Kiley Literary Legacies

Writers & Speakers

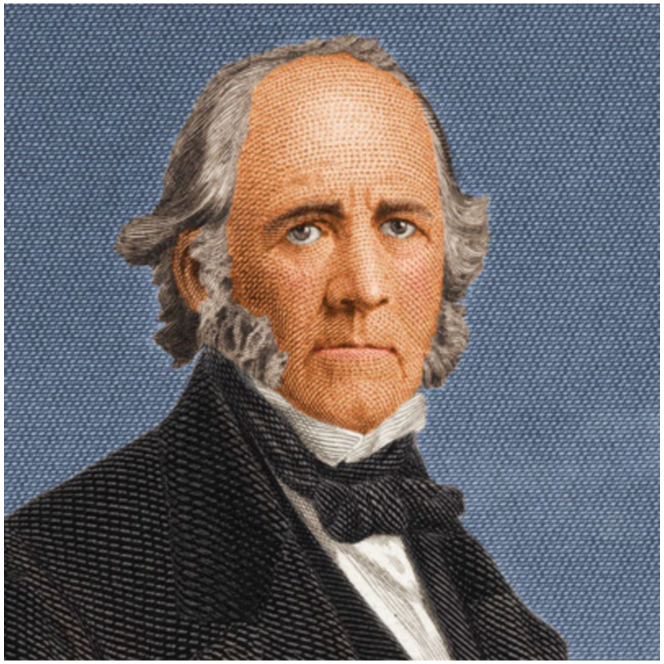
The Houston Construction Market 2023 Outlook

