

# 2021

# North American Engineering and Construction Outlook

**Third Quarter Edition** 



### **U.S. Key Takeaways**

- Total engineering and construction spending for the U.S. is forecast to end 2021 up 2%, compared to up 5% in 2020.
- Strong growth in residential investment, especially within single-family and improvements, will again uphold industry spending levels in 2021.
   Water supply is the only nonresidential segment expected to grow in 2021, with an anticipated gain of more than 5%.
- Declines in 2021 will be led by falling investment in nonresidential buildings, especially among private segments,

- including lodging, amusement and recreation, religious, office and commercial construction. Further, declines in publicly funded nonresidential building segments will be realized across public safety, transportation and education.
- Multifamily residential, health care, communication, manufacturing, highway and street, and sewage and waste disposal are all expected to end the year with growth roughly in line with the rate of inflation, between 0% and 4%, and are therefore considered stable.
- The latest Nonresidential Construction Index (NRCI) feedback suggests continued and increased optimism heading into the third quarter of 2021, at 59.7, up from 54.4 in the prior quarter. The index shows strong momentum since the first quarter of 2021, well within expansionary territory, surpassing the growth threshold of 50. The most recent reading is in the range of scores collected between 2011 and 2018, suggesting increased engineering and construction opportunities ahead.

## **U.S. 2021 Segment Performance**

2021/2020 Comparison



Single-family Improvements Water Supply



Multifamily
Health Care
Communication
Manufacturing
Highway and Street
Sewage and Waste Disposal



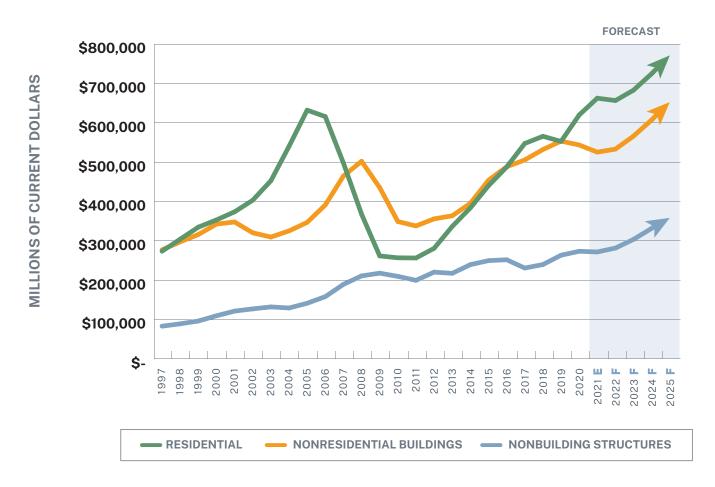
Office
Commercial
Educational
Religious
Public Safety
Amusement and Recreation
Transportation
Power

Conservation and Development

Lodging



# **Total Construction Put in Place Estimated for the U.S.**

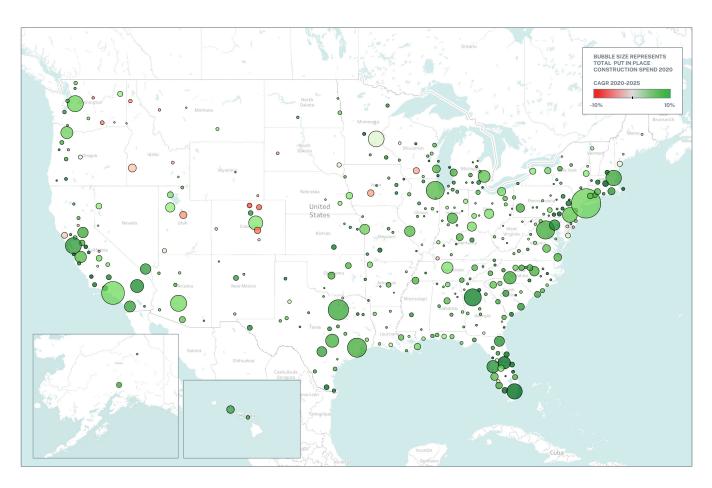


#### **SOURCE: FMI FORECAST Q3 2021**

Third quarter 2021 forecast based on first quarter 2021 actuals and second quarter 2021 assumptions.



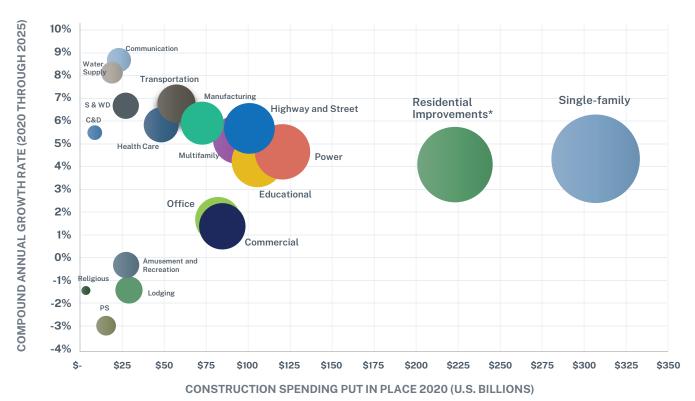
# Total Construction Spending Put in Place 2020 and Forecast Growth (2020 through 2025) by Metropolitan Statistical Area



