

PARKING STRUCTURE COST OUTLOOK FOR 2022



Norfolk International Airport Parking Garage D | Norfolk, VA

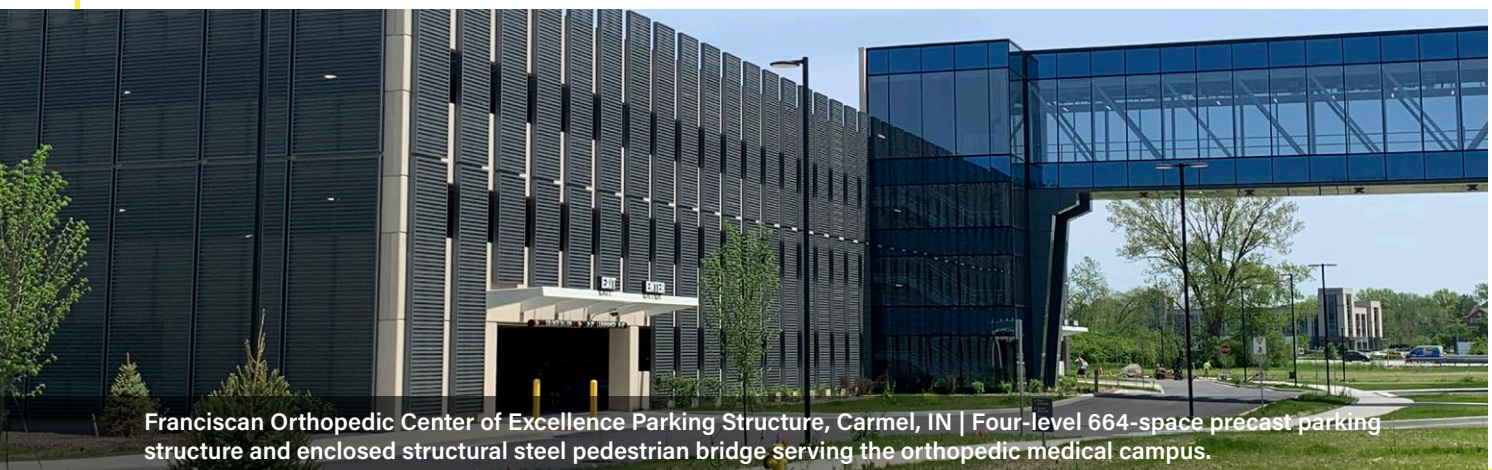
WGI has specialized in parking structure planning and design since 1983, and our Annual Parking Structure Construction Cost Report provides an important planning tool for owners, contractors, and design teams.

WGI maintains a database of completed parking structure projects. Our methodology to analyze the historical cost information assists our clients and the industry. Our construction cost database contains hundreds of completed parking structure projects of varying size, scope, and geographic location. For our forecast, we only exclude the cost of parking structures that are completely or significantly below grade since their cost is much higher. The cost data is assigned factors based on the time of bidding and location of the parking structure. The time factor is based on the Building Cost Index (BCI), published by *Engineering News-Record* (ENR). The location factor is taken from the annual edition of the RS Means Building Construction Cost Data. Applying these two factors to genuine construction cost data adjusts the cost to a current national basis, and from that, we determine the national median. The national median can then be re-adjusted to reflect a median construction cost in almost every city in the United States.

As of May 2022, our statistical data indicates that the median construction cost for a new

parking structure is \$27,900 per space, or \$83.21 per square foot; an 8.6% increase over 2021, when the median cost was \$25,700 per space. The table later in this report lists the 2022 median parking structure construction costs in various U.S. cities, with the lowest cost in Oklahoma City, the highest in New York, and Detroit nearest the national median.

It should be noted that, while the construction cost data includes sitework and utilities directly related to the parking structures, it does not include costs for items such as land acquisition, architectural and engineering fees, environmental evaluations, materials testing, special inspections, geotechnical borings and recommendations, financing, owner administrative and legal, or other project soft costs. Soft costs are typically about 15% to 20% of construction costs, but can be higher for owners allocating their internal costs directly to the project. Another issue of note is that the 2021 edition of the International Building Code (IBC) requires automatic fire sprinklers for all garages with footprints exceeding 48,000 square feet, regardless of openness. All of the parking structures in our analysis predate the adoption of IBC 2021, so while our data includes fire-sprinkled facilities, the median cost derived from our analysis generally does not include fire sprinklers.



