



## MEMO

To: Michigan Economic Development Corporation; Michigan Strategic Fund  
From: SB Friedman Development Advisors  
Date: May 18, 2018

RE: **Bedrock Transformational Sites – Underwriting Analysis**

### Executive Summary

Bedrock Management Services LLC (the “Developer” or “Bedrock”) has requested approximately \$618 million in public assistance to be reimbursed over 30 years for a proposed mixed-use, multi-site development in downtown Detroit (the “Project”). The Developer has requested assistance under the Transformational Brownfield Plan (TBP) amendment to the Michigan Brownfield Redevelopment Financing Act. SB Friedman Development Advisors (SB Friedman) has been engaged by the Michigan Economic Development Corporation (MEDC) on behalf of the Michigan Strategic Fund (MSF) to conduct an independent third-party financial and underwriting review of the Developer’s proposed project, as required under state statute. The goal of SB Friedman’s engagement is to conduct a sufficient review, underwriting and financial analysis to evaluate the reasonableness of the Project’s key assumptions, the financial feasibility of the Project with and without TBP assistance, and the financing gap/level and structure of TBP assistance required to make the Project financially feasible.

The Developer has estimated total Project costs of \$2.15 billion, for the following four components:

- **One Campus Martius (OCM) Addition.** A \$94.8 million expansion of the 14-story OCM office building at the corner of Gratiot Avenue and Farmer Street, consisting of approximately 270,000 square feet of office space and 39,000 square feet of event and auditorium space.
- **Book Tower.** A \$311.4 million historic rehabilitation of the 13-story Book Building and 38-story Book Tower into a mixed-use development consisting of a 200-key hotel with approximately 40,000 square feet of event space, 95 residential units, 106,000 square feet of office, 29,000 square feet of ground-floor retail, and a 400-space above-ground parking structure at the southwest corner of Grand River Avenue and Washington Boulevard.
- **Monroe Blocks.** An \$830.1 million new construction development consisting of several low- and mid-rise buildings and two high-rise towers organized around public space. Monroe Blocks will include approximately 814,000 square feet of office, 482 residential units, 169,000 square feet of retail, and 1,261 underground parking spaces. The Monroe Blocks site is currently predominantly vacant and bounded by Monroe Street, Randolph Street, Bates Street, Cadillac Square and Woodward Avenue.
- **Hudson’s Site.** A \$909.0 million new construction, mixed-use high-rise 52-story tower with 330 residential units, 93,000 square feet of exhibition space, and a SkyDeck, as well as a mid-rise podium that contains 360,000 square feet of office space and 168,000 square feet of event space. Approximately 103,000 square feet of retail

space will be included on the Hudson's Site, along with 711 underground parking spaces. The currently vacant Hudson's Site is located on the southeast corner of Woodward Avenue and Grand River Avenue.

This **Executive Summary** is intended to provide a high-level overview of SB Friedman's analysis and results. Additional detail and supporting documentation is provided in the full memorandum and associated Appendices.

## **APPROACH**

SB Friedman evaluated the reasonableness of key pro forma assumptions by benchmarking the Developer's assumed costs, revenues, expenses and financing assumptions against industry standards and similar first-class downtown projects in Detroit and other Midwestern cities. SB Friedman used a variety of sources to conduct this evaluation, including data from the Developer, SB Friedman's in-house database with detailed underwriting metrics for similar projects we have reviewed in the downtowns of other major Midwestern cities, information from MEDC regarding recent and proposed downtown Detroit developments, publicly available data on additional projects, industry sources (e.g., RS Means, Institute for Real Estate Management (IREM), PricewaterhouseCoopers), and subscriptions to data sources (e.g., CoStar, Real Capital Analytics, Esri Business Analyst). Additional clarifying information was provided by the Developer and its consultants through correspondence, conversations and written materials.

In addition, SB Friedman evaluated the Developer's TBP tax revenue projection assumptions using data from a Plante Moran analysis prepared for the Developer as well as data obtained from CoStar, U.S. Census, U.S. Bureau of Labor Statistics, Building Owners and Managers Association, STR, and data and interviews with the Detroit Assessor's Office.

Additional detail is provided in the Methodology section.

## **UNDERWRITING FINDINGS**

### **Operating Assumptions**

Overall, the Developer's assumptions regarding operating income and expenses of various components of the Project appear to be reasonable. As would be expected for a transformative project, the assumed office, retail and residential rents include premiums over existing product in downtown Detroit. The Project's average residential rents on a per-square-foot basis are anticipated to exceed the current top of the market average rents by 25-35%. Office and retail premiums are expected to range from 0-30%+, depending on the Project component. The assumed average daily rate for hotel rooms in the Project is equivalent to current new boutique hotel room rates downtown. The Developer's assumption that the Project's hotel rooms will not command a premium over the newest property appears to be reasonable, given that a large number of hotel rooms are proposed in downtown Detroit. This additional supply in coming years may depress growth in room rates.

Operating expense assumptions for a majority of the components and land uses appear to be reasonable, falling within typical ranges based on industry standards, SB Friedman's review of similar projects, and Developer operating data for certain existing projects in downtown Detroit. However, the expense load for the office component of Hudson's Site was substantially higher than other office space in the Project and exceeded the typical range of expenses. No additional documentation or explanation for the additional expenses was provided, thus SB Friedman adjusted the Hudson's Site office expenses per square foot to match those of the Monroe Blocks for the purposes of evaluating the Project's need for assistance.

No third-party feasibility study indicating potential revenue and expenses of the event and exhibition space was provided by the Developer. Event and exhibition space operating data is not available through subscription databases that provide data on other land uses. Furthermore, because the operations of such space are highly dependent upon build out, anticipated users, and local competitive supply and demand factors, SB Friedman was not able to evaluate the Developer's revenue and expense assumptions using comparable space in other markets. The net operating revenue (NOI) related to event and exhibition space totals approximately 10% of the overall Project NOI. While these revenues and expenses therefore influence Project revenues and returns, the impact of variation in event/exhibition NOI would be less substantial than changes to assumptions for the office and residential components, which are the predominant land uses.

The Developer's assumptions regarding the pace of absorption and stabilized vacancy for each use appear to be reasonable, based on the absorption and vacancy of similar projects in downtown and the Detroit region, and SB Friedman's experience with projects elsewhere. The Developer has assumed 3% annual growth in revenues and expenses over the period of analysis; both of these escalation factors are within escalation ranges consistent with recent and anticipated inflation rates.

Overall, the Developer has assumed the Project will achieve a substantial premium on current downtown Detroit rents, which presents risk that the Project may not achieve pro forma rents and therefore depress equity returns. In the case of the office program, this risk is mitigated somewhat in that the Quicken Loans family of companies is expected to be available to lease 45-50% of the office square footage associated with the Project. However, the materials provided to SB Friedman do not appear to indicate as clear of a risk mitigation strategy for residential rental rates. As discussed below, SB Friedman has therefore included a rent sensitivity scenario in which the residential rents achieve only a 10% premium above the top of the Detroit downtown market.

### **Construction Costs**

To assess the reasonableness of the Project development costs, SB Friedman evaluated 1) whether there was sufficient documentation from the Developer regarding the basis for the cost estimates, and 2) whether the costs, when analyzed overall and by typical cost categories (e.g., acquisition, hard costs for core and shell, hard costs for fit-out, soft costs), appear to be reasonable based on industry benchmarks and projects of a similar type.

The proposed Project is in preliminary stages of pre-development, with the Hudson's Site, Book Tower, Monroe Blocks Phase II and OCM Addition components in the conceptual or master plan design phase. The Monroe Blocks Phase I component has progressed further than other components, with 100% schematic design completed. Preliminary cost estimates for the Project are therefore based on the anticipated massing, mix of uses, and fit-out standards for the buildings, rather than being based on more detailed design and specifications. The Developer provided contractor estimates and supporting documentation for the Hudson's Site, Monroe Blocks and Book Tower. No contractor estimates or backup documentation was provided for the OCM Addition.

SB Friedman compiled cost information for comparable first-class downtown mid- and high-rise projects in major Midwestern cities (Chicago, Milwaukee, Kansas City, Minneapolis, Cincinnati), each of which represent significant new construction or historic rehabilitation projects in those markets. To ensure an "apples to apples" comparison with the proposed Project, SB Friedman adjusted all costs to the midpoint of Project construction (2019 for the OCM Addition and Book Tower; 2020 for Monroe Blocks and the Hudson's Site) and to Detroit using industry indices. All costs were allocated by land use. Following adjustments and allocation of costs by land use, a range of costs was identified by land use. SB Friedman then calculated a weighted average of costs for the most comparable projects. Two luxury skyscraper mixed-use condominium and luxury hotel buildings in Chicago were excluded from the analysis: the 98-

story Trump Tower Chicago, and the 94-story Vista Tower, which is currently under construction. Certain structural design elements and costs are intrinsic to such “supertall” buildings, and both buildings provide a level of finish appropriate for luxury condominiums but atypical of even high-end rental residential buildings.

The early stage of design requires that a certain level of cost contingency be built into the budget to account for design changes and construction cost inflation prior to construction start. The Developer’s and contractors’ stated contingency methodology and overall contingencies appear to be reasonable for the current level of design on a percentage basis. The contractor estimates also include an allowance to meet or make payments associated with Detroit local worker requirements.

SB Friedman’s review indicates that the estimated costs for parking within the Project (\$33,600/space for above-ground and \$48,200-57,700/space for below-ground parking spaces) and the OCM Addition office space are at the high end of typical cost ranges, but do not substantially exceed costs for peer Midwestern projects. The Developer’s hard cost estimates for event and exhibition are \$587/sf for Book Tower and \$815/sf for Hudson’s Site. Such costs are difficult to benchmark and evaluate because they vary widely based on anticipated uses and buildout. SB Friedman has reviewed costs for smaller hotel-related event spaces in other projects that are similar to the Developer’s range of costs, though the event spaces are not directly comparable to what is proposed for the Project.

The Developer’s cost estimates for the remaining residential, office, retail and hotel components of the Project substantially exceed the top of the range of development costs for comparable mid- and high-rise buildings throughout the Midwest:

- The Developer’s total development costs (TDC) for the office components of the Project in the Hudson’s Site, Monroe Blocks and Book Tower range from \$516-705/sf, and retail costs range from \$500-705/sf. Office and retail TDC for comparable Midwest projects ranges from \$220-460/sf.
- For the residential components, the Developer’s TDC of \$572-768/sf exceed the range of \$240-390/sf across comparable projects in Midwestern cities.
- For the hotel component, the Developer’s TDC of \$770/sf exceed the Midwest comparable project range of \$370-695/sf.

The Developer has provided additional documentation from contractors identifying Project-specific costs that would result in residential, office and hotel costs in the Project exceeding first-class Midwest comparables. Such costs include extraordinary costs related to site-specific conditions that impact foundations and the structure of the Hudson’s Site tower; structural features related to the mix of uses, including transfer load grids above event/exhibition space; design features integral to the Project intent, such as multiple building elements with differing setbacks on the Monroe Blocks; and labor shortage, labor efficiency and Detroit Executive Order penalties related to the availability of skilled construction labor in Detroit. The additional costs also include premium features, including an infinite floorplate in the office space on the Hudson’s Site, premium exterior surfaces, including terra cotta cladding on Hudson’s Site and Monroe Blocks, and luxury residential fit-out.

Certain of these costs had already been allocated to other land uses (e.g., SkyDeck and exhibition space) or already appear to be included in the Midwest comparables figure (e.g., upgraded HVAC to meet LEED/Well standards). SB Friedman therefore identified a subset of the extraordinary and premium features that were not accounted for elsewhere. These costs total approximately \$296.1 million, as shown in more detail in **Figure 13** on page 23, and include:

- \$76.4 million in structural features related to the site, mix of uses, and design of the Project;
- \$48.1 million in labor market premiums;
- \$30.3 million in costs related to the Book Tower historic rehabilitation above recent historic rehabilitation costs in Detroit; and
- \$141.3 million related to premium features, materials and fit-out planned by the Developer.

