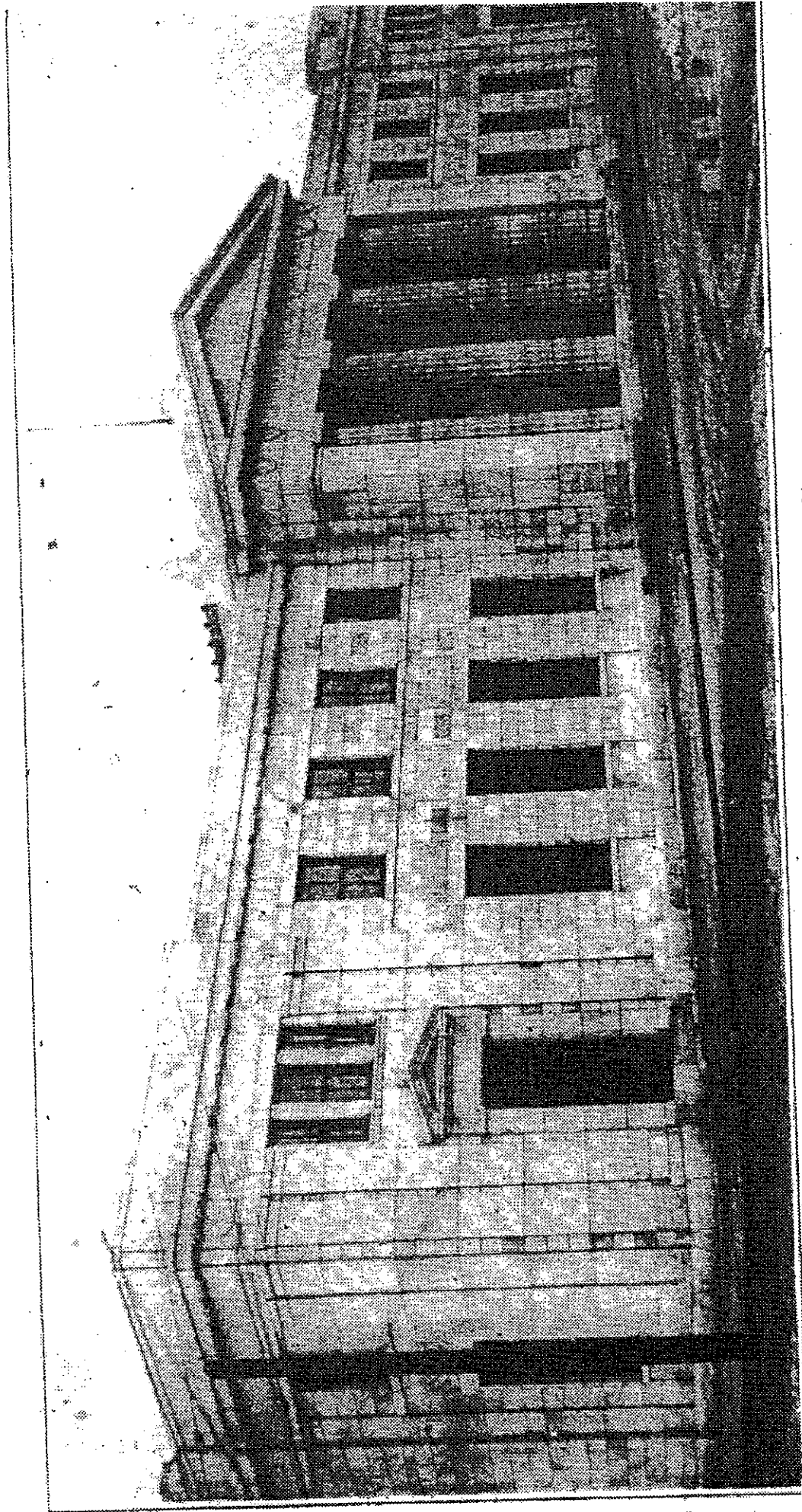


CANADIAN
NATIONAL
RAILWAYS

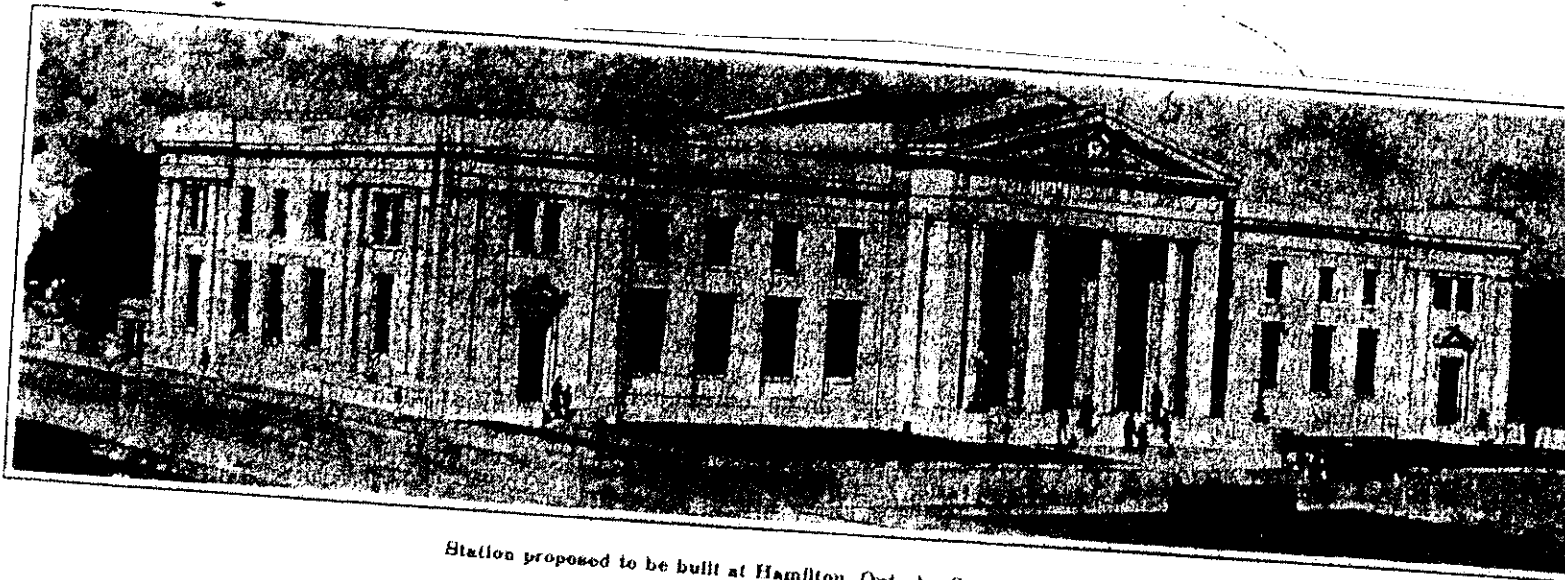
HAMILTON
STATION



Canadian National Rys. New Station at Hamilton, Ont.

New Canadian National Railway Station for Hamilton.

The accompanying illustration reproduces from an architect's drawing a view of the station to be built at Hamilton, Ont., by Canadian National Ry., in conformity with the general terminal plan developed last year and described in detail in Canadian Railway and Marine World for Aug. 1928, pg. 474, where a plan showing track and street layout, location of station site, etc., was given. The station layout plans have been changed since that plan was published, so as to move the station's north wing easterly somewhat from James St. to provide both stairs and ramp descent to the station tracks below. The illustration does not show the north wing, or concourse, extending out over the tracks. The side of the building shown to the left will be flush with James St., while the space at the front will extend southerly to within a short distance of Murray St. The station building will be about 189 ft. from east to west by about 83 ft. from north to south, and the layout of the site is such that a large part of the



Station proposed to be built at Hamilton, Ont., by Canadian National Railway.

April 1929.



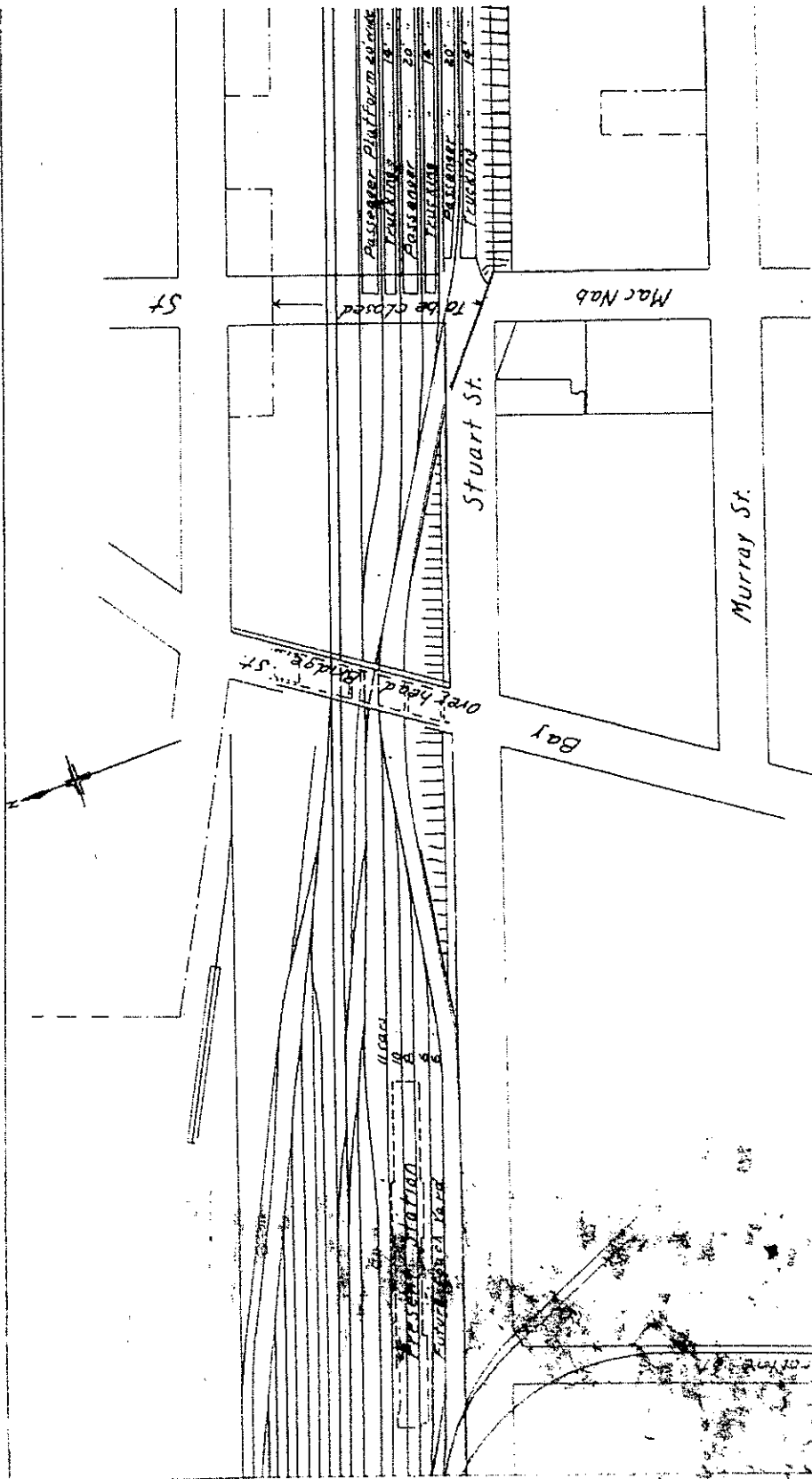
Station proposed to be built at Hamiltion, Ont., by Canadian National Railway.

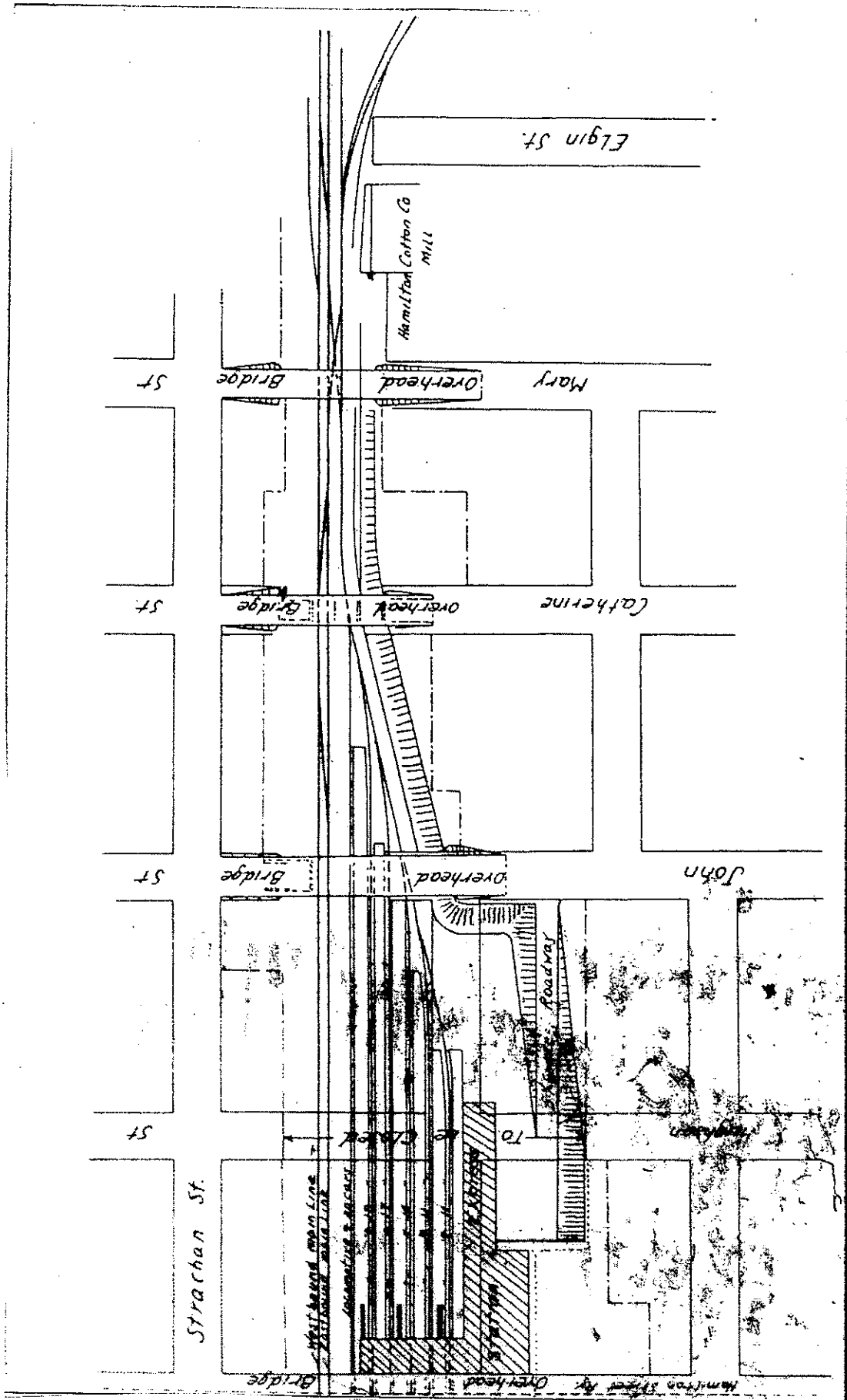
structure will be below the ground level as shown in the illustration, the plans providing for two floors below that level, with access to the lower floor by a roadway, with 5% grade leading down from John St. The main floor, at ground level, will be used for ticket offices, waiting rooms, lunch rooms and the other conveniences for the travelling public, and the top floor will be used for offices. The two lower floors will be used for the handling of baggage, mail and express, and for other facilities. The building's foundations will be of reinforced concrete, Canadian stone will be used for the exterior, marble will be used largely in the interior, tiled floor will be provided in the lobby, and the other floors will be mainly of hardwood. Work on the building will be commenced as soon as possible following the completion of plans, and it is hoped to have construction completed by June 1, 1980. The building was designed by John Schofield, Architect, Canadian National Ry.

terminal, west of the present station.

capacity of each individual track being marked on the plan. There will be 3 passenger and 3 baggage and express platforms, arranged alternately, the passenger platforms to be 20 ft. wide and the others 14 ft. wide. It is probable that the tops of platforms will be at rail level. The platforms will be quite long, extending from McNab St. on the west, with the two longest ones going beyond John St. on the east. They will probably be of concrete construction.

United States Railways' Financial Results.—U.S.A. class 1 railways' gross operating revenues in May were \$510,714,148, compared with \$519,569,844 in May, 1927, a decrease of 1.7%; operating expenses were \$381,836,287, compared with \$391,-





General Layout New Passenger Terminal at Hamilton, Canadian National Railway. See also opposite page.

Waiting Room and Entrance to Train Concourse.

the east end of the station building is the express warehouse and on the west end the baggage warehouse, both at platform level. Reference to the block plan will indicate that the northwest corner of the site is occupied by an existing building, the former London Shoe Co. premises, which were acquired by the Canadian National and have been remodelled to house divisional offices.

The station grounds are laid out and landscaped in a spacious and pleasing manner. A wide semi-circular driveway fronts the entire facade and is flanked on either side with stone wing walls, shrubbery and grassed areas, and in the central area opposite the main entrance there is a wide expanse of grass relieved with flowering shrubs. Teaming yards adjoin the baggage and express warehouses, and at the east end of the property there is a large parking area for taxis and private cars. The forecourt of the building along York Street is about 200 ft.

As the divisional offices are located in the remodelled adjoining building, the superstructure of the station is only one story high, except for a mezzanine in the rear portion, but the fact that it contains the business offices, the sufficient height to maintain proper proportion and dignity in the exterior.

In the planning of the station, the main entrance is placed centrally on the York Street front and through a large vestibule opens on to the business lobby, 64 ft. long by 40 ft. wide by 20 ft. high. On the west side of the lobby is the ticket office, and, adjoining, the parcel and baggage checking facilities. Connected to the baggage warehouse. On the opposite side of the lobby is the

located in the basement. The elevation of the lunch room floor is 5 1/2 ft. below the business lobby floor and 2 ft. 3 in. above concourse floor. It is thus centrally located in the layout, as patronage is equally divided between train passengers and nearby business people. Kitchen facilities adjoin the lunch room, with a service entrance direct to the platform above.

The underground passenger concourse is 117 ft. long and 35 ft. wide, with a ceiling height of 19 ft. 2 in. There are no columns and practically all the seating accommodation for waiting passengers is in this room, as experience has taught that the passengers waiting to board trains prefer to wait as near to the tracks as possible. The subway to the London and Port Stanley Ry. station is 117 ft. wide and 10 ft. high.

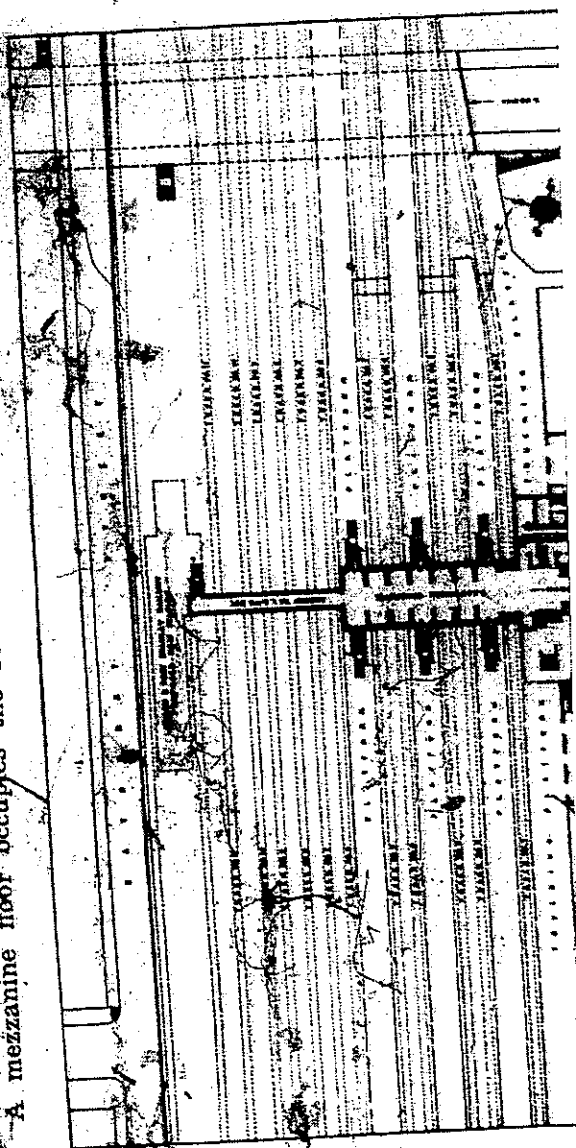
A mezzanine floor occupies the rear

crown. All concrete used on this was vibrated. The subway to the London and Port Stanley Ry. is of similar construction to the concourse.

The substructure of the station, to approximately grade level, is of reinforced concrete, and above grade level is a steel frame with reinforced concrete floors and roof slabs. The exterior walls are of brick and stone, with inner linings of terra cotta. Roofs are felt, pitch and gravel type, laid on insulating material.

