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Ohio State Engineer

Title: Illinois Central Railroad Proposed Passenger Terminal, Chicago

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Issue Date: May-1922

Publisher: Ohio State University, College of Engineering

Citation: Ohio State Engineer, vol. 5, no. 4 (May, 1922), 2-5, 15.

URI: <http://hdl.handle.net/1811/35033>

Appears in Collections: [Ohio State Engineer: Volume 5, no. 4 \(May, 1922\)](#)

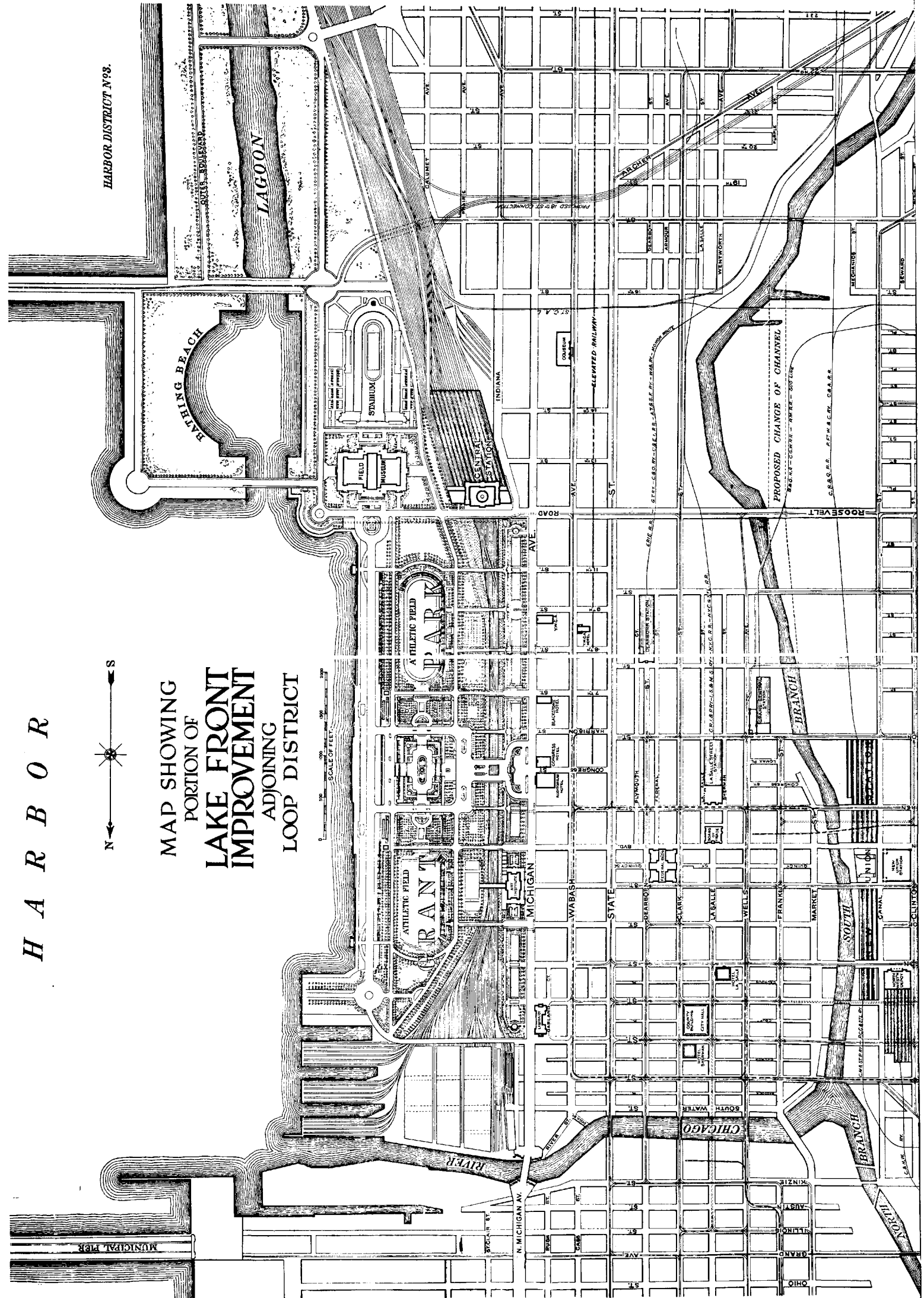
H A R B O R



MAP SHOWING
PORTION OF
LAKE FRONT
IMPROVEMENT
ADJOINING
LOOP DISTRICT

SCALE OF FEET
0 50 100 150 200

HARBOR DISTRICT NOS.



