

# CBS 2 Broadcast Center, Chicago, Illinois

## 哥伦比亚广播公司CBS电视2台演播中心

建筑设计 Goettsch Partners

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资料提供 Goettsch Partners

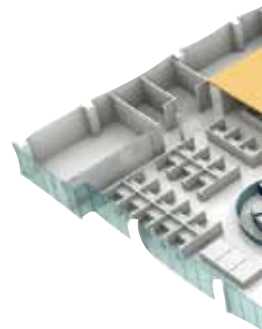
新近建成的哥伦比亚演播公司（CBS）地处芝加哥中央商务区的核心部位，该演播中心是第一个全数字化高清演播设施。演播中心属于哥伦比亚演播公司在芝加哥的子公司WBBM电视。始于新闻电台780调幅广播电台的WBBM电视台是芝加哥的第一批从“超级站”演化过来的广播电视台。自20世纪30年代建站以来，哥伦比亚演播公司首次从长期使用并改建过的工作用房搬到市中心崭新的混合商业办公和零售的开发楼中，在当地被称为Block 37。

从传统的磁带和模拟演播格式到全数字格式的转变是多技术平台的升级。这种技术升级对工作流程和组织结构产生根本性转变是很不常见的。数字媒介生成的内容流动性和可存取性改变了新闻中心的工作流程，需要工作人员不断提高整体素质和能力。

新演播中心设在20层办公大楼的前5层。但CBS的设施是独立于其他层的写字楼租户的。因哥伦比亚演播公司是主租户，它投资建设了专门适用于演播功能的核心空间和外墙设计。演播中心拥有独立的机电和配电系统。在结构上，演播中心独特的隔音和防振地板也独立于建筑的整体框架结构系统。

新设施设有两个制作室。第一个是街前新闻播音室（2 400平方英尺），具有超大、高容量、低速送风管道浮动的树脂地板，尽量减少对数字麦克风空气流动的干扰。临街的两个工作室的外部玻璃幕墙是由带角度的防弹玻璃制成，可防止声光的弹回反射。

第二个是一个供内部处理制作的工作室（4 500平方英尺），视播内容包括政治辩论，曾在1960年首次现场播出该国约翰肯尼迪和理查德尼克松总统的辩论，此外还有谈话节目和与观众同场的综艺节目。制



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作室有专门的视频和音频控制室，可为分期访问的客户提供演员休息室和超大布景，两个工作室都可容下豪华轿车。

建筑设计中有地下专用移动装置停车空间，包括双层高度、充分延伸的天线和首层竖向扩展的封闭式工作室。在这里，复杂的振动隔离组件可以减少巴士、地铁和公交列车线路对其的影响。工作室楼面下还应用了井式楼板结构。

东北角隐藏的悬挑桁架支撑是为将来机场快线地铁站的建设设计的。街前工作室的视频和音频控制房间的位置很独特，它不是直接邻接工作室楼层，而是邻接演播室控制室街三楼新闻中心。

在基地建设剖面组织设计中，3层办公楼的每一层都设在高架地板系统上，每一层都按功能设特定高度。二楼中央设备区是24英寸高的“高架地板”，在三楼新闻中心是9英寸，而在四楼的管理销售层是6英寸。

演播中心的竖向城市特性决定了夹心式的功能设计方法。一楼包含两层层高的工作室、后台内部存储室和哥伦比亚演播公司的公共大堂接待空间。二楼是一个双层高的空间，所有的技术用房和工作人员办公室包括总控室和中央室均位于该层。三楼设有新闻室、编辑室、化妆区、中央存储和分工台。四楼有供市场营销、销售和会计人员的行政办公套间。

这种以夹心式楼层设计的方法减少了控制室和演播室之间昂贵的广播电缆的使用，而且使办公空间更加灵活，以满足长远的规划要求。此外，连接第三和第四层之间的楼梯间也促进了各楼层工作人员的沟通和销售交流。多媒体会议室下面的视觉通道就像桥梁一样使参观设施的客户可亲身观看和体验每天新闻工作的繁忙节奏，并同时有效隔离了他们之间的互相干扰。

可以说，美国哥伦比亚演播公司CBS电视2台演播中心以其独特的组织形式在全公司范围内，同时也在一定程度上成为全演播设计行业的新一代基准。（译/GP，校/朱晓琳）



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The recently completed CBS 2 Broadcast Center in the heart of Chicago's central business district is one of the nation's first all-digital, high-definition broadcast facilities.

