Misunderstood Metal

The Undervalued Backbone of Texas Industrial Real Estate

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Executive Summary

Texas industrial real estate is at a turning point. Concrete tilt-wall warehouses still dominate new construction, but the real opportunity for investors seeking strong returns and low downside risk lies in the strength of pre-engineered metal buildings (PEMBs). These assets are not cheaper substitutes for tilt-wall. They are fit-for-purpose, market-responsive alternatives that outperform on cost, speed-to-market, and flexibility.

Texas is the nation's logistics leader. Between 2021 and late 2023, nearly one in five U.S. logistics facility investments occurred in Texas, with Dallas-Fort Worth and Houston each adding close to 100 assets. That scale of activity highlights durable demand for functional, adaptable space.

In this context, PEMBs stand out. Their steel frames, modular layouts, and repairable standing-seam roofs allow modernization and code-compliant upgrades with fewer dollars and less downtime than concrete shells. Tenant turnover, often a liability in industrial ownership, can become an opportunity in PEMBs, as clear-span layouts, expandable frames, and roof-over retrofits reduce make-ready costs and downtime, often enabling quicker re-tenanting than more rigid shells.

Market data reinforces the case. Infill PEMBs across DFW, Houston, the Austin–San Antonio corridor, and border metros remain nearly full and often command rent premiums. By contrast, large tilt-wall boxes show higher vacancy and slower absorption. Users from petrochemical plants to cross-border operators choose PEMBs for their speed, adaptability, and affordability.

PEMBs are fit-for-purpose, market-responsive alternatives that outperform on cost, speed-to-market, and flexibility.

The investment argument is equally strong. Capital flows have concentrated in tilt-wall, leaving PEMBs undervalued despite superior operating performance. Existing PEMBs often trade at higher capitalization rates, offering investors mispriced yield. Lower recurring capital costs, accelerated depreciation, and Texas-specific incentives further enhance returns.

Tilt-wall remains relevant for mega-distribution centers, concrete façade covenants, or certain insurance categories. But across most of Texas, the evidence is clear: PEMBs are not merely competitive, they are outperforming.

In a state defined by growth, trade, and nearshoring, PEMBs form a durable, undervalued backbone of the industrial landscape. For investors willing to move past outdated perceptions, the opportunity is clear: capture resilient cash flow, unlock value, and stay ahead of the cycle by embracing an asset class proven to deliver.

Perception vs. Reality: Metal's Misunderstood Quality

For decades, metal industrial buildings have been dismissed as temporary or inferior, a "discount" version of concrete tilt-wall. That perception no longer holds. Modern pre-engineered metal buildings (PEMBs) are engineered to the same codes as concrete or masonry systems and can be designed to withstand high winds, seismic events, and snow loads.[1] Steel does not support mold or rot, and standing-seam roofs can be repaired or re-roofed without dismantling walls.[2] When properly maintained, these buildings routinely deliver service lives spanning multiple decades, with studies indicating that roofing systems alone can last 50 years or longer.[3]

What the market proves is simple: tenants value function over façade. Smaller, flexible facilities are predominantly built with metal frames and consistently outperform expectations.

Nationally, buildings under 50,000 square feet were only 3.8% vacant in Q2 2025, compared with 7.6% vacancy for warehouses over 100,000 square feet.[4] In Texas, brokers confirm that infill PEMBs remain near full occupancy and often command rent premiums, while large tilt-wall distribution boxes struggle to fill space.[5] The misperception that metal is a riskier investment simply does not match the operating data.[6]

The narrative must shift. PEMBs are not second-class assets; they are a fit-for-purpose choice that aligns with how industrial users actually operate. Manufacturers, suppliers, and service providers prioritize speed, adaptability, and affordability over architectural prestige. When judged on performance, not perception, PEMBs consistently deliver the resilience, income stability, and tenant appeal that tilt-wall often cannot.

Design and Performance: Why Metal Excels

Engineered resilience

Pre-engineered metal buildings combine a steel skeleton with durable panel walls and standing-seam roofs, an engineered system that delivers strength, efficiency, and adaptability.[7] Leading trade associations in the metal building industry highlight several performance attributes: steel framing resists winds and seismic loads and is noncombustible, and metal roofs commonly achieve multi-decade service life.[8] Roof panels lock together to shed rain and hail, insulation packages are easily upgraded, and tight building envelopes can drive major energy savings.[9]

By contrast, tilt-wall panels provide good fire ratings and thermal mass but come with drawbacks: heavy foundations, limited adaptability, and costly modifications.[10] In hurricane-prone Texas, the ability to repair or re-cover a metal roof quickly and affordably after a storm can mean the difference between a brief disruption and months of lost income.[11]

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Suites can be resized or combined with minimal downtime, enabling faster lease-ups and stronger tenant retention.