How it all began

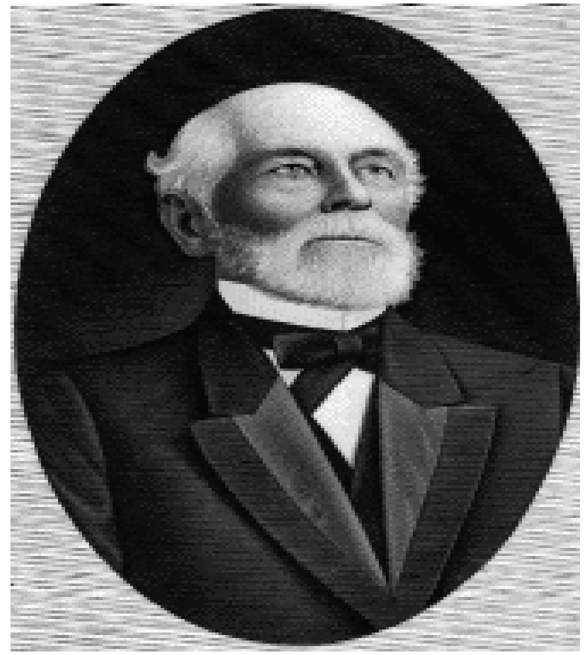
The Allens

Thomas W. Ward

Houston choreography began

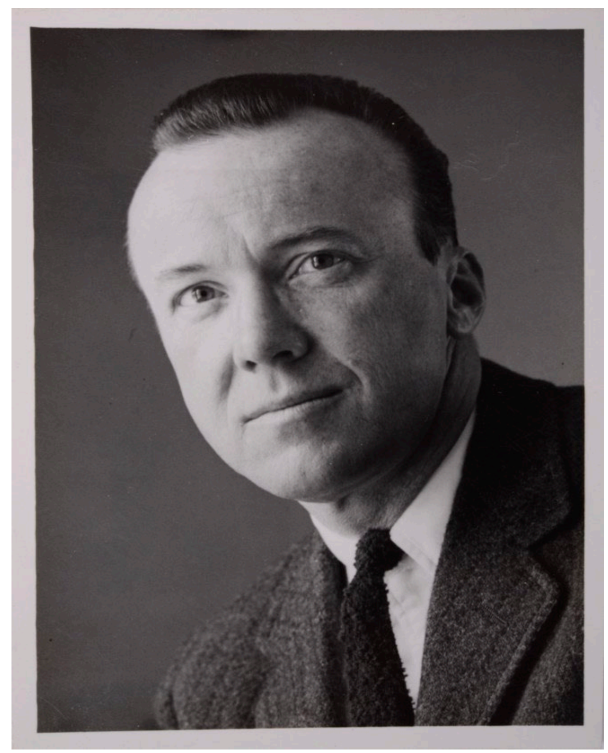


Sam Houston



William Marsh Rice

Jesse Jones



Gerald Hines

Current picture

Resilient Houston

Jobs Lost, March – April ’20

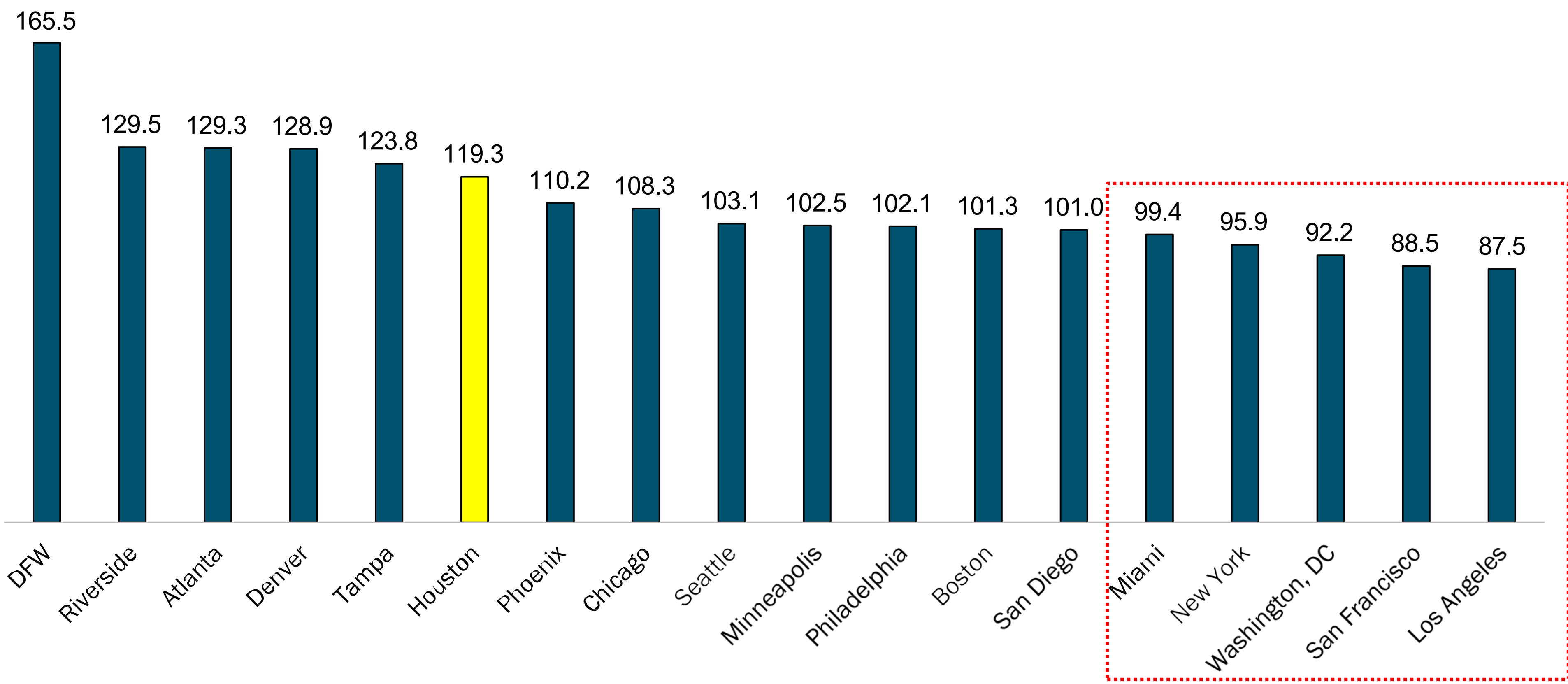
359,400

Jobs Created, May ’20 – Nov ’22

504,200

Percent Pandemic Jobs Losses Recovered

Major Metros



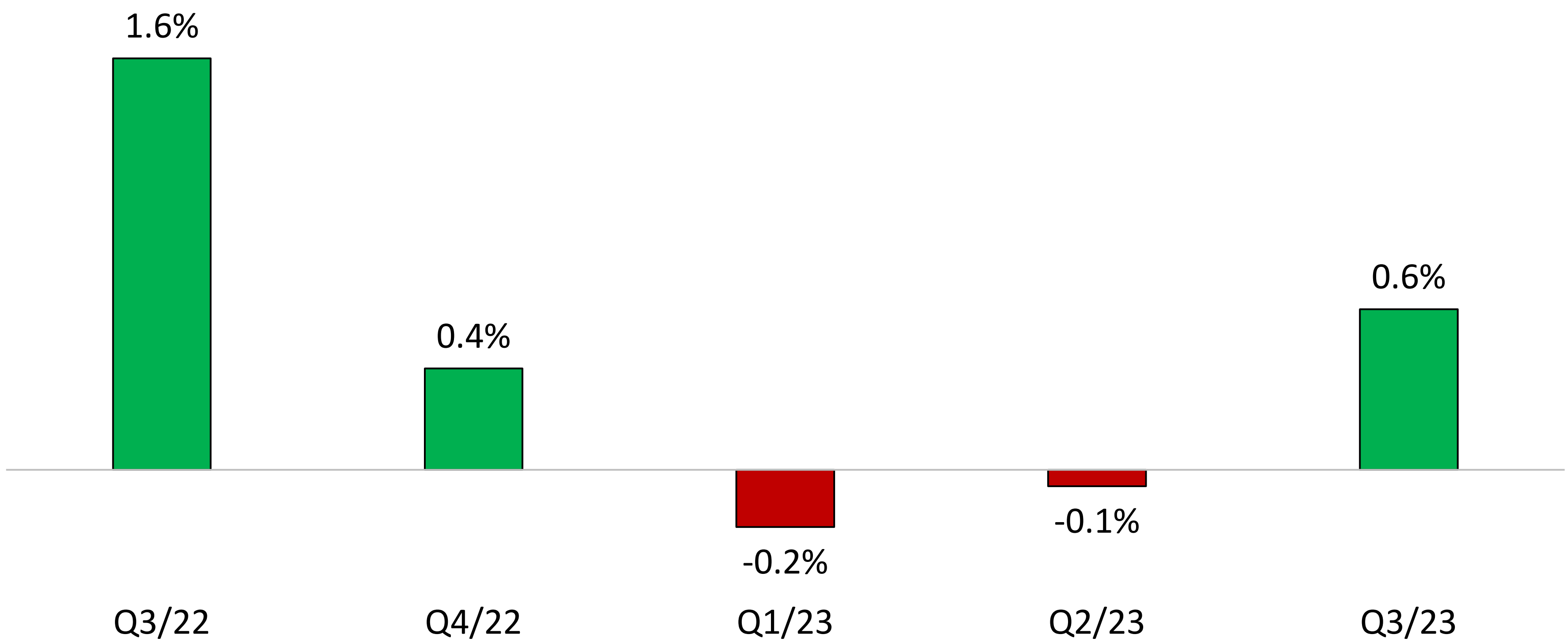
Source: Greater Houston Partnership calculations based on Bureau of Labor Statistics data

* As of June '22

The probabilities:

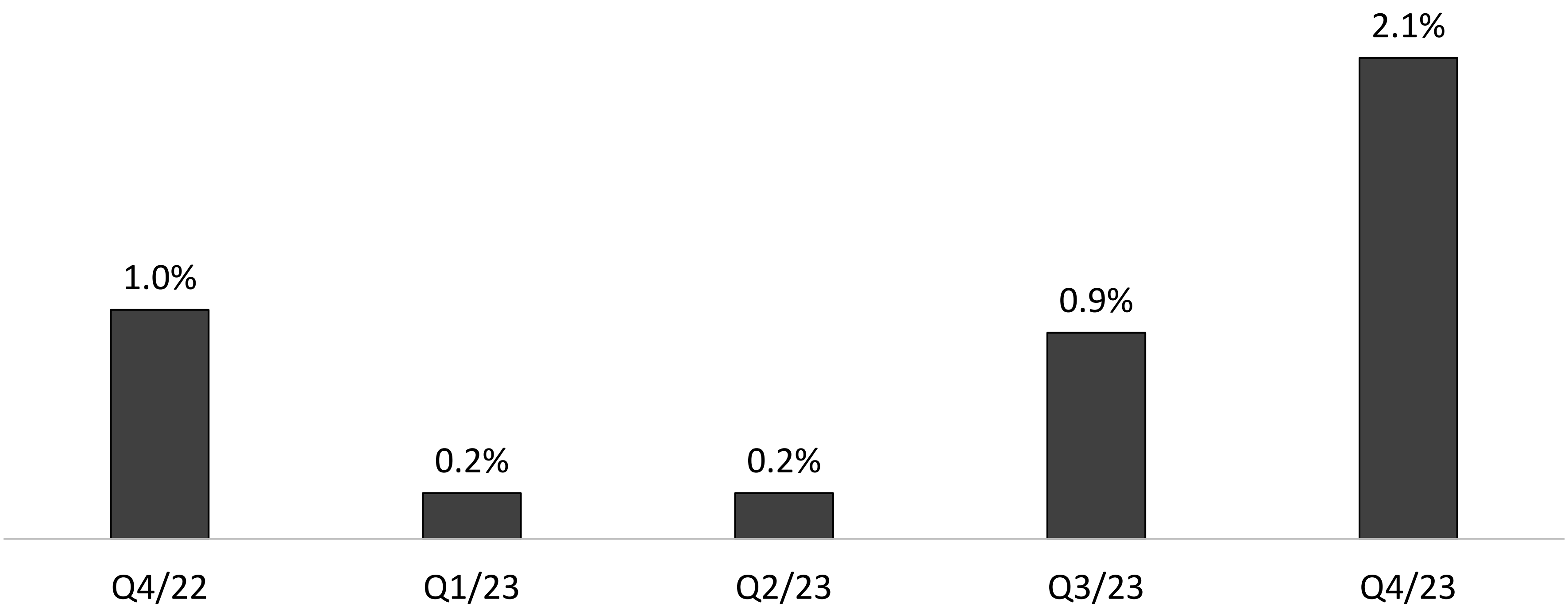
50%	Mild Recession
30%	Near Miss
20%	Deep and Protracted