In point of architectural design, both exterior and interior follow modern restrained classic lines, and the station makes a decided addition to London's many fine public buildings. The subway straight entrance archway is flanked by two pylons, each terminating in a finely sculptured figure symbolizing on one side "Commerce" and on the other "Engineering". This carries a technique of flow out of the modern lines and appearance of the stone work.

The exterior stone is a Canadian limestone, and the brick of contrasting dark brown color is also Canadian-made. Wood sash has been used throughout, with the exception of the large window in the entrance archway, which is of metal, with metal grilles. The main entrance doors are of white metal.



Hamilton Station, Canadian National Railways.

The Canadian National Rys. Central Region management has invited tenders for the construction of a passenger terminal station in Hamilton, Ont., to replace the present Stuart St. station, to be sent in by Nov. 14. The new station will be considerably east of the present one, and about in a line with Stuart St. produced easterly. It will be between James and Hughson Sts., with street entrance from James St. The roadway entrance for vehicular traffic from John St., Macnab and Hughson Sts. will be closed, and overhead bridges will be provided to carry the other streets in the new station's vicinity over the railway tracks, those streets being, from east to west, Mary, Catherine, John, James and Bay. The station building will be about 189 ft. from east to west, by about 83 ft. from north to south, with a concourse extending to the north over the station tracks, which will be in a cut considerably below the level of the surrounding land, access to which will be by stairs and ramp. There will be two floors below ground level, devoted chiefly to handling of baggage, mail and express. The main floor, at ground level, will be used for ticket offices, waiting rooms, lunch rooms, etc., and the second floor will be used for offices. The building will have reinforced concrete foundation, stone exterior, and tiled floor in the lobby. Other floors will be of hardwood. Marble will be used largely in the interior. The station was designed by John Schofield, Architect, Canadian National Rys. A description of the site and the preparatory work, which involved con-

NOVEMBER
1929

Passenger Station at Hamilton for Canadian National Railways.

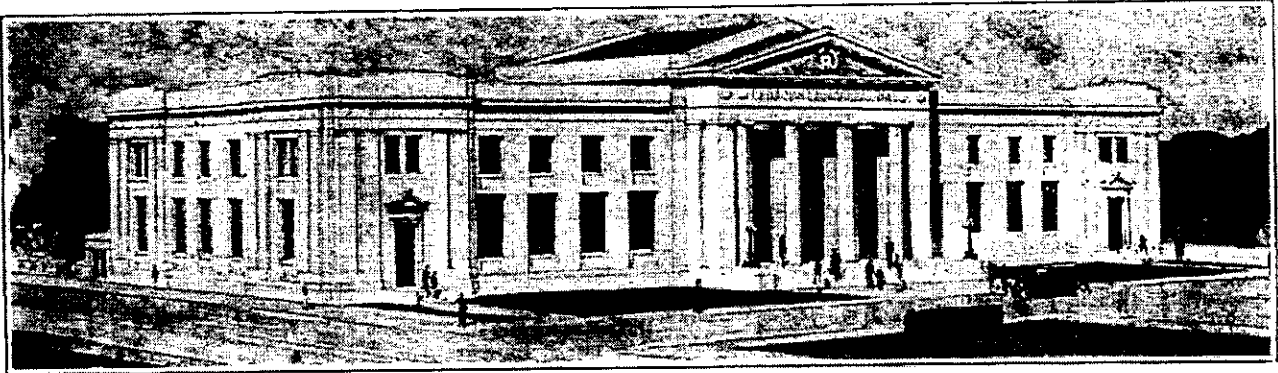
Canadian National Rys. has, as announced in Canadian Railway and Marine World for Dec. 1929, pg. 756, given a contract to Pigott Construction Co. for the construction of a passenger station at Hamilton, Ont., to replace the present Stuart St. station. Plans for this new facility have been developing during the past two years. Canadian Railway and Marine World for Aug. 1928 gave, on pg. 474, a plan of the site, showing the proposed station track layout, the location of the station with respect to the streets in the vicinity, and specifying the streets to be closed and those to be carried across the railway tracks by bridges. It was explained that the station building would be on the south side of the railway tracks; that the ground floor of the station would be some 20 ft. above track level, and that there would be a station concourse, extending northerly from the station building, at its west end, out over the tracks, with stairs leading down from the east side of the concourse to the track platforms. Since that plan was given, the design has been changed, and now provides for the concourse extending northerly over the tracks from the center of the station building, with 3 ramps, on

and complete in Canada, and notable for architectural beauty and maximum utility. The foundations will be of reinforced concrete, the exterior will be in Canadian stone, starting from a granite base course and enriched by elaborate carving on the south and west elevations. The central feature of the south elevation will be a Corinthian front supported on massive fluted stone columns, behind which will be massive doors, framed in bronze, opening into the lobby. Marble will be used freely in the interior, in the public rooms; the lobby floor will be of tile.

The building will consist of 3 stories, with a mezzanine floor between the 1st and 2nd main floors. It will be about 83 ft. from north to south, by 189 ft. from east to west. The elevation of the lower floor, corresponding with track platform elevation of 267.16 ft. above sea level, will be 267.40; that of the mezzanine floor 280.70; of the main or ground floor, 291.70; of the top floor, 307.45, and of the roof slab, 319.95. There will be a ramp from the main floor to the concourse, the ramp space being 22 ft. wide and about 30 ft. long. Elevation of the concourse floor will be 288.45, making the vertical distance between concourse floor and track

stairs leading down to the lower floor at both ends. The layout of the mezzanine floor, from east to west, will include the shedmen's lunch room; men's lavatory, with cement floor and steel partitions; express records and stationery room; yardmaster's office; yardmaster's general office; storage room enclosed by 8 in. brick walls; room for station police; telephone switchboard room; railway telegraph office; bedrooms; public space; women's coat room; and women's lavatory. Floors will be of cement, with linoleum finish except in the lavatories and storage room.

On the main or street floor, the entrance through the main opening in the south elevation will be through a vestibule, with terrazzo floor, into the main lobby, which will be 2 stories high, and which will have wainscoting of fine marble, and plastering marked by a richly ornamented ceiling framing the ceiling lights. At the east side of the lobby will be the ticket office, with marble front and bronze grillwork, flanked by a checking office, stair hall, and parcel and baggage checking facilities. At the west, or left, side of the lobby entrance, will be the station master's office and space for Canada Railway



Station being built at Hamilton, Ont., for Canadian National Railways.

10% grade, and 13 flights of steps, leading down to the track platforms from the east side of the concourse, and 3 flights of steps leading down from the west side of the concourse. Otherwise, the design is, in all essential particulars, as shown by the plan referred to.

The station building will extend easterly from James St., which is being kept open by a bridge carrying it across the railway tracks, with the eastern extremity crossing Hughson St., which has been closed. The south side of the building, in which will be the main entrance, will be some distance north of Murray St., with a large open space in front of the building. The south and west elevations are shown in the accompanying illustration, reproduced from an architect's drawing. As explained in the previous article referred to, the railway at that point runs in a deep cut, and preparation of the site required a great deal of excavation and grading, which was done under contract from the C.N.R. by Huffman Construction Co., which also has, under contract from the C.N.R., built bridges to carry Bay, James, John and Catherine Sts. across the railway tracks. Additional bridges are being built by the City of Hamilton to carry Mary and Macnab Sts. across the tracks, the contractors for the substructures being Campbell and Lavelle, Toronto.

The designs for the station indicate that it will be one of the most up-to-date

platforms 21.29 ft. at the center line of the concourse. The concourse will be about 130 ft. north and south by 60 ft. east and west, will have terrazzo floor and will be lined to a height of 8 ft. from the floor with a fine brick. There will be 6 station tracks, the longest to the north, the ramps and stairs from the concourse giving direct connection to any track platform.

On the lower floor, at approximate track level, will be, toward the east end, the baggage room, with creosoted wood block floor. Adjacent to it will be the trucking lobby, customs office, public space and bonded baggage space, all with wood block floor. A large freight elevator will be provided. Stairs will lead down from the main or ground floor and open into the public space. Adjacent to the freight elevator will be a pneumatic tube system motor room. The west half of the lower floor will be taken up by conductors' room, lavatories, conductors' rest room, fan room, switchboard room, transformer room, signal maintainers' office, and car inspectors' offices; the southwest portion will be occupied by the boiler room, with engineer's storeroom adjacent. Cement floors will be provided in the spaces mentioned.

The mezzanine floor will extend from east to west over the northerly portion of the lower floor, and will be arranged with a corridor along the south side, with

News Co.'s facilities. Beyond the ticket office, to the east, or right, side on entering the lobby, will be the express facilities, with separate entrance from the exterior, as shown in the south elevation in the illustration; these will include public space and counter; cashier's space; agent's office; general office; on hand room; and express checking lobby. The floors to be of cement, with linoleum in the office spaces.

To the rear, or north, of the main stair hall adjacent to the main lobby, will be the men's lavatory, and also opening off from the main lobby, to the north, will be the men's smoking room. Opening off the main lobby to the north, west of the smoking room, will be the ramp chamber, leading to the concourse, and adjacent to the ramp, on the west, will be the women's waiting room, with lavatory adjoining on the west. The lavatories, men's smoking room and women's waiting room will be floored in terrazzo. The northwest portion of the main floor will be occupied by a kitchen; pastry room; storeroom; and luncheon, with separate entrance from the exterior to the kitchen, shown at the extreme left, in the west elevation, in the illustration. The southwest portion of the main floor will be occupied by the commercial telegraph offices; public space; a large office for which use will be found; and a stair hall, with vestibule and entrance from the exterior, as shown in the

Canadian National Railways New Station at Hamilton.

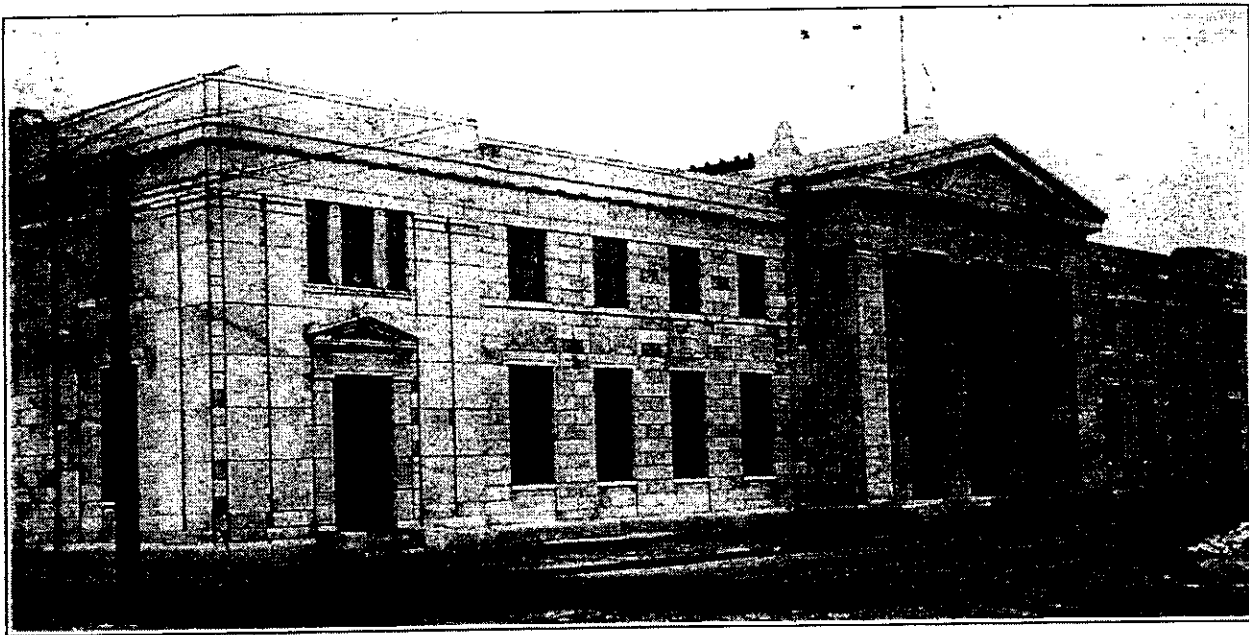
The station built at Hamilton, Ont., for Canadian National Rys., has been completed. A number of features of great advantage to general traffic conditions have marked the construction of the station and its various facilities, among which are the elimination of certain grade crossings in the city, the lowering of track levels, the construction of bridges of the latest type and design, which will all facilitate the movement of street traffic and the operation of trains. The problem in designing the new station was largely one of adjusting various natural grades to provide easy access from street to track level and combine convenient facilities for the public with an imposing exterior. The track level is some 25 ft. lower than the street level, the tracks running parallel to the main facade of the building.

The new structure occupies a site bounded on the west by James St., on

tinently modern touch has been introduced giving life to the imposing facade, which is certainly a worthy portal to the city. The elevations to James and Murray Sts. are two stories high, while on the track side, on account of the difference in grades, the height is four stories. The main front is dominated by a central portico crowned by a pediment. A very successful scheme of flood lighting has been introduced in the portico ceiling, and the lines and proportions of the four fluted Doric columns are accentuated at night when seen in silhouette. Attention is arrested by the carved stone ornament, which though used sparingly, is planned so as to accentuate the fine proportions of the building. The subjects used for the carving are worthy of notice, and the skilful manner in which hard mechanical motifs, such as locomotives and steamships, have been given a decorative effect has elicited much favor-

is the business artery of the structure. On the east side are the ticket offices, with accommodation for the sale of transportation, berths and seats. The checking room is beyond, and on this side is also the men's waiting room and smoking room. On the west side is the newsstand, and nearby the commercial telegraph office. Then close by, are the telephone operators and the booths. Following around, patrons reach the dining room and lunch counter. At a further point is the women's waiting room and rest room, and conveniently near is the office of the Travellers' Aid representative. In the space behind the dining room are the kitchens, the serving pantry and store space for the operation of the dining room services.

The main lobby is carried up to the full height of the building and is enclosed by a copper roof. There is ample daylight both from the ceiling and from



Canadian National Rys. New Station at Hamilton, Ont.

the south by Murray St., and on the east by John St., the tracks forming the northern boundary. Both James and John St. are bridged across the tracks. The main facade of the building faces on Murray St., but is set back a considerable distance from the street line, and the intervening area is treated as a station plaza. It is the intention in the spring to carry out a landscaping scheme on the plaza, which will make a perfect setting for the classical station building and add immeasurably to the appearance of the surrounding locality. Parking space for automobiles, taxis and buses is provided on the open space to the east side of the plaza. The station building proper is 290 ft. long by 83 ft. wide. The main entrance from the plaza leads through a spacious vestibule to a large business and ticket lobby, which in turn leads to the concourse, 60 ft. wide by 134 ft. long, bridging the tracks. Stairways and ramps run from the concourse to and from the passenger platforms.

The main building follows the Greek Doric style of architecture, but a dis-

able comment. The stone frieze over the three main entrance doorways, for instance, carved in distinctly modern manner, tells the story of the part played by the railway in the transportation of the various products of the country. Surmounting the pavilions at each end of the main front are carved into the parapet the coats of arms of the City of Hamilton and the Province of Ontario. There are separate entrances at the west end and east end of the building, the west entrance leading to the railway offices which occupy the second floor. At the east end, the entrance leads to the offices of the Canadian National Express Company. Adjoining the main station building on the track level and extending 250 feet to the east, is the wing which contains complete facilities for the Express Department and the royal mail.

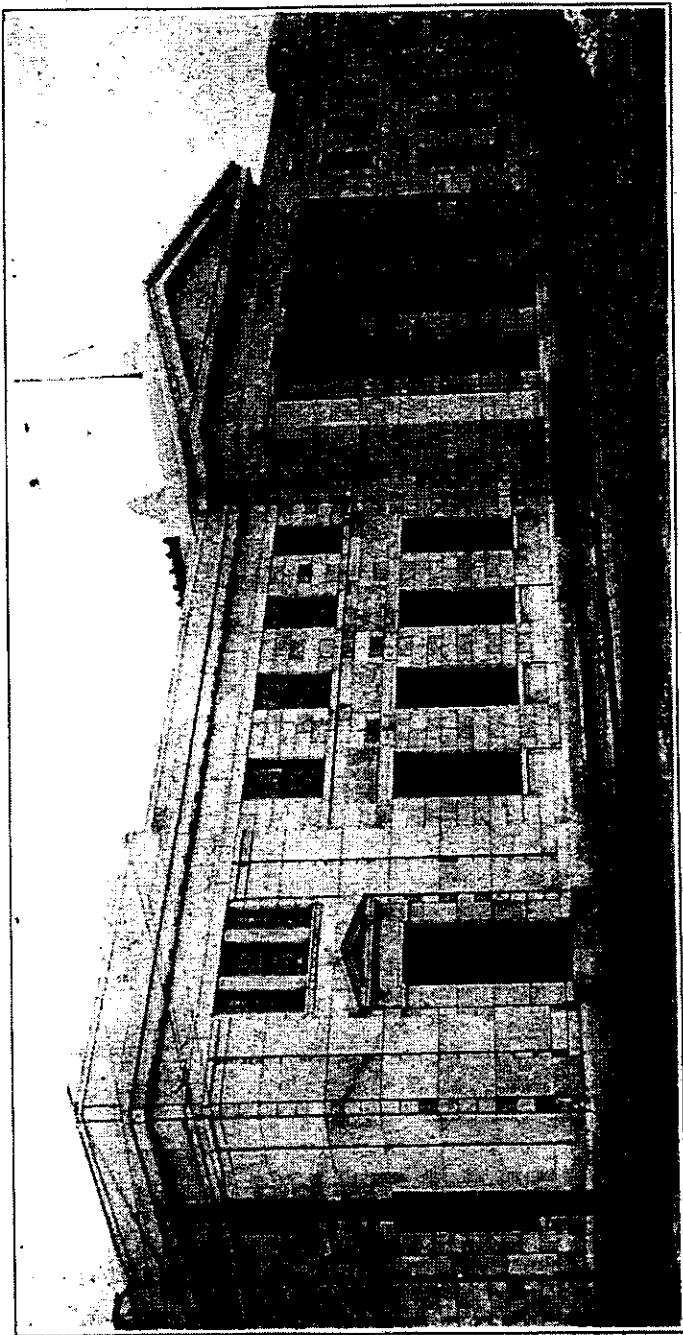
In the interior of the building, the Greek feeling again is manifested, but with a modern touch. On entering through the main doorways, the traveller finds himself in a commodious chamber on the street level and directly ahead of him is the concourse. This main lobby

windows on the side of the building. For artificial lighting there are two large bronze candelabra, also wall brackets, and all have been designed to harmonize with the interior of the lobby. The walls are treated with marble columns, pilasters and dado, and the plaster work above has been given a variegated stone effect. The plaster ceiling is beamed and coffered in a handsome design in traditional Greek manner, and colored in soft greys, blues, and terra cotta tones. The floor is of patterned terrazzo in effective color combinations. The general effect of this lobby is extremely pleasing, while the arrangement of the public facilities leaves nothing to be desired in the matter of convenience. Leading from the lobby is the concourse. The walls are lined to a height of 8 ft. with a buff coloured glazed brick. The ceiling is an open steel work roof and the floor is of terrazzo; the walls above the brick are of sand finished plaster. Seating arrangements are provided in the concourse for passengers and waiting friends. The men's and women's waiting rooms and lavatory accommodation have entrances from the

The new structure occupies a site bounded on the west by James St., on

tives and steamships, have been given a decorative effect has elicited much favor-

daylight both from the ceiling and from



Canadian National Rwy. New Station at Hamilton, Ont.

the south by Murray St., and on the east by John St., the tracks forming the northern boundary. Both James and John St. are bridged across the tracks. The main facade of the building faces on Murray St., but is set back a considerable distance from the street line, and the intervening area is treated as a station plaza. It is the intention in the spring to carry out a landscaping scheme on the plaza, which will make a perfect setting for the classical station building and add immeasurably to the appearance of the surrounding locality. Parking space for automobiles, taxis and buses is provided on the open space to the east side of the plaza. The station building proper is 290 ft. long by 83 ft. wide. The main entrance from the plaza leads through a spacious vestibule to a large business and ticket lobby, which in turn leads to the concourse, 60 ft. wide by 134 ft. long, bridging the tracks. Stairways and ramps run from the concourse to and from the passenger platform.

The main building follows the Greek Doric style of architecture, but a dis-

able comment. The stone frieze over the three main entrance doorways, for instance, carved in distinctly modern manner, tells the story of the part played by the railway in the transportation of the various products of the country. Surmounting the pavilions at each end of the main front are carved into the parapet the coats of arms of the City of Hamilton and the Province of Ontario. There are separate entrances at the west end and east end of the building, the west entrance leading to the railway offices which occupy the second floor. At the east end, the entrance leads to the offices of the Canadian National Express Company. Adjoining the main station building on the track level and extending 250 feet to the east, is the wing which contains complete facilities for the Express Department and the royal mail.

