

Spaceport America New Mexico, USA

美国太空港

业主 New Mexico Spaceport Authority (NMSA)

承租方 Virgin Galactic

建筑设计 Foster+Partners

基地面积 300 000ft² / 27 880m² including apron

建筑面积 110 000 ft² / 10 219m²

层数 3

高度 60 ft



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项目位于新墨西哥州沙漠地貌中的发射场，标志着这个世界上一种新的建筑类型正在形成。设计的目的在于对环境产生最小的影响，并最大程度地向第一批参与太空旅行的游客展示无与伦比的快感。从空中俯瞰，机场建筑隐喻的眼睛形象是Virgin Galactic公司的品牌标志——一个拉长的瞳孔，停机坪就像是虹膜。从历史悠久的El Camino Real（西班牙语，中文译作王者之路，加州著名道路）看过去，机场建筑以有机的形式巧妙地环境中凸显出来。

为了将建筑的平面组织得更为高效合理，发射场是根据飞船的尺寸精心设计的，同时慎重考虑了封闭与开敞空间之间的平衡。宇航员的区域和游客空间已与建筑的其余部分整合在了一起，而如控制室等更敏感的区域则是可见的，但会限制出入。游客和宇航员将穿过一条跨越地形的幽深隧道进入建筑。隔墙围合成了一个展览空间，其中展示了太空旅行的历史和航空领域以及宇航员的故事。隧道强大的线性轴线延伸进了建筑，从长廊平面到超大机库（容纳航天器和模拟室的空间）最后到达机场建筑。机场建筑内跑道上方的一面玻璃幕墙上搭建了一个平台。从那里可以看到所有抵港及离港的飞机。

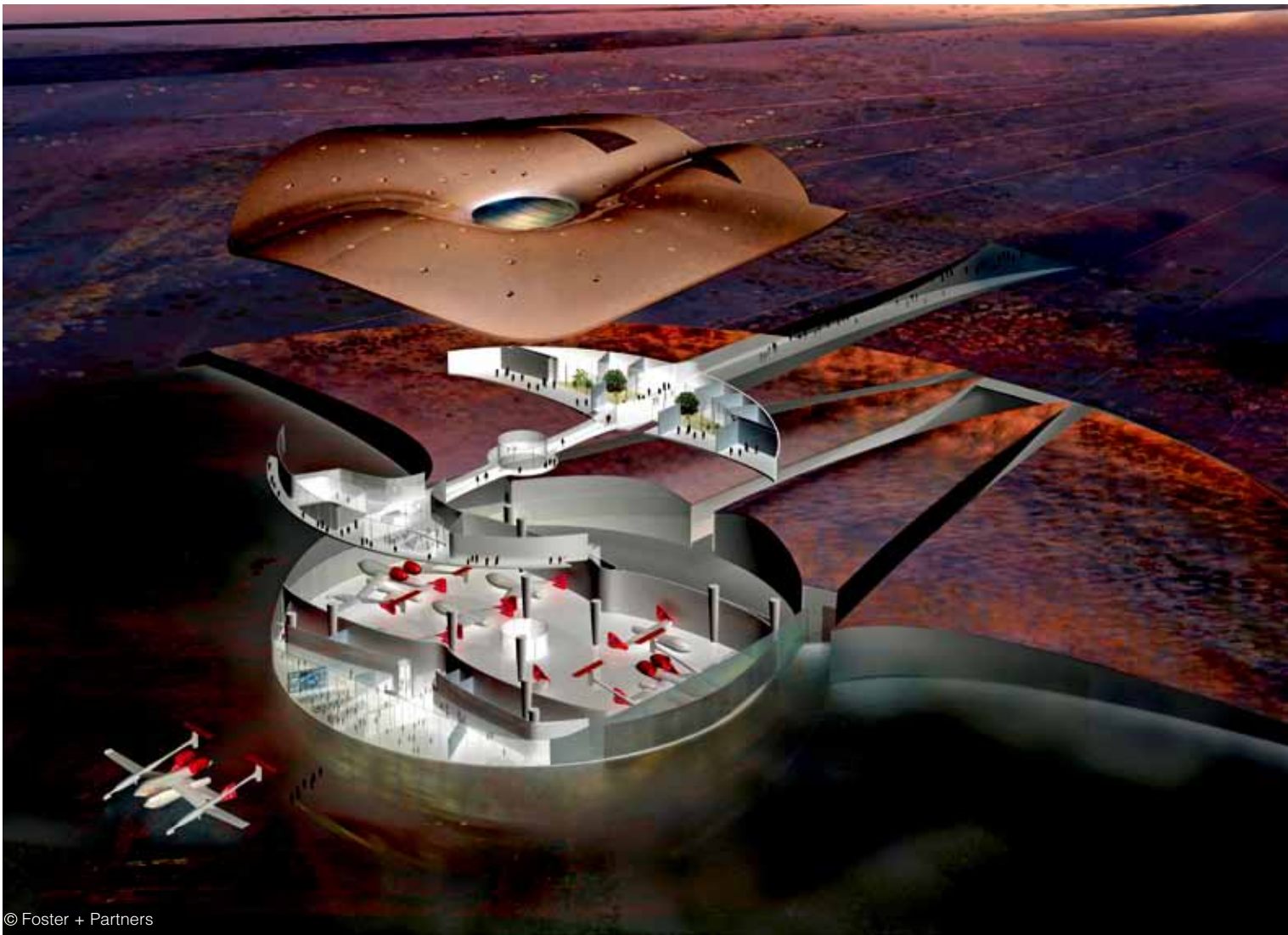
凭借明显的低碳效果和非常少的额外能源需求，该项目获得了LEED金牌认证。下沉的形式是为了利用地热而采用挖掘基地的方式形成的，同时也使得建筑从新墨西哥州的极端气候中得到缓冲，并借助西风进行自然通风；也最大限度地利用透过天窗的日光进行自然采光。此外建筑师利用当地材料和施工技术进行建造，其目的是在实现可持续的同时，也能根据周围的环境变化对自身进行细微的调节。（译/张岩，校/朱晓琳）