**SOURCE: FMI FORECAST Q3 2021** 

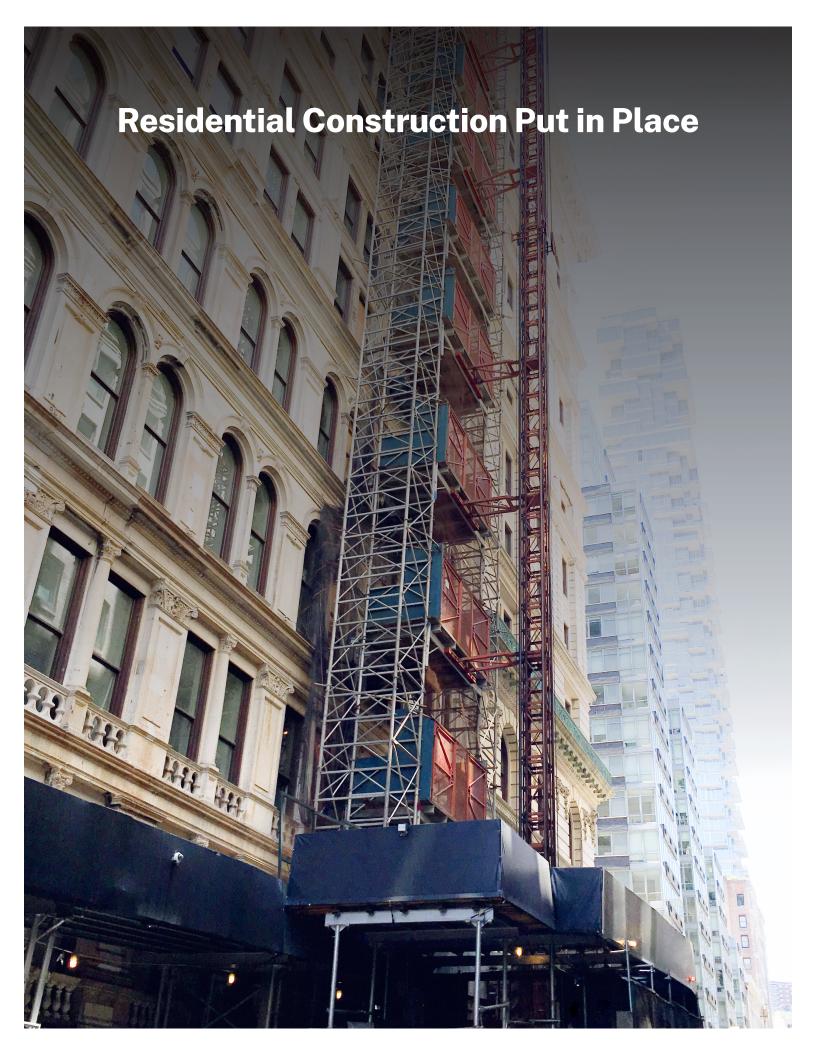


Total U.S. Construction Spending Put in Place 2020 and Forecast Growth (2020 through 2025) by Construction Segment



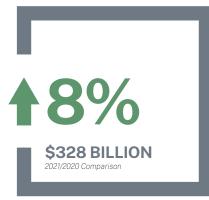
\*Improvements includes additions, alterations and major replacements. It does not include maintenance and repairs.

**SOURCE: FMI FORECAST Q3 2021** 



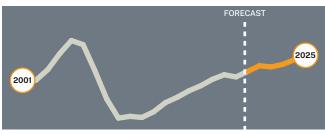


#### SINGLE-FAMILY RESIDENTIAL



#### DRIVERS:

- Unemployment rate
- Core CPI
- Income
- Mortgage rates
- Home prices
- Housing starts
- Housing permits



2021	UP	8%	\$328 B
2022	DWN	<b>-2</b> %	\$323 B
2023	STA	3%	\$334 B
2024	UP	6%	\$354 B
2025	UP	7%	\$378 B

- Heightened demand and limited supply will stabilize investment levels through the remainder of 2021.
- Extremely high construction costs, driven by high material prices and a lack of labor, will continue to strain builders' ability to supply homes, particularly low-cost starter homes.
- Inventories are expected to rise through the second half of the year due to expiration of forbearance programs, the Centers for Disease Control and Prevention eviction freeze, declining virus concerns, and various stimulus programs reaching expiration in the fall.
- Mortgage rates will slowly climb, stalling home price appreciation while also limiting affordability.

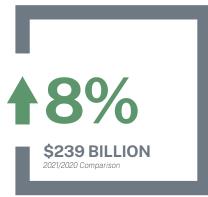
#### **MULTIFAMILY RESIDENTIAL**



- Unemployment rate
- Core ĈPI
- Income
- Mortgage rates
- Home prices
- Housing startsHousing permits
- FORECAST 2025 2001 \$94 B 2021 **STA** 2% \$96 B 2022 **STA** 2% 2023 6% \$102 B **UP** 2024 **UP** 8% \$110 B 2025 9% \$120 B UP
- Expect ongoing disruptions via delays or cancellations in mixed-use investment, high input costs (materials and labor) and rising vacancies through late 2022.
- States are adopting processes to delay evictions beyond the midyear moratorium cutoff, and some are offering rent relief packages.
- Affordable housing becomes a political issue as the nation begins to expire pandemic stimulus programs alongside heightened unemployment.
- Multifamily redevelopment opportunity will be explored across vacant office, retail and lodging space. A resurgence in urban living is anticipated within the five-year forecast period.



#### **IMPROVEMENTS**

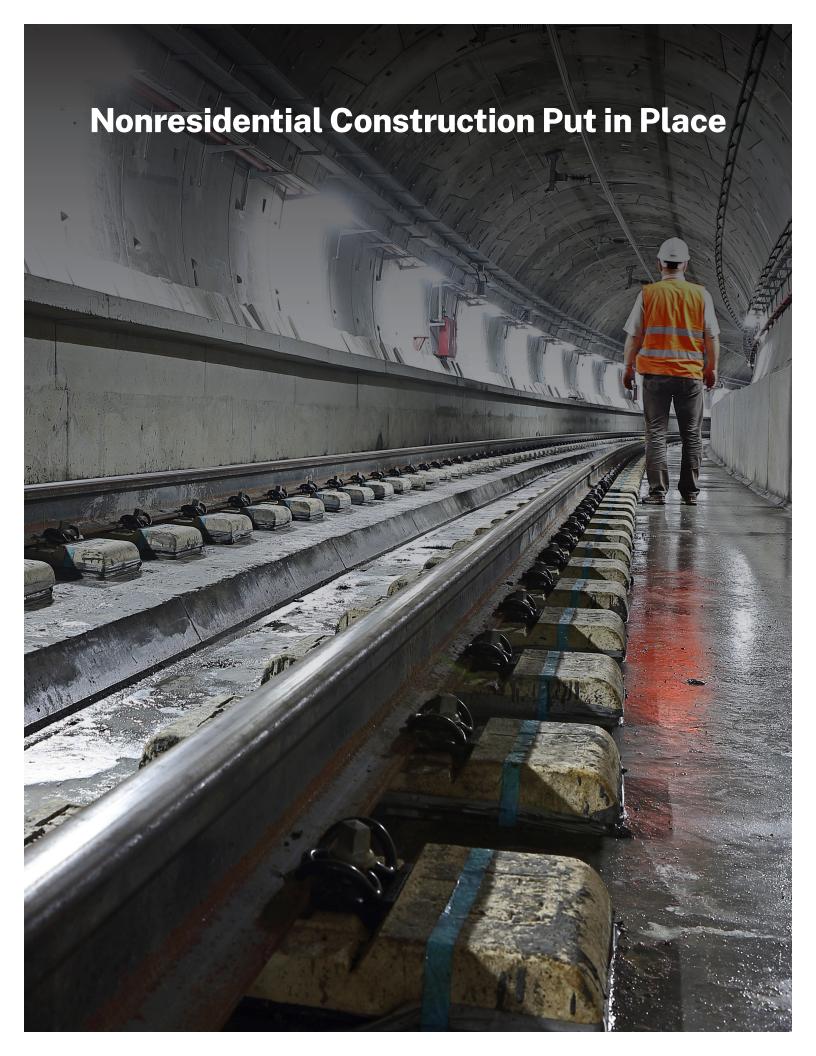


- Unemployment rate
- Core CPI
- Income
- Mortgage rates
- Home prices
- Housing starts
- Housing permits