GDP (Quarterly, Annualized Growth Rate)



Source: *The Wall Street Journal*

GDP (Quarterly, Annualized Growth Rate)*



Source: Federal Reserve Bank of Philadelphia Survey of Professional Forecasters

* median forecast

Houston Employment Forecast for ’23

Scenario	Probability	Job Gains
Mild Recession (Baseline)	50%	**60,000**
Near Miss	30%	**80,000**
Something Deeper	20%	**30,000**

Source: Greater Houston Partnership Research

Change in Population, 20 Most Populous Metros

July 1, 2020 to July 1, 2021

Pop Rank	Metro	Change	Pop Rank	Metro	Change
1	New York	-327,955	11	Phoenix	78,220
2	Los Angeles	-175,913	12	San Francisco	-116,385
3	Chicago	-91,671	13	Riverside	47,601
4	Dallas-Ft Worth	97,290	14	Detroit	-20,543
5	**Houston**	**69,094**	15	Seattle	-13,177
6	Washington	-29,280	16	Minneapolis	-1,909
7	Philadelphia	-13,382	17	San Diego	-11,183
8	Miami	-34,694	18	Tampa	36,129
9	Atlanta	42,904	19	Denver	3,277
10	Boston	-36,579	20	Baltimore	-3,364

Source: U.S. Census Bureau

Net Migration, 20 Most Populous Metros*

Pop Rank	Metro	Change	Pop Rank	Metro	Change
1	New York	-361,774	11	Phoenix	70,097
2	Los Angeles	-199,539	12	San Francisco	-123,885
3	Chicago	-102,613	13	Riverside	33,986
4	Dallas-Ft Worth	62,921	14	Detroit	-16,682
5	**Houston**	**31,921**	15	Seattle	-24,169
6	Washington	-54,211	16	Minneapolis	-12,629
7	Philadelphia	-10,623	17	San Diego	-22,149
8	Miami	-32,541	18	Tampa	45,625
9	Atlanta	25,049	19	Denver	-5,448
10	Boston	-37,535	20	Baltimore	-3,565

Source: U.S. Census Bureau

* July 1, 2020 to June 30, 2021

Composition of Metro Houston Population

Race/Ethnicity	’21	’11	Change, ’11 – ’21 #	Change, ’11 – ’21 %
Hispanic	2,774,634	2,185,195	589,438	27.0
White	2,392,671	2,386,063	6,608	0.3
Black	1,210,749	1,022,598	188,151	18.4
Asian	576,547	395,648	180,899	45.7
Multiple[1]	216,205	73,043	143,162	196.0
Other[2]	36,034	24,348	11,687	48.0

1 Includes residents who self-identify as of two or more races.
2 Includes American Indians, Alaska Natives, Native Hawaiians, and Other Pacific Islanders

Source: U.S. Census Bureau, American Community Survey 1-Yr Estimates

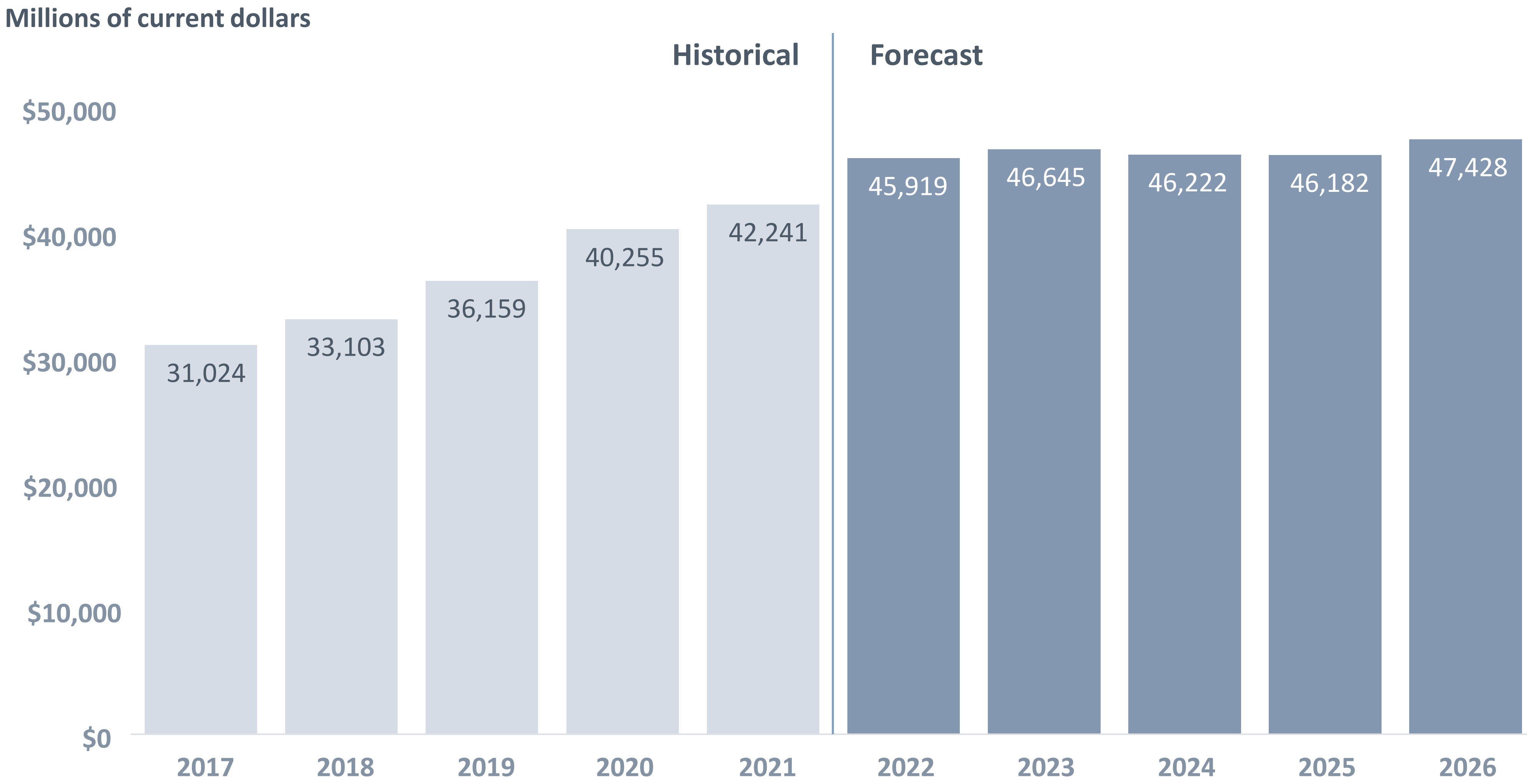
Median Age of Population Among Top 50 Metros

