

Stage roof systems



- 1. **Client:** Live 4 Live
Project: Stanford commencement
Set & scenic: San Diego Opera Shop

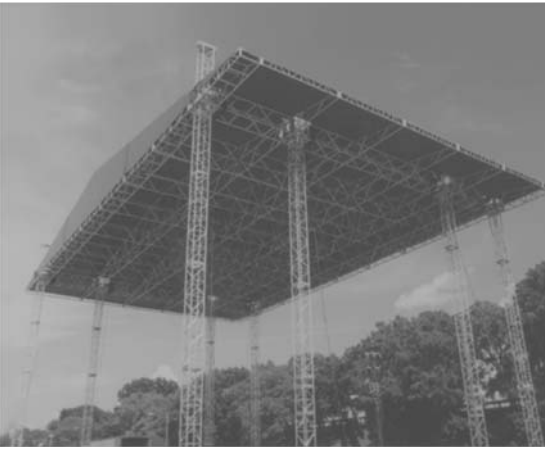
- 2. **Client:** Fabric Structures Inc
Project: Summerstage, Central Park, New York
Architects: FTL Happold

Total Structures manufactures what is probably the most versatile modular stage roof system in the world, detailed information for which is contained in the coming pages. However, please note that we have a long history of designing and manufacturing custom stage roofs that are tailored precisely to meet our clients needs, some examples of which are illustrated in the inset photographs.

Please contact us for a consultation to help you decide which roof format would best suit your needs. +1 805 676 3322, or if you would like us to contact you, please e-mail us on info@totalstructures.com



Stage roof systems



The Total Structures' Outdoor Stage Roof Design is now the world wide industry standard, with systems in every major country. The flexibility in the concept makes it the most versatile, expandable roof system in the market today. A typical structure has a perimeter grid made up of standard truss which would usually be 10ft sections, although other modules can be accommodated. The width and depth of the roof is determined by the number of modules in each direction. The maximum allowable cross stage span is 80ft (larger custom construction can be achieved), with virtually no limit on the depth. The roof is formed by constructing a matrix of ladders and truss which make a series of identically sized bays inside the structure. It is this feature which gives rise to massive point load capacities anywhere under the grid.

The payload of the roof is governed primarily by the number and type of towers at each side and a choice of perimeter truss: Medium Duty, Heavy Duty, Fold Flat or even Folding Catwalk Truss. Similarly payloads range from 6 Tons for small roofs to 25 Tons and above for

larger constructions. The roof is covered with high grade reinforced PVC material which is divided into pieces on large roofs for easy handling.

The concept of the roof structure is so versatile that a large roof can be split into two separate smaller roofs by adding only a small number of components.

Integral PA wings of various sizes can be added to the main roof structure for a major concert or tour.

As the majority of components are essentially two dimensional, the structure requires very little volume for transport and storage, especially when the fold flat or folding catwalk truss are used around the perimeter. With each intersection using only four bolts, the largest of roof constructions can be achieved remarkably quickly with a minimum crew.



TOTAL
STRUCTURES

Stage roof systems

Stage roof systems

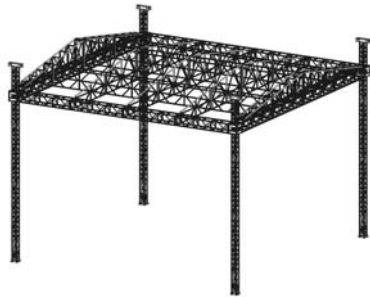
The illustrations on this page demonstrate the modular nature of the Total Structures Outdoor Roof System. The components used in the largest system can be reconfigured to make many other roof assemblies, including all those illustrated.

Three-dimensional CAD models are offered with every quotation along with a detailed component list so that the client can assess precisely what is being purchased.

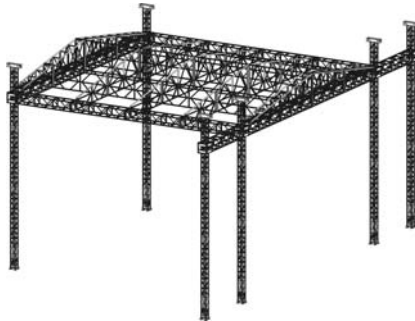
Onsite training is provided where necessary and each roof is supplied with an operating manual. Full engineering is supplied with each system and is defined by US Unified Building Code, conformity to ANSI E1.21-2006 "Entertainment Technology Ground-Supported Overhead Structures Used to Cover the Stage Areas and Support Equipment in the Production of Outdoor Entertainment Events", and also in consultation with the client to determine special

considerations such as local and state requirements and operational conditions. Total Structures also make a commitment to clients with after sales support, not only with product supply and maintenance, but also with engineering and advice.

