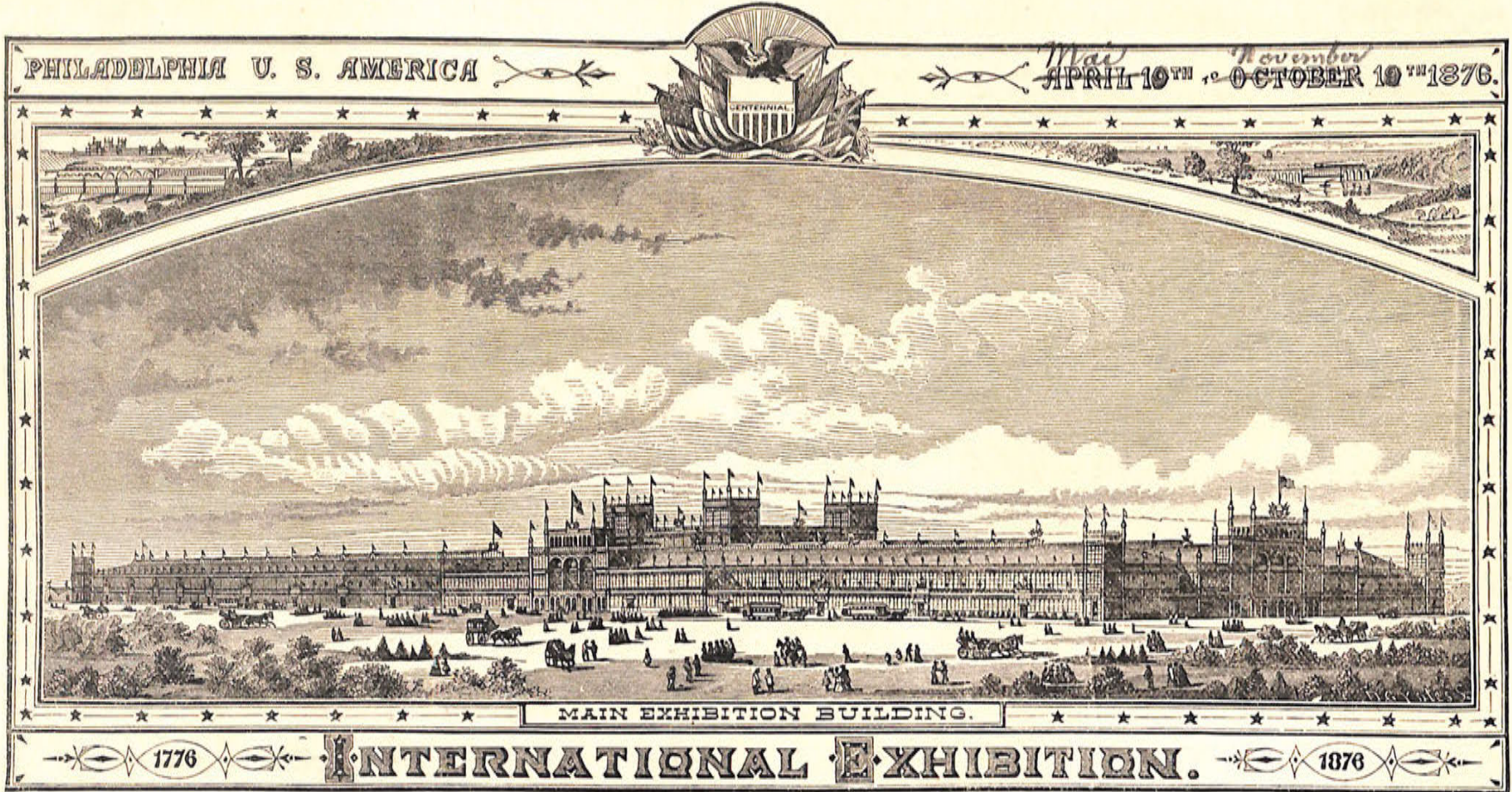


# United States Centennial Commission



GENERAL DESIGN.

THE principal buildings in which the International Exhibition of 1876 will be held are the MAIN BUILDING, the ART GALLERY, the MACHINERY HALL, the AGRICULTURAL and the HORTICULTURAL HALLS. In the aggregate they cover a floor space of about 40 acres.

The Main Exhibition Building is located immediately east of the intersection of BELMONT and ELM AVENUES, on the LANSLOWNE PLATEAU. It will stand 170 feet back from the north side of ELM AVENUE, the area between the building and the Avenue being used for special products, which may be exhibited in the open air. There will also be a space 300 feet in width between the building and the ART GALLERY on the north side, which will be ornamentally treated as ground for special purposes.

The building is in the form of a parallelogram, extending east and west 1,880 feet in length, and north and south 464 feet in width.