2021	UP	8%	\$239 B
2022	DWN	-1%	\$236 B
2023	STA	4%	\$245 B
2024	UP	5%	\$258 B
2025	UP	5%	\$271 B

- Ongoing high input prices, rising interest rates, increased living expenses and reduced refinancing activity, alongside a behavioral shift of fewer people working from home, more travel and going out, and less impressive home price appreciation, suppress investment growth through 2022 and 2023.
- Demographics suggest improvements will remain most healthy in those high-growth/high-performance secondary and tertiary markets proven favorable through the pandemic.
- The nation's largest urban centers will begin to reclaim a share of investment as early as 2022.





# Nonresidential Construction Index (NRCI) Q1 2011 to Q3 2021

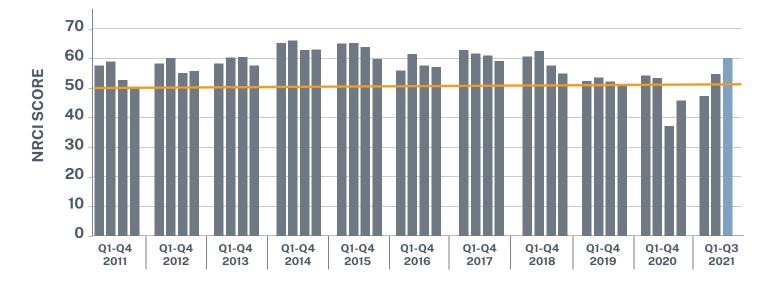
NRCI scores are based on a diffusion index where scores above 50 indicate improving or expanding industry conditions; a score of 50 represents conditions remaining the same; and a score below 50 signals worse conditions than last quarter (or contraction).

Current NRCI Reading for Q3 2021

(June 8-June 18)

Previous Reading

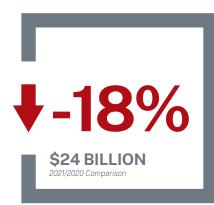
54.4



The data in the NRCI is presented as a sampling of construction industry executives voluntarily serving as panelists for this FMI survey. Responses are based on their experience and opinions, and the analysis is based on FMI's interpretation of the aggregated results.



#### **LODGING**



#### DRIVERS:

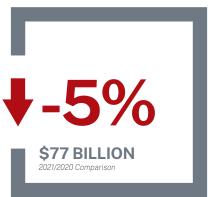
- Occupancy rate
- RevPAR
- Average daily rate
- Room starts



2021	DWN	-18%	\$24 B
2022	DWN	-8%	\$22 B
2023	UP	5%	\$23 B
2024	UP	8%	\$25 B
2025	UP	10%	\$27 B

- Spring and summer leisure travel is pushing key indicators such as occupancy, average daily rate and revenue per available room (RevPAR) to monthly and weekly pandemic-era highs. Metrics are still well below 2019 levels.
- Pent-up demand for destination vacations will lead the industry's recovery through late 2022. Anticipate more permanent losses among business travelers.
- Costar research predicts nearly half of rooms will remain empty through 2021, with accelerated recovery into the second half of the year.

#### **OFFICE**



- Office vacancy rate
- Unemployment rate

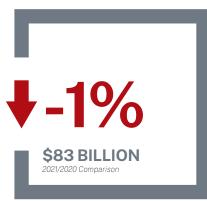
2001	FORECAST 2025
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2021	DWN	-5%	\$77 B
2022	DWN	-1%	\$76 B
2023	UP	5%	\$80 B
2024	UP	6%	\$84 B
2025	UP	5%	\$89 B

- Kastle Systems data shows occupancy rates across the largest U.S. cities are still less than half of 2019's levels.
- Organizations will continue to bring workers back to offices during the second half of 2021 after many were working remotely last year, offering flexible or hybrid work conditions while assessing space requirements.
- Expect vacancies to rise over the next several years as leases expire, alongside increasing renovation spending.
- Federal corporate tax revisions and variances between state and local taxes encourage increased relocations.
- Data centers and life science research facilities continue to demonstrate strength.



#### **COMMERCIAL**



#### DRIVERS:

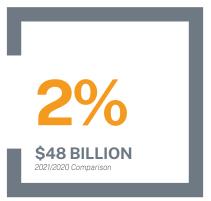
- Retail sales
- CPI
- Income
- Home prices
- Housing starts
- Housing prices



2021	DWN	-1%	\$83 B
2022	DWN	-2%	\$81 B
2023	STA	1%	\$81 B
2024	STA	4%	\$85 B
2025	UP	7%	\$90 B

- Significant losses in construction spending were realized in multi-retail and food and beverage investment through 2020.
- Expect fewer new retail investments via delays or cancellations in mixed-use, alongside oversupply conditions, due to shuttered or distressed businesses and restaurants.
- Investment in warehouse and distribution space has reached approximately half of all commercial spending and is stabilizing more significant declines. Construction costs for these facilities have also risen dramatically.
- Future growth in warehouse and distribution spending will be challenged over the coming years due to the pandemic pulling forward demand and investment.

#### **HEALTH CARE**



- Population change
- Population change in ages 75 and up
- Uninsured population
- Government spending
- Nonresidential structure investment

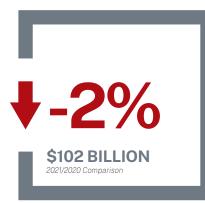


2021	STA	<b>2</b> %	\$48 B
2022	UP	6%	\$51 B
2023	UP	8%	\$55 B
2024	UP	8%	\$60 B
2025	UP	6%	\$63 B

- Significant increased spending on specialty care facilities (e.g., testing sites and drug clinics) was realized through 2020. Expect declines here through 2021.
- Many large hospital investments are in the planning stages and are likely to move forward across major metropolitans.
- Aging demographics (i.e., baby boomers) support increased health care investment through the forecast period and beyond.



