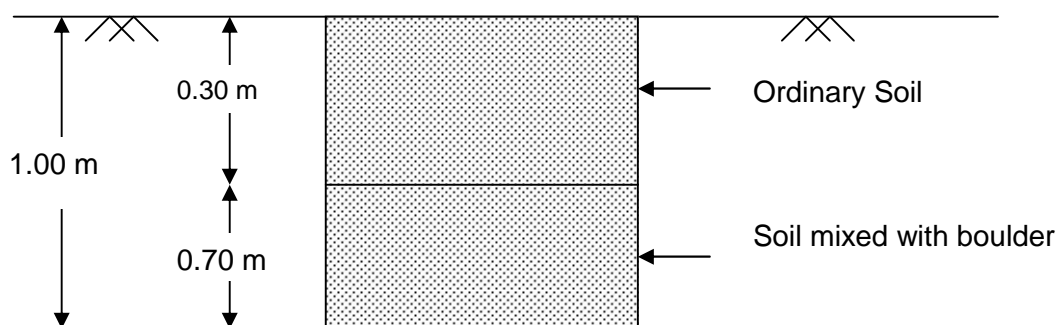
**Chainage 446+000** : From the surface the soil is found ordinary soil.



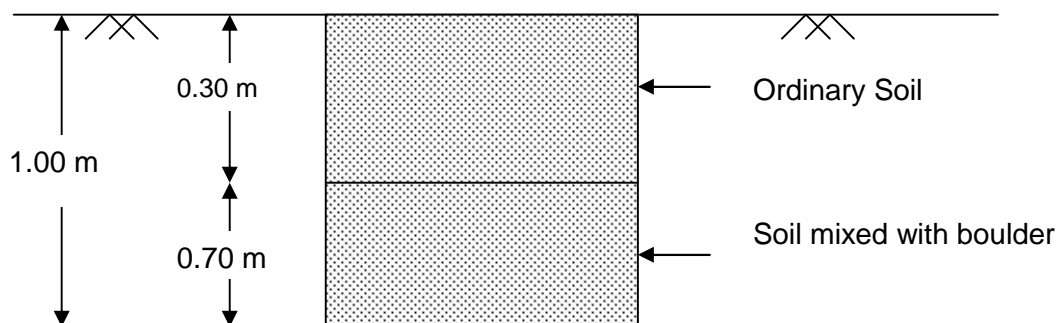
**Chainage 451+000** : The soil is of ordinary soil upto a depth of about 35 cms, and then followed with a soil mixed with some boulder materials.



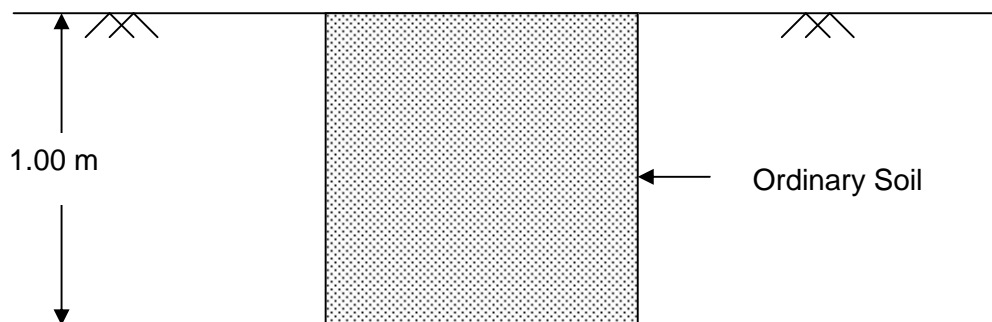
**Chainage 456+000** : The soil is of ordinary soil upto a depth of about 30 cms, and then followed with a soil mixed with some boulder materials.



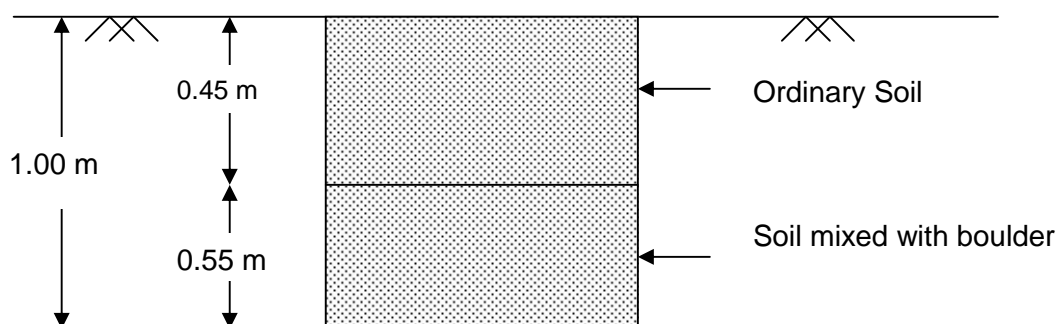
**Chainage 461+000** : The soil is of ordinary soil upto a depth of about 30 cms, and then followed with a soil mixed with some boulder materials.



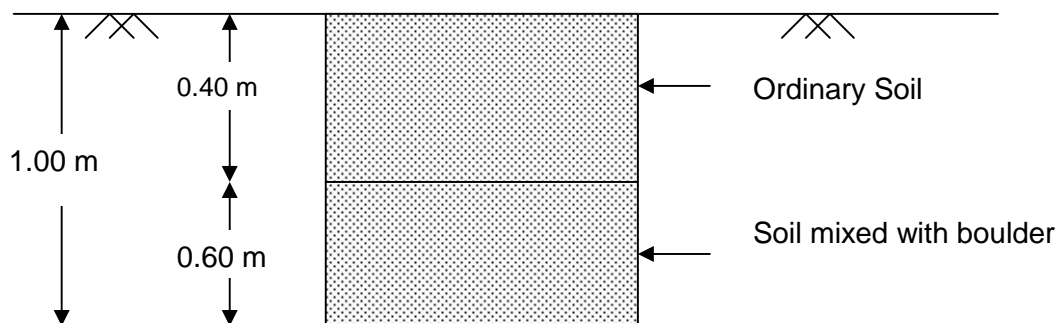
**Chainage 466+000** : From the surface the soil is found ordinary soil.



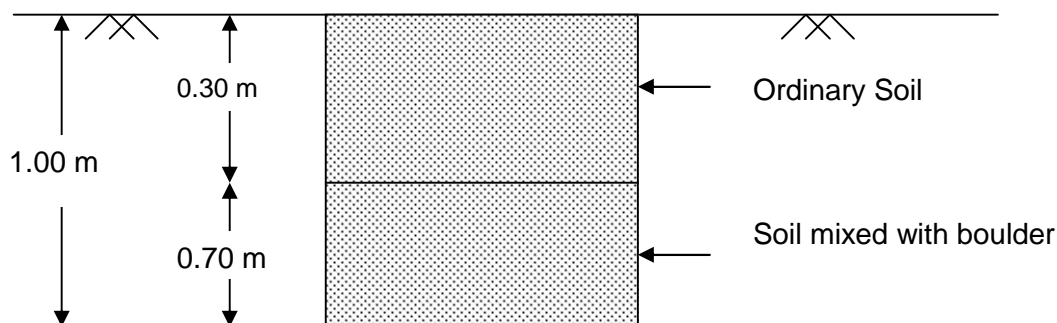
**Chainage 471+000** : The soil is of ordinary soil upto a depth of about 45 cms, and then followed with a soil mixed with some boulder materials.



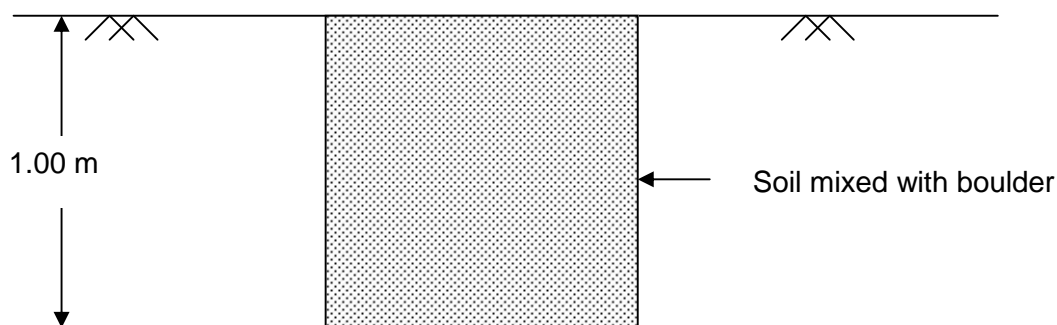
**Chainage 476+000** : The soil is of ordinary soil upto a depth of about 40 cms, and then followed with a soil mixed with some boulder materials.



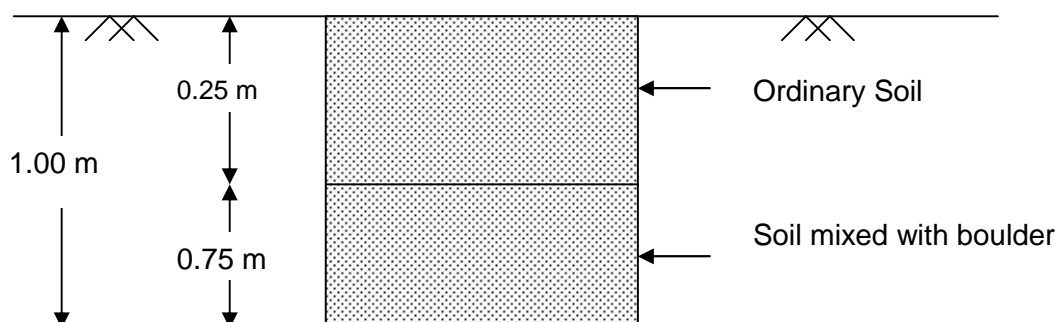
**Chainage 481+000** : The soil is of ordinary soil upto a depth of about 30 cms, and then followed with a soil mixed with some boulder materials.



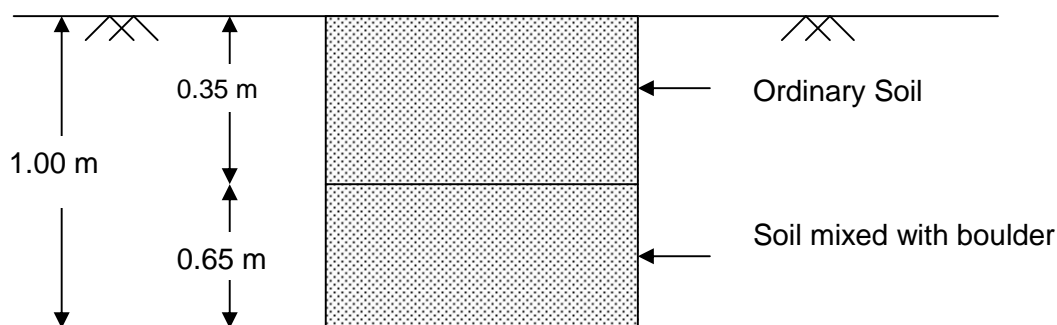
**Chainage 486+000** : From the surface the soil is found mixed with boulders.



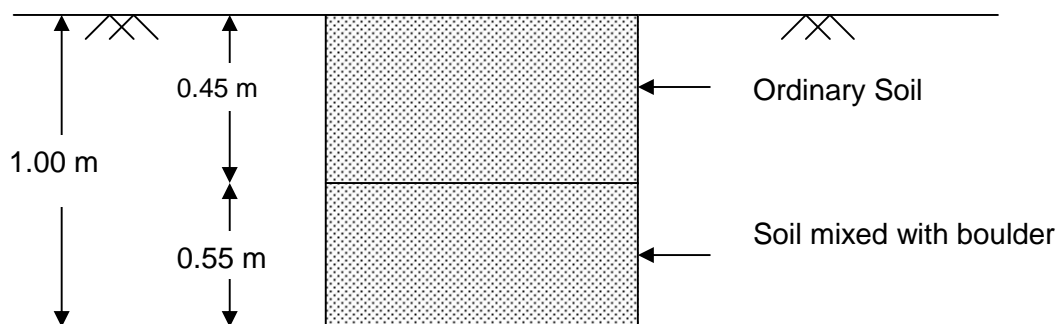
**Chainage 491+000** : The soil is of ordinary soil upto a depth of about 25 cms, and then followed with a soil mixed with some boulder materials.



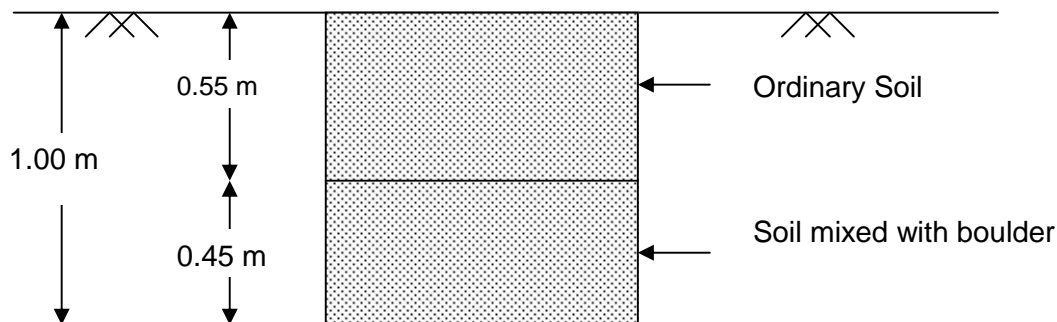
**Chainage 496+000** : The soil is of ordinary soil upto a depth of about 35 cms, and then followed with a soil mixed with some boulder materials.



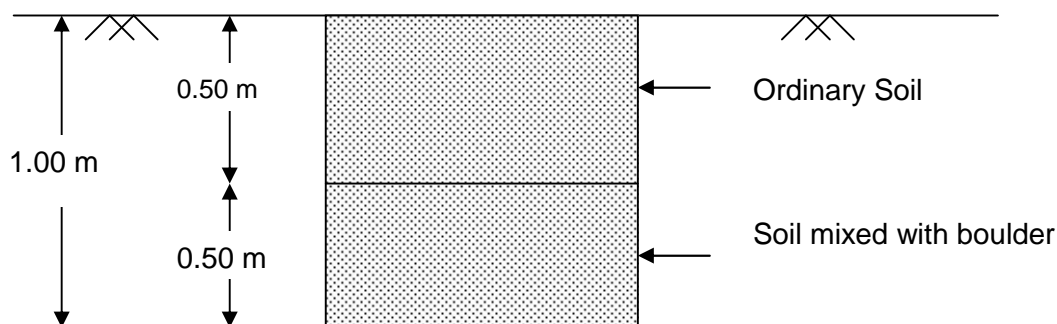
**Chainage 501+000** : The soil is of ordinary soil upto a depth of about 45 cms, and then followed with a soil mixed with some boulder materials.



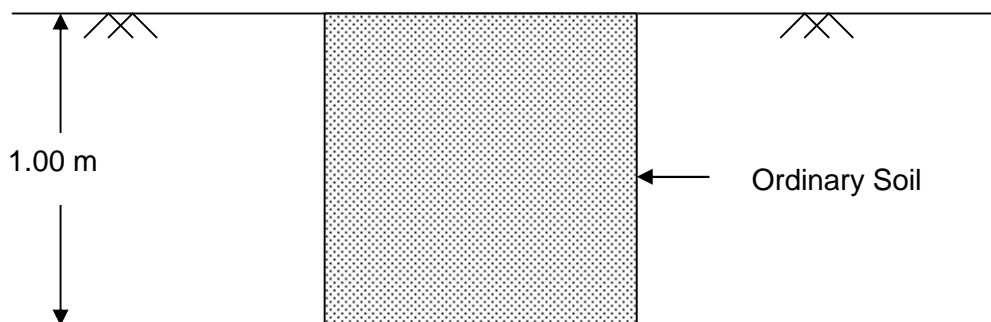
**Chainage 506+000 :** The soil is of ordinary soil upto a depth of about 55 cms, and then followed with a soil mixed with some boulder materials.



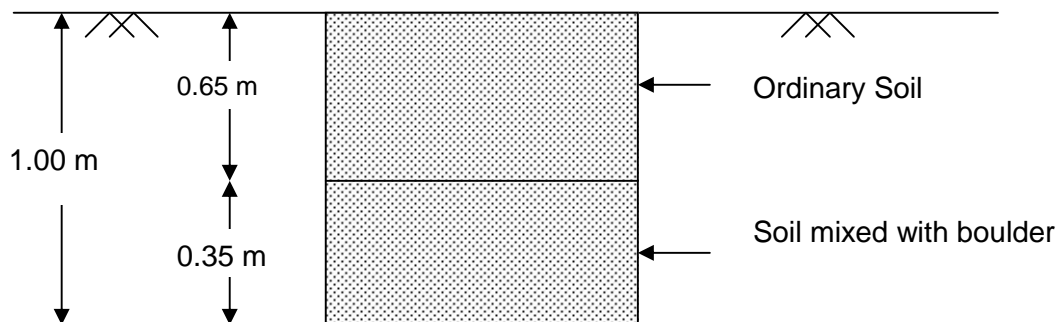
**Chainage 511+000 :** The soil is of ordinary soil upto a depth of about 50 cms, and then followed with a soil mixed with some boulder materials.



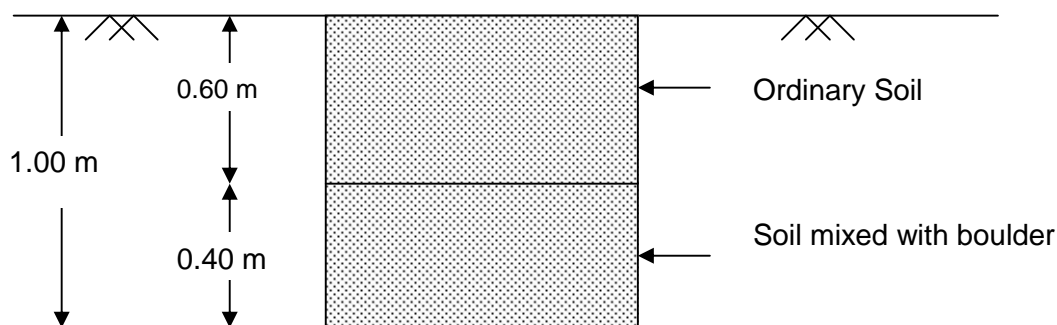
**Chainage 516+000 :** From the surface the soil is found ordinary soil.



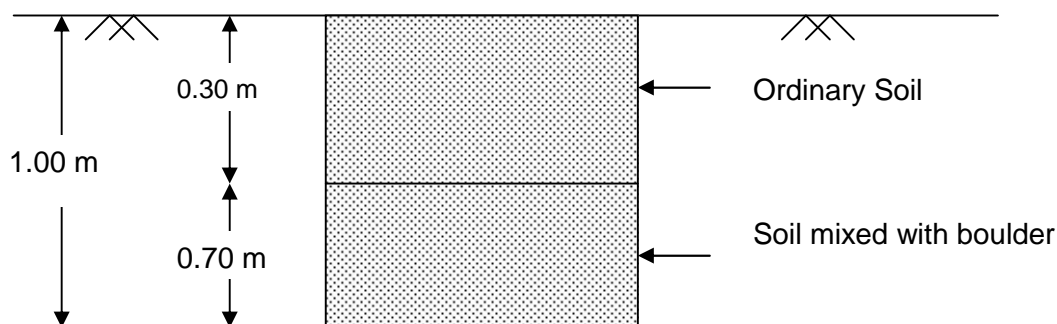
**Chainage 521+000 :** The soil is of ordinary soil upto a depth of about 65 cms, and then followed with a soil mixed with some boulder materials.



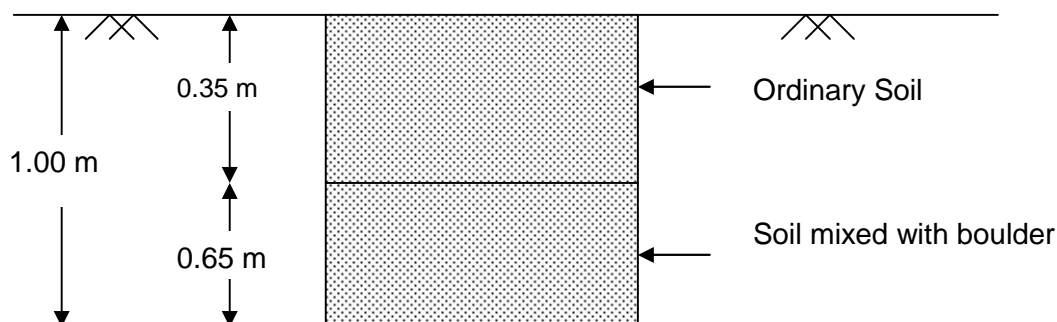
**Chainage 526+000 :** The soil is of ordinary soil upto a depth of about 60 cms, and then followed with a soil mixed with some boulder materials.



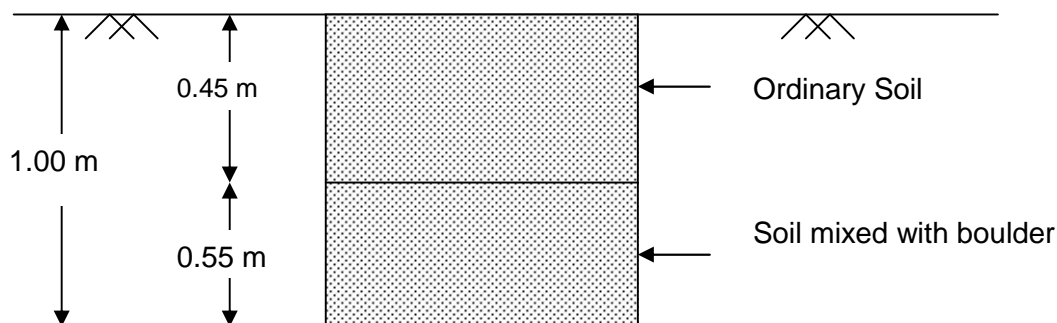
**Chainage 531+000 :** The soil is of ordinary soil upto a depth of about 30 cms, and then followed with a soil mixed with some boulder materials.



**Chainage 536+000 :** The soil is of ordinary soil upto a depth of about 35 cms, and then followed with a soil mixed with some boulder materials.

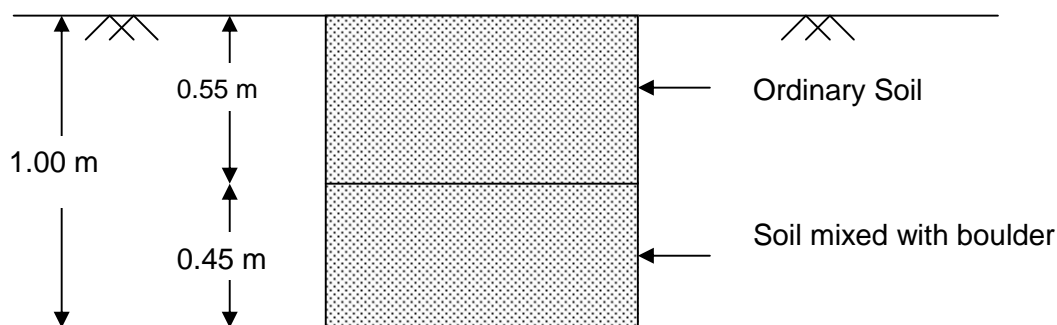


**Chainage 541+000 :** The soil is of ordinary soil upto a depth of about 45 cms, and then followed with a soil mixed with some boulder materials.

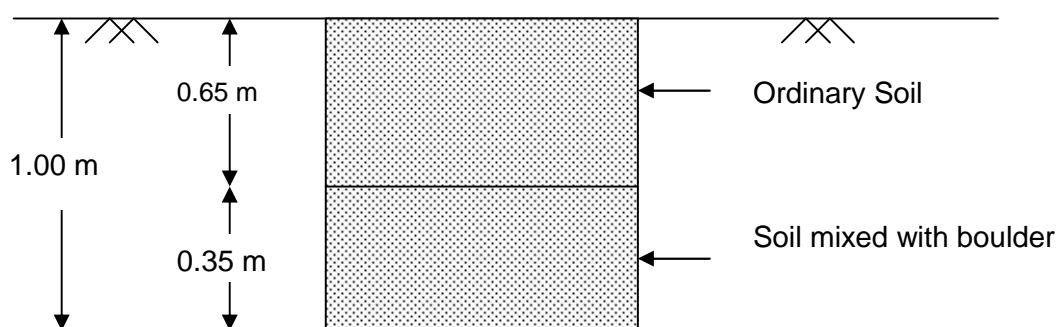




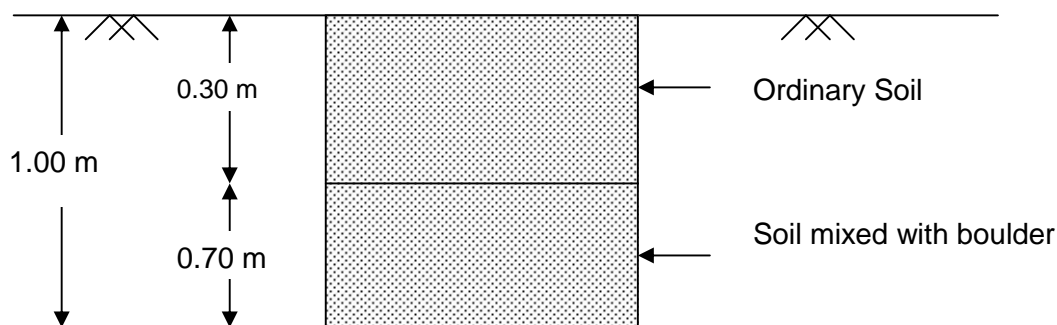
**Chainage 546+000** : The soil is of ordinary soil upto a depth of about 55 cms, and then followed with a soil mixed with some boulder materials.



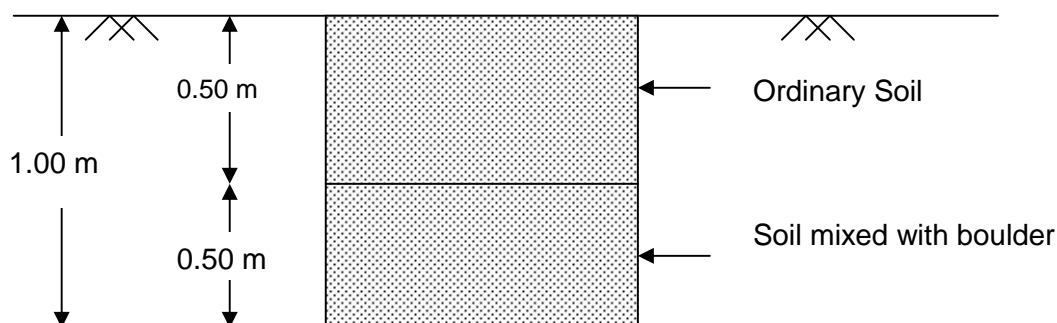
**Chainage 551+000** : The soil is of ordinary soil upto a depth of about 65 cms, and then followed with a soil mixed with some boulder materials.



**Chainage 556+000** : The soil is of ordinary soil upto a depth of about 30 cms, and then followed with a soil mixed with some boulder materials.



**Chainage 561+000** : The soil is of ordinary soil upto a depth of about 50 cms, and then followed with a soil mixed with some boulder materials.



## SECTION - 4

### TRAFFIC SURVEY, ANALYSIS & FORECAST

#### 4.1 INTRODUCTION

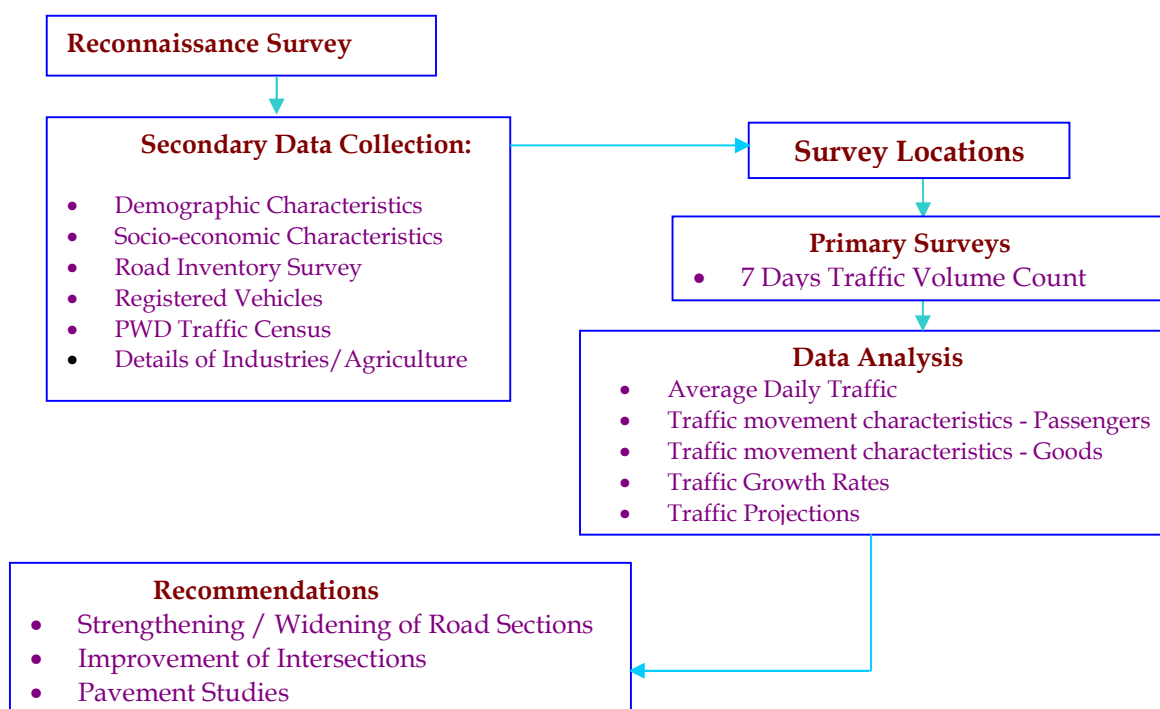
##### Traffic Survey, Analysis and Forecasting

This Chapter deals with various traffic studies carried out and the analysis of the data obtained from these studies. In planning and design of a highway, an appreciation of the existing traffic and traffic expected to use the highway is important. This is to assess the capacity requirements, pavement design, identify present and likely future traffic conditions and to have provisions for future improvements. As part of this study, a systematic methodology has been followed to assess the characteristics of the traffic on the project road.

Traffic count surveys carried out to establish the base year for traffic. The baseline traffic characteristics are very important for the assessment of future traffic and travel pattern.

#### 4.2 TRAFFIC SURVEY AND STUDY METHODOLOGY

A comprehensive data has been collected from various departments/ organisations/ agencies/ institutions and other sources related to the Traffic census & socio-economic indicators. The Classified Traffic Volume Count surveys have been conducted for 24 hours for seven days. The Detailed Methodology is pictorially depicted in Figure.



Study Methodology Flow Chart for Traffic Survey

### **4.3 TRAFFIC SURVEYS**

#### **4.3.1 Site Reconnaissance**

Immediately after the award of work a team headed by traffic engineer and supervisors visited the site and got acquainted with the road and the road influence area and studied the traffic survey points along the project section.

#### **4.3.2 Data Collection**

##### **Secondary Data Collection**

The Secondary data were collected regarding the traffic on the existing road. All other related demographic characteristics, socio economic characteristics, vehicle registration, PWD traffic census and other detailed industrial and agricultural data were collected from the concerned departments and compiled to extract the required results for the analysis of the project traffic scenario.

##### **Primary Data Collection**

Primary data collection was conducted using the manual method for classified traffic counts. The traffic counts were conducted at 60 minutes interval for 24 hours. The 60 minutes interval data were then compiled as hourly. The traffic count was conducted as per IRC guidelines. The survey was conducted for both fast moving and slow moving vehicles plying on the project road. The following types of vehicles were counted.

- 1. Fast moving**
  1. Cars, jeeps and vans
  2. Two-wheelers
  3. Three-wheelers
  4. Buses
  5. Trucks
    - Light Commercial vehicles
    - Two axle standard trucks
    - Multi-axle trucks
    - Truck trailers
- 2. Slow moving**
  1. Cycles
  2. Cycle rickshaws
  3. Animal drawn carts
  4. Others

Enumerators specially trained for this purpose noted data on the number of vehicles of different categories moving along the road in both directions.

##### **Traffic Studies Homogeneous Sections**

Homogeneous sections are the sections of the project road having similar traffic and travel characteristics. Major intersections / settlements have been considered as nodes for identification for various homogeneous sections.

#### **4.3.3 Analysis**

The collected data were analysed to get total daily traffic for the number of days during which Classified Traffic Volume Survey at each count station. The data analyses were calculated in terms of hourly traffic volumes, total PCU's values, traffic composition, Average Daily Traffic (ADT) and mode wise distribution of traffic. The analysis is represented in the form of Bar Charts, Pie Charts and other various graphical forms.

#### 4.3.4 Factors for Seasonal Variation

The seasonal variation in traffic occurs due to various reasons such as higher traffic during harvest and festival seasons, lower traffic during rainy season etc. Estimation of seasonal variation factors requires time series traffic count data on a monthly basis.

Seasonal variation factor, which is the ratio of the traffic for a particular month of the year to the average monthly traffic for that year, was not available. Seasonal correction factor, which is used to moderate the traffic observed in any month of the year to AADT by multiplying the observed traffic with the factor, is the inverse of the seasonal variation factor. In absence of time series data, it was decided to obtain data for the district. The data suggests the month of February as an average month. A seasonal correction factor of 1.0 is applied to arrive at AADT.

#### 4.4 TRAFFIC SURVEYS

##### 4.4.1 Classified Traffic Volume Count

In order to assess the variation of traffic levels and traffic composition over the week, traffic surveys were conducted continuously for one-week duration. The survey was carried out 24 hrs for one week using the standard proforma given in the SP: 19 - 2001.

The traffic was broadly grouped into Fast Moving Vehicles and Slow Moving Vehicles. Further the fast moving vehicles have been classified into Cars/Jeeps, Two wheelers, three wheelers, Buses (Mini & Full), Trucks and Agricultural Tractors. Slow Moving Vehicles are Cycles, Cycle Rickshaws and Animal Drawn Vehicles.

The surveys were conducted using well-trained enumerators, under the supervision of Traffic and transportation professionals. These surveys were normally conducted during dry weather conditions.

The primary objectives of the traffic count were to:

- Determine the motorised and non-motorised traffic volumes along the corridor.
- Determine Average Daily Traffic
- Determine the distribution of traffic during peak and non-peak hours.
- Establish the mode wise distribution.
- Determine the current traffic pattern on the project road

Traffic Volume counts were carried out for both directions separately. Two enumerators in seven shifts were deployed and an experienced supervisor was kept in charge of each location. Two locations were identified, one for each location as given in Table.

**Traffic Survey Locations for Classified Volume Count**

Station	Section	Location/Chainage	Remarks
1	Tawipui N-2-Lawngtlai (Km 431+ Km 490)	Lawngtlai	7 Days
2	Lawngtlai - Zero (Km 490 to Km 562)	Zero Point	7 Days

The traffic surveys were conducted in the month of Sept 2012

Different classes of vehicles which were obtained from the field surveys were converted into Passenger Car Units (PCU's) by using the PCU factors given in IRC: 64-1979 "Guidelines for Capacity of Roads in Rural Areas".

#### 4.4.2 Recommended PCU values for different Types of Vehicles

Sr No.	Vehicle Type	Equivalency Factor
<b>Fast Vehicles</b>		
1	Motor Cycle or Scooter	<b>0.50</b>
2	Car/Jeep, Van/Taxi or auto-rickshaw	<b>1.00</b>
3	Agricultural Tractor, LCV	<b>1.50</b>
4	Truck or Bus	<b>3.00</b>
5	Truck -Trailer, Agricultural Tractor-Trailer Unit	<b>4.50</b>
<b>Slow Vehicles</b>		
6	Cycle	<b>0.50</b>
7	Cycle Rickshaw	<b>2.00</b>
8	Hand Cart	<b>3.00</b>
9	Horse -Drawn Cart	<b>4.00</b>
10	Bullock/Camel Cart	<b>8.00</b>

#### 4.4.3 Data Tabulation and result interpretation

The data collected have been tabulated hourly. This gives the detailed traffic count for each day and each direction for the one count locations. The tabulations also give traffic in Passenger Car Units (PCU's) per day in addition to vehicles per day for the survey locations.

Location	Average daily traffic intensity (PCU)	Average daily traffic intensity (CVD)	peak hour traffic Nos/PCU	peak hour traffic ratio in %	Time of peak traffic
Lawngtlai	1166	312	462/569	7.31	09-10
Zero Point	813	228	367/451	8.47	09-10

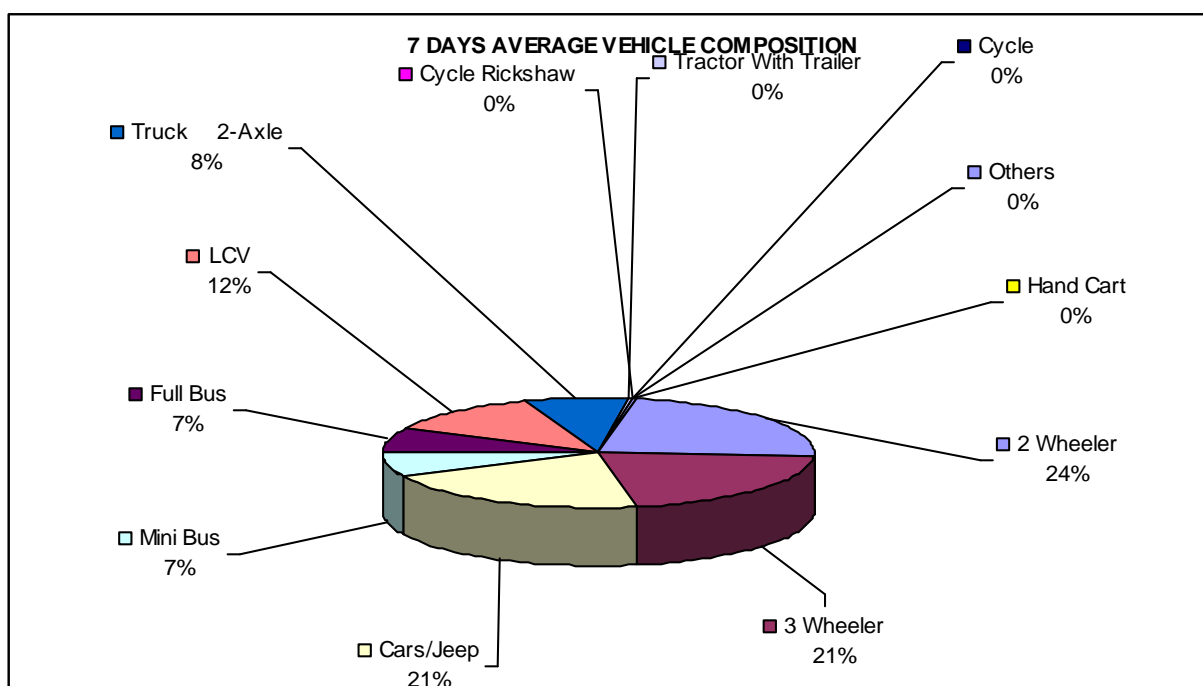
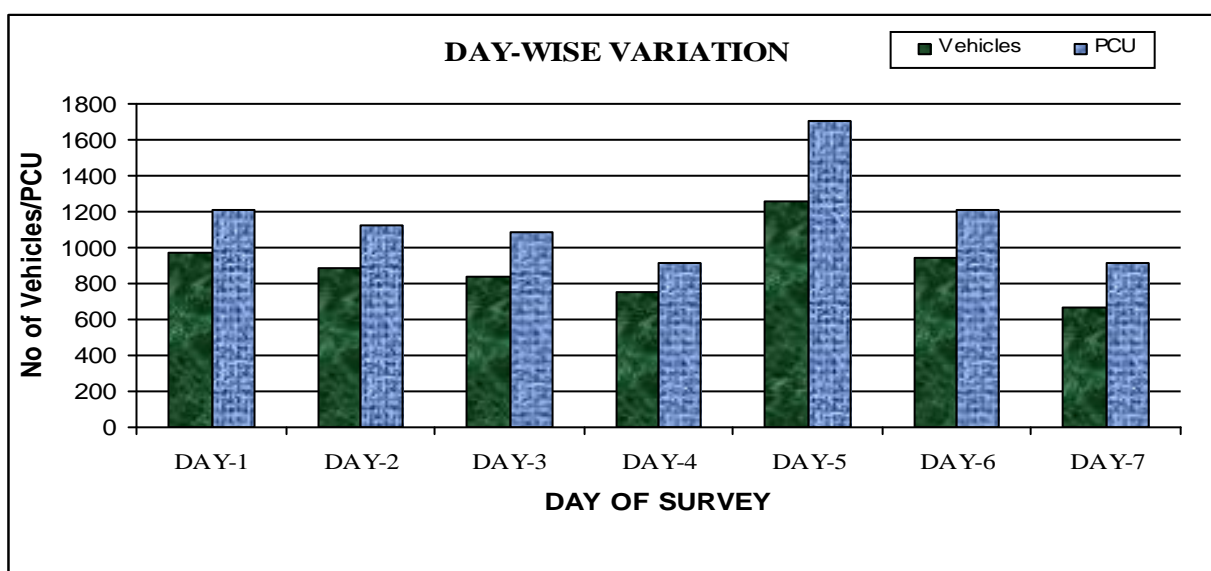
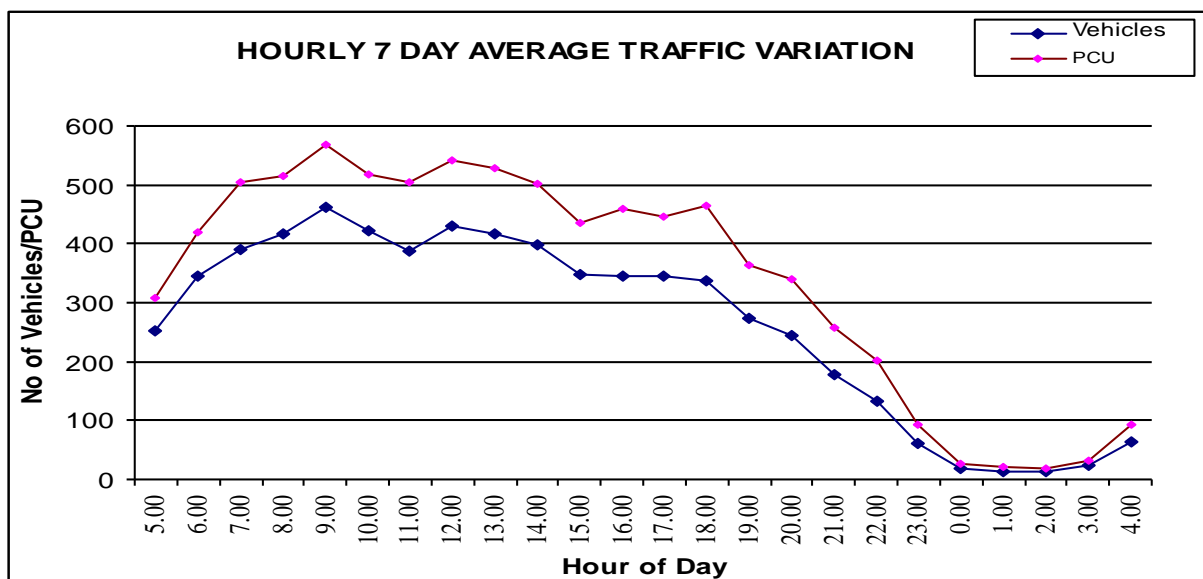
The traffic characteristics are as follows:

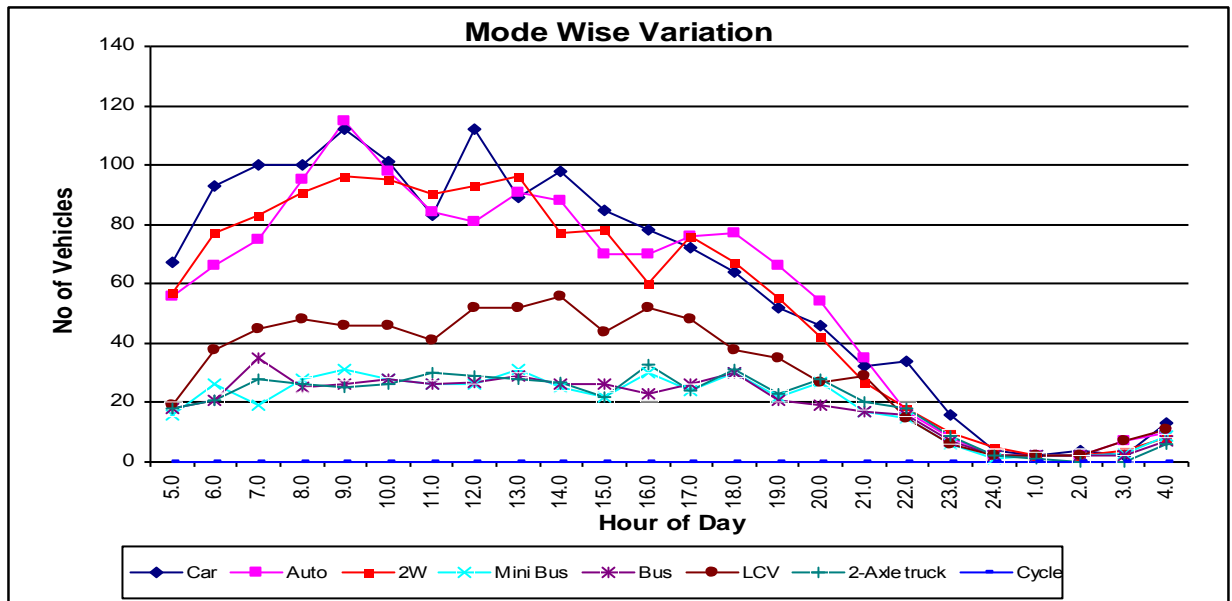
- The percentage of the Passenger vehicles is much higher than the commercial vehicles.
- Passenger cars and two wheelers form a major portion of the passenger vehicles.

Daily Traffic Variation, Hourly traffic variations, hourly traffic distribution and day wise traffic variation are illustrated in various figures placed below.

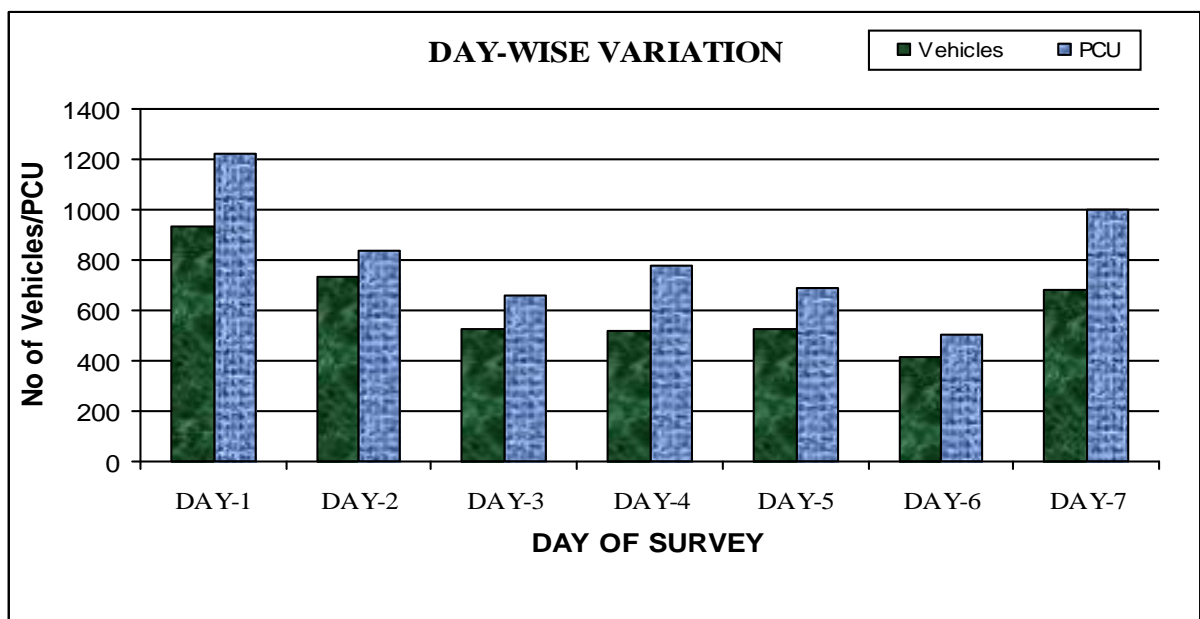
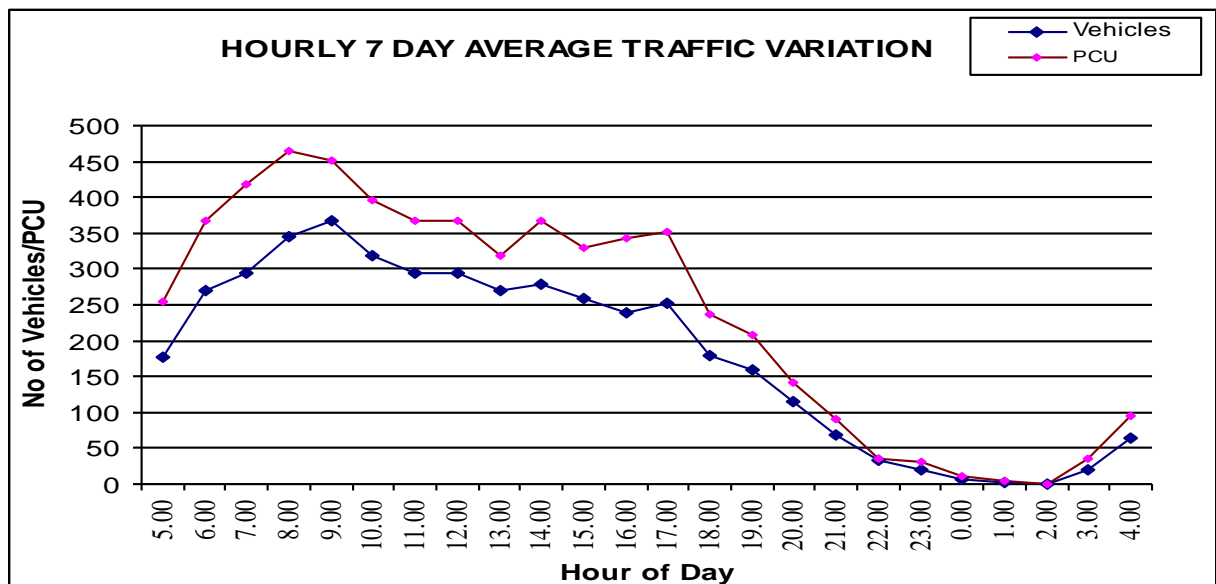
The weekly Traffic variations have presented in the figure given below:

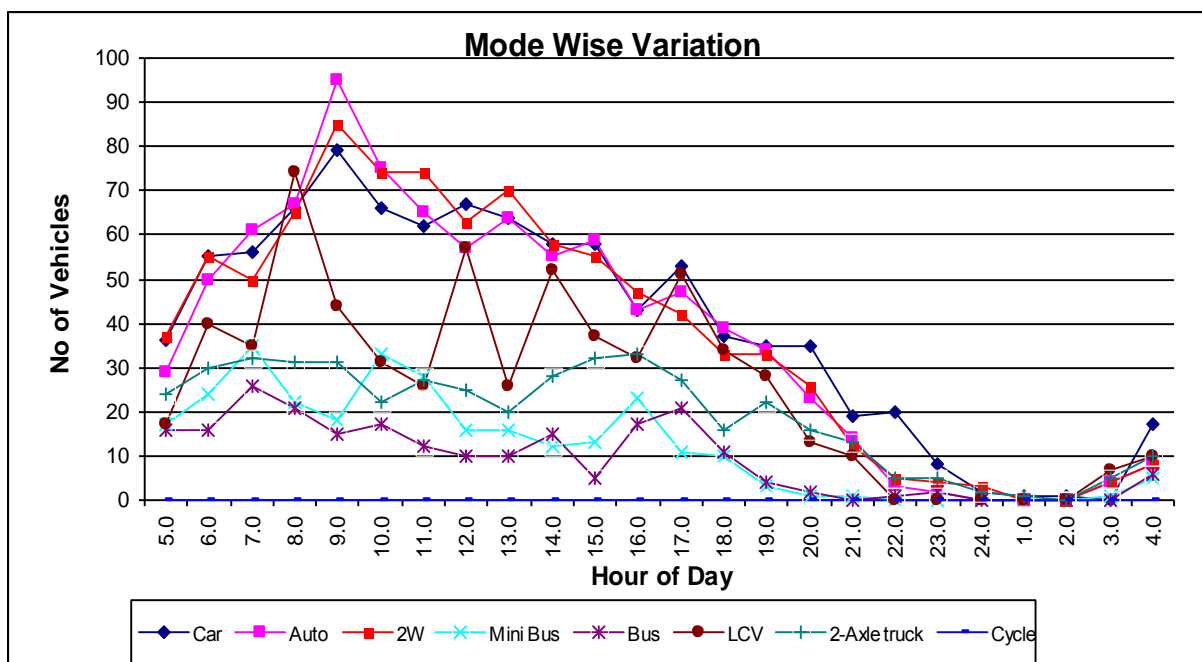
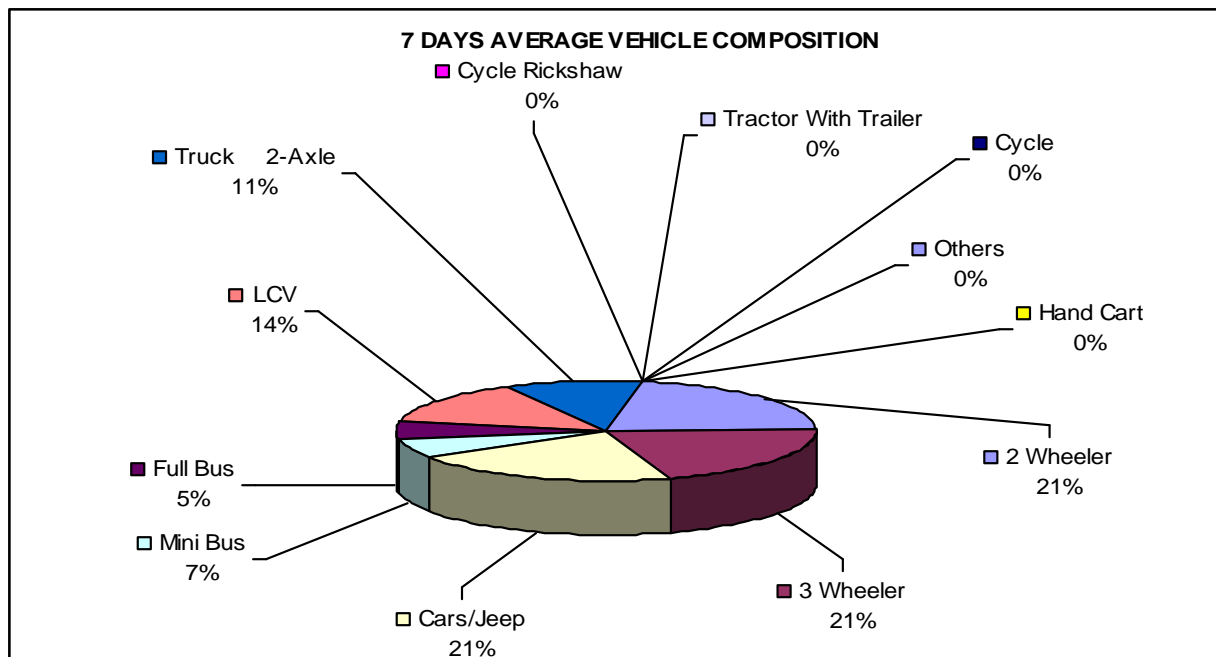
#### Section Km 431+00 to Km 490+00





### Section Km 490+00 to Km 562+00





## 4.5 TRAVEL PATTERN & COMPOSITION

### 4.5.1 Travel Pattern

An understanding of the travel pattern is key to transportation planners, researchers, engineers and policy analysts. The travel patterns relates to the changes in directionality, purpose, mode and time of the trip. Traffic counts, which directly measure volumes, are a more accurate measure of traffic pattern on specific facilities.

The traffic scenario at all the sections is influenced by the local traffic. Cars and 2-wheelers form an important means of traffic in this region. The hourly variation at the count location, traffic is more during the morning hours.

### 4.5.2 Traffic Composition

From traffic volume counts the following observations are made,



- (i) There are large numbers of Cars and Auto Rickshaw using the road (42.00%).
- (ii) Traffic is dominated by the passenger vehicles (cars and two wheelers).
- (iii) The heavy vehicle traffic (19.88%) as compared to the passenger traffic (42.00%).

#### 4.5.3 Traffic Forecast

It is very essential to accurately estimate the future traffic, as the development of the highway is totally dependent upon the future demand of the traffic.

➤ **Methods of Forecasting:**

Traffic forecasts are generally prepared using one or a combination of the following methods:

- Time series trend in traffic growth
- Temporal trends in vehicle registrations
- Socio-economic characteristics
- Transport Demand Elasticity Approach

Depending upon the character of the study area and the objectives of the study, a judicious selection of the forecast methodology would be adopted as each of the above methods has inherent advantages and disadvantages, which are briefly described below:

- **Time Series Trends:**

This is the most reliable tool available presently for long-term projections. It has been observed that the growth of traffic over a large time frame preferably over a period of about ten years in the past gives a reasonably accurate forecast for the horizon year, though in itself is a large time frame. The main shortcoming of this method is that it does not take into account the effect of induced developments, which have a pronounced effect over a shorter time frame.

Nevertheless this tool has been proven reliable for traffic forecasting on intercity corridors, where the effect of local development does not have much influence over the long-term traffic.

The time series data obtained from PWD counts are given in Table. The data available from the department is insufficient and shows an inconsistent growth of traffic along the road corridor. Hence this method cannot be relied upon to be used for forecasting the future traffic.

- **Growth in vehicle registrations:**

The growth of vehicle registration in the influence region is generally a good indicator in as much as it is found to correlate reasonably well with traffic growth. This holds true especially in urban areas, and in those cases, it is possible to establish a definite trend and correlation between traffic growth and vehicle registration. However, when traffic corridors are considered, the correlation between vehicle registration growth and traffic growth rates has been found to be not valid, as traffic growth along an inter-urban is influenced by many other factors in addition to the number of vehicle registrations.

The growth of motor vehicles in the project area from the registration data for last five years has been collected. The growth of every type of vehicle has been calculated and presented in Table.

- **Socio-economic parameters:**

Socio-economic parameters including population, employment, vehicle ownership, per capita income and development proposals (with or without land use changes) have all been

found to produce good correlation with the traffic growth. These above parameters have been described.

- **Transport Demand Elasticity Approach:**

Elasticity of traffic demand is defined as the rate at which traffic intensity varies due to changes in the corresponding economic variables selected. Therefore, to estimate the elasticity traffic demand, it is necessary to establish the relationship between the growth in the number of a given category of vehicle with any one of the economic variables considered, such as NSDP, per capita income and population growth. The econometric model and the form of equation for estimation of traffic demand elasticity as recommended in IRC-108 of 1996 is as follows:

$$\text{Log}_e (P) = A_0 + A_1 \log_e (EI) \text{ where}$$

P = Number of vehicles of any particular category  
EI = Economic indicator such as NSDP, Per Capita Income or population.  
A<sub>0</sub> = a constant  
A<sub>1</sub> = a Co-efficient (Elasticity Value)

Due to non-availability of the required data in a definitive manner in the concerned departments, no relevant data could be collected so as to fulfill the requirement of traffic forecast. So this method could not be used in the current forecast.

- **Future Traffic Growth Rate:**

The traffic forecast is developed in three components:

- i. Normal growth in traffic
- ii. Diverted traffic
- iii. Induced traffic.

The normal growth in traffic conceptually corresponds to the historical growth of traffic without taking any capital investment in the project road. For determining the normal growth in traffic, a study of past trends in traffic growth is undertaken. However, the traffic growth rate established for this study are based on elasticity approach, wherein a relationship is established between past traffic volume data and socio-economic indicators. In absence of time series data on classified traffic, vehicle registration data has been used for determining transport demand elasticity.

### **Normal Traffic**

The normal traffic is the base traffic currently moving on the project road section and will continue to use the project road section, even if it is not improved. Its forecast requires an assessment of the current and projected rates of traffic growth in the absence of road improvement.

### **Induced Traffic**

In addition to normal growth of traffic, the improvement of highway would tend to induce traffic generation. The induced traffic is a function of price elasticity. Freight and passenger vehicles are sensitive to reduction in journey costs. For passengers the lower costs encourage more trips for both business and personal reasons. Lower costs enlarge the market for both intermediate and finished goods.

The NH 54 was constructed to provide connectivity between two the Southern District of Mizoram and also serve International trade road between India & Myanmar via Multi Model transit route .The freight transport in the region will increase multifold and the socio-economic activities improve in the project road influence area.

Due to insufficient data and inconsistency of the available data the consultant has adopted the growth rate of 7.5% as per the Indian Road Congress (IRC: SP: 48-1998).

#### **Traffic Projections:**

The projected traffic up to the year 2032 using the composite growth rates of vehicles are given in Table.

#### **Projected Traffic upto the year 2032**

Station No.	Base Year Traffic 2013 (PCU)	Traffic Forecast			
		2017	2022	2027	2032
1	1166	1674	2404	3452	4956

#### **4.6 DESIGN OF LANES:**

Capacity analysis is fundamental to the planning, design and operation of roads and provides among other things the basis for determining the carriageway width to be provided at any point in a road network with respect to the volume and composition of traffic. It is also a valuable tool for evaluation of the investments needed for future road construction and improvements and for working out priorities between competing Projects. The NH road has been considered for two lanes.

- Therefore, No of commercial vehicles per day for design taking into consideration 7.5% per annum growth rate and a pavement life of 15 years
- After 15 years design life PCU per day : 4956
- Design road capacity (Service volume ) for hill road for high curvature ( above 200 degrees per Km) for two lane ,greater than 4500 PCU
- Hence existing road need to upgrade for two lane standard

#### **4.7 CVD FOR DESIGN OF PAVEMENT**

As per traffic count survey, average commercial vehicle per day (CVD) works out to 312.0. Traffic intensity is too low on this existing road due to bad gradient and road geometric. The existing road being developed to National Highway Double lane Standard On completion of this project road, the connectivity with two Southern District Headquarter, state capital Aizawl and along with Indo Myanmar via Multi Model transit route will improved .It will serve one of the major International trade routes between India and Myanmar for economically and culturally and traffic of all kinds will increase many fold. In view of the low intensity of traffic at present scenario, the traffic intensity of 312 numbers for commercial vehicles per day has been considered. Traffic intensity CVD 312 has been considered for pavement design.

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai									Additional Information									
Direction : Tawipui North-2 to Lawngtlai				Road : NH 54																		
Section From : Km 431 to Km 490				Station no.: Lawngtlai																		
Date : 14.09.2012				Hour : 24 (7 Days)																		
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC									
From	To	Two Wheelers	3 Wheeler/ Auto Rickshaw	Cars/Jee p/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU	
5.00	6.00	5	6	5	1	2	1	1	0	0	0	21	0	0	0	0	0	0	0	21	25.5	
6.00	7.00	5	5	4	2	1	2	1	0	0	0	20	0	0	0	0	0	0	0	20	23.5	
7.00	8.00	5	7	8	3	3	1	2	0	0	0	29	0	0	0	0	0	1	1	30	41.5	
8.00	9.00	6	9	9	1	2	2	2	0	0	0	31	0	0	0	0	0	1	1	32	40.5	
9.00	10.00	9	10	12	2	1	4	2	0	0	0	40	0	0	0	0	0	0	0	40	44.5	
10.00	11.00	9	7	9	1	2	5	3	0	0	0	36	0	0	0	0	0	0	0	36	44.5	
11.00	12.00	7	6	11	2	2	2	3	0	0	0	33	0	0	0	0	0	0	0	33	41.5	
12.00	13.00	10	8	8	1	2	4	2	0	0	0	35	0	0	0	0	0	2	2	37	46.5	
13.00	14.00	9	7	7	1	2	2	2	0	0	0	30	0	0	0	0	0	0	0	30	35.0	
14.00	15.00	10	9	6	1	1	1	1	0	0	0	29	0	0	0	0	0	0	0	29	29.0	
15.00	16.00	6	5	5	2	2	4	2	0	0	0	26	0	0	0	0	0	0	0	26	34.0	
16.00	17.00	7	5	6	3	2	5	3	0	0	0	31	0	0	0	0	0	0	0	31	41.5	
17.00	18.00	5	9	6	1	1	4	2	0	0	0	28	0	0	0	0	0	0	0	28	34.0	
18.00	19.00	6	8	5	2	2	2	2	0	0	0	27	0	0	0	0	0	0	0	27	34.0	
19.00	20.00	4	7	4	1	1	3	3	0	0	0	23	0	0	0	0	0	0	0	23	31.0	
20.00	21.00	4	7	5	2	2	2	2	0	0	0	24	0	0	0	0	0	0	0	24	32.0	
21.00	22.00	3	4	3	2	2	2	1	0	0	0	17	0	0	0	0	0	0	0	17	23.5	
22.00	23.00	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6.0	
23.00	24.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3.0	
0.00	1.00	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6.0	
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5	
4.00	5.00	1	1	0	0	1	1	0	0	0	0	4	0	0	0	0	0	0	0	4	6.0	
TOTAL		111	120	113	28	31	48	39	0	0	0	490	0	0	0	0	0	4	4	494	624.5	

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai											Additional Information								
Direction : Tawipui North-2 to Lawngtlai		Road : NH 54																			
Section From : Km 431 to Km 490		Station no.: Lawngtlai																			
Date :15.09.2012		Hour : 24 (7 Days)											Weather: Fair								
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheelee	3 Wheeler/	Cars/Jee p/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksh	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU
5.00	6.00	5	2	8	1	1	1	1	0	0	0	19	0	0	0	0	0	0	0	19	21.5
6.00	7.00	5	1	7	2	2	3	2	0	1	0	23	0	0	0	0	0	0	0	23	33.0
7.00	8.00	4	7	5	1	3	1	3	0	0	0	24	0	0	0	0	0	1	1	25	38.0
8.00	9.00	6	3	4	2	1	3	1	0	0	0	20	0	0	0	0	0	0	0	20	23.5
9.00	10.00	9	9	8	3	2	4	1	0	2	0	38	0	0	0	0	0	1	1	39	50.0
10.00	11.00	8	6	10	1	1	5	2	0	0	0	33	0	0	0	0	0	0	0	33	38.0
11.00	12.00	6	5	6	1	2	4	2	0	0	0	26	0	0	0	0	0	0	0	26	33.5
12.00	13.00	9	6	5	2	1	5	1	0	1	0	30	0	0	0	0	0	1	1	31	38.0
13.00	14.00	8	6	9	1	2	4	3	0	0	0	33	0	0	0	0	0	0	0	33	41.5
14.00	15.00	9	7	6	2	1	3	2	0	0	0	30	0	0	0	0	0	0	0	30	34.0
15.00	16.00	5	4	5	1	2	2	1	0	0	0	20	0	0	0	0	0	0	0	20	25.0
16.00	17.00	6	6	4	2	1	1	2	0	0	0	22	0	0	0	0	0	0	0	22	26.5
17.00	18.00	4	5	4	1	1	3	1	0	0	0	19	0	0	0	0	0	0	0	19	23.0
18.00	19.00	5	7	5	2	2	2	2	0	0	0	25	0	0	0	0	0	0	0	25	32.5
19.00	20.00	3	6	5	1	2	2	1	0	0	0	20	0	0	0	0	0	0	0	20	26.0
20.00	21.00	3	6	3	2	2	2	2	0	0	0	20	0	0	0	0	0	0	0	20	28.5
21.00	22.00	4	3	3	1	1	2	1	0	0	0	15	0	0	0	0	0	0	0	15	18.5
22.00	23.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3.0
23.00	24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4.00	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
TOTAL		99	89	97	26	27	47	28	0	4	0	417	0	0	0	0	0	4	4	421	534.0

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai											Additional Information								
Direction : Tawipui North-2 to Lawngtlai		Road : NH 54																			
Section From : Km 431 to Km 490		Station no.: Lawngtlai																			
Date :16.09.2012		Hour : 24 (7 Days)											Weather: Fair								
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheelee	3 Wheeler/	Cars/Jee p/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksh	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU
5.00	6.00	4	2	1	1	0	0	1	0	0	0	9	0	0	0	0	0	0	0	9	9.5
6.00	7.00	3	1	6	2	3	2	2	0	1	0	20	0	0	0	0	0	0	0	20	32.5
7.00	8.00	4	4	3	1	2	2	3	0	0	0	19	0	0	0	0	0	0	0	19	28.5
8.00	9.00	2	3	4	2	0	1	1	0	0	0	13	0	0	0	0	0	0	0	13	15.5
9.00	10.00	6	5	8	3	2	2	1	0	2	0	29	0	0	0	0	0	0	0	29	38.5
10.00	11.00	5	6	8	1	1	3	2	0	0	0	26	0	0	0	0	0	0	0	26	31.5
11.00	12.00	6	1	5	1	2	2	2	0	0	0	19	0	0	0	0	0	0	0	19	25.5
12.00	13.00	9	4	2	2	1	5	1	0	1	0	25	0	0	0	0	0	0	0	25	30.0
13.00	14.00	8	3	6	1	2	4	3	0	0	0	27	0	0	0	0	0	0	0	27	35.5
14.00	15.00	9	5	4	2	1	3	2	0	0	0	26	0	0	0	0	0	0	0	26	30.0
15.00	16.00	5	4	3	0	2	2	1	0	0	0	17	0	0	0	0	0	0	0	17	21.5
16.00	17.00	6	4	1	2	1	1	2	0	0	0	17	0	0	0	0	0	0	0	17	21.5
17.00	18.00	4	5	4	1	1	3	1	0	0	0	19	0	0	0	0	0	0	0	19	23.0
18.00	19.00	5	7	2	2	2	2	2	0	0	0	22	0	0	0	0	0	0	0	22	29.5
19.00	20.00	3	6	5	1	2	2	1	0	0	0	20	0	0	0	0	0	0	0	20	26.0
20.00	21.00	3	6	3	2	2	2	2	0	0	0	20	0	0	0	0	0	0	0	20	28.5
21.00	22.00	4	3	3	1	1	2	1	0	0	0	15	0	0	0	0	0	0	0	15	18.5
22.00	23.00	2	2	2	2	2	2	2	0	0	0	14	0	0	0	0	0	0	0	14	23.0
23.00	24.00	2	2	2	2	1	2	0	0	0	0	11	0	0	0	0	0	0	0	11	14.0
0.00	1.00	2	2	2	1	2	2	0	0	0	0	11	0	0	0	0	0	0	0	11	15.5
1.00	2.00	2	2	2	2	2	2	0	0	0	0	12	0	0	0	0	0	0	0	12	17.0
2.00	3.00	2	2	2	2	2	2	0	0	0	0	12	0	0	0	0	0	0	0	12	17.0
3.00	4.00	2	3	2	2	2	3	0	0	0	0	14	0	0	0	0	0	0	0	14	19.5
4.00	5.00	2	2	2	2	3	2	0	0	0	0	13	0	0	0	0	0	0	0	13	20.0
TOTAL		100	84	82	38	39	53	30	0	4	0	430	0	0	0	0	0	0	0	430	571.5

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai																			
Direction : Tawipui North-2 to Lawngtlai		Road : NH 54											Additional Information								
Section From : Km 431 to Km 490		Station no.: Lawngtlai											Weather: Fair								
Date :17.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheelers	3 Wheeler/ Auto Rickshaw	Cars/Jee p/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU
From	To																				
5.00	6.00	3	3	2			1	1	0	0	0	10	0	0	0	0	0	0	0	10	11.0
6.00	7.00	5	4	4	1		2		0	0	0	16	0	0	0	0	0	1	1	17	18.0
7.00	8.00	7	4	3		2	4		0	1	0	21	0	0	0	0	0	0	0	21	25.5
8.00	9.00	8	5	8		2	3	2	0	0	0	28	0	0	0	0	0	0	0	28	33.5
9.00	10.00	10	9	5	1	1	3		0	2	0	31	0	0	0	0	0	1	1	32	37.0
10.00	11.00	6	8	4	1	1	2		0	0	0	22	0	0	0	0	0	0	0	22	22.5
11.00	12.00	7	6	3	2	1	1	2	0	0	0	22	0	0	0	0	0	0	0	22	26.0
12.00	13.00	8	5	4	1		1	1	0	0	0	20	0	0	0	0	0	2	2	22	25.0
13.00	14.00	8	5	4	2		2	1	0	0	0	22	0	0	0	0	0	0	0	22	22.0
14.00	15.00	6	4	5			3	1	0	0	0	19	0	0	0	0	0	1	1	20	22.5
15.00	16.00	5	3	5			2		0	0	0	15	0	0	0	0	0	0	0	15	13.5
16.00	17.00	5	3	3	2		1		0	0	0	14	0	0	0	0	0	0	0	14	13.0
17.00	18.00	6	4	2	1	1	1	1	0	0	0	16	0	0	0	0	0	0	0	16	18.0
18.00	19.00	4	4	2	1		1		0	0	0	12	0	0	0	0	0	0	0	12	11.0
19.00	20.00	3	3	1			2	1	0	0	0	10	0	0	0	0	0	0	0	10	11.5
20.00	21.00	3	2	1			2	1	0	0	0	9	0	0	0	0	0	0	0	9	10.5
21.00	22.00	2	2	1			1	1	0	0	0	7	0	0	0	0	0	0	0	7	8.5
22.00	23.00	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.5
23.00	24.00	1	0	0	0	0	0	3	0	0	0	4	0	0	0	0	0	0	0	4	9.5
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	0	0	1	0	0	1	1	0	0	0	3	0	0	0	0	0	0	0	3	5.5
TOTAL		98	74	60	13	8	33	16	0	3	0	305	0	0	0	0	0	5	5	310	348.0

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai											Additional Information								
Direction : Tawipui North-2 to Lawngtlai		Road : NH 54																			
Section From : Km 431 to Km 490		Station no.: Lawngtlai																			
Date :18.09.2012		Hour : 24 (7 Days)											Weather: Fair								
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheelee	3 Wheeler/	Cars/Jee p/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksh	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU
5.00	6.00	4	4	3	2	2	3	3	0	0	0	21	0	0	0	0	0	0	0	21	31.5
6.00	7.00	6	6	7	2	2	4	3	0	0	0	30	0	0	0	0	0	0	0	30	40.0
7.00	8.00	6	6	5	4	6	7	6	0	0	0	40	0	0	0	0	0	0	0	40	66.5
8.00	9.00	10	11	8	5	5	9	5	0	0	0	53	0	0	0	0	0	0	0	53	75.0
9.00	10.00	9	13	9	5	5	6	6	0	0	0	53	0	0	0	0	0	0	0	53	76.0
10.00	11.00	8	9	9	6	5	5	5	0	0	0	47	0	0	0	0	0	0	0	47	68.5
11.00	12.00	8	7	10	5	4	5	6	0	0	0	45	0	0	0	0	0	0	0	45	66.0
12.00	13.00	9	6	9	4	4	8	6	0	0	0	46	0	0	0	0	0	0	0	46	67.5
13.00	14.00	10	12	10	5	4	6	5	0	0	0	52	0	0	0	0	0	0	0	52	70.5
14.00	15.00	9	12	10	4	6	10	6	0	0	0	57	0	0	0	0	0	0	0	57	83.5
15.00	16.00	8	11	9	5	5	5	6	0	0	0	49	0	0	0	0	0	0	0	49	72.0
16.00	17.00	7	10	8	4	4	6	8	0	0	0	47	0	0	0	0	0	0	0	47	72.5
17.00	18.00	7	10	7	4	5	5	6	0	0	0	44	0	0	0	0	0	0	0	44	67.0
18.00	19.00	5	11	8	4	4	5	6	0	0	0	43	0	0	0	0	0	0	0	43	65.0
19.00	20.00	6	9	8	4	4	5	5	0	0	0	41	0	0	0	0	0	0	0	41	60.5
20.00	21.00	6	9	7	5	4	5	6	0	0	0	42	0	0	0	0	0	0	0	42	64.0
21.00	22.00	5	7	5	4	4	4	5	0	0	0	34	0	0	0	0	0	0	0	34	53.5
22.00	23.00	6	4	5	4	4	4	4	0	0	0	31	0	0	0	0	0	0	0	31	48.0
23.00	24.00	5	4	4	4	6	4	4	0	0	0	31	0	0	0	0	0	0	0	31	52.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
4.00	5.00	0	1	0	2	0	0	1	0	0	0	4	0	0	0	0	0	0	0	4	7.0
TOTAL		134	163	141	82	83	106	102	0	0	0	811	0	0	0	0	0	0	0	811	1208.0



**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai																			
Direction : Tawipui North-2 to Lawngtlai		Road : NH 54										Additional Information									
Section From : Km 431 to Km 490		Station no.: Lawngtlai										Weather: Fair									
Date :19.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Whee	3 Wheeler/	Cars/Jee p/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksh	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU
5.00	6.00	4	4	5	1	1	1	2	0	0	0	18	0	0	0	0	0	0	0	18	23.0
6.00	7.00	6	5	7	2	1	3	1	0	0	0	25	0	0	0	0	0	0	0	25	28.5
7.00	8.00	8	5	6	1	2	4	2	0	0	0	28	0	0	0	0	0	0	0	28	34.5
8.00	9.00	9	6	11	1		2	1	0	0	0	30	0	0	0	0	0	0	0	30	29.0
9.00	10.00	11	10	14	1		1	1	0	0	0	38	0	0	0	0	0	1	1	39	38.5
10.00	11.00	7	9	12	2	1	2	1	0	0	0	34	0	0	0	0	0	0	0	34	36.5
11.00	12.00	8	7	15			2	1	0	0	0	33	0	0	0	0	0	0	0	33	32.0
12.00	13.00	9	6	12	1		1	1	0	0	0	30	0	0	0	0	0	0	0	30	28.5
13.00	14.00	9	6	11	2		3	2	0	0	0	33	0	0	0	0	0	0	0	33	35.0
14.00	15.00	7	5	10	1	1	4	1	0	0	0	29	0	0	0	0	0	0	0	29	32.0
15.00	16.00	6	4	9			5	1	0	0	0	25	0	0	0	0	0	0	0	25	26.5
16.00	17.00	6	4	7	1		4	1	0	0	0	23	0	0	0	0	0	0	0	23	24.5
17.00	18.00	7	5	5	1	1	4	1	0	0	0	24	0	0	0	0	0	0	0	24	27.0
18.00	19.00	5	4	6	1	2	3		0	0	0	21	0	0	0	0	0	0	0	21	24.5
19.00	20.00	4	4	5			3	1	0	0	0	17	0	0	0	0	0	0	0	17	18.5
20.00	21.00	4	3	5			1		0	0	0	13	0	0	0	0	0	0	0	13	11.5
21.00	22.00	3	1	2			2	2	0	0	0	10	0	0	0	0	0	0	0	10	13.5
22.00	23.00	5	5	2	3	3	3	3	0	0	0	24	0	0	0	0	0	0	0	24	36.5
23.00	24.00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
0.00	1.00	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
4.00	5.00	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	2	4.0
TOTAL		120	96	144	18	13	48	22	0	0	0	461	0	0	0	0	0	1	1	462	507.0

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai																			
Direction : Tawipui North-2 to Lawngtlai		Road : NH 54										Additional Information									
Section From : Km 431 to Km 490		Station no.: Lawngtlai										Weather: Fair									
Date :20.09 .2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Whee	3 Wheeler/	Cars/Jee p/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksh	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU
5.00	6.00	2	2	1			1	1	0	0	0	7	0	0	0	0	0	0	0	7	8.5
6.00	7.00	4	4	5			2	1	0	0	0	16	0	0	0	0	0	0	0	16	17.0
7.00	8.00	4	4	3	2	2	3	2	0	0	0	20	0	0	0	0	0	0	0	20	28.5
8.00	9.00	6	7	4	1	1	5	1	0	0	0	25	0	0	0	0	0	0	0	25	29.0
9.00	10.00	5	9	5	1	1	2	2	0	0	0	25	0	0	0	0	0	0	0	25	30.0
10.00	11.00	4	5	5	2	1	1	1	0	0	0	19	0	0	0	0	0	0	0	19	22.5
11.00	12.00	4	3	6	1		1	2	0	0	0	17	0	0	0	0	0	0	0	17	20.0
12.00	13.00	5	2	5			4	2	0	0	0	18	0	0	0	0	0	0	0	18	21.5
13.00	14.00	6	8	6	1		2	1	0	0	0	24	0	0	0	0	0	0	0	24	24.5
14.00	15.00	5	8	6		2	6	2	0	0	0	29	0	0	0	0	0	0	0	29	37.5
15.00	16.00	4	7	5	1	1	1	2	0	0	0	21	0	0	0	0	0	0	0	21	26.0
16.00	17.00	3	6	4			2	4	0	0	0	19	0	0	0	0	0	0	0	19	26.5
17.00	18.00	3	6	3		1	1	2	0	0	0	16	0	0	0	0	0	0	0	16	21.0
18.00	19.00	1	7	4			1	2	0	0	0	15	0	0	0	0	0	0	0	15	19.0
19.00	20.00	2	5	4			1	1	0	0	0	13	0	0	0	0	0	0	0	13	14.5
20.00	21.00	2	5	3	1		1	2	0	0	0	14	0	0	0	0	0	0	0	14	18.0
21.00	22.00	1	3	1				1	0	0	0	6	0	0	0	0	0	0	0	6	7.5
22.00	23.00	3	2	2	2	2	2	3	0	0	0	16	0	0	0	0	0	0	0	16	26.5
23.00	24.00	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
TOTAL		64	93	75	12	11	37	33	0	0	0	325	0	0	0	0	0	0	0	325	405.5

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai										Additional Information									
Direction : Lawngtlai to Tawipui North-2		Road : NH 54										Weather: Fair									
Section From : Km 431 to Km 490		Station no.: Lawngtlai																			
Date : 14.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
From	To	Two Wheeler s	3 Wheeler/ Auto Rickshaw	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Ricksha w	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU
5.00	6.00	8	6	5	1	2	1	2	0	0	0	25	0	0	0	0	0	0	0	25	30.0
6.00	7.00	9	8	7	2	3	2	2	0	0	0	33	0	0	0	0	0	0	0	33	40.5
7.00	8.00	11	7	7	1	1	4	3	0	0	0	34	0	0	0	0	0	1	1	35	42.0
8.00	9.00	8	9	8	1	2	2	3	0	0	0	33	0	0	0	0	0	0	0	33	40.5
9.00	10.00	7	11	8	1	1	4	1	0	0	0	33	0	0	0	0	0	0	0	33	36.0
10.00	11.00	10	14	12	2	2	2	2	0	0	0	44	0	0	0	0	0	0	0	44	49.0
11.00	12.00	5	12	6	2	1	3	1	0	0	0	30	0	0	0	0	0	0	0	30	34.0
12.00	13.00	8	7	6	2	2	4	4	0	0	0	33	0	0	0	0	0	0	0	33	44.0
13.00	14.00	5	8	8	1	2	3	2	0	0	0	29	0	0	0	0	0	0	0	29	36.5
14.00	15.00	8	6	6	1	3	2	3	0	0	0	29	0	0	0	0	0	0	0	29	38.5
15.00	16.00	9	5	5	1	1	2	2	0	0	0	25	0	0	0	0	0	0	0	25	28.0
16.00	17.00	9	5	7	1	1	4	3	0	0	0	30	0	0	0	0	0	0	0	30	36.0
17.00	18.00	5	4	4	2	1	5	1	0	0	0	22	0	0	0	0	0	0	0	22	27.0
18.00	19.00	9	4	5	2	2	4	2	0	0	0	28	0	0	0	0	0	0	0	28	34.5
19.00	20.00	3	3	4	1	2	3	1	0	0	0	17	0	0	0	0	0	0	0	17	23.5
20.00	21.00	2	2	2	2	1	1	1	0	0	0	11	0	0	0	0	0	0	0	11	15.5
21.00	22.00	3	1	2	1	1	2	2	0	0	0	12	0	0	0	0	0	0	0	12	18.0
22.00	23.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
23.00	24.00	0	1	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	3.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	1	1	2	1	1	1	0	0	0	0	7	0	0	0	0	0	0	0	7	9.5
TOTAL		121	114	106	25	29	50	35	0	0	0	480	0	0	0	0	0	1	1	481	588.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai																			
Direction : Lawngtlai to Tawipui North-2		Road : NH 54										Additional Information									
Section From : Km 431 to Km 490		Station no.: Lawngtlai										Weather: Fair									
Date :15.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	7	6	8	1	2	1	1	0	0	0	26	0	0	0	0	0	0	0	26	29.5
6.00	7.00	9	7	6	2	1	2	1	0	0	0	28	0	0	0	0	0	0	0	28	29.5
7.00	8.00	11	6	7	1	2	3	1	0	0	0	31	0	0	0	0	0	0	0	31	33.5
8.00	9.00	10	9	8	2	3	4	2	0	0	0	38	0	0	0	0	0	0	0	38	46.0
9.00	10.00	9	10	7	3	3	5	4	0	0	0	41	0	0	0	0	0	1	1	42	57.5
10.00	11.00	8	7	6	1	2	3	2	0	0	0	29	0	0	0	0	0	0	0	29	35.0
11.00	12.00	7	8	5	2	3	2	3	0	1	0	31	0	0	0	0	0	1	1	32	46.5
12.00	13.00	6	6	5	3	2	2	3	0	0	0	27	0	0	0	0	0	0	0	27	36.5
13.00	14.00	4	7	4	1	3	3	2	0	0	0	24	0	0	0	0	0	0	0	24	34.0
14.00	15.00	6	5	3	2	1	6	2	0	0	0	25	0	0	0	0	0	0	0	25	32.0
15.00	16.00	7	4	6	3	2	4	1	0	0	0	27	0	0	0	0	0	0	0	27	33.0
16.00	17.00	8	4	4	2	2	3	2	0	0	0	25	0	0	0	0	0	0	0	25	31.5
17.00	18.00	4	5	6	2	1	3	2	0	0	0	23	0	0	0	0	0	0	0	23	29.5
18.00	19.00	5	5	5	2	3	2	4	0	0	0	26	0	0	0	0	0	0	0	26	39.5
19.00	20.00	3	3	3	2	2	3	2	0	0	0	18	0	0	0	0	0	0	0	18	27.0
20.00	21.00	2	2	2	3	1	1	3	0	0	0	14	0	0	0	0	0	0	0	14	23.0
21.00	22.00	2	2	1	0	1	1	1	0	0	0	8	0	0	0	0	0	0	0	8	11.5
22.00	23.00	2	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	2.0
23.00	24.00	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	2.0
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
3.00	4.00	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2.0
4.00	5.00	3	2	1	1	0	3	0	0	0	0	10	0	0	0	0	0	0	0	10	10.5
TOTAL		118	99	90	33	34	51	36	0	1	0	462	0	0	0	0	0	2	2	464	593.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai																			
Direction : Lawngtlai to Tawipui North-2		Road : NH 54										Additional Information									
Section From : Km 431 to Km 490		Station no.: Lawngtlai										Weather: Fair									
Date :16.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	7	6	1	1	1	1	0	0	0	0	17	0	0	0	0	0	0	0	17	16.5
6.00	7.00	9	7	4	2	1	2	0	0	0	0	25	0	0	0	0	0	0	0	25	24.5
7.00	8.00	11	6	5	1	2	3	1	0	0	0	29	0	0	0	0	0	0	0	29	31.5
8.00	9.00	10	9	6	2	1	4	2	0	0	0	34	0	0	0	0	0	0	0	34	38.0
9.00	10.00	9	10	4	1	2	2	2	0	0	0	30	0	0	0	0	0	0	0	30	35.0
10.00	11.00	8	7	6	1	2	6	1	0	0	0	31	0	0	0	0	0	0	0	31	36.5
11.00	12.00	7	8	5	2	3	2	2	0	1	0	30	0	0	0	0	0	0	0	30	40.5
12.00	13.00	6	6	5	2	2	2	1	0	0	0	24	0	0	0	0	0	0	0	24	29.0
13.00	14.00	4	7	4	1	3	3	2	0	0	0	24	0	0	0	0	0	0	0	24	34.0
14.00	15.00	6	5	3	2	1	4	2	0	0	0	23	0	0	0	0	0	0	0	23	29.0
15.00	16.00	7	4	6	1	2	4	1	0	0	0	25	0	0	0	0	0	0	0	25	30.0
16.00	17.00	6	4	4	2	2	3	2	0	0	0	23	0	0	0	0	0	0	0	23	30.5
17.00	18.00	1	1	6	2	1	3	2	0	0	0	16	0	0	0	0	0	0	0	16	24.0
18.00	19.00	2	2	5	2	3	2	4	0	0	0	20	0	0	0	0	0	0	0	20	35.0
19.00	20.00	3	3	3	2	2	3	2	0	0	0	18	0	0	0	0	0	0	0	18	27.0
20.00	21.00	2	2	2	3	1	1	3	0	0	0	14	0	0	0	0	0	0	0	14	23.0
21.00	22.00	2	2	1	0	1	1	1	0	0	0	8	0	0	0	0	0	0	0	8	11.5
22.00	23.00	2	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	2.0
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
3.00	4.00	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2.0
4.00	5.00	3	2	1	1	0	3	0	0	0	0	10	0	0	0	0	0	0	0	10	10.5
TOTAL		107	92	74	28	30	49	28	0	1	0	409	0	0	0	0	0	0	0	409	512.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai										Additional Information							
Direction : Lawngtlai to Tawipui North-2				Road : NH 54																	
Section From : Km 431 to Km 490				Station no.: Lawngtlai																	
Date :17.09.2012				Hour : 24 (7 Days)										Weather: Fair							
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler s	3 Wheeler/ Auto Rickshaw	Cars/JEEP/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Ricksha w	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU
From	To																				
5.00	6.00	4	6	5	1	2	2	1	0	0	0	21	0	0	0	0	0	0	0	21	26.5
6.00	7.00	6	6	7	1	2	4	1	0	0	0	27	0	0	0	0	0	0	0	27	32.5
7.00	8.00	7	10	9	1	2	5	1	0	0	0	35	0	0	0	0	0	0	0	35	40.5
8.00	9.00	9	7	4	3	1	2	1	0	1	0	28	0	0	0	0	0	1	1	29	35.0
9.00	10.00	8	5	6	1	1	3	1	0	0	0	25	0	0	0	0	0	0	0	25	27.0
10.00	11.00	7	4	4	2	3	3	2	0	0	0	25	0	0	0	0	0	0	0	25	34.0
11.00	12.00	6	6	6	2	2	2	1	0	0	0	25	0	0	0	0	0	1	1	26	33.0
12.00	13.00	9	9	5	2	2	4	1	0	1	0	33	0	0	0	0	0	0	0	33	39.5
13.00	14.00	6	7	7	4	3	5	1	0	0	0	33	0	0	0	0	0	0	0	33	42.5
14.00	15.00	8	5	5	2	2	4	1	0	0	0	27	0	0	0	0	0	0	0	27	32.0
15.00	16.00	5	6	5	2	3	4	1	0	0	0	26	0	0	0	0	0	0	0	26	34.5
16.00	17.00	4	4	3	3	3	5	2	0	0	0	24	0	0	0	0	0	0	0	24	36.0
17.00	18.00	7	8	5	3	2	4	1	0	0	0	30	0	0	0	0	0	0	0	30	36.0
18.00	19.00	7	6	4	2	2	3	2	0	0	0	26	0	0	0	0	0	0	0	26	33.0
19.00	20.00	5	4	4	4	2	2	1	0	0	0	22	0	0	0	0	0	0	0	22	28.5
20.00	21.00	3	3	3	3	2	3	2	0	0	0	19	0	0	0	0	0	0	0	19	28.5
21.00	22.00	1	1	1	3	2		1	0	0	0	9	0	0	0	0	0	0	0	9	16.0
22.00	23.00	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.0
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4.00	5.00	3	0	0	0	0	0	2	0	0	0	5	0	0	0	0	0	0	0	5	7.5
TOTAL		108	97	83	39	36	55	23	0	2	0	443	0	0	0	0	0	2	2	445	564.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai											Additional Information								
Direction : Lawngtlai to Tawipui North-2		Road : NH 54																			
Section From : Km 431 to Km 490		Station no.: Lawngtlai											Weather: Fair								
Date :18.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	3	6	4	1	2	3	1	0	0	0	20	0	0	0	0	0	0	0	20	26.5
6.00	7.00	7	7	6	1	2	3	2	0	0	0	28	0	0	0	0	0	0	0	28	34.5
7.00	8.00	11	6	5		1	3	1	0	0	0	27	0	0	0	0	0	0	0	27	27.0
8.00	9.00	13	14	7		1	5	1	0	0	0	41	0	0	0	0	0	0	0	41	41.0
9.00	10.00	12	8	4	1	1	4	1	0	1	0	32	0	0	0	0	0	0	0	32	34.5
10.00	11.00	9	10	4	2	1	3	1	0	0	0	30	0	0	0	0	0	0	0	30	32.0
11.00	12.00	10	7	6			3	2	0	0	0	28	0	0	0	0	0	0	0	28	28.5
12.00	13.00	12	10	7		1	4	2	0	1	0	37	0	0	0	0	0	0	0	37	41.0
13.00	14.00	8	9	8	1		7	1	0	0	0	34	0	0	0	0	0	0	0	34	36.0
14.00	15.00	7	9	5		1	4	1	0	1	0	28	0	0	0	0	0	0	0	28	32.5
15.00	16.00	6	7	9			3	1	0	1	0	27	0	0	0	0	0	0	0	27	29.5
16.00	17.00	9	7	3	2	1	5	1	0	0	0	28	0	0	0	0	0	0	0	28	31.0
17.00	18.00	7	8	4			4	1	0	0	0	24	0	0	0	0	0	0	0	24	24.5
18.00	19.00	6	6	4			3	1	0	1	0	21	0	0	0	0	0	0	0	21	23.5
19.00	20.00	7	7	3			2	1	0	0	0	20	0	0	0	0	0	0	0	20	19.5
20.00	21.00	2	3	2			2	1	0	0	0	10	0	0	0	0	0	0	0	10	12.0
21.00	22.00	2	0	0	1	0	2	0	0	0	0	5	0	0	0	0	0	0	0	5	5.5
22.00	23.00	6	0	0	0	1	0	0	0	0	0	7	0	0	0	0	0	0	0	7	6.0
23.00	24.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3.0
TOTAL		137	124	81	9	13	61	20	0	5	0	450	0	0	0	0	0	0	0	450	492.5

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai											Additional Information								
Direction : Lawngtlai to Tawipui North-2		Road : NH 54																			
Section From : Km 431 to Km 490		Station no.: Lawngtlai																			
Date :19.09.2012		Hour : 24 (7 Days)											Weather: Fair								
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler s	3 Wheeler/ Auto Rickshaw	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Ricksha w	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total
PCU																					
From	To																				
5.00	6.00	6	2	5	3	2	2	2	0	0	0	22	0	0	0	0	0	0	0	22	29.5
6.00	7.00	10	3	4	4	2	4	1	0	0	0	28	0	0	0	0	0	0	0	28	33.0
7.00	8.00	6	2	9	2	4	3	2	0	0	0	28	0	0	0	0	0	0	0	28	39.5
8.00	9.00	2	2	6	5	4	4	3	0	0	0	26	0	0	0	0	0	1	1	27	46.5
9.00	10.00	5	4	4	5	4	4	1	0	0	0	27	0	0	0	0	0	0	0	27	39.0
10.00	11.00	7	4	4	4	4	4	2	0	0	0	29	0	0	0	0	0	0	0	29	41.5
11.00	12.00	2	5	4	4	4	7	1	0	0	0	27	0	0	0	0	0	3	3	30	50.5
12.00	13.00	7	4	11	4	6	5	2	0	0	0	39	0	0	0	0	0	0	0	39	56.0
13.00	14.00	3	4	7	6	5	5	1	0	0	0	31	0	0	0	0	0	0	0	31	47.0
14.00	15.00	5	5	5	5	4	4	1	0	0	0	29	0	0	0	0	0	0	0	29	41.0
15.00	16.00	7	4	4	4	4	4	1	0	0	0	28	0	0	0	0	0	0	0	28	38.5
16.00	17.00	2	5	4	4	4	7	1	0	0	0	27	0	0	0	0	0	0	0	27	41.5
17.00	18.00	7	4	11	4	6	5	1	0	0	0	38	0	0	0	0	0	0	0	38	53.0
18.00	19.00	3	4	7	6	5	5	2	0	0	0	32	0	0	0	0	0	0	0	32	50.0
19.00	20.00	3	3	3	3	2	2	1	0	0	0	17	0	0	0	0	0	0	0	17	24.0
20.00	21.00	5	2	2	2	2	2	1	0	0	0	16	0	0	0	0	0	0	0	16	21.5
21.00	22.00	0	3	2	2	2	5	1	0	0	0	15	0	0	0	0	0	0	0	15	24.5
22.00	23.00	2	2	2	2	2	2	2	0	0	0	14	0	0	0	0	0	0	0	14	23.0
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4.00	5.00	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	4.5
TOTAL		83	62	94	70	66	74	27	0	0	0	476	0	0	0	0	0	4	4	480	704.5



**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai										Additional Information									
Direction : Lawngtlai to Tawipui North-2		Road : NH 54																			
Section From : Km 431 to Km 490		Station no.: Lawngtlai										Weather: Fair									
Date :20.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	5	1	4	2	1	1	1	0	0	0	15	0	0	0	0	0	0	0	15	18.0
6.00	7.00	9	2	3	3	1	3	4	0	0	0	25	0	0	0	0	0	0	0	25	33.5
7.00	8.00	5	1	8	1	3	2	1	0	0	0	21	0	0	0	0	0	0	0	21	28.0
8.00	9.00	1	1	4	3	2	2	1	0	0	0	14	0	0	0	0	0	0	0	14	22.0
9.00	10.00	3	2	2	3	2	2	2	0	0	0	16	0	0	0	0	0	0	0	16	25.0
10.00	11.00	5	2	2	2	2	2	2	0	0	0	17	0	0	0	0	0	0	0	17	24.5
11.00	12.00	0	3	2	2	2	5	2	0	0	0	16	0	0	0	0	0	0	0	16	27.5
12.00	13.00	5	2	9	2	4	3	2	0	0	0	27	0	0	0	0	0	0	0	27	39.0
13.00	14.00	1	2	5	4	3	3	2	0	0	0	20	0	0	0	0	0	0	0	20	33.0
14.00	15.00	3	3	3	3	2	2	2	0	0	0	18	0	0	0	0	0	0	0	18	27.0
15.00	16.00	5	2	2	2	2	2	2	0	0	0	17	0	0	0	0	0	0	0	17	24.5
16.00	17.00	0	3	2	2	2	5	2	0	0	0	16	0	0	0	0	0	0	0	16	27.5
17.00	18.00	5	2	9	2	4	3	2	0	0	0	27	0	0	0	0	0	0	0	27	39.0
18.00	19.00	1	2	5	4	3	3	2	0	0	0	20	0	0	0	0	0	0	0	20	33.0
19.00	20.00	3	3	3	3	2	2	2	0	0	0	18	0	0	0	0	0	0	0	18	27.0
20.00	21.00	5	2	2	2	2	2	2	0	0	0	17	0	0	0	0	0	0	0	17	24.5
21.00	22.00	0	3	2	2	2	5	2	0	0	0	16	0	0	0	0	0	0	0	16	27.5
22.00	23.00	2	2	2	2	2	2	2	0	0	0	14	0	0	0	0	0	0	0	14	23.0
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4.00	5.00	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	4.5
TOTAL		59	38	69	45	41	49	36	0	0	0	337	0	0	0	0	0	0	0	337	508.5