Rank	Metro	Median Age	Rank	Metro	Median Age
1	Salt Lake City	33.6	41	St. Louis	40.0
2	**Houston**	**35.3**	42	San Francisco	40.2
3	Riverside	35.4	43	Detroit	40.3
4	Dallas-Fort Worth	35.6	44	Hartford	40.6
5	San Antonio	35.7	45	Providence	40.8
6	Austin	35.9	46	Buffalo	40.8
7	Oklahoma City	36.1	47	Cleveland	41.3
8	Columbus	36.6	48	Miami	42.0
9	Memphis	36.6	49	Tampa	42.3
10	San Diego	36.9	50	Pittsburgh	42.8

% Employed Working from Home

Rank	Metro	%	Rank	Metro	%
1	San Francisco	35.1	11	Charlotte	25.3
2	San Jose	34.8	12	Atlanta	24.2
3	Washington	33.1	13	Philadelphia	23.6
4	Austin	32.2	14	Phoenix	23.4
5	Raleigh	31.0	15	Sacramento	23.3
6	Seattle	30.6	16	Columbus	23.0
7	Denver	27.5	17	Richmond	23.0
8	Portland	27.5	18	Salt Lake City	22.9
9	Boston	26.9	19	New York	22.8
10	Minneapolis	26.0	20	Baltimore	22.2
			41	Houston	15.5

Houston Construction put in place



CONSTRUCTION PUT IN PLACE BY MARKET SEGMENT: RESIDENTIAL

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Single Family	6,203	7,004	7,365	8,712	10,947	12,173	11,459	10,858	10,723	11,124
% Change		13%	5%	18%	26%	11%	-6%	-5%	-1%	4%
Multifamily	1,724	1,985	2,252	2,483	2,669	3,401	3,756	3,560	3,256	3,325
% Change		15%	13%	10%	7%	27%	10%	-5%	-9%	2%
Improvements*	4,290	4,456	4,573	5,886	6,023	6,981	6,871	6,525	6,512	6,754
% Change		4%	3%	29%	2%	16%	-2%	-5%	0%	4%
Total Residential	12,217	13,445	14,191	17,081	19,640	22,555	22,086	20,943	20,492	21,203
% Change		10%	6%	20%	15%	15%	-2%	-5%	-2%	3%