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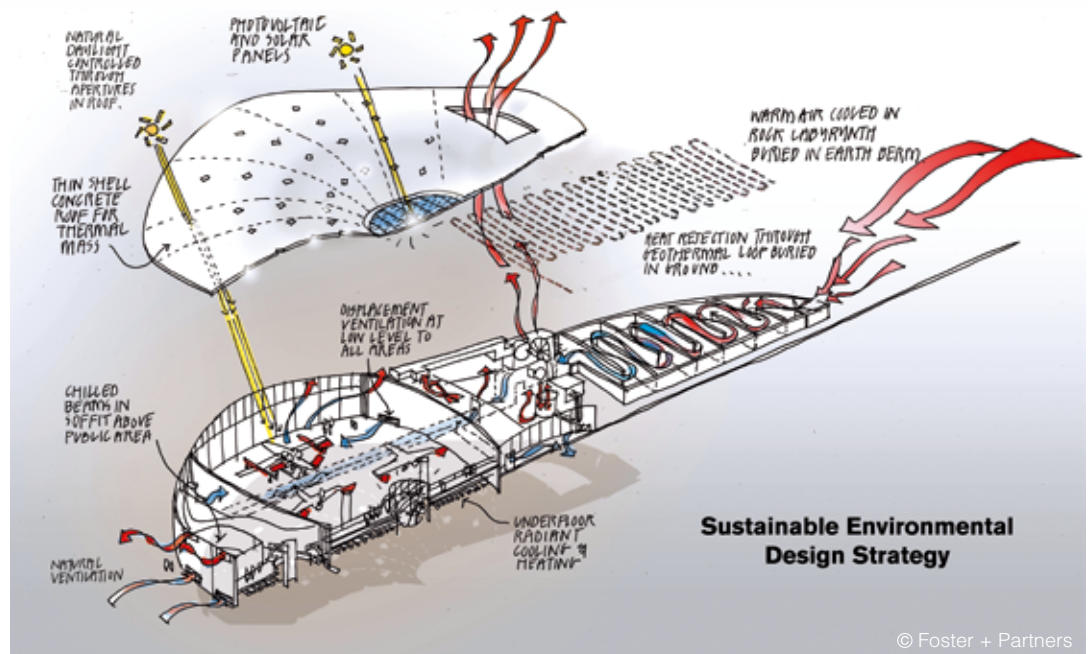
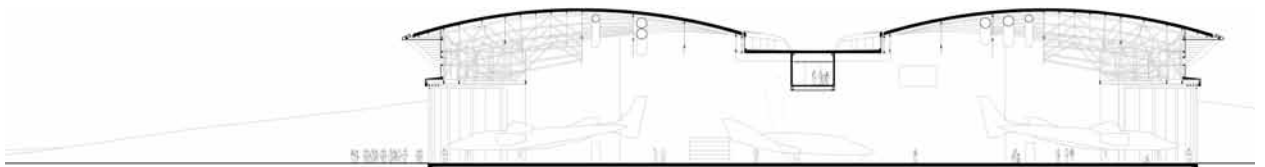
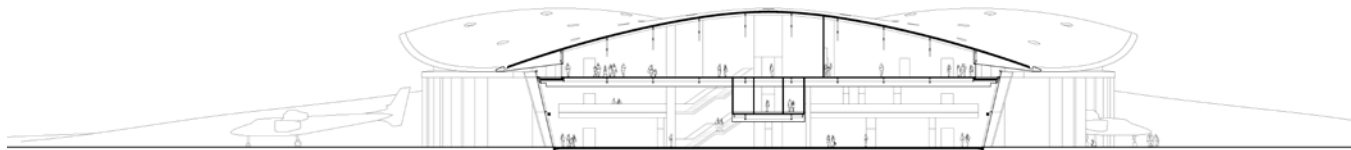
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Located in the desert-like landscape of New Mexico, Spaceport will be the first building of its kind in the world. Its design aims to articulate the thrill of space travel for the first space tourists while making a minimal impact on the environment. Viewed from space, the terminal evokes Virgin Galactic's brand logo of the eye, and is suggestive of an elongated pupil, with the apron completing the iris. Approached from the historic El Camino Real trail, the terminal's organic form appears as a subtle rise in the landscape.