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai																		
Direction : Daywise Traffic - Both Directions				Road : NH 54										Additional Information								
Section From : Km 431 to Km 490				Station no.: 1										Weather: Fair								
Date : 14.09.2012				Hour : 24 (7 Days)																		
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC									
From	To	Two Wheelers	3 Wheeler/Auto Rickshaw	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU	
5.00	6.00	13	12	10	2	4	2	3	0	0	0	46	0	0	0	0	0	0	0	46	55.5	
6.00	7.00	14	13	11	4	4	4	3	0	0	0	53	0	0	0	0	0	0	0	53	64	
7.00	8.00	16	14	15	4	4	5	5	0	0	0	63	0	0	0	0	0	2	2	65	83.5	
8.00	9.00	14	18	17	2	4	4	5	0	0	0	64	0	0	0	0	0	1	1	65	81	
9.00	10.00	16	21	20	3	2	8	3	0	0	0	73	0	0	0	0	0	0	0	73	80.5	
10.00	11.00	19	21	21	3	4	7	5	0	0	0	80	0	0	0	0	0	0	0	80	93.5	
11.00	12.00	12	18	17	4	3	5	4	0	0	0	63	0	0	0	0	0	0	0	63	75.5	
12.00	13.00	18	15	14	3	4	8	6	0	0	0	68	0	0	0	0	0	2	2	70	90.5	
13.00	14.00	14	15	15	2	4	5	4	0	0	0	59	0	0	0	0	0	0	0	59	71.5	
14.00	15.00	18	15	12	2	4	3	4	0	0	0	58	0	0	0	0	0	0	0	58	67.5	
15.00	16.00	15	10	10	3	3	6	4	0	0	0	51	0	0	0	0	0	0	0	51	62	
16.00	17.00	16	10	13	4	3	9	6	0	0	0	61	0	0	0	0	0	0	0	61	77.5	
17.00	18.00	10	13	10	3	2	9	3	0	0	0	50	0	0	0	0	0	0	0	50	61	
18.00	19.00	15	12	10	4	4	6	4	0	0	0	55	0	0	0	0	0	0	0	55	68.5	
19.00	20.00	7	10	8	2	3	6	4	0	0	0	40	0	0	0	0	0	0	0	40	54.5	
20.00	21.00	6	9	7	4	3	3	3	0	0	0	35	0	0	0	0	0	0	0	35	47.5	
21.00	22.00	6	5	5	3	3	4	3	0	0	0	29	0	0	0	0	0	0	0	29	41.5	
22.00	23.00	1	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	3	6.5	
23.00	24.00	0	1	2	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	4	6	
0.00	1.00	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6	
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3.00	4.00	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2	3	
4.00	5.00	2	2	2	1	2	2	0	0	0	0	11	0	0	0	0	0	0	0	11	15.5	
TOTAL		232	234	219	53	60	98	74	0	0	0	970	0	0	0	0	0	5	5	975	1212.5	

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lunglei - Lawngtlai																			
Direction : Daywise Traffic - Both Directions		Road : NH 54																			
Section From : Km 431 to Km 490		Station no.: 1																			
Date :15.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	12	8	16	2	3	2	2	0	0	0	45	0	0	0	0	0	0	0	45	51
6.00	7.00	14	8	13	4	3	5	3	0	1	0	51	0	0	0	0	0	0	0	51	62.5
7.00	8.00	15	13	12	2	5	4	4	0	0	0	55	0	0	0	0	0	1	1	56	71.5
8.00	9.00	16	12	12	4	4	7	3	0	0	0	58	0	0	0	0	0	0	0	58	69.5
9.00	10.00	18	19	15	6	5	9	5	0	2	0	79	0	0	0	0	0	2	2	81	107.5
10.00	11.00	16	13	16	2	3	8	4	0	0	0	62	0	0	0	0	0	0	0	62	73
11.00	12.00	13	13	11	3	5	6	5	0	1	0	57	0	0	0	0	0	1	1	58	80
12.00	13.00	15	12	10	5	3	7	4	0	1	0	57	0	0	0	0	0	1	1	58	74.5
13.00	14.00	12	13	13	2	5	7	5	0	0	0	57	0	0	0	0	0	0	0	57	75.5
14.00	15.00	15	12	9	4	2	9	4	0	0	0	55	0	0	0	0	0	0	0	55	66
15.00	16.00	12	8	11	4	4	6	2	0	0	0	47	0	0	0	0	0	0	0	47	58
16.00	17.00	14	10	8	4	3	4	4	0	0	0	47	0	0	0	0	0	0	0	47	58
17.00	18.00	8	10	10	3	2	6	3	0	0	0	42	0	0	0	0	0	0	0	42	52.5
18.00	19.00	10	12	10	4	5	4	6	0	0	0	51	0	0	0	0	0	0	0	51	72
19.00	20.00	6	9	8	3	4	5	3	0	0	0	38	0	0	0	0	0	0	0	38	53
20.00	21.00	5	8	5	5	3	3	5	0	0	0	34	0	0	0	0	0	0	0	34	51.5
21.00	22.00	6	5	4	1	2	3	2	0	0	0	23	0	0	0	0	0	0	0	23	30
22.00	23.00	2	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	1	1	4	5
23.00	24.00	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	2
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00	3.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
3.00	4.00	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
4.00	5.00	3	2	1	1	0	3	0	0	0	0	10	0	0	0	0	0	0	0	10	10.5
TOTAL		217	188	187	59	61	98	64	0	5	0	879	0	0	0	0	0	6	6	885	1127

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai																	
Direction : Daywise Traffic - Both Directions				Road : NH 54									Additional Information								
Section From : Km 431 to Km 490				Station no.: 1									Weather: Fair								
Date :16.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
From	To																				
5.00	6.00	11	8	2	2	1	1	1	0	0	0	26	0	0	0	0	0	0	0	26	26
6.00	7.00	12	8	10	4	4	4	2	0	1	0	45	0	0	0	0	0	0	0	45	57
7.00	8.00	15	10	8	2	4	5	4	0	0	0	48	0	0	0	0	0	0	0	48	60
8.00	9.00	12	12	10	4	1	5	3	0	0	0	47	0	0	0	0	0	0	0	47	53.5
9.00	10.00	15	15	12	4	4	4	3	0	2	0	59	0	0	0	0	0	0	0	59	73.5
10.00	11.00	13	13	14	2	3	9	3	0	0	0	57	0	0	0	0	0	0	0	57	68
11.00	12.00	13	9	10	3	5	4	4	0	1	0	49	0	0	0	0	0	0	0	49	66
12.00	13.00	15	10	7	4	3	7	2	0	1	0	49	0	0	0	0	0	0	0	49	59
13.00	14.00	12	10	10	2	5	7	5	0	0	0	51	0	0	0	0	0	0	0	51	69.5
14.00	15.00	15	10	7	4	2	7	4	0	0	0	49	0	0	0	0	0	0	0	49	59
15.00	16.00	12	8	9	1	4	6	2	0	0	0	42	0	0	0	0	0	0	0	42	51.5
16.00	17.00	12	8	5	4	3	4	4	0	0	0	40	0	0	0	0	0	0	0	40	52
17.00	18.00	5	6	10	3	2	6	3	0	0	0	35	0	0	0	0	0	0	0	35	47
18.00	19.00	7	9	7	4	5	4	6	0	0	0	42	0	0	0	0	0	0	0	42	64.5
19.00	20.00	6	9	8	3	4	5	3	0	0	0	38	0	0	0	0	0	0	0	38	53
20.00	21.00	5	8	5	5	3	3	5	0	0	0	34	0	0	0	0	0	0	0	34	51.5
21.00	22.00	6	5	4	1	2	3	2	0	0	0	23	0	0	0	0	0	0	0	23	30
22.00	23.00	4	2	3	2	2	2	2	0	0	0	17	0	0	0	0	0	0	0	17	25
23.00	24.00	3	2	2	2	1	2	0	0	0	0	12	0	0	0	0	0	0	0	12	14.5
0.00	1.00	2	2	3	1	2	2	0	0	0	0	12	0	0	0	0	0	0	0	12	16.5
1.00	2.00	2	2	2	2	2	2	0	0	0	0	12	0	0	0	0	0	0	0	12	17
2.00	3.00	3	2	2	2	2	2	0	0	0	0	13	0	0	0	0	0	0	0	13	17.5
3.00	4.00	2	4	3	2	2	3	0	0	0	0	16	0	0	0	0	0	0	0	16	21.5
4.00	5.00	5	4	3	3	3	5	0	0	0	0	23	0	0	0	0	0	0	0	23	30.5
TOTAL		207	176	156	66	69	102	58	0	5	0	839	0	0	0	0	0	0	0	839	1083.5

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai																	
Direction : Daywise Traffic - Both Directions				Road : NH 54										Additional Information							
Section From : Km 431 to Km 490				Station no.: 1										Weather: Fair							
Date :17.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
From	To																				
5.00	6.00	7	9	7	1	2	3	2	0	0	0	31	0	0	0	0	0	0	0	31	37.5
6.00	7.00	11	10	11	2	2	6	1	0	0	0	43	0	0	0	0	0	1	1	44	50.5
7.00	8.00	14	14	12	1	4	9	1	0	1	0	56	0	0	0	0	0	0	0	56	66
8.00	9.00	17	12	12	3	3	5	3	0	1	0	56	0	0	0	0	0	1	1	57	68.5
9.00	10.00	18	14	11	2	2	6	1	0	2	0	56	0	0	0	0	0	1	1	57	64
10.00	11.00	13	12	8	3	4	5	2	0	0	0	47	0	0	0	0	0	0	0	47	56.5
11.00	12.00	13	12	9	4	3	3	3	0	0	0	47	0	0	0	0	0	1	1	48	59
12.00	13.00	17	14	9	3	2	5	2	0	1	0	53	0	0	0	0	0	2	2	55	64.5
13.00	14.00	14	12	11	6	3	7	2	0	0	0	55	0	0	0	0	0	0	0	55	64.5
14.00	15.00	14	9	10	2	2	7	2	0	0	0	46	0	0	0	0	0	1	1	47	54.5
15.00	16.00	10	9	10	2	3	6	1	0	0	0	41	0	0	0	0	0	0	0	41	48
16.00	17.00	9	7	6	5	3	6	2	0	0	0	38	0	0	0	0	0	0	0	38	49
17.00	18.00	13	12	7	4	3	5	2	0	0	0	46	0	0	0	0	0	0	0	46	54
18.00	19.00	11	10	6	3	2	4	2	0	0	0	38	0	0	0	0	0	0	0	38	44
19.00	20.00	8	7	5	4	2	4	2	0	0	0	32	0	0	0	0	0	0	0	32	40
20.00	21.00	6	5	4	3	2	5	3	0	0	0	28	0	0	0	0	0	0	0	28	39
21.00	22.00	3	3	2	3	2	1	2	0	0	0	16	0	0	0	0	0	0	0	16	24.5
22.00	23.00	3	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	2.5
23.00	24.00	2	0	0	0	0	0	3	0	0	0	5	0	0	0	0	0	0	0	5	10
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00	4.00	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	3	0	1	0	0	1	3	0	0	0	8	0	0	0	0	0	0	0	8	13
TOTAL		206	171	143	52	44	88	39	0	5	0	748	0	0	0	0	0	7	7	755	912

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai																	
Direction : Daywise Traffic - Both Directions				Road : NH 54									Additional Information								
Section From : Km 431 to Km 490				Station no.: 1									Weather: Fair								
Date :18.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
From	To																				
5.00	6.00	7	10	7	3	4	6	4	0	0	0	41	0	0	0	0	0	0	0	41	58
6.00	7.00	13	13	13	3	4	7	5	0	0	0	58	0	0	0	0	0	0	0	58	74.5
7.00	8.00	17	12	10	4	7	10	7	0	0	0	67	0	0	0	0	0	0	0	67	93.5
8.00	9.00	23	25	15	5	6	14	6	0	0	0	94	0	0	0	0	0	0	0	94	116
9.00	10.00	21	21	13	6	6	10	7	0	1	0	85	0	0	0	0	0	0	0	85	110.5
10.00	11.00	17	19	13	8	6	8	6	0	0	0	77	0	0	0	0	0	0	0	77	100.5
11.00	12.00	18	14	16	5	4	8	8	0	0	0	73	0	0	0	0	0	0	0	73	94.5
12.00	13.00	21	16	16	4	5	12	8	0	1	0	83	0	0	0	0	0	0	0	83	108.5
13.00	14.00	18	21	18	6	4	13	6	0	0	0	86	0	0	0	0	0	0	0	86	106.5
14.00	15.00	16	21	15	4	7	14	7	0	1	0	85	0	0	0	0	0	0	0	85	116
15.00	16.00	14	18	18	5	5	8	7	0	1	0	76	0	0	0	0	0	0	0	76	101.5
16.00	17.00	16	17	11	6	5	11	9	0	0	0	75	0	0	0	0	0	0	0	75	103.5
17.00	18.00	14	18	11	4	5	9	7	0	0	0	68	0	0	0	0	0	0	0	68	91.5
18.00	19.00	11	17	12	4	4	8	7	0	1	0	64	0	0	0	0	0	0	0	64	88.5
19.00	20.00	13	16	11	4	4	7	6	0	0	0	61	0	0	0	0	0	0	0	61	80
20.00	21.00	8	12	9	5	4	7	7	0	0	0	52	0	0	0	0	0	0	0	52	76
21.00	22.00	7	7	5	5	4	6	5	0	0	0	39	0	0	0	0	0	0	0	39	59
22.00	23.00	12	4	5	4	5	4	4	0	0	0	38	0	0	0	0	0	0	0	38	54
23.00	24.00	5	4	4	4	6	4	5	0	0	0	32	0	0	0	0	0	0	0	32	55.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00	4.00	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	2	2.5
4.00	5.00	0	1	0	2	1	0	1	0	0	0	5	0	0	0	0	0	0	0	5	10
TOTAL		271	287	222	91	96	167	122	0	5	0	1261	0	0	0	0	0	0	0	1261	1700.5

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai																		
Direction : Daywise Traffic - Both Directions				Road : NH 54										Additional Information								
Section From : Km 431 to Km 490				Station no.: 1										Weather: Fair								
Date :19.09.2012				Hour : 24 (7 Days)																		
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC									
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU	
From	To																					
5.00	6.00	10	6	10	4	3	3	4	0	0	0	40	0	0	0	0	0	0	0	40	52.5	
6.00	7.00	16	8	11	6	3	7	2	0	0	0	53	0	0	0	0	0	0	0	53	61.5	
7.00	8.00	14	7	15	3	6	7	4	0	0	0	56	0	0	0	0	0	0	0	56	74	
8.00	9.00	11	8	17	6	4	6	4	0	0	0	56	0	0	0	0	0	1	1	57	75.5	
9.00	10.00	16	14	18	6	4	5	2	0	0	0	65	0	0	0	0	0	1	1	66	77.5	
10.00	11.00	14	13	16	6	5	6	3	0	0	0	63	0	0	0	0	0	0	0	63	78	
11.00	12.00	10	12	19	4	4	9	2	0	0	0	60	0	0	0	0	0	3	3	63	82.5	
12.00	13.00	16	10	23	5	6	6	3	0	0	0	69	0	0	0	0	0	0	0	69	84.5	
13.00	14.00	12	10	18	8	5	8	3	0	0	0	64	0	0	0	0	0	0	0	64	82	
14.00	15.00	12	10	15	6	5	8	2	0	0	0	58	0	0	0	0	0	0	0	58	73	
15.00	16.00	13	8	13	4	4	9	2	0	0	0	53	0	0	0	0	0	0	0	53	65	
16.00	17.00	8	9	11	5	4	11	2	0	0	0	50	0	0	0	0	0	0	0	50	66	
17.00	18.00	14	9	16	5	7	9	2	0	0	0	62	0	0	0	0	0	0	0	62	80	
18.00	19.00	8	8	13	7	7	8	2	0	0	0	53	0	0	0	0	0	0	0	53	74.5	
19.00	20.00	7	7	8	3	2	5	2	0	0	0	34	0	0	0	0	0	0	0	34	42.5	
20.00	21.00	9	5	7	2	2	3	1	0	0	0	29	0	0	0	0	0	0	0	29	33	
21.00	22.00	3	4	4	2	2	7	3	0	0	0	25	0	0	0	0	0	0	0	25	38	
22.00	23.00	7	7	4	5	5	5	5	0	0	0	38	0	0	0	0	0	0	0	38	59.5	
23.00	24.00	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.5	
0.00	1.00	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1	
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3.00	4.00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	
4.00	5.00	0	1	0	1	1	0	1	0	0	0	4	0	0	0	0	0	0	0	4	8.5	
TOTAL		203	158	238	88	79	122	49	0	0	0	937	0	0	0	0	0	5	5	942	1211.5	

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai																	
Direction : Daywise Traffic - Both Directions				Road : NH 54									Additional Information								
Section From : Km 431 to Km 490				Station no.: 1									Weather: Fair								
Date :20.09 .2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
From	To																				
5.00	6.00	7	3	5	2	1	2	2	0	0	0	22	0	0	0	0	0	0	0	22	26.5
6.00	7.00	13	6	8	3	1	5	5	0	0	0	41	0	0	0	0	0	0	0	41	50.5
7.00	8.00	9	5	11	3	5	5	3	0	0	0	41	0	0	0	0	0	0	0	41	56.5
8.00	9.00	7	8	8	4	3	7	2	0	0	0	39	0	0	0	0	0	0	0	39	51
9.00	10.00	8	11	7	4	3	4	4	0	0	0	41	0	0	0	0	0	0	0	41	55
10.00	11.00	9	7	7	4	3	3	3	0	0	0	36	0	0	0	0	0	0	0	36	47
11.00	12.00	4	6	8	3	2	6	4	0	0	0	33	0	0	0	0	0	0	0	33	47.5
12.00	13.00	10	4	14	2	4	7	4	0	0	0	45	0	0	0	0	0	0	0	45	60.5
13.00	14.00	7	10	11	5	3	5	3	0	0	0	44	0	0	0	0	0	0	0	44	57.5
14.00	15.00	8	11	9	3	4	8	4	0	0	0	47	0	0	0	0	0	0	0	47	64.5
15.00	16.00	9	9	7	3	3	3	4	0	0	0	38	0	0	0	0	0	0	0	38	50.5
16.00	17.00	3	9	6	2	2	7	6	0	0	0	35	0	0	0	0	0	0	0	35	54
17.00	18.00	8	8	12	2	5	4	4	0	0	0	43	0	0	0	0	0	0	0	43	60
18.00	19.00	2	9	9	4	3	4	4	0	0	0	35	0	0	0	0	0	0	0	35	52
19.00	20.00	5	8	7	3	2	3	3	0	0	0	31	0	0	0	0	0	0	0	31	41.5
20.00	21.00	7	7	5	3	2	3	4	0	0	0	31	0	0	0	0	0	0	0	31	42.5
21.00	22.00	1	6	3	2	2	5	3	0	0	0	22	0	0	0	0	0	0	0	22	35
22.00	23.00	5	4	4	4	4	4	5	0	0	0	30	0	0	0	0	0	0	0	30	49.5
23.00	24.00	1	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	2.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.00	2.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	0	0	1	1	0	0	1	0	0	0	3	0	0	0	0	0	0	0	3	5.5
TOTAL		123	131	144	57	52	86	69	0	0	0	662	0	0	0	0	0	0	0	662	914



**Annexure D-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lunglei - Lawngtlai																		
Direction : Hourly 7 days Average Both Direction				Road : NH 54				Additional Information														
Section From : Km 431 to Km 490				Station no.: 1				Weather: Fair														
Date :11.10.2009 TO 17.10.2009				Hour : 24 (7 Days)																		
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC									
From	To	Two Wheelers	3 Wheeler/A uto Rickshaw	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Ricksha w	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU	
5.00	6.00	67	56	57	16	18	19	18	0	0	0	251	0	0	0	0	0	0	0	251	307	
6.00	7.00	93	66	77	26	21	38	21	0	2	0	344	0	0	0	0	0	1	1	345	421	
7.00	8.00	100	75	83	19	35	45	28	0	1	0	386	0	0	0	0	0	3	3	389	505	
8.00	9.00	100	95	91	28	25	48	26	0	1	0	414	0	0	0	0	0	3	3	417	515	
9.00	10.00	112	115	96	31	26	46	25	0	7	0	458	0	0	0	0	0	4	4	462	569	
10.00	11.00	101	98	95	28	28	46	26	0	0	0	422	0	0	0	0	0	0	0	422	517	
11.00	12.00	83	84	90	26	26	41	30	0	2	0	382	0	0	0	0	0	5	5	387	505	
12.00	13.00	112	81	93	26	27	52	29	0	4	0	424	0	0	0	0	0	5	5	429	542	
13.00	14.00	89	91	96	31	29	52	28	0	0	0	416	0	0	0	0	0	0	0	416	527	
14.00	15.00	98	88	77	25	26	56	27	0	1	0	398	0	0	0	0	0	1	1	399	501	
15.00	16.00	85	70	78	22	26	44	22	0	1	0	348	0	0	0	0	0	0	0	348	437	
16.00	17.00	78	70	60	30	23	52	33	0	0	0	346	0	0	0	0	0	0	0	346	460	
17.00	18.00	72	76	76	24	26	48	24	0	0	0	346	0	0	0	0	0	0	0	346	446	
18.00	19.00	64	77	67	30	30	38	31	0	1	0	338	0	0	0	0	0	0	0	338	464	
19.00	20.00	52	66	55	22	21	35	23	0	0	0	274	0	0	0	0	0	0	0	274	365	
20.00	21.00	46	54	42	27	19	27	28	0	0	0	243	0	0	0	0	0	0	0	243	341	
21.00	22.00	32	35	27	17	17	29	20	0	0	0	177	0	0	0	0	0	0	0	177	258	
22.00	23.00	34	17	18	15	16	15	18	0	0	0	133	0	0	0	0	0	1	1	134	202	
23.00	24.00	16	8	10	6	7	6	9	0	0	0	62	0	0	0	0	0	0	0	62	92	
0.00	1.00	4	2	5	1	2	2	2	0	0	0	18	0	0	0	0	0	0	0	18	26	
1.00	2.00	2	2	2	2	2	2	1	0	0	0	13	0	0	0	0	0	0	0	13	20	
2.00	3.00	4	2	2	2	2	2	0	0	0	0	14	0	0	0	0	0	0	0	14	18	
3.00	4.00	2	7	4	3	2	7	0	0	0	0	25	0	0	0	0	0	0	0	25	33	
4.00	5.00	13	10	8	9	7	11	6	0	0	0	64	0	0	0	0	0	0	0	64	94	
TOTAL		1459	1345	1309	466	461	761	475	0	20	0	6296	0	0	0	0	0	23	23	6319	8161	
Hourly Average		208	192	187	67	66	109	68	0	3	0	899	0	0	0	0	0	3	3	903	1166	

**Annexure E-1**  
**Average Daily Traffic Data**

State : Mizoram Direction : Daywise - Both Directions Summary Section From : Km 431 to Km 490												District : Lunglei - Lawngtlai Road : NH 54 Station no.: 1 Hour : 24 (7 Days)										Additional Information Weather: Fair			
DAY & DATE		FAST MOVING VEHICLES										NON MOTORISED TRAFFIC													
		Two Wheelers	3 Wheeler/Auto	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU				
DAY-1	UP	111	120	113	28	31	48	39	0	0	490	0	0	0	0	0	0	4	4	494	625				
	DOWN	121	114	106	25	29	50	35	0	0	480	0	0	0	0	0	0	1	1	481	588				
TOTAL		232	234	219	53	60	98	74	0	0	970	0	0	0	0	0	0	5	5	975	1213				
DAY-2	UP	99	89	97	26	27	47	28	0	4	417	0	0	0	0	0	0	4	4	421	534				
	DOWN	118	99	90	33	34	51	36	0	1	462	0	0	0	0	0	0	2	2	464	593				
TOTAL		217	188	187	59	61	98	64	0	5	879	0	0	0	0	0	0	6	6	885	1127				
DAY-3	UP	100	84	82	38	39	53	30	0	4	430	0	0	0	0	0	0	0	0	430	572				
	DOWN	107	92	74	28	30	49	28	0	1	409	0	0	0	0	0	0	0	0	409	512				
TOTAL		207	176	156	66	69	102	58	0	5	839	0	0	0	0	0	0	0	0	839	1084				
DAY-4	UP	98	74	60	13	8	33	16	0	3	305	0	0	0	0	0	0	5	5	310	348				
	DOWN	108	97	83	39	36	55	23	0	2	443	0	0	0	0	0	0	2	2	445	564				
TOTAL		206	171	143	52	44	88	39	0	5	748	0	0	0	0	0	0	7	7	755	912				
DAY-5	UP	134	163	141	82	83	106	102	0	0	811	0	0	0	0	0	0	0	0	811	1208				
	DOWN	137	124	81	9	13	61	20	0	5	450	0	0	0	0	0	0	0	0	450	493				
TOTAL		271	287	222	91	96	167	122	0	5	1261	0	0	0	0	0	0	0	0	1261	1701				
DAY-6	UP	120	96	144	18	13	48	22	0	0	461	0	0	0	0	0	0	1	1	462	507				
	DOWN	83	62	94	70	66	74	27	0	0	476	0	0	0	0	0	0	4	4	480	705				
TOTAL		203	158	238	88	79	122	49	0	0	937	0	0	0	0	0	0	5	5	942	1212				
DAY-7	UP	64	93	75	12	11	37	33	0	0	325	0	0	0	0	0	0	0	0	325	406				
	DOWN	59	38	69	45	41	49	36	0	0	337	0	0	0	0	0	0	0	0	337	509				
TOTAL		123	131	144	57	52	86	69	0	0	662	0	0	0	0	0	0	0	0	662	914				
TOTAL WEEKLY TRAFFIC		1459	1345	1309	466	461	761	475	0	20	0	6296	0	0	0	0	0	23	23	6319	8161				
AVERAGE DAILY TRAFFIC		208	192	187	67	66	109	68	0	3	0	899	0	0	0	0	0	3	3	903	1166				
COMMERCIAL VEHICLE PER DAY (CVD)					312																				

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																		
Direction : Zero towards Lawngtlai				Road : NH 54				Additional Information														
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point				Weather: Fair														
Date : 18.09.2012				Hour : 24 (7 Days)																		
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC									
From	To	Two Wheelers	3 Wheeler/ Auto Rickshaw	Cars/Jeep /Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU	
5.00	6.00	2	3	3	7	8	2	7	0	0	0	32	0	0	0	0	0	0	0	32	65.5	
6.00	7.00	3	5	5	4	2	3	8	0	0	0	30	0	0	0	0	0	0	0	30	52.0	
7.00	8.00	2	8	3	2		1	4	0	0	0	20	0	0	0	0	0	0	0	20	28.5	
8.00	9.00	5	7	5			5	8	0	0	0	30	0	0	0	0	0	0	0	30	46.0	
9.00	10.00	7	11	9		1	4	3	0	0	0	35	0	0	0	0	0	0	0	35	41.5	
10.00	11.00	9	8	10	3	2	2	4	0	0	0	38	0	0	0	0	0	0	0	38	48.0	
11.00	12.00	5	10	7	4	3	3	5	0	0	0	37	0	0	0	0	0	0	0	37	54.0	
12.00	13.00	6	12	5	2		11	2	0	0	0	38	0	0	0	0	0	0	0	38	45.5	
13.00	14.00	3	8	7		1	2	3	0	0	0	24	0	0	0	0	0	0	0	24	31.5	
14.00	15.00	5	5	4			3	5	0	0	0	22	0	0	0	0	0	0	0	22	31.0	
15.00	16.00	6	9	6	1		5	10	0	0	0	37	0	0	0	0	0	0	0	37	57.0	
16.00	17.00	3	6	4	5	4	3	7	0	0	0	32	0	0	0	0	0	0	0	32	56.5	
17.00	18.00	4	5	5	2	2	23	5	0	0	0	46	0	0	0	0	0	0	0	46	70.5	
18.00	19.00	3	4	2		1	10	4	0	0	0	24	0	0	0	0	0	0	0	24	37.5	
19.00	20.00	2	3	1			5	6	0	0	0	17	0	0	0	0	0	0	0	17	30.5	
20.00	21.00	2	1	2			3	3	0	0	0	11	0	0	0	0	0	0	0	11	17.5	
21.00	22.00	1	2	1				2	0	0	0	6	0	0	0	0	0	0	0	6	9.5	
22.00	23.00	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6.0	
23.00	24.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3.0	
0.00	1.00	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6.0	
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5	
4.00	5.00	1	1	0	0	1	1	0	0	0	0	4	0	0	0	0	0	0	0	4	6.0	
TOTAL		69	108	79	30	25	87	91	0	0	0	489	0	0	0	0	0	0	0	489	745.0	

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha										Additional Information									
Direction : Zero towards Lawngtlai		Road : NH 54																			
Section From : Km 472+00 to Km 562+00		Station no.: Zero Point										Weather: Fair									
Date :19.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep /Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	3	4	4	4		2	1	0	0	0	18	0	0	0	0	0	0	0	18	21.5
6.00	7.00	2	6	6	2	2	4	2	0	0	0	24	0	0	0	0	0	0	0	24	34.0
7.00	8.00	3	9	4	2		1	2	0	0	0	21	0	0	0	0	0	0	0	21	25.0
8.00	9.00	6	8	6			3	1	0	0	0	24	0	0	0	0	0	0	0	24	24.5
9.00	10.00	8	12	10		1	2	2	0	0	0	35	0	0	0	0	0	0	0	35	38.0
10.00	11.00	10	9	11	1	1	2	1	0	0	0	35	0	0	0	0	0	0	0	35	35.5
11.00	12.00	6	11	8	2	2	3	2	0	0	0	34	0	0	0	0	0	0	0	34	41.5
12.00	13.00	7	13	6	1		11	1	0	0	0	39	0	0	0	0	0	0	0	39	43.5
13.00	14.00	4	9	8		1	2	1	0	0	0	25	0	0	0	0	0	0	0	25	28.0
14.00	15.00	6	6	5		1	2	2	0	0	0	22	0	0	0	0	0	0	0	22	26.0
15.00	16.00	7	10	7	1		4	1	0	0	0	30	0	0	0	0	0	0	0	30	31.0
16.00	17.00	4	7	5	3	3	2	3	0	0	0	27	0	0	0	0	0	0	0	27	39.5
17.00	18.00	5	6	6	1	2	4	4	0	0	0	28	0	0	0	0	0	0	0	28	40.0
18.00	19.00	4	5	3	1	1	8	2	0	0	0	24	0	0	0	0	0	0	0	24	32.5
19.00	20.00	3	4	2			5	2	0	0	0	16	0	0	0	0	0	0	0	16	21.0
20.00	21.00	3	2	3			3	1	0	0	0	12	0	0	0	0	0	0	0	12	14.0
21.00	22.00	2	1	1				1	0	0	0	5	0	0	0	0	0	0	0	5	6.0
22.00	23.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
23.00	24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	1	0	0	0	1	1	0	0	0	3	0	0	0	0	0	0	0	3	5.5
4.00	5.00	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	2	6.0
TOTAL		83	123	95	18	15	59	31	0	0	0	424	0	0	0	0	0	0	0	424	513.0

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha											Additional Information								
Direction : Zero towards Lawngtlai		Road : NH 54											Weather: Fair								
Section From : Km 472+00 to Km 562+00		Station no.: Zero Point											Hour : 24 (7 Days)								
Date :20.09.2012																					
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep /Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	2	2	2			1	1	0	0	0	8	0	0	0	0	0	0	0	8	9.5
6.00	7.00	4	3	4	2		2	2	0	0	0	17	0	0	0	0	0	0	0	17	21.0
7.00	8.00	3	6	4	3	1	1	1	0	0	0	19	0	0	0	0	0	0	0	19	23.5
8.00	9.00	4	5	4		1	4	1	0	0	0	19	0	0	0	0	0	0	0	19	23.0
9.00	10.00	5	6	8			3	2	0	0	0	24	0	0	0	0	0	0	0	24	27.0
10.00	11.00	5	7	6	3	1	2	1	0	0	0	25	0	0	0	0	0	0	0	25	29.0
11.00	12.00	4	6	5	2	2	2	1	0	0	0	22	0	0	0	0	0	0	0	22	28.0
12.00	13.00	4	6	3	1		4	1	0	0	0	19	0	0	0	0	0	0	0	19	21.5
13.00	14.00	4	3	5			1	1	0	0	0	14	0	0	0	0	0	0	0	14	14.5
14.00	15.00	4	3	2		1	1	2	0	0	0	13	0	0	0	0	0	0	0	13	17.5
15.00	16.00	5	4	3	2		2	2	0	0	0	18	0	0	0	0	0	0	0	18	21.5
16.00	17.00	4	5	2	4	2	2	1	0	0	0	20	0	0	0	0	0	0	0	20	27.0
17.00	18.00	5	4	3	1	1	4	2	0	0	0	20	0	0	0	0	0	0	0	20	26.0
18.00	19.00	5	2	1	2	1	3	1	0	0	0	15	0	0	0	0	0	0	0	15	19.0
19.00	20.00	3	2	2			3	1	0	0	0	11	0	0	0	0	0	0	0	11	13.0
20.00	21.00	4	2	2			1	2	0	0	0	11	0	0	0	0	0	0	0	11	13.5
21.00	22.00	1	1	1				1	0	0	0	4	0	0	0	0	0	0	0	4	5.5
22.00	23.00	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.5
23.00	24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	3	0	0	1	1	0	0	0	5	0	0	0	0	0	0	0	5	7.5
4.00	5.00	1	1	1	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	4	5.5
TOTAL		69	68	62	20	11	37	24	0	0	0	291	0	0	0	0	0	0	0	291	355.0

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																		
Direction : Zero towards Lawngtlai				Road : NH 54				Additional Information														
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point				Weather: Fair														
Date :21.09.2012				Hour : 24 (7 Days)																		
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC									
		Two Wheelers	3 Wheeler/ Auto Rickshaw	Cars/Jeep /Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailor	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total	
From	To																				PCU	
5.00	6.00	1	2	2			1	2	0	0	0	8	0	0	0	0	0	0	0	8	12.0	
6.00	7.00	2	4	3		2	3	1	0	0	0	15	0	0	0	0	0	0	0	15	21.5	
7.00	8.00	2	4	5	4	3	3	4	0	0	0	25	0	0	0	0	0	0	0	25	41.5	
8.00	9.00	4	7	2	3	2	7	2	0	0	0	27	0	0	0	0	0	0	0	27	38.0	
9.00	10.00	3	9	7	2	1	2	5	0	0	0	29	0	0	0	0	0	0	0	29	41.5	
10.00	11.00	2	5	3	2	1	3	2	0	0	0	18	0	0	0	0	0	0	0	18	25.5	
11.00	12.00	2	3	4	1		1	3	0	0	0	14	0	0	0	0	0	0	0	14	20.0	
12.00	13.00	3	2	3			5	3	0	0	0	16	0	0	0	0	0	0	0	16	23.0	
13.00	14.00	4	6	4			1	2	0	0	0	17	0	0	0	0	0	0	0	17	19.5	
14.00	15.00	3	4	4	3	2	8	4	0	0	0	28	0	0	0	0	0	0	0	28	44.0	
15.00	16.00	2	3	3	2	1	2	3	0	0	0	16	0	0	0	0	0	0	0	16	25.0	
16.00	17.00	1	2	2	1		3	5	0	0	0	14	0	0	0	0	0	0	0	14	25.5	
17.00	18.00	1	2	1		2	1	2	0	0	0	9	0	0	0	0	0	0	0	9	17.0	
18.00	19.00		3	2				1	0	0	0	6	0	0	0	0	0	0	0	6	8.0	
19.00	20.00		1	2				2	0	0	0	5	0	0	0	0	0	0	0	5	9.0	
20.00	21.00		1	1				1	0	0	0	3	0	0	0	0	0	0	0	3	5.0	
21.00	22.00							1	0	0	0	1	0	0	0	0	0	0	0	1	3.0	
22.00	23.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0	
23.00	24.00	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	3	9.0	
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0	
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	
3.00	4.00	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5	
4.00	5.00	0	0	1	0	0	1	1	0	0	0	3	0	0	0	0	0	0	0	3	5.5	
TOTAL		30	58	51	19	14	41	47	0	0	0	260	0	0	0	0	0	0	0	260	397.0	

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Zero towards Lawngtlai				Road : NH 54				Additional Information													
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point				Weather: Fair													
Date :22.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheelee	3 Wheeler/	Cars/Jeep /Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	2	2	1			1	1	0	0	0	7	0	0	0	0	0	0	0	7	8.5
6.00	7.00	4	4	5			2	1	0	0	0	16	0	0	0	0	0	0	0	16	17.0
7.00	8.00	4	4	3	2	2	3	2	0	0	0	20	0	0	0	0	0	0	0	20	28.5
8.00	9.00	6	7	4	1	1	5	1	0	0	0	25	0	0	0	0	0	0	0	25	29.0
9.00	10.00	5	9	5	1	1	2	2	0	0	0	25	0	0	0	0	0	0	0	25	30.0
10.00	11.00	4	5	5	2	1	1	1	0	0	0	19	0	0	0	0	0	0	0	19	22.5
11.00	12.00	4	3	6	1		1	2	0	0	0	17	0	0	0	0	0	0	0	17	20.0
12.00	13.00	5	2	5			4	2	0	0	0	18	0	0	0	0	0	0	0	18	21.5
13.00	14.00	6	8	6	1		2	1	0	0	0	24	0	0	0	0	0	0	0	24	24.5
14.00	15.00	5	8	6		2	6	2	0	0	0	29	0	0	0	0	0	0	0	29	37.5
15.00	16.00	4	7	5	1	1	1	2	0	0	0	21	0	0	0	0	0	0	0	21	26.0
16.00	17.00	3	6	4			2	4	0	0	0	19	0	0	0	0	0	0	0	19	26.5
17.00	18.00	3	6	3		1	1	2	0	0	0	16	0	0	0	0	0	0	0	16	21.0
18.00	19.00	1	7	4			1	2	0	0	0	15	0	0	0	0	0	0	0	15	19.0
19.00	20.00	2	5	4			1	1	0	0	0	13	0	0	0	0	0	0	0	13	14.5
20.00	21.00	2	5	3	1		1	2	0	0	0	14	0	0	0	0	0	0	0	14	18.0
21.00	22.00	1	3	1				1	0	0	0	6	0	0	0	0	0	0	0	6	7.5
22.00	23.00	2	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	2.0
23.00	24.00	1	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	0	0	3	6.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
4.00	5.00	0	1	0	2	0	0	1	0	0	0	4	0	0	0	0	0	0	0	4	7.0
TOTAL		64	93	71	12	11	34	30	0	0	0	315	0	0	0	0	0	0	0	315	388.0

**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha										Additional Information									
Direction : Zero towards Lawngtlai		Road : NH 54										Weather: Fair									
Section From : Km 472+00 to Km 562+00		Station no.: Zero Point										Hour : 24 (7 Days)									
Date :23.09.2012																					
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep /Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	2	1	1	0	0	2	1	0	0	0	7	0	0	0	0	0	0	0	7	9.0
6.00	7.00	3	5	2	0		4	2	0	0	0	16	0	0	0	0	0	0	0	16	20.5
7.00	8.00	3	5	4	2	2	4	3	0	0	0	23	0	0	0	0	0	0	0	23	34.5
8.00	9.00	5	6	3	1	1	6	1	0	0	0	23	0	0	0	0	0	0	0	23	28.0
9.00	10.00	4	8	6		1	3	1	0	0	0	23	0	0	0	0	0	0	0	23	26.5
10.00	11.00	3	6	4	1	1	4	1	0	0	0	20	0	0	0	0	0	0	0	20	25.0
11.00	12.00	3	4	3		0	2	1	0	0	0	13	0	0	0	0	0	0	0	13	14.5
12.00	13.00	4	3	2	0	1	4	1	0	0	0	15	0	0	0	0	0	0	0	15	19.0
13.00	14.00	5	5	3	0	0	2	2	0	0	0	17	0	0	0	0	0	0	0	17	19.5
14.00	15.00	3	5	3	1		7	1	0	0	0	20	0	0	0	0	0	0	0	20	24.5
15.00	16.00	3	4	2	1	1	3	1	0	0	0	15	0	0	0	0	0	0	0	15	19.5
16.00	17.00	2	3	1		0	4	2	0	0	0	12	0	0	0	0	0	0	0	12	17.0
17.00	18.00	2	3	2	1	2	2	1	0	0	0	13	0	0	0	0	0	0	0	13	19.5
18.00	19.00	2	2	1	0	0	2	1	0	0	0	8	0	0	0	0	0	0	0	8	10.0
19.00	20.00	1	2	1	0	1	2	2	0	0	0	9	0	0	0	0	0	0	0	9	15.5
20.00	21.00	3	2	1	0	0	1	1	0	0	0	8	0	0	0	0	0	0	0	8	9.0
21.00	22.00	1	1	1	0	0	2	1	0	0	0	6	0	0	0	0	0	0	0	6	8.5
22.00	23.00	3	3	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	4.5
23.00	24.00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
0.00	1.00	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	1	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	3	7.0
4.00	5.00	0	1	0	0	1	0	3	0	0	0	5	0	0	0	0	0	0	0	5	13.0
TOTAL		54	71	40	7	11	54	28	0	0	0	265	0	0	0	0	0	0	0	265	346.5



**Annexure A-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha										Additional Information									
Direction : Zero towards Lawngtlai		Road : NH 54																			
Section From : Km 472+00 to Km 562+00		Station no.: Zero Point										Weather: Fair									
Date :24.09 .2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep /Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	2	2	3	4	5	2	4	0	0	0	22	0	0	0	0	0	0	0	22	42.0
6.00	7.00	4	3	5	6	4	5	7	0	0	0	34	0	0	0	0	0	0	0	34	59.5
7.00	8.00	6	3	4	9	8	7	9	0	0	0	46	0	0	0	0	0	0	0	46	85.0
8.00	9.00	7	4	9	10	9	24	10	0	0	0	73	0	0	0	0	0	0	0	73	124.5
9.00	10.00	9	8	12	8	5	15	6	0	0	0	63	0	0	0	0	0	0	0	63	92.0
10.00	11.00	5	7	10	11	3	5	5	0	0	0	46	0	0	0	0	0	0	0	46	67.5
11.00	12.00	6	5	13	12	2	4	5	0	0	0	47	0	0	0	0	0	0	0	47	66.0
12.00	13.00	7	4	10	7	5	3	4	0	0	0	40	0	0	0	0	0	0	0	40	59.5
13.00	14.00	7	4	9	5	3	5	3	0	0	0	36	0	0	0	0	0	0	0	36	49.5
14.00	15.00	5	3	8		4	8	3	0	0	0	31	0	0	0	0	0	0	0	31	46.5
15.00	16.00	4	2	7			7	5	0	0	0	25	0	0	0	0	0	0	0	25	36.5
16.00	17.00	4	2	5	2	4	2	3	0	0	0	22	0	0	0	0	0	0	0	22	36.0
17.00	18.00	5	3	3	3	4	2	3	0	0	0	23	0	0	0	0	0	0	0	23	37.0
18.00	19.00	3	2	4		2	1	2	0	0	0	14	0	0	0	0	0	0	0	14	21.0
19.00	20.00	2	2	3				2	0	0	0	9	0	0	0	0	0	0	0	9	12.0
20.00	21.00	2	1	3				1	0	0	0	7	0	0	0	0	0	0	0	7	8.0
21.00	22.00	1	1	2				1	0	0	0	5	0	0	0	0	0	0	0	5	6.5
22.00	23.00	1	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	3.5
23.00	24.00	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
TOTAL		80	56	113	77	58	91	75	0	0	0	550	0	0	0	0	0	0	0	550	860.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Lawngtlai towards Zero				Road : NH 54									Additional Information								
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point									Weather: Fair								
Date : 18.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
From	To	Two Wheeler s	3 Wheeler/ Auto Ricshaw	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Ricksha w	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU
5.00	6.00	4	4	5	1	1	1	2	0	0	0	18	0	0	0	0	0	0	0	18	23.0
6.00	7.00	6	5	7	2	1	3	1	0	0	0	25	0	0	0	0	0	0	0	25	28.5
7.00	8.00	8	5	6	1	2	4	2	0	0	0	28	0	0	0	0	0	0	0	28	34.5
8.00	9.00	9	6	11	1		2	1	0	0	0	30	0	0	0	0	0	0	0	30	29.0
9.00	10.00	11	10	14	1		1	1	0	0	0	38	0	0	0	0	0	0	0	38	35.5
10.00	11.00	7	9	12	2	1	2	1	0	0	0	34	0	0	0	0	0	0	0	34	36.5
11.00	12.00	8	7	15			2	1	0	0	0	33	0	0	0	0	0	0	0	33	32.0
12.00	13.00	9	6	12	1		1	1	0	0	0	30	0	0	0	0	0	0	0	30	28.5
13.00	14.00	9	6	11	2		3	2	0	0	0	33	0	0	0	0	0	0	0	33	35.0
14.00	15.00	7	5	10	1	1	4	1	0	0	0	29	0	0	0	0	0	0	0	29	32.0
15.00	16.00	6	4	9			5	1	0	0	0	25	0	0	0	0	0	0	0	25	26.5
16.00	17.00	6	4	7	1		4	1	0	0	0	23	0	0	0	0	0	0	0	23	24.5
17.00	18.00	7	5	5	1	1	4	1	0	0	0	24	0	0	0	0	0	0	0	24	27.0
18.00	19.00	5	4	6	1	2	3		0	0	0	21	0	0	0	0	0	0	0	21	24.5
19.00	20.00	4	4	5			3	1	0	0	0	17	0	0	0	0	0	0	0	17	18.5
20.00	21.00	4	3	5			1		0	0	0	13	0	0	0	0	0	0	0	13	11.5
21.00	22.00	3	1	2			2	2	0	0	0	10	0	0	0	0	0	0	0	10	13.5
22.00	23.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
23.00	24.00	0	1	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	3.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	1	1	2	1	1	3	0	0	0	0	9	0	0	0	0	0	0	0	9	12.5
TOTAL		115	90	146	16	10	49	19	0	0	0	445	0	0	0	0	0	0	0	445	478.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Lawngtlai towards Zero				Road : NH 54									Additional Information								
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point									Weather: Fair								
Date :19.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	3	3	2			1	1	0	0	0	10	0	0	0	0	0	0	0	10	11.0
6.00	7.00	5	4	4	1		2		0	0	0	16	0	0	0	0	0	0	0	16	15.0
7.00	8.00	7	4	3		2	4		0	0	0	20	0	0	0	0	0	0	0	20	22.5
8.00	9.00	8	5	8		2	3	2	0	0	0	28	0	0	0	0	0	0	0	28	33.5
9.00	10.00	10	9	5	1	1	3		0	0	0	29	0	0	0	0	0	0	0	29	28.0
10.00	11.00	6	8	4	1	1	2		0	0	0	22	0	0	0	0	0	0	0	22	22.5
11.00	12.00	7	6	3	2	1	1	2	0	0	0	22	0	0	0	0	0	0	0	22	26.0
12.00	13.00	8	5	4	1		1	1	0	0	0	20	0	0	0	0	0	0	0	20	19.0
13.00	14.00	8	5	4	2		2	1	0	0	0	22	0	0	0	0	0	0	0	22	22.0
14.00	15.00	6	4	5			3	1	0	0	0	19	0	0	0	0	0	0	0	19	19.5
15.00	16.00	5	3	5			2		0	0	0	15	0	0	0	0	0	0	0	15	13.5
16.00	17.00	5	3	3	2		1		0	0	0	14	0	0	0	0	0	0	0	14	13.0
17.00	18.00	6	4	2	1	1	1	1	0	0	0	16	0	0	0	0	0	0	0	16	18.0
18.00	19.00	4	4	2	1		1		0	0	0	12	0	0	0	0	0	0	0	12	11.0
19.00	20.00	3	3	1			2	1	0	0	0	10	0	0	0	0	0	0	0	10	11.5
20.00	21.00	3	2	1			2	1	0	0	0	9	0	0	0	0	0	0	0	9	10.5
21.00	22.00	2	2	1			1	1	0	0	0	7	0	0	0	0	0	0	0	7	8.5
22.00	23.00	2	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	2.0
23.00	24.00	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	2.0
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
3.00	4.00	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2.0
4.00	5.00	3	2	1	1	0	3	0	0	0	0	10	0	0	0	0	0	0	0	10	10.5
TOTAL		106	77	61	13	8	35	12	0	0	0	312	0	0	0	0	0	0	0	312	323.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Lawngtlai towards Zero				Road : NH 54									Additional Information								
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point									Weather: Fair								
Date :20.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	2	2	2			1	1	0	0	0	8	0	0	0	0	0	0	0	8	9.5
6.00	7.00	2	3	4	2		2	2	0	0	0	15	0	0	0	0	0	0	0	15	20.0
7.00	8.00	3	3	3	3	1	1	1	0	0	0	15	0	0	0	0	0	0	0	15	19.5
8.00	9.00	1	4	4		1	4	1	0	0	0	15	0	0	0	0	0	0	0	15	20.5
9.00	10.00	3	2	3			3	2	0	0	0	13	0	0	0	0	0	0	0	13	17.0
10.00	11.00	2	3	2	3	1	2	1	0	0	0	14	0	0	0	0	0	0	0	14	19.5
11.00	12.00	5	4	2	2	2	2	1	0	0	0	18	0	0	0	0	0	0	0	18	23.5
12.00	13.00	3	2	1	1		4	1	0	0	0	12	0	0	0	0	0	0	0	12	15.0
13.00	14.00	5	3	2			1	1	0	0	0	12	0	0	0	0	0	0	0	12	12.0
14.00	15.00	2	3	4		1	1	2	0	0	0	13	0	0	0	0	0	0	0	13	18.5
15.00	16.00	3	4	1	2		2	2	0	0	0	14	0	0	0	0	0	0	0	14	18.5
16.00	17.00	2	2	4	4	2	2	1	0	0	0	17	0	0	0	0	0	0	0	17	25.0
17.00	18.00	3	4	1	1	1	4	2	0	0	0	16	0	0	0	0	0	0	0	16	23.0
18.00	19.00	1	2	2	2	1	3	1	0	0	0	12	0	0	0	0	0	0	0	12	18.0
19.00	20.00	2	2	3			3	1	0	0	0	11	0	0	0	0	0	0	0	11	13.5
20.00	21.00	2	2	2			1	2	0	0	0	9	0	0	0	0	0	0	0	9	12.5
21.00	22.00	1	1	1				1	0	0	0	4	0	0	0	0	0	0	0	4	5.5
22.00	23.00	1	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.5
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3.0
4.00	5.00	7	1	1	0	0	0	1	0	0	0	10	0	0	0	0	0	0	0	10	8.5
TOTAL		51	47	44	20	10	36	25	0	0	0	233	0	0	0	0	0	0	0	233	305.5

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Lawngtlai towards Zero				Road : NH 54										Additional Information							
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point								Weather: Fair									
Date :21.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler s	3 Wheeler/ Auto rickshaws	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Ricksha w	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU
5.00	6.00	2	2	1			1	2	0	0	0	8	0	0	0	0	0	0	0	8	11.5
6.00	7.00	3	4	2		2	3	1	0	0	0	15	0	0	0	0	0	0	0	15	21.0
7.00	8.00	5	4	2	4	3	3	4	0	0	0	25	0	0	0	0	0	0	0	25	40.0
8.00	9.00	2	7	4	3	2	7	2	0	0	0	27	0	0	0	0	0	0	0	27	39.0
9.00	10.00	7	9	3	2	1	2	5	0	0	0	29	0	0	0	0	0	0	0	29	39.5
10.00	11.00	3	5	2	2	1	3	2	0	0	0	18	0	0	0	0	0	0	0	18	25.0
11.00	12.00	4	3	2	1		1	3	0	0	0	14	0	0	0	0	0	0	0	14	19.0
12.00	13.00	3	2	3			5	3	0	0	0	16	0	0	0	0	0	0	0	16	23.0
13.00	14.00	4	6	4			1	2	0	0	0	17	0	0	0	0	0	0	0	17	19.5
14.00	15.00	4	4	3	3	2	8	4	0	0	0	28	0	0	0	0	0	0	0	28	43.5
15.00	16.00	3	3	2	2	1	2	3	0	0	0	16	0	0	0	0	0	0	0	16	24.5
16.00	17.00	2	2	1	1		3	5	0	0	0	14	0	0	0	0	0	0	0	14	25.0
17.00	18.00	1	2	1		2	1	2	0	0	0	9	0	0	0	0	0	0	0	9	17.0
18.00	19.00	2	3					1	0	0	0	6	0	0	0	0	0	0	0	6	7.0
19.00	20.00	2	1					2	0	0	0	5	0	0	0	0	0	0	0	5	8.0
20.00	21.00	1	1					1	0	0	0	3	0	0	0	0	0	0	0	3	4.5
21.00	22.00							1	0	0	0	1	0	0	0	0	0	0	0	1	3.0
22.00	23.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4.00	5.00	3	0	0	0	0	0	2	0	0	0	5	0	0	0	0	0	0	0	5	7.5
TOTAL		52	58	30	18	14	40	45	0	0	0	257	0	0	0	0	0	0	0	257	378.0

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Lawngtlai towards Zero				Road : NH 54									Additional Information								
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point									Weather: Fair								
Date :22.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	1	2	1	0	0	1	1	0	0	0	6	0	0	0	0	0	0	0	6	8.0
6.00	7.00	7	3	3	1	2	4	0	0	0	0	20	0	0	0	0	0	0	0	20	23.0
7.00	8.00	2	5	1	2	0	2	0	0	0	0	12	0	0	0	0	0	0	0	12	13.0
8.00	9.00	3	1	2	1	1	3	1	0	0	0	12	0	0	0	0	0	0	0	12	16.5
9.00	10.00	4	0	2	2	3	1	2	0	0	0	14	0	0	0	0	0	0	0	14	23.5
10.00	11.00	2	2	3	2	3	3	3	0	0	0	18	0	0	0	0	0	0	0	18	31.5
11.00	12.00	4	2	5	1	0	1	1	0	0	0	14	0	0	0	0	0	0	0	14	15.0
12.00	13.00	2	0	2	2	2	3	3	0	0	0	14	0	0	0	0	0	0	0	14	25.5
13.00	14.00	3	1	1	2	3	2	1	0	0	0	13	0	0	0	0	0	0	0	13	21.5
14.00	15.00	2	3	2	2	1	1	1	0	0	0	12	0	0	0	0	0	0	0	12	16.5
15.00	16.00	2	5	3	1	1	2	2	0	0	0	16	0	0	0	0	0	0	0	16	22.5
16.00	17.00	3	0	8	0	2	1	1	0	0	0	15	0	0	0	0	0	0	0	15	20.0
17.00	18.00	3	2	1	0	0	3	2	0	0	0	11	0	0	0	0	0	0	0	11	15.0
18.00	19.00	2	1	2	1	2	1	1	0	0	0	10	0	0	0	0	0	0	0	10	16.0
19.00	20.00	1	2	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	4	5.5
20.00	21.00	1	0	1	0	2	0	1	0	0	0	5	0	0	0	0	0	0	0	5	10.5
21.00	22.00	2	0	0	1	0	2	0	0	0	0	5	0	0	0	0	0	0	0	5	5.5
22.00	23.00	6	0	0	0	1	0	0	0	0	0	7	0	0	0	0	0	0	0	7	6.0
23.00	24.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3.0
TOTAL		50	29	37	18	25	31	21	0	0	0	211	0	0	0	0	0	0	0	211	302.5

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Lawngtlai towards Zero				Road : NH 54				Additional Information													
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point				Weather: Fair													
Date :23.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler s	3 Wheeler/ Auto Rickshaw	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Ricksha w	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE S	Total PCU
5.00	6.00	5	0	3	1	0	0	0	0	0	0	9	0	0	0	0	0	0	0	9	7.0
6.00	7.00	9	1	2	2	0	2	3	0	0	0	19	0	0	0	0	0	0	0	19	22.5
7.00	8.00	5	0	7	0	2	1	0	0	0	0	15	0	0	0	0	0	0	0	15	17.0
8.00	9.00	1	0	3	2	1	1	0	0	0	0	8	0	0	0	0	0	0	0	8	11.0
9.00	10.00	3	1	1	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	5.0
10.00	11.00	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	2.5
11.00	12.00	0	1	0	0	0	3	0	0	0	0	4	0	0	0	0	0	0	0	4	5.5
12.00	13.00	5	0	7	0	2	1	0	0	0	0	15	0	0	0	0	0	0	0	15	17.0
13.00	14.00	1	0	3	2	1	1	0	0	0	0	8	0	0	0	0	0	0	0	8	11.0
14.00	15.00	3	1	1	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	5.0
15.00	16.00	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	2.5
16.00	17.00	0	1	0	0	0	3	0	0	0	0	4	0	0	0	0	0	0	0	4	5.5
17.00	18.00	5	0	7	0	2	1	0	0	0	0	15	0	0	0	0	0	0	0	15	17.0
18.00	19.00	1	0	3	2	1	1	0	0	0	0	8	0	0	0	0	0	0	0	8	11.0
19.00	20.00	3	1	1	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	5.0
20.00	21.00	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	2.5
21.00	22.00	0	1	0	0	0	3	0	0	0	0	4	0	0	0	0	0	0	0	4	5.5
22.00	23.00	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.0
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4.00	5.00	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	4.5
TOTAL		59	7	38	13	9	17	4	0	0	0	147	0	0	0	0	0	0	0	147	158.5

**Annexure B-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Lawngtlai towards Zero				Road : NH 54									Additional Information								
Section From : Km 472+00 to Km 562+00				Station no.: Zero Point									Weather: Fair								
Date :24.09 .2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheeler	3 Wheeler/	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	5	0	7	0	2	1	0	0	0	0	15	0	0	0	0	0	0	0	15	17.0
6.00	7.00	1	0	3	2	1	1	0	0	0	0	8	0	0	0	0	0	0	0	8	11.0
7.00	8.00	3	1	1	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	5.0
8.00	9.00	5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	2.5
9.00	10.00	0	1	0	0	0	3	0	0	0	0	4	0	0	0	0	0	0	0	4	5.5
10.00	11.00	3	1	2	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	4.5
11.00	12.00	4	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	3.0
12.00	13.00	1	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	3	6.5
13.00	14.00	1	0	3	2	1	1	0	0	0	0	8	0	0	0	0	0	0	0	8	11.0
14.00	15.00	3	1	1	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	5.0
15.00	16.00	3	1	2	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	4.5
16.00	17.00	4	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	3.0
17.00	18.00	3	1	2	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	4.5
18.00	19.00	4	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	3.0
19.00	20.00	7	2	8	2	2	4	1	0	0	0	26	0	0	0	0	0	0	0	26	31.5
20.00	21.00	3	1	2	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6	4.5
21.00	22.00	4	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5	3.0
22.00	23.00	1	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	3	6.5
23.00	24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3.00	4.00	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	1	0	1	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	4	4.5
TOTAL		56	9	36	8	6	13	5	0	0	0	133	0	0	0	0	0	0	0	133	137.5



**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha				Additional Information																
Direction : Daywise Traffic - Both Directions				Road : NH 54																				
Section From : Km 472+00 to Km 562+00				Station no.: 1				Weather: Fair																
Date : 18.09.2012				Hour : 24 (7 Days)																				
Time		FAST MOVING VEHICLES												NON MOTORISED TRAFFIC										Total
From	To	Two Wheelers	3 Wheeler/Auto Rickshaw	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	PCU			
5.00	6.00	6	7	8	8	9	3	9	0	0	0	50	0	0	0	0	0	0	0	50	88.5			
6.00	7.00	9	10	12	6	3	6	9	0	0	0	55	0	0	0	0	0	0	0	55	80.5			
7.00	8.00	10	13	9	3	2	5	6	0	0	0	48	0	0	0	0	0	0	0	48	63			
8.00	9.00	14	13	16	1	0	7	9	0	0	0	60	0	0	0	0	0	0	0	60	75			
9.00	10.00	18	21	23	1	1	5	4	0	0	0	73	0	0	0	0	0	0	0	73	77			
10.00	11.00	16	17	22	5	3	4	5	0	0	0	72	0	0	0	0	0	0	0	72	84.5			
11.00	12.00	13	17	22	4	3	5	6	0	0	0	70	0	0	0	0	0	0	0	70	86			
12.00	13.00	15	18	17	3	0	12	3	0	0	0	68	0	0	0	0	0	0	0	68	74			
13.00	14.00	12	14	18	2	1	5	5	0	0	0	57	0	0	0	0	0	0	0	57	66.5			
14.00	15.00	12	10	14	1	1	7	6	0	0	0	51	0	0	0	0	0	0	0	51	63			
15.00	16.00	12	13	15	1	0	10	11	0	0	0	62	0	0	0	0	0	0	0	62	83.5			
16.00	17.00	9	10	11	6	4	7	8	0	0	0	55	0	0	0	0	0	0	0	55	81			
17.00	18.00	11	10	10	3	3	27	6	0	0	0	70	0	0	0	0	0	0	0	70	97.5			
18.00	19.00	8	8	8	1	3	13	4	0	0	0	45	0	0	0	0	0	0	0	45	62			
19.00	20.00	6	7	6	0	0	8	7	0	0	0	34	0	0	0	0	0	0	0	34	49			
20.00	21.00	6	4	7	0	0	4	3	0	0	0	24	0	0	0	0	0	0	0	24	29			
21.00	22.00	4	3	3	0	0	2	4	0	0	0	16	0	0	0	0	0	0	0	16	23			
22.00	23.00	1	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	3	6.5			
23.00	24.00	0	1	2	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	4	6			
0.00	1.00	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6			
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
3.00	4.00	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2	3			
4.00	5.00	2	2	2	1	2	4	0	0	0	0	13	0	0	0	0	0	0	0	13	18.5			
TOTAL		184	198	225	46	35	136	110	0	0	0	934	0	0	0	0	0	0	0	934	1223			

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha																			
Direction : Daywise Traffic - Both Directions		Road : NH 54		Additional Information																	
Section From : Km 472+00 to Km 562+00		Station no.: 1		Weather: Fair																	
Date :19.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	6	7	6	4	0	3	2	0	0	0	28	0	0	0	0	0	0	0	28	32.5
6.00	7.00	7	10	10	3	2	6	2	0	0	0	40	0	0	0	0	0	0	0	40	49
7.00	8.00	10	13	7	2	2	5	2	0	0	0	41	0	0	0	0	0	0	0	41	47.5
8.00	9.00	14	13	14	0	2	6	3	0	0	0	52	0	0	0	0	0	0	0	52	58
9.00	10.00	18	21	15	1	2	5	2	0	0	0	64	0	0	0	0	0	0	0	64	66
10.00	11.00	16	17	15	2	2	4	1	0	0	0	57	0	0	0	0	0	0	0	57	58
11.00	12.00	13	17	11	4	3	4	4	0	0	0	56	0	0	0	0	0	0	0	56	67.5
12.00	13.00	15	18	10	2	0	12	2	0	0	0	59	0	0	0	0	0	0	0	59	62.5
13.00	14.00	12	14	12	2	1	4	2	0	0	0	47	0	0	0	0	0	0	0	47	50
14.00	15.00	12	10	10	0	1	5	3	0	0	0	41	0	0	0	0	0	0	0	41	45.5
15.00	16.00	12	13	12	1	0	6	1	0	0	0	45	0	0	0	0	0	0	0	45	44.5
16.00	17.00	9	10	8	5	3	3	3	0	0	0	41	0	0	0	0	0	0	0	41	52.5
17.00	18.00	11	10	8	2	3	5	5	0	0	0	44	0	0	0	0	0	0	0	44	58
18.00	19.00	8	9	5	2	1	9	2	0	0	0	36	0	0	0	0	0	0	0	36	43.5
19.00	20.00	6	7	3	0	0	7	3	0	0	0	26	0	0	0	0	0	0	0	26	32.5
20.00	21.00	6	4	4	0	0	5	2	0	0	0	21	0	0	0	0	0	0	0	21	24.5
21.00	22.00	4	3	2	0	0	1	2	0	0	0	12	0	0	0	0	0	0	0	12	14.5
22.00	23.00	2	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	2
23.00	24.00	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	2
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00	3.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
3.00	4.00	0	2	1	0	0	1	1	0	0	0	5	0	0	0	0	0	0	0	5	7.5
4.00	5.00	3	2	1	1	1	3	1	0	0	0	12	0	0	0	0	0	0	0	12	16.5
TOTAL		189	200	156	31	23	94	43	0	0	0	736	0	0	0	0	0	0	0	736	836

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha																			
Direction : Daywise Traffic - Both Directions		Road : NH 54		Additional Information																	
Section From : Km 472+00 to Km 562+00		Station no.: 1		Weather: Fair																	
Date :20.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	4	4	4	0	0	2	2	0	0	0	16	0	0	0	0	0	0	0	16	19
6.00	7.00	6	6	8	4	0	4	4	0	0	0	32	0	0	0	0	0	0	0	32	41
7.00	8.00	6	9	7	6	2	2	2	0	0	0	34	0	0	0	0	0	0	0	34	43
8.00	9.00	5	9	8	0	2	8	2	0	0	0	34	0	0	0	0	0	0	0	34	43.5
9.00	10.00	8	8	11	0	0	6	4	0	0	0	37	0	0	0	0	0	0	0	37	44
10.00	11.00	7	10	8	6	2	4	2	0	0	0	39	0	0	0	0	0	0	0	39	48.5
11.00	12.00	9	10	7	4	4	4	2	0	0	0	40	0	0	0	0	0	0	0	40	51.5
12.00	13.00	7	8	4	2	0	8	2	0	0	0	31	0	0	0	0	0	0	0	31	36.5
13.00	14.00	9	6	7	0	0	2	2	0	0	0	26	0	0	0	0	0	0	0	26	26.5
14.00	15.00	6	6	6	0	2	2	4	0	0	0	26	0	0	0	0	0	0	0	26	36
15.00	16.00	8	8	4	4	0	4	4	0	0	0	32	0	0	0	0	0	0	0	32	40
16.00	17.00	6	7	6	8	4	4	2	0	0	0	37	0	0	0	0	0	0	0	37	52
17.00	18.00	8	8	4	2	2	8	4	0	0	0	36	0	0	0	0	0	0	0	36	49
18.00	19.00	6	4	3	4	2	6	2	0	0	0	27	0	0	0	0	0	0	0	27	37
19.00	20.00	5	4	5	0	0	6	2	0	0	0	22	0	0	0	0	0	0	0	22	26.5
20.00	21.00	6	4	4	0	0	2	4	0	0	0	20	0	0	0	0	0	0	0	20	26
21.00	22.00	2	2	2	0	0	0	2	0	0	0	8	0	0	0	0	0	0	0	8	11
22.00	23.00	2	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	3
23.00	24.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
1.00	2.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.5
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00	4.00	0	0	3	0	0	1	2	0	0	0	6	0	0	0	0	0	0	0	6	10.5
4.00	5.00	8	2	2	0	1	0	1	0	0	0	14	0	0	0	0	0	0	0	14	14
TOTAL		120	115	106	40	21	73	49	0	0	0	524	0	0	0	0	0	0	0	524	660.5

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha																			
Direction : Daywise Traffic - Both Directions		Road : NH 54		Additional Information																	
Section From : Km 472+00 to Km 562+00		Station no.: 1		Weather: Fair																	
Date :21.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	3	4	3	0	0	2	4	0	0	0	16	0	0	0	0	0	0	0	16	23.5
6.00	7.00	5	8	5	0	4	6	2	0	0	0	30	0	0	0	0	0	0	0	30	42.5
7.00	8.00	7	8	7	8	6	6	8	0	0	0	50	0	0	0	0	0	0	0	50	81.5
8.00	9.00	6	14	6	6	4	14	4	0	0	0	54	0	0	0	0	0	0	0	54	77
9.00	10.00	10	18	10	4	2	4	10	0	0	0	58	0	0	0	0	0	0	0	58	81
10.00	11.00	5	10	5	4	2	6	4	0	0	0	36	0	0	0	0	0	0	0	36	50.5
11.00	12.00	6	6	6	2	0	2	6	0	0	0	28	0	0	0	0	0	0	0	28	39
12.00	13.00	6	4	6	0	0	10	6	0	0	0	32	0	0	0	0	0	0	0	32	46
13.00	14.00	8	12	8	0	0	2	4	0	0	0	34	0	0	0	0	0	0	0	34	39
14.00	15.00	7	8	7	6	4	16	8	0	0	0	56	0	0	0	0	0	0	0	56	87.5
15.00	16.00	5	6	5	4	2	4	6	0	0	0	32	0	0	0	0	0	0	0	32	49.5
16.00	17.00	3	4	3	2	0	6	10	0	0	0	28	0	0	0	0	0	0	0	28	50.5
17.00	18.00	2	4	2	0	4	2	4	0	0	0	18	0	0	0	0	0	0	0	18	34
18.00	19.00	2	6	2	0	0	0	2	0	0	0	12	0	0	0	0	0	0	0	12	15
19.00	20.00	2	2	2	0	0	0	4	0	0	0	10	0	0	0	0	0	0	0	10	17
20.00	21.00	1	2	1	0	0	0	2	0	0	0	6	0	0	0	0	0	0	0	6	9.5
21.00	22.00	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2	6
22.00	23.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
23.00	24.00	1	0	0	0	0	0	3	0	0	0	4	0	0	0	0	0	0	0	4	9.5
0.00	1.00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00	4.00	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1.5
4.00	5.00	3	0	1	0	0	1	3	0	0	0	8	0	0	0	0	0	0	0	8	13
TOTAL		82	116	81	37	28	81	92	0	0	0	517	0	0	0	0	0	0	0	517	775

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																		
Direction : Daywise Traffic - Both Directions				Road : NH 54				Additional Information														
Section From : Km 472+00 to Km 562+00				Station no.: 1				Weather: Fair														
Date :22.09.2012				Hour : 24 (7 Days)																		
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC									
		Two Wheel	3 Wheeler/A	Cars/JEEP/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU	
5.00	6.00	3	4	2	0	0	2	2	0	0	0	13	0	0	0	0	0	0	0	13	16.5	
6.00	7.00	11	7	8	1	2	6	1	0	0	0	36	0	0	0	0	0	0	0	36	40	
7.00	8.00	6	9	4	4	2	5	2	0	0	0	32	0	0	0	0	0	0	0	32	41.5	
8.00	9.00	9	8	6	2	2	8	2	0	0	0	37	0	0	0	0	0	0	0	37	45.5	
9.00	10.00	9	9	7	3	4	3	4	0	0	0	39	0	0	0	0	0	0	0	39	53.5	
10.00	11.00	6	7	8	4	4	4	4	0	0	0	37	0	0	0	0	0	0	0	37	54	
11.00	12.00	8	5	11	2	0	2	3	0	0	0	31	0	0	0	0	0	0	0	31	35	
12.00	13.00	7	2	7	2	2	7	5	0	0	0	32	0	0	0	0	0	0	0	32	47	
13.00	14.00	9	9	7	3	3	4	2	0	0	0	37	0	0	0	0	0	0	0	37	46	
14.00	15.00	7	11	8	2	3	7	3	0	0	0	41	0	0	0	0	0	0	0	41	54	
15.00	16.00	6	12	8	2	2	3	4	0	0	0	37	0	0	0	0	0	0	0	37	48.5	
16.00	17.00	6	6	12	0	2	3	5	0	0	0	34	0	0	0	0	0	0	0	34	46.5	
17.00	18.00	6	8	4	0	1	4	4	0	0	0	27	0	0	0	0	0	0	0	27	36	
18.00	19.00	3	8	6	1	2	2	3	0	0	0	25	0	0	0	0	0	0	0	25	35	
19.00	20.00	3	7	4	0	1	1	1	0	0	0	17	0	0	0	0	0	0	0	17	20	
20.00	21.00	3	5	4	1	2	1	3	0	0	0	19	0	0	0	0	0	0	0	19	28.5	
21.00	22.00	3	3	1	1	0	2	1	0	0	0	11	0	0	0	0	0	0	0	11	13	
22.00	23.00	8	0	1	0	1	0	0	0	0	0	10	0	0	0	0	0	0	0	10	8	
23.00	24.00	1	0	0	0	2	0	1	0	0	0	4	0	0	0	0	0	0	0	4	9.5	
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3.00	4.00	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	2	2.5	
4.00	5.00	0	1	0	2	1	0	1	0	0	0	5	0	0	0	0	0	0	0	5	10	
TOTAL		114	122	108	30	36	65	51	0	0	0	526	0	0	0	0	0	0	0	526	690.5	

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram		District : Lawngtlai-Saiha																			
Direction : Daywise Traffic - Both Directions		Road : NH 54		Additional Information																	
Section From : Km 472+00 to Km 562+00		Station no.: 1		Weather: Fair																	
Date :23.09.2012		Hour : 24 (7 Days)																			
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	7	1	4	1	0	2	1	0	0	0	16	0	0	0	0	0	0	0	16	16
6.00	7.00	12	6	4	2	0	6	5	0	0	0	35	0	0	0	0	0	0	0	35	43
7.00	8.00	8	5	11	2	4	5	3	0	0	0	38	0	0	0	0	0	0	0	38	51.5
8.00	9.00	6	6	6	3	2	7	1	0	0	0	31	0	0	0	0	0	0	0	31	39
9.00	10.00	7	9	7	1	1	3	1	0	0	0	29	0	0	0	0	0	0	0	29	31.5
10.00	11.00	8	6	4	1	1	4	1	0	0	0	25	0	0	0	0	0	0	0	25	27.5
11.00	12.00	3	5	3	0	0	5	1	0	0	0	17	0	0	0	0	0	0	0	17	20
12.00	13.00	9	3	9	0	3	5	1	0	0	0	30	0	0	0	0	0	0	0	30	36
13.00	14.00	6	5	6	2	1	3	2	0	0	0	25	0	0	0	0	0	0	0	25	30.5
14.00	15.00	6	6	4	2	0	7	1	0	0	0	26	0	0	0	0	0	0	0	26	29.5
15.00	16.00	8	4	2	1	1	3	1	0	0	0	20	0	0	0	0	0	0	0	20	22
16.00	17.00	2	4	1	0	0	7	2	0	0	0	16	0	0	0	0	0	0	0	16	22.5
17.00	18.00	7	3	9	1	4	3	1	0	0	0	28	0	0	0	0	0	0	0	28	36.5
18.00	19.00	3	2	4	2	1	3	1	0	0	0	16	0	0	0	0	0	0	0	16	21
19.00	20.00	4	3	2	1	1	2	2	0	0	0	15	0	0	0	0	0	0	0	15	20.5
20.00	21.00	8	2	1	0	0	1	1	0	0	0	13	0	0	0	0	0	0	0	13	11.5
21.00	22.00	1	2	1	0	0	5	1	0	0	0	10	0	0	0	0	0	0	0	10	14
22.00	23.00	5	3	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8	5.5
23.00	24.00	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1.5
0.00	1.00	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1
1.00	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00	4.00	0	1	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	3	7
4.00	5.00	0	1	0	1	1	0	4	0	0	0	7	0	0	0	0	0	0	0	7	17.5
TOTAL		113	78	78	20	20	71	32	0	0	0	412	0	0	0	0	0	0	0	412	505

**Annexure C-1**  
**Daily Traffic Count Data**

State : Mizoram				District : Lawngtlai-Saiha																	
Direction : Daywise Traffic - Both Directions				Road : NH 54				Additional Information													
Section From : Km 472+00 to Km 562+00				Station no.: 1				Weather: Fair													
Date :24.09.2012				Hour : 24 (7 Days)																	
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC								
		Two Wheel	3 Wheeler/A	Cars/Jeep/ Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle	Tractor	Tractor with	Total MT	Cycle	Cycle Ricksha	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLE	Total PCU
5.00	6.00	7	2	10	4	7	3	4	0	0	0	37	0	0	0	0	0	0	0	37	59
6.00	7.00	5	3	8	8	5	6	7	0	0	0	42	0	0	0	0	0	0	0	42	70.5
7.00	8.00	9	4	5	10	8	7	9	0	0	0	52	0	0	0	0	0	0	0	52	90
8.00	9.00	12	4	9	10	9	24	10	0	0	0	78	0	0	0	0	0	0	0	78	127
9.00	10.00	9	9	12	8	5	18	6	0	0	0	67	0	0	0	0	0	0	0	67	97.5
10.00	11.00	8	8	12	11	3	5	5	0	0	0	52	0	0	0	0	0	0	0	52	72
11.00	12.00	10	5	14	12	2	4	5	0	0	0	52	0	0	0	0	0	0	0	52	69
12.00	13.00	8	4	10	7	5	3	6	0	0	0	43	0	0	0	0	0	0	0	43	66
13.00	14.00	8	4	12	7	4	6	3	0	0	0	44	0	0	0	0	0	0	0	44	60.5
14.00	15.00	8	4	9	1	4	8	3	0	0	0	37	0	0	0	0	0	0	0	37	51.5
15.00	16.00	7	3	9	0	0	7	5	0	0	0	31	0	0	0	0	0	0	0	31	41
16.00	17.00	8	2	6	2	4	2	3	0	0	0	27	0	0	0	0	0	0	0	27	39
17.00	18.00	8	4	5	3	4	2	3	0	0	0	29	0	0	0	0	0	0	0	29	41.5
18.00	19.00	7	2	5	0	2	1	2	0	0	0	19	0	0	0	0	0	0	0	19	24
19.00	20.00	9	4	11	2	2	4	3	0	0	0	35	0	0	0	0	0	0	0	35	43.5
20.00	21.00	5	2	5	0	0	0	1	0	0	0	13	0	0	0	0	0	0	0	13	12.5
21.00	22.00	5	1	3	0	0	0	1	0	0	0	10	0	0	0	0	0	0	0	10	9.5
22.00	23.00	2	0	0	0	0	0	3	0	0	0	5	0	0	0	0	0	0	0	5	10
23.00	24.00	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
0.00	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.00	2.00	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	3
2.00	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.00	4.00	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2	3
4.00	5.00	1	0	2	0	0	2	0	0	0	0	5	0	0	0	0	0	0	0	5	5.5
TOTAL		136	65	149	85	64	104	80	0	0	0	683	0	0	0	0	0	0	0	683	997.5

**Annexure D-1**  
**Daily Traffic Count Data**

State : Mizoram													District : Lawngtlai-Saiha										
Direction : Hourly 7 days Average Both Direction													Road : NH 54										
Section From : Km 472+00 to Km 562+00													Station no.: 1										
Date :11.10.2009 TO 17.10.2009													Hour : 24 (7 Days)										
Time		FAST MOVING VEHICLES											NON MOTORISED TRAFFIC										
From	To	Two Wheelers	3 Wheeler/Auto Rickshaw	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU		
5.00	6.00	36	29	37	17	16	17	24	0	0	0	176	0	0	0	0	0	0	0	176	255		
6.00	7.00	55	50	55	24	16	40	30	0	0	0	270	0	0	0	0	0	0	0	270	367		
7.00	8.00	56	61	50	35	26	35	32	0	0	0	295	0	0	0	0	0	0	0	295	418		
8.00	9.00	66	67	65	22	21	74	31	0	0	0	346	0	0	0	0	0	0	0	346	465		
9.00	10.00	79	95	85	18	15	44	31	0	0	0	367	0	0	0	0	0	0	0	367	451		
10.00	11.00	66	75	74	33	17	31	22	0	0	0	318	0	0	0	0	0	0	0	318	395		
11.00	12.00	62	65	74	28	12	26	27	0	0	0	294	0	0	0	0	0	0	0	294	368		
12.00	13.00	67	57	63	16	10	57	25	0	0	0	295	0	0	0	0	0	0	0	295	368		
13.00	14.00	64	64	70	16	10	26	20	0	0	0	270	0	0	0	0	0	0	0	270	319		
14.00	15.00	58	55	58	12	15	52	28	0	0	0	278	0	0	0	0	0	0	0	278	367		
15.00	16.00	58	59	55	13	5	37	32	0	0	0	259	0	0	0	0	0	0	0	259	329		
16.00	17.00	43	43	47	23	17	32	33	0	0	0	238	0	0	0	0	0	0	0	238	344		
17.00	18.00	53	47	42	11	21	51	27	0	0	0	252	0	0	0	0	0	0	0	252	353		
18.00	19.00	37	39	33	10	11	34	16	0	0	0	180	0	0	0	0	0	0	0	180	238		
19.00	20.00	35	34	33	3	4	28	22	0	0	0	159	0	0	0	0	0	0	0	159	209		
20.00	21.00	35	23	26	1	2	13	16	0	0	0	116	0	0	0	0	0	0	0	116	142		
21.00	22.00	19	14	12	1	0	10	13	0	0	0	69	0	0	0	0	0	0	0	69	91		
22.00	23.00	20	3	5	0	1	0	5	0	0	0	34	0	0	0	0	0	0	0	34	36		
23.00	24.00	8	2	4	0	2	0	5	0	0	0	21	0	0	0	0	0	0	0	21	31		
0.00	1.00	2	0	3	0	0	0	2	0	0	0	7	0	0	0	0	0	0	0	7	10		
1.00	2.00	1	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	2	4		
2.00	3.00	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1		
3.00	4.00	0	4	4	1	0	7	5	0	0	0	21	0	0	0	0	0	0	0	21	35		
4.00	5.00	17	8	8	5	6	10	10	0	0	0	64	0	0	0	0	0	0	0	64	95		
TOTAL		938	894	903	289	227	624	457	0	0	0	4332	0	0	0	0	0	0	0	4332	5688		
Hourly Average		134	128	129	41	32	89	65	0	0	0	619	0	0	0	0	0	0	0	619	813		



**Annexure E-1**  
**Average Daily Traffic Data**

State : Mizoram												District : Lawngtlai-Saiha									
Direction : Daywise - Both Directions Summary												Road : NH 54									
Section From : Km 472+00 to Km 562+00												Station no.: 1									
												Hour : 24 (7 Days)									
DAY & DATE		FAST MOVING VEHICLES										NON MOTORISED TRAFFIC									
		Two Wheelers	3 Wheeler/Auto	Cars/Jeep/Vans	Mini Bus	Full Bus	LCV	Truck 2-Axle	Multi Axle Truck	Tractor	Tractor with Trailer	Total MT	Cycle	Cycle Rickshaw	Hand Cart	Horse Cart	Bullock Cart	Others	TOTAL NMT	TOTAL VEHICLES	Total PCU
DAY-1	UP	69	108	79	30	25	87	91	0	0	0	489	0	0	0	0	0	0	0	489	745
	DOWN	115	90	146	16	10	49	19	0	0	0	445	0	0	0	0	0	0	0	445	478
	TOTAL	184	198	225	46	35	136	110	0	0	0	934	0	0	0	0	0	0	0	934	1223
DAY-2	UP	83	123	95	18	15	59	31	0	0	0	424	0	0	0	0	0	0	0	424	513
	DOWN	106	77	61	13	8	35	12	0	0	0	312	0	0	0	0	0	0	0	312	323
	TOTAL	189	200	156	31	23	94	43	0	0	0	736	0	0	0	0	0	0	0	736	836
DAY-3	UP	69	68	62	20	11	37	24	0	0	0	291	0	0	0	0	0	0	0	291	355
	DOWN	51	47	44	20	10	36	25	0	0	0	233	0	0	0	0	0	0	0	233	306
	TOTAL	120	115	106	40	21	73	49	0	0	0	524	0	0	0	0	0	0	0	524	661
DAY-4	UP	30	58	51	19	14	41	47	0	0	0	260	0	0	0	0	0	0	0	260	397
	DOWN	52	58	30	18	14	40	45	0	0	0	257	0	0	0	0	0	0	0	257	378
	TOTAL	82	116	81	37	28	81	92	0	0	0	517	0	0	0	0	0	0	0	517	775
DAY-5	UP	64	93	71	12	11	34	30	0	0	0	315	0	0	0	0	0	0	0	315	388
	DOWN	50	29	37	18	25	31	21	0	0	0	211	0	0	0	0	0	0	0	211	303
	TOTAL	114	122	108	30	36	65	51	0	0	0	526	0	0	0	0	0	0	0	526	691
DAY-6	UP	54	71	40	7	11	54	28	0	0	0	265	0	0	0	0	0	0	0	265	347
	DOWN	59	7	38	13	9	17	4	0	0	0	147	0	0	0	0	0	0	0	147	159
	TOTAL	113	78	78	20	20	71	32	0	0	0	412	0	0	0	0	0	0	0	412	505
DAY-7	UP	80	56	113	77	58	91	75	0	0	0	550	0	0	0	0	0	0	0	550	860
	DOWN	56	9	36	8	6	13	5	0	0	0	133	0	0	0	0	0	0	0	133	138
	TOTAL	136	65	149	85	64	104	80	0	0	0	683	0	0	0	0	0	0	0	683	998
TOTAL WEEKLY TRAFFIC		938	894	903	289	227	624	457	0	0	0	4332	0	0	0	0	0	0	0	4332	5688
AVERAGE DAILY TRAFFIC		134	128	129	41	32	89	65	0	0	0	619	0	0	0	0	0	0	0	619	813
COMMERCIAL VEHICLE PER DAY (CVD)					228																

## SECTION - 5

### INVENTORY CUM CONDITION SURVEY

#### 5.1 General

The proposed road consists of:

- (i) Regrading portions; where existing route is utilized.
- (ii) Realignment portions, which are new route stretches.
- (iii) Inventory and Condition Survey of Existing Culverts.
- (iv) Inventory and Condition Survey of Existing Bridges.

Inventorisation and Condition Survey relates to the existing road portions.

#### 5.2 Road Inventory and Condition Survey

This section deals detailed data collection and survey of the project road to study and understand the existing road condition. Road inventorization has been done with respect to the project road sections. The data collected has been formatted at every 100 m for each km of the road. The survey and investigations have been carried out in the months of August & Sept 2012. Major activities with respect to this have been as under.

- Road Inventory Survey
- Pavement Condition Survey
- Existing Culvert
- Existing Retaining Wall
- Existing Breast Wall
- Existing Bridge

##### 5.2.1 Road Inventory Survey

The inventory survey was undertaken by actual measurement, study, investigation and/or visual assessment of various elements and features particularly with respect to roadway, carriageway (type and width), shoulders (type and width), height of embankment, drainage pattern, drainage structure, retaining structures, etc. The land environment features such as topography, terrain, land use, soil, air environment, water bodies, agriculture, etc. are based on actual survey, map studies and/or visual assessment.

#### Road Inventory Data Sheets are placed as Annexure-IIA.

The salient features of the Project Corridor are summarized as under.

##### Road Length

The Project Corridor Takes off from Lunglei district near Tawipui North Village-2 at Km 431+00 then passes through the 13 Nos of villages, Lawngtlai City from Km 472+00 to Km 480+00 and Terminate at km 562+000 at Tuipang Village within Saiha District.

##### Altitude

Altitude of alignment varies from 585.0 m at take off point and 1335.0 m at End point above the MSL

##### Terrain

The project road is located in Mizoram, one of the most variegated hilly terrains in eastern part of

India. The hills are undulating and are separated by rivers, which flow either to the north or south creating deep gorges between the hill ranges.

The classification of the terrain is normally done by means of cross slope to the country viz. slope approximately perpendicular to the center line of the highway location.

Terrain Classification as per IRC: SP-48-1998

Sl no	Terrain Classification	% Cross slope of country
1	Plain	0 to 10
2	Rolling	Greater than 10 upto 25
3	Mountainous	Greater than 25 upto 60
4	Steep	Greater than 60

The road mostly is in the Mountainous to steep terrain.

### Gradient

The existing gradients of the road between km 431+00 to km 562+000 are steep at many stretches. As a result, the heavily loaded trucks and large sized vehicles find it difficult to pass through these stretches safely and smoothly, especially during rainy season.

### Towns and villages:

The project road passes through few scattered populations in the Lunglei district, Lawngtlai District & Saiha District. The list of the habitats along the project road is as follows:

DETAILS OF VILLAGE						
Sr.No	Design Chainage		Existing Chainage		Village Name	District
	From	To	From	To		
1	432800	434700	432800	434750	Tawipui North village-2	Lunglei
2	435060	437900	435250	438150	Tawipui North village-1	Lunglei
3	443380	446410	444100	447250	Tawipui South village	Lunglei
4	457850	459230	459700	461100	Thingfal village	Lunglei
5	467020	468130	469550	470700	Thingka village	Lawngtlai
6	468950	470730	471550	473400	Aoc village	Lawngtlai
7	470730	476040	473400	478900	Lawngtlai city	Lawngtlai
8	483830	484110	486800	487100	Saika village - 1	Lawngtlai
9	489850	490880	486800	487100	Saika village - 2	Lawngtlai
10	494840	495530	498300	499000	Chawntlangpui village	Lawngtlai
11	497480	498980	501050	502550	Sihtlangpui village	Lawngtlai
12	502650	505680	506250	509350	Kawlchaw village	Saiha
13	514860	515960	518800	519900	Zero point	Saiha
14	520970	522445	525200	526850	Maubawk village	Saiha
15	531320	531800	536000	538000	Theiva village	Saiha
16	538515	539500	544950	546000	Theihri village	Saiha
17	551085	553636	558600	561200	Tuipang village	Saiha

## Land-use:

The regional land use plays an important role in the decision making process of any project. The land use analysis is very essential requirement for the expansion/widening and realignment of the road projects. The region is yet to be fully linked and connected with wide network of roads. Hence the economic activities are also very less and the people in the region still depend on primitive ways of livelihood. The region is scarcely populated and the natural physical landscape beauty still enthrills the onlookers. The settlements are all along the road. The forest have been cleared to give way for the cultivation of crops but the percentage of land cover used for the agricultural purposes is still very small. The clearing of the jungle and vegetation covers for settlements, agriculture, transport and communication lines and consequent disappearance of the wild life have yet to take its toll in the region.

### Percentage Distribution of Land use

Sl No	Land Use	Percentage
1	Settlements	24.35 %
2	Agriculture	54.15 %
3	Forest	11.50%
4	Others	10.00 %

Thus we see that the Settlements and agriculture land covers the major area of the project sector.

### ➤ Right Of-Way (ROW)

The right of way on the ground is not defined due to various temporary encroachments at built up sections.

### ➤ Formation

Cutting of the hill slopes mostly forms the road formations. The width of the formation cutting is varying from 5.5m to 6.5 m.

### ➤ Carriageway

The carriageway width varies from 3 m to 4.2 m.

### ➤ Shoulders

Shoulders are more or less non-existent, and / or inadequate in width, depressed and non-functional.

### ➤ Pavement Condition Survey

The pavement condition of road sector from km 431+00 to km 562+00 has been carried out. The pavement condition of the existing project road with respect to thickness, cracking, potholes, rutting etc have been surveyed in detailed to access the condition. The reconnaissance survey of the pavement reflects the following,

- Thickness of the existing pavement is inadequate.
- Sub grade has failed at some locations
- Pavement failure at many place is due to improper drainage system
- Cracking, raveling, potholes, ruts, etc. are of very high order.

The pavement condition survey of the project road was simultaneously carried out along with the road inventory to assess existing pavement condition. Condition survey was undertaken by visual assessment of pavement surface distress, potholes, cracks, patches, raveling, condition of shoulders, etc.

### **The Pavement Condition Survey Data for the project road are presented in Annexure- II B**

General condition of the road pavement is poor, especially in the portion, which has not been reconstructed/rehabilitated in the past. The road has been resurfaced in some portion but the surface has shown distress. The road requires regrading, widening and strengthening for capacity augmentation as well as for improvement of the riding surface.

Pavement Visual Condition Survey was carried out over the road corridor by a team of experienced highway engineers to assess different modes, regarding the following features:

- Type of Surface
- % cracked area
- % Area covered by pot holes, raveling and patching
- Rutting
- Shoulder condition
- Embankment

The finding of the visual pavement condition survey has been tabulated and attached in Annexure-II. Based on the visual survey findings, the percentage Cracks, Potholes, Patching, Raveling and Edge drop over the entire road corridor are indicated in the pavement condition survey sheets. The road surface is poor. Cracks, potholes, patching, raveling and edge drops are very predominantly visible.

#### **Analysis:**

Analysis of data obtained consequent to the Condition Survey has revealed that the pavement condition of the existing road is poor. The road has no well-defined camber, super elevation and curve widening.

#### **5.2.2 Culvert Inventory and Condition Survey**

The inventory survey was undertaken by actual survey, measurements and visual inspection of various elements forming the Cross-Drainage structures viz. chainage, the span arrangement, length, width, vertical clearance, details of superstructure, sub-structure / foundation and protection works, etc.

**The survey has been conducted using the format given in Annexure - II C.**

It has two parts:

- Culvert Inventory Data
- Condition Survey

The inventory survey was undertaken by actual study, site visit, measurements and visual inspections. It was supplemented by survey and detailed investigations by the team. Special attention was paid to the Condition Survey of various features of culverts / bridges and adequacy or otherwise.

The condition of existing culverts is rated poor and recommended for replacement.

#### **5.2.3 Slope protection Inventory and Condition Survey**

The inventory survey was undertaken by actual survey, measurements and visual inspection of various elements forming the Retaining wall & Breast wall structures viz. chainage, length, width & height etc.

**The survey has been conducted using the format given in Annexure - II D & II E.**

## 5.2.4 Inventory of Bridges

### General

Inventory of all the Bridges falling on the project road has been prepared in terms of guidelines provided in IRC: SP-35, 1990 so as to determine the number, category of structures and also to attempt a scientific approach for their retention / repairs / rehabilitation based on technical grounds. This inventory data for each structure consists of location, construction data (wherever available), type of foundation, sub-structure and super structure, overall length, details of spans, waterway, carriageway width, provision of footpaths along with the past behavior of the structure from functional, hydraulic and structural considerations.

The inventory survey was undertaken by actual measurement, study, investigation and visual assessment of various elements and features particularly with respect to location, span arrangement, structural details, roadway width, and condition of structures.

List of Existing PSC Bridges on the project road are tabulated below:

Sr.No.	Location in Km	Width in m	Name of River	Type	Direction
1	506+670 to 506+985	12.00	Tuipui	PSC bridge	Right angle to the direction of the river

## 5.2.5 Utility Survey

The Utility survey was undertaken by actual survey, measurements and visual inspection of various elements such Electric pole ,Telephone post , Cable Post & Water supply Pipe line .

