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સુરત મહાનગરપાલિકાના વિવિધ પેડાપાઈના  
રેસલ્વેશન ને નવી ડીઝાઇન મુજબ બનાવવા નવા ટ્રેન્ચ લાઈન  
રીપેરીંગ કામો પરત્વે વિવિધ જાન નરફથી મેપલ સુચના  
આવેલ છે. ઉક્ત રોડ ડીઝાઇન સંચાર કરતી સંખ્યા એસ.વી.એન.  
આઈ. ટી., સુરત સાથે અહીં વિચારણા કરતા, એસ.વી.એન.આઈ.  
ટી., સુરત નરફથી ટ્રેન્ચલાઈન રીપેરીંગ કરવાના કામ મેપલ  
બોલાઈકડ ડીઝાઇન આ સાથે "એનર્જી-આ" મુજબ આ સાથે  
સામેલ કામો અપેલ છે. ને મુજબ જરૂરી ફેરફાર કરી  
આગામી કાર્યવાહી દ્વારા કરવા આદેશાનુસાર તમામને  
જાણવામાં આવે છે.

વિશ્વાસ:- એનર્જી-આ"

  
16/12  
કાર્યપાલક ઇન્ફોર્મ  
રોડ ડેવલપમેન્ટ ડીપાર્ટમેન્ટ

ન.સા.ર. અ.સી.ટી. ઇન્ફોર્મશી પ્રતિ .... જાણ સારું  
ન.સા.ર. અ. આડવાઈકડમાં પ્રતિ .... જાણ સારું.

## 1. For Residential Roads

For Residential Roads, the preparation of stabilised sub grade should be considered for a depth of 100 mm instead of 200 mm. Further, looking to the difficulty in using the disc harrow for Residential Roads, pulverisation of soil and mixing of soil-lime-fly ash may be permitted with manual plough, without compromising the quality of work. The quantity of lime and fly ash mentioned in design shall remain unchanged to compensate the effect of reduction in sub grade depth.

To check the quality of construction of stabilised sub grade, Field CBR is traditionally be determined as per IS:2720 (Part 31): 1990. However, due to difficulty in taking the truck used for the test purpose to enter in the residential streets, field dry density shall be determined and the compaction effort given shall be minimum 97% of the MDD. All other requirements mentioned in earlier design should be considered as it is except these changes.

## 2. For Trench Reinstatement

- In this case, due to difficulty in having the access of the various machineries used for mixing, spreading and compaction in trench reinstatement work due to space constraints, it is decided to permit alternate methods for the same without compromising the quality of construction work. The changes in the construction methodology recommended are summarised in Table 1.

**Table 1: Revised construction methodology recommended for trench reinstatement work**


Layer	Mixing	Laying and Spreading	Compaction	
			Trench width $\leq 1.5$ m	Trench width $> 1.5$ m
Stabilised Sub grade	Manual Plough	Manual method	Plate vibrator	Roller (As per tender)
Granular Sub-base - V	Plant	Manual method	Plate vibrator	Roller (As per tender)
WMM Base	Plant	Manual method	Plate vibrator	Roller (As per tender)
Bituminous Layer	Plant	Paver	Mini Roller	Roller (As per tender)

- For sub grade, sub-base and base courses, if the minimum compaction requirement is not attained as mentioned in Technical Specifications, the layer shall be prepared in two layers having equal thicknesses each. e.g. If 200 mm thick sub grade is prepared as per Table 1, and minimum compaction requirement is not attained, sub grade has to be prepared in two layers having 100 mm thickness each.
- Due to practical difficulties in laying two bituminous layers (i.e. DBM and BC), it is recommended to have the changes in the thicknesses of different layers as shown in Table 2. It is to be noted here that the layer of BC is omitted due to the difficulties arising during using paver and roller for DBM layer in trench reinstatement work. The thickness of BC layer has been compensated by increasing the thickness of GSB, WMM and DBM. In place of DBM-II, DBM-I has been incorporated due to thickness constraints of DBM-II. Further, after preparing layer of DBM-I, tack coat and stone dust shall be applied confirming the relevant items of Technical Specifications.

**Table 2: Revised thicknesses of pavement layers for trench reinstatement work**

Layer Description	Compacted Thickness (mm)	
	Residential and Collector Roads	Sub-Arterial and Arterial Roads
Stabilised Sub grade	100	200
Granular Sub-base (GSB-V)	150	200
WMM Base	150	200
Prime Coat	SS-1 @ 0.85 kg per sq. m.	
Tack Coat	RS-1 @ 0.27 kg per sq. m.	
DBM-I	100	100
Tack Coat (Overlapping to the existing adjoining bituminous surface)	RS-1 @ 0.25 kg per sq. m.	
Stone Dust	0.03 Cum per 10 sq. m.	

- Due to time constraint of carrying out CBR test and looking to the safety of road users, adequacy of sub grade compaction shall be checked by measuring field dry density, which shall be at least 97% of the MDD. For GSB, WMM and DBM, compaction adequacy shall be checked as per relevant items of Tender Specifications.

  
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