The broadcast center is home to CBS Broadcasting's Chicago affiliate, WBBM-TV. WBBM was one of Chicago's first television broadcasters evolving from their "super-station" roots at WBBM News radio 780 AM radio. After being housed in a retrofitted structure since its inception in the 1930s, CBS 2 moved to anchor a new downtown mixed-use office/retail development project, known locally as Block 37.

The transition from legacy tape and analog broadcasting formats to an all-digital format is more than an upgrade of technology platforms. This is one of the rare instances in which a technology upgrade produces a fundamental shift in work process and organizational structure. The fluidity and accessibility of digitally generated content invents new newsroom workflows, requires sophisticated staff skillset development, and collapses and expands generation-long job descriptions.

The new broadcast center occupies the first five floors of a 20-story office tower. But CBS's facility is independent of the office tenants on multiple levels. Being the anchor tenant allowed CBS to invest several broadcast-specific program elements into the core-and-shell design of the building.

The broadcast center has independent mechanical systems from the tenant office tower as well as separate backup power. Structurally, the broadcast center floors are independent from the balance of the buildings framing system in order to isolate sound and vibration transmission.

The new facility houses two production studios. The first is a street-front news broadcast studio (2,400 usf) that features a floating resin floor with oversized, high-volume, low-velocity air-supply ductwork to minimize air movement interference with digital microphones. The two exterior street-facing walls of the studio have angled bulletproof glass perimeter glazing to deflect sound and light toward floor surfaces, stopping sound and light bounce-back reflections.

The second studio is an interior production studio (4,500 usf) sized for out-of-house productions, including political debates—the previous facility broadcasted the country's first live presidential debate in 1960 between John Kennedy and Richard Nixon—talk shows and variety programs with an audience. The production studio has dedicated video and audio control rooms with access to guest-staging green rooms and large set capacities, including the ability to accommodate a passenger car in both studios.

The building design has dedicated mobile unit parking below the building, including a double-height, full-extension antennae-maintenance bay extending vertically to encapsulate grade-level studio space. Here, the complex vibration-isolation assemblies to minimize the impact of bus traffic and underground subway commuter train lines are visible. They include use of waffle-slab construction under studio floor areas. What can't be seen is the cantilevered trusses supporting the northeast corner of the building over a planned underground airport express rail station.

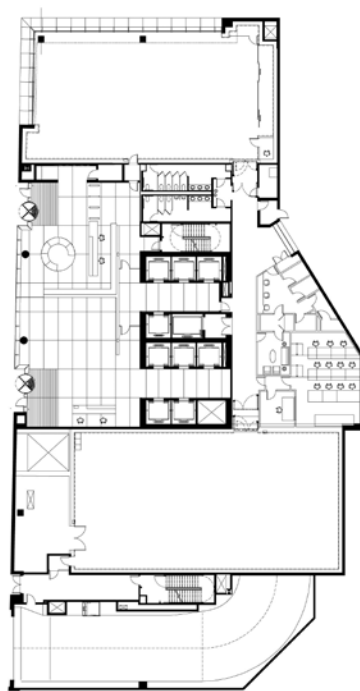
A unique aspect to the video and audio control room location for the street-front studio is that instead of the conventional adjacency to the studio floor, the street from the studio control room is adjacent to the 3rd floor newsroom.

In organizing the base-building design in cross section, each of the three office floors is on raised-floor systems, each at a functionally specific height. The 2nd floor central equipment area has a 24" raised floor, the 3rd floor newsroom has 9" , and the 4th floor administration/sales has 6" .





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一层平面



三层平面

The vertical urban nature of the broadcast center features a sandwich stack approach to functions. The 1st floor contains the two-story studios, and back-of-house storage, and the public lobby CBS reception space. The 2nd floor effectively acts as a mezzanine-like area between double-height studios with all technical spaces and staff offices including master control room and central rack room. The 3rd floor hosts the newsroom, editing suites, makeup areas, central storage and assignment desk. The 4th floor holds the administrative executive office suite, marketing, sales and accounting staffs.

This sandwich approach to the technical floors minimized expensive broadcast cable runs between control rooms and studio spaces and made office spaces more flexible in long-range planning. Additionally, an inter-connecting stairwell between the 3rd and 4th floors facilitates interoffice communication and sales narrative. Finally, the placement of the assignment desk sight lines under the multimedia conference room "bridge" allows visitors to the facility to vicariously experience the news day "buzz" while maintaining functional separation.

In its final form, the CBS 2 Broadcast Center has become a company-wide and, on some levels, industry-wide benchmark for the new generation of broadcast design.<sup>AT</sup>