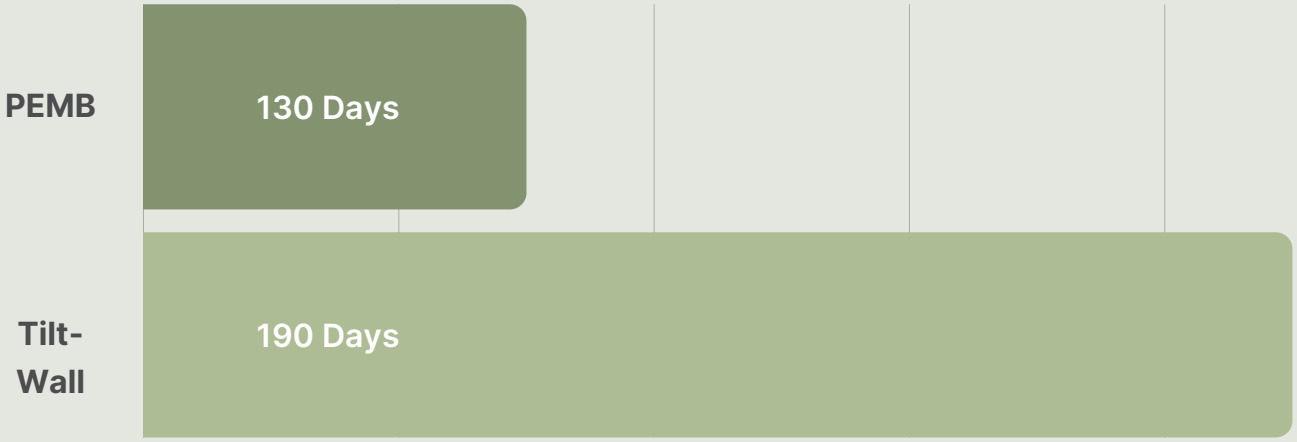
Adaptability and functionality

Tenant turnover is inevitable in industrial ownership, and adaptability determines operating success.[12] PEMBs are inherently modular: owners can add dock doors, clerestory windows, solar arrays, or mezzanines with straightforward cut-and-bolt work instead of demolition.[13] Suites can be resized or combined with minimal downtime, enabling faster lease-ups and stronger retention.[14] By contrast, alterations such as cutting new openings in tilt-wall concrete panels are engineering modifications that require lengthy analysis and reinforcement design.[15]

Functionality matters as much as modularity. PEMBs can be sited and operated as true freestanding, single-tenant buildings with 360-degree drive, dedicated yard, and secure access, or demised lightly when demand shifts, preserving the ability to recombine space later.[16] By contrast, carving a large tilt-wall box into multiple suites typically entails fire-rated demising and separate metering, and, where new docks or doors are needed, engineered panel modifications and reinforcing to cut openings in the concrete, steps that can significantly extend schedules and capex.[17]

Construction Timeline Comparison

PEMBs vs. Tilt-Wall Concrete[19]



PEMBs deliver materially faster schedules. In a NAIOP case study of Home Depot Lower Heights in Houston, the PEMB schedule was 130 days vs 190 days for a comparable concrete tilt baseline (~32% faster). NAIOP also notes PEMBs typically reduce construction time by about 30% to 40% versus concrete tilt and precast systems.

Roofing systems and warranties

Not all roof systems are created equal. Thermoplastic polyolefin (TPO) membranes are commonly specified on tilt-wall warehouses, but their warranties typically max out at 15 years for 45-mil membranes and 20 years for 60-mil membranes.[21] Standing-seam metal roofs are standard on most PEMBs and carry 25-year weathertightness warranties and have anticipated service lives of 60 years or more.[22] In Texas' hurricane-prone climate, that difference compounds: a metal roof can often be re-covered in place after a storm, whereas a TPO roof may require full replacement.