#### **EDUCATIONAL**



#### DRIVERS:

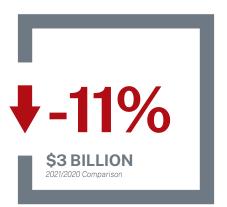
- Population change
- younger than age 18
  Population change
- ages 18-24
- Stock markets
- Government spending
- Nonresidential structure investment



2021	DWN	<b>-2</b> %	\$102 B
2022	STA	4%	\$106 B
2023	UP	6%	\$113 B
2024	UP	7%	\$121 B
2025	UP	7%	\$129 B

- Expect most K-12 and higher educational facilities to be fully open and functional by the end of 2021.
- Significant and long-running K-12 renovation and reconstruction needs persist.
- Higher education owners face ongoing challenges and restructuring in the coming years.

#### **RELIGIOUS**



- GDP
- Population
- Income
- Personal savings

2001	FORECAST
	2025

2021	DWN	-11%	\$3 B
2022	DWN	-6%	\$3 B
2023	STA	2%	\$3 B
2024	UP	5%	\$3 B
2025	UP	6%	\$3 B

- Facility investments have largely been targeting civicbased needs to better attract and connect with communities.
- Successful religious institutions have leveraged communication technologies to increase participation and reach their audiences, ultimately reducing traditional facility needs.
- Opportunities for expansion will become more viable and attractive over the coming years, alongside rising vacancies across lodging, office and commercial space.

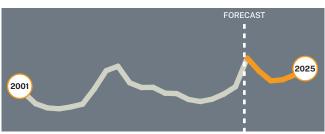


#### **PUBLIC SAFETY**



#### DRIVERS:

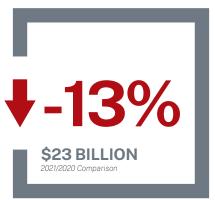
- Population
- Government spending
- Incarceration rate
- Nonresidential structure investment



2021	DWN	-14%	\$13 B
2022	DWN	-12%	\$11 B
2023	DWN	1%	\$12 B
2024	UP	6%	\$12 B
2025	UP	6%	\$13 B

- Social unrest is expected to continue into 2022, alongside pullback of stimulus programs and payments and increased mental health concerns, homelessness and violent crime.
- Emergency response as well as military and correctional spending all experienced significant growth in construction spending through 2020, under the support of various waves of stimulus funding.
- Short-term declines are expected through 2022 as stimulus funding expires and investment focus is redirected into infrastructure.

#### **AMUSEMENT AND RECREATION**



- Income
- Personal savings rate
- Unemployment rateEmployment

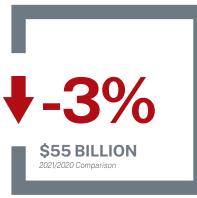


2021	DWN	-13%	\$23 B
2022	DWN	-4%	\$22 B
2023	UP	6%	\$24 B
2024	UP	7%	\$25 B
2025	UP	6%	\$27 B

- Significant losses were realized through 2020 across movie theaters and studios, performance and meeting centers, and amusement parks. Public parks and sports facility spending realized gains through the pandemic.
- Pent-up demand for leisure travel will increase investment opportunities over the coming years.
- Convention and business travel will remain challenged, limiting opportunities for investment in larger gathering places.



#### **TRANSPORTATION**



#### DRIVERS:

- Population
- Government spending
- Transportation funding



2021	DWN	<b>-3</b> %	\$55 B
2022	STA	2%	\$56 B
2023	UP	9%	\$61 B
2024	UP	13%	\$69 B
2025	UP	14%	\$79 B

- Biden's Bipartisan Infrastructure Framework outlines more than \$170 billion to be invested into transportation infrastructure, including \$115 billion into rail/transit, \$25 billion in airports and \$16 billion in ports. Proposed funding levels, if passed, would have a significant impact on annual spending.
- The most current version of the House surface transportation bill (i.e., the successor to the FAST Act, which is under review) includes \$109 billion for transit and \$95 billion for freight and passenger rail between 2022 and 2026.
- Air and rail ridership levels are expected to remain low for the next several years due to lasting changes in business travel, though transportation megaprojects (i.e., \$1 billion or greater) are expected to strengthen in the latter half of the forecast period.

#### COMMUNICATION



- Population
- Security and regulation standards
- Private investment
- Innovation and technology investment

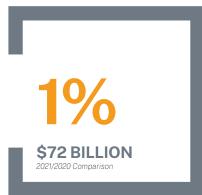


2021	STA	3%	\$23 B
2022	UP	6%	\$25 B
2023	UP	10%	\$27 B
2024	UP	12%	\$30 B
2025	UP	13%	\$34 B

- The bipartisan infrastructure proposal allocates \$65 billion to be invested into high-speed broadband infrastructure over the next eight years. Proposed funding levels, if passed, would have a significant impact on annual investment.
- 5G and other network technologies continue to drive new opportunities for device and data integration. Investment demand overlaps with growth across connected devices, data centers, distribution and logistics spending.