SB Friedman has concluded that extraordinary costs totaling \$154.8 million, associated with structural requirements and labor, are reasonable based on site conditions and overall design requirements to meet the broad intent of the Project in a manner consistent with the quality and character of the peer first-class projects in other downtowns. Approximately \$141.3 million in premium feature costs are related to design choices made by the Developer and fall outside the range and character of peer projects. The Developer has indicated the improvements are necessary for the success of the Project. Furthermore, the MEDC staff and City of Detroit Planning and Development Department have indicated that, as a policy, they support the level of design and finishes proposed for the Project.

Therefore, for the purpose of evaluating the Project's need for TBP assistance, SB Friedman adjusted the average Midwest construction costs for office, residential, hotel and retail space upwards to account for the extraordinary and premium feature costs identified above. Only a portion of the \$296.1 million was allocated to office, residential, hotel and retail space by the Developer's contractors and SB Friedman. The remaining costs were allocated to exhibition/event space, parking and the OCM Addition, which were not adjusted from the Developer submittal. Following addition of the extraordinary costs and premium features to the Midwest average cost baseline, approximately \$398.8 million of the Developer's budget has not been accounted for in the costs associated with peer comparables or in Project-specific factors identified by the Developer. Therefore, for the purposes of evaluating the Project's need for TBP assistance, SB Friedman has tested a scenario in which Project costs are reduced by \$398.8 million, or approximately 18.5%.

## Financing

The Developer identified preliminary financing sources for each component of the Project, but no documentation from potential lenders has been provided. The historic Book Tower project is expected to be financed with Historic Tax Credit (HTC) equity, conventional debt and Developer equity. All other Project components are anticipated to be financed with conventional debt and equity. The Developer has not determined how the TBP revenue stream will be financed but indicated it may be bond financed or could be considered as Project cash flow by conventional lenders. The Developer does not expect to have formal discussions with lenders, HTC syndicators and bond underwriters until the request for TBP assistance has been considered. One affiliate of the Developer is expected to provide all required equity.

The Developer's financing assumptions include relatively low leverage and a relatively high amount of equity during both construction and operations. The high level of equity commitment at the outset of construction is probably necessary given the perceived construction and lease-up risk of a transformational project. The strong financial commitment of the Developer is a positive for the Project. However, the debt to equity ratio may change, potentially substantially, as Project design and costs are finalized, and as lenders underwrite the Project and propose construction financing terms. Upon stabilization, the Project is likely to be viewed more favorably by lenders and obtain more advantageous debt financing.

Therefore, for the purposes of evaluating the Project's need for TBP assistance, SB Friedman adjusted the Developer's assumed 1.5x debt coverage ratio (DCR) for permanent financing to 1.3x, which reflects more typical market terms. This adjustment results in loan-to-value ratios more similar to recent permanent financing and refinancing terms in Detroit,

as identified using Real Capital Analytics. SB Friedman has reflected the reduction of equity that results from increased leverage at conversion to permanent financing. The equity level would be likely to change further when the Developer pursues bond or other financing for the TBP revenue stream and undertakes refinancing or sale of Project components, though such scenarios have not been evaluated here.

### TBP Revenue Projections

Overall, SB Friedman has concluded that the Developer's TBP revenue projections appear to be reasonable. Current wages, employment sectors and employment density in downtown Detroit and the Detroit region align with the Developer's assumptions regarding potential employment and income tax generated by employees and residents of the Project. Assessed value assumptions for real property were reviewed based on comparable developments in downtown and confirmed with the Detroit Assessor's Office. While SB Friedman noted several adjustments or sensitivities to assumptions that could be made, the net effect of making these adjustments was not significant and would not materially impact the Project's financial returns.

### FINANCIAL RETURNS ANALYSIS

SB Friedman evaluated the Project's need for TBP tax increment financing (TIF) assistance under three scenarios. In each scenario, the office operating expenses were reduced for the Hudson's Site, permanent debt was sized using the Developer's parameters and 1.3x DCR, and ongoing TBP assistance was recognized as annual cash flow. The scenarios are as follows:

1. **Developer Cost Scenario** | We used Project costs presented by the Developer and full capture of all available TBP benefit, as projected by Plante Moran.
2. **Adjusted Cost Scenario** | In this scenario, we used adjusted costs for the residential, hotel, office and retail uses, using the average cost of first-class Midwest comparables as a baseline and then added the extraordinary and premium feature costs applicable to each Project component. This results in a reduction of approximately \$398.8 million in costs, related to cost differences between the Project and Midwest cost baseline that have not been specified by the Developer. TBP TIF projections were adjusted downward to account for the reduced construction period costs and labor activity.
3. **Adjusted Cost Scenario + Residential Rent Sensitivity** | Using the same cost adjustments in Scenario 2, residential rents were adjusted downward to reflect a 10% premium over existing downtown per-square-foot rents (\$2.75/sf in 2018). This sensitivity analysis evaluates the impact on financial feasibility of not achieving the 25-35% residential rent premium currently assumed by the Developer. TBP TIF projections were adjusted downward to account for the reduced construction period costs and labor activity. Income tax capture assumptions were also adjusted to reflect reduced resident incomes aligning with the lower rent assumptions.

MEDC TBP Program Guidelines specify that the leveraged annual cash-on-cash return for a project receiving TBP assistance cannot exceed an average of 15% over the TBP assistance period. While Project financing is preliminary and variation in any financing assumptions would impact the amount of cash equity contributed by the Developer and potentially significantly alter the cash-on-cash returns, SB Friedman has primarily evaluated the need for TBP assistance based on MEDC Guidelines.

SB Friedman also considered two unleveraged return metrics, stabilized yield on cost and unleveraged IRR, to consider the overall viability of the Project, rather than equity returns based on a particular financing structure. To account for the mix of Project uses, SB Friedman established a range of market-appropriate, risk-adjusted rates of return for each land use, which were then weighted in aggregate to each land uses’ percentage of overall Project net operating income. The following ranges were established for the Project: 7.0-7.7% for stabilized yield on cost and 8.3-8.8% for unleveraged internal rate of return. The results of the returns analysis are described below and shown in **Figure 1**:

- Developer Cost Scenario** | Under this scenario, Project returns without TBP assistance are below target return thresholds, indicating the Project is not feasible without TBP assistance. With the full requested \$618.0M in TBP assistance, the Project achieves an average 9.2% cash-on-cash return through 20 years of stabilized operations and is below the unleveraged return ranges listed above.
- Adjusted Cost Scenario** | Under this scenario, TBP assistance is reduced to \$406.0 million, with assistance ending after Year 20 of operations. The average cash-on-cash return from stabilization through Year 20 is 15.0%. The reduced assistance results in a stabilized yield on cost of 7.2%, which is within the target return range, and unleveraged IRR of 7.9%, which is below the target range.
- Adjusted Cost Scenario + Residential Rent Sensitivity** | Under this scenario, TBP assistance totals \$496.3 million, with assistance ending after Year 24 of operations. The average cash-on-cash return from stabilization through Year 24 is 14.9%. Any additional TBP assistance in Year 25 would result in the average cash-on-cash return exceeding the 15.0% MEDC guideline. The reduced assistance results in a stabilized yield on cost of 7.0%, which is at the low end of the target return range, and unleveraged IRR of 7.7%, below the target range.

**Figure 1. Required TBP Assistance to Achieve Financial Viability**

Scenario [1]	Total Development Cost	TBP Assistance			Returns with Assistance		
		Total Assistance	Construction Period Assistance	Ongoing Assistance	Average Cash-on-Cash Return	Stabilized Yield on Cost [2]	Unleveraged IRR
1. Developer Cost Scenario	\$2.15 B	\$618.0 M	\$78.8 M	\$539.2 M	9.2%	5.9%	6.5%
2. Adjusted Cost Scenario	\$1.75 B	\$406.0 M	\$64.5 M	\$341.5 M	15.0% [3]	7.2%	7.9%
3. Adjusted Cost Scenario + Residential Rent Sensitivity	\$1.75 B	\$496.3 M	\$64.5 M	\$431.8 M	14.9% [4]	7.0%	7.7%
SBF RETURN BENCHMARK						7.0-7.7%	8.3-8.8%
MEDC TBP GUIDANCE: MAXIMUM AVERAGE TBP RETURN DURING ASSISTANCE PERIOD						15.0%	

[1] All scenarios reflect an adjustment to Hudson’s Site operating expenses and 1.3 DCR on permanent financing. In Scenario 3, income tax capture assumptions were adjusted to reflect reduced resident incomes aligning with the lower rent assumptions.

[2] Overall project stabilization in 2024 (Year 5)

[3] Stabilization through 2039 (Year 20)

[4] Stabilization through 2043 (Year 24); any additional assistance in Year 25 would result in an average cash-on-cash return exceeding the 15.0% MEDC guideline

Source: Bedrock, SB Friedman

## CONCLUSIONS/RECOMMENDATIONS

The Developer's proposed Project is likely to be transformative to downtown Detroit, bringing a density of high-end new construction and renovated product that is expected to attract new office workers, residents and tourists to downtown. While the projected operating revenues associated with the Project are generally expected to exceed rents achieved in existing downtown developments, the Project rents appear to be insufficient to support construction costs associated with the Project's mix of uses, substantial underground parking, and level of quality and design.

SB Friedman's financial analysis primarily considered the leveraged annual cash-on-cash metric. With the full Developer estimated construction costs, and permanent financing sized using a 1.3 DCR, the Project requires the full \$618.0 million in TBP assistance to be financially viable. If costs are equal to the average of recent high-end projects in other Midwestern cities, adjusted upward for extraordinary and premium costs associated with the Project, TBP assistance would be reduced substantially to \$406.0 million. In a scenario where the residential rents achieve only a 10% premium above the top of the Detroit downtown market, and costs equal the Midwest cost plus extraordinary and premium finishes scenario, approximately \$496.3 million in TBP assistance is needed to achieve financial feasibility.

The Developer's construction cost estimates for the Project substantially exceed development costs of high-end mid- and high-rise development in major Midwestern cities, including the latest luxury residential and best-in-class office developments in downtown Chicago. The difference in cost between the Project and peer projects appears to be related to site-specific conditions, structural features to support the mix of uses, deterioration and other costs associated with the historic rehabilitation of the Book Tower, labor shortage premiums, and premium exterior and interior finishes. Approximately \$112 million in costs is associated with design elements and premium finishes for the residential, office, retail and hotel components of the Project that do not appear to contribute to the Project's cash flow. SB Friedman estimates that if these elements were eliminated from the Project, TBP assistance could be reduced approximately dollar for dollar. The premium costs do not result in additional cash flow, so each additional budget dollar above a certain level must be funded with equity and then fully serviced with TBP assistance during operations. Under guidance from MEDC, SB Friedman's analysis includes these premium costs because of their potential transformational impact on downtown Detroit.