**The survey has been conducted using the format given in Annexure - II H-1, H-2, H-3 & H-4**

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
431.00	431.20	Hilly	Rise	Agri		7.23	Flexible	PC	3.70	ER	1.77	N/A	N/A	Not define	very poor condition
431.20	431.40	Hilly	Rise	Agri		6.67	Flexible	PC	3.70	ER	1.48	N/A	N/A	Not define	very poor condition
431.40	431.60	Hilly	Rise	Agri		6.10	Flexible	PC	3.70	ER	1.20	N/A	N/A	Not define	very poor condition
431.60	431.80	Hilly	Rise	Agri		6.30	Flexible	PC	3.70	ER	1.30	N/A	N/A	Not define	very poor condition
431.80	432.00	Hilly	Rise	Agri		6.40	Flexible	PC	4.10	ER	1.15	N/A	N/A	Not define	very poor condition
432.00	432.20	Hilly	Rise	Agri		7.30	Flexible	PC	3.60	ER	1.85	N/A	N/A	Not define	very poor condition
432.20	432.40	Hilly	Rise	Agri		7.20	Flexible	PC	3.50	ER	1.85	N/A	N/A	Not define	very poor condition
432.40	432.60	Hilly	Rise	Agri		6.60	Flexible	PC	3.80	ER	1.40	N/A	N/A	Not define	very poor condition
432.60	432.80	Hilly	Rise	Agri		7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	very poor condition
432.80	433.00	Hilly	Rise	Built Up	Tawipui N Vill-2	6.90	Flexible	PC	3.80	ER	1.55	N/A	N/A	Not define	very poor condition
433.00	433.20	Hilly	Rise	Built Up	Tawipui N Vill-2	9.90	Flexible	PC	5.60	ER	2.15	N/A	N/A	Not define	very poor condition
433.20	433.40	Hilly	Rise	Built Up	Tawipui N Vill-2	9.50	Flexible	PC	5.10	ER	2.20	N/A	N/A	Not define	very poor condition
433.40	433.60	Hilly	Rise	Built Up	Tawipui N Vill-2	8.15	Flexible	PC	4.75	ER	1.70	N/A	N/A	Not define	poor and undulation
433.60	433.80	Hilly	Fall	Built Up	Tawipui N Vill-2	6.80	Flexible	PC	4.40	ER	1.20	N/A	N/A	Not define	poor and undulation
433.80	434.00	Hilly	Fall	Built Up	Tawipui N Vill-2	9.95	Flexible	PC	4.85	ER	2.55	N/A	N/A	Not define	poor and undulation
434.00	434.20	Hilly	Fall	Built Up	Tawipui N Vill-2	9.88	Flexible	PC	5.13	ER	2.38	N/A	N/A	Not define	poor and undulation
434.20	434.40	Hilly	Rise	Built Up	Tawipui N Vill-2	13.10	Flexible	PC	5.30	ER	3.90	N/A	N/A	Not define	poor and undulation
434.40	434.60	Hilly	Rise	Built Up	Tawipui N Vill-2	9.80	Flexible	PC	5.40	ER	2.20	N/A	N/A	Not define	poor and undulation
434.60	434.80	Hilly	Rise	Built Up	Tawipui N Vill-2	8.45	Flexible	PC	4.55	ER	1.95	N/A	N/A	Not define	poor and undulation
434.80	435.00	Hilly	Rise	Agri		7.10	Flexible	PC	3.70	ER	1.70	N/A	N/A	Not define	poor and undulation
435.00	435.20	Hilly	Rise	Agri		6.45	Flexible	PC	3.55	ER	1.45	N/A	N/A	Not define	poor and undulation
435.20	435.40	Hilly	Rise	Built Up	Tawipui N Vill-1	5.80	Flexible	PC	3.40	ER	1.20	N/A	N/A	Not define	poor and undulation
435.40	435.60	Hilly	Rise	Built Up	Tawipui N Vill-1	9.10	Flexible	PC	4.00	ER	2.55	N/A	N/A	Not define	very poor condition
435.60	435.80	Hilly	Rise	Built Up	Tawipui N Vill-1	8.05	Flexible	PC	3.65	ER	2.20	N/A	N/A	Not define	very poor condition
435.80	436.00	Hilly	Rise	Built Up	Tawipui N Vill-1	7.00	Flexible	PC	3.30	ER	1.85	N/A	N/A	Not define	very poor condition
436.00	436.20	Hilly	Rise	Built Up	Tawipui N Vill-1	6.75	Flexible	PC	3.85	ER	1.45	N/A	N/A	Not define	poor and undulation
436.20	436.40	Hilly	Rise	Built Up	Tawipui N Vill-1	6.50	Flexible	PC	4.40	ER	1.05	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
436.40	436.60	Hilly	Rise	Built Up	Tawipui N Vill-1	6.20	Flexible	PC	4.40	ER	0.90	N/A	N/A	Not define	poor and undulation	
436.60	436.80	Hilly	Rise	Built Up	Tawipui N Vill-1	8.60	Flexible	PC	4.90	ER	1.85	N/A	N/A	Not define	poor and undulation	
436.80	437.00	Hilly	Rise	Built Up	Tawipui N Vill-1	9.10	Flexible	PC	4.85	ER	2.13	N/A	N/A	Not define	poor and undulation	
437.00	437.20	Hilly	Rise	Built Up	Tawipui N Vill-1	9.60	Flexible	PC	4.80	ER	2.40	N/A	N/A	Not define	poor and undulation	
437.20	437.40	Hilly	Rise	Built Up	Tawipui N Vill-1	9.10	Flexible	PC	5.20	ER	1.95	N/A	N/A	Not define	poor and undulation	
437.40	437.60	Hilly	Rise	Built Up	Tawipui N Vill-1	10.15	Flexible	PC	5.75	ER	2.20	N/A	N/A	Not define	poor and undulation	
437.60	437.80	Hilly	Rise	Built Up	Tawipui N Vill-1	11.20	Flexible	PC	6.30	ER	2.45	N/A	N/A	Not define	poor and undulation	
437.80	438.00	Hilly	Rise	Built Up	Tawipui N Vill-1	9.10	Flexible	PC	4.10	ER	2.50	N/A	N/A	Not define	poor and undulation	
438.00	438.20	Hilly	Rise	Built Up	Tawipui N Vill-1	7.20	Flexible	PC	4.10	ER	1.55	N/A	N/A	Not define	poor and undulation	
438.20	438.40	Hilly	Rise	Agri		7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation	
438.40	438.60	Hilly	Rise	Agri		7.10	Flexible	PC	3.70	ER	1.70	N/A	N/A	Not define	poor and undulation	
438.60	438.80	Hilly	Rise	Agri		6.60	Flexible	PC	3.50	ER	1.55	N/A	N/A	Not define	poor	
438.80	439.00	Hilly	Rise	Agri		7.10	Flexible	PC	3.80	ER	1.65	N/A	N/A	Not define	poor	
439.00	439.20	Hilly	Rise	Agri		7.00	Flexible	PC	4.10	ER	1.45	N/A	N/A	Not define	poor	
439.20	439.40	Hilly	Rise	Agri		7.00	Flexible	PC	3.70	ER	1.65	N/A	N/A	Not define	poor	
439.40	439.60	Hilly	Rise	Agri		6.90	Flexible	PC	3.60	ER	1.65	N/A	N/A	Not define	poor	
439.60	439.80	Hilly	Rise	Agri		6.80	Flexible	PC	3.80	ER	1.50	N/A	N/A	Not define	poor	
439.80	440.00	Hilly	Rise	Agri		7.10	Flexible	PC	4.00	ER	1.55	N/A	N/A	Not define	poor and undulation	
440.00	440.20	Hilly	Rise	Agri		6.90	Flexible	PC	3.80	ER	1.55	N/A	N/A	Not define	poor and undulation	
440.20	440.40	Hilly	Rise	Agri		6.50	Flexible	PC	3.80	ER	1.35	N/A	N/A	Not define	poor and undulation	
440.40	440.60	Hilly	Rise	Agri		7.90	Flexible	PC	3.60	ER	2.15	N/A	N/A	Not define	poor and undulation	
440.60	440.80	Hilly	Rise	Agri		6.40	Flexible	PC	3.40	ER	1.50	N/A	N/A	Not define	poor and undulation	
440.80	441.00	Hilly	Rise	Agri		7.20	Flexible	PC	3.40	ER	1.90	N/A	N/A	Not define	poor and undulation	
441.00	441.20	Hilly	Rise	Agri		7.20	Flexible	PC	3.80	ER	1.70	N/A	N/A	Not define	poor and undulation	
441.20	441.40	Hilly	Rise	Agri		7.40	Flexible	PC	3.40	ER	2.00	N/A	N/A	Not define	poor and undulation	
441.40	441.60	Hilly	Rise	Agri		7.10	Flexible	PC	3.20	ER	1.95	N/A	N/A	Not define	poor	
441.60	441.80	Hilly	Rise	Agri		6.80	Flexible	PC	3.00	ER	1.90	N/A	N/A	Not define	poor	



ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
441.80	442.00	Hilly	Rise	Agri		6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor	
442.00	442.20	Hilly	Rise	Agri		7.18	Flexible	PC	3.10	ER	2.04	N/A	N/A	Not define	poor	
442.20	442.40	Hilly	Rise	Agri		7.10	Flexible	PC	3.20	ER	1.95	N/A	N/A	Not define	poor	
442.40	442.60	Hilly	Rise	Agri		7.40	Flexible	PC	3.10	ER	2.15	N/A	N/A	Not define	poor	
442.60	442.80	Hilly	Rise	Agri		7.35	Flexible	PC	3.25	ER	2.05	N/A	N/A	Not define	poor	
442.80	443.00	Hilly	Rise	Agri		7.30	Flexible	PC	3.40	ER	1.95	N/A	N/A	Not define	poor and undulation	
443.00	443.20	Hilly	Rise	Agri		7.10	Flexible	PC	3.45	ER	1.83	N/A	N/A	Not define	poor and undulation	
443.20	443.40	Hilly	Rise	Agri		6.90	Flexible	PC	3.50	ER	1.70	N/A	N/A	Not define	poor and undulation	
443.40	443.60	Hilly	Rise	Agri		6.20	Flexible	PC	3.50	ER	1.35	N/A	N/A	Not define	poor and undulation	
443.60	443.80	Hilly	Rise	Agri		7.70	Flexible	PC	3.00	ER	2.35	N/A	N/A	Not define	poor and undulation	
443.80	444.00	Hilly	Rise	Agri		6.65	Flexible	PC	3.30	ER	1.68	N/A	N/A	Not define	poor and undulation	
444.00	444.20	Hilly	Rise	Built Up	Tawipui S vill	5.60	Flexible	PC	3.60	ER	1.00	N/A	N/A	Not define	poor and undulation	
444.20	444.40	Hilly	Rise	Built Up	Tawipui S vill	6.20	Flexible	PC	4.10	ER	1.05	N/A	N/A	Not define	poor and undulation	
444.40	444.60	Hilly	Rise	Built Up	Tawipui S vill	6.00	Flexible	PC	3.50	ER	1.25	N/A	N/A	Not define	poor and undulation	
444.60	444.80	Hilly	Rise	Built Up	Tawipui S vill	10.00	Flexible	PC	5.20	ER	2.40	N/A	N/A	Not define	poor and undulation	
444.80	445.00	Hilly	Rise	Built Up	Tawipui S vill	9.70	Flexible	PC	5.00	ER	2.35	N/A	N/A	Not define	poor and undulation	
445.00	445.20	Hilly	Rise	Built Up	Tawipui S vill	8.35	Flexible	PC	4.75	ER	1.80	N/A	N/A	Not define	poor and undulation	
445.20	445.40	Hilly	Rise	Built Up	Tawipui S vill	9.40	Flexible	PC	4.80	ER	2.30	N/A	N/A	Not define	poor and undulation	
445.40	445.60	Hilly	Rise	Built Up	Tawipui S vill	7.00	Flexible	PC	4.50	ER	1.25	N/A	N/A	Not define	poor and undulation	
445.60	445.80	Hilly	Fall	Built Up	Tawipui S vill	6.50	Flexible	PC	3.80	ER	1.35	N/A	N/A	Not define	poor and undulation	
445.80	446.00	Hilly	Fall	Built Up	Tawipui S vill	8.00	Flexible	PC	4.15	ER	1.93	N/A	N/A	Not define	poor and undulation	
446.00	446.20	Hilly	Fall	Built Up	Tawipui S vill	9.50	Flexible	PC	4.50	ER	2.50	N/A	N/A	Not define	poor and undulation	
446.20	446.40	Hilly	Fall	Built Up	Tawipui S vill	7.20	Flexible	PC	3.70	ER	1.75	N/A	N/A	Not define	poor and undulation	
446.40	446.60	Hilly	Fall	Built Up	Tawipui S vill	9.80	Flexible	PC	4.50	ER	2.65	N/A	N/A	Not define	poor and undulation	
446.60	446.80	Hilly	Fall	Built Up	Tawipui S vill	9.60	Flexible	PC	5.00	ER	2.30	N/A	N/A	Not define	poor and undulation	
446.80	447.00	Hilly	Fall	Built Up	Tawipui S vill	9.60	Flexible	PC	5.10	ER	2.25	N/A	N/A	Not define	poor and undulation	
447.00	447.20	Hilly	Fall	Built Up	Tawipui S vill	11.00	Flexible	PC	5.40	ER	2.80	N/A	N/A	Not define	poor and undulation	

# ROAD INVENTORY DATA SHEET

Appendix II A

Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
447.20	447.40	Hilly	Fall			10.00	Flexible	PC	4.30	ER	2.85	N/A	N/A	Not define	poor and undulation
447.40	447.60	Hilly	Fall			7.10	Flexible	PC	3.00	ER	2.05	N/A	N/A	Not define	poor and undulation
447.60	447.80	Hilly	Fall			6.95	Flexible	PC	3.60	ER	1.68	N/A	N/A	Not define	poor and undulation
447.80	448.00	Hilly	Fall			6.80	Flexible	PC	4.20	ER	1.30	N/A	N/A	Not define	poor and undulation
448.00	448.20	Hilly	Fall			6.90	Flexible	PC	3.50	ER	1.70	N/A	N/A	Not define	poor and undulation
448.20	448.40	Hilly	Fall			7.00	Flexible	PC	4.20	ER	1.40	N/A	N/A	Not define	poor and undulation
448.40	448.60	Hilly	Fall			6.40	Flexible	PC	3.90	ER	1.25	N/A	N/A	Not define	poor and undulation
448.60	448.80	Hilly	Fall			6.50	Flexible	PC	3.80	ER	1.35	N/A	N/A	Not define	poor and undulation
448.80	449.00	Hilly	Fall			6.10	Flexible	PC	3.30	ER	1.40	N/A	N/A	Not define	poor and undulation
449.00	449.20	Hilly	Fall			6.40	Flexible	PC	3.50	ER	1.45	N/A	N/A	Not define	poor and undulation
449.20	449.40	Hilly	Fall			6.60	Flexible	PC	3.50	ER	1.55	N/A	N/A	Not define	poor and undulation
449.40	449.60	Hilly	Rise			6.75	Flexible	PC	3.55	ER	1.60	N/A	N/A	Not define	poor and undulation
449.60	449.80	Hilly	Rise			6.90	Flexible	PC	3.60	ER	1.65	N/A	N/A	Not define	poor and undulation
449.80	450.00	Hilly	Rise			6.60	Flexible	PC	3.80	ER	1.40	N/A	N/A	Not define	poor and undulation
450.00	450.20	Hilly	Rise			6.80	Flexible	PC	3.60	ER	1.60	N/A	N/A	Not define	poor and undulation
450.20	450.40	Hilly	Rise			7.30	Flexible	PC	3.90	ER	1.70	N/A	N/A	Not define	poor and undulation
450.40	450.60	Hilly	Rise			7.80	Flexible	PC	3.70	ER	2.05	N/A	N/A	Not define	poor and undulation
450.60	450.80	Hilly	Fall			6.60	Flexible	PC	3.90	ER	1.35	N/A	N/A	Not define	poor and undulation
450.80	451.00	Hilly	Fall			6.70	Flexible	PC	3.80	ER	1.45	N/A	N/A	Not define	poor and undulation
451.00	451.20	Hilly	Fall			6.60	Flexible	PC	3.80	ER	1.40	N/A	N/A	Not define	poor and undulation
451.20	451.40	Hilly	Fall			6.65	Flexible	PC	3.75	ER	1.45	N/A	N/A	Not define	poor and undulation
451.40	451.60	Hilly	Fall			6.70	Flexible	PC	3.70	ER	1.50	N/A	N/A	Not define	poor and undulation
451.60	451.80	Hilly	Fall			6.70	Flexible	PC	3.60	ER	1.55	N/A	N/A	Not define	poor and undulation
451.80	452.00	Hilly	Rise			6.90	Flexible	PC	3.90	ER	1.50	N/A	N/A	Not define	poor and undulation
452.00	452.20	Hilly	Rise			6.80	Flexible	PC	3.80	ER	1.50	N/A	N/A	Not define	poor and undulation
452.20	452.40	Hilly	Rise			6.70	Flexible	PC	3.70	ER	1.50	N/A	N/A	Not define	poor and undulation
452.40	452.60	Hilly	Rise			7.00	Flexible	PC	4.20	ER	1.40	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
452.60	452.80	Hilly	Rise			7.00	Flexible	PC	3.50	ER	1.75	N/A	N/A	Not define	poor and undulation	
452.80	453.00	Hilly	Rise			6.50	Flexible	PC	3.80	ER	1.35	N/A	N/A	Not define	poor and undulation	
453.00	453.20	Hilly	Rise			6.40	Flexible	PC	3.55	ER	1.43	N/A	N/A	Not define	poor and undulation	
453.20	453.40	Hilly	Rise			6.30	Flexible	PC	3.30	ER	1.50	N/A	N/A	Not define	poor and undulation	
453.40	453.60	Hilly	Rise			6.70	Flexible	PC	3.80	ER	1.45	N/A	N/A	Not define	poor and undulation	
453.60	453.80	Hilly	Rise			6.50	Flexible	PC	3.80	ER	1.35	N/A	N/A	Not define	poor and undulation	
453.80	454.00	Hilly	Rise			6.10	Flexible	PC	3.50	ER	1.30	N/A	N/A	Not define	poor and undulation	
454.00	454.20	Hilly	Rise			6.60	Flexible	PC	4.00	ER	1.30	N/A	N/A	Not define	poor and undulation	
454.20	454.40	Hilly	Rise			7.00	Flexible	PC	3.90	ER	1.55	N/A	N/A	Not define	poor and undulation	
454.40	454.60	Hilly	Rise			7.00	Flexible	PC	3.70	ER	1.65	N/A	N/A	Not define	poor and undulation	
454.60	454.80	Hilly	Rise			7.25	Flexible	PC	3.75	ER	1.75	N/A	N/A	Not define	poor and undulation	
454.80	455.00	Hilly	Rise			7.28	Flexible	PC	4.53	ER	1.38	N/A	N/A	Not define	poor and undulation	
455.00	455.20	Hilly	Rise			7.50	Flexible	PC	3.80	ER	1.85	N/A	N/A	Not define	poor and undulation	
455.20	455.40	Hilly	Fall			7.30	Flexible	PC	5.30	ER	1.00	N/A	N/A	Not define	poor and undulation	
455.40	455.60	Hilly	Fall			7.60	Flexible	PC	4.00	ER	1.80	N/A	N/A	Not define	poor and undulation	
455.60	455.80	Hilly	Fall			7.00	Flexible	PC	3.90	ER	1.55	N/A	N/A	Not define	poor and undulation	
455.80	456.00	Hilly	Fall			7.50	Flexible	PC	4.00	ER	1.75	N/A	N/A	Not define	poor and undulation	
456.00	456.20	Hilly	Fall			7.10	Flexible	PC	4.00	ER	1.55	N/A	N/A	Not define	poor and undulation	
456.20	456.40	Hilly	Fall			6.90	Flexible	PC	4.10	ER	1.40	N/A	N/A	Not define	poor and undulation	
456.40	456.60	Hilly	Fall			7.00	Flexible	PC	4.20	ER	1.40	N/A	N/A	Not define	poor and undulation	
456.60	456.80	Hilly	Rise			7.20	Flexible	PC	4.30	ER	1.45	N/A	N/A	Not define	poor and undulation	
456.80	457.00	Hilly	Rise			7.40	Flexible	PC	4.40	ER	1.50	N/A	N/A	Not define	poor and undulation	
457.00	457.20	Hilly	Rise			7.10	Flexible	PC	3.90	ER	1.60	N/A	N/A	Not define	poor and undulation	
457.20	457.40	Hilly	Rise			6.90	Flexible	PC	4.50	ER	1.20	N/A	N/A	Not define	poor and undulation	
457.40	457.60	Hilly	Rise			6.90	Flexible	PC	3.60	ER	1.65	N/A	N/A	Not define	poor and undulation	
457.60	457.80	Hilly	Rise			6.90	Flexible	PC	4.20	ER	1.35	N/A	N/A	Not define	poor and undulation	
457.80	458.00	Hilly	Rise			6.90	Flexible	PC	3.80	ER	1.55	N/A	N/A	Not define	poor and undulation	

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
458.00	458.20	Hilly	Rise			6.00	Flexible	PC	3.40	ER	1.30	N/A	N/A	Not define	poor and undulation	
458.20	458.40	Hilly	Rise			6.90	Flexible	PC	4.20	ER	1.35	N/A	N/A	Not define	poor and undulation	
458.40	458.60	Hilly	Rise			7.10	Flexible	PC	4.10	ER	1.50	N/A	N/A	Not define	poor and undulation	
458.60	458.80	Hilly	Rise			6.70	Flexible	PC	4.20	ER	1.25	N/A	N/A	Not define	poor and undulation	
458.80	459.00	Hilly	Rise			6.50	Flexible	PC	3.90	ER	1.30	N/A	N/A	Not define	poor and undulation	
459.00	459.20	Hilly	Rise			6.80	Flexible	PC	3.40	ER	1.70	N/A	N/A	Not define	poor and undulation	
459.20	459.40	Hilly	Rise			6.00	Flexible	PC	3.90	ER	1.05	N/A	N/A	Not define	poor and undulation	
459.40	459.60	Hilly	Rise			6.70	Flexible	PC	4.00	ER	1.35	N/A	N/A	Not define	poor and undulation	
459.60	459.80	Hilly	Rise	Built Up	Thingfal	10.00	Flexible	PC	5.40	ER	2.30	N/A	N/A	Not define	poor and undulation	
459.80	460.00	Hilly	Rise	Built Up	Thingfal	9.90	Flexible	PC	3.80	ER	3.05	N/A	N/A	Not define	poor and undulation	
460.00	460.20	Hilly	Rise	Built Up	Thingfal	9.40	Flexible	PC	4.70	ER	2.35	N/A	N/A	Not define	poor and undulation	
460.20	460.40	Hilly	Fall	Built Up	Thingfal	9.40	Flexible	PC	4.80	ER	2.30	N/A	N/A	Not define	poor and undulation	
460.40	460.60	Hilly	Fall	Built Up	Thingfal	9.50	Flexible	PC	4.00	ER	2.75	N/A	N/A	Not define	poor and undulation	
460.60	460.80	Hilly	Fall	Built Up	Thingfal	8.90	Flexible	PC	4.20	ER	2.35	N/A	N/A	Not define	poor and undulation	
460.80	461.00	Hilly	Fall	Built Up	Thingfal	9.05	Flexible	PC	4.10	ER	2.48	N/A	N/A	Not define	poor and undulation	
461.00	461.20	Hilly	Fall	Built Up	Thingfal	8.30	Flexible	PC	4.40	ER	1.95	N/A	N/A	Not define	poor and undulation	
461.20	461.40	Hilly	Fall			9.20	Flexible	PC	4.00	ER	2.60	N/A	N/A	Not define	poor and undulation	
461.40	461.60	Hilly	Fall			6.60	Flexible	PC	3.60	ER	1.50	N/A	N/A	Not define	poor and undulation	
461.60	461.80	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
461.80	462.00	Hilly	Fall			6.95	Flexible	PC	3.35	ER	1.80	N/A	N/A	Not define	poor and undulation	
462.00	462.20	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
462.20	462.40	Hilly	Fall			5.80	Flexible	PC	3.60	ER	1.10	N/A	N/A	Not define	poor and undulation	
462.40	462.60	Hilly	Fall			6.80	Flexible	PC	3.50	ER	1.65	N/A	N/A	Not define	poor and undulation	
462.60	462.80	Hilly	Fall			6.85	Flexible	PC	3.40	ER	1.73	N/A	N/A	Not define	poor and undulation	
462.80	463.00	Hilly	Fall			6.90	Flexible	PC	3.30	ER	1.80	N/A	N/A	Not define	poor and undulation	
463.00	463.20	Hilly	Fall			5.80	Flexible	PC	3.00	ER	1.40	N/A	N/A	Not define	poor and undulation	
463.20	463.40	Hilly	Fall			6.50	Flexible	PC	3.30	ER	1.60	N/A	N/A	Not define	poor and undulation	

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
463.40	463.60	Hilly	Fall			6.50	Flexible	PC	3.10	ER	1.70	N/A	N/A	Not define	poor and undulation	
463.60	463.80	Hilly	Fall			6.70	Flexible	PC	3.00	ER	1.85	N/A	N/A	Not define	poor and undulation	
463.80	464.00	Hilly	Fall			5.80	Flexible	PC	3.00	ER	1.40	N/A	N/A	Not define	poor and undulation	
464.00	464.20	Hilly	Fall			7.10	Flexible	PC	3.70	ER	1.70	N/A	N/A	Not define	poor and undulation	
464.20	464.40	Hilly	Fall			6.90	Flexible	PC	3.65	ER	1.63	N/A	N/A	Not define	poor and undulation	
464.40	464.60	Hilly	Fall			6.70	Flexible	PC	3.60	ER	1.55	N/A	N/A	Not define	poor and undulation	
464.60	464.80	Hilly	Fall			5.80	Flexible	PC	3.70	ER	1.05	N/A	N/A	Not define	poor and undulation	
464.80	465.00	Hilly	Fall			6.20	Flexible	PC	3.10	ER	1.55	N/A	N/A	Not define	poor and undulation	
465.00	465.20	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
465.20	465.40	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
465.40	465.60	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
465.60	465.80	Hilly	Fall			6.50	Flexible	PC	4.00	ER	1.25	N/A	N/A	Not define	poor and undulation	
465.80	466.00	Hilly	Fall			6.70	Flexible	PC	3.10	ER	1.80	N/A	N/A	Not define	poor and undulation	
466.00	466.20	Hilly	Fall			7.10	Flexible	PC	3.70	ER	1.70	N/A	N/A	Not define	poor and undulation	
466.20	466.40	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
466.40	466.60	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
466.60	466.80	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
466.80	467.00	Hilly	Fall			9.70	Flexible	PC	3.60	ER	3.05	N/A	N/A	Not define	poor and undulation	
467.00	467.20	Hilly	Fall			7.70	Flexible	PC	3.60	ER	2.05	N/A	N/A	Not define	poor and undulation	
467.20	467.40	Hilly	Fall			7.50	Flexible	PC	3.65	ER	1.93	N/A	N/A	Not define	poor and undulation	
467.40	467.60	Hilly	Fall			7.05	Flexible	PC	3.70	ER	1.68	N/A	N/A	Not define	poor and undulation	
467.60	467.80	Hilly	Fall			7.30	Flexible	PC	3.70	ER	1.80	N/A	N/A	Not define	poor and undulation	
467.80	468.00	Hilly	Fall			6.60	Flexible	PC	3.75	ER	1.43	N/A	N/A	Not define	poor and undulation	
468.00	468.20	Hilly	Fall			6.45	Flexible	PC	3.78	ER	1.34	N/A	N/A	Not define	poor and undulation	
468.20	468.40	Hilly	Fall			5.90	Flexible	PC	3.80	ER	1.05	N/A	N/A	Not define	poor and undulation	
468.40	468.60	Hilly	Fall			6.30	Flexible	PC	3.80	ER	1.25	N/A	N/A	Not define	poor and undulation	
468.60	468.80	Hilly	Fall			5.50	Flexible	PC	4.20	ER	0.65	N/A	N/A	Not define	poor and undulation	

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
468.80	469.00	Hilly	Fall			7.00	Flexible	PC	3.40	ER	1.80	N/A	N/A	Not define	poor and undulation
469.00	469.20	Hilly	Fall			7.30	Flexible	PC	3.50	ER	1.90	N/A	N/A	Not define	poor and undulation
469.20	469.40	Hilly	Fall			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
469.40	469.60	Hilly	Fall	Built Up	Thingka	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
469.60	469.80	Hilly	Fall	Built Up	Thingka	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
469.80	470.00	Hilly	Fall	Built Up	Thingka	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
470.00	470.20	Hilly	Fall	Built Up	Thingka	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
470.20	470.40	Hilly	Fall	Built Up	Thingka	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
470.40	470.60	Hilly	Fall	Built Up	Thingka	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
470.60	470.80	Hilly	Fall	Built Up	Thingka	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
470.80	471.00	Hilly	Fall	Agri		6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
471.00	471.20	Hilly	Fall	Agri		6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
471.20	471.40	Hilly	Fall	Agri		5.80	Flexible	PC	3.70	ER	1.05	N/A	N/A	Not define	poor and undulation
471.40	471.60	Hilly	Fall	Built Up	AOC Village	5.95	Flexible	PC	3.70	ER	1.13	N/A	N/A	Not define	poor and undulation
471.60	471.80	Hilly	Fall	Built Up	AOC Village	6.10	Flexible	PC	3.70	ER	1.20	N/A	N/A	Not define	poor and undulation
471.80	472.00	Hilly	Fall	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
472.00	472.20	Hilly	Fall	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
472.20	472.40	Hilly	Fall	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
472.40	472.60	Hilly	Fall	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
472.60	472.80	Hilly	Fall	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
472.80	473.00	Hilly	Fall	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
473.00	473.20	Hilly	Rise	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
473.20	473.40	Hilly	Rise	Built Up	AOC Village	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
473.40	473.60	Hilly	Rise	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
473.60	473.80	Hilly	Rise	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
473.80	474.00	Hilly	Rise	Built Up	Lawngtlai City	9.50	Flexible	PC	5.80	ER	1.85	N/A	N/A	Not define	poor and undulation
474.00	474.20	Hilly	Rise	Built Up	Lawngtlai City	9.60	Flexible	PC	4.30	ER	2.65	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
474.20	474.40	Hilly	Rise	Built Up	Lawngtlai City	12.30	Flexible	PC	6.50	ER	2.90	N/A	N/A	Not define	poor and undulation
474.40	474.60	Hilly	Rise	Built Up	Lawngtlai City	7.80	Flexible	PC	5.20	ER	1.30	N/A	N/A	Not define	poor and undulation
474.60	474.80	Hilly	Rise	Built Up	Lawngtlai City	10.00	Flexible	PC	5.70	ER	2.15	N/A	N/A	Not define	poor and undulation
474.80	475.00	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
475.00	475.20	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
475.20	475.40	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
475.40	475.60	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
475.60	475.80	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
475.80	476.00	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
476.00	476.20	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
476.20	476.40	Hilly	Rise	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
476.40	476.60	Hilly	Rise	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
476.60	476.80	Hilly	Rise	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
476.80	477.00	Hilly	Rise	Built Up	Lawngtlai City	8.30	Flexible	PC	4.70	ER	1.80	N/A	N/A	Not define	poor and undulation
477.00	477.20	Hilly	Rise	Built Up	Lawngtlai City	11.70	Flexible	PC	5.00	ER	3.35	N/A	N/A	Not define	poor and undulation
477.20	477.40	Hilly	Rise	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
477.40	477.60	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
477.60	477.80	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
477.80	478.00	Hilly	Fall	Built Up	Lawngtlai City	6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation
478.00	478.20	Hilly	Fall	Built Up	Lawngtlai City	8.90	Flexible	PC	5.40	ER	1.75	N/A	N/A	Not define	poor and undulation
478.20	478.40	Hilly	Rise	Built Up	Lawngtlai City	8.00	Flexible	PC	4.40	ER	1.80	N/A	N/A	Not define	poor and undulation
478.40	478.60	Hilly	Rise	Built Up	Lawngtlai City	7.58	Flexible	PC	4.03	ER	1.78	N/A	N/A	Not define	poor and undulation
478.60	478.80	Hilly	Rise	Built Up	Lawngtlai City	7.10	Flexible	PC	3.40	ER	1.85	N/A	N/A	Not define	poor and undulation
478.80	479.00	Hilly	Rise	Built Up	Lawngtlai City	7.15	Flexible	PC	3.65	ER	1.75	N/A	N/A	Not define	poor and undulation
479.00	479.20	Hilly	Rise			7.20	Flexible	PC	3.90	ER	1.65	N/A	N/A	Not define	poor and undulation
479.20	479.40	Hilly	Rise			6.70	Flexible	PC	3.00	ER	1.85	N/A	N/A	Not define	poor and undulation
479.40	479.60	Hilly	Rise			6.40	Flexible	PC	3.15	ER	1.63	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
479.60	479.80	Hilly	Rise			6.10	Flexible	PC	3.30	ER	1.40	N/A	N/A	Not define	poor and undulation	
479.80	480.00	Hilly	Rise			6.70	Flexible	PC	4.50	ER	1.10	N/A	N/A	Not define	poor and undulation	
480.00	480.20	Hilly	Rise			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
480.20	480.40	Hilly	Rise			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
480.40	480.60	Hilly	Rise			6.95	Flexible	PC	3.10	ER	1.93	N/A	N/A	Not define	poor and undulation	
480.60	480.80	Hilly	Rise			7.60	Flexible	PC	4.10	ER	1.75	N/A	N/A	Not define	poor and undulation	
480.80	481.00	Hilly	Rise			6.60	Flexible	PC	3.50	ER	1.55	N/A	N/A	Not define	poor and undulation	
481.00	481.20	Hilly	Rise			7.00	Flexible	PC	3.30	ER	1.85	N/A	N/A	Not define	poor and undulation	
481.20	481.40	Hilly	Rise			7.30	Flexible	PC	3.80	ER	1.75	N/A	N/A	Not define	poor and undulation	
481.40	481.60	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
481.60	481.80	Hilly	Rise			7.13	Flexible	PC	3.58	ER	1.78	N/A	N/A	Not define	poor and undulation	
481.80	482.00	Hilly	Rise			6.60	Flexible	PC	3.50	ER	1.55	N/A	N/A	Not define	poor and undulation	
482.00	482.20	Hilly	Rise			7.30	Flexible	PC	3.50	ER	1.90	N/A	N/A	Not define	poor and undulation	
482.20	482.40	Hilly	Rise			7.00	Flexible	PC	3.00	ER	2.00	N/A	N/A	Not define	poor and undulation	
482.40	482.60	Hilly	Rise			7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation	
482.60	482.80	Hilly	Rise			6.90	Flexible	PC	3.30	ER	1.80	N/A	N/A	Not define	poor and undulation	
482.80	483.00	Hilly	Rise			7.40	Flexible	PC	3.30	ER	2.05	N/A	N/A	Not define	poor and undulation	
483.00	483.20	Hilly	Rise			7.25	Flexible	PC	3.40	ER	1.93	N/A	N/A	Not define	poor and undulation	
483.20	483.40	Hilly	Rise			7.10	Flexible	PC	3.50	ER	1.80	N/A	N/A	Not define	poor and undulation	
483.40	483.60	Hilly	Rise			6.55	Flexible	PC	3.40	ER	1.58	N/A	N/A	Not define	poor and undulation	
483.60	483.80	Hilly	Fall			6.00	Flexible	PC	3.30	ER	1.35	N/A	N/A	Not define	poor and undulation	
483.80	484.00	Hilly	Fall			7.00	Flexible	PC	3.30	ER	1.85	N/A	N/A	Not define	poor and undulation	
484.00	484.20	Hilly	Fall			7.00	Flexible	PC	3.30	ER	1.85	N/A	N/A	Not define	poor and undulation	
484.20	484.40	Hilly	Fall			7.70	Flexible	PC	4.10	ER	1.80	N/A	N/A	Not define	poor and undulation	
484.40	484.60	Hilly	Fall			7.40	Flexible	PC	4.00	ER	1.70	N/A	N/A	Not define	poor and undulation	
484.60	484.80	Hilly	Fall			7.10	Flexible	PC	3.90	ER	1.60	N/A	N/A	Not define	poor and undulation	
484.80	485.00	Hilly	Fall			7.60	Flexible	PC	31.00	ER	-11.70	N/A	N/A	Not define	poor and undulation	



ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
485.00	485.20	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
485.20	485.40	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
485.40	485.60	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
485.60	485.80	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
485.80	486.00	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
486.00	486.20	Hilly	Fall			7.20	Flexible	PC	4.00	ER	1.60	N/A	N/A	Not define	poor and undulation
486.20	486.40	Hilly	Fall			6.80	Flexible	PC	3.80	ER	1.50	N/A	N/A	Not define	poor and undulation
486.40	486.60	Hilly	Fall			7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation
486.60	486.80	Hilly	Fall	Built Up	Saika Village	6.80	Flexible	PC	3.40	ER	1.70	N/A	N/A	Not define	poor and undulation
486.80	487.00	Hilly	Fall	Built Up	Saika Village	10.60	Flexible	PC	5.00	ER	2.80	N/A	N/A	Not define	poor and undulation
487.00	487.20	Hilly	Fall	Built Up	Saika Village	10.20	Flexible	PC	3.50	ER	3.35	N/A	N/A	Not define	poor and undulation
487.20	487.40	Hilly	Fall			10.90	Flexible	PC	4.00	ER	3.45	N/A	N/A	Not define	poor and undulation
487.40	487.60	Hilly	Fall			7.30	Flexible	PC	4.00	ER	1.65	N/A	N/A	Not define	poor and undulation
487.60	487.80	Hilly	Fall			7.10	Flexible	PC	4.20	ER	1.45	N/A	N/A	Not define	poor and undulation
487.80	488.00	Hilly	Fall			7.10	Flexible	PC	4.20	ER	1.45	N/A	N/A	Not define	poor and undulation
488.00	488.20	Hilly	Fall			7.20	Flexible	PC	3.85	ER	1.68	N/A	N/A	Not define	poor and undulation
488.20	488.40	Hilly	Fall			7.10	Flexible	PC	4.20	ER	1.45	N/A	N/A	Not define	poor and undulation
488.40	488.60	Hilly	Fall			7.30	Flexible	PC	3.50	ER	1.90	N/A	N/A	Not define	poor and undulation
488.60	488.80	Hilly	Fall			6.70	Flexible	PC	3.50	ER	1.60	N/A	N/A	Not define	poor and undulation
488.80	489.00	Hilly	Fall			7.35	Flexible	PC	3.65	ER	1.85	N/A	N/A	Not define	poor and undulation
489.00	489.20	Hilly	Fall			8.00	Flexible	PC	3.80	ER	2.10	N/A	N/A	Not define	poor and undulation
489.20	489.40	Hilly	Fall			7.00	Flexible	PC	4.70	ER	1.15	N/A	N/A	Not define	poor and undulation
489.40	489.60	Hilly	Fall			6.60	Flexible	PC	4.10	ER	1.25	N/A	N/A	Not define	poor and undulation
489.60	489.80	Hilly	Fall			6.70	Flexible	PC	4.65	ER	1.03	N/A	N/A	Not define	poor and undulation
489.80	490.00	Hilly	Fall			6.80	Flexible	PC	5.20	ER	0.80	N/A	N/A	Not define	poor and undulation
490.00	490.20	Hilly	Fall			6.90	Flexible	PC	4.60	ER	1.15	N/A	N/A	Not define	poor and undulation
490.20	490.40	Hilly	Fall			6.80	Flexible	PC	4.10	ER	1.35	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
490.40	490.60	Hilly	Fall			7.00	Flexible	PC	4.00	ER	1.50	N/A	N/A	Not define	poor and undulation	
490.60	490.80	Hilly	Fall			6.70	Flexible	PC	3.60	ER	1.55	N/A	N/A	Not define	poor and undulation	
490.80	491.00	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
491.00	491.20	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
491.20	491.40	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
491.40	491.60	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
491.60	491.80	Hilly	Fall			7.70	Flexible	PC	6.40	ER	0.65	N/A	N/A	Not define	poor and undulation	
491.80	492.00	Hilly	Fall			6.60	Flexible	PC	3.60	ER	1.50	N/A	N/A	Not define	poor and undulation	
492.00	492.20	Hilly	Fall			6.75	Flexible	PC	4.30	ER	1.23	N/A	N/A	Not define	poor and undulation	
492.20	492.40	Hilly	Fall			6.90	Flexible	PC	5.00	ER	0.95	N/A	N/A	Not define	poor and undulation	
492.40	492.60	Hilly	Fall			7.50	Flexible	PC	5.60	ER	0.95	N/A	N/A	Not define	poor and undulation	
492.60	492.80	Hilly	Fall			7.25	Flexible	PC	6.15	ER	0.55	N/A	N/A	Not define	poor and undulation	
492.80	493.00	Hilly	Fall			7.00	Flexible	PC	6.70	ER	0.15	N/A	N/A	Not define	poor and undulation	
493.00	493.20	Hilly	Fall			6.70	Flexible	PC	6.50	ER	0.10	N/A	N/A	Not define	poor and undulation	
493.20	493.40	Hilly	Fall			7.40	Flexible	PC	6.10	ER	0.65	N/A	N/A	Not define	poor and undulation	
493.40	493.60	Hilly	Fall			7.00	Flexible	PC	6.70	ER	0.15	N/A	N/A	Not define	poor and undulation	
493.60	493.80	Hilly	Fall			7.00	Flexible	PC	5.70	ER	0.65	N/A	N/A	Not define	poor and undulation	
493.80	494.00	Hilly	Fall			6.90	Flexible	PC	3.60	ER	1.65	N/A	N/A	Not define	poor and undulation	
494.00	494.20	Hilly	Fall			10.00	Flexible	PC	7.00	ER	1.50	N/A	N/A	Not define	poor and undulation	
494.20	494.40	Hilly	Fall			11.00	Flexible	PC	7.30	ER	1.85	N/A	N/A	Not define	poor and undulation	
494.40	494.60	Hilly	Fall			11.00	Flexible	PC	7.40	ER	1.80	N/A	N/A	Not define	poor and undulation	
494.60	494.80	Hilly	Fall			10.00	Flexible	PC	6.70	ER	1.65	N/A	N/A	Not define	poor and undulation	
494.80	495.00	Hilly	Fall			7.20	Flexible	PC	5.20	ER	1.00	N/A	N/A	Not define	poor and undulation	
495.00	495.20	Hilly	Fall			7.15	Flexible	PC	5.20	ER	0.98	N/A	N/A	Not define	poor and undulation	
495.20	495.40	Hilly	Fall			7.10	Flexible	PC	5.20	ER	0.95	N/A	N/A	Not define	poor and undulation	
495.40	495.60	Hilly	Fall			7.00	Flexible	PC	4.90	ER	1.05	N/A	N/A	Not define	poor and undulation	
495.60	495.80	Hilly	Fall			6.70	Flexible	PC	5.20	ER	0.75	N/A	N/A	Not define	poor and undulation	

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
495.80	496.00	Hilly	Fall			6.70	Flexible	PC	5.10	ER	0.80	N/A	N/A	Not define	poor and undulation
496.00	496.20	Hilly	Fall			6.83	Flexible	PC	4.88	ER	0.98	N/A	N/A	Not define	poor and undulation
496.20	496.40	Hilly	Fall			6.70	Flexible	PC	5.00	ER	0.85	N/A	N/A	Not define	poor and undulation
496.40	496.60	Hilly	Fall			6.95	Flexible	PC	4.65	ER	1.15	N/A	N/A	Not define	poor and undulation
496.60	496.80	Hilly	Fall			7.20	Flexible	PC	4.30	ER	1.45	N/A	N/A	Not define	poor and undulation
496.80	497.00	Hilly	Fall			7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation
497.00	497.20	Hilly	Fall			6.85	Flexible	PC	4.75	ER	1.05	N/A	N/A	Not define	poor and undulation
497.20	497.40	Hilly	Fall			6.70	Flexible	PC	5.90	ER	0.40	N/A	N/A	Not define	poor and undulation
497.40	497.60	Hilly	Fall			7.40	Flexible	PC	5.90	ER	0.75	N/A	N/A	Not define	poor and undulation
497.60	497.80	Hilly	Fall			7.20	Flexible	PC	5.90	ER	0.65	N/A	N/A	Not define	poor and undulation
497.80	498.00	Hilly	Fall			7.00	Flexible	PC	5.90	ER	0.55	N/A	N/A	Not define	poor and undulation
498.00	498.20	Hilly	Fall			5.70	Flexible	PC	5.20	ER	0.25	N/A	N/A	Not define	poor and undulation
498.20	498.40	Hilly	Fall	Built Up	Chawntlangpui	7.70	Flexible	PC	5.80	ER	0.95	N/A	N/A	Not define	poor and undulation
498.40	498.60	Hilly	Fall	Built Up	Chawntlangpui	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
498.60	498.80	Hilly	Fall	Built Up	Chawntlangpui	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
498.80	499.00	Hilly	Fall	Built Up	Chawntlangpui	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
499.00	499.20	Hilly	Fall	Built Up	Chawntlangpui	7.90	Flexible	PC	5.80	ER	1.05	N/A	N/A	Not define	poor and undulation
499.20	499.40	Hilly	Fall	Built Up	Chawntlangpui	7.75	Flexible	PC	6.55	ER	0.60	N/A	N/A	Not define	poor and undulation
499.40	499.60	Hilly	Fall	Built Up	Chawntlangpui	7.30	Flexible	PC	6.48	ER	0.41	N/A	N/A	Not define	poor and undulation
499.60	499.80	Hilly	Fall	Built Up	Chawntlangpui	7.60	Flexible	PC	7.30	ER	0.15	N/A	N/A	Not define	poor and undulation
499.80	500.00	Hilly	Fall	Built Up	Chawntlangpui	6.85	Flexible	PC	6.40	ER	0.23	N/A	N/A	Not define	poor and undulation
500.00	500.20	Hilly	Fall	Agri		6.10	Flexible	PC	5.50	ER	0.30	N/A	N/A	Not define	poor and undulation
500.20	500.40	Hilly	Fall	Agri		7.00	Flexible	PC	6.20	ER	0.40	N/A	N/A	Not define	poor and undulation
500.40	500.60	Hilly	Fall	Agri		7.60	Flexible	PC	6.60	ER	0.50	N/A	N/A	Not define	poor and undulation
500.60	500.80	Hilly	Fall	Agri		6.20	Flexible	PC	5.90	ER	0.15	N/A	N/A	Not define	poor and undulation
500.80	501.00	Hilly	Fall	Agri		7.00	Flexible	PC	6.20	ER	0.40	N/A	N/A	Not define	poor and undulation
501.00	501.20	Hilly	Fall	Built Up	Sihtlangpui	9.00	Flexible	PC	5.30	ER	1.85	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
501.20	501.40	Hilly	Fall	Built Up	Sihtlangpui	9.80	Flexible	PC	5.20	ER	2.30	N/A	N/A	Not define	poor and undulation	
501.40	501.60	Hilly	Fall	Built Up	Sihtlangpui	9.70	Flexible	PC	5.30	ER	2.20	N/A	N/A	Not define	poor and undulation	
501.60	501.80	Hilly	Fall	Built Up	Sihtlangpui	9.60	Flexible	PC	5.40	ER	2.10	N/A	N/A	Not define	poor and undulation	
501.80	502.00	Hilly	Fall	Built Up	Sihtlangpui	9.75	Flexible	PC	5.60	ER	2.08	N/A	N/A	Not define	poor and undulation	
502.00	502.20	Hilly	Fall	Built Up	Sihtlangpui	9.90	Flexible	PC	5.80	ER	2.05	N/A	N/A	Not define	poor and undulation	
502.20	502.40	Hilly	Fall	Built Up	Sihtlangpui	10.30	Flexible	PC	4.30	ER	3.00	N/A	N/A	Not define	poor and undulation	
502.40	502.60	Hilly	Fall	Built Up	Sihtlangpui	9.60	Flexible	PC	4.80	ER	2.40	N/A	N/A	Not define	poor and undulation	
502.60	502.80	Hilly	Fall	Agri		6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
502.80	503.00	Hilly	Fall	Agri		6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
503.00	503.20	Hilly	Fall	Agri		6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
503.20	503.40	Hilly	Fall	Agri		6.10	Flexible	PC	3.60	ER	1.25	N/A	N/A	Not define	poor and undulation	
503.40	503.60	Hilly	Fall	Agri		7.60	Flexible	PC	3.80	ER	1.90	N/A	N/A	Not define	poor and undulation	
503.60	503.80	Hilly	Fall	Agri		6.60	Flexible	PC	3.50	ER	1.55	N/A	N/A	Not define	poor and undulation	
503.80	504.00	Hilly	Fall	Agri		6.10	Flexible	PC	3.40	ER	1.35	N/A	N/A	Not define	poor and undulation	
504.00	504.20	Hilly	Fall	Agri		6.20	Flexible	PC	3.40	ER	1.40	N/A	N/A	Not define	poor and undulation	
504.20	504.40	Hilly	Fall	Agri		6.50	Flexible	PC	3.55	ER	1.48	N/A	N/A	Not define	poor and undulation	
504.40	504.60	Hilly	Fall	Agri		6.80	Flexible	PC	3.70	ER	1.55	N/A	N/A	Not define	poor and undulation	
504.60	504.80	Hilly	Fall	Agri		7.20	Flexible	PC	4.00	ER	1.60	N/A	N/A	Not define	poor and undulation	
504.80	505.00	Hilly	Fall	Agri		7.20	Flexible	PC	4.20	ER	1.50	N/A	N/A	Not define	poor and undulation	
505.00	505.20	Hilly	Fall	Agri		7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation	
505.20	505.40	Hilly	Fall	Agri		6.80	Flexible	PC	3.60	ER	1.60	N/A	N/A	Not define	poor and undulation	
505.40	505.60	Hilly	Fall	Agri		6.10	Flexible	PC	3.50	ER	1.30	N/A	N/A	Not define	poor and undulation	
505.60	505.80	Hilly	Fall	Agri		6.70	Flexible	PC	3.70	ER	1.50	N/A	N/A	Not define	poor and undulation	
505.80	506.00	Hilly	Fall	Agri		7.00	Flexible	PC	3.80	ER	1.60	N/A	N/A	Not define	poor and undulation	
506.00	506.20	Hilly	Fall	Built Up	Kawlchaw Vill	6.95	Flexible	PC	3.60	ER	1.68	N/A	N/A	Not define	poor and undulation	
506.20	506.40	Hilly	Fall	Built Up	Kawlchaw Vill	7.63	Flexible	PC	3.50	ER	2.06	N/A	N/A	Not define	poor and undulation	
506.40	506.60	Hilly	Fall	Built Up	Kawlchaw Bridge	6.90	Flexible	PC	3.40	ER	1.75	N/A	N/A	Not define	poor and undulation	

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
506.60	506.80	Hilly	Fall	Built Up	Kawlchaw Bridge	8.30	Flexible	PC	3.40	ER	2.45	N/A	N/A	Not define	poor and undulation
506.80	507.00	Hilly	Fall	Built Up	Kawlchaw Bridge	9.10	Flexible	PC	3.50	ER	2.80	N/A	N/A	Not define	poor and undulation
507.00	507.20	Hilly	Fall	Built Up	Kawlchaw Vill	9.70	Flexible	PC	3.40	ER	3.15	N/A	N/A	Not define	poor and undulation
507.20	507.40	Hilly	Rise	Built Up	Kawlchaw Vill	9.90	Flexible	PC	3.60	ER	3.15	N/A	N/A	Not define	poor and undulation
507.40	507.60	Hilly	Rise	Built Up	Kawlchaw Vill	8.60	Flexible	PC	4.00	ER	2.30	N/A	N/A	Not define	poor and undulation
507.60	507.80	Hilly	Rise	Built Up	Kawlchaw Vill	8.83	Flexible	PC	4.23	ER	2.30	N/A	N/A	Not define	poor and undulation
507.80	508.00	Hilly	Rise	Built Up	Kawlchaw Vill	7.30	Flexible	PC	4.40	ER	1.45	N/A	N/A	Not define	poor and undulation
508.00	508.20	Hilly	Rise	Built Up	Kawlchaw Vill	9.05	Flexible	PC	4.45	ER	2.30	N/A	N/A	Not define	poor and undulation
508.20	508.40	Hilly	Rise	Built Up	Kawlchaw Vill	9.48	Flexible	PC	4.93	ER	2.28	N/A	N/A	Not define	poor and undulation
508.40	508.60	Hilly	Rise	Built Up	Kawlchaw Vill	10.80	Flexible	PC	4.50	ER	3.15	N/A	N/A	Not define	poor and undulation
508.60	508.80	Hilly	Rise	Built Up	Kawlchaw Vill	9.90	Flexible	PC	5.40	ER	2.25	N/A	N/A	Not define	poor and undulation
508.80	509.00	Hilly	Rise	Built Up	Kawlchaw Vill	6.90	Flexible	PC	3,2	ER	####	N/A	N/A	Not define	poor and undulation
509.00	509.20	Hilly	Rise	Built Up	Kawlchaw Vill	7.00	Flexible	PC	3.50	ER	1.75	N/A	N/A	Not define	poor and undulation
509.20	509.40	Hilly	Rise	Built Up	Kawlchaw Vill	6.70	Flexible	PC	3.20	ER	1.75	N/A	N/A	Not define	poor and undulation
509.40	509.60	Hilly	Rise	Agri		7.70	Flexible	PC	3.60	ER	2.05	N/A	N/A	Not define	poor and undulation
509.60	509.80	Hilly	Rise	Agri		6.90	Flexible	PC	3.55	ER	1.68	N/A	N/A	Not define	poor and undulation
509.80	510.00	Hilly	Rise	Agri		6.10	Flexible	PC	3.50	ER	1.30	N/A	N/A	Not define	poor and undulation
510.00	510.20	Hilly	Rise	Agri		6.00	Flexible	PC	3.45	ER	1.28	N/A	N/A	Not define	poor and undulation
510.20	510.40	Hilly	Rise	Agri		5.90	Flexible	PC	3.40	ER	1.25	N/A	N/A	Not define	poor and undulation
510.40	510.60	Hilly	Rise	Agri		7.00	Flexible	PC	3.40	ER	1.80	N/A	N/A	Not define	poor and undulation
510.60	510.80	Hilly	Rise	Agri		7.30	Flexible	PC	3.80	ER	1.75	N/A	N/A	Not define	poor and undulation
510.80	511.00	Hilly	Rise	Agri		5.90	Flexible	PC	3.40	ER	1.25	N/A	N/A	Not define	poor and undulation
511.00	511.20	Hilly	Rise	Agri		7.20	Flexible	PC	3.50	ER	1.85	N/A	N/A	Not define	poor and undulation
511.20	511.40	Hilly	Rise	Agri		6.40	Flexible	PC	3.40	ER	1.50	N/A	N/A	Not define	poor and undulation
511.40	511.60	Hilly	Fall	Agri		7.20	Flexible	PC	4.10	ER	1.55	N/A	N/A	Not define	poor and undulation
511.60	511.80	Hilly	Fall	Agri		6.60	Flexible	PC	3.65	ER	1.48	N/A	N/A	Not define	poor and undulation
511.80	512.00	Hilly	Fall	Agri		6.00	Flexible	PC	3.20	ER	1.40	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
512.00	512.20	Hilly	Fall	Agri		7.30	Flexible	PC	3.50	ER	1.90	N/A	N/A	Not define	poor and undulation
512.20	512.40	Hilly	Rise	Agri		6.80	Flexible	PC	3.50	ER	1.65	N/A	N/A	Not define	poor and undulation
512.40	512.60	Hilly	Rise	Agri		7.00	Flexible	PC	3.70	ER	1.65	N/A	N/A	Not define	poor and undulation
512.60	512.80	Hilly	Rise	Agri		6.20	Flexible	PC	3.30	ER	1.45	N/A	N/A	Not define	poor and undulation
512.80	513.00	Hilly	Rise	Agri		7.20	Flexible	PC	3.80	ER	1.70	N/A	N/A	Not define	poor and undulation
513.00	513.20	Hilly	Rise	Agri		6.95	Flexible	PC	3.80	ER	1.58	N/A	N/A	Not define	poor and undulation
513.20	513.40	Hilly	Rise	Agri		6.70	Flexible	PC	3.80	ER	1.45	N/A	N/A	Not define	poor and undulation
513.40	513.60	Hilly	Rise	Agri		5.70	Flexible	PC	3.70	ER	1.00	N/A	N/A	Not define	poor and undulation
513.60	513.80	Hilly	Rise	Agri		6.90	Flexible	PC	3.50	ER	1.70	N/A	N/A	Not define	poor and undulation
513.80	514.00	Hilly	Rise	Agri		6.70	Flexible	PC	3.40	ER	1.65	N/A	N/A	Not define	poor and undulation
514.00	514.20	Hilly	Rise	Agri		6.50	Flexible	PC	3.30	ER	1.60	N/A	N/A	Not define	poor and undulation
514.20	514.40	Hilly	Rise	Agri		6.80	Flexible	PC	3.65	ER	1.58	N/A	N/A	Not define	poor and undulation
514.40	514.60	Hilly	Rise	Agri		7.00	Flexible	PC	3.83	ER	1.59	N/A	N/A	Not define	poor and undulation
514.60	514.80	Hilly	Rise	Agri		7.10	Flexible	PC	4.00	ER	1.55	N/A	N/A	Not define	poor and undulation
514.80	515.00	Hilly	Rise	Agri		7.20	Flexible	PC	4.00	ER	1.60	N/A	N/A	Not define	poor and undulation
515.00	515.20	Hilly	Rise	Agri		5.90	Flexible	PC	3.10	ER	1.40	N/A	N/A	Not define	poor and undulation
515.20	515.40	Hilly	Rise	Agri		6.00	Flexible	PC	3.60	ER	1.20	N/A	N/A	Not define	poor and undulation
515.40	515.60	Hilly	Rise	Agri		6.90	Flexible	PC	3.80	ER	1.55	N/A	N/A	Not define	poor and undulation
515.60	515.80	Hilly	Rise	Agri		6.65	Flexible	PC	3.60	ER	1.53	N/A	N/A	Not define	poor and undulation
515.80	516.00	Hilly	Rise	Agri		6.40	Flexible	PC	3.40	ER	1.50	N/A	N/A	Not define	poor and undulation
516.00	516.20	Hilly	Rise	Agri		6.30	Flexible	PC	4.00	ER	1.15	N/A	N/A	Not define	poor and undulation
516.20	516.40	Hilly	Rise	Agri		6.80	Flexible	PC	3.10	ER	1.85	N/A	N/A	Not define	poor and undulation
516.40	516.60	Hilly	Rise	Agri		7.50	Flexible	PC	3.80	ER	1.85	N/A	N/A	Not define	poor and undulation
516.60	516.80	Hilly	Rise	Agri		6.00	Flexible	PC	3.30	ER	1.35	N/A	N/A	Not define	poor and undulation
516.80	517.00	Hilly	Rise	Agri		6.35	Flexible	PC	3.45	ER	1.45	N/A	N/A	Not define	poor and undulation
517.00	517.20	Hilly	Rise	Agri		6.70	Flexible	PC	3.60	ER	1.55	N/A	N/A	Not define	poor and undulation
517.20	517.40	Hilly	Rise	Agri		6.90	Flexible	PC	3.60	ER	1.65	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
517.40	517.60	Hilly	Rise	Agri		7.10	Flexible	PC	3.60	ER	1.75	N/A	N/A	Not define	poor and undulation
517.60	517.80	Hilly	Rise	Agri		8.50	Flexible	PC	3.60	ER	2.45	N/A	N/A	Not define	poor and undulation
517.80	518.00	Hilly	Rise	Agri		6.80	Flexible	PC	3.20	ER	1.80	N/A	N/A	Not define	poor and undulation
518.00	518.20	Hilly	Rise	Agri		6.20	Flexible	PC	3.10	ER	1.55	N/A	N/A	Not define	poor and undulation
518.20	518.40	Hilly	Rise	Agri		7.10	Flexible	PC	3.20	ER	1.95	N/A	N/A	Not define	poor and undulation
518.40	518.60	Hilly	Rise	Agri		9.80	Flexible	PC	4.50	ER	2.65	N/A	N/A	Not define	poor and undulation
518.60	518.80	Hilly	Rise	Agri		6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
518.80	519.00	Hilly	Rise	Built Up	Zero Point	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
519.00	519.20	Hilly	Rise	Built Up	Zero Point	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
519.20	519.40	Hilly	Rise	Built Up	Zero Point	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
519.40	519.60	Hilly	Rise	Built Up	Zero Point	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
519.60	519.80	Hilly	Rise	Built Up	Zero Point	10.10	Flexible	PC	4.90	ER	2.60	N/A	N/A	Not define	poor and undulation
519.80	520.00	Hilly	Rise	Built Up	Zero Point	9.35	Flexible	PC	4.15	ER	2.60	N/A	N/A	Not define	poor and undulation
520.00	520.20	Hilly	Rise			8.60	Flexible	PC	3.40	ER	2.60	N/A	N/A	Not define	poor and undulation
520.20	520.40	Hilly	Rise			11.00	Flexible	PC	3.60	ER	3.70	N/A	N/A	Not define	poor and undulation
520.40	520.60	Hilly	Rise			9.10	Flexible	PC	3.65	ER	2.73	N/A	N/A	Not define	poor and undulation
520.60	520.80	Hilly	Rise			7.20	Flexible	PC	3.70	ER	1.75	N/A	N/A	Not define	poor and undulation
520.80	521.00	Hilly	Rise			9.00	Flexible	PC	4.00	ER	2.50	N/A	N/A	Not define	poor and undulation
521.00	521.20	Hilly	Rise			6.00	Flexible	PC	3.60	ER	1.20	N/A	N/A	Not define	poor and undulation
521.20	521.40	Hilly	Rise			6.90	Flexible	PC	3.80	ER	1.55	N/A	N/A	Not define	poor and undulation
521.40	521.60	Hilly	Rise			6.90	Flexible	PC	3.55	ER	1.68	N/A	N/A	Not define	poor and undulation
521.60	521.80	Hilly	Rise			6.90	Flexible	PC	3.30	ER	1.80	N/A	N/A	Not define	poor and undulation
521.80	522.00	Hilly	Rise			7.00	Flexible	PC	3.40	ER	1.80	N/A	N/A	Not define	poor and undulation
522.00	522.20	Hilly	Rise			7.10	Flexible	PC	3.50	ER	1.80	N/A	N/A	Not define	poor and undulation
522.20	522.40	Hilly	Rise			6.80	Flexible	PC	3.25	ER	1.78	N/A	N/A	Not define	poor and undulation
522.40	522.60	Hilly	Rise			6.50	Flexible	PC	3.00	ER	1.75	N/A	N/A	Not define	poor and undulation
522.60	522.80	Hilly	Rise			6.10	Flexible	PC	3.20	ER	1.45	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
522.80	523.00	Hilly	Rise			6.90	Flexible	PC	3.50	ER	1.70	N/A	N/A	Not define	poor and undulation
523.00	523.20	Hilly	Rise			6.40	Flexible	PC	3.50	ER	1.45	N/A	N/A	Not define	poor and undulation
523.20	523.40	Hilly	Rise			6.80	Flexible	PC	3.80	ER	1.50	N/A	N/A	Not define	poor and undulation
523.40	523.60	Hilly	Rise			6.35	Flexible	PC	3.60	ER	1.38	N/A	N/A	Not define	poor and undulation
523.60	523.80	Hilly	Rise			5.90	Flexible	PC	3.40	ER	1.25	N/A	N/A	Not define	poor and undulation
523.80	524.00	Hilly	Rise			6.10	Flexible	PC	3.40	ER	1.35	N/A	N/A	Not define	poor and undulation
524.00	524.20	Hilly	Rise			6.45	Flexible	PC	3.40	ER	1.53	N/A	N/A	Not define	poor and undulation
524.20	524.40	Hilly	Rise			6.80	Flexible	PC	3.40	ER	1.70	N/A	N/A	Not define	poor and undulation
524.40	524.60	Hilly	Rise			6.80	Flexible	PC	3.30	ER	1.75	N/A	N/A	Not define	poor and undulation
524.60	524.80	Hilly	Rise			7.80	Flexible	PC	3.00	ER	2.40	N/A	N/A	Not define	poor and undulation
524.80	525.00	Hilly	Rise			6.30	Flexible	PC	3.70	ER	1.30	N/A	N/A	Not define	poor and undulation
525.00	525.20	Hilly	Rise			7.30	Flexible	PC	3.60	ER	1.85	N/A	N/A	Not define	poor and undulation
525.20	525.40	Hilly	Rise	Built Up	Maubawk Village	9.05	Flexible	PC	4.40	ER	2.33	N/A	N/A	Not define	poor and undulation
525.40	525.60	Hilly	Fall	Built Up	Maubawk Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
525.60	525.80	Hilly	Fall	Built Up	Maubawk Village	10.80	Flexible	PC	5.20	ER	2.80	N/A	N/A	Not define	poor and undulation
525.80	526.00	Hilly	Fall	Built Up	Maubawk Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
526.00	526.20	Hilly	Fall	Built Up	Maubawk Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
526.20	526.40	Hilly	Fall	Built Up	Maubawk Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
526.40	526.60	Hilly	Fall	Built Up	Maubawk Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
526.60	526.80	Hilly	Fall	Built Up	Maubawk Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
526.80	527.00	Hilly	Fall	Built Up	Maubawk Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
527.00	527.20	Hilly	Fall			10.90	Flexible	PC	3.80	ER	3.55	N/A	N/A	Not define	poor and undulation
527.20	527.40	Hilly	Rise			7.20	Flexible	PC	2.90	ER	2.15	N/A	N/A	Not define	poor and undulation
527.40	527.60	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
527.60	527.80	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
527.80	528.00	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
528.00	528.20	Hilly	Rise			7.00	Flexible	PC	3.00	ER	2.00	N/A	N/A	Not define	poor and undulation



ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
528.20	528.40	Hilly	Rise			7.10	Flexible	PC	3.00	ER	2.05	N/A	N/A	Not define	poor and undulation
528.40	528.60	Hilly	Rise			6.40	Flexible	PC	3.00	ER	1.70	N/A	N/A	Not define	poor and undulation
528.60	528.80	Hilly	Rise			6.60	Flexible	PC	3.10	ER	1.75	N/A	N/A	Not define	poor and undulation
528.80	529.00	Hilly	Rise			6.70	Flexible	PC	2.50	ER	2.10	N/A	N/A	Not define	poor and undulation
529.00	529.20	Hilly	Rise			7.60	Flexible	PC	3.10	ER	2.25	N/A	N/A	Not define	poor and undulation
529.20	529.40	Hilly	Rise			6.60	Flexible	PC	3.00	ER	1.80	N/A	N/A	Not define	poor and undulation
529.40	529.60	Hilly	Rise			5.60	Flexible	PC	4.40	ER	0.60	N/A	N/A	Not define	poor and undulation
529.60	529.80	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
529.80	530.00	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
530.00	530.20	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
530.20	530.40	Hilly	Rise			7.00	Flexible	PC	3.40	ER	1.80	N/A	N/A	Not define	poor and undulation
530.40	530.60	Hilly	Rise			6.10	Flexible	PC	3.60	ER	1.25	N/A	N/A	Not define	poor and undulation
530.60	530.80	Hilly	Rise			5.90	Flexible	PC	3.30	ER	1.30	N/A	N/A	Not define	poor and undulation
530.80	531.00	Hilly	Rise			7.30	Flexible	PC	3.50	ER	1.90	N/A	N/A	Not define	poor and undulation
531.00	531.20	Hilly	Rise			7.00	Flexible	PC	3.50	ER	1.75	N/A	N/A	Not define	poor and undulation
531.20	531.40	Hilly	Rise			6.95	Flexible	PC	3.55	ER	1.70	N/A	N/A	Not define	poor and undulation
531.40	531.60	Hilly	Rise			6.90	Flexible	PC	3.60	ER	1.65	N/A	N/A	Not define	poor and undulation
531.60	531.80	Hilly	Rise			5.90	Flexible	PC	3.70	ER	1.10	N/A	N/A	Not define	poor and undulation
531.80	532.00	Hilly	Rise			6.10	Flexible	PC	3.60	ER	1.25	N/A	N/A	Not define	poor and undulation
532.00	532.20	Hilly	Rise			7.10	Flexible	PC	3.40	ER	1.85	N/A	N/A	Not define	poor and undulation
532.20	532.40	Hilly	Rise			7.20	Flexible	PC	4.30	ER	1.45	N/A	N/A	Not define	poor and undulation
532.40	532.60	Hilly	Rise			6.75	Flexible	PC	3.90	ER	1.43	N/A	N/A	Not define	poor and undulation
532.60	532.80	Hilly	Rise			6.30	Flexible	PC	3.50	ER	1.40	N/A	N/A	Not define	poor and undulation
532.80	533.00	Hilly	Rise			7.10	Flexible	PC	3.40	ER	1.85	N/A	N/A	Not define	poor and undulation
533.00	533.20	Hilly	Rise			6.95	Flexible	PC	3.60	ER	1.68	N/A	N/A	Not define	poor and undulation
533.20	533.40	Hilly	Rise			6.80	Flexible	PC	3.80	ER	1.50	N/A	N/A	Not define	poor and undulation
533.40	533.60	Hilly	Rise			6.00	Flexible	PC	3.00	ER	1.50	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
533.60	533.80	Hilly	Rise			6.15	Flexible	PC	2.95	ER	1.60	N/A	N/A	Not define	poor and undulation
533.80	534.00	Hilly	Rise			6.30	Flexible	PC	2.90	ER	1.70	N/A	N/A	Not define	poor and undulation
534.00	534.20	Hilly	Rise			6.60	Flexible	PC	2.95	ER	1.83	N/A	N/A	Not define	poor and undulation
534.20	534.40	Hilly	Rise			6.90	Flexible	PC	3.00	ER	1.95	N/A	N/A	Not define	poor and undulation
534.40	534.60	Hilly	Rise			6.80	Flexible	PC	3.30	ER	1.75	N/A	N/A	Not define	poor and undulation
534.60	534.80	Hilly	Rise			5.80	Flexible	PC	3.20	ER	1.30	N/A	N/A	Not define	poor and undulation
534.80	535.00	Hilly	Rise			6.65	Flexible	PC	3.20	ER	1.73	N/A	N/A	Not define	poor and undulation
535.00	535.20	Hilly	Rise			7.50	Flexible	PC	3.20	ER	2.15	N/A	N/A	Not define	poor and undulation
535.20	535.40	Hilly	Rise			6.85	Flexible	PC	3.20	ER	1.83	N/A	N/A	Not define	poor and undulation
535.40	535.60	Hilly	Rise			6.60	Flexible	PC	3.25	ER	1.68	N/A	N/A	Not define	poor and undulation
535.60	535.80	Hilly	Rise			6.20	Flexible	PC	3.20	ER	1.50	N/A	N/A	Not define	poor and undulation
535.80	536.00	Hilly	Rise			6.35	Flexible	PC	3.30	ER	1.53	N/A	N/A	Not define	poor and undulation
536.00	536.20	Hilly	Rise	Built Up	Theiva Village	6.50	Flexible	PC	3.40	ER	1.55	N/A	N/A	Not define	poor and undulation
536.20	536.40	Hilly	Rise	Built Up	Theiva Village	6.60	Flexible	PC	3.50	ER	1.55	N/A	N/A	Not define	poor and undulation
536.40	536.60	Hilly	Rise	Built Up	Theiva Village	7.00	Flexible	PC	4.00	ER	1.50	N/A	N/A	Not define	poor and undulation
536.60	536.80	Hilly	Rise	Built Up	Theiva Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
536.80	537.00	Hilly	Rise	Built Up	Theiva Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
537.00	537.20	Hilly	Rise	Built Up	Theiva Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
537.20	537.40	Hilly	Rise	Built Up	Theiva Village	6.80	Flexible	PC	2.40	ER	2.20	N/A	N/A	Not define	poor and undulation
537.40	537.60	Hilly	Rise	Built Up	Theiva Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
537.60	537.80	Hilly	Rise	Built Up	Theiva Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
537.80	538.00	Hilly	Rise	Built Up	Theiva Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
538.00	538.20	Hilly	Rise			5.60	Flexible	PC	3.30	ER	1.15	N/A	N/A	Not define	poor and undulation
538.20	538.40	Hilly	Rise			6.05	Flexible	PC	3.45	ER	1.30	N/A	N/A	Not define	poor and undulation
538.40	538.60	Hilly	Rise			6.50	Flexible	PC	3.60	ER	1.45	N/A	N/A	Not define	poor and undulation
538.60	538.80	Hilly	Rise			7.10	Flexible	PC	3.10	ER	2.00	N/A	N/A	Not define	poor and undulation
538.80	539.00	Hilly	Rise			7.00	Flexible	PC	4.10	ER	1.45	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
539.00	539.20	Hilly	Rise			5.90	Flexible	PC	3.30	ER	1.30	N/A	N/A	Not define	poor and undulation
539.20	539.40	Hilly	Rise			6.50	Flexible	PC	3.30	ER	1.60	N/A	N/A	Not define	poor and undulation
539.40	539.60	Hilly	Rise			7.10	Flexible	PC	3.30	ER	1.90	N/A	N/A	Not define	poor and undulation
539.60	539.80	Hilly	Rise			7.20	Flexible	PC	3.60	ER	1.80	N/A	N/A	Not define	poor and undulation
539.80	540.00	Hilly	Rise			6.70	Flexible	PC	3.60	ER	1.55	N/A	N/A	Not define	poor and undulation
540.00	540.20	Hilly	Rise			6.60	Flexible	PC	3.20	ER	1.70	N/A	N/A	Not define	poor and undulation
540.20	540.40	Hilly	Rise			6.70	Flexible	PC	3.40	ER	1.65	N/A	N/A	Not define	poor and undulation
540.40	540.60	Hilly	Rise			6.60	Flexible	PC	3.40	ER	1.60	N/A	N/A	Not define	poor and undulation
540.60	540.80	Hilly	Rise			6.50	Flexible	PC	3.40	ER	1.55	N/A	N/A	Not define	poor and undulation
540.80	541.00	Hilly	Rise			6.50	Flexible	PC	3.40	ER	1.55	N/A	N/A	Not define	poor and undulation
541.00	541.20	Hilly	Rise			7.20	Flexible	PC	3.35	ER	1.93	N/A	N/A	Not define	poor and undulation
541.20	541.40	Hilly	Rise			6.50	Flexible	PC	3.40	ER	1.55	N/A	N/A	Not define	poor and undulation
541.40	541.60	Hilly	Rise			7.90	Flexible	PC	3.30	ER	2.30	N/A	N/A	Not define	poor and undulation
541.60	541.80	Hilly	Rise			6.80	Flexible	PC	3.00	ER	1.90	N/A	N/A	Not define	poor and undulation
541.80	542.00	Hilly	Rise			6.95	Flexible	PC	3.25	ER	1.85	N/A	N/A	Not define	poor and undulation
542.00	542.20	Hilly	Rise			7.10	Flexible	PC	3.50	ER	1.80	N/A	N/A	Not define	poor and undulation
542.20	542.40	Hilly	Rise			7.20	Flexible	PC	3.50	ER	1.85	N/A	N/A	Not define	poor and undulation
542.40	542.60	Hilly	Rise			7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation
542.60	542.80	Hilly	Rise			7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation
542.80	543.00	Hilly	Rise			7.00	Flexible	PC	3.60	ER	1.70	N/A	N/A	Not define	poor and undulation
543.00	543.20	Hilly	Rise			6.20	Flexible	PC	3.40	ER	1.40	N/A	N/A	Not define	poor and undulation
543.20	543.40	Hilly	Rise	Agri		7.10	Flexible	PC	3.50	ER	1.80	N/A	N/A	Not define	poor and undulation
543.40	543.60	Hilly	Rise	Agri		7.00	Flexible	PC	3.80	ER	1.60	N/A	N/A	Not define	poor and undulation
543.60	543.80	Hilly	Rise	Agri		6.70	Flexible	PC	3.30	ER	1.70	N/A	N/A	Not define	poor and undulation
543.80	544.00	Hilly	Rise	Agri		7.90	Flexible	PC	3.70	ER	2.10	N/A	N/A	Not define	poor and undulation
544.00	544.20	Hilly	Rise	Agri		5.90	Flexible	PC	3.70	ER	1.10	N/A	N/A	Not define	poor and undulation
544.20	544.40	Hilly	Rise	Agri		7.10	Flexible	PC	3.40	ER	1.85	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
544.40	544.60	Hilly	Rise	Agri		6.00	Flexible	PC	3.20	ER	1.40	N/A	N/A	Not define	poor and undulation	
544.60	544.80	Hilly	Rise	Agri		6.00	Flexible	PC	3.50	ER	1.25	N/A	N/A	Not define	poor and undulation	
544.80	545.00	Hilly	Rise	Agri		6.50	Flexible	PC	3.60	ER	1.45	N/A	N/A	Not define	poor and undulation	
545.00	545.20	Hilly	Rise	Built Up	Theihri Village	6.00	Flexible	PC	3.20	ER	1.40	N/A	N/A	Not define	poor and undulation	
545.20	545.40	Hilly	Rise	Built Up	Theihri Village	8.00	Flexible	PC	4.80	ER	1.60	N/A	N/A	Not define	poor and undulation	
545.40	545.60	Hilly	Fall	Built Up	Theihri Village	9.05	Flexible	PC	4.45	ER	2.30	N/A	N/A	Not define	poor and undulation	
545.60	545.80	Hilly	Fall	Built Up	Theihri Village	7.23	Flexible	PC	3.78	ER	1.73	N/A	N/A	Not define	poor and undulation	
545.80	546.00	Hilly	Fall	Built Up	Theihri Village	10.10	Flexible	PC	4.10	ER	3.00	N/A	N/A	Not define	poor and undulation	
546.00	546.20	Hilly	Fall	Agri		5.40	Flexible	PC	3.10	ER	1.15	N/A	N/A	Not define	poor and undulation	
546.20	546.40	Hilly	Fall	Agri		5.75	Flexible	PC	3.05	ER	1.35	N/A	N/A	Not define	poor and undulation	
546.40	546.60	Hilly	Fall	Agri		6.10	Flexible	PC	3.00	ER	1.55	N/A	N/A	Not define	poor and undulation	
546.60	546.80	Hilly	Fall	Agri		6.90	Flexible	PC	3.40	ER	1.75	N/A	N/A	Not define	poor and undulation	
546.80	547.00	Hilly	Fall	Agri		6.80	Flexible	PC	3.20	ER	1.80	N/A	N/A	Not define	poor and undulation	
547.00	547.20	Hilly	Fall	Agri		6.30	Flexible	PC	2.70	ER	1.80	N/A	N/A	Not define	poor and undulation	
547.20	547.40	Hilly	Fall	Agri		5.80	Flexible	PC	3.10	ER	1.35	N/A	N/A	Not define	poor and undulation	
547.40	547.60	Hilly	Fall	Agri		6.00	Flexible	PC	3.50	ER	1.25	N/A	N/A	Not define	poor and undulation	
547.60	547.80	Hilly	Fall	Agri		7.30	Flexible	PC	3.50	ER	1.90	N/A	N/A	Not define	poor and undulation	
547.80	548.00	Hilly	Fall	Agri		7.05	Flexible	PC	3.00	ER	2.03	N/A	N/A	Not define	poor and undulation	
548.00	548.20	Hilly	Fall	Agri		6.80	Flexible	PC	2.50	ER	2.15	N/A	N/A	Not define	poor and undulation	
548.20	548.40	Hilly	Fall			6.50	Flexible	PC	3.40	ER	1.55	N/A	N/A	Not define	poor and undulation	
548.40	548.60	Hilly	Fall			6.80	Flexible	PC	3.00	ER	1.90	N/A	N/A	Not define	poor and undulation	
548.60	548.80	Hilly	Fall			5.70	Flexible	PC	4.00	ER	0.85	N/A	N/A	Not define	poor and undulation	
548.80	549.00	Hilly	Fall			7.00	Flexible	PC	3.40	ER	1.80	N/A	N/A	Not define	poor and undulation	
549.00	549.20	Hilly	Fall			6.10	Flexible	PC	2.80	ER	1.65	N/A	N/A	Not define	poor and undulation	
549.20	549.40	Hilly	Fall			6.50	Flexible	PC	3.20	ER	1.65	N/A	N/A	Not define	poor and undulation	
549.40	549.60	Hilly	Fall			5.00	Flexible	PC	3.10	ER	0.95	N/A	N/A	Not define	poor and undulation	
549.60	549.80	Hilly	Fall			5.30	Flexible	PC	2.90	ER	1.20	N/A	N/A	Not define	poor and undulation	

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
549.80	550.00	Hilly	Fall			5.60	Flexible	PC	2.70	ER	1.45	N/A	N/A	Not define	poor and undulation	
550.00	550.20	Hilly	Fall			7.10	Flexible	PC	3.40	ER	1.85	N/A	N/A	Not define	poor and undulation	
550.20	550.40	Hilly	Fall			6.10	Flexible	PC	3.50	ER	1.30	N/A	N/A	Not define	poor and undulation	
550.40	550.60	Hilly	Fall			6.20	Flexible	PC	3.20	ER	1.50	N/A	N/A	Not define	poor and undulation	
550.60	550.80	Hilly	Fall			6.60	Flexible	PC	2.90	ER	1.85	N/A	N/A	Not define	poor and undulation	
550.80	551.00	Hilly	Fall			5.70	Flexible	PC	3.00	ER	1.35	N/A	N/A	Not define	poor and undulation	
551.00	551.20	Hilly	Fall			6.40	Flexible	PC	3.00	ER	1.70	N/A	N/A	Not define	poor and undulation	
551.20	551.40	Hilly	Fall			6.90	Flexible	PC	3.10	ER	1.90	N/A	N/A	Not define	poor and undulation	
551.40	551.60	Hilly	Fall			7.20	Flexible	PC	3.30	ER	1.95	N/A	N/A	Not define	poor and undulation	
551.60	551.80	Hilly	Fall			6.80	Flexible	PC	3.30	ER	1.75	N/A	N/A	Not define	poor and undulation	
551.80	552.00	Hilly	Fall			7.30	Flexible	PC	3.50	ER	1.90	N/A	N/A	Not define	poor and undulation	
552.00	552.20	Hilly	Fall			7.20	Flexible	PC	2.80	ER	2.20	N/A	N/A	Not define	poor and undulation	
552.20	552.40	Hilly	Fall			7.10	Flexible	PC	3.40	ER	1.85	N/A	N/A	Not define	poor and undulation	
552.40	552.60	Hilly	Fall			6.60	Flexible	PC	3.05	ER	1.78	N/A	N/A	Not define	poor and undulation	
552.60	552.80	Hilly	Fall			6.10	Flexible	PC	2.70	ER	1.70	N/A	N/A	Not define	poor and undulation	
552.80	553.00	Hilly	Fall			6.55	Flexible	PC	2.85	ER	1.85	N/A	N/A	Not define	poor and undulation	
553.00	553.20	Hilly	Fall			7.00	Flexible	PC	3.00	ER	2.00	N/A	N/A	Not define	poor and undulation	
553.20	553.40	Hilly	Fall			6.50	Flexible	PC	3.00	ER	1.75	N/A	N/A	Not define	poor and undulation	
553.40	553.60	Hilly	Fall			6.35	Flexible	PC	3.10	ER	1.63	N/A	N/A	Not define	poor and undulation	
553.60	553.80	Hilly	Fall			6.20	Flexible	PC	3.20	ER	1.50	N/A	N/A	Not define	poor and undulation	
553.80	554.00	Hilly	Fall			7.20	Flexible	PC	3.00	ER	2.10	N/A	N/A	Not define	poor and undulation	
554.00	554.20	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
554.20	554.40	Hilly	Fall			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
554.40	554.60	Hilly	Rise			6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
554.60	554.80	Hilly	Rise			6.80	Flexible	PC	3.20	ER	1.80	N/A	N/A	Not define	poor and undulation	
554.80	555.00	Hilly	Rise			6.90	Flexible	PC	2.70	ER	2.10	N/A	N/A	Not define	poor and undulation	
555.00	555.20	Hilly	Rise			5.80	Flexible	PC	3.10	ER	1.35	N/A	N/A	Not define	poor and undulation	

ROAD INVENTORY DATA SHEET														Appendix II A	
Road Name: NH -54														Sheet No. :	
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12	
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair	
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)				
555.20	555.40	Hilly	Rise			7.00	Flexible	PC	3.00	ER	2.00	N/A	N/A	Not define	poor and undulation
555.40	555.60	Hilly	Rise			6.40	Flexible	PC	3.20	ER	1.60	N/A	N/A	Not define	poor and undulation
555.60	555.80	Hilly	Rise			6.65	Flexible	PC	3.10	ER	1.78	N/A	N/A	Not define	poor and undulation
555.80	556.00	Hilly	Rise	Agri		6.90	Flexible	PC	3.00	ER	1.95	N/A	N/A	Not define	poor and undulation
556.00	556.20	Hilly	Rise	Agri		7.10	Flexible	PC	3.10	ER	2.00	N/A	N/A	Not define	poor and undulation
556.20	556.40	Hilly	Rise	Agri		7.30	Flexible	PC	3.20	ER	2.05	N/A	N/A	Not define	poor and undulation
556.40	556.60	Hilly	Rise	Agri		6.90	Flexible	PC	3.20	ER	1.85	N/A	N/A	Not define	poor and undulation
556.60	556.80	Hilly	Rise	Agri		6.70	Flexible	PC	3.30	ER	1.70	N/A	N/A	Not define	poor and undulation
556.80	557.00	Hilly	Rise	Agri		6.50	Flexible	PC	3.40	ER	1.55	N/A	N/A	Not define	poor and undulation
557.00	557.20	Hilly	Rise	Agri		6.70	Flexible	PC	3.20	ER	1.75	N/A	N/A	Not define	poor and undulation
557.20	557.40	Hilly	Rise	Agri		6.90	Flexible	PC	3.30	ER	1.80	N/A	N/A	Not define	poor and undulation
557.40	557.60	Hilly	Rise	Agri		7.10	Flexible	PC	3.40	ER	1.85	N/A	N/A	Not define	poor and undulation
557.60	557.80	Hilly	Rise	Agri		7.10	Flexible	PC	3.20	ER	1.95	N/A	N/A	Not define	poor and undulation
557.80	558.00	Hilly	Rise	Agri		7.10	Flexible	PC	3.50	ER	1.80	N/A	N/A	Not define	poor and undulation
558.00	558.20	Hilly	Rise	Agri		6.80	Flexible	PC	3.80	ER	1.50	N/A	N/A	Not define	poor and undulation
558.20	558.40	Hilly	Rise	Agri		7.20	Flexible	PC	3.30	ER	1.95	N/A	N/A	Not define	poor and undulation
558.40	558.60	Hilly	Rise			6.20	Flexible	PC	3.00	ER	1.60	N/A	N/A	Not define	poor and undulation
558.60	558.80	Hilly	Rise	Built Up	Tuipang Village	9.80	Flexible	PC	3.80	ER	3.00	N/A	N/A	Not define	poor and undulation
558.80	559.00	Hilly	Rise	Built Up	Tuipang Village	9.70	Flexible	PC	4.40	ER	2.65	N/A	N/A	Not define	poor and undulation
559.00	559.20	Hilly	Rise	Built Up	Tuipang Village	9.60	Flexible	PC	3.50	ER	3.05	N/A	N/A	Not define	poor and undulation
559.20	559.40	Hilly	Rise	Built Up	Tuipang Village	6.90	Flexible	PC	3.60	ER	1.65	N/A	N/A	Not define	poor and undulation
559.40	559.60	Hilly	Rise	Built Up	Tuipang Village	10.00	Flexible	PC	3.60	ER	3.20	N/A	N/A	Not define	poor and undulation
559.60	559.80	Hilly	Rise	Built Up	Tuipang Village	9.95	Flexible	PC	3.80	ER	3.08	N/A	N/A	Not define	poor and undulation
559.80	560.00	Hilly	Rise	Built Up	Tuipang Village	9.90	Flexible	PC	4.00	ER	2.95	N/A	N/A	Not define	poor and undulation
560.00	560.20	Hilly	Rise	Built Up	Tuipang Village	7.30	Flexible	PC	5.00	ER	1.15	N/A	N/A	Not define	poor and undulation
560.20	560.40	Hilly	Rise	Built Up	Tuipang Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation
560.40	560.60	Hilly	Rise	Built Up	Tuipang Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation

ROAD INVENTORY DATA SHEET															Appendix II A	
Road Name: NH -54														Sheet No. :		
From: Km 431+000							To: Km 562+000							Date of Survey :20.08.12 to 26.09.12		
District (From) : LUNGLEI							District (To) : SAIHA							Weather : Fair		
From (Km)	To (Km)	Terrain (Plain Rolling/Hilly)	Rise & Fall	Land Use (Built Up/Agri/Forest/I ndustrial/Barre n)	Name of Village/Town	Formation width (m)	CARRIAGEWAY			SHOULDER		Embank- ment Height (m)	Submergenc e(in cm) / Stretch in m	Right of Way	Remarks	
							Pavement type	Surfacing type	Width (m)	Type (BT/CC/GR/ ER)	Width (m)					
560.60	560.80	Hilly	Rise	Built Up	Tuipang Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
560.80	561.00	Hilly	Rise	Built Up	Tuipang Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	
561.00	561.20	Hilly	Rise	Built Up	Tuipang Village	6.95	Flexible	PC	3.65	ER	1.65	N/A	N/A	Not define	poor and undulation	

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54														Sheet No :			
From (Km.) 431+000						TO : 562+000						Date of Survey :20.08.12 to 26.09.12					
District (from) :LUNGLEI						District (To): SAIHA						Weather : Fair					
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
431.00	432.00	Surface	PC	25	Soil	Poor	25	Poor	22	55	8/5	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
432.00	433.00	Surface	PC	25	Soil	Poor	25	Poor	26	34	12.5/12	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
433.00	434.00	Surface	PC	25	Soil	Poor	25	Poor	30	10	.7/ .3	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
434.00	435.00	Surface	PC	25	Soil	Poor	25	Poor	18	38	7/12	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
435.00	436.00	Surface	PC	25	Soil	Poor	25	Poor	23	24.5	-	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
436.00	437.00	Surface	PC	25	Soil	Poor	25	Poor	21	12.5	-	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
437.00	438.00	Surface	PC	25	Soil	Poor	25	Poor	16	10.5	1/ .5	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
438.00	439.00	Surface	PC	25	Soil	Poor	25	Poor	18	43	9/22	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														



PAVEMENT CONDITION SURVEY																Appendix : II B		
ROAD NAME : NH 54														Sheet No :				
From (Km.) 431+000						TO : 562+000								Date of Survey :20.08.12 to 26.09.12				
District (from) :LUNGLEI						District (To): SAIHA								Weather : Fair				
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition						Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **					
439.00	440.00	Surface	PC	25	Soil	Poor	25	Poor	20	67	20.5/36.5	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
440.00	441.00	Surface	PC	25	Soil	Poor	25	Poor	25	45	6/14.5	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
441.00	442.00	Surface	PC	25	Soil	Poor	25	Poor	28	54	5/7.5	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
442.00	443.00	Surface	PC	25	Soil	Poor	25	Poor	21	47.5	5/7.3	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
443.00	444.00	Surface	PC	25	Soil	Poor	25	Poor	30	48	7/10	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
444.00	445.00	Surface	PC	25	Soil	Poor	25	Poor	27	40.5	9/14	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
445.00	446.00	Surface	PC	25	Soil	Poor	25	Poor	36	25.5	2.5/3	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
446.00	447.00	Surface	PC	25	Soil	Poor	25	Poor	34	34.5	6.5/9.5	Severe		20.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54													Sheet No :				
From (Km.) 431+000						TO : 562+000						Date of Survey :20.08.12 to 26.09.12					
District (from) :LUNGLEI						District (To): SAIHA						Weather : Fair					
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
447.00	448.00	Surface	PC	25	Soil	Poor	25	Poor	35	44.5	6.1/5.2	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
448.00	449.00	Surface	PC	25	Soil	Poor	25	Poor	30	46	9.7/15	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
449.00	450.00	Surface	PC	25	Soil	Poor	25	Poor	29	34	1/1	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
450.00	451.00	Surface	PC	25	Soil	Poor	25	Poor	26	24	1.2/5	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
451.00	452.00	Surface	PC	25	Soil	Poor	25	Poor	27	47	4.5/9	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
452.00	453.00	Surface	PC	25	Soil	Poor	25	Poor	19	40.5	5/1.5	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
453.00	454.00	Surface	PC	25	Soil	Poor	25	Poor	16	5.5	6/1.2	Severe		20.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
454.00	455.00	Surface	PC	25	Soil	Poor	25	Poor	15	3	-	Severe		20.00	N/A	NE	Patch repairing is requird
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54													Sheet No :				
From (Km.) 431+000						TO : 562+000						Date of Survey :20.08.12 to 26.09.12					
District (from) :LUNGLEI						District (To): SAIHA						Weather : Fair					
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
455.00	456.00	Surface	PC	25	Soil	Poor	25	Poor	12	1.5	0.5/1	Severe		20.00	N/A	NE	Patch repairing is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
456.00	457.00	Surface	PC	25	Soil	Poor	25	Poor	14	-	.2/ .1	Severe		20.00	N/A	NE	Patch repairing is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
457.00	458.00	Surface	PC	25	Soil	Poor	25	Poor	18	4	-	Severe		20.00	N/A	NE	Patch repairing is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
458.00	459.00	Surface	PC	25	Soil	Poor	25	Poor	19	2.5	-	Severe		20.00	N/A	NE	Patch repairing is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
459.00	460.00	Surface	PC	25	Soil	Poor	25	Poor	15	5	-	Severe		30.00	N/A	NE	Patch repairing is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
460.00	461.00	Surface	PC	25	Soil	Poor	25	Poor	16	3.5	-	Severe		30.00	N/A	NE	Patch repairing is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
461.00	462.00	Surface	PC	25	Soil	Poor	25	Poor	25	4.5	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
462.00	463.00	Surface	PC	25	Soil	Poor	25	Poor	32	5	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54													Sheet No :				
From (Km.) 431+000						TO : 562+000							Date of Survey :20.08.12 to 26.09.12				
District (from) :LUNGLEI						District (To): SAIHA							Weather : Fair				
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
463.00	464.00	Surface	PC	25	Soil	Poor	25	Poor	38	1.5	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
464.00	465.00	Surface	PC	25	Soil	Poor	25	Poor	37	-	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
465.00	466.00	Surface	PC	25	Soil	Poor	25	Poor	29	-	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
466.00	467.00	Surface	PC	25	Soil	Poor	25	Poor	35	2.5	.5/ .2	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
467.00	468.00	Surface	PC	25	Soil	Poor	25	Poor	40	3	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
468.00	469.00	Surface	PC	25	Soil	Poor	25	Poor	43	4.5	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
469.00	470.00	Surface	PC	25	Soil	Poor	25	Poor	41	3	.5/ .5	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
470.00	471.00	Surface	PC	25	Soil	Poor	25	Poor	39	-	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
471.00	472.00	Surface	PC	25	Soil	Poor	25	Poor	30	20.5	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54														Sheet No :			
From (Km.) 431+000							TO : 562+000							Date of Survey :20.08.12 to 26.09.12			
District (from) :LUNGLEI							District (To): SAIHA							Weather : Fair			
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
472.00	473.00	Surface	PC	25	Soil	Poor	25	Poor	40	-	-	Severe		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
473.00	474.00	Surface	PC	25	Soil	Poor	25	Poor	43	4	.5/.5	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
474.00	475.00	Surface	PC	25	Soil	Poor	25	Poor	34	1.5	1/.5	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
475.00	476.00	Surface	PC	25	Soil	Poor	25	Poor	30	40.5	5/1.5	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
476.00	477.00	Surface	PC	25	Soil	Poor	25	Poor	38	5.5	6/1.2	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
477.00	478.00	Surface	PC	25	Soil	Poor	25	Poor	42	3	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
478.00	479.00	Surface	PC	25	Soil	Poor	25	Poor	40	1.5	0.5/1	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
479.00	480.00	Surface	PC	25	Soil	Poor	25	Poor	36	-	.2/.1	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
480.00	481.00	Surface	PC	25	Soil	Poor	25	Poor	36	4	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														

PAVEMENT CONDITION SURVEY																	Appendix : II B	
ROAD NAME : NH 54														Sheet No :				
From (Km.) 431+000							TO : 562+000							Date of Survey :20.08.12 to 26.09.12				
District (from) :LUNGLEI							District (To): SAIHA							Weather : Fair				
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks	
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **					
481.00	482.00	Surface	PC	25	Soil	Poor	25	Poor	34	2.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
		Base	WBM	150														
482.00	483.00	Sub-base	GSB	100	Soil	Poor	25	Poor	40	5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
483.00	484.00	Binder			Soil	Poor	25	Poor	47	3.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
484.00	485.00	Subgrade	Soil		Soil	Poor	25	Poor	43	4.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Surface	PC	25														
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
485.00	486.00	Base	WBM	150	Soil	Poor	25	Poor	32	5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
486.00	487.00	Surface	PC	25	Soil	Poor	25	Poor	30	1.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
		Base	WBM	150														
487.00	488.00	Sub-base	GSB	100	Soil	Poor	25	Poor	46	-	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
488.00	489.00	Binder			Soil	Poor	25	Poor	41	-	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
489.00	490.00	Subgrade	Soil		Soil	Poor	25	Poor	43	2.5	.5/ .2	Moderate		30.00	N/A	NE	Strengthening is required	
		Surface	PC	25														
		Binder																
		Base	WBM	150														

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54													Sheet No :				
From (Km.) 431+000						TO : 562+000						Date of Survey :20.08.12 to 26.09.12					
District (from) :LUNGLEI						District (To): SAIHA						Weather : Fair					
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
490.00	491.00	Surface	PC	25	Soil	Poor	25	Poor	40	3	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
		Base	WBM	150													
491.00	492.00	Sub-base	GSB	100	Soil	Poor	25	Poor	35	4.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface															
		Base															
492.00	493.00	Base	WBM	150	Soil	Poor	25	Poor	36	3	.5/.5	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
493.00	494.00	Surface	PC	25	Soil	Poor	25	Poor	32	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
		Base	WBM	150													
494.00	495.00	Sub-base	GSB	100	Soil	Poor	25	Poor	46	20.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
495.00	496.00	Binder			Soil	Poor	25	Poor	48	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
496.00	497.00	Subgrade	Soil		Soil	Poor	25	Poor	43	4	.5/.5	Moderate		30.00	N/A	NE	Strengthening is required
		Surface	PC	25													
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
497.00	498.00	Base	WBM	150	Soil	Poor	25	Poor	38	1.5	1/.5	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
498.00	499.00	Surface	PC	25	Soil	Poor	25	Poor	39	40.5	5/1.5	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														

PAVEMENT CONDITION SURVEY																	Appendix : II B	
ROAD NAME : NH 54														Sheet No :				
From (Km.) 431+000							TO : 562+000							Date of Survey :20.08.12 to 26.09.12				
District (from) :LUNGLEI							District (To): SAIHA							Weather : Fair				
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks	
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **					
499.00	500.00	Surface	PC	25	Soil	Poor	25	Poor	40	5.5	6/1.2	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
500.00	501.00	Surface	PC	25	Soil	Poor	25	Poor	45	3	-	Severe		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
501.00	502.00	Surface	PC	25	Soil	Poor	25	Poor	47	1.5	0.5/1	Severe		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
502.00	503.00	Surface	PC	25	Soil	Poor	25	Poor	49	-	.2/.1	Severe		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
503.00	504.00	Surface	PC	25	Soil	Poor	25	Poor	38	4	-	Severe		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
504.00	505.00	Surface	PC	25	Soil	Poor	25	Poor	48	2.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
505.00	506.00	Surface	PC	25	Soil	Poor	25	Poor	45	5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
506.00	507.00	Surface	PC	25	Soil	Poor	25	Poor	41	3.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															
507.00	508.00	Surface	PC	25	Soil	Poor	25	Poor	36	4.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															



PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54													Sheet No :				
From (Km.) 431+000						TO : 562+000						Date of Survey :20.08.12 to 26.09.12					
District (from) :LUNGLEI						District (To): SAIHA						Weather : Fair					
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
508.00	509.00	Surface	PC	25	Soil	Poor	25	Poor	42	5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
509.00	510.00	Subgrade	Soil		Soil	Poor	25	Poor	40	1.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Surface	PC	25													
		Binder															
		Base	WBM	150													
510.00	511.00	Sub-base	GSB	100	Soil	Poor	25	Poor	52	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
511.00	512.00	Base	WBM	150	Soil	Poor	25	Poor	51	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
512.00	513.00	Binder			Soil	Poor	25	Poor	48	2.5	.5/ .2	Moderate		30.00	N/A	NE	Strengthening is required
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
513.00	514.00	Surface	PC	25	Soil	Poor	25	Poor	57	3	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
514.00	515.00	Subgrade	Soil		Soil	Poor	25	Poor	46	4.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Surface	PC	25													
		Binder															
		Base	WBM	150													
515.00	516.00	Sub-base	GSB	100	Soil	Poor	25	Poor	48	3	.5/ .5	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
516.00	517.00	Base	WBM	150	Soil	Poor	25	Poor	53	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													

PAVEMENT CONDITION SURVEY																	Appendix : II B	
ROAD NAME : NH 54														Sheet No :				
From (Km.) 431+000							TO : 562+000							Date of Survey :20.08.12 to 26.09.12				
District (from) :LUNGLEI							District (To): SAIHA							Weather : Fair				
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks	
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **					
517.00	518.00	Surface	PC	25	Soil	Poor	25	Poor	57	20.5	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Binder																
		Base	WBM	150														
		Sub-base	GSB	100														
518.00	519.00	Subgrade	Soil		Soil	Poor	25	Poor	55	-	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Surface	PC	25														
		Binder																
		Base	WBM	150														
519.00	520.00	Sub-base	GSB	100	Soil	Poor	25	Poor	50	4	.5/.5	Moderate		30.00	N/A	NE	Strengthening is required	
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
520.00	521.00	Base	WBM	150	Soil	Poor	25	Poor	47	1.5	1/.5	Moderate		30.00	N/A	NE	Strengthening is required	
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
521.00	522.00	Binder			Soil	Poor	25	Poor	52	40.5	5/1.5	Moderate		30.00	N/A	NE	Strengthening is required	
		Surface	PC	25														
		Base	WBM	150														
		Sub-base	GSB	100														
522.00	523.00	Subgrade	Soil		Soil	Poor	25	Poor	51	5.5	6/1.2	Moderate		30.00	N/A	NE	Strengthening is required	
		Surface	PC	25														
		Binder																
		Base	WBM	150														
523.00	524.00	Sub-base	GSB	100	Soil	Poor	25	Poor	49	3	-	Moderate		30.00	N/A	NE	Strengthening is required	
		Subgrade	Soil															
		Surface	PC	25														
		Binder																
524.00	525.00	Base	WBM	150	Soil	Poor	25	Poor	56	1.5	0.5/1	Moderate		30.00	N/A	NE	Strengthening is required	
		Sub-base	GSB	100														
		Subgrade	Soil															
		Surface	PC	25														
525.00	526.00	Binder			Soil	Poor	25	Poor	59	-	.2/.1	Moderate		30.00	N/A	NE	Strengthening is required	
		Surface	PC	25														
		Base	WBM	150														
		Sub-base	GSB	100														
		Subgrade	Soil															