FMI Consulting

CONSTRUCTION PUT IN PLACE BY MARKET SEGMENT: NON-RESIDENTIAL BUILDINGS

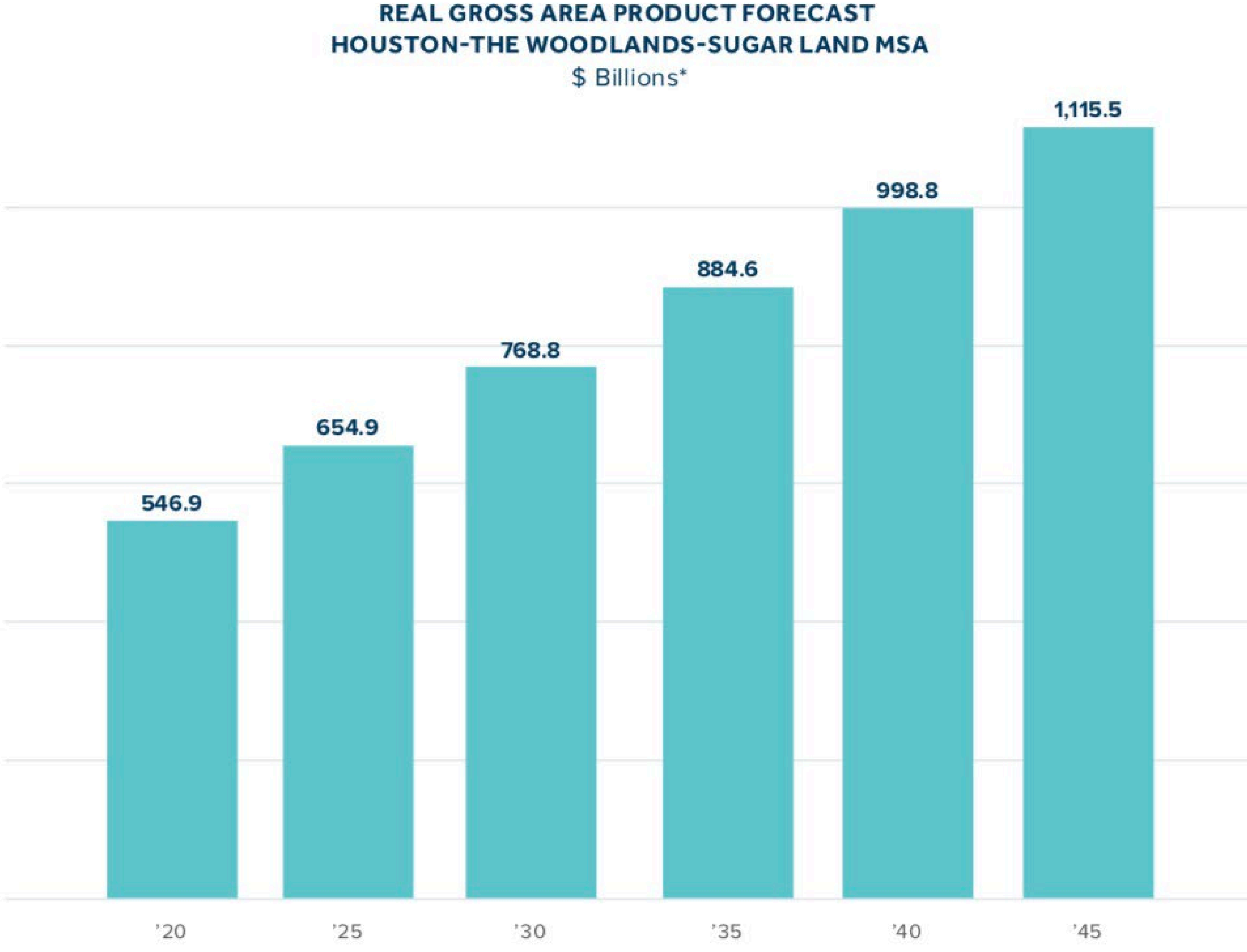
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Lodging	622	659	720	642	426	397	415	394	353	336
% Change		6%	9%	-11%	-34%	-7%	4%	-5%	-10%	-5%
Office	1,530	1,677	1,968	2,156	2,078	2,124	2,123	1,970	1,685	1,573
% Change		10%	17%	10%	-4%	2%	0%	-7%	-14%	-7%
Commercial	1,843	1,814	1,812	1,966	2,087	2,377	2,395	2,148	1,814	1,683
% Change		-2%	0%	9%	6%	14%	1%	-10%	-16%	-7%
Health Care	908	916	997	1,056	1,050	1,120	1,151	1,136	1,153	1,196
% Change		1%	9%	6%	-1%	7%	3%	-1%	1%	4%
Educational	2,055	2,147	2,393	2,449	2,235	2,210	2,259	2,344	2,418	2,491
% Change		4%	11%	2%	-9%	-1%	2%	4%	3%	3%
Religious	75	75	84	79	67	69	69	68	70	73
% Change		0%	11%	-6%	-14%	2%	0%	0%	2%	4%
Public Safety	180	195	258	411	283	275	287	302	314	331
% Change		8%	33%	59%	-31%	-3%	4%	5%	4%	6%
Amusement and Recreation	561	600	679	669	611	638	675	680	618	562
% Change		7%	13%	-1%	-9%	4%	6%	1%	-9%	-9%
Transportation	955	1,081	1,177	1,300	1,222	1,234	1,350	1,506	1,669	1,779
% Change		13%	9%	11%	-6%	1%	9%	12%	11%	7%
Communication	502	537	496	555	576	580	613	665	729	779
% Change		7%	-8%	12%	4%	1%	6%	8%	10%	7%
Manufacturing	1,475	1,549	1,807	1,712	1,840	2,164	2,405	2,557	2,498	2,422
% Change		5%	17%	-5%	7%	18%	11%	6%	-2%	-3%
Total Nonresidential Buildings	10,707	11,248	12,390	12,995	12,475	13,187	13,743	13,772	13,319	13,226
% Change		5%	10%	5%	-4%	6%	4%	0%	-3%	-1%

CONSTRUCTION PUT IN PLACE BY MARKET SEGMENT: NON-BUILDING STRUCTURES

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Power	3,572	3,736	4,508	4,657	4,711	4,427	4,248	4,132	4,303	4,509
% Change		5%	21%	3%	1%	-6%	-4%	-3%	4%	5%
Highway and Street	2,963	3,020	3,255	3,477	3,369	3,497	3,982	4,493	4,985	5,249
% Change		2%	8%	7%	-3%	4%	14%	13%	11%	5%
Sewage and Waste Disposal	778	801	889	997	1,031	1,137	1,293	1,438	1,554	1,662
% Change		3%	11%	12%	3%	10%	14%	11%	8%	7%
Water Supply	513	552	585	699	710	782	911	1,021	1,079	1,109
% Change		8%	6%	20%	2%	10%	17%	12%	6%	3%
Conservation and Development	273	301	342	350	305	334	382	421	451	470
% Change		10%	14%	2%	-13%	9%	15%	10%	7%	4%
Total Nonbuilding Structures	8,099	8,410	9,579	10,179	10,126	10,176	10,816	11,507	12,371	12,999
% Change		4%	14%	6%	-1%	0%	6%	6%	8%	5%
Total Put in Place	31,024	33,103	36,159	40,255	42,241	45,919	46,645	46,222	46,182	47,428
% Change		7%	9%	11%	5%	9%	2%	-1%	0%	3%

GROSS AREA PRODUCT FORECAST

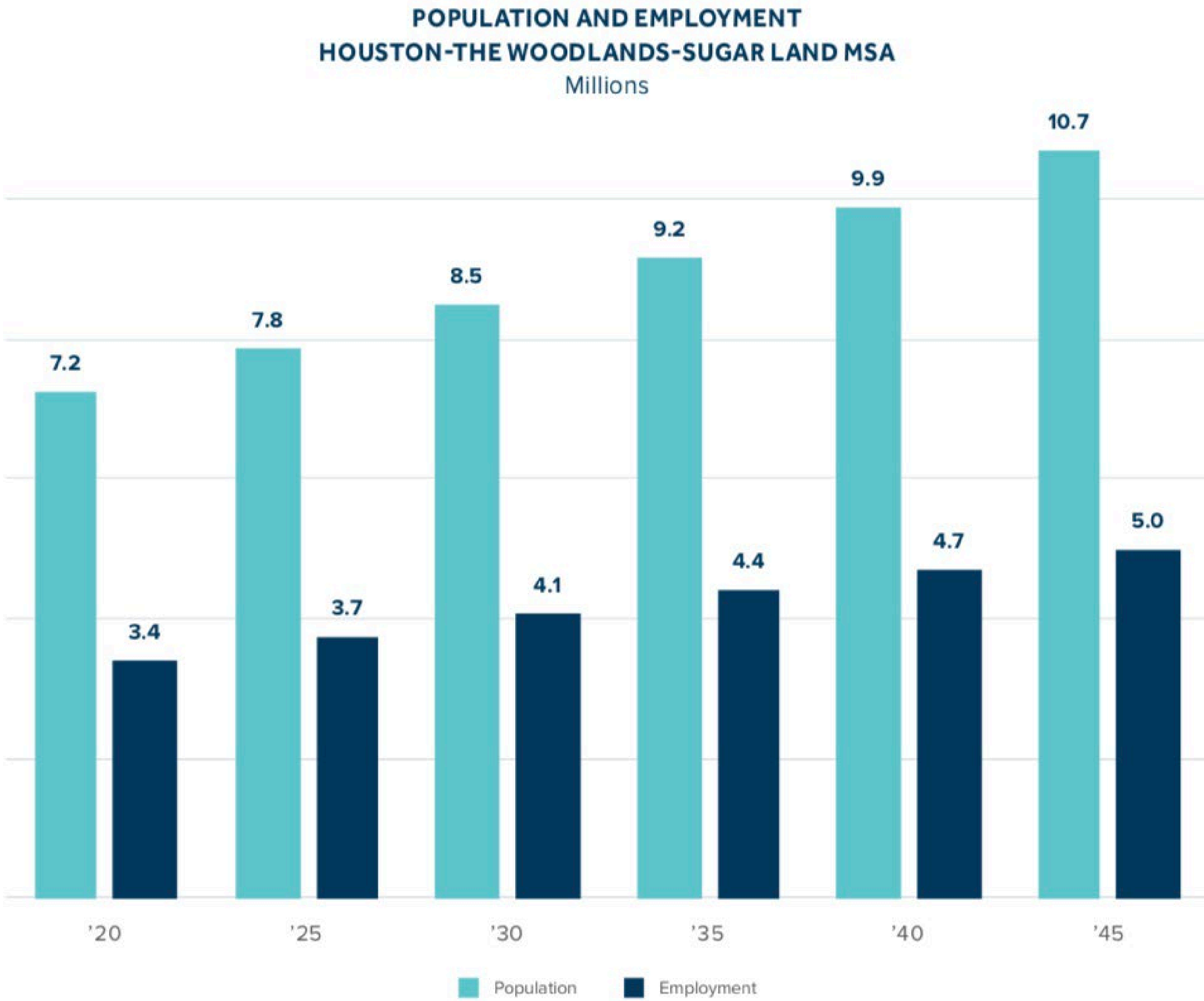
The Perryman Group forecasts sustained economic growth for the Houston metro over the next quarter century.