In the interior of the building, the Greek feeling again is manifested, but with a modern touch. On entering through the main doorways, the traveller finds himself in a commodious chamber on the street level and directly ahead of him is the concourse. This main lobby

windows on the side of the building. For artificial lighting there are two large bronze candelabra, also wall brackets, and all have been designed to harmonize with the interior of the lobby. The walls are treated with marble columns, pilasters and dado, and the plaster work above has been given a variegated stone effect. The plaster ceiling is beamed and coffered in a handsome design in traditional Greek manner, and colored in soft greys, blues, and terra cotta tones. The floor is of patterned terrazzo in effective color combinations. The general effect of this lobby is extremely pleasing, while the arrangement of the public facilities leaves nothing to be desired in the matter of convenience. Leading from the lobby is the concourse. The walls are lined to a height of 8 ft. with a buff coloured glazed brick. The ceiling is an open steel work roof and the floor is of terrazzo; the walls above the brick are of sand finished plaster. Seating arrangements are provided in the concourse for passengers and waiting friends. The men's and women's waiting rooms and lavatory accommodation have entrances from the

concourse in addition to the main lobby.

From the concourse, stairs lead down to the passenger tracks, and stairs and ramps lead upwards to the street level. Special care has been exercised in planning the stairways, the steps being at convenient height, and the treads are fitted with tile surfaced so that it will prevent slipping under any condition. Below are six passenger tracks, well equipped, and sheltered adequately from all weather conditions. The approaches and exits have been designed to provide direct entrance and preclude passengers from walking across tracks.

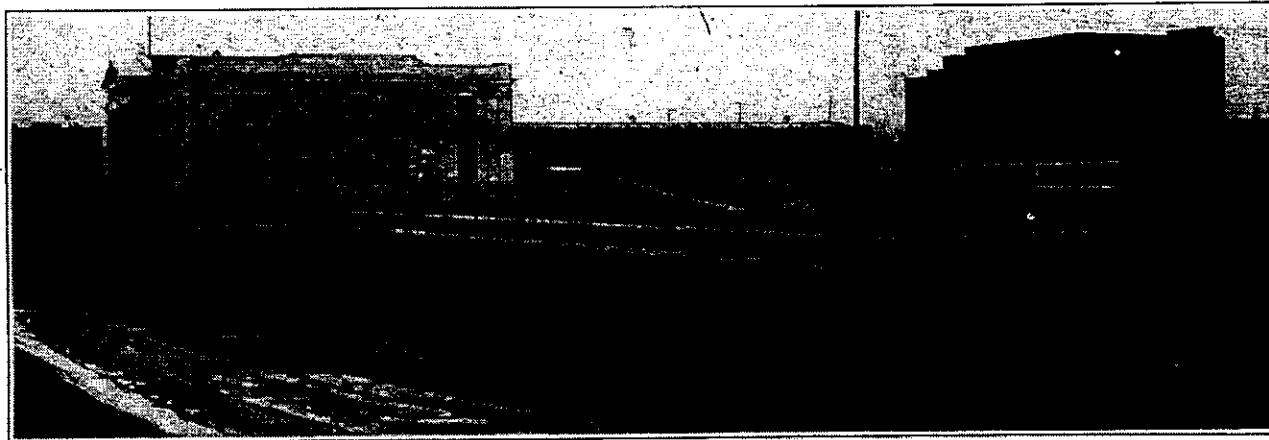
Under the main floor is the station building, and above the track level is a mezzanine floor containing some railway offices, train dispatcher's office and rooms to accommodate the staff employed in the dining room and kitchen. At the track level and on the west side of the building are the baggage rooms, offices for conductors, trainmen, and car inspectors, and beyond these offices, the boiler room. On the east side, the entire space is given over to handling, checking and storage of baggage. The wing adjoining the main station building is occupied

whereas with the ordinary type of radiation most of the heat supplied is pocketed near the ceiling line. A forced ventilation system is used in the main lobby, waiting rooms, lavatories, kitchen and lunch room, air being supplied to the main lobby, lunch room and kitchen, and exhausted from these rooms, lavatories and waiting rooms. The air supply, before being delivered to the system, is drawn through a bank of extended surface copper tube radiators, which in cold weather heats the fresh air up to room temperature. The plumbing system is most modern in every respect. Hot water is supplied to the various fixtures from a large storage tank in the basement, which is heated by steam in winter and by electricity in summer. Ample protection is afforded against fire by hose reels and fire hose cabinets.

Electricity for lighting and power purposes is supplied through two transformers to the lighting circuits; three more transformers are provided for the operation of all motors. Adequate lighting is provided in all parts of the building, and all the fixtures are furnished with the new day-light type of glass. A sys-

tem of construction.

The general contractor was Pigott Construction Co., Hamilton. The subcontractors were:—excavation, A. Cope & Sons, Hamilton; structural steel, Reid & Brown, Toronto; cut stone, A. Stead, Hamilton; lath & plaster, Hill Bros., Hamilton; marble, tile & terrazzo, Italian Mosaic & Tile Co., Toronto; lumber, frames, trim & doors, Patterson & Crosthwaite, Hamilton; Consumers Lumber Co., Hamilton; electrical, Culley Electric Co., Hamilton; electric fixtures, Metal Studios Ltd., Hamilton; roofing, sheet metal & waterproofing, J. E. Rid-dell & Sons, Hamilton; plumbing & heating, Adams Clark, Ltd., Hamilton; ornamental iron, Dennistee, Ltd., London; bronze, Dominion Bronze & Iron, Winnipeg; glazing, Ontario Plate Glass Co., Hamilton; painting & decorating, McElroy & Scott, Hamilton; elevator work, Otis Fensom Elevator Co., Hamilton; scales, Gurney Scales Co., Hamilton; pneumatic speaking tubes, Lamsen Co., Toronto; linoleum, T. Eaton Co., Hamilton; superway doors, Richards-Wileox Canadian Co., London; brick, Toronto Brick Co., Toronto; gypsum, Gypsum,



Side view of Canadian National Ry. New Station at Hamilton, Ont., showing Express Department accommodation at lower right.

by the Express Department and royal mail, and contains the most modern equipment for these facilities. The entire group of buildings embodies the latest and most modern ideas in building construction, and are as completely fire-proof as is possible. The framework is of reinforced concrete and steel; the walls are of brickwork faced with stone. The equipment also follows the best and latest practice in every respect.

In any modern building, the mechanical features of necessity play an important part; and particularly so is this the case in a large railway station. The two heating boilers are of the water tube type and are oil-fired. Steam is supplied for heating cars standing on tracks outside, through a pressure reducing valve. The building is heated throughout with a vacuum return line system. All parts of the building to which the public have access are heated by concealed radiation, the remainder being heated by direct radiation. The concourse, express and baggage rooms, and royal mail wing are heated by unit heaters which are suspended from the ceiling. Air is blown over a steam heated element by an electrically driven fan and directed downward. This type of heater is extremely efficient, as it keeps the temperature of the air at the floor level as high as that near the ceiling,

tem of electric clocks is operated from a master clock located in the train dispatcher's office. Provision is also made for the installation of telephones with an extensive system of conduits, so that it is possible to install a telephone in any room without having to expose the wiring or cut any plaster. A burglar alarm system is installed for Express Department, with loud ringing gongs both inside and outside the building.

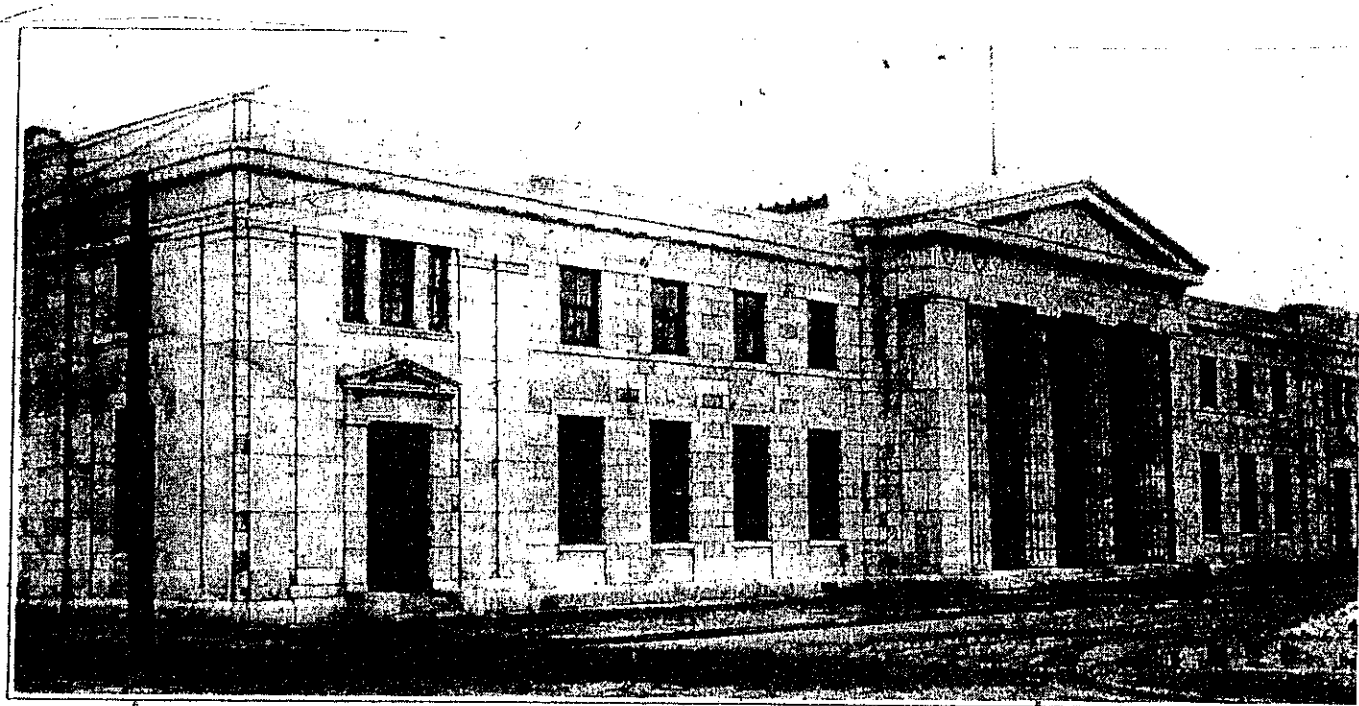
Canadian materials and labor have been used exclusively. The stone exterior is faced with Queenston Limestone, cut and carved by Canadian workmen. The bronze work, including the electric fixtures, is the product of Canadian craftsmen, the ceiling decorations are the work of a Hamilton firm. The same is true of all other trades.

The whole layout for station building and track facilities was developed under the direction of S. J. Hungerford, Vice President, Operation and Construction Departments; W. A. Kingsland, General Manager, Central Region, and T. T. Irving, Chief Engineer, Central Region, and the design and construction of the building was in charge of the C.N.R. Architectural Department, John Schofield, Architect, G. F. Drummond, Assistant Architect, and H. C. Cann, Mechanical Engineer. E. Hedley, Building Superintendent, was immediately in charge of

Lime & Alabastine, Ltd., Paris; modeling, H. B. Thompkins, Montreal.

The Ambassador Bridge's Financial Collapse.

Little more than a year old, valued at \$13,892,000, is the international bridge between Detroit, Mich., and Sandwich, Ont. Recently not the bridge but the company of the same name which owns it began to sway dangerously. Business depression has caused traffic to fall off. Competing ferries have cut their rates viciously rather than go out of business. Traffic has been diverted into the new Detroit-Canada tunnel. During 1930 toll revenue was \$392,000, operating expenses, \$328,000. But by the time all charges were computed the bridge company had a \$1,367,000 loss. Common and preferred stockholders realized recently they had no equity behind their securities; holders of the \$8,000,000 7% debentures did not receive interest due; owners of the \$12,000,000 issue of 6½% first mortgage bonds formed a protective committee. The company's funded debt was sold by a syndicate headed by Hemphill, Noyes and Co. Prospectuses estimated for the first year tolls would come to \$2,012,833.—From Times, New York.



Canadian National Ry. New Station at Hamilton, Ont.

the south by Murray St., and on the east by John St., the tracks forming the northern boundary. Both James and John St. are bridged across the tracks. The main facade of the building faces on Murray St., but is set back a considerable distance from the street line, and the intervening area is treated as a station plaza. It is the intention in the spring to carry out a landscaping scheme on the plaza, which will make a perfect setting for the classical station building and add immeasurably to the appearance of the surrounding locality. Parking space for automobiles, taxis and buses is provided on the open space to the east side of the plaza. The station building proper is 290 ft. long by 83 ft. wide. The main entrance from the plaza leads through a spacious vestibule to a large business and ticket lobby, which in turn leads to the concourse, 60 ft. wide by 134 ft. long, bridging the tracks. Stairways and ramps run from the concourse to and from the passenger platforms.

The main building follows the Greek Doric style of architecture, but a dis-

able comment. The stone frieze over the three main entrance doorways, for instance, carved in distinctly modern manner, tells the story of the part played by the railway in the transportation of the various products of the country. Surmounting the pavilions at each end of the main front are carved into the parapet the coats of arms of the City of Hamilton and the Province of Ontario. There are separate entrances at the west end and east end of the building, the west entrance leading to the railway offices which occupy the second floor. At the east end, the entrance leads to the offices of the Canadian National Express Company. Adjoining the main station building on the track level and extending 250 feet to the east, is the wing which contains complete facilities for the Express Department and the royal mail.

In the interior of the building, the Greek feeling again is manifested, but with a modern touch. On entering through the main doorways, the traveller finds himself in a commodious chamber on the street level and directly ahead of him is the concourse. This main lobby

windows on the side of the building. For artificial lighting there are two large bronze candelabra, also wall brackets, and all have been designed to harmonize with the interior of the lobby. The walls are treated with marble columns, pilasters and dado, and the plaster work above has been given a variegated stone effect. The plaster ceiling is beamed and coffered in a handsome design in traditional Greek manner, and colored in soft greys, blues, and terra cotta tones. The floor is of patterned terrazzo in effective color combinations. The general effect of this lobby is extremely pleasing, while the arrangement of the public facilities leaves nothing to be desired in the matter of convenience. Leading from the lobby is the concourse. The walls are lined to a height of 8 ft. with a buff coloured glazed brick. The ceiling is an open steel work roof and the floor is of terrazzo; the walls above the brick are of sand finished plaster. Seating arrangements are provided in the concourse for passengers and waiting friends. The men's and women's waiting rooms and lavatory accommodation have entrances from the

Canadian National Railways New Station at Hamilton.

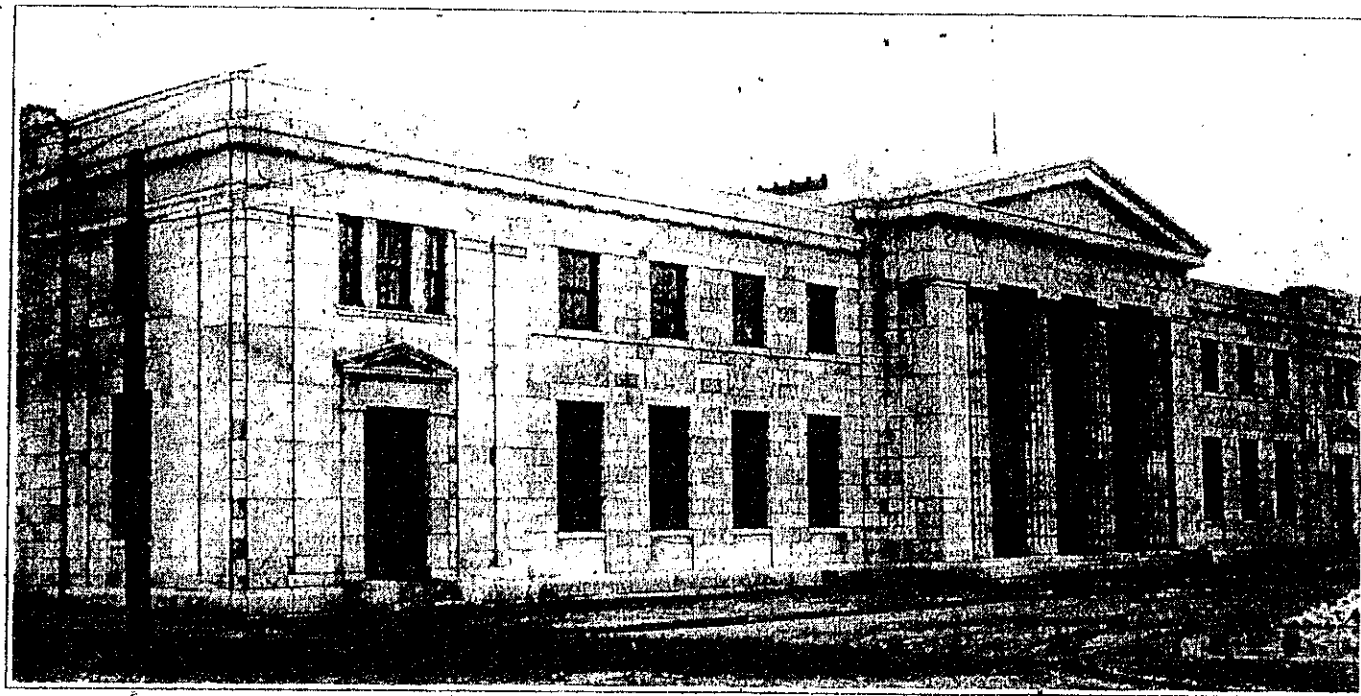
The station built at Hamilton, Ont., for Canadian National Rys., has been completed. A number of features of great advantage to general traffic conditions have marked the construction of the station and its various facilities, among which are the elimination of certain grade crossings in the city, the lowering of track levels, the construction of bridges of the latest type and design, which will all facilitate the movement of street traffic and the operation of trains. The problem in designing the new station was largely one of adjusting various natural grades to provide easy access from street to track level and combine convenient facilities for the public with an imposing exterior. The track level is some 25 ft. lower than the street level, the tracks running parallel to the main facade of the building.

The new structure occupies a site bounded on the west by James St., on

timely modern touch has been introduced giving life to the imposing facade, which is certainly a worthy portal to the city. The elevations to James and Murray Sts. are two stories high, while on the track side, on account of the difference in grades, the height is four stories. The main front is dominated by a central portico crowned by a pediment. A very successful scheme of flood lighting has been introduced in the portico ceiling, and the lines and proportions of the four fluted Doric columns are accentuated at night when seen in silhouette. Attention is arrested by the carved stone ornament, which though used sparingly, is planned so as to accentuate the fine proportions of the building. The subjects used for the carving are worthy of notice, and the skilful manner in which hard mechanical motifs, such as locomotives and steamships, have been given a decorative effect has elicited much favor-

is the business artery of the structure. On the east side are the ticket offices, with accommodation for the sale of transportation, berths and seats. The checking room is beyond, and on this side is also the men's waiting room and smoking room. On the west side is the newsstand, and nearby the commercial telegraph office. Then close by, are the telephone operators and the booths. Following around, patrons reach the dining room and lunch counter. At a further point is the women's waiting room and rest room, and conveniently near is the office of the Travellers' Aid representative. In the space behind the dining room are the kitchens, the serving pantry and store space for the operation of the dining room services.

The main lobby is carried up to the full height of the building and is enclosed by a copper roof. There is ample daylight both from the ceiling and from



Canadian National Rys. New Station at Hamilton, Ont.

The stone frieze over the windows on the side of the building. For

concourse in addition to the main lobby.

From the concourse, stairs lead down to the passenger tracks, and stairs and ramps lead upwards to the street level. Special care has been exercised in planning the stairways, the steps being at convenient height, and the treads are fitted with tile surfaced so that it will prevent slipping under any condition. Below are six passenger tracks, well equipped, and sheltered adequately from all weather conditions. The approaches and exits have been designed to provide direct entrance and preclude passengers from walking across tracks.

