

decided on the merits of each particular case, but for purposes of comparison I have assumed that the streets considered under each of the headings are those of a large city.

There is a general consensus of opinion that for main avenues lined with shops or business premises four lines of traffic should be provided on each side of a central tramway. This allows for one line to be occupied by vehicles stopping at the curb, one by slow moving vehicles, and two by fast traffic.

Taking each line of traffic at a width of 8 ft., we get a total of 64 ft., to which must be added the tramway and the footpaths.

The width we can afford to allot to the tramway must depend entirely on the special circumstances of the case. Under any conditions, however, I think it desirable that the track should be definitely reserved for trams by means of a raised curb, and the minimum width allowable should be not less than 20 ft. Where it is possible to lay a sleeper track in grass between an avenue of trees it will be necessary to reserve a width of about 40 ft.

The customary allowance for footpaths is one-fifth of the total width on each side, but in the case of very wide roads this is unnecessary, and a width of 20 ft. seems to be a reasonable maximum.

It will be seen that we have a total width of 124 ft. between buildings, and I think we may regard this as a suitable width for a main avenue in a built-up area.

In districts not yet fully developed, where it is possible to secure a greater width without undue expenditure—as, for instance, under the provisions of a town planning scheme, there will be greater opportunities of providing for the amenities, and many variations suggest themselves.

Whatever allocation is adopted, however, I feel convinced that one or two guiding principles should be rigidly adhered to.

In the first place, fast traffic should be located as far as possible from those parts of the road devoted to foot passengers, in order that the noise, dust, and sense of unrest inevitably associated with fast moving vehicles shall disturb pedestrians as little as may be.

In the second place, tramways, whether they are placed towards the sides of the road or in the centre of it, should have a track entirely to themselves. This secures not only much more efficient working of the trams, but it also conduces in a very pronounced way to the safety and comfort of the other traffic.

In the third place, the indiscriminate use of trees and grass is to be guarded against.

If trees are to be used successfully, they must form a definite part of the street picture, either as a foil to the architecture, or for the purpose of affording shade, or protection from noise and dust. Nothing can be more unsatisfactory than trees badly placed, or planted under conditions such as insufficient space or too smoky an atmosphere, where they have not a chance to grow properly and quickly become an eyesore.

Much the same argument applies to turf; if rightly placed, under conditions where it flourishes and is well looked after, it is a continual source of delight, but where these conditions do not obtain it is far better to use gravel.

Main Streets.—These include those streets which, though of first-rate importance, do not fall within the category of main avenues.

It is impossible to lay down hard and fast definitions of the various classes, but perhaps the best description in this case would be those streets which form the main traffic routes within the city itself.

They form a group of hardly less importance than main avenues, and much the same considerations govern their design.

The probabilities are, however, that the available space will be more restricted, though, on the other hand, the traffic to be provided for may be rather less.

Provision for three lines of traffic on each side of a double tramway track will not be by any means excessive, and taking this as a reasonable standard, together with two footpaths each 18 ft. wide, a total width of 104 ft. is arrived at.

We are again confronted with the problem of deciding whether to provide an electric railway under the street, and on the whole I think it would be wise to do so.

In any case, I think we shall all be agreed on the necessity for providing adequate subways for the various mains, which all need attention at frequent intervals, to the great inconvenience of the general public, when, as is usually the case, it necessitates taking up portions of the footpath or carriageway.

An alternative arrangement is where the trams are placed at the side of the road, but this has the grave disadvantage that persons alighting from vehicles drawn up at the curb have to cross the track in order to reach the footpath.

There is no little danger, I think, when one is endeavoring to arrive at some sort of a standard width for any type of road that a nightmare of uniformity may be the result.

This is so far removed from the ideals of a town planner that it is more than ever necessary to urge that the object aimed at is not a standardization of roads, but a standardization of the principles of design.

In this connection we have a very important problem before us. For, whereas there is a fairly general agreement amongst traffic experts that a width of about 100 ft. is a proper allowance for main streets in cities, we have a totally different opinion expressed by men with a large experience of retail trade.

All the gentlemen who kindly let me know their views as to the general requisities of a shopping street agreed that main traffic streets offered the best opportunities for shops. They wish, however, to limit the width—in the interests of shopping—to from 50 to 70 ft.

A compromise might be accomplished by abolishing the surface tramway and replacing it by an underground tramway, probably in conjunction with motor buses. A further economy in width is realized by a strict relegation of all delivery vans to a service road in the rear of the shops, while a footpath 18 ft. in width would allow of frequent bays for the accommodation of vehicles wishing to draw up and deposit passengers.

Secondary Streets.—These may be said to form the connecting links in the system of main streets. They probably will not deal to any extent with through traffic, but are likely to carry a considerable volume of local or semi-local traffic.

A few, acting as supplementary ring roads within the city, will require tramway tracks, but as a general rule it may be taken that these will not be necessary.

In no other class of street perhaps does the width and allocation of space depend so much on the particular needs of the locality, and a large number of variations are possible.

The definition of secondary streets is necessarily more elastic than in the other classes, with the exception of boulevards or parkways, and widths have been proposed varying from 60 ft. to 80 ft.