Illinois Central Railroad Proposed Passenger Terminal, Chicago

Prepared under direction of D. J. BRUMLEY, Chief Engineer
Chicago Terminal Improvement

LARGELY on account of its excellent transportation facilities Chicago has enjoyed one of the greatest growths of any city in the world. The railroads from the west and northwest naturally converge at the southerly end of Lake Michigan, making Chicago the most convenient point for interchange of traffic with lines to the east and southeast. Radiating from Chicago, there are two major railroad lines to Milwaukee, six to St. Paul and Minneapolis, six to Omaha, six to Kansas City, four to St. Louis, two to New Orleans, six to Cincinnati, Jacksonville and southeastern points, two to Washington, six to New York and four to Detroit and Canadian points.

There are no topographical obstacles that tend to restrict the routes of entrance into the city and each line has striven to reach the heart of the city through the lines of least financial resistance. This has resulted in the Central Business or "Loop" District of Chicago becoming practically surrounded by railroad yards and terminal facilities. The growth of the city has caused this district to become greatly congested and something must be done to enable the city to force back this railroad barrier now restricting its growth and development.

To assist in solving this problem the City of Chicago created a Railway Terminal Commission. This Commission has submitted a plan for the consolidation of the passenger facilities of all the roads now using the Dearborn, La Salle and Grand Central Stations, with the Central Station facilities on the Lake Front just south of East Roosevelt Road. The freight facilities in the southerly area of the loop are also to be rearranged, under this plan, and are to be reconstructed west of Clark Street. The Chicago River, which makes a big bend to the east between Polk Street and Sixteenth Street, is to be straightened, thereby permitting the extension of many needed streets which will relieve the present congestion existing in the down-town district. It will also provide more room for the southward expansion of the business district and permit a better freight development west of Clark Street.

At the same time that the Railroad Terminal Commission was developing this plan, the demand for railroad electrification within the city became positive. The Illinois Central, on account of its commanding position on the Lake Front, was chosen as the railroad to start the electrification program. As a result of this popular demand the Illinois Central agreed to electrify its lines in the city within a definite term of years, and at the same time agreed to construct a

very large passenger station and terminal facilities adequate to accommodate all the roads now using the Dearborn, La Salle, Grand Central and Central Stations. Sufficient land for the coach and engine facilities is to be made available by filling along the westerly shore of the lake, making a right of way 635 feet in average width and extending from East Roosevelt Road to Thirty-first Street, a distance in excess of two miles.

The South Park Commissioners of the city agreed to fill in the lake east of the railroad boundary line and to construct a magnificent "Lake Front Park" from Grant Park to Jackson Park as illustrated by Figure No. 1. The new Field Museum (Figure No. 2) is at the north end of this park. Immediately south of the Field Museum a large Stadium seating 100,000 people has been planned and will probably be constructed in the near future. Figure No. 3 shows a view of both the Stadium and Field Museum. Wide boulevards will extend the entire length of the park area. An enclosed watercourse 600 feet wide and five miles long for boat races and other aquatic sports will be provided and on the shores of this watercourse or lagoon will be constructed several large bathing beaches.

The site for the proposed consolidated passenger station was selected by the Illinois Central Railroad Company and approved by the Terminal Commission for several reasons. Most of the roads that would use the station enter the city from the south. The Illinois Central right of way from Ninety-fifth Street north is unhindered by any highway or railroad grade crossings and does not interfere with the development of the city. The station site at East Roosevelt Road and Michigan Avenue is easily accessible to the traveling public, being on two of the city's principal thoroughfares and conveniently served by elevated, surface and railroad suburban transportation. The natural growth southward, when railroad barriers are removed, will bring the center of the business district each year nearer to this location. It is also essential that a city such as Chicago should have its passenger terminals so located as to add to the dignity of the city. It