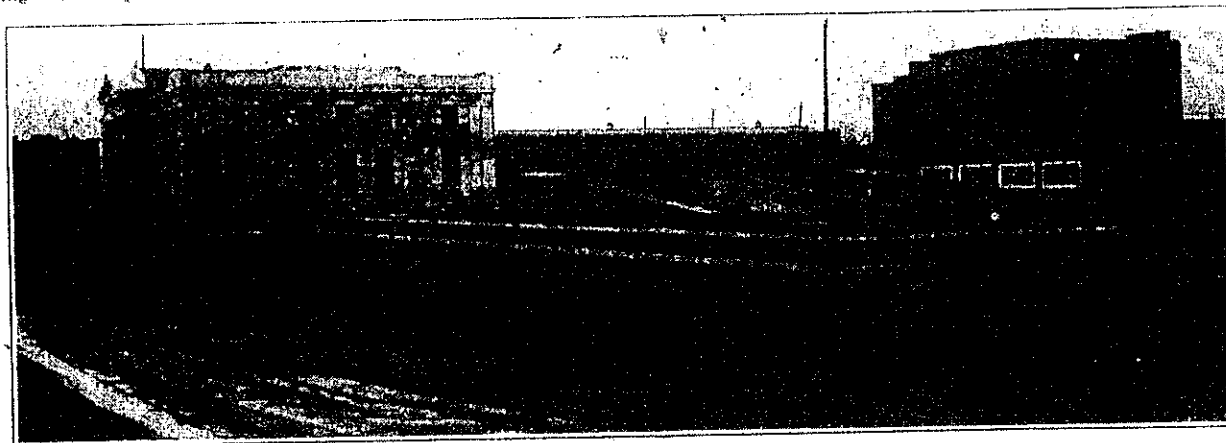
Under the main floor is the station building, and above the track level is a mezzanine floor containing some railway offices, train dispatcher's office and rooms to accommodate the staff employed in the dining room and kitchen. At the track level and on the west side of the building are the baggage rooms, offices for conductors, trainmen, and car inspectors, and beyond these offices, the boiler room. On the east side, the entire space is given over to handling, checking and storage of baggage. The wing adjoining the main station building is occupied

whereas with the ordinary type of radiation most of the heat supplied is pocketed near the ceiling line. A forced ventilation system is used in the main lobby, waiting rooms, lavatories, kitchen and lunch room, air being supplied to the main lobby, lunch room and kitchen, and exhausted from these rooms, lavatories and waiting rooms. The air supply, before being delivered to the system, is drawn through a bank of extended surface copper tube radiators, which in cold weather heats the fresh air up to room temperature. The plumbing system is most modern in every respect. Hot water is supplied to the various fixtures from a large storage tank in the basement, which is heated by steam in winter and by electricity in summer. Ample protection is afforded against fire by hose reels and fire hose cabinets.

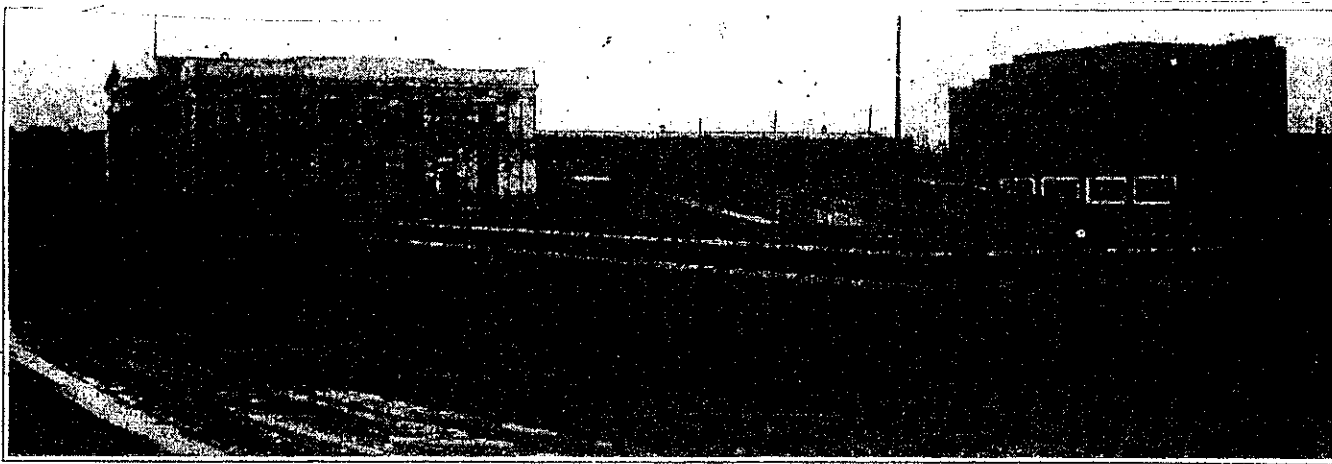
Electricity for lighting and power purposes is supplied through two transformers to the lighting circuits; three more transformers are provided for the operation of all motors. Adequate lighting is provided in all parts of the building, and all the fixtures are furnished with the new day-light type of glass. A sys-

tem of construction.

The general contractor was Pigott Construction Co., Hamilton. The subcontractors were:—excavation, A. Cope & Sons, Hamilton; structural steel, Reid & Brown, Toronto; cut stone, A. Stend, Hamilton; lath & plaster, Hill Bros., Hamilton; marble, tile & terrazzo, Italian Mosaic & Tile Co., Toronto; lumber, frames, trim & doors, Patterson & Crosthwaite, Hamilton; Consumers Lumber Co., Hamilton; electrical, Colley Electric Co., Hamilton; electric fixtures, Metal Studios Ltd., Hamilton; roofing, sheet metal & waterproofing, J. E. Riddell & Sons, Hamilton; plumbing & heating, Adams Clark, Ltd., Hamilton; ornamental iron, Dennistee, Ltd., London; bronze, Dominion Bronze & Iron, Winnipeg; glazing, Ontario Plate Glass Co., Hamilton; painting & decorating, McElroy & Scott, Hamilton; elevator work, Otis Fensom Elevator Co., Hamilton; scales, Gurney Scales Co., Hamilton; pneumatic speaking tubes, Lamsen Co., Toronto; linoleum, T. Eaton Co., Hamilton; superway doors, Richards-Wilcox Canadian Co., London; brick, Toronto Brick Co., Toronto; gypsum, Gypsum,



Side view of Canadian National Rys. New Station at Hamilton, Ont., showing Express Department accommodation at lower right.



Side view of Canadian National Ry. New Station at Hamilton, Ont., showing Express Department accommodation at lower right.

by the Express Department and royal mail, and contains the most modern equipment for these facilities. The entire group of buildings embodies the latest and most modern ideas in building construction, and are as completely fire-proof as is possible. The framework is of reinforced concrete and steel; the walls are of brickwork faced with stone. The equipment also follows the best and latest practice in every respect.

In any modern building, the mechanical features of necessity play an important part; and particularly so is this the case in a large railway station. The two heating boilers are of the water tube type and are oil-fired. Steam is supplied for heating cars standing on tracks outside, through a pressure reducing valve. The building is heated throughout with a vacuum return line system. All parts of the building to which the public have access are heated by concealed radiation, the remainder being heated by direct radiation. The concourse, express and baggage rooms, and royal mail wing are heated by unit heaters which are suspended from the ceiling. Air is blown over a steam heated element by an electrically driven fan and directed downward. This type of heater is extremely efficient, as it keeps the temperature of the air at the floor level as high as that near the ceiling,

tem of electric clocks is operated from a master clock located in the train dispatcher's office. Provision is also made for the installation of telephones with an extensive system of conduits, so that it is possible to install a telephone in any room without having to expose the wiring or put any plaster. A burglar alarm system is installed for Express Department, with loud ringing gongs both inside and outside the building.

Canadian materials and labor have been used exclusively. The stone exterior is faced with Queenston Limestone, cut and carved by Canadian workmen. The bronze work, including the electric fixtures, is the product of Canadian craftsmen, the ceiling decorations are the work of a Hamilton firm. The same is true of all other trades.

The whole layout for station building and track facilities was developed under the direction of S. J. Hungerford, Vice President, Operation and Construction Departments; W. A. Kingsland, General Manager, Central Region, and T. T. Irving, Chief Engineer, Central Region, and the design and construction of the building was in charge of the C.N.R. Architectural Department, John Schofield, Architect, G. F. Drummond, Assistant Architect, and H. C. Cann, Mechanical Engineer. E. Hedley, Building Superintendent, was immediately in charge of

Lime & Alabastine, Ltd., Paris; modeling, H. B. Thompkins, Montreal.

Hamilton Station.—The exterior work on the station being built for the C.N.R. in Hamilton, Ont., a description of which was given in Canadian Railway and Marine World for Jan., 1930, pg. 6, and the general contractor for which is Piggott Construction Co., has been completed, and interior finishing and decorating are being proceeded with rapidly. A recent press report states that passenger and trucking platforms between John and Macnab Sts. have been built, and that if all goes well the station will be ready for opening in February. Land in front of the station, and surrounded by James, Murray and Hughson Sts., is owned by the railway, and as soon as present leases expire, the houses on it will be demolished and a park laid out. The report said:—"The materials used in the construction of the building have been mostly supplied by Canadian sources, with Queenston and Trenton ranking high as contributors. All the stone work has been done with Queenston stone; Trenton supplied the wood block flooring which is used entirely on the track level. Finishings of bronze and copper have all been supplied from Canadian mines; and with the exception of the marble used in the front entrance and upstairs halls, which has been imported from Italy and the United States, the entire building is the result of Canadian products and Canadian industry. On the front side of the building, which faces Murray St., carved stone blocks representing the four different means of transport supplied by the C.N.R. have been placed. These represent railway travel, for which a model C.N.R. locomotive has been duplicated; steamship travel, represented by an ocean liner; electric travel, by an electric locomotive, and the Canadian National Express by a large motor truck. On the extreme southeast corner of the station is the Ontario coat-of-arms, and on the southwest corner is Hamilton's coat-of-arms".

A contract for installation of flood-lighting equipment in connection with the station is reported to have been awarded to Dynes Electric Co., Hamilton.

Brantford Freight Cut-off.—A contract

JANUARY 1931

Hamilton Station, Canadian National Rys.—It is announced that the C.N.R. has given a contract to Pigott Construction Co., Hamilton, Ont., for the construction of a passenger terminal station there, to replace the present Stuart Street station. A description of the station was published in Canadian Railway and Marine World for Aug. 1929, pg. 474, with a plan showing the layout in detail; an illustration of the building from an architect's drawing was given in the April 1929 issue, pg. 221, and some particulars were also published in the Nov. 1929 issue, pg. 692.

Canadian National Railways New Station at Hamilton.

The station built at Hamilton, Ont., for Canadian National Rys., has been completed. A number of features of great advantage to general traffic conditions have marked the construction of the station and its various facilities, among which are the elimination of certain grade crossings in the city, the lowering of track levels, the construction of bridges of the latest type and design, which will all facilitate the movement of street traffic and the operation of trains. The problem in designing the new station was largely one of adjusting various natural grades to provide easy access from street to track level and combine convenient facilities for the public with an imposing exterior. The track level is some 25 ft. lower than the street level, the tracks running parallel to the main facade of the building.

The new structure occupies a site bounded on the west by James St., on

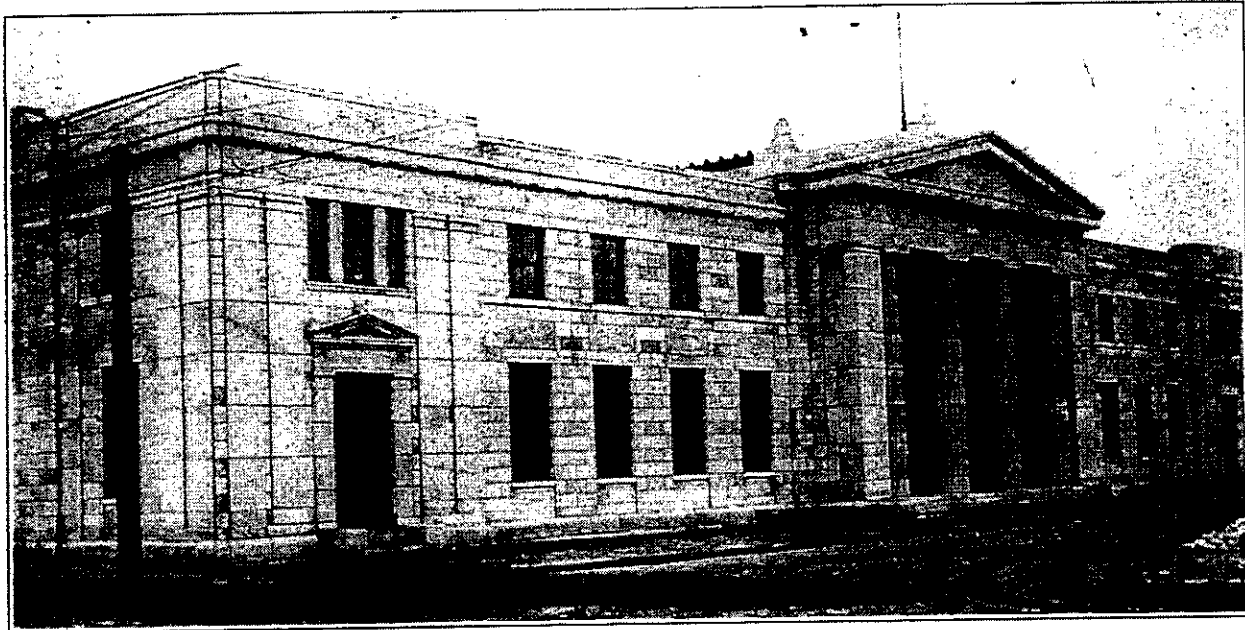
the east by Murray St., and on the south by John St., the tracks forming the northern boundary. Both James and John St. are bridged across the tracks. The main facade of the building faces on Murray St., but is set back a considerable distance from the street line, and the intervening area is treated as a station plaza. It is the intention in the spring to carry out a landscaping scheme on the plaza, which will make a perfect setting for the classical station building and add immeasurably to the appearance of the surrounding locality. Parking space for automobiles, taxis and buses is provided on the open space to the east side of the plaza. The station building proper is 290 ft. long by 83 ft. wide. The main entrance from the plaza leads through a spacious vestibule to a large business and ticket lobby, which in turn leads to the concourse, 60 ft. wide by 134 ft. long, bridging the tracks. Stairways and ramps run from the concourse to and from the passenger platforms.

The main building follows the Greek Doric style of architecture, but a distinctly modern touch has been introduced giving life to the imposing facade, which is certainly a worthy portal to the city.

The elevations to James and Murray Sts. are two stories high, while on the track side, on account of the difference in grades, the height is four stories. The main front is dominated by a central portico crowned by a pediment. A very successful scheme of flood lighting has been introduced in the portico ceiling, and the lines and proportions of the four fluted Doric columns are accentuated at night when seen in silhouette. Attention is arrested by the carved stone ornament, which though used sparingly, is planned so as to accentuate the fine proportions of the building. The subjects used for the carving are worthy of notice, and the skilful manner in which hard mechanical motifs, such as locomotives and steamships, have been given a decorative effect has elicited much favor-

is the business artery of the structure. On the east side are the ticket offices, with accommodation for the sale of transportation, berths and seats. The checking room is beyond, and on this side is also the men's waiting room and smoking room. On the west side is the newsstand, and nearby the commercial telegraph office. Then close by, are the telephone operators and the booths. Following around, patrons reach the dining room and lunch counter. At a further point is the women's waiting room and rest room, and conveniently near is the office of the Travellers' Aid representative. In the space behind the dining room are the kitchens, the serving pantry and store space for the operation of the dining room services.

The main lobby is carried up to the full height of the building and is enclosed by a copper roof. There is ample daylight both from the ceiling and from



Canadian National Rys. New Station at Hamilton, Ont.

able comment. The stone frieze over the three main entrance doorways, for instance, carved in distinctly modern manner, tells the story of the part played by the railway in the transportation of the various products of the country. Surmounting the pavilions at each end of the main front are carved into the parapet the coats of arms of the City of Hamilton and the Province of Ontario. There are separate entrances at the west end and east end of the building, the west entrance leading to the railway offices which occupy the second floor. At the east end, the entrance leads to the offices of the Canadian National Express Company. Adjoining the main station building on the track level and extending 250 feet to the east, is the wing which contains complete facilities for the Express Department and the royal mail.

In the interior of the building, the Greek feeling again is manifested, but with a modern touch. On entering through the main doorways, the traveller finds himself in a commodious chamber on the street level and directly ahead of him is the concourse. This main lobby

windows on the side of the building. For artificial lighting there are two large bronze candelabra, also wall brackets, and all have been designed to harmonize with the interior of the lobby. The walls are treated with marble columns, pilasters and dado, and the plaster work above has been given a variegated stone effect. The plaster ceiling is beamed and coffered in a handsome design in traditional Greek manner, and colored in soft greys, blues, and terra cotta tones. The floor is of patterned terrazzo in effective color combinations. The general effect of this lobby is extremely pleasing, while the arrangement of the public facilities leaves nothing to be desired in the matter of convenience. Leading from the lobby is the concourse. The walls are lined to a height of 8 ft. with a buff coloured glazed brick. The ceiling is an open steel work roof and the floor is of terrazzo; the walls above the brick are of sand finished plaster. Seating arrangements are provided in the concourse for passengers and waiting friends. The men's and women's waiting rooms and lavatory accommodation have entrances from the

STATIONS

CPR- CNR

SAINT JOHN,
NEW BRUNSWICK.

UNION STATION

Canadian Railway and Marine World

October, 1931

Union Station for Saint John, New Brunswick.

Information has been given in recent issues of Canadian Railway and Marine World as to the progress made in preliminary work for the construction of a station headhouse at Saint John, N.B., for joint use by Canadian National Ry. and Canadian Pacific Ry. The old station, which was also used jointly, was demolished late in 1930; it had developed structural faults, owing to settlement of the foundations. Tenders were invited by the General Manager, Atlantic Region, Canadian National Ry., in Dec., 1930, for excavation, pile driving and concrete foundations for the new station, and a contract was awarded B. Mooney and Sons, Saint John, in Feb., 1930, for the station headhouse foundation work. The chief work under this contract was

Canadian Pacific express room 48 x 71 ft., and small rooms for bonded baggage, baggage master, agent, trainmen, etc. On the second floor are the agent's offices, rooms for operators, conductors, and trainmen, etc. The train-shed, of steel construction, which was built shortly before the baggage and express building, having been completed in 1929, is of the Bush type, 132 x 600 ft., with 3 transverse panels each covering 2 tracks, with open concrete smoke ducts above each track. Not only on account of the former station headhouse building developing structural faults, but also because it was evident that a new station would expedite the handling of traffic, and would provide modern and up-to-date facilities for the travelling

out with no alterations to the latter beyond the providing of convenient access from one to the other.

The entire substructure will be carried on heavy beams of reinforced concrete, supporting the reinforced concrete pan joist system of the first or main floor slightly above grade. The skeleton of the superstructure will be steel frame, the columns to be fireproofed with terra cotta and the second floor and roof slab with concrete. In the second floor and roof, the concrete pan joist system will be used. Any possible dampness due to Saint John's abundant rainfall will be guarded against by the use of cavity walls of brick and terra cotta in the greater part of the building, while the portions having stone trim will be pro-



Station Headhouse to be built at Saint John, N.B., for joint use by Canadian National Ry. and Canadian Pacific Ry.

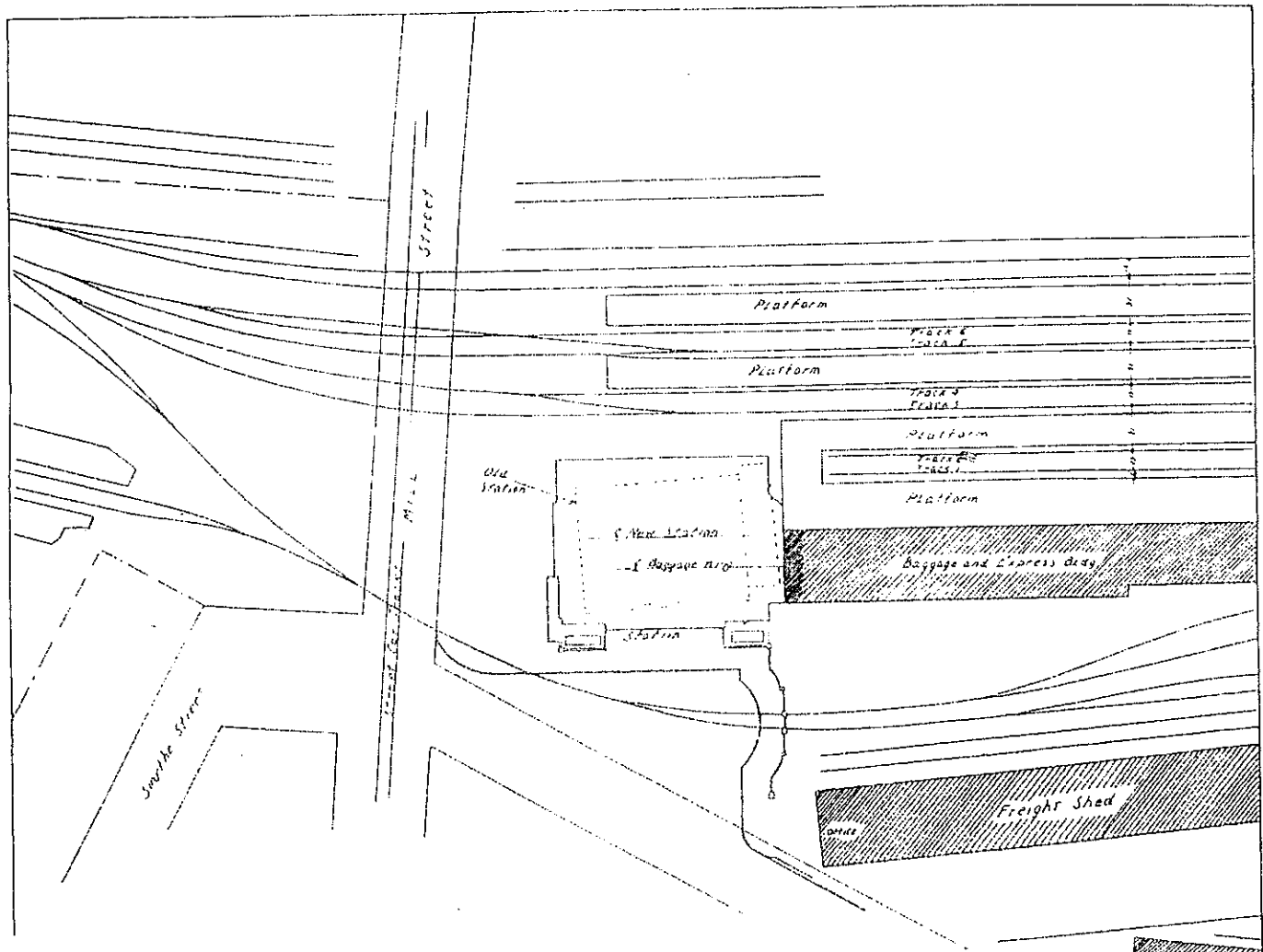
ing accommodation; the eastern portion will be kept clear for the convenience of passenger traffic.

