gauge to recommend for any new subway. We have come to the conclusion that it is wise to propose the use of the standard 4 ft. 8½ in. gauge on any new subway, and we do so for the following reasons.

(a) It is the gauge of the steam railways, which cannot alter their gauge, and it might be desirable to run the subway cars on the steam lines.

(b) It is the gauge of the Metropolitan Division of the Toronto and York Radials, and we believe that most development will occur along this line.

(c) It is the standard gauge most commonly is use, and all equipment, etc., can thus be more readily and cheaply obtained.

We are not unmindful of the fact that for a free interchange this involves the ultimate change of gauge of all the existing lines with the exception of the Metropolitan Division, but we believe it will make ultimately for increased facility and economy of operation. However, should it be considered that the alteration of the present gauges be a too expensive task even with a view to obtaining ultimate benefit, then we would recommend the adoption for the subway of the 4 ft. 11 in. gauge of the Toronto Railway and alter the radial lines' gauge to this.

Ventilation:

It is possible that during hot weather the natural current of air in the direction of traffic induced by the movement of the trains may need some augmentation. In this case exhaust fans can be installed at suitable points at a not heavy charge, to discharge vitiated air, which will be naturally replaced by fresh.

Signalling:

We have allowed in the estimate for the installation of block signals equipped with devices for automatically throwing on the air-brakes in case a train should run past a signal set at "danger." The signals would be spaced so that a train would be brought to a full stop before the train in front was reached. The signals would be spaced so that a three-minute headway would be maintained. When the growth of traffic makes it necessary, the installation of additional signals will permit of this headway's being reduced to one and one-half minutes. Junctions and switch-points would be protected by interlocking signals, arranged to prevent any conflicting movement.

It may be said that the installation of an elaborate system of signals within the subway is not absolutely necessary, and that if single surface cars are first used only, a much less complicated system might be employed. This would mean a reduction of about 1 per cent. in the first cost. However, we have assumed in these estimates that you would prefer to operate the subway under the best possible equipment.