Two Project components are primarily driving the financial gap and need for TBP assistance: relatively high construction costs, including premium features, and conservative financing assumptions. While the Developer has identified certain cost components that cause Project costs to exceed typical first-class Midwest downtown projects, nearly \$400 million in Project costs are not accounted for after adjusting the average Midwest cost baseline upward to account for extraordinary costs and premium finishes. Furthermore, the state TBP statute allows for reductions of up to 10% in TBP project budgets before any adjustments to TBP assistance are required. Given the range of costs identified between the Developer submittal and typical Midwest downtown costs, adjusted for particular Project components, and the range of TBP assistance required to achieve viability under alternate cost scenarios, it is recommended that the TBP assistance structure be such that cost savings are reflected in the TBP assistance. In addition, there is currently great uncertainty related to the Developer's ability to finance the TBP revenues over time; the Developer pro formas and SB Friedman's analysis assume that the TBP revenues are not financed by a third-party entity, even after stabilization. Changes in the financing structure would impact the amount of equity in the Project and equity returns. SB Friedman therefore strongly recommends that the TBP assistance structure and redevelopment agreement require two "true ups" to right-size public TBP assistance at the time costs are solidified and conversion to permanent financing occurs for each Project component:

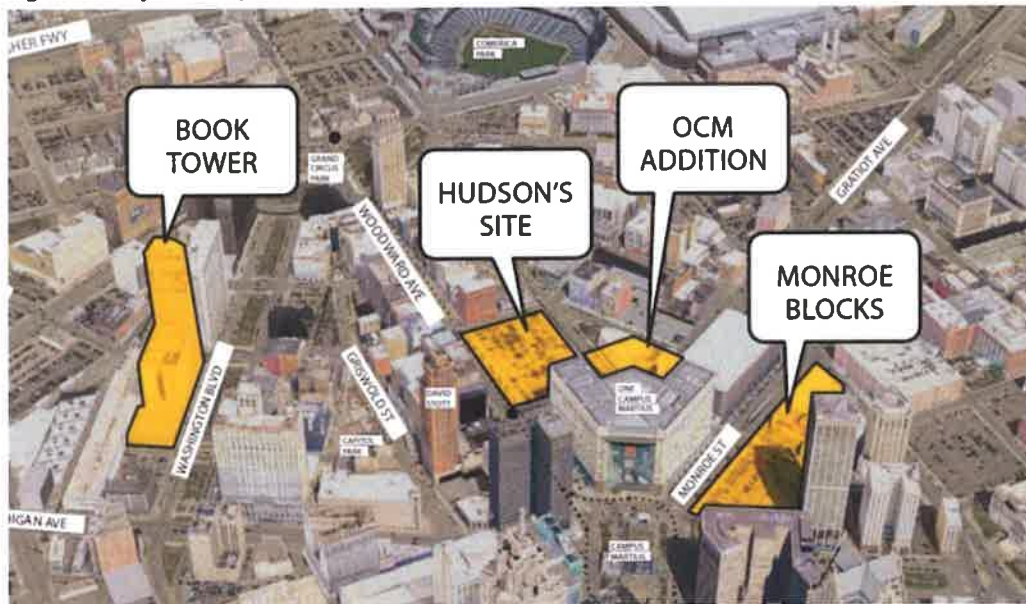


- **Construction Cost Verification and Savings Capture** | Costs could be verified at the time competitive bids are awarded, with assistance modified based on approved bids. Alternatively, costs could instead be verified following construction completion, comparing anticipated costs indicated in the pro formas to actual costs incurred, at the point at which a certificate of occupancy is issued for each component of the Project. The benefit of the latter scenario is that actual construction costs are verified, with the Developer submitting owner’s sworn statements for all costs. It is our understanding MEDC intends to certify costs after construction completion, and is putting a process in place to do so. In order to incentivize the Developer to reduce costs, any cost savings could be shared between the Developer and the state at a level to be negotiated prior to finalizing the development agreement. Construction-period assistance would be right-sized during construction based on actual costs incurred, and any resulting reduction in assistance during operations would first be taken from income tax revenue, as required by statute, and then real and personal property tax revenues.
- **Upside Sharing** | Following stabilized occupancy, a re-underwriting should be triggered when each Project component or the Project as a whole is converted to permanent financing, is sold, is refinanced or undergoes another financial change, such as monetization of the TBP revenues. At this point, the Project would be evaluated using actual costs, revenues, operating expenses and financing. The Developer would be allowed to maintain an agreed-upon return on equity (as indicated in the original underwriting or another market-appropriate threshold), with any additional revenue – the upside – shared between the Developer and state at a set ratio (e.g., the ratio of TBP assistance to developer equity in the Project at construction completion). This upside sharing provision could be structured such that there would be no impacts to the Developer’s ability to finance the TBP revenue stream.

## Project Characteristics

The proposed \$2.15 billion Project consists of four related components, totaling approximately 4.2 million gross square feet, in Downtown Detroit. The Project locations are shown in more detail in Figure 2.

Figure 2. Project Components/Map



Source: Bedrock Management Services LLC

## PROJECT PROGRAM

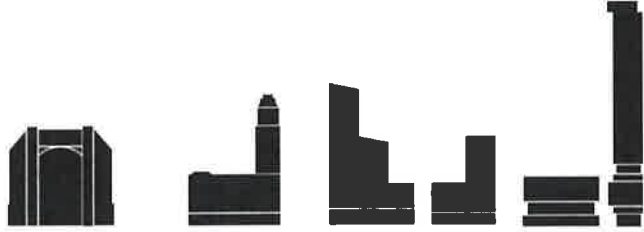
Each component involved a mix of uses. The components combined include over 900 residential units, approximately 1.5 million square feet of office, 300,000 square feet of retail, 200 hotel rooms and 2,400 parking stalls. Components also include less traditional space including event and exhibition space, a SkyDeck and public plazas. The project program for each component is identified in Figure 3.

## PROJECT SCHEDULE

The Developer has indicated the four components will be developed concurrently, with construction beginning in 2017 and completed in 2022. **Figure 4** includes the project schedule for each component.

- **OCM Addition.** Construction is expected to begin in early 2018 and be completed in late 2019;
- **Book Tower.** The Developer commenced early stabilization work in early 2016 to ready Book Tower for renovation, which is expected to begin in the first quarter of 2019 and be finished in early 2021;
- **Monroe Blocks.** Construction of Phase I, which includes an office tower, 136 residential units, approximately 100,000 square feet of retail and below-grade parking, is expected to begin in spring 2018, and be fully completed in early 2021. Construction on Phase II, which includes 346 residential units and another 44,000 square feet of retail is anticipated to begin in Summer 2019 and be completed by early 2022; and
- **Hudson's Site.** The Developer broke ground on the Hudson's Site in December 2017 and the project is expected to be completed by in mid-2022.

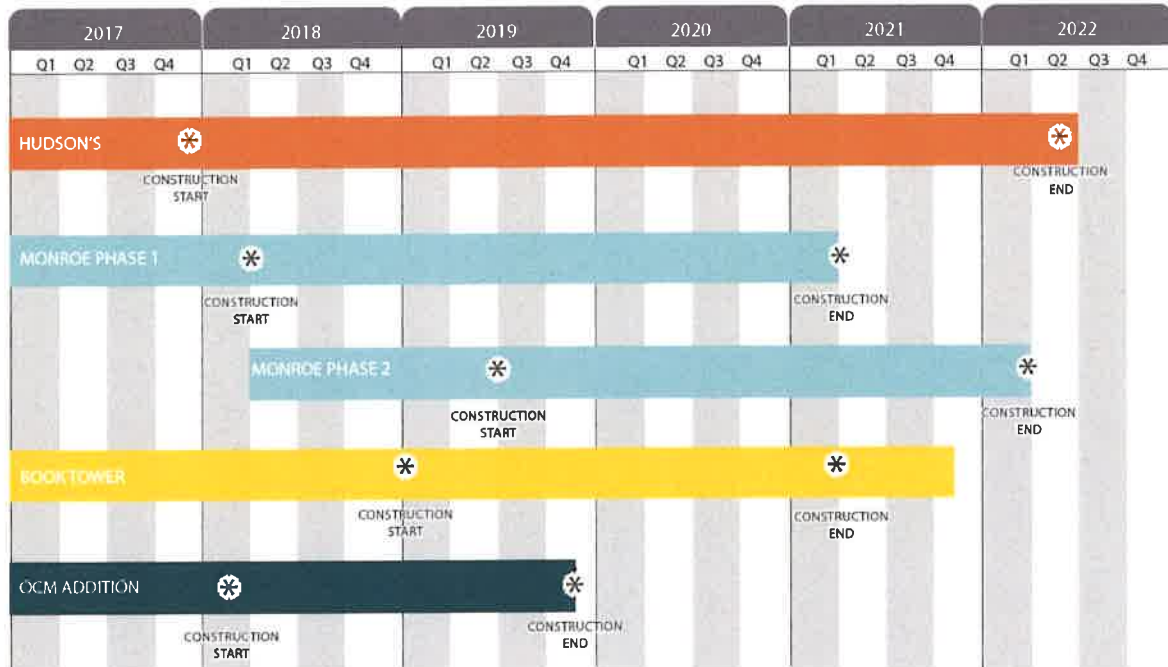
Figure 3. Project Program



PROGRAM	OCM ADDITION	BOOK TOWER	MONROE BLOCKS	HUDSON'S BLOCK	PROGRAM TOTALS
OFFICE (GSF)	269,160	106,400	814,000	262,662	1,452,222
RETAIL (GSF)		28,890	169,000	102,805	300,695
RESIDENTIAL (GSF)		143,083	433,000	439,217	1,015,300
RESIDENTIAL (UNITS)		95	482	330	907
EVENTS	41,040	49,780		167,968	258,788
HOTEL (GSF)		106,400			106,400
HOTEL (KEYS)		200			200
EXHIBITION (GSF)				93,464	93,464
PROJECT TOTALS (GSF)	310,200	434,553	1,416,000	1,066,116	3,226,869
PUBLIC SPACE (ACRES)			1.50	0.25	1.75
PARKING (SPACES)		400	1,261	711	2,372
TOTAL DEVELOPMENT COSTS [1]	\$94.8 M	\$311.4 M	\$830.1 M	\$909.0 M	\$2.07 B

[1] Before construction materials sales tax exemption and construction labor income tax capture  
 Source: Bedrock. All areas are measured in Gross Square Feet and exclude Parking, BOH, and Public Space.

Figure 4. Project Schedule



Source: Bedrock

## Methodology

SB Friedman was engaged by MEDC, on behalf of the MSF, to assist with the review and underwriting of a request from the Developer for financial assistance under the TBP amendment to the Michigan Brownfield Redevelopment Financing Act. Our work included:

- Reviewing the Project pro formas, TBP projections, Transformational Brownfield Plan, and supporting information;
- Conducting a conceptual review to evaluate the reasonableness of Project budgets;
- Evaluating the reasonableness of land purchase prices;
- Reviewing Project financing structures and terms;
- Analyzing Project operations and pro forma assumptions;
- Independently validating TBP projection calculations and assumptions;
- Conducting returns analyses and sensitivities to evaluate Project feasibility and Developer returns; and
- Recommending an appropriate level of public assistance and outlining potential structuring options.

Our methodology is outlined in the following section, with additional detail provided throughout this document. The purpose of this section is to clearly articulate processes undertaken in the course of our review and allow for all later sections of this document to focus specifically on the presentation of our findings and conclusions.

### PROJECT PRO FORMAS, TBP PROJECTIONS, TBP PLAN, AND SUPPORTING INFORMATION REVIEW

SB Friedman conducted a detailed review of material submitted by the Developer and requested supplemental data required for our analysis. We also engaged the Developer in subsequent conversations and correspondence to obtain additional information to best understand and validate the underlying Project assumptions.

Key information submitted by the Developer and reviewed by SB Friedman included:

- **Project pro formas** | Individual live pro formas for each of the four Project components, received January 10, 2018, including development budgets, sources and uses, 10-year cash flow and underlying project assumptions.
- **TBP projections** | Live TBP model, prepared by Plante Moran, and received January 19, 2018, which outlined assumptions and projected TBP tax exemptions and capture by Project component.
- **TBP plan** | Summary document approved October 12, 2018, detailing site plans, request for assistance, description of costs to be paid, summary of eligible activities and job creation estimates.