Franciscan Orthopedic Center of Excellence Parking Structure, Carmel, IN | Four-level 664-space precast parking structure and enclosed structural steel pedestrian bridge serving the orthopedic medical campus.

FOR COMPARISON, TODAY'S MEDIAN-COST PARKING STRUCTURE TYPICALLY INCLUDES:

- 8'-6" to 8'-9" wide parking spaces
- Precast concrete superstructure
- Precast concrete façade with simple architectural treatment
- Glass-backed elevators and unenclosed stairs clad with exterior glass curtain wall
- Standard wayfinding and signage
- Shallow-spread footing foundations
- All above-grade construction
- Open parking structure with natural ventilation; without mechanical ventilation or fire sprinklers
- Minimal or no grade-level commercial space
- Conventional parking access and revenue control system
- Standard energy-efficient LED lighting

OVERALL PARKING STRUCTURE CONSTRUCTION COST WOULD BE GREATER THAN THE MEDIAN IF IT INCLUDES THESE ENHANCED FEATURES:

- 9'-0" wide parking spaces for improved user comfort
- Cast-in-place post-tensioned concrete superstructure for lower maintenance costs (note that PT may be more economical than precast in certain markets)
- Architectural façade with adorned precast, brick, metal panels, and other materials
- Stormwater management including on-site retention / detention
- Deep foundations such as caissons or piling
- Below-grade construction
- Enclosed stair towers due to local code requirements
- Enclosed parking structure without natural ventilation where mechanical ventilation and fire sprinklers are required
- Flexibility for future parking/building expansion, or incorporation of roof-level solar panels
- Service life in northern/coastal regions beyond a standard 50 to 60 years
- Design for future adaptive reuse, such as detailed in our Flexpark[®] planning model



2022 | ▲ 8.6%

CONSTRUCTION COST FROM 2021

City	Index	Cost/Space	Cost/SF
Albuquerque	86.3	\$24,078	\$71.81
Atlanta	91.3	\$25,473	\$75.97
Birmingham	87.8	\$24,496	\$73.06
Boston	113.1	\$31,555	\$94.11
Charlotte	87.2	\$24,329	\$72.56
Chicago	117.3	\$32,727	\$97.61
Cincinnati	90.8	\$25,333	\$75.56
Cleveland	96.3	\$26,868	\$80.13
Denver	91.8	\$25,612	\$76.39
Dallas	86.2	\$24,050	\$71.73
Detroit - Median	100.0	\$27,900	\$83.21
Houston	85.1	\$23,743	\$70.81
Indianapolis	91.9	\$25,640	\$76.47
Jacksonville	85.2	\$23,771	\$70.90
Kansas City, MO	97.0	\$27,063	\$80.71
Las Vegas	104.7	\$29,211	\$87.12
Los Angeles	113.2	\$31,583	\$94.20
Miami	86.4	\$24,106	\$71.89
Minneapolis	108.0	\$30,132	\$89.87
Nashville	89.3	\$24,915	\$74.31
New Orleans	86.5	\$24,134	\$71.98
New York - Highest	129.1	\$36,019	\$107.43
Oklahoma City - Lowest	84.5	\$23,576	\$70.31
Philadelphia	115.2	\$32,141	\$95.86
Phoenix	88.1	\$24,580	\$73.31
Pittsburgh	100.3	\$27,984	\$83.46
Portland, OR	102.7	\$28,653	\$85.46
Richmond	88.7	\$24,747	\$73.81
St. Louis	101.3	\$28,263	\$84.29
Salt Lake City	89.8	\$25,054	\$74.72
San Diego	110.4	\$30,802	\$91.87
San Francisco	127.5	\$35,573	\$106.09
Seattle	106.9	\$29,825	\$88.95
Tampa	86.2	\$24,050	\$71.73
Washington, D.C.	96.9	\$27,035	\$80.63
National Median	100	\$27,900	\$83.21

- Grade-level commercial space
- Mixed-use development where the parking is integrated with office, retail, residential, or other uses
- Custom wayfinding and signage system
- Green Business Certification, Inc. (GBCI) ParkSmart® Certification for sustainability
- Enhanced parking technology
 - License-plate recognition
 - Parking-guidance system
 - Car-count system with variable-message LED signs
 - WiFi and cellular services
 - Solar-energy collection
 - Building Management System

COST DRIVERS: Features That Impact the Cost of a Parking Structure



PARKING INDUSTRY 2022 CONSTRUCTION ECONOMIC FORECAST

Construction in the United States saw unprecedented challenges in 2021 as we emerged from the Covid-19 pandemic. We found an economy facing currency inflation rates approaching the highest in the last 40 years. These challenges have only accelerated as we approach mid-2022. Construction material and labor shortages, combined with productivity challenges, became the new normal. Add inflation to the pre-existing material and labor challenges, and the result is some of the largest cost increases, for both design services and construction, we've seen in decades.

