

CANADIAN

PACIFIC

JOHN STREET

ENGINE

TERMINAL

TORONTO

Canadian Railway and Marine World

May, 1931

Toronto Locomotive and Car Facilities, Canadian Pacific Railway.

The second and final stage in providing modern and complete locomotive and car terminal facilities for the Canadian Pacific Ry. in the central terminal area, on the Toronto waterfront, southwest of the union station, has been practically completed. The second stage, on the southwest side of the locomotive house; a 60,000-gall. steel water tank at the east side of the locomotive house and south of the tracks serving the turntable; two standpipes a short distance northeast of the turntable and a



West side and south end of car cleaners building with umbrella roof under construction at east side. In background Royal York Hotel.

passenger car yards and buildings are at a level some 17 ft higher than the rail level in the yards which occupied the site formerly; that the providing of the new facilities had to be done in two stages to permit of the continuance of operation while the work was being carried out, and that while operation was continued at low level at the north side of the site the south side was transferred and the south group of new facilities was provided. During the past year while operation was being carried out, the locomotive house and other buildings having been finished and practically all of them occupied and placed in operation, the only work of importance remaining to be done being the final ballasting and surfacing of the north passenger car yard. The building

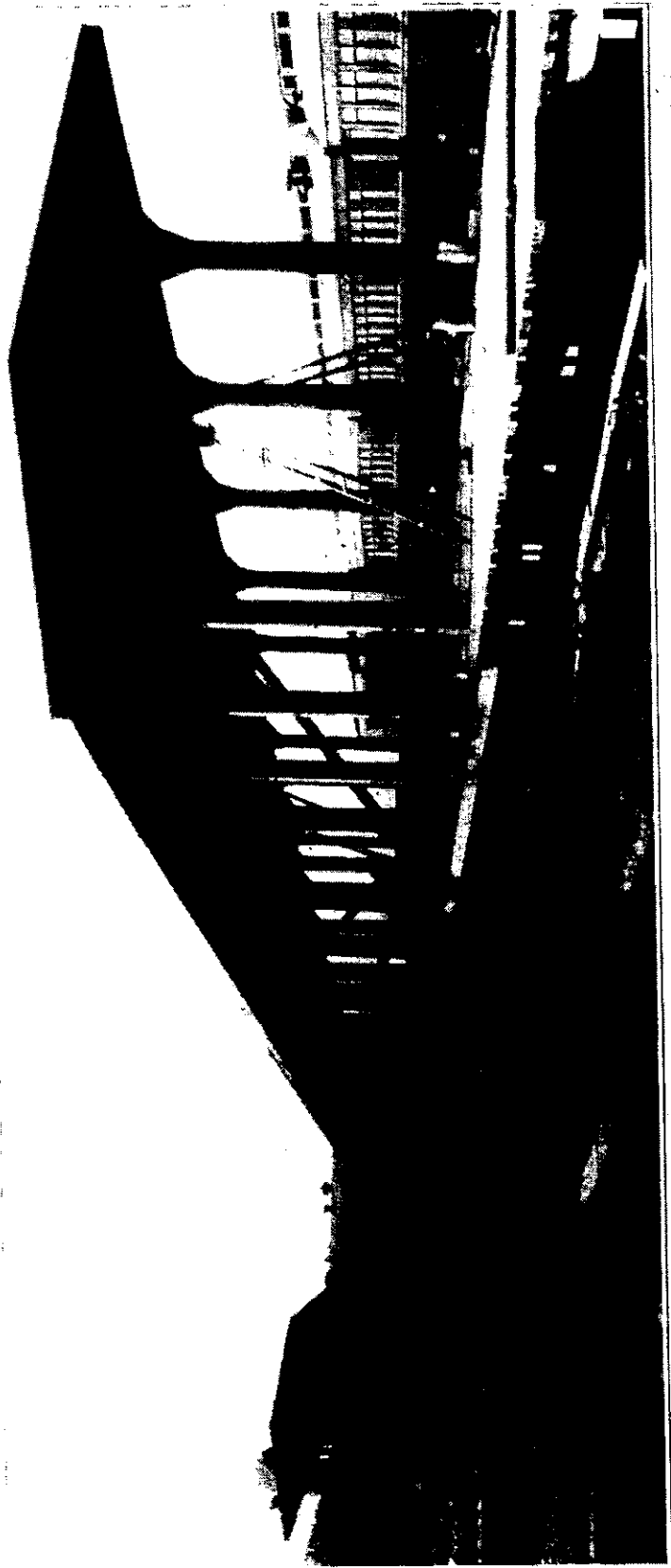
near Bay St. at the east end of the passenger car yard, a 350-ton circular mechanical coating plant with electrically-driven machinery and with sand drying, elevating, storing and servicing facilities integral, a mechanical cylinder plant serving three tracks, with machin-

West side and south end of car cleaners' building, with umbrella roof under construction at east side. In background, Royal York Hotel

completed, the locomotive house and all other buildings having been finished and practically all of them occupied and placed in operation, the only work of importance remaining to be done being the final ballasting and surfacing of the north passenger car yard, the building

operation while the work was being carried out, and that while operation was continued at low level at the north side of the site, the south side was transferred and the south group of new facilities was provided. During the past year, while operation was being

third near Bay St at the east end of the passenger car yard; a 350-ton circular bin mechanical coaling plant with electrically-driven machinery and with sand drying, elevating, storing and servicing facilities integral; a mechanical cinder plant serving three tracks, with machin-



Umbrella roofs over platforms at east side of car cleaners' building

of wooden platforms between the tracks in that yard, and the laying of water, gas and air lines, and some additional steam lines, through it. A complete description of the first stage of the work, with illustrations and a general plan and other drawings, was given in Canadian Railway and Marine World for Dec., 1929, beginning on pg. 735, where it was explained that the new