Source: The Perryman Group
*'09 Constant Dollars

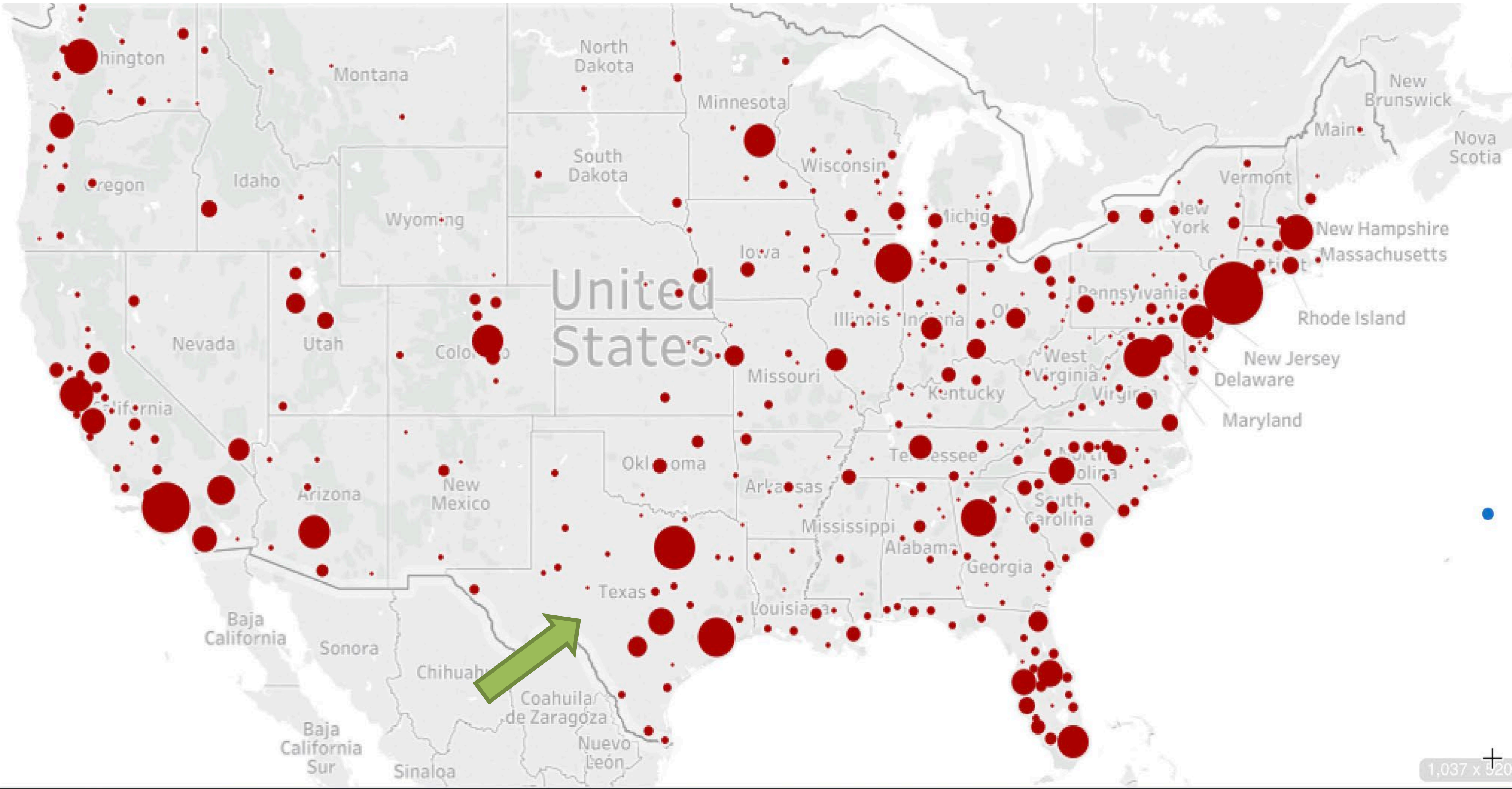
POPULATION AND EMPLOYMENT FORECAST

The Perryman Group forecasts Houston's population to reach 10.7 million and employment to grow to 5.0 million by '45.