Supporting documentation requested and review by SB Friedman included:

- Construction cost documentation, including:
  - Walbridge estimating summary letter and opinion of probable cost for Book Tower
  - Walbridge Memo: Construction Costs for the Book Building and Book Tower Redevelopment Project
  - Turner Construction Company budget estimate for the Monroe Blocks, based on 100% Schematic Design for Phase I and Master Plan-level design for Phase II (2018)
  - Dharam Consulting cost estimate for Monroe Blocks Phase 1, based on 100% Schematic Design
  - Turner Memo: Construction Cost for the Monroe Blocks Project
  - SHoP Architects Hudson's Site Concept Design Narrative
  - Barton Malow concept design budget (2018) for the Hudson's Site
  - Barton Malow Memo: Construction Costs for the Hudson's Site Redevelopment Project – Rev. 3.30.18

- Dharam Consulting concept design construction cost and risk consultant report (2018) for the Hudson’s Site
- Hudson’s Core and Shell Cost Benchmarking, prepared by Developer
- Concept and schematic design (when available) drawings for Hudson’s Site and Monroe Blocks
- Project site plan and renderings for the OCM Addition
- Redevelopment term sheet for the Monroe Blocks (2016)
- Property transfer affidavits for Book Tower, the Monroe Blocks, and the Hudson’s Site
- Developer affiliate fee summary used to clarify fees paid to the Developer and its affiliates
- Third-party market studies, datasets and reports used to validate Project assumptions, including:
  - HR&A Residential and Retail Market Study
  - JLL Office Assumption and Market Demand Study
  - Dunn and Bradstreet office tenant data
  - Smith Travel Research (STR) 2017 HOST Almanac data
  - National Restaurant Association Operations Report
  - NRF Report on Wages in the Retail Industry

Throughout our engagement, SB Friedman also received written and verbal responses from the Developer to due diligence questions.

## CONCEPTUAL PROJECT BUDGET REVIEW

We conducted a conceptual review of Project development costs, as well as evaluated the available basis provided by the Developer for these estimates. Our review was conceptual in that it did not involve independent cost estimating of hard costs and was based on information from comparable projects and industry data. We reviewed the level of design/construction estimation performed by the Developer, as well as the embedded design/construction contingencies. We also compared estimated soft costs (i.e., architect fees, developer and affiliate fees, financing costs, legal fees) against comparable project and industry benchmarks. Budget items were evaluated by Project component or land use as either a percent of total development costs or on a per-gross-square-foot (GSF) or per-unit basis.

Budget line items were allocated to five SB Friedman-defined cost categories: acquisition costs, hard costs, soft costs, financing fees, and developer fees. We also adjusted the Hudson’s Site budget to reconcile with the affiliate fee summary provided by the Developer on February 9, 2018. This resulted in an increase to the Hudson’s Site developer fee (including the Bedrock construction management fee and the tenant coordination fee) from \$6.8 million in the pro forma to the \$28.3 million outlined in the affiliate fee summary. The difference in costs was removed from the owner contingency line item in order to hold constant the total development cost. This adjustment is reflected in the SB Friedman budget adjustment sections below.

To evaluate costs on a per-square-foot, per-unit, or percentage of total cost basis, SB Friedman compiled cost information for first-class downtown mid- and high-rise projects in major Midwestern cities (Chicago, Milwaukee, Kansas City, Minneapolis, Cincinnati), each of which represent significant new construction or historic rehabilitation projects in those markets. Two luxury skyscraper mixed-use condominium and luxury hotel buildings in Chicago were excluded from the analysis: the 98-story Trump Tower Chicago and the 94-story Vista Tower, which is currently under construction. Certain structural design elements and costs are intrinsic to such “supertall” buildings, and both buildings provide a level of finishes appropriate for luxury condominiums but atypical of even high-end rental residential buildings.

To ensure an “apples to apples” comparison with the proposed Project, SB Friedman used the following methodology to allocate and adjust costs for each project individually:

- Parking costs and gross square footage were separated from other costs and land uses.
- For mixed-use projects, costs were allocated by land use (e.g., office, retail, residential), using detail from the developer or cost estimates when available, or using gross square footage by land use.
- When possible, costs were allocated to key cost categories; in certain cases, total development costs (TDC) were used.
- All costs were adjusted to 2019 or 2020 dollars, whichever reflects the midpoint of construction for the relevant component of the Project.
- Costs for projects in other Midwestern cities were adjusted to Detroit using the 2017 RS Means City Cost Index.<sup>[1]</sup>

Following this process, a range of costs was established by land use for the purpose of evaluating Project costs. Two luxury skyscraper mixed-use condominium and luxury hotel buildings in Chicago were excluded from the analysis: the 98-story Trump Tower Chicago and the 94-story Vista Tower, which is currently under construction. Certain structural design elements and costs are intrinsic to such “supertall” buildings, and both buildings provide a level of finish appropriate for luxury condominiums but atypical of even high-end rental residential buildings.

When an allocation of costs by land use was not provided by the Developer, SB Friedman allocated each line item using the following methodology:

- Hard cost line items specific to a land use (i.e., office tenant improvements) were allocated to the corresponding land use.
- Hard costs spread amongst multiple uses (i.e., core and shell) were allocated proportionately by gross square foot (GSF).
- Hard costs relevant to all land uses (i.e., owner contingency) were allocated by the percentage of hard costs, less contingencies.
- Soft costs and developer fees specific to a land use (i.e., retail leasing commissions) were allocated to the corresponding land use.
- All other acquisition, soft costs, financing costs and developer fees were distributed across land use categories using the percentage of hard costs.

## LAND PURCHASE PRICE EVALUATION

SB Friedman conducted analyses to determine the reasonableness of land purchase price by Project component. We received and reviewed land purchase price documentation from the Developer for Book Tower, the Monroe Blocks and the Hudson’s Site. Acquisition costs were evaluated on a per-land- or per-building-square-foot basis and as a percentage of total development costs using market-specific data available through Real Capital Analytics and CoStar, which are subscription data services that provide data on real estate transfers. Secondly, acquisition costs were evaluated as a percentage of total development costs, based on comparable projects reviewed by SB Friedman.

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<sup>[1]</sup> RS Means is a leading provider of construction cost data and produces an annual City Cost Index indicating the relative costs of construction in major cities as compared to the national average (which is indicated with a value of 100.0). The cost index for Detroit in 2017 was 100.9. Cost indices for relevant cities with comparable projects are: Chicago (120.0), Kansas City (102.5), Milwaukee (102.7), Minneapolis (105.7) and Cincinnati (89.1).

## FINANCING STRUCTURE AND TERMS REVIEW

We evaluated the reasonableness of the Developer’s financing assumptions, particularly in terms of the status of financing, maximization of debt, the presence of a reasonable amount of equity, and adherence to market terms. Our review was based on information from recent projects reviewed by SB Friedman, industry sources that track financing trends and commitments (i.e., American Council of Life Insurers, PricewaterhouseCoopers, RealtyRates), and market-specific financings available through Real Capital Analytics.

## CASH FLOW OPERATIONS AND PRO FORMA ASSUMPTIONS ANALYSIS

SB Friedman evaluated the appropriateness of the Developer’s operating assumptions by component and by land use. Revenue assumptions were evaluated on a per-square-foot basis, whereas expense assumptions were evaluated on a per-square-foot and percentage of revenue basis. Revenue and expense line items were analyzed both individually and in aggregate. Assumed occupancy rates and absorption were evaluated against market-specific historic analytic data and market projections. Where necessary, revenue and expense items were again allocated by land use using the methodology outlined above. For the purposes of evaluating Project returns over a 20-year period following stabilization, as requested by MEDC, SB Friedman prepared an extended cash flow model using the Developer’s 10-year cash flow and revenue and expense inflation parameters from the Developer. Full property tax payments prior to abatements and TBP reimbursements after Year 10 were identified in the Plante Moran TBP model.

Specific data sources used in our analysis of the cash flow operations and pro forma assumptions, include:

- **CoStar** | Building characteristic and analytics data were evaluated, both regionally and in the Detroit CBD, to analyze office, residential and retail market rents, occupancy, and absorption of new product.
- **CompStak** | Office and retail lease comp information was used to evaluate Project revenue assumptions and the reasonableness of lease terms and structures.
- **Third-Party Market Studies/Data Sources** | These reports/data, including information from HR&A, HVS, Smith Travel Research (STR) and Zimmerman and Volk, were used to evaluate hotel, residential and retail market demand and validate revenue, expense and inflation assumptions.
- **Comparable Midwestern City Project Data** | Certain revenue and expense assumption benchmarks were derived from an internal SB Friedman database of comparable projects and adjusted to account for location factors and inflation.
- **MEDC Project Data** | MEDC provided SB Friedman with comparable project data within the local hotel industry. Data was used to evaluate operating assumptions included within the Developer pro forma.

Where necessary, revenue and expense assumptions were inflated or deflated to 2018 dollars using the Developer’s inflation assumption.

## TBP PROJECTIONS AND ASSUMPTIONS REVIEW

SB Friedman evaluated the reasonableness of the Developer’s TBP projections, including all model assumptions (i.e., assessed/taxable value, construction and permanent employment generation, socioeconomic and demographic characteristics of expected residents, etc.). Our review was based on data provided by the Developer and available through other third-party sources. Data sources and a brief description of evaluated assumptions are outlined below:

- **Detroit Assessors Office** | We worked with the Detroit Central Business District Assessor to identify appropriate comparable projects and associated assessment values on a per-building-square-foot or per-unit basis.

- **CoStar** | CoStar data was used to identify vacancy rates of recent commercial development and basic building characteristics in downtown and competitive suburban markets. Vacancy rates were used to evaluate the potential likelihood that the Developer will be able to fully lease Project components.
- **US Census Longitudinal Employment Household Data (LEHD)** | LEHD combines payroll tax data with US Census Bureau data to allow for analysis of age, earnings, and industry profiles by a specific geography. SB Friedman used LEHD data to identify office employment levels in the Downtown and specific sites. In conjunction with CoStar building data, LEHD was also used to verify the office employee per-square-foot assumptions.
- **Securities and Exchange Commission 10-K Filings** | Data from 10-K filings was used to verify approximate employee density rates for the retail and food and beverage industries. SB Friedman reviewed density rates for types of tenants expected within Project components.
- **Bureau of Labor Statistics, Quarterly Census of Employment and Wages** | BLS data for Wayne County and a four-county region was used to compare the recent sectoral distribution of office employees to the distribution assumed in the Plante Moran model. BLS data was also used to analyze wages and wage growth over five- and ten-year periods.
- **Bureau of Labor Statistics, Consumer Expenditure Survey (CES)** | SB Friedman evaluated the expected rent to income factor for residents of the Project using BLS CES 2016 data for higher-income households.
- **Building Owners and Managers Association (BOMA)** | 2016 BOMA data was used to benchmark commercial management agent costs for each component.
- **State of Michigan 2018 Tax Tables** | Tax tables were used to verify withholding assumptions included in the Plante Moran model.
- **National Restaurant Association Operations Report** | This report was used to confirm wages for employees within the Food & Beverage space.
- **STR Host Almanac** | This report was used to verify hotel wages; the Project hotel is assumed to fall within the Luxury class.

## RETURNS ANALYSES, SENSITIVITIES AND RECOMMENDATIONS

The results of the forgoing research and analysis were combined with information from the Developer's four individual pro formas (by Project component) and incorporated into individual component-level models and a combined Project model. These models were then used to evaluate Project feasibility (with and without assistance) and analyze return on total development cost and return on investment for the Project overall. As part of the analysis, benchmark/hurdle rates of return, weighted in aggregate by each component's percentage of stabilized net operating income, were derived based on SB Friedman's experience with comparable projects and industry sources, including RealtyRates, PricewaterhouseCoopers, and Real Estate Research Corporation. Market-appropriate terminal capitalization rates were derived using this same methodology and data sources.

