## Construction Spend and Yearly % Change Summary by MSA (2017-2022)

**Houston, The Woodlands and Sugarland, Texas**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single Family</strong></td>
<td>$6,945.9M</td>
<td>$7,641.7M</td>
<td>$8,890.5M</td>
<td>$9,243.5M</td>
<td>$9,602.5M</td>
<td>$9,782.9M</td>
</tr>
<tr>
<td><strong>Multi-Family</strong></td>
<td>$1,704.9M</td>
<td>$1,801.2M</td>
<td>$2,049.3M</td>
<td>$2,079.6M</td>
<td>$2,084.9M</td>
<td>$2,104.6M</td>
</tr>
<tr>
<td><strong>Improvements</strong></td>
<td>$5,009.3M</td>
<td>$5,555.7M</td>
<td>$6,615.1M</td>
<td>$6,949.4M</td>
<td>$7,165.9M</td>
<td>$7,331.1M</td>
</tr>
<tr>
<td><strong>Total Residential</strong></td>
<td>$13,660.2M</td>
<td>$14,998.6M</td>
<td>$17,555.1M</td>
<td>$18,271.4M</td>
<td>$18,863.4M</td>
<td>$19,218.6M</td>
</tr>
<tr>
<td><strong>Lodging</strong></td>
<td>$576.9M</td>
<td>$682.3M</td>
<td>$768.6M</td>
<td>$955.4M</td>
<td>$969.2M</td>
<td>$716.6M</td>
</tr>
<tr>
<td><strong>Office</strong></td>
<td>$1,345.1M</td>
<td>$1,489.1M</td>
<td>$1,619.8M</td>
<td>$1,766.4M</td>
<td>$1,720.1M</td>
<td>$1,775.7M</td>
</tr>
<tr>
<td><strong>Commercial</strong></td>
<td>$1,712.2M</td>
<td>$1,870.6M</td>
<td>$2,011.5M</td>
<td>$2,081.3M</td>
<td>$2,102.2M</td>
<td>$2,137.1M</td>
</tr>
<tr>
<td><strong>Health Care</strong></td>
<td>$843.4M</td>
<td>$878.9M</td>
<td>$927.8M</td>
<td>$963.0M</td>
<td>$988.5M</td>
<td>$1,024.1M</td>
</tr>
<tr>
<td><strong>Educational</strong></td>
<td>$1,835.3M</td>
<td>$1,918.0M</td>
<td>$2,053.7M</td>
<td>$2,134.2M</td>
<td>$2,173.8M</td>
<td>$2,217.3M</td>
</tr>
<tr>
<td><strong>Religious</strong></td>
<td>$67.7M</td>
<td>$65.8M</td>
<td>$64.4M</td>
<td>$65.4M</td>
<td>$67.0M</td>
<td>$68.0M</td>
</tr>
<tr>
<td><strong>Public Safety</strong></td>
<td>$166.8M</td>
<td>$187.3M</td>
<td>$201.4M</td>
<td>$210.3M</td>
<td>$216.7M</td>
<td>$227.4M</td>
</tr>
<tr>
<td><strong>Amusement and Recreation</strong></td>
<td>$500.0M</td>
<td>$536.5M</td>
<td>$577.8M</td>
<td>$598.4M</td>
<td>$602.9M</td>
<td>$619.4M</td>
</tr>
<tr>
<td><strong>Transportation</strong></td>
<td>$908.9M</td>
<td>$1,041.1M</td>
<td>$1,140.9M</td>
<td>$1,253.7M</td>
<td>$1,328.2M</td>
<td>$1,393.0M</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>$499.6M</td>
<td>$532.0M</td>
<td>$558.1M</td>
<td>$580.4M</td>
<td>$600.3M</td>
<td>$625.1M</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td>$1,337.0M</td>
<td>$1,391.8M</td>
<td>$1,501.2M</td>
<td>$1,519.7M</td>
<td>$1,545.7M</td>
<td>$1,574.4M</td>
</tr>
<tr>
<td><strong>Total Non-Res Buildings</strong></td>
<td>$9,845.9M</td>
<td>$10,543.3M</td>
<td>$11,325.1M</td>
<td>$11,782.2M</td>
<td>$12,044.6M</td>
<td>$12,378.4M</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>$3,218.1M</td>
<td>$3,331.2M</td>
<td>$3,591.2M</td>
<td>$3,733.4M</td>
<td>$3,874.6M</td>
<td>$3,981.7M</td>
</tr>
<tr>
<td><strong>Highway and Street</strong></td>
<td>$2,969.4M</td>
<td>$3,132.9M</td>
<td>$3,413.7M</td>
<td>$3,554.7M</td>
<td>$3,579.5M</td>
<td>$3,569.3M</td>
</tr>
<tr>
<td><strong>Sewage and Waste Disposal</strong></td>
<td>$679.7M</td>
<td>$709.2M</td>
<td>$776.7M</td>
<td>$818.4M</td>
<td>$816.8M</td>
<td>$849.1M</td>
</tr>
<tr>
<td><strong>Water Supply</strong></td>
<td>$393.7M</td>
<td>$428.2M</td>
<td>$474.9M</td>
<td>$496.5M</td>
<td>$507.5M</td>
<td>$512.5M</td>
</tr>
<tr>
<td><strong>Conservation and Development</strong></td>
<td>$241.5M</td>
<td>$269.6M</td>
<td>$300.2M</td>
<td>$314.7M</td>
<td>$331.6M</td>
<td>$342.2M</td>
</tr>
<tr>
<td><strong>Total Non-building Structures</strong></td>
<td>$7,502.4M</td>
<td>$8,871.3M</td>
<td>$8,585.1M</td>
<td>$8,897.7M</td>
<td>$9,129.9M</td>
<td>$9,254.7M</td>
</tr>
</tbody>
</table>