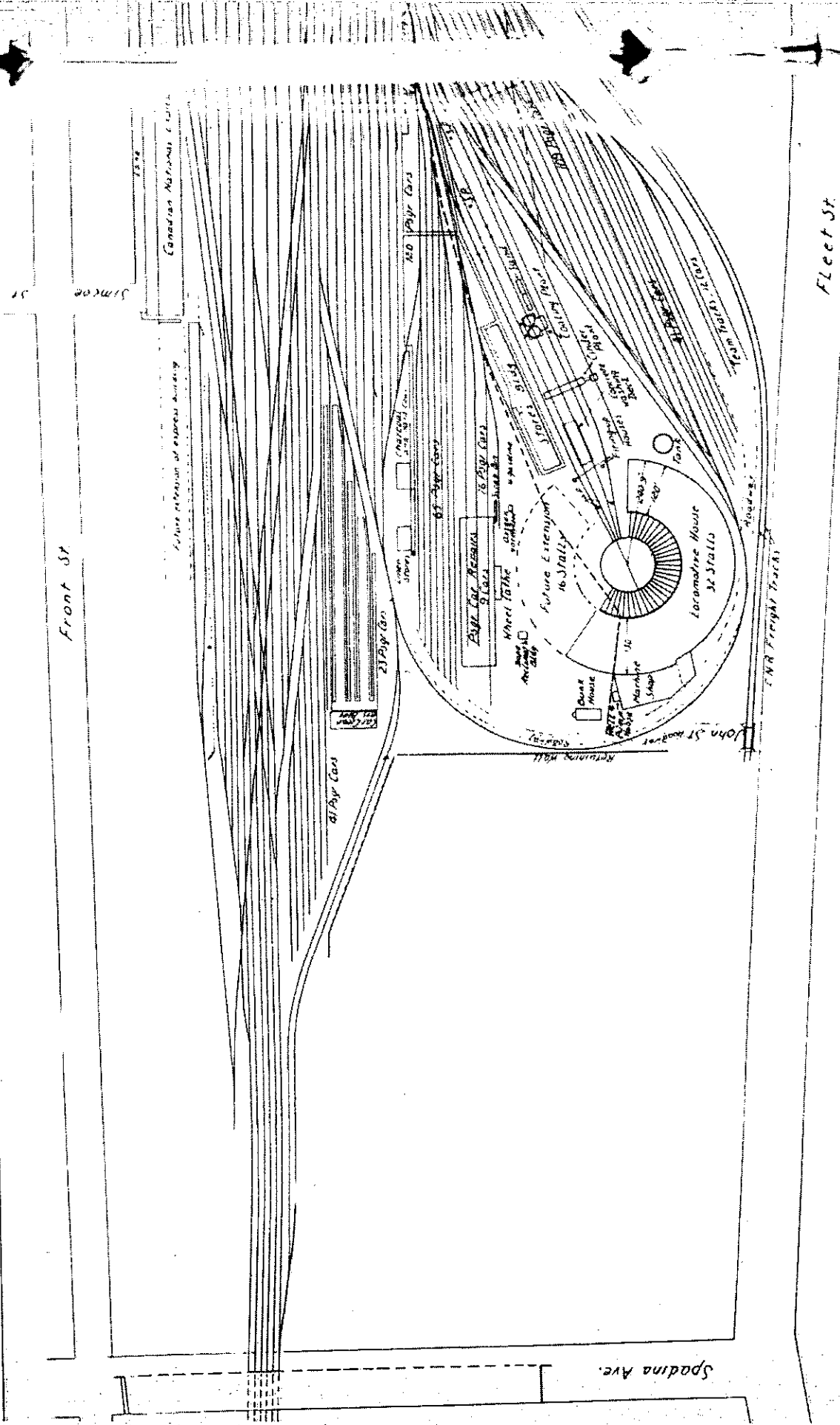
ducted with the new facilities at the south side of the site, the north side has been transferred and the north group of the new facilities provided.

The facilities provided in the first stage of the work consisted of 28 stalls of a locomotive house; a 120-ft. turntable at the center of the locomotive house circle with track approaches from the northeast; a machine shop annex at

ery driven electrically; a concrete locomotive washing deck serving the central two turntable tracks; two small firing-up houses for use in connection with building up fires in locomotives which have been supplied with live steam in the locomotive house and move out under their own power; the west section of a locomotive and car stores building; and

(Continued on pg. 2.)

A LIST OF THE FACILITIES AND THE SECOND STAGE OF THE WORK WAS THE COMPLETE BUILDING 361 FT. 2 IN. LONG, CHARCOAL AND HARD COAL STORAGE BUILDING, WITH A 2-STORY AND BASEMENT SECTION AT EAST OF THE LINEN STORES AND SUPPLY BUILDING IN CANADIAN RAILWAY AND MARINE



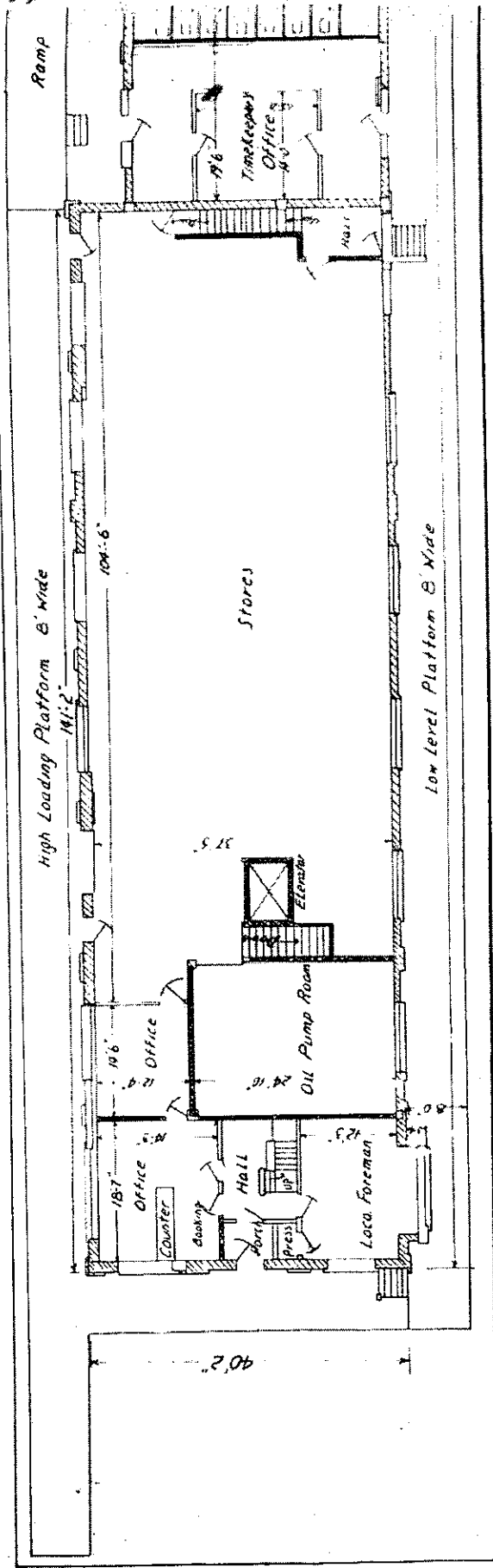
General layout, Toronto locomotive and car facilities, C.P.R. See also opposite page.

Toronto Locomotive and Car Facilities, Canadian Pacific Railway.

World for February last, pg. 85, in a report on the progress being made with the work. They consist of an additional 4 stalls for the locomotive house, giving it a total of 32 stalls, of which 9 are 130 ft. long, and 23 are 120 ft. long; a journal lathe; a bunk house for loco-

the west end, 40 ft. 2 in wide, and 1-story section at the east end, 30 ft. 4 in. wide; a passenger car repair shop, 340 x 75 ft., with a 1-story annex at the south side for wheel lathe and journal lathe; a bunk house for loco-

World for February last, pg. 85, in a report on the progress being made with the work. They consist of an additional 4 stalls for the locomotive house, giving it a total of 32 stalls, of which 9 are 130 ft. long, and 23 are 120 ft. long; a journal lathe; a bunk house for loco-



Locomotive and car stores building ground floor layout, C.P.R. See also opposite page.

article in our Dec., 1929, issue. On account of its use, only four of the tracks in the house have smoke jacks over them, these being of Transite and of the C.P.R. standard type.