Speed-to-market

In industrial real estate, time is money and construction systems directly affect delivery. PEMBs offer flexibility because offices, HVAC systems, and insulation upgrades can be added within the existing frame.[18] This makes it possible to keep neighboring suites in operation while minimizing disruption. For ground-up development, neutral cost benchmarks show that pre-engineered metal shells typically run $20–$35 per square foot and can shorten construction timelines by up to 40% compared with tilt-wall alternatives.[19] Faster completion means lower carrying costs, quicker lease-up, and rental income realized months ahead of schedule.[20]

Texas Market Insights: Evidence from the Field

Dallas-Fort Worth

Since 2023, the DFW industrial pipeline has delivered more than 115 million square feet of new space, much of it in the form of tilt-wall mega-warehouses.[23] However, leasing velocity is strongest in smaller spaces located closer to population centers.[24] Infill metal properties have virtually no availability, and tenants are willing to pay premiums for flexible suites.[25] In contrast, high-profile tilt-wall boxes on the periphery face elevated vacancy rates and slower lease-up periods.[26]

Houston

Houston's largest distribution centers are typically delivered as tilt-wall concrete facilities.[27] By contrast, small- and mid-bay product often uses PEMBs.[28] PEMBs are relatively easy to retrofit for upgrades such as ventilation or overhead cranes, which supports manufacturing and petrochemical uses.[29] Houston's market data reinforces this typology split: spaces under 250,000 square feet command about a 10% higher rent than larger ones, while big-box tilt-wall facilities 500,000 square feet and larger face slower lease-up and higher vacancy.[30] To be precise, this rent premium is reported by size rather than wall system, but since tilt-up dominates the largest footprints and PEMBs are common in smaller ones, the size differential largely aligns with construction type.[31]

Austin–San Antonio corridor

Central Texas has quickly become a crossroads for advanced manufacturing and e-commerce.[32] Flex industrial space in the region, much of which occupies pre-engineered metal buildings, has vacancy rates of only about 5% compared with double-digit vacancy rates in large tilt-wall logistics buildings.[33] Rising land costs along I-35 put investors who acquire and reposition existing metal facilities in these locations closer to labor supplies.[34] These buildings are particularly well-suited for suppliers to automotive plants, semiconductor fabs, and last-mile distributors.[35]

Border and secondary markets

In markets such as Laredo, McAllen, and Temple, demand is driven by trade flows and limited new construction.[36] Port Laredo ranked as the nation's top trade gateway in 2024, with $339 billion in total trade.[37] Existing metal buildings in these secondary markets can be repositioned quickly to serve cross-border logistics and light manufacturing, avoiding the long lead times associated with new tilt-wall development.