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54													Sheet No :				
From (Km.) 431+000						TO : 562+000						Date of Survey :20.08.12 to 26.09.12					
District (from) :LUNGLEI						District (To): SAIHA						Weather : Fair					
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
526.00	527.00	Surface	PC	25	Soil	Poor	25	Poor	47	1.5	0.5/1	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
527.00	528.00	Surface	PC	25	Soil	Poor	25	Poor	49	-	.2/.1	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
528.00	529.00	Surface	PC	25	Soil	Poor	25	Poor	38	4	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
529.00	530.00	Surface	PC	25	Soil	Poor	25	Poor	48	2.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
530.00	531.00	Surface	PC	25	Soil	Poor	25	Poor	45	5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
531.00	532.00	Surface	PC	25	Soil	Poor	25	Poor	41	3.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
532.00	533.00	Surface	PC	25	Soil	Poor	25	Poor	36	4.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
533.00	534.00	Surface	PC	25	Soil	Poor	25	Poor	42	5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
534.00	535.00	Surface	PC	25	Soil	Poor	25	Poor	40	1.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54														Sheet No :			
From (Km.) 431+000							TO : 562+000							Date of Survey :20.08.12 to 26.09.12			
District (from) :LUNGLEI							District (To): SAIHA							Weather : Fair			
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
535.00	536.00	Surface	PC	25	Soil	Poor	25	Poor	52	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
536.00	537.00	Subgrade	Soil		Soil	Poor	25	Poor	51	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Surface	PC	25													
		Binder															
		Base	WBM	150													
537.00	538.00	Sub-base	GSB	100	Soil	Poor	25	Poor	48	2.5	.5/ .2	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
538.00	539.00	Base	WBM	150	Soil	Poor	25	Poor	57	3	-	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
539.00	540.00	Binder			Soil	Poor	25	Poor	46	4.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
540.00	541.00	Surface	PC	25	Soil	Poor	25	Poor	48	3	.5/ .5	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
541.00	542.00	Subgrade	Soil		Soil	Poor	25	Poor	53	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Surface	PC	25													
		Binder															
		Base	WBM	150													
542.00	543.00	Sub-base	GSB	100	Soil	Poor	25	Poor	57	20.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
543.00	544.00	Base	WBM	150	Soil	Poor	25	Poor	55	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54													Sheet No :				
From (Km.) 431+000							TO : 562+000						Date of Survey :20.08.12 to 26.09.12				
District (from) :LUNGLEI							District (To): SAIHA						Weather : Fair				
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
544.00	545.00	Surface	PC	25	Soil	Poor	25	Poor	50	4	.5/.5	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
545.00	546.00	Subgrade	Soil		Soil	Poor	25	Poor	47	1.5	1/.5	Moderate		30.00	N/A	NE	Strengthening is required
		Surface	PC	25													
		Binder															
		Base	WBM	150													
546.00	547.00	Sub-base	GSB	100	Soil	Poor	25	Poor	52	40.5	5/1.5	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
547.00	548.00	Base	WBM	150	Soil	Poor	25	Poor	51	5.5	6/1.2	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													
548.00	549.00	Binder			Soil	Poor	25	Poor	49	3	-	Moderate		30.00	N/A	NE	Strengthening is required
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
549.00	550.00	Surface	PC	25	Soil	Poor	25	Poor	56	1.5	0.5/1	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
550.00	551.00	Subgrade	Soil		Soil	Poor	25	Poor	59	-	.2/.1	Moderate		30.00	N/A	NE	Strengthening is required
		Surface	PC	25													
		Binder															
		Base	WBM	150													
551.00	552.00	Sub-base	GSB	100	Soil	Poor	25	Poor	47	1.5	0.5/1	Moderate		30.00	N/A	NE	Strengthening is required
		Subgrade	Soil														
		Surface	PC	25													
		Binder															
552.00	553.00	Base	WBM	150	Soil	Poor	25	Poor	49	-	.2/.1	Moderate		30.00	N/A	NE	Strengthening is required
		Sub-base	GSB	100													
		Subgrade	Soil														
		Surface	PC	25													

PAVEMENT CONDITION SURVEY																Appendix : II B	
ROAD NAME : NH 54														Sheet No :			
From (Km.) 431+000							TO : 562+000							Date of Survey :20.08.12 to 26.09.12			
District (from) :LUNGLEI							District (To): SAIHA							Weather : Fair			
Chainage		Pavement Composition			Shoulder		Riding Quality		Pavement Condition					Pavement Edge drop (mm)	Embankment Condition (Good/ Fair/ poor)	Road Side Drain (NE/PF/F) ***	Remarks
From (Km.)	To (Km.)	Composition	Type *	Thickness (mm)	Composition	Condition (Fair/Poor/Failed)	Speed (Km/hr)	Quality (G/F/P/VP)	Cracking (%)	Raveling (%)	Potholing (No. and % 100m) **	Rut (None/ Moderate/Severe)	Patching (No. and % 100m) **				
553.00	554.00	Surface	PC	25	Soil	Poor	25	Poor	38	4	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
554.00	555.00	Surface	PC	25	Soil	Poor	25	Poor	48	2.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
555.00	556.00	Surface	PC	25	Soil	Poor	25	Poor	45	5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
556.00	557.00	Surface	PC	25	Soil	Poor	25	Poor	41	3.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
557.00	558.00	Surface	PC	25	Soil	Poor	25	Poor	36	4.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
558.00	559.00	Surface	PC	25	Soil	Poor	25	Poor	42	5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
559.00	560.00	Surface	PC	25	Soil	Poor	25	Poor	40	1.5	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
560.00	561.00	Surface	PC	25	Soil	Poor	25	Poor	52	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														
561.00	562.00	Surface	PC	25	Soil	Poor	25	Poor	51	-	-	Moderate		30.00	N/A	NE	Strengthening is required
		Binder															
		Base	WBM	150													
		Sub-base	GSB	100													
		Subgrade	Soil														

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C		
Road Name :NH -54															Sheet No. :				
Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12		
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable	N/A =	Not Available									
1 Opening of the masonry joints				2	Damage of the headwall			3	Bulging of headwall			4	Crack in the wall			5	Part damage of the wall		
6 Completely choked				7	Growing of vegetation			8	Crack in the parapet			9	No parapet,all damage			10	Partial choked		
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert					Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail				
1	431+100	Slab	0.2	1 x 1	3.7	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	h/w of v/s is damage other conditon is good
2	431+400	Slab	0.15	1 x 0.8	3.7	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	h/w broken on both side rest good condition
3	431+555	Slab	0.15	1 x 0.8	3.7	6.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening good walls need repair
4	431+850	Slab	0.15	1 x 0.9	4.1	6.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	not exist
5	432+075	Slab	0.15	1 x 0.8	3.6	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	not exist
6	432+230	Slab	0.15	1 x 0.8	3.5	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	fully covered with landslide
7	432+430	Slab	0.225	1 x 1.5	3.8	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	h/w broken need relpace
8	432+665	Slab	0.225	1 x 1.5	3.6	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	h/w crack culvert condition is good
9	432+745	Slab	0.225	1 x 1.5	3.8	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	h/w slightly crack
10	432+865	Slab	0.15	1 x 0.8	4.6	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	its small bridge but good condition
11	433+025	Slab	0.25	1 x 2	5.6	9.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	condition is good
12	433+110	Slab	0.15	1 x 0.9	4.1	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition but covered with weeds
13	433+223	Slab	0.2	1 x 1	5.1	9.5		N/A		N/A	F	F	P		VP		No Souring	Sufficient	good condition
14	433+679	Slab	0.2	1 x 1.2	4.4	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill and no h/w
15	434+155	Slab	0.2	1 x 1	5.3	13.1		N/A		N/A	F	F	P		VP		No Souring	Sufficient	small pipe good condition
16	434+270	Slab	0.15	1 X 0.9	4.4	8.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill and culvert condition is also need repair
17	434+424	Slab	0.2	1 x 1	5.4	9.8		N/A		N/A	F	F	P		VP		No Souring	Sufficient	good condition
18	434+726	Slab	0.15	1 x 0.8	3.9	8.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	slightly crack of wing/w
19	434+790	Slab	0.225	1 x 1.3	3.7	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
20	435+220	Slab	0.15	1 x 0.9	3.4	5.8		N/A		N/A	F	F	P				No Souring	Sufficient	no h/w need contruction
21	435+440	Slab	0.225	1 x 1.5	4.0	9.1		N/A		N/A	F	F	P		VP		No Souring	Sufficient	no h/w need contruction
22	435+790	Slab	0.2	1 x 1	3.3	7.0	1x1	N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w is broken
23	436+130	Slab	0.225	1 x 1.5	4.4			N/A		N/A	F	F	P		VP		No Souring	Sufficient	good condition
24	436+404	Slab	0.225	1 x 1.5	4.4	6.2		N/A		N/A	F	F	P		VP		No Souring	Sufficient	opening fill no h/w

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
Road Name :NH -54															Sheet No. :					
Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12			
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable			N/A =	Not Available								
1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet			9 No parapet,all damage			10 Partial choked								
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
25	436+471	Slab	0.15	1 x 0.8	4.0	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill wing/w crack	
26	436+646	Slab	0.15	1 x 0.8	4.9	8.6	1.5x2	N/A		N/A	F	F	P		VP		No Souring	Sufficient	opening is fill but wing/w condition is good	
27	437+050	Slab	0.225	1 x 1.5	4.8	9.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
28	437+178	Slab	0.15	1 x 0.9	5.2	9.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	crack on the wing/w	
29	437+554	Slab	0.225	1 x 1.5	6.3	11.2		N/A		N/A	F	F	P		VP		No Souring	Sufficient	parapet damage	
30	437+716	Slab	0.225	1 x 1.5	4.1	9.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	damage of parapet culvert condition is good	
31	437+900	Slab	0.15	1 x 0.8	4.1	7.2		N/A		N/A	F	F	P		VP		No Souring	Sufficient	good condition	
32	438+128	Slab	0.225	1 x 1.5	3.6	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
33	438+427	Slab	0.15	1 x 0.9	3.7	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	crack on the parapet	
34	438+539	Slab	0.15	1 x 0.9	3.5	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	crack on the wing wall	
35	438+736	Slab	0.225	1 x 1.5	3.4	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
36	438+878	Slab	0.225	1 x 1.5	3.8	7.1	1.2x1.4	N/A		N/A	F	F	P		VP		No Souring	Sufficient	culvert condition is good but wing/w is slightly crack	
37	439+031	Slab	0.225	1 x 1.5	4.1	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill and no parapet	
38	439+089	Slab	0.15	1 x 0.8	4.2	6.0		N/A		N/A	F	F	P		2/3		No Souring	Sufficient	culvert condition is good but wing/w is slightly crack	
39	439+146	Slab	0.225	1 x 1.5	3.7	7.0		N/A		N/A	F	F	P		4/10		No Souring	Sufficient	wing/w is crack	
40	439+303	Slab	0.15	1 x 0.8	3.6	6.7	1x1.2	N/A		N/A	P	P	P		2/3		No Souring	Sufficient	damage of wall and and opening is slightly fill	
41	439+460	Slab	0.225	1 x 1.5	3.6	6.9		N/A		N/A	F	F	P		7/2		No Souring	Sufficient	opening is fill wall condition is good	
42	439+568	Slab	0.225	1 x 1.5	3.8	6.8		N/A		N/A	F	F	P		VP		No Souring	Sufficient	wall damage	
43	439+839	Slab	0.15	1 x 0.8	4.0	7.1		N/A		N/A	P	P	P		5r		No Souring	Sufficient	wall damage	
44	439+946	Slab	0.15	1 x 0.9	3.8	6.9		N/A		N/A	P	P	P		1		No Souring	Sufficient	good condition	
45	440+208	Slab	0.2	1 x 1.2	3.8	6.5		N/A		N/A	F	F	P		VP		No Souring	Sufficient	opening is fill and wing/w is crack	
46	440+326	Slab	0.225	1 x 1.5	3.6	7.9		N/A		N/A	F	F	P		VP		No Souring	Sufficient	fully covered with landslide	
47	440+552	Slab	0.225	1 x 1.5	3.4	6.4		N/A		N/A	F	F	P		VP		No Souring	Sufficient	wall damage	
48	440+651	Slab	0.225	1 x 1.5	3.4	7.2		N/A		N/A	F	F	P		VP		No Souring	Sufficient	wing/w is crack	



INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
Road Name :NH -54															Sheet No. :					
Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12			
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable	N/A =	Not Available										
1 Opening of the masonry joints				2	Damage of the headwall		3	Bulging of headwall		4	Crack in the wall			5	Part damage of the wall					
6 Completely choked				7	Growing of vegetation		8	Crack in the parapet		9	No parapet,all damage			10	Partial choked					
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
49	440+910	Slab	0.225	1 x 1.5	3.8	7.2		N/A		N/A	F	F	P		VP		No Souring	Sufficient	all parapet damage culvert is good but walls need repair and no headwall	
50	441+095	Slab	0.225	1 x 1.5	3.4	7.4		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	all parapet damage culvert is good no headwall	
51	441+626	Slab	0.225	1 x 1.5	3.0	6.8		N/A		N/A	F	F	P		3/2		No Souring	Sufficient	good condition	
52	442+180	Slab	0.225	1 x 1.5	3.2	7.1		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	good condition	
53	442+288	Slab	0.225	1 x 1.5	3.1	7.4		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	good condition	
54	442+725	Slab	0.225	1 x 1.5	3.4	7.3		N/A		N/A	F	F	P		VP		No Souring	Sufficient	parapet damage rest are in good condition	
55	443+108	Slab	0.225	1 x 1.5	3.6	6.8		N/A		N/A	F	F	P		1/2		No Souring	Sufficient	no headwall walls slightly damage	
56	443+180	Slab	0.225	1 x 1.5	3.5	6.9		N/A		N/A	F	F	P		3/4		No Souring	Sufficient	can be considered good	
57	443+340	Slab	0.225	1 x 1.5	3.5	6.2		N/A		N/A	F	F	P		VP		No Souring	Sufficient	parapet damage walls slightly crack	
58	443+500	Slab	0.225	1 x 1.5	3.0	7.7		N/A		N/A	F	F	P		1/2		No Souring	Sufficient	parapet damage culvert condition is good	
59	443+990	Slab	0.225	1 x 1.5	3.6	5.6		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	good condition	
60	444+216	Slab	0.225	1 x 1.5	4.1			N/A		N/A	F	F	P		2/2		No Souring	Sufficient	crack at top of parapet rest portion is good	
61	444+344	Slab	0.225	1 x 1.5	3.5	6.0		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	opening is fill and wing/w is crack	
62	444+445	Slab	0.225	1 x 1.5				N/A		N/A	F	F	P		3/2		No Souring	Sufficient	wall damage	
63	444+534	Slab	0.225	1 x 1.5	5.2	10.0		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	opening is fill and wing/w is crack	
64	444+912	Slab	0.225	1 x 1.5	4.8	8.9		N/A		N/A	F	F	P		1/2		No Souring	Sufficient	good condition	
65	445+129	Slab	0.225	1 x 1.5	4.8	9.4		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	opening is fill walls are in good condition	
66	445+310	Slab	0.225	1 x 1.5	4.5	7.0		N/A		N/A	F	F	P		VP		No Souring	Sufficient	opening is good but no h/w	
67	445+594	Slab	0.2	1 x 1	3.8	6.5		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	opening is good but no h/w	
68	445+880	Slab	0.15	1 x 0.8	4.5	9.5		N/A		N/A	F	F	P		VP		No Souring	Sufficient	no h/w but in good condition	
69	446+115	Slab	0.15	1 x 0.8	3.7	7.2	1.5x1.2	N/A		N/A	F	F	P		2/2		No Souring	Sufficient	good condition	
70	446+323	Slab	0.2	1 x 1	4.5	9.8		N/A		N/A	F	F	P		2/3		No Souring	Sufficient	opening fill walls good	
71	446+563	Slab	0.15	1 x 0.8	5.0	9.6		N/A		N/A	F	F	P		3/2		No Souring	Sufficient	opening fill parapet crack at top	
72	446+673	Slab	0.15	1 x 0.8	5.1	9.6		N/A		N/A	F	F	P		2/3		No Souring	Sufficient	good condition	

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Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12			
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1 Opening of the masonry joints				2	Damage of the headwall			3	Bulging of headwall			4	Crack in the wall			5	Part damage of the wall			
6 Completely choked				7	Growing of vegetation			8	Crack in the parapet			9	No parapet,all damage			10	Partial choked			
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
73	446+930	Slab	0.15	1 x 0.8	5.4	11.0		N/A		N/A	F	F	P		5/4		No Souring	Sufficient	good condition	
74	447+170	Slab	0.15	1 x 0.8	4.3	10.0		N/A		N/A	F	F	P		5/4		No Souring	Sufficient	parapet crack at top rest are in good condition	
75	447+202	Slab	0.2	1 x 1	4.2	6.7		N/A		N/A	F	F	P		VP		No Souring	Sufficient	opening is fill crack wall	
76	447+440	Slab	0.2	1 x 1	3.0	7.1		N/A		N/A	F	F	P		VP		No Souring	Sufficient	no headwall	
77	447+695	Slab	0.15	1 x 0.8	3.5	6.4		N/A		N/A	F	F	P		VP		No Souring	Sufficient	opening fill no headwall	
78	447+790	Slab	0.15	1 x 0.9	4.2	6.8		N/A		N/A	F	F	P		3/21		No Souring	Sufficient	good condition	
79	448+014	Slab	0.15	1 x 0.9	3.5	6.9		N/A		N/A	F	F	P		VP		No Souring	Sufficient	fully covered with landslide	
80	448+147	Slab	0.15	1 x 0.8	4.2	7.0		N/A		N/A	F	F	P		VP		No Souring	Sufficient	fully covered broken wall	
81	448+414	Slab	0.15	1 x 0.8	3.9	6.4		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	no headwall	
82	448+597	Slab	0.15	1 x 0.9	3.8	6.5		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	culvert condition is good but wall slightly crack	
83	448+844	4.5	0.15	1 x 0.8	3.3	6.1		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	opening fill r/s parapet is damage	
84	449+070	Slab	0.2	1 x 1	3.5	6.4		N/A		N/A	F	F	P		2/3		No Souring	Sufficient	good condition	
85	449+280	Slab	0.2	1 x 1	3.5	6.6		N/A		N/A	F	F	P		NA		No Souring	Sufficient	R/Wslightly crack opening good	
86	449+540	Slab	0.15	1 x 0.8	3.6	6.9		N/A		N/A	F	F	P		1/2		No Souring	Sufficient	good condition	
87	449+805	Slab	0.15	1 x 0.8	3.8	6.6		N/A		N/A	F	F	P		2/4		No Souring	Sufficient	good condition	
88	449+870	Slab	0.15	1 x 0.9	3.6	6.6		N/A		N/A	F	F	P		2/1		No Souring	Sufficient	no headwall parapet damage	
89	450+031	Slab	0.15	1 x 0.8	3.6	6.8		N/A		N/A	F	F	P		3/1		No Souring	Sufficient	parapet damage wall condition good	
90	450+234	Slab	0.2	1 x 1	3.9	7.3		N/A		N/A	F	F	P		3/2		No Souring	Sufficient	wing/w condition is bad	
91	450+449	Pipe		0.9	3.7	7.8		N/A		N/A	F	F	P		2/3		No Souring	Sufficient	culvert condition is poor	
92	450+505	Slab	0.2	1 x 1	4.2	7.1		N/A		N/A	F	F	P		3/5		No Souring	Sufficient	parapet damage opening good	
93	450+565	Slab	0.15	1 x 0.8	3.9	6.6		N/A		N/A	F	F	P		3/3		No Souring	Sufficient	culvert condition is poor	
94	450+850	Slab	0.15	1 x 0.9	3.8	6.7		N/A		N/A	F	F	P		3/3		No Souring	Sufficient	culvert condition is poor	
95	451+053	Slab	0.15	1 x 0.8	3.8	6.6		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	good condition only parapet crack at top	
96	451+370	Slab	0.2	1 x 1.2	3.7	6.7		N/A		N/A	P	P	P		5/6		No Souring	Sufficient	good condition only parapet crack at top	

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1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall				4 Crack in the wall			5 Part damage of the wall						
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet				9 No parapet,all damage			10 Partial choked						
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert					Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail				
97	451+552	Slab	0.2	1 x 1	3.6	6.7		N/A		N/A	F	F	P		3/1		No Souring	Sufficient	culvert condition is poor
98	451+690	Slab	0.15	1 x 0.8	3.9	6.9		N/A		N/A	F	F	P		3/4		No Souring	Sufficient	culvert condition is poor
99	452+215	Slab	0.15	1 x 0.8	3.7	6.7		N/A		N/A	F	F	P		3/1		No Souring	Sufficient	good conditon
100	452+445	Pipe		0.9	4.2	7.0		N/A		N/A	F	F	P		VP		No Souring	Sufficient	culvert condition is poor
101	452+625	Slab	0.15	1 x 0.8	3.5	7.0		N/A		N/A	F	F	P		VP		No Souring	Sufficient	no headwall and parapet bad condition
102	452+875	Slab	0.15	1 x 0.9	3.8	6.5		N/A		N/A	F	F	P		1L		No Souring	Sufficient	good condition
103	453+275	Slab	0.15	1 x 0.8	3.3	6.3		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	damage
104	453+555	Slab	0.2	1 x 1	3.8	6.7		N/A		N/A	F	F	P		2/1		No Souring	Sufficient	crack on the wall opening is good
105	453+570	Slab	0.225	1 x 1.5	3.8	6.5		N/A		N/A	F	F	P		2/3		No Souring	Sufficient	only parapet crack
106	453+694	Slab	0.15	1 x 0.8	3.5	6.1	1.2x1.4	N/A		N/A	P	P	P		3/2V 3/1H		No Souring	Sufficient	walls condition is poor
107	453+880	Slab	0.15	1 x 0.9	4.0	6.6	1.4x1.6	N/A		N/A	F	F	P		2/1		No Souring	Sufficient	crack on the wall
108	454+252	Slab	0.225	1 x 1.5	3.9	7.0		N/A		N/A	F	F	P		4/2		No Souring	Sufficient	no headwall and parapet bad condition
109	454+415	Slab	0.15	1 x 0.9	3.7	7.0		N/A		N/A	F	F	P		2/3		No Souring	Sufficient	good condition
110	455+010	Slab	0.225	1 x 1.5	3.8	7.5		N/A		N/A	F	F	P		2/2		No Souring	Sufficient	poor condition
111	455+246	Slab	0.225	1 x 1.3	5.3	7.3		N/A		N/A	F	F	P		4/3		No Souring	Sufficient	crack parapet covered with weeds
112	455+410	Slab	0.2	1 x 1	4.0	7.6	1.6x2.0	N/A		N/A	F	F	P		4/5		No Souring	Sufficient	crack parapet covered with weeds
113	455+595	Slab	0.2	1 x 1	3.9	7.0		N/A		N/A	F	F	P		2/1		No Souring	Sufficient	condition is good
114	455+807	Slab	0.2	1 x 1	4.0	7.5		N/A		N/A	F	F	P		1/1		No Souring	Sufficient	walls crack
115	455+946	Slab	0.15	1 x 0.8	4.0	7.1		N/A		N/A	F	F	P		2/1		No Souring	Sufficient	crack wall opening is good
116	456+156	Slab	0.225	1 x 1.5	4.1	6.9		N/A		N/A	F	F	P		6/5		No Souring	Sufficient	good condition
117	456+340	Slab	0.15	1 x 0.9	4.2	7.0	1.5x1.2	N/A		N/A	F	F	P		1/1		No Souring	Sufficient	opening is fill and culvert condition is bad
118	456+705	Slab	0.225	1 x 1.5	4.4	7.4	1.4x1.6	N/A		N/A	P	P	P		1/1		No Souring	Sufficient	parapet damage rest are in good condition
119	456+934	Slab	0.225	1 x 1.5	3.9	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall walls slightly damage
120	457+150	Slab	0.2	1 x 1	3.9	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	can be considered good

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6 Completely choked				7	Growing of vegetation		8	Crack in the parapet		9	No parapet,all damage				10	Partial choked				
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
121	457+225	Slab	0.3	1 x 3	4.5	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage walls slightly crack	
122	457+540	Slab	0.15	1 x 0.8	3.6	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage culvert condition is good	
123	457+670	Slab	0.3	1 x 3	4.2	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
124	457+720	Slab	0.3	1 x 3	3.8	6.9	1.2x1.6	N/A		N/A	P	P	P		VP		No Souring	Sufficient	crack at top of parapet rest portion is good	
125	457+855	Slab	0.15	1 x 0.8	3.4	6.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill and wing/w is crack	
126	458+195	Slab	0.15	1 x 0.9	4.2	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wall damage	
127	458+360	Slab	0.225	1 x 1.5	4.1	7.1	1.2x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill and wing/w is crack	
128	458+556	Slab	0.15	1 x 0.8	4.2	6.7	1.4x1.6	N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
129	458+730	Slab	0.25	1 x 2	3.9	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill walls are in good condition	
130	458+960	Slab	0.15	1 x 0.9	3.4	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is good but no h/w	
131	459+302	Slab	0.15	1 x 0.8	3.9	6.0	1.8x2.0	N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is good but no h/w	
132	459+490	Slab	0.15	1 x 0.8	4.0	6.7	1.4x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	no h/w but in good condition	
133	459+600	Slab	0.15	1 x 0.8	5.4	10.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
134	459+770	Slab	0.225	1 x 1.5	3.8	9.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill walls good	
135	459+940	Slab	0.2	1 x 1	4.7	9.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill parapet crack at top	
136	460+105	Slab	0.15	1 x 0.8	4.8	9.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
137	460+400	Slab	0.225	1 x 1.5	4.0	9.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
138	461+005	Slab	0.15	1 x 0.9	4.4	8.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet crack at top rest are in good condition	
139	461+195	Slab	0.15	1 x 0.9	4.0	9.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill crack wall	
140	461+465	Slab	0.15	1 x 0.9	3.6	6.6	1.6x1.8	N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall	
141	462+220	Slab	0.15	1 x 0.9	3.6	5.8	1.2x1.0	N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill no headwall	
142	462+441	Slab	0.15	1 x 0.9	3.5	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition	
143	462+700	Slab	0.3	1 x 3	3.6	6.9	1.2x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	fully covered with landslide	
144	462+800	Slab	0.3	1 x 3	3.3	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	fully covered broken wall	

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6 Completely choked				7	Growing of vegetation		8	Crack in the parapet		9	No parapet,all damage		10	Partial choked					
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert					Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail				
145	462+996	Slab	0.15	1 x 0.8	3.0	5.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall
146	463+251	Slab	0.225	1 x 1.5	3.3	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is good but wall slightly crack
147	463+495	Slab	0.25	1 x 2	3.1	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill r/s parapet is damage
148	463+655	Slab	0.2	1 x 1	3.0	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
149	463+735	Slab	0.2	1 x 1	3.0	5.8	1.5x1.8	N/A		N/A	P	P	P		VP		No Souring	Sufficient	R/Wslightly crack opening good
150	464+055	Slab	0.3	1 x 3	3.7	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
151	464+445	Slab	0.2	1 x 1	3.6	6.7	1.4x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
152	464+665	Slab	0.15	1 x 0.8	3.7	5.8	1.2x1.0	N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall parapet damage
153	464+860	Slab	0.2	1 x 1	3.1	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage wall condition good
154	465+100	Slab	0.15	1 x 0.9	3.2	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad
155	465+510	Slab	0.225	1 x 1.3	4.0	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
156	465+870	Slab	0.225	1 x 1.5	3.1	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good
157	466+040	Slab	0.15	1 x 0.8	3.7	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
158	466+756	Slab	0.15	1 x 0.8	3.6	9.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
159	466+901	Slab	0.225	1 x 1.5	3.6	7.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition only parapet crack at top
160	467+651	Slab	0.225	1 x 1.5	3.7	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition only parapet crack at top
161	468+250	Slab	0.15	1 x 0.9	3.8	5.9	1.2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage rest are in good condition
162	468+330	Slab	0.2	1 x 1	3.8	6.5	1.6x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall walls slightly damage
163	468+400	Slab	0.2	1 x 1	3.8	6.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	can be considered good
164	468+555	Slab	0.15	1 x 0.9	4.2	5.5	1.5x2.0	N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage walls slightly crack
165	468+680	Slab	0.2	1 x 1	3.4	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage culvert condition is good
166	468+920	Slab	0.2	1 x 1	3.5	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
167	471+220	Slab	0.225	1 x 1.5	3.7	5.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	crack at top of parapet rest portion is good
168	471+558	Slab	0.15	1 x 0.8	3.7	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill and wing/w is crack

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Road Name :NH -54															Sheet No. :				
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REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable			N/A =	Not Available							
1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall							
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet			9 No parapet,all damage			10 Partial choked							
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert					Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail				
169	473+820	Slab	0.225	1 x 1.5	5.8	9.5	1x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	wall damage
170	473+982	Slab	0.225	1 x 1.5	4.3	9.6	1.2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill and wing/w is crack
171	474+104	Slab	0.225	1 x 1.5	5.3	7.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
172	474+243	Slab	0.225	1 x 1.5	6.5	12.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill walls are in good condition
173	474+500	Slab	0.225	1 x 1.5	5.2	7.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is good but no h/w
174	474+618	Slab	0.225	1 x 1.5	5.7	10.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is good but no h/w
175	476+773	Slab	0.225	1 x 1.5	4.7	8.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	no h/w but in good condition
176	476+952	Slab	0.225	1 x 1.5	5.0	11.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
177	477+961	Slab	0.225	1 x 1.5	5.4	8.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill walls good
178	478+698	Slab	0.225	1 x 1.5	3.4	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill parapet crack at top
179	479+023	Slab	0.225	1 x 1.5	3.9	7.2	1.2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
180	479+164	Slab	0.225	1 x 1.5	3.0	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
181	479+531	Slab	0.225	1 x 1.5	3.3	6.1	1.2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet crack at top rest are in good condition
182	479+683	Slab	0.225	1 x 1.5	4.5	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening is fill crack wall
183	479+884	Slab	0.225	1 x 1.5	4.8	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall
184	480+608	Slab	0.225	1 x 1.5	4.1	7.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill no headwall
185	480+741	Slab	0.225	1 x 1.5	3.5	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
186	480+958	Slab	0.225	1 x 1.5	3.3	7.0	1.2x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	fully covered with landslide
187	481+299	Slab	0.225	1 x 1.5	3.8	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	fully covered broken wall
188	481+719	Slab	0.225	1 x 1.5	3.5	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall
189	481+991	Slab	0.225	1 x 1.5	3.5	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is good but wall slightly crack
190	482+050	Slab	0.225	1 x 1.5	3.5	6.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	opening fill r/s parapet is damage
191	482+204	Slab	0.225	1 x 1.5	3.0	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
192	482+256	Slab	0.225	1 x 1.5	3.5	5.9	1.2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	R/Wslightly crack opening good

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1 Opening of the masonry joints				2	Damage of the headwall		3	Bulging of headwall		4	Crack in the wall		5	Part damage of the wall					
6 Completely choked				7	Growing of vegetation		8	Crack in the parapet		9	No parapet,all damage		10	Partial choked					
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert					Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail				
193	482+327	Slab	0.225	1 x 1.5	3.6	7.0	1.4x1.6	N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
194	482+640	Slab	0.225	1 x 1.5	3.3	6.9	1.2x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition
195	482+735	Slab	0.225	1 x 1.5	3.8	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	no headwall parapet damage
196	482+817	Slab	0.225	1 x 1.5	3.3	7.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage wall condition good
197	483+130	Slab	0.225	1 x 1.5	4.3	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad
198	483+263	Slab	0.225	1 x 1.5	3.5	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
199	483+641	Slab	0.225	1 x 1.5	3.3	6.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good
200	483+750	Slab	0.225	1 x 1.5	3.3	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
201	484+020	Slab	0.225	1 x 1.5	3.3	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
202	484+171	Slab	0.225	1 x 1.5	4.1	7.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition only parapet crack at top
203	484+571	Slab	0.225	1 x 1.5	3.9	7.1	1.2x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	good condition only parapet crack at top
204	484+765	Slab	0.225	1 x 1.5	31.0	7.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad
205	484+945	Slab	0.225	1 x 1.5	4.0	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
206	486+004	Slab	0.225	1 x 1.5	4.0	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good
207	486+140	Slab	0.225	1 x 1.5	3.8	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad
208	486+349	Slab	0.225	1 x 1.5	3.6	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
209	486+520	Slab	0.225	1 x 1.5	3.4	6.8	1.2x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good
210	486+842	Slab	0.225	1 x 1.5	5.0	10.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad
211	486+973	Slab	0.225	1 x 1.5	3.5	10.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
212	487+142	Slab	0.225	1 x 1.5	4.0	10.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good
213	487+295	Slab	0.225	1 x 1.5	4.7	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad
214	487+442	Slab	0.225	1 x 1.5	4.0	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
215	487+640	Slab	0.225	1 x 1.5	4.2	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good
216	488+189	Slab	0.225	1 x 1.5	4.2	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
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REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable			N/A =	Not Available								
1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet			9 No parapet,all damage			10 Partial choked								
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
217	488+360	Slab	0.225	1 x 1.5	3.5	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
218	488+605	Slab	0.225	1 x 1.5	3.5	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good	
219	488+913	Pipe		0.9	3.8	8.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
220	489+147	Pipe		0.9	6.5	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
221	489+232	Pipe		0.9	4.7	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
222	489+406	Pipe		0.9	4.1	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
223	489+747	Pipe		0.9	5.2	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
224	490+355	Slab	0.225	1 x 1.5	4.0	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	wing/w condition is bad	
225	490+667	Slab	0.225	1 x 1.5	3.6	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
226	491+641	Slab	0.225	1 x 1.5	6.4	7.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	parapet damage opening good	
227	491+867	Slab	0.225	1 x 1.5	3.6	6.6	1.8x2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
228	492+193	Slab	0.225	1 x 1.5	5.0	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
229	492+366	Pipe		0.9	5.6	7.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
230	492+721	Pipe		0.9	6.7	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
231	493+010	Pipe		0.9	6.5	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
232	493+157	Pipe		0.9	6.6	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
233	493+280	Pipe		0.9	6.1	7.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
234	493+446	Pipe		0.9	6.7	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
235	493+643	Pipe		0.9	5.7	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
236	493+840	Pipe		0.9	3.6	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
237	494+005	Pipe		0.9	7.0	10.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
238	494+ 221	Pipe		0.9	7.3	11.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
239	494+389	Pipe		0.9	7.4	11.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
240	494+602	Pipe		0.9	6.7	10.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	



INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
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1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall		4 Crack in the wall				5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet		9 No parapet,all damage				10 Partial choked								
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
241	494+744	Slab	0.225	1 x 1.5	5.9	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
242	494+800	Slab	0.225	1 x 1.5	5.2	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
243	495+282	Slab	0.225	1 x 1.5	5.2	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
244	495+334	Slab	0.225	1 x 1.5	4.9	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
245	495+601	Slab	0.225	1 x 1.5	5.2	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
246	496+298	Slab	0.225	1 x 1.5	5.0	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
247	496+531	Slab	0.225	1 x 1.5	4.3	7.2	2X1.8	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
248	496+753	Slab	0.225	1 x 1.5	3.6	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
249	497+199	Slab	0.225	1 x 1.5	5.9	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
250	497+460	Slab	0.225	1 x 1.5	5.9	7.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
251	497+771	Slab	0.225	1 x 1.5	5.9	7.0	1.2X1.6	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
252	497+994	Slab	0.225	1 x 1.5	5.2	5.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
253	498+290	Slab	0.225	1 x 1.5	5.8	7.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
254	499+063	Slab	0.225	1 x 1.5	5.8	7.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
255	499+547	Slab	0.225	1 x 1.5	7.3	7.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
256	499+968	Slab	0.225	1 x 1.5	6.4	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
257	500+047	Slab	0.225	1 x 1.5	5.5	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
258	500+156	Slab	0.225	1 x 1.5	6.2	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
259	500+331	Slab	0.225	1 x 1.5	6.2	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
260	500+453	Pipe		0.9	6.6	7.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
261	500+582	Slab	0.225	1 x 1.5	5.9	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
262	500+692	Pipe		0.9	6.2	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
263	500+970	Pipe		0.9	5.2	11.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
264	501+006	Pipe		0.9	5.3	9.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																		Appendix-II C		
Road Name :NH -54															Sheet No. :					
Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12			
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor		NA = Not Avoidable		N/A =		Not Available							
1 Opening of the masonry joints				2	Damage of the headwall		3	Bulging of headwall		4	Crack in the wall		5	Part damage of the wall						
6 Completely choked				7	Growing of vegetation		8	Crack in the parapet		9	No parapet,all damage		10	Partial choked						
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert					Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks	
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
265	501+264	Pipe		0.9	5.2	9.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
266	501+545	Slab	0.225	1 x 1.5	5.4	9.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
267	502+069	Pipe		0.9	5.8	9.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
268	502+167	Slab	0.225	1 x 1.5	4.3	10.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
269	502+367	Slab	0.225	1 x 1.5	4.8	9.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
270	503+228	Slab	0.225	1 x 1.5	3.6	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
271	503+463	Slab	0.225	1 x 1.5	3.8	7.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
272	503+660	Pipe		0.9	3.5	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
273	503+749	Slab	0.225	1 x 1.5	3.4	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
274	503+875	Slab	0.225	1 x 1.5	3.4	6.2	1.5x1.8	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
275	504+499	Pipe		0.9	3.7	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
276	504+574	Slab	0.225	1 x 1.5	4.0	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
277	504+712	Slab	0.225	1 x 1.5	4.2	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
278	505+044	Slab	0.225	1 x 1.5	3.6	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
279	505+206	Pipe		0.9	3.6	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
280	505+443	Slab	0.225	1 x 1.5	3.5	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
281	505+689	Pipe		0.9	3.7	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
282	505+764	Pipe		0.9	3.8	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
283	506+323	Pipe		0.9	3.4	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
284	507+092	Slab	0.225	1 x 1.5	3.4	9.7	1.5x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
285	507+265	Slab	0.225	1 x 1.5	3.6	9.9	1.5x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
286	507+859	Slab	0.225	1 x 1.5	4.4	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
287	508+461	Slab	0.225	1 x 1.5	4.5	10.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
288	508+559	Slab	0.225	1 x 1.5	5.4	9.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
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1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet			9 No parapet,all damage			10 Partial choked								
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
289	508+667	Slab	0.225	1 x 1.5	3.4	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
290	508+726	Slab	0.225	1 x 1.5	3.2	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
291	508+942	Slab	0.225	1 x 1.5	3.5	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
292	508+989	Slab	0.225	1 x 1.5	3.6	6.8	1.5x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
293	509+080	Slab	0.225	1 x 1.5	3.2	5.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
294	509+273	Slab	0.225	1 x 1.5	3.2	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
295	509+493	Slab	0.225	1 x 1.5	3.6	7.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
296	509+820	Slab	0.225	1 x 1.5	3.5	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
297	509+876	Slab	0.225	1 x 1.5	3.6	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
298	509+899	Slab	0.225	1 x 1.5	3.5	7.1	1.5x2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
299	510+101	Slab	0.225	1 x 1.5	3.7	7.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
300	510+282	Slab	0.225	1 x 1.5	3.4	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
301	510+370	Slab	0.225	1 x 1.5	3.4	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
302	510+680	Slab	0.225	1 x 1.5	3.8	7.3	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
303	510+855	Slab	0.225	1 x 1.5	3.4	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
304	510+950	Slab	0.225	1 x 1.5	3.3	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
305	511+055	Slab	0.225	1 x 1.5	3.5	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
306	511+185	Slab	0.225	1 x 1.5	3.4	6.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
307	511+413	Slab	0.225	1 x 1.5	4.1	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
308	511+703	Slab	0.225	1 x 1.5	3.2	6.0	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
309	511+959	Slab	0.225	1 x 1.5	3.3	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
310	512+001	Slab	0.225	1 x 1.5	3.5	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
311	512+083	Slab	0.225	1 x 1.5	3.6	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
312	512+260	Slab	0.225	1 x 1.5	3.5	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
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1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet			9 No parapet,all damage			10 Partial choked								
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
313	512+361	Slab	0.225	1 x 1.5	3.7	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
314	512+510	Slab	0.225	1 x 1.5	3.3	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
315	512+775	Slab	0.225	1 x 1.5	3.8	7.2	1.5x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
316	513+178	Slab	0.225	1 x 1.5	3.8	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
317	513+300	Slab	0.225	1 x 1.5	3.0	7.0	1.5x2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
318	513+450	Slab	0.225	1 x 1.5	3.7	5.7	1.5x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
319	513+498	Slab	0.225	1 x 1.5	3.5	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
320	513+902	Slab	0.225	1 x 1.5	3.3	6.5	1x1	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
321	514+096	Slab	0.225	1 x 1.5	3.4	5.9	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
322	514+563	Slab	0.225	1 x 1.5	4.0	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
323	514+649	Slab	0.225	1 x 1.5	4.0	7.2	1.5x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
324	515+061	Slab	0.225	1 x 1.5	3.1	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
325	515+184	Slab	0.225	1 x 1.5	3.6	6.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
326	515+462	Slab	0.225	1 x 1.5	3.8	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
327	515+751	Slab	0.225	1 x 1.5	3.4	6.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
328	515+975	Slab	0.225	1 x 1.5	4.0	6.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
329	516+100	Slab	0.225	1 x 1.5	3.1	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
330	516+342	Slab	0.225	1 x 1.5	3.8	7.5	1.5x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
331	516+544	Slab	0.225	1 x 1.5	3.3	6.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
332	516+906	Slab	0.225	1 x 1.5	3.6	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
333	517+321	Slab	0.225	1 x 1.5	3.6	7.1	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
334	517+503	Slab	0.225	1 x 1.5	3.6	8.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
335	517+735	Slab	0.225	1 x 1.5	3.2	6.8	1.5x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
336	518+054	Slab	0.225	1 x 1.5	3.1	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
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1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation			8 Crack in the parapet			9 No parapet,all damage			10 Partial choked							
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
337	518+181	Slab	0.225	1 x 1.5	3.2	7.1	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
338	518+461	Slab	0.225	1 x 1.5	4.5	9.8	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
339	519+510	Slab	0.225	1 x 1.5	4.9	10.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
340	519+899	Slab	0.225	1 x 1.5	3.4	8.6	1.2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
341	520+104	Slab	0.225	1 x 1.5	3.6	11.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
342	520+510	Slab	0.225	1 x 1.5	3.7	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
343	520+708	Slab	0.225	1 x 1.5	3.6	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
344	520+810	Slab	0.225	1 x 1.5	4.0	9.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
345	521+000	Slab	0.225	1 x 1.5	3.6	6.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
346	521+190	Slab	0.225	1 x 1.5	3.8	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
347	521+570	Slab	0.225	1 x 1.5	3.3	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
348	521+930	Slab	0.225	1 x 1.5	3.5	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
349	522+515	Slab	0.225	1 x 1.5	3.0	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
350	522+625	Slab	0.225	1 x 1.5	3.2	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
351	522+870	Slab	0.225	1 x 1.5	3.5	6.9	1.6x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
352	523+042	Slab	0.225	1 x 1.5	3.5	6.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
353	523+185	Slab	0.225	1 x 1.5	3.8	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
354	523+625	Slab	0.225	1 x 1.5	3.4	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
355	523+790	Slab	0.225	1 x 1.5	3.4	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
356	524+288	Slab	0.225	1 x 1.5	3.4	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
357	524+475	Slab	0.225	1 x 1.5	3.3	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
358	524+588	Slab	0.225	1 x 1.5	3.0	7.8									VP		No Souring	Sufficient	culvert condition is poor	
359	524+620	Slab	0.225	1 x 1.5			1.2x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
360	524+775	Slab	0.225	1 x 1.5	3.7	6.3	1.2x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

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6 Completely choked				7	Growing of vegetation		8	Crack in the parapet		9	No parapet,all damage				10	Partial choked				
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
361	524+920	Slab	0.225	1 x 1.5	3.6	7.3	1.2x1.0	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
362	525+635	Slab	0.225	1 x 1.5	5.2	10.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
363	526+960	Slab	0.225	1 x 1.5	3.8	10.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
364	527+260	Slab	0.225	1 x 1.5	2.9	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
365	527+970	Slab	0.225	1 x 1.5	3.0	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
366	528+218	Slab	0.225	1 x 1.5	3.0	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
367	528+310	Slab	0.225	1 x 1.5	3.1	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
368	528+425	Slab	0.225	1 x 1.5	3.0	6.4	1.0x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
369	528+542	Slab	0.225	1 x 1.5	3.1	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
370	528+725	Slab	0.225	1 x 1.5	2.5	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
371	528+840	Slab	0.225	1 x 1.5	2.5	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
372	529+025	Slab	0.225	1 x 1.5	3.1	7.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
373	529+135	Slab	0.225	1 x 1.5	2.0	6.6	1.2x1.1	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
374	529+238	Slab	0.225	1 x 1.5	3.0	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
375	529+493	Slab	0.225	1 x 1.5	4.4	5.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
376	530+223	Slab	0.225	1 x 1.5	3.4	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
377	530+453	Slab	0.225	1 x 1.5	3.6	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
378	530+668	Slab	0.225	1 x 1.5	3.3	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
379	530+860	Slab	0.225	1 x 1.5	3.5	7.3	1.2x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
380	531+015	Slab	0.225	1 x 1.5	3.5	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
381	531+392	Slab	0.225	1 x 1.5	3.6	6.9	1.2x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
382	531+670	Slab	0.225	1 x 1.5	3.7	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
383	531+886	Slab	0.225	1 x 1.5	3.6	6.1									VP		No Souring	Sufficient	culvert condition is poor	
384	532+075	Slab	0.225	1 x 1.5	3.4	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
Road Name :NH -54															Sheet No. :					
Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12			
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor		NA = Not Avoidable			N/A =		Not Available						
1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall				4 Crack in the wall			5 Part damage of the wall							
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet				9 No parapet,all damage			10 Partial choked							
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
385	532+210	Slab	0.225	1 x 1.5	4.3	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
386	532+520	Slab	0.225	1 x 1.5	3.7	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
387	532+602	Slab	0.225	1 x 1.5	3.5	6.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
388	532+742	Slab	0.225	1 x 1.5	3.4	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
389	533+150	Slab	0.225	1 x 1.5	3.8	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
390	533+265	Slab	0.225	1 x 1.5	3.0	6.0	1.2X1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
391	533+700	Slab	0.225	1 x 1.5	2.7	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
392	533+875	Slab	0.225	1 x 1.5	2.9	6.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
393	534+250	Slab	0.225	1 x 1.5	3.0	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
394	534+375	Slab	0.225	1 x 1.5	3.3	6.8	1.4X1.6	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
395	534+460	Slab	0.225	1 x 1.5	3.2	5.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
396	534+928	Slab	0.225	1 x 1.5	3.2	7.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
397	535+630	Slab	0.225	1 x 1.5	3.2	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
398	535+920	Slab	0.225	1 x 1.5	3.4	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
399	536+090	Slab	0.225	1 x 1.5	3.3	7.0	1.2X1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
400	536+238	Slab	0.225	1 x 1.5	3.5	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
401	536+380	Slab	0.225	1 x 1.5	4.0	7.0	1.2X1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
402	537+163	Slab	0.225	1 x 1.5	2.4	6.8	1x1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
403	538+020	Slab	0.225	1 x 1.5	3.3	5.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
404	538+350	Slab	0.225	1 x 1.5	3.6	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
405	538+650	Slab	0.225	1 x 1.5	3.1	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
406	538+748	Slab	0.225	1 x 1.5	4.1	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
407	538+890	Slab	0.225	1 x 1.5	3.3	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
408	539+310	Slab	0.225	1 x 1.5	3.3	7.1	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
Road Name :NH -54															Sheet No. :					
Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12			
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable	N/A =	Not Available										
1 Opening of the masonry joints				2	Damage of the headwall		3	Bulging of headwall		4	Crack in the wall				5	Part damage of the wall				
6 Completely choked				7	Growing of vegetation		8	Crack in the parapet		9	No parapet,all damage				10	Partial choked				
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
409	539+565	Slab	0.225	1 x 1.5	3.6	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
410	539+780	Slab	0.225	1 x 1.5	3.6	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
411	540+072	Slab	0.225	1 x 1.5	3.2	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
412	540+280	Slab	0.225	1 x 1.5	3.4	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
413	540+530	Slab	0.225	1 x 1.5	3.4	6.5	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
414	541+180	Slab	0.225	1 x 1.5	3.4	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
415	541+355	Slab	0.225	1 x 1.5	3.3	7.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
416	541+670	Slab	0.225	1 x 1.5	3.0	6.8	1.5X1.2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
417	541+920	Slab	0.225	1 x 1.5	3.5	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
418	542+190	Slab	0.225	1 x 1.5	3.5	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
419	542+415	Slab	0.225	1 x 1.5	3.6	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
420	542+725	Slab	0.225	1 x 1.5	3.6	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
421	542+980	Slab	0.225	1 x 1.5	3.4	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
422	543+160	Slab	0.225	1 x 1.5	3.5	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
423	543+460	Slab	0.225	1 x 1.5	3.8	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
424	543+555	Slab	0.225	1 x 1.5	3.3	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
425	543+710	Slab	0.225	1 x 1.5	3.7	7.0	1.5x1.6	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
426	543+810	Slab	0.225	1 x 1.5	3.7	7.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
427	543+990	Slab	0.225	1 x 1.5	3.7	5.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
428	544+248	Slab	0.225	1 x 1.5	3.4	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
429	544+390	Slab	0.225	1 x 1.5	3.2	6.0	2x1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
430	544+605	Slab	0.225	1 x 1.5	3.5	6.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
431	544+760	Slab	0.225	1 x 1.5	3.6	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
432	544+878	Slab	0.225	1 x 1.5	3.2	6.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	



INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
Road Name :NH -54															Sheet No. :					
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REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable			N/A =	Not Available								
1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet			9 No parapet,all damage			10 Partial choked								
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
433	545+220	Slab	0.225	1 x 1.5	4.8	8.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
434	545+808	Slab	0.225	1 x 1.5	4.1	10.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
435	546+030	Slab	0.225	1 x 1.5	3.1	5.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
436	546+385	Slab	0.225	1 x 1.5	3.0	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
437	546+545	Slab	0.225	1 x 1.5	3.4	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
438	546+720	Slab	0.225	1 x 1.5	3.2	6.8	1.8x2	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
439	546+962	Slab	0.225	1 x 1.5	2.7	6.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
440	547+175	Slab	0.225	1 x 1.5	3.1	5.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
441	547+380	Slab	0.225	1 x 1.5	3.5	6.0	1.2x1.4	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
442	547+672	Slab	0.225	1 x 1.5	3.5	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
443	547+970	Slab	0.225	1 x 1.5	2.5	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
444	548+150	Slab	0.225	1 x 1.5	3.0	6.5	1.2X1.6	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
445	548+230	Slab	0.225	1 x 1.5	3.4	6.5	1.5X1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
446	548+270	Slab	0.225	1 x 1.5	3.2	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
447	548+380	Slab	0.225	1 x 1.5	3.0	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
448	548+560	Slab	0.225	1 x 1.5	4.0	5.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
449	548+744	Slab	0.225	1 x 1.5	3.4	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
450	548+837	Slab	0.225	1 x 1.5	2.8	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
451	549+135	Slab	0.225	1 x 1.5	3.2	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
452	549+405	Slab	0.225	1 x 1.5	3.1	5.0	2X1.5	N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
453	549+770	Slab	0.225	1 x 1.5	2.7	5.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
454	549+875	Slab	0.225	1 x 1.5	3.2	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
455	549+890	Slab	0.225	1 x 1.5	2.8	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
456	549+940	Slab	0.225	1 x 1.5	3.4	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																	Appendix-II C			
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Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12			
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable			N/A =	Not Available								
1 Opening of the masonry joints				2 Damage of the headwall		3 Bulging of headwall			4 Crack in the wall			5 Part damage of the wall								
6 Completely choked				7 Growing of vegetation		8 Crack in the parapet			9 No parapet,all damage			10 Partial choked								
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert						Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail					
457	550+205	Slab	0.225	1 x 1.5	3.5	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
458	550+460	Slab	0.225	1 x 1.5	3.2	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
459	550+570	Slab	0.225	1 x 1.5	2.9	6.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
460	550+785	Slab	0.225	1 x 1.5	3.0	5.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
461	550+858	Slab	0.225	1 x 1.5	3.0	5.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
462	551+120	Slab	0.225	1 x 1.5	3.0	6.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
463	551+260	Slab	0.225	1 x 1.5	3.1	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
464	551+390	Slab	0.225	1 x 1.5	3.3	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
465	551+542	Slab	0.225	1 x 1.5	3.3	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
466	551+720	Slab	0.225	1 x 1.5	3.5	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
467	551+960	Slab	0.225	1 x 1.5	3.1	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
468	552+025	Slab	0.225	1 x 1.5	2.8	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
469	552+192	Slab	0.225	1 x 1.5	3.4	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
470	552+505	Slab	0.225	1 x 1.5	2.7	6.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
471	552+890	Slab	0.225	1 x 1.5	3.0	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
472	553+198	Slab	0.225	1 x 1.5	3.0	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
473	553+600	Slab	0.225	1 x 1.5	3.2	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
474	553+872	Slab	0.225	1 x 1.5	3.0	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
475	554+635	Slab	0.225	1 x 1.5	3.2	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
476	554+760	Slab	0.225	1 x 1.5	2.7	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
477	554+851	Slab	0.225	1 x 1.5	3.0	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
478	555+015	Slab	0.225	1 x 1.5	3.1	5.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
479	555+038	Slab	0.225	1 x 1.5	3.0	8.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	
480	555+270	Slab	0.225	1 x 1.5	3.0	7.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor	

INVENTORY & CONDITION SURVEY FOR CULVERTS																			
Road Name :NH -54															Sheet No. :				
Section : From Km 431+000 to Km 562+000															Date of Survey :		Date of Survey :20.08.12 to 26.09.12		
REFERENCE FOR REMARKS				G = Good	F = Fair	P = Poor	VP = Very Poor	NA = Not Avoidable			N/A =	Not Available							
1 Opening of the masonry joints				2	Damage of the headwall			3	Bulging of headwall			4	Crack in the wall			5	Part damage of the wall		
6 Completely choked				7	Growing of vegetation			8	Crack in the parapet			9	No parapet,all damage			10	Partial choked		
Sr. No.	Location (m)	Type of structure (Pipe,Slab,Box,Arch)	Thickness of slab (m)	Span Arrangement and Total Ventway[No.xLength(m)]	Carriageway Width(m)	Width of Culvert (m)	Details of Protection Works				Condition of various features of Culvert					Height of wing wall	Presence of Sour	Adequacy of Water-way	Remarks
							Catch Pit	Apron	Type	Condition	Slab/ Pipe/ Box/ Arch	Head Wall	Wing Wall	Return Wall	Parapet/ Handrail				
481	555+470	Slab	0.225	1 x 1.5	3.2	6.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
482	555+722	Slab	0.225	1 x 1.5	3.3	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
483	555+850	Slab	0.225	1 x 1.5	3.0	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
484	556+189	Slab	0.225	1 x 1.5	3.2	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
485	556+325	Slab	0.225	1 x 1.5	3.2	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
486	556+635	Slab	0.225	1 x 1.5	3.3	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
487	556+760	Slab	0.225	1 x 1.5	3.4	6.5		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
488	556+894	Slab	0.225	1 x 1.5	3.2	6.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
489	557+345	Slab	0.225	1 x 1.5	3.4	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
490	557+566	Slab	0.225	1 x 1.5	3.2	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
491	557+735	Slab	0.225	1 x 1.5	3.5	7.1		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
492	558+080	Slab	0.225	1 x 1.5	3.8	6.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
493	558+175	Slab	0.225	1 x 1.5	3.3	7.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
494	558+535	Slab	0.225	1 x 1.5	3.0	6.2		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
495	558+680	Slab	0.225	1 x 1.5	3.8	9.8		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
496	558+885	Slab	0.225	1 x 1.5	4.4	9.7		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
497	559+040	Slab	0.225	1 x 1.5	3.5	9.6		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
498	559+221	Slab	0.225	1 x 1.5	3.6	6.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
499	559+338	Slab	0.225	1 x 1.5	5.1	10.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
500	559+400	Slab	0.225	1 x 1.5	3.6	10.0		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
501	559+837	Slab	0.225	1 x 1.5	4.0	9.9		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
502	559+900	Slab	0.225	1 x 1.5	3.8	9.4		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor
503	560+080	Slab	0.225	1 x 1.5	5.0	7.3		N/A		N/A	P	P	P		VP		No Souring	Sufficient	culvert condition is poor

# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
1	431645	11.385	RHS	1,2,3,6,7	326	494210	6.590	LHS	1,2,3,5,6,7
2	431845	4.230	RHS	1,2,3,6,7	327	494222	21.620	LHS	1,2,3,6,7
3	432045	32.241	RHS	1,2,3,6,7	328	494449	47.250	LHS	1,2,3,6,7
4	432225	9.000	RHS	1,2,3,6,7	329	494598	2.800	LHS	1,2,3,5,6,7
5	432550	3.712	RHS	1,2,3,5,6,7	330	494603	6.440	LHS	1,2,3,5,6,7
6	432650	16.160	RHS	1,2,3,5,6,7	331	494724	14.790	LHS	1,2,3,5,6,7
7	432748	2.787	RHS	1,2,3,5,6,7	332	494745	8.000	LHS	1,2,3,5,6,7
8	433005	25.190	RHS	1,2,3,6,7	333	494790	7.160	LHS	1,2,3,6,7
9	433105	8.062	RHS	1,2,3,5,6,7	334	494801	15.000	LHS	1,2,3,6,7
10	433215	7.528	RHS	1,2,3,5,6,7	335	494893	8.940	LHS	1,2,3,6,7
11	433675	3.500	RHS	1,2,3,6,7	336	494957	4.480	LHS	1,2,3,6,7
12	433680	5.239	RHS	1,2,3,6,7	337	495106	7.680	LHS	1,2,3,5,6,7
13	434800	12.000	RHS	1,2,3,5,6,7	338	495202	23.930	LHS	1,2,3,5,6,7
14	435047	8.500	RHS	1,2,3,6,7	339	495272	7.290	LHS	1,2,3,6,7
15	435258	20.000	RHS	1,2,3,5,6,7	340	495283	40.170	LHS	1,2,3,5,6,7
16	435440	11.000	RHS	1,2,3,6,7	341	495335	5.700	LHS	1,2,3,6,7
17	435482	1.800	RHS	1,2,3,6,7	342	495389	10.900	LHS	1,2,3,5,6,7
18	435773	13.000	RHS	1,2,3,5,6,7	343	495575	23.000	LHS	1,2,3,6,7
19	435921	7.000	RHS	1,2,3,5,6,7	344	495602	5.000	LHS	1,2,3,5,6,7
20	436136	3.300	RHS	1,2,3,6,7	345	495646	22.100	LHS	1,2,3,6,7
21	436644	3.300	RHS	1,2,3,6,7	346	495702	8.550	LHS	1,2,3,6,7
22	436782	1.600	RHS	1,2,3,6,7	347	495947	38.170	LHS	1,2,3,5,6,7
23	437050	9.100		1,2,3,6,7	348	496299	4.680	LHS	1,2,3,6,7
24	437162	1.500		1,2,3,6,7	349	496435	22.240	LHS	1,2,3,6,7
25	437326	7.500		1,2,3,5,6,7	350	496524	3.900	LHS	1,2,3,6,7
26	437556	5.000		1,2,3,6,7	351	496524	3.500	RHS	1,2,3,6,7
27	437597	11.100		1,2,3,6,7	352	496725	25.640	LHS	1,2,3,5,6,7
28	437897	28.600		1,2,3,5,6,7	353	496754	1.300	LHS	1,2,3,6,7
29	438216	8.600	LHS	1,2,3,6,7	354	497034	4.760	LHS	1,2,3,6,7
30	438250	20.700		1,2,3,6,7	355	497088	4.000	LHS	1,2,3,6,7
31	438540	20.000		1,2,3,6,7	356	497155	9.000	LHS	1,2,3,5,6,7
32	438600	8.100		1,2,3,6,7	357	497195	2.270	LHS	1,2,3,6,7
33	438878	3.500		1,2,3,6,7	358	497199	2.690	LHS	1,2,3,5,6,7
34	439000	29.000	RHS	1,2,3,6,7	359	497453	3.100	LHS	1,2,3,6,7
35	439145	3.200	RHS	1,2,3,6,7	360	497676	15.500	LHS	1,2,3,5,6,7
36	439164	12.500	RHS	1,2,3,6,7	361	497742	25.000	LHS	1,2,3,6,7
37	439358	15.000	RHS	1,2,3,6,7	362	497772	7.900	LHS	1,2,3,6,7
38	439460	12.000	RHS	1,2,3,6,7	363	497847	7.450	LHS	1,2,3,6,7
39	439740	11.300	RHS	1,2,3,6,7	364	497913	7.240	LHS	1,2,3,6,7
40	439800	8.600	RHS	1,2,3,6,7	365	497979	12.460	LHS	1,2,3,6,7
41	440150	15.300	RHS	1,2,3,6,7	366	498271	14.690	LHS	1,2,3,6,7
42	440240	9.700	RHS	1,2,3,6,7	367	498291	9.820	LHS	1,2,3,5,6,7

# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
43	440360	15.500	RHS	1,2,3,6,7	368	498920	26.730	LHS	1,2,3,6,7
44	440900	35.000	RHS	1,2,3,6,7	369	498981	27.270	LHS	1,2,3,6,7
45	440950	10.200	RHS	1,2,3,6,7	370	499064	61.450	LHS	1,2,3,6,7
46	441261	5.500	RHS	1,2,3,6,7	371	499198	40.410	LHS	1,2,3,6,7
47	441400	19.700	RHS	1,2,3,6,7	372	499310	23.770	LHS	1,2,3,6,7
48	441450	36.600	RHS	1,2,3,6,7	373	499536	7.300	LHS	1,2,3,5,6,7
49	441840	26.300	RHS	1,2,3,6,7	374	499548	9.660	LHS	1,2,3,6,7
50	442100	13.500	RHS	1,2,3,6,7	375	500543	2.120	LHS	1,2,3,5,6,7
51	442185	16.100	RHS	1,2,3,6,7	376	500548	2.000	LHS	1,2,3,6,7
52	442245	9.600	RHS	1,2,3,6,7	377	500147	6.530	LHS	1,2,3,5,6,7
53	442730	19.600	RHS	1,2,3,6,7	378	500157	11.000	LHS	1,2,3,6,7
54	442806	9.500	RHS	1,2,3,6,7	379	500320	10.560	LHS	1,2,3,6,7
55	443027	18.100	RHS	1,2,3,6,7	380	500332	1.300	LHS	1,2,3,5,6,7
56	443220	40.100	RHS	1,2,3,6,7	381	500380	16.510	LHS	1,2,3,6,7
57	443832	47.800	RHS	1,2,3,6,7	382	500437	13.620	LHS	1,2,3,6,7
58	444076	15.400	RHS	1,2,3,6,7	383	500577	2.600	LHS	1,2,3,5,6,7
59	444427	7.8	RHS	1,2,3,6,7	384	500583	1.630	LHS	1,2,3,6,7
60	444512	15.900	RHS	1,2,3,6,7	385	500686	3.130	LHS	1,2,3,6,7
61	444650		RHS	1,2,3,6,7	386	500693	4.250	LHS	1,2,3,6,7
62	444708	27.100	RHS	1,2,3,6,7	387	500953	8.800	LHS	1,2,3,5,6,7
63	444878	7.000	RHS	1,2,3,6,7	388	500971	4.790	LHS	1,2,3,5,6,7
64	444903	19.500	RHS	1,2,3,6,7	389	501007	43.540	LHS	1,2,3,6,7
65	444964	31.000	RHS	1,2,3,6,7	390	501636	15.540	LHS	1,2,3,6,7
66	445=450	31.100	RHS	1,2,3,6,7	391	502998	17.400	LHS	1,2,3,6,7
67	445483	5.300	RHS	1,2,3,6,7	392	503031	6.950	LHS	1,2,3,6,7
68	445590	3.700	LHS	1,2,3,6,7	393	503087	23.730	LHS	1,2,3,6,7
69	445605	4.500	LHS	1,2,3,6,7	394	503133	26.580	LHS	1,2,3,6,7
70	445760	20.800	RHS	1,2,3,6,7	395	503563	8.000	LHS	1,2,3,5,6,7
71	446323	4.100	LHS	1,2,3,5,6,7	396	503721	6.150	LHS	1,2,3,6,7
72	446562	1.400	LHS	1,2,3,6,7	397	504167	39.110	RHS	1,2,3,6,7
73	446672	13.000	LHS	1,2,3,6,7	398	504252	29.450	RHS	1,2,3,6,7
74	446836	3.900	LHS	1,2,3,6,7	399	504702	7.130	LHS	1,2,3,6,7
75	446871	10.000	LHS	1,2,3,6,7	400	504713	1.500	LHS	1,2,3,6,7
76	446931	15.100	LHS	1,2,3,6,7	401	504961	10.000	LHS	1,2,3,6,7
77	447364	8.800	LHS	1,2,3,6,7	402	505031	8.210	LHS	1,2,3,6,7
78	447440	5.400	LHS	1,2,3,6,7	403	505045	38.810	LHS	1,2,3,6,7
79	448021	4.900	LHS	1,2,3,6,7	404	505187	17.760	LHS	1,2,3,6,7
80	448148	13.000	LHS	1,2,3,5,6,7	405	505444	15.340	LHS	1,2,3,5,6,7
81	448718	3.900	LHS	1,2,3,5,6,7	406	505528	20.850	LHS	1,2,3,6,7
82	448780	9.400	LHS	1,2,3,6,7	407	505678	7.600	LHS	1,2,3,6,7
83	449071	5.700	RHS	1,2,3,5,6,7	408	505690	9.200	LHS	1,2,3,5,6,7
84	449280	6.900		1,2,3,6,7	409	505759	2.860	LHS	1,2,3,6,7

# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
85	449350	48.200	RHS	1,2,3,6,7	410	505765	7.400	LHS	1,2,3,5,6,7
86	449509	20.000	RHS	1,2,3,6,7	411	505887	41.500	LHS	1,2,3,6,7
87	449644	12.600	LHS	1,2,3,6,7	412	506074	11.000	LHS	1,2,3,6,7
88	449800	24.000	RHS	1,2,3,6,7	413	506150	94.000	LHS	1,2,3,6,7
89	449853	24.000	RHS	1,2,3,5,6,7	414	506268	7.740	LHS	1,2,3,6,7
90	450030	6.500	LHS	1,2,3,5,6,7	415	506314	7.740	LHS	1,2,3,5,6,7
91	450170	11.000	LHS	1,2,3,6,7	416	507069	11.690	LHS	1,2,3,6,7
92	450234	5.500	LHS	1,2,3,6,7	417	507750	35.800	LHS	1,2,3,5,6,7
93	450449	4.500	LHS	1,2,3,6,7	418	508727	8.000	LHS	1,2,3,5,6,7
94	450505	8.800	LHS	1,2,3,6,7	419	509122	9.710	LHS	1,2,3,5,6,7
95	451060	4.700	LHS	1,2,3,6,7	420	509494	3.250	LHS	1,2,3,5,6,7
96	451552	12.100	LHS	1,2,3,6,7	421	509477	10.000	LHS	1,2,3,6,7
97	451690	10.100	LHS	1,2,3,5,6,7	422	509668	46.300	LHS	1,2,3,6,7
98	451990	22.000	RHS	1,2,3,5,6,7	423	509945	5.650	LHS	1,2,3,6,7
99	452000	11.700	LHS	1,2,3,6,7	424	510037	5.860	LHS	1,2,3,6,7
100	452345	9.500	LHS	1,2,3,5,6,7	425	510102	6.340	LHS	1,2,3,6,7
101	452445	11.500	LHS	1,2,3,5,6,7	426	510359	9.800	LHS	1,2,3,6,7
102	452625	13.300	LHS	1,2,3,6,7	427	510371	16.970	LHS	1,2,3,6,7
103	452690	20.900	LHS	1,2,3,6,7	428	510593	6.000	LHS	1,2,3,6,7
104	452793	24.200	RHS	1,2,3,6,7	429	510760	12.770	LHS	1,2,3,6,7
105	452875	13.100	LHS	1,2,3,6,7	430	510856	47.580	LHS	1,2,3,6,7
106	453315	8.300	LHS	1,2,3,6,7	431	511100	16.990	LHS	1,2,3,6,7
107	453470	17.700	LHS	1,2,3,5,6,7	432	511400	8.580	LHS	1,2,3,6,7
108	453570	13.200	LHS	1,2,3,5,6,7	433	511684	17.580	LHS	1,2,3,6,7
109	453806	13.200	LHS	1,2,3,6,7	434	512356	8.320	LHS	1,2,3,6,7
110	454045	39.200	LHS	1,2,3,5,6,7	435	512362			1,2,3,6,7
111	454145	11.400	LHS	1,2,3,5,6,7	436	512363	15.500	LHS	1,2,3,6,7
112	454245	17.800	LHS	1,2,3,5,6,7	437	512439	14.000	LHS	1,2,3,6,7
113	454395	21.200	LHS	1,2,3,6,7	438	512595	65.600	LHS	1,2,3,6,7
114	454485	72.500	LHS	1,2,3,6,7	439	512909	4.300	LHS	1,2,3,6,7
115	454745	3.800	LHS	1,2,3,6,7	440	513098	8.350	LHS	1,2,3,6,7
116	454790	8.200	LHS	1,2,3,5,6,7	441	513301	23.870	LHS	1,2,3,6,7
117	454895	7.500	LHS	1,2,3,6,7	442	513499	83.660	LHS	1,2,3,6,7
118	455807	10.500	LHS	1,2,3,6,7	443	513685	23.340	LHS	1,2,3,6,7
119	455946	5.300	LHS	1,2,3,6,7	444	513753	12.300	LHS	1,2,3,6,7
120	456080	20.000	LHS	1,2,3,6,7	445	514065	4.470	LHS	1,2,3,6,7
121	456157	14.100	LHS	1,2,3,6,7	446	514195	14.680	LHS	1,2,3,6,7
122	456456	23.100	LHS	1,2,3,6,7	447	514245	33.450	LHS	1,2,3,6,7
123	456705	4.800	RHS	1,2,3,6,7	448	514390	9.000	LHS	1,2,3,6,7
124	456934	19.200	LHS	1,2,3,6,7	449	514437	14.360	LHS	1,2,3,6,7
125	457002	8.900	LHS	1,2,3,6,7	450	514562	9.500	LHS	1,2,3,6,7
126	457100	11.300	LHS	1,2,3,5,6,7	451	514564	6.950	LHS	1,2,3,6,7

# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
127	457150	31.000	LHS	1,2,3,6,7	452	514624	15.450	LHS	1,2,3,6,7
128	457225	15.000	LHS	1,2,3,6,7	453	514641	4.460	RHS	1,2,3,5,6,7
129	457225	3.900	RHS	1,2,3,6,7	454	514651	6.730	LHS	1,2,3,6,7
130	457260	7.800	LHS	1,2,3,6,7	455	514651	3.400	RHS	1,2,3,6,7
131	457330	16.000	LHS	1,2,3,6,7	456	514772	79.620	LHS	1,2,3,6,7
132	457400	15.000	LHS	1,2,3,6,7	457	514895	63.960	LHS	1,2,3,6,7
133	457475	4.000	LHS	1,2,3,6,7	458	514991	12.000	LHS	1,2,3,6,7
134	457670	10.500	LHS	1,2,3,6,7	459	515089	57.160	LHS	1,2,3,6,7
135	457670	4.100	RHS	1,2,3,6,7	460	515174	8.600	LHS	1,2,3,6,7
136	457740	8.300	LHS	1,2,3,6,7	461	515185	4.200	LHS	1,2,3,6,7
137	457855	5.200	LHS	1,2,3,6,7	462	516003	26.230	LHS	1,2,3,6,7
138	458265	9.100	LHS	1,2,3,6,7	463	516126	21.000	LHS	1,2,3,5,6,7
139	458360	11.000	LHS	1,2,3,6,7	464	516238	6.640	LHS	1,2,3,6,7
140	458450	6.800	LHS	1,2,3,5,6,7	465	516337	1.920	LHS	1,2,3,6,7
141	458556	19.800	LHS	1,2,3,5,6,7	466	516343	8.860	LHS	1,2,3,6,7
142	459240	16.900	LHS	1,2,3,6,7	467	516896	8.850	LHS	1,2,3,6,7
143	459450	29.000	LHS	1,2,3,6,7	468	516907	7.780	LHS	1,2,3,6,7
144	459525	19.000	LHS	1,2,3,6,7	469	516983	8.830	LHS	1,2,3,6,7
145	459600	4.500	LHS	1,2,3,6,7	470	517118	10.900	LHS	1,2,3,6,7
146	459720	26.300	LHS	1,2,3,6,7	471	517288	28.470	LHS	1,2,3,6,7
147	460400	7.000	LHS	1,2,3,6,7	472	517452	44.900	LHS	1,2,3,6,7
148	460760	11.000	RHS	1,2,3,6,7	473	517504	16.480	LHS	1,2,3,6,7
149	461450	6.800	RHS	1,2,3,6,7	474	518119	22.960	LHS	1,2,3,6,7
150	461620	14.600	RHS	1,2,3,5,6,7	475	518251	56.100	LHS	1,2,3,6,7
151	461660	4.800	RHS	1,2,3,6,7	476	518728	32.500		1,2,3,6,7
152	462350	11.500	RHS	1,2,3,6,7	477	518925	18.730	LHS	1,2,3,5,6,7
153	462440	20.000	RHS	1,2,3,6,7	478	520098	5.500	LHS	1,2,3,5,6,7
154	462660	5.600	RHS	1,2,3,6,7	479	520155	11.600	LHS	1,2,3,6,7
155	462700	11.000	RHS	1,2,3,6,7	480	520239	43.200	LHS	1,2,3,6,7
156	462850	15.700	RHS	1,2,3,6,7	481	520511	24.000	LHS	1,2,3,6,7
157	462910	5.900	RHS	1,2,3,5,6,7	482	520535	4.000	LHS	1,2,3,6,7
158	463000	15.000	RHS	1,2,3,5,6,7	483	520700	3.100	RHS	1,2,3,6,7
159	463150	14.300	RHS	1,2,3,5,6,7	484	520710	4.800	LHS	1,2,3,6,7
160	463375	11.600	RHS	1,2,3,6,7	485	521120	14.000	LHS	1,2,3,6,7
161	464045	9.200	RHS	1,2,3,6,7	486	521180	6.350	LHS	1,2,3,6,7
162	464056	8.000	RHS	1,2,3,6,7	487	521191	9.100	LHS	1,2,3,5,6,7
163	464345	9.200	RHS	1,2,3,5,6,7	488	521328	22.000	LHS	1,2,3,6,7
164	464565	23.400	RHS	1,2,3,5,6,7	489	521560	7.500	LHS	1,2,3,6,7
165	464755	13.300	RHS	1,2,3,5,6,7	490	521925	8.000	LHS	1,2,3,6,7
166	464885	24.700	RHS	1,2,3,6,7	491	522560	9.800	LHS	1,2,3,6,7
167	464930	90.500	RHS	1,2,3,6,7	492	522625	15.000	LHS	1,2,3,6,7
168	465100	4.100	RHS	1,2,3,6,7	493	522830	40.000	LHS	1,2,3,6,7

# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
169	465180	21.000	LHS	1,2,3,5,6,7	494	522920	13.000	LHS	1,2,3,5,6,7
170	465251	5.200	LHS	1,2,3,6,7	495	523043	4.500	LHS	1,2,3,5,6,7
171	465310	24.300	LHS	1,2,3,6,7	496	523180	20.000	LHS	1,2,3,5,6,7
172	465630	34.400	LHS	1,2,3,6,7	497	523590	32.000	LHS	1,2,3,6,7
173	466405	23.2 n	LHS	1,2,3,6,7	498	524380	20.000	LHS	1,2,3,6,7
174	466455	6.400	LHS	1,2,3,6,7	499	524755	17.000	LHS	1,2,3,6,7
175	466530	8.200	LHS	1,2,3,6,7	500	525120	7.700	LHS	1,2,3,6,7
176	466600	49.400	LHS	1,2,3,6,7	501	527105	20.000	LHS	1,2,3,5,6,7
177	466700	17.000	LHS	1,2,3,5,6,7	502	527320	10.000	LHS	1,2,3,6,7
178	466804	2.300	RHS	1,2,3,6,7	503	527710	12.000	RHS	1,2,3,6,7
179	466870	13.800	RHS	1,2,3,5,6,7	504	528010	18.000	RHS	1,2,3,6,7
180	466900	23.500	RHS	1,2,3,5,6,7	505	528070	7.000	RHS	1,2,3,6,7
181	467000	17.500	LHS	1,2,3,6,7	506	528160	54.000	RHS	1,2,3,6,7
182	467060	7.600	LHS	1,2,3,6,7	507	528360	8.500	RHS	1,2,3,6,7
183	467096	11.600	LHS	1,2,3,6,7	508	528408	25.000	RHS	1,2,3,6,7
184	467150	32.900	LHS	1,2,3,5,6,7	509	528470	5.000	RHS	1,2,3,6,7
185	467300	11.500	RHS	1,2,3,6,7	510	528510	33.000	RHS	1,2,3,6,7
186	467555	15.800	LHS	1,2,3,5,6,7	511	528690	30.000	RHS	1,2,3,5,6,7
187	467600	20.200	RHS	1,2,3,6,7	512	528822	10.000	RHS	1,2,3,6,7
188	467650	19.000	RHS	1,2,3,5,6,7	513	529050	18.000	RHS	1,2,3,6,7
189	467700	18.000	RHS	1,2,3,6,7	514	529295	6.000	RHS	1,2,3,6,7
190	467760	20.700	RHS	1,2,3,6,7	515	529712	15.000	RHS	1,2,3,6,7
191	467840	7.400	RHS	1,2,3,6,7	516	529853	90.000	RHS	1,2,3,6,7
192	467905	32.800	RHS	1,2,3,6,7	517	530020	50.000	RHS	1,2,3,6,7
193	468010	8.600	RHS	1,2,3,5,6,7	518	531140	6.000	RHS	1,2,3,6,7
194	468075	2.100	RHS	1,2,3,6,7	519	531188	7.000	RHS	1,2,3,6,7
195	468100	43.100	RHS	1,2,3,6,7	520	531880	15.000	RHS	1,2,3,6,7
196	468160	4.200	RHS	1,2,3,6,7	521	532190	22.000	RHS	1,2,3,6,7
197	468251	13.700	RHS	1,2,3,5,6,7	522	532302	4.500	RHS	1,2,3,6,7
198	468331	13.200	RHS	1,2,3,5,6,7	523	532415	18.000	RHS	1,2,3,6,7
199	468401	15.100	RHS	1,2,3,6,7	524	532570	6.500	RHS	1,2,3,6,7
200	468495	14.300	RHS	1,2,3,6,7	525	532680	6.500	RHS	1,2,3,5,6,7
201	468680	13.100	RHS	1,2,3,5,6,7	526	532740	8.000	RHS	1,2,3,5,6,7
202	468710	49.500	RHS	1,2,3,6,7	527	532870	11.000	RHS	1,2,3,6,7
203	468860	4.000	RHS	1,2,3,6,7	528	533048	4.000	RHS	1,2,3,6,7
204	469150	23.700	RHS	1,2,3,6,7	529	533818	90.000	RHS	1,2,3,6,7
205	469205	17.200	RHS	1,2,3,6,7	530	534010	15.000	RHS	1,2,3,6,7
206	469300	8.400	RHS	1,2,3,6,7	531	534155	7.000	RHS	1,2,3,6,7
207	469550	10.500	RHS	1,2,3,6,7	532	534376	12.500	RHS	1,2,3,6,7
208	470420	9.600	RHS	1,2,3,6,7	533	534440	20.000	RHS	1,2,3,6,7
209	470635	23.000	RHS	1,2,3,6,7	534	534801	12.000	RHS	1,2,3,6,7
210	471595	12.000	RHS	1,2,3,6,7	535	535412	12.000	RHS	1,2,3,5,6,7



# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
211	472157	7.940	RHS	1,2,3,5,6,7	536	535650	37.000	RHS	1,2,3,6,7
212	472495	18.350	RHS	1,2,3,5,6,7	537	535980	4.000	RHS	1,2,3,6,7
213	473065	20.000	LHS	1,2,3,5,6,7	538	537062	11.000	LHS	1,2,3,6,7
214	473850	6.580	LHS	1,2,3,5,6,7	539	538170	6.000	RHS	1,2,3,6,7
215	473965	9.740	LHS	1,2,3,5,6,7	540	538260	14.000	RHS	1,2,3,6,7
216	474083	19.480	LHS	1,2,3,5,6,7	541	538800	9.000	RHS	1,2,3,6,7
217	474105	18.390	LHS	1,2,3,6,7	542	539630	32.000	RHS	1,2,3,5,6,7
218	474230	7.240	LHS	1,2,3,6,7	543	539690	16.000	RHS	1,2,3,5,6,7
219	477955	10.700	LHS	1,2,3,6,7	544	539825	48.000	RHS	1,2,3,5,6,7
220	478339	25.610	LHS	1,2,3,6,7	545	539955	7.000	RHS	1,2,3,6,7
221	478394	19.890	LHS	1,2,3,6,7	546	540060	37.000	RHS	1,2,3,6,7
222	478400	39.000	RHS	1,2,3,6,7	547	540150	4.000	RHS	1,2,3,6,7
223	478522	13.930	RHS	1,2,3,5,6,7	548	540610	42.000	RHS	1,2,3,6,7
224	478657	9.310	RHS	1,2,3,6,7	549	540850	10.000	RHS	1,2,3,5,6,7
225	479012	9.780	RHS	1,2,3,6,7	550	540980	6.500	RHS	1,2,3,6,7
226	479028	33.740	RHS	1,2,3,6,7	551	541070	5.500	RHS	1,2,3,6,7
227	479238	4.950	RHS	1,2,3,6,7	552	541220	40.000	RHS	1,2,3,6,7
228	479425	16.000	RHS	1,2,3,6,7	553	541342	15.000	RHS	1,2,3,6,7
229	479499	4.000	RHS	1,2,3,6,7	554	541530	9.000	RHS	1,2,3,6,7
230	479544	9.200	RHS	1,2,3,6,7	555	541580	16.000	RHS	1,2,3,6,7
231	479676	5.590	RHS	1,2,3,6,7	556	541645	40.000	RHS	1,2,3,6,7
232	479777	13.380	RHS	1,2,3,6,7	557	541718	26.000	RHS	1,2,3,6,7
233	479837	142.200	RHS	1,2,3,6,7	558	541825	20.000	RHS	1,2,3,6,7
234	479885	11.880	RHS	1,2,3,5,6,7	559	541920	18.000	RHS	1,2,3,5,6,7
235	480063	7.690	RHS	1,2,3,5,6,7	560	542010	8.500	RHS	1,2,3,6,7
236	480101	28.000	RHS	1,2,3,6,7	561	542190	15.000	RHS	1,2,3,6,7
237	480271	7.780	RHS	1,2,3,6,7	562	542415	4.000	RHS	1,2,3,6,7
238	480355	7.180	RHS	1,2,3,6,7	563	542630	55.000	RHS	1,2,3,6,7
239	480594	25.680	RHS	1,2,3,6,7	564	542725	5.000	RHS	1,2,3,6,7
240	480954	7.300	RHS	1,2,3,6,7	565	543225	11.500	RHS	1,2,3,6,7
241	481209	16.790	RHS	1,2,3,6,7	566	543358	13.000	RHS	1,2,3,6,7
242	481399	17.000	RHS	1,2,3,6,7	567	543450	10.000	RHS	1,2,3,6,7
243	481491	13.510	RHS	1,2,3,5,6,7	568	543610	10.000	RHS	1,2,3,6,7
244	481594	19.600	RHS	1,2,3,5,6,7	569	544210	7.000	RHS	1,2,3,6,7
245	481703	11.150	RHS	1,2,3,6,7	570	544240	10.000		1,2,3,6,7
246	481776	18.750	RHS	1,2,3,6,7	571	544730	27.000	RHS	1,2,3,6,7
247	481821	5.530	RHS	1,2,3,6,7	572	544810	10.000	RHS	1,2,3,6,7
248	481905	17.000	RHS	1,2,3,5,6,7	573	544878	4.000	RHS	1,2,3,5,6,7
249	482046	3.000	RHS	1,2,3,6,7	574	544938	8.000	RHS	1,2,3,5,6,7
250	482051	2.460	RHS	1,2,3,6,7	575	545120	7.000	RHS	1,2,3,6,7
251	482110	20.820	RHS	1,2,3,6,7	576	546040	14.000	RHS	1,2,3,6,7
252	482178	20.250	RHS	1,2,3,6,7	577	546630	14.000	RHS	1,2,3,6,7

# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
253	482206	7.930	RHS	1,2,3,6,7	578	546710	26.000	RHS	1,2,3,6,7
254	482256	8.320	RHS	1,2,3,6,7	579	546948	52.000	RHS	1,2,3,6,7
255	482290	6.250	RHS	1,2,3,6,7	580	547060	20.000	RHS	1,2,3,6,7
256	482317	7.810	RHS	1,2,3,6,7	581	547120	26.000	RHS	1,2,3,6,7
257	482327	12.000	RHS	1,2,3,6,7	582	547260	25.000	RHS	1,2,3,6,7
258	482437	21.000	RHS	1,2,3,5,6,7	583	547640	50.000	RHS	1,2,3,5,6,7
259	482496	13.850	RHS	1,2,3,5,6,7	584	547728	6.000	RHS	1,2,3,6,7
260	482629	7.520	RHS	1,2,3,6,7	585	547770	12.000	RHS	1,2,3,6,7
261	482697	28.450	RHS	1,2,3,6,7	586	547951	34.000	RHS	1,2,3,6,7
262	482735	7.500	RHS	1,2,3,6,7	587	548145	7.000	RHS	1,2,3,6,7
263	482782	33.520	RHS	1,2,3,6,7	588	548262	7.000	RHS	1,2,3,6,7
264	482818	16.710	RHS	1,2,3,6,7	589	548320	58.000	RHS	1,2,3,6,7
265	482929	41.870	RHS	1,2,3,6,7	590	548458	16.000		1,2,3,5,6,7
266	483131	7.660	RHS	1,2,3,6,7	591	548610	45.000	RHS	1,2,3,5,6,7
267	483165	43.850	RHS	1,2,3,5,6,7	592	548685	12.000	RHS	1,2,3,5,6,7
268	483252	10.000	RHS	1,2,3,6,7	593	548740	14.000	RHS	1,2,3,6,7
269	483264	9.740	RHS	1,2,3,6,7	594	548830	68.000	RHS	1,2,3,6,7
270	483324	49.350	RHS	1,2,3,6,7	595	549160	26.000	RHS	1,2,3,6,7
271	483443	29.470	RHS	1,2,3,6,7	596	549210	19.000	RHS	1,2,3,6,7
272	483640	10.000	RHS	1,2,3,6,7	597	549406	13.000	RHS	1,2,3,5,6,7
273	483642	6.100	RHS	1,2,3,6,7	598	549730	15.000	RHS	1,2,3,6,7
274	483742	6.140	RHS	1,2,3,6,7	599	549835	18.500	RHS	1,2,3,6,7
275	483751	4.500	RHS	1,2,3,5,6,7	600	549868	15.000	RHS	1,2,3,6,7
276	483800	23.800	RHS	1,2,3,5,6,7	601	549912	40.000	RHS	1,2,3,6,7
277	483931	11.000	RHS	1,2,3,6,7	602	550057	47.000	RHS	1,2,3,6,7
278	484021	3.630	RHS	1,2,3,5,6,7	603	550570	23.000	RHS	1,2,3,6,7
279	484066	6.540	RHS	1,2,3,5,6,7	604	550732	46.000	RHS	1,2,3,6,7
280	484111	12.600	RHS	1,2,3,5,6,7	605	550858	63.000	RHS	1,2,3,6,7
281	484166	9.400	RHS	1,2,3,5,6,7	606	551012	26.000	RHS	1,2,3,6,7
282	484266	8.750	RHS	1,2,3,5,6,7	607	551175	5.000	RHS	1,2,3,5,6,7
283	484445	39.680	RHS	1,2,3,6,7	608	551203	90.000	RHS	1,2,3,6,7
284	484562	7.900	RHS	1,2,3,6,7	609	551390	6.500	RHS	1,2,3,6,7
285	484572	2.250	RHS	1,2,3,5,6,7	610	551505	30.000	RHS	1,2,3,6,7
286	484763	10.880	RHS	1,2,3,5,6,7	611	551703	15.000	RHS	1,2,3,6,7
287	484766	7.320	RHS	1,2,3,6,7	612	551950	13.000	RHS	1,2,3,6,7
288	485316	8.260	RHS	1,2,3,6,7	613	552018	16.000	RHS	1,2,3,6,7
289	485561	5.500	RHS	1,2,3,6,7	614	552170	30.000	RHS	1,2,3,6,7
290	485609	5.650	RHS	1,2,3,5,6,7	615	553127	16.000	RHS	1,2,3,6,7
291	486141	49.980	LHS	1,2,3,6,7	616	553187	12.000	RHS	1,2,3,6,7
292	486481	13.590	LHS	1,2,3,6,7	617	553420	45.000	RHS	1,2,3,6,7
293	486674	9.750	LHS	1,2,3,5,6,7	618	553865	10.000	RHS & LHS	1,2,3,6,7
294	486817	17.210	LHS	1,2,3,6,7	619	554340	70.000	RHS	1,2,3,6,7

# INVENTORY & CONDITION SURVEY FOR RETAINING WALL

Road Name : NH-54

Appendix-II D

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                             |   |                                          |
|-----------------------------|---|------------------------------------------|
| 1 Bulging of retaining wall | 5 | Parapet wall fully broken                |
| 2 Crack in the wall         | 6 | Growing of vegetation or weeds           |
| 3 Part damage of the wall   | 7 | Depression of the soil of retaining wall |
| 4 Crack in the parapet wall | 8 | Erosion of the v/s toe at foundation     |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
295	487103	16.210	LHS	1,2,3,6,7	620	554349	12.000	LHS	1,2,3,6,7
296	487253	36.270	LHS	1,2,3,6,7	621	554636	2.800	RHS	1,2,3,5,6,7
297	487296	16.850	LHS	1,2,3,5,6,7	622	554750	15.000	RHS	1,2,3,5,6,7
298	487641	4.000	LHS	1,2,3,6,7	623	554842	12.000	RHS	1,2,3,6,7
299	487700	35.890	LHS	1,2,3,6,7	624	554916	35.000	RHS	1,2,3,6,7
300	487966	17.000	LHS	1,2,3,6,7	625	555028	35.000	RHS	1,2,3,6,7
301	488178	4.420	LHS	1,2,3,5,6,7	626	555271	25.000	RHS	1,2,3,6,7
302	488190	16.000	LHS	1,2,3,6,7	627	555320	11.000	RHS	1,2,3,6,7
303	488510	6.650	LHS	1,2,3,6,7	628	555365	10.000	RHS	1,2,3,6,7
304	488595	10.170	LHS	1,2,3,6,7	629	555663	97.000	RHS	1,2,3,6,7
305	488738	34.450	LHS	1,2,3,6,7	630	555840	15.000	RHS	1,2,3,6,7
306	489214	15.080	LHS	1,2,3,6,7	631	555909	26.000	RHS	1,2,3,5,6,7
307	489233	8.820	LHS	1,2,3,6,7	632	556190	70.000	RHS	1,2,3,6,7
308	489373	29.000	LHS	1,2,3,5,6,7	633	556630	10.000	RHS	1,2,3,6,7
309	489522	8.000	LHS	1,2,3,6,7	634	556800	30.000	RHS	1,2,3,6,7
310	489748	57.000	LHS	1,2,3,6,7	635	556880	34.000	RHS	1,2,3,6,7
311	489861	5.000	LHS	1,2,3,6,7	636	557002	20.000	RHS	1,2,3,6,7
312	490058	12.000	LHS	1,2,3,5,6,7	637	557051	8.000	RHS	1,2,3,6,7
313	490143	11.210	LHS	1,2,3,5,6,7	638	557105	52.000	RHS	1,2,3,5,6,7
314	490508	8.400	LHS	1,2,3,6,7	639	557566	8.000	RHS	1,2,3,5,6,7
315	490736	18.420	LHS	1,2,3,5,6,7	640	557630	23.000	RHS	1,2,3,5,6,7
316	490808	14.520	LHS	1,2,3,6,7	641	557970	15.000	RHS	1,2,3,6,7
317	490971	6.780	LHS	1,2,3,6,7	642	558128	7.000	RHS	1,2,3,6,7
318	491046	17.000	LHS	1,2,3,5,6,7	643	558292	9.000	RHS	1,2,3,6,7
319	491249	94.000	LHS	1,2,3,5,6,7	644	558405	30.000	RHS	1,2,3,6,7
320	491377	67.000	LHS	1,2,3,5,6,7	645	558536	16.000	RHS	1,2,3,5,6,7
321	492 071	28.150	LHS	1,2,3,5,6,7	646	559315	16.000	RHS	1,2,3,6,7
322	492253	21.500	LHS	1,2,3,6,7	647	559382	10.000	RHS	1,2,3,5,6,7
323	493140	12.460	LHS	1,2,3,5,6,7	648	559623	14.000	RHS	1,2,3,6,7
324	493281	23.370	LHS	1,2,3,6,7	649	559880	42.000	RHS	1,2,3,5,6,7
325	493319	10.780	LHS	1,2,3,6,7	650	560070	16.000	LHS	1,2,3,6,7

# INVENTORY & CONDITION SURVEY FOR BREAST WALL

Road Name : NH-54

Appendix-II E

Section : FROM KM 431+00 TO KM 562+00

Dt of Survey :20.08.12 to 26.09.12

## REFERENCE FOR REMARKS

- |                                  |   |                                       |
|----------------------------------|---|---------------------------------------|
| 1 Bulging of retaining wall      | 5 | Depression of the soil of breast wall |
| 2 Crack in the wall              | 6 | Erosion of the v/s toe at foundation  |
| 3 Part damage of the wall        | 7 | Top portion of the breast wall damage |
| 4 Growing of vegetation or weeds |   |                                       |

Sl. No	Chainage in m	Length in m	Side	Remarks	Sl. No	Chainage in m	Length in m	Side	Remarks
1	432830	11.172	LHS	1,3,4,5,7	27	474611	20.87	RHS	1,3,4,5,7
2	432860	11.561	LHS	1,3,4,5,7	28	475379	21	RHS	1,3,4,5,7
3	433598	9	RHS	1,3,4,5,7	29	476009	8.2	RHS	1,3,4,5,7
4	434424	25	LHS	1,3,4,5,7	30	476313	29.59	RHS	1,3,4,5,7
5	438100	63.1		1,3,4,5,7	31	477315	16.23	RHS	1,3,4,5,7
6	438250	20.1	RHS	1,3,4,5,7	32	477429	24.83	RHS	1,3,4,5,7
7	438621	22.6		1,3,4,5,7	33	477834	43	RHS	1,3,4,5,7
8	439089	36	LHS	1,3,4,5,7	34	478265	18.38	RHS	1,3,4,5,7
9	440532	21.8	LHS	1,3,4,5,7	35	479018	19	LHS	1,3,4,5,7
10	442575	32.1	RHS	1,3,4,5,7	36	479113	21.3	LHS	1,3,4,5,7
11	442885	14.2	LHS	1,3,4,5,7	37	495229	43.18	RHS	1,3,4,5,7
12	443650	46.1	LHS	1,3,4,5,7	38	498343	8.4	RHS	1,3,4,5,7
13	443827	106.9	LHS	1,3,4,5,7	39	498764	25	RHS	1,3,4,5,7
14	445600	12.9	LHS	1,3,4,5,7	40	511256	25.85	RHS	1,3,4,5,7
15	449360	29.2	LHS	1,3,4,5,7	41	511361	23.56	RHS	1,3,4,5,7
16	452965	38	RHS	1,3,4,5,7	42	512777	12.5	RHS	1,3,4,5,7
17	453455	52.6	RHS	1,3,4,5,7	43	515957	55.35	RHS	1,3,4,5,7
18	453940	11.5	RHS	1,3,4,5,7	44	518907	40.77	RHS	1,3,4,5,7
19	454800	11.8	RHS	1,3,4,5,7	45	519079	9.68	RHS	1,3,4,5,7
20	463255	39.4	LHS	1,3,4,5,7	46	519440	15.7	LHS	1,3,4,5,7
21	464460	55.5	LHS	1,3,4,5,7	47	520420	46.4	LHS	1,3,4,5,7
22	464705	22.5	LHS	1,3,4,5,7	48	525545	20	RHS	1,3,4,5,7
23	465147	15.2	LHS	1,3,4,5,7	49	525650	10	RHS	1,3,4,5,7
24	465570	4.7	RHS	1,3,4,5,7	50	553062	63	LHS	1,3,4,5,7
25	472017	29	LHS	1,3,4,5,7	51	553898	6	LHS	1,3,4,5,7
26	473183	11.28	LHS	1,3,4,5,7	52	560620	15	RHS	1,3,4,5,7