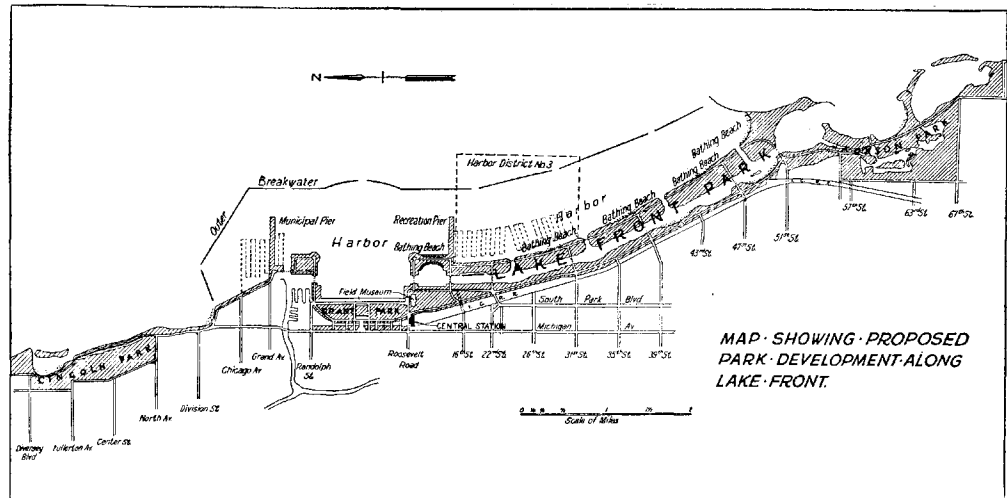


Fig. 1

is important that the environments of the station creat a favorable impression upon the traveling public. It would be difficult to imagine a setting more aesthetic and a location more advantageous than the one proposed for this station.



Fig. 2. Field Museum of Natural History, built on land formerly owned by the Illinois Central Railroad.

The future growth of the passenger business can be accommodated at this point for a great many years. A station of twenty-eight stub-end station tracks with wide platforms is proposed for the upper or East Roosevelt Road Viaduct level. Directly under the track level there is ample space available for baggage, mail and express development on the level of Indiana Avenue. Under the baggage floor level another station track level may be developed providing thirty more double ended or through station tracks. This number of station tracks can, if necessity demands, be increased to a total of seventy-five, which will be adequate for almost an indefinite period.

The stub-end tracks on the upper level, which are to constitute the initial installation, are very desirable from the standpoint of the traveling public. The passengers may walk directly from the station to the trains without having to climb ramps or stairs as is necessary in a double ended or through station. The through station tracks are superior to the stub from an operating standpoint and have the added advantage of greater capacity in trains handled.

Final plans for the station and track arrangements have not yet been adopted. This discussion must, therefore, necessarily be confined to the general scheme as now proposed. Two main approaches to the station will be provided, one from the south and the other from the west. The south approach will consist of four tracks along the west side of the Illinois Central right of way in about the same location as the present main line tracks. The west approach will consist of a new two or more track elevated railroad to be constructed south of Eighteenth Street and extending west far enough to connect with the western roads in the vicinity of the Chicago River. The elevated tracks of the west approach are to be on approximately the same elevation as the upper level station tracks. The south approach tracks will ascend on a grade of 0.3% from near Twenty-sixth Street, meeting the

grade of the western approach just south of the throat. Ample coach and engine facilities are to be provided immediately south of the throat and a wye track for turning equipment connects from the south with the western approach tracks.

This wye will also make possible the backing of all trains into the station if that plan of operation is considered desirable. Such a method of operation is now in use in some stations with very favorable results.

Engine facilities must be provided until such time as the through passenger tracks are electrified. The rectangular type of engine house instead of the more common type of roundhouse will be used on account of it being better adaptable to the space available. This type is not much used in this country but is quite common in Europe.

The train shed will very probably be of the "Bush" type. This shed consists of low canopies over the platforms and tracks with an opening directly over the center of each track through which the smoke from the engines escapes. The station tracks and platforms will be 1200 feet long, which is sufficient for the accommodation of trains of seventeen coaches. Independent trucking and passenger platforms are to be provided making each track available from both a passenger and a trucking platform. This will eliminate any confusion which might develop due to the mingling on the same platform of passengers and trucks and at the same time facilitate station operation by providing the independent trucking platform for the station employees.