FMI Corporation Copyright 2019
in the top two areas in which your firm is active: What WTI oil price does your firm need to profitably drill a new well?

Dollars per barrel

<table>
<thead>
<tr>
<th>Area</th>
<th>Dollars per barrel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permian (Midland)</td>
<td>$47</td>
</tr>
<tr>
<td>Permian (Delaware)</td>
<td>$49</td>
</tr>
<tr>
<td>Bakken</td>
<td>$50</td>
</tr>
<tr>
<td>Permian (Other)</td>
<td>$52</td>
</tr>
<tr>
<td>SCOOP/STACK</td>
<td>$53</td>
</tr>
<tr>
<td>Other U.S. (Shale)</td>
<td>$54</td>
</tr>
<tr>
<td>Other U.S. (Non-shale)</td>
<td>$55</td>
</tr>
</tbody>
</table>

Number of responses:

- Permian (Midland): 15
- Permian (Delaware): 13
- Bakken: 4
- Permian (Other): 18
- SCOOP/STACK: 7
- Other U.S. (Shale): 7
- Other U.S. (Non-shale): 34

NOTES: Lines show the mean, and bars show the range of responses. Executives from 65 exploration and production firms answered this question during the survey collection period, March 14–22, 2018. SOURCE: Federal Reserve Bank of Dallas.
Statewide Authorizations

• Bonds in Play Currently (May, August, November 2018) - $12,633,290,307

• May 2019 Bond Summary – Passed $7,369,676,000

Our Region - Houston MSA

• Approximately $9,000,000,000 in approved bonds

• K-12 - Junior College - Community Colleges – City - County

• Infrastructure in Houston
  – Toll Road Extensions, 249 Extensions, Ship Channel Bridge, Flood Control Projects

• TMC3 – Texas Medical Center - $2,500,000,000 next 5 years

• Multi-Family Projects - $600,000,000 - $900,000,000 per year for 5 years

• Warehouse - $1,200,000,000 (15,000,000 Square Feet on the drawing board)

• 2+ Downtown High Rise Buildings
Industry - Design & Construction

- Confident in the ability to maintain or increase the backlog of work
- Lack of confidence in the ability to attract and retain skilled workers – Shortage continues / exacerbates
- Lack of confidence in the ability to attract and maintain professional staff
- Overall Concern - Inadequate time to complete drawings
- Overall Concern – Permit time increasing
- Overall Concern – Construction time extending
### Design Professional Average Future Cost Projections*

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary</strong></td>
<td>$197-210/sf</td>
<td>$200-258/sf</td>
<td>$195-263/sf</td>
</tr>
<tr>
<td></td>
<td>(Avg. $203/sf)</td>
<td>(Avg. $229/sf)</td>
<td>(Avg. $230/sf)</td>
</tr>
<tr>
<td><strong>Middle/JHS</strong></td>
<td>$220-269/sf</td>
<td>$210-280/sf</td>
<td>$205-288/sf</td>
</tr>
<tr>
<td></td>
<td>(Avg. $241/sf)</td>
<td>(Avg. $250/sf)</td>
<td>(Avg. $250/sf)</td>
</tr>
<tr>
<td><strong>High School</strong></td>
<td>$242-298/sf</td>
<td>$245-305/sf</td>
<td>$245-305/sf</td>
</tr>
<tr>
<td></td>
<td>(Avg. $270/sf)</td>
<td>(Avg. $280/sf)</td>
<td>(Avg. $280/sf)</td>
</tr>
</tbody>
</table>