A list of the facilities in connection with the second stage of the work was given in Canadian Railway and Marine

two additional standpipes, Fairbanks-Morse Sheffield type 12-A, erected in the vicinity of the turnouts from the ladder track to the locomotive house tracks; the east section of the locomotive and car stores building, making the complete building 361 ft. 2 in. long, with a 2-story and basement section at

tive crews, west of the locomotive house; a dope reclamation building, south of the west end of the passenger car repair shop; a linen stores and supply building, north of the east end of the passenger car repair shop; a charcoal and hard coal storage building, east of the linen stores and supply build-

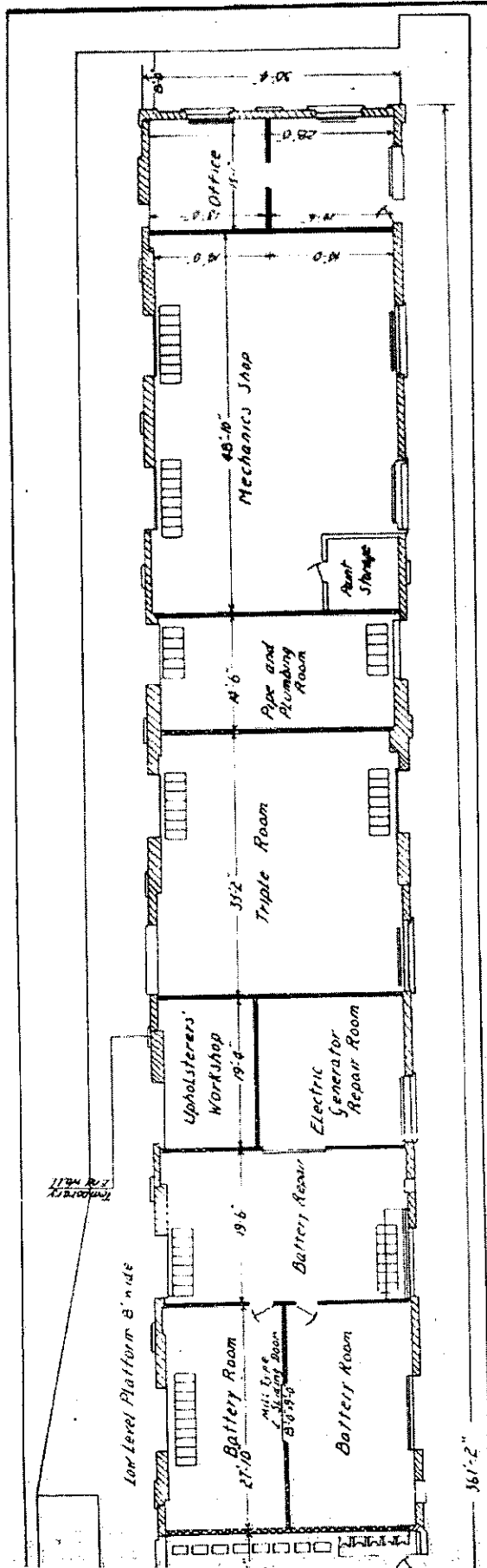
Front St

ing; a car cleaners' building, in the north-west section of the passenger car storage yards; a car battery charging equipment building, between the north and south passenger car yards and just west of the midway or wide runway which extends north and south through the yards; a yardmaster's office, at the

with the main roadway from York St. built in the first stage of the work, and a track connection from the high level loop track to the main line tracks at Spadina Ave. The location of all these facilities is shown on the accompanying general plan.

As the facilities provided in the first

windows arranged to open, extending all the way around, can be extended at some future time by the addition of 16 stalls, to make a total of 48. All the buildings are set on concrete piles sunk to rock, and are of practically fireproof construction throughout. The facilities provided in the second stage of the



Locomotive and car stores building ground floor layout, C.P.R. See also opposite page.

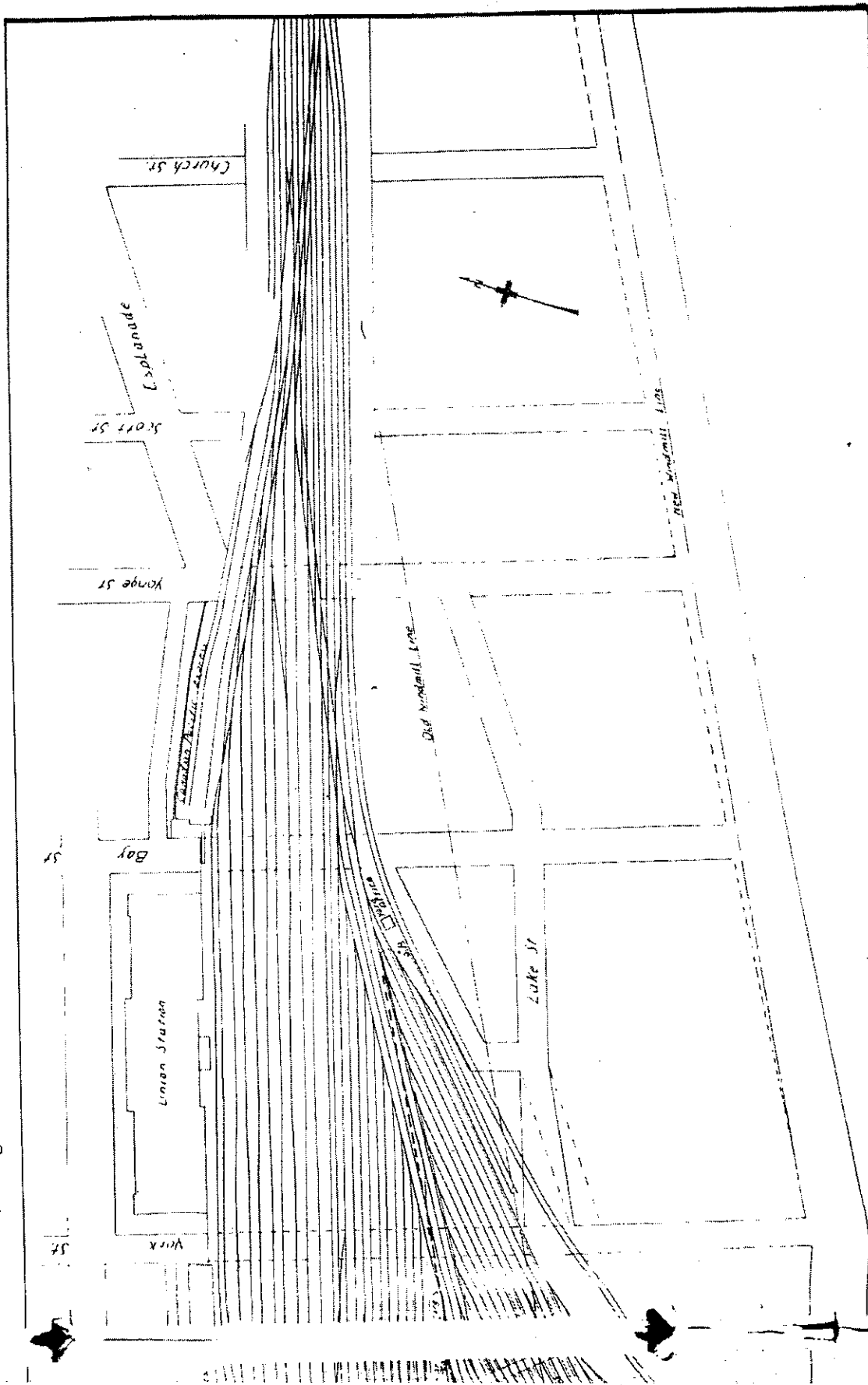
east side of the site; platforms and umbrella shelters between tracks at east side of the car cleaners' building; a concrete washing deck, for passenger car trucks, on the loop track at the north-west side of the locomotive house; a roadway from John St., running up to the high level and making connection