## DETAILS OF JUNCTION

Road Name : NH 54					Appendix - IIF	
Section : FROM KM 431+00 TO KM 562+00					Dt of Survey :20.08.12 to 26.09.12	
S/N	CHAINAGE	SIDE	SHAPE	DESCRIPTION	LOCATION	TYPE
1	433340.00	LHS	Y	Village Link Road	TAWIPUI NORTH VILLAGE-2	Minor
2	433500.00	LHS	Y	Village Link Road	TAWIPUI NORTH VILLAGE-2	Minor
3	433525.00	RHS	X	Village Link Road	TAWIPUI NORTH VILLAGE-2	Minor
4	433865.00	LHS	Y	Village Link Road	TAWIPUI NORTH VILLAGE-2	Minor
5	433895.00	LHS	Y	Village Link Road	TAWIPUI NORTH VILLAGE-2	Minor
6	434230.00	LHS	Y	Village Link Road	TAWIPUI NORTH VILLAGE-2	Minor
7	435950.00	LHS	Y	Village Link Road	TAWIPUI NORTH VILLAGE-1	Minor
8	440200.00	RHS	Y	Agricultural Link Road		Minor
9	440670.00	LHS	Y	Agricultural Link Road		Minor
10	445000.00	RHS	Y	Village Link Road	TAWIPUI SOUTH VILLAGE	Minor
11	445290.00	RHS	Y	Village Link Road	TAWIPUI SOUTH VILLAGE	Minor
12	450990.00	RHS	Y	BPL COMPANY		Minor
13	459150.00	LHS	Y	Village Link Road	THINGFAL VILLAGE	Minor
14	467280.00	LHS	Y	Village Link Road	THINGKA VILLAGE	Minor
15	467360.00	LHS	Y	Village Link Road	THINGKA VILLAGE	Minor
16	470550.00	RHS	Y	Multi Model Road	LAWNGTLAI CITY	Major
17	472360.00	LHS	Y	Bungtlanga Road	LAWNGTLAI CITY	Major
18	472850.00	RHS	Y	City Link Road	LAWNGTLAI CITY	Minor
19	473060.00	LHS	Y	City Link Road	LAWNGTLAI CITY	Minor
20	473070.00	RHS	Y	City Link Road	LAWNGTLAI CITY	Minor
21	473450.00	RHS	Y	City Link Road	LAWNGTLAI CITY	Minor
22	474200.00	RHS	Y	City Link Road	LAWNGTLAI CITY	Minor
23	474770.00	RHS	Y	City Link Road	LAWNGTLAI CITY	Minor
24	475000.00	RHS	Y	City Link Road	LAWNGTLAI CITY	Minor
25	475610.00	LHS	Y	PWD Complex Link Road	LAWNGTLAI CITY	Minor
26	478130.00	LHS	Y	Village Link Road		Minor
27	483800.00	RHS	Y	Village Link Road	SAIKA VILLAGE	Major
28	490650.00	RHS	Y	Village Link Road	KAWLCHAW VILLAGE	Minor
29	503430.00	RHS	Y	Village Link Road	KAWLCHAW VILLAGE	Minor
30	503720.00	LHS	Y	Village Link Road	KAWLCHAW VILLAGE	Minor
31	503850.00	LHS	Y	Village Link Road	KAWLCHAW VILLAGE	Minor
32	515170.00	LHS	Y	NH 54 B takeoff point	ZERO POINT	Major
33	523050.00	RHS	Y	Agricultural Link Road		Minor
34	530470.00	LHS	Y	Diversion start	THEIVA VILLAGE	Minor
35	531480.00	RHS	Y	Village Link Road	THEIVA VILLAGE	Minor
36	532020.00	RHS	Y	Village Link Road	THEIVA VILLAGE	Minor
37	533080.00	RHS	Y	Diversion end	THEIVA VILLAGE	Minor
38	536440.00	RHS	Y	Agricultural Link Road		Minor
39	538700.00	LHS	Y	Village Link Road	THEIHRI VILLAGE	Minor
40	539040.00	LHS	Y	Village Link Road	THEIHRI VILLAGE	Minor
41	552410.00	RHS	Y	Village Link Road	TUIPANG VILLAGE	Minor
42	552830.00	RHS	Y	Village Link Road	TUIPANG VILLAGE	Minor
43	553604.00			Village Link Road	TUIPANG VILLAGE	Minor

DETAILS OF VILLAGE						
Road Name : NH 54					Appendix - IIG	
Section : FROM KM 431+00 TO KM 562+00					Dt of Survey :20.08.12 to 26.09.12	
Sr.No	Design Chainage		Existing Chainage		Village Name	District
	From	To	From	To		
1	432800	434700	432800	434750	Tawipui North village-2	Lunglei
2	435060	437900	435250	438150	Tawipui North village-1	Lunglei
3	443380	446410	444100	447250	Tawipui South village	Lunglei
4	457850	459230	459700	461100	Thingfal village	Lunglei
5	467020	468130	469550	470700	Thingka village	Lawngtlai
6	468950	470730	471550	473400	Aoc village	Lawngtlai
7	470730	476040	473400	478900	Lawngtlai city	Lawngtlai
8	483830	484110	486800	487100	Saika village - 1	Lawngtlai
9	489850	490880	486800	487100	Saika village - 2	Lawngtlai
10	494840	495530	498300	499000	Chawntlangpui village	Lawngtlai
11	497480	498980	501050	502550	Sihtlangpui village	Lawngtlai
12	502650	505680	506250	509350	Kawlchaw village	Saiha
13	514860	515960	518800	519900	Zero point	Saiha
14	520970	522445	525200	526850	Maubawk village	Saiha
15	531320	531800	536000	538000	Theiva village	Saiha
16	538515	539500	544950	546000	Theihri village	Saiha
17	551085	553636	558600	561200	Tuipang village	Saiha

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00					Appendix - IIH -3		
Electric Pole				Dt of Survey :20.08.12 to 26.09.12			
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
1	431755	RHS	2	394	478380	RHS	1
2	432920	RHS	2	395	478602	RHS	1
3	432930	RHS	1	396	479192	RHS	2
4	432945	RHS	1	397	479282	RHS	2
5	432960	RHS	1	398	479750	RHS	2
6	433047	RHS	1	399	479817	RHS	2
7	433085	RHS	1	400	481028	RHS	2
8	433122	RHS	1	401	481133	RHS	1
9	433180	RHS	1	402	481245	RHS	1
10	433230	RHS	1	403	481376	RHS	2
11	433285	RHS	1	404	481458	RHS	1
12	433325	RHS	1	405	481550	RHS	3
13	433330	RHS	1	406	482006	RHS	2
14	433355	RHS	1	407	482397	RHS	2
15	433395	RHS	1	408	483315	RHS	2
16	433420	RHS	1	409	483576	RHS	1
17	433445	RHS	1	410	483617	RHS	2
18	433492	RHS	1	411	483879	RHS	1
19	433510	LHS	2	412	483998	RHS	2
20	433540	RHS	1	413	484063	RHS	1
21	433575	RHS	1	414	484232	RHS	2
22	433610	RHS	1	415	484 335	RHS	1
23	433618	RHS	1	416	484419	RHS	1
24	433670	RHS	1	417	484684	RHS	2
25	433716	RHS	1	418	484863	RHS	2
26	433765`	RHS	1	419	485027	RHS	1
27	433774	RHS	1	420	485171	RHS	1
28	433820	RHS	1	421	485295	RHS	2
29	433852	RHS	1	422	485383	RHS	1
30	433925	RHS	1	423	493378	LHS	1
31	433960	LHS	1	424	493594	LHS	1
32	433990	RHS	1	425	493625	LHS	1
33	434024	RHS	1	426	493680	LHS	1
34	434084	RHS	1	427	493717	LHS	1
35	434119	RHS	1	428	493806	LHS	1
36	434157	RHS	1	429	493895	LHS	1
37	434200	RHS	1	430	493937	LHS	1
38	434280	RHS	1	431	493976	LHS	1
39	434337	RHS	1	432	494107	LHS	1
40	434388	RHS	1	433	498072	LHS	1
41	434500	RHS	1	434	498193	LHS	1
42	434562	RHS	1	435	498241	LHS	1
43	434588	RHS	1	436	498354	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
44	434591	RHS	1	437	498461	LHS	1
45	434640	RHS	1	438	498628	LHS	1
46	434677	RHS	1	439	498701	LHS	1
47	434700	RHS	2	440	498747	LHS	1
48	434770	RHS	1	441	498843	LHS	1
49	434838	RHS	1	442	498891	LHS	1
50	434903	RHS	1	443	499272	LHS	1
51	434937	RHS	1	444	499450	LHS	2
52	434970	RHS	1	445	499664	LHS	2
53	435121	RHS	1	446	500025	LHS	2
54	435162	RHS	1	447	500508	LHS	2
55	435249	RHS	1	448	501151	LHS	1
56	435283	RHS	1	449	501202	LHS	1
57	435316	RHS	1	450	501256	LHS	1
58	435347	RHS	1	451	501311	LHS	1
59	435395	RHS	1	452	501350	LHS	1
60	435467	RHS	1	453	501388	LHS	1
61	435526	RHS	1	454	501417	LHS	1
62	435565	RHS	1	455	501451	LHS	1
63	435570	RHS	1	456	501501	LHS	1
64	435605	RHS	1	457	501549	LHS	1
65	435652	RHS	1	458	501588	LHS	1
66	435671	RHS	3	459	501621	LHS	1
67	435735	RHS	1	460	501688	LHS	2
68	435824	RHS	1	461	501729	LHS	1
69	435867	RHS	1	462	501769	LHS	1
70	435898	RHS	1	463	501779	LHS	1
71	435900	RHS	1	464	501837	LHS	1
72	435990	RHS	1	465	501889	LHS	1
73	436058	RHS	1	466	501930	LHS	1
74	436124	RHS	1	467	501959	RHS	1
75	436179	RHS	1	468	501998	RHS	1
76	436244	RHS	1	469	502044	RHS	1
77	436289	RHS	1	470	502092	RHS	1
78	436330	RHS	1	471	502141	RHS	1
79	436372	RHS	1	472	503760	LHS	2
80	436415	RHS	1	473	504225	RHS	2
81	436458	RHS	1	474	504677	LHS	1
82	436503	RHS	1	475	504801	RHS	1
83	436536	RHS	1	476	505161	LHS	2
84	436564	RHS	1	477	505282	LHS	3
85	436580	RHS	1	478	505350	LHS	1
86	436623	RHS	1	479	505722	LHS	2



## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
87	436655	RHS	1	480	505975	LHS	2
88	436674	RHS	2	481	506126	LHS	1
89	436746	RHS	1	482	506216	LHS	1
90	436778	RHS	1	483	506291	LHS	1
91	436824	RHS	1	484	506381	LHS	1
92	436871	RHS	1	485	506483	LHS	1
93	436957	RHS	1	486	506551	LHS	1
94	436984	RHS	1	487	506667	LHS	1
95	437034	RHS	1	488	506998	LHS	1
96	437088	RHS	1	489	507029	LHS	1
97	437146	RHS	1	490	507065	LHS	1
98	437198	RHS	1	491	507120	LHS	1
99	437241	RHS	1	492	507152	LHS	1
100	437267	RHS	1	493	507198	LHS	1
101	437295	RHS	1	494	507240	LHS	1
102	437427	RHS	1	495	507317	LHS	1
103	437492	RHS	1	496	507342	LHS	1
104	437537	RHS	1	497	507394	LHS	1
105	437609	RHS	1	498	507476	LHS	1
106	437650	RHS	1	499	507532	LHS	1
107	437681	RHS	1	500	507582	LHS	1
108	437720	RHS	1	501	507724	LHS	1
109	437765	RHS	1	502	507774	LHS	1
110	437792	RHS	1	503	507809	LHS	1
111	437824	RHS	1	504	507811	LHS	2
112	437866	RHS	1	505	507889	LHS	1
113	437920	RHS	1	506	507898	LHS	1
114	437957	RHS	1	507	507932	LHS	1
115	437998	RHS	1	508	507963	LHS	1
116	438010	RHS	1	509	507998	LHS	1
117	438043	RHS	1	510	508008	LHS	1
118	438060	RHS	1	511	508031	LHS	1
119	438084	RHS	1	512	508033	RHS	1
120	438115	RHS	1	513	508064	LHS	1
121	439245	RHS	2	514	508065	LHS	1
122	439722	RHS	2	515	508066	RHS	1
123	441494	RHS	2	516	508100	RHS	1
124	441921	RHS	2	517	508120	LHS	1
125	441978	RHS	1	518	508131	LHS	1
126	442006	RHS	3	519	508164	LHS	1
127	442300	RHS	2	520	508234	LHS	1
128	442535	RHS	2	521	508266	LHS	1
129	442922	RHS	2	522	508283	LHS	2

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
130	444002	RHS	1	523	508301	RHS	1
131	444037	RHS	1	524	508334	LHS	1
132	444104	RHS	1	525	508367	LHS	1
133	444145	RHS	1	526	508401	LHS	1
134	444180	RHS	1	527	508416	LHS	1
135	444208	RHS	1	528	508470	LHS	1
136	444257	RHS	1	529	508502	LHS	1
137	444297	RHS	1	530	508536	LHS	1
138	444317	RHS	1	531	508570	LHS	1
139	444317	RHS	1	532	508603	LHS	1
140	444350	RHS	1	533	508639	LHS	1
141	444381	RHS	2	534	508672	LHS	1
142	444388	RHS	1	535	508675	LHS	1
143	444440	RHS	1	536	508742	LHS	1
144	444475	RHS	1	537	508774	LHS	1
145	444509	RHS	1	538	508809	RHS	1
146	444580	RHS	1	539	508827	LHS	2
147	444608	RHS	1	540	508895	LHS	1
148	444639	RHS	1	541	509042	LHS	2
149	444690	RHS	1	542	518807	LHS	1
150	444745	RHS	1	543	518850	LHS	1
151	444789	RHS	1	544	518888	LHS	1
152	444817	RHS	1	545	518931	LHS	1
153	444847	RHS	1	546	518978	LHS	1
154	444939	RHS	1	547	519024	LHS	1
155	445020	RHS	1	548	519061	LHS	1
156	445145	RHS	1	549	519109	LHS	1
157	445235	RHS	1	550	519166	LHS	2
158	445280	RHS	1	551	519233	RHS	1
159	445408	RHS	1	552	519269	RHS	1
160	445465	RHS	1	553	519310	RHS	1
161	445528	RHS	1	554	519340	RHS	1
162	445584	RHS	1	555	519390	RHS	1
163	445677	RHS	1	556	519432	RHS	1
164	445709	LHS	1	557	519470	RHS	1
165	445754	LHS	1	558	519511	RHS	1
166	445809	LHS	1	559	519550	LHS	1
167	445863	LHS	1	560	519605	LHS	1
168	445920	LHS	1	561	519642	LHS	1
169	445965	LHS	1	562	519690	LHS	1
170	446005	LHS	1	563	519735	LHS	1
171	446036	LHS	1	564	519780	LHS	1
172	446070	LHS	1	565	519815	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
173	446100	RHS	1	566	519821	LHS	3
174	446105	LHS	1	567	519980	LHS	1
175	446157	LHS	1	568	520238	LHS	1
176	446192	LHS	1	569	520350	LHS	2
177	446245	LHS	1	570	525285	LHS	1
178	446295	LHS	1	571	525320	LHS	1
179	446398	LHS	1	572	525350	LHS	1
180	446424	LHS	1	573	525385	LHS	1
181	446465	LHS	1	574	525425	LHS	1
182	446500	LHS	1	575	525460	LHS	1
183	446539	LHS	1	576	525507	LHS	1
184	446600	LHS	1	577	525547	LHS	1
185	446643	LHS	1	578	525580	LHS	1
186	446702	LHS	1	579	525612	LHS	1
187	446747	LHS	1	580	525690	LHS	1
188	446765	LHS	1	581	525735	LHS	1
189	446788	LHS	1	582	525780	LHS	1
190	446840	LHS	1	583	525835	LHS	1
191	446884	LHS	1	584	525885	LHS	1
192	447000	LHS	1	585	525955	LHS	1
193	447057	LHS	1	586	525980	LHS	1
194	447105	LHS	1	587	525999	LHS	1
195	447160	LHS	1	588	526085	LHS	1
196	449408	RHS	3	589	526130	LHS	1
197	449620	RHS	1	590	526152	LHS	1
198	451208	RHS	2	591	526300	LHS	1
199	454915	LHS	2	592	526399	LHS	1
200	456400	LHS	1	593	526440	LHS	1
201	458080	LHS	1	594	526470	LHS	1
202	459365	LHS	1	595	526502	LHS	1
203	459410	LHS	1	596	526548	LHS	1
204	459460	LHS	1	597	526590	LHS	1
205	459505	LHS	1	598	526625	LHS	1
206	459560	RHS	1	599	526700	LHS	1
207	459610	LHS	1	600	526740	LHS	1
208	459645	LHS	1	601	526765	LHS	1
209	459670	LHS	1	602	526770	LHS	2
210	459705	LHS	1	603	526800	LHS	1
211	459753	LHS	1	604	528110	RHS	1
212	459800	LHS	1	605	528220	RHS	2
213	459830	LHS	1	606	529530	RHS	3
214	459885	LHS	1	607	529685	RHS	2
215	459920	LHS	1	608	530010	RHS	2

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
216	459965	LHS	1	609	530120	RHS	2
217	459995	LHS	1	610	530400	RHS	2
218	460030	LHS	1	611	530802	RHS	2
219	460065	LHS	1	612	532225	RHS	3
220	460190	LHS	1	613	533805	RHS	2
221	460248	LHS	1	614	533965	RHS	2
222	460300	LHS	1	615	534200	RHS	3
223	460360	LHS	1	616	534740	RHS	2
224	460448	RHS	1	617	535060	RHS	2
225	460448	LHS	1	618	535340	RHS	2
226	460460	LHS	1	619	536070	RHS	1
227	460500	LHS	1	620	536108	RHS	1
228	460515	LHS	1	621	536140	RHS	1
229	460570	LHS	1	622	536170	RHS	1
230	460570	RHS	1	623	536210	RHS	1
231	460610	RHS	1	624	536265	RHS	1
232	460664	RHS	1	625	536306	RHS	1
233	460710	RHS	1	626	536351	RHS	1
234	460770	RHS	1	627	536400	RHS	1
235	460815	RHS	1	628	536475	RHS	1
236	460890	LHS	1	629	536515	RHS	1
237	460940	LHS	1	630	536547	RHS	1
238	460990	LHS	1	631	536620	LHS	1
239	461052	RHS	1	632	536625	LHS	1
240	461092	RHS	1	633	536638	LHS	1
241	461130	RHS	1	634	536640	LHS	1
242	461400	RHS	1	635	536680	LHS	1
243	462200	RHS	2	636	536740	LHS	1
244	462245	RHS	1	637	536770	LHS	1
245	469770	RHS	1	638	536815	LHS	1
246	469820	RHS	1	639	536949	RHS	1
247	469850	LHS	1	640	536967	RHS	1
248	469890	LHS	1	641	536990	RHS	1
249	469920	RHS	1	642	537020	RHS	1
250	469970	RHS	2	643	537051	RHS	1
251	469998	LHS	1	644	537125	RHS	1
252	470041	RHS	1	645	537170	RHS	1
253	470094	RHS	1	646	537220	RHS	1
254	470130	RHS	1	647	537255	RHS	1
255	470261	RHS	1	648	537292	RHS	1
256	470325	RHS	1	649	537325	RHS	1
257	470370	RHS	1	650	537410	RHS	1
258	470415	RHS	1	651	537615	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
259	470470	RHS	1	652	537660	LHS	1
260	470540	RHS	1	653	537708	LHS	1
261	470980	RHS	2	654	537740	LHS	1
262	471199	RHS	1	655	537770	LHS	1
263	471720	RHS	1	656	537798	LHS	1
264	471760	RHS	1	657	537825	LHS	1
265	471805	RHS	1	658	537860	LHS	1
266	471855	RHS	1	659	538230	RHS	1
267	471910	RHS	1	660	538425	RHS	1
268	471955	RHS	1	661	538490	RHS	2
269	472010	RHS	1	662	538540	RHS	1
270	472085	RHS	1	663	538875	RHS	2
271	472200	RHS	1	664	539170	RHS	2
272	472261	RHS	1	665	539235	RHS	1
273	472321	RHS	1	666	539460	RHS	2
274	472376	RHS	1	667	540170	RHS	2
275	472402	RHS	1	668	540315	RHS	1
276	472426	RHS	1	669	540460	RHS	1
277	472483	RHS	1	670	540602	RHS	1
278	472537	RHS	1	671	540692	RHS	1
279	472569	RHS	1	672	540790	RHS	2
280	472723	LHS	1	673	541420	RHS	2
281	472779	LHS	1	674	542290	RHS	2
282	472815	LHS	1	675	543142	RHS	1
283	472858	LHS	1	676	543280	RHS	2
284	472890	LHS	1	677	543582	RHS	2
285	472923	LHS	1	678	543943	RHS	2
286	472988	LHS	1	679	544260	RHS	2
287	473011	LHS	1	680	545020	RHS	1
288	473065	RHS	1	681	545030	RHS	2
289	473105	RHS	1	682	545050	RHS	1
290	473145	RHS	1	683	545080	RHS	1
291	473194	RHS	1	684	545115	RHS	1
292	473224	RHS	1	685	545150	RHS	1
293	473294	LHS	1	686	545200	RHS	1
294	473343	LHS	1	687	545230	RHS	1
295	473393	LHS	1	688	545260	RHS	1
296	473548	LHS	1	689	545340	LHS	1
297	473602	RHS	1	690	545387	RHS	1
298	473651	LHS	1	691	545425	RHS	1
299	473698	LHS	1	692	545470	RHS	1
300	473856	LHS	1	693	545495	RHS	1
301	473907	LHS	1	694	545525	RHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
302	473943	LHS	1	695	545575	RHS	1
303	474029	LHS	1	696	545605	RHS	1
304	474076	LHS	1	697	545640	RHS	1
305	474151	LHS	1	698	545670	RHS	1
306	474219	LHS	1	699	545705	RHS	1
307	474255	RHS	1	700	545725	RHS	1
308	474284	LHS	1	701	545755	RHS	1
309	474336	LHS	1	702	545790	RHS	1
310	474367	LHS	1	703	545835	RHS	1
311	474426	LHS	1	704	545875	RHS	1
312	474452	LHS	1	705	545895	RHS	1
313	474482	LHS	1	706	546185	RHS	2
314	474508	LHS	1	707	546295	RHS	1
315	474548	LHS	1	708	546440	RHS	3
316	474715	LHS	1	709	546588	RHS	1
317	474760	LHS	1	710	546750	RHS	2
318	474809	RHS	1	711	547100	RHS	2
319	474868	LHS	1	712	547540	RHS	2
320	474898	LHS	1	713	547775	RHS	1
321	474919	RHS	1	714	547840	RHS	2
322	474972	LHS	1	715	548130	RHS	2
323	474985	LHS	1	716	548250	RHS	2
324	474995	LHS	1	717	548490	RHS	1
325	475006	LHS	1	718	548600	RHS	2
326	475053	RHS	2	719	548820	RHS	3
327	475109	LHS	1	720	549270	RHS	2
328	475153	LHS	1	721	550705	RHS	2
329	475235	LHS	1	722	550980	RHS	3
330	475287	LHS	1	723	553020	RHS	2
331	475289	LHS	1	724	553168	RHS	1
332	475326	RHS	1	725	553340	RHS	2
333	475345	RHS	1	726	553640	RHS	2
334	475360	LHS	1	727	553730	RHS	1
335	475385	LHS	1	728	553815	RHS	1
336	475402	LHS	1	729	553940	RHS	2
337	475432	LHS	1	730	554078	RHS	1
338	475470	LHS	1	731	554170	RHS	2
339	475494	LHS	1	732	554560	RHS	2
340	475550	LHS	1	733	558325	RHS	2
341	475600	LHS	1	734	558328	RHS	2
342	475638	LHS	1	735	558615	RHS	1
343	475667	LHS	1	736	558693	RHS	1
344	475691	LHS	1	737	558725	RHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
345	475762	LHS	1	738	558774	RHS	1
346	475801	LHS	1	739	558810	RHS	1
347	475827	LHS	1	740	558854	RHS	1
348	475879	LHS	1	741	558910	LHS	1
349	475908	LHS	1	742	558950	LHS	1
350	475937	LHS	1	743	558995	LHS	1
351	475965	LHS	1	744	559080	RHS	1
352	476002	LHS	1	745	559108	RHS	1
353	476039	LHS	1	746	559142	RHS	1
354	476108	LHS	1	747	559252	RHS	1
355	476211	RHS	1	748	559290	RHS	1
356	476247	RHS	1	749	559508	RHS	4
357	476269	RHS	1	750	559570	RHS	2
358	476285	LHS	1	751	559575	RHS	2
359	476362	RHS	1	752	559683	RHS	6
360	476396	LHS	1	753	559800	RHS	2
361	476421	LHS	1	754	559812	RHS	2
362	476433	LHS	2	755	559995	LHS	1
363	476497	LHS	1	756	560026	LHS	1
364	476532	RHS	1	757	560060	LHS	1
365	476632	LHS	1	758	560095	LHS	1
366	476662	LHS	1	759	560096	LHS	1
367	476710	LHS	1	760	560132	LHS	1
368	476774	RHS	1	761	560151	LHS	1
369	476816	LHS	1	762	560200	LHS	1
370	476836	RHS	1	763	560238	LHS	1
371	476870	LHS	1	764	560290	LHS	1
372	476920	LHS	1	765	560335	LHS	1
373	477115	LHS	1	766	560360	LHS	1
374	477160	LHS	1	767	560388	LHS	1
375	477188	LHS	1	768	560475	LHS	1
376	477249	LHS	1	769	560515	LHS	2
377	477297	LHS	1	770	560551	LHS	1
378	477341	LHS	1	771	560560	LHS	1
379	477376	LHS	1	772	560590	LHS	1
380	477412	LHS	1	773	560636	LHS	1
381	477463	LHS	1	774	560662	LHS	1
382	477518	LHS	1	775	560680	LHS	1
383	477581	LHS	1	776	560710	LHS	1
384	477650	LHS	1	777	560761	LHS	1
385	477707	LHS	1	778	560826	LHS	1
386	477821	LHS	1	779	560870	LHS	1
387	477868	LHS	1	780	560910	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -3	
Electric Pole					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
388	477899	LHS	1	781	560934	RHS	1
389	477968	LHS	1	782	560980	LHS	1
390	478002	LHS	1	783	561015	LHS	1
391	478039	LHS	1	784	561050	LHS	1
392	478081	LHS	1	785	561080	LHS	1
393	478326	LHS	1				



## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -2	
Telephone post					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
1	433595	RHS	1	232	472261	RHS	1
2	433615	RHS	1	233	472295	RHS	1
3	433654	RHS	1	234	472321	RHS	1
4	433715	RHS	1	235	472348	RHS	1
5	433760	RHS	1	236	472376	RHS	1
6	433798	RHS	1	237	472426	RHS	1
7	433770	RHS	1	238	472456	RHS	1
8	443792	RHS	1	239	472483	RHS	1
9	433821	RHS	1	240	472514	RHS	1
10	433860	RHS	1	241	472536	RHS	1
11	433902	RHS	1	242	472560	RHS	1
12	433926	RHS	1	243	472621	LHS	1
13	433946	RHS	1	244	472662	LHS	1
14	433960	LHS	1	245	472691	LHS	1
15	433978	RHS	1	246	472723	LHS	1
16	434009	RHS	1	247	472817	LHS	1
17	434037	RHS	1	248	472840	LHS	1
18	434069	RHS	1	249	472858	LHS	1
19	434086	RHS	1	250	472890	LHS	1
20	434091	RHS	1	251	472912	LHS	1
21	434111	RHS	1	252	472929	LHS	1
22	434144	RHS	1	253	472950	LHS	1
23	434168	RHS	1	254	472988	LHS	1
24	434197	RHS	1	255	472999	LHS	1
25	434235	RHS	1	256	473022	LHS	1
26	434265	RHS	1	257	473051	LHS	1
27	434290	RHS	1	258	473084	LHS	1
28	434317	RHS	1	259	473116	LHS	1
29	434338	RHS	1	260	473142	LHS	1
30	434353	RHS	1	261	473149	LHS	1
31	434376	RHS	1	262	473180	LHS	1
32	434400	RHS	1	263	473232	LHS	1
33	434431	RHS	1	264	473253	LHS	1
34	434460	RHS	1	265	473307	LHS	1
35	434479	RHS	1	266	473373	LHS	1
36	434500	RHS	1	267	473422	LHS	1
37	434521	RHS	1	268	473462	LHS	1
38	434538	RHS	1	269	473478	LHS	1
39	434564	RHS	1	270	473515	LHS	1
40	434606	RHS	1	271	473534	LHS	1
41	434630	RHS	1	272	473550	LHS	1
42	434657	RHS	1	273	473573	LHS	1
43	434682	RHS	1	274	473583	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -2	
Telephone post					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
44	434700	RHS	1	275	473602	LHS	1
45	434785	RHS	1	276	473632	LHS	1
46	434938	RHS	1	277	473652	LHS	1
47	435141	RHS	1	278	473732	LHS	1
48	435165	RHS	1	279	473776	LHS	1
49	435195	RHS	1	280	473793	LHS	1
50	435228	RHS	1	281	473808	LHS	1
51	435400	RHS	1	282	473856	LHS	1
52	435422	RHS	1	283	473870	LHS	1
53	435456	RHS	1	284	473885	LHS	1
54	435477	RHS	1	285	473899	LHS	1
55	435541	RHS	1	286	473927	LHS	1
56	435564	RHS	1	287	473948	LHS	1
57	435585	RHS	1	288	473970	LHS	1
58	435626	RHS	1	289	474003	LHS	1
59	435650	RHS	1	290	474059	LHS	1
60	435674	RHS	1	291	474076	LHS	1
61	435703	RHS	1	292	474164	LHS	1
62	435738	RHS	1	293	474184	LHS	1
63	435770	RHS	1	294	474205	LHS	1
64	435800	RHS	1	295	474229	LHS	1
65	435826	RHS	1	296	474255	LHS	1
66	435860	RHS	1	297	474270	LHS	1
67	435890	RHS	1	298	474284	LHS	1
68	435914	RHS	2	299	474300	LHS	1
69	435944	RHS	1	300	474313	LHS	1
70	435997	RHS	1	301	474325	LHS	1
71	436022	RHS	1	302	474367	LHS	1
72	436024	RHS	1	303	474382	LHS	1
73	436077	RHS	1	304	474396	LHS	1
74	436103	RHS	1	305	474426	LHS	1
75	436127	RHS	1	306	474452	LHS	1
76	436158	RHS	1	307	474482	LHS	1
77	436177	RHS	1	308	474508	LHS	1
78	436187	RHS	1	309	474563	LHS	1
79	436207	RHS	1	310	474581	LHS	1
80	436234	RHS	1	311	474610	LHS	1
81	436269	RHS	1	312	474630	LHS	1
82	436298	RHS	1	313	474651	LHS	1
83	436330	RHS	1	314	474667	LHS	1
84	436364	RHS	1	315	474691	LHS	1
85	436404	RHS	1	316	474712	LHS	1
86	436437	RHS	1	317	474743	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -2	
Telephone post					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
87	436450	RHS	1	318	474760	LHS	1
88	436480	RHS	1	319	474787	LHS	1
89	436507	RHS	1	320	474827	LHS	1
90	436521	RHS	1	321	474846	LHS	1
91	436553	RHS	1	322	474887	LHS	1
92	436565	RHS	1	323	474897	LHS	1
93	436578	RHS	1	324	474909	LHS	2
94	436602	RHS	1	325	474928	LHS	1
95	436611	RHS	1	326	474942	LHS	1
96	436624	RHS	1	327	474955	LHS	1
97	436650	RHS	1	328	474961	LHS	1
98	436695	RHS	1	329	475030	LHS	1
99	436707	RHS	1	330	475053	LHS	1
100	436712	RHS	1	331	475070	LHS	1
101	436729	RHS	1	332	475091	LHS	1
102	436748	RHS	1	333	475116	LHS	1
103	436770	RHS	1	334	475148	LHS	1
104	436786	RHS	1	335	475164	LHS	1
105	436803	RHS	1	336	475212	LHS	1
106	436831	RHS	1	337	475259	LHS	1
107	436846	RHS	1	338	475274	LHS	1
108	436850	RHS	1	339	475281	LHS	1
109	436868	RHS	1	340	475286	LHS	1
110	436893	RHS	1	341	475300	LHS	1
111	436910	RHS	1	342	475308	LHS	1
112	436936	RHS	2	343	475326	LHS	1
113	436957	RHS	1	344	475332	LHS	1
114	436982	RHS	1	345	475351	LHS	1
115	437009	RHS	1	346	475373	LHS	1
116	437032	RHS	1	347	475398	LHS	1
117	437056	RHS	1	348	475416	LHS	1
118	437083	RHS	1	349	475540	LHS	1
119	437104	RHS	1	350	475573	LHS	1
120	437128	RHS	1	351	475590	LHS	1
121	437159	RHS	1	352	475615	LHS	1
122	437189	RHS	1	353	475627	LHS	1
123	437237	RHS	1	354	475640	LHS	1
124	437263	RHS	1	355	475657	LHS	1
125	437293	RHS	1	356	475685	LHS	1
126	437325	RHS	1	357	475692	LHS	1
127	437350	RHS	1	358	475702	LHS	1
128	437368	RHS	1	359	475710	LHS	1
129	437383	RHS	1	360	475721	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -2	
Telephone post					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
130	437407	RHS	1	361	475737	LHS	1
131	437429	RHS	1	362	475762	LHS	1
132	437443	RHS	1	363	475784	LHS	1
133	437464	RHS	1	364	475827	LHS	1
134	437515	RHS	1	365	475862	LHS	1
135	437580	RHS	1	366	475879	LHS	1
136	437606	RHS	1	367	475893	LHS	1
137	437632	RHS	1	368	475907	LHS	1
138	437696	RHS	1	369	475917	LHS	1
139	437709	RHS	1	370	475936	LHS	1
140	437732	RHS	1	371	475948	LHS	1
141	437770	RHS	1	372	475957	LHS	1
142	437784	RHS	1	373	476002	LHS	1
143	437808	RHS	1	374	476027	LHS	1
144	437826	RHS	1	375	476091	LHS	1
145	437849	RHS	1	376	476109	LHS	1
146	437868	RHS	1	377	476130	LHS	1
147	437928	RHS	1	378	476165	LHS	1
148	439958	RHS	1	379	476187	LHS	1
149	437997	RHS	1	380	476200	LHS	1
150	438008	RHS	1	381	476212	LHS	1
151	438023	RHS	1	382	476232	LHS	1
152	438044	RHS	1	383	476252	LHS	1
153	438067	RHS	1	384	476268	LHS	1
154	439136	RHS	1	385	476287	LHS	1
155	439255	RHS	1	386	476356	LHS	1
156	439286	RHS	1	387	476379	LHS	1
157	439383	RHS	1	388	476421	LHS	1
158	439519	RHS	1	389	476457	LHS	1
159	469670	RHS	1	390	476480	LHS	1
160	469795	RHS	1	391	476506	LHS	1
161	469850	LHS	1	392	476522	LHS	1
162	469900	LHS	1	393	476548	LHS	1
163	469915	RHS	1	394	476567	LHS	1
164	469920	LHS	1	395	476587	LHS	1
165	469945	LHS	1	396	476615	LHS	1
166	470040	RHS	1	397	476633	LHS	1
167	470060	RHS	1	398	476648	LHS	1
168	470101	RHS	1	399	476763	LHS	1
169	470115	RHS	1	400	476778	LHS	1
170	470130	RHS	1	401	476793	LHS	1
171	470155	RHS	1	402	476834	LHS	1
172	470175	RHS	1	403	476855	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -2	
Telephone post					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
173	470200	RHS	1	404	476872	LHS	1
174	470231	RHS	1	405	476892	LHS	1
175	470260	RHS	1	406	476940	LHS	1
176	470294	RHS	1	407	476963	LHS	1
177	470325	RHS	1	408	477067	LHS	1
178	470355	RHS	1	409	477090	LHS	1
179	470370	RHS	1	410	477138	LHS	1
180	470398	RHS	1	411	477165	LHS	1
181	470416	RHS	1	412	477180	LHS	1
182	470445	RHS	1	413	477261	LHS	1
183	470471	RHS	1	414	477290	LHS	1
184	470490	RHS	1	415	477303	LHS	1
185	470545	RHS	1	416	477323	LHS	1
186	470600	RHS	1	417	477342	LHS	1
187	470630	RHS	1	418	477376	LHS	1
188	470685	RHS	1	419	477393	LHS	1
189	470705	RHS	1	420	477431	LHS	1
190	470740	RHS	1	421	477455	LHS	1
191	470760	RHS	1	422	477514	LHS	1
192	470800	RHS	1	423	477552	LHS	1
193	470830	RHS	1	424	477676	LHS	1
194	470860	RHS	1	425	477787	LHS	1
195	470915	RHS	1	426	477900	LHS	1
196	470955	RHS	1	427	477953	LHS	1
197	470970	RHS	1	428	477997	LHS	1
198	470990	RHS	1	429	478143	LHS	1
199	471010	RHS	1	430	478189	LHS	1
200	471050	RHS	1	431	478315	LHS	1
201	471090	RHS	1	432	478379	LHS	1
202	471120	RHS	1	433	480693	RHS	1
203	471160	RHS	1	434	481317	RHS	1
204	471180	RHS	1	435	481516	RHS	1
205	471290	RHS	1	436	560450	LHS	1
206	471310	RHS	1	437	560485	LHS	1
207	471370	RHS	1	438	560594	LHS	1
208	471440	RHS	1	439	560606	LHS	1
209	471460	RHS	1	440	560623	LHS	1
210	471500	RHS	1	441	560636	LHS	1
211	471530	RHS	1	442	560649	LHS	1
212	471600	RHS	1	443	560690	LHS	1
213	471620	RHS	1	444	560710	LHS	1
214	471690	RHS	1	445	560730	LHS	1
215	471710	RHS	1	446	560760	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -2	
Telephone post					Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
216	471748	RHS	1	447	560770	LHS	1
217	471775	RHS	1	448	560801	LHS	1
218	471805	RHS	1	449	560827	LHS	1
219	471875	RHS	1	450	560840	LHS	1
220	471930	RHS	1	451	560858	LHS	1
221	471995	RHS	1	452	560890	LHS	1
222	472010	RHS	1	453	560930	LHS	1
223	472036	RHS	1	454	560952	LHS	1
224	472070	RHS	1	455	560970	LHS	1
225	472090	RHS	1	456	560995	LHS	1
226	472104	RHS	1	457	561060	LHS	1
227	472118	RHS	1	458	561080	LHS	1
228	472147	RHS	1	459	561115	LHS	1
229	472189	RHS	1	460	561133	LHS	1
230	472200	RHS	1	461	561150	LHS	1
231	472236	RHS	1	462	561160	LHS	1
				463	561174	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00						Appendix - IIH -1	
Cable post				Dt of Survey :20.08.12 to 26.09.12			
Sr.No.	Chainage	Side	Remarks	Sr.No.	Chainage	Side	Remarks
1	431655	RHS	1	45	467865	RHS	1
2	431697	RHS	1	46	468030	RHS	1
3	431730	RHS	1	47	468310	RHS	1
4	431800	RHS	1	48	468380	RHS	1
5	432142	RHS	1	49	468705	RHS	1
6	432680	RHS	2	50	468795	RHS	1
7	433305	RHS	1	51	468850	RHS	1
8	445616	RHS	1	52	469190	RHS	1
9	446950	RHS	1	53	469225	RHS	1
10	461180	RHS	1	54	469360	RHS	1
11	461490	RHS	1	55	469410	RHS	1
12	461520	RHS	1	56	469530	RHS	1
13	461610	RHS	1	57	469575	RHS	1
14	461705	RHS	1	58	469610	RHS	1
15	461890	RHS	1	59	512527	LHS	1
16	461908	RHS	1	60	512857	LHS	1
17	462110	RHS	1	61	512928	LHS	1
18	462160	RHS	1	62	512983	LHS	1
19	462180	RHS	1	63	513036	LHS	1
20	462325	RHS	1	64	513070	LHS	1
21	462370	RHS	1	65	513123	LHS	1
22	462465	RHS	1	66	515480	LHS	1
23	462594	RHS	1	67	515531	LHS	1
24	462615	RHS	1	68	515575	LHS	1
25	462650	RHS	1	69	515594	LHS	1
26	462860	RHS	1	70	515620	LHS	1
27	462980	RHS	1	71	515686	LHS	1
28	463025	RHS	1	72	515720	LHS	1
29	463050	RHS	1	73	515768	LHS	1
30	463330	RHS	1	74	515824	LHS	1
31	463370	RHS	1	75	516460	LHS	1
32	463445	RHS	1	76	516494	LHS	1
33	463555	RHS	1	77	516594	LHS	1
34	463630	RHS	1	78	516644	LHS	1
35	463804	RHS	1	79	516761	LHS	1
36	464115	RHS	1	80	516891	LHS	1
37	464454	RHS	1	81	516979	LHS	1
38	464794	RHS	1	82	517117	LHS	1
39	464920	RHS	1	83	517420	LHS	1
40	465070	RHS	1	84	517642	LHS	1
41	466390	RHS	1	85	517989	LHS	1
42	466860	RHS	1	86	518035	LHS	1
43	467045	RHS	1	87	518324	LHS	1
44	467547	RHS	1	88	518363	LHS	1

## DETAILS OF UTILITY

Road Name : NH 54 FROM KM 431+00 TO KM 562+00			Appendix - IIH -4	
Water Pipe		Dt of Survey :20.08.12 to 26.09.12		
Sr.No.	Chainage	Remarks	Side	Remarks
1	433+470		LHS	
2	433+570		RHS	
3	433+717		RHS	
4	437+330	70	RHS	
5	438+900	68	RHS	
6	445+530	75	RHS	
7	445+900	135	RHS	
8	446+210	69	LHS	
9	460+115	24	RHS	
10	461+000	74	LHS	
11	461+510	50	RHS	1 nos
12	462+040	42	RHS	
13	462+760	270	RHS	
14	463+600	65	RHS	
15	470+971	10	RHS	
16	471+110	50	RHS	
17	473+0212	22	RHS	
18	473+082	10	RHS	
19	473+376	21	LHS	1no
20	473+647	327	LHS	
21	474+294	53	LHS	
22	497+794	202	LHS	
23	498+315	14	LHS	
24	500+959	42	RHS	
25	501+002	98	LHS	
26	501+332	43	RHS	
27	501+334	75	LHS	
28	505+772	83	LHS	
29	506+219	81	LHS	
30	506+334	127	LHS	
31	507+851	20	LHS	
32	507+989	273	LHS	



NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
1	483403.805	2515409.143	585.049	GPS.M1	431+080	431+080
2	483408.600	2515381.287	586.026	GPS.M2	431+100	431+100
3	483464.895	2515367.957	588.461	PIL-A1	431+112	431+150
4	483491.023	2515358.564	588.930	PIL-A2	431+140	431+180
5	484002.080	2515056.394	607.248	PIL-A3	431+790	431+830
6	484140.668	2514855.835	616.156	PIL-A5	432+082	432+120
7	484185.242	2514833.148	617.539	PIL-A6	432+130	432+170
8	484138.174	2514476.480	635.591	PIL-A7	432+695	432+775
9	484098.631	2514451.993	636.969	PIL-A8	432+740	432+822
10	483631.180	2514183.041	652.876	PIL-A9	433+348	433+430
11	483600.899	2514187.373	653.509	PIL-A10	433+380	433+463
12	483425.181	2513921.438	654.844	PIL-A11	433+908	434+008
13	483412.021	2513859.373	654.364	PIL-A12	433+970	434+070
14	483634.093	2513589.038	659.327	PIL-A13	434+354	434+470
15	483642.912	2513416.048	666.843	PIL-A14	434+542	434+660
16	483628.353	2513329.109	671.070	GPS-M3	434+620	434+740
17	483623.348	2513295.847	672.575	GPS-M4	434+654	434+783
18	483528.531	2513259.197	676.146	PIL-A15	434+780	434+898
19	483501.460	2513204.886	676.605	PIL-A16	434+835	434+955
20	483407.183	2513106.395	682.052	PIL-A17	435+004	435+122
21	483370.614	2513081.280	683.107	PIL-A18	435+044	435+164
22	483371.970	2512786.922	699.132	PIL-A19	435+539	435+700
23	483414.512	2512732.679	701.630	PIL-A20	435+605	435+758
24	483334.103	2512306.365	717.524	PIL-A21	436+206	436+390
25	483325.645	2512277.408	718.405	PIL-A22	436+240	436+420
26	483490.267	2512065.710	728.700	PIL-A23	436+663	436+873
27	483499.382	2512002.851	730.277	PIL-A24	436+725	436+935
28	483623.187	2511933.904	732.617	PIL-A25	436+865	437+080
29	483646.591	2511916.033	734.051	PIL-A26	436+893	437+110
30	483744.093	2511521.954	750.209	PIL-A27	437+486	437+716
31	483733.448	2511457.732	751.969	PIL-A28	437+543	437+790
32	483771.168	2511388.639	753.288	GPS-M5	437+620	437+862
33	483748.488	511348.005	755.261	GPS-M6	437+700	473+942
34	483543.576	2511416.892	762.839	PIL-A29	437+937	438+190
35	483497.338	2511434.984	762.932	PIL-A30	437+982	438+239
36	483341.265	2511336.138	777.644	PIL-A31	438+440	438+743
37	483417.302	2511263.387	781.681	PIL-A32	438+540	438+844
38	483573.962	2511220.546	787.920	PIL-A33	438+720	439+040
39	483615.552	2511209.461	788.037	PIL-A34	439+095	438+766
40	483726.666	2510807.410	803.996	PIL-A35	439+322	439+660
41	483688.867	2510837.883	805.844	PIL-A36	439+360	439+710
42	483494.203	2510786.626	815.709	PIL-A37	439+684	440+054
43	483458.658	2510818.143	817.359	PIL-A38	439+705	440+105
44	483278.313	2510510.344	832.700	PIL-A39	440+107	440+593
45	483283.359	2510462.098	832.600	PIL-A40	440+157	440+660
46	483475.874	2510531.964	843.615	PIL-A41	440+475	441+042
47	483499.670	2510549.541	844.305	PIL-A42	440+512	441+080

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
48	483743.499	2510289.763	856.686	PIL-A43	440+915	441+500
49	483832.875	2510277.187	858.774	PIL-A44	440+994	441+590
50	483713.793	2510111.465	863.219	GPS-M7	441+260	441+913
51	483720.235	2510070.171	864.737	GPS-M8	441+293	441+962
52	483744.847	2509995.218	867.008	PIL-45	441+375	442+043
53	483766.182	2509970.536	867.580	PIL-A46	441+400	442+075
54	483597.854	2509711.984	879.338	PIL-A47	441+907	442+600
55	483581.089	2509667.651	880.753	PIL-A48	441+950	442+645
56	483695.148	2509389.850	885.740	PIL-A49	442+262	442+970
57	483708.374	2509357.547	885.514	PIL-A50	442+300	443+010
58	483842.077	2508988.782	892.709	PIL-A51	442+762	443+480
59	483852.847	2508942.718	892.606	PIL-A52	442+818	443+532
60	483840.114	2508557.794	904.153	PIL-A53	443+280	444+000
61	483847.093	2508521.696	904.430	PIL-A54	443+317	444+036
62	483895.938	2508061.072	917.808	PIL-A55	443+860	444+580
63	483859.857	2508046.575	919.507	PIL-A56	443+895	444+620
64	483923.059	2507854.481	928.729	PIL-B1	444+170	444+910
65	483958.134	2507854.070	928.997	GPS-M10	444+200	444+940
66	484013.124	2507847.713	931.202	PIL-A57	444+270	445+010
67	484025.074	2507829.998	931.563	PIL-A58	444+290	445+030
68	483932.709	2507739.874	938.226	PIL-A60	444+390	445+130
69	483942.389	2507708.193	938.053	PIL-A59	444+420	445+160
70	484350.712	2507009.169	933.660	PIL-A61	445+250	445+995
71	484378.840	2506969.534	936.240	PIL-A62	445+300	446+045
72	484765.136	2506865.703	921.529	PIL-A63	445+842	446+580
73	484752.157	2506823.855	921.405	PIL-A64	445+885	446+620
74	484647.954	2506620.118	917.987	PIL-A66	446+170	447+005
75	484917.595	2506605.614	915.662	PIL-A67	446+700	447+550
76	484982.537	2506572.037	915.593	PIL-A68	446+750	447+610
77	484894.830	2506406.694	915.487	GPS-M11	446+930	447+820
78	484887.216	2506361.456	915.972	GPS-M12	446+972	447+862
79	484850.894	2506249.927	915.941	PIL-A69	447+102	447+992
80	484875.766	2506232.559	915.203	PIL-A70	447+140	448+030
81	485214.789	2506228.934	913.551	PIL-A71	447+710	448+637
82	485245.238	2506263.069	914.348	PIL-A72	447+740	448+680
83	485434.615	2506208.486	921.061	PIL-A73	448+076	449+038
84	485405.560	2506177.203	921.154	PIL-A74	448+116	449+078
85	485153.076	2505775.978	922.222	PIL-A75	448+620	449+610
86	485088.922	2505759.623	922.955	PIL-A76	448+670	449+675
87	484857.128	2505735.483	929.934	PIL-A77	448+910	449+930
88	484816.176	2505761.786	931.230	PIL-A78	448+944	449+974
89	484619.272	2505402.479	955.109	PIL-A79	449+512	450+604
90	484627.502	2505363.114	955.825	PIL-A80	449+550	450+645
91	484848.155	2505176.654	947.794	PIL-A81	449+850	450+950
92	484850.000	2505136.918	945.963	PIL-A82	449+890	450+988
93	485004.680	2505027.848	939.892	GPS-M13	450+090	451+205
94	484978.391	2504987.656	937.107	GPS-M14	450+120	451+250

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
95	484908.723	2504855.415	927.675	PIL-A83	450+364	451+493
96	484941.076	2504816.339	926.669	PIL-A84	450+414	451+541
97	485006.096	2504393.118	912.104	PIL-A85	450+868	452+030
98	485070.059	2504325.547	914.451	PIL-A86	450+960	452+122
99	485288.534	2504082.278	926.960	PIL-A87	451+305	452+493
100	485308.919	2504026.418	928.128	PIL-A88	451+357	452+550
101	485685.892	2504073.843	939.232	PIL-A89	451+865	453+062
102	485645.146	2504120.406	940.897	PIL-A90	451+935	453+125
103	485925.597	2504207.336	955.281	PIL-A91	452+377	453+598
104	485933.659	2504235.042	955.492	PIL-A92	452+405	453+625
105	485888.783	2504451.368	963.758	GPS-M15	452+600	453+850
106	485954.173	2504457.040	966.194	GPS-M16	452+640	453+916
107	486087.138	2504549.146	969.080	PIL-A93	452+790	454+090
108	486112.006	2504550.018	969.560	PIL-A94	452+805	454+105
109	486377.675	2504622.203	979.810	PIL-A95	453+220	454+562
110	486408.869	2504660.758	980.548	PIL-A96	453+270	454+612
111	486532.479	2504623.736	987.961	PIL-A97	453+644	455+065
112	486485.205	2504561.324	987.802	PIL-A98	453+720	455+090
113	486656.174	2504329.424	988.431	PIL-A99	454+182	455+667
114	486604.690	2504289.947	988.640	PIL-A100	454+250	455+733
115	486673.107	2504162.192	9888.497	PIL-A101	454+504	455+980
116	486745.570	2504165.035	9888.728	PIL-A102	454+575	456+050
117	486791.934	2503941.148	989.721	PIL-A103	454+860	456+385
118	486768.322	2503926.989	989.578	PIL-A104	454+870	456+405
119	486454.691	2503869.005	995.848	PIL-A105	455+450	457+020
120	486458.124	2503798.376	998.122	PIL-A106	455+515	457+090
121	486427.858	2503731.540	1000.856	GPS-M17	455+600	457+185
122	486449.021	2503677.090	1002.244	GPS-M18	455+666	457+248
123	486472.038	2503517.129	1010.556	PIL-A107	455+880	457+470
124	486441.364	2503478.456	1012.545	PIL-A108	455+934	457+523
125	486686.024	2503250.831	1035.931	PIL-A109	456+323	458+040
126	486680.149	2503191.717	1038.619	PIL-A110	456+380	458+100
127	486531.432	2503016.663	1056.924	PIL-A111	456+620	458+380
128	486494.759	2502982.996	1060.356	PIL-A112	456+665	458+425
129	486481.474	2502573.886	1080.748	PIL-A113	457+185	459+030
130	486488.861	2502507.621	1083.437	PIL-A114	457+250	459+090
131	486648.528	2502158.005	1098.008	PIL-A115	457+761	459+598
132	486701.818	2502157.962	1099.906	PIL-A116	457+810	459+648
133	486715.734	2502098.932	1102.129	GPS-M19	457+862	459+710
134	486661.991	2502057.730	1103.534	GPS-M20	457+930	459+780
135	486718.213	2501755.138	1116.111	PIL-A117	458+330	460+190
136	486732.174	2501720.094	115.393	PIL-A118	458+360	460+220
137	486880.697	2501341.011	1105.708	PIL-A119	458+790	460+660
138	486879.217	2501313.418	1104.801	PIL-A120	458+820	460+688
139	486919.261	2501065.548	1094.686	PIL-A121	459+090	460+955
140	486944.911	2501010.233	1094.633	PIL-A122	459+152	461+018
141	487011.702	2500508.756	1078.207	PIL-A123	459+696	461+562

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
142	487020.902	2500450.150	1076.719	PIL-A124	459+754	461+623
143	487059.965	2500017.319	1065.670	PIL-A125	460+250	462+112
144	487015.406	2499979.845	1063.155	PIL-A126	460+304	462+170
145	487007.544	2499953.533	1062.195	PIL-A14	460+328	462+198
146	487012.441	2499566.727	1045.645	PIL-A127	460+740	462+620
147	487046.644	2499476.314	1044.834	GPS-M21	460+855	462+742
148	487037.764	2499424.720	1043.092	GPS-M22	460+904	462+790
149	487031.902	2499386.044	1042.019	PIL-A129	460+942	462+830
150	487024.132	2499333.497	1039.956	PIL-A130	461+000	462+880
151	486909.079	2498880.810	1024.401	PIL-A131	461+470	463+402
152	486930.103	2498858.237	1024.058	PIL-A132	461+500	463+425
153	486716.947	2498563.795	1012.007	PIL-A133	461+985	463+952
154	486709.856	2498555.267	1011.596	PIL-A134	461+998	463+960
155	486589.396	2498415.440	1006.535	PIL-BPL	462+180	464+160
156	486522.199	2498249.659	1001.890	PIL-465	462+388	464+380
157	486497.359	2498189.809	1000.289	PIL-A135	462+465	464+452
158	486472.218	2498161.074	998.914	PIL-A136	462+505	464+490
159	486339.344	2497962.103	994.876	PIL-BRO	462+770	464+762
160	486239.246	2497889.217	989.677	PIL-A137	462+790	464+940
161	486297.683	2497876.590	988.859	PIL-A138	462+810	465+000
162	486411.125	2497858.055	987.204	BPL-200	462+850	465+120
163	486569.735	2497814.430	986.920	BPL-400	463+015	465+288
164	486650.372	2497751.254	985.204	BPL-600	463+130	465+400
165	486624.136	2497579.311	980.710	PIL-A139	463+325	465+590
166	486619.070	2497545.247	980.643	BPL-800	463+345	465+619
167	486617.834	2497544.012	980.221	PIL-A140	463+346	465+620
168	486704.588	2497390.119	976.759	PIL-A141	463+540	465+818
169	486727.233	2497361.860	975.900	PIL-A142	463+575	465+852
170	486729.790	2497320.394	973.875	GPS-M23	463+624	465+902
171	486718.309	2497288.869	972.339	GPS-M24	463+660	465+935
172	486661.459	2497188.406	969.300	P-BRO200	463+780	466+054
173	486694.001	2496977.216	963.509	P-BRO400	464+035	466+323
174	486704.596	2496905.915	960.738	PIL-A143	464+117	466+400
175	486685.210	2496858.665	960.323	PIL-A144	464+162	466+450
176	486672.416	2496762.237	958.877	P-BRO600	464+270	466+555
177	486604.529	2496643.163	954.484	P-BRO-800	464+380	466+752
178	486728.777	2496579.259	952.491	PIL-A145	464+510	466+922
179	486739.602	2496559.421	951.806	PIL-A146	464+525	466+948
180	486902.060	2496460.488	945.071	P-BRO-200	464+714	467+152
181	486967.370	2496220.920	936.120	PIL-A147	464+975	467+412
182	487017.274	2496216.568	934.596	PIL-A148	465+015	467+416
183	487064.700	2496162.881	933.017	P-BRO-600	465+096	467+550
184	487159.093	2496059.941	925.642	P-BRO-800	465+295	467+752
185	487152.404	2495928.046	920.215	PIL-B1	465+410	467+900
186	487200.120	2495906.659	918.748	PIL-B2	465+452	467+954
187	487517.678	2495769.244	907.870	PIL-B3	465+900	468+412
188	487508.101	2495724.105	906.516	PIL-B4	465+942	468+458

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
189	487458.587	2495378.912	894.679	PIL-B5	466+322	468+804
190	487465.708	2495321.825	892.482	PIL-B6	466+382	468+914
191	487254.915	2495230.509	884.136	PIL-B7	466+650	469+190
192	487249.711	2495156.278	882.211	PIL-B8	466+705	469+260
193	487336.035	2495105.115	878.526	GPS-M25	466+805	469+362
194	487352.590	2495072.333	878.234	GPS-M26	466+840	469+400
195	487512.054	2494561.645	853.303	PIL-B11	467+660	470+230
196	487483.774	2494543.938	852.023	PIL-B12	467+702	470+260
197	87621.415	2494362.484	835.345	PIL-B13	468+104	470+700
198	487659.042	2494357.481	832.711	PIL-B14	468+140	470+736
199	487815.660	2493967.232	809.089	PIL-B15	468+622	471+245
200	487783.999	2493941.617	810.177	PIL-B16	468+660	471+290
201	487691.261	2493595.838	795.031	PIL-B17	469+025	471+780
202	487714.728	2493586.621	794.526	PIL-B18	469+042	471+803
203	487824.452	2493119.383	776.762	PIL-B19	469+590	472+362
204	487869.060	2493098.656	775.275	PIL-B20	469+640	472+412
205	487983.224	2492824.599	769.953	PIL-B21	469+954	472+722
206	487978.006	2492767.887	768.312	PIL-B22	470+010	472+780
207	488104.351	2492538.579	759.810	GPS-M27	470+290	473+062
208	488134.161	2492530.127	759.979	GPS-M28	470+324	473+094
209	488311.941	2492462.390	764.916	PIL-B25	470+520	473+290
210	488353.861	2492456.804	767.394	PIL-B27	470+560	473+332
211	488597.012	2492358.398	773.487	PIL-D1	470+852	473+625
212	488620.650	2492348.835	773.308	PIL-D2	470+880	473+655
213	488864.130	2492208.680	774.152	PIL-M3	471+198	474+000
214	488923.602	2492192.355	775.454	PIL-M4	471+258	474+072
215	489266.845	2491851.830	788.919	PIL-D5	471+790	474+600
216	489293.436	2491839.119	789.727	PIL-D6	471+820	474+630
217	489474.025	2491880.298	796.584	PIL-D7	472+134	474+955
218	489524.937	2491869.310	797.888	PIL-D8	472+180	475+004
219	489559.467	2491639.743	794.776	PIL-D9	472+550	475+370
220	489536.290	2491585.781	794.076	PIL-D10	472+609	475+430
221	489509.515	2491422.962	797.421	PIL-D11	472+778	475+600
222	489508.952	2491376.468	798.227	PIL-D12	472+828	475+650
223	489525.051	2491149.041	805.077	PIL-D12	473+075	475+897
224	489485.106	2491141.423	804.884	PIL-D13	473+115	475+935
225	489101.775	2490774.187	828.165	PIL-D15	473+780	476+620
226	489077.696	2490736.090	831.656	PIL-D16	473+822	476+660
227	489009.702	2490585.723	846.560	PIL-D17	474+016	476+857
228	488964.951	2490537.198	850.249	PIL-D18	474+080	476+920
229	488936.287	2489950.150	878.560	PIL-D20	474+690	477+535
230	488923.471	2489887.264	876.285	PIL-D19	474+754	477+600
231	488864.107	2489598.679	868.937	PIL-D21	475+080	477+920
232	488890.302	2489524.631	869.410	PIL-D22	475+150	477+998
233	488766.364	2488998.296	855.657	PIL-D23	475+722	478+570
234	488777.470	2488941.907	857.499	PIL-D24	475+775	478+625
235	488834.785	2488556.685	875.319	PIL-D25	476+312	479+170

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
236	488850.976	2488515.758	876.297	PIL-D26	476+350	479+220
237	489057.433	2488317.594	886.718	PIL-D28	476+690	479+560
238	489039.848	2488275.268	887.548	PIL-D28	476+732	479+610
239	488971.171	2487993.373	898.285	PIL-D29	477+080	479+960
240	488941.557	2487967.391	898.730	PIL-D30	477+130	480+005
241	488814.814	2487647.984	910.238	PIL-D31	477+700	480+580
242	488816.343	2487598.250	911.475	PIL-D32	477+750	480+635
243	488709.385	2487016.186	927.215	PIL-D33	478+400	481+280
244	488685.791	2486977.911	928.747	PIL-D34	478+450	481+330
245	488556.302	2486852.653	931.834	GPS-M31	478+630	481+510
246	488534.287	2486819.888	932.534	GPS-M32	478+650	481+552
247	488586.892	2486781.700	934.040	PIL-D35	478+700	481+614
248	488505.288	2486257.130	943.542	PIL-D37	479+350	482+280
249	488465.391	2486197.641	944.197	PIL-D38	479+420	482+350
250	488365.457	2485998.895	949.639	PIL-D39	479+660	482+604
251	488446.175	2485965.915	953.313	PIL-D40	479+745	482+690
252	488616.741	2485633.378	967.719	PIL-D41	480+254	483+212
253	488607.722	2485551.094	968.863	PIL-D42	480+348	483+307
254	488499.630	2485301.527	977.692	PIL-D43	480+650	483+606
255	488486.814	2485234.326	977.163	PIL-D44	480+720	483+679
256	488374.572	2484827.887	964.805	PIL-D45	481+250	484+222
257	488385.637	2484793.731	963.930	PIL-D46	481+280	484+260
258	488371.840	2484683.829	961.200	GPS-M2	481+393	484+373
259	488374.007	2484635.137	959.846	GPS-M1	481+435	484+415
260	488340.373	2483979.156	938.348	PIL-E2	482+183	485+183
261	488357.463	2483946.781	936.665	PIL-E1	482+216	485+210
262	488645.308	2483698.010	933.927	PIL-E3	482+620	485+622
263	488687.635	2483655.027	932.643	PIL-E4	482+680	485+682
264	488997.515	2483593.580	921.393	PIL-E5	483+024	486+030
265	489067.008	2483553.768	918.139	PIL-E6	483+100	486+105
266	489299.058	2483337.459	902.441	PIL-E8	483+544	486+585
267	489409.362	2483425.282	889.152	PIL-E9	483+937	487+000
268	489387.838	2483460.733	887.911	PIL-E910	483+975	487+037
269	489376.490	2483696.622	872.718	PIL-E11	484+250	487+397
270	489410.173	2483717.153	869.587	PIL-E12	484+277	487+420
271	489327.496	2483845.504	860.857	GPS-M33T	484+464	487+648
272	489359.921	2483880.169	859.277	GPS-M34	484+510	487+695
273	489540.151	2483996.587	848.468	PIL-E13	484+810	488+012
274	489574.293	2484019.922	847.088	PIL-E14	484+834	488+048
275	489841.433	2484158.159	832.208	PIL-E15	485+292	488+520
276	489877.822	2484192.904	830.873	PIL-E16	485+335	488+565
277	490257.798	2484178.737	818.829	PIL-E17	485+748	488+993
278	490732.064	2484211.433	799.994	PIL-E19	486+302	489+550
279	490780.601	2484228.022	797.488	PIL-E20	486+348	489+600
280	491110.070	2484280.714	784.927	PIL-E21	486+740	490+000
281	491165.466	2484277.588	783.571	PIL-E22	486+796	490+052
282	491554.255	2484506.555	767.616	PIL-E23	487+270	490+524

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
283	491610.993	2484518.873	764.628	PIL-E24	487+326	490+585
284	491844.944	2484642.671	756.780	GPS-M35	487+600	490+854
285	491873.418	2484694.639	755.418	GPS-M36	487+658	490+912
286	491952.739	2484716.520	752.735	PIL-E25	487+740	491+000
287	491967.485	2484750.000	751.562	PIL-E26	487+782	491+040
288	492311.409	2484978.209	736.662	PIL-E27	488+190	491+490
289	492320.497	2484932.656	735.250	PIL-E28	488+215	491+538
290	492028.391	2484612.171	717.468	PIL-E29	488+730	492+070
291	491964.206	2484571.748	714.014	PIL-E30	488+816	492+152
292	491825.582	2484471.501	707.182	GPS-M37	488+995	492+345
293	491811.209	2484417.384	705.114	GPS-M38	489+062	492+410
294	491757.431	2484212.177	696.246	PIL-E31	489+288	492+642
295	491765.563	2484149.957	693.838	PIL-E32	489+352	492+700
296	491783.069	2483842.264	680.907	PIL-E33	489+668	493+020
297	491789.140	2483784.760	681.031	PIL-E34	489+726	493+070
298	491869.601	2483382.489	659.630	PIL-E35	490+200	493+558
299	491876.883	2483335.300	657.007	PIL-E36	490+240	493+607
300	491601.184	2483187.850	639.262	PIL-E37	490+637	494+015
301	491594.866	2483142.756	637.934	PIL-E38	490+688	494+65
302	491474.313	2482848.277	619.609	PIL-E39	491+100	494+515
303	491467.499	2482783.050	617.017	PIL-E40	491+163	494+580
304	491742.136	2482502.341	600.091	PIL-E39	491+583	495+015
305	491711.361	2482435.485	597.275	PIL-E40	491+654	495+090
306	491866.929	491866.929	579.116	PIL-E43	492+185	495+622
307	491930.658	2482158.805	577.321	PIL-E44	492+250	495+688
308	492280.292	2481943.236	554.897	GPS-M39	492+824	496+295
309	492313.070	2481950.747	553.572	GPS-M40	492+870	496+332
310	492435.033	2481981.832	548.372	PIL-E45	493+000	496+458
311	492507.567	2481969.884	546.979	PIL-E46	493+066	496+530
312	492838.599	2481999.836	530.847	PIL-E47	493+528	497+005
313	492830.929	2481932.325	528.183	PIL-E48	493+600	497+080
314	492824.264	2481484.795	511.267	P-PIL	494+070	497+550
315	492810.378	2481445.792	510.339	P-PIL	494+100	497+590
316	492917.518	2481278.191	495.919	PIL-E51	494+444	497+970
317	492990.805	2481255.190	495.095	PIL-E52	494+520	498+052
318	493342.960	2480930.904	475.858	PIL-E54	495+040	498+595
319	493223.149	2480623.885	462.142	PIL-E55	495+438	498+988
320	493284.381	2480600.741	460.429	PIL-E56	495+500	499+053
321	493399.730	2480520.302	451.119	GPS-M41	495+656	499+243
322	493424.217	2480475.624	447.715	GPS-M42	495+708	499+290
323	493508.147	2480370.620	441.729	P-PILL	495+840	499+424
324	493506.098	2480304.578	439.008	P-PILL	495+900	499+490
325	493571.571	2479932.753	421.180	PIL-E57	496+350	499+954
326	493602.215	2479869.116	419.404	PIL-E58	496+418	500+020
327	493674.490	2479513.318	400.315	PIL-E59	496+860	500+504
328	493709.205	2479457.350	397.280	PIL-E60	496+924	500+570
329	493844.347	2479110.689	380.919	PIL-E61	497+322	500+972

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
330	493871.435	2479128.632	380.146	PIL-E62	497+370	501+010
331	494167.876	2479345.025	364.164	PIL-E63	497+747	501+390
332	494234.408	2479348.519	362.400	PIL-E64	497+805	501+454
333	494228.836	2478976.767	340.295	GPS-M43	498+204	501+852
334	494231.363	2478937.924	337.921	GPS-M44	498+244	501+900
335	494280.575	2478902.010	333.423	PIL-E65	498+360	502+004
336	494275.466	2478938.093	332.095	PIL-E66	498+400	502+042
337	494525.196	2479135.288	315.539	PIL-E67	498+860	502+500
338	494553.280	2479128.921	313.043	PIL-E68	498+895	502+532
339	494777.409	2478982.788	290.772	PIL-E69	499+277	502+926
340	494831.439	2478989.438	288.579	PIL-E70	499+330	502+980
341	494668.717	2478730.575	271.680	PIL-E71	499+735	503+396
342	494625.319	2478715.549	268.736	PIL-E72	499+771	503+440
343	494833.597	2478314.075	248.133	PIL-E73	500+290	503+953
344	494862.685	2478302.591	247.117	PIL-E74	500+320	503+980
345	494972.649	2478205.269	234.126	PIL-E75	500+607	504+262
346	494992.497	2478267.338	232.881	PIL-E76	500+670	504+330
347	495091.540	2478069.346	217.811	GPS-M45	500+980	504+640
348	495132.034	2478037.490	214.966	GPS-M46	501+028	504+690
349	495309.535	2477925.588	203.798	PIL-E77	501+248	504+910
350	495342.363	2477887.591	201.494	PIL-E78	501+300	504+960
351	495543.628	2477637.632	185.726	PIL-E77	501+644	505+312
352	495574.948	2477597.981	183.674	PIL-E78	501+693	505+362
353	496024.006	2477303.919	161.754	PIL-E79	502+260	505+930
354	496064.205	2477294.312	161.388	PIL-E80	502+297	505+968
355	496419.280	2477196.193	150.306	PIL-E81	502+680	506+355
356	496481.101	2477195.267	149.716	PIL-E82	502+740	506+415
357	496681.595	2477453.206	147.564	PIL-G1	503+280	506+960
358	496652.222	2477475.640	147.984	PIL-G2	503+310	506+990
359	496407.796	2477556.996	145.183	PIL-G3	503+600	507+280
360	496374.479	2477577.095	145.848	PIL-G4	503+640	507+318
361	495857.945	2477819.068	167.508	PIL-G5	504+210	507+893
362	495815.042	2477875.621	169.281	PIL-G6	504+280	507+962
363	495735.426	2477969.629	174.355	GPS-M47	504+404	508+090
364	495730.495	2478007.097	174.802	GPS-M48	504+438	508+120
365	495611.700	2478376.658	184.294	PIL-G7	504+840	508+525
366	495619.164	2478432.524	187.915	PIL-G8	504+885	508+580
367	495572.003	2478731.535	195.568	PIL-G9	505+200	508+895
368	495595.335	2479020.555	203.359	PIL-G11	505+544	509+282
369	495611.343	2479081.964	204.935	PIL-G12	505+607	509+346
370	495361.728	2479400.360	215.370	PIL-G13	506+155	509+907
371	495325.572	2479429.222	215.773	PIL-G14	506+208	509+955
372	495070.541	2479775.646	220.987	PIL-G15	506+657	510+412
373	495049.336	2479823.127	220.604	PIL-G16	506+710	510+470
374	495068.777	2480025.004	226.021	GPS-M49	506+934	510+700
375	495108.011	2480066.443	226.793	GPS-M50	506+986	510+754
376	495169.634	2480201.717	230.586	PIL-G17	507+144	510+910



NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
377	495168.119	2480238.489	231.265	PIL-G18	507+180	510+946
378	495319.725	2480533.914	242.566	PIL-G19	507+598	511+388
379	495314.585	2480577.282	244.435	PIL-G20	507+677	511+460
380	495031.972	2480848.094	240.367	PIL-G21	508+095	511+884
381	495019.127	2480896.091	240.415	PIL-G22	508+150	511+934
382	494901.545	2481161.894	251.397	PIL-S78	508+508	512+300
383	494930.171	2481190.981	252.871	PIL-S79	508+542	512+340
384	494957.609	2481332.566	261.235	PIL-P1	508+698	512+505
385	495105.854	2481415.545	268.649	PIL-P2	508+870	512+682
386	494977.472	2481666.093	291.771	PIL-P3	509+300	513+120
387	495007.731	2481827.248	298.733	PIL-G25	509+485	513+330
388	495011.622	2481863.247	300.429	PIL-G26	509+520	513+370
389	495022.576	2481911.630	303.361	GPS-M51	509+570	513+420
390	495003.219	2481951.331	305.740	GPS-M52	509+620	513+465
391	494831.518	2482155.269	322.116	PIL-G27	509+970	513+850
392	494795.980	2482191.800	324.598	PIL-G28	510+020	513+900
393	494994.538	2482396.187	343.010	PIL-S6	510+377	514+290
394	495028.361	2482413.315	344.251	PIL-S5	510+418	514+330
395	495081.146	2482596.066	363.890	PIL-S4	510+940	514+850
396	495031.722	2482584.076	366.182	PIL-S3	510+993	514+902
397	494788.904	2482589.004	376.172	PIL-S2	511+245	515+160
398	494724.711	2482630.453	378.691	PIL-S1	511+305	515+225
399	494799.669	2482838.091	389.625	PIL-D10	511+542	515+462
400	494665.330	2482930.975	395.441	PIL-D9	511+722	515+665
401	494795.477	2483019.201	402.342	PIL-G29	511+880	515+832
402	494818.011	2483092.381	405.558	PIL-G30	511+958	515+910
403	494829.205	2483134.836	407.151	GPS-M53	512+000	515+950
404	494828.162	2483168.265	408.436	GPS-M54	512+038	515+988
405	494687.677	2483397.857	418.327	PIL-G31	512+320	516+270
406	494685.768	2483452.556	420.144	PIL-G32	512+375	516+325
407	494622.973	2483530.485	424.184	PIL-D8	512+480	516+440
408	494744.316	2483767.542	441.669	PIL-G32	512+840	516+822
409	494805.078	2483750.858	444.470	PIL-G33	512+900	516+880
410	494887.813	2483780.745	449.395	PIL-D7	512+987	516+980
411	494961.192	2483754.733	452.433	PIL-D6	513+070	517+060
412	495153.722	2483764.843	461.892	PIL-D5	513+260	517+260
413	495215.944	2483768.920	464.058	PIL-G34	513+340	517+340
414	495248.306	2483781.667	465.849	PIL-G35	513+368	517+370
415	495348.625	2483957.658	478.057	PIL-D4	513+660	517+660
416	495289.586	2484099.201	485.935	PIL-G36	513+817	517+817
417	495338.498	2484149.305	489.347	PIL-G37	513+878	517+890
418	495476.112	2484099.052	498.742	PIL-D3	514+015	518+030
419	495619.356	2484118.999	507.979	PIL-D2	514+212	518+222
420	495821.489	2484222.775	519.313	PIL-D1	514+460	518+480
421	495875.749	2484209.334	521.144	GPS-M55	514+510	518+530
422	495940.155	2484174.799	525.542	GPS-M56	514+584	518+607
423	496049.784	2484295.168	535.534	PIL-G40	514+814	518+833

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
424	496064.501	2484333.333	537.212	PIL-G41	514+855	518+870
425	495959.887	2484648.222	550.601	PIL-G42	515+170	519+180
426	496005.439	2484611.537	549.545	PIL-G43	515+200	519+204
427	496314.148	2483935.129	579.066	PIL-G44	515+954	519+980
428	496243.277	2483889.194	582.486	PIL-G45	516+020	520+055
429	496387.746	2483702.962	601.419	PIL-G46	516+357	520+407
430	496361.886	2483652.269	603.040	PIL-G47	516+412	520+462
431	496590.426	2483591.318	613.351	PIL-G48	516+700	520+790
432	496601.343	2483618.428	615.193	PIL-G49	516+730	520+852
433	496694.535	2483725.292	620.909	GPS-M57	516+880	521+020
434	496719.700	2483739.647	622.547	GPS-M58	516+910	521+050
435	496785.348	2483973.899	631.478	PIL-G50	517+182	521+320
436	496802.727	2484047.012	635.136	PIL-G51	517+258	521+400
437	496896.353	2483803.746	654.384	PIL-G52	517+622	521+785
438	496883.043	2483742.046	656.894	PIL-G53	517+690	521+850
439	496702.365	2483462.564	674.864	PIL-G54	518+092	522+280
440	496626.635	2483410.644	678.060	PIL-G55	518+180	522+370
441	496550.102	2483055.212	696.431	PIL-G56	518+600	522+778
442	496568.902	2483022.736	699.012	PIL-G57	518+630	522+822
443	496831.540	2482864.779	718.247	PIL-G58	519+080	523+280
444	496903.047	2482865.063	721.062	PIL-G59	519+144	523+338
445	497212.469	2482714.094	742.800	PIL-G60	519+552	523+756
446	497157.457	2482730.158	744.949	PIL-G61	519+610	523+820
447	497050.333	2482703.248	749.385	GPS-M59	519+734	523+936
448	497028.058	2482675.319	751.175	GPS-M60	519+770	523+970
449	496853.993	2482486.408	774.681	PIL-G62	520+267	524+510
450	496863.453	2482445.652	777.091	PIL-G63	520+310	524+552
451	497022.176	2482364.245	787.592	PIL-G64	520+500	524+750
452	497063.842	2482321.713	791.288	PIL-G65	520+545	524+804
453	496837.638	2482110.754	816.074	PIL-G66	521+005	525+300
454	496810.693	2482063.851	817.597	PIL-G67	521+070	525+360
455	496899.332	2481884.908	815.761	PIL-G68	521+315	525+754
456	496889.399	2481836.988	814.006	PIL-G69	521+360	525+804
457	496953.858	2481425.058	800.526	PIL-G70	521+838	526+288
458	496955.620	2481359.015	797.250	PIL-G71	521+904	526+354
459	497109.679	2481059.418	779.994	PIL-G72	522+276	526+732
460	497137.606	2481013.918	780.500	PIL-G73	522+330	526+788
461	497196.042	2481012.804	778.024	GPS-M61	522+427	526+876
462	497271.150	2481036.560	777.808	GPS-M62	522+490	526+950
463	497297.510	2480838.829	782.360	PIL-G74	522+730	527+195
464	497337.800	2480795.993	780.853	PIL-G75	522+798	527+255
465	497733.937	2480660.547	777.797	PIL-G76	523+250	527+727
466	497763.473	2480616.647	775.099	PIL-G77	523+300	527+780
467	498125.755	2480354.732	756.741	PIL-G78	523+760	528+240
468	498177.086	2480372.069	759.313	PIL-G79	523+810	528+298
469	498485.264	2480240.273	778.444	PIL-G80	524+210	528+710
470	498541.720	2480267.153	783.128	PIL-G81	524+260	528+770

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
471	498832.474	2480302.804	797.602	PIL-G82	524+765	529+285
472	498871.354	2480285.700	798.199	PIL-G83	524+800	529+320
473	499073.687	2480020.239	804.601	PIL-G84	525+190	529+754
474	499272.279	2479762.468	826.017	PIL-G85	525+662	530+240
475	499324.463	2479773.302	828.486	PIL-G86	525+718	530+290
476	499708.108	2479873.673	848.734	PIL-G87	526+122	530+700
477	499775.814	2479882.336	851.650	PIL-G88	526+192	530+765
478	499827.253	2479889.792	853.622	GPS-M63	526+240	530+815
479	99865.191	2479927.523	855.351	GPS-M64	526+290	530+870
480	500105.294	2479934.812	867.108	PIL-G89	526+560	531+140
481	500174.493	2479948.328	868.494	PIL-G90	526+625	531+207
482	500452.489	2479820.750	881.232	PIL-G91	527+096	531+700
483	500456.512	2479745.380	882.139	PIL-G92	527+170	531+775
484	500839.493	2479697.703	897.430	PIL-G93	527+642	532+284
485	500883.847	2479727.267	900.089	PIL-G94	527+695	532+340
486	501185.693	2479691.257	917.615	PIL-G95	528+114	532+765
487	501263.369	2479375.781	939.555	PIL-K1/10	528+590	533+250
488	501220.717	2479328.956	941.439	PIL-K1/9	528+660	533+310
489	501250.516	2479104.073	956.074	PIL-K1/8	528+995	533+707
490	501301.249	2479109.985	958.127	PIL-K1/7	529+050	533+757
491	501424.488	2479119.345	962.555	GPS-M65	529+176	533+590
492	501492.342	2479117.466	966.170	GPS-M66	529+242	533+954
493	501785.899	2479180.227	976.456	PIL-K1/6	529+570	534+185
494	501825.630	2479152.183	977.567	PIL-K1/5	529+615	534+325
495	502015.160	2478849.016	990.393	PIL-K1/4	529+990	534+710
496	502040.539	2478819.038	992.551	PIL-K1/3	530+025	534+750
497	502327.001	2478467.496	1010.396	PIL-K1/2	530+034	535+265
498	502342.425	2478418.307	1012.596	PIL-K1/1	530+087	535+316
499	502346.586	2478092.761	1028.278	PIL-K1	530+962	535+700
500	502306.421	2478058.254	1029.624	PIL-K2	531+012	535+750
501	502072.229	2477606.138	1050.099	PIL-K3	531+584	536+333
502	502109.247	2477566.879	1052.734	PIL-K4	531+640	536+390
503	502142.650	2477559.248	1065.261	PIL-K5	531+988	536+717
504	502139.187	2477599.653	1066.761	PIL-K6	532+028	536+758
505	502206.202	2477442.296	1077.995	PIL-K7	532+355	537+087
506	502276.386	2477438.352	1080.515	PIL-K8	532+425	537+152
507	502304.251	2477458.491	1097.495	PIL-K9	532+968	537+670
508	502244.610	2477472.451	1098.949	PIL-K10	533+036	537+737
509	502274.671	2477556.398	1105.282	GPS-M67	533+230	537+911
510	502248.511	2477497.242	1106.735	GPS-M68	533+286	537+978
511	502535.914	2477441.715	1118.268	PIL-K11	533+574	538+281
512	502572.603	2477404.084	1120.052	PIL-K12	533+628	538+331
513	502766.429	2477435.233	1130.746	PIL-K13	533+910	538+626
514	502832.732	2477479.077	1134.891	PIL-K14	534+005	538+715
515	503235.243	2477514.516	1155.521	PIL-K15	534+488	539+226
516	503307.498	2477495.295	1156.629	PIL-K16	534+560	539+300
517	503589.693	2477483.421	1175.531	PIL-K17	534+892	539+633

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
518	503642.175	2477458.069	1178.532	PIL-K18	534+951	539+695
519	503986.465	2477351.051	1203.303	PIL-K19	535+395	540+142
520	504014.183	2477298.473	1206.703	PIL-K20	535+452	540+200
521	504237.103	2476912.620	1229.653	PIL-K21	535+901	540+650
522	504263.501	2476875.635	1232.092	PIL-K22	535+946	540+697
523	504323.279	2476788.920	1236.078	GPS-M70	536+052	540+801
524	504430.740	2476563.165	1247.782	PIL-K23	536+310	541+060
525	504442.725	2476508.683	1250.881	PIL-K24	536+361	541+117
526	504428.099	2476245.881	1273.247	PIL-K25	536+890	541+700
527	504423.692	2476203.033	1274.164	PIL-K26	536+932	541+742
528	504268.187	2476083.453	1287.905	PIL-K27	537+250	542+068
529	504243.259	2476031.260	1289.976	PIL-K28	537+304	542+125
530	503880.478	2475742.778	1312.455	PIL-K29	537+854	542+685
531	503844.760	2475731.435	1313.814	PIL-K30	537+890	542+742
532	504010.490	2475463.633	1323.032	PIL-K31	538+358	543+217
533	504059.815	2475429.772	1324.377	PIL-K32	538+410	543+277
534	504355.307	2475469.768	1333.015	PIL-K33	538+742	543+639
535	504393.492	2475507.317	1337.541	PIL-K34	538+794	543+692
536	504421.140	2475506.598	1338.782	GPS-M71	538+821	543+723
537	504464.528	2475453.630	1340.137	GPS-M72	538+892	543+793
538	504543.755	2475251.895	1340.309	PIL-I.6	539+154	544+074
539	504608.782	2475225.861	1339.951	PIL-I.5	539+222	544+147
540	504794.493	2474910.418	1351.696	PIL-I.4	539+690	544+623
541	504843.451	2474919.395	1353.346	PIL-I.3	539+740	544+672
542	504820.951	2474652.401	1360.346	PIL-I.2	540+110	545+044
543	504873.940	2474639.058	1363.170	PIL-I.1	540+160	545+096
544	505240.287	2474062.103	1361.918	PIL-I.7	541+103	546+078
545	505241.497	2474005.892	1359.895	PIL-I.8	541+160	546+135
546	505492.476	2473630.531	1348.381	PIL-I.9	541+625	546+609
547	505541.437	2473640.426	1347.048	PIL-I.10	541+669	546+660
548	505674.572	2473346.284	1338.024	PIL-R15	542+039	547+026
549	505679.894	2473264.905	1333.965	PIL-R14	542+109	547+105
550	505976.432	2472917.607	1315.071	PIL-R13	542+595	547+605
551	506017.544	2472889.266	1312.524	PIL-R12	542+648	547+656
552	505971.957	2472497.835	1293.537	GPS-M73	543+126	548+115
553	505976.949	2472448.461	1292.555	GPS-M74	543+175	548+214
554	505912.465	2472143.471	1283.510	PIL-FS-V3	543+518	548+557
555	505909.017	2472093.927	1284.678	PIL-FS-V4	543+565	548+605
556	505681.422	2471784.756	1264.466	PIL-FS-V5	544+110	549+150
557	505633.100	2471807.912	1263.201	PIL-FS-V6	544+160	549+200
558	505435.739	2471613.155	1243.815	PIL-FS-V7	544+512	549+588
559	505449.442	2471556.335	1241.444	PIL-FS-V8	544+565	549+643
560	505464.749	2471490.240	1239.958	GPS-M75	544+632	549+710
561	505496.225	2471462.270	1239.243	GPS-M76	544+670	549+750
562	505381.658	2471376.225	1227.645	PIL-V9	544+985	550+100
563	505310.614	2471341.163	1221.934	PIL-V10	545+055	550+178
564	505327.832	2471017.060	1200.461	PIL-B11	545+401	550+584

NH -54 PILLER LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
565	505307.252	2470975.170	1198.556	PIL-B12	545+451	550+630
566	505161.726	2470641.721	1181.119	PIL-B13	545+871	550+068
567	505192.144	2470626.472	1178.700	PIL-B14	545+904	551+109
568	505227.508	2470444.142	1164.034	PIL-B16	546+398	551+574
569	505181.504	2470419.839	1160.966	PIL-B15	546+444	551+613
570	504885.789	2470461.464	1140.835	PIL-B17	546+874	552+060
571	504869.686	2470507.103	1137.345	PIL-B18	546+905	552+105
572	504587.570	2470770.142	1119.642	PIL-V19	547+318	552+522
573	504539.631	2470832.010	1117.307	PIL-V20	547+388	552+600
574	504502.508	2470730.985	1110.485	GPS-M77	547+489	552+721
575	504497.309	2470681.087	1108.844	GPS-M78	547+537	552+770
576	504421.921	2470448.503	1097.343	PIL-V21	547+789	557+021
577	504420.652	2470370.864	1093.764	PIL-V22	547+864	553+099
578	504364.044	2469857.712	1070.712	PIL-V23	548+396	553+631
579	504392.962	2469769.470	1067.842	PIL-V24	548+484	553+721
580	504526.332	2469435.919	1062.898	PIL-V25	548+850	554+088
581	504543.532	2469371.017	1062.012	PIL-V26	548+916	554+156
582	504494.638	2469022.322	1064.969	PIL-V27	549+324	554+556
583	504483.747	2468971.027	1066.494	PIL-V28	549+324	554+560
584	504229.616	2468798.162	1083.730	PIL-V28	549+372	554+610
585	504229.616	2468798.162	1083.730	PIL-V29	549+770	554+608
586	504170.728	2468809.006	1087.769	PIL-V30	549+830	555+093
587	503916.658	2469066.856	1104.464	PIL-V31	550+248	555+513
588	503831.696	2469055.767	1109.194	PIL-V32	550+328	555+597
589	503690.248	2469078.304	1118.197	GPS-M79	550+580	555+850
590	503676.402	2469128.296	1119.308	GPS-M80	550+633	555+903
591	503546.540	2469191.738	1126.021	PIL.Y.8	550+812	556+090
592	503504.083	2469186.997	1128.310	PIL.Y.7	550+850	556+123
593	503163.735	2469183.948	1146.077	PIL.Y.6	551+250	556+536
594	503117.474	2469219.427	1147.597	PIL.Y.5	551+305	556+593
595	503096.782	2468983.831	1168.037	PIL.Y.4	551+650	557+049
596	503054.325	2468953.823	1170.344	PIL.Y.3	551+701	557+100
597	503216.891	2468768.805	1191.008	PIL.Y.2	551+997	557+553
598	503184.219	2468729.853	1193.440	PIL.Y.1	552+059	557+622
599	503098.540	2468572.377	1200.809	PIL.K1	552+110	557+928
600	503132.131	2468608.375	1203.277	PIL.K2	552+190	557+974
601	503313.533	2468441.209	1222.910	GPS-M81	552+442	558+268
602	503327.568	2468391.217	1224.473	GPS-M82	552+470	558+320
603	503470.701	2468486.493	1237.139	PIL.K3	552+614	558+514
604	503501.795	2468457.785	1240.144	PIL.K4	552+664	558+584
605	503721.873	2468300.930	1255.044	PIL.K5	552+980	558+915
606	503707.914	2468234.705	1258.075	PIL.K6	553+044	558+980
607	503618.425	2467888.301	1285.540	PIL.LZ1	553+509	559+514
608	503602.714	2467834.253	1287.481	PIL.LZ2	553+553	559+564
609	503684.071	2467705.427	1295.075	PIL.LZ3	553+717	559+735
610	503758.229	2467697.892	1298.652	PIL.LZ4	553+790	559+807
611	503730.253	2467881.873	1314.733	PIL.LZ5	554+350	560+381

NH 54 TBM LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
1	483467.310	2515367.895	589.061	TBM-K1	431+152	431+114
2	483900.250	2515208.593	601.165	TBM-K2	431+640	431+597
3	484157.872	2514846.780	617.876	TBM-K3	432+140	432+100
4	484107.438	2514620.009	628.870	TBM-K4	432+550	432+473
5	483960.145	2514331.896	641.513	TBM-K5	433+027	432+947
6	483633.483	2513352.549	670.099	TBM-K6	434+785	434+603
7	483476.053	2513119.958	679.406	TBM-K7	435+044	434+924
8	483342.861	2512937.990	693.310	TBM-K8	435+486	435+356
9	483660.099	2511861.109	735.371	TBM-B15	437+177	436+960
10	483778.090	2511350.493	754.542	TBM-B14	437+910	437+665
11	483541.010	2511417.555	763.303	TBM-B13	438+195	437+937
12	483336.685	2511343.357	777.375	TBM-B12	438+735	438+433
13	483584.828	2511212.752	788.411	TBM-B11	439+060	438+740
14	483781.286	2510920.468	797.906	TBM-B10	439+455	439+125
15	483492.219	2510789.217	816.452	TBM-B9	440+055	439+685
16	483253.605	2510684.237	826.828	TBM-B8	440+410	439+950
17	483479.516	2510542.132	844.256	TBM-B7	441+150	440+515
18	483738.725	2510392.779	853.709	TBM-B6	441+390	440+812
19	483687.239	2509311.572	886.140	TBM-B4	443+070	442+355
20	483757.256	2509097.326	890.029	TBM-B3	443+340	442+625
21	483864.788	2508483.147	905.635	TBM-B2	44+080	443+360
22	484182.439	2507170.454	938.080	TBM-K9	445+760	445+015
23	484356.297	2507003.658	934.250	TBM-K10	446+004	445+260
24	484651.095	2506629.968	919.016	TBM-K11	447+000	446+160
25	484852.232	2506245.925	916.499	TBM-K12	447+997	447+107
26	485198.125	2506197.916	913.235	TBM-K13	448+600	447+672
27	485333.208	2506296.926	917.469	TBM-K14	448+788	447+850
28	485429.071	2506201.653	921.714	TBM-K15	449+050	448+085
29	485141.661	2505850.460	919.858	TBM-K16	449+532	448+552
30	484884.360	2505769.922	927.172	TBM-K17	449+890	448+878
31	484650.015	2505703.792	939.857	TBM-K18	450+185	449+137
32	484552.129	2505473.067	951.656	TBM-K19	450+505	449+422
33	484848.226	2505149.323	946.926	TBM-K20	450+972	449+880
34	484956.677	2504805.796	926.443	TBM-K21	551+555	450+430
35	485019.887	2504372.803	912.119	TBM-K22	452+057	450+894
36	485502.348	2504075.786	934.136	TBM-K23	452+812	451+620
37	485667.824	2504086.113	940.450	TBM-K24	453+085	451+895
38	485856.431	2504177.059	952.398	TBM-K25	453+500	452+270
39	485918.036	2504458.936	965.586	TBM-K26	453+880	452+605
40	486069.802	2504524.172	968.555	TBM-K27	454+058	452+780
41	486175.792	2504423.275	973.918	TBM-K28	454+255	452+925
42	486369.377	2504615.487	979.788	TBM-K29	454+550	453+208
43	486521.270	2504605.545	988.382	TBM-K30	455+085	453+665
44	486594.837	486594.837	988.736	TBM-K31	455+410	453+973
45	486784.906	2504154.398	989.076	TBM-K32	456+093	454+614

NH 54 TBM LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
46	486795.130	2503981.165	989.415	TBM-K33	456+342	454+825
47	487023.551	2500439.892	1076.801	TBM-A1	461+635	459+667
48	487066.263	2499817.603	1056.740	TBM-A2	462+354	460+480
49	487031.698	2499370.122	1041.637	TBM-A3	462+845	460+960
50	487021.859	2499301.937	1039.621	TBM-A4	462+912	461+030
51	486882.342	2498909.228	1024.792	TBM-A5	463+365	461+455
52	486726.092	2498573.461	1013.132	TBM-A7	463+940	461+970
53	486607.301	2498457.752	1008.595	TBM-A8	464+120	462+184
54	486513.237	2498279.522	1002.842	TBM-A9	464+350	462+355
55	486350.689	2497959.597	995.300	TBM-A10	464+770	462+770
56	486250.741	2497887.317	990.277	TBM-A11	464+952	462+800
57	486720.276	2497368.603	976.706	TBM-A12	465+845	463+564
58	486693.450	2496885.046	961.004	TBM-A13	466+422	464+140
59	486639.948	2496730.513	957.135	TBM-A14	466+606	464+322
60	486700.551	2496620.669	954.113	TBM-A15	466+870	464+448
61	486727.568	2496574.801	953.458	TBM-A16	466+932	464+512
62	486860.489	2496500.726	946.885	TBM-A17	467+095	464+655
63	486960.475	2496234.237	937.029	TBM-A18	467+410	464+965
64	486968.189	2496219.532	936.303	TBM-A19	467+415	464+975
65	487111.741	2496149.125	931.606	TBM-A20	467+595	465+132
66	487192.228	2495916.462	917.824	TBM-F13	467+840	465+440
67	487330.165	2495832.568	914.772	TBM-F12	468+112	465+608
68	487467.483	2495335.113	893.745	TBM-F11	468+900	466+370
69	487280.141	2495247.536	885.749	TBM-F10	469+160	466+627
70	487548.558	2494845.496	869.731	TBM-F9	469+702	467+142
71	487540.111	2494676.988	860.908	TBM-F8	470+072	467+514
72	487396.231	2494451.604	846.119	TBM-F7	470+422	467+840
73	487651.906	2494358.955	833.789	TBM-F6	470+730	468+132
74	487678.208	2493689.933	801.625	TBM-F5	471+590	468+942
75	487713.091	2493585.524	795.311	TBM-F4	471+805	469+042
76	487829.261	2493394.826	787.655	TBM-F3	472+056	469+298
77	487789.851	2493317.005	783.756	TBM-F2	472+148	469+385
78	487785.493	2493304.020	783.715	TBM-F2A	472+162	469+400
79	487979.508	2492771.941	768.733	TBM-F1	472+775	470+006
80	489514.057	2491886.566	798.456	TBM-S1	474+985	472+165
81	489554.882	2491609.465	794.397	TBM-S2	475+400	472+580
82	489316.975	2490943.439	807.368	TBM-S2	476+220	473+396
83	489348.205	2490911.759	807.942	TBM-S3	476+265	473+438
84	489236.542	2490770.928	819.900	TBM-S4	476+450	473+615
85	489220.983	2490781.026	820.182	TBM-S5	476+470	473+630
86	488922.379	2490432.363	859.988	TBM-S6	477+040	474+198
87	488931.277	2490403.015	861.092	TBM-S6	477+067	474+225
88	488827.762	2489670.929	870.946	TBM-S8	477+837	474+995
89	488822.637	2489641.284	876.396	TBM-S9	477+865	475+022
90	488834.395	2489145.450	851.119	TBM-S10	478+410	475+560

NH 54 TBM LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
91	488835.156	2489126.511	851.421	TBM-S11	478+430	475+580
92	488936.102	2488771.528	867.086	TBM-S12	478+890	476+030
93	488968.374	2488751.329	868.356	TBM-S13	478+928	476+070
94	489056.899	2488377.395	884.883	TBM-S14	479+485	476+610
95	489066.381	2488364.731	885.767	TBM-S15	479+500	476+628
96	488988.460	2488011.429	898.257	TBM-S16	479+940	477+060
97	488954.123	2487968.576	898.717	TBM-S17	479+995	477+120
98	488701.685	2487884.310	903.351	TBM-S18	480+270	477+390
99	488693.773	2487843.433	904.374	TBM-S19	480+310	477+427
100	488741.677	2487083.298	925.598	TBM-S20	481+210	478+330
101	488734.226	2487069.844	926.017	TBM-S21	481+225	478+345
102	488620.884	2486708.629	935.447	TBM-N8	481+704	478+794
103	488473.280	2486201.749	944.407	TBM-N7	482+340	479+410
104	488397.132	2485987.356	950.749	TBM-N6	482+634	479+693
105	488640.745	2485712.553	967.539	TBM-N5	483+133	480+173
106	488601.689	2485523.412	969.851	TBM-N4	483+332	480+375
107	488497.969	2485265.543	977.558	TBM-N3	483+645	480+685
108	488417.143	2484852.778	966.194	TBM-N2	484+180	481+210
109	488324.075	2484330.004	952.110	TBM-N1	484+780	481+790
110	489440.367	2483302.439	892.924	TBM-J1	486+850	483+798
111	490286.892	2484181.208	818.566	TBM-J2	489+020	485+775
112	491146.427	2484279.557	784.716	TBM-T1	490+032	486+775
113	491791.869	2483818.818	682.720	TBM-J3	493+052	489+695
114	491454.764	2482981.203	625.664	TBM-J4	494+370	490+950
115	491733.107	2482481.425	598.681	TBM-J5	495+040	491+605
116	493589.518	2479851.528	418.527	TBM-1	500+045	496+437
117	493595.030	2479849.923	418.858	TBM-2	500+045	496+437
118	494643.852	2478529.574	260.774	TBM-R1	503+660	499+998
119	494687.080	2478470.612	257.462	TBM-R2	503+734	500+070
120	494994.139	2478096.801	223.965	TBM-R3	504+530	500+870
121	495024.523	2478062.137	221.778	TBM-R4	504+575	500+920
122	495900.390	2477332.902	166.174	TBM-R3	505+802	502+130
123	496054.019	2477298.840	161.982	TBM-R3K	505+960	502+285
124	496373.764	2477209.653	152.230	TBM-R5	506+300	502+630
125	496520.393	2477190.645	149.550	TBM-6	506+475	502+780
126	496570.070	2477184.408	149.520	TBM-7	506+507	502+830
127	496671.976	2477473.720	148.363	TBM-Z1	506+975	503+300
128	495881.280	2477794.782	166.796	TBM-J7	507+860	504+178
129	495618.903	2478576.834	192.549	TBM-N3	508+728	505+035
130	495366.346	2479396.133	215.217	TBM-N2	509+900	506+148
131	495332.486	2479426.636	216.114	TBM-N1	509+948	506+202
132	495081.075	2480003.802	225.538	TBM-T6	510+680	506+914
133	495169.972	2480195.457	230.670	TBM-T5	510+902	507+135
134	495343.748	2480543.790	244.120	TBM-T4	511+412	507+622
135	494932.806	2481284.687	258.732	TBM-1	512+450	508+647