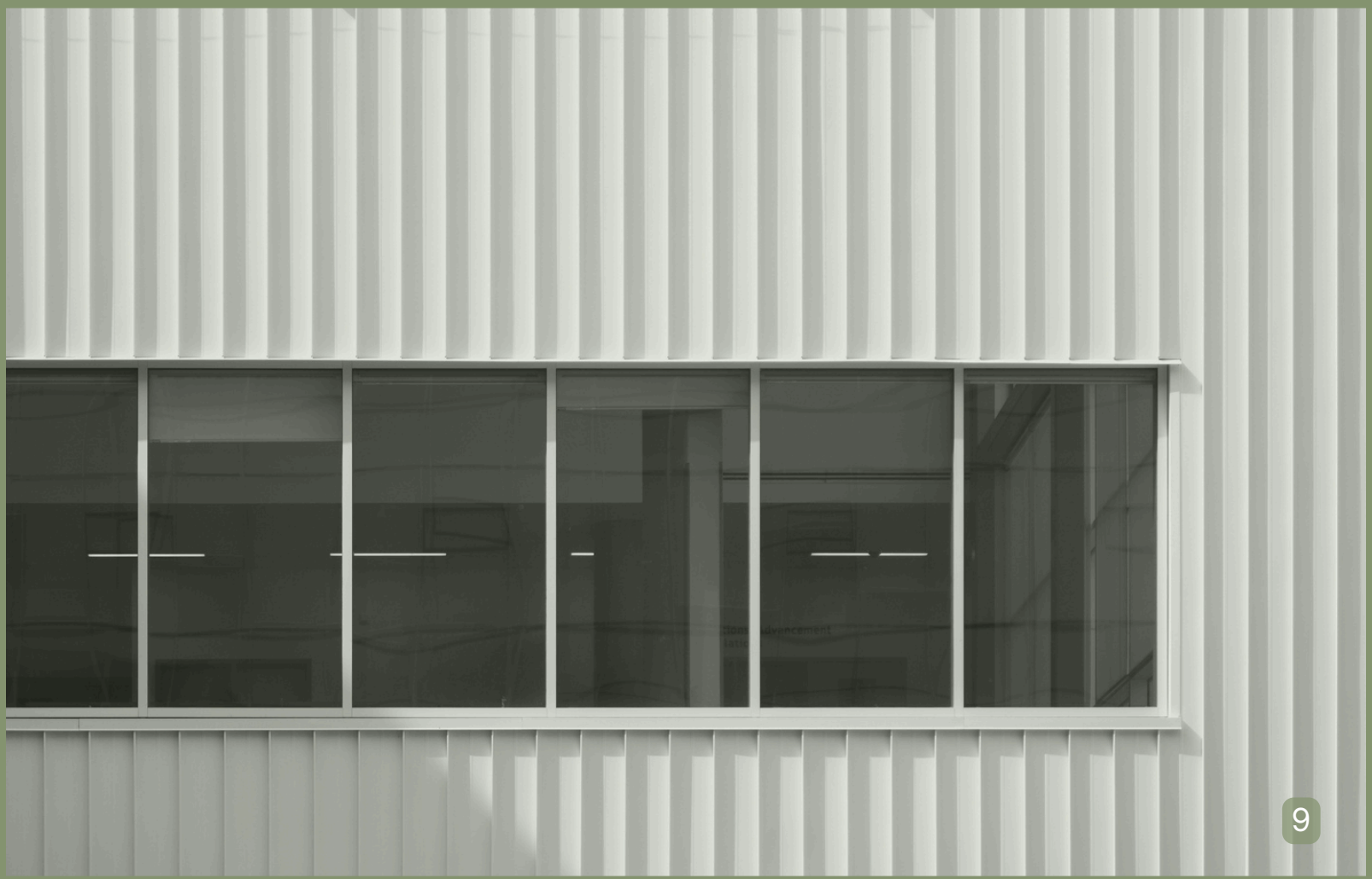
Industrial outdoor storage

Demand for industrial outdoor storage (IOS) has been characterized by tight vacancy and notable rent growth in recent years.[38] These assets emphasize low-coverage industrial land with significant yard and parking space, along with room for small ancillary structures.[39] Many analysts and allocators now track IOS as a distinct niche with sub-3% vacancy in leading markets and persistent entitlement bottlenecks that constrain new supply.[40]

While precise definitions vary, common characteristics include sites of two to ten acres, floor-area ratio typically below ~20%, and uses such as truck parking, container and equipment storage, and rental operations.[41]

Industrial outdoor storage has sub-3% vacancy in leading markets, with persistent entitlement bottlenecks that constrain new supply.

Given IOS's emphasis on land and circulation over building coverage, when a building is included it is commonly delivered as a small pre-engineered metal shop/office for speed, cost, and ease of modification.[42]