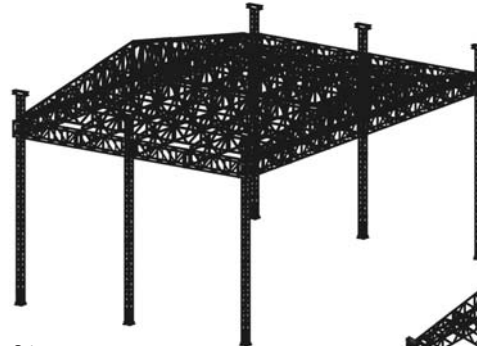
45ft x 45ft Stage Roof - 4 towers



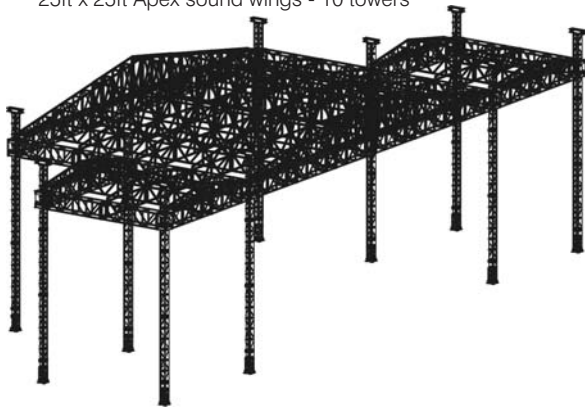
45ft x 45ft Stage Roof w/ 10ft single span sound wing - 4 towers



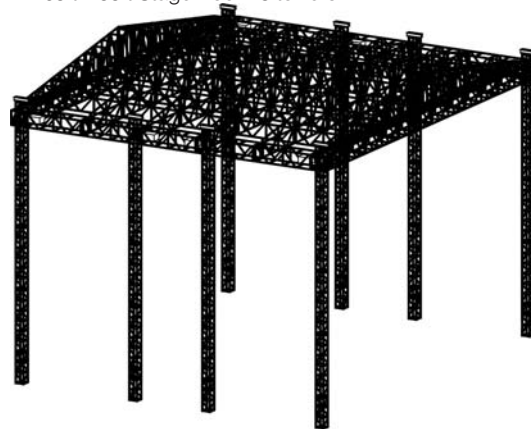
65ft x 45ft Stage Roof - 6 towers



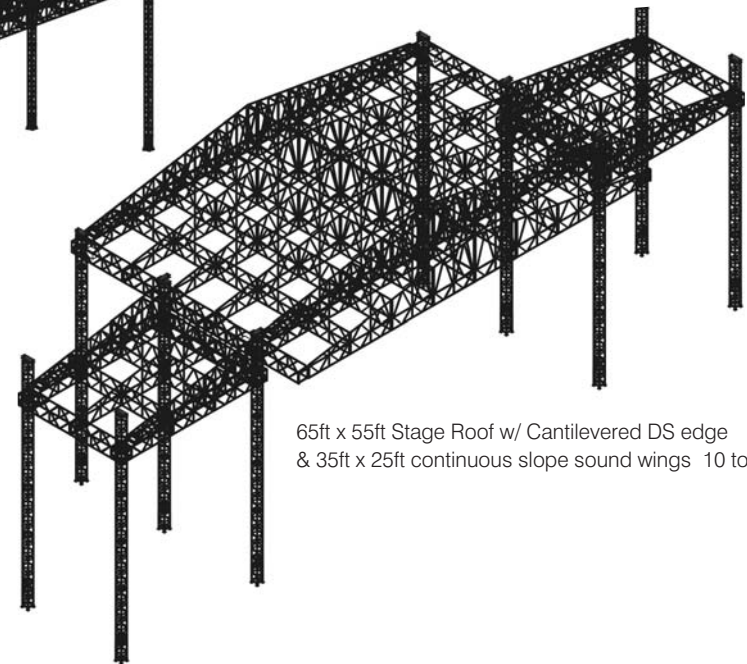
65ft x 45ft Stage Roof
25ft x 25ft Apex sound wings - 10 towers