NH 54 TBM LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
136	495041.642	2481499.471	279.156	TBM-2	512+897	509+090
137	494794.069	2482193.858	325.067	TBM-T4	513+900	510+022
138	495081.112	2482454.391	346.638	TBM-T3	514+395	510+480
139	495089.540	2482598.026	363.635	TBM-T2	514+845	510+935
140	494762.079	2482603.020	377.561	TBM-T1	515+190	511+270
141	494808.767	2482828.597	388.823	TBM-S7	515+462	511+528
142	494696.322	2483468.796	420.756	TBM-S6	516+342	512+390
143	494892.004	2483776.887	449.247	TBM-S5	516+986	512+990
144	495024.067	2483756.213	455.652	TBM-S4	517+125	513+130
145	495362.625	2483806.496	471.743	TBM-S3	517+500	513+500
146	495643.649	2484133.862	508.548	TBM-S2	518+252	514+240
147	496016.486	2484219.895	532.473	TBM-S1	518+743	514+730
148	496082.097	2484405.296	553.052	TBM-J1	519+425	515+420
149	496303.316	2483922.115	580.720	TBM-J2	519+995	515+960
150	496360.750	2483649.698	603.366	TBM-J3	520+465	516+414
151	496605.212	2483589.978	614.745	TBM-J4	520+800	516+710
152	496552.690	2482985.657	700.572	TBM-J5	522+862	518+675
153	496843.478	2482869.894	719.000	TBM-J6	523+290	519+090
154	497185.805	2482728.471	744.344	TBM-J8	523+790	519+580
155	496894.261	2482428.045	780.111	TBM-J9	524+600	520+354
156	496951.421	2481239.358	791.424	TBM-N4	526+468	522+018
157	497009.886	2481211.621	787.104	TBM-N5	526+535	522+080
158	497399.629	2480801.720	782.605	TBM-J10	527+320	522+860
159	497730.000	2480666.119	778.014	TBM-J11	527+722	523+242
160	498903.977	2480275.579	798.709	TBM-N6	529+360	524+830
161	499063.318	2480049.001	804.715	TBM-N7	529+720	525+160
162	499858.843	2479922.215	855.401	TBM-Z2	530+860	526+280
163	500341.378	2479998.019	873.215	TBM-Z3	531+397	526+814
164	500346.658	2480002.367	873.317	TBM-Z4	531+398	526+815
165	501244.357	2479102.963	956.165	TBM-B7	533+700	528+990
166	502019.814	2478835.074	991.935	TBM-B1	535+720	530+000
167	502428.384	2477466.451	1114.785	TBM-H4	538+162	533+460
168	502845.744	2477506.645	1136.470	TBM-H3	538+750	534+022
169	502952.761	2477464.701	1144.253	TBM-H2	538+880	534+140
170	502968.082	2477476.514	1144.525	TBM-H1	538+895	534+150
171	503600.564	2477477.210	1176.753	TBM-B2	539+648	534+910
172	503991.075	2477340.810	1204.220	TBM-B3	540+152	535+407
173	504235.452	2476914.186	1229.860	TBM-B4	540+650	535+903
174	504433.628	2476552.849	1248.708	TBM-B5	541+070	536+320
175	504327.589	2476391.269	1257.518	TBM-B3	541+354	536+577
176	504422.340	2476202.661	1274.557	TBM-B2	541+740	536+932
177	503892.459	2475745.890	1312.728	TBM-B1	542+652	537+840
178	504381.217	2475495.064	1335.432	TBM-B4	543+670	538+775
179	504539.480	2475256.617	1340.259	TBM-R4	544+070	539+147
180	504837.225	2474918.102	1353.249	TBM-R3	544+662	539+734

NH 54 TBM LIST						
Sr.No	X-Co-ordinate	Y-Co-ordinate	Levels	Pillar No	Ex. Chainage	Design Chainage
181	504826.826	2474648.279	1360.679	TBM-R2	545+050	540+115
182	504990.904	2474321.454	1372.742	TBM-R1	545+680	540+710
183	505514.745	2473635.301	1347.946	TBM-R5	546+625	541+642
184	505522.870	2473638.525	1347.698	TBM-R6	546+640	541+650
185	505573.923	2473606.298	1346.320	TBM-R7	546+710	541+720
186	505600.523	2473556.880	1344.027	TBM-R8	546+765	541+778
187	506014.506	2472892.680	1312.887	TBM-B6	547+652	542+642
188	505401.132	2471367.864	1228.856	TBM-B7	550+085	544+970
189	505200.271	2470621.844	1180.156	TBM-B8	551+115	545+914
190	505391.083	2470446.964	1170.836	TBM-B9	551+398	546+210
191	504874.599	2470442.689	1142.114	TBM-R15	552+036	546+850
192	504593.068	2470752.906	1120.805	TBM-R14	552+505	547+300
193	504430.431	2470273.151	1089.726	TBM-R13	553+198	547+964
194	504436.327	2470028.140	1079.702	TBM-R12	553+448	548+214
195	504466.872	2469641.406	1064.517	TBM-R11	553+870	548+632
196	504603.812	2469185.013	1059.443	TBM-R10	554+352	549+118
197	504583.016	2469131.925	1060.361	TBM-R9	554+410	549+176
198	503849.720	2469060.740	1108.442	TBM-B8	555+580	550+310
199	503694.880	2469072.255	1118.364	TBM-B9	555+850	550+574
200	503380.023	2468440.122	1230.533	TBM-B10	558+410	552+510
201	503731.751	2468325.676	1253.805	TBM-B11	558+880	552+950
202	503604.359	2467844.280	1287.634	TBM-B11	559+555	553+548
203	503750.373	2467695.956	1298.382	TBM-B10	559+800	553+780
204	503750.786	2467880.490	1315.889	TBM-Z6	560+400	554+368
205	503877.854	2468192.705	1330.095	TBM-Z7	560+793	554+764
206	503875.441	2468200.268	1330.045	TBM-Z8	560+800	554+770
207	503840.626	2468450.338	1335.056	TBM-Z9	561+173	555+108
208	503821.961	2468483.942	1335.875	TBM-Z10	561+210	555+139

## HORIZONTAL CURVE DETAILS

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1	LHS	431007.678	431037.678	431065.144	431082.158	431112.158	217.803	25	-30	44.480	30	30	0.093
2	RHS	431129.192	431144.192	431163.789	431182.895	431197.895	30.796	50	100	38.703	15	15	0.100
3	LHS	431209.490	431224.490	431263.237	431297.667	431312.667	303.999	50	-90	73.177	15	15	0.100
4	RHS	431325.701	431345.701	431347.907	431350.111	431370.111	25.537	35	55	4.410	20	20	0.099
5	RHS	431402.002	431422.002	431423.265	431424.527	431444.527	28.796	35	45	2.525	20	20	0.100
6	LHS	431450.542	431465.542	431468.881	431472.218	431487.218	347.707	50	-100	6.676	15	15	0.100
7	RHS	431496.029	431511.029	431516.346	431521.646	431536.646	19.598	40	75	10.617	15	15	0.095
8	LHS	431549.543	431569.543	431570.836	431572.127	431592.127	334.161	35	-50	2.584	20	20	0.100
9	RHS	431594.403	431614.403	431633.470	431651.111	431671.111	59.152	35	55	36.708	20	20	0.099
10	LHS	431696.375	431716.375	431719.195	431722.008	431742.008	327.481	35	-45	5.633	20	20	0.100
11	RHS	431794.771	431814.771	431831.372	431846.828	431866.828	59.677	35	50	32.057	20	20	0.100
12	LHS	431882.010	431912.010	431931.266	431947.218	431977.218	253.282	30	-35	35.208	30	30	0.100
13	RHS	431982.174	432012.174	432015.659	432019.120	432049.120	60.622	30	35	6.946	30	30	0.100
14	LHS	432058.084	432078.084	432083.397	432088.678	432108.678	328.241	35	-55	10.594	20	20	0.099
15	RHS	432142.367	432172.367	432179.729	432186.806	432216.806	84.919	25	30	14.439	30	30	0.093
16	RHS	432220.306	432240.306	432253.732	432266.644	432286.644	48.329	35	55	26.338	20	20	0.099
17	LHS	432359.716	432389.716	432410.749	432426.404	432456.404	232.653	25	-30	36.688	30	30	0.093
18	RHS	432459.258	432474.258	432474.988	432475.718	432490.718	15.727	40	60	1.460	15	15	0.100
19	LHS	432498.234	432518.234	432519.212	432520.191	432540.191	332.136	35	-45	1.957	20	20	0.100
20	RHS	432547.044	432577.044	432588.147	432598.312	432628.312	98.039	25	30	21.268	30	30	0.093
21	RHS	432636.225	432656.225	432658.243	432660.258	432680.258	30.601	35	45	4.033	20	20	0.100
22	LHS	432706.302	432721.302	432725.044	432728.780	432743.780	342.936	40	-75	7.478	15	15	0.095
23	RHS	432746.676	432766.676	432773.508	432780.237	432800.237	42.863	35	45	13.561	20	20	0.100
24	LHS	432815.530	432835.530	432855.931	432873.837	432893.837	285.864	35	-45	38.307	20	20	0.100
25	RHS	432896.364	432926.364	432929.560	432932.732	432962.732	69.526	25	30	6.368	30	30	0.093
26	LHS	432970.288	432985.288	432991.338	432997.347	433012.347	334.260	40	-60	12.059	15	15	0.100
27	RHS	433036.267	433051.267	433093.829	433133.312	433148.312	44.619	50	125	82.045	15	15	0.089
28	LHS	433164.110	433194.110	433202.488	433210.450	433240.450	271.620	25	-30	16.340	30	30	0.093
29	RHS	433241.134	433261.134	433295.017	433321.869	433341.869	84.151	35	55	60.735	20	20	0.099
30	RHS	433366.590	433386.590	433396.831	433406.840	433426.840	42.058	35	55	20.250	20	20	0.099
31	LHS	433428.936	433448.936	433453.007	433457.055	433477.055	324.337	35	-45	8.119	20	20	0.100
32	LHS	433497.550	433527.550	433528.822	433530.093	433560.093	306.813	30	-35	2.543	30	30	0.100
33	LHS	433638.529	433658.529	433678.427	433695.999	433715.999	286.925	35	-45	37.470	20	20	0.100
34	LHS	433718.125	433733.125	433734.462	433735.798	433750.798	346.641	40	-75	2.673	15	15	0.095
35	RHS	433752.253	433767.253	433769.270	433771.287	433786.287	5.478	65	200	4.034	15	15	0.094
36	RHS	433799.848	433814.848	433856.404	433893.617	433908.617	53.807	50	100	78.769	15	15	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
37	LHS	433922.326	433942.326	433965.491	433985.112	434005.112	280.132	35	-45	42.786	20	20	0.100
38	RHS	434009.219	434024.219	434027.345	434030.467	434045.467	18.845	40	65	6.248	15	15	0.100
39	LHS	434049.670	434064.670	434074.004	434083.211	434098.211	330.451	40	-65	18.541	15	15	0.100
40	RHS	434101.332	434121.332	434149.285	434171.358	434191.358	89.249	35	45	50.026	20	20	0.100
41	LHS	434193.543	434213.543	434240.472	434262.076	434282.076	272.813	35	-45	48.533	20	20	0.100
42	RHS	434290.343	434320.343	434327.297	434334.073	434364.073	71.614	30	35	13.730	30	30	0.100
43	RHS	434387.652	434402.652	434408.781	434414.873	434429.873	24.096	40	65	12.221	15	15	0.100
44	LHS	434434.928	434454.928	434468.315	434480.952	434500.952	301.406	35	-45	26.024	20	20	0.100
45	RHS	434507.569	434527.569	434536.029	434544.357	434564.357	38.384	35	55	16.788	20	20	0.099
46	RHS	434650.440	434670.440	434693.875	434713.652	434733.652	80.494	35	45	43.212	20	20	0.100
47	LHS	434749.729	434769.729	434789.056	434806.240	434826.240	288.179	35	-45	36.511	20	20	0.100
48	RHS	434897.496	434927.496	434934.995	434942.270	434972.270	73.407	30	35	14.774	30	30	0.100
49	LHS	434982.319	435002.319	435004.415	435006.507	435026.507	329.225	35	-45	4.188	20	20	0.100
50	RHS	435029.307	435059.307	435060.024	435060.741	435090.741	51.535	30	35	1.434	30	30	0.100
51	LHS	435105.871	435135.871	435182.849	435196.020	435226.020	187.931	25	-30	60.149	30	30	0.093
52	RHS	435267.788	435297.788	435315.693	435330.888	435360.888	103.417	30	35	33.100	30	30	0.100
53	LHS	435384.652	435414.652	435423.652	435432.140	435462.140	269.351	25	-30	17.488	30	30	0.093
54	RHS	435474.683	435489.683	435496.057	435502.389	435517.389	24.469	40	65	12.706	15	15	0.100
55	LHS	435542.331	435557.331	435561.983	435566.623	435581.623	341.527	40	-75	9.292	15	15	0.095
56	RHS	435590.515	435610.515	435652.694	435682.479	435702.479	95.823	35	55	71.964	20	20	0.099
57	LHS	435703.477	435723.477	435729.295	435735.049	435755.049	319.806	35	-45	11.572	20	20	0.100
58	RHS	435755.582	435775.582	435781.261	435786.900	435806.900	32.704	35	55	11.318	20	20	0.099
59	RHS	435857.695	435872.695	435884.152	435895.377	435910.377	33.356	40	65	22.682	15	15	0.100
60	LHS	435937.718	435967.718	435998.672	436018.407	436048.407	228.002	30	-35	50.689	30	30	0.100
61	RHS	436125.958	436140.958	436235.098	436275.670	436290.670	114.413	40	75	134.712	15	15	0.095
62	LHS	436305.167	436335.167	436379.004	436397.959	436427.959	208.223	30	-35	62.792	30	30	0.100
63	RHS	436448.332	436463.332	436495.466	436526.237	436541.237	35.787	50	125	62.905	15	15	0.089
64	LHS	436543.605	436558.605	436562.845	436567.073	436582.073	339.434	40	-65	8.468	15	15	0.100
65	RHS	436582.806	436602.806	436626.447	436646.341	436666.341	81.012	35	45	43.535	20	20	0.100
66	LHS	436682.994	436702.994	436719.989	436735.134	436755.134	285.446	30	-40	32.140	20	20	0.100
67	RHS	436762.760	436777.760	436781.993	436786.222	436801.222	13.532	50	100	8.462	15	15	0.100
68	RHS	436873.912	436893.912	436915.221	436934.571	436954.571	63.269	35	55	40.659	20	20	0.099
69	LHS	436962.461	436982.461	437000.324	437016.471	437036.471	291.378	35	-45	34.010	20	20	0.100
70	RHS	437086.581	437106.581	437116.124	437125.389	437145.389	49.529	35	45	18.808	20	20	0.100
71	LHS	437148.291	437163.291	437166.249	437169.202	437184.202	340.158	40	-60	5.911	15	15	0.100
72	LHS	437193.328	437208.328	437211.976	437215.616	437230.616	340.393	40	-65	7.288	15	15	0.100
73	RHS	437269.566	437299.566	437321.560	437337.524	437367.524	129.839	25	30	37.958	30	30	0.093

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
74	LHS	437419.052	437439.052	437451.897	437464.076	437484.076	302.733	35	-45	25.024	20	20	0.100
75	LHS	437497.875	437517.875	437529.762	437541.288	437561.288	314.846	35	-55	23.413	20	20	0.099
76	RHS	437615.385	437645.385	437669.518	437686.032	437716.032	135.015	25	30	40.647	30	30	0.093
77	LHS	437740.357	437760.357	437762.879	437765.396	437785.396	328.140	35	-45	5.039	20	20	0.100
78	RHS	437786.133	437806.133	437807.812	437809.490	437829.490	24.472	35	55	3.357	20	20	0.099
79	RHS	437854.590	437874.590	437883.173	437891.553	437911.553	47.174	35	45	16.963	20	20	0.100
80	LHS	437912.499	437927.499	437935.765	437943.927	437958.927	330.028	40	-60	16.428	15	15	0.100
81	RHS	437963.114	437983.114	437992.731	438002.062	438022.062	49.658	35	45	18.948	20	20	0.100
82	LHS	438057.605	438087.605	438095.844	438103.687	438133.687	272.054	25	-30	16.082	30	30	0.093
83	LHS	438155.531	438170.531	438220.954	438266.386	438281.386	309.226	50	-125	95.855	15	15	0.089
84	LHS	438306.802	438336.802	438343.886	438350.716	438380.716	276.267	25	-30	13.914	30	30	0.093
85	RHS	438403.014	438418.014	438422.092	438426.168	438441.168	10.731	50	125	8.154	15	15	0.089
86	LHS	438507.018	438527.018	438530.349	438533.671	438553.671	332.242	35	-55	6.653	20	20	0.099
87	RHS	438556.561	438576.561	438579.688	438582.805	438602.805	33.552	35	45	6.244	20	20	0.100
88	LHS	438606.625	438636.625	438640.912	438645.140	438675.140	286.516	25	-30	8.515	30	30	0.093
89	RHS	438680.485	438700.485	438710.521	438720.234	438740.234	50.693	35	45	19.749	20	20	0.100
90	RHS	438767.052	438787.052	438804.771	438820.812	438840.812	68.451	35	45	33.760	20	20	0.100
91	LHS	438876.404	438906.404	438909.937	438913.446	438943.446	299.474	30	-35	7.042	30	30	0.100
92	RHS	438948.323	438968.323	438970.363	438972.401	438992.401	30.727	35	45	4.078	20	20	0.100
93	LHS	438999.903	439014.903	439040.552	439065.711	439080.711	334.983	50	-150	50.808	15	15	0.074
94	RHS	439105.687	439120.687	439127.038	439133.358	439148.358	21.188	40	75	12.671	15	15	0.095
95	RHS	439179.047	439209.047	439220.799	439231.448	439261.448	100.199	25	30	22.401	30	30	0.093
96	RHS	439275.172	439295.172	439300.169	439305.125	439325.125	38.175	35	45	9.953	20	20	0.100
97	LHS	439329.960	439359.960	439368.244	439376.125	439406.125	271.951	25	-30	16.165	30	30	0.093
98	RHS	439429.460	439449.460	439457.693	439465.747	439485.747	46.220	35	45	16.287	20	20	0.100
99	LHS	439488.037	439503.037	439508.627	439514.196	439529.196	340.158	40	-75	11.159	15	15	0.095
100	RHS	439530.966	439560.966	439580.118	439595.057	439625.057	122.447	25	30	34.091	30	30	0.093
101	LHS	439637.919	439667.919	439696.527	439713.618	439743.618	215.506	25	-30	45.699	30	30	0.093
102	RHS	439756.532	439771.532	439777.584	439783.601	439798.601	23.953	40	65	12.069	15	15	0.100
103	RHS	439839.303	439869.303	439870.056	439870.809	439900.809	51.661	30	35	1.506	30	30	0.100
104	LHS	439904.414	439934.414	439946.711	439957.755	439987.755	258.206	25	-30	23.341	30	30	0.093
105	LHS	439994.710	440014.710	440016.944	440019.176	440039.176	334.631	35	-55	4.466	20	20	0.099
106	RHS	440041.682	440056.682	440088.833	440120.025	440135.025	30.000	50	150	63.343	15	15	0.074
107	LHS	440177.910	440207.910	440217.731	440226.892	440256.892	266.466	25	-30	18.982	30	30	0.093
108	LHS	440269.729	440299.729	440305.499	440311.130	440341.130	281.044	25	-30	11.401	30	30	0.093
109	RHS	440342.446	440357.446	440375.564	440392.784	440407.784	44.418	40	65	35.338	15	15	0.100
110	LHS	440409.872	440429.872	440431.342	440432.812	440452.812	330.869	35	-45	2.940	20	20	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
111	RHS	440463.732	440483.732	440526.488	440552.117	440572.117	112.558	35	45	68.385	20	20	0.100
112	LHS	440606.903	440621.903	440629.055	440636.163	440651.163	337.773	40	-75	14.260	15	15	0.095
113	RHS	440737.520	440752.520	440761.697	440770.841	440785.841	15.334	50	125	18.321	15	15	0.089
114	RHS	440810.907	440830.907	440844.477	440857.266	440877.266	59.119	35	45	26.359	20	20	0.100
115	LHS	440878.540	440908.540	440919.651	440929.822	440959.822	262.133	25	-30	21.282	30	30	0.093
116	RHS	440970.265	440990.265	441018.332	441040.455	441060.455	89.384	35	45	50.190	20	20	0.100
117	RHS	441087.761	441107.761	441128.990	441147.433	441167.433	76.070	35	45	39.672	20	20	0.100
118	LHS	441202.496	441222.496	441267.062	441295.296	441315.296	253.744	35	-50	72.800	20	20	0.100
119	RHS	441321.266	441336.266	441336.594	441336.922	441351.922	12.053	40	75	0.656	15	15	0.095
120	LHS	441365.041	441380.041	441399.159	441417.056	441432.056	310.441	40	-60	37.015	15	15	0.100
121	RHS	441465.381	441495.381	441521.494	441538.355	441568.355	139.399	25	30	42.974	30	30	0.093
122	LHS	441569.463	441589.463	441615.361	441636.463	441656.463	274.773	35	-45	47.000	20	20	0.100
123	RHS	441665.035	441695.035	441710.668	441723.859	441753.859	112.462	25	30	28.824	30	30	0.093
124	LHS	441793.409	441813.409	441836.904	441857.818	441877.818	292.933	35	-55	44.409	20	20	0.099
125	LHS	441904.258	441924.258	441948.478	441968.696	441988.696	278.005	35	-45	44.438	20	20	0.100
126	RHS	441995.994	442010.994	442032.477	442053.669	442068.669	22.155	50	150	42.675	15	15	0.074
127	RHS	442147.341	442167.341	442175.477	442183.439	442203.439	46.066	35	45	16.098	20	20	0.100
128	LHS	442206.513	442226.513	442233.230	442239.849	442259.849	317.602	35	-45	13.336	20	20	0.100
129	RHS	442279.648	442299.648	442310.826	442321.560	442341.560	53.487	35	45	21.912	20	20	0.100
130	LHS	442415.985	442435.985	442448.618	442460.616	442480.616	303.245	35	-45	24.631	20	20	0.100
131	LHS	442522.508	442537.508	442555.387	442572.403	442587.403	316.035	40	-65	34.895	15	15	0.100
132	RHS	442598.884	442613.884	442630.691	442646.777	442661.777	42.219	40	65	32.893	15	15	0.100
133	LHS	442673.566	442688.566	442696.605	442704.584	442719.584	336.339	40	-75	16.018	15	15	0.095
134	RHS	442742.748	442762.748	442775.000	442786.859	442806.859	45.973	35	55	24.111	20	20	0.099
135	RHS	442839.424	442859.424	442867.187	442874.798	442894.798	45.087	35	45	15.374	20	20	0.100
136	RHS	442949.256	442964.256	442966.735	442969.214	442984.214	5.727	65	200	4.958	15	15	0.094
137	LHS	443020.176	443040.176	443060.229	443077.905	443097.905	286.627	35	-45	37.729	20	20	0.100
138	LHS	443149.547	443164.547	443178.719	443192.769	443207.769	340.234	50	-125	28.222	15	15	0.089
139	RHS	443228.381	443248.381	443257.751	443266.857	443286.857	49.038	35	45	18.476	20	20	0.100
140	LHS	443288.023	443303.023	443309.494	443315.923	443330.923	335.467	40	-65	12.900	15	15	0.100
141	RHS	443341.922	443356.922	443359.024	443361.125	443376.125	14.704	40	75	4.203	15	15	0.095
142	LHS	443399.216	443414.216	443435.367	443455.571	443470.571	319.682	40	-80	41.355	15	15	0.089
143	RHS	443476.848	443491.848	443545.175	443581.166	443596.166	91.989	40	65	89.318	15	15	0.100
144	LHS	443597.820	443617.820	443640.271	443660.024	443680.024	288.740	35	-50	42.204	20	20	0.100
145	RHS	443715.274	443730.274	443734.130	443737.976	443752.976	20.114	40	65	7.702	15	15	0.100
146	RHS	443777.347	443807.347	443812.892	443818.313	443848.313	78.282	25	30	10.966	30	30	0.093
147	LHS	443873.820	443893.820	443896.967	443900.107	443920.107	332.765	35	-55	6.287	20	20	0.099

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
148	LHS	443932.226	443952.226	443959.525	443966.739	443986.739	324.159	35	-55	14.513	20	20	0.099
149	LHS	444015.154	444035.154	444065.574	444088.653	444108.653	266.433	35	-45	53.499	20	20	0.100
150	RHS	444115.914	444130.914	444133.994	444137.069	444152.069	18.774	40	65	6.155	15	15	0.100
151	LHS	444156.800	444176.800	444183.231	444189.603	444209.603	325.924	35	-55	12.803	20	20	0.099
152	RHS	444215.864	444245.864	444248.348	444250.820	444280.820	66.863	25	30	4.956	30	30	0.093
153	RHS	444290.010	444310.010	444315.536	444321.008	444341.008	39.479	35	45	10.998	20	20	0.100
154	RHS	444380.670	444395.670	444399.409	444403.139	444418.139	19.854	40	65	7.469	15	15	0.100
155	LHS	444420.672	444435.672	444459.105	444481.097	444496.097	313.885	40	-75	45.425	15	15	0.095
156	RHS	444501.324	444516.324	444521.610	444526.878	444541.878	19.567	40	75	10.554	15	15	0.095
157	RHS	444549.989	444569.989	444571.802	444573.613	444593.613	30.181	35	45	3.624	20	20	0.100
158	LHS	444595.709	444610.709	444615.746	444620.763	444635.763	338.057	40	-65	10.054	15	15	0.100
159	LHS	444637.678	444657.678	444667.213	444676.469	444696.469	310.696	35	-45	18.791	20	20	0.100
160	RHS	444751.359	444766.359	444780.199	444793.732	444808.732	32.409	40	75	27.373	15	15	0.095
161	LHS	444813.022	444828.022	444829.764	444831.507	444846.507	351.620	50	-125	3.485	15	15	0.089
162	RHS	444847.854	444862.854	444862.987	444863.120	444878.120	13.517	40	65	0.266	15	15	0.100
163	LHS	444886.059	444906.059	444911.975	444917.823	444937.823	319.621	35	-45	11.764	20	20	0.100
164	RHS	444938.959	444958.959	444959.911	444960.864	444980.864	27.959	35	45	1.905	20	20	0.100
165	LHS	444990.036	445010.036	445012.595	445015.149	445035.149	328.107	35	-45	5.113	20	20	0.100
166	RHS	445047.646	445062.646	445064.599	445066.551	445081.551	14.517	40	75	3.905	15	15	0.095
167	LHS	445102.846	445117.846	445119.353	445120.860	445135.860	341.236	35	-55	3.014	15	15	0.099
168	RHS	445146.522	445166.522	445167.505	445168.489	445188.489	27.993	35	45	1.967	20	20	0.100
169	LHS	445192.317	445207.317	445209.297	445211.277	445226.277	343.326	40	-65	3.960	15	15	0.100
170	LHS	445270.705	445290.705	445293.769	445296.824	445316.824	326.840	35	-45	6.119	20	20	0.100
171	LHS	445337.468	445357.468	445363.935	445370.313	445390.313	318.309	35	-45	12.845	20	20	0.100
172	RHS	445394.400	445414.400	445423.214	445431.809	445451.809	47.751	35	45	17.409	20	20	0.100
173	LHS	445551.213	445566.213	445570.977	445575.734	445590.734	345.957	50	-100	9.521	15	15	0.100
174	LHS	445612.565	445627.565	445634.668	445641.715	445656.715	334.344	40	-65	14.150	15	15	0.100
175	RHS	445684.204	445714.204	445754.959	445770.379	445800.379	164.724	25	30	56.175	30	30	0.093
176	LHS	445810.191	445830.191	445833.584	445836.964	445856.964	326.013	35	-45	6.773	20	20	0.100
177	RHS	445861.955	445881.955	445884.082	445886.207	445906.207	30.988	35	45	4.252	20	20	0.100
178	LHS	445915.527	445935.527	445938.485	445941.435	445961.435	327.129	35	-45	5.908	20	20	0.100
179	RHS	445964.304	445994.304	445995.131	445995.958	446025.958	51.839	30	35	1.654	30	30	0.100
180	LHS	446042.518	446072.518	446083.292	446093.205	446123.205	263.300	25	-30	20.687	30	30	0.093
181	RHS	446140.380	446160.380	446162.459	446164.535	446184.535	30.799	35	45	4.155	20	20	0.100
182	RHS	446221.781	446241.781	446245.315	446248.834	446268.834	34.556	35	45	7.053	20	20	0.100
183	LHS	446281.326	446311.326	446358.298	446371.471	446401.471	187.853	25	-30	60.145	30	30	0.093
184	RHS	446494.651	446509.651	446522.962	446535.990	446550.990	32.072	40	74	26.339	15	15	0.096



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185	RHS	446673.643	446693.643	446745.256	446770.480	446790.480	123.409	35	45	76.837	20	20	0.100
186	RHS	446820.752	446840.752	446843.040	446845.325	446865.325	25.731	35	55	4.573	20	20	0.099
187	LHS	446878.716	446898.716	446903.860	446908.961	446928.961	321.558	35	-45	10.245	20	20	0.100
188	RHS	446992.239	447007.239	447010.478	447013.698	447028.698	35.245	30	35	6.459	15	15	0.100
189	LHS	447040.691	447060.691	447103.840	447129.487	447149.487	247.018	35	-45	68.796	20	20	0.100
190	LHS	447211.710	447241.710	447256.338	447268.931	447298.931	250.858	25	-30	27.221	30	30	0.093
191	RHS	447322.255	447352.255	447389.469	447405.794	447435.794	159.673	25	30	53.539	30	30	0.093
192	LHS	447528.043	447558.043	447574.193	447588.305	447618.305	261.498	30	-35	30.262	30	30	0.100
193	LHS	447632.160	447647.160	447663.719	447679.979	447694.979	332.620	50	-100	32.819	15	15	0.100
194	RHS	447697.711	447717.711	447727.777	447737.516	447757.516	50.815	35	45	19.805	20	20	0.100
195	LHS	447760.363	447780.363	447785.281	447790.160	447810.160	322.164	35	-45	9.797	20	20	0.100
196	LHS	447818.951	447833.951	447836.257	447838.562	447853.562	342.834	40	-65	4.611	15	15	0.100
197	RHS	447864.914	447894.914	447907.309	447918.422	447948.422	102.276	25	30	23.508	30	30	0.093
198	RHS	447970.752	448000.752	448004.684	448008.571	448038.571	72.343	25	30	7.819	30	30	0.093
199	RHS	448056.009	448071.009	448082.058	448093.017	448108.017	21.238	50	100	22.008	15	15	0.100
200	RHS	448144.297	448159.297	448160.574	448161.851	448176.851	13.506	40	75	2.554	15	15	0.095
201	LHS	448184.775	448199.775	448206.762	448213.710	448228.710	338.005	40	-75	13.935	15	15	0.095
202	LHS	448236.172	448251.172	448263.272	448275.098	448290.098	325.728	40	-65	23.926	15	15	0.100
203	RHS	448296.266	448311.266	448335.039	448356.848	448371.848	53.414	40	65	45.582	15	15	0.100
204	LHS	448385.468	448400.468	448408.285	448416.071	448431.071	342.604	50	-100	15.603	15	15	0.100
205	RHS	448486.808	448501.808	448505.009	448508.208	448523.208	12.363	50	100	6.400	15	15	0.100
206	LHS	448527.735	448547.735	448557.125	448566.249	448586.249	311.085	35	-45	18.514	20	20	0.100
207	RHS	448589.641	448619.641	448625.559	448631.326	448661.326	79.729	25	30	11.685	30	30	0.093
208	RHS	448704.438	448724.438	448726.813	448729.183	448749.183	31.561	35	45	4.745	20	20	0.100
209	LHS	448758.755	448773.755	448783.100	448792.318	448807.318	330.553	40	-65	18.563	15	15	0.100
210	RHS	448809.181	448824.181	448828.012	448831.832	448846.832	21.748	40	60	7.651	15	15	0.100
211	LHS	448847.524	448867.524	448870.841	448874.147	448894.147	326.120	35	-45	6.623	20	20	0.100
212	RHS	448896.479	448916.479	448920.331	448924.165	448944.165	35.269	35	45	7.686	20	20	0.100
213	LHS	448948.685	448968.685	448984.550	448999.190	449019.190	295.798	35	-45	30.505	20	20	0.100
214	RHS	449023.641	449043.641	449056.066	449068.081	449088.081	46.403	35	55	24.440	20	20	0.099
215	LHS	449096.869	449126.869	449130.195	449133.502	449163.502	300.161	30	-35	6.633	30	30	0.100
216	LHS	449166.939	449186.939	449189.323	449191.702	449211.702	328.503	35	-45	4.763	20	20	0.100
217	RHS	449215.392	449235.392	449256.825	449275.396	449295.396	76.543	35	45	40.004	20	20	0.100
218	LHS	449301.594	449321.594	449348.329	449369.841	449389.841	273.156	35	-45	48.247	20	20	0.100
219	LHS	449401.038	449416.038	449420.318	449424.586	449439.586	339.327	40	-65	8.548	15	15	0.100
220	RHS	449486.057	449501.057	449507.242	449513.412	449528.412	15.732	50	100	12.355	15	15	0.100
221	LHS	449535.035	449550.035	449563.639	449577.078	449592.078	336.012	50	-100	27.043	15	15	0.100



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222	LHS	449598.614	449613.614	449615.101	449616.588	449631.588	349.715	50	-100	2.974	15	15	0.100
223	RHS	449654.930	449669.930	449674.125	449678.311	449693.311	17.971	40	75	8.381	15	15	0.095
224	LHS	449719.095	449734.095	449753.830	449772.690	449787.690	319.112	40	-75	38.595	15	15	0.095
225	RHS	449798.730	449818.730	449838.120	449855.347	449875.347	72.116	35	45	36.617	20	20	0.100
226	LHS	449922.229	449952.229	449957.385	449962.441	449992.441	283.210	25	-30	10.212	30	30	0.093
227	RHS	450031.133	450061.133	450119.558	450133.308	450163.308	167.373	30	35	72.175	30	30	0.100
228	LHS	450183.455	450213.455	450226.505	450238.438	450268.438	270.070	30	-35	24.983	30	30	0.100
229	LHS	450302.515	450322.515	450331.528	450340.306	450360.306	311.889	35	-45	17.791	20	20	0.100
230	RHS	450416.094	450446.094	450456.030	450465.284	450495.284	94.069	25	30	19.190	30	30	0.093
231	LHS	450496.119	450516.119	450537.815	450556.552	450576.552	283.089	35	-45	40.433	20	20	0.100
232	RHS	450585.411	450605.411	450612.761	450620.024	450640.024	36.124	35	55	14.613	20	20	0.099
233	LHS	450691.113	450706.113	450711.302	450716.482	450731.482	345.600	50	-100	10.369	15	15	0.100
234	RHS	450747.718	450762.718	450766.802	450770.884	450785.884	8.985	50	150	8.166	15	15	0.074
235	LHS	450817.130	450832.130	450852.285	450871.907	450886.907	328.756	50	-100	39.777	15	15	0.100
236	LHS	450893.541	450908.541	450909.551	450910.560	450925.560	343.874	40	-60	2.019	15	15	0.100
237	RHS	450937.939	450952.939	450955.199	450957.456	450972.456	18.670	40	60	4.517	15	15	0.100
238	RHS	450982.735	450997.735	450999.336	451000.936	451015.936	13.946	40	75	3.201	15	15	0.095
239	LHS	451026.276	451046.276	451050.887	451055.466	451075.466	322.843	35	-45	9.190	20	20	0.100
240	RHS	451079.061	451099.061	451105.675	451112.194	451132.194	42.212	35	45	13.133	20	20	0.100
241	LHS	451132.926	451147.926	451160.421	451172.563	451187.563	322.287	40	-60	24.637	15	15	0.100
242	RHS	451189.764	451204.764	451210.696	451216.590	451231.590	25.618	40	60	11.826	15	15	0.100
243	LHS	451235.110	451255.110	451259.492	451263.847	451283.847	323.509	35	-45	8.737	20	20	0.100
244	RHS	451292.200	451312.200	451320.197	451328.029	451348.029	45.648	35	45	15.829	20	20	0.100
245	LHS	451355.847	451370.847	451473.940	451496.093	451511.093	226.148	40	-60	125.246	15	15	0.100
246	RHS	451525.866	451555.866	451557.457	451559.046	451589.046	54.456	30	35	3.180	30	30	0.100
247	RHS	451602.872	451617.872	451621.282	451624.692	451639.692	10.016	50	125	6.820	15	15	0.089
248	RHS	451701.139	451721.139	451724.479	451727.807	451747.807	34.000	35	45	6.668	20	20	0.100
249	LHS	451767.296	451797.296	451846.574	451858.732	451888.732	185.403	25	-30	61.436	30	30	0.093
250	RHS	451947.192	451977.192	451990.115	452001.597	452031.597	103.954	25	30	24.405	30	30	0.093
251	RHS	452071.799	452101.799	452103.954	452106.102	452136.102	65.646	25	30	4.303	30	30	0.093
252	LHS	452150.748	452165.748	452167.440	452169.132	452184.132	349.984	50	-105	3.384	15	15	0.100
253	RHS		452192.952	452203.522	452214.083		4.057	80	300	21.131	0	0	0.095
254	LHS	452275.178	452295.178	452330.702	452355.322	452375.322	258.033	35	-45	60.144	20	20	0.100
255	LHS	452380.133	452395.133	452463.347	452529.281	452544.281	331.649	80	-300	134.148	15	15	0.095
256	RHS	452560.838	452590.838	452600.983	452610.403	452640.403	94.773	25	30	19.565	30	30	0.093
257	LHS	452645.398	452660.398	452674.015	452687.428	452702.428	333.327	50	-90	27.030	15	15	0.100
258	RHS	452760.528	452790.528	452803.777	452815.480	452845.480	104.966	25	30	24.952	30	30	0.093

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
259	LHS	452872.932	452902.932	452925.637	452941.803	452971.803	228.615	25	-30	38.871	30	30	0.093
260	RHS	452986.097	453006.097	453010.845	453015.557	453035.557	37.589	35	45	9.460	20	20	0.100
261	LHS	453046.225	453066.225	453073.274	453080.209	453100.209	316.847	35	-45	13.984	20	20	0.100
262	RHS	453102.147	453122.147	453134.879	453146.963	453166.963	57.159	35	45	24.816	20	20	0.100
263	LHS	453179.200	453199.200	453203.709	453208.189	453228.189	323.148	35	-45	8.989	20	20	0.100
264	LHS	453265.909	453285.909	453287.968	453290.025	453310.025	329.400	35	-45	4.116	20	20	0.100
265	RHS	453312.792	453342.792	453343.476	453344.160	453374.160	59.982	25	30	1.368	30	30	0.093
266	RHS	453431.650	453456.650	453536.794	453545.280	453570.280	162.871	30	40	88.630	25	25	0.100
267	LHS	453571.449	453591.449	453594.169	453596.882	453616.882	327.633	35	-45	5.433	20	20	0.100
268	RHS	453636.229	453651.229	453654.810	453658.383	453673.383	19.627	40	65	7.154	15	15	0.100
269	LHS	453720.044	453740.044	453747.043	453753.931	453773.931	316.889	35	-45	13.887	20	20	0.100
270	LHS	453775.020	453805.020	453806.524	453808.025	453838.025	305.999	30	-35	3.005	30	30	0.100
271	RHS	453843.545	453858.545	453863.496	453868.427	453883.427	22.081	40	65	9.882	15	15	0.100
272	LHS	453887.623	453902.623	453906.960	453911.295	453926.295	351.029	50	-150	8.672	15	15	0.074
273	LHS	453942.086	453972.086	453975.463	453978.818	454008.818	299.888	30	-35	6.732	30	30	0.100
274	RHS	454042.198	454072.198	454120.647	454133.181	454163.181	173.884	25	30	60.983	30	30	0.093
275	LHS	454264.900	454284.900	454326.328	454351.868	454371.868	249.284	35	-45	66.968	20	20	0.100
276	LHS	454430.081	454460.081	454463.127	454466.152	454496.152	291.202	25	-30	6.071	30	30	0.093
277	RHS	454506.438	454521.438	454543.869	454565.569	454580.569	33.992	50	100	44.131	15	15	0.100
278	RHS	454607.145	454627.145	454634.130	454641.040	454661.040	35.395	35	55	13.895	20	20	0.099
279	RHS	454671.123	454701.123	454709.433	454717.336	454747.336	88.353	25	30	16.213	30	30	0.093
280	LHS	454749.232	454764.232	454770.960	454777.640	454792.640	335.041	40	-65	13.408	15	15	0.100
281	RHS	454823.913	454843.913	454849.969	454855.953	454875.953	40.895	35	45	12.040	20	20	0.100
282	LHS	454880.971	454900.971	454921.223	454939.032	454959.032	286.153	35	-45	38.061	20	20	0.100
283	RHS	454968.138	454988.138	455051.204	455073.732	455093.732	134.566	35	45	85.594	20	20	0.100
284	LHS	455133.172	455153.172	455154.973	455156.773	455176.773	335.544	35	-55	3.601	20	20	0.099
285	RHS	455177.433	455197.433	455206.999	455216.284	455236.284	49.471	35	45	18.851	20	20	0.100
286	LHS	455240.138	455255.138	455257.625	455260.110	455275.110	342.504	40	-65	4.972	15	15	0.100
287	LHS	455307.732	455337.732	455375.195	455391.466	455421.466	200.198	25	-30	53.734	30	30	0.093
288	RHS	455445.050	455460.050	455496.043	455525.792	455540.792	71.223	40	65	65.742	15	15	0.100
289	LHS	455543.142	455563.142	455577.944	455591.742	455611.742	298.145	35	-45	28.600	20	20	0.100
290	LHS	455629.005	455649.005	455657.906	455666.581	455686.581	312.229	35	-45	17.576	20	20	0.100
291	RHS	455687.747	455707.747	455711.241	455714.722	455734.722	34.453	35	45	6.975	20	20	0.100
292	RHS	455752.645	455782.645	455785.870	455789.070	455819.070	69.579	25	30	6.425	30	30	0.093
293	RHS	455825.667	455840.667	455849.998	455859.233	455874.233	25.726	40	75	18.566	15	15	0.095
294	LHS	455877.763	455897.763	455929.883	455953.555	455973.555	263.638	35	-45	55.792	20	20	0.100
295	LHS	456023.988	456053.988	456059.409	456064.714	456094.714	282.252	25	-30	10.726	30	30	0.093

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296	RHS	456102.471	456132.471	456140.532	456148.221	456178.221	87.474	25	30	15.750	30	30	0.093
297	LHS	456182.460	456202.460	456206.232	456209.988	456229.988	324.955	35	-45	7.528	20	20	0.100
298	RHS	456233.425	456253.425	456268.876	456283.192	456303.192	63.505	35	45	29.767	20	20	0.100
299	RHS	456347.162	456367.162	456382.492	456396.713	456416.713	63.149	35	45	29.551	20	20	0.100
300	LHS	456425.499	456445.499	456455.084	456464.387	456484.387	310.524	35	-45	18.888	20	20	0.100
301	RHS	456493.510	456513.510	456520.439	456527.259	456547.259	43.010	35	45	13.749	20	20	0.100
302	LHS	456551.158	456571.158	456575.044	456578.912	456598.912	324.776	35	-45	7.754	20	20	0.100
303	RHS	456610.898	456630.898	456638.456	456645.874	456665.874	44.680	35	45	14.976	20	20	0.100
304	LHS	456667.378	456687.378	456701.237	456714.266	456734.266	300.301	35	-45	26.888	20	20	0.100
305	LHS	456778.117	456798.117	456800.016	456801.912	456821.912	329.733	35	-45	3.795	20	20	0.100
306	LHS	456883.003	456898.003	456905.928	456913.776	456928.776	332.941	40	-65	15.773	15	15	0.100
307	RHS	456953.162	456968.162	456971.510	456974.857	456989.857	8.320	50	150	6.695	15	15	0.074
308	RHS	456997.501	457027.501	457042.516	457055.343	457085.343	110.496	25	30	27.842	30	30	0.093
309	LHS	457089.273	457109.273	457114.056	457118.803	457138.803	322.411	35	-45	9.530	20	20	0.100
310	LHS	457149.412	457169.412	457176.618	457183.703	457203.703	316.400	35	-45	14.291	20	20	0.100
311	RHS	457208.331	457223.331	457252.340	457279.800	457294.800	41.087	50	100	56.469	15	15	0.100
312	LHS	457309.946	457329.946	457337.957	457345.802	457365.802	314.467	35	-45	15.856	20	20	0.100
313	LHS	457483.911	457498.911	457505.857	457512.782	457527.782	343.531	50	-100	13.871	15	15	0.100
314	RHS	457543.461	457563.461	457566.271	457569.077	457589.077	26.700	35	55	5.616	20	20	0.099
315	LHS	457612.560	457642.560	457659.655	457674.365	457704.365	258.900	30	-35	31.805	30	30	0.100
316	RHS	457770.755	457800.755	457843.517	457858.296	457888.296	167.266	25	30	57.541	30	30	0.093
317	LHS	457893.720	457913.720	457918.674	457923.589	457943.589	321.991	35	-45	9.869	20	20	0.100
318	LHS	457984.493	458004.493	458034.473	458057.385	458077.385	267.256	35	-45	52.892	20	20	0.100
319	RHS	458094.177	458124.177	458128.162	458132.100	458162.100	72.524	25	30	7.923	30	30	0.093
320	RHS	458172.768	458192.768	458201.619	458210.247	458230.247	47.746	35	45	17.479	20	20	0.100
321	LHS	458233.118	458263.118	458272.949	458282.118	458312.118	266.422	25	-30	19.000	30	30	0.093
322	RHS	458319.060	458334.060	458343.811	458353.418	458368.418	30.309	40	65	19.358	15	15	0.100
323	LHS	458373.144	458388.144	458388.969	458389.793	458404.793	350.559	50	-100	1.649	15	15	0.100
324	RHS	458412.814	458427.814	458438.455	458448.908	458463.908	31.961	40	65	21.094	15	15	0.100
325	LHS	458504.458	458524.458	458538.306	458551.326	458571.326	300.413	35	-45	26.868	20	20	0.100
326	RHS	458575.367	458595.367	458599.563	458603.734	458623.734	36.128	35	45	8.367	20	20	0.100
327	LHS	458629.922	458649.922	458657.572	458665.125	458685.125	323.423	35	-55	15.203	20	20	0.099
328	RHS	458692.446	458707.446	458710.165	458712.880	458727.880	18.126	40	65	5.434	15	15	0.100
329	RHS	458751.461	458766.461	458780.287	458793.638	458808.638	40.365	40	60	27.177	15	15	0.100
330	RHS	458822.256	458837.256	458844.997	458852.725	458867.725	11.682	50	150	15.469	15	15	0.074
331	LHS	458868.156	458883.156	458886.508	458889.860	458904.860	353.921	65	-200	6.704	15	15	0.094
332	LHS	458927.543	458952.543	458958.402	458964.179	458989.179	307.587	30	-40	11.636	25	25	0.100

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333	RHS	458992.151	459007.151	459008.007	459008.862	459023.862	9.651	50	100	1.711	15	15	0.100
334	RHS	459034.042	459049.042	459058.776	459068.471	459083.471	15.908	50	125	19.429	15	15	0.089
335	LHS	459095.396	459110.396	459113.513	459116.627	459131.627	343.902	40	-75	6.231	15	15	0.095
336	RHS	459153.487	459168.487	459170.199	459171.910	459186.910	14.141	40	75	3.423	15	15	0.095
337	RHS	459233.083	459248.083	459252.687	459257.287	459272.287	9.351	50	150	9.204	15	15	0.074
338	RHS	459375.602	459390.602	459441.177	459488.162	459503.162	43.098	50	150	97.560	15	15	0.074
339	LHS	459504.792	459534.792	459543.780	459552.387	459582.387	282.114	30	-35	17.595	30	30	0.100
340	RHS	459622.737	459637.737	459658.535	459678.748	459693.748	32.169	50	100	41.011	15	15	0.100
341	RHS	459743.822	459758.822	459774.360	459789.787	459804.787	17.622	50	150	30.965	15	15	0.074
342	LHS	459841.255	459861.255	459869.326	459877.227	459897.227	314.340	35	-45	15.972	20	20	0.100
343	RHS	459901.838	459916.838	459921.437	459926.025	459941.025	18.579	40	75	9.187	15	15	0.095
344	RHS	459975.732	459990.732	459999.975	460009.208	460024.208	7.722	80	250	18.476	15	15	0.100
345	LHS	460027.920	460042.920	460049.277	460055.604	460070.604	338.857	40	-75	12.684	15	15	0.095
346	RHS	460086.018	460101.018	460110.526	460119.876	460134.876	32.473	40	60	18.858	15	15	0.100
347	RHS	460138.961	460153.961	460181.601	460205.764	460210.764	59.025	40	60	51.803	15	5	0.100
348	LHS	460260.713	460275.713	460346.412	460386.364	460401.364	257.186	40	-70	110.651	15	15	0.100
349	RHS	460406.307	460426.307	460426.435	460426.562	460446.562	25.843	35	45	0.255	20	20	0.100
350	RHS	460453.407	460468.407	460473.534	460478.641	460493.641	22.326	40	65	10.234	15	15	0.100
351	RHS		460543.258	460554.989	460566.715		3.017	80	450	23.457	0	0	0.063
352	RHS	460617.728	460637.728	460645.029	460652.245	460672.245	36.028	35	55	14.517	20	20	0.099
353	LHS	460673.105	460688.105	460732.970	460765.153	460780.153	272.111	40	-60	77.048	15	15	0.100
354	RHS	460785.563	460815.563	460819.588	460823.564	460853.564	72.658	25	30	8.001	30	30	0.093
355	LHS	460855.822	460870.822	460877.218	460883.583	460898.583	338.876	40	-75	12.761	15	15	0.095
356	RHS		460922.039	460944.992	460967.914		5.319	80	500	45.875	0	0	0.057
357	LHS	461047.185	461062.185	461065.299	461068.413	461083.413	351.965	50	-150	6.228	15	15	0.074
358	RHS	461093.526	461108.526	461125.384	461141.692	461156.692	36.912	40	75	33.166	15	15	0.095
359	LHS	461200.474	461220.474	461221.133	461221.792	461241.792	311.226	25	-25	1.318	20	20	0.100
360	RHS	461245.781	461260.781	461261.758	461262.735	461277.735	15.038	40	65	1.954	15	15	0.100
361	LHS	461286.535	461301.535	461304.877	461308.212	461323.212	339.449	40	-60	6.677	15	15	0.100
362	RHS	461330.473	461350.473	461366.161	461380.663	461400.663	63.933	35	45	30.190	20	20	0.100
363	LHS	461418.571	461448.571	461466.418	461480.771	461510.771	241.272	25	-30	32.200	30	30	0.093
364	RHS	461523.011	461553.011	461567.490	461579.991	461609.991	108.877	25	30	26.980	30	30	0.093
365	LHS	461623.743	461643.743	461651.384	461658.927	461678.927	323.476	35	-55	15.184	20	20	0.099
366	RHS	461702.496	461717.496	461726.208	461734.798	461749.798	30.964	40	60	17.302	15	15	0.100
367	RHS	461767.623	461787.623	461801.922	461815.601	461835.601	50.108	35	55	27.978	20	20	0.099
368	LHS	461894.920	461909.920	461931.641	461952.205	461967.205	316.278	40	-75	42.285	15	15	0.095
369	RHS	461975.650	461990.650	461998.482	462006.282	462021.282	17.559	50	100	15.632	15	15	0.100

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370	LHS	462024.585	462044.585	462051.870	462059.030	462079.030	316.235	35	-45	14.445	20	20	0.100
371	RHS	462082.579	462102.579	462114.566	462126.183	462146.183	45.491	35	55	23.604	20	20	0.099
372	LHS	462152.542	462167.542	462171.517	462175.483	462190.483	339.886	40	-65	7.941	15	15	0.100
373	RHS	462204.520	462219.520	462222.422	462225.320	462240.320	18.339	40	65	5.800	15	15	0.100
374	LHS	462293.225	462323.225	462330.166	462336.868	462366.868	276.780	25	-30	13.643	30	30	0.093
375	RHS	462374.007	462389.007	462440.981	462482.303	462497.303	73.138	40	85	93.296	15	15	0.084
376	LHS	462551.556	462566.556	462594.246	462618.910	462633.910	300.738	40	-65	52.354	15	15	0.100
377	RHS	462656.962	462676.962	462691.662	462705.379	462725.379	61.762	35	45	28.417	20	20	0.100
378	LHS	462757.236	462777.236	462840.234	462867.229	462887.229	234.031	35	-50	89.993	20	20	0.100
379	RHS	463032.705	463047.705	463066.320	463084.197	463099.197	39.373	40	75	36.492	15	15	0.095
380	RHS	463145.312	463160.312	463235.479	463292.191	463307.191	76.549	50	110	131.879	15	15	0.100
381	LHS	463308.098	463328.098	463356.743	463380.123	463400.123	277.604	35	-50	52.025	20	20	0.100
382	RHS	463449.834	463479.834	463481.287	463482.738	463512.738	54.003	30	35	2.904	30	30	0.100
383	LHS	463524.564	463544.564	463553.844	463562.867	463582.867	311.358	35	-45	18.303	20	20	0.100
384	RHS	463588.048	463608.048	463621.639	463634.446	463654.446	59.158	35	45	26.398	20	20	0.100
385	RHS	463693.779	463708.779	463712.850	463716.918	463731.918	8.883	50	150	8.139	15	15	0.074
386	RHS	463766.716	463781.716	463791.724	463801.615	463816.615	26.757	40	75	19.899	15	15	0.095
387	LHS	463841.524	463871.524	463886.224	463898.861	463928.861	250.586	25	-30	27.337	30	30	0.093
388	RHS	463932.618	463947.618	463980.726	464012.347	464027.347	36.650	50	125	64.729	15	15	0.089
389	RHS	464082.391	464102.391	464111.593	464120.626	464140.626	39.957	35	55	18.235	20	20	0.099
390	LHS	464151.011	464166.011	464179.737	464193.199	464208.199	329.799	40	-80	27.188	15	15	0.089
391	RHS	464224.932	464244.932	464252.027	464259.007	464279.007	43.408	35	45	14.075	20	20	0.100
392	LHS	464346.305	464366.305	464405.886	464431.232	464451.232	251.876	35	-45	64.927	20	20	0.100
393	RHS	464468.026	464488.026	464494.183	464500.263	464520.263	41.151	35	45	12.237	20	20	0.100
394	LHS	464523.558	464543.558	464548.097	464552.605	464572.605	323.159	35	-45	9.047	20	20	0.100
395	RHS	464579.448	464594.448	464594.820	464595.191	464610.191	15.179	40	60	0.743	15	15	0.100
396	RHS	464690.140	464705.140	464708.496	464711.848	464726.848	16.590	40	75	6.708	15	15	0.095
397	RHS	464841.305	464856.305	464885.373	464911.767	464926.767	53.946	40	75	55.462	15	15	0.095
398	LHS	464951.884	464981.884	464989.242	464996.316	465026.316	275.197	25	-30	14.432	30	30	0.093
399	RHS	465029.335	465044.335	465066.488	465088.185	465103.185	27.046	50	125	43.850	15	15	0.089
400	LHS	465105.302	465125.302	465138.067	465150.178	465170.178	302.981	35	-45	24.876	20	20	0.100
401	RHS	465176.960	465206.960	465216.581	465225.579	465255.579	92.909	25	30	18.619	30	30	0.093
402	RHS	465256.567	465271.567	465277.584	465283.562	465298.562	25.889	40	60	11.995	15	15	0.100
403	LHS	465304.509	465319.509	465399.126	465465.899	465480.899	298.385	50	-150	146.390	15	15	0.074
404	LHS	465520.980	465540.980	465547.547	465554.021	465574.021	318.061	35	-45	13.041	20	20	0.100
405	RHS	465584.685	465604.685	465607.437	465610.185	465630.185	26.693	35	55	5.500	20	20	0.099
406	LHS	465642.369	465672.369	465678.729	465684.903	465714.903	278.773	25	-30	12.534	30	30	0.093



Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
407	RHS	465722.633	465752.633	465756.595	465760.524	465790.524	62.134	30	35	7.891	30	30	0.100
408	RHS	465815.253	465845.253	465850.809	465856.242	465886.242	78.283	25	30	10.989	30	30	0.093
409	RHS	465895.863	465910.863	465916.491	465922.107	465937.107	15.069	50	100	11.244	15	15	0.100
410	LHS	465942.729	465962.729	465969.060	465975.334	465995.334	326.040	35	-55	12.605	20	20	0.099
411	RHS	466043.201	466073.201	466074.642	466076.081	466106.081	62.896	25	30	2.880	30	30	0.093
412	LHS	466109.277	466139.277	466143.855	466148.363	466178.363	285.361	25	-30	9.086	30	30	0.093
413	RHS	466183.771	466203.771	466216.727	466229.001	466249.001	57.640	35	45	25.230	20	20	0.100
414	LHS	466318.388	466338.388	466343.711	466348.984	466368.984	321.136	35	-45	10.596	20	20	0.100
415	RHS	466381.072	466401.072	466411.492	466421.619	466441.619	46.578	35	50	20.547	20	20	0.100
416	RHS	466493.266	466513.266	466540.786	466564.298	466584.298	74.119	35	55	51.032	20	20	0.099
417	LHS	466611.576	466636.576	466732.884	466730.747	466755.747	189.447	30	-40	94.171	25	25	0.100
418	RHS	466768.830	466783.830	466792.416	466800.903	466815.903	28.317	40	65	17.073	15	15	0.100
419	LHS	466905.449	466920.449	466934.953	466949.406	466964.406	347.471	65	-200	28.957	15	15	0.094
420	RHS	467098.801	467113.801	467131.040	467148.062	467163.062	22.694	50	125	34.261	15	15	0.089
421	LHS	467191.235	467206.235	467210.044	467213.844	467228.844	340.101	40	-65	7.609	15	15	0.100
422	LHS	467229.637	467249.637	467254.024	467258.392	467278.392	330.146	35	-55	8.755	20	20	0.099
423	RHS	467290.894	467320.894	467322.227	467323.559	467353.559	62.418	25	30	2.665	30	30	0.093
424	RHS	467356.141	467376.141	467395.650	467412.958	467432.958	72.413	35	45	36.817	20	20	0.100
425	RHS	467433.461	467453.461	467472.728	467490.241	467510.241	65.202	35	50	36.780	20	20	0.100
426	LHS	467511.315	467541.315	467576.988	467593.609	467623.609	202.946	25	-30	52.294	30	30	0.093
427	RHS	467630.979	467650.979	467683.498	467707.298	467727.298	97.218	35	45	56.319	20	20	0.100
428	LHS	467794.794	467824.794	467834.678	467843.890	467873.890	266.234	25	-30	19.096	30	30	0.093
429	LHS	467874.925	467904.925	467907.814	467910.686	467940.686	291.710	25	-30	5.761	30	30	0.093
430	RHS	468030.542	468060.542	468061.941	468063.337	468093.337	62.634	25	30	2.795	30	30	0.093
431	LHS	468095.808	468115.808	468124.048	468132.108	468152.108	313.911	35	-45	16.300	20	20	0.100
432	RHS	468157.322	468177.322	468189.442	468201.000	468221.000	55.729	35	45	23.678	20	20	0.100
433	LHS	468233.391	468248.391	468254.521	468260.616	468275.616	336.023	40	-65	12.225	15	15	0.100
434	RHS	468287.285	468317.285	468323.446	468329.439	468359.439	80.587	25	30	12.154	30	30	0.093
435	LHS	468365.055	468390.055	468412.158	468430.440	468455.440	266.425	30	-40	40.385	25	25	0.100
436	RHS	468496.065	468521.065	468533.053	468544.359	468569.359	69.266	30	40	23.294	25	25	0.100
437	LHS	468573.525	468588.525	468596.405	468604.196	468619.196	330.807	40	-60	15.671	15	15	0.100
438	RHS	468621.620	468646.620	468659.221	468671.034	468696.034	70.905	30	40	24.414	25	25	0.100
439	LHS	468703.601	468718.601	468725.690	468732.768	468747.768	348.941	50	-150	14.167	15	15	0.074
440	LHS	468833.153	468848.153	468868.212	468886.868	468901.868	308.764	40	-60	38.715	15	15	0.100
441	RHS	468933.806	468963.806	468967.819	468971.796	469001.796	62.259	30	35	7.990	30	30	0.100
442	LHS	469012.726	469042.726	469064.991	469081.034	469111.034	229.615	25	-30	38.308	30	30	0.093
443	RHS	469113.052	469128.052	469133.625	469139.167	469154.167	24.973	40	60	11.115	15	15	0.100

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444	RHS	469181.520	469196.520	469204.519	469212.496	469227.496	14.330	50	125	15.976	15	15	0.089
445	RHS	469303.876	469318.876	469342.054	469363.113	469378.113	56.569	40	60	44.237	15	15	0.100
446	RHS	469380.369	469395.369	469402.679	469409.918	469424.918	28.224	40	60	14.549	15	15	0.100
447	LHS	469429.240	469449.240	469455.160	469461.025	469481.025	323.672	35	-50	11.785	20	20	0.100
448	LHS	469570.350	469585.350	469595.102	469604.710	469619.710	329.831	40	-65	19.360	15	15	0.100
449	LHS	469644.264	469659.264	469681.611	469702.733	469717.733	315.961	40	-76	43.469	15	15	0.094
450	RHS	469743.879	469758.879	469792.256	469822.916	469837.916	49.274	50	92	64.037	15	15	0.100
451	RHS	469893.907	469908.907	469912.104	469915.299	469930.299	12.317	50	100	6.392	15	15	0.100
452	LHS	469938.949	469953.949	469956.608	469959.264	469974.264	344.605	40	-75	5.315	15	15	0.095
453	RHS	469984.327	469999.327	470000.388	470001.449	470016.449	13.206	40	75	2.122	15	15	0.095
454	RHS	470048.965	470063.965	470078.597	470093.096	470108.096	20.331	50	125	29.131	15	15	0.089
455	LHS	470111.673	470126.673	470140.574	470154.063	470169.063	322.644	40	-65	27.390	15	15	0.100
456	LHS	470196.587	470216.587	470219.836	470223.073	470243.073	326.368	35	-45	6.486	20	20	0.100
457	RHS	470246.573	470266.573	470273.577	470280.470	470300.470	43.228	35	45	13.897	20	20	0.100
458	LHS	470311.418	470326.418	470331.321	470336.215	470351.215	344.334	50	-90	9.797	15	15	0.100
459	LHS	470357.173	470377.173	470393.602	470408.677	470428.677	294.483	35	-45	31.504	20	20	0.100
460	RHS	470430.141	470445.141	470475.186	470503.801	470518.801	38.378	50	110	58.660	15	15	0.100
461	LHS	470528.236	470543.236	470550.077	470556.910	470571.910	350.720	65	-175	13.674	15	15	0.100
462	LHS	470587.691	470602.691	470611.851	470620.958	470635.958	340.499	50	-97	18.267	15	15	0.100
463	LHS		470655.545	470659.776	470664.007		358.388	80	-300	8.462	0	0	0.095
464	RHS		470715.826	470726.294	470736.755		3.512	80	350	20.929	0	0	0.081
465	RHS	470793.479	470818.479	470827.361	470835.959	470860.959	60.981	30	40	17.480	25	25	0.100
466	LHS	470889.402	470904.402	470945.157	470980.940	470995.940	301.802	50	-90	76.538	15	15	0.100
467	RHS	471001.568	471021.568	471029.037	471036.335	471056.335	49.811	30	40	14.767	20	20	0.100
468	RHS	471057.035	471072.035	471080.489	471088.927	471103.927	11.457	65	160	16.892	15	15	0.100
469	LHS	471105.595	471135.595	471143.070	471150.246	471180.246	274.771	25	-30	14.651	30	30	0.093
470	RHS	471184.255	471214.255	471218.078	471221.860	471251.860	71.852	25	30	7.605	30	30	0.093
471	LHS	471253.598	471273.598	471282.840	471291.828	471311.828	311.402	35	-45	18.230	20	20	0.100
472	RHS	471317.458	471332.458	471338.953	471345.397	471360.397	26.798	40	60	12.939	15	15	0.100
473	LHS	471381.039	471396.039	471396.398	471396.757	471411.757	345.057	40	-60	0.718	15	15	0.100
474	RHS	471415.254	471430.254	471443.555	471456.433	471471.433	39.378	40	60	26.179	15	15	0.100
475	LHS	471512.335	471527.335	471539.192	471549.919	471564.919	288.248	25	-30	22.584	15	15	0.093
476	RHS	471574.160	471589.160	471592.504	471595.820	471610.820	41.378	25	30	6.660	15	15	0.093
477	RHS	471642.633	471667.633	471671.960	471676.254	471701.254	48.225	30	40	8.621	25	25	0.100
478	LHS	471735.217	471750.217	471753.992	471757.766	471772.766	355.785	80	-300	7.549	15	15	0.095
479	LHS	471863.649	471888.649	471922.756	471935.562	471960.562	195.213	25	-25	46.913	25	25	0.100
480	RHS	471988.557	472013.557	472035.094	472049.113	472074.113	138.808	25	25	35.556	25	25	0.100

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481	LHS	472163.528	472188.528	472191.872	472195.177	472220.177	287.468	25	-25	6.649	25	25	0.100
482	RHS	472231.089	472256.089	472265.769	472274.560	472299.560	99.747	25	25	18.471	25	25	0.100
483	LHS	472305.613	472335.613	472339.176	472342.705	472372.705	289.244	25	-30	7.092	30	30	0.093
484	RHS	472412.770	472437.770	472455.258	472468.291	472493.291	127.343	25	25	30.521	25	25	0.100
485	RHS	472537.466	472552.466	472560.214	472567.878	472582.878	29.112	40	60	15.412	15	15	0.100
486	LHS	472585.562	472600.562	472611.274	472621.140	472636.140	292.053	25	-30	20.578	15	15	0.093
487	RHS	472650.603	472675.603	472678.772	472681.930	472706.930	39.921	35	45	6.327	25	25	0.100
488	LHS	472711.651	472726.651	472738.825	472750.946	472765.946	345.054	50	-150	24.295	15	15	0.074
489	LHS	472768.180	472783.180	472792.632	472801.930	472816.930	327.811	40	-60	18.750	15	15	0.100
490	RHS		472818.577	472834.996	472851.383		6.405	80	300	32.806	0	0	0.095
491	LHS		472874.924	472876.079	472877.234		359.758	80	-450	2.310	0	0	0.063
492	RHS	472896.172	472911.172	472916.745	472922.310	472937.310	12.600	50	120	11.138	15	15	0.093
493	LHS		472968.726	472984.888	473001.019		353.975	80	-300	32.293	0	0	0.095
494	LHS	473014.089	473034.089	473042.663	473050.980	473070.980	307.228	30	-40	16.891	20	20	0.100
495	RHS	473072.627	473092.627	473099.961	473107.133	473127.133	49.525	30	40	14.506	20	20	0.100
496	RHS	473136.354	473161.354	473166.382	473171.278	473196.278	80.112	25	25	9.924	25	25	0.100
497	LHS	473255.922	473275.922	473288.188	473299.978	473319.978	309.659	35	-50	24.056	20	20	0.100
498	RHS	473380.943	473395.943	473404.495	473413.033	473428.033	10.955	65	170	17.090	15	15	0.100
499	LHS	473438.791	473468.791	473471.696	473474.582	473504.582	291.741	25	-30	5.791	30	30	0.093
500	RHS	473512.512	473542.512	473557.236	473569.888	473589.888	100.167	25	30	27.376	30	20	0.093
501	LHS	473594.042	473614.042	473617.852	473621.621	473651.621	297.889	25	-30	7.579	20	30	0.093
502	RHS	473660.803	473690.803	473706.313	473719.432	473749.432	112.024	25	30	28.629	30	30	0.093
503	LHS	473774.307	473794.307	473810.811	473825.612	473845.612	286.601	30	-40	31.305	20	20	0.100
504	LHS	473852.708	473867.708	473869.496	473871.283	473886.283	345.898	40	-75	3.575	15	15	0.095
505	RHS	473953.487	473968.487	473976.508	473984.434	473999.434	29.564	40	60	15.947	15	15	0.100
506	LHS	474006.587	474036.587	474043.693	474050.542	474080.542	276.070	25	-30	13.955	30	30	0.093
507	RHS	474087.813	474117.813	474120.388	474122.950	474152.950	67.168	25	30	5.137	30	30	0.093
508	LHS	474187.311	474207.311	474214.915	474222.403	474242.403	319.820	35	-50	15.092	20	20	0.100
509	RHS		474324.275	474329.920	474335.564		1.981	80	350	11.289	0	0	0.081
510	LHS		474394.406	474418.999	474443.483		350.720	80	-300	49.077	0	0	0.095
511	RHS		474468.963	474487.016	474505.037		5.953	80	350	36.074	0	0	0.081
512	LHS	474532.381	474547.381	474552.541	474557.676	474572.676	335.948	40	-60	10.295	15	15	0.100
513	RHS	474585.798	474600.798	474602.921	474605.043	474620.043	18.473	40	60	4.245	15	15	0.100
514	LHS	474624.027	474639.027	474646.302	474653.506	474668.506	331.988	40	-60	14.479	15	15	0.100
515	RHS	474677.716	474702.716	474707.724	474712.680	474737.680	50.226	30	40	9.964	25	25	0.100
516	LHS	474762.460	474777.460	474780.427	474783.394	474798.394	352.041	50	-150	5.934	15	15	0.074
517	RHS	474928.625	474943.625	474948.587	474953.539	474968.539	15.956	50	90	9.914	15	15	0.100



Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
518	LHS	475075.006	475095.006	475116.025	475134.801	475154.801	291.603	35	-50	39.795	20	20	0.100
519	RHS	475167.727	475182.727	475191.614	475200.455	475215.455	18.773	50	100	17.728	15	15	0.100
520	RHS	475216.867	475246.867	475249.026	475251.176	475281.176	65.603	25	30	4.309	30	30	0.093
521	LHS	475292.986	475307.986	475319.638	475331.077	475346.077	328.867	40	-70	23.091	15	15	0.100
522	LHS	475358.241	475373.241	475379.198	475385.140	475400.140	344.633	50	-100	11.899	15	15	0.100
523	RHS	475407.760	475422.760	475434.970	475447.060	475462.060	22.520	50	100	24.300	15	15	0.100
524	LHS	475486.820	475501.820	475509.984	475518.074	475533.074	334.428	40	-70	16.254	15	15	0.100
525	LHS	475587.471	475602.471	475608.109	475613.714	475628.714	334.992	40	-60	11.243	15	15	0.100
526	RHS	475629.773	475644.773	475684.200	475717.372	475732.372	66.957	40	75	72.599	15	15	0.095
527	LHS	475752.316	475767.316	475772.435	475777.538	475792.538	340.865	40	-75	10.222	15	15	0.095
528	LHS	475816.090	475836.090	475865.440	475888.104	475908.104	268.381	35	-45	52.014	20	20	0.100
529	RHS	475908.948	475928.948	475931.134	475933.317	475953.317	28.001	35	50	4.369	20	20	0.100
530	LHS	475955.204	475970.204	475970.592	475970.980	475985.980	355.605	65	-200	0.776	15	15	0.094
531	RHS	475988.432	476018.432	476018.928	476019.424	476049.424	59.259	25	30	0.992	30	30	0.093
532	LHS	476050.145	476080.145	476084.231	476088.267	476118.267	287.284	25	-30	8.122	30	30	0.093
533	RHS	476131.451	476161.451	476171.382	476180.632	476210.632	94.044	25	30	19.181	30	30	0.093
534	LHS	476214.351	476229.351	476232.288	476235.221	476250.221	340.103	40	-60	5.870	15	15	0.100
535	RHS	476255.470	476275.470	476280.740	476285.904	476305.904	58.184	25	30	10.434	20	20	0.093
536	LHS	476315.010	476335.010	476340.125	476345.195	476365.195	321.573	35	-45	10.185	20	20	0.100
537	LHS	476387.689	476407.689	476423.412	476438.157	476458.157	302.178	35	-50	30.468	20	20	0.100
538	LHS	476506.479	476521.479	476560.325	476595.583	476610.583	309.068	50	-100	74.104	15	15	0.100
539	RHS	476631.731	476646.731	476653.472	476660.193	476675.193	16.375	50	100	13.462	15	15	0.100
540	RHS	476708.541	476738.541	476751.005	476762.168	476792.168	102.444	25	30	23.627	30	30	0.093
541	LHS	476794.128	476819.128	476827.043	476834.755	476859.755	301.853	30	-40	15.627	25	25	0.100
542	RHS	476864.078	476894.078	476905.274	476915.750	476945.750	84.625	30	35	21.672	30	30	0.100
543	LHS	476951.711	476971.711	476977.107	476982.460	477002.460	324.891	35	-50	10.749	20	20	0.100
544	LHS	477031.340	477061.340	477067.160	477072.874	477102.874	292.090	30	-35	11.534	30	30	0.100
545	RHS	477113.265	477143.265	477148.706	477154.030	477184.030	77.891	25	30	10.765	30	30	0.093
546	RHS	477192.899	477217.899	477224.419	477230.826	477255.826	54.415	30	40	12.927	25	25	0.100
547	LHS	477289.227	477304.227	477310.706	477317.143	477332.143	335.478	40	-65	12.916	15	15	0.100
548	RHS		477392.432	477395.380	477398.327		0.756	80	450	5.895	0	0	0.063
549	LHS	477435.591	477460.591	477461.981	477463.371	477488.371	320.281	30	-40	2.780	25	25	0.100
550	LHS	477489.214	477519.214	477530.318	477540.484	477570.484	262.213	25	-30	21.270	30	30	0.093
551	RHS	477635.840	477660.840	477669.801	477678.470	477703.470	61.176	30	40	17.630	25	25	0.100
552	RHS	477707.554	477722.554	477726.027	477729.492	477744.492	20.951	40	60	6.938	15	15	0.100
553	LHS	477759.044	477774.044	477782.867	477791.565	477806.565	329.045	40	-60	17.521	15	15	0.100
554	RHS	477812.879	477827.879	477833.161	477838.417	477853.417	24.422	40	60	10.538	15	15	0.100

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555	LHS	477856.530	477871.530	477878.946	477886.288	477901.288	331.586	40	-60	14.758	15	15	0.100
556	RHS	477999.457	478014.457	478026.266	478037.882	478052.882	29.399	40	75	23.425	15	15	0.095
557	LHS	478070.233	478085.233	478095.043	478104.680	478119.680	327.156	40	-60	19.447	15	15	0.100
558	RHS	478141.144	478171.144	478174.068	478176.973	478206.973	68.547	25	30	5.829	30	30	0.093
559	LHS	478237.610	478252.610	478263.461	478274.257	478289.257	343.221	50	-125	21.647	15	15	0.089
560	RHS		478353.444	478372.485	478391.488		6.328	80	350	38.044	0	0	0.081
561	LHS	478452.615	478467.615	478474.759	478481.859	478496.859	337.743	40	-75	14.244	15	15	0.095
562	RHS	478500.803	478515.803	478525.647	478535.316	478550.316	33.029	40	60	19.513	15	15	0.100
563	LHS	478715.534	478745.534	478757.901	478768.994	478798.994	258.045	25	-30	23.460	30	30	0.093
564	RHS	478803.391	478823.391	478832.160	478840.752	478860.752	42.926	35	50	17.361	20	20	0.100
565	RHS	478865.368	478885.368	478891.070	478896.713	478916.713	39.999	35	45	11.345	20	20	0.100
566	LHS	478917.774	478947.774	478947.825	478947.876	478977.876	310.770	30	-35	0.102	30	30	0.100
567	RHS	478978.131	479008.131	479009.685	479011.236	479041.236	54.283	30	35	3.105	30	30	0.100
568	LHS	479049.788	479064.788	479068.262	479071.728	479086.728	339.192	40	-60	6.940	15	15	0.100
569	RHS	479087.349	479107.349	479115.353	479123.192	479143.192	45.669	35	45	15.843	20	20	0.100
570	LHS	479152.935	479182.935	479188.319	479193.589	479223.589	282.413	25	-30	10.654	30	30	0.093
571	LHS	479238.233	479253.233	479258.075	479262.912	479277.912	348.731	50	-125	9.679	15	15	0.089
572	RHS	479281.558	479301.558	479304.668	479307.766	479327.766	37.591	30	40	6.208	20	20	0.100
573	RHS	479348.747	479378.747	479383.566	479388.304	479418.304	75.682	25	30	9.557	30	30	0.093
574	LHS	479423.213	479443.213	479455.647	479467.475	479487.475	303.741	35	-45	24.262	20	20	0.100
575	RHS		479493.220	479498.476	479503.672	479528.672	32.966	30	40	10.452	0	25	0.100
576	LHS	479537.839	479557.839	479563.252	479568.613	479588.613	320.827	35	-45	10.774	20	20	0.100
577	RHS	479593.314	479613.314	479616.919	479620.510	479640.510	34.720	35	45	7.196	20	20	0.100
578	LHS	479680.292	479710.292	479725.220	479737.995	479767.995	249.893	25	-30	27.703	30	30	0.093
579	LHS	479802.437	479822.437	479824.178	479825.918	479845.918	330.121	35	-45	3.481	20	20	0.100
580	RHS	479847.379	479877.379	479878.037	479878.694	479908.694	59.884	25	30	1.315	30	30	0.093
581	RHS	479943.722	479973.722	479979.457	479985.056	480015.056	79.034	25	30	11.334	30	30	0.093
582	LHS	480015.991	480045.991	480058.015	480068.863	480098.863	259.062	25	-30	22.872	30	30	0.093
583	LHS	480100.150	480120.150	480129.552	480138.737	480158.737	315.923	35	-50	18.587	20	20	0.100
584	RHS	480174.188	480204.188	480205.296	480206.402	480236.402	61.592	25	30	2.214	30	30	0.093
585	RHS	480241.128	480271.128	480271.629	480272.129	480302.129	50.899	30	35	1.001	30	30	0.100
586	LHS	480324.829	480344.829	480349.211	480353.565	480373.565	323.521	35	-45	8.736	20	20	0.100
587	RHS	480374.497	480404.497	480406.301	480408.101	480438.101	55.105	30	35	3.604	30	30	0.100
588	LHS	480438.925	480453.925	480460.976	480467.962	480482.962	332.314	40	-60	14.037	15	15	0.100
589	LHS	480493.869	480508.869	480509.678	480510.487	480525.487	354.539	65	-170	1.618	15	15	0.100
590	LHS	480543.313	480558.313	480563.125	480567.930	480582.930	346.005	50	-100	9.617	15	15	0.100
591	RHS	480586.566	480616.566	480621.877	480627.080	480657.080	77.472	25	30	10.514	30	30	0.093

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592	LHS	480693.209	480718.209	480725.026	480731.714	480756.714	304.949	30	-40	13.505	25	25	0.100
593	RHS	480777.421	480792.421	480798.276	480804.125	480819.125	10.201	50	150	11.704	15	15	0.074
594	LHS	480822.164	480842.164	480846.199	480850.220	480870.220	330.835	35	-55	8.056	20	20	0.099
595	RHS	480873.857	480893.857	480894.269	480894.681	480914.681	26.646	35	45	0.824	20	20	0.100
596	RHS	480921.422	480951.422	480955.009	480958.562	480988.562	71.081	25	30	7.140	30	30	0.093
597	LHS	480990.498	481015.498	481021.715	481027.834	481052.834	306.553	30	-40	12.336	25	25	0.100
598	LHS	481099.294	481124.294	481126.613	481128.927	481153.927	317.587	30	-40	4.633	25	25	0.100
599	LHS	481156.537	481171.537	481176.240	481180.928	481195.928	340.057	40	-70	9.391	15	15	0.100
600	LHS	481200.380	481220.380	481224.791	481229.179	481249.179	327.146	35	-50	8.799	20	20	0.100
601	RHS	481253.894	481273.894	481293.392	481308.473	481328.473	104.290	25	30	34.579	20	20	0.093
602	LHS	481330.669	481350.669	481355.016	481359.302	481379.302	305.437	25	-30	8.633	20	20	0.093
603	RHS	481389.231	481404.231	481410.909	481417.546	481432.546	23.261	40	70	13.315	15	15	0.100
604	LHS	481497.821	481517.821	481526.888	481535.431	481555.431	288.190	25	-30	17.610	20	20	0.093
605	RHS	481556.856	481576.856	481590.930	481603.175	481623.175	88.566	25	30	26.319	20	20	0.093
606	LHS	481634.109	481649.109	481654.653	481660.165	481675.165	335.137	40	-60	11.056	15	15	0.100
607	RHS	481680.446	481695.446	481701.027	481706.576	481721.576	24.978	40	60	11.130	15	15	0.100
608	LHS	481763.849	481778.849	481782.991	481787.119	481802.119	337.891	40	-60	8.270	15	15	0.100
609	RHS	481818.355	481833.355	481838.982	481844.595	481859.595	16.748	50	90	11.240	15	15	0.100
610	RHS	481869.021	481889.021	481895.655	481902.194	481922.194	42.271	35	45	13.173	20	20	0.100
611	LHS	481924.413	481954.413	481963.997	481972.965	482002.965	267.330	25	-30	18.552	30	30	0.093
612	RHS	482020.460	482040.460	482041.833	482043.205	482063.205	26.183	35	50	2.745	20	20	0.100
613	LHS	482063.428	482078.428	482084.491	482090.512	482105.512	334.172	40	-60	12.084	15	15	0.100
614	RHS	482156.425	482171.425	482175.187	482178.942	482193.942	16.218	40	80	7.517	15	15	0.089
615	RHS	482220.645	482235.645	482236.147	482236.649	482251.649	15.419	40	60	1.004	15	15	0.100
616	LHS	482256.580	482271.580	482280.087	482288.481	482303.481	329.569	40	-60	16.901	15	15	0.100
617	RHS	482311.891	482326.891	482330.392	482333.886	482348.886	21.038	40	60	6.995	15	15	0.100
618	LHS	482350.356	482380.356	482382.490	482384.619	482414.619	304.004	30	-35	4.263	30	30	0.100
619	RHS	482430.329	482445.329	482447.204	482449.080	482464.080	10.835	50	100	3.751	15	15	0.100
620	LHS	482475.872	482490.872	482498.380	482505.809	482520.809	331.521	40	-60	14.937	15	15	0.100
621	RHS	482536.602	482556.602	482562.410	482568.154	482588.154	40.241	35	45	11.552	20	20	0.100
622	LHS	482588.592	482603.592	482611.845	482620.010	482635.010	332.355	40	-65	16.418	15	15	0.100
623	RHS	482636.593	482651.593	482680.378	482708.004	482723.004	35.689	50	115	56.411	15	15	0.097
624	LHS	482725.039	482740.039	482752.084	482763.813	482778.813	323.038	40	-60	23.774	15	15	0.100
625	RHS	482785.860	482800.860	482810.253	482819.495	482834.495	32.140	40	60	18.635	15	15	0.100
626	LHS	482844.131	482864.131	482887.613	482908.037	482928.037	286.790	35	-50	43.906	20	20	0.100
627	RHS	483002.093	483027.093	483037.102	483046.709	483071.709	63.976	30	40	19.616	25	25	0.100
628	LHS	483072.126	483087.126	483092.859	483098.558	483113.558	334.845	40	-60	11.432	15	15	0.100

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629	RHS	483151.569	483166.569	483175.600	483184.496	483199.496	31.534	40	60	17.927	15	15	0.100
630	LHS	483215.600	483235.600	483238.743	483241.876	483261.876	326.640	35	-45	6.276	20	20	0.100
631	RHS	483276.856	483306.856	483330.720	483347.175	483367.175	124.895	25	30	40.319	30	20	0.093
632	LHS	483371.978	483386.978	483419.221	483436.263	483451.263	237.296	25	-30	49.285	15	15	0.093
633	RHS	483460.398	483475.398	483477.269	483479.136	483494.136	35.835	25	30	3.738	15	15	0.093
634	LHS	483505.532	483520.532	483536.117	483549.279	483564.279	276.592	25	-30	28.747	15	15	0.093
635	RHS	483577.291	483592.291	483629.710	483645.991	483660.991	131.267	25	30	53.700	15	15	0.093
636	LHS	483668.570	483693.570	483736.899	483751.482	483776.482	201.784	25	-30	57.912	25	25	0.093
637	RHS	483785.487	483805.487	483812.538	483819.337	483839.337	64.772	25	30	13.850	20	20	0.093
638	LHS	483842.301	483862.301	483890.350	483907.409	483927.409	235.678	25	-30	45.108	20	20	0.093
639	RHS	483934.612	483949.612	483952.429	483955.243	483970.243	19.713	40	60	5.631	15	15	0.100
640	LHS	483971.146	483986.146	483996.453	484006.561	484021.561	326.309	40	-60	20.415	15	15	0.100
641	RHS	484022.910	484052.910	484063.515	484073.298	484103.298	96.241	25	30	20.388	30	30	0.093
642	LHS	484104.267	484134.267	484149.626	484162.658	484192.658	248.614	25	-30	28.391	30	30	0.093
643	RHS	484193.959	484213.959	484219.458	484224.836	484244.836	59.001	25	30	10.877	20	20	0.093
644	LHS	484247.291	484267.291	484268.396	484269.500	484289.500	317.725	25	-30	2.209	20	20	0.093
645	RHS	484292.513	484312.513	484317.298	484322.004	484342.004	56.388	25	30	9.491	20	20	0.093
646	LHS	484346.064	484366.064	484383.195	484397.195	484417.195	262.474	25	-30	31.131	20	20	0.093
647	RHS	484424.697	484454.697	484470.192	484483.302	484513.302	112.029	25	30	28.605	30	30	0.093
648	RHS	484532.139	484547.139	484549.118	484551.095	484566.095	18.113	40	60	3.956	15	15	0.100
649	LHS	484577.940	484602.940	484606.840	484610.696	484635.696	297.492	25	-30	7.756	25	25	0.093
650	RHS	484637.736	484662.736	484664.610	484666.480	484691.480	55.027	25	30	3.744	25	25	0.093
651	RHS	484703.414	484733.414	484740.530	484747.388	484777.388	84.007	25	30	13.974	30	30	0.093
652	LHS	484802.830	484822.830	484832.418	484841.390	484861.390	286.406	25	-30	18.560	20	20	0.093
653	RHS	484867.279	484887.279	484911.602	484928.155	484948.155	116.383	25	30	40.876	20	20	0.093
654	LHS	484950.733	484980.733	485025.345	485044.122	485074.122	207.153	30	-35	63.389	30	30	0.100
655	RHS	485109.844	485124.844	485133.639	485142.328	485157.328	28.633	40	65	17.484	15	15	0.100
656	RHS	485175.419	485190.419	485202.039	485213.612	485228.612	14.636	50	150	23.193	15	15	0.074
657	LHS	485278.373	485293.373	485309.397	485324.946	485339.946	324.453	40	-75	31.573	15	15	0.095
658	RHS	485341.796	485356.796	485385.054	485409.614	485424.614	64.869	40	60	52.818	15	15	0.100
659	LHS	485478.270	485493.270	485498.764	485504.244	485519.244	343.597	50	-90	10.974	15	15	0.100
660	RHS	485542.838	485567.838	485583.787	485598.191	485623.191	79.321	30	40	30.353	25	25	0.100
661	LHS	485627.768	485652.768	485672.728	485689.796	485714.796	271.158	30	-40	37.028	25	25	0.100
662	RHS	485728.315	485743.315	485749.258	485755.163	485770.163	25.682	40	60	11.848	15	15	0.100
663	LHS	485792.657	485807.657	485809.934	485812.210	485827.210	355.538	80	-250	4.553	15	15	0.100
664	RHS	485836.297	485851.297	485864.276	485876.861	485891.861	38.765	40	60	25.564	15	15	0.100
665	RHS	485904.625	485919.625	485920.949	485922.272	485937.272	16.869	40	60	2.647	15	15	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
666	LHS	485949.553	485964.553	485973.333	485982.007	485997.007	331.481	40	-65	17.454	15	15	0.100
667	LHS	486032.802	486062.802	486070.233	486077.371	486107.371	274.995	25	-30	14.569	30	30	0.093
668	RHS	486114.002	486144.002	486151.438	486158.580	486188.580	85.168	25	30	14.578	30	30	0.093
669	LHS	486190.023	486215.023	486218.979	486222.909	486247.909	312.994	30	-40	7.886	25	25	0.100
670	RHS	486379.332	486399.332	486412.605	486425.280	486445.280	52.681	35	50	25.948	20	20	0.100
671	LHS	486478.034	486493.034	486493.522	486494.010	486509.010	344.842	40	-60	0.976	15	15	0.100
672	LHS	486542.685	486567.685	486580.938	486593.280	486618.280	287.638	30	-40	25.595	25	25	0.100
673	RHS	486672.111	486697.111	486713.028	486727.409	486752.409	79.289	30	40	30.298	25	25	0.100
674	LHS	486757.009	486772.009	486777.949	486783.875	486798.875	344.671	50	-100	11.866	15	15	0.100
675	RHS	486812.395	486827.395	486831.909	486836.420	486851.420	9.268	50	150	9.025	15	15	0.074
676	LHS	486859.474	486874.474	486887.067	486899.392	486914.392	327.415	40	-70	24.918	15	15	0.100
677	LHS	486933.319	486948.319	486956.787	486965.143	486980.143	329.704	40	-60	16.824	15	15	0.100
678	RHS	487020.705	487035.705	487040.740	487045.753	487060.753	23.941	40	60	10.048	15	15	0.100
679	RHS	487104.311	487119.311	487121.518	487123.724	487138.724	18.580	40	60	4.413	15	15	0.100
680	LHS	487148.684	487163.684	487175.804	487187.603	487202.603	322.849	40	-60	23.919	15	15	0.100
681	RHS	487203.698	487218.698	487223.480	487228.242	487243.242	23.480	40	60	9.544	15	15	0.100
682	LHS	487279.820	487294.820	487298.562	487302.294	487317.294	338.596	40	-60	7.474	15	15	0.100
683	RHS	487327.800	487352.800	487353.837	487354.873	487379.873	38.887	30	40	2.073	25	25	0.100
684	LHS	487393.000	487408.000	487418.724	487429.366	487444.366	339.288	50	-100	21.366	15	15	0.100
685	LHS		487473.407	487480.929	487488.449		357.575	80	-350	15.042	0	0	0.081
686	LHS	487526.577	487541.577	487545.768	487549.954	487564.954	346.661	50	-100	8.377	15	15	0.100
687	RHS	487569.540	487584.540	487592.233	487599.843	487614.843	28.979	40	60	15.303	15	15	0.100
688	LHS	487624.814	487644.814	487655.061	487665.028	487685.028	313.940	35	-50	20.214	20	20	0.100
689	RHS	487691.742	487716.742	487720.765	487724.760	487749.760	47.391	30	40	8.018	25	25	0.100
690	LHS	487771.036	487796.036	487807.968	487819.228	487844.228	290.994	30	-40	23.192	25	25	0.100
691	RHS	487885.425	487915.425	487918.060	487920.681	487950.681	67.346	25	30	5.256	30	30	0.093
692	LHS	487952.550	487967.550	487967.735	487967.919	487982.919	348.340	40	-75	0.369	15	15	0.095
693	RHS	487990.287	488005.287	488006.426	488007.566	488022.566	13.204	40	75	2.279	15	15	0.095
694	LHS	488023.250	488038.250	488045.061	488051.814	488066.814	332.785	40	-60	13.564	15	15	0.100
695	RHS		488090.157	488105.799	488121.412		5.993	80	300	31.255	0	0	0.095
696	RHS	488137.719	488152.719	488158.038	488163.351	488178.351	11.886	50	125	10.632	15	15	0.089
697	RHS	488217.647	488247.647	488262.033	488274.476	488304.476	108.558	25	30	26.829	30	30	0.093
698	RHS	488337.716	488352.716	488357.075	488361.419	488376.419	22.652	40	60	8.703	15	15	0.100
699	LHS	488449.280	488464.280	488473.851	488483.319	488498.319	334.109	40	-75	19.039	15	15	0.095
700	RHS	488499.729	488529.729	488542.620	488554.081	488584.081	103.837	25	30	24.352	30	30	0.093
701	LHS	488586.907	488601.907	488622.953	488642.944	488657.944	317.253	40	-75	41.037	15	15	0.095
702	RHS	488683.828	488698.828	488707.184	488715.432	488730.432	30.299	40	60	16.604	15	15	0.100



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703	LHS	488790.936	488805.936	488832.375	488857.631	488872.631	321.816	50	-100	51.695	15	15	0.100
704	LHS	488896.387	488911.387	488914.521	488917.650	488932.650	339.799	40	-60	6.263	15	15	0.100
705	RHS	488936.144	488956.144	488964.946	488973.528	488993.528	47.740	35	45	17.384	20	20	0.100
706	LHS	489048.561	489078.561	489081.502	489084.425	489114.425	291.541	25	-30	5.864	30	30	0.093
707	RHS	489116.524	489136.524	489143.484	489150.335	489170.335	43.191	35	45	13.811	20	20	0.100
708	LHS	489172.708	489187.708	489210.277	489231.553	489246.553	315.156	40	-75	43.845	15	15	0.095
709	LHS		489268.711	489287.141	489305.537		354.015	80	-350	36.826	0	0	0.081
710	LHS	489377.408	489392.408	489410.615	489428.645	489443.645	340.537	50	-150	36.237	15	15	0.074
711	RHS	489454.370	489474.370	489483.579	489492.537	489512.537	48.704	35	45	18.167	20	20	0.100
712	LHS	489515.014	489535.014	489536.853	489538.690	489558.690	329.895	35	-45	3.676	20	20	0.100
713	LHS	489590.396	489605.396	489607.421	489609.443	489624.443	341.914	40	-60	4.047	15	15	0.100
714	RHS	489625.646	489645.646	489649.592	489653.517	489673.517	35.512	35	45	7.871	20	20	0.100
715	LHS	489689.403	489709.403	489714.110	489718.789	489738.789	326.412	35	-50	9.386	20	20	0.100
716	RHS	489746.044	489761.044	489767.183	489773.280	489788.280	26.085	40	60	12.236	15	15	0.100
717	LHS	489830.061	489850.061	489858.432	489866.613	489886.613	313.558	35	-45	16.552	20	20	0.100
718	RHS	489888.195	489918.195	489924.099	489929.853	489959.853	79.661	25	30	11.658	30	30	0.093
719	LHS	489963.973	489983.973	490009.801	490030.868	490050.868	274.912	35	-45	46.895	20	20	0.100
720	RHS	490065.759	490080.759	490095.056	490107.442	490122.442	79.694	25	30	26.683	15	15	0.093
721	LHS	490127.616	490142.616	490185.629	490217.252	490232.252	274.436	40	-60	74.636	15	15	0.100
722	RHS	490238.303	490253.303	490283.819	490309.763	490324.763	68.300	40	60	56.460	15	15	0.100
723	LHS	490341.088	490361.088	490363.040	490364.989	490384.989	332.715	35	-50	3.901	20	20	0.100
724	RHS	490387.377	490417.377	490430.504	490442.125	490472.125	104.661	25	30	24.748	30	30	0.093
725	RHS		490554.282	490560.069	490565.856		1.413	80	500	11.574	0	0	0.057
726	LHS	490641.544	490661.544	490688.566	490710.215	490730.215	272.709	35	-45	48.671	20	20	0.100
727	RHS	490745.143	490775.143	490784.467	490793.224	490823.224	91.945	25	30	18.081	30	30	0.093
728	LHS	490847.775	490867.775	490900.550	490917.549	490937.549	226.810	25	-30	49.774	20	20	0.093
729	RHS	490944.590	490959.590	490979.065	490994.137	491009.137	94.726	25	30	34.547	15	15	0.093
730	LHS	491019.572	491034.572	491043.919	491052.693	491067.693	296.838	25	-30	18.121	15	15	0.093
731	LHS	491109.310	491124.310	491131.363	491138.394	491153.394	343.361	50	-100	14.084	15	15	0.100
732	RHS	491179.678	491199.678	491202.823	491205.958	491225.958	33.554	35	45	6.280	20	20	0.100
733	LHS	491227.664	491257.664	491262.613	491267.473	491297.473	284.009	25	-30	9.809	30	30	0.093
734	RHS	491300.724	491330.724	491334.421	491338.090	491368.090	61.190	30	35	7.366	30	30	0.100
735	LHS	491375.675	491405.675	491406.661	491407.648	491437.648	307.744	30	-35	1.973	30	30	0.100
736	LHS	491450.356	491465.356	491466.142	491466.929	491481.929	344.236	40	-60	1.573	15	15	0.100
737	RHS	491491.370	491506.370	491511.352	491516.312	491531.312	23.828	40	60	9.942	15	15	0.100
738	LHS	491543.768	491558.768	491565.918	491573.026	491588.026	337.782	40	-75	14.258	15	15	0.095
739	RHS	491610.859	491640.859	491650.620	491659.733	491689.733	93.431	25	30	18.874	30	30	0.093

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740	RHS	491769.680	491784.680	491797.546	491810.127	491825.127	33.162	40	70	25.447	15	15	0.100
741	LHS	491838.143	491853.143	491860.802	491868.377	491883.377	331.236	40	-60	15.234	15	15	0.100
742	LHS	491924.069	491954.069	491977.252	491993.543	492023.543	227.450	25	-30	39.474	30	30	0.093
743	RHS	492042.768	492057.768	492069.190	492080.557	492095.557	16.082	50	135	22.789	15	15	0.082
744	RHS	492101.003	492116.003	492159.503	492199.726	492214.726	45.261	50	125	83.723	15	15	0.089
745	LHS	492229.097	492249.097	492252.475	492255.841	492275.841	326.094	35	-45	6.744	20	20	0.100
746	RHS	492301.593	492316.593	492317.156	492317.720	492332.720	15.544	40	60	1.127	15	15	0.100
747	LHS	492338.792	492358.792	492365.686	492372.473	492392.473	317.259	35	-45	13.681	20	20	0.100
748	RHS	492414.997	492434.997	492469.693	492496.903	492516.903	85.392	35	55	61.906	20	20	0.099
749	LHS	492531.752	492561.752	492579.692	492594.089	492624.089	241.034	25	-30	32.337	30	30	0.093
750	RHS	492631.785	492651.785	492662.319	492672.480	492692.480	51.944	35	45	20.695	20	20	0.100
751	RHS	492697.909	492712.909	492739.155	492756.034	492771.034	111.121	25	30	43.125	15	15	0.093
752	LHS	492778.576	492793.576	492816.140	492836.741	492851.741	304.517	40	-60	43.165	15	15	0.100
753	LHS	492879.759	492909.759	492920.099	492929.674	492959.674	264.688	25	-30	19.915	30	30	0.093
754	RHS	492982.838	493002.838	493008.527	493014.167	493034.167	35.903	35	50	11.329	20	20	0.100
755	RHS	493071.862	493086.862	493089.816	493092.769	493107.769	10.127	50	120	5.907	15	15	0.093
756	LHS	493146.406	493176.406	493177.357	493178.307	493208.307	307.880	30	-35	1.901	30	30	0.100
757	RHS	493212.580	493227.580	493231.077	493234.567	493249.567	19.517	40	65	6.987	15	15	0.100
758	LHS		493273.145	493290.109	493307.037		353.621	80	-300	33.892	0	0	0.095
759	RHS	493310.488	493325.488	493331.121	493336.747	493351.747	12.067	50	125	11.259	15	15	0.089
760	LHS	493352.145	493372.145	493377.584	493382.970	493402.970	320.769	35	-45	10.825	20	20	0.100
761	RHS	493404.656	493424.656	493427.280	493429.899	493449.899	29.020	35	50	5.243	20	20	0.100
762	RHS	493452.657	493482.657	493497.403	493510.069	493540.069	109.779	25	30	27.412	30	30	0.093
763	RHS	493602.593	493617.593	493622.036	493626.465	493641.465	21.125	40	65	8.872	15	15	0.100
764	LHS	493643.066	493658.066	493666.059	493673.958	493688.958	330.504	40	-60	15.892	15	15	0.100
765	RHS	493694.967	493709.967	493713.232	493716.494	493731.494	9.874	50	125	6.527	15	15	0.089
766	RHS	493969.112	493994.112	493998.817	494003.465	494028.465	56.262	30	35	9.353	25	25	0.100
767	LHS	494033.481	494058.481	494060.539	494062.592	494087.592	312.446	30	-35	4.111	25	25	0.100
768	RHS	494137.377	494157.377	494170.821	494183.504	494203.504	58.857	35	45	26.127	20	20	0.100
769	LHS	494220.371	494250.371	494253.334	494256.279	494286.279	291.460	25	-30	5.908	30	30	0.093
770	LHS	494310.667	494340.667	494351.436	494361.346	494391.346	263.313	25	-30	20.679	30	30	0.093
771	RHS	494398.349	494428.349	494429.288	494430.226	494460.226	61.009	25	30	1.877	30	30	0.093
772	LHS	494473.782	494488.782	494496.811	494504.759	494519.759	332.796	40	-65	15.977	15	15	0.100
773	LHS		494556.167	494569.187	494582.199		356.706	80	-450	26.032	0	0	0.063
774	RHS	494702.018	494717.018	494746.195	494771.867	494786.867	61.597	40	65	54.849	15	15	0.100
775	LHS	494799.591	494819.591	494831.227	494841.792	494861.792	279.424	25	-30	22.201	20	20	0.093
776	RHS	494865.567	494885.567	494893.528	494901.130	494921.130	67.961	25	30	15.563	20	20	0.093