Organised into a highly efficient and rational plan, Spaceport has been designed to relate to the dimensions of the spacecraft. There is also a careful balance between accessibility and privacy. The astronauts' areas and visitor spaces are fully integrated with the rest of the building, while the more sensitive zones – such as the control room – are visible, but have limited access. Visitors and astronauts enter the building via a deep channel cut into the landscape. The retaining walls form an exhibition space that documents a history of space exploration alongside the story of the region and its settlers. The strong linear axis of the channel continues into the building on a galleried level to the super hangar – which houses the spacecraft and the simulation room – through to the terminal building. A glazed facade on to the runway establishes a platform within the terminal building for coveted views out to arriving and departing spacecraft.

With minimal embodied carbon and few additional energy requirements, the scheme has been designed to achieve the prestigious LEED Gold accreditation. The low-lying form is dug into the landscape to exploit the thermal mass, which buffers the building from the extremes of the New Mexico climate as well as catching the westerly winds for ventilation; and maximum use is made of daylight via skylights. Intended to be built using local materials and regional construction techniques, it aims to be both sustainable and sensitive to its surroundings. **AT**

项目信息

功能分区

西区：NMSA和维珍银河公司的行政和后勤支持设施。

中区：操作核心区，包括飞机库以及飞机的维护设施。

东区：主要的操作训练区、宇航员休息室、任务控制室、宇航服更衣室以及恢复休息室。休息室以及任务控制室都有跨过停机坪，跑道直达上方景观的视野。

可持续设计

（1）在护堤里埋设了100m长的地下管道使新鲜空气进入建筑进行降温以及通风，地板下设置辐射式供冷供热设施，线路埋设在混凝土板中。

（2）利用光伏板发电（不设置在建筑上，而设置在停机区），在季节中期采用自然通风，可调节的立面可尽量减少建筑获得的太阳能光热，并最大限度地扩大视野和得到更多的日光照明。

（3）使用高性能低辐射玻璃和高效又自然的遮阳系统。

（4）一些地方低速位移通过了冷冻光束（活动）的通风系统。

（5）中水回收利用。