stage of the work were all described fully in the article in our Dec., 1929, issue, they will not be dealt with further here, with the exception of pointing out that the locomotive house, of brick construction, with mill type roof with tar and gravel covering and with a monitor, glazed on both sides and with

work are as follows:—

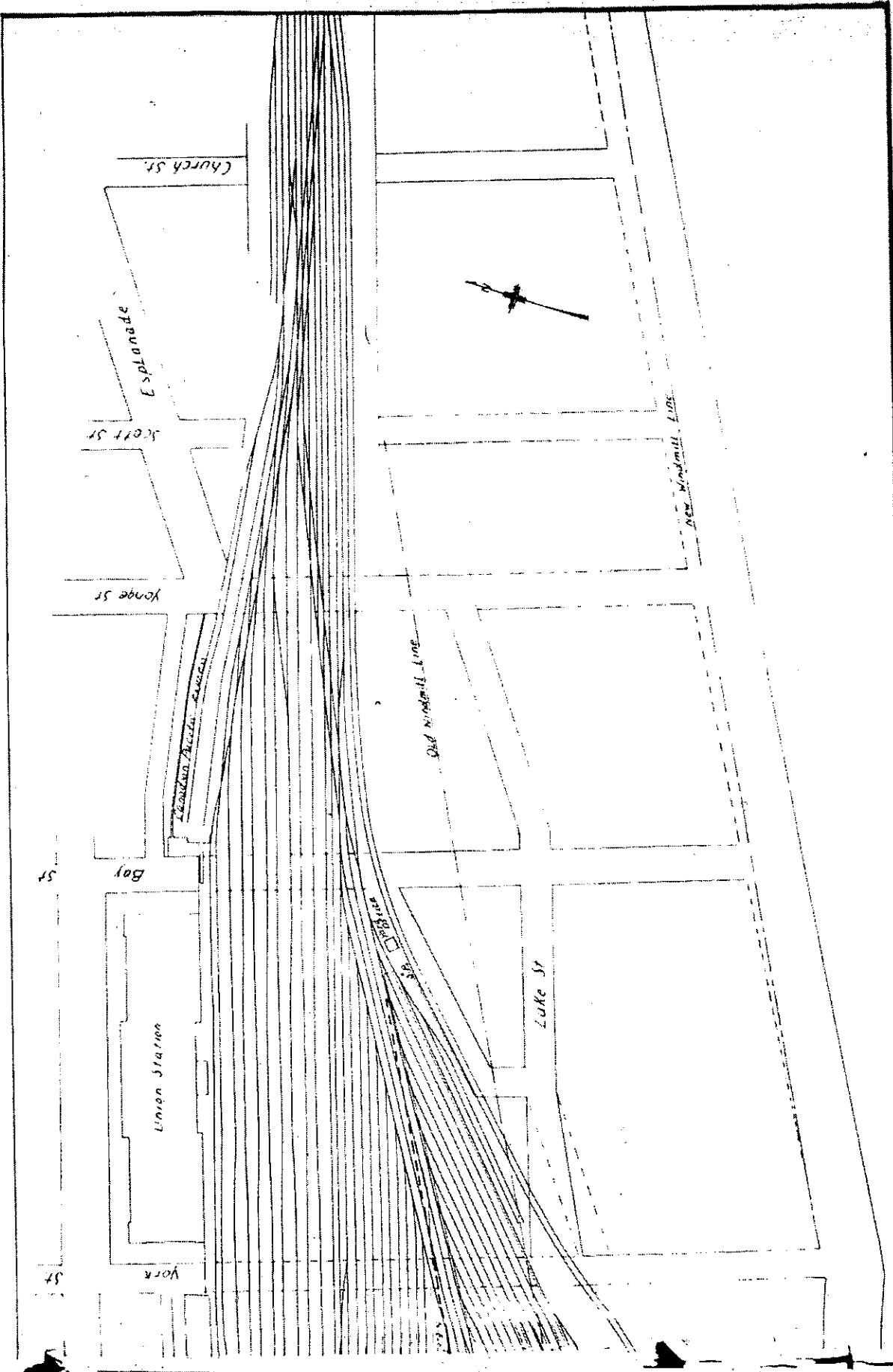
The locomotive and car stores building, which, as stated, was built in two sections, the west part first and the east part later, and a ground floor plan of which is given herewith, has overall dimensions of 361 ft. 2 in. by 40 ft. 2 in., the westerly section being of 2 stories

roadway from John St., running up to tar and gravel cover, and with a the westerly section being 01 2 stories the high level and making connection monitor, grazed on both sides and with



General layout, Toronto locomotive and car facilities, C.P.R. See also opposite page.

roadway from John St., running up to tar and gravel covering and with a
the high level and making connection monitor, glazed on both sides and with
the westerly section being of 2 stories