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777	LHS	495001.892	495016.892	495026.677	495036.441	495051.441	348.407	65	-170	19.549	15	15	0.100
778	RHS	495104.454	495134.454	495137.990	495141.495	495171.495	70.835	25	30	7.041	30	30	0.093
779	RHS	495192.747	495207.747	495212.692	495217.622	495232.622	19.032	40	75	9.875	15	15	0.095
780	LHS	495241.206	495261.206	495275.929	495289.843	495309.843	304.408	35	-50	28.637	20	20	0.100
781	RHS	495329.752	495359.752	495365.214	495370.588	495400.588	66.990	30	35	10.836	30	30	0.100
782	LHS	495411.510	495441.510	495468.508	495485.476	495515.476	218.739	25	-30	43.966	30	30	0.093
783	RHS	495532.737	495552.737	495559.359	495565.903	495585.903	38.058	35	50	13.166	20	20	0.100
784	LHS	495594.218	495619.218	495622.100	495624.965	495649.965	301.372	25	-30	5.747	25	25	0.093
785	RHS	495650.787	495675.787	495681.860	495687.772	495712.772	70.669	25	30	11.985	25	25	0.093
786	LHS	495805.255	495820.255	495824.413	495828.566	495843.566	346.740	50	-100	8.311	15	15	0.100
787	RHS	495903.968	495923.968	495943.025	495960.021	495980.021	71.388	35	45	36.053	20	20	0.100
788	LHS	495995.544	496025.544	496044.424	496059.247	496089.247	238.354	25	-30	33.703	30	30	0.093
789	RHS	496090.419	496120.419	496132.020	496142.559	496172.559	99.700	25	30	22.140	30	30	0.093
790	LHS	496213.059	496228.059	496232.478	496236.888	496251.888	343.083	40	-80	8.829	15	15	0.089
791	RHS	496317.639	496332.639	496355.148	496377.323	496392.323	22.927	50	150	44.684	15	15	0.074
792	LHS	496395.204	496415.204	496423.914	496432.412	496452.412	312.702	35	-45	17.208	20	20	0.100
793	RHS	496456.146	496476.146	496487.467	496498.413	496518.413	48.451	35	50	22.267	20	20	0.100
794	RHS	496527.568	496547.568	496549.628	496551.681	496571.681	46.064	25	30	4.113	20	20	0.093
795	LHS	496573.856	496593.856	496621.750	496638.798	496658.798	236.001	25	-30	44.942	20	20	0.093
796	RHS	496666.233	496681.233	496700.108	496717.808	496732.808	49.255	40	60	36.575	15	15	0.100
797	LHS		496755.150	496776.941	496798.689		353.884	80	-400	43.539	0	0	0.071
798	RHS	496822.453	496837.453	496842.489	496847.501	496862.501	23.934	40	60	10.048	15	15	0.100
799	LHS	496868.622	496893.622	496897.403	496901.145	496926.145	297.904	25	-30	7.523	25	25	0.093
800	RHS	496930.495	496945.495	496957.540	496969.269	496984.269	37.111	40	60	23.774	15	15	0.100
801	RHS		497024.313	497036.280	497048.241		3.166	80	450	23.928	0	0	0.063
802	LHS	497105.036	497120.036	497123.775	497127.512	497142.512	349.827	50	-125	7.476	15	15	0.089
803	RHS	497154.227	497169.227	497179.407	497189.570	497204.570	10.200	65	200	20.343	15	15	0.094
804	LHS	497223.891	497238.891	497246.917	497254.849	497269.849	330.466	40	-60	15.958	15	15	0.100
805	RHS	497271.557	497301.557	497302.830	497304.102	497334.102	62.209	25	30	2.545	30	30	0.093
806	LHS	497340.538	497365.538	497395.496	497409.307	497434.307	202.481	25	-25	43.769	25	25	0.100
807	RHS	497481.712	497496.712	497506.264	497515.758	497530.758	19.568	50	100	19.046	15	15	0.100
808	RHS	497556.915	497571.915	497602.157	497631.808	497646.808	24.556	65	175	59.893	15	15	0.100
809	LHS	497670.219	497690.219	497696.940	497703.563	497723.563	317.652	35	-45	13.344	20	20	0.100
810	RHS	497779.020	497794.020	497941.422	497959.038	497974.038	137.591	40	75	165.018	15	15	0.095
811	RHS	497979.719	497994.719	498011.138	498027.369	498042.369	21.912	50	125	32.650	15	15	0.089
812	LHS	498052.277	498067.277	498072.077	498076.869	498091.869	346.000	50	-100	9.592	15	15	0.100
813	RHS	498097.002	498112.002	498122.139	498132.154	498147.154	26.892	40	75	20.152	15	15	0.095



Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
814	LHS	498187.084	498202.084	498213.313	498224.286	498239.286	324.551	40	-60	22.202	15	15	0.100
815	LHS	498297.335	498312.335	498314.907	498317.478	498332.478	350.771	50	-125	5.143	15	15	0.089
816	LHS	498345.812	498375.812	498389.738	498401.224		267.509	25	-25	25.412	30	0	0.100
817	LHS		498401.989	498415.237	498426.355	498456.355	269.898	25	-25	24.366	0	30	0.100
818	RHS	498499.029	498514.029	498522.743	498531.429	498546.429	14.862	50	125	17.400	15	15	0.089
819	RHS	498558.526	498573.526	498591.781	498609.547	498624.547	32.611	50	90	36.021	15	15	0.100
820	RHS	498646.951	498661.951	498677.223	498692.391	498707.391	17.418	50	150	30.440	15	15	0.074
821	RHS	498730.564	498745.564	498799.509	498839.095	498854.095	83.017	40	75	93.531	15	15	0.095
822	LHS	498857.072	498872.072	498888.974	498905.321	498920.321	323.204	40	-75	33.249	15	15	0.095
823	RHS	498930.017	498960.017	498964.783	498969.491	498999.491	64.647	30	35	9.474	30	30	0.100
824	LHS	499004.157	499019.157	499019.928	499020.700	499035.700	349.485	50	-90	1.543	15	15	0.100
825	RHS	499054.329	499069.329	499077.883	499086.322	499101.322	30.562	40	60	16.993	15	15	0.100
826	LHS	499115.483	499130.483	499146.431	499161.843	499176.843	322.087	40	-70	31.360	15	15	0.100
827	LHS	499181.290	499211.290	499221.363	499230.725	499260.725	265.611	25	-30	19.435	30	30	0.093
828	RHS	499295.751	499310.751	499322.445	499333.849	499348.849	36.517	40	60	23.098	15	15	0.100
829	RHS	499391.660	499421.660	499459.287	499479.168	499509.168	143.286	30	35	57.508	30	30	0.100
830	RHS	499514.177	499529.177	499543.577	499557.442	499572.442	41.448	40	60	28.265	15	15	0.100
831	LHS	499602.918	499617.918	499643.595	499667.139	499682.139	307.447	40	-70	49.221	15	15	0.100
832	LHS	499709.901	499724.901	499742.375	499759.499	499774.499	331.724	50	-100	34.598	15	15	0.100
833	RHS	499775.130	499795.130	499808.244	499820.651	499840.651	58.043	35	45	25.521	20	20	0.100
834	LHS	499851.336	499866.336	499916.266	499949.622	499964.622	266.236	40	-60	83.286	15	15	0.100
835	RHS		500020.441	500031.699	500042.950		3.698	80	350	22.509	0	0	0.081
836	LHS		500059.903	500074.429	500088.939		355.369	80	-350	29.036	0	0	0.081
837	LHS		500112.205	500120.892	500129.576		357.213	80	-350	17.371	0	0	0.081
838	LHS	500249.758	500264.758	500292.889	500320.373	500335.373	333.121	50	-150	55.615	15	15	0.074
839	RHS	500385.827	500400.827	500442.301	500474.659	500489.659	78.333	40	65	73.832	15	15	0.100
840	LHS	500501.516	500531.516	500550.806	500565.803	500595.803	237.262	25	-30	34.287	30	30	0.093
841	LHS	500606.635	500636.635	500639.316	500641.982	500671.982	292.568	25	-30	5.347	30	30	0.093
842	RHS	500710.202	500730.202	500751.993	500763.331		123.584	20	20	33.129	20	0	0.089
843	RHS		500764.317	500772.630	500780.074	500800.074	73.861	20	20	15.757	0	20	0.089
844	LHS	500877.231	500892.231	500971.038	501002.639	501017.639	240.341	40	-60	110.408	15	15	0.100
845	RHS	501021.069	501036.069	501062.131	501085.242	501100.242	61.409	40	60	49.173	15	15	0.100
846	LHS	501104.490	501119.490	501138.363	501156.060	501171.060	310.791	40	-60	36.570	15	15	0.100
847	RHS	501189.543	501204.543	501218.041	501231.211	501246.211	34.158	40	70	26.668	15	15	0.100
848	RHS	501325.385	501340.385	501346.419	501352.443	501367.443	12.944	50	120	12.058	15	15	0.093
849	RHS	501371.561	501391.561	501394.854	501398.127	501418.127	43.534	30	35	6.566	20	20	0.100
850	LHS	501427.220	501447.220	501459.520	501470.565	501490.565	277.356	25	-30	23.345	20	20	0.093

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
851	RHS	501498.030	501513.030	501526.441	501539.236	501554.236	47.243	35	50	26.206	15	15	0.100
852	LHS	501573.968	501588.968	501596.426	501603.835	501618.835	337.331	40	-75	14.867	15	15	0.095
853	RHS	501655.699	501670.699	501700.909	501730.827	501745.827	17.230	80	250	60.128	15	15	0.100
854	LHS	501817.904	501832.904	501855.217	501877.347	501892.347	343.009	65	-200	44.443	15	15	0.094
855	LHS	501922.368	501937.368	501945.581	501953.784	501968.784	351.000	65	-200	16.416	15	15	0.094
856	RHS	501992.799	502007.799	502022.180	502036.434	502051.434	20.009	50	125	28.635	15	15	0.089
857	LHS	502063.915	502083.915	502084.917	502085.917	502105.917	318.083	25	-30	2.002	20	20	0.093
858	RHS	502108.634	502128.634	502129.167	502129.699	502149.699	40.356	25	30	1.065	20	20	0.093
859	LHS	502153.085	502173.085	502177.170	502181.233	502201.233	324.262	35	-45	8.148	20	20	0.100
860	RHS	502338.060	502353.060	502363.138	502373.030	502388.030	33.494	40	60	19.970	15	15	0.100
861	LHS	502393.482	502408.482	502433.323	502456.223	502471.223	308.761	40	-70	47.741	15	15	0.100
862	RHS	502504.590	502519.590	502524.195	502528.783	502543.783	23.126	40	60	9.193	15	15	0.100
863	LHS	502557.152	502572.152	502574.089	502576.025	502591.025	349.213	50	-100	3.873	15	15	0.100
864	RHS	502596.693	502611.693	502612.681	502613.670	502628.670	6.495	50	150	1.977	15	15	0.074
865	RHS	502659.736	502674.736	502677.851	502680.960	502695.960	20.281	40	60	6.224	15	15	0.100
866	LHS	502701.092	502716.092	502728.059	502739.716	502754.716	323.123	40	-60	23.624	15	15	0.100
867	RHS	502763.703	502778.703	502784.979	502791.249	502806.249	10.568	50	150	12.546	15	15	0.074
868	RHS	502889.516	502904.516	502930.526	502955.805	502970.805	30.395	50	125	51.289	15	15	0.089
869	LHS	502992.472	503012.472	503027.427	503038.154	503058.154	229.273	20	-20	25.682	20	20	0.089
870	RHS		503108.220	503108.270	503108.321		0.171	65	180	0.101	0	0	0.100
871	LHS	503343.679	503363.679	503370.610	503377.433	503397.433	317.079	35	-45	13.754	20	20	0.100
872	LHS	503424.010	503444.010	503460.554	503475.384	503495.384	286.526	30	-40	31.374	20	20	0.100
873	RHS	503501.280	503521.280	503534.068	503546.035	503566.035	64.164	30	40	24.755	20	20	0.100
874	LHS	503589.646	503604.646	503606.747	503608.848	503623.848	352.805	50	-150	4.202	15	15	0.074
875	RHS	503649.719	503664.719	503664.973	503665.228	503680.228	3.594	80	250	0.509	15	15	0.100
876	LHS	503741.819	503756.819	503759.110	503761.400	503776.400	352.556	50	-150	4.581	15	15	0.074
877	LHS		503818.021	503827.650	503837.274		356.982	80	-350	19.253	0	0	0.081
878	RHS	503933.015	503948.015	503952.523	503957.028	503972.028	9.225	50	150	9.013	15	15	0.074
879	LHS	504005.366	504020.366	504024.160	504027.952	504042.952	353.647	65	-200	7.586	15	15	0.094
880	LHS	504139.788	504154.788	504158.360	504161.932	504176.932	354.999	80	-250	7.144	15	15	0.100
881	RHS	504184.078	504199.078	504240.909	504280.668	504295.668	36.999	50	150	81.590	15	15	0.074
882	LHS	504342.205	504357.205	504364.932	504372.639	504387.639	346.051	50	-125	15.434	15	15	0.089
883	RHS	504394.871	504409.871	504425.185	504440.347	504455.347	20.948	50	125	30.476	15	15	0.089
884	RHS	504459.537	504474.537	504483.648	504492.622	504507.622	31.686	40	60	18.085	15	15	0.100
885	LHS	504517.109	504532.109	504569.137	504604.713	504619.713	326.580	50	-150	72.604	15	15	0.074
886	RHS	504653.672	504668.672	504679.451	504690.083	504705.083	27.958	40	75	21.411	15	15	0.095
887	LHS	504743.077	504758.077	504763.005	504767.919	504782.919	341.072	40	-75	9.842	15	15	0.095

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888	RHS	504795.531	504810.531	504813.403	504816.273	504831.273	11.893	50	100	5.742	15	15	0.100
889	LHS	504835.527	504850.527	504856.853	504863.132	504878.132	333.686	40	-60	12.605	15	15	0.100
890	RHS	504881.451	504896.451	504915.297	504932.972	504947.972	49.339	40	60	36.521	15	15	0.100
891	LHS	504973.551	504988.551	504994.920	505001.258	505016.258	338.836	40	-75	12.707	15	15	0.095
892	LHS	505081.862	505096.862	505105.988	505114.975	505129.975	328.491	40	-60	18.113	15	15	0.100
893	RHS	505137.751	505152.751	505163.848	505174.785	505189.785	28.372	40	75	22.034	15	15	0.095
894	RHS	505205.970	505220.970	505255.665	505285.962	505300.962	61.197	40	75	64.992	15	15	0.095
895	LHS	505304.045	505334.045	505343.256	505351.919	505381.919	268.712	25	-30	17.874	30	30	0.093
896	RHS	505386.986	505406.986	505434.156	505455.873	505475.873	87.792	35	45	48.887	20	20	0.100
897	LHS	505483.196	505513.196	505519.827	505526.248	505556.248	277.879	25	-30	13.052	30	30	0.093
898	RHS	505559.588	505579.588	505586.740	505593.774	505613.774	43.628	35	45	14.186	20	20	0.100
899	RHS	505626.581	505641.581	505645.084	505648.578	505663.578	21.058	40	60	6.997	15	15	0.100
900	LHS	505672.344	505702.344	505723.169	505738.752	505768.752	233.206	25	-30	36.408	30	30	0.093
901	RHS	505776.314	505791.314	505795.922	505800.519	505815.519	18.563	40	75	9.205	15	15	0.095
902	RHS	505829.748	505844.748	505875.115	505905.021	505920.021	21.693	65	200	60.273	15	15	0.094
903	RHS		505933.909	505954.101	505974.266		5.184	80	450	40.357	0	0	0.063
904	RHS	506022.334	506042.334	506066.341	506086.441	506106.441	81.684	35	45	44.107	20	20	0.100
905	LHS	506167.996	506187.996	506228.912	506256.577	506276.577	258.587	35	-50	68.581	20	20	0.100
906	RHS	506288.194	506308.194	506316.741	506325.087	506345.087	47.036	35	45	16.893	20	20	0.100
907	LHS	506345.205	506360.205	506362.496	506364.785	506379.785	341.323	40	-60	4.580	15	15	0.100
908	LHS	506401.247	506416.247	506421.534	506426.794	506441.794	335.644	40	-60	10.547	15	15	0.100
909	RHS	506442.027	506472.027	506474.061	506476.091	506506.091	55.880	30	35	4.064	30	30	0.100
910	LHS	506513.401	506528.401	506529.110	506529.820	506544.820	347.522	40	-75	1.419	15	15	0.095
911	RHS	506603.290	506618.290	506624.568	506630.816	506645.816	21.127	40	75	12.526	15	15	0.095
912	LHS	506654.718	506674.718	506681.735	506688.639	506708.639	316.902	35	-45	13.921	20	20	0.100
913	RHS	506710.125	506730.125	506732.396	506734.664	506754.664	25.680	35	55	4.539	20	20	0.099
914	LHS	506774.131	506789.131	506791.233	506793.333	506808.333	341.788	40	-60	4.202	15	15	0.100
915	RHS	506812.609	506842.609	506844.654	506846.692	506876.692	65.186	25	30	4.083	30	30	0.093
916	RHS	506895.668	506910.668	506916.798	506922.912	506937.912	15.693	50	100	12.244	15	15	0.100
917	LHS	506945.987	506965.987	506968.780	506971.566	506991.566	327.571	35	-45	5.579	20	20	0.100
918	RHS	506992.636	507012.636	507016.899	507021.119	507041.119	46.718	30	35	8.483	20	20	0.100
919	LHS	507044.764	507059.764	507066.931	507074.031	507089.031	332.069	40	-60	14.267	15	15	0.100
920	LHS	507163.881	507178.881	507188.887	507198.775	507213.775	333.430	40	-75	19.894	15	15	0.095
921	LHS	507217.383	507232.383	507238.032	507243.668	507258.668	345.000	50	-100	11.285	15	15	0.100
922	RHS	507260.311	507280.311	507291.261	507301.870	507321.870	47.680	35	50	21.559	20	20	0.100
923	LHS	507324.639	507354.639	507356.849	507359.051	507389.051	294.377	25	-30	4.412	30	30	0.093
924	RHS	507396.979	507416.979	507431.451	507445.153	507465.153	55.234	35	50	28.174	20	20	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
925	RHS	507475.525	507495.525	507500.955	507506.332	507526.332	39.305	35	45	10.807	20	20	0.100
926	LHS	507530.256	507545.256	507546.250	507547.244	507562.244	343.877	40	-60	1.988	15	15	0.100
927	RHS	507570.797	507600.797	507602.090	507603.381	507633.381	62.351	25	30	2.584	30	30	0.093
928	LHS	507635.148	507665.148	507700.580	507717.242	507747.242	203.328	25	-30	52.094	30	30	0.093
929	LHS	507802.333	507817.333	507822.473	507827.604	507842.604	345.556	50	-100	10.271	15	15	0.100
930	LHS		507853.317	507860.045	507866.772		357.553	80	-300	13.455	0	0	0.095
931	RHS		507885.745	507906.130	507926.470		6.668	80	350	40.725	0	0	0.081
932	RHS	508030.091	508050.091	508068.479	508085.581	508105.581	57.863	35	55	35.490	20	20	0.099
933	LHS	508157.198	508172.198	508192.875	508213.180	508228.180	334.396	50	-125	40.982	15	15	0.089
934	LHS	508252.141	508272.141	508281.434	508290.468	508310.468	311.203	35	-45	18.327	20	20	0.100
935	RHS	508314.344	508329.344	508329.685	508330.027	508345.027	12.103	40	75	0.683	15	15	0.095
936	RHS	508364.820	508384.820	508391.658	508398.392	508418.392	42.849	35	45	13.572	20	20	0.100
937	RHS	508431.621	508451.621	508468.488	508483.896	508503.896	66.629	35	45	32.275	20	20	0.100
938	LHS	508507.865	508527.865	508529.388	508530.911	508550.911	330.715	35	-45	3.046	20	20	0.100
939	RHS	508557.628	508577.628	508579.802	508581.973	508601.973	31.117	35	45	4.345	20	20	0.100
940	LHS	508608.439	508628.439	508634.069	508639.570	508659.570	300.634	25	-30	11.131	20	20	0.093
941	RHS	508668.095	508683.095	508755.076	508806.292	508821.292	83.481	50	95	123.197	15	15	0.100
942	LHS	508941.931	508971.931	508974.160	508976.380	509006.380	294.269	25	-30	4.449	30	30	0.093
943	LHS	509007.696	509037.696	509051.372	509063.359	509093.359	253.764	25	-30	25.663	30	30	0.093
944	RHS	509094.350	509109.350	509129.052	509147.424	509162.424	50.818	40	60	38.074	15	15	0.100
945	LHS	509179.448	509194.448	509199.367	509204.271	509219.271	341.066	40	-75	9.823	15	15	0.095
946	RHS	509219.408	509249.408	509252.016	509254.612	509284.612	67.248	25	30	5.204	30	30	0.093
947	RHS	509291.456	509311.456	509328.158	509343.886	509363.886	54.640	35	55	32.430	20	20	0.099
948	LHS	509364.342	509394.342	509398.000	509401.622	509431.622	288.806	25	-30	7.280	30	30	0.093
949	RHS	509435.082	509465.082	509467.087	509469.087	509499.087	55.671	30	35	4.005	30	30	0.100
950	LHS	509502.286	509522.286	509528.095	509533.840	509553.840	319.901	35	-45	11.554	20	20	0.100
951	RHS	509554.888	509569.888	509573.223	509576.547	509591.547	27.663	35	45	6.659	15	15	0.100
952	LHS	509596.653	509611.653	509688.526	509724.609	509739.609	247.305	40	-65	112.956	15	15	0.100
953	RHS	509773.139	509803.139	509824.467	509840.221	509870.221	128.261	25	30	37.082	30	30	0.093
954	LHS	509872.903	509887.903	509935.876	509968.839	509983.839	268.423	40	-60	80.936	15	15	0.100
955	RHS	510007.974	510022.974	510039.982	510056.939	510071.939	11.268	80	250	33.965	15	15	0.100
956	RHS	510117.254	510137.254	510171.107	510195.301	510215.301	99.428	35	45	58.047	20	20	0.100
957	RHS	510299.718	510314.718	510320.963	510327.202	510342.202	10.633	50	150	12.484	15	15	0.074
958	RHS	510356.136	510371.136	510375.072	510378.997	510393.997	21.953	40	60	7.861	15	15	0.100
959	LHS	510405.076	510420.076	510426.424	510432.724	510447.724	333.729	40	-60	12.648	15	15	0.100
960	LHS	510458.039	510473.039	510479.014	510484.979	510499.979	347.667	50	-125	11.940	15	15	0.089
961	RHS	510519.145	510534.145	510545.210	510556.236	510571.236	14.180	50	150	22.091	15	15	0.074

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
962	LHS	510576.011	510591.011	510600.727	510610.404	510625.404	344.251	50	-125	19.393	15	15	0.089
963	RHS	510640.085	510655.085	510662.370	510669.623	510684.623	18.841	50	90	14.538	15	15	0.100
964	LHS	510700.345	510720.345	510721.849	510723.353	510743.353	338.145	40	-60	3.008	20	20	0.100
965	LHS	510748.720	510773.720	510829.993	510849.948	510874.948	215.019	30	-40	76.228	25	25	0.100
966	LHS		510954.082	510972.369	510990.635		355.459	80	-450	36.553	0	0	0.063
967	RHS	511114.102	511129.102	511153.491	511176.262	511191.262	47.519	40	75	47.160	15	15	0.095
968	LHS	511205.810	511220.810	511235.720	511250.038	511265.038	317.908	40	-60	29.228	15	15	0.100
969	RHS	511293.718	511313.718	511394.650	511415.457	511435.457	139.526	35	50	101.739	20	20	0.100
970	LHS	511504.698	511519.698	511604.286	511634.159	511649.159	236.440	40	-60	114.461	15	15	0.100
971	RHS	511685.957	511705.957	511815.765	511820.309	511840.309	153.999	35	50	114.352	20	20	0.100
972	LHS	511864.723	511879.723	511922.527	511960.611	511975.611	305.155	50	-100	80.888	15	15	0.100
973	LHS		512017.477	512024.230	512030.982		357.843	80	-350	13.505	0	0	0.081
974	LHS	512069.137	512084.137	512120.234	512153.420	512168.420	311.794	50	-100	69.283	15	15	0.100
975	LHS	512185.633	512200.633	512212.207	512223.599	512238.599	331.113	40	-75	22.966	15	15	0.095
976	RHS	512242.370	512257.370	512276.539	512294.478	512309.478	49.845	40	60	37.108	15	15	0.100
977	LHS	512310.820	512325.820	512332.067	512338.298	512353.298	344.313	50	-100	12.478	15	15	0.100
978	RHS	512378.013	512393.013	512405.973	512418.541	512433.541	38.709	40	60	25.528	15	15	0.100
979	LHS	512434.889	512464.889	512465.018	512465.147	512495.147	302.323	25	-30	0.258	30	30	0.093
980	RHS	512532.933	512547.933	512604.792	512652.890	512667.890	62.619	50	110	104.957	15	15	0.100
981	RHS	512772.929	512802.929	512814.691	512825.348	512855.348	100.228	25	30	22.419	30	30	0.093
982	LHS	512862.280	512877.280	512883.614	512889.931	512904.931	344.218	50	-100	12.651	15	15	0.100
983	RHS	512907.757	512922.757	512925.266	512927.774	512942.774	7.757	50	150	5.017	15	15	0.074
984	LHS	512953.194	512983.194	512983.661	512984.129	513014.129	309.440	30	-35	0.935	30	30	0.100
985	RHS	513014.438	513044.438	513046.111	513047.781	513077.781	63.798	25	30	3.343	30	30	0.093
986	LHS	513081.651	513096.651	513097.816	513098.980	513113.980	343.465	40	-60	2.329	15	15	0.100
987	LHS	513116.593	513131.593	513135.834	513140.066	513155.066	342.086	40	-75	8.473	15	15	0.095
988	RHS	513159.779	513174.779	513176.413	513178.047	513193.047	7.078	50	150	3.268	15	15	0.074
989	LHS	513196.578	513211.578	513211.867	513212.156	513227.156	348.248	40	-75	0.578	15	15	0.095
990	LHS	513229.239	513244.239	513247.165	513250.088	513265.088	348.093	50	-100	5.849	15	15	0.100
991	RHS	513266.614	513286.614	513294.635	513302.490	513322.490	45.789	35	45	15.876	20	20	0.100
992	LHS	513340.786	513360.786	513372.350	513383.425	513403.425	305.791	35	-45	22.639	20	20	0.100
993	RHS	513407.627	513427.627	513434.098	513440.482	513460.482	41.979	35	45	12.855	20	20	0.100
994	LHS	513465.177	513485.177	513489.998	513494.795	513514.795	329.264	35	-55	9.618	20	20	0.099
995	LHS	513537.427	513567.427	513578.837	513589.234	513619.234	261.110	25	-30	21.807	30	30	0.093
996	RHS	513623.189	513638.189	513648.302	513658.227	513673.227	33.538	40	60	20.038	15	15	0.100
997	LHS	513732.875	513747.875	513771.781	513794.805	513809.805	324.664	50	-100	46.930	15	15	0.100
998	RHS	513855.910	513885.910	513893.233	513900.275	513930.275	84.864	25	30	14.365	30	30	0.093



Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
999	RHS	513932.065	513962.065	513963.284	513964.503	513994.503	61.965	25	30	2.438	30	30	0.093
1000	RHS	514057.697	514072.697	514074.780	514076.863	514091.863	11.111	50	100	4.166	15	15	0.100
1001	LHS	514101.222	514116.222	514121.490	514126.732	514141.732	335.700	40	-60	10.510	15	15	0.100
1002	LHS	514194.936	514219.936	514229.408	514238.286	514263.286	277.278	25	-30	18.350	25	25	0.093
1003	RHS	514268.748	514288.748	514289.637	514290.525	514310.525	31.287	30	40	1.777	20	20	0.100
1004	LHS	514313.165	514328.165	514337.602	514346.885	514361.885	327.949	40	-60	18.720	15	15	0.100
1005	RHS	514365.937	514385.937	514413.928	514437.722	514457.722	74.914	35	55	51.785	20	20	0.099
1006	RHS	514534.170	514549.170	514557.569	514565.930	514580.930	18.323	50	100	16.760	15	15	0.100
1007	RHS	514616.848	514631.848	514636.947	514642.029	514657.029	19.271	40	75	10.181	15	15	0.095
1008	LHS	514672.303	514702.303	514726.523	514744.677	514774.677	241.572	30	-35	42.374	30	30	0.100
1009	RHS	514811.052	514826.052	514830.016	514833.972	514848.972	17.594	40	75	7.920	15	15	0.095
1010	LHS	514858.465	514873.465	514874.047	514874.629	514889.629	352.658	50	-125	1.164	15	15	0.089
1011	LHS	514910.149	514925.149	514935.423	514945.651	514960.651	343.824	50	-125	20.502	15	15	0.089
1012	LHS	514966.231	514986.231	514995.919	515005.316	515025.316	310.256	35	-45	19.085	20	20	0.100
1013	RHS	515037.176	515052.176	515054.483	515056.787	515071.787	15.116	40	75	4.611	15	15	0.095
1014	RHS	515113.591	515128.591	515132.787	515136.975	515151.975	17.989	40	75	8.384	15	15	0.095
1015	LHS	515164.464	515179.464	515184.390	515189.295	515204.295	336.328	40	-60	9.831	15	15	0.100
1016	RHS	515206.025	515226.025	515261.126	515268.141		149.311	20	20	42.116	20	0	0.089
1017	RHS		515268.608	515272.800	515276.873	515296.873	52.413	20	20	8.265	0	20	0.089
1018	LHS	515310.628	515325.628	515330.990	515336.345	515351.345	348.321	50	-125	10.717	15	15	0.089
1019	RHS	515477.411	515492.411	515500.396	515508.359	515523.359	14.207	50	125	15.948	15	15	0.089
1020	LHS	515537.162	515552.162	515557.986	515563.801	515578.801	347.846	50	-125	11.639	15	15	0.089
1021	RHS	515594.744	515609.744	515618.301	515626.816	515641.816	18.454	50	100	17.072	15	15	0.100
1022	LHS	515647.088	515662.088	515665.838	515669.582	515684.582	343.943	40	-80	7.494	15	15	0.089
1023	RHS	515687.748	515702.748	515706.880	515711.000	515726.000	22.239	40	60	8.252	15	15	0.100
1024	LHS	515729.925	515744.925	515754.068	515763.072	515778.072	328.469	40	-60	18.147	15	15	0.100
1025	LHS	515793.936	515813.936	515817.365	515820.783	515840.783	329.257	35	-50	6.847	20	20	0.100
1026	RHS	515844.053	515874.053	515875.127	515876.200	515906.200	52.699	30	35	2.147	30	30	0.100
1027	LHS	515919.023	515939.023	515947.023	515954.858	515974.858	314.434	35	-45	15.835	20	20	0.100
1028	RHS	515979.350	516009.350	516024.566	516037.513	516067.513	111.083	25	30	28.163	30	30	0.093
1029	LHS	516116.256	516141.256	516151.189	516160.166	516185.166	259.497	25	-25	18.910	25	25	0.100
1030	LHS	516269.018	516299.018	516300.860	516302.697	516332.697	295.771	25	-30	3.679	30	30	0.093
1031	RHS	516335.408	516365.408	516388.295	516404.510	516434.510	132.045	25	30	39.102	30	30	0.093
1032	LHS	516481.413	516511.413	516528.278	516542.141	516572.141	244.031	25	-30	30.728	30	30	0.093
1033	RHS	516616.045	516636.045	516640.806	516645.531	516665.531	37.629	35	45	9.486	20	20	0.100
1034	LHS	516674.499	516694.499	516705.302	516715.703	516735.703	307.568	35	-45	21.204	20	20	0.100
1035	LHS	516749.197	516779.197	516782.687	516786.146	516816.146	289.568	25	-30	6.949	30	30	0.093

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1036	RHS	516816.425	516831.425	516849.187	516865.962	516880.962	47.338	40	60	34.537	15	15	0.100
1037	RHS	516892.152	516907.152	516913.534	516919.868	516934.868	26.470	40	60	12.716	15	15	0.100
1038	LHS	516940.627	516955.627	516958.433	516961.234	516976.234	340.369	40	-60	5.607	15	15	0.100
1039	LHS	516981.728	516996.728	517031.753	517065.544	517080.544	327.998	50	-150	68.816	15	15	0.074
1040	LHS	517104.966	517124.966	517135.220	517145.129	517165.129	308.971	35	-45	20.163	20	20	0.100
1041	RHS	517172.172	517192.172	517197.360	517202.502	517222.502	38.629	35	45	10.330	20	20	0.100
1042	RHS	517304.761	517329.761	517343.992	517357.107	517377.107	71.541	30	40	27.346	25	20	0.100
1043	RHS	517379.323	517409.323	517422.582	517434.292	517464.292	105.116	25	30	24.969	30	30	0.093
1044	LHS	517464.494	517479.494	517493.184	517506.414	517521.414	319.989	40	-60	26.920	15	15	0.100
1045	RHS	517560.391	517580.391	517606.330	517628.247	517648.247	77.825	35	50	47.856	20	20	0.100
1046	LHS	517650.095	517665.095	517677.813	517690.291	517705.291	329.381	40	-75	25.196	15	15	0.095
1047	LHS	517726.640	517741.640	517754.835	517767.970	517782.970	345.346	65	-160	26.330	15	15	0.100
1048	LHS	517796.447	517811.447	517818.703	517825.835	517840.835	322.732	35	-45	14.388	15	15	0.100
1049	RHS	517844.522	517869.522	517893.353	517909.800	517934.800	124.711	25	30	40.278	25	25	0.093
1050	LHS	517950.784	517970.784	517992.511	518012.169	518032.169	296.079	35	-55	41.385	20	20	0.099
1051	RHS	518058.433	518073.433	518086.374	518099.026	518114.026	33.309	40	70	25.593	15	15	0.100
1052	LHS	518118.853	518133.853	518136.179	518138.505	518153.505	348.803	50	-100	4.652	15	15	0.100
1053	RHS	518161.478	518176.478	518178.890	518181.302	518196.302	11.429	50	100	4.824	15	15	0.100
1054	RHS	518223.447	518238.447	518243.018	518247.585	518262.585	11.193	50	125	9.138	15	15	0.089
1055	LHS	518265.713	518285.713	518293.359	518300.888	518320.888	319.775	35	-50	15.175	20	20	0.100
1056	LHS	518331.558	518346.558	518350.576	518354.594	518369.594	353.408	65	-200	8.036	15	15	0.094
1057	LHS	518384.401	518404.401	518412.910	518421.258	518441.258	317.899	35	-50	16.857	20	20	0.100
1058	RHS	518444.553	518464.553	518472.603	518480.485	518500.485	45.891	35	45	15.932	20	20	0.100
1059	LHS	518505.824	518525.824	518527.986	518530.145	518550.145	332.248	35	-50	4.321	20	20	0.100
1060	RHS	518554.579	518569.579	518575.744	518581.882	518596.882	20.933	40	75	12.303	15	15	0.095
1061	LHS	518599.076	518629.076	518632.004	518634.918	518664.918	301.415	30	-35	5.842	30	30	0.100
1062	RHS	518664.984	518689.984	518691.314	518692.643	518717.643	52.893	25	30	2.659	25	25	0.093
1063	LHS	518718.530	518743.530	518745.127	518746.720	518771.720	306.250	25	-30	3.190	25	25	0.093
1064	LHS	518786.864	518806.864	518811.836	518816.767	518831.767	325.200	35	-45	9.903	20	15	0.100
1065	RHS	518833.402	518848.402	518859.437	518870.045	518890.045	49.879	35	45	21.643	15	20	0.100
1066	LHS	518896.257	518911.257	518914.049	518916.838	518931.838	341.933	40	-65	5.581	15	15	0.100
1067	LHS	518971.778	518986.778	518993.965	519001.094	519016.094	334.240	40	-65	14.316	15	15	0.100
1068	LHS	519032.412	519062.412	519069.924	519077.133	519107.133	274.636	25	-30	14.721	30	30	0.093
1069	RHS	519115.260	519135.260	519152.392	519167.633	519187.633	75.037	30	40	32.373	20	20	0.100
1070	RHS	519198.345	519213.345	519225.966	519238.224	519253.224	38.213	40	60	24.879	15	15	0.100
1071	LHS	519272.056	519292.056	519299.378	519306.596	519326.596	320.461	35	-50	14.540	20	20	0.100
1072	RHS	519328.413	519343.413	519352.407	519361.386	519376.386	10.604	65	180	17.973	15	15	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1073	LHS	519383.684	519398.684	519401.637	519404.587	519419.587	344.163	40	-75	5.903	15	15	0.095
1074	LHS	519448.829	519463.829	519464.856	519465.884	519480.884	350.328	50	-100	2.055	15	15	0.100
1075	RHS	519495.192	519515.192	519524.441	519533.437	519553.437	48.803	35	45	18.245	20	20	0.100
1076	RHS	519563.010	519583.010	519595.217	519604.930		91.522	20	20	21.920	20	0	0.089
1077	RHS		519605.523	519613.305	519620.366	519640.366	71.198	20	20	14.843	0	20	0.089
1078	LHS	519677.673	519692.673	519705.310	519717.583	519732.583	321.938	40	-60	24.910	15	15	0.100
1079	LHS	519755.801	519770.801	519781.172	519791.341	519806.341	326.165	40	-60	20.540	15	15	0.100
1080	LHS	519816.399	519846.399	519858.085	519868.686	519898.686	260.192	25	-30	22.287	30	30	0.093
1081	RHS	519958.431	519988.431	520020.338	520037.402	520067.402	150.895	25	30	48.971	30	30	0.093
1082	LHS	520068.961	520088.961	520094.791	520100.556	520120.556	319.823	35	-45	11.595	20	20	0.100
1083	RHS	520122.176	520137.176	520150.567	520163.526	520178.526	39.515	40	60	26.350	15	15	0.100
1084	RHS	520204.662	520219.662	520219.879	520220.095	520235.095	11.850	40	75	0.433	15	15	0.095
1085	LHS	520250.925	520280.925	520295.378	520307.863	520337.863	251.316	25	-30	26.938	30	30	0.093
1086	LHS	520341.767	520371.767	520372.734	520373.700	520403.700	299.117	25	-30	1.933	30	30	0.093
1087	RHS	520405.587	520420.587	520424.952	520429.314	520444.314	10.953	50	125	8.727	15	15	0.089
1088	LHS	520449.590	520464.590	520471.565	520478.477	520493.477	332.550	40	-60	13.887	15	15	0.100
1089	RHS	520501.479	520516.479	520522.875	520529.223	520544.223	26.581	40	60	12.744	15	15	0.100
1090	RHS	520559.284	520579.284	520601.915	520613.165	520633.165	154.447	20	20	33.881	20	20	0.089
1091	LHS	520645.309	520665.309	520675.450	520685.257	520705.257	309.165	35	-45	19.948	20	20	0.100
1092	RHS	520706.138	520726.138	520736.813	520747.100	520767.100	52.197	35	45	20.962	20	20	0.100
1093	LHS	520768.819	520783.819	520787.559	520791.289	520806.289	338.621	40	-60	7.470	15	15	0.100
1094	LHS	520848.027	520868.027	520940.385	520964.640	520984.640	226.415	35	-50	96.613	20	20	0.100
1095	RHS	521003.018	521023.018	521038.405	521051.453	521071.453	92.541	25	30	28.435	20	20	0.093
1096	LHS	521078.066	521098.066	521106.209	521113.968	521133.968	291.567	25	-30	15.902	20	20	0.093
1097	LHS	521152.005	521167.005	521186.015	521203.994	521218.994	314.234	40	-65	36.989	15	15	0.100
1098	RHS	521231.412	521261.412	521275.776	521288.204	521318.204	108.603	25	30	26.792	30	30	0.093
1099	LHS	521329.053	521344.053	521349.877	521355.664	521370.664	334.636	40	-60	11.611	15	15	0.100
1100	RHS	521375.872	521390.872	521404.472	521417.621	521432.621	39.875	40	60	26.749	15	15	0.100
1101	LHS	521435.321	521450.321	521503.502	521544.191	521559.191	282.126	40	-80	93.870	15	15	0.089
1102	RHS	521559.875	521589.875	521590.715	521591.554	521621.554	51.931	30	35	1.679	30	30	0.100
1103	LHS	521636.809	521651.809	521692.211	521725.928	521740.928	291.931	40	-75	74.119	15	15	0.095
1104	RHS	521753.737	521768.737	521777.586	521786.407	521801.407	15.047	50	125	17.670	15	15	0.089
1105	RHS	521830.866	521845.866	521855.563	521865.093	521880.093	32.686	40	60	19.227	15	15	0.100
1106	LHS	522035.766	522055.766	522070.239	522083.771	522103.771	298.980	35	-45	28.005	20	20	0.100
1107	RHS	522111.980	522131.980	522144.539	522156.474	522176.474	56.669	35	45	24.494	20	20	0.100
1108	LHS	522218.649	522243.649	522249.939	522256.127	522281.127	306.328	30	-40	12.478	25	25	0.100
1109	RHS	522318.162	522338.162	522343.338	522348.476	522368.476	34.776	35	50	10.314	20	20	0.100



Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1110	LHS	522380.650	522405.650	522423.583	522437.977	522462.977	250.629	25	-30	32.327	25	25	0.093
1111	RHS	522464.176	522484.176	522488.684	522493.163	522513.163	36.972	35	45	8.987	20	20	0.100
1112	RHS	522520.394	522540.394	522556.993	522570.716	522590.716	96.186	25	30	30.322	20	20	0.093
1113	RHS	522596.902	522616.902	522622.505	522627.980	522647.980	59.407	25	30	11.078	20	20	0.093
1114	LHS	522650.279	522680.279	522691.803	522702.284	522732.284	260.781	25	-30	22.005	30	30	0.093
1115	LHS	522803.575	522823.575	522835.997	522847.816	522867.816	303.709	35	-45	24.241	20	20	0.100
1116	RHS	522913.018	522933.018	522937.999	522942.948	522962.948	34.422	35	50	9.930	20	20	0.100
1117	LHS	522977.292	522992.292	522993.006	522993.719	523008.719	350.634	50	-100	1.427	15	15	0.100
1118	RHS	523015.412	523035.412	523040.328	523045.205	523065.205	37.937	35	45	9.793	20	20	0.100
1119	LHS	523071.119	523101.119	523104.652	523108.152	523138.152	289.331	25	-30	7.033	30	30	0.093
1120	RHS	523156.237	523171.237	523185.852	523199.909	523214.909	41.739	40	60	28.672	15	15	0.100
1121	RHS	523242.206	523257.206	523271.956	523286.335	523301.335	33.821	40	75	29.129	15	15	0.095
1122	LHS	523312.815	523332.815	523338.671	523344.475	523364.475	323.749	35	-50	11.660	20	20	0.100
1123	RHS	523523.575	523543.575	523551.508	523559.309	523579.309	41.088	35	50	15.734	20	20	0.100
1124	LHS	523603.038	523618.038	523655.391	523690.920	523705.920	322.717	50	-135	72.882	15	15	0.082
1125	RHS	523709.784	523724.784	523729.693	523734.588	523749.588	19.089	40	75	9.804	15	15	0.095
1126	LHS	523756.041	523786.041	523791.344	523796.567	523826.567	293.741	30	-35	10.526	30	30	0.100
1127	RHS	523834.953	523864.953	523866.492	523868.027	523898.027	63.168	25	30	3.074	30	30	0.093
1128	LHS	523919.229	523934.229	523937.227	523940.219	523955.219	340.010	40	-60	5.990	15	15	0.100
1129	RHS	523958.833	523978.833	523987.294	523995.560	524015.560	46.873	35	45	16.727	20	20	0.100
1130	LHS	524018.560	524033.560	524047.089	524060.172	524075.172	320.381	40	-60	26.612	15	15	0.100
1131	RHS	524085.447	524100.447	524101.328	524102.209	524117.209	16.067	40	60	1.762	15	15	0.100
1132	LHS	524118.130	524143.130	524152.837	524161.907	524186.907	276.471	25	-30	18.777	25	25	0.093
1133	RHS	524217.241	524232.241	524233.766	524235.290	524250.290	10.411	50	100	3.049	15	15	0.100
1134	LHS	524256.390	524286.390	524290.823	524295.191	524325.191	286.010	25	-30	8.801	30	30	0.093
1135	RHS	524327.077	524357.077	524367.305	524376.792	524406.792	95.071	25	30	19.715	30	30	0.093
1136	LHS	524424.171	524439.171	524453.620	524467.529	524482.529	318.711	40	-60	28.358	15	15	0.100
1137	RHS	524492.015	524517.015	524531.501	524544.813	524569.813	75.723	30	40	27.798	25	25	0.100
1138	LHS	524573.179	524598.179	524600.853	524603.513	524628.513	302.214	25	-30	5.334	25	25	0.093
1139	RHS	524631.175	524656.175	524664.488	524672.394	524697.394	78.767	25	30	16.219	25	25	0.093
1140	RHS	524723.400	524743.400	524744.961	524746.521	524766.521	29.477	35	45	3.121	20	20	0.100
1141	LHS	524768.011	524798.011	524798.803	524799.593	524829.593	299.831	25	-30	1.582	30	30	0.093
1142	RHS	524840.543	524870.543	524879.718	524888.352	524918.352	91.387	25	30	17.809	30	30	0.093
1143	LHS	524949.814	524974.814	524989.899	525003.665	525028.665	282.990	30	-40	28.851	25	25	0.100
1144	LHS	525077.383	525092.383	525095.256	525098.128	525113.128	352.163	50	-150	5.745	15	15	0.074
1145	RHS	525161.366	525181.366	525185.036	525188.690	525208.690	34.843	35	45	7.324	20	20	0.100
1146	RHS	525240.012	525260.012	525264.520	525268.998	525288.998	36.953	35	45	8.986	20	20	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1147	LHS	525436.617	525461.617	525468.413	525475.081	525500.081	304.954	30	-40	13.464	25	25	0.100
1148	LHS	525538.865	525568.865	525575.998	525582.872	525612.872	275.995	25	-30	14.007	30	30	0.093
1149	RHS	525625.987	525645.987	525651.421	525656.824	525676.824	29.574	40	60	10.837	20	20	0.100
1150	RHS	525744.314	525759.314	525765.169	525770.987	525785.987	25.505	40	60	11.673	15	15	0.100
1151	LHS	525808.095	525828.095	525833.661	525839.182	525859.182	324.472	35	-50	11.087	20	20	0.100
1152	LHS	525919.916	525934.916	525937.790	525940.664	525955.664	352.603	65	-160	5.748	15	15	0.100
1153	RHS	525975.317	525990.317	526004.906	526019.403	526034.403	16.895	50	150	29.086	15	15	0.074
1154	RHS		526076.593	526076.636	526076.678		0.120	65	180	0.085	0	0	0.100
1155	RHS	526164.649	526179.649	526188.074	526196.486	526211.486	10.486	65	175	16.837	15	15	0.100
1156	LHS	526237.020	526257.020	526266.201	526275.180	526295.180	316.320	35	-50	18.160	20	20	0.100
1157	RHS	526301.162	526316.162	526325.333	526334.364	526349.364	31.756	40	60	18.202	15	15	0.100
1158	RHS	526471.563	526496.563	526504.390	526512.022	526537.022	57.992	30	40	15.459	25	25	0.100
1159	LHS	526539.932	526554.932	526579.032	526600.766	526615.766	301.982	40	-60	45.834	15	15	0.100
1160	LHS	526649.482	526664.482	526670.664	526676.819	526691.819	339.264	40	-75	12.337	15	15	0.095
1161	RHS	526728.642	526743.642	526749.992	526756.296	526771.296	26.479	40	60	12.654	15	15	0.100
1162	RHS	526785.042	526815.042	526834.939	526850.179	526880.179	124.418	25	30	35.137	30	30	0.093
1163	LHS	526880.376	526910.376	526929.016	526943.733	526973.733	239.112	25	-30	33.357	30	30	0.093
1164	RHS	527006.928	527036.928	527047.070	527056.488	527086.488	94.677	25	30	19.560	30	30	0.093
1165	LHS	527171.630	527186.630	527187.299	527187.967	527202.967	353.845	50	-150	1.337	15	15	0.074
1166	LHS	527225.836	527255.836	527268.655	527280.065	527310.065	256.557	25	-30	24.229	30	30	0.093
1167	LHS	527332.654	527347.654	527352.610	527357.551	527372.551	341.101	40	-75	9.897	15	15	0.095
1168	RHS	527442.160	527467.160	527482.973	527496.266	527521.266	103.344	25	30	29.106	25	25	0.093
1169	LHS	527522.166	527547.166	527548.784	527550.400	527575.400	306.162	25	-30	3.234	25	25	0.093
1170	RHS	527575.809	527590.809	527594.070	527597.325	527612.325	20.658	40	60	6.516	15	15	0.100
1171	LHS	527621.809	527641.809	527657.447	527671.910	527691.910	296.296	35	-45	30.101	20	20	0.100
1172	LHS	527716.313	527731.313	527743.204	527755.024	527770.024	342.314	50	-125	23.711	15	15	0.089
1173	RHS	527795.435	527815.435	527820.869	527826.261	527846.261	35.394	35	50	10.826	20	20	0.100
1174	LHS	527847.771	527862.771	527864.184	527865.597	527880.597	353.261	50	-150	2.826	15	15	0.074
1175	RHS	527884.134	527909.134	527913.786	527918.397	527943.397	49.184	30	40	9.263	25	25	0.100
1176	RHS	527982.066	528007.066	528010.395	528013.708	528038.708	45.383	30	40	6.642	25	25	0.100
1177	LHS	528052.425	528072.425	528077.828	528083.147	528103.147	309.777	30	-35	10.722	20	20	0.100
1178	RHS	528104.627	528124.627	528128.633	528132.604	528152.604	45.947	30	35	7.977	20	20	0.100
1179	RHS	528216.438	528236.438	528244.619	528252.623	528272.623	46.127	35	45	16.185	20	20	0.100
1180	LHS	528287.360	528307.360	528347.685	528370.515	528390.515	240.943	30	-40	63.155	20	20	0.100
1181	RHS	528393.539	528413.539	528420.181	528426.703	528446.703	47.543	30	40	13.164	20	20	0.100
1182	RHS	528470.592	528495.592	528517.886	528533.937	528558.937	121.107	25	30	38.345	25	25	0.093
1183	LHS	528572.984	528587.984	528598.898	528609.637	528624.637	330.134	40	-70	21.653	15	15	0.100

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1184	LHS	528675.687	528690.687	528697.814	528704.874	528719.874	332.236	40	-60	14.187	15	15	0.100
1185	RHS	528750.401	528765.401	528768.942	528772.478	528787.478	17.005	40	75	7.077	15	15	0.095
1186	LHS	528870.604	528900.604	528923.058	528939.155	528969.155	229.160	25	-30	38.551	30	30	0.093
1187	RHS	529050.175	529065.175	529072.332	529079.421	529094.421	28.028	40	60	14.246	15	15	0.100
1188	LHS	529103.365	529123.365	529129.942	529136.444	529156.444	322.197	35	-50	13.079	20	20	0.100
1189	RHS	529173.627	529188.627	529198.305	529207.889	529222.889	24.583	40	80	19.262	15	15	0.089
1190	LHS	529254.386	529269.386	529286.892	529303.453	529318.453	313.241	40	-60	34.067	15	15	0.100
1191	RHS	529323.033	529338.033	529342.107	529346.176	529361.176	13.351	50	100	8.143	15	15	0.100
1192	RHS	529372.930	529392.930	529397.193	529401.435	529421.435	32.796	35	50	8.505	20	20	0.100
1193	LHS	529487.635	529502.635	529507.744	529512.829	529527.829	336.008	40	-60	10.194	15	15	0.100
1194	RHS	529541.899	529566.899	529576.029	529584.852	529609.852	61.592	30	40	17.953	25	25	0.100
1195	LHS	529622.671	529637.671	529643.460	529649.213	529664.213	334.689	40	-60	11.542	15	15	0.100
1196	RHS	529669.260	529684.260	529695.178	529705.576	529720.576	52.042	30	40	21.316	15	15	0.100
1197	LHS	529722.304	529737.304	529740.493	529743.670	529758.670	332.907	35	-45	6.366	15	15	0.100
1198	RHS	529763.610	529778.610	529783.339	529788.011	529803.011	40.041	30	35	9.401	15	15	0.100
1199	LHS	529821.831	529836.831	529850.417	529863.938	529878.938	344.964	65	-160	27.107	15	15	0.100
1200	LHS	529955.153	529970.153	529981.523	529992.868	530007.868	349.305	65	-200	22.715	15	15	0.094
1201	LHS	530026.294	530041.294	530053.132	530064.777	530079.777	330.616	40	-75	23.483	15	15	0.095
1202	RHS	530092.387	530107.387	530115.767	530124.078	530139.078	24.299	40	75	16.691	15	15	0.095
1203	LHS	530140.953	530155.953	530166.424	530176.686	530191.686	325.969	40	-60	20.733	15	15	0.100
1204	RHS	530207.900	530232.900	530252.964	530270.093	530295.093	89.096	30	40	37.193	25	25	0.100
1205	LHS	530295.888	530315.888	530324.224	530332.326	530352.326	307.864	30	-40	16.438	20	20	0.100
1206	LHS	530387.460	530407.460	530411.506	530415.535	530435.535	327.943	35	-50	8.075	20	20	0.100
1207	RHS	530438.561	530463.561	530471.759	530479.732	530504.732	59.031	30	40	16.171	25	25	0.100
1208	LHS	530519.215	530534.215	530538.757	530543.297	530558.297	351.465	65	-160	9.082	15	15	0.100
1209	RHS	530678.098	530693.098	530704.119	530715.078	530730.078	17.718	50	120	21.980	15	15	0.093
1210	RHS	530790.627	530805.627	530806.998	530808.369	530823.369	10.301	50	100	2.742	15	15	0.100
1211	LHS	530846.629	530876.629	530883.704	530890.525		304.934	25	-30	13.896	30	0	0.093
1212	RHS		530905.901	530929.653	530946.081	530976.081	105.408	25	30	40.180	0	30	0.093
1213	LHS	531013.877	531028.877	531037.416	531045.840	531060.840	329.572	40	-60	16.963	15	15	0.100
1214	LHS	531098.693	531113.693	531126.098	531138.158	531153.158	322.439	40	-60	24.465	15	15	0.100
1215	RHS	531186.171	531211.171	531222.790	531233.787	531258.787	68.253	30	40	22.616	25	25	0.100
1216	LHS	531298.481	531313.481	531320.797	531328.052	531343.052	333.946	40	-65	14.571	15	15	0.100
1217	RHS	531368.440	531383.440	531386.738	531390.029	531405.029	20.757	40	60	6.589	15	15	0.100
1218	LHS	531405.757	531435.757	531439.087	531442.398	531472.398	300.019	30	-35	6.641	30	30	0.100
1219	LHS	531558.176	531573.176	531574.007	531574.838	531589.838	345.430	40	-65	1.662	15	15	0.100
1220	RHS	531597.838	531612.838	531621.344	531629.738	531644.738	30.567	40	60	16.900	15	15	0.100

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1221	LHS	531653.017	531668.017	531725.725	531759.928	531774.928	257.977	40	-60	91.911	15	15	0.100
1222	RHS	531800.884	531815.884	531818.998	531822.110	531837.110	8.178	50	150	6.226	15	15	0.074
1223	RHS	531904.291	531919.291	531925.142	531930.955	531945.955	25.577	40	60	11.664	15	15	0.100
1224	LHS	531949.770	531964.770	531979.714	531994.062	532009.062	317.745	40	-60	29.292	15	15	0.100
1225	RHS	532014.003	532044.003	532045.694	532047.382	532077.382	54.724	30	35	3.379	30	30	0.100
1226	LHS	532135.383	532150.383	532157.649	532164.845	532179.845	332.008	40	-60	14.462	15	15	0.100
1227	RHS	532189.905	532204.905	532207.003	532209.100	532224.100	16.949	40	65	4.195	15	15	0.100
1228	LHS	532243.759	532258.759	532300.652	532331.902	532346.902	275.948	40	-60	73.143	15	15	0.100
1229	LHS	532349.381	532364.381	532378.243	532391.627	532406.627	319.723	40	-60	27.246	15	15	0.100
1230	RHS	532408.599	532428.599	532440.982	532452.767	532472.767	56.265	35	45	24.168	20	20	0.100
1231	RHS	532513.520	532543.520	532551.028	532558.233	532588.233	85.517	25	30	14.713	30	30	0.093
1232	LHS	532593.075	532623.075	532635.015	532645.802	532675.802	259.438	25	-30	22.727	30	30	0.093
1233	RHS	532700.254	532715.254	532727.222	532739.118	532754.118	17.936	50	125	23.864	15	15	0.089
1234	RHS	532808.807	532828.807	532847.979	532865.055	532885.055	71.627	35	45	36.248	20	20	0.100
1235	LHS	532897.109	532912.109	532914.559	532917.009	532932.009	350.988	50	-125	4.900	15	15	0.089
1236	LHS	532956.955	532971.955	532976.248	532980.536	532995.536	346.542	50	-100	8.581	15	15	0.100
1237	LHS	533024.964	533039.964	533041.106	533042.247	533057.247	354.413	65	-175	2.283	15	15	0.100
1238	RHS	533068.556	533083.556	533089.205	533094.825	533109.825	23.204	40	65	11.269	15	15	0.100
1239	RHS	533142.555	533157.555	533161.191	533164.823	533179.823	12.836	50	100	7.268	15	15	0.100
1240	LHS	533186.083	533216.083	533223.597	533230.809	533260.809	274.698	25	-30	14.726	30	30	0.093
1241	RHS	533313.241	533328.241	533367.429	533400.464	533415.464	66.633	40	75	72.223	15	15	0.095
1242	LHS	533543.930	533573.930	533577.363	533580.767	533610.767	289.759	25	-30	6.837	30	30	0.093
1243	RHS	533616.155	533636.155	533638.177	533640.198	533660.198	27.569	35	50	4.043	20	20	0.100
1244	RHS	533693.031	533713.031	533725.620	533737.782	533757.782	46.640	35	55	24.751	20	20	0.099
1245	RHS	533786.918	533806.918	533820.876	533834.256	533854.256	49.444	35	55	27.338	20	20	0.099
1246	LHS	533865.644	533880.644	533914.318	533947.179	533962.179	333.352	65	-175	66.535	15	15	0.100
1247	RHS	533997.344	534012.344	534017.008	534021.667	534036.667	11.287	50	125	9.323	15	15	0.089
1248	LHS	534123.437	534138.437	534139.050	534139.663	534154.663	344.555	40	-60	1.226	15	15	0.100
1249	RHS	534164.116	534179.116	534182.992	534186.858	534201.858	20.166	40	65	7.742	15	15	0.100
1250	LHS	534205.632	534220.632	534224.764	534228.890	534243.890	344.374	40	-85	8.258	15	15	0.084
1251	RHS	534265.116	534280.116	534288.059	534295.944	534310.944	23.561	40	75	15.828	15	15	0.095
1252	LHS	534325.892	534340.892	534345.056	534349.211	534364.211	342.203	40	-75	8.319	15	15	0.095
1253	LHS	534409.147	534424.147	534431.779	534439.399	534454.399	348.546	50	-150	15.252	15	15	0.074
1254	RHS	534457.049	534472.049	534478.266	534484.467	534499.467	15.797	50	100	12.418	15	15	0.100
1255	LHS	534514.681	534529.681	534532.828	534535.972	534550.972	347.810	50	-100	6.291	15	15	0.100
1256	RHS	534589.369	534604.369	534627.574	534650.414	534665.414	23.325	50	150	46.045	15	15	0.074
1257	RHS	534693.665	534708.665	534714.068	534719.469	534734.469	6.038	80	250	10.804	15	15	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1258	LHS	534751.194	534766.194	534768.117	534770.039	534785.039	343.444	40	-65	3.845	15	15	0.100
1259	RHS	534879.486	534909.486	534920.565	534930.712	534960.712	97.852	25	30	21.226	30	30	0.093
1260	LHS	534996.298	535011.298	535013.743	535016.186	535031.186	348.652	50	-100	4.888	15	15	0.100
1261	RHS	535032.657	535047.657	535058.339	535068.799	535083.799	34.633	40	60	21.142	15	15	0.100
1262	LHS	535090.472	535120.472	535157.352	535173.747	535203.747	201.026	25	-30	53.275	30	30	0.093
1263	LHS	535236.827	535251.827	535254.886	535257.943	535272.943	346.623	50	-90	6.116	15	15	0.100
1264	RHS	535275.348	535290.348	535291.491	535292.635	535307.635	6.630	50	150	2.287	15	15	0.074
1265	RHS	535310.837	535340.837	535346.732	535352.479	535382.479	79.651	25	30	11.642	30	30	0.093
1266	RHS	535420.807	535435.807	535440.821	535445.812	535460.812	23.985	40	60	10.005	15	15	0.100
1267	LHS	535463.776	535483.776	535492.823	535501.632	535521.632	311.949	35	-45	17.856	20	20	0.100
1268	RHS	535553.202	535583.202	535606.855	535623.261	535653.261	133.823	25	30	40.059	30	30	0.093
1269	LHS	535705.848	535735.848	535745.219	535754.014	535784.014	268.102	25	-30	18.166	30	30	0.093
1270	RHS	535786.945	535801.945	535859.764	535893.972	535908.972	102.235	40	60	92.027	15	15	0.100
1271	LHS	535918.813	535948.813	535961.912	535973.514	536003.514	255.652	25	-30	24.701	30	30	0.093
1272	RHS	536065.131	536080.131	536093.343	536106.516	536121.516	11.908	65	200	26.385	15	15	0.094
1273	LHS	536161.082	536176.082	536182.752	536189.418	536204.418	353.558	80	-250	13.336	15	15	0.100
1274	RHS	536235.137	536250.137	536261.681	536273.045	536288.045	29.048	40	75	22.908	15	15	0.095
1275	RHS	536303.070	536318.070	536320.248	536322.425	536337.425	14.817	40	75	4.355	15	15	0.095
1276	RHS	536378.139	536398.139	536399.227	536400.315	536420.315	23.115	35	55	2.176	20	20	0.099
1277	LHS	536422.604	536452.604	536467.467	536480.203	536510.203	250.095	25	-30	27.599	30	30	0.093
1278	LHS	536550.680	536565.680	536572.739	536579.788	536594.788	349.018	50	-150	14.108	15	15	0.074
1279	LHS	536612.968	536632.968	536639.184	536645.322	536665.322	318.848	35	-45	12.354	20	20	0.100
1280	RHS	536685.511	536700.511	536704.601	536708.690	536723.690	5.421	80	250	8.179	15	15	0.100
1281	LHS	536738.403	536753.403	536757.820	536762.220	536777.220	337.313	40	-60	8.817	15	15	0.100
1282	RHS	536783.274	536798.274	536801.665	536805.049	536820.049	20.895	40	60	6.775	15	15	0.100
1283	RHS	536821.023	536836.023	536842.666	536849.296	536864.296	13.043	50	125	13.273	15	15	0.089
1284	LHS	536868.218	536898.218	536905.458	536912.427	536942.427	275.581	25	-30	14.209	30	30	0.093
1285	RHS	536945.524	536965.524	536970.166	536974.774	536994.774	37.321	35	45	9.250	20	20	0.100
1286	LHS	536999.367	537014.367	537021.626	537028.814	537043.814	332.001	40	-60	14.447	15	15	0.100
1287	RHS	537047.573	537077.573	537083.257	537088.807	537118.807	78.761	25	30	11.234	30	30	0.093
1288	LHS	537129.173	537144.173	537157.224	537170.016	537185.016	328.932	40	-75	25.843	15	15	0.095
1289	LHS	537190.967	537205.967	537227.583	537247.462	537262.462	306.058	40	-60	41.495	15	15	0.100
1290	RHS	537265.888	537295.888	537305.534	537314.554	537344.554	93.064	25	30	18.666	30	30	0.093
1291	RHS	537373.164	537398.164	537410.242	537421.623	537446.623	69.527	30	40	23.459	25	25	0.100
1292	LHS	537468.249	537488.249	537524.296	537550.714	537570.714	265.519	35	-50	62.465	20	20	0.100
1293	RHS	537588.029	537603.029	537613.581	537624.098	537639.098	13.873	50	150	21.069	15	15	0.074
1294	LHS	537642.177	537657.177	537665.176	537673.115	537688.115	336.494	40	-75	15.938	15	15	0.095



Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1295	RHS	537691.985	537706.985	537711.876	537716.753	537731.753	18.964	40	75	9.768	15	15	0.095
1296	RHS	537742.736	537757.736	537758.760	537759.785	537774.785	10.885	50	90	2.049	15	15	0.100
1297	RHS	537778.249	537798.249	537814.076	537828.906	537848.906	58.184	35	50	30.657	20	20	0.100
1298	LHS	537851.597	537866.597	537874.549	537882.486	537897.486	348.213	50	-150	15.889	15	15	0.074
1299	RHS	537930.844	537945.844	537957.496	537969.043	537984.043	21.919	50	100	23.199	15	15	0.100
1300	LHS	537985.317	538005.317	538044.023	538071.193	538091.193	261.687	35	-50	65.876	20	20	0.100
1301	LHS	538094.210	538109.210	538113.460	538117.700	538132.700	342.098	40	-75	8.490	15	15	0.095
1302	LHS	538171.144	538186.144	538187.786	538189.428	538204.428	353.161	50	-150	3.284	15	15	0.074
1303	RHS	538207.548	538227.548	538227.885	538228.222	538248.222	23.761	35	50	0.674	20	20	0.100
1304	RHS	538289.146	538319.146	538326.301	538333.193	538363.193	84.186	25	30	14.047	30	30	0.093
1305	RHS	538363.670	538378.670	538386.582	538394.402	538409.402	29.470	40	60	15.732	15	15	0.100
1306	LHS	538410.994	538425.994	538427.163	538428.332	538443.332	343.535	40	-60	2.338	15	15	0.100
1307	RHS	538482.500	538502.500	538507.228	538511.921	538531.921	37.551	35	45	9.421	20	20	0.100
1308	LHS	538532.537	538557.537	538588.938	538606.029	538631.029	219.698	25	-30	48.492	25	25	0.093
1309	RHS	538648.899	538678.899	538699.595	538715.133	538745.133	126.634	25	30	36.234	30	30	0.093
1310	LHS	538749.135	538779.135	538791.443	538802.495	538832.495	258.153	25	-30	23.360	30	30	0.093
1311	RHS	538833.679	538853.679	538866.874	538879.481	538899.481	52.504	35	50	25.802	20	20	0.100
1312	RHS	538900.437	538915.437	538922.080	538928.670	538943.670	27.055	40	60	13.233	15	15	0.100
1313	RHS	538945.686	538960.686	538977.234	538993.259	539008.259	36.434	40	75	32.573	15	15	0.095
1314	LHS	539025.415	539045.415	539068.209	539079.439	539099.439	205.241	20	-20	34.024	20	20	0.089
1315	RHS	539160.491	539180.491	539183.689	539186.881	539206.881	27.571	35	55	6.390	20	20	0.099
1316	RHS	539289.461	539309.461	539321.203	539332.596	539352.596	44.955	35	55	23.135	20	20	0.099
1317	LHS	539362.876	539382.876	539388.857	539394.767	539414.767	319.503	35	-45	11.891	20	20	0.100
1318	RHS	539427.288	539442.288	539450.395	539458.418	539473.418	27.498	40	65	16.130	15	15	0.100
1319	RHS	539507.204	539527.204	539535.672	539543.945	539563.945	46.900	35	45	16.741	20	20	0.100
1320	LHS	539567.208	539582.208	539585.726	539589.237	539604.237	340.719	40	-65	7.029	15	15	0.100
1321	LHS	539648.734	539663.734	539672.238	539680.646	539695.646	331.902	40	-65	16.912	15	15	0.100
1322	RHS	539699.295	539714.295	539726.272	539738.049	539753.049	29.661	40	75	23.754	15	15	0.095
1323	LHS	539763.175	539778.175	539783.421	539788.641	539803.641	335.821	40	-60	10.466	15	15	0.100
1324	RHS		539836.303	539852.618	539868.910		5.379	80	350	32.607	0	0	0.081
1325	LHS	539889.402	539904.402	539928.641	539951.290	539966.290	312.766	40	-75	46.888	15	15	0.095
1326	RHS	539985.618	540000.618	540023.575	540044.754	540059.754	52.215	40	65	44.136	15	15	0.100
1327	LHS	540062.978	540092.978	540095.956	540098.915	540128.915	291.501	25	-30	5.937	30	30	0.093
1328	RHS	540135.190	540165.190	540167.416	540169.634	540199.634	65.787	25	30	4.444	30	30	0.093
1329	LHS	540219.253	540234.253	540248.338	540262.238	540277.238	335.414	50	-100	27.985	15	15	0.100
1330	RHS	540288.069	540308.069	540324.069	540339.040	540359.040	58.480	35	50	30.971	20	20	0.100
1331	LHS	540364.107	540394.107	540395.880	540397.650	540427.650	295.982	25	-30	3.543	30	30	0.093

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1332	RHS	540428.800	540458.800	540463.743	540468.598	540498.598	76.093	25	30	9.798	30	30	0.093
1333	LHS	540511.669	540526.669	540567.117	540597.847	540612.847	277.760	40	-60	71.178	15	15	0.100
1334	RHS	540618.772	540638.772	540645.912	540652.934	540672.934	43.618	35	45	14.162	20	20	0.100
1335	LHS	540679.678	540699.678	540708.023	540716.180	540736.180	313.591	35	-45	16.502	20	20	0.100
1336	RHS	540745.835	540765.835	540772.587	540779.239	540799.239	42.664	35	45	13.404	20	20	0.100
1337	RHS	540800.832	540815.832	540835.452	540854.698	540869.698	26.871	50	115	38.866	15	15	0.097
1338	LHS	540874.391	540899.391	540908.882	540918.028	540943.028	297.605	30	-40	18.637	25	25	0.100
1339	RHS	540955.532	540970.532	540973.554	540976.572	540991.572	16.131	40	75	6.040	15	15	0.095
1340	LHS	540992.282	541012.282	541015.039	541017.790	541037.790	327.569	35	-45	5.508	20	20	0.100
1341	RHS	541046.192	541061.192	541061.922	541062.651	541077.651	13.522	40	70	1.459	15	15	0.100
1342	RHS	541098.086	541128.086	541131.909	541135.690	541165.690	71.837	25	30	7.604	30	30	0.093
1343	LHS	541186.922	541206.922	541219.147	541230.901	541250.901	309.639	35	-50	23.979	20	20	0.100
1344	RHS	541327.788	541342.788	541350.568	541358.284	541373.284	25.064	40	70	15.496	15	15	0.100
1345	RHS	541375.212	541405.212	541408.849	541412.451	541442.451	71.173	25	30	7.239	30	30	0.093
1346	LHS	541444.264	541464.264	541466.952	541469.633	541489.633	327.701	35	-45	5.369	20	20	0.100
1347	RHS	541493.515	541513.515	541517.103	541520.677	541540.677	34.588	35	45	7.162	20	20	0.100
1348	LHS	541542.336	541572.336	541574.789	541577.234	541607.234	302.905	30	-35	4.898	30	30	0.100
1349	LHS	541609.228	541624.228	541634.422	541644.567	541659.567	343.216	50	-120	20.339	15	15	0.093
1350	RHS	541688.928	541703.928	541705.592	541707.256	541722.256	17.516	40	60	3.328	15	15	0.100
1351	LHS	541722.852	541737.852	541745.237	541752.548	541767.548	331.721	40	-60	14.696	15	15	0.100
1352	RHS	541769.213	541789.213	541813.622	541835.159	541855.159	68.831	35	55	45.946	20	20	0.099
1353	LHS	541913.197	541928.197	541937.427	541946.534	541961.534	330.746	40	-65	18.337	15	15	0.100
1354	LHS	541993.999	542008.999	542014.136	542019.255	542034.255	339.423	40	-70	10.256	15	15	0.100
1355	LHS	542066.484	542081.484	542088.738	542095.922	542110.922	331.944	40	-60	14.438	15	15	0.100
1356	RHS	542138.963	542163.963	542172.443	542180.675	542205.675	59.875	30	40	16.712	25	25	0.100
1357	LHS	542217.263	542232.263	542235.986	542239.706	542254.706	349.827	50	-125	7.443	15	15	0.089
1358	RHS	542288.581	542303.581	542332.806	542357.972	542372.972	66.383	40	60	54.391	15	15	0.100
1359	LHS	542383.512	542398.512	542402.205	542405.890	542420.890	341.684	40	-70	7.378	15	15	0.100
1360	RHS	542499.024	542519.024	542536.380	542552.435	542572.435	61.239	35	50	33.411	20	20	0.100
1361	LHS	542592.934	542607.934	542615.402	542622.813	542637.813	335.639	40	-70	14.879	15	15	0.100
1362	LHS	542678.179	542698.179	542702.184	542706.174	542726.174	330.860	35	-55	7.995	20	20	0.099
1363	LHS	542757.103	542787.103	542801.375	542813.745	542843.745	251.872	25	-30	26.642	30	30	0.093
1364	RHS	542853.926	542883.926	542891.664	542899.072	542929.072	86.263	25	30	15.146	30	30	0.093
1365	LHS	542954.486	542974.486	542988.888	543002.362	543022.362	299.118	35	-45	27.876	20	20	0.100
1366	LHS	543082.665	543097.665	543110.551	543123.051	543138.051	321.449	40	-60	25.386	15	15	0.100
1367	RHS	543144.868	543164.868	543167.698	543170.520	543190.520	32.766	35	45	5.652	20	20	0.100
1368	RHS	543231.435	543261.435	543266.788	543272.029	543302.029	77.633	25	30	10.594	30	30	0.093

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1369	RHS	543334.946	543364.946	543374.451	543383.356	543413.356	92.513	25	30	18.410	30	30	0.093
1370	LHS	543415.367	543445.367	543453.641	543461.514	543491.514	272.007	25	-30	16.147	30	30	0.093
1371	LHS	543554.329	543584.329	543593.418	543601.980	543631.980	269.075	25	-30	17.651	30	30	0.093
1372	RHS	543638.887	543653.887	543660.608	543667.317	543682.317	13.163	50	125	13.430	15	15	0.089
1373	RHS	543756.658	543776.658	543780.643	543784.614	543804.614	29.172	35	55	7.956	20	20	0.099
1374	LHS	543808.072	543828.072	543833.630	543839.132	543859.132	320.481	35	-45	11.060	20	20	0.100
1375	RHS	543863.359	543883.359	543894.874	543905.906	543925.906	54.219	35	45	22.547	20	20	0.100
1376	LHS	543970.705	544000.705	544004.564	544008.393	544038.393	298.340	30	-35	7.688	30	30	0.100
1377	RHS	544042.148	544072.148	544077.673	544083.108	544113.108	67.067	30	35	10.960	30	30	0.100
1378	RHS	544161.138	544176.138	544192.709	544208.756	544223.756	36.480	40	75	32.618	15	15	0.095
1379	LHS	544259.370	544279.370	544337.135	544361.178	544381.178	230.437	35	-45	81.808	20	20	0.100
1380	RHS	544398.408	544413.408	544417.539	544421.667	544436.667	10.764	50	125	8.259	15	15	0.089
1381	LHS	544442.422	544457.422	544462.789	544468.131	544483.131	337.386	40	-65	10.709	15	15	0.100
1382	RHS	544513.187	544528.187	544539.816	544551.160	544566.160	36.363	40	60	22.973	15	15	0.100
1383	LHS	544578.915	544593.915	544594.061	544594.207	544609.207	345.520	40	-60	0.292	15	15	0.100
1384	RHS	544632.275	544662.275	544700.860	544716.871	544746.871	161.709	25	30	54.596	30	30	0.093
1385	LHS	544748.265	544773.265	544777.056	544780.825	544805.825	313.468	30	-40	7.560	25	25	0.100
1386	RHS	544807.203	544827.203	544828.069	544828.935	544848.935	27.701	35	45	1.732	20	20	0.100
1387	LHS	544853.010	544873.010	544880.216	544887.300	544907.300	316.404	35	-45	14.290	20	20	0.100
1388	RHS	544926.661	544941.661	544942.336	544943.012	544958.012	12.563	40	75	1.351	15	15	0.095
1389	RHS	544974.376	545004.376	545012.337	545019.940	545049.940	87.058	25	30	15.564	30	30	0.093
1390	LHS	545050.484	545080.484	545089.849	545098.640	545128.640	268.134	25	-30	18.156	30	30	0.093
1391	RHS	545136.933	545151.933	545154.359	545156.784	545171.784	11.438	50	100	4.851	15	15	0.100
1392	RHS	545204.570	545234.570	545240.538	545246.353	545276.353	79.943	25	30	11.783	30	30	0.093
1393	RHS	545277.735	545297.735	545303.603	545309.405	545329.405	40.389	35	45	11.670	20	20	0.100
1394	LHS	545330.338	545360.338	545373.466	545385.089	545415.089	255.435	25	-30	24.751	30	30	0.093
1395	RHS	545426.868	545456.868	545459.139	545461.401	545491.401	65.966	25	30	4.533	30	30	0.093
1396	LHS	545494.711	545509.711	545510.123	545510.536	545525.536	351.081	50	-100	0.825	15	15	0.100
1397	RHS	545531.561	545546.561	545546.764	545546.967	545561.967	13.707	40	65	0.406	15	15	0.100
1398	LHS	545572.621	545587.621	545591.429	545595.228	545610.228	340.133	40	-65	7.607	15	15	0.100
1399	RHS	545620.522	545635.522	545636.162	545636.802	545651.802	10.490	50	90	1.280	15	15	0.100
1400	LHS	545692.664	545707.664	545709.233	545710.802	545725.802	351.711	50	-125	3.138	15	15	0.089
1401	RHS	545744.034	545759.034	545760.112	545761.190	545776.190	6.584	50	150	2.156	15	15	0.074
1402	LHS	545817.498	545847.498	545878.657	545895.759	545925.759	210.542	25	-30	48.261	30	30	0.093
1403	RHS	545939.811	545954.811	545956.378	545957.944	545972.944	13.870	40	75	3.133	15	15	0.095
1404	LHS	545986.143	546001.143	546002.764	546004.384	546019.384	349.689	50	-100	3.241	15	15	0.100
1405	RHS	546041.492	546056.492	546066.046	546075.563	546090.563	15.618	50	125	19.071	15	15	0.089



Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1406	RHS	546120.414	546135.414	546144.133	546152.809	546167.809	18.659	50	100	17.395	15	15	0.100
1407	LHS	546218.010	546233.010	546257.467	546280.981	546295.981	323.952	50	-100	47.971	15	15	0.100
1408	LHS	546445.540	546460.540	546463.638	546466.733	546481.733	343.902	40	-75	6.193	15	15	0.095
1409	RHS	546493.157	546508.157	546512.923	546517.670	546532.670	23.479	40	60	9.513	15	15	0.100
1410	RHS	546652.173	546667.173	546677.006	546686.775	546701.775	19.905	50	100	19.602	15	15	0.100
1411	LHS	546842.662	546857.662	546872.875	546887.459	546902.459	317.269	40	-60	29.797	15	15	0.100
1412	LHS	546988.286	547003.286	547014.810	547026.264	547041.264	341.868	50	-120	22.978	15	15	0.093
1413	RHS	547078.341	547093.341	547107.509	547121.489	547136.489	24.774	50	100	28.148	15	15	0.100
1414	RHS	547153.566	547168.566	547170.205	547171.845	547186.845	4.243	80	250	3.279	15	15	0.100
1415	LHS	547248.291	547263.291	547271.198	547279.055	547294.055	337.969	40	-80	15.764	15	15	0.089
1416	RHS	547306.216	547321.216	547325.024	547328.826	547343.826	16.283	40	80	7.610	15	15	0.089
1417	LHS	547369.784	547384.784	547387.577	547390.368	547405.368	347.004	50	-90	5.584	15	15	0.100
1418	RHS	547411.171	547426.171	547430.273	547434.368	547449.368	14.777	50	90	8.197	15	15	0.100
1419	LHS	547457.272	547472.272	547480.348	547488.409	547503.409	348.168	50	-150	16.137	15	15	0.074
1420	RHS	547512.933	547527.933	547557.902	547586.168	547601.168	42.059	50	100	58.235	15	15	0.100
1421	RHS	547669.301	547684.301	547707.767	547730.212	547745.212	38.873	50	90	45.911	15	15	0.100
1422	LHS	547766.029	547781.029	547801.750	547820.933	547835.933	307.603	40	-60	39.904	15	15	0.100
1423	RHS	547854.215	547869.215	547875.797	547882.372	547897.372	10.804	50	150	13.157	15	15	0.074
1424	RHS	547946.887	547966.887	547973.997	547980.990	548000.990	43.452	35	45	14.103	20	20	0.100
1425	RHS	548038.218	548068.218	548072.108	548075.954	548105.954	72.091	25	30	7.736	30	30	0.093
1426	LHS	548108.172	548138.172	548144.984	548151.569	548181.569	277.266	25	-30	13.397	30	30	0.093
1427	RHS	548186.551	548216.551	548218.548	548220.541	548250.541	55.730	30	35	3.990	30	30	0.100
1428	LHS	548265.010	548280.010	548290.868	548301.671	548316.671	343.306	50	-125	21.661	15	15	0.089
1429	RHS	548323.325	548353.325	548358.890	548364.329	548394.329	78.430	25	30	11.004	30	30	0.093
1430	LHS	548401.504	548416.504	548418.726	548420.948	548435.948	348.944	50	-100	4.444	15	15	0.100
1431	RHS	548463.219	548478.219	548483.325	548488.406	548503.406	24.072	40	60	10.187	15	15	0.100
1432	LHS	548505.941	548520.941	548522.992	548525.041	548540.041	343.287	40	-65	4.100	15	15	0.100
1433	LHS	548549.977	548564.977	548570.248	548575.507	548590.507	343.873	50	-90	10.530	15	15	0.100
1434	LHS	548594.701	548609.701	548623.379	548636.716	548651.716	325.703	40	-70	27.015	15	15	0.100
1435	LHS	548651.890	548666.890	548669.012	548671.133	548686.133	341.689	40	-60	4.243	15	15	0.100
1436	LHS	548716.566	548731.566	548733.948	548736.329	548751.329	352.462	50	-150	4.763	15	15	0.074
1437	LHS	548766.118	548786.118	548794.772	548803.257	548823.257	317.516	35	-50	17.139	20	20	0.100
1438	RHS	548877.243	548907.243	548930.931	548947.345	548977.345	133.911	25	30	40.102	30	30	0.093
1439	LHS	548980.562	548995.562	549006.117	549016.457	549031.457	325.774	40	-60	20.895	15	15	0.100
1440	RHS	549034.592	549049.592	549057.633	549065.613	549080.613	23.835	40	75	16.021	15	15	0.095
1441	RHS	549102.424	549117.424	549118.611	549119.798	549134.798	13.324	40	75	2.374	15	15	0.095
1442	LHS	549139.762	549169.762	549180.823	549190.957	549220.957	262.296	25	-30	21.195	30	30	0.093

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1443	LHS	549299.868	549314.868	549319.973	549325.054	549340.054	336.099	40	-60	10.186	15	15	0.100
1444	RHS	549343.827	549373.827	549375.679	549377.527	549407.527	55.180	30	35	3.700	30	30	0.100
1445	LHS	549427.472	549457.472	549461.324	549465.146	549495.146	298.424	30	-35	7.674	30	30	0.100
1446	RHS	549536.042	549566.042	549570.495	549574.900	549604.900	63.719	30	35	8.858	30	30	0.100
1447	RHS	549621.930	549636.930	549640.399	549643.866	549658.866	12.579	50	100	6.936	15	15	0.100
1448	LHS	549748.208	549768.208	549774.605	549780.918	549800.918	318.368	35	-45	12.710	20	20	0.100
1449	LHS	549836.927	549866.927	549875.613	549883.837	549913.837	270.477	25	-30	16.910	30	30	0.093
1450	RHS	549917.147	549932.147	549934.282	549936.415	549951.415	18.544	40	60	4.268	15	15	0.100
1451	LHS	549951.753	549981.753	549988.405	549994.845	550024.845	277.849	25	-30	13.092	30	30	0.093
1452	RHS	550048.069	550068.069	550114.583	550140.243	550160.243	117.451	35	45	72.174	20	20	0.100
1453	LHS	550202.246	550232.246	550250.934	550265.672	550295.672	239.002	25	-30	33.426	30	30	0.093
1454	RHS	550331.818	550351.818	550358.286	550364.666	550384.666	41.881	35	45	12.848	20	20	0.100
1455	LHS	550389.662	550409.662	550414.810	550419.915	550439.915	321.604	35	-45	10.253	20	20	0.100
1456	RHS	550445.800	550475.800	550496.184	550511.609	550541.609	125.712	25	30	35.809	30	30	0.093
1457	LHS	550549.622	550564.622	550575.302	550585.840	550600.840	332.466	40	-75	21.218	15	15	0.095
1458	LHS	550605.148	550625.148	550656.956	550680.526	550700.526	264.107	35	-45	55.378	20	20	0.100
1459	RHS	550771.887	550786.887	550821.879	550852.368	550867.368	61.628	40	75	65.481	15	15	0.095
1460	LHS	550912.384	550942.384	550963.750	550979.516	551009.516	231.828	25	-30	37.132	30	30	0.093
1461	RHS	551010.791	551025.791	551033.717	551041.552	551056.552	29.439	40	60	15.761	15	15	0.100
1462	LHS	551058.333	551073.333	551074.548	551075.763	551090.763	344.661	40	-65	2.430	15	15	0.100
1463	RHS	551092.221	551122.221	551134.859	551146.144	551176.144	102.988	25	30	23.923	30	30	0.093
1464	LHS	551176.829	551196.829	551206.971	551216.781	551236.781	309.263	35	-45	19.952	20	20	0.100
1465	RHS	551237.374	551257.374	551261.999	551266.592	551286.592	37.208	35	45	9.218	20	20	0.100
1466	LHS	551286.808	551306.808	551311.680	551316.515	551336.515	322.263	35	-45	9.707	20	20	0.100
1467	LHS	551347.000	551362.000	551370.063	551378.029	551393.029	330.397	40	-60	16.029	15	15	0.100
1468	RHS	551405.973	551430.973	551447.833	551460.640	551485.640	125.332	25	25	29.667	25	25	0.100
1469	LHS	551492.948	551517.948	551523.517	551529.015	551554.015	308.386	30	-40	11.067	25	25	0.100
1470	RHS	551562.450	551582.450	551592.501	551602.227	551622.227	50.750	35	45	19.777	20	20	0.100
1471	LHS	551628.136	551658.136	551664.364	551670.418	551700.418	279.381	25	-30	12.282	30	30	0.093
1472	RHS	551705.437	551735.437	551739.789	551744.080	551774.080	73.833	25	30	8.643	30	30	0.093
1473	LHS	551775.709	551790.709	551791.997	551793.284	551808.284	346.631	40	-75	2.575	15	15	0.095
1474	RHS	551815.786	551830.786	551837.685	551844.524	551859.524	27.530	40	60	13.738	15	15	0.100
1475	RHS	551891.199	551906.199	551923.108	551939.162	551954.162	45.812	40	60	32.963	15	15	0.100
1476	LHS	551976.113	552001.113	552030.654	552052.002	552077.002	251.419	30	-40	50.889	25	25	0.100
1477	RHS	552079.537	552094.537	552108.421	552121.824	552136.824	40.511	40	60	27.287	15	15	0.100
1478	LHS	552138.052	552163.052	552170.506	552177.540	552202.540	269.634	25	-25	14.488	25	25	0.100
1479	LHS	552261.566	552281.566	552288.662	552295.664	552315.664	321.014	35	-50	14.098	20	20	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
1480	RHS	552322.007	552337.007	552348.755	552360.395	552375.395	22.096	50	100	23.388	15	15	0.100
1481	LHS	552400.943	552420.943	552441.994	552453.383		238.426	20	-20	32.440	20	0	0.089
1482	LHS		552453.899	552464.892	552474.003	552494.003	273.848	20	-20	20.104	0	20	0.089
1483	RHS	552525.967	552540.967	552546.671	552552.362	552567.362	15.183	50	100	11.395	15	15	0.100
1484	RHS	552587.297	552607.297	552611.766	552616.210	552636.210	33.273	35	50	8.913	20	20	0.100
1485	RHS	552648.036	552678.036	552685.359	552692.401	552722.401	84.861	25	30	14.365	30	30	0.093
1486	RHS	552760.719	552780.719	552802.773	552822.260	552842.260	70.556	35	50	41.541	20	20	0.100
1487	LHS	552847.677	552862.677	552869.153	552875.592	552890.592	337.165	40	-70	12.915	15	15	0.100
1488	LHS	552931.696	552946.696	552959.653	552972.217	552987.217	321.349	40	-60	25.521	15	15	0.100
1489	RHS	552999.410	553014.410	553018.336	553022.259		8.892	50	100	7.849	15	0	0.100
1490	LHS		553025.888	553038.115	553050.129	553065.129	335.764	40	-75	24.241	0	15	0.095
1491	RHS	553075.269	553095.269	553098.586	553101.843	553121.843	76.260	20	20	6.574	20	20	0.089
1492	LHS	553126.181	553146.181	553149.338	553152.442	553172.442	284.791	20	-20	6.261	20	20	0.089
1493	LHS	553174.282	553189.282	553193.965	553198.629	553213.629	336.757	40	-60	9.347	15	15	0.100
1494	RHS	553291.251	553311.251	553329.442	553343.956	553363.956	100.751	25	30	32.705	20	20	0.093
1495	LHS	553367.914	553387.914	553394.770	553401.125	553421.125	264.928	20	-20	13.211	20	20	0.089
1496	RHS	553425.136	553440.136	553442.645	553445.150	553460.150	19.216	40	60	5.014	15	15	0.100
1497	LHS	553461.320	553476.320	553481.911	553487.470	553502.470	335.139	40	-60	11.150	15	15	0.100
1498	LHS	553510.534	553525.534	553542.670	553558.917	553573.917	313.924	40	-60	33.383	15	15	0.100
1499	RHS	553579.165	553599.165	553606.768	553614.230	553634.230	44.760	35	45	15.065	20	20	0.100

**LAWNGTLAI BYE PASS ROAD**

1	RHS		38.906	56.597	70.875		61.113	25	30	31.969	0	0	0.093
2	LHS	81.080	111.080	113.402	115.715	145.715	293.869	25	-30	4.635	30	30	0.093
3	RHS		152.116	168.920	183.448		51.363	30	35	31.332	0	0	0.100
4	RHS	188.767	218.767	228.672	237.901	267.901	93.883	25	30	19.134	30	30	0.093
5	RHS	277.009	297.009	310.153	322.585		45.409	35	45	25.576	20	0	0.100
6	LHS		325.169	339.162	352.302	372.302	312.754	35	-45	27.133	0	20	0.100
7	LHS	429.785	444.785	471.521	496.150	511.150	309.311	40	-75	51.365	15	15	0.095
8	RHS	531.171	546.171	566.222	585.356	600.356	41.491	40	75	39.185	15	15	0.095
9	LHS	630.383	645.383	655.534	665.640	680.640	343.897	50	-125	20.257	15	15	0.089
10	LHS	707.300	722.300	753.064	779.767	794.767	296.174	40	-65	57.467	15	15	0.100
11	LHS	853.425	868.425	882.855	897.262	912.262	351.726	80	-300	28.837	15	15	0.095
12	LHS	1008.760	1028.760	1048.158	1065.389	1085.389	288.020	35	-45	36.629	20	20	0.100
13	LHS	1109.856	1124.856	1155.067	1181.417	1196.417	296.963	40	-65	56.561	15	15	0.100
14	RHS	1228.718	1258.718	1275.125	1288.745	1318.745	114.719	25	30	30.027	30	30	0.093
15	RHS	1389.778	1404.778	1435.516	1465.059	1480.059	34.562	50	125	60.281	15	15	0.089
16	LHS	1512.140	1527.140	1556.876	1582.917	1597.917	297.725	40	-65	55.777	15	15	0.100

Curve No	Curve Sign	BS	BC	CP	EC	ES	Delta	Speed	Radius	Lc	Ts	Te	Super elevation
17	RHS	1612.398	1627.398	1647.110	1665.676	1680.676	47.088	40	65	38.278	15	15	0.100
18	RHS		1721.214	1748.930	1776.531		9.106	80	350	55.317	0	0	0.081
19	LHS	1800.580	1815.580	1833.748	1851.230	1866.230	321.364	40	-75	35.650	15	15	0.095
20	RHS	1875.811	1895.811	1901.609	1907.343	1927.343	40.278	35	45	11.532	20	20	0.100
21	RHS		1927.357	1934.756	1941.866		27.804	25	30	14.509	0	0	0.093

# VERTICAL CURVE DETAILS

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
1	431000.000	483462.991	2515445.012	583.306				INFINITY	0
2	431032.588	483435.922	2515427.174	583.974	25	2.05%	6.98%	506.937	19.726
3	431102.799	483458.354	2515375.238	588.875	35	6.98%	2.92%	-860.864	-11.616
4	431178.415	483530.328	2515354.386	591.079	30	2.92%	1.81%	-2717.398	-3.680
5	431248.335	483587.331	2515314.544	592.345	25	1.81%	2.36%	4566.679	2.190
6	431283.459	483621.800	2515309.067	593.173	25	2.36%	3.68%	1895.065	5.277
7	431336.342	483673.232	2515320.779	595.118	40	3.68%	2.47%	-3321.949	-3.010
8	431425.240	483760.512	2515309.221	597.317	35	2.47%	0.72%	-1999.433	-5.001
9	431473.037	483799.565	2515281.789	597.662	45	0.72%	2.97%	2006.780	4.983
10	431679.264	483948.518	2515153.504	603.777	25	2.97%	4.04%	2333.706	4.285
11	431766.226	483989.656	2515079.871	607.287	25	4.04%	3.35%	-3631.168	-2.754
12	431816.495	484023.368	2515042.705	608.970	30	3.35%	2.10%	-2398.270	-4.170
13	431890.638	484019.953	2514971.120	610.525	25	2.10%	4.12%	1233.146	8.109
14	431980.922	484072.322	2514919.806	614.249	55	4.12%	1.23%	-1900.050	-5.263
15	432043.838	484125.157	2514894.266	615.022	30	1.23%	3.50%	1324.423	7.550
16	432117.468	484176.352	2514843.995	617.595	25	3.50%	2.53%	-2596.447	-3.851
17	432392.443	484076.792	2514684.470	624.558	25	2.53%	6.80%	585.364	17.083
18	432445.690	484087.393	2514638.318	628.180	30	6.80%	4.01%	-1072.572	-9.323
19	432511.882	484136.517	2514594.555	630.832	75	4.01%	1.30%	-2769.946	-3.610
20	432630.211	484189.502	2514514.204	632.368	100	1.30%	5.16%	2590.977	3.860
21	432723.736	484119.522	2514455.144	637.191	45	5.16%	1.31%	-1170.779	-8.541
22	432819.816	484037.498	2514414.312	638.454	25	1.31%	3.25%	1291.900	7.741
23	432909.775	483985.949	2514351.716	641.377	45	3.25%	0.76%	-1804.443	-5.542
24	432982.318	483926.842	2514319.037	641.925	25	0.76%	3.27%	993.599	10.064
25	433089.577	483833.527	2514267.766	645.434	35	3.27%	0.84%	-1437.449	-6.957
26	433140.122	483783.393	2514265.059	645.857	30	0.84%	4.53%	813.259	12.296
27	433256.929	483703.241	2514215.004	651.143	35	4.53%	2.22%	-1519.107	-6.583
28	433411.148	483570.211	2514192.109	654.569	55	2.22%	4.77%	2158.031	4.634
29	433518.219	483475.671	2514233.087	659.676	55	4.77%	0.78%	-1377.231	-7.261
30	433684.441	483360.280	2514122.291	660.967	75	0.78%	-2.43%	-2339.146	-4.275
31	433901.926	483431.064	2513926.534	655.683	35	-2.43%	-1.97%	7666.730	1.304
32	434056.278	483488.187	2513805.365	652.638	35	-1.97%	2.16%	846.113	11.819
33	434320.286	483627.137	2513623.867	658.349	35	2.16%	4.72%	1370.438	7.297
34	434410.130	483633.720	2513537.015	662.587	35	4.72%	1.52%	-1095.369	-9.129
35	434471.636	483615.371	2513479.259	663.524	45	1.52%	5.54%	1119.551	8.932
36	434566.370	483642.494	2513391.185	668.773	45	5.54%	4.37%	-3847.931	-2.599
37	434659.053	483632.313	2513299.063	672.826	40	4.37%	3.36%	-3946.192	-2.534
38	434734.200	483579.264	2513256.715	675.349	35	3.36%	1.53%	-1912.518	-5.229
39	434828.160	483509.485	2513210.012	676.785	25	1.53%	3.72%	1142.911	8.750
40	434905.173	483489.788	2513135.561	679.647	45	3.72%	2.36%	-3310.055	-3.021
41	434985.141	483426.597	2513100.754	681.531	25	2.36%	3.45%	2296.886	4.354
42	435043.489	483373.523	2513079.141	683.541	25	3.45%	0.40%	-820.351	-12.190
43	435081.176	483337.049	2513076.388	683.691	25	0.40%	1.88%	1685.184	5.934
44	435166.394	483261.644	2513070.503	685.294	25	1.88%	6.33%	561.622	17.806
45	435209.481	483274.459	2513032.902	688.022	35	6.33%	3.66%	-1308.008	-7.645
46	435274.283	483332.000	2513003.166	690.391	50	3.66%	3.97%	15722.332	0.636
47	435338.636	483354.403	2512950.734	692.949	30	3.97%	3.34%	-4699.783	-2.128
48	435418.598	483310.848	2512884.864	695.617	30	3.34%	3.14%	-14949.203	-0.669
49	435476.478	483343.718	2512840.276	697.431	25	3.14%	3.25%	22470.561	0.445
50	435565.421	483391.565	2512766.301	700.319	25	3.25%	3.85%	4144.922	2.413
51	435644.784	483431.777	2512700.875	703.374	65	3.85%	1.69%	-3005.164	-3.328
52	435714.790	483394.614	2512644.802	704.555	45	1.69%	2.93%	3618.222	2.764
53	435890.637	483294.236	2512506.855	709.708	35	2.93%	1.73%	-2908.973	-3.438
54	435984.115	483211.083	2512470.867	711.323	55	1.73%	2.87%	4807.544	2.080