#### **MANUFACTURING**



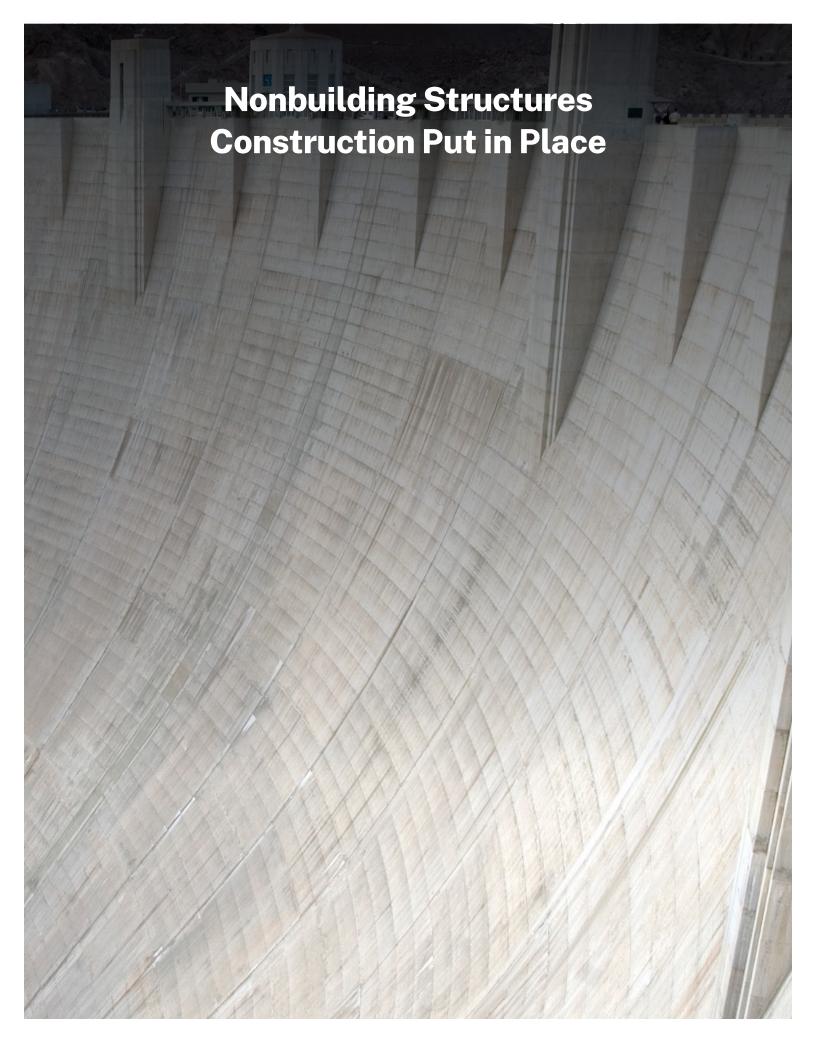
- PMI
- Industrial productionCapacity utilizationDurable goods orders

- Manufacturing inventories



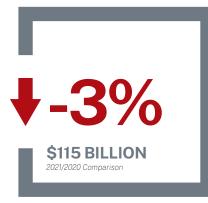
2021	STA	1%	\$72 B
2022	UP	8%	\$78 B
2023	UP	10%	\$86 B
2024	UP	6%	\$91 B
2025	UP	5%	\$96 B

- Supply chain constraints are expected to remain in place through 2022 as the global economy recovers and international trade negotiations resume.
- Spending growth is expected to return in 2022 and 2023, fueled by infrastructure spending and as owners pursue modernization investments.
- Industrywide labor shortages will limit expansion efforts.





#### **POWER**



#### DRIVERS:

- Population
- Industrial production
- Government spending



2021	DWN	-3%	\$115 B
2022	STA	2%	\$117 B
2023	UP	8%	\$126 B
2024	UP	10%	\$138 B
2025	UP	9%	\$150 B

- The Bipartisan Infrastruce Framework allocates more than \$70 billion to be invested into the electric grid and power infrastructure over the next eight years.
- The original American Jobs Plan also highlights as much as \$400 billion in clean energy tax credits, potentially radically altering the financial landscape of pursuing and developing renewable generation infrastructure.
- Approximately 80% of planned investment in generation capacity is to be directed into renewables, led by solar through 2021.
- The recent strong rebound in oil and gas prices is expected to drive increased production and associated investment. However, demand may be limited by a lack of political support, new rules and intensified oversight and regulation.

#### **HIGHWAY AND STREET**



**UP** 

**UP** 

**UP** 

2023

2024

2025

#### DRIVERS:

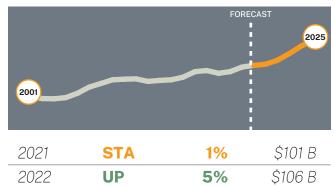
- Population
- Government spending

\$114 B

\$124 B

\$132 B

 Nonresidential structure investment



■ The Bipartisan Infrastructure Framework allocates \$109 billion to be invested into roads and bridges over the next eight years. If passed, proposed funding levels would have a moderate impact on annual construction spending.

8%

8%

6%

- Reauthorization or an extension of the federal surface transportation bill will be an important milestone in the coming months. The current one-year extension of the FAST Act is set to expire at the end of September.
- The proposed House federal surface transportation bill includes \$343 billion for roads and bridges and safety between 2022 and 2026, representing more than a 50% increase over FAST Act funding levels for roads and bridges.

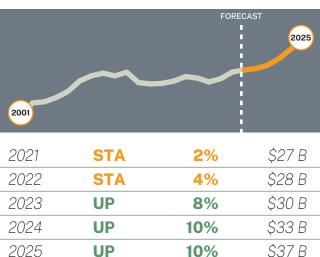


#### SEWAGE AND WASTE DISPOSAL



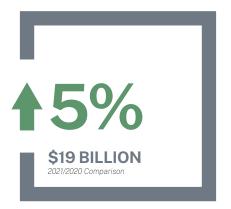
#### DRIVERS:

- Population
- $\blacksquare$  Industrial production
- Government spending

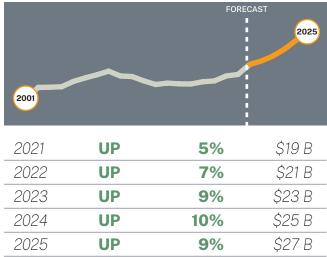


- Congress is working toward a new five-year Clean Water Bill with proposals between \$35 billion and \$50 billion.
- The bipartisan infrastructure proposal allocates \$60 billion to be invested in water and wastewater infrastructure, including \$55 billion into infrastructure projects and \$5 billion toward water storage in the western U.S. Proposed funding level, if passed, would have a significant impact on annual construction spending.
- The 2021 American Society of Civil Engineers (ASCE) report card features a wastewater grade of D, a stormwater grade of D+ and a solid waste score of C+, highlighting the fact that 15% of the nation's 16,000 wastewater treatment plants are running at or above capacity, while underground pipes are on average 45 years old and aging.

#### **WATER SUPPLY**



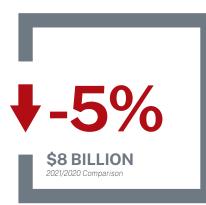
- Population
- Industrial production
- Government spending



- The Water Quality Protection and Jobs Creation Act of 2021 allocates \$40 billion over the next five years for water and wastewater infrastructure through the Clean Water State Revolving Fund (SRF) and an additional \$10 billion for other federal grant assistance.
- The Environmental Protection Agency (EPA) announced in late April the availability of \$6.5 billion in water infrastructure funding under the agency's Water Infrastructure Finance and Innovation Act (WIFIA) and state (SWIFIA) programs, supporting more than \$13 billion in infrastructure spending.
- The 2021 ASCE report card highlights a drinking water grade of C- and recommends tripling annual appropriations for system maintenance, addressing safety, affordability and waste.