Dodge Data & Analytics is reporting that they see a 6% rise in construction starts in 2022 compared to 2021, and overall construction starts are projected to exceed 2019 primarily due to a nonresidential construction sector that regained its footing following the pandemic (Dodge, *ForConstructionPros.com*). The Portland Cement Association (PCA) estimates that U.S. inflation will reach 7% in 2022, with elevated inflation rates extending into 2024 (PCA, *Cemnet*). Meanwhile, Turner Construction reported a continued escalation in steel, copper, and aluminum prices at the conclusion of last year

compared to earlier in 2021 (Turner, *Construction Superintendent*).

Challenges in the construction market prior to 2022 were headlined by skilled and unskilled labor shortages in the construction trades, tariffs, and international trade relationships. Today, most of those challenges still exist and are more pronounced, joined by shipping bottlenecks, rapid fuel price increases, and extreme political unrest. Deloitte discussed supply chain disruptions and sourcing challenges as



Park Place Parking Structure | Missoula, MT



Bexar County Parking Structure, San Antonio, TX | The eight-level precast structure provides 750 spaces on levels 2 through 8. Level 1 provides 34,000 square feet of office space and a fitness center. Architectural finishes include limestone veneer panels selected to match the adjacent building.

a reason why project delivery schedules and profit margins will be depressed in 2022 and 2023 (Deloitte).

Urban core office buildings, hotels, education, and the retail sector were negatively impacted by a decrease in new project starts during 2020 and 2021. According to the American Institute of Architects (AIA), the economic recovery in 2021 did not carry over to the non-residential building sector, exhibiting a 5% decline from pre-pandemic 2019 levels. The AIA reported in its 2022 consensus construction forecast that non-residential construction spending is expected to rise 5.4% in 2022, and another 6.1% in 2023 (AIA, *Building*

Design and Construction).

Finally, the Infrastructure Investment and Jobs Act (IIJA) passed into law by Congress in November 2021. The IIJA will infuse \$550 billion spending on roads, bridges, and related infrastructure. Dodge has suggested that passage of IIJA would result in a 32% increase in construction starts over the next five years, or more than double the growth rate in starts expected in its absence (Dodge, *ForConstructionPros.com*). As a result of the IIJA becoming law, we would anticipate an even more pronounced increase in construction costs and labor challenges for all construction markets.

SUMMARY

For the past two years, parking structure costs were on the rise and increasing faster than in any period in the last four decades. In 2022, almost all metropolitan markets in the U.S. are likely to experience significant increases in parking construction costs over 2021.

While the year-over-year price increases won't be quite as dramatic as those seen last year, high single-digit increases in 2022, and an upward trend through 2023, should be expected. Pent-up demand, population growth, skilled and unskilled labor shortages, currency inflationary pressures, and supply chain issues will continue to drive costs, and until these challenges subside, we anticipate further price escalation over the next few years — hopefully settling back to a more sedate pace in 2023.

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The parking professionals at WGI are happy to assist with the planning and budgeting of your next parking structure. If you have any questions or would like specific cost information for your area, contact Raymond Smith at Raymond.Smith@WGIInc.com and Rob McConnell at Rob.McConnell@WGIInc.com. Or call us at 800.FYI.PARK (800.394.7275).

As a multidisciplinary solutions-providing consulting firm, WGI has 18 offices in eight states, serving clients in all 50 states and internationally, and specializing in the following disciplines: parking facility design and engineering, transportation engineering, land development/municipal engineering, traffic engineering, geospatial and land surveying, subsurface utility engineering, restoration and structural engineering, landscape architecture, environmental sciences and water resources, architecture, land planning, and MEP engineering. In 2022, *ENR* ranked WGI #167 — up eight places — on its list of the Top 500 Design Firms; *ENR* also named WGI its 2021 Design Firm of the Year in the southeast United States.



University of North Carolina Craige Parking Deck Expansion | Chapel Hill, NC

LET'S TALK.

For more information about this study or to have a conversation with one of our experts, please contact us:



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