### Current Projected Escalation Costs

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary</strong></td>
<td>3-4%</td>
<td>5-8%</td>
<td>6-9%</td>
</tr>
<tr>
<td><strong>Middle/JH School</strong></td>
<td>4-6%</td>
<td>5-8%</td>
<td>6-9%</td>
</tr>
<tr>
<td><strong>High School</strong></td>
<td>4-6%</td>
<td>5-8%</td>
<td>6-9%</td>
</tr>
</tbody>
</table>
Importance of Looking Ahead

- Begin with the First Day of School In Mind
- Elementary / Intermediate: 28 Months
- Junior High / High School: 48 Months
Currently

• Reviewing each project concept and evaluating options
• Reviewing existing facilities and future use

Important to Note:
• We cannot receive BIDS for work – we are dealing with projects in concept not fully designed plans for construction.
• Estimates are prepared utilizing CISD historical data and experience as well as input from design and engineering consultants with their historical data and experience
# 2019 Bond Package

## New Schools
- Elementary #45 - Carey Creek Feeder  $30,078,792.60
- Elementary #46 - Carey Creek Feeder  $37,183,519.52
- Elementary #47 - Grand Oaks Feeder  $39,414,330.69
- New Junior High School - Carey Creek Feeder  $80,629,536.00

1,060 student capacity, and includes the cost for utility infrastructure and road improvements.

Woodfield Jr. would transition to an Intermediate.

## Growth & Sustainability
- College High School - Master Plan - Phase 2  $1,464,000,000.00
- Oak Ridge High School Overhaul - Phase 1  $47,640,640.00
- upgrades to mechanical, electrical, plumbing, and window systems throughout the school with some cosmetic updates as a byproduct including the auditorium, gym, and entrances.
- TVI College Park High School - TI Classroom Addition  $1,220,000.00
- The Woodlands High School - Robotics Lab & Science Classrooms Addition  $1,260,000.00
- Carey Creek High School - Capacity and Program Upgrades  $3,240,000.00
- Carey Creek High School - Classroom Capacity and Program Upgrades  $11,910,160.00
- Carey Creek High School - Classroom Capacity and Program Upgrades  $23,400,000.00
- York Junior High Addition  $3,240,000.00
- York Junior High Addition  $16,060,000.00
- York Junior High Addition  $16,060,000.00
- Creighton Elementary Overhaul  $13,483,200.00
- Creighton Elementary Overhaul  $13,483,200.00
- upgrades to mechanical, electrical, and plumbing systems as well as a new roof.

## Safety & Security (2020-2023)
- Creighton Elementary Overhaul  $24,576,592.69

## Life Cycle
- Priority 1 & 2 - items not included in other projects  $19,204,211.93
- Life Cycle (2020-2023)  $88,614,489.83

## Campus Improvements and Renovations
- Collins & Wilkerson PE Classroom / Gym Addition  $13,877,697.14
- Only two of the three in CSD without assigned PE classes or gym space
- Rynear PE Classroom / Gym Addition  $3,595,520.00
- Gym additions to elementary to raise the size of other elementary
- Glen Loch Elementary - HVAC Overhaul  $3,212,802.10
- TVI College Park High School - Fire Alarm Compliance, Safety Upgrades & Life Cycle  $9,068,800.00
- Turf Conversions  $25,146,160.00
- Band / Football / Cheer / Wrestling / Softball
- Energie Efficiency & Conservation Projects  $2,657,659.27
- Washington Renovations and Conversion to Washington HS  $5,145,864.55
- (Replacement for Haake High School)

## Career & Technical Education Facilities
- Addition of robotics, automation technology, and engineering design programs at  $10,515,654.39
- Oak Ridge HS, a central location in the southern half of the District
- North County Agricultural/CTE Complex  $3,618,000.00

## District-wide Facility & Transportation Needs
- Central (NORTH) Maintenance & Custodial  $10,112,400.00
- Current facilities need to be relocated to meet increasing maintenance needs.
- Transportation - New Buses  $10,000,000.00
- Transportation Center Expansions & Renovation  $17,000,000.00
- Jett Center Decommissioning  $1,783,514.31
- Jett Center Decommissioning  $1,783,514.31
- The existing facility is being relocated
- Haake Building Renovation  $3,955,520.00
- The current building, currently home to Haake High School, will be relocated and offices
- Cost Center: $17,696,959.88
- Teacher Training Center
- The current 36-year-old facility used for many of the 1,800 staff development offered annually
- is being vacated, facility will be built on current CSD land at Woodfield/Deer Park

## Technology
- Land Purchases  $35,000,000.00
- Contingency  $20,000,000.00
- Contingency  $39,000,000.00

## Total
- $807,000,000.00