All public facilities, ticket office, telegraph office, lunch room, railway news office, women's waiting room, and men's smoking room, will open off the general waiting room and concourse, a very logical and convenient arrangement from the public's point of view. Practically the entire eastern wall of the concourse will be devoted to access to the concourse lobby. This will be well lighted by a large skylight in its low ceiling, and from it direct access to the station plat-

7 in. x 26 ft. 4 in. At the west, or Mill St. end, of the concourse, there will be, from south to north, a storage room; a travellers' aid office, opening off the concourse, between which and the west wall of the building will be the stair hall for a stairway to the second floor; the west vestibule, 23 ft. x 16½ ft.; another stairway, adjoining the west vestibule at the north side; and janitor's quarters. Along the north side of the main waiting room and concourse, from west to east, will be the men's smoking room 30 ft. 7½ in. x 22 ft. 4 in., and, opening off it, the men's lavatory, 14

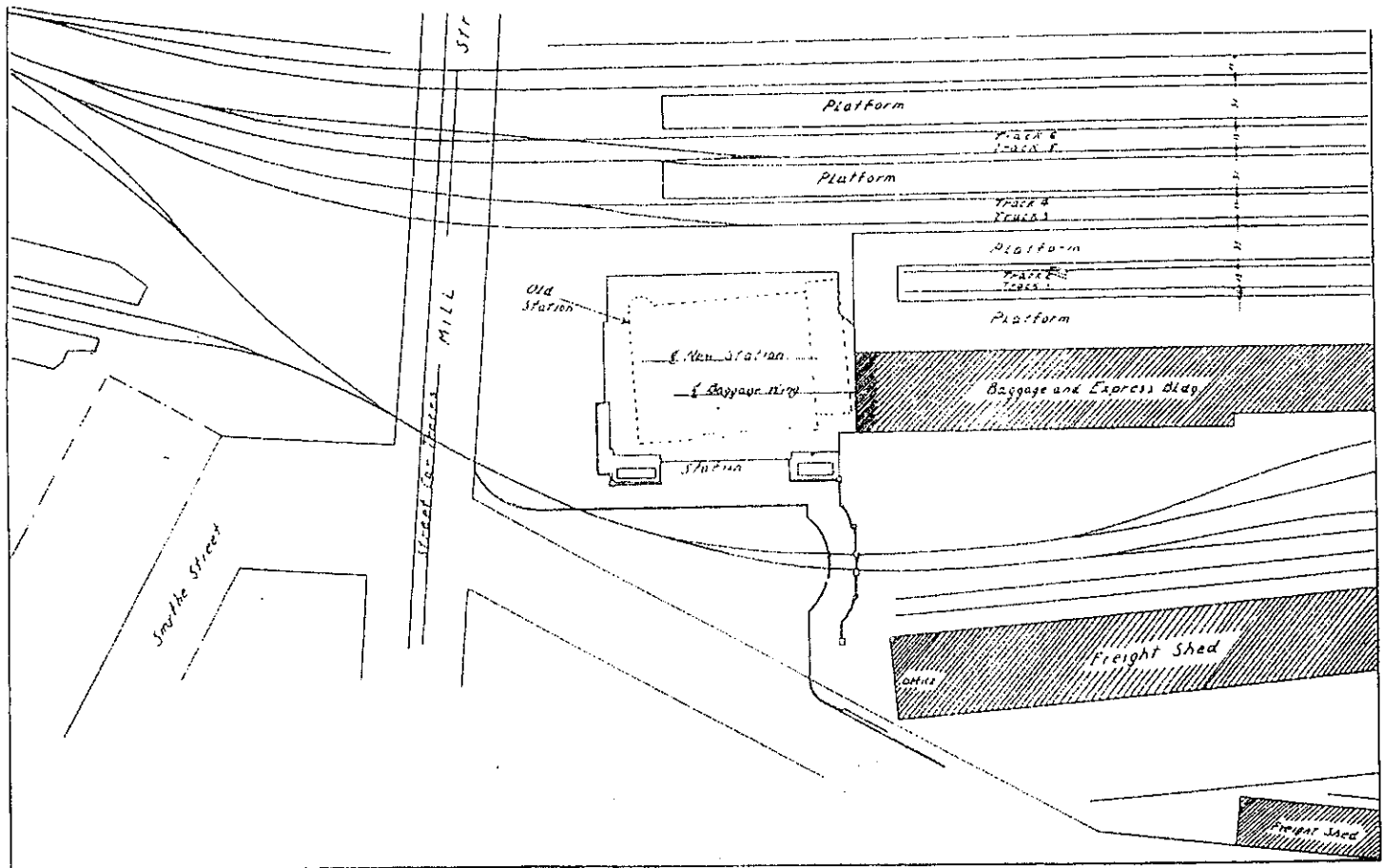
ing room and lavatory, in the lunch room outside the lunch counter circle, and in the kitchen and kitchen stores space. The terrazzo floor in the main waiting room and concourse will be multi-colored. Space will be provided at the north side of the concourse lobby, at the east end of the main waiting room and concourse, for the entrance to a subway under the station tracks.

The second floor of the station head-house building will be occupied by offices for the various facilities necessary for the complete modern railway station. The subdividing will be by



October 1931

October 1931



General Layout, Saint John, N.B., passenger terminal area, showing relation of new station headhouse to existing facilities.

forms, and to the parcel and baggage checking counters of the baggage wing, will be provided. Parcel lockers will be built in the walls at each end of the concourse lobby, for the convenience of travellers, and doors will open off to the baggage master's office, stairway to basement and conductor's pay-in office. The baggage master's office, stairway to basement and conductor's pay counter will all be at the south side of the lobby. Ranged along the south side of the concourse will be the ticket office, 39 ft. 7 in. long, with counter; a stair lobby; the south vestibule of the concourse, 31½ ft. long x 19 ft. 3½ in. wide; the commercial telegraph office, 23 ft. 10 in. x 15 ft.; women's lavatory, 14 ft. 10 in. x 16 ft. 3 in., and, in the southwest corner, the women's waiting room, 80 ft.

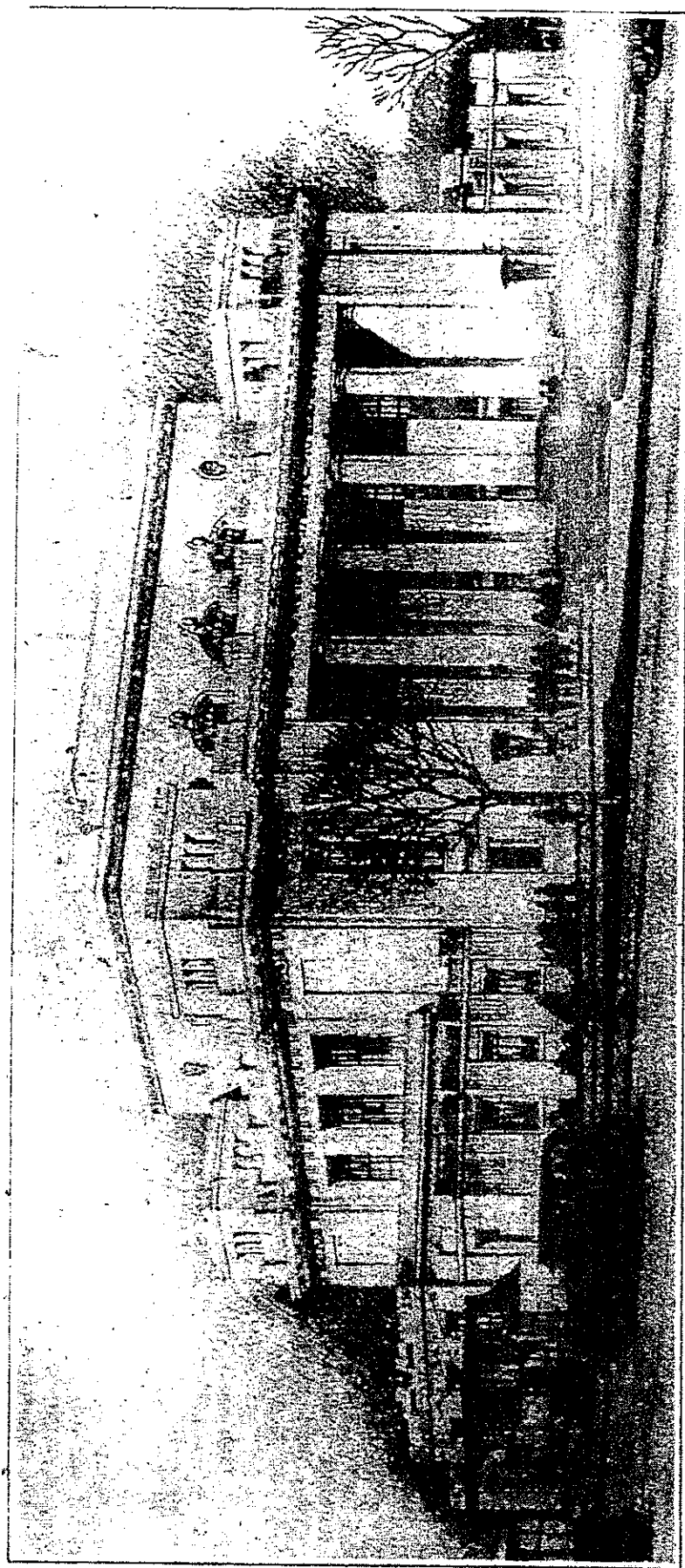
ft. 7½ in. x 22 ft. 4 in.; the lunch room, 47½ ft. x 22 ft. 8 in., containing a lunch counter with 38 stools; the railway news office and stock room will be at the northeast corner, fronting the waiting room and concourse; behind them, and connected with the lunch room, will be the kitchen and kitchen stores room. The floor covering in the ticket office and the baggage master's office will be linoleum, which will also be used in part of the commercial telegraph office, in the travellers' aid office, inside the lunch counter circle, in the lunch room and in the railway news office and stock room. The floors will be of terrazzo in the conductors' pay-in office, the stair lobby adjoining the ticket office, part of the commercial telegraph office, women's lavatory and waiting room, men's smok-

movable partitions. The central part of the second floor area will be occupied by the upper part of the main waiting room and concourse; along the north and south sides of the central space will be corridors, 6 ft. 8 in. wide, to be designated the north and south corridors respectively. There will be no offices at the east and west ends of the central space, but there will be a corridor at the east end, 6½ ft. wide, connecting the north and south corridors, while, at the west end, the main landing from the two stairways leading up from the main floor near the Mill St. entrance will be arranged to open into corridors 6 ft. 10 in. wide, adjoining the stairways and connecting the north and south corridors. Thus, complete circulation around the upper concourse space will be provided

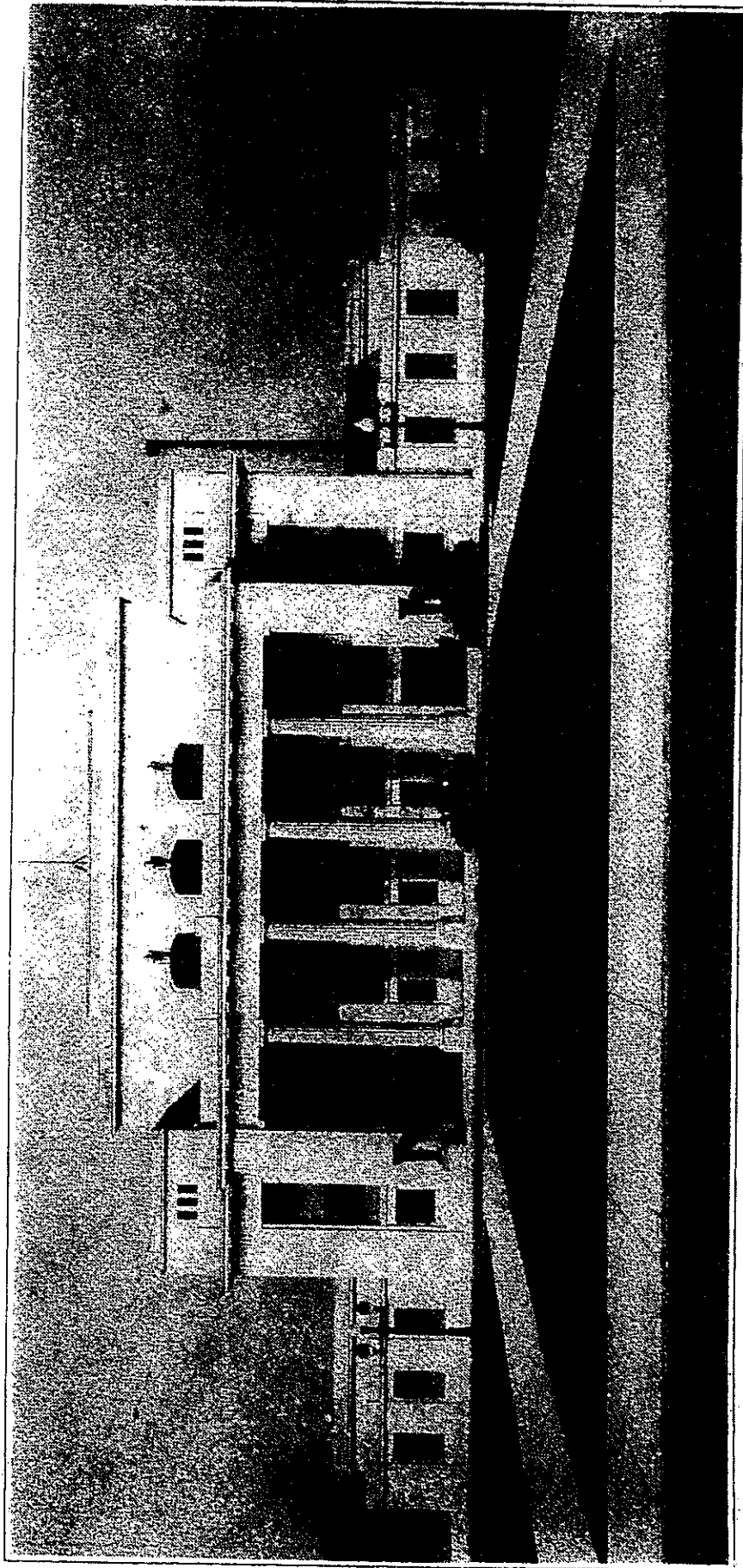
CANADIAN
PACIFIC
RAILWAY

PARK AVENUE
STATION

MONTREAL



Station to be built at Park Avenue, Montreal, for Canadian Pacific Railway.



Park Avenue Station, Montreal, Canadian Pacific Railway.

Canadian Railway and Marine World

December, 1931

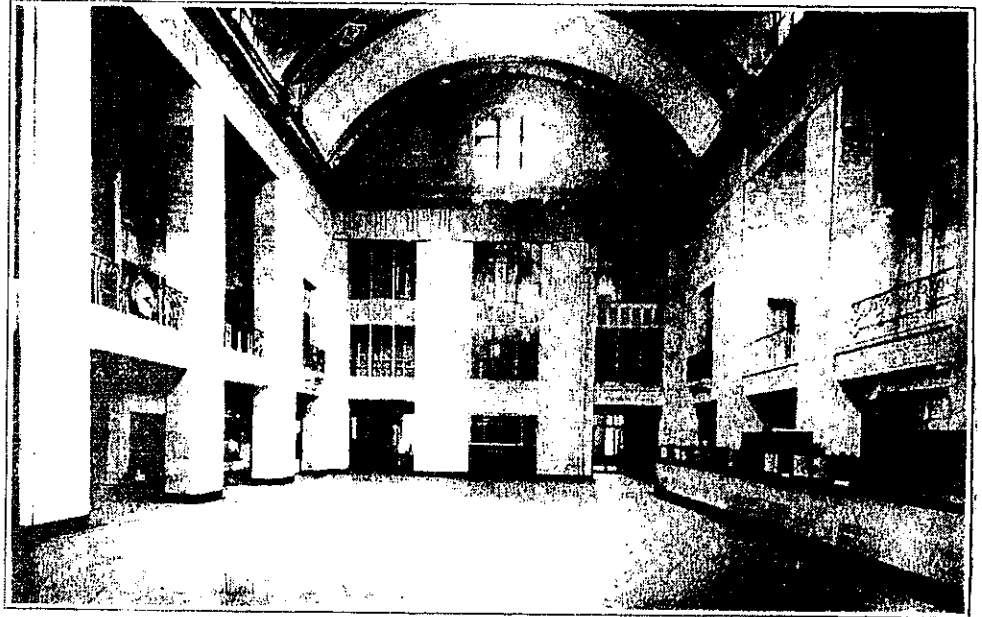
Station built at Park Avenue, Montreal, by Canadian Pacific Railway.

The Canadian Pacific Railway Co.'s new station in the north end of Montreal, to be known as Montreal, Park Avenue, has been built as a result of the normal growth and development of that section of the city. The construction of two new subways under the railway lines at Jean Talon Street and at Park Avenue will permit adequate extension of tramway service to the north end of the city, and the new station has been located at the junction of Park Avenue and Jean Talon Street, with a view to general convenience to the public, from the standpoints of accessibility by tramway and taxi. The Mile End station was closed to passenger traffic when the Park Avenue station was opened, as it had for some time been subject to congestion and certain inconvenience of location, and traffic from that point has, as a consequence, been transferred to the new station. The project in its full development includes a station building, with approaching driveways, sidewalks, gardens, etc.; an express building and power house; a subway from the station building to the train platforms; and additional trackage, with covered passenger, baggage and express platforms.

The station building has been design-

easy ramp is a passage way connected to the passenger platforms, enabling passengers to move to and from trains under

walls, which is also used for the finish of the walls of the lobbies around the central space. The floors are of Ter-



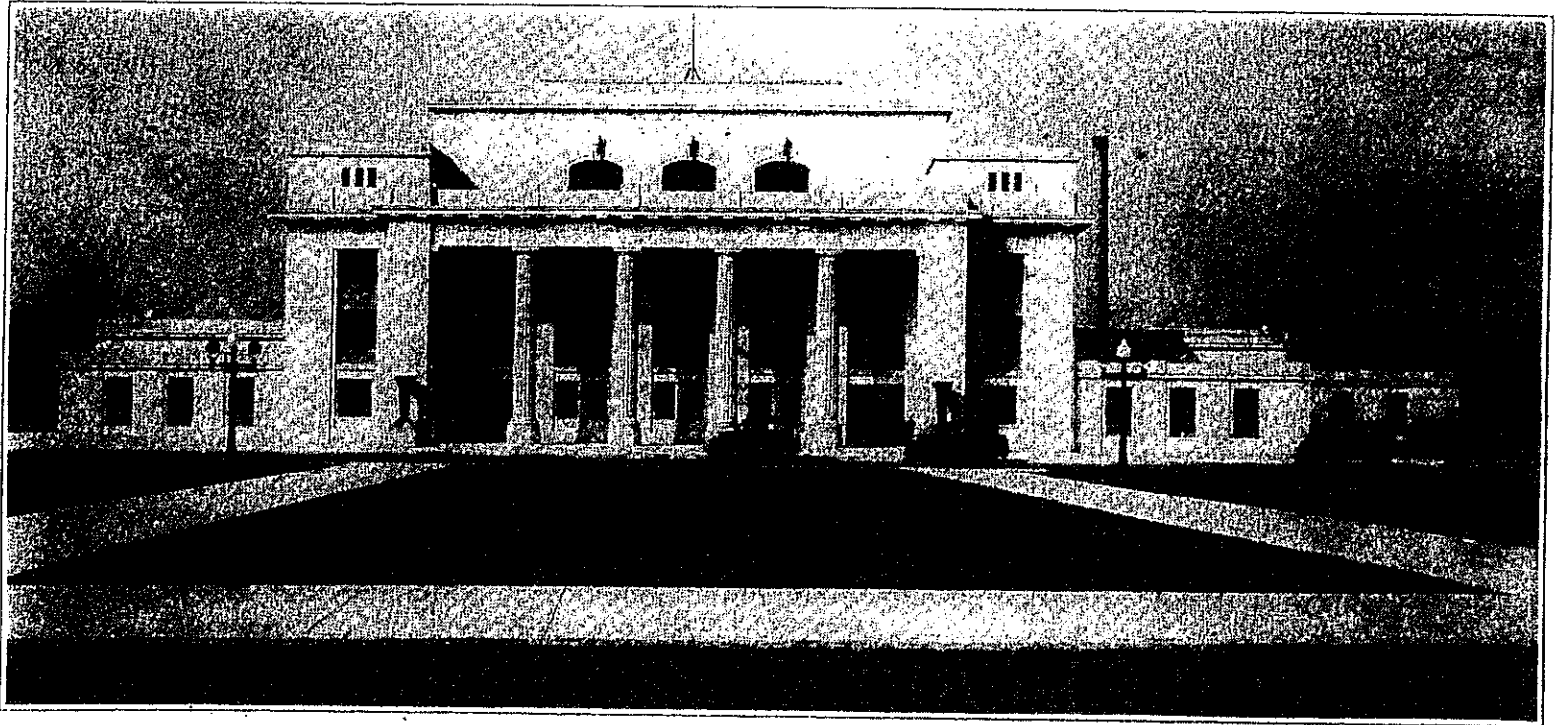
Concourse, Park Avenue Station, Montreal, Canadian Pacific Railway.