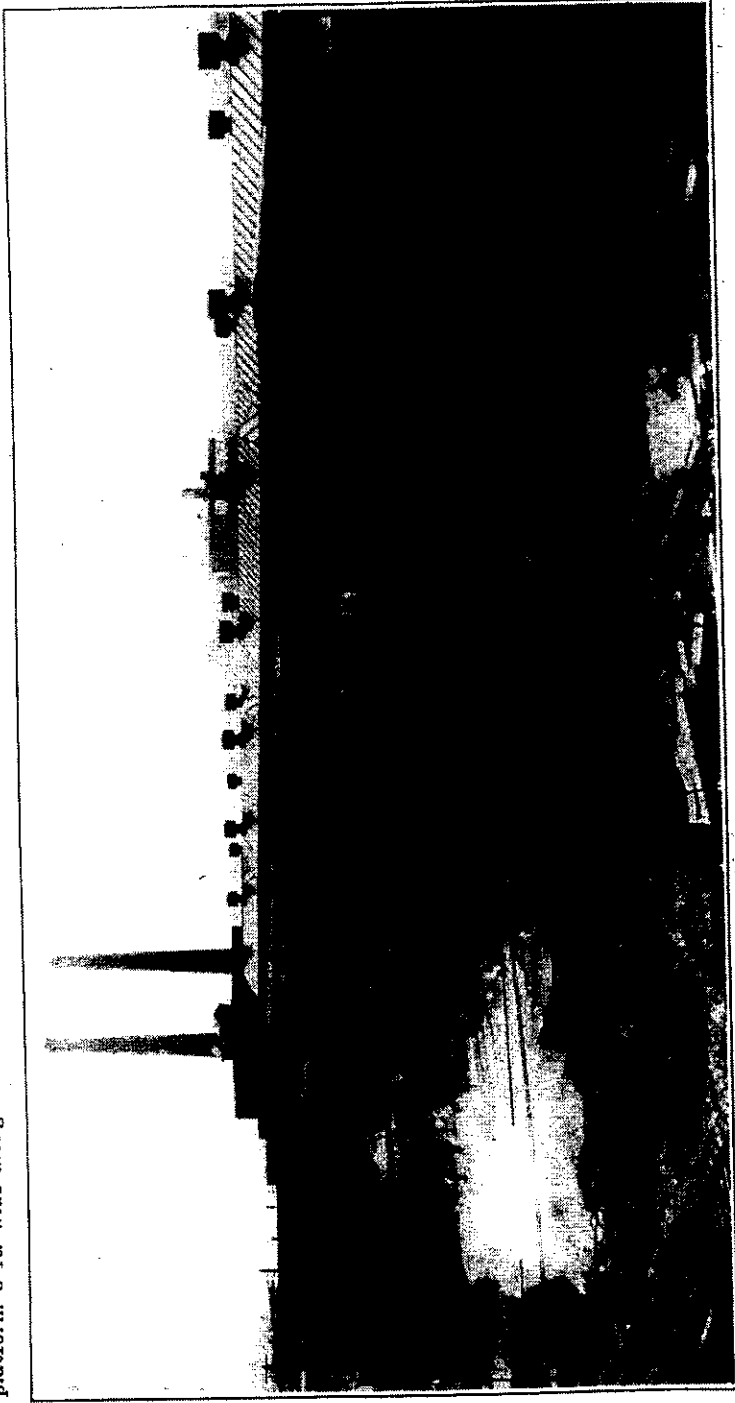
General layout, Toronto locomotive and car facilities. C.P.R. See also opposite page.

May, 1931

and basement, and the easterly of one story without basement. The building is of brick construction, on concrete foundation, and with concrete floors. There is a low level platform 8 ft. wide along the south side, and a high level platform 8 ft. wide along the west half

radiators, and lighted throughout with pendant fixtures. The storage bins are of steel construction. Sash throughout is of steel, and the window area is very generous, resulting in good natural lighting. The floor in the stores area is surfaced with wood blocks. The 2-

lows, from west to east:—locomotive foreman's office, general office, booking-in room, oil-pump room and general stores room, with the freight elevator at the west end of the latter and stairs leading to the basement at both ends. The 1-story part of the building contains, from

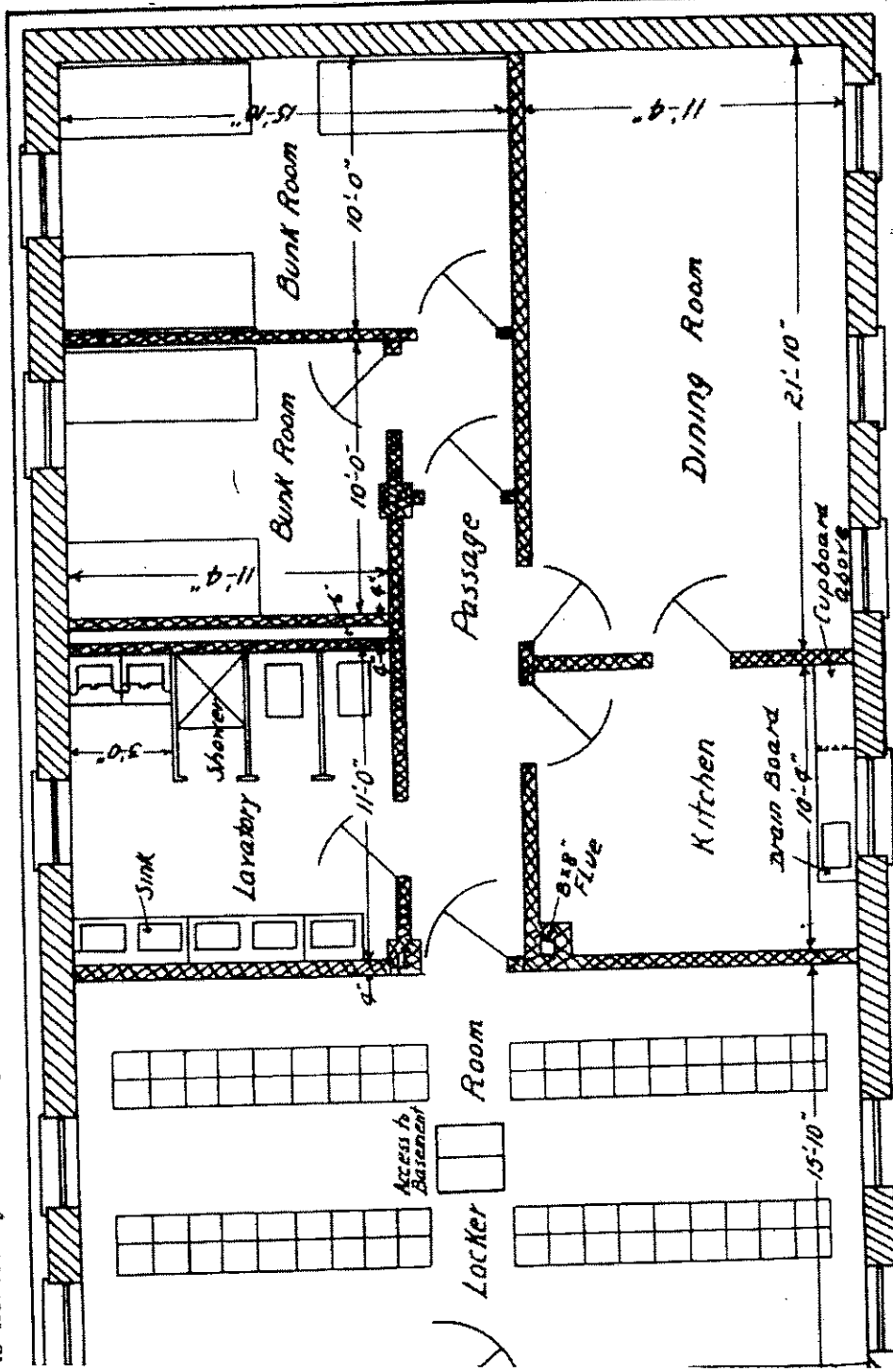


South side of passenger car repair shop, showing wheel and journal lathe annex and wheel storage tracks. Dope reclamation building in left middle background. Smokestacks in background are of city waterworks plant. at the north side, ramping down to a low level platform of the same width ing, at the west end, is served by a large west to east, timekeeper's office, lavatories, battery room, battery repair shop, electric generator re-

amping down to a
of the same width
The north side of
d by a spur, run-
igh level platform,
ing being served by
mill type sliding
is heated by steam

ground. Smokestacks in background are visible

stories and basement part of the build-
ing, at the west end, is served by a large
freight elevator. The west end of the
basement is fitted for oil tank storage,
the balance being divided into space for
paint storage, waste storage and general
stores. The ground floor of the 2-stories
part of the building is divided as fol-