Investment Case: Returns, Taxes, and Incentives

Mispricing and yield

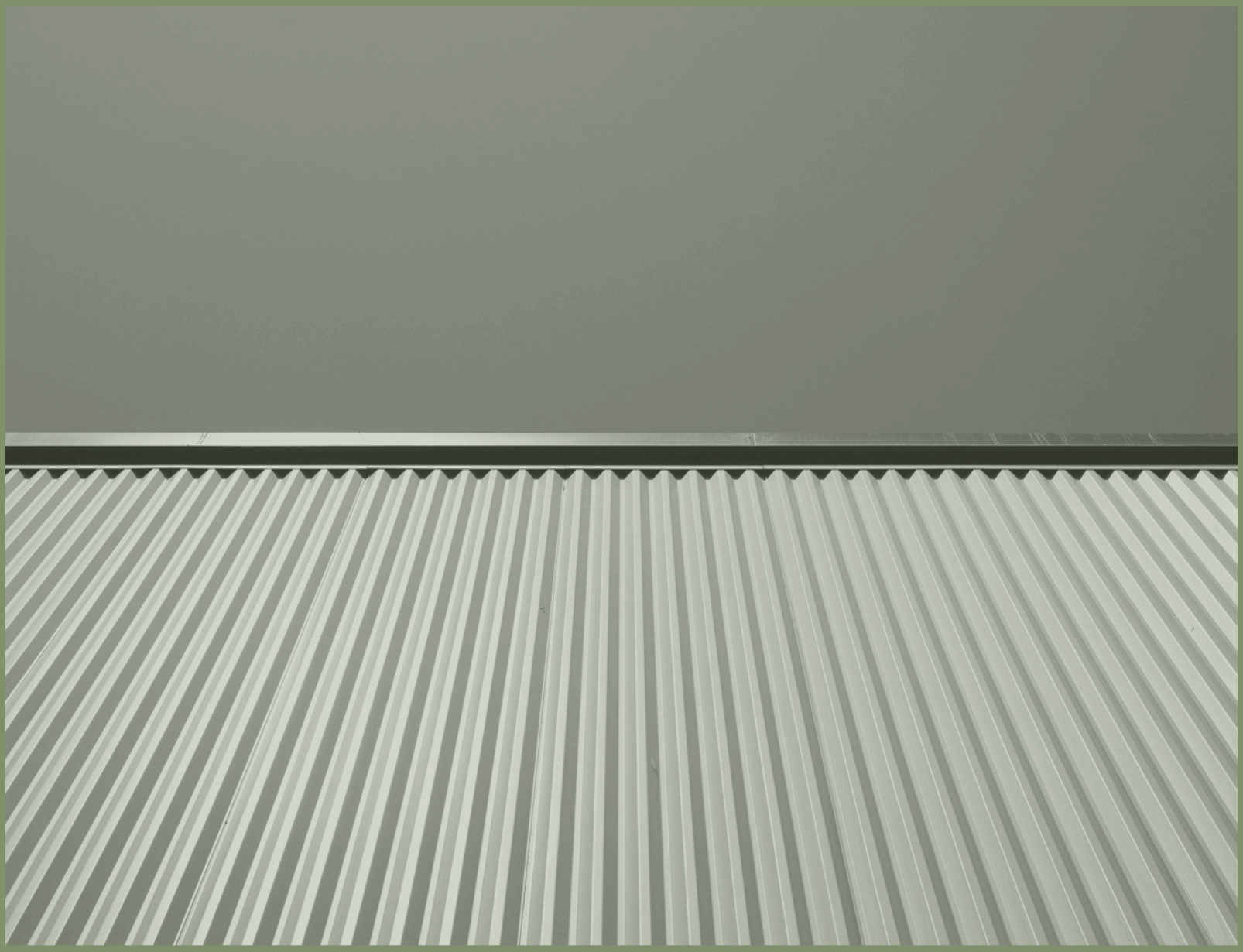
Investor preference for concrete tilt-wall "big-box" shells has increasingly concentrated capital into that subtype, even as small-bay and infill product (much of it PEMB) show tighter operating metrics, creating room for relative mispricing.[43] Metal industrial assets often transact at higher capitalization rates than bulk/tilt-wall peers even where operating data indicate stronger occupancy/rent performance for smaller suites.[44] Brokers cite wide spreads depending on size, risk, and market—e.g., Newmark has noted a historical 50–100 bps small-bay premium versus bulk distribution, and wider dispersion has been observed across deal profiles in 2024–2025.[45] Existing PEMBs acquired at ~7–8% cap rates in Texas can produce compelling risk-adjusted returns after stabilization and lower recurring capital expenses relative to heavy concrete shells.[46]

Replacement economics have tilted against new development as construction financing remains selective and costs remain elevated versus pre-2020 levels, enhancing the relative value of existing infill assets.[47] Texas industrial construction costs have risen by ~30% since 2020, reducing the viability of some ground-up projects at today's rents.[48]

Cost segregation and after-tax benefits

The IRS Cost Segregation Audit Techniques Guide permits reclassification of qualifying property (e.g., certain electrical, dedicated HVAC, specialty finishes, and process equipment) into 5, 7, or 15-year recovery periods when supported by a proper study.[49] Because many industrial build-outs include movable components and tenant-specific systems that qualify as § 1245 property, owners of PEMBs often capture substantial accelerated depreciation when properly identified and documented by an engineering-based analysis.[50] Engaging a cost-segregation specialist is widely recognized as best practice because the IRS evaluates the quality of studies and supporting engineering detail in examinations.[51]

Existing PEMBs can produce compelling risk-adjusted returns and lower recurring capital expenses relative to heavy concrete shells.