The larger portion of the structure is one story in height, and shows the main cornice upon the outside at 45 feet above the ground, the interior height being 70 feet. At the centre of the longer sides are projections 416 feet in length, and in the centre of the shorter sides or ends of the building are projections 216 feet in length. In these projections, in the centre of the four sides, are located the main entrances, which are provided with arcades upon the ground floor, and central facades extending to the height of 90 feet.

The EAST ENTRANCE will form the principal approach for carriages, visitors being allowed to alight at the doors of the building under cover of the arcade.

The SOUTH ENTRANCE will be the principal approach from street cars, the ticket offices being located upon the line of ELM AVENUE, with covered ways provided for entrance into the building itself.

The MAIN PORTAL on the north side communicates directly with the ART GALLERY, and the MAIN PORTAL on the west side gives the main passage way to the MACHINERY and AGRICULTURAL HALLS.

Upon the corners of the building there are four towers 75 feet in height, and between the towers and the central projections or entrances, there is a lower roof introduced showing a cornice at 24 feet above the ground.

In order to obtain a central feature for the building as a whole, the roof over the central part, for 184 feet square, has been raised above the surrounding portion, and four towers, 48 feet square, rising to 120 feet in height, have been introduced at the corners of the elevated roof.

The areas covered are as follows:

Ground Floor . . . . .	872,320 square feet.	20.02 acres.
Upper Floors in projections . . . . .	37,344 " "	.85 "
" " in towers . . . . .	26,344 " "	.60 "
	936,008	21.47 "

GROUND PLAN.

The general arrangement of the ground plan shows a central avenue or nave 120 feet in width, and extending 1,832 feet in length. This is the longest avenue of that width ever introduced into an Exhibition Building. On either side of this nave there is an avenue 100 feet by 1,832 feet in length. Between the nave and side avenues are aisles 48 feet wide, and on the outer sides of the building smaller aisles 24 feet in width.

In order to break the great length of the roof lines, three cross avenues or transepts have been introduced of the same widths and in the same relative positions to each other as the nave and avenues running lengthwise, viz: a central transept 120 feet in width by 416 feet in length, with one on either side of 100 feet by 416 feet, and aisles between of 48 feet.

The intersections of these avenues and transepts in the central portion of the building result in dividing the ground floor into nine open spaces free from supporting columns, and covering in the aggregate an area of 416 feet

square. Four of these spaces are 100 feet square, four 100 feet by 120 feet, and the central space or pavilion 120 feet square. The intersections of the 48 foot aisles produce four interior courts 48 feet square, one at each corner of the central space.

The main promenades through the nave and central transept, are each 30 feet in width, and those through the centre of the side avenues and transepts 15 feet each. All other walks are 10 feet wide, and lead at either end to exit doors.

The following table gives the principal dimensions of the different parts of the building.

DIMENSIONS.

Measurements taken from centre to centre of supporting columns.	
Length of Building . . . . .	1880 feet
Width of Building . . . . .	464 "
CENTRAL AVENUE OR NAVE.	
Length . . . . .	1832 "
Width . . . . .	120 "
Height to top of supporting columns . . . . .	45 "
Height to ridge of roof . . . . .	70 "
CENTRAL TRANSEPT.	
Length . . . . .	416 "
Width . . . . .	120 "
Height to top of columns . . . . .	45 "
Height to ridge of roof . . . . .	70 "
SIDE AVENUES.	
Length . . . . .	1832 "
Width . . . . .	100 "
Height to top of columns . . . . .	45 "
Height to ridge of roof . . . . .	65 "
SIDE TRANSEPTS.	
Length . . . . .	416 "
Width . . . . .	100 "
Height to top of columns . . . . .	45 "
Height to ridge of roof . . . . .	65 "
CENTRAL AISLES.	
Length at east end . . . . .	744 "
" at west end . . . . .	672 "
Width . . . . .	48 "
Height to roof . . . . .	30 "
SIDE AISLES.	
Length at east end . . . . .	744 "
" at west end . . . . .	672 "
Width . . . . .	24 "
Height to roof . . . . .	24 "
CENTRE SPACE OR PAVILION.	
Ground Plan . . . . .	120 " square.
Height to top of supporting columns . . . . .	72 "
Height to ridge of roof . . . . .	96 "
TOWERS OVER COURTS.	
Ground Plan . . . . .	48 " square.
Height to roof . . . . .	120 "
CORNER TOWERS.	
Ground Plan . . . . .	24 " square.
Height to roof . . . . .	75 "

The foundations consist of piers of masonry.

The superstructure is composed of wrought iron columns which support wrought iron roof trusses.

As a general rule the columns are placed lengthwise of the building at the uniform distance apart of 24 feet, and the sides of the building for the height of seven feet from the ground are finished with timber framed in panels between the columns, and above the seven feet with glazed sash. Portions of the sash are movable for ventilation.

The wrought iron columns are composed of rolled channel bars with plates riveted to the flanges.

The roof trusses are similar in form to those in general use for Depots and Warehouses, and consist of straight rafters with struts and tie-bars.