Bunk house for locomotive crews, Toronto locomotive and car facilities, C.P.R.

of the building, contains, from west to east, storage room, records room, lavatories, instruction room, dining room and lockers. Stairs connect the ground floor and second floors near the west end of the building.

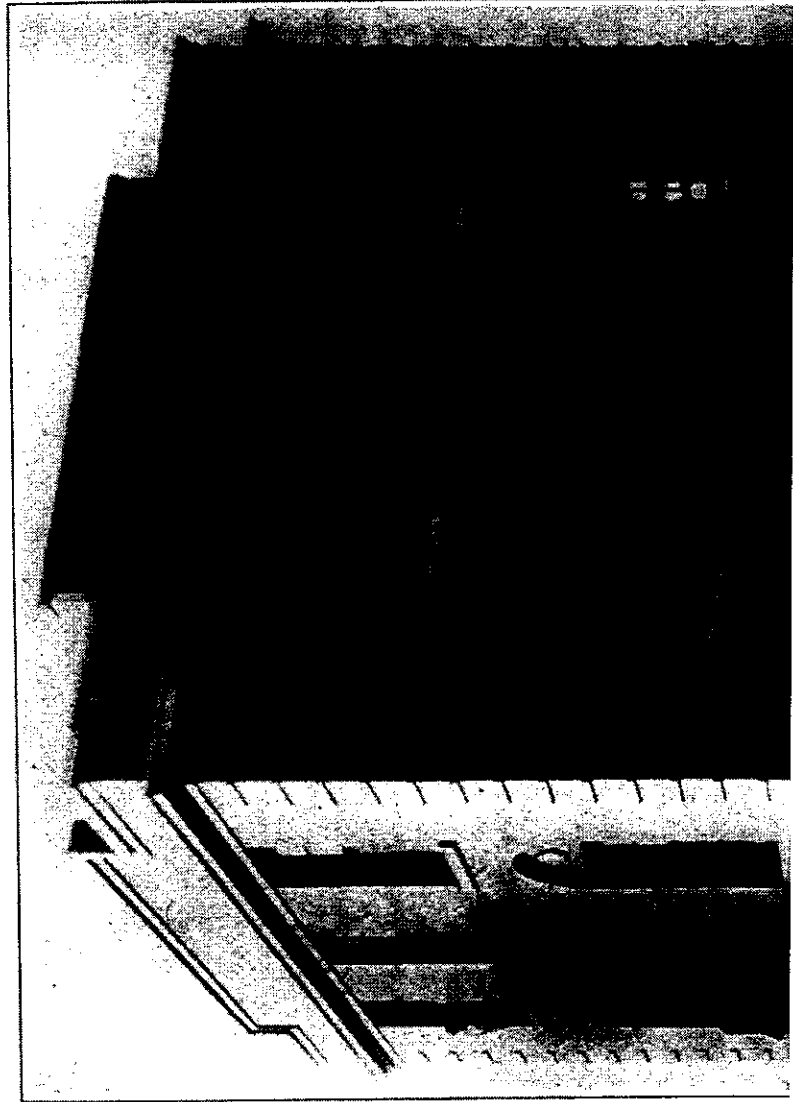
The passenger car repair shop, north of the locomotive house, is a 1-story building, 75 x 340 ft., of brick construction on concrete foundations, and is served by three tracks running in from the east, which provide capacity for 9 passenger cars inside the building, and for 16 outside. The floor is of concrete, with mastic top. The roof trusses are of steel, and the roof contains two lines of skylights, there being four skylights, each 72 ft. x 8 ft. 6 in., in each line. Adequate natural lighting is provided by the skylights and the large window area.

Roof ventilators are provided. Heating is by the unit heater system, the heaters, consisting of steam coils over which air is driven by motor driven fan, being suspended from the roof trusses. A Fridy electric car puller is installed at the east end of the shop, for moving cars into and out of the shop. The three tracks are provided with pits the full length of the shop, and in addition there are two intermediate tracks for wheels, the full length of the shop, but not provided with pits. The shop is lighted by drop fixtures. The roof is of tar and gravel construction. The shop doors are of the Richard-Wilcox combined sliding and folding type. The annex containing the wheel and journal lathe is 1-story, of brick construction, with wood block floor, the machines being at the east side of it, with lavatory accommodation for the shop employes at the west. Outside the passenger car repair shop, at the south side, is the wheel storage area, which is served by an air-operated hoist. The wheels are handled through a side door near the east end of the building.

The bunk house for locomotive crews

steel sash. A concrete platform, 61 ft. long and 10 ft. wide, is provided at the track (south) side, the door at this side being a Richard-Wilcox vertical sliding mill type. At the north side is a receiving door, for deliveries from trucks. The building is heated by steam radiators. The basement contains a conductors' room, porters' room and a room for soiled linen, all opening off a central hall. The building contains an elevator serving the basement, ground floor and upper floor, all floors also being connected by stairs. The ground floor layout includes a central hall, a room 19 ft. 4 in. x 37 ft. 8 in. for clean linen, an office with observation window in the floor, enabling a view of a portion of the basement to be had from the office, a

of the linen stores building, is 1-story without basement, 100 ft. 10 in. x 39 ft., and is of the same type of construction as the buildings described previously. Leading to it from the east are 6 tracks, served by two high platforms, 20 ft. wide, covered by umbrella roofs, and 3 open platforms, 8 ft. wide. The umbrella roofs are continuous to the east elevation of the building, and the platforms merge into a transverse platform along the building's east side. The tracks leading to the building have a total capacity of 23 passenger cars. The building is equipped with carpet beaters and other modern appliances for the thorough cleaning and renovating of passenger car upholstery and interior fittings. The doors of the building are