Adequate throat tracks will be provided with a ratio of about one throat track to three station tracks. This is necessary because all switching movements in a stub terminal must of necessity be made through the main throat and a large amount of interference will result if ample throat tracks are not provided. The suburban or commuter traffic will be completely separated from the through passenger business. It is generally recognized that the requirements of the two classes of service are dissimilar and that the operation of the terminal is much more efficient when separate facilities are provided. The commuter demands rapid service with frequent trains and has no need of elaborate waiting rooms, smoking rooms, barber shops, etc. Ample waiting rooms, rest rooms, barber shops, restaurants, etc., are, therefore, essential and a part of the through passenger facilities. There are several large modern passenger terminals in use today where the suburban business has largely monopolized the facilities provided to the detriment of the

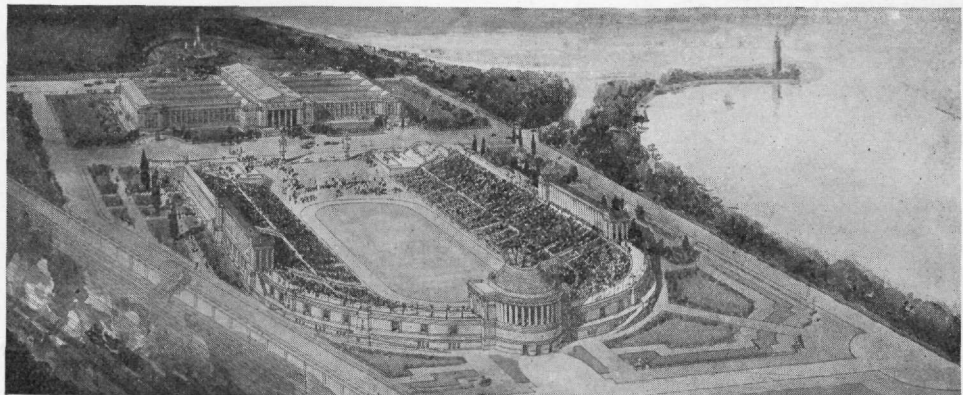


Fig. 3. Stadium designed by Holabird & Roche to be built by South Park Commissioners south of Field Museum of Natural History.

through passenger service. For these reasons the plans for Central Station contemplated carrying the suburban tracks in a tunnel under the through passenger station to a separate terminal at Randolph Street. The suburban station at Roosevelt Road will be connected to the through passenger station by suitable ramps and elevators, but the main routes of entrance and exit will connect directly with the street, eliminating interferences between through and suburban passengers. Exclusive freight tracks have been planned, extending from the Randolph Street freight yards to the southern limits of the city and every facility possible provided to reduce to a minimum the interference between freight and passenger movements.

In many instances the railroads entering Chicago are forced to haul their empty passenger equipment to coach yards and engine facilities located long distances from the passenger station. This results in a heavy operating expense. On account of its wide right of way on land not now obstructed by buildings or other occupation, Central Station will have adjacent to the throat of the terminal ample coach yards and engine facilities for the accommodation of all railroads using the station.

The engine facilities to be located at Twenty-sixth Street, will be laid out in accordance with the latest and best ideas of locomotive terminal design. Everything possible will be done to provide for the quick and economical handling of the locomotive from the engine terminal to the train and vice versa. Storage tracks, ash pits, turntables, transfer tables, coaling stations, etc., have all been laid out with a view to eliminating loss of time in putting the locomotive through the terminal. Ample tracks will be provided for the storage of locomotives in the order of their arrival or departure, so that the terminal will not become congested during the peak load periods.

Plans now being made contemplate the fullest use of the two-hundred-foot right of way extending

south from Thirty-first Street to Matteson, the southerly limits of the terminal improvements. Instead of the present eight main running tracks there will be a total of thirteen. Not all of the additional tracks will be built at this time, but previous to electrification each track will be placed in its ultimate location, so that as additional tracks are needed they can be built without disturbing the existing tracks. This requires the extension of many street subways, the building of miles of retaining walls, placing of an immense yardage of fill, relocation of station platforms and many similar changes. A great deal of this work must be done

