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P R E F A C E

Hitherto all the branches of P.W.D. have been referring to separate books of Specifications which were either incomplete or out of date in many respects. The object of bringing out this hand book of P.W.D. Specifications is to provide complete, up-to-date and uniform specifications which will be applicable to all the branches of the Public Works Department in the State. This book is a supplement to the Common Schedule of Rates and describes in precise terms the intention behind each item of work as given in the Common Schedule of Rates. It supersedes all the books of Specifications previously in force in the various branches.

For the sake of clarity and easy reference, the serial numbers of the chapters have been made to correspond to the chapters in the Common Schedule of Rates.

The Specifications given in this book will serve as standard specifications which will supply to normal construction and maintenance works. For big projects and specialised works, the Chief Engineer concerned may issue separate specifications and separate Schedule of Rates for any or all items of work.

In case where new methods of construction have to be employed, the authority competent to give technical sanction shall lay down specifications for such items which shall be attached to the detailed estimate at the time of according technical sanction.

Where deviation and alterations from the Standard Specifications, as laid down in this book, are desired, specially drafted specification should be attached to the estimate and the suspension of the standard specifications made clear, the rates of such items of work as given in the Common Schedule of Rates being suitably amended. The authority to make any deviations or alterations, as suggested above, shall be the same as is competent to accord technical sanction to the detailed estimate.

Wherever a reference has been made to any Indian Standard issued by the Indian Standard Institution, it shall be taken as a reference to the latest version of the Standard. Wherever reference has been made to any standard other than the Indian

Standards, the same shall be superseded by the relevant Indian Standard when the latter comes into force.

Wherever, any dimensions or weights are given, their equivalents in metric units have also been given within brackets. These equivalents have been based on exact conversions but have been suitably rounded off in accordance with the procedure laid down by the Indian Standards Institution.

The metric units will be followed only when the State P.W.D. switches over to metric units of weights and measures. In the transition stage when both the systems may be existing side by side the Executive Engineer will determine which of the two units will be followed in case of any particular item of work.

Issued by the authority of
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OF
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1. "American Civil Engineers' Hand-book" by Merriman and Wiggin
2. 'Building Construction' by Mitchell.
3. "Highway Engineers' Hand-book" by Harger and Bonney.
4. 'Specifications 1962' of Architectural Press, London.
5. 'Irrigation Engineers' by K. R. Sharma.
6. 'Irrigation Outlets' by Gulhati.
7. 'Concrete Plain and Reinforced' by Taylor, Thompson and Smulski.
8. 'Joints and Cracks in Concrete' by Critchell.
9. 'Wood construction' by National Committee on Wood Utilization, United States Department of Commerce.
10. 'Road Aggregates' by Knight.
11. 'Building Construction' by Mackay.
12. Chief Engineer's Technical Memoranda of the Punjab P.W.D. (B. & R.) Branch.
13. Military Engineering Service Standards Schedule of Rates.
14. 'Form Work of Concrete Structures' by Wynn.
15. 'R.C.C. Design' by Reynolds.
16. P.W.D. Manual of Irrigation Practice.
17. Roorkee Treatises on Civil Engineering.
18. Report of Ecafe Seminar on Low Cost Roads and Soil Stabilization.
19. Central P.W.D. Specifications.
20. Punjab Manual of Irrigation Practice.
21. Rajasthan P.W.D. Specifications.
22. Punjab P.W.D. Public Health Specifications.
23. U.P. Irrigation Department Specifications.
24. Madras Detailed Standards Specifications.

25. Maharashtra P.W.D. Hand-book.
26. Military Engineer Services Hand-book.
27. Madras Highway Manual.
28. Standards Specifications Northern Railways.
29. *Publications of* Indian Roads Congress.
30. " Indian Standards Institute.
31. " British Standards Institute.
32. " American Society of Testing Materials.
33. " United States Bureau of Reclamation.
34. " American Concrete Institute.
35. " Central Board of Irrigation.
36. " Concrete Association of India.
37. " Ministry of War Transport, London.
38. " National Building Organization.
39. " Forest Research Institute, Dehra Dun.
40. " British Road Tar Association, London.
41. " Burmah Shell.
42. " Shalimar Tar Products.
43. " Standard Vacuum Oil Company.
44. " Caltex.
45. " Sahu Cement Works.

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