Source: The Perryman Group

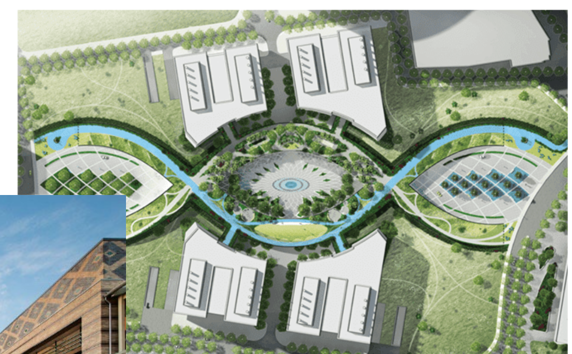
The Best Construction Markets



The Market Dynamics & Trends

- Residential Market
  - Single-family up 10% both years of pandemic – WFH?
  - Houses built to rent – growing
  - Apartments remain strong
- Commercial Markets
  - General purpose office space declining – energy industry dynamics & WFH
  - Repurposing of older office buildings – Esperson
- Medical space
  - Traditional hospitals grow with population & care delivery moving to suburbia
  - Laboratory space growing – TMC 3 + incubator labs
  - TMC 5,000,000 sq. ft. completing construction – 5,500,000 sq. ft. in design



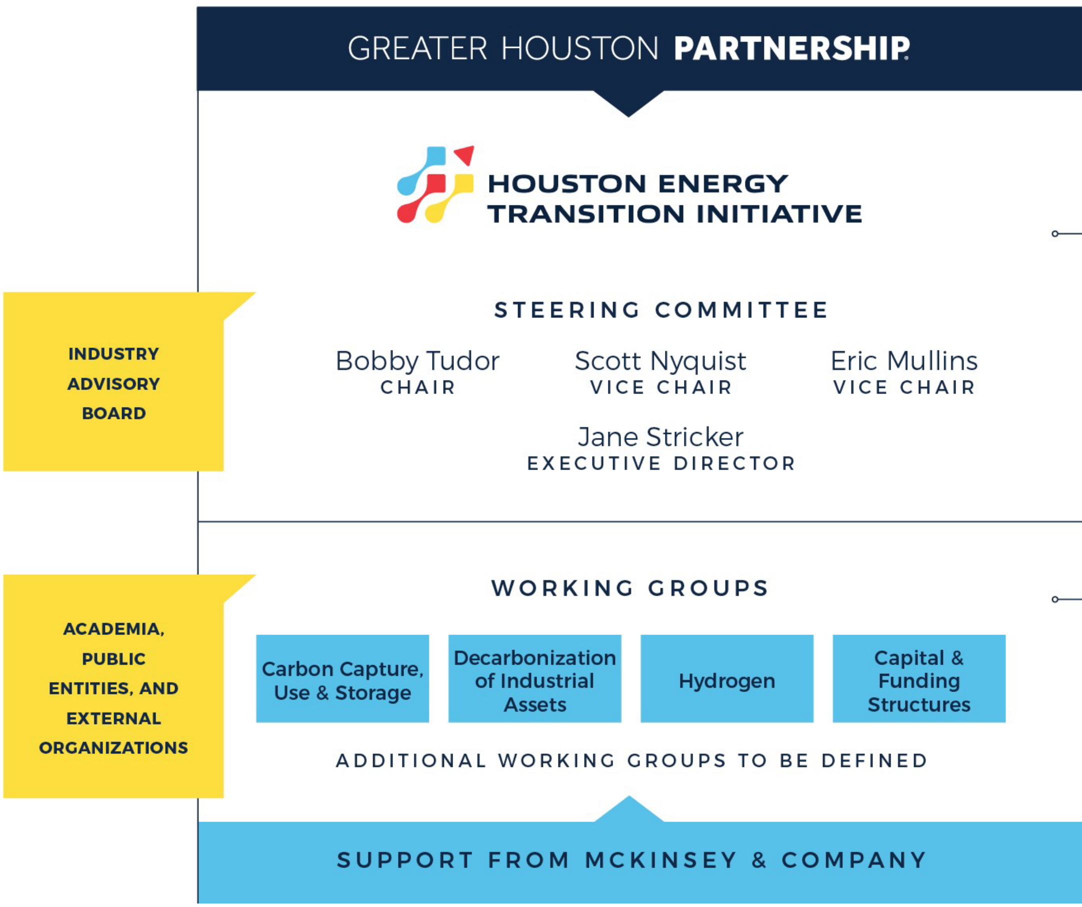


The Market Dynamics & Trends – cont.

- Schools (K-12) + Higher Ed.
  - Remain strong
  - Larger facilities + Elaborate sports facilities (Stadia Natatoriums)
- Stable markets
  - Religious – larger sanctuaries
  - Retail - ethnic & economic diversification drives
- Light industrial markets
  - Warehouses, service centers – off the charts
  - Large energy related project – sporadic
- Roads, bridges, streets
  - The need never ends – we seem to never catch up



Maintaining Energy Leadership



- SteerCo meets quarterly on priorities, key decisions, and progress.
- Each member assigns a delegate which meets monthly to monitor and progress initiatives

- Industry-led working groups
  - Progress initiatives
  - Coordinate with external groups
  - SteerCo members join any working group
  - Additional industry members invited as needed
  - Quarterly progress reporting to SteerCo