The station building has been designed along modified Italian Renaissance lines, with the elimination of all unnecessary embellishments, modern motifs being applied in stone carving and metal ornamentation, the effort being to provide a simple, but dignified and monumental, building. It consists of a large

Concourse, Park Avenue Station, Montreal, Canadian Pacific Railway.

cover. There are two floors of offices above the ground floor level, arranged around the central concourse space. They will be occupied by the company's own forces. The main building is fireproof,

razzo in a pleasing 2-tone buff effect with black marble bases and borders. The ceilings of the large public spaces are treated with acoustical material to soften the echoes and tone down the gen-



Park Avenue Station, Montreal, Canadian Pacific Railway.

central concourse, around which are the waiting rooms, with men's and women's rooms adjacent, ticket office lobby, baggage and parcel rooms, telegraph, travelers' aid, public telephones, news stand, a complete lunch room and a barber shop. Leading from the concourse by an

being constructed of steel frame with reinforced concrete floors. The exterior walls are of stone, backed up with brick and furred on the inside with Haydite blocks.

The interior finish in the concourse consists of Travertine marble on the side

eral noise level in those spaces. The main concourse has concealed cove lighting, housed in the cornice around the room. The lighting of the other portions of the building is by conventional drop light fixtures hung from the ceilings.

The main entrances, of which there

The exterior work around the building consists of sidewalks, curbing, street paving, garden plots, fencing, etc. The streets and roadways, after having been graded and levelled off to the sub-grade, were rolled, and an 8-in. layer of large broken stone, forming a teleford base, was installed; on top of this a 3-in. layer of dry crushed stone was placed and finally a 6-in. layer of concrete, reinforced with wire mesh, the wearing surface consisting of 3 in. of asphalt. The cement surfaced sidewalks were formed similarly, but no steel reinforcing was used. The curbing consists partly of granite and partly of concrete. The main fence on the front side of the building and the portion connecting the express building is constructed with concrete posts and iron pickets. The fence on the other portions of the property has standard chain link fence and iron pipe posts. The lighting from the outside is provided by City of Montreal type light standards, having 500 watt lamps in each. The front of the building will be further illuminated by 2 special lamp standards equipped with high power floodlights.

The plans, specifications and details were prepared in the office of the Chief Engineer, C.P.R., J. M. R. Fairbairn, D.Sc. Construction was started about Jan. 1, last, and was completed by Oct. 1.

The offices on the first floor are occupied by O. M. Lavoie, Superintendent, Laurentian Division, and T. Collins, Superintendent, Montreal Terminals, with their assistants, division master mechanics, and staff. The second floor is occupied by P. D. Gant, Accountant, and George Trepanier, Assistant Accountant, and staff.

The station was opened officially, Oct. 31, at 9.30 p.m., when R. S. White, M.P. for Mount Royal, Montreal, unlocked the front door, among those present being Mayor Houde, of Montreal, J. K. Savage, Superintendent, Quebec District, T. Collins, Superintendent, Montreal Terminals, O. M. Lavoie, Superintendent, Laurentian Division, and a number of other C.P.R. officials. On the following day, Nov. 1, Sunday, the station went into active operation, the first inbound train being one from Quebec, arriving at 6.23 a.m., and the first outbound one leaving at 9.45 a.m. for Quebec. All the services previously at Mile End station have been transferred to Park Avenue station.

nel of full size, which also serves as a connecting passage between the station building and the power house. At the end of the express building an ash disposal tank has been incorporated as a part of the structure, so that ashes may be conveyed from the boiler room floor by a steam jet ash conveying system to the tank above, from which, by means of a chute, the ashes will ultimately be discharged into gondola cars and hauled away. The heating for the building is a 2-pipe low pressure vacuum system, the vacuum pumps being located in the basement of the station and discharging the condensation through the tunnel to the boiler feed pumps in the boiler room. The boilers are equipped with efficiency instruments to indicate, record and integrate steam flow, record air flow and flue gas temperature, and indicate air pressure at various points in the boiler settings.

The exterior work around the building consists of sidewalks, curbing, street paving, garden plots, fencing, etc. The streets and roadways, after having been graded and levelled off to the sub-grade, were rolled, and an 8-in. layer of large broken stone, forming a teleford base, was installed; on top of this a 3-in. layer of dry crushed stone was placed and finally a 6-in. layer of concrete, reinforced with wire mesh, the wearing surface consisting of 3 in. of asphalt. The cement surfaced sidewalks were formed similarly, but no steel reinforcing was used. The curbing consists partly of granite and partly of concrete. The main fence on the front side of the building and the portion connecting the express building is constructed with concrete posts and iron pickets. The fence on the other portions of the property has standard chain link fence and iron pipe posts. The lighting from the outside is provided by City of Montreal type light standards, having 500 watt lamps in each. The front of the building will be



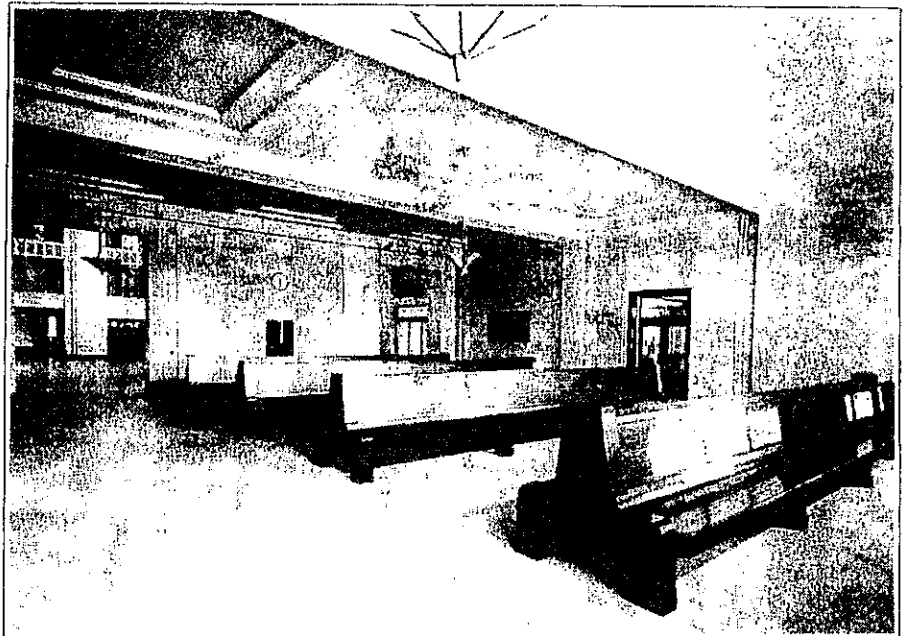
Women's Waiting Room, Park Avenue Station, Montreal, Canadian Pacific Railway.

and doors. Other openings around the central public spaces have Monel metal doors and frames. In the passage way from the concourse to the trains several store front display show cases have been installed, which are also trimmed with Monel metal.

The waiting room is finished in much the same material as the main concourse, but with simple ornamental plastered ceiling with no acoustical treatment. It will be fitted with black marble drinking fountain and comfortable seats of the conventional type. The men's smoking room and women's rest room, with lavatories adjoining, are connected directly with the waiting room on either side. The men's smoking room is finished with a heather brown quarry tile floor and dado to window sill height. The walls and ceiling are plastered down in a soft buff tone decoration. The women's room has an oak floor and oak dado to window sill height, with plastered walls and a simply ornamented plastered ceiling. The walls are finished in a light texture Craftex treatment. The lavatories in these rooms are finished with white marble dado and stalls and white Ceramic tile floor. The ticket office on one side of the main concourse is of the open counter type, with a low Monel metal screen on top, with individual wickets. The counter has a Travertine marble front and a Belgian black marble top. Counters for the telegraph and travelers' aid are both similar. A completely equipped news stand, with customary fittings and show cases, is located at one end of the concourse, adjacent to the entrance to the subway, where it is convenient for passengers moving to and from trains.

The lunch room has plastered walls and ceilings, with Terrazzo floor, and is furnished with a Travertine and Belgian

finished with red quarry tile floor, with white glazed tile walls from floor to ceiling, and is fitted up with all modern conveniences, including electric refrigeration and gas ranges. There will be a



Men's Waiting Room, Park Avenue Station, Montreal, Canadian Pacific Railway.

completely equipped soda fountain in conjunction with the lunch room. The barber shop, at the easterly end of the concourse, and adjacent to the lunch room, is finished with a white green-veined marble dado about 7 feet high, with Belgian black marble base and bor-

and protected with a marquise or platform shelter for the full width. The building is faced with dark brown textured brick and trimmed with concrete.

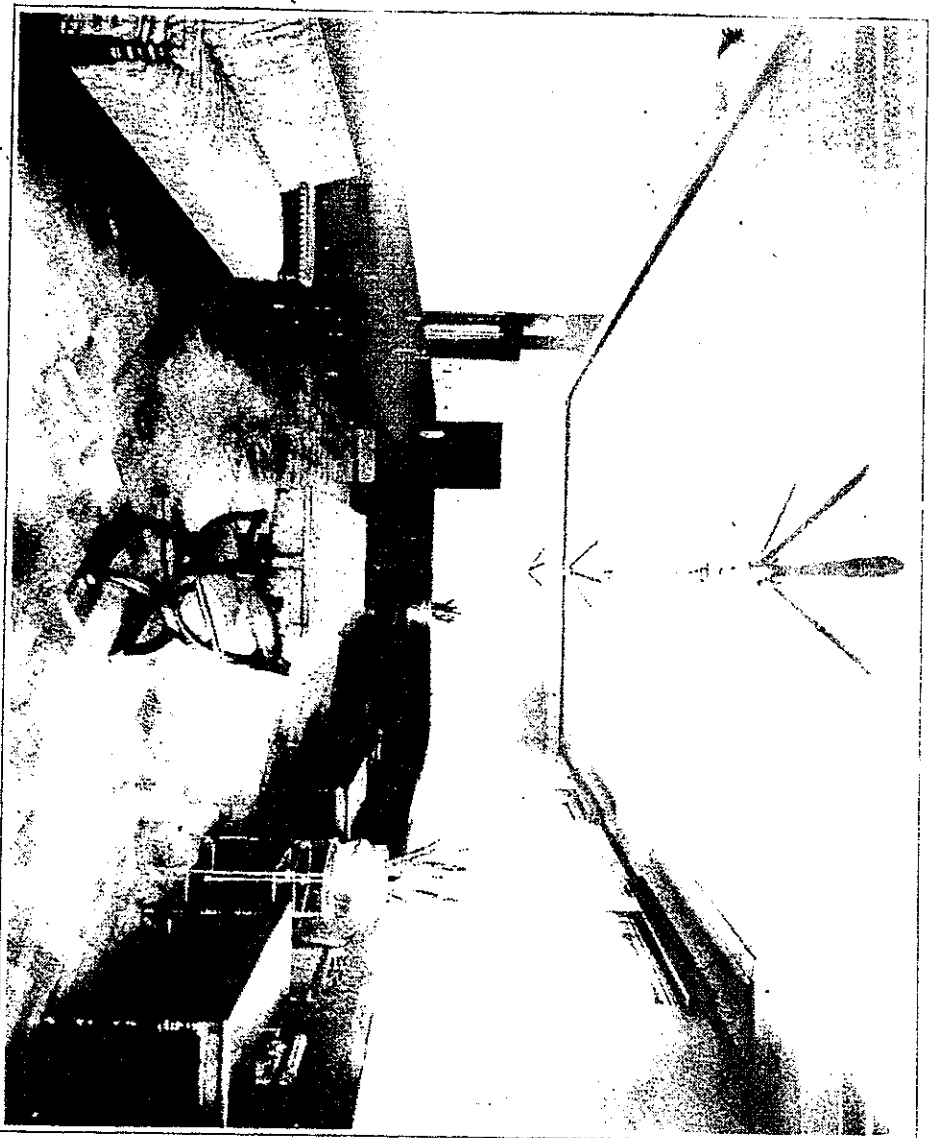
The basement floor is excavated to a depth of 27 ft., to provide space for boilers and power plant serving all facilities in connection with the terminal. Considerable ground water was encountered in the excavation, which was 60% in rock. The drainage is provided by footing drains, carried around the outside walls and turned into a sump pit inside the building, the water being pumped from the pit into the sewer by electrically driven automatic sump pumps.

Space has been provided for 4 horizontal return tubular high pressure steam boilers, 2 of which have been installed for the present. They are fired by automatic stokers of the underfeed type. The coal supply is contained in coal bunkers

which form a portion of the basement of the building, coal being discharged directly from the cars through manholes in the platform to the coal bunkers. All steam and return mains and other piping from the power house to the station are carried in an underground pipe tun-

are two on the front of the building, two for exit to the tramways off the waiting rooms, and a single entrance at the rear for exit to taxis, have bronze frames

marble counter in a double J form. This counter is of the low type, with chair height stools with backs. The kitchen, in conjunction with the lunch room, is



Women's Waiting Room, Park Avenue Station, Montreal, Canadian Pacific Railway.

and doors. Other openings around the central public spaces have Monel metal floors and frames. In the passage way ceiling, and is fitted up with all modern

der, and a dark green Terrazzo floor. It will be equipped with the latest conveniences in the way of cabinets, basins, chairs, etc. The general offices on the first and second floors are finished in conventional form, with plastered walls and ceilings, cement floors covered with linoleum with a painted wood base and picture mould, pressed steel door frames, wood doors, with glazed panels and transoms. Corridors to the offices have plastered walls and ceilings, with Terrazzo floors, black marble bases and borders.

The Canadian Pacific Express Co.'s building is at the rear and somewhat back of the station building, and is connected to it by platforms. It is a low one-story building, consisting of a large express room with customary sliding doors, and a general office at one end for the accommodation of the staff and the public. The building has a 10 ft. platform extending around all 4 sides and protected with a marquee or platform shelter for the full width. The building is faced with dark brown textured brick and trimmed with concrete.

The basement floor is excavated to a depth of 27 ft., to provide space for boilers and power plant serving all facilities in connection with the terminal. Considerable ground water was encountered in the excavation, which was 60% in rock. The drainage is provided by footing drains, carried around the outside walls and turned into a sump pit inside the building, the water being pumped from the pit into the sewer by electrically driven automatic sump pumps.

Space has been provided for 4 horizontal return tubular high pressure steam boilers, 2 of which have been installed for the present. They are fired by automatic stokers of the underfeed type. The

Park Ave. Station, Montreal.—An illustrated description of this station, which was opened Oct. 31 and went into operation Nov. 1, is given on the first pages of this issue. In our November issue, pg. 696, it was mentioned that the Board of Railway Commissioners had passed order 47,445, Sept. 29, approving plans of the ground floor and front elevation of the station, which was designated as being at Breslay, and its location was similarly designated in the Board's orders 46,059 and 47,446. On Oct. 27 the Board issued order 47,588, amending the three previous orders by striking out the word "Breslay" and substituting the words "Montreal (Park Avenue)."

December 1931



Station Headhouse to be built at Saint John, N.B., for joint use by Canadian National Rys. and Canadian Pacific Ry.

the driving of about 600 piles in clusters and the provision of reinforced concrete capping, which has been finished. The accompanying block plan shows the location of the old station by dotted lines in the space to be occupied by the new structure. The baggage and express building, which existed previously, was described in *Canadian Railway and Marine World* for Nov., 1928, pg. 636, and a plan showing the layout of the baggage and express building in relation to the other terminal facilities, as they existed at that time, was given in the Nov., 1928, issue, pg. 660. Completion of the baggage and express building, in 1930, followed shortly after completion of the present train-shed, north of the baggage and express building. The baggage and express building is 442 ft. 4 in. x 50 ft. 1 in., taking in the whole area of former baggage and express quarters and considerable additional space. The foundations are of concrete, the walls are of brick, and the roof of built-up type, with 5-ply asbestos over a frame deck. The ground floor contains a baggage room 48 x 62 ft., with alcove 18 x 20 ft., Canadian National express room 48 x 84 ft., mail room 38 x 46 ft., Cana-

public, it was decided to include replacement of the former headhouse, by the one for which the foundations are now prepared, in the programme for unemployment relief which was embarked upon last autumn by the railways in conjunction with the Dominion Government. In the preparation of foundations for the new station headhouse, the new piles were driven to greater depth than those employed formerly; in addition, the piles of the old foundations, where their positions coincided with the new, were tested, and such piles as were found satisfactory for the new loading were incorporated in the new foundations. Owing to the high tide level at Saint John, with consequent hydrostatic pressure, it was considered inadvisable to utilize the whole of the substructure as a basement, but ample provision has been made for present requirements of mechanical equipment in the part of the building adjoining the existing baggage and express building, by means of a small basement, combined with a roomy pipe duct around the entire outside foundation walls of the station headhouse building. The joining of that building to the existing structure will be carried

vided with ample brick backing, as well as the standard cavity and inner wall of terra cotta.

Looking at the building from the exterior, the treatment will be local red brick of dark red colour, relieved by stone cornice, window trim, and entrance features. The main entrance, off Pond Street, will be distinguished by a stone portico with tall Roman Doric columns. A subsidiary entrance will be provided off Mill Street, which will also have an interesting treatment of stone detail. When the building is finished, a well laid out entourage on both streets, with facilities for parking and handling of taxi traffic, will complete the picture, while the commercial traffic of the adjoining baggage and express wing will be segregated in a satisfactory manner.

The center of interest in the station headhouse will be a combined waiting room and concourse in the center of the plan. This will extend up the entire height of the building and terminate in a segmental vaulted ceiling above the main roof deck, thus providing ample clearstory as well as end lighting. The space at the western or Mill Street end of the concourse will be occupied by seat-

Canadian Pacific Railway Station for North End of Montreal.

The Canadian Pacific Ry. has given a contract to Anglin-Norcross, Ltd., for the construction of a passenger station at the head, or north end, of Park Ave., Montreal, where it enters Jean Talon St., the work to be completed by October. It will be known as Park Avenue station and will serve the north end of Montreal, Outremont and adjoining territory. It will be about 125 ft. west and 300 ft. north of the recently-built subway on Jean Talon St.; it will face on that street, and will be near the junction of the line from Place Viger station with the belt line which connects the Sartin and Outremont yards and provides a connection with Windsor Street station via Westmount, Montreal West and St. Luc Jct. An area 300 x 450 ft. between the building and Jean Talon St. is to be laid out in roadways and gardens arranged to provide separate inbound and outbound traffic lanes, space for parking of private automobiles, taxicabs, etc.,

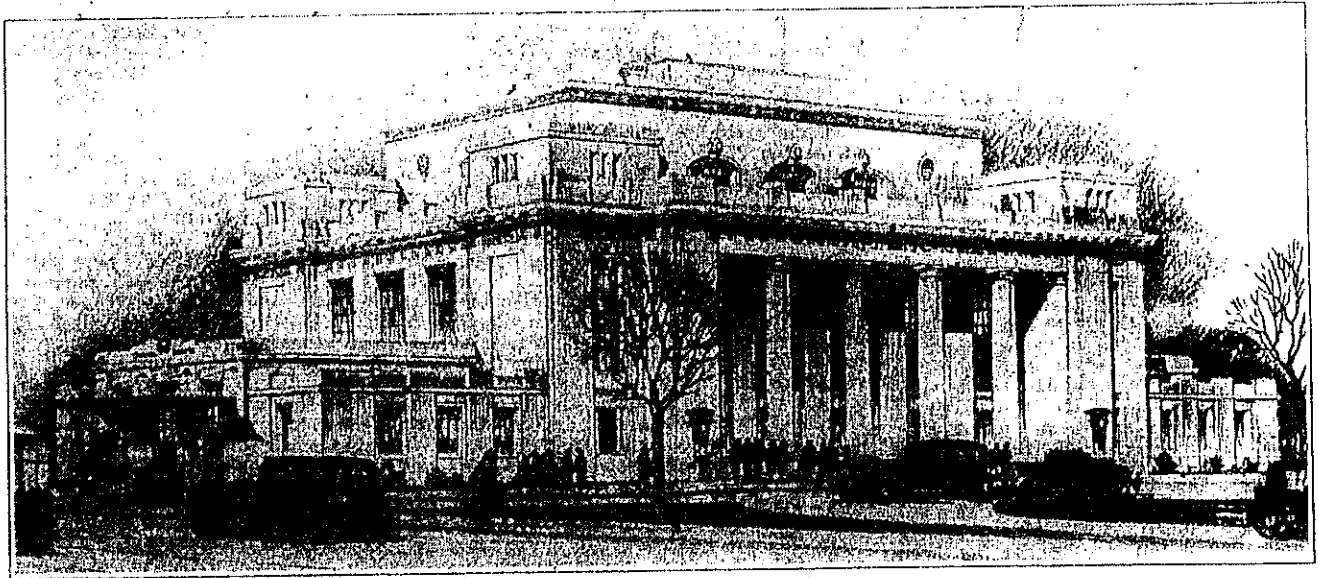
ing, men's smoking room, 36 x 18 ft., with lavatories adjoining. There will be two vestibules on the west side of the building, for passengers coming from and going to the new street, and these will open into the general waiting room. There will also be a vestibule at the north side of the concourse, at the west end, and arranged along the north side of the concourse will be a travellers' aid office, telegraph office, parcel check room 47 x 16 ft., and station master's and baggage master's office. Telephone booths will be arranged at the northwest corner of the concourse, at the entrance to the vestibule hall. To the east of the concourse, from south to north, i.e., from the Jean Talon St. side toward the rear of the building, will be a kitchen and lunch room with the space between them and the concourse occupied by barber shop, boot shining stand, news stand, etc.; the ramp down to the tunnel leading to trains, and the baggage room.

the C.P.R. Engineering Department's direction, under supervision of J. M. R. Fairbairn, Chief Engineer, and J. W. Orrock, Engineer of Buildings.