The component-level and combined Project models were then used to conduct sensitivities, where inputs and level of public assistance were adjusted to arrive at our conclusions and recommendations.



## Development Cost Analysis

The Developer's construction costs were estimated by three unaffiliated general contractors qualified to construct and eligible to bid on the projects: Turner Construction, Walbridge Aldinger and Barton Malow. Costs for the Hudson's Site and Monroe Blocks were also reviewed by Dharam Consulting. No contractor documentation for OCM Addition was provided. The specifications and designs given to contractors for preparation of cost estimates were not provided to SB Friedman.

For the purposes of evaluating each Project component, SB Friedman identified total development costs (TDC) in addition to TDC net of parking costs.<sup>1</sup> SB Friedman used two primary cost metrics for key line items: costs per gross square foot and costs as a percentage of TDC. In order to evaluate Project budgets by land use and key cost component, SB Friedman allocated, on a gross square footage basis, costs which had not been allocated to a particular land use and reallocated certain soft costs to better align the Developer budgets with industry data and comparable projects.

Figures 5-8 present TDC by Project component from the Developer's preliminary pro formas. According to the Developer, budgets for Book Tower and the OCM Addition are in the conceptual design phase, the Hudson's Site costs are based on conceptual design, though the Developer is nearly at 50% schematic design, and Monroe Blocks is at 100% schematic design for the residential component, and concept phase for all other uses. While costs for all components except the OCM Addition were provided by general contractors, those costs were based on preliminary design and should be evaluated with the understanding that adjustments to costs will be made as the Developer finalizes the design for each component.

Figure 5. OCM Addition Budget

Development Costs [1]	Total Development Costs (TDC)		
	Developer Budget	% of TDC	\$ per GSF [2]
Acquisition Costs	\$0	0%	\$0
Hard Construction Costs	\$77,166,241	81%	\$249
Soft Costs	\$12,591,131	13%	\$41
Financing Costs	\$2,092,243	2%	\$7
Developer Fees [3]	\$2,933,166	3%	\$9
<b>TOTAL DEVELOPMENT COSTS (TDC)</b>	<b>\$94,782,781</b>	<b>100%</b>	<b>\$306</b>

[1] Costs reflect budget provided by Developer on 01/10/2018

[2] Component does not include parking, GSF provided by Developer

[3] Includes Developer fee and fees paid to Developer-affiliated entities.

Source: Bedrock, SB Friedman

<sup>1</sup> See the Methodology Section for a description of how costs are allocated by land use.

Figure 6. Book Tower Budget

Development Costs [1]	Total Development Costs (TDC)			TDC Net of Parking		
	Developer Budget	% of TDC	\$ per GSF	Developer Budget	% of TDC	\$ per GSF [3]
Acquisition Costs [2]	\$26,000,000	8%	\$1,045	\$26,000,000	9%	\$1,045
Hard Construction Costs	\$237,237,624	76%	\$395	\$223,797,624	76%	\$515
Soft Costs	\$20,570,524	7%	\$34	\$19,509,666	7%	\$45
Financing Costs	\$18,510,352	6%	\$31	\$17,461,703	6%	\$40
Developer Fees [4]	\$9,125,744	3%	\$15	\$8,616,295	3%	\$20
<b>TOTAL DEVELOPMENT COSTS (TDC)</b>	<b>\$311,444,245</b>	<b>100%</b>	<b>\$519</b>	<b>\$295,385,288</b>	<b>100%</b>	<b>\$680</b>

[1] Costs reflect budget provided by Developer on 01/10/2018

[2] Value per square foot is shown as per land square foot.

[3] Excludes parking square footage indicated in the pro forma.

[4] Includes Developer fee and fees paid to Developer-affiliated entities.

Source: Bedrock, SB Friedman

Figure 7. Monroe Blocks Budget

Development Costs [1]	Total Development Costs (TDC)			TDC Net of Parking		
	Developer Budget	% of TDC	\$ per GSF	Developer Budget	% of TDC	\$ per GSF [3]
Acquisition Costs [2]	\$1,800,001	0%	\$14	\$1,800,001	0%	\$14
Hard Construction Costs	\$683,879,447	82%	\$330	\$623,088,865	75%	\$436
Soft Costs	\$69,359,213	8%	\$34	\$64,874,919	8%	\$45
Financing Costs	\$47,996,032	6%	\$23	\$43,729,627	5%	\$31
Developer Fees [4]	\$27,056,522	3%	\$13	\$24,738,817	3%	\$17
<b>TOTAL DEVELOPMENT COSTS (TDC)</b>	<b>\$830,091,215</b>	<b>100%</b>	<b>\$401</b>	<b>\$758,232,230</b>	<b>91%</b>	<b>\$531</b>

[1] Costs reflect budget provided by Developer on 01/10/2018

[2] Value per square foot is shown as per land square foot.

[3] Excludes parking square footage indicated in the pro forma.

[4] Includes Developer fee and fees paid to Developer-affiliated entities.

Source: Bedrock, SB Friedman

Figure 8. Hudson's Site Budget

Development Costs [1]	Total Development Costs (TDC)			TDC Net of Parking		
	Developer Budget	% of TDC	\$ per GSF	Developer Budget	% of TDC	\$ per GSF [3]
Acquisition Costs [2]	\$15,000,000	2%	\$158	\$15,000,000	2%	\$158
Hard Construction Costs	\$796,872,183	88%	\$626	\$756,156,365	88%	\$674
Soft Costs	\$40,944,942	5%	\$32	\$39,254,591	5%	\$35
Financing Costs	\$49,187,880	5%	\$39	\$46,584,762	5%	\$42
Developer Fees [4]	\$6,975,536	1%	\$5	\$5,052,729	1%	\$5
<b>TOTAL DEVELOPMENT COSTS (TDC)</b>	<b>\$908,980,541</b>	<b>100%</b>	<b>\$714</b>	<b>\$862,170,883</b>	<b>100%</b>	<b>\$769</b>

[1] Costs reflect budget provided by Developer on 01/10/2018

[2] Value per square foot is shown as per land square foot.

[3] Excludes parking square footage indicated in the pro forma.

[4] Includes Developer fee and fees paid to Developer-affiliated entities.

Source: Bedrock, SB Friedman

**HARD COSTS BY LAND USE**

Development budgets were evaluated by land use to ensure consistency between benchmark data and Project components. Costs by land use, per component, are provided in **Figure 9**. For each land use, a range of location-adjusted costs per GSF for comparable first class mid- and high-rise downtown projects in Midwest cities are presented. Costs are inflated to the midpoint of construction for the appropriate Project component. All costs allocated to a land use are presented net of parking and parking square footage.

**Figure 9. Comparable Development Cost Table**

	Hard Costs/GSF		TDC/GSF	
	2019\$			
Office	OCM Addition	\$256		\$316
	Book Tower	\$473		\$634
	Midwestern Comparable Project Range	\$165 - 330		\$210 - 445
	2020\$			
	Monroe Blocks	\$419		\$516
	Hudson's Site	\$591		\$705
	Midwestern Comparable Project Range	\$170 - 330		\$220 - 460
Residential	Hard Costs/GSF		TDC/GSF	
	2019\$			
	Book Tower	\$478		\$628
	Midwestern Comparable Historic Rehabilitation Project Range	\$150 - 185		\$190 - 265
	2020\$			
	Monroe Blocks	\$480		\$572
	Hudson's Site	\$660		\$768
Midwestern Comparable Project Range	\$180 - 280		\$240 - 390	
Retail	Hard Costs/GSF		TDC/GSF	
	2019\$			
	Book Tower	\$461		\$619
	Midwestern Comparable Project Range	\$195 - 255		\$270 - 420
	2020\$			
	Monroe Blocks	\$405		\$500
	Hudson's Site	\$588		\$705
Midwestern Comparable Project Range	\$200 - 265		\$275 - 430	

Source: Bedrock, SB Friedman

**Office**

Office TDC ranges widely by Project component, from approximately \$316/GSF for the OCM Addition to \$705/GSF for the Hudson’s Site. For comparable Midwest projects, TDC ranged from \$220-460/GSF in 2020 dollars, with an average of \$380/GSF. OCM Addition is the only component with costs within range of comparable office development in the Midwest. Total development costs for office space in each of the other three components are significantly higher, ranging from \$516-705/GSF, substantially exceeding costs of Midwest Comparable project costs.

SB Friedman evaluated costs allocated specifically to office tenant improvements (TI) to ensure those costs were within a reasonable range. TI allowances for the Project ranged from \$44-64/GSF. TI varies across markets and is a function

of rent, lease terms and quality of space. Comparable projects and industry data suggests TI of approximately \$45-55/GSF is common. The Hudson’s Site is the only component with TI (\$64/GSF) above this range; the TI allowance for Hudson’s Site appears to be reasonable given typical variation in office TI and higher rents for this component.

**Residential**

Residential TDC ranges from \$570-770/GSF for Project components, with hard costs ranging from \$480-660/GSF, with the highest costs/GSF on the Hudson’s Site. Book Tower TDC and hard costs were benchmarked against historic rehab residential projects in major Midwest cities. Midwestern comparable historic rehabilitation projects ranged from \$190-265 TDC/GSF, less than half the costs included in Book Tower estimates on a per-square-foot basis. Historic rehabilitation imposes additional developer risk that new construction does not; however, the spread in costs between Book Tower and comparable projects exceeds typical risk contingencies. The Developer did not provide any additional information to clarify the cost differential between Midwestern comparables and component costs.

Compared against similar Midwest projects, the costs appear well above average, with the Monroe Blocks TDC/GSF 146% greater than the high end of the benchmark range and Hudson’s Site TDC/GSF 197% greater than the benchmark range. Irrespective of the TDC or hard cost metric, Monroe Blocks and Hudson’s Site costs are nearly double the expected range.

**Retail**

Retail project costs by component ranged from approximately \$500-705/GSF. Again, costs were 16-64% above the \$270-430/GSF range for comparable projects.

SB Friedman evaluated retail tenant improvements as a function of retail GSF. The benchmark range for retail space in similar Midwest projects is \$65-95/GSF. The Project components all included TI allowances within the range, varying from \$40-88/GSF. The highest TI per GSF rate is projected for the Hudson’s Site, which is to be expected given the higher rents in the component.

**Hotel**

Hotel TDC for Book Tower is \$770/GSF, 11% above the high end of the Midwest comparable project range of \$370-695 per gross square foot. Benchmark ranges are from historic rehabilitation/conversion and new construction projects previously reviewed by SB Friedman or provided by MEDC. Hotel costs and comparable project ranges are identified in **Figure 10** below. The analysis excludes square footage of the food and beverage space within Book Tower and the associated \$38.6 million in food and beverage specific hard costs.

**Figure 10. Hotel Comparable Development Cost Table**

	Hard Costs/GSF	TDC/GSF
<b>2019\$</b>		
Book Tower	\$587	\$770
Midwestern Comparable Project Range	\$240-485	\$370-695

Source: Bedrock, MEDC, SB Friedman

## Parking

Parking construction costs were evaluated on a per-stall basis. Costs for Project components vary from \$34,000-58,000/stall, as indicated in **Figure 11**, with a majority of the variation related to whether the parking structure is above or below ground. Book Tower is the only component with above ground parking and the cost per stall (\$33,600) is 12% above the benchmark range. Monroe Blocks and the Hudson’s Site both have below ground parking. The Developer indicated in preliminary budgets that the high number of stalls in a small space would require a stackable parking system and higher than normal hard costs for parking. The Monroe Blocks cost per stall is within range at \$48,000/stall, however the Hudson’s Site is above benchmark range by 15%.

