

pensated. At Queen St., the elevation is 39.5, the line at that point gently sloping up to meet the old level at Logan Ave.

The C.P.R. line where it leaves the steel viaduct at Parliament St., is carried on an earth embankment up to the point at which it again strikes grade at Eastern Ave., with the exception of the short stretch of reinforced concrete viaduct where the double track line crosses Trinity St. on a 66 ft. subway. The Overend and Front St. subways are both 33 ft. Eastern Ave. is to cross the tracks on an overhead bridge, which will probably be of the same type as that further along at Queen St., where the bridge, with long, easy approaches, crosses both the tracks and the river. All the subways along the whole line, with the exception of Trinity Front and Vine streets are to have a clear headway of 14 ft. Trinity, Front and Vine streets are to have a smaller headway of 10 ft. The overhead bridges are all to have a clear headway of 22 ft. 6 ins.

It will be noticed in the description of the viaduct, that there will be no level crossings at Bay, Yonge or Church Sts.,

about 300 by 100 ft. in which is the main waiting room. As the elevation figures on the plan show, the waiting room floor is at practically the same level as that of the street. At either end of this main structure, there are smaller rooms which will probably be allocated for lavatories, etc., when the details of the design are finally worked out. The plan, as shown, merely gives the general arrangement, without regard to the refinements in interior arrangement that will follow later.

At the west end of the building, there is a large addition 100 by 80 ft., which will probably be used for a dining room. There is another room of similar proportions to the rear of this room. To the east of the main waiting room are the baggage facilities in an addition extending over to Bay St. This building will have a floor space of 59,000 sq. ft., of which there is 7,000 sq. ft. for baggage in bond, and 5,000 sq. ft. for hand baggage. The Bay St. end is to be sectioned off for the postal service.

Between the main waiting room and the tracks, there is a concourse 80 ft. wide, the full length of the waiting room.

length over the centre of each track the width of the smoke stack, and at such a height as to just clear the stack. The double-track spans rest on columns down the centre of the passenger platforms. These passenger platforms are about 20 ft. in width, leaving a 10 ft. space along each side of the central dividing fence, which should prove ample for each track. The standing capacity of the 10 tracks will be 290 cars of the standard 70 ft. length.

Between each passenger platform, there is a separate baggage platform about 12 ft. wide, for the handling of all baggage clear of the passenger platforms. The baggage is unloaded on the side opposite to that on which the passengers leave, on to trucks in the usual manner. At the westerly end of the baggage room, there is a subway leading under the tracks at the same elevation as the baggage room floor, 14.5. Leading down into this baggage subway, there is a lift from each baggage platform on to which the trucks are run, and lowered to the baggage room level. The baggage room is rather extensive, for not only is there

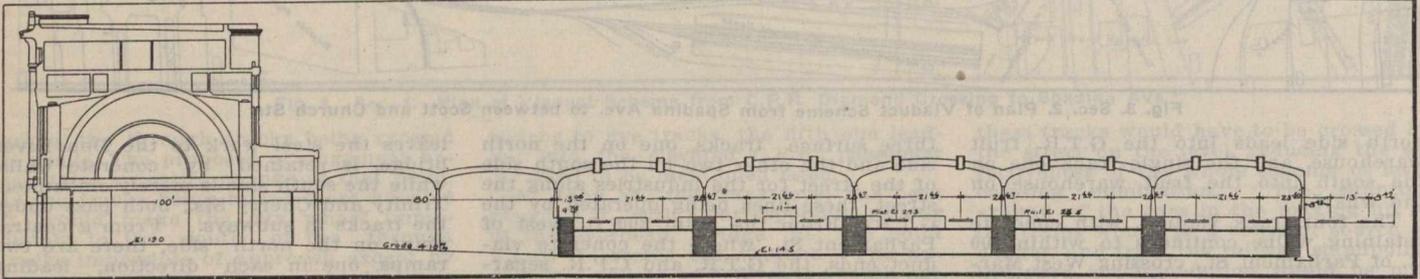


Fig. 4. Cross Section through Union Station and Passenger Subway under Tracks, showing Interior Arrangement.

all the surface tracks crossing streets being further east. The Board has ordered that none of these surface tracks between Church and Parliament Sts. be operated during May, June, July, August and September except between 10 p.m. and 6 a.m., unless the merchandise carried be of a perishable nature, in which case the train may operate if preceded by a flagman on foot.