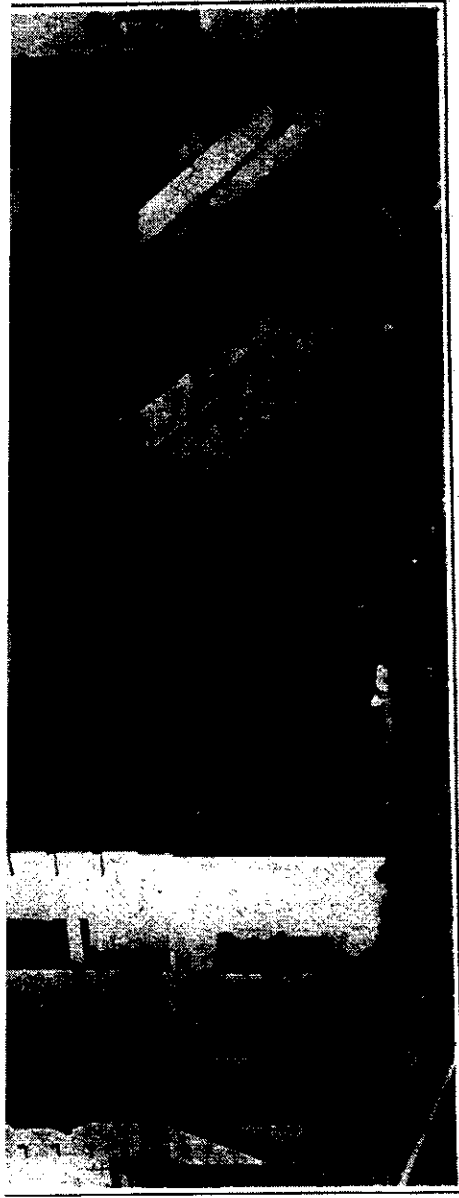


a side door near the east end of the building.

The bunk house for locomotive crews is, like the other buildings, supported on concrete piles, and is a fireproof structure with brick walls on concrete foundations, with concrete floor and roof and steel sash. It has no basement. It is 1-story, 30 x 51 ft., and is at the west side of the locomotive house. At the north end is a locker room, opening on a corridor off which there is a kitchen fitted with electric stove, sink, hot and cold water faucets, and cupboards, and a dining room equipped with table and chairs. On the other side of the corridor are lavatories, fitted with basins and shower, the lavatory space being lined from floor to ceiling with Vitrolite, providing a much more durable interior finish than plaster and paint. Beyond the corridor are two bedrooms, laid out so as to keep out noise from the rest of the building, one room being fitted with three lower and upper berths, and the other with two. The bunk house is heated by steam radiators.

The dope reclamation building, 20 x 35 ft., south of the passenger car repair shop's west end, is of brick, with concrete foundations on concrete piles, and with concrete floor and roof and steel sash. It contains complete apparatus for the reclamation of oil and waste from used journal box packing.

The linen stores building, 61 ft. 8 in. x 40 ft. 8 in., north of the east end of the passenger car repair shop, is a 2-story and basement brick structure with concrete foundation on concrete piles, and with concrete floors and roof and



Yardmaster's Office, Toronto central terminal area. Canadian Pacific Railway.

spare linen room, and a stock equipment room. The upper floor contains a tailor shop, 19 ft. 4 in. x 37 ft. 8 in., men's locker room, lavatories, and room for seamstress, with lavatory adjoining. Pneumatic speaking tubes connect all floors. Exterior canopies are provided at both doors.

The charcoal and hard coal storage building, immediately east of the linen stores building, is 78 ft. 10 in. x 19 ft., and is divided by a wall into two equal parts. It is 1-story, of the same type of construction as the buildings described previously, and is fitted with hinged doors on the north side, and three folding chutes at the south, or track side, for receiving coal from cars. Coal is delivered to passenger train cars through the doors at the north side.

The car cleaners' building, toward the west end of the property and northwest

of mill type; the floor is of concrete with mastic surface; efficient ventilation is secured by roof ventilators, and large window area provides plenty of natural light.

The car battery charging equipment building, located as described previously and as shown on the general plan, is 1-story, 46 ft. 4 in. x 18 ft. 4 in., 12 ft. high, and, like the other buildings, is of brick construction on concrete foundations on concrete piles, with concrete floor and roof and steel sash. It houses the electrical equipment which receives the current from the Toronto Hydro-Electric Commission and transforms it by motor-generator equipment to voltage suitable for charging passenger car storage batteries. The charging current is distributed throughout the yards by cables carried on the lighting standards.

The yardmaster's office, 2-story and basement, 30 x 24 ft., of the same type of construction as the other buildings, and placed at the east end of the south passenger car yard, east of York St., is the only building of the whole terminal layout which has its own heating plant, the reason being that the piping of steam across the York St. subway, which carries that street under the railway tracks, would have been a difficult and expensive proposition. Steam for all the other buildings, including the locomotive house, is supplied from Toronto Terminals Ry. Co.'s central heating plant, which also supplies the union station and the C.P.R.'s Royal York Hotel. The heating plant in the yardmaster's office is a hot water one, with furnace room in the basement, which also contains a locker room for yardmen, and a lavatory with shower and Bradley wash fountain. The stairs throughout are of steel construction, with concrete and tile treads. The ground floor contains a luncheon room for yardmen, and, adjoining, a kitchen equipped with electric stove, hot and cold water faucets, etc. The upper floor contains the yardmaster's office, with public space and counter, and desk room for clerks.

The concrete washing deck for passenger car trucks, on the loop track which encircles the locomotive house and the yard north of the passenger car repair shop, is northwest of the locomotive house, and of concrete construction, set on concrete piles. The deck, 185 x 23 ft., is fitted with drainage connection to the sewerage system. The depth of

early in 1930 to allow enough time for settlement, and it was not desirable to proceed with track ballasting and surfacing until a sufficient time for settlement had elapsed. Air, Pintsch gas and steam lines, and wiring for lighting and battery charging, have been provided throughout the south yards, and some of the steam lines have been laid in the north yards. The provision of the balance of the steam lines, and of all the other facilities mentioned, for the north yards, will be completed in the near future. Turnouts in the yards are no. 9 throughout. In the trainfilling to elevate the site for the facilities, about 600,000 cu. yd. of material was used in the first stage of the work, and about 400,000 cu. yd. in the second stage. The material was hauled from Scarborough, a few miles east of Toronto.

The supply of electric current for the terminal is secured from the Toronto Hydro-Electric Commission at 2,300 volts, and is fed through a main oil switch with rupturing capacity of 150,000 kva. to 4 panels in the compressor room in the locomotive house machine shop annex. One of these controls the primary side of a bank of three 200 kva. 2300-550 volt transformers; the second controls the 2,300 volt line to three 50 kva. 2300-115-230 volt transformers for lighting; the third controls 2300 volt service to two 750 cu. ft. free air per minute synchronous motor-driven Ingersoll-Rand compressors, the motors being C.G.E. type with each unit having its own exciter set and independent control boards; the fourth is a metering unit.

Newfoundland Radiotelegraph Regulations.

The Radiotelegraph Act, 1930, passed by the Newfoundland Legislature last year, was summarized in Canadian Railway and Marine World for Oct., 1930, pg. 678. The act places the administration of radiotelegraph stations, on shore and ship, under the Minister of Posts and Telegraphs, and gives the government power to make regulations for the carrying out of the act. A very complete code of regulations was made effective recently; some of them are summarized as follows.