Maintaining Energy Leadership

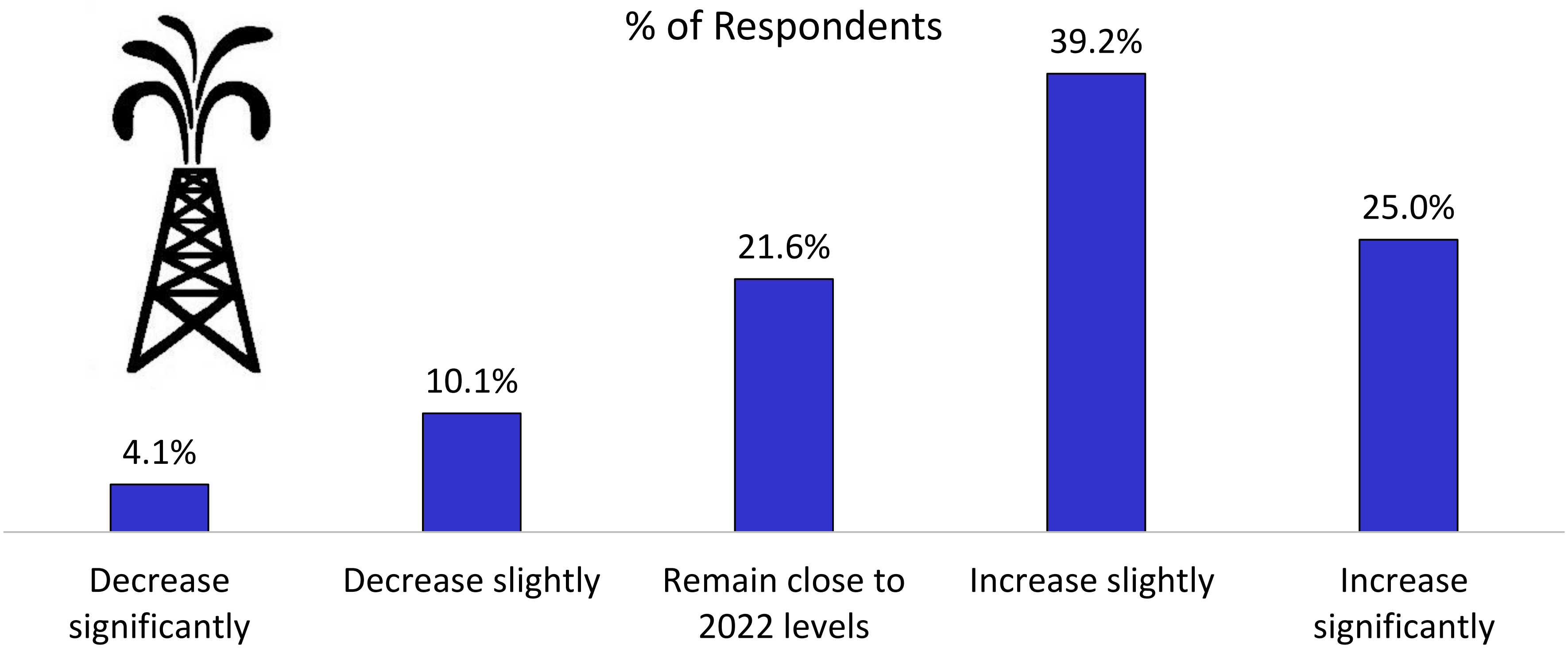
Greentown Labs

East End Maker Hub

Halliburton Labs

The Ion

Expectations for your firm's capital spending in '23 v '22?



Source: Federal Reserve Bank of Dallas

* Based on a survey of executives from 95 exploration and production firms and 53 oil and gas support services firms conducted December '22.

A MAJOR DRIVER OF CONSTRUCTION FOR THE FUTURE

Potential Head Winds

* Interest Rates
* Difficulty getting financing (45 % Equity Requirements)
* Delays (Supply Chain Problems; availability, price escalations, Firm pricing for a project)
* War in Ukraine
* China -Dependency of US Companies
* The Washington Sandbox
* Skilled Labor

Workforce

Shortage of skilled workers continues / exacerbates

Efforts to make construction work an attractive career

C-3

The Construction Career Collaborative

- Safety Training
- Pay Legally
- Craft Training

Immigration Reform

- National Effort
- Baker Institute
- The Rational Middle Video Series:
  - 10, 20-minute fact-filled videos to prompt discussion

RATIONAL MIDDLE.
IMMIGRATION

Offsite Build / Onsite Install

Real Savings

- Time / Cost

Productivity

Taking Many Forms

- Traditional Specialty Contractors Building Additional Facilities

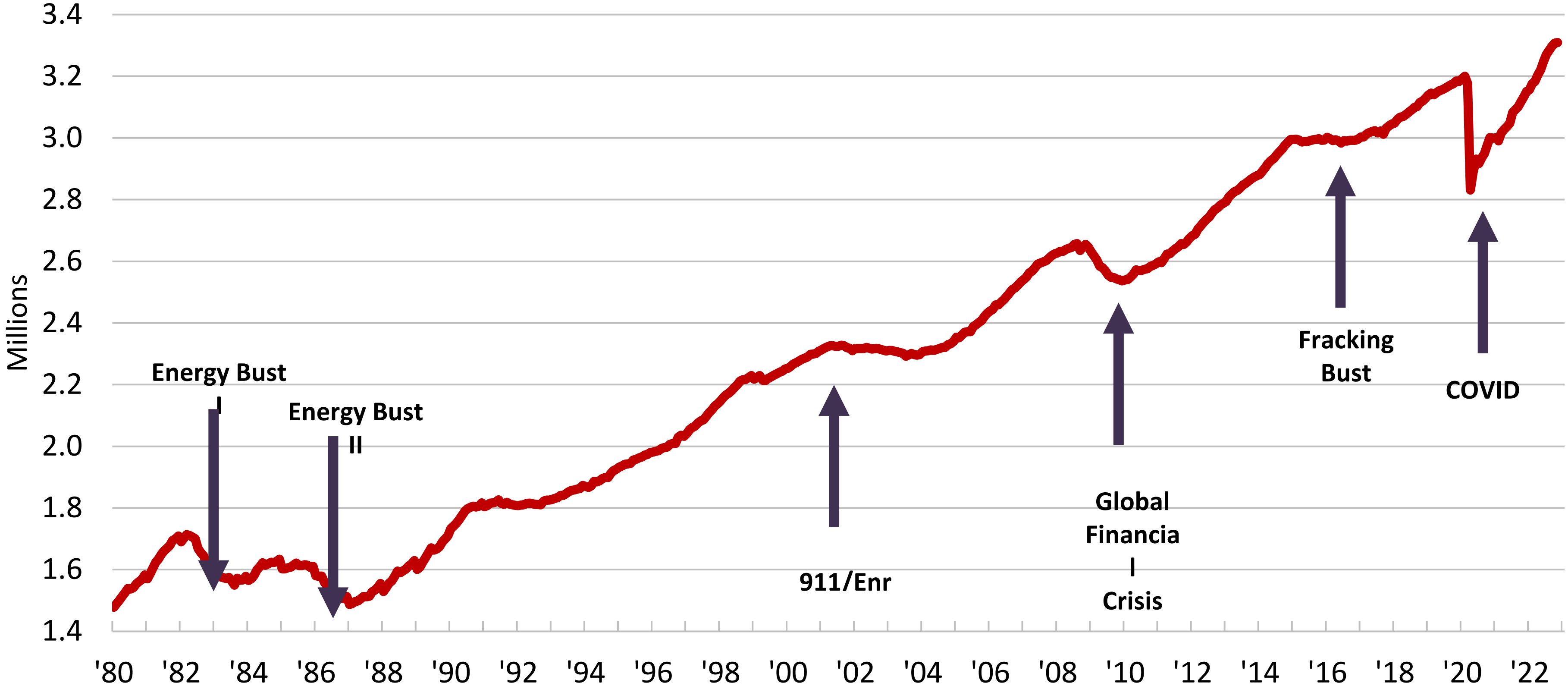
Tech. Based & Funded Start Ups

- ~~Katerra~~ – 3.7 Billion Back log; Prescient – Full-Stack Modular
- Skender - Struggling
- MiTek – Buffet Company

Modular Applications

- Apartments/ Hotels/ Hospitals

Metro Houston Employment



Source: Texas Workforce Commission

"You might give serious thought to thanking your lucky stars, you live in Texas."
– Jim Goode, Restauranteur

Stay humble, Live only in Gratitude.

Kiley
Literary Legacies