Public incentives

Texas public incentive systems amplify the strengths of PEMBs and make their advantages easier to monetize. The Triple Freeport exemption fuels demand from distributors and manufacturers who already prefer small-bay PEMBs, which translates to stronger leasing and steadier rents.[52] Local agreements under Chapters 380 and 381, along with the Texas Enterprise Fund, reward rapid job creation and swift capital deployment, and PEMBs are designed to deliver both.[53]

Energy rebates align perfectly with standing-seam roofs and modular interiors, allowing owners to capture savings while tenants keep operating.[54] The Voluntary Cleanup Program adds another layer of value by protecting investors as they reposition older industrial parcels into productive assets.[55] Together, these programs accelerate the performance of PEMBs and give investors a clearer path to capturing upside.

Risk and diversification

Metal industrial assets frequently accommodate multiple tenants in suites ranging from a few thousand to several tens of thousands of square feet.[56] This tenant mix reduces exposure to any single credit event.[57] A modeled comparison shows that ownership of ten 5,000-square-foot suites results in vacancy volatility of about 5%, whereas reliance on one 50,000-square-foot tenant produces more than 10% volatility across a leasing cycle.[58] In addition, shorter lease terms allow rents to adjust more quickly to inflation and changing market conditions, providing a natural hedge against economic shifts.[59]

A Balanced Perspective

Despite the advantages of PEMBs, tilt-wall construction is not an obsolete asset class. It remains a mainstream delivery method for low-rise industrial and commercial buildings.[60] For large regional distribution centers that prioritize very tall clear heights (roughly 32–40 feet), wide bay spacing, and robust roof loading, site-cast concrete wall systems are commonly paired with steel roof structures and are often the right choice.[61]

Architectural covenants and local design standards in planned industrial districts sometimes require masonry or concrete façades (including tilt-wall) as a condition of approval.[62] Zero-lot-line sites often require higher-rated exterior walls; solid concrete can be the simpler path to compliance.[63]

Insurance carriers classify buildings by construction type, which directly affects property insurance costs. Tilt-up buildings with concrete exterior walls and noncombustible steel roofs usually qualify as Masonry Noncombustible (ISO Class 4).[64] This category is often rated more favorably than Noncombustible (Class 3), which is commonly applied to light metal buildings.[65] Because of this, owners of metal buildings fare well to work closely with brokers to negotiate competitive coverage and make sure lenders understand the performance of modern PEMBs.

These considerations show that tilt-wall still has a place in the market, but they also highlight its limits. For the vast majority of tenant requirements, tilt-wall delivers rigidity at a premium, while PEMBs deliver flexibility, speed, and superior risk-adjusted value.

For most tenants, tilt-wall delivers rigidity at a premium.

PEMBs deliver flexibility, speed, and superior risk-adjusted value.

Conclusion

Investing in metal industrial buildings is about seeing past outdated perceptions. In Texas, these structures have demonstrated remarkable resilience, adaptability, and income stability.[66] They house the businesses that keep the economy running, including service contractors, manufacturers, and distributors, and they do it efficiently.[67] While tilt-wall will always have a place in large regional logistics, PEMBs deserves consideration as a core holding.[68] Pre-engineered metal buildings outperform tilt-wall on cost, speed-to-market, and flexibility. By focusing on what matters: value delivered through resilient, adaptable space, investors can unlock an underappreciated asset class and capitalize on Texas.[69]


270-G
270-D

Table A: Build and lifecycle head-to-head[70]		
Topic	**PEMB**	**Tilt-Wall Concrete**
Construction Speed	Shortens timelines by up to 40% vs tilt-wall	Baseline longer schedules
Roof Warranty	Standing-seam metal: 25-year weathertightness; expected 60+ year service life	TPO (standard on tilt-wall): 15 years at 45-mil; 20 years at 60-mil
Storm Recovery	Metal roof can generally be recovered after storm damage	TPO roof often require full replacement
Alterations / Openings	Cut-and-bolt modifications (add docks, windows, mezzanines) with minimal downtime	New openings are engineering mods requiring analysis and reinforcement; extends schedule and capex

Table B: Texas operating outcomes by form[71]		
Market	**PEMB Concrete**	**Tilt-Wall Concrete**
Austin–San Antonio corridor	Flex (much of it PEMB) vacancy about 5%	Large tilt-wall logistics buildings have double-digit vacancy
Houston	Small/mid-bay often PEMB; sub-250k sf rents about 10% higher (size proxy)	Big-box tilt-wall 500k sf+ face slower lease-up and higher vacancy
Dallas–Fort Worth	Infill metal properties see virtually no availability; tenants pay premiums for flexible suites	Peripheral tilt-wall mega-warehouses show elevated vacancy and slower lease-up

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