Express Companies' Matters.

J. B. Sutherland, General Agent, Foreign Department, Canadian Pacific Express Co., Toronto, was placed on the pension list, Dec. 31, 1930, after 43 years' service. He started as a messenger on the Toronto-North Bay run in Sept., 1887, his subsequent record being:—1888 to 1892, night clerk, Toronto office; 1892 to 1900, clerk in delivery room, Toronto office; 1900 to 1909, customs clerk, Toronto; 1909 to 1912, freight Solicitor, Toronto; 1912 to 1926, Agent, Foreign Department, Toronto; 1926 to date of retirement, General Agent, Foreign Department, Toronto.

The Canadian Pacific Express Co.'s



Station to be built at Park Avenue, Montreal, for Canadian Pacific Railway.

with facilities for pedestrians and street car passengers. In connection with the development, a new street, running north from Jean Talon St., west of the station, is being provided; it is to carry electric railway tracks, and there will be a side entrance to the station, for passengers arriving or leaving by street cars.

On the upper floors, surrounding the concourse, will be railway offices. The station's interior finish will include marble floors and walls with marble and plaster ornamentation; Monel metal and bronze will be used for doors, door frames, lamp standard, ticket wickets, railings, etc. Where marble is not used on the floors,

Toronto no. 2 first aid team was awarded the Dr. H. A. Beatty trophy for first aid teams on the C.P.R. Eastern Lines, at the annual competition held under the auspices of the St. John's Ambulance Association recently, Dec. 19, 1930.

P. A. Dunne, Superintendent, Canadian Pacific Express Co., British Columbia

with facilities for pedestrians and street car passengers. In connection with the development, a new street, running north from Jean Talon St., west of the station, is being provided; it is to carry electric railway tracks, and there will be a side entrance to the station, for passengers arriving or leaving by street cars.

The station building, which will be of combined classical and modern architecture, will be 234 ft. east and west by 103 ft. north and south, with an area of 20,650 sq. ft., and will have cut stone exterior. The central portion, rising to a height of four stories, will contain the concourse, 80 x 50 ft., as the main feature, utilizing the full height of the building. There will be four large columns at the front entrance, from which two vestibules, one at each side, will lead directly into the concourse; these will flank the ticket office, 45 x 23 ft., and fitted with eight open counter type wickets and agent's office and cashier's cage. To the west (the new street side) of the main entrance will be the women's rest room, 36 x 18 ft., with lavatories adjoining; to the west of the concourse will be the general waiting room, 55 x 45 ft., and at the northwest corner of the build-

On the upper floors, surrounding the concourse, will be railway offices. The station's interior finish will include marble floors and walls with marble and plaster ornamentation; Monel metal and bronze will be used for doors, door frames, lamp standard, ticket wickets, railings, etc. Where marble is not used on the floors, terrazzo or concrete will be employed.

The passenger platform, between the main line tracks, will be 30 ft. wide and 1,200 ft. long, and the tunnel or subway connecting the platform with the station ramp will be 135 ft. long. Connecting with the northeast corner of the station by a sidewalk, with pipe tunnel below it, and at some distance from the station, will be the express building, so arranged, together with express tracks, as to afford maximum facility in the handling of express to and from the cars and to and from waggons and trucks. The express platform will be 18 ft. wide and 580 ft. long. A high platform, 225 ft. long, for handling milk, will be provided at the north end of the express platform. The express building will contain power and heating facilities for the station building.

Construction will be carried out under

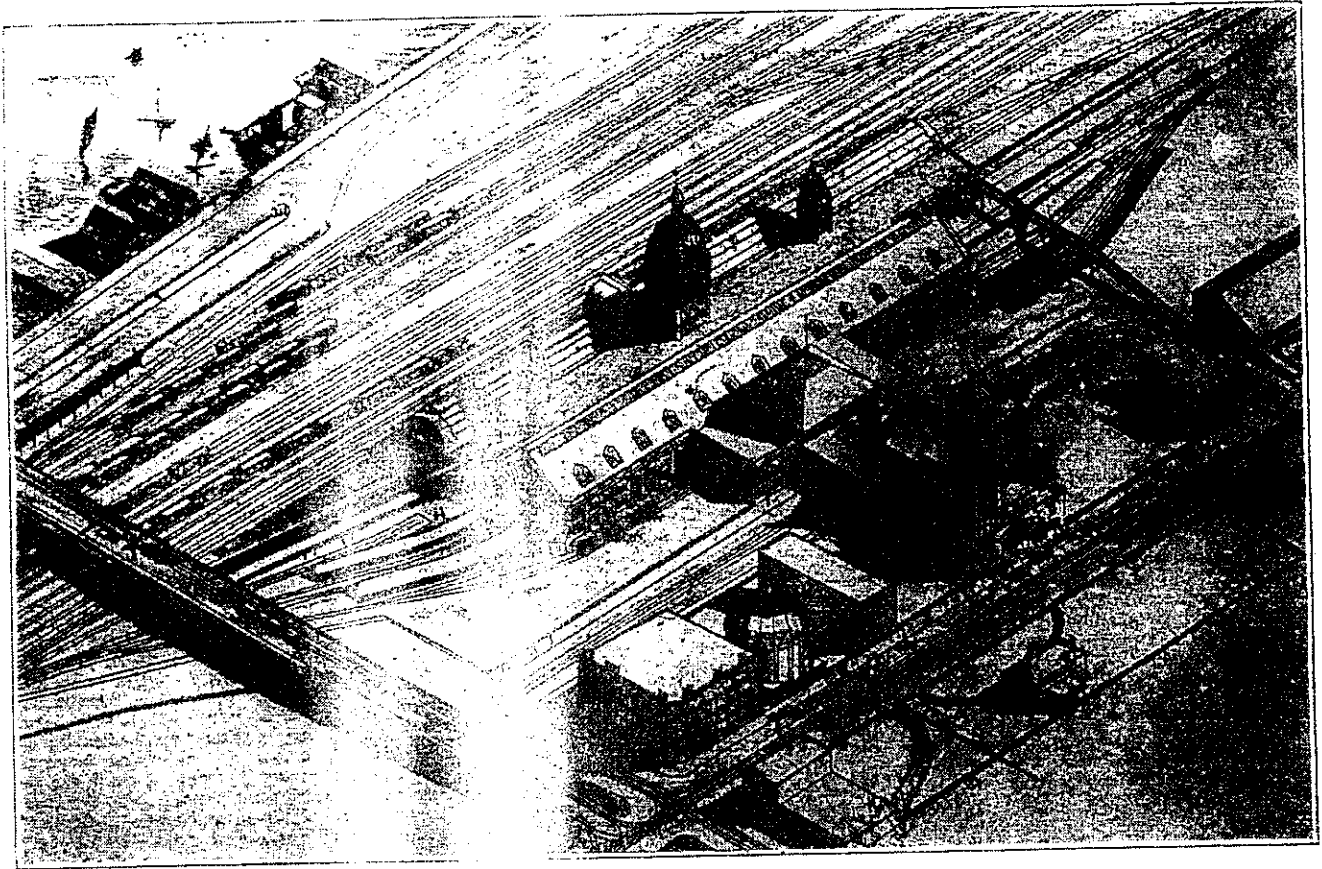
February 1931

Toronto's Former Union Station to be Demolished.

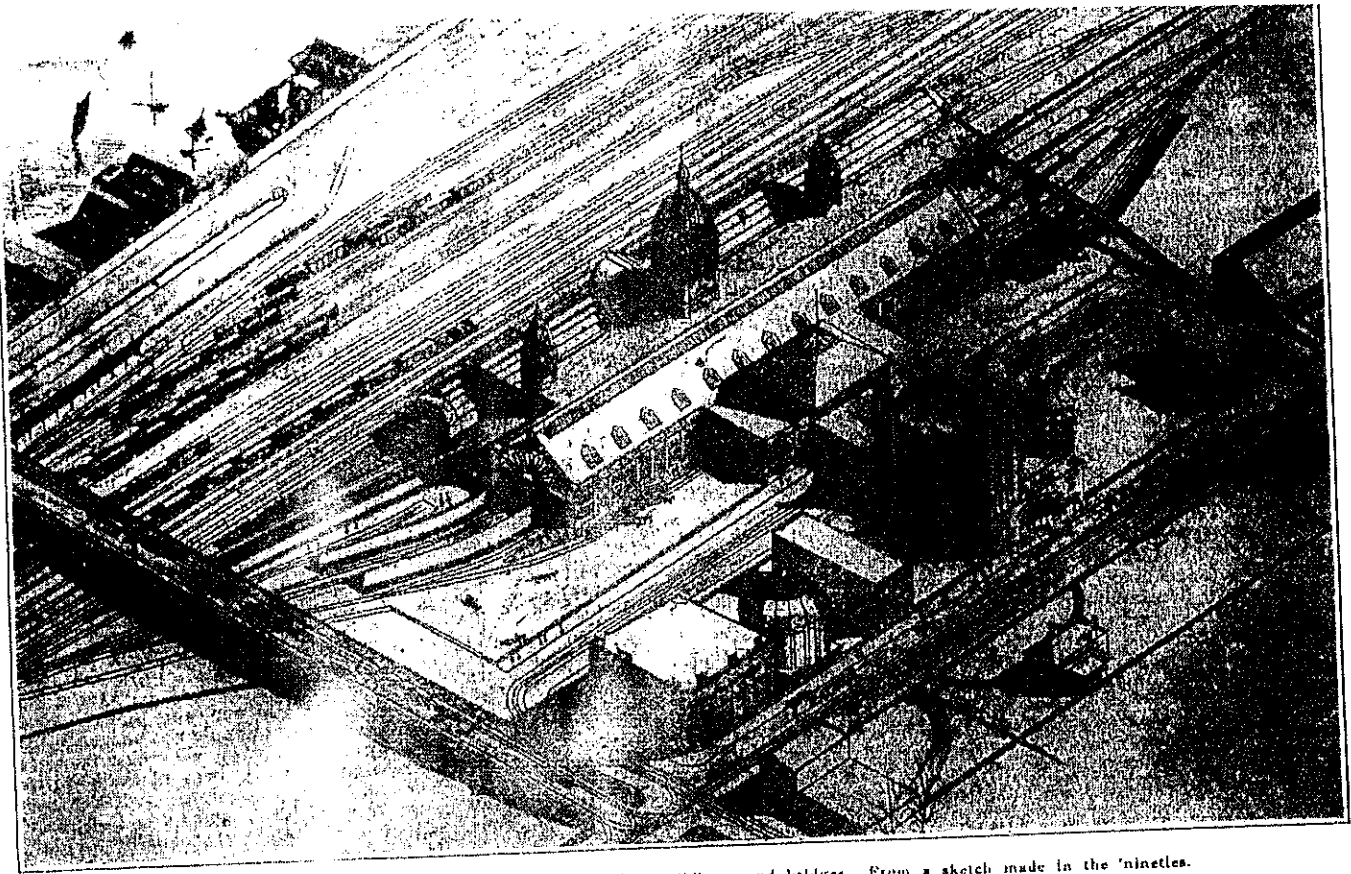
Toronto Terminals R. Co. has, we are advised officially, given a contract to Frankel Bros., Toronto, for demolition of the remaining portion of the former Toronto Union station, on the south side of Front St., between York and Simcoe Sts. With the tearing down of that structure, there will pass into obivion a landmark of interest not only to Toronto citizens but to thousands of people from all parts of the world who have passed through its portals. Built in 1895 as a Grand Trunk Ry. undertaking, as a result of an agreement entered into between that railway and the Canadian Pacific and connected to the original

a sketch made in the early nineties, when the Grand Trunk and Canadian Pacific Ry. Cos. were entering into an agreement for joint use of the station facing Front St. now about to be demolished. The previous station, finished in 1873, is indicated by the three towers at the south (Lake Ontario) side of the group of buildings shown. To get to it, passengers proceeded south on York St., and then followed a road to the right, or west, to the station. In 1895, the union station, facing Front St., shown in the illustration in the right foreground with the large arched entrance from Front St., was completed, and the

An interesting feature of the accompanying illustration is the bridge by which York St. was carried over the railway yards to the waterfront. This street is now carried under the tracks in a subway, being one of several giving access to the waterfront in that manner. as a part of the Toronto waterfront track elevation scheme, which has been practically brought to completion. The other buildings shown in the illustration, viz., the three on the south side of, and facing, Front St., east of the station, the one at the southeast corner of Front and Simcoe Sts. and those on the north side of Front St., were not railway facilities.



Toronto's former Union Station and surrounding buildings and bridges. From a sketch made in the 'nineties.



Toronto's former Union Station and surrounding buildings and bridges. From a sketch made in the 'nineties.

Grand Trunk Ry. station, the south by a long trainshed, the latter served the travelling public continuously until the present handsome union station was placed in operation, following its formal opening by the Prince of Wales on Aug. 6, 1927.

Historical information in regard to Toronto railway stations was given in an article in *Canadian Railway and Marine World* for Oct., 1927, beginning on pg. 567, in connection with a description of the present union station. As there mentioned, the Grand Trunk Ry., after having demolished in 1873 a station which had been built in 1852, began construction of one to replace it, west of York St. and south of Front St. That station was completed in 1874, and was, at the time, considered an architectural triumph. An illustration of it accompanied the article in our Oct., 1927, issue. Its three towers are shown in the accompanying illustration, prepared from

long trainshed at its rear was also built, connecting it with the former station. The illustration shows the Lake Ontario waterfront as it was when the north or Front St. part of the assembly was built in 1895. When the original station was completed, in 1873, the waterfront was much further north, there being room between the south elevation of the original station and the water for only the station platform, the driveway, and three tracks, as shown in the illustration in our Oct., 1927, issue. Now the waterfront is considerably further south than shown in the accompanying illustration. The southerly trainshed was demolished in 1927, some months previous to the opening of the present union station, and the northerly trainshed was removed early in 1928, by Frankel Bros. No decision has been arrived at to the time of writing as to the use to be made of the land to be made available by the demolition of the old station.

Competition for Paper on Transportation Subject.—The Canadian Railway Club, Montreal, has invited members of the Club, and employees of any transportation company in Canada holding positions under that of general foreman, or chief clerk, to submit papers on any phase of transportation, or transportation equipment, by Feb. 28. The prize offered is a course at Scranton Correspondence School, suitable to the successful candidate's avocation, or, at his option, \$45 in cash.

Railway Labor Representation in Governments.—Railway labor interests are now represented in both the Canadian and United States governments, Senator Gideon Robertson, Vice President of the Order of Railroad Telegraphers, being Dominion Minister of Labor, and Hon. W. N. Doak, National Legislative Representative of the Brotherhood of Railroad Trainmen, being United States Secretary of Labor.

CANADIAN PACIFIC
RAILWAY

WINDSOR STATION,
MONTREAL, QUEBEC

Extensions and Alterations at C. P. R. Winnipeg Station and Hotel.

The accompanying illustration shows the C.P.R. station and Royal Alexandra Hotel at Winnipeg as they will be when the alterations and extensions now being made are completed. These alterations and extensions will largely change the appearance of the existing buildings. The improvements being made will be an addition to the hotel which will add 184 room, not 474 as stated in daily press reports, to its accommodation; a new six story building will replace the present baggage room and Dominion Express Co.'s offices; there will be considerable extensions to the present station and waiting rooms, and in the train shed the tracks will be raised six feet, and the Main St. subway is to be raised to a corresponding height and widened to permit of the installation of two additional tracks.

The internal improvements to the hotel will give two additional elevators for baggage; and additional elevators for guests; the addition of a ball room 100 by 40 ft.; a banquet room of similar dimensions, and 10 private dining rooms.

The station accommodation will be rearranged so as to provide special waiting rooms for immigrants; a complete rearrangement of the space allotted for the handling and checking of baggage, and the construction of a subway with

(26) Declaring that the word "railway" in the preceding sections shall include "any steam or electric railway, street railway or tramway."

(27) Provides that "upon the application of not less than 50 owners of real estate in any district in which a street railway is being operated, or of an adjoining district asking for an order of the Board for the extension of the said railway," the Board may, after an inquiry, make such order as the public interests may require.

(28) For refusing or neglecting to obey such order a penalty of \$25 a day is provided, which may be enforced under the terms of sec. 6, chap. 55, 1 Geo. V.

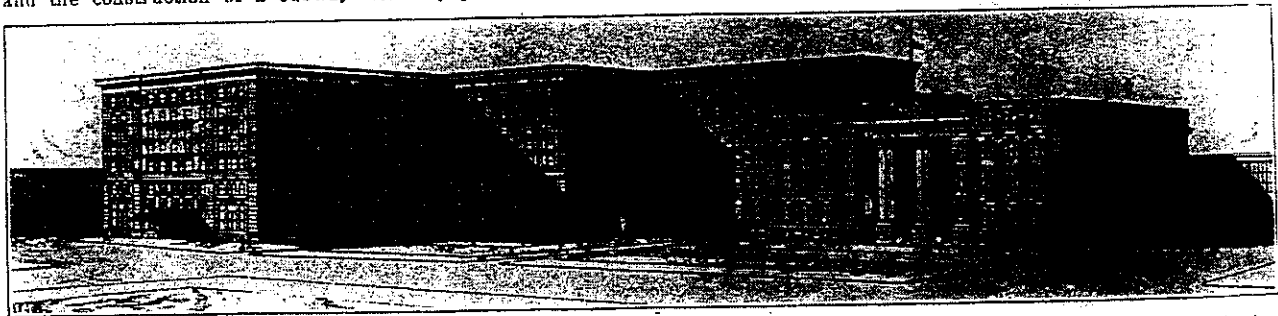
Intercolonial Railway Betterments and Extensions.

Following the return to Ottawa of the Minister of Railways from his recent trip of inspection over the Intercolonial Ry., press reports stated that important plans for the improvement of the line had been decided on. These were said to involve the building of a second track from Moncton, N.B., to Halifax, N.S., where new deep water terminals are to be built, and the improvement of the entire line in respect of gradients and curvature. We have been officially advised that these reports are merely newspaper talk.

A short description of the new terminals was given on pg. 274 of our June issue.

In connection with the new deep water terminal plans F. W. Cowie, who advised the Government on the matter, said that after consultation with various authorities it was decided that it was necessary to provide accommodation for nine ocean going vessels at once; for nine additional vessels in about three or four years, and for a further nine vessels after the opening of the Quebec bridge, with a corresponding increase in the railway accommodation at the same time. Having these requirements as a guide all possible locations were considered and it was finally decided to adopt George's Island Bay as the site for the new terminals. With an excellent approach through Fairview to the harbor site from a railway point of view, it was then necessary to lay out as most suitable, in consideration of the physical features of the location, the type and design of harbor development which has been decided upon. It was found that a union station could be located within half a mile of the centre of the city, with excellent streets leading from the station to all city points. It was found that by building a bulkhead wharf along the narrower waterfront 2,000 feet of bulkhead quay could be provided so as to give the very best possible harbor accommodation.

The most important construction work going on is the building of the line from



Canadian Pacific Railway Station and Royal Alexandra Hotel, Winnipeg, as They Will Appear When Extensions Contracted for Are Completed.

connecting stairways between the hotel and the station.