Fees for the installation and operation of radiotelegraph stations in Newfoundland and on ships registered in Newfoundland are as follows:—limited coast stations and coast stations, \$50; public commercial stations, \$50; private commercial broadcasting stations, \$50; amateur experimental stations, \$2; private receiving stations, \$1 to \$2.50; technical or training school stations, \$5; ship stations, \$10. Fees varying from \$1 to \$5 are specified for examinations for certificates of proficiency in radiotelegraphy. The provisions of the International Radiotelegraph Convention of Washington, 1927, and regulations, are to be observed by all stations subject to the act, and any person installing or working any station in violation of this regulation is to be liable to a fine of not more than \$500 and costs.

Licenses, to be issued by the Minister of Posts and Telegraphs, are divided into nine classes. Licenses for transmitting

Locomotive house, is supplied to the
Terminals Ry. Co.'s central heating
plant, which also supplies the union sta-
tion and the C.P.R.'s Royal York Hotel.
The heating plant in the yardmaster's
office is a hot water one, with furnace
rooms in the basement, which also con-
tains a locker room for yardmen, and a
lavatory with shower and Bradley wash
fountain. The stairs throughout are of
steel construction, with concrete and tile
treads. The ground floor contains a
luncheon room for yardmen, and, ad-
joining, a kitchen equipped with electric
stove, hot and cold water faucets, etc.
The upper floor contains the yardmas-
ter's office, with public space and counter,
and desk room for clerks.

The concrete washing deck for pas-
senger car trucks, on the loop track
which encircles the locomotive house and
the yard north of the passenger car re-
pair shop, is northwest of the locomo-
tive house, and of concrete construction,
set on concrete piles. The deck, 185 x
28 ft., is fitted with drainage connection
to the sewerage system. The depth of
the concrete is 3/4 ft. Complete ap-
paratus for applying the washing com-
pound under high air pressure is being
installed. The trucks will be washed
as a cut of cars is handled over the deck
at slow speed.

The roadway, being built to connect
John St., just north of where that street
leaves Fleet St., southwest of the loco-
motive house, will provide access to the
high level roadway which was provided
in the first stage of the work, giving ac-
cess from York St. around the south side
of the locomotive house, inside of and
parallel to the loop track, and leading
to the linen stores building, coal storage
building, etc. The high level roadway
and the connection from John St. are
both shown on the accompanying gen-
eral plan. The high level roadway is of
waterbound macadam construction; the
connection from John St. will be sur-
faced with Tarvia.

The new track connection from the
high level tracks at the north side of
the terminal site, joining the main line
tracks, is a double track one, 1,600 ft.
long, built to provide facility in opera-
tion. It passes in front of property oc-
cupied by city waterworks facilities in
the John St. area, where a retaining wall
had to be built before construction of
the line could be proceeded with.

throughout. In the traifilling to ele-
vate the site for the facilities, about
600,000 cu. yd. of material was used in
the first stage of the work, and about
400,000 cu. yd. in the second stage. The
material was hauled from Scarborough,
a few miles east of Toronto.

The supply of electric current for the
terminal is secured from the Toronto
Hydro-Electric Commission at 2,300
volts, and is fed through a main oil
switch with rupturing capacity of 150,-
000 kva. to 4 panels in the compressor
room in the locomotive house machine
shop annex. One of these controls the
primary side of a bank of three 200 kva.
2300-550 volt transformers; the second
controls the 2,300 volt line to three 50
kva. 2300-115-230 volt transformers for
lighting; the third controls 2300 volt ser-
vice to two 750 cu. ft. free air per min-
ute synchronous motor-driven Ingersoll-
Rand compressors, the motors being its
C.G.E. type with each unit having its
own exciter set and independent control
boards; the fourth is a metering unit.
The passenger car yards are lighted by
500 watt units, plain lamps with light
directors, spaced at 110 ft. centers and
mounted on steel poles 35 ft. high.

The first stage of the terminal work
was so far advanced as to permit the
first 28 stalls of the locomotive house to
be placed in operation in Oct., 1929, this
locomotive house, and one built by the
Toronto, Hamilton and Buffalo Ry., in
Hamilton, introducing to Canada the di-
rect steaming system of locomotive
house operation. Construction of the
locomotive house which was replaced by
the new one was begun in 1897, when 15
stalls were built; 5 stalls were added in
1907 and 7 more in 1918, a machine shop
being added in the latter year. The
first 15 stalls were 70 ft. long, the next
five, 80 ft., and the last seven, 85 ft.
The original turntable was a 70-ft. one,
which was replaced in 1918 by a 90-ft.
one.

The high level terminal development
plans were prepared by the Canadian
Pacific Ry. Engineering Department un-
der direction of J. M. R. Fairbairn, D.
Sc., Chief Engineer. The work was car-
ried out under supervision of Lt.-Col.
Blair Ripley, C.B.E., D.S.O., District En-
gineer, Ontario District; H. S. Bare, of
the Engineer of Buildings' staff, was in
charge of building construction, and V.

code of regulations was made effective
recently; some of them are summarized
as follows.

Fees for the installation and operation
of radiotelegraph stations in Newfound-
land and on ships registered in New-
foundland are as follows:—limited coast
stations and coast stations, \$50; public
commercial stations, \$50; private com-
mercial broadcasting stations, \$50; ama-
teur experimental stations, \$2; private
receiving stations, \$1 to \$2.50; technical
or training school stations, \$5; ship sta-
tions, \$10. Fees varying from \$1 to \$5
are specified for examinations for cer-
tificates of proficiency in radiotelegraphy.
The provisions of the International Ra-
diotelegraph Convention of Washington,
1927, and regulations, are to be observed
by all stations subject to the act, and
any person installing or working any
station in violation of this regulation
is to be liable to a fine of not more
than \$500 and costs.

Licenses, to be issued by the Minister
of Posts and Telegraphs, are divided into
nine classes. Licenses for transmitting
stations are to be issued only to British
subjects or to companies incorporated
under the laws of any British Dominion.
Licenses for private receiving stations
are issued to anyone in Newfoundland,
regardless of nationality. Licenses are
valid for one year, commencing July 1
and expiring June 30 the following year.
Ship station licenses are granted to sta-
tions on British ships registered in New-
foundland.

The regulations divide ship stations
into four classes, and specify the range,
wave length, etc., for the equipment of
each. The minimum range of equipment
for foreign-going passenger ships must
be 100 miles, and an emergency source
of power must be instantly available.
Masters of ships are given the power to
censor messages. All operators on
coast, ship or land stations must be
British subjects. The number of opera-
tors to be carried on ships of different
classes is specified; on foreign-going
passenger ships registered in Newfound-
land, two operators, holding first class
certificates, must be carried.

Other matters included in the regula-
tions are the requirements in the way
of examinations for certificates of pro-
ficiency in radiotelegraphy, the inspection
of stations, the operation of ship stations
within the territorial waters or harbors