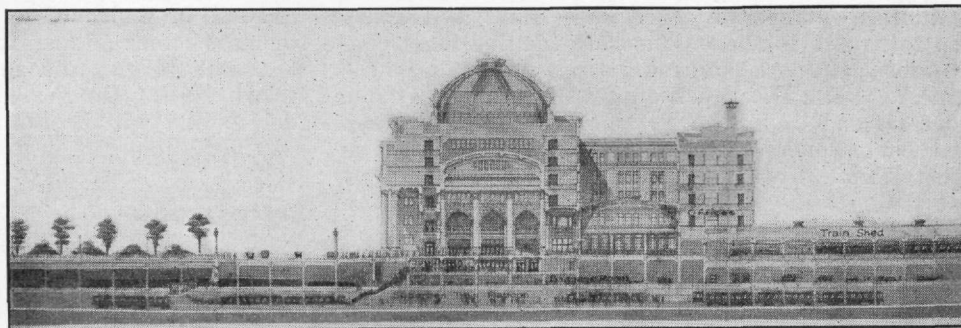


Fig. 4. North and south section through station building and train shed, looking east from Indiana Ave. This view shows the three main levels proposed in the new station. The through passenger tracks are located on the same level as Roosevelt Road Viaduct, which makes it possible for patrons to pass through the lobby, concourse and on to the train platforms without using stairs or crossing tracks. The middle level will be used for baggage, mail and express facilities and will be served from Indiana Avenue. The lower track level is occupied by suburban tracks and platforms and can also be used for a future through passenger track level.

prior to the electrification of the suburban service, which is one of the first stages of the construction program. Elimination of all grade crossings, both railway and highway, between Central Station and Harvey, is contemplated. The magnitude of this achievement may be seen when it is known that there are now built or contemplated thirty-two subways or viaducts for highway crossings and seven distinct railways, which now or in the future will cross over the Illinois Central tracks on viaducts. One of the highway crossings, South Park Boulevard viaduct, the contract for which is soon to be let, will be 632 feet long and will cost in the neighborhood of a million dollars. Eighteenth Street subway will also cost about one million dollars.

In order to avoid expensive electrification of present freight yards, and to take advantage of the operating economies of a hump yard, plans have been completed and work is well under way for a classification yard to be located at Harvey, Illinois, the southern limit of the through passenger and freight electrified zone. This project, to be known as Markham Yard, will be the largest freight yard in the world. All classification of cars will be done by switching over a hump. All freight trains, both north and south bound, will leave the yard with cars arranged in station order. Several smaller yards will be abandoned, except for purely local switching. This yard,

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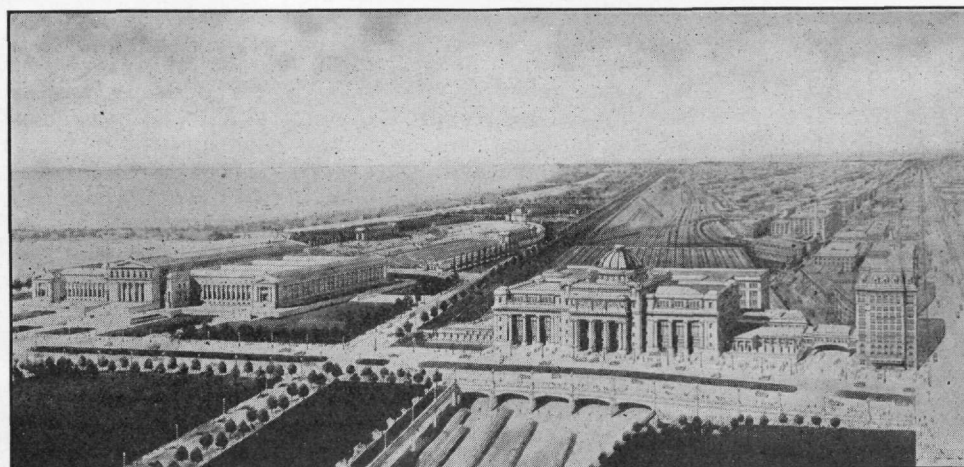


Fig. 5. Aerial view of the proposed Central Station, Field Museum of Natural History and proposed Stadium. Picture reproduced by courtesy of the Chicago Plan Commission.

ILLINOIS CENTRAL RAILROAD TERMINAL

(Continued from Page 5)

when completed, will cost about \$10,000,000. The station building itself, on account of its prominent location and a nature of its surroundings, will be a monument of architectural beauty. The close proximity of the Field Museum and the proposed stadium, and the commanding location overlooking Michigan Avenue and Grant Park preclude

a mediocre type of building. Although plans for the building are only in a tentative stage and many types have been considered, Figs. No. 4 and 5 will give an idea of the character of building contemplated. Due consideration will be given to the possibility of constructing a huge office building above the station concourse and also above the train sheds after steam operation has been replaced by electricity.