#### **CONSERVATION AND DEVELOPMENT**



- Population
- Government spending



2021	DWN	<b>-5</b> %	\$8 B
2022	UP	7%	\$9 B
2023	UP	8%	\$9 B
2024	UP	8%	\$10 B
2025	UP	11%	\$11 B

- Biden is maintaining approximately \$3 billion in funding through the Nature Conservation Act, enacted last year to support conservation and recreation projects nationwide.
- The head of the EPA, Michael Regan, recently announced the agency is developing new rules to manage pollution through vehicle, landfill methane, industrial soot and power plant emissions.
- Expect increased oversight in environmental justice to protect poor and underrepresented communities, which are found to be disproportionately impacted by climate change and pollution.
- The bipartisan infrastructure proposal includes just over \$21 billion toward remediation of legacy pollution.

#### **Construction Put in Place Estimated for the United States**

Millions of Current Dollars

3rd Quarter 2021 Forecast (Based on 1st Quarter 2021 Actuals and 2nd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	242,939	270,365	289,855	280,398	304,128	327,915	322,861	334,085	354,473	377,848
Multifamily	79,112	80,403	83,411	85,880	92,639	94,041	96,005	101,772	110,079	119,717
Improvements*	163,913	194,986	190,611	184,664	221,119	238,506	235,625	245,032	258,143	271,425
Total Residential	485,964	545,754	563,877	550,942	617,886	660,461	654,491	680,889	722,694	768,990
NONRESIDENTIAL BUILDINGS										
Lodging	27,077	28,660	31,464	33,071	28,585	23,538	21,708	22,786	24,562	26,949
Office	67,907	68,685	76,662	84,862	81,159	76,942	75,821	79,659	84,286	88,852
Commercial	78,696	87,626	86,422	80,435	83,706	82,805	80,839	81,461	84,656	90,392
Health Care	40,574	43,120	43,450	45,560	47,619	48,368	51,049	55,288	59,836	63,385
Educational	91,629	96,685	101,210	105,374	104,525	102,147	106,356	113,261	121,145	129,192
Religious	3,752	3,586	3,499	3,544	3,160	2,816	2,635	2,688	2,816	2,976
Public Safety	8,177	8,539	9,353	10,530	15,090	13,019	11,462	11,633	12,382	13,158
Amusement and Recreation	23,652	26,569	28,068	28,803	26,897	23,336	22,313	23,551	25,156	26,755
Transportation	43,339	46,137	53,219	57,154	56,637	55,040	56,243	61,168	69,067	78,678
Communication	22,179	23,696	24,502	22,242	22,685	23,323	24,685	27,093	30,467	34,357
Manufacturing	79,633	70,682	72,508	80,079	71,843	72,434	78,395	85,922	91,170	95,947
<b>Total Nonresidential Buildings</b>	486,615	503,985	530,357	551,654	541,906	523,768	531,506	564,510	605,543	650,640
NONBUILDING STRUCTURES										
Power	112,067	95,951	99,569	113,885	119,235	115,114	117,027	126,030	138,386	150,235
Highway and Street	93,187	89,620	91,745	97,559	99,702	101,167	106,100	114,464	123,922	131,765
Sewage and Waste Disposal	24,151	22,901	23,931	26,089	26,703	27,137	28,253	30,428	33,473	36,931
Water Supply	13,940	14,168	15,477	15,882	18,533	19,456	20,805	22,687	25,062	27,376
Conservation and Development	7,745	7,464	8,229	9,126	8,377	7,952	8,501	9,141	9,908	10,975
<b>Total Nonbuilding Structures</b>	251,090	230,104	238,951	262,541	272,550	270,826	280,685	302,751	330,751	357,282
Total Put in Place	\$1,223,669	\$1,279,843	\$1,333,185	\$1,365,137	\$1,432,342	\$1,455,055	\$1,466,682	\$1,548,149	\$1,658,989	\$1,776,912

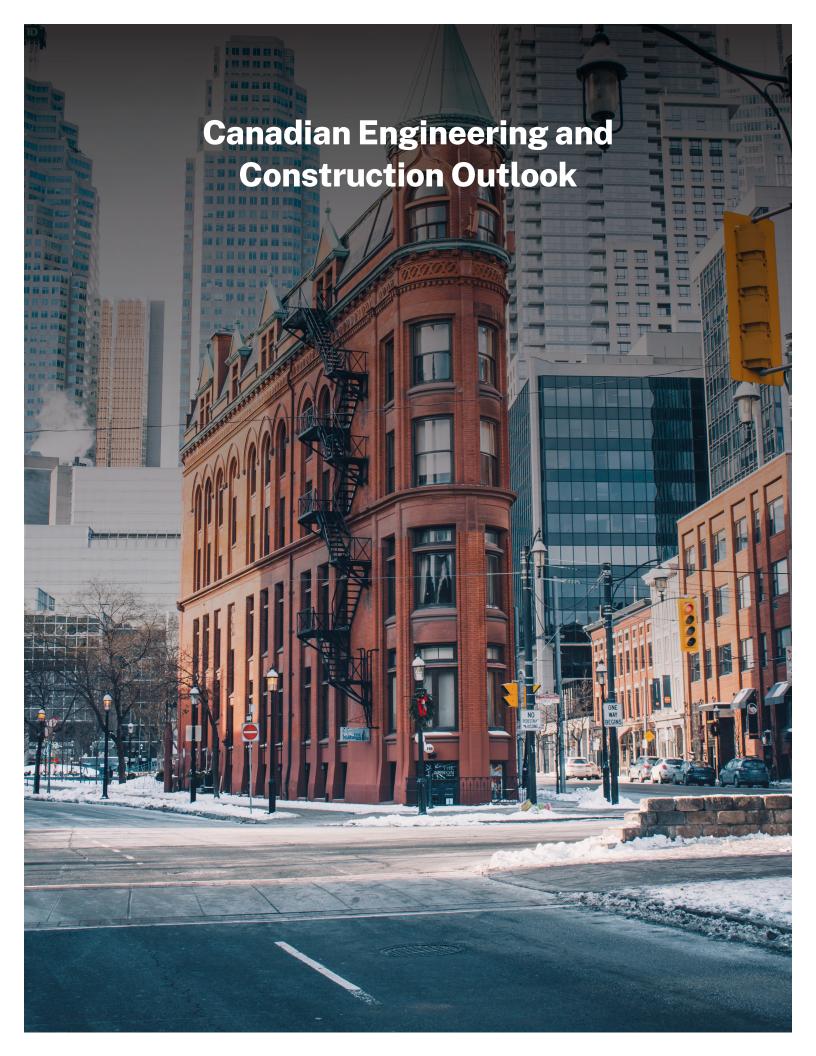
#### **Construction Put in Place Estimated for the United States**