**Figure 11. Parking Comparable Development Cost Table**

	Parking Hard Costs	Cost/Stall
Book Tower (above ground)	\$13,440,000	\$ 33,600
Monroe Blocks (below ground)	\$60,790,581	\$ 48,208
Hudson's Site (below ground)	\$41,040,169	\$ 57,722
Above Ground Benchmark		\$20,000-\$30,000
Below Ground Benchmark		\$30,000-\$50,000

Source: Bedrock, SB Friedman

## Events/Exhibition Space

Hudson’s Site will include exhibition space featuring immersive installations, flexible private event space and a publicly accessible observation deck with wrap-around views. Monroe Blocks includes a meeting center within the office tower for use by tenants of the tower. The hard costs per GSF varied from \$203-815 in different Project components, as shown in **Figure 12**. The Developer indicated the OCM Addition costs are lower than other components due to the event space being considered supplemental office meeting space and not the unique exhibition space included in the Hudson’s Site. Costs for event and exhibition space are difficult to benchmark and evaluate because they vary widely based on anticipated uses and buildout. The Developer’s hard cost estimates for event and exhibition space appear to be high on a per-square-foot basis, particularly for Hudson’s Site, but SB Friedman has reviewed costs for smaller hotel-related event spaces in other projects which are similar to the Developer’s range of costs, though the event spaces are not directly comparable to what is proposed for the Project.

**Figure 12. Events/Exhibition Comparable Development Cost Table**

	Hard Costs	Hard Costs/GSF
OCM Addition	\$8,673,723	\$203
Book Tower	\$29,224,705	\$587
Hudson's Site	\$136,923,203	\$815

Source: Bedrock, SB Friedman

## Contingency

Contingency is included as a line item within hard costs for each component. SB Friedman evaluates contingency as a percentage of hard costs. A reasonable design contingency as a percentage of hard costs varies depending on the level of design work completed to date. At the schematic design stage, a design contingency of 10% may be reasonable, while only 5% design contingency would be reasonable at design development; higher contingencies would be

appropriate during the conceptual design stage. Contractor contingencies are typically equal to 3-5% of hard costs. An additional owner-level contingency of 5% is also common, with higher contingencies included for projects where there are environmental or other conditions that are unknown and could impact costs.

The contingencies specifically listed in the Project budgets or contractor estimates are generally within the ranges stated above. However, budget line items varied by component, and certain contractor estimates did not specify each level of contingency. Therefore, it appears certain contingencies may have been built into the baseline hard cost estimates. Under SB Friedman's cost adjustments for the purposes of evaluating the Project's need for public assistance (as described below), contingencies were included with all other Project costs before overall costs were reduced to benchmark ranges.

## **HARD COST ADJUSTMENTS**

SB Friedman's review of Project hard costs indicates that the Developer cost assumptions for certain Project components exceed costs for similar construction projects in downtown Midwestern cities by a substantial margin. While it is difficult to evaluate costs of special purpose space (e.g., event space, exhibition space), costs for mid- and high-rise construction of office, residential, retail and hotel components in Detroit would not be expected to vary to the extent seen from other projects in the Midwest.

The Developer has provided additional documentation from contractors identifying Project-specific costs that would result in residential and office costs in the Project exceeding first-class Midwest comparables. Such costs include extraordinary costs related to site-specific conditions that impact foundations and the structure of the Hudson's Site tower; structural features related to the mix of uses, including transfer load grids above event/exhibition space; and design features integral to the Project intent, such as multiple building elements with differing setbacks on the Monroe Blocks. The additional costs also include premium features, including an infinite floorplate in the office space on the Hudson's Site, premium finishes, including terra cotta cladding on Hudson's Site and Monroe Blocks, and luxury residential fit-out. Certain of these costs had already been allocated to other land uses (e.g., SkyDeck and exhibition space) or already appear to be included in the Midwest comparables figure (e.g., upgraded HVAC to meet LEED/Well standards). SB Friedman therefore has not included certain costs that the Developer identified as extraordinary, as they had already been accounted in our analysis. Extraordinary costs and premium features that are specific to the Project and that have not been accounted for elsewhere total approximately \$296.1 million, as shown in **Figure 13**.

**Figure 13. Extraordinary and Premium Project Costs**

Project Element	Project Component(s)	Cost
<b>Extraordinary Costs</b>		
Structural Features related to Substandard Soil Conditions	Hudson's Site, Monroe Blocks	\$10,013,800
Structural Features to Support Mix of Uses and Design	Hudson's Site, Monroe Blocks	\$42,997,200
Vertical Transportation related to Mix of Uses and Design	Hudson's Site, Monroe Blocks	\$23,408,800
Deterioration, Façade Restoration, Etc.	Book Tower	\$16,341,309
Building Systems Configuration	Book Tower	\$13,944,174
Labor Market Premiums	Hudson's Site, Monroe Blocks, Book Tower	\$48,107,490
<b>Premium Features</b>		
Premium Exterior Surfaces	Hudson's Site, Monroe Blocks	\$98,824,800
Infinite Office Floorplate and Premium Office Design	Hudson's Site, Monroe Blocks	\$26,146,400
Luxury Residential Interior Fit-out	Hudson's Site	\$16,300,000
<b>Total Extraordinary and Premium Costs Identified by Developer [2]</b>		<b>\$296,083,972</b>

[1] Includes anticipated labor shortages that would increase the cost of labor, declines in labor efficiency related to complexity of Project, and contributions under the City of Detroit Executive Order Workforce Target.

[2] Excludes extraordinary and premium feature costs that are accounted for elsewhere in SB Friedman's analysis.

Source: Bedrock, Walbridge, Turner Construction Company, Barton Malow SB Friedman

SB Friedman has concluded that the extraordinary costs totaling \$154.8 million, associated with structural requirements and labor, are reasonable based on-site conditions and overall design requirements to meet the broad intent of the Project in a manner consistent with the quality and character of the peer first-class projects in other downtowns. The approximately \$141.3 million in premium feature costs are related to design choices made by the Developer and fall outside the range and character of peer projects. The Developer has indicated the improvements are necessary for the success of the Project. Furthermore, the MEDC staff and City of Detroit Planning and Development Department have indicated that, as a policy, they support the level of design and finishes proposed for the Project.

Therefore, for the purpose of evaluating the Project's need for TBP assistance, SB Friedman adjusted the average Midwest cost base for office, residential, hotel and retail space upwards to account for all the extraordinary and premium feature costs in **Figure 13**. Only a portion of the \$296.1 million was allocated to office, residential, hotel and retail space by the Developer's contractors and SB Friedman. The remaining costs were allocated to exhibition/event space, parking and the OCM Addition, which were not adjusted from the Developer submittal. Following addition of the extraordinary costs and premium features to the Midwest average cost baseline, approximately \$398.8 million of the Developer's budget has not been accounted for in the costs associated with peer comparables or in Project-specific factors identified by the Developer. Therefore, for the purposes of evaluating the Project's need for TBP assistance, SB Friedman has tested a scenario in which Project costs are reduced by \$398.8 million, or approximately 18.5%.

**Figure 14** identifies the average cost of Midwest comparables by land use. It also shows the adjusted Project costs by component and land use following the addition of extraordinary costs and premium features to the Midwest cost base.

**Figure 14. Adjusted Cost Scenario (TDC per Square Foot)**

	Residential	Office	Retail	Hotel
2019 Midwest Cost Base (Average of comparables)	\$355	\$365	\$365	\$615
Adjusted Book Tower [1]	\$445	\$455	\$455	\$705
OCM Addition	\$316			
2020 Midwest Cost Base (Average of comparables)	\$370	\$380	\$370	
Adjusted Monroe Blocks [1]	\$429	\$467	\$439	
Adjusted Hudson's Site [1]	\$531	\$485	\$380	

[1] TDC per square foot, plus extraordinary costs and premium features

Source: SB Friedman

Using the adjusted TDC per square foot defined in **Figure 14**, SB Friedman interpolated new hard costs and total development costs for each Project component. Hard costs and TDC for the Adjusted Cost Scenario and the original Developer budget are included in **Figure 15**.

**Figure 15. Adjusted Midwest Hard Costs and TDC**

	Developer Hard Costs	Developer TDC	Adjusted Cost Scenario Hard Costs	Adjusted Cost Scenario TDC
OCM Addition	\$77,166,241	\$94,782,781	\$77,166,241	\$94,782,781
Book Tower	\$237,237,624	\$311,444,245	\$180,740,831	\$254,614,576
Monroe Blocks	\$683,879,447	\$830,091,215	\$570,276,184	\$716,936,687
Hudson's Site	\$775,485,013	\$908,980,541	\$549,431,439	\$680,146,831
<b>TOTAL</b>	<b>\$1,773,768,324</b>	<b>\$2,145,298,782</b>	<b>\$1,377,614,695</b>	<b>\$1,746,480,875</b>

Source: Bedrock, SB Friedman

The hard costs included in the Adjusted Cost Scenario are incorporated in the cost analysis by line item moving forward.

## ACQUISITION COSTS

Land acquisition costs were included for three Project components: Book Tower, Monroe Blocks and Hudson's Site. Acquisition costs have been evaluated on a per-land-square-foot basis and as a percentage of total development costs.

Book Tower has the highest acquisition costs, reflecting the purchase of an existing building from a private entity, rather than vacant land. Acquisition costs for Book Tower are approximately 8% of original TDC and 10% of the revised TDC for the Project component. According to property transfer affidavits provided by the Developer, the site was acquired from a private entity in 2015 for \$25.1 million. The Book Tower component also required acquisition of a \$928,000 community center. Book Tower acquisition costs are within the expected range as a percentage of total costs and therefore are considered appropriate.

Acquisition costs for the Monroe Blocks and Hudson's Site have a low percentage of TDC because all or portions of the sites were acquired directly from the City of Detroit at a discounted value. Both properties were well below comparable Midwestern project ranges for typical percentage of total development costs. Furthermore, land transfer prices (per land square foot) for the Monroe Blocks (\$1/SF) and the Hudson's Site (\$14/SF) appear to be well below the



acquisition price of recent redevelopment site land transfers reported through Real Capital Analytics, which were in excess of \$50/SF.

**Figure 16** below includes acquisition costs for the Project components as well as the range seen in recent comparable Midwestern projects. Overall, the land acquisition costs are favorable to the projects and the relatively low overall costs for land should help limit total development costs for the Project.

**Figure 16. Land Acquisition Cost as a Percentage of TDC by Scenario**

	Acquisition Costs % of Developer TDC	Acquisition Costs % of Adjusted TDC
Book Tower	8.3%	10.2%
Monroe Blocks	0.2%	0.3%
Hudson's Site	1.7%	2.2%
Midwest Comparable Project Range		5-13%

Source: Bedrock, SB Friedman

### SOFT & FINANCING COSTS

Soft and financing costs are typically evaluated as a percentage of TDC. Project component soft costs and financings fees per TDC ranged from 10-15% of total development costs and 13-16% in the Adjusted Cost Scenario. According to the Developer budget, the component with the highest cost ratio is the OCM Addition which appears to be the result of lower structural costs and lack of acquisition costs, given that the project is an expansion of an existing structure. Book Tower, Monroe Blocks and Hudson’s Site are all within a typical range. **Figure 17** includes soft costs and financing fees by Project component, in addition to the percentage of TDC.

**Figure 17. Soft and Financing Costs as a Percentage of TDC by Scenario**

	Soft Costs & Financing	Soft Costs/ Developer TDC	Soft Costs/ Adjusted TDC
OCM Addition	\$14,683,374	15%	15%
Book Tower	\$39,080,877	13%	15%
Monroe Blocks	\$117,355,245	14%	16%
Hudson's Site	\$90,132,822	10%	13%
Midwestern Comparable Project Range			8-20%

Source: Bedrock, SB Friedman

### DEVELOPER & CONSULTING FEES

Developer fees for each Project component range from 1-3.5% of total costs (net of acquisition costs) according to the original budgets provided. SB Friedman included fees paid directly to Bedrock or affiliated consultants in the developer fee, which include the following:

- **Tenant Coordination Fee** | Fees paid for coordination of all tenant construction, design and review of prepared space plans.
- **Incentive Coordination Fee** | Fees paid for providing services in connection with any economic incentive pursued.