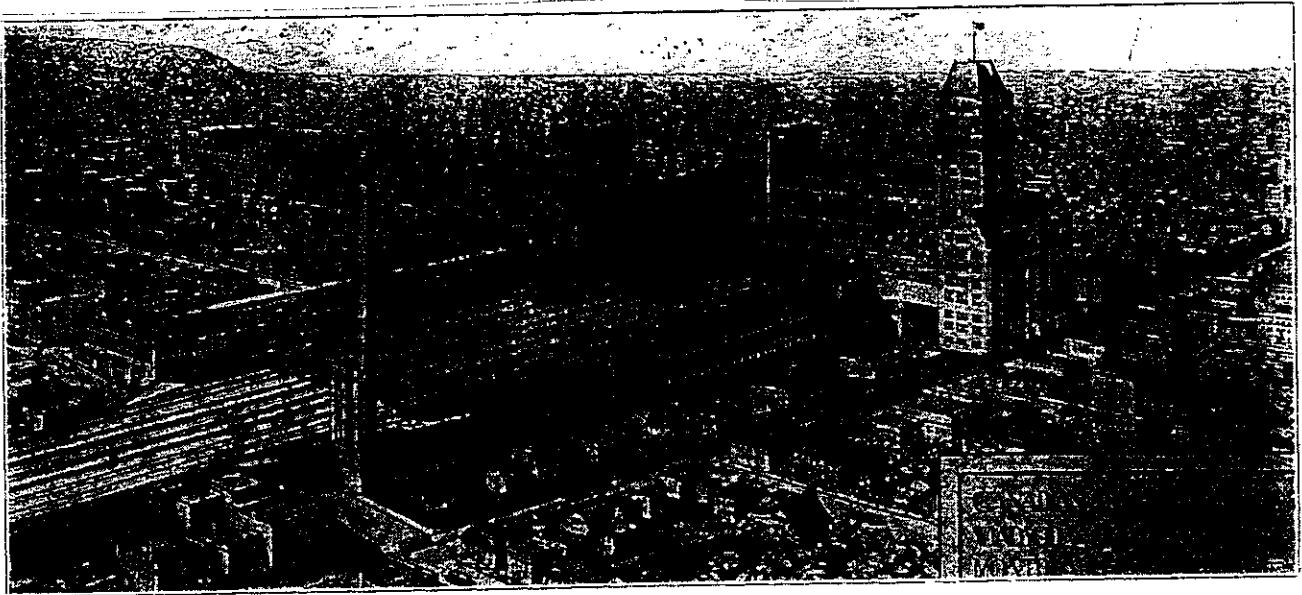
The work is being carried out by Westinghouse, Church, Kerr and Co., whose local representative is E. J. Brinkherhoff. F. Lee, Principal Assistant Engineer, is in charge for the C.P.R.

August 1913

C.P.R. Windsor St. Station, Montreal

Work on the extensive additions which the C.P.R. is building at the Windsor St. Station, Montreal, is progressing very favorably. It is expected that the new structure will be ready for occupancy by May next. Many changes will be made in the arrangement of the present departments, many of them contemplating removal to the newer portion. It is also stated that a number of officials in other parts of the city will be brought to these headquarters. The staffs that will be transferred first will be those located at the southern end of the present structure, which will permit the workmen to tear down the end wall and proceed with the extension of the new building to join the present structure.

The building is now entirely sheathed with its stone veneer, which covers the reinforced concrete shell. In the interior, the partitions are being rapidly put in place, and outside a start has been made in enclosing the part of the



Perspective View of Canadian Pacific Railway Windsor St. Station, Montreal, as enlarged.

The coal sales for the year were 271,950 tons, compared with 239,633 for the previous year. The gross earnings of the railway were \$346,573.48, compared with \$378,125.02 for the previous year. The land sales aggregated 5,658 acres.

It was found convenient to transfer the head office of this company from London to Montreal.

Under the agreement with the C.P.R. Co., provision was made for the shareholders of this company receiving a dividend of 5% per annum from July, 1910.

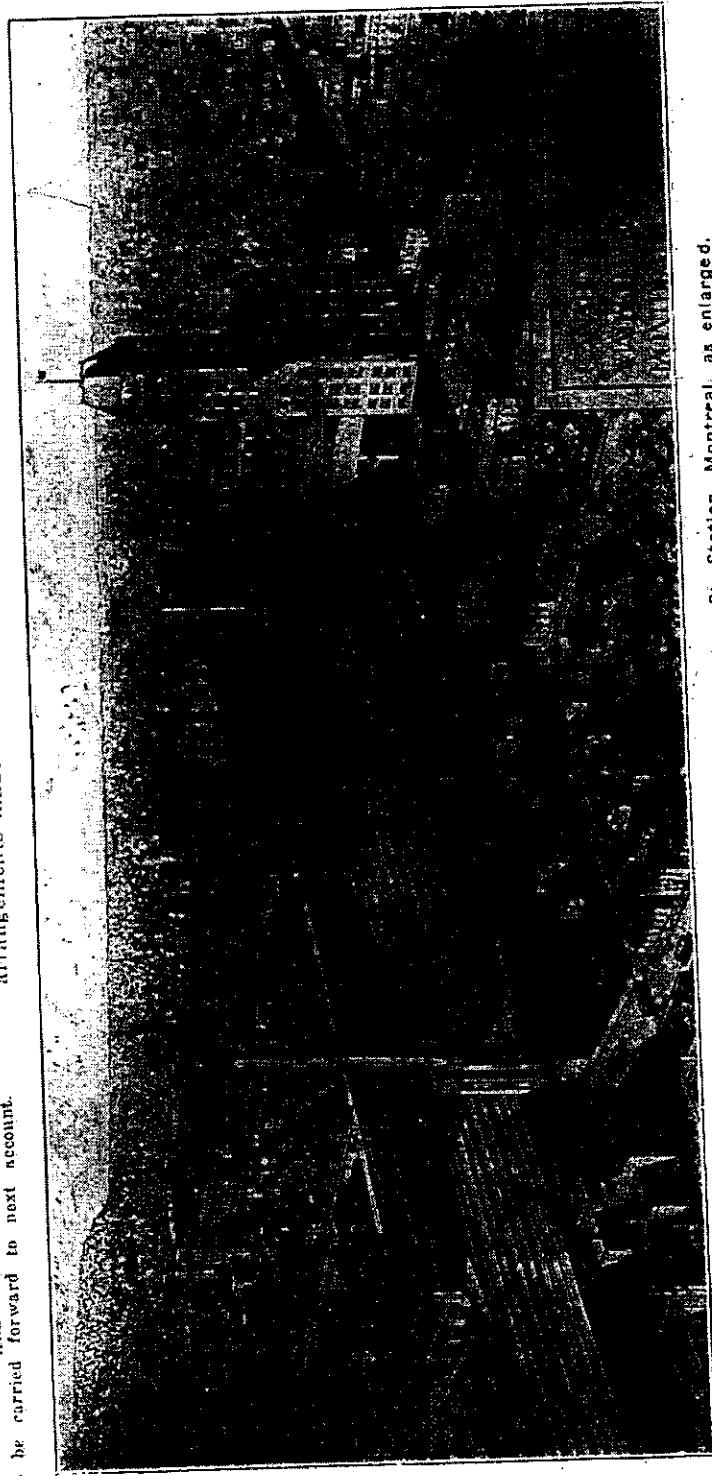
concerns not fronted by tracks. The boiler house is practically completed and the boilers installed. The big stack has reached a height of 200 ft. A large force of men is at work on the viaduct. On the top of the viaduct, a big steam shovel is levelling off the ground to the rear of the new station.

December 1911

And leave\$101,089.61
to be carried forward to next account.

arrangements made with the C.P.R. Co.

been made as



Montréal, as enlarged.

Perspective View of Canadian Pacific Railway Windsor St. Station.

The coal sales for the year were 271,960 tons, compared with 239,623 for the previous year. The gross earnings of the railway were \$346,573.48, compared with \$378,128.02 for the previous year. The land sales aggregated 6,658 acres and realized \$229,199.60, the average price being about \$64.33 per acre for irrigable land, and \$5.28 for non-irrigable land. These sales comprised 2,226 acres covered by the trust, used for the debenture stockholders and 3,430 acres free from the trust. The profit from sale of town lots was \$46,048. The estimated net profit from all the above sales was \$213,000. The profit received during the year in cash from lands free from the trust sold during that and previous years (after deducting the commissions and land expenses for the year) viz., a net sum of \$217,300, is included in the present revenue account, the balance remaining in reserve pending the realization of the outstanding instalments and the lands still unsold. The total amount in reserve in connection with sales of the company's lands is now \$1,705,372.15, and in connection

concourse not fronted by tracks. The boiler house is practically completed and the boilers installed. The big stack has reached a height of 200 ft. A large force of men is at work on the viaduct. On the top of the viaduct, a big steam shovel is levelling off the ground to the rear of the new station.

When completed this building will be the largest and best equipped station in Canada. The accompanying illustration from a photograph of the architect's perspective drawing gives a comprehensive and realistic view of the station as it will finally appear. Nearly all the portion to the right of the two short towers in the centre of the building is the new section being built.

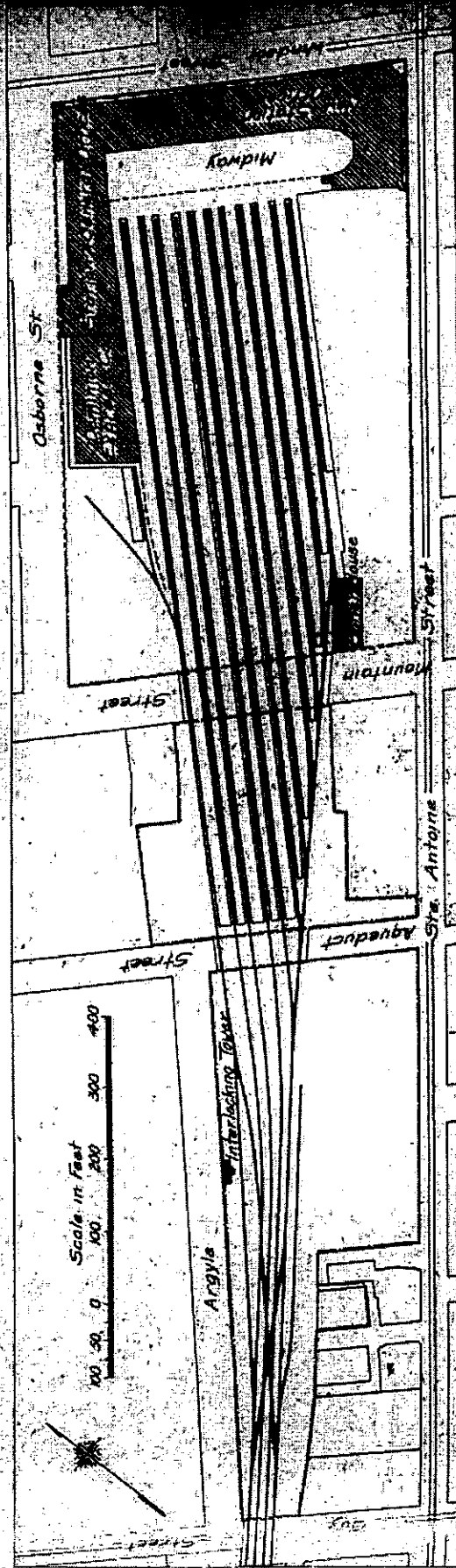
The Anglo-Canadian Contractors (limited) has been incorporated under the Dominion Companies Act, with a capital of \$250,000 and offices at Toronto, to carry on general contracting and other businesses incidental thereto. The company has tendered for the construction of the tube railway system for Toronto.

It was found convenient to transfer the head office of this company from London to Montréal.

Under the agreement with the C.P.R. Co., provision was made for the shareholders of this company receiving a dividend of 5% per annum from July, 1910 to Dec. 31, 1911. In accordance therewith, a dividend of 5% for the year ended June 30, 1911, will be payable after the annual general meeting, and notice will be given when the dividend of 2½% for the half year ending Dec. 31, 1911, will be payable. The share certificates will, on and after Jan. 1, 1912, be endorsed with the obligation of the C.P.R. Co. to pay 3% half-yearly, commencing with a payment on July 1, 1912, in respect of the preceding six months. By arrangement with the C.P.R. Co., notice has been given for the redemption on Jan. 1, 1912, of the outstanding 5% debenture stock of this company.

A bylaw was submitted for adoption decreasing the number of directors to five and, in accordance with the Railway Act of Canada, the directors retire from office. Following are the officers and

and now in use, the number of tracks has yard are to be controlled from the inter- in a satisfactory position. The present
 been increased from 6 to 11, and their length locking tower shown. The initial installa- G. J. Alexander, read an address.



Plan of Canadian Pacific Railway Windsor Street Station and Terminal Trackage and Approaches, Montreal.

increased by the acquisition of the prop tion calls for 70 electrically operated Two papers were read, one by Dr. Shaw

Windsor Street Station and Terminal Yards, Montreal Canadian Pacific Railway.

The remodeling and extension of the Windsor St. station, Montreal, is now nearing completion, and a portion of the new part has been in service for some months. The track arrangements have been completed, the layout at present in use being shown in the accompanying plan of the station and terminal. All the portion of the station and office building south of the division line shown is new. The ground floor is being used for waiting rooms, restaurant, etc., and the other floors for general and local officials' offices. In the old layout, all the portion of the property south of the division line, through the new and old parts of the station, did not belong to the railway, so that all the terminal facilities were to the north of this line. In the former arrangement, there were 6 station tracks, all projecting into the station building about 40 ft. further than in the new arrangement, the latter giving greater concourse accommodation. All the station tracks branched off from the main line just west of Aqueduct St., with none of the station tracks of a greater length than 900 ft.

In the arrangement shown in the plan, and now in use, the number of tracks has been increased from 6 to 11, and their length

south, makes the bridge column heights vary.

The train shed formerly used is being removed, and the newer Bush type used instead. Over the northerly 7 tracks, it will extend to beyond Mountain St., or 1,140 ft., while the shed for the lower four tracks cuts off in pairs 950 and 810 ft. long respectively. The Bush terminal construction calls for a low shed building in spans bridging two tracks, with a longitudinal opening in the roof for the escape of the locomotive gases. This shed is supported on columns between every other track. The longitudinal opening for the escape of gases is encased in concrete, and is in consequence not subject to attack from the fumes.

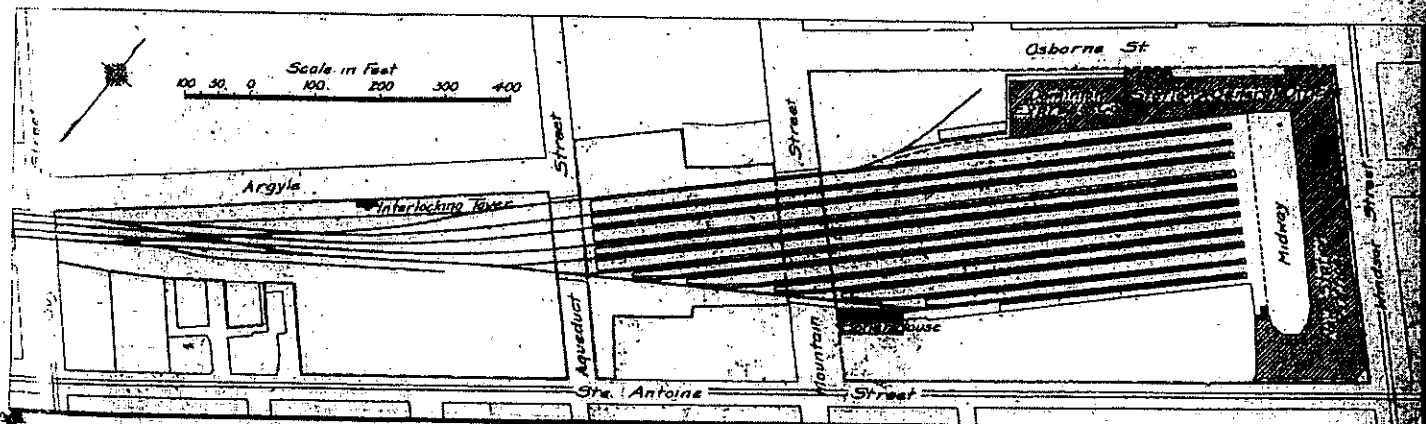
The passenger platforms are 16 ft. wide, and it is along this platform that the train shed columns are placed. The intermediate platform is 10 ft. wide, and is for baggage handling, this arrangement segregating the passengers from the baggage. The platforms are of concrete, and the track ballast of crushed stone, the track being laid with 35 lb. rails.

The whole switching arrangements of the yard are to be controlled from the interlocking tower shown. The initial installa-

Canadian Ticket Agents' Association's Annual Meeting

The association's 27th annual meeting, held at the Hollenden Hotel, Cleveland, Ohio, Oct. 8, 9 and 10, the members and their guests having travelled from Buffalo, N.Y., on the Cleveland and Buffalo Traction Co.'s s.s. City of Buffalo. At the opening the meeting addresses of welcome were delivered by the mayor of Cleveland, President of the Chamber of Commerce, and the chairman of the local reception committee, R. W. Wallace, G.P.A., Buffalo, and C. L. Kimball, A.G.P.A., Pennsylvania Lines, representing the American Association of General Passenger Ticket Agents, and the President and Secretary of the International Association of Ticket Agents, extended fraternal greetings. Among other visitors present were: W. Stitt, G.P.A., Canadian Pacific Ry.; W. S. Cook, A.G.P.A., Grand Trunk Ry.; M. G. Murphy, D.P.A., Canadian Pacific Ry., and a number of officials of U. S. lines were also among the visitors, and several of them spoke.

The veteran Secretary-Treasurer and one of the founders of the association, E. J. Hooke, presented his annual statement showing the association to be slowly increasing in numbers and the finances to be in a satisfactory position. The President, G. J. Alexander, read an address.



Plan of Canadian Pacific Railway Windsor Street Station and Terminal Trackage and Approaches, Montreal.

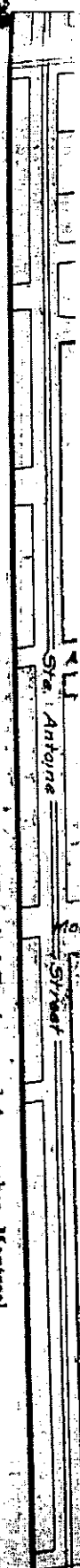
increased by the acquisition of the property to the south of the old tracks in the station, and the property to the north of the tracks west of Aqueduct St. The northerly of the station tracks has been straightened out to give a clear length of 1,400 ft. at the point where it strikes the main line

tion calls for 70 electrically operated switches, with accommodation for 88 when required.

We are indebted to J. M. R. Fairbairn, M. Can. Soc. C.E., Assistant Engineer, and N. E. Gutellus, Resident Engineer, for the data on which the foregoing article is based.

Two papers were read, one by Dr. Shaw, the association's honorary physician, on precautions to be observed by travellers from the standpoint of health, and the other by P. V. G. Mitchell, Passenger Traffic Manager, White Star-Dominion Line, Montreal, on ocean steamship business. A number

Plan of Canadian Pacific Railway Windsor Street Station and Terminal Trackage and Approaches, Montreal.



increased by the acquisition of the property to the south of the old tracks in the station, and the property to the north of the tracks west of Aqueduct St. The north side of the station tracks has been straightened out to give a clear length of 1,400 ft. at the point where it strikes the main line.

With one lead track leading into all the station tracks, the tracks vary from the maximum mentioned down to about 400 ft., giving a total station capacity, making due allowance for locomotive length, of 120 cars, varying in train length from 6 to 14 cars.

In increasing the size of the yard, it has been necessary to build new retaining walls on the south side of the station grounds. Osborne St., on the north side of the station, is on the crest of a hill, which drops off quite rapidly to the south, so that while the station level is that of Osborne St., on the St. Antoine side there are three stories below that level. In consequence, the southerly portion of the yard had to be reclaimed by retaining walls and filling to the lines shown in the plan.

The station crosses two streets on overhead bridges. That at Aqueduct St. is a 5 span bridge, and at Mountain St. a 9 span bridge, both of steel construction with steel floor, waterproofed deck. The elevation of the rails above the streets on the north side being considerably less than on the

tion calls for 70 electrically operated switches, with accommodation for 88 when required.

We are indebted to J. M. R. Fairbairn, M. Can. Soc. C.E., Assistant Engineer, and N. E. Gutelius, Resident Engineer, for the data on which the foregoing article is based.

December 1911

HALIFAX
AND
SOUTHWESTERN

C. H. RIFF

branch line from Dawson to Amoryville, about three miles, was put under construction at the beginning of October. H. W. D. Armstrong, Fredericton, N.B., is Chief Engineer. (Sept., pg. 460.)

Halifax and South Western Ry.—In a recent interview, the Deputy Commissioner of Mines for Nova Scotia is reported as saying, after having made an inspection of the line, that there was no dangerous condition of the roadbed as had been alleged. There were a considerable number of worn-out ties on the first two sections, but these were being replaced. There were also places on the line where more ballast would improve the appearance, and perhaps the smoothness of running. "It is not clear to me," he added, "that there have been casualties exceeding those on any other road for the same train mileage." (May, 1911, pg. 409.)

November 1912.