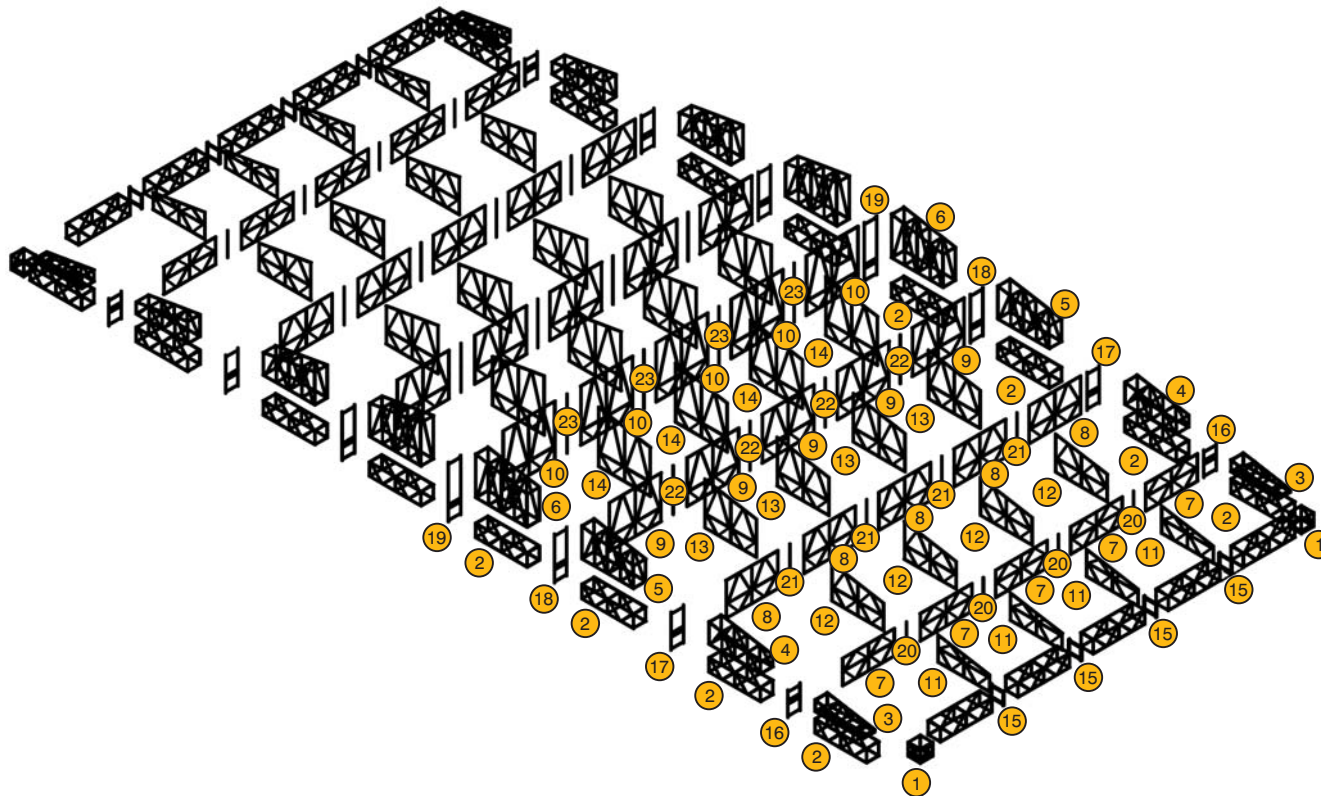
65ft x 55ft Stage Roof - 8 towers



65ft x 55ft Stage Roof w/ Cantilevered DS edge
& 35ft x 25ft continuous slope sound wings 10 towers.



The exploded view on this page is given to demonstrate the ease of assembly and also to provide a key to terminology used specifically for Total Structures Stage Roof assemblies. This illustration is taken from the Total Structures publication "Operating Manual for Demountable Roof Top Structures Designed and Fabricated by Total Structures Inc", which is provided with all our stage roof systems.



- ① Sleeve Block
- ② Perimeter Truss
- ③ Level 1 Sloping Truss
- ④ Level 2 Sloping Truss
- ⑤ Level 3 Sloping Truss
- ⑥ Level 4 Sloping Truss
- ⑦ Level 1 Apex Ladder
- ⑧ Level 2 Apex Ladder
- ⑨ Level 3 Apex Ladder
- ⑩ Level 4 Apex Ladder
- ⑪ Level 1 Sloping Ladder
- ⑫ Level 2 Sloping Ladder
- ⑬ Level 3 Sloping Ladder
- ⑭ Level 4 Sloping Ladder
- ⑮ Sloping Ladder > Truss Node
- ⑯ Apex Ladder > Truss Node Level 1
- ⑰ Apex Ladder > Truss Node Level 2
- ⑱ Apex Ladder > Truss Node Level 3
- ⑲ Apex Ladder > Truss Node Level 4
- ⑳ Level 1 Grid Node
- ㉑ Level 2 Grid Node
- ㉒ Level 3 Grid Node
- ㉓ Level 4 Grid Node