- **Standard Developer Fee** | General overhead fee.
- **Internal Financing Fee** | Fees paid for providing services in connection with any financing pursued.
- **Construction Management Fee** | Developer-side CM fee (separate from GC CM fee).

Comparable Midwestern projects evaluated by SB Friedman consistently include developer fees between 2-4% of TDC, net of acquisition costs. In SB Friedman’s experience, projects with larger budgets typically have smaller developer fees as a percentage of TDC. The combined developer fee for the Project overall does not exceed 4%, but is a high dollar figure given the magnitude of the Project components.

Despite the original developer fees proposed by the Developer falling within a reasonable range, the developer fees for Hudson’s Site, Monroe Blocks and Book Tower surpassed 4% after adjusting costs and reallocating certain fees that are paid to the Developer but were originally included as soft costs. Developer and consultant fees must be limited to 4% of the total development cost of the project according to the MSF and Michigan Treasury, therefore SB Friedman limited such fees to 4%.

The adjustment to the developer fee ultimately reduced TDC for Book Tower, Monroe Blocks and Hudson’s Site. The revised and original developer fees are included in **Figure 18** below.

**Figure 18. Developer Fees Provided in the Developer Budget**

	Developer Fee	% of Developer Costs [1]	Adjusted Developer Fee [2]	% of Adjusted Costs [1,2]
OCM Addition	\$2,933,166	3.2%	\$2,933,166	3.2%
Book Tower	\$9,125,744	3.3%	\$8,792,868	4.0%
Monroe Blocks	\$27,056,522	3.4%	\$27,505,257	4.0%
Hudson's Site	\$6,975,536	0.8%	\$25,582,570	4.0%
SB Friedman Comparable Projects		4.0%		4.0%
MSF Regulatory Limit		4.0%		4.0%

[1] Developer fee is calculated as a percentage of total hard costs, soft costs and financing costs.

[2] Includes Developer fee and fees paid to Developer-affiliated entities.

Source: Bedrock, SB Friedman

In addition to developer and consultant fees, the Developer provided an Affiliated Fees Summary which identifies other fees paid to Bedrock or its affiliates, which includes office and retail leasing commissions. SB Friedman evaluated leasing commission assumptions as a percentage of revenue. **Figure 19** below identifies the leasing commission per by Project component and land use, in addition to SB Friedman benchmarks based on industry standards.

**Figure 19. Leasing Fees as a Percentage of Revenue**

	Office Leasing Commissions (LC)	LC % of Rent [1]	Retail LC	LC % of Rent [1]
Book Tower	\$1,416,531	5%	\$428,144	5%
Hudson's Site	\$6,818,331	4%	\$2,186,151	3%
SB Friedman Comparable Projects		2-6%		2-6%

[1] Assumes 10-year lease term

Source: Bedrock, SB Friedman

Related party fees collectively total more than \$86.5 million in developer fees and leasing commissions paid to the Developer or associated parties.

### **CONCLUSION: DEVELOPMENT COST ANALYSIS**

For the purposes of evaluating the Project's need for public assistance, SB Friedman adjusted the Developer's costs for residential, office, hotel and residential land uses to the average of the Midwestern cost range. Costs were then adjusted upward to reflect demonstrated extraordinary and premium feature costs. The Midwestern adjusted costs were based on extraordinary costs identified by the Developer above what would be seen in other projects and markets. The remaining difference between the \$2.15 billion in costs according to the Developer submittal and the \$1.75 billion assumed by SB Friedman per the Adjusted Cost Scenario is the result of unspecified extraordinary or premium costs associated with the office, retail, residential and hotel uses. SB Friedman did not modify costs associated with other land uses included in the Project.

## Proposed Financing Sources

The Developer anticipates financing the Project with a combination of conventional debt financing, equity generated from federal historic tax credits, and developer/investor (cash) equity. SB Friedman reviewed the financing assumptions, particularly in terms of the status of financing, maximization of debt, the presence of a reasonable amount of equity, and adherence to market terms, using market data and information from recent comparable projects. Additional detail regarding the Developer’s preliminary financing sources is described below:

- Construction Debt** | The Developer anticipates obtaining interest-only construction loans for each Project component, the terms of which are presented in **Figure 20** below. Per the Developer, term sheets from potential lenders are not available as only preliminary conversations with lenders have occurred. The Developer is assuming that construction debt will be sized as a percentage of loan-to-cost (LTC), ranging from 44.2-55.0%, depending on the Project component. This assumption appears conservative based on recent projects reviewed by SB Friedman, as well as data from RealtyRates and Real Capital Analytics, where LTC assumptions for construction financing have ranged from 65-75%. The Developer indicated that the lower LTC assumptions are due to the risk involved with this Project, as well as the large amount of non-traditional space (i.e., exhibition and event space). Interest rates appear reasonable based on recent transactions in downtown Detroit and industry data, where interest rates have consistently ranged from 4.5-5.0% for both construction and permanent financing. SB Friedman accepted the Developer’s construction debt assumption due to the perceived lease-up and development risk associated with the Project.

**Figure 20. Construction Debt Assumptions**

Project Component	Loan to Cost	Interest Rate	Term
OCM Addition	53.4%	4.49%	29 months
Book Tower	45.0%	5.0%	68 months
Monroe Blocks	55.0%	5.0%	72 months
Hudson’s Site	44.2%	5.0%	84 months

Source: Bedrock

- Permanent Debt** | The Developer’s pro forma ultimately sizes the amount of available permanent debt based on a 1.5 debt coverage ratio (DCR) and stabilized net operating income, net of TBP revenues. Per the Developer, the lower level of leverage is again attributable to the risk associated with the Project. However, leverage assumptions appear conservative when compared to comparable projects where DCRs typically range from 1.25-1.30. Permanent loan conversion would occur at stabilization, at which point the Developer is assuming the Project will benefit from high rents and occupancy. With the development risk and lease-up risk minimized, it would be expected that the Project would achieve more favorable debt financing terms. The Developer assumes a 30-year amortization for all components, with interest rates ranging from 5.0-5.5%. The longer amortization is favorable to the Project and interest rates are largely within typical 4.5-5.0% ranges, with the exception of the Hudson’s Site, which appears to be somewhat conservative.

For the purposes of this underwriting analysis, permanent debt was sized using a 1.3 DCR. This adjustment results in loan-to-value ratios more similar to recent permanent financing and refinancing terms in Detroit, as identified using Real Capital Analytics. All other financing assumptions were determined to be reasonable. Conversion from construction to permanent financing results in refinancing proceeds that reduce the initial equity investment. Distribution of the refinancing proceeds and the reduced equity investment are reflected in the SB Friedman underwriting analysis. Permanent debt assumptions are presented in **Figure 21**.

**Figure 21. Permanent Debt Assumptions**

Project Component	Developer DCR	Adjusted DCR	Interest Rate	Amortization
OCM Addition	1.5	1.3	5.0%	30 years
Book Tower	1.5	1.3	5.0%	30 years
Monroe Blocks	1.5	1.3	5.0%	30 years
Hudson's Site	1.5	1.3	5.5%	30 years

Source: Bedrock

- Historic Tax Credits** | The Developer is pursuing federal historic tax credits for the rehabilitation of Book Tower and estimates approximately \$218.0 million in qualified eligible expenses. Term sheets from potential tax credit investors were not available; however, the Developer is assuming awarded tax credits will be valued at \$0.70 per credit, resulting in \$30.5 million in HTC benefit. This represents approximately 9.8% of total sources within the Developer's budget.

Current HTC pricing is impacted by a number of market-driven and project-specific factors; however, the assumed pricing appears to be conservative. In recent projects reviewed by SB Friedman, pricing for federal credits following the December 2017 tax bill has ranged from \$0.80-0.85/credit. However, there is continuing uncertainty within the market regarding recent changes to the HTC program and the federal tax code that could impact the marketability and pricing of credits, particularly now that HTCs are amortized over a 5-year period.

- Developer/Investor Equity** | Remaining Project costs will be financed with cash equity from the Developer. Equity, as a percentage of total development sources, is high when compared to more conventional projects; however, this is a factor of the perceived risk during construction, which is limiting construction financing. As discussed above, conversion to permanent debt will result in refinancing proceeds which would be payable to equity investors, thereby reducing their long-term investment in the Project during operations.
- Bond Proceeds** | The Developer stated that bond financing against TBP revenues could be pursued; however, such bonding was not reflected within the Developer's pro forma. Per the Developer, this was because there is some uncertainty regarding how the market will value the TBP revenue streams. Presumably, the cost of funds associated with bond financing would be below that of cash equity. Therefore, bond proceeds would likely reduce the developer/investor equity in the Project resulting in a lower initial investment and a higher rate of return on remaining capital.

Project sources used within the SB Friedman Project returns analysis, reflecting the adjustments outlined above, are presented in **Figures 22 and 23**.

Figure 22. Project Sources – Developer Cost Scenario

	Without TBP				Refinancing Proceeds	With TBP				Refinancing Proceeds
	Construction	%	Permanent	%		Construction	%	Permanent	%	
<b>OCM ADDITION</b>										
TOTAL	\$94,782,781	100%	\$94,782,781	100%		\$91,172,295	100%	\$91,172,295	100%	
Debt	\$50,602,564	53%	\$67,479,152	71%	\$16,876,588	\$48,675,000	53%	\$67,479,152	74%	\$18,804,152
Equity	\$44,180,217	47%	\$27,303,629	29%		\$42,497,295	47%	\$23,693,143	26%	
<b>BOOK TOWER</b>										
TOTAL	\$311,444,245	100%	\$311,444,245	100%		\$300,344,271	100%	\$300,344,271	100%	
Debt	\$140,149,910	45%	\$174,815,035	56%	\$34,665,125	\$135,154,922	45%	\$174,815,035	58%	\$39,660,113
HTC Equity	\$140,772,799	45%	\$106,107,674	34%		\$135,755,611	45%	\$96,095,498	32%	
Equity	\$30,521,536	10%	\$30,521,536	10%		\$29,433,739	10%	\$29,433,739	10%	
<b>MONROE BLOCKS</b>										
TOTAL	\$830,091,215	100%	\$830,091,215	100%		\$803,263,320	100%	\$803,263,320	100%	
Debt	\$456,550,168	55%	\$510,971,028	62%	\$54,420,859	\$441,794,826	55%	\$510,971,028	64%	\$69,176,201
Equity	\$373,541,047	45%	\$319,120,188	38%		\$361,468,494	45%	\$292,292,293	36%	
<b>HUDSON'S SITE</b>										
TOTAL	\$908,980,541	100%	\$908,980,541	100%		\$871,696,153	100%	\$871,696,153	100%	
Debt	\$401,601,423	44%	\$465,643,587	51%	\$64,042,164	\$385,128,614	44%	\$465,643,587	53%	\$80,514,974
Equity	\$507,379,118	56%	\$443,336,954	49%		\$486,567,539	56%	\$406,052,566	47%	
<b>TDC</b>	<b>\$2,145,298,782</b>					<b>\$2,066,476,039</b>				

[1] Debt assumes 1.5 debt coverage ratio based on stabilized year net operating income

[2] Historic tax credit equity held constant as percentage of total development costs