The city is to bear one-third the cost of building the viaduct which is to include the C.P.R. passenger car yard and the G.T.R. Don sorting yard, excepting the cost of rails and track laying. Likewise, it is to bear one-third the cost of the bridges at Spadina Ave., John St., and Eastern Ave., and of the substructure made necessary by the elevation of the station. These payments are to be made as the work progresses on the submission of progress reports.

The new union station is to be located facing on Front St., between York and Bay Sts., east of the present location, and will occupy the entire frontage between these two streets. The station plan, as prepared by the G.T.R., is shown in fig. 1, and a cross section through the station is shown in fig. 4. The only portion of the old station retained is the old Canadian Express Co.'s building to the west of the new station on York St. This building is to be increased in capacity by the addition of another story, and a similar structure will be erected to the east of the new station on the east side of Bay St., for the Dominion Express Co., the main floor of this latter being on the viaduct level, while the old building is to retain its former level, with the tracks leading down to it from a ramp as previously explained. The two buildings will thus bear the same relation to the station.

The station building is to be located 80 ft. back from the street curb. Along this curb, there is to be a 23 ft. sidewalk, instead of the former 13 ft., back of which will be a 45 ft. driveway, separated from the station building by a 12 ft. sidewalk along the wall. The central part of the station building is a large structure

This concourse slopes down with a 4.10% slope from the waiting room elevation of 19.0, to that of the subway under the tracks, which is at elevation 14.5. The subway from the concourse runs under the whole ten tracks, with stairs on each side up to the platform level of 27.3. Outgoing passengers come into the main waiting room from the street, and on into the concourse, where they are met at the entrance to the subway by the ticket examiner, who directs the passengers to the correct stair, each stair being numbered, and a large sign will give the time of train departure, its name and general routing. At the top of the stairs there are two gates, one to each track, a fencing down the centre of the platform dividing it. The gate of the outgoing train will be the only one open, so there will be no confusion in taking the wrong track. The trainman will also be located at this gate instead of at the train steps, to again examine tickets and direct the passenger to the proper car. The ticket offices are along the south wall of the main waiting room, on the path of the passenger from the street to the tracks. In the event of the passenger having purchased his ticket at the city ticket office and driving down, he can drive up to the baggage delivery entrance, have his baggage removed and checked, and can then go directly into the concourse through the 19 ft. passageway along the east side of the waiting room. For the outgoing passenger, the conveniences are excellent.

The incoming passenger comes out through the subway into the concourse where he can pass out either side exit, without having to pass through the waiting room. If he has baggage, he will come out by the passage on the east side wall, where the baggage rooms are located. The station has been well designed for the relieving of the waiting room for needless through passage.

All the tracks in the station are through tracks, with no stubs. The 10 tracks are 1,500 ft. long, and are covered with the Bush low type two-track span train shed, with openings the full

the space in the building at the end of the main waiting room, but there is a large space extending out under four tracks. The hand baggage platform at the west end of the baggage room, is at elevation 18.5, 4 ft. above the baggage room floor, so that all hand baggage can easily be handed up to the hand baggage storage along the concourse exit. Bay St., along the side of the baggage room and under the track has been increased in width from 80 to 110 ft., for 110 ft. under the tracks. There is a driveway 80 ft. wide by 150 ft. long in the Bay St. side of the baggage room. All this space provides ample accommodation for the baggage wagons coming into the station. The outside area is slightly lower than that of the baggage room floor, so that no lifting of baggage on to the wagons is required.

The express traffic is handled through the station in the same manner as the baggage, a subway with lifts running under the tracks from the two express buildings.

The question as to what extent the C.P.R. will use the new union station is still in doubt, and if that company decides to withdraw a large portion of its passenger service, a modification of the station plans may be necessary. It appears to be settled that the C.P.R. and Canadian Northern Ry. will build a union station at North Toronto, to which a large portion of the C.P.R. passenger traffic may be diverted and all the Canadian Northern Ry.'s passenger business will be handled there, as it is not the latter company's intention to use the down town union station at all, its present use of the existing union station being only temporary.

During May, 19 fatal, and 29 non-fatal accidents were reported, in connection with Canadian railways. Of the fatalities, six were due to being run over, three each to falls and to being struck by trains, two each to being crushed between cars, and to falling material, and one each to a collision, to jumping from a locomotive and to a fall.