Change From Prior Year - Current Dollar Basis

3rd Quarter 2021 Forecast (Based on 1st Quarter 2021 Actuals and 2nd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	10%	11%	7%	-3%	8%	8%	-2%	3%	6%	7%
Multifamily	16%	2%	4%	3%	8%	2%	2%	6%	8%	9%
Improvements*	10%	19%	-2%	-3%	20%	8%	-1%	4%	5%	5%
Total Residential	11%	12%	3%	-2%	12%	7%	-1%	4%	6%	6%
NONRESIDENTIAL BUILDINGS										
Lodging	23%	6%	10%	5%	-14%	-18%	-8%	5%	8%	10%
Office	21%	1%	12%	11%	-4%	-5%	-1%	5%	6%	5%
Commercial	17%	11%	-1%	-7%	4%	-1%	-2%	1%	4%	7%
Health Care	2%	6%	1%	5%	5%	2%	6%	8%	8%	6%
Educational	7%	6%	5%	4%	-1%	-2%	4%	6%	7%	7%
Religious	4%	-4%	-2%	1%	-11%	-11%	-6%	2%	5%	6%
Public Safety	-4%	4%	10%	13%	43%	-14%	-12%	1%	6%	6%
Amusement and Recreation	15%	12%	6%	3%	-7%	-13%	-4%	6%	7%	6%
Transportation	-4%	6%	15%	7%	-1%	-3%	2%	9%	13%	14%
Communication	2%	7%	3%	-9%	2%	3%	6%	10%	12%	13%
Manufacturing	-4%	-11%	3%	10%	-10%	1%	8%	10%	6%	5%
Total Nonresidential Buildings	8%	4%	5%	4%	-2%	-3%	1%	6%	7%	7%
NONBUILDING STRUCTURES										
Power	1%	-14%	4%	14%	5%	-3%	2%	8%	10%	9%
Highway and Street	2%	-4%	2%	6%	2%	1%	5%	8%	8%	6%
Sewage and Waste Disposal	-2%	-5%	4%	9%	2%	2%	4%	8%	10%	10%
Water Supply	4%	2%	9%	3%	17%	5%	7%	9%	10%	9%
Conservation and Development	0%	-4%	10%	11%	-8%	-5%	7%	8%	8%	11%

 $<sup>^{\</sup>star} Improvements\ includes\ additions,\ alterations\ and\ major\ replacements.\ It\ does\ not\ include\ maintenance\ and\ repairs.$ 



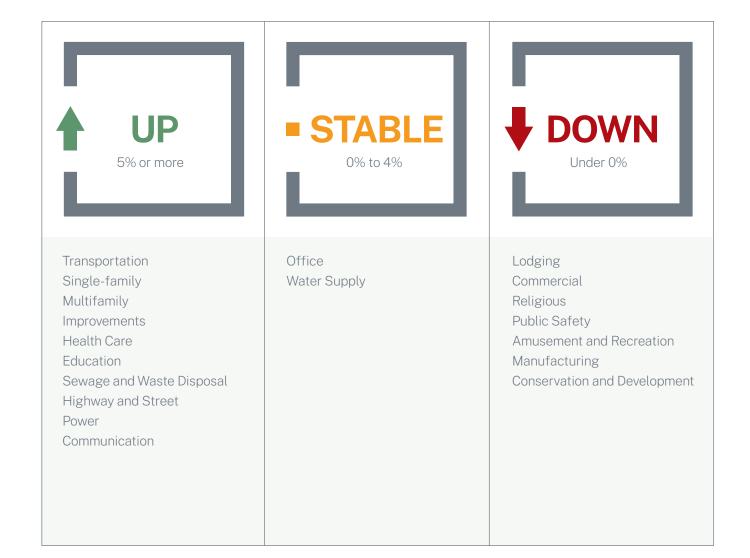
## **U.S. Key Takeaways**

- Total engineering and construction spending for Canada is forecast to end 2021 up 5% compared to down 1% in 2020.
- Declines in 2021 will be led by decreasing investment in private nonresidential building segments, including lodging, commercial, and amusement and recreation. The reduced
- spending will also impact manufacturing, public safety, conservation and development, and religious spending.
- Transportation, multifamily residential, single family residential, improvements, health care, education, sewage and waste disposal, highway and street, power, and commu-

nication are strong growth segments, with each anticipated to experience 2021 year-end growth rates of more than 5%. Office and water supply segments are expected to end the year with growth roughly in line with the rate of inflation, and therefore considered stable.

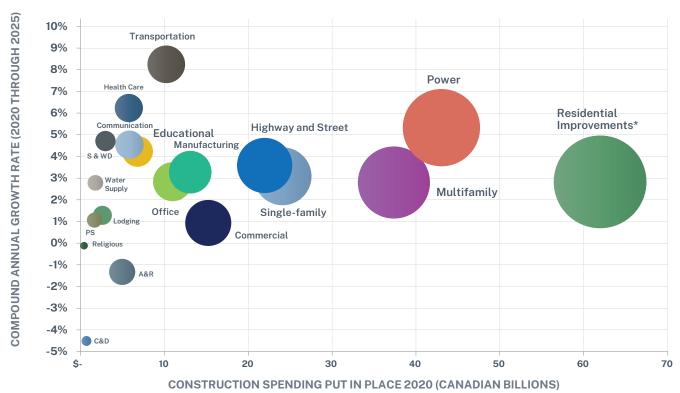
## **Canada 2021 Segment Performance**

2021/2020 Comparison





# Total Canadian Construction Spending Put in Place 2020 and Forecast Growth (2020 through 2025) by Construction Segment

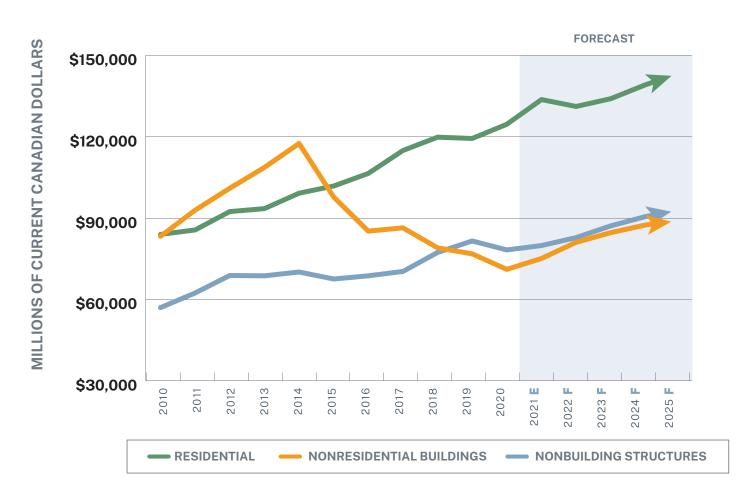


\*Improvements includes additions, alterations and major replacements. It does not include maintenance and repairs.