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
55	436062.605	483246.451	2512409.841	713.577	30	2.87%	5.42%	1176.034	8.503
56	436132.961	483304.494	2512370.079	717.392	35	5.42%	1.95%	-1008.238	-9.918
57	436181.674	483333.520	2512331.997	718.342	35	1.95%	-0.95%	-1207.713	-8.280
58	436214.317	483337.089	2512299.808	718.033	25	-0.95%	1.16%	1184.814	8.440
59	436255.347	483322.031	2512262.190	718.510	45	1.16%	0.38%	-5758.250	-1.737
60	436322.044	483268.694	2512222.809	718.764	35	0.38%	2.26%	1863.505	5.366
61	436402.202	483279.931	2512159.732	720.576	45	2.26%	4.25%	2256.571	4.432
62	436474.405	483351.928	2512159.555	723.647	30	4.25%	3.12%	-2634.643	-3.796
63	436550.031	483421.318	2512131.802	726.003	65	3.12%	3.61%	13116.622	0.762
64	436608.881	483476.417	2512112.227	728.128	25.078	3.61%	1.30%	-1085.290	-9.214
65	436690.623	483495.971	2512037.797	729.191	20	1.30%	3.53%	895.273	11.170
66	436731.037	483511.054	2512001.971	730.619	25	3.53%	1.55%	-1256.644	-7.958
67	436778.355	483554.556	2511983.884	731.350	35	1.55%	0.97%	-6102.526	-1.639
68	436830.293	483599.220	2511957.466	731.854	30	0.97%	2.94%	1527.743	6.546
69	437070.430	483732.250	2511785.096	738.901	25	2.94%	4.82%	1324.155	7.552
70	437145.123	483781.823	2511734.508	742.504	25	4.82%	2.19%	-949.835	-10.528
71	437197.683	483804.741	2511687.774	743.655	45	2.19%	3.18%	4558.162	2.194
72	437265.952	483856.467	2511643.845	745.824	35	3.18%	-0.30%	-1007.880	-9.922
73	437324.287	483880.716	2511596.435	745.653	35	-0.30%	3.57%	905.854	11.039
74	437436.053	483779.793	2511556.384	749.641	45	3.57%	0.94%	-1712.808	-5.838
75	437498.663	483746.450	2511506.192	750.231	35	0.94%	3.48%	1380.381	7.244
76	437579.434	483758.975	2511429.876	753.040	40	3.48%	1.96%	-2635.010	-3.795
77	437658.559	483780.394	2511356.699	754.590	25	1.96%	3.47%	1654.470	6.044
78	437719.538	483726.429	2511346.606	756.706	55	3.47%	2.61%	-6405.914	-1.561
79	438007.189	483481.521	2511453.564	764.219	35	2.61%	4.18%	2226.217	4.492
80	438148.543	483401.352	2511535.667	770.133	35	4.18%	1.77%	-1446.766	-6.912
81	438296.115	483289.542	2511450.543	772.737	35	1.77%	3.83%	1698.532	5.887
82	438416.461	483328.306	2511358.411	777.341	45	3.83%	3.19%	-7090.049	-1.410
83	438623.520	483485.655	2511228.920	783.947	40	3.19%	4.00%	4926.321	2.030
84	438724.176	483580.926	2511232.501	787.976	25	4.00%	1.61%	-1045.763	-9.562
85	438885.074	483645.484	2511109.184	790.570	35	1.61%	3.81%	1589.251	6.292
86	438936.790	483666.048	2511064.867	792.542	35	3.81%	1.54%	-1539.737	-6.495
87	439010.946	483709.889	2511007.360	793.685	25	1.54%	4.58%	822.624	12.156
88	439093.047	483761.635	2510944.599	797.445	35	4.58%	3.28%	-2701.150	-3.702
89	439221.366	483817.639	2510835.499	801.660	45	3.28%	3.38%	45185.768	0.221
90	439302.984	483745.167	2510805.249	804.422	35	3.38%	2.16%	-2858.855	-3.498
91	439414.488	483656.618	2510779.552	806.830	35	2.16%	4.55%	1462.350	6.838
92	439552.803	483556.208	2510692.115	813.128	40	4.55%	1.75%	-1426.965	-7.008
93	439644.572	483505.880	2510747.904	814.734	35	1.75%	4.84%	1131.652	8.837
94	439768.672	483427.697	2510729.779	820.744	35	4.84%	2.62%	-1572.813	-6.358
95	439928.184	483292.402	2510671.622	824.919	45	2.62%	5.82%	1403.390	7.126
96	440038.026	483272.513	2510578.173	831.317	35	5.82%	2.01%	-917.626	-10.898
97	440106.823	483291.304	2510512.529	832.699	35	2.01%	0.73%	-2722.920	-3.673
98	440171.683	483287.504	2510447.830	833.169	45	0.73%	4.67%	1141.636	8.759
99	440346.097	483394.201	2510436.287	841.308	35	4.67%	2.19%	-1413.388	-7.075
100	440490.953	483479.283	2510549.338	844.480	20	2.19%	3.47%	1557.296	6.421
101	440598.974	483567.148	2510516.487	848.233	30	3.47%	3.03%	-6801.451	-1.470
102	440722.409	483669.786	2510450.304	851.977	80	3.03%	1.74%	-6198.075	-1.613
103	440817.821	483746.056	2510394.002	853.639	20	1.74%	3.03%	1552.290	6.442
104	440984.473	483824.650	2510283.184	858.690	35	3.03%	4.49%	2406.777	4.155
105	441037.202	483861.220	2510249.407	861.055	25	4.49%	2.54%	-1285.443	-7.779
106	441121.144	483852.705	2510167.070	863.187	50	2.54%	-1.20%	-1335.680	-7.487
107	441182.758	483798.643	2510142.182	862.446	25	-1.20%	0.29%	1675.230	5.969
108	441246.043	483741.038	2510119.723	862.629	50	0.29%	4.52%	1181.776	8.462
109	441320.884	483741.335	2510050.260	866.012	40	4.52%	1.87%	-1511.264	-6.617
110	441401.446	483772.078	2509976.566	867.521	30	1.87%	3.61%	1724.691	5.798

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
111	441546.508	483842.232	2509884.594	872.761	35	3.61%	-0.75%	-801.842	-12.471
112	441607.799	483788.055	2509858.159	872.300	25	-0.75%	2.74%	715.804	13.970
113	441683.903	483784.622	2509784.763	874.386	25	2.74%	2.99%	10086.563	0.991
114	441736.536	483750.755	2509752.799	875.958	35	2.99%	0.64%	-1487.152	-6.724
115	441805.927	483682.552	2509765.350	876.399	35	0.64%	2.91%	1538.508	6.500
116	441909.045	483605.190	2509708.130	879.399	25	2.91%	1.94%	-2567.264	-3.895
117	441936.321	483594.958	2509683.161	879.927	25	1.94%	3.07%	2210.992	4.523
118	442016.478	483636.627	2509618.816	882.385	35	3.07%	1.73%	-2621.694	-3.814
119	442065.902	483663.744	2509577.741	883.241	35	1.73%	2.30%	6207.033	1.611
120	442133.179	483692.861	2509517.091	884.785	25	2.30%	3.64%	1863.436	5.366
121	442177.424	483707.410	2509475.747	886.394	25	3.64%	-0.29%	-636.317	-15.715
122	442343.003	483703.292	2509318.262	885.911	25	-0.29%	1.76%	1219.632	8.199
123	442396.312	483675.647	2509272.681	886.848	25	1.76%	-0.49%	-1114.873	-8.970
124	442449.055	483654.084	2509225.258	886.592	25	-0.49%	0.81%	1939.125	5.157
125	442517.945	483678.576	2509161.527	887.147	35	0.81%	2.74%	1811.754	5.520
126	442740.570	483833.685	2509011.786	893.239	45	2.74%	-0.03%	-1626.959	-6.146
127	442848.441	483867.912	2508914.665	893.207	25	-0.03%	1.76%	1395.299	7.167
128	443115.679	483764.316	2508695.218	897.917	45	1.76%	6.55%	940.782	10.629
129	443189.066	483802.101	2508632.576	902.721	25	6.55%	2.77%	-662.301	-15.099
130	443244.996	483842.439	2508593.886	904.271	25	2.77%	0.66%	-1183.421	-8.450
131	443314.147	483854.865	2508527.293	904.726	25	0.66%	2.30%	1525.540	6.555
132	443385.650	483875.846	2508459.323	906.368	40	2.30%	1.62%	-5893.745	-1.697
133	443456.627	483900.989	2508394.552	907.517	30	1.62%	3.73%	1418.766	7.048
134	443555.887	483941.896	2508311.099	911.223	45	3.73%	1.87%	-2412.009	-4.146
135	443631.258	483902.227	2508248.092	912.630	25	1.87%	2.44%	4388.038	2.279
136	443742.170	483937.319	2508145.648	915.333	35	2.44%	0.97%	-2392.015	-4.181
137	443802.894	483943.187	2508085.480	915.924	35	0.97%	3.73%	1269.892	7.875
138	443878.930	483881.778	2508046.710	918.760	20	3.73%	3.43%	-6721.785	-1.488
139	444056.384	483821.263	2507897.959	924.852	55	3.43%	4.03%	9160.612	1.092
140	444137.927	483895.517	2507873.408	928.140	30	4.03%	0.98%	-983.835	-10.164
141	444186.523	483941.839	2507859.585	928.618	25	0.98%	3.89%	861.785	11.604
142	444268.488	484018.601	2507852.756	931.802	45	3.89%	1.11%	-1620.457	-6.171
143	444438.801	484026.229	2507693.011	933.688	45	1.11%	3.66%	1764.938	5.666
144	444542.370	484043.025	2507592.688	937.476	55	3.66%	0.57%	-1782.092	-5.611
145	444646.851	484021.892	2507492.115	938.073	25	0.57%	1.33%	3292.292	3.037
146	444816.469	484108.257	2507352.228	940.329	45	1.33%	-0.12%	-3097.939	-3.228
147	444921.581	484137.197	2507252.112	940.200	45	-0.12%	-2.46%	-1921.721	-5.204
148	445011.217	484184.121	2507177.608	937.992	35	-2.46%	-1.05%	2476.408	4.038
149	445076.150	484231.294	2507133.359	937.310	35	-1.05%	-1.60%	-6393.443	-1.564
150	445147.553	484280.956	2507083.039	936.169	25	-1.60%	-0.73%	2866.020	3.489
151	445193.700	484310.179	2507048.314	935.834	25	-0.73%	-2.75%	-1233.505	-8.107
152	445236.807	484336.957	2507014.857	934.647	30	-2.75%	-2.53%	13626.804	0.734
153	445417.612	484495.649	2506984.184	930.069	25	-2.53%	-2.76%	-10808.129	-0.925
154	445532.437	484605.902	2506955.758	926.895	30	-2.76%	-1.87%	3353.319	2.982
155	445591.428	484663.135	2506942.572	925.793	45	-1.87%	-1.81%	71016.468	0.141
156	445755.270	484808.125	2506937.379	922.834	55	-1.81%	-0.80%	5454.437	1.833
157	445951.709	484696.437	2506782.758	921.268	35	-0.80%	-2.06%	-2772.505	-3.607
158	446016.421	484662.179	2506731.300	919.935	25	-2.06%	-0.51%	1614.495	6.194
159	446092.046	484605.739	2506688.232	919.549	30	-0.51%	-1.79%	-2348.302	-4.258
160	446154.112	484629.682	2506631.642	918.438	30	-1.79%	-0.90%	3358.311	2.978
161	446195.931	484632.947	2506590.354	918.064	25	-0.90%	0.73%	1536.173	6.510
162	446253.184	484625.384	2506534.163	918.483	25	0.73%	-0.30%	-2422.505	-4.128
163	446541.174	484761.879	2506560.846	917.619	65	-0.30%	-1.29%	-6571.721	-1.522
164	446709.229	484925.606	2506592.926	915.452	35	-1.29%	-0.06%	2853.922	3.504
165	446859.217	484920.799	2506464.403	915.358	55	-0.06%	1.17%	4446.539	2.249
166	446955.426	484882.422	2506380.563	916.488	25	1.17%	-0.30%	-1700.732	-5.880

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
167	447009.189	484874.556	2506327.483	916.329	25	-0.30%	0.95%	1999.963	5.000
168	447080.297	484837.603	2506268.259	917.008	30	0.95%	-0.87%	-1645.706	-6.076
169	447332.838	484991.416	2506272.433	914.814	45	-0.87%	-1.51%	-6981.751	-1.432
170	447406.582	485042.470	2506299.260	913.698	30	-1.51%	0.48%	1508.257	6.630
171	447561.428	485106.737	2506159.732	914.435	35	0.48%	-0.54%	-3460.824	-2.889
172	447711.183	485225.954	2506225.485	913.633	75	-0.54%	2.35%	2599.289	3.847
173	447803.872	485308.746	2506260.816	915.811	35	2.35%	4.35%	1752.153	5.707
174	447926.007	485393.797	2506333.733	921.121	75	4.35%	0.38%	-1891.147	-5.288
175	448040.040	485442.214	2506245.613	921.556	35	0.38%	0.74%	9879.551	1.012
176	448222.516	485322.406	2506112.254	922.899	35	0.74%	0.31%	-8204.726	-1.219
177	448282.852	485298.093	2506058.307	923.086	30	0.31%	-0.15%	-6547.023	-1.527
178	448489.647	485185.294	2505895.012	922.778	25	-0.15%	-2.19%	-1225.535	-8.160
179	448548.997	485143.898	2505852.721	921.479	30	-2.19%	0.99%	943.429	10.600
180	448626.586	485126.299	2505778.887	922.248	30	0.99%	2.21%	2463.142	4.060
181	448821.911	484937.988	2505769.586	926.562	50	2.21%	4.49%	2195.108	4.556
182	449026.546	484747.239	2505742.988	935.744	35	4.49%	3.81%	-5198.887	-1.923
183	449177.559	484627.065	2505670.646	941.503	35	3.81%	5.85%	1723.244	5.803
184	449287.184	484591.752	2505576.257	947.910	75	5.85%	3.11%	-2742.632	-3.646
185	449574.648	484629.198	2505342.803	956.851	100	3.11%	-1.64%	-2104.303	-4.752
186	449704.593	484723.738	2505254.838	954.717	55	-1.64%	-4.60%	-1858.815	-5.380
187	449847.021	484838.793	2505180.336	948.164	30	-4.60%	-1.83%	1083.186	9.232
188	449961.467	484864.346	2505071.085	946.068	35	-1.83%	-4.36%	-1385.067	-7.220
189	450244.892	484864.137	2504947.998	933.715	40	-4.36%	-3.21%	3496.520	2.860
190	450405.653	484930.773	2504815.381	928.548	30	-3.21%	-4.79%	-1903.086	-5.255
191	450506.619	484939.295	2504734.843	923.711	25	-4.79%	-2.58%	1131.848	8.835
192	450582.941	484947.102	2504665.773	921.740	25	-2.58%	-4.06%	-1694.639	-5.901
193	450731.492	484970.899	2504522.311	915.713	25	-4.06%	-4.32%	-9554.624	-1.047
194	450829.223	484986.675	2504426.071	911.492	45	-4.32%	2.79%	633.474	15.786
195	450905.474	485022.083	2504359.790	913.616	55	2.79%	2.58%	-26910.635	-0.372
196	451053.937	485109.717	2504243.629	917.447	35	2.58%	6.23%	959.644	10.421
197	451103.407	485149.093	2504214.009	920.527	45	6.23%	3.41%	-1594.557	-6.271
198	451191.121	485194.572	2504141.675	923.515	30	3.41%	2.65%	-3990.845	-2.506
199	451264.276	485239.713	2504085.191	925.456	55	2.65%	4.35%	3248.392	3.078
200	451329.796	485293.190	2504049.147	928.304	35	4.35%	2.62%	-2028.229	-4.930
201	451388.454	485318.385	2503996.655	929.842	35	2.62%	1.34%	-2726.818	-3.667
202	451536.673	485430.870	2504040.078	931.825	30	1.34%	2.90%	1923.381	5.199
203	451615.928	485500.479	2504069.465	934.121	25	2.90%	3.14%	10356.131	0.966
204	451688.923	485573.436	2504069.176	936.412	25	3.14%	4.00%	2920.716	3.424
205	451734.404	485617.773	2504062.109	938.229	30	4.00%	1.77%	-1350.062	-7.407
206	451971.165	485623.094	2504149.267	942.426	30	1.77%	3.68%	1577.334	6.340
207	452111.840	485711.623	2504235.508	947.596	25	3.68%	2.30%	-1821.311	-5.491
208	452180.335	485773.112	2504205.836	949.173	25	2.30%	3.00%	3582.077	2.792
209	458770.132	486875.412	2501363.467	1107.261	45	-3.50%	-6.15%	-1697.869	-5.890
210	458963.315	486851.725	2501174.830	1095.379	45	-6.15%	-0.59%	809.828	12.348
211	459064.993	486904.937	2501088.764	1094.775	25	-0.59%	-0.36%	10684.736	0.936
212	459221.195	486961.662	2500944.227	1094.214	75	-0.36%	-3.37%	-2492.250	-4.012
213	459414.667	486988.664	2500753.228	1087.696	55	-3.37%	-3.75%	-14313.073	-0.699
214	459567.689	486950.727	2500613.320	1081.952	55	-3.75%	-1.51%	2447.385	4.086
215	459650.890	487004.777	2500550.225	1080.699	35	-1.51%	-4.06%	-1373.002	-7.283
216	459694.841	487018.735	2500508.843	1078.917	25	-4.06%	-2.88%	2129.986	4.695
217	459777.613	487031.288	2500427.131	1076.532	40	-2.88%	-3.36%	-8337.663	-1.199
218	459905.069	487044.109	2500306.051	1072.248	45	-3.36%	-1.48%	2389.494	4.185
219	460005.616	487082.440	2500213.688	1070.762	35	-1.48%	-2.98%	-2328.047	-4.295
220	460054.654	487095.771	2500166.635	1069.300	35	-2.98%	1.36%	806.431	12.400
221	460103.518	487121.460	2500125.121	1069.964	25	1.36%	-1.18%	-983.977	-10.163
222	460173.127	487121.837	2500057.004	1069.141	75	-1.18%	-4.22%	-2469.226	-4.050



S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
223	460341.929	487015.962	2499936.350	1062.019	55	-4.22%	-4.23%	#####	-0.026
224	460597.797	487066.792	2499697.711	1051.187	30	-4.23%	-3.86%	8049.789	1.242
225	460742.782	487025.223	2499564.873	1045.589	55	-3.86%	-0.31%	1548.139	6.459
226	460855.279	487059.521	2499469.054	1045.242	45	-0.31%	-3.36%	-1477.141	-6.770
227	460993.873	487034.331	2499333.522	1040.593	40	-3.36%	-2.79%	7082.959	1.412
228	461099.489	487019.684	2499229.115	1037.646	45	-2.79%	-3.60%	-5576.444	-1.793
229	461205.847	486966.919	2499139.388	1033.821	55	-3.60%	-3.21%	14162.394	0.706
230	461314.533	486962.187	2499033.246	1030.334	45	-3.21%	-3.50%	-15519.838	-0.644
231	461418.447	486934.373	2498943.827	1026.698	40	-3.50%	-3.58%	-51357.479	-0.195
232	461469.176	486915.506	2498900.499	1024.884	50	-3.58%	-0.17%	1469.661	6.804
233	461565.602	486990.781	2498846.514	1024.716	55	-0.17%	-2.08%	-2889.009	-3.461
234	461673.879	486950.296	2498750.247	1022.466	45	-2.08%	-1.67%	10906.010	0.917
235	461828.267	486878.199	2498628.750	1019.895	65	-1.67%	-4.13%	-2640.265	-3.788
236	461994.547	486733.229	2498565.543	1013.032	55	-4.13%	-2.95%	4655.871	2.148
237	462158.855	486632.596	2498444.309	1008.192	55	-2.95%	-2.00%	5797.382	1.725
238	462241.549	486574.273	2498386.532	1006.540	35	-2.00%	-2.20%	-17192.022	-0.582
239	462488.003	486506.643	2498184.509	1001.116	55	-2.20%	-3.66%	-3760.106	-2.660
240	462558.181	486456.364	2498135.552	998.545	35	-3.66%	-0.85%	1245.632	8.028
241	462720.912	486429.166	2497985.557	997.156	35	-0.85%	-6.36%	-635.122	-15.745
242	462871.293	486412.025	2497869.847	987.585	55	-6.36%	-0.17%	887.725	11.265
243	462946.203	486485.098	2497853.462	987.458	35	-0.17%	0.01%	20171.857	0.496
244	463033.591	486570.536	2497835.109	987.462	55	0.01%	-2.35%	-2334.715	-4.283
245	463258.101	486677.532	2497659.812	982.184	65	-2.35%	-1.79%	11663.885	0.857
246	463344.892	486637.513	2497583.823	980.627	25	-1.79%	-0.58%	2060.386	4.853
247	463473.330	486708.064	2497481.591	979.881	60	-0.58%	-2.87%	-2626.172	-3.808
248	463604.753	486736.900	2497360.372	976.116	25	-2.87%	-3.32%	-5557.995	-1.799
249	463872.704	486617.498	2497137.371	967.233	45	-3.32%	-1.20%	2127.870	4.700
250	463966.464	486667.539	2497066.930	966.108	35	-1.20%	-2.60%	-2498.466	-4.002
251	464172.936	486700.586	2496874.746	960.738	40	-2.60%	-1.24%	2945.763	3.395
252	464300.205	486678.809	2496755.138	959.156	65	-1.24%	-3.34%	-3100.772	-3.225
253	464413.090	486647.765	2496655.981	955.386	45	-3.34%	-1.98%	3317.903	3.014
254	464503.578	486726.483	2496614.843	953.592	40	-1.98%	-3.44%	-2738.964	-3.651
255	464809.886	486948.822	2496412.191	943.044	45	-3.44%	-2.55%	5051.357	1.980
256	464911.205	486986.440	2496322.218	940.457	45	-2.55%	-4.29%	-2590.303	-3.861
257	465003.703	486983.371	2496235.666	936.489	45	-4.29%	-3.23%	4254.090	2.351
258	465189.756	487143.913	2496162.337	930.476	35	-3.23%	-3.07%	21456.602	0.466
259	465309.705	487174.146	2496067.837	926.795	35	-3.07%	-4.90%	-1910.234	-5.235
260	465465.168	487196.644	2495920.918	919.175	65	-4.90%	-1.37%	1841.422	5.431
261	465568.059	487272.942	2495856.044	917.764	45	-1.37%	-4.51%	-1435.890	-6.964
262	465708.503	487400.310	2495836.065	911.437	55	-4.51%	-0.10%	1248.455	8.010
263	465796.660	487475.613	2495863.703	911.349	45	-0.10%	-2.12%	-2224.923	-4.495
264	465932.663	487525.489	2495763.553	908.462	65	-2.12%	-3.79%	-3909.092	-2.558
265	466035.115	487533.986	2495664.447	904.584	35	-3.79%	-2.88%	3880.822	2.577
266	466125.633	487508.343	2495586.459	901.974	35	-2.88%	-5.59%	-1292.919	-7.734
267	466175.828	487509.088	2495539.768	899.168	45	-5.59%	-0.51%	885.562	11.292
268	466228.767	487521.209	2495489.963	898.899	25	-0.51%	-3.49%	-839.568	-11.911
269	466349.800	487469.270	2495381.442	894.679	45	-3.49%	-1.20%	1965.238	5.088
270	466400.665	487475.644	2495331.066	894.070	35	-1.20%	-3.30%	-1662.237	-6.016
271	466522.425	487409.672	2495231.352	890.049	25	-3.30%	-3.01%	8460.542	1.182
272	466591.439	487343.872	2495231.239	887.974	60	-3.01%	-4.05%	-5781.763	-1.730
273	466759.237	487292.908	2495161.260	881.187	45	-4.05%	-1.89%	2084.792	4.797
274	466941.415	487403.034	2495019.239	877.751	35	-1.89%	-5.44%	-985.516	-10.147
275	467060.393	487486.187	2494934.162	871.281	35	-5.44%	-1.53%	896.430	11.155
276	467168.241	487550.152	2494848.858	869.628	45	-1.53%	-0.08%	3096.155	3.230
277	467247.029	487591.328	2494782.966	869.565	35	-0.08%	-1.72%	-2128.205	-4.699
278	467405.873	487660.217	2494672.121	866.826	55	-1.72%	-4.79%	-1794.602	-5.572

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
279	467599.478	487505.878	2494641.984	857.554	55	-4.79%	-3.66%	4885.537	2.047
280	467759.949	487461.915	2494524.440	851.675	35	-3.66%	-5.59%	-1814.528	-5.511
281	467849.114	487397.871	2494472.955	846.689	55	-5.59%	-4.12%	3734.647	2.678
282	468018.773	487536.135	2494424.772	839.700	35	-4.12%	-3.38%	4729.673	2.114
283	468113.934	487611.114	2494382.368	836.484	75	-3.38%	-6.65%	-2290.617	-4.366
284	468509.528	487798.647	2494102.447	810.162	55	-6.65%	-0.38%	877.160	11.400
285	468739.606	487768.416	2493903.888	809.280	65	-0.38%	-3.01%	-2474.036	-4.042
286	469041.794	487648.484	2493650.381	800.182	50	-3.01%	-6.41%	-1469.692	-6.804
287	469116.436	487690.023	2493603.636	795.395	55	-6.41%	-0.39%	912.375	10.960
288	469168.953	487736.092	2493579.746	795.193	35	-0.39%	-3.26%	-1216.574	-8.220
289	469497.819	487793.301	2493309.527	784.467	35	-3.26%	-4.04%	-4506.472	-2.219
290	469637.565	487795.748	2493173.043	778.824	35	-4.04%	-2.48%	2240.096	4.464
291	469752.975	487880.031	2493101.658	775.966	45	-2.48%	-1.63%	5348.623	1.870
292	470004.030	487972.654	2492877.548	771.863	45	-1.63%	-3.08%	-3115.609	-3.210
293	470174.366	487982.518	2492710.410	766.619	45	-3.08%	-3.81%	-6183.289	-1.617
294	470266.425	488040.589	2492642.469	763.114	35	-3.81%	-2.05%	1995.303	5.012
295	470416.690	488123.744	2492529.765	760.030	35	-2.05%	3.99%	579.430	17.258
296	470474.887	488181.606	2492529.444	762.351	35	3.99%	2.42%	-2235.146	-4.474
297	470543.756	488242.735	2492498.548	764.019	45	2.42%	1.60%	-5473.938	-1.827
298	470658.963	488352.430	2492468.905	765.862	25	1.60%	3.21%	1549.147	6.455
299	470737.919	488431.370	2492468.072	768.400	30	3.21%	3.06%	-19269.195	-0.519
300	470819.446	488512.276	2492460.230	770.893	50	3.06%	2.97%	-53423.166	-0.187
301	470901.414	488556.527	2492393.350	773.323	25	2.97%	1.65%	-1900.145	-5.263
302	470948.484	488588.570	2492359.602	774.099	30	1.65%	-0.98%	-1141.188	-8.763
303	471008.148	488645.666	2492344.594	773.514	25	-0.98%	-0.15%	3015.505	3.316
304	471091.370	488701.513	2492288.332	773.389	25	-0.15%	2.40%	982.132	10.182
305	471177.119	488762.511	2492247.523	775.442	25	2.40%	-3.46%	-426.791	-23.431
306	471213.916	488798.311	2492254.146	774.168	25	-3.46%	0.03%	715.680	13.973
307	471284.729	488850.258	2492208.220	774.189	25	0.03%	2.31%	1095.598	9.127
308	471378.991	488938.065	2492178.507	776.368	25	2.31%	-0.10%	-1037.702	-9.637
309	471462.617	489009.894	2492138.595	776.287	30	-0.10%	4.40%	667.642	14.978
310	471572.809	489090.007	2492082.995	781.131	40	4.40%	1.66%	-1461.399	-6.843
311	471667.182	489176.093	2492053.652	782.697	25	1.66%	2.69%	2434.478	4.108
312	471800.135	489222.048	2491929.774	786.268	45	2.69%	3.53%	5318.448	1.880
313	471883.399	489252.931	2491852.628	789.209	35	3.53%	1.16%	-1475.957	-6.775
314	471989.560	489295.075	2491911.299	790.441	25	1.16%	4.32%	790.855	12.645
315	472026.739	489305.139	2491945.148	792.048	40	4.32%	1.94%	-1682.447	-5.944
316	472100.587	489366.068	2491917.093	793.484	35	1.94%	2.63%	5076.647	1.970
317	472164.129	489412.112	2491873.304	795.157	30	2.63%	1.78%	-3528.784	-2.834
318	472206.899	489450.160	2491861.395	795.920	30	1.78%	2.59%	3739.836	2.674
319	472252.381	489491.220	2491880.501	797.096	25	2.59%	3.08%	5033.098	1.987
320	472279.233	489514.968	2491870.944	797.924	25	3.08%	-0.55%	-687.519	-14.545
321	472329.732	489536.067	2491825.331	797.644	30	-0.55%	1.35%	1572.943	6.358
322	472385.691	489588.092	2491812.157	798.402	60	1.35%	2.12%	7882.662	1.269
323	472450.523	489648.781	2491799.612	799.773	40	2.12%	-2.37%	-891.030	-11.223
324	472686.661	489547.256	2491607.744	794.166	75	-2.37%	1.13%	2138.928	4.675
325	472816.241	489498.657	2491491.962	795.632	35	1.13%	2.53%	2502.475	3.996
326	472983.595	489495.654	2491325.634	799.867	35	2.53%	4.04%	2321.999	4.307
327	473114.547	489537.583	2491210.248	805.155	55	4.04%	-0.21%	-1296.212	-7.715
328	473263.086	489438.892	2491136.091	804.850	25	-0.21%	0.86%	2337.328	4.278
329	473340.820	489386.114	2491083.797	805.522	35	0.86%	-0.26%	-3110.179	-3.215
330	473415.717	489347.647	2491019.631	805.327	30	-0.26%	3.52%	792.717	12.615
331	473457.510	489321.826	2490986.833	806.799	35	3.52%	0.50%	-1157.368	-8.640
332	473539.408	489339.970	2490910.521	807.208	40	0.50%	6.66%	648.833	15.412
333	474554.960	488912.398	2490176.511	874.887	70	6.66%	3.71%	-2372.497	-4.215
334	474730.812	488950.418	2490008.999	881.418	125	3.71%	-3.85%	-1653.759	-6.047

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
335	474945.325	488895.658	2489801.927	873.170	25	-3.85%	-1.27%	970.644	10.302
336	475136.972	488831.178	2489628.957	870.738	25	-1.27%	-3.89%	-953.863	-10.484
337	475181.877	488858.944	2489593.707	868.991	35	-3.89%	0.23%	849.002	11.779
338	475256.341	488877.932	2489524.468	869.164	55	0.23%	-3.16%	-1620.204	-6.172
339	475335.723	488831.869	2489460.914	866.654	25	-3.16%	-4.12%	-2603.649	-3.841
340	475408.487	488822.802	2489389.190	863.655	35	-4.12%	-3.46%	5242.825	1.907
341	475472.280	488810.697	2489327.222	861.451	25	-3.46%	-6.60%	-795.276	-12.574
342	475640.709	488822.841	2489164.888	850.337	60	-6.60%	2.31%	673.925	14.838
343	475687.223	488830.685	2489119.790	851.409	25	2.31%	3.27%	2578.952	3.878
344	475834.890	488770.692	2488986.934	856.244	35	3.27%	3.37%	35560.447	0.281
345	475964.773	488859.868	2488906.013	860.624	25	3.37%	6.03%	940.148	10.637
346	476012.380	488894.707	2488873.798	863.496	30	6.03%	1.45%	-654.574	-15.277
347	476064.856	488896.878	2488822.525	864.256	25	1.45%	4.58%	797.722	12.536
348	476176.135	488968.785	2488747.137	869.355	25	4.58%	1.33%	-767.670	-13.026
349	476224.479	488952.343	2488702.599	869.996	25	1.33%	4.03%	924.777	10.813
350	476265.730	488942.453	2488662.718	871.658	30	4.03%	1.02%	-997.194	-10.028
351	476305.230	488915.714	2488636.197	872.061	25	1.02%	3.98%	845.693	11.825
352	476358.860	488873.375	2488605.623	874.194	30	3.98%	1.08%	-1036.779	-9.645
353	476410.922	488849.852	2488559.322	874.758	25	1.08%	4.08%	835.329	11.971
354	476494.383	488876.367	2488482.529	878.160	25	4.08%	2.85%	-2038.979	-4.904
355	476613.644	488966.114	2488412.976	881.559	25	2.85%	3.77%	2715.205	3.683
356	476750.514	489083.424	2488352.734	886.720	25	3.77%	1.03%	-912.091	-10.964
357	476832.170	489051.522	2488280.229	887.561	35	1.03%	3.64%	1342.409	7.449
358	476924.799	489049.263	2488194.405	890.930	35	3.64%	2.61%	-3400.608	-2.941
359	477063.633	488963.010	2488093.811	894.551	35	2.61%	5.09%	1408.548	7.100
360	477140.622	488998.549	2488027.040	898.471	35	5.09%	0.68%	-793.874	-12.596
361	477327.425	488852.584	2487956.704	899.749	45	0.68%	1.88%	3752.661	2.665
362	477574.468	488735.548	2487821.775	904.401	45	1.88%	3.82%	2320.030	4.310
363	477713.974	488830.696	2487737.217	909.734	70	3.82%	0.30%	-1987.219	-5.032
364	477802.345	488822.998	2487650.431	909.999	45	0.30%	2.94%	1705.612	5.863
365	477974.940	488858.522	2487484.365	915.071	45	2.94%	2.18%	-5927.087	-1.687
366	478121.683	488876.444	2487342.036	918.269	55	2.18%	1.38%	-6869.018	-1.456
367	478269.701	488831.359	2487219.190	920.310	30	1.38%	3.98%	1153.747	8.667
368	478341.088	488797.482	2487156.371	923.150	45	3.98%	2.02%	-2293.433	-4.360
369	478434.259	488748.235	2487077.380	925.029	40	2.02%	3.46%	2778.757	3.599
370	478566.141	488686.106	2486963.919	929.587	60	3.46%	1.61%	-3242.123	-3.084
371	478937.813	488613.589	2486670.118	935.555	35	1.61%	4.37%	1264.925	7.906
372	478996.781	488627.055	2486613.906	938.133	25	4.37%	1.37%	-833.665	-11.995
373	479095.785	488599.002	2486521.220	939.493	35	1.37%	-0.31%	-2078.544	-4.811
374	479181.255	488543.726	2486459.138	939.228	35	-0.31%	3.06%	1039.641	9.619
375	479297.725	488581.657	2486353.408	942.788	35	3.06%	0.38%	-1305.243	-7.661
376	479412.208	488549.185	2486257.739	943.217	35	0.38%	1.01%	5511.735	1.814
377	479565.883	488437.092	2486162.936	944.769	45	1.01%	3.36%	1914.173	5.224
378	479630.183	488409.708	2486105.716	946.930	45	3.36%	1.43%	-2326.579	-4.298
379	479728.456	488349.720	2486033.951	948.332	45	1.43%	4.26%	1588.521	6.295
380	479863.994	488464.519	2485975.539	954.105	30	4.26%	1.85%	-1243.130	-8.044
381	480021.118	488498.380	2485851.316	957.006	50	1.85%	5.26%	1463.654	6.832
382	480192.690	488592.187	2485772.805	966.035	35	5.26%	1.82%	-1015.877	-9.844
383	480271.810	488641.515	2485716.335	967.472	35	1.82%	0.06%	-1992.824	-5.018
384	480339.613	488626.953	2485650.539	967.513	30	0.06%	2.10%	1473.275	6.788
385	480409.832	488637.464	2485582.152	968.986	35	2.10%	0.29%	-1941.634	-5.150
386	480463.199	488612.056	2485535.544	969.143	35	0.29%	3.45%	1109.705	9.011
387	480609.094	488610.735	2485390.953	974.174	75	3.45%	2.19%	-5976.139	-1.673
388	480780.491	488507.152	2485271.405	977.933	70	2.19%	-2.00%	-1668.472	-5.994
389	480832.149	488492.566	2485221.950	976.899	30	-2.00%	0.87%	1045.785	9.562
390	480889.369	488493.677	2485165.367	977.395	30	0.87%	-2.18%	-984.055	-10.162

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
391	480974.680	488452.610	2485098.582	975.534	50	-2.18%	-4.41%	-2244.095	-4.456
392	481122.987	488346.904	2485010.963	968.993	50	-4.41%	-1.58%	1764.936	5.666
393	481200.723	488360.483	2484936.242	967.767	35	-1.58%	-0.57%	3477.623	2.876
394	481279.749	488417.195	2484883.539	967.316	35	-0.57%	-3.38%	-1245.464	-8.029
395	481352.215	488392.313	2484821.271	964.866	45	-3.38%	-1.25%	2113.319	4.732
396	481406.468	488396.494	2484767.813	964.187	35	-1.25%	-3.32%	-1690.877	-5.914
397	481508.230	488377.920	2484667.951	960.807	35	-3.32%	-1.75%	2221.967	4.501
398	481603.632	488424.622	2484592.974	959.141	45	-1.75%	-2.41%	-6774.350	-1.476
399	481781.806	488360.458	2484429.079	954.846	45	-2.41%	-2.97%	-8049.063	-1.242
400	481925.662	488301.257	2484306.731	950.574	35	-2.97%	-6.25%	-1066.280	-9.378
401	481979.852	488272.312	2484266.593	947.186	45	-6.25%	-2.77%	1292.133	7.739
402	482244.091	488351.390	2484017.976	939.868	65	-2.77%	-3.83%	-6122.134	-1.633
403	482383.343	488381.049	2483884.384	934.533	45	-3.83%	-0.54%	1367.587	7.312
404	482521.863	488497.164	2483812.134	933.784	25	-0.54%	0.69%	2039.700	4.903
405	482674.535	488625.212	2483735.931	934.830	50	0.69%	-2.11%	-1791.495	-5.582
406	483014.460	488900.693	2483627.786	927.671	65	-2.11%	-5.07%	-2193.100	-4.560
407	483181.543	489048.392	2483560.746	919.200	45	-5.07%	-3.79%	3523.424	2.838
408	483420.503	489119.394	2483395.649	910.137	35	-3.79%	-2.76%	3382.670	2.956
409	483522.596	489195.462	2483332.366	907.321	25	-2.76%	-4.31%	-1608.330	-6.218
410	483732.164	489317.336	2483245.523	898.284	45	-4.31%	-3.57%	6027.158	1.659
411	483869.342	489432.911	2483295.188	893.392	25	-3.57%	-1.07%	1000.605	9.994
412	483908.571	489450.808	2483326.992	892.974	30	-1.07%	-3.05%	-1512.470	-6.612
413	484027.112	489410.130	2483436.261	889.357	55	-3.05%	-5.08%	-2707.476	-3.693
414	484168.118	489443.789	2483551.101	882.191	35	-5.08%	-3.60%	2367.380	4.224
415	484239.626	489404.248	2483606.021	879.614	35	-3.60%	-6.25%	-1321.257	-7.569
416	484471.770	489310.345	2483781.324	865.099	35	-6.25%	-5.90%	9921.028	1.008
417	484531.953	489330.443	2483835.852	861.548	25	-5.90%	-3.56%	1067.066	9.371
418	484695.906	489393.060	2483974.239	855.716	30	-3.56%	-4.07%	-5848.090	-1.710
419	484819.073	489496.045	2483963.369	850.703	35	-4.07%	-3.87%	17851.979	0.560
420	485054.613	489669.245	2483931.192	841.578	35	-3.87%	-3.61%	13069.151	0.765
421	485169.760	489717.075	2484033.495	837.426	55	-3.61%	-1.61%	2753.835	3.631
422	485272.586	489800.053	2484093.379	835.771	55	-1.61%	-4.59%	-1845.714	-5.418
423	485358.228	489852.387	2484158.278	831.841	45	-4.59%	-2.01%	1745.020	5.731
424	485525.378	490008.285	2484198.337	828.481	30	-2.01%	-3.56%	-1932.466	-5.175
425	485722.034	490171.487	2484156.900	821.475	45	-3.56%	-2.01%	2891.651	3.458
426	485806.773	490253.432	2484172.534	819.775	55	-2.01%	-4.02%	-2733.311	-3.659
427	485998.653	490419.504	2484100.466	812.064	25	-4.02%	-2.79%	2038.725	4.905
428	486156.658	490541.830	2484149.139	807.652	40	-2.79%	-3.92%	-3537.184	-2.827
429	486245.362	490627.204	2484145.887	804.172	35	-3.92%	-3.90%	122345.283	0.082
430	486427.822	490792.894	2484214.512	797.066	30	-3.90%	-2.43%	2042.398	4.896
431	486519.466	490878.169	2484182.333	794.843	45	-2.43%	-3.86%	-3136.137	-3.189
432	486661.577	490982.499	2484246.310	789.357	30	-3.86%	-1.33%	1182.940	8.454
433	486719.982	491021.190	2484286.875	788.583	35	-1.33%	-3.61%	-1532.806	-6.524
434	486820.098	491119.726	2484274.166	784.971	50	-3.61%	-3.12%	10238.495	0.977
435	486909.790	491207.985	2484272.181	782.173	45	-3.12%	-3.89%	-5851.880	-1.709
436	486971.844	491261.373	2484302.159	779.760	30	-3.89%	-2.73%	2594.309	3.855
437	487042.740	491306.271	2484356.873	777.823	40	-2.73%	-3.82%	-3669.163	-2.725
438	487137.054	491390.557	2484397.899	774.218	40	-3.82%	-3.06%	5257.854	1.902
439	487239.439	491477.459	2484446.708	771.083	25	-3.06%	-2.77%	8649.212	1.156
440	487311.293	491540.896	2484479.525	769.091	35	-2.77%	-6.06%	-1064.941	-9.390
441	487357.101	491575.863	2484508.591	766.316	25	-6.06%	-2.94%	801.875	12.471
442	487487.523	491698.312	2484548.860	762.479	75	-2.94%	-4.20%	-5940.426	-1.683
443	487579.757	491774.132	2484600.613	758.602	45	-4.20%	-1.18%	1489.977	6.712
444	487689.101	491863.567	2484655.741	757.308	25	-1.18%	-5.81%	-540.324	-18.507
445	487732.166	491892.588	2484686.166	754.805	25	-5.81%	-2.83%	837.575	11.939
446	487884.022	491981.138	2484783.923	750.514	25	-2.83%	-6.41%	-697.679	-14.333

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
447	487927.763	491999.542	2484821.716	747.711	35	-6.41%	-1.20%	671.914	14.883
448	487977.065	492045.938	2484837.956	747.119	25	-1.20%	-3.25%	-1222.187	-8.182
449	488024.545	492090.048	2484854.993	745.578	30	-3.25%	-2.43%	3695.163	2.706
450	488220.113	492257.522	2484952.440	740.818	25	-2.43%	-8.43%	-416.642	-24.001
451	488276.064	492307.039	2484943.180	736.099	25	-8.43%	-3.24%	480.891	20.795
452	488476.238	492281.304	2484749.312	729.623	25	-3.24%	-4.75%	-1650.073	-6.060
453	488535.517	492279.066	2484691.105	726.807	30	-4.75%	-2.75%	1498.017	6.675
454	488628.640	492191.456	2484674.867	724.248	30	-2.75%	-3.82%	-2806.973	-3.563
455	488744.096	492089.081	2484626.836	719.842	25	-3.82%	-2.23%	1572.575	6.359
456	488798.537	492034.965	2484620.903	718.629	35	-2.23%	-4.32%	-1673.418	-5.976
457	488901.230	491950.058	2484567.666	714.195	35	-4.32%	-2.95%	2554.696	3.914
458	489006.502	491877.293	2484498.831	711.091	100	-2.95%	-4.73%	-5600.978	-1.785
459	489168.683	491778.196	2484392.134	703.413	60	-4.73%	-0.36%	1371.360	7.292
460	489258.051	491744.659	2484313.279	703.093	25	-0.36%	-5.85%	-455.276	-21.965
461	489353.925	491747.547	2484217.527	697.485	35	-5.85%	-3.94%	1830.294	5.464
462	489432.444	491759.881	2484140.415	694.393	25	-3.94%	-6.23%	-1089.714	-9.177
463	489470.342	491773.964	2484105.256	692.031	25	-6.23%	-2.25%	627.052	15.948
464	489535.009	491758.972	2484043.853	690.580	35	-2.25%	-3.39%	-3063.349	-3.264
465	489614.049	491765.249	2483965.484	687.902	30	-3.39%	-3.19%	15232.596	0.656
466	489660.452	491776.179	2483921.065	686.422	25	-3.19%	-2.27%	2721.947	3.674
467	489696.917	491768.686	2483885.388	685.594	25	-2.27%	-4.54%	-1103.704	-9.060
468	489878.578	491790.407	2483709.553	677.352	25	-4.54%	-6.76%	-1123.437	-8.901
469	489923.852	491813.204	2483671.551	674.290	25	-6.76%	-3.10%	682.821	14.645
470	490049.723	491801.436	2483561.159	670.387	25	-3.10%	-5.72%	-955.840	-10.462
471	490117.139	491822.469	2483504.878	666.533	35	-5.72%	-2.08%	962.589	10.389
472	490187.537	491806.490	2483439.243	665.068	35	-2.08%	-6.23%	-844.562	-11.840
473	490337.335	491861.292	2483313.498	655.744	45	-6.23%	-4.67%	2892.413	3.457
474	490449.954	491838.446	2483213.625	650.486	35	-4.67%	-4.02%	5380.454	1.859
475	490546.062	491742.497	2483215.351	646.624	25	-4.02%	-3.49%	4745.201	2.107
476	490663.406	491625.396	2483220.375	642.527	35	-3.49%	-6.10%	-1344.283	-7.439
477	490704.685	491593.923	2483195.937	640.011	25	-6.10%	-4.08%	1241.458	8.055
478	490819.349	491538.775	2483115.488	635.331	30	-4.08%	-2.66%	2108.771	4.742
479	490889.136	491472.905	2483109.021	633.476	25	-2.66%	-5.83%	-788.948	-12.675
480	490982.705	491488.594	2483023.566	628.023	30	-5.83%	-3.02%	1067.504	9.368
481	491048.902	491441.505	2482979.351	626.026	50	-3.02%	-6.33%	-1511.690	-6.615
482	491128.018	491445.229	2482900.609	621.022	25	-6.33%	-1.61%	530.701	18.843
483	491194.505	491466.438	2482837.679	619.949	35	-1.61%	-3.54%	-1817.736	-5.501
484	491383.312	491527.878	2482679.672	613.266	35	-3.54%	-5.34%	-1942.758	-5.147
485	491524.314	491630.682	2482594.437	605.735	45	-5.34%	-3.66%	2681.679	3.729
486	491833.575	491651.493	2482370.111	594.407	100	-3.66%	-3.62%	213984.509	0.047
487	492032.190	491647.914	2482246.819	587.224	25	-3.62%	-2.26%	1838.776	5.438
488	492095.345	491710.244	2482254.651	585.799	25	-2.26%	-3.38%	-2222.647	-4.499
489	492185.273	491794.478	2482228.437	582.758	25	-3.38%	-3.70%	-7833.527	-1.277
490	492285.642	491874.386	2482172.150	579.044	35	-3.70%	-2.86%	4145.036	2.413
491	492401.498	491984.195	2482149.887	575.735	35	-2.86%	-4.93%	-1690.574	-5.915
492	492459.738	492041.135	2482152.890	572.866	30	-4.93%	-3.19%	1728.495	5.785
493	492568.072	492099.873	2482066.287	569.409	35	-3.19%	-5.14%	-1793.858	-5.575
494	492680.656	492195.071	2482109.843	563.620	40	-5.14%	-2.47%	1498.147	6.675
495	492724.629	492237.210	2482100.907	562.533	35	-2.47%	-4.80%	-1503.864	-6.650
496	492798.933	492231.548	2482032.733	558.967	35	-4.80%	-3.07%	2017.988	4.955
497	492944.899	492308.767	2481936.615	554.493	35	-3.07%	-4.91%	-1901.373	-5.259
498	493006.480	492360.153	2481970.295	551.472	35	-4.91%	-2.98%	1817.746	5.501
499	493265.157	492603.641	2482008.566	543.763	30	-2.98%	-2.61%	8021.057	1.247
500	493367.359	492696.950	2482049.689	541.099	45	-2.61%	-3.88%	-3522.324	-2.839
501	493447.514	492753.937	2482104.198	537.986	35	-3.88%	-4.99%	-3157.812	-3.167
502	493542.843	492819.503	2482072.574	533.227	25	-4.99%	-2.75%	1116.271	8.958

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
503	493664.108	492822.469	2481952.584	529.889	65	-2.75%	-3.97%	-5328.800	-1.877
504	493798.629	492843.363	2481820.025	524.545	55	-3.97%	-3.87%	51131.998	0.196
505	493954.755	492861.014	2481664.900	518.511	30	-3.87%	-2.98%	3400.440	2.941
506	494002.776	492859.392	2481617.713	517.079	25	-2.98%	-3.72%	-3403.566	-2.938
507	494117.247	492814.645	2481519.576	512.824	45	-3.72%	-1.79%	2334.238	4.284
508	494196.764	492787.469	2481449.992	511.401	35	-1.79%	-6.77%	-703.342	-14.218
509	494238.762	492751.445	2481428.495	508.560	25	-6.77%	-1.96%	520.208	19.223
510	494345.919	492755.763	2481328.523	506.460	35	-1.96%	-6.72%	-734.901	-13.607
511	494454.037	492856.271	2481314.274	499.192	35	-6.72%	-2.08%	753.314	13.275
512	494585.964	492970.968	2481254.889	496.453	45	-2.08%	-4.42%	-1924.173	-5.197
513	494708.395	493088.811	2481221.689	491.048	30	-4.42%	-2.63%	1680.896	5.949
514	494816.915	493145.449	2481136.857	488.194	55	-2.63%	-5.07%	-2250.948	-4.443
515	494940.789	493239.752	2481077.050	481.909	25	-5.07%	-2.92%	1161.759	8.608
516	494989.954	493260.836	2481032.635	480.473	35	-2.92%	-3.74%	-4281.756	-2.335
517	495078.151	493307.657	2480958.262	477.175	35	-3.74%	-4.34%	-5817.515	-1.719
518	495207.718	493304.751	2480847.019	471.551	25	-4.34%	-2.01%	1074.467	9.307
519	495269.986	493259.305	2480804.926	470.297	35	-2.01%	-4.16%	-1629.459	-6.137
520	495370.635	493245.233	2480707.541	466.108	150	-4.16%	-2.41%	8568.730	1.167
521	495569.980	493269.305	2480598.705	461.301	100	-2.41%	-6.25%	-2606.932	-3.836
522	495762.280	493407.103	2480492.318	449.288	75	-6.25%	-4.93%	5704.057	1.753
523	495953.728	493504.531	2480332.104	439.845	45	-4.93%	-2.22%	1661.580	6.018
524	496062.543	493494.864	2480238.073	437.425	55	-2.22%	-5.93%	-1482.621	-6.745
525	496155.060	493568.203	2480202.345	431.935	23.852	-5.93%	-4.44%	1600.000	6.250
526	496319.980	493571.050	2480038.953	424.608	50	-4.44%	-2.65%	2784.621	3.591
527	496419.902	493563.161	2479940.186	421.963	100	-2.65%	-3.34%	-14494.195	-0.690
528	496577.648	493553.160	2479803.761	416.698	35	-3.34%	-5.69%	-1487.977	-6.721
529	496656.846	493555.589	2479743.187	412.192	25	-5.69%	-3.67%	1237.044	8.084
530	496723.193	493600.918	2479698.062	409.758	55	-3.67%	-5.57%	-2900.090	-3.448
531	496784.746	493616.537	2479638.541	406.333	55	-5.57%	-3.74%	3017.549	3.314
532	496898.102	493637.460	2479528.798	402.090	45	-3.74%	-4.49%	-6052.565	-1.652
533	497039.451	493714.520	2479415.846	395.749	30	-4.49%	-3.14%	2223.127	4.498
534	497102.337	493733.920	2479356.028	393.777	55	-3.14%	-3.81%	-8202.220	-1.219
535	497188.287	493769.383	2479277.917	390.505	30	-3.81%	-3.37%	6878.576	1.454
536	497263.075	493800.201	2479210.788	387.984	35	-3.37%	-4.77%	-2495.290	-4.008
537	497359.175	493818.288	2479125.127	383.397	30	-4.77%	-3.40%	2189.660	4.567
538	497498.011	493910.256	2479169.839	378.671	55	-3.40%	-4.73%	-4162.198	-2.403
539	497616.870	494010.948	2479231.165	373.056	55	-4.73%	-5.69%	-5716.911	-1.749
540	497741.765	494119.108	2479281.223	365.953	55	-5.69%	-2.28%	1612.245	6.203
541	497869.439	494221.146	2479342.902	363.048	45	-2.28%	-7.42%	-875.240	-11.425
542	497942.219	494275.021	2479298.276	357.650	25	-7.42%	-4.72%	925.403	10.806
543	498029.230	494277.958	2479212.475	353.547	45	-4.72%	-4.95%	-19349.539	-0.517
544	498217.603	494217.021	2479036.914	344.226	45	-4.95%	-5.94%	-4545.895	-2.200
545	498294.895	494221.801	2478959.884	339.636	55	-5.94%	-3.97%	2790.216	3.584
546	498483.817	494274.081	2478950.414	332.142	35	-3.97%	-1.38%	1352.296	7.395
547	498677.176	494305.247	2479130.878	329.477	100	-1.38%	-6.01%	-2161.684	-4.626
548	498778.556	494384.808	2479191.060	323.390	30	-6.01%	-4.23%	1686.088	5.931
549	498864.668	494462.245	2479162.833	319.751	45	-4.23%	-6.20%	-2279.922	-4.386
550	498941.825	494535.026	2479142.742	314.968	25	-6.20%	-5.25%	2633.849	3.797
551	499163.836	494627.844	2478954.113	303.312	45	-5.25%	-6.70%	-3110.004	-3.215
552	499330.438	494758.370	2478980.435	292.155	35	-6.70%	-4.07%	1334.542	7.493
553	499421.003	494847.934	2478989.829	288.465	30	-4.07%	-6.33%	-1329.029	-7.524
554	499513.365	494850.133	2478917.026	282.617	30	-6.33%	-2.97%	893.445	11.193
555	499629.781	494741.068	2478887.616	279.155	35	-2.97%	-3.85%	-4001.596	-2.499
556	499780.958	494663.623	2478765.492	273.337	45	-3.85%	-6.61%	-1627.960	-6.143
557	499855.369	494616.007	2478714.316	268.416	25	-6.61%	-3.27%	748.704	13.356
558	499909.849	494581.546	2478674.417	266.633	35	-3.27%	-3.68%	-8655.730	-1.155

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
559	500198.382	494711.225	2478421.859	256.021	35	-3.68%	-4.67%	-3526.455	-2.836
560	500267.241	494750.057	2478365.002	252.805	35	-4.67%	-4.15%	6723.499	1.487
561	500461.919	494886.370	2478237.621	244.726	35	-4.15%	-4.42%	-12966.628	-0.771
562	500540.207	494876.680	2478161.609	241.266	35	-4.42%	-5.78%	-2579.483	-3.877
563	500600.315	494930.199	2478150.713	237.794	35	-5.78%	-3.75%	1730.485	5.779
564	500694.260	494977.862	2478219.514	234.267	35	-3.75%	-3.34%	8404.748	1.190
565	500809.308	495013.511	2478215.944	230.427	25	-3.34%	-3.94%	-4123.933	-2.425
566	500873.689	494986.931	2478157.307	227.888	35	-3.94%	-5.61%	-2101.089	-4.759
567	501012.592	495045.232	2478062.779	220.096	25	-5.61%	-4.56%	2377.437	4.206
568	501061.664	495093.288	2478058.179	217.859	35	-4.56%	-6.57%	-1739.010	-5.750
569	501105.950	495123.988	2478027.142	214.949	30	-6.57%	-5.27%	2300.863	4.346
570	501210.040	495216.139	2477989.399	209.467	35	-5.27%	-4.51%	4628.736	2.160
571	501483.276	495371.892	2477788.743	197.142	65	-4.51%	-5.50%	-6545.113	-1.528
572	501565.534	495434.026	2477741.826	192.615	25	-5.50%	-4.10%	1786.122	5.599
573	501610.260	495459.842	2477705.723	190.779	35	-4.10%	-5.57%	-2385.251	-4.192
574	501661.718	495499.882	2477673.404	187.912	25	-5.57%	-2.97%	959.504	10.422
575	501692.977	495523.064	2477652.460	186.985	25	-2.97%	-4.62%	-1515.471	-6.599
576	501750.019	495558.244	2477607.683	184.352	30	-4.62%	-2.93%	1781.967	5.612
577	501936.777	495680.875	2477468.964	178.876	75	-2.93%	-4.17%	-6056.515	-1.651
578	502062.275	495780.146	2477393.951	173.642	35	-4.17%	-5.86%	-2067.840	-4.836
579	502136.283	495844.960	2477363.528	169.303	25	-5.86%	-3.86%	1244.786	8.034
580	502222.308	495917.744	2477323.310	165.987	45	-3.86%	-2.99%	5214.015	1.918
581	502474.078	496150.012	2477245.660	158.455	25	-2.99%	-2.81%	13903.192	0.719
582	502630.632	496303.755	2477226.909	154.053	35	-2.81%	-2.67%	25310.786	0.395
583	502764.126	496429.266	2477190.276	150.484	30	-2.67%	-0.87%	1663.768	6.010
584	502864.789	496529.371	2477181.694	149.608	25	-0.87%	1.30%	1154.072	8.665
585	502918.203	496582.047	2477173.275	150.300	25	1.30%	-1.13%	-1029.950	-9.709
586	502996.144	496648.096	2477132.926	149.418	25	-1.13%	-3.97%	-881.179	-11.348
587	503041.958	496685.106	2477140.681	147.600	25	-3.97%	0.00%	629.951	15.874
588	503394.481	496649.415	2477486.782	147.600	55	0.00%	-5.16%	-1065.516	-9.385
589	503486.354	496572.015	2477519.225	142.858	45	-5.16%	3.27%	533.472	18.745
590	503573.849	496492.768	2477518.504	145.722	35	3.27%	-0.48%	-933.439	-10.713
591	503687.225	496394.361	2477574.538	145.182	45	-0.48%	3.74%	1067.351	9.369
592	503821.198	496275.124	2477635.069	150.193	35	3.74%	4.37%	5561.785	1.798
593	503881.860	496218.162	2477655.919	152.843	45	4.37%	5.18%	5533.392	1.807
594	504020.114	496092.361	2477712.366	160.008	65	5.18%	2.24%	-2206.466	-4.532
595	504117.647	496002.482	2477750.204	162.189	45	2.24%	3.28%	4324.672	2.312
596	504287.549	495856.536	2477830.800	167.757	45	3.28%	3.81%	8520.486	1.174
597	504467.597	495744.598	2477970.341	174.609	25	3.81%	0.96%	-879.639	-11.368
598	504547.984	495737.827	2478049.508	175.383	30	0.96%	4.08%	962.631	10.388
599	504592.031	495726.782	2478091.985	177.180	25	4.08%	0.66%	-730.760	-13.684
600	504623.613	495711.911	2478119.812	177.388	25	0.66%	1.89%	2027.534	4.932
601	504763.963	495677.661	2478252.836	180.043	55	1.89%	4.45%	2153.058	4.645
602	504969.718	495629.730	2478445.828	189.191	35	4.45%	2.60%	-1891.734	-5.286
603	505115.602	495612.300	2478588.508	192.978	50	2.60%	1.61%	-5068.740	-1.973
604	505229.991	495570.046	2478691.630	194.819	35	1.61%	2.38%	4530.595	2.207
605	505376.892	495611.906	2478815.920	198.318	35	2.38%	1.54%	-4154.076	-2.407
606	505460.534	495597.232	2478889.503	199.606	30	1.54%	2.80%	2372.792	4.214
607	505568.779	495610.789	2478979.225	202.641	35	2.80%	2.19%	-5715.665	-1.750
608	505628.328	495604.678	2479036.672	203.946	30	2.19%	3.47%	2345.674	4.263
609	505670.369	495618.722	2479075.893	205.405	30	3.47%	3.34%	-22734.558	-0.440
610	505756.756	495591.520	2479135.579	208.289	25	3.34%	0.89%	-1020.248	-9.802
611	505793.577	495555.002	2479131.040	208.616	30	0.89%	1.95%	2816.067	3.551
612	505851.425	495497.925	2479139.848	209.746	30	1.95%	1.57%	-7718.762	-1.296
613	505976.686	495387.966	2479198.161	211.706	55	1.57%	1.83%	20707.148	0.483
614	506059.874	495327.475	2479253.418	213.229	25	1.83%	0.36%	-1703.848	-5.869

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
615	506132.679	495347.144	2479321.004	213.493	25	0.36%	2.75%	1049.169	9.531
616	506229.385	495366.963	2479410.284	216.148	25	2.75%	0.46%	-1095.699	-9.127
617	506280.340	495325.185	2479436.820	216.385	25	0.46%	2.04%	1590.740	6.286
618	506329.162	495283.701	2479460.205	217.379	30	2.04%	3.47%	2086.854	4.792
619	506466.254	495184.858	2479549.352	222.141	55	3.47%	-2.22%	-965.875	-10.353
620	506545.579	495153.801	2479620.922	220.379	25	-2.22%	-1.05%	2133.644	4.687
621	506602.424	495128.568	2479671.860	219.783	35	-1.05%	0.91%	1783.684	5.606
622	506879.900	495029.443	2479915.907	222.316	45	0.91%	3.26%	1920.600	5.207
623	507032.904	495097.412	2480049.585	227.298	25	3.26%	2.42%	-2982.128	-3.353
624	507204.470	495177.315	2480196.751	231.446	25	2.42%	1.74%	-3698.220	-2.704
625	507293.805	495166.957	2480284.809	233.002	25	1.74%	4.10%	1061.672	9.419
626	507348.997	495190.087	2480334.575	235.263	30	4.10%	2.07%	-1478.585	-6.763
627	507464.063	495165.968	2480440.939	237.642	30	2.07%	2.83%	3913.102	2.556
628	507530.377	495205.579	2480491.108	239.521	30	2.83%	2.06%	-3884.814	-2.574
629	507565.610	495232.891	2480513.049	240.248	30	2.06%	3.75%	1776.715	5.628
630	507619.058	495278.394	2480535.160	242.253	35	3.75%	2.68%	-3265.215	-3.063
631	507696.132	495345.439	2480547.651	244.317	30	2.68%	-0.79%	-865.093	-11.559
632	507926.994	495171.954	2480681.894	242.495	30	-0.79%	-0.02%	3899.832	2.564
633	507980.467	495125.128	2480707.714	242.484	25	-0.02%	0.45%	5362.125	1.865
634	508043.137	495070.352	2480738.149	242.764	25	0.45%	-2.51%	-845.182	-11.832
635	508112.520	495043.244	2480798.448	241.021	35	-2.51%	0.06%	1359.574	7.355
636	508392.256	494890.419	2480997.229	241.196	55	0.06%	5.45%	1020.277	9.801
637	508558.004	494908.519	2481144.131	250.235	35	5.45%	6.14%	5075.593	1.970
638	508662.922	494946.170	2481235.337	256.680	55	6.14%	4.14%	-2746.424	-3.641
639	508732.265	494945.704	2481303.406	259.551	45	4.14%	5.43%	3493.242	2.863
640	508900.732	495082.038	2481391.299	268.696	45	5.43%	1.35%	-1102.730	-9.068
641	509020.750	495155.506	2481468.119	270.314	75	1.35%	6.51%	1452.584	6.884
642	509137.540	495059.834	2481499.246	277.918	35	6.51%	5.70%	-4308.148	-2.321
643	509281.109	494953.976	2481584.513	286.099	45	5.70%	6.46%	5915.478	1.690
644	509355.494	494973.656	2481652.424	290.904	45	6.46%	4.00%	-1831.365	-5.460
645	509418.258	495000.208	2481704.049	293.416	25	4.00%	4.93%	2696.449	3.709
646	509607.641	495027.666	2481882.135	302.751	45	4.93%	4.67%	-17312.100	-0.578
647	509671.423	495018.155	2481942.651	305.729	45	4.67%	3.91%	-5961.336	-1.677
648	509729.627	494968.152	2481968.498	308.007	35	3.91%	4.83%	3828.523	2.612
649	509793.858	494904.027	2481969.720	311.109	35	4.83%	6.60%	1979.084	5.053
650	509868.619	494892.825	2482028.943	316.041	25	6.60%	3.49%	-805.297	-12.418
651	509948.902	494905.407	2482102.977	318.845	35	3.49%	4.51%	3454.478	2.895
652	510108.999	494789.170	2482211.792	326.058	35	4.51%	5.60%	3214.803	3.111
653	510394.988	494951.730	2482379.143	342.058	100	5.60%	3.10%	-4005.302	-2.497
654	510527.340	495067.563	2482435.179	346.158	60	3.10%	2.16%	-6375.274	-1.569
655	510730.960	495239.620	2482541.609	350.549	45	2.16%	4.98%	1593.670	6.275
656	510966.717	495123.244	2482614.079	362.291	35	4.98%	4.57%	-8603.546	-1.162
657	511216.334	494885.959	2482604.155	373.707	65	4.57%	3.24%	-4879.733	-2.049
658	511363.234	494749.805	2482628.637	378.469	25	3.24%	4.79%	1613.332	6.198
659	511503.459	494805.107	2482746.242	385.187	65	4.79%	4.32%	-13719.877	-0.729
660	511614.592	494797.453	2482842.430	389.985	25	4.32%	2.10%	-1126.946	-8.874
661	511745.255	494679.652	2482885.706	392.728	100	2.10%	6.12%	2488.375	4.019
662	511852.592	494728.838	2482962.985	399.294	75	6.12%	4.06%	-3639.244	-2.748
663	512110.322	494840.763	2483174.950	409.750	50	4.06%	2.95%	-4528.728	-2.208
664	512258.626	494752.591	2483286.057	414.129	45	2.95%	3.56%	7410.658	1.349
665	512430.129	494688.237	2483440.060	420.234	65	3.56%	3.53%	#####	-0.045
666	512583.031	494610.135	2483561.165	425.633	45	3.53%	4.59%	4247.622	2.354
667	512756.147	494624.473	2483729.490	433.579	75	4.59%	6.07%	5072.569	1.971
668	512851.639	494685.216	2483776.822	439.374	45	6.07%	4.93%	-3946.164	-2.534
669	513080.853	494900.894	2483761.933	450.670	55	4.93%	4.25%	-8065.766	-1.240
670	513251.584	495067.982	2483757.495	457.920	55	4.25%	4.55%	18082.218	0.553



S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
671	513564.911	495363.626	2483795.105	472.178	45	4.55%	3.63%	-4907.985	-2.038
672	513697.404	495352.076	2483920.276	476.993	45	3.63%	4.71%	4171.929	2.397
673	513788.246	495347.407	2484009.906	481.273	55	4.71%	5.14%	12843.717	0.779
674	513930.218	495325.645	2484131.135	488.572	45	5.14%	5.42%	16303.367	0.613
675	514268.648	495620.483	2484094.046	506.903	55	5.42%	4.63%	-6998.031	-1.429
676	514502.682	495787.722	2484217.073	517.740	45	4.63%	5.43%	5631.072	1.776
677	514669.162	495941.510	2484164.191	526.779	65	5.43%	4.06%	-4738.231	-2.110
678	514847.529	496037.288	2484256.504	534.017	45	4.06%	5.02%	4701.986	2.127
679	514992.927	496075.973	2484393.866	541.309	45	5.02%	3.18%	-2457.701	-4.069
680	515257.370	495986.948	2484619.140	549.729	75	3.18%	0.74%	-3068.956	-3.258
681	515445.626	496068.228	2484456.871	551.122	55	0.74%	4.21%	1584.545	6.311
682	515649.706	496128.237	2484263.211	559.717	45	4.21%	2.99%	-3694.997	-2.706
683	515797.411	496164.905	2484122.698	564.138	40	2.99%	6.55%	1123.818	8.898
684	516046.863	496279.708	2483926.536	580.484	45	6.55%	5.33%	-3672.297	-2.723
685	516296.043	496294.277	2483754.442	593.758	35	5.33%	4.50%	-4243.126	-2.357
686	516352.782	496349.358	2483761.935	596.313	35	4.50%	6.52%	1735.511	5.762
687	516421.068	496383.762	2483718.425	600.764	35	6.52%	3.76%	-1270.047	-7.874
688	516598.740	496424.275	2483606.908	607.450	25	3.76%	2.56%	-2075.943	-4.817
689	516668.611	496490.078	2483591.598	609.238	25	2.56%	4.34%	1403.169	7.127
690	516873.439	496624.017	2483680.943	618.129	35	4.34%	3.94%	-8815.842	-1.134
691	517051.923	496768.702	2483778.625	625.168	55	3.94%	3.51%	-12793.370	-0.782
692	517137.978	496800.189	2483857.687	628.192	25	3.51%	5.23%	1459.927	6.850
693	517177.395	496786.141	2483894.237	630.252	35	5.23%	1.92%	-1057.720	-9.454
694	517224.019	496782.780	2483939.507	631.146	25	1.92%	3.56%	1524.766	6.558
695	517284.092	496795.557	2483998.206	633.283	35	3.56%	4.35%	4413.476	2.266
696	517393.603	496864.228	2484064.477	638.046	25	4.35%	6.20%	1352.527	7.394
697	517498.982	496897.828	2483980.298	644.578	35	6.20%	4.30%	-1838.605	-5.439
698	517574.536	496934.955	2483914.646	647.822	30	4.30%	5.93%	1831.302	5.461
699	517710.041	496887.126	2483796.572	655.861	100	5.93%	3.25%	-3725.433	-2.684
700	517858.887	496897.780	2483655.600	660.697	25	3.25%	6.51%	767.593	13.028
701	517916.878	496878.746	2483609.756	664.469	25	6.51%	4.50%	-1247.482	-8.016
702	518124.615	496726.993	2483494.415	673.820	25	4.50%	3.28%	-2053.449	-4.870
703	518208.560	496661.283	2483442.583	676.577	25	3.28%	4.36%	2332.456	4.287
704	518418.030	496537.790	2483290.097	685.701	40	4.36%	4.88%	7693.895	1.300
705	518524.646	496533.694	2483188.783	690.899	45	4.88%	3.65%	-3660.626	-2.732
706	518629.120	496520.876	2483086.021	694.709	40	3.65%	6.18%	1578.447	6.335
707	518733.015	496547.445	2482991.790	701.130	55	6.18%	3.80%	-2313.504	-4.322
708	518813.635	496592.607	2482928.777	704.196	45	3.80%	2.47%	-3364.028	-2.973
709	518859.088	496634.957	2482913.094	705.317	25	2.47%	4.10%	1527.226	6.548
710	519064.481	496788.143	2482792.174	713.743	25	4.10%	6.19%	1196.635	8.357
711	519136.658	496829.714	2482848.228	718.212	25	6.19%	4.61%	-1576.517	-6.343
712	519181.244	496870.090	2482861.617	720.265	25	4.61%	3.04%	-1597.338	-6.260
713	519210.616	496899.042	2482856.712	721.158	25	3.04%	5.75%	923.601	10.827
714	519382.585	497048.269	2482782.958	731.042	30	5.75%	5.99%	12351.148	0.810
715	519436.308	497101.194	2482775.765	734.261	30	5.99%	3.32%	-1125.031	-8.889
716	519528.446	497192.602	2482776.910	737.323	30	3.32%	6.21%	1041.160	9.605
717	519627.879	497208.041	2482714.556	743.493	25	6.21%	2.68%	-710.024	-14.084
718	519726.784	497114.479	2482739.414	746.148	75	2.68%	5.45%	2716.474	3.681
719	519986.201	497119.224	2482583.538	760.274	25	5.45%	6.43%	2548.679	3.924
720	520051.689	497093.781	2482536.276	764.482	45	6.43%	2.60%	-1176.987	-8.496
721	520149.916	497003.813	2482506.315	767.038	24	2.60%	4.10%	1600.000	6.250
722	520263.549	496891.600	2482514.559	771.700	75	4.10%	6.27%	3455.992	2.894
723	520402.658	496885.203	2482417.403	780.426	65	6.27%	5.27%	-6459.568	-1.548
724	520532.846	497004.148	2482369.252	787.283	45	5.27%	6.10%	5405.927	1.850
725	520771.235	496883.824	2482280.728	801.822	75	6.10%	4.61%	-5036.158	-1.986
726	521001.302	496802.898	2482162.687	812.428	35	4.61%	6.34%	2023.295	4.942

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
727	521080.003	496808.820	2482097.748	817.417	45	6.34%	1.64%	-957.335	-10.446
728	521166.119	496825.203	2482021.423	818.829	75	1.64%	-0.43%	-3622.192	-2.761
729	521326.028	496905.311	2481924.100	818.139	40	-0.43%	-4.51%	-981.721	-10.186
730	521448.757	496855.774	2481815.828	812.609	35	-4.51%	-0.85%	958.188	10.436
731	521537.148	496842.171	2481732.973	811.855	30	-0.85%	1.14%	1507.849	6.632
732	521592.036	496865.828	2481683.942	812.478	45	1.14%	-3.71%	-928.537	-10.770
733	521730.509	496872.261	2481554.483	807.341	35	-3.71%	-3.31%	8693.622	1.150
734	521806.179	496923.779	2481499.591	804.838	45	-3.31%	-4.84%	-2944.458	-3.396
735	521978.733	496954.464	2481334.541	796.494	55	-4.84%	-6.54%	-3225.313	-3.100
736	522221.547	497035.024	2481124.895	780.612	45	-6.54%	-0.57%	753.959	13.263
737	522310.679	497091.955	2481063.119	780.102	25	-0.57%	1.20%	1414.512	7.070
738	522412.020	497154.994	2480987.255	781.313	25	1.20%	-5.73%	-361.034	-27.698
739	522479.559	497212.411	2481011.040	777.443	35	-5.73%	-0.80%	710.435	14.076
740	522543.701	497274.126	2481021.921	776.928	25	-0.80%	2.14%	849.394	11.773
741	522625.813	497289.558	2480950.206	778.764	25	2.40%	3.14%	3361.244	2.975
742	522745.166	497268.045	2480859.389	782.516	30	3.14%	-1.15%	-698.709	-14.312
743	522835.624	497330.410	2480794.849	781.476	30	-1.15%	2.41%	843.187	11.860
744	522944.627	497438.338	2480796.847	784.101	65	2.41%	1.33%	-6051.695	-1.652
745	523005.744	497493.801	2480771.401	784.916	25	1.33%	0.34%	-2516.635	-3.974
746	523099.425	497563.776	2480713.560	785.235	30	0.34%	-5.34%	-528.135	-18.935
747	523171.481	497633.758	2480720.677	781.387	30	-5.34%	-3.32%	1486.532	6.727
748	523272.277	497724.559	2480682.249	778.039	40	-3.32%	-0.78%	1573.959	6.353
749	523309.481	497745.370	2480651.603	777.749	25	-0.78%	-6.20%	-461.185	-21.683
750	523353.749	497774.343	2480619.240	775.004	25	-6.20%	-5.36%	2956.494	3.382
751	523417.843	497832.578	2480592.475	771.571	30	-5.36%	-5.07%	10628.789	0.941
752	523646.279	497998.932	2480451.964	759.982	40	-5.07%	-2.33%	1455.390	6.871
753	523730.494	498066.656	2480402.911	758.024	40	-2.33%	-2.98%	-6138.638	-1.629
754	523800.331	498121.847	2480363.551	755.946	75	-2.98%	6.62%	781.659	12.793
755	523890.059	498206.129	2480365.231	761.884	35	6.62%	3.37%	-1077.856	-9.278
756	523967.882	498268.356	2480319.899	764.508	45	3.37%	5.52%	2091.378	4.782
757	524028.026	498301.294	2480272.071	767.830	30	5.52%	6.45%	3253.395	3.074
758	524069.441	498327.883	2480241.323	770.499	35	6.45%	5.36%	-3221.404	-3.104
759	524116.409	498365.639	2480213.810	773.016	35	5.36%	4.44%	-3818.595	-2.619
760	524265.786	498492.499	2480249.624	779.651	30	4.44%	9.11%	643.310	15.545
761	524329.250	498510.898	2480304.203	785.430	25	9.11%	4.84%	-585.645	-17.075
762	524462.014	498604.074	2480367.700	791.851	50	4.84%	1.46%	-1481.586	-6.750
763	524552.512	498678.736	2480407.001	793.174	30	1.46%	3.04%	1896.868	5.272
764	524665.233	498783.331	2480407.857	796.605	25	3.04%	6.33%	761.953	13.124
765	524699.160	498809.805	2480387.757	798.751	30	6.33%	-0.21%	-459.405	-21.767
766	524804.046	498858.978	2480297.702	798.535	25	-0.21%	0.74%	2638.695	3.790
767	524872.870	498919.940	2480267.490	799.046	50	0.74%	-0.64%	-3607.513	-2.772
768	524969.467	498904.477	2480175.853	798.423	25	-0.64%	5.76%	390.343	25.619
769	525037.125	498939.501	2480123.621	802.321	30	5.76%	2.48%	-913.335	-10.949
770	525158.260	499045.564	2480065.619	805.319	45	2.48%	0.48%	-2251.022	-4.442
771	525270.550	499109.148	2479977.975	805.855	25	0.48%	5.31%	517.358	19.329
772	525459.654	499090.719	2479789.973	815.894	35	5.31%	3.56%	-2004.168	-4.990
773	525547.294	499148.144	2479726.013	819.016	35	3.56%	5.88%	1513.010	6.609
774	525656.059	499239.639	2479758.434	825.407	35	5.88%	4.91%	-3609.242	-2.771
775	525710.050	499291.872	2479771.889	828.056	30	4.91%	3.89%	-2957.243	-3.382
776	525826.459	499406.092	2479772.320	832.586	45	3.89%	5.63%	2583.672	3.870
777	525984.529	499550.018	2479834.877	841.491	35	5.63%	5.25%	-9021.595	-1.108
778	526051.318	499612.882	2479856.574	844.994	35	5.25%	4.49%	-4653.856	-2.149
779	526243.087	499800.670	2479892.638	853.611	35	4.49%	3.75%	-4712.431	-2.122
780	526327.874	499869.636	2479937.714	856.791	35	3.75%	2.69%	-3303.403	-3.027
781	526385.835	499924.905	2479954.827	858.350	35	2.69%	5.46%	1264.302	7.910
782	526452.920	499989.568	2479972.689	862.013	45	5.46%	3.01%	-1835.704	-5.448

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
783	526511.404	500046.462	2479978.410	863.772	35	3.01%	6.52%	997.194	10.028
784	526571.920	500095.683	2479943.957	867.716	35	6.52%	1.80%	-742.562	-13.467
785	526690.941	500208.215	2479971.662	869.864	35	1.80%	2.58%	4519.488	2.213
786	526826.078	500329.981	2480008.014	873.349	35	2.58%	1.63%	-3674.800	-2.721
787	526906.747	500325.428	2479933.255	874.661	30	1.63%	4.84%	933.622	10.711
788	527040.712	500439.814	2479903.304	881.145	40	4.84%	0.56%	-933.778	-10.709
789	527201.466	500462.471	2479748.555	882.038	35	0.56%	4.17%	968.285	10.328
790	527365.325	500573.741	2479715.026	888.872	100	4.17%	2.28%	-5275.215	-1.896
791	527647.747	500802.675	2479697.218	895.298	35	2.28%	6.22%	888.321	11.257
792	527768.711	500901.578	2479759.674	902.816	45	6.22%	4.89%	-3386.426	-2.953
793	527841.883	500954.431	2479807.807	906.391	25	4.89%	3.24%	-1515.081	-6.600
794	527925.342	501033.726	2479828.606	909.092	35	3.24%	3.97%	4746.962	2.107
795	528091.579	501149.618	2479722.220	915.697	125	3.97%	4.91%	13350.400	0.749
796	528220.499	501222.882	2479623.908	922.027	25	4.91%	2.52%	-1045.020	-9.569
797	528271.154	501222.688	2479575.110	923.302	35	2.52%	4.71%	1596.059	6.265
798	528464.527	501330.374	2479470.929	932.411	25	4.71%	4.73%	105707.025	0.095
799	528630.696	501262.775	2479365.166	940.277	45	4.73%	3.05%	-2678.491	-3.733
800	528738.820	501208.424	2479274.432	943.579	30	3.05%	2.59%	-6414.400	-1.559
801	528848.771	501160.817	2479176.159	946.423	35	2.59%	5.78%	1096.480	9.120
802	529032.672	501251.907	2479112.212	957.049	50	5.78%	3.37%	-2074.343	-4.821
803	529157.924	501374.106	2479111.920	961.267	35	3.37%	4.55%	2968.402	3.369
804	529305.905	501517.108	2479134.242	967.996	25	4.55%	3.08%	-1700.286	-5.881
805	529507.912	501703.404	2479181.373	974.211	30	3.08%	2.76%	-9396.244	-1.064
806	529633.394	501815.659	2479166.184	977.671	25	2.76%	4.06%	1917.961	5.214
807	529684.098	501862.508	2479147.663	979.730	35	4.06%	2.41%	-2117.219	-4.723
808	529859.623	501942.461	2478998.465	983.956	65	2.41%	4.60%	2964.059	3.374
809	530110.539	502088.059	2478804.325	995.500	75	4.60%	3.33%	-5889.746	-1.698
810	530183.395	502144.299	2478759.596	997.924	25	3.33%	5.45%	1175.564	8.507
811	530263.778	502208.561	2478719.749	1002.308	35	5.45%	1.60%	-909.207	-10.999
812	530397.412	502245.182	2478600.514	1004.452	35	1.60%	4.61%	1165.877	8.577
813	530768.373	502386.805	2478279.962	1021.540	35	4.61%	5.74%	3098.349	3.228
814	530909.376	502405.523	2478148.106	1029.628	45	5.74%	6.07%	13344.107	0.749
815	531075.843	502316.596	2478026.821	1039.738	55	6.07%	6.43%	15445.597	0.647
816	531566.371	502162.998	2477609.564	1071.276	30	6.43%	5.21%	-2464.500	-4.058
817	532248.156	502681.712	2477323.018	1106.811	125	5.21%	5.90%	18170.611	0.550
818	533217.166	503438.209	2477418.024	1163.983	25	5.90%	6.39%	5145.583	1.943
819	533381.355	503578.773	2477490.100	1174.468	35	6.39%	5.47%	-3828.415	-2.612
820	533530.650	503714.710	2477429.544	1182.637	35	5.47%	6.27%	4410.589	2.267
821	533632.773	503802.386	2477448.374	1189.035	35	6.27%	5.67%	-5840.001	-1.712
822	533857.885	503983.941	2477391.906	1201.790	35	5.67%	5.29%	-9330.632	-1.072
823	533946.680	504015.487	2477309.770	1206.488	25	5.29%	5.37%	33205.793	0.301
824	534034.341	504066.106	2477238.406	1211.192	35	5.37%	5.91%	6485.492	1.542
825	534093.612	504092.605	2477185.389	1214.692	55	5.91%	5.99%	63147.045	0.158
826	534206.739	504151.469	2477089.755	1221.472	35	5.99%	3.85%	-1632.401	-6.126
827	534289.258	504196.093	2477020.762	1224.648	35	3.85%	4.93%	3228.795	3.097
828	534499.700	504299.262	2476840.373	1235.029	55	4.93%	3.95%	-5571.204	-1.795
829	534708.958	504399.194	2476659.594	1243.285	55	3.95%	5.10%	4771.793	2.096
830	534871.428	504458.458	2476509.714	1251.568	25	5.10%	2.67%	-1030.701	-9.702
831	535057.366	504349.079	2476402.742	1256.538	35	2.67%	3.90%	2861.914	3.494
832	535123.646	504283.852	2476397.113	1259.120	25	3.90%	6.12%	1125.211	8.887
833	535204.826	504300.897	2476336.388	1264.086	35	6.12%	4.85%	-2767.635	-3.613
834	535294.582	504385.388	2476307.409	1268.442	45	4.85%	6.15%	3457.350	2.892
835	535364.345	504435.894	2476267.719	1272.735	35	6.15%	3.13%	-1156.428	-8.647
836	535435.289	504427.509	2476197.351	1274.954	35	3.13%	6.31%	1101.096	9.082
837	535564.572	504420.975	2476075.744	1283.107	35	6.31%	4.24%	-1689.332	-5.920
838	535634.283	504382.528	2476034.700	1286.059	45	4.24%	1.88%	-1911.825	-5.231

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
839	535746.218	504279.660	2476072.357	1288.165	30	1.88%	4.73%	1051.482	9.510
840	535808.162	504244.566	2476022.939	1291.097	25	4.73%	1.80%	-852.415	-11.731
841	535935.457	504133.385	2476031.352	1293.390	35	1.80%	4.35%	1373.985	7.278
842	536095.692	504045.496	2475919.592	1300.358	25	4.35%	5.71%	1842.847	5.426
843	536199.625	503989.279	2475832.251	1306.287	25	5.71%	4.29%	-1770.411	-5.648
844	536427.510	503807.074	2475721.872	1316.070	35	4.29%	6.48%	1601.038	6.246
845	536491.334	503764.631	2475687.414	1320.205	25	6.48%	-0.70%	-348.023	-28.734
846	536670.787	503845.014	2475535.981	1318.941	40	-0.70%	3.22%	1020.455	9.800
847	536793.929	503959.747	2475494.995	1322.901	35	3.22%	1.40%	-1922.532	-5.201
848	536888.192	504041.198	2475449.380	1324.216	28.701	1.40%	3.19%	1599.999	6.250
849	536999.554	504138.163	2475489.388	1327.767	45	3.19%	2.54%	-6894.940	-1.450
850	537207.290	504322.735	2475470.569	1333.035	35	2.54%	5.64%	1129.439	8.854
851	537323.035	504424.872	2475505.232	1339.557	25	5.64%	2.38%	-767.006	-13.038
852	537396.059	504471.593	2475449.498	1341.292	55	2.38%	-1.51%	-1416.732	-7.059
853	537487.662	504445.739	2475365.378	1339.912	25	-1.51%	0.02%	1634.722	6.117
854	537559.030	504470.594	2475304.755	1339.928	25	0.02%	1.11%	2304.586	4.339
855	537648.141	504547.176	2475259.978	1340.915	25	1.11%	-1.23%	-1068.919	-9.355
856	537681.302	504576.498	2475245.001	1340.507	25	-1.23%	0.25%	1687.753	5.925
857	537876.744	504672.539	2475106.042	1340.995	45	0.25%	0.54%	15659.840	0.639
858	538013.172	504652.102	2474972.557	1341.728	100	0.54%	6.31%	1732.985	5.770
859	538149.323	504756.736	2474915.811	1350.316	35	6.31%	4.12%	-1602.873	-6.239
860	538246.876	504853.479	2474921.072	1354.339	45	4.12%	2.71%	-3176.604	-3.148
861	538315.828	504919.402	2474902.001	1356.206	25	2.71%	3.46%	3302.632	3.028
862	538397.165	504921.144	2474826.670	1359.024	25	3.46%	-2.12%	-447.679	-22.337
863	538427.762	504903.858	2474801.456	1358.375	25	-2.12%	0.65%	902.934	11.075
864	538562.183	504832.507	2474692.489	1359.247	25	0.65%	6.05%	463.246	21.587
865	538702.170	504926.285	2474617.613	1367.710	45	6.05%	0.05%	-750.532	-13.324
866	538783.860	504888.679	2474548.165	1367.751	55	0.05%	5.90%	940.206	10.636
867	538898.072	504948.550	2474458.401	1374.489	55	5.90%	2.18%	-1476.551	-6.773
868	538983.131	504923.355	2474379.969	1376.339	45	2.18%	-1.83%	-1123.983	-8.897
869	539200.154	505003.802	2474317.872	1372.370	45	-1.83%	-3.50%	-2692.908	-3.713
870	539277.315	505075.771	2474290.083	1369.669	25	-3.50%	-0.76%	910.541	10.982
871	539322.501	505115.005	2474268.469	1369.328	35	-0.76%	-3.01%	-1552.689	-6.440
872	539394.556	505151.003	2474206.831	1367.160	35	-3.01%	0.70%	943.876	10.595
873	539459.192	505205.361	2474172.561	1367.612	45	0.70%	-4.31%	-897.768	-11.139
874	539549.799	505247.777	2474094.858	1363.704	25	-4.31%	-2.90%	1769.479	5.651
875	539608.207	505244.810	2474037.013	1362.010	55	-2.90%	-4.74%	-2987.635	-3.347
876	539671.250	505255.960	2473975.074	1359.021	45	-4.74%	-4.06%	6563.248	1.524
877	539795.844	505300.774	2473861.118	1353.968	35	-4.06%	-2.65%	2485.887	4.023
878	539860.942	505333.809	2473805.041	1352.244	55	-2.65%	-0.11%	2167.976	4.613
879	540013.632	505446.795	2473714.864	1352.075	55	-0.11%	-4.04%	-1398.613	-7.150
880	540109.186	505503.955	2473642.600	1348.212	45	-4.04%	-1.42%	1717.737	5.822
881	540202.973	505580.571	2473605.866	1346.877	35	-1.42%	-3.92%	-1400.552	-7.140
882	540372.265	505649.288	2473461.823	1340.237	65	-3.92%	-0.09%	1694.231	5.902
883	540473.943	505697.438	2473379.433	1340.149	45	-0.09%	-5.17%	-884.788	-11.302
884	540583.176	505692.888	2473276.314	1334.500	45	-5.17%	-2.37%	1605.717	6.228
885	540685.863	505757.932	2473202.425	1332.067	26.003	-2.37%	-4.00%	-1600.000	-6.250
886	540747.657	505801.383	2473161.924	1329.598	45	-4.00%	-5.30%	-3460.355	-2.890
887	540911.573	505847.889	2473014.832	1320.919	55	-5.30%	-2.79%	2192.072	4.562
888	541020.854	505930.003	2472944.065	1317.874	75	-2.79%	-3.75%	-7779.411	-1.285
889	541180.427	506021.602	2472842.932	1311.890	55	-3.75%	-5.10%	-4085.572	-2.448
890	541435.695	506084.134	2472622.055	1298.881	65	-5.10%	-2.98%	3070.543	3.257
891	541601.872	505981.413	2472499.915	1293.930	55	-2.98%	-1.34%	3353.382	2.982
892	541729.760	505995.248	2472373.730	1292.217	30	-1.34%	-2.86%	-1975.257	-5.063
893	541814.503	506012.064	2472292.168	1289.795	41.521	-2.86%	-3.51%	-6399.999	-1.563
894	541954.029	505929.481	2472182.102	1284.903	26.43	-3.51%	-1.86%	1600.001	6.250

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
895	542005.575	505916.640	2472132.186	1283.946	25	-1.86%	2.77%	540.649	18.496
896	542057.859	505918.829	2472080.166	1285.394	30	2.77%	-4.03%	-441.527	-22.649
897	542182.371	505963.271	2471967.133	1280.382	45	-4.03%	-6.08%	-2186.600	-4.573
898	542248.003	505938.914	2471906.358	1276.389	25	-6.08%	-3.44%	946.892	10.561
899	542455.488	505792.882	2471786.914	1269.245	45	-3.44%	-3.11%	13563.074	0.737
900	542631.346	505634.112	2471799.113	1263.773	35	-3.11%	-5.41%	-1524.265	-6.561
901	542765.252	505504.091	2471790.579	1256.532	45	-5.41%	-5.23%	24969.253	0.400
902	543015.359	505451.365	2471586.136	1243.458	125	-5.23%	-2.41%	4440.957	2.252
903	543260.430	505541.076	2471365.814	1237.545	75	-2.41%	-5.73%	-2260.787	-4.423
904	543863.609	505324.466	2471046.411	1202.982	45	-5.73%	-4.34%	3245.057	3.082
905	544327.549	505151.116	2470682.548	1182.831	35	-4.34%	-2.48%	1882.594	5.312
906	544557.541	505328.745	2470549.286	1177.118	35	-2.48%	-4.63%	-1633.338	-6.122
907	545074.665	505058.631	2470415.370	1153.190	30	-4.63%	-4.45%	17365.878	0.576
908	545579.413	504715.469	2470602.863	1130.707	45	-4.45%	-5.86%	-3213.333	-3.112
909	545635.324	504679.776	2470645.520	1127.433	17.746	-5.86%	-4.75%	1600.004	6.250
910	545764.791	504600.541	2470747.606	1121.289	35	-4.75%	-4.06%	5137.289	1.947
911	545850.290	504545.668	2470811.993	1117.814	35	-4.06%	-6.48%	-1446.491	-6.913
912	545915.481	504504.971	2470776.232	1113.587	35	-6.48%	-4.31%	1610.658	6.209
913	546003.933	504502.426	2470688.271	1109.774	5.547	-4.31%	-4.66%	-1600.001	-6.250
914	546154.789	504480.060	2470540.851	1102.747	45	-4.66%	-4.52%	33276.338	0.301
915	546434.587	504437.950	2470274.899	1090.094	55	-4.52%	-3.98%	10191.494	0.981
916	546749.828	504419.366	2469967.900	1077.538	45	-3.98%	-5.67%	-2672.091	-3.742
917	546880.836	504375.846	2469845.485	1070.114	35	-5.67%	-2.26%	1026.548	9.741
918	547012.844	504419.904	2469721.249	1067.135	45	-2.26%	-1.39%	5213.680	1.918
919	547176.327	504491.926	2469577.689	1064.855	20.675	-1.39%	-0.10%	1600.000	6.250
920	547253.214	504503.988	2469501.755	1064.777	35	-0.10%	-1.72%	-2164.748	-4.619
921	547386.913	504551.144	2469377.645	1062.479	25.543	-1.72%	-0.12%	1600.001	6.250
922	547477.227	504582.048	2469293.278	1062.368	35	-0.12%	-2.02%	-1840.824	-5.432
923	547616.154	504597.746	2469160.654	1059.556	65	-2.02%	3.30%	1222.168	8.182
924	547931.783	504472.670	2468886.278	1069.955	45	3.30%	4.61%	3431.953	2.914
925	548530.290	504054.584	2468962.093	1097.522	35	4.61%	3.14%	-2393.285	-4.178
926	548625.408	504005.219	2469041.544	1100.512	30	3.14%	5.67%	1188.659	8.413
927	548675.167	503958.762	2469058.195	1103.332	35	5.67%	4.54%	-3097.098	-3.229
928	549005.131	503713.076	2469036.908	1118.303	45	4.54%	2.25%	-1967.148	-5.084
929	549122.113	503665.268	2469141.735	1120.935	35	2.25%	3.87%	2156.288	4.638
930	549303.147	503531.108	2469185.809	1127.946	35	3.87%	3.39%	-7221.749	-1.385
931	549431.220	503412.952	2469170.195	1132.285	55	3.39%	6.68%	1668.524	5.993
932	549544.628	503317.479	2469125.410	1139.866	35	6.68%	4.54%	-1632.433	-6.126
933	549613.247	503253.779	2469124.026	1142.982	65	4.54%	3.56%	-6638.213	-1.506
934	549833.320	503058.943	2469205.523	1150.819	55	3.56%	6.59%	1815.114	5.509
935	551225.776	503541.417	2468415.167	1242.601	55	6.59%	5.01%	-3469.275	-2.882
936	551485.877	503728.483	2468297.124	1255.622	45	5.01%	6.40%	3219.543	3.106
937	551914.380	503715.413	2467914.451	1283.062	45	6.40%	2.75%	-1229.967	-8.130
938	552033.493	503615.856	2467860.398	1286.332	35	2.75%	3.92%	2978.644	3.357
939	552146.754	503636.313	2467752.836	1290.772	35	3.92%	6.15%	1573.448	6.355
940	552277.996	503743.951	2467706.113	1298.836	45	6.15%	1.30%	-928.083	-10.775
941	552373.547	503832.929	2467737.686	1300.074	45	1.30%	3.15%	2433.982	4.108
942	552561.278	503789.888	2467738.911	1305.978	35	3.15%	3.93%	4464.548	2.240
943	552627.381	503726.490	2467724.418	1308.575	35	3.93%	1.48%	-1430.903	-6.989
944	552688.077	503672.433	2467747.548	1309.475	30	1.48%	3.49%	1497.416	6.678
945	552884.297	503763.255	2467888.757	1316.315	35	3.49%	5.20%	2043.244	4.894
946	552975.595	503829.836	2467948.956	1321.062	35	5.20%	2.44%	-1268.674	-7.882
947	553087.380	503853.962	2468057.001	1323.790	45	2.44%	5.52%	1460.833	6.845
948	553165.981	503908.834	2468103.589	1328.129	45	5.52%	0.21%	-847.681	-11.797
949	553323.998	503870.512	2468254.002	1328.464	25	0.21%	4.81%	543.423	18.402
950	553371.990	503910.186	2468276.346	1330.774	25	4.81%	0.71%	-608.680	-16.429

S/N	Chainage	X-Coordinate	Y-Coordinate	VIP Level	Length of Curve	In gradient	Out gradient	Radius	M.VALUE
951	553482.318	503923.514	2468373.689	1331.552	75	0.71%	2.74%	3678.963	2.718
952	553635.670	503827.631	2468483.430	1335.760	0			INFINITY	0.000

**LAWNGTLAI BYE PASS ROAD**

1	488538.214	2490209.082	724.067	0.000				INFINITY	0
2	488504.760	2490024.899	748.371	382.103	35	6.36%	6.29%	-46848.946	-0.21345
3	488286.008	2489575.187	787.066	997.689	45	6.29%	6.79%	8951.634	1.11711
4	488608.700	2489452.911	821.916	1511.051	55	6.79%	6.38%	-13478.459	-0.74192
5	488827.626	2489106.317	849.667	1945.978				INFINITY	0