**SOURCE: FMI FORECAST Q3 2021** 



# **Total Construction Spending Put in Place Estimated for Canada**



**SOURCE: FMI FORECAST Q3 2021** 

Third quarter 2021 forecast based on first quarter 2021 actuals and second quarter 2021 assumptions.

#### **Construction Put in Place Estimated for Canada**

Millions of Current Canadian Dollars

3rd Quarter 2021 Forecast (Based on 1st Quarter 2021 Actuals and 2nd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	26,964	28,106	26,394	22,839	24,095	26,264	25,821	26,163	27,309	28,049
Multifamily	25,267	28,428	31,860	34,243	37,367	39,548	39,167	39,777	41,546	42,895
Improvements*	53,223	57,287	60,460	61,121	61,954	66,619	64,923	66,789	68,950	71,218
Total Residential	105,454	113,821	118,714	118,204	123,416	132,431	129,911	132,729	137,805	142,163
NONRESIDENTIAL BUILDINGS										
Lodging	2,569	2,557	2,766	2,695	2,606	2,467	2,486	2,575	2,680	2,778
Office	8,977	9,011	10,138	11,302	10,972	11,195	11,273	11,496	12,163	12,619
Commercial	13,357	13,472	14,002	15,748	15,228	14,050	14,144	14,705	15,424	15,951
Health Care	4,823	5,168	5,252	5,319	5,756	6,554	7,033	7,478	7,691	7,788
Educational	6,645	7,729	7,678	6,744	6,799	7,446	7,841	8,100	8,204	8,366
Religious	413	386	382	444	415	385	379	392	403	413
Public Safety	970	1,289	1,250	1,697	1,647	1,558	1,605	1,652	1,703	1,737
Amusement and Recreation	4,429	4,488	4,090	4,113	4,961	4,233	4,032	4,233	4,433	4,641
Transportation	7,074	7,510	10,214	10,454	10,218	11,996	13,288	14,478	14,890	15,188
Communication	5,781	5,904	6,327	6,725	5,829	6,265	6,568	6,836	7,092	7,277
Manufacturing	13,038	12,177	14,525	15,558	13,082	12,982	13,387	14,360	15,032	15,369
<b>Total Nonresidential Buildings</b>	68,077	69,691	76,624	80,799	77,514	79,132	82,037	86,305	89,717	92,127
NONBUILDING STRUCTURES										
Power	57,954	57,583	52,893	49,592	43,026	45,791	49,692	51,953	53,839	55,776
Highway and Street	17,725	19,706	20,480	21,163	21,955	23,013	24,451	25,460	26,083	26,181
Sewage and Waste Disposal	5,114	4,655	2,797	2,918	2,966	3,112	3,513	3,961	4,155	3,733
Water Supply	3,000	3,145	1,680	1,735	1,768	1,831	1,919	1,942	1,995	2,028
Conservation and Development	611	482	442	704	702	681	736	513	540	557
Total Nonbuilding Structures	84,404	85,571	78,292	76,112	70,417	74,429	80,310	83,829	86,612	88,276
Total Put in Place	\$257,934	\$269,084	\$273,630	\$275,115	\$271,347	\$285,992	\$292,258	\$302,862	\$314,134	\$322,565

#### **Construction Put in Place Estimated for Canada**

Change From Prior Year - Current Canadian Dollar Basis

3rd Quarter 2021 Forecast (Based on 1st Quarter 2021 Actuals and 2nd Quarter 2021 Assumptions)

	2016	2017	2018	2019	2020	2021E	2022F	2023F	2024F	2025F
RESIDENTIAL BUILDINGS										
Single-family	5%	4%	-6%	-13%	5%	9%	-2%	1%	4%	3%
Multifamily	6%	13%	12%	7%	9%	6%	-1%	2%	4%	3%
Improvements*	3%	8%	6%	1%	1%	8%	-3%	3%	3%	3%
Total Residential	5%	8%	4%	0%	4%	7%	-2%	2%	4%	3%
NONRESIDENTIAL BUILDINGS										
Lodging	4%	0%	8%	-3%	-3%	-5%	1%	4%	4%	4%
Office	-2%	0%	13%	11%	-3%	2%	1%	2%	6%	4%
Commercial	-6%	1%	4%	12%	-3%	-8%	1%	4%	5%	3%
Health Care	-6%	7%	2%	1%	8%	14%	7%	6%	3%	1%
Educational	12%	16%	-1%	-12%	1%	10%	5%	3%	1%	2%
Religious	-7%	-7%	-1%	16%	-7%	-7%	-1%	3%	3%	2%
Public Safety	-36%	33%	-3%	36%	-3%	-5%	3%	3%	3%	2%
Amusement and Recreation	26%	1%	-9%	1%	21%	-15%	-5%	5%	5%	5%
Transportation	14%	6%	36%	2%	-2%	17%	11%	9%	3%	2%
Communication	11%	2%	7%	6%	-13%	7%	5%	4%	4%	3%
Manufacturing	0%	-7%	19%	7%	-16%	-1%	3%	7%	5%	2%
Total Nonresidential Buildings	2%	2%	10%	5%	-4%	2%	4%	5%	4%	3%
NONBUILDING STRUCTURES										
Power	-15%	-1%	-8%	-6%	-13%	6%	9%	5%	4%	4%
Highway and Street	-7%	11%	4%	3%	4%	5%	6%	4%	2%	0%
Sewage and Waste Disposal	-7%	-9%	-40%	4%	2%	5%	13%	13%	5%	-10%
Water Supply	-19%	5%	-47%	3%	2%	4%	5%	1%	3%	2%
Conservation and Development	78%	-21%	-8%	59%	0%	-3%	8%	-30%	5%	3%

 $<sup>^{\</sup>star} Improvements\ includes\ additions,\ alterations\ and\ major\ replacements.\ It\ does\ not\ include\ maintenance\ and\ repairs.$ 

### **ABOUT THE AUTHORS**



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