[3] Remainder of project sources assumed to be developer/investor equity

Source: Bedrock, SB Friedman

Figure 23. Project Sources - Adjusted Cost Scenario

	Without TBP				Refinancing Proceeds	With TBP				Refinancing Proceeds
	Construction	%	Permanent	%		Construction	%	Permanent	%	
<b>OCM ADDITION</b>										
TOTAL	\$94,782,781	100%	\$94,782,781	100%		\$91,172,295	100%	\$91,172,295	100%	
Debt	\$50,602,564	53%	\$67,479,152	71%	\$16,876,588	\$48,675,000	53%	\$67,479,152	74%	\$18,804,152
Equity	\$44,180,217	47%	\$27,303,629	29%		\$42,497,295	47%	\$23,693,143	26%	
<b>BOOK TOWER</b>										
TOTAL	\$254,614,576	100%	\$254,614,576	100%		\$246,157,999	100%	\$246,157,999	100%	
Debt	\$114,576,559	45%	\$174,815,035	69%	\$60,238,476	\$110,771,099	45%	\$174,815,035	71%	\$64,043,936
HTC Equity	\$115,085,788	45%	\$54,847,313	22%		\$111,263,415	45%	\$47,219,480	19%	
Equity	\$24,952,228	10%	\$24,952,228	10%		\$24,123,484	10%	\$24,123,484	10%	
<b>MONROE BLOCKS</b>										
TOTAL	\$716,936,687	100%	\$716,936,687	100%		\$690,254,367	100%	\$690,254,367	100%	
Debt	\$394,315,178	55%	\$510,971,028	71%	\$116,655,850	\$379,639,902	55%	\$510,971,028	74%	\$131,331,126
Equity	\$322,621,509	45%	\$205,965,660	29%		\$310,614,465	45%	\$179,283,339	26%	
<b>HUDSON'S SITE</b>										
TOTAL	\$680,146,831	100%	\$680,146,831	100%		\$654,439,804	100%	\$654,439,804	100%	
Debt	\$300,499,211	44%	\$465,643,587	68%	\$165,144,376	\$289,141,455	44%	\$465,643,587	71%	\$176,502,132
Equity	\$379,647,620	56%	\$214,503,244	32%		\$365,298,348	56%	\$188,796,216	29%	
<b>TDC</b>	<b>\$1,746,480,876</b>					<b>\$1,682,024,464</b>				

[1] Debt assumes 1.5 debt coverage ratio based on stabilized year net operating income

[2] Historic tax credit equity held constant as percentage of total development costs

[3] Remainder of project sources assumed to be developer/investor equity

Source: Bedrock, SB Friedman

## FINANCING CONCLUSIONS

Uncertainty exists regarding the overall financing of the Project, particularly in terms of financing terms, tax credit pricing and the potential bonding of TBP revenue streams. Overall, the Developer's financing assumptions include relatively low leverage and a relatively high amount of equity during both construction and operations. The high level of equity commitment at the outset of construction is probably necessary given the perceived construction and lease-up risk of a transformational project. The strong commitment of the Developer is a positive for the Project.

However, the debt to equity ratio at conversion to permanent financing is conservative and the Project would likely achieve a higher debt coverage ratio than the 1.5 currently assumed by the Developer, particularly given the Project's high rent and occupancy assumptions. As discussed above, for the purposes of this underwriting analysis, permanent debt was sized using a 1.3 DCR. This adjustment results in loan-to-value ratios more similar to recent permanent financing and refinancing terms in Detroit, as identified using Real Capital Analytics. SB Friedman has reflected the reduction of equity that results from increased leverage at conversion to permanent financing

The remaining financing assumptions appear reasonable; however, these assumptions may change, potentially substantially, as Project design and costs are finalized, as lenders underwrite the Project and propose construction financing terms and as the Developer pursues bond or other financing for the TBP revenue stream. For the purpose of this analysis, SB Friedman accepted the Developer's assumption that TBP assistance will be self-funded. Given the uncertainties associated with the long-term financing, uncertainties which are reasonable given the risk levels of the project as pioneering in many ways in downtown Detroit, SB Friedman will later discuss reset mechanisms and actions upon sale and refinancing to protect the state from over-subsidizing the project.

Pages 32-39 – Operating Cash Flow Assumptions has been redacted.



## Review of Developer TBP Projections

The Developer provided SB Friedman with a model prepared by Plante Moran used to estimate assistance for each of the six forms of financial assistance over the course of the 30-year TBP period. The TBP revenue projection model is dependent on a series of assumptions including taxable value per unit, employment, wages, residential income, residential capture rates and occupancy rates. SB Friedman reviewed each assumption to determine reasonableness. Basic tax rate and abatement assumptions were verified directly with MEDC and the State of Michigan.

### TAXABLE VALUE

The Developer provided taxable value on a per-unit, -stall, -key or -square-foot basis. Original assumptions by land use are included in **Figure 29** below.

**Figure 29. Developer Taxable Value by Component**

	OCM Addition	Book Tower	Monroe Block Phase 1	Monroe Block Phase 2	Hudson's Site
Office/Commercial (\$/SF)	\$34	\$40	\$40	\$40	\$40
Retail (\$/SF)	\$40	\$40	\$40	\$40	\$40
Residential (\$/unit)	\$55,000	\$55,000	\$55,000	\$55,000	\$75,000
Hotel (\$/SF)	\$50	\$50	\$50	\$50	\$50
Parking (\$/space)	\$6,800	\$6,800	\$6,800	\$6,800	\$6,800

Source: Bedrock, SB Friedman

As mentioned above, SB Friedman worked with the Detroit Assessors Office to review the taxable value assumptions provided by the Developer. A summary of SB Friedman benchmarks is included in **Figure 30** by land use.

**Figure 30. SB Friedman Taxable Value Benchmark**

	SBF Benchmark	Properties Included in SBF Analysis
Office/Commercial (\$/SF)	\$40	OCM, One Kennedy Square, 150 W Jefferson, One Detroit Center
Residential (\$/unit)	\$37,000	The Scott at Brush Park
Hotel (\$/SF)	\$40	Foundation Hotel, David Whitney Building, Hilton Garden Inn
Parking (\$/space)	\$7,000	2 Detroit Garage, 1000 Franklin, Port Atwater Parking, 621 Franklin St

Source: Bedrock, Detroit Assessors Office, SB Friedman

Comparing the Developer assumptions against the Detroit benchmarks, the only taxable value assumption significantly different is the taxable value per unit rate for residential. The Developer taxable value assumption for residential ranges between \$55,000 and \$75,000. Benchmark data for stabilized downtown new construction development was unavailable at the time of analysis. Instead, SB Friedman used a slightly modified value per unit the Developer provided for the Scott at Brush Park, located in Midtown. The SB Friedman adjustment changed taxable value per unit from \$48,000 to \$37,000 by removing parking to isolate non-parking value. As the calculated taxable value was nearly half the value of either of the Developer assumptions for taxable value, SB Friedman worked with the Assessor's Office to reconcile assumptions. The Assessor's Office stated high rent downtown residential units are generally between

\$100,000 and \$125,000 market value per unit, which is roughly between \$50,000 and \$62,000 taxable value. Using the Assessor’s Office back of the envelope values, the Project components are all within range except Hudson’s Site which has a 20% premium over existing value.

The office taxable value per-square-foot assumption in the OCM Addition is slightly below the benchmark, \$34 as opposed to \$40, and will be addressed with the potential adjustments.

**POTENTIAL ADJUSTMENTS**

SB Friedman evaluated each assumption within the Plante Moran model. Basic industry assumptions were quickly validated, such as the percentage of hard costs attributed to wages and ongoing vacancy rates. Other assumptions which include more variability within the data and required a closer look. A summary of specific items evaluated is located in **Figure 31** below.

**Figure 31. SB Friedman Taxable Value Benchmark**

Assumption	Developer	SBF Benchmark
Wages [1]		
Hotel	\$24,000	\$21,000
Retail	\$26,000	\$24,000
Office	\$85,000	\$92,000
Food & Beverage	\$25,000	\$17,000
Event/Auditorium/Exhibition	\$40,000-68,000	
Commercial Management Agent (CMA)	\$4.00 / SF	\$3.80 /SF
SF per Employee		
Office	175-200	200-400
Retail	164	150-200
Food & Beverage	160	140
Wage Growth Rate	2%	2%
Resident Rent-to-Income Factor	25%	20%
Withholding Rates	3.7-3.875%	3.6-3.85%

[1] Annual wage unless otherwise noted  
 Source: Bedrock, Detroit Assessors Office, SB Friedman

Using SB Friedman benchmark research, each of the following assumptions was considered as a potential adjustment.

- **Taxable Value** | The only taxable value per unit rates proposed by the Developer below SB Friedman benchmarks is the taxable value per parking stall rate for all components and the office taxable value per square foot for the OCM Addition. The difference between parking taxable value was de minimis and would not impact real property taxes. The 2017 taxable value for OCM Phase I is \$36 per square foot and the newest product fully assessed, One Kennedy Square, has a taxable value of \$40 per square foot. Based on SB Friedman conversations with the Assessor’s Office the taxable value of the OCM Addition is likely to reflect the One Kennedy Square taxable value, indicating the taxable value is below appropriate levels in the Plante Moran model.
- **Withholding Rates** | The model provided by Plante Moran incorporated approximate withholding rates calculated using rough wage estimates early in the model design process. In the course of evaluating the

projections, SB Friedman adjusted the withholding rates to values which aligned with final salary assumptions to identify if the adjustment impacted TBP revenue.

- **Employee Composition & Wages**

- The original model assumed Rock Family of Companies employees would occupy 20% of office space within the Project components. During the course of SB Friedman’s analysis, the Developer indicated the Family of Companies would likely occupy 50% of office space. Maintaining the Bedrock methodology for calculating office employee incomes, income would decrease from \$85,000 per employee to \$79,000.
- Wage estimates included in the Developer source materials were from either 2016 or 2013 datasets. Inflating the wages to 2017 values would create a more meaningful baseline for analysis, to then be inflated 2% annually as is currently modeled.

- **Office Employment Density** | The Plante Moran model assumes a higher density (175 SF/employee) in the OCM Addition as opposed to the other Project Components. The difference is attributed to the higher percentage of Rock Family of Companies employees anticipated within the OCM Addition, which are assumed to occupy 135 SF per employee rather than the traditional 200-250 SF standard. In the event the number of Rock Family of Companies employees increases above the projected 20% of total employees within Project components, the density of employees within the components will also increase.

- **Rent-to-Income Factor** | The Developer has assumed residents of the Project will have household incomes of approximately \$125,000, based on applying a rent-to-income factor of 25% to the anticipated rents. BLS CES data indicates households with higher incomes (\$75,000+) only spend 20% of their income on housing. SB Friedman elected to not adjust the rent-to-income factor to match the BLS CES rate as it would ultimately increase wage projections to an unlikely level given the high rent PSF rate.

- The 25% rent-to-income factor did remain a slight concern given that wages for Project component employees are expected to range between \$25,000 and \$85,000 annually and the Developer is assuming 10% of employees within Project components will also live within a component.
- Large units could offset the difference between individual wages and household wages necessary, as the household size is likely to be 2+ people in each unit. However specific detail on target residents and household size was not included in Developer materials.

- **Live-Work Ratio** | Existing LEHD live-work data for the Detroit Central Business District (CBD) indicates less than 2% of the people who currently work in the CBD also live in the CBD. The Developer has projected 10% of office employees will both live and work in Project components. This assumption could be reasonable, given that the Project will provide a new stock of residential units that will likely be attractive to CBD office workers. In the event the live-work factor is lower than 10%, the Project will yield higher income and withholding captures than the Developer currently assumes.

Applying these potential adjustments to the Developer assumptions resulted in only marginal differences (<1%) in total projected TBP assistance over the 30-year period (undiscounted). Many of the adjustments were offsetting, with one adjustment increasing and another decreasing the amount of TBP revenue generated by the Project. Given the uncertainty related to all projections and absence of significant change, all assumptions included within the Plante

Moran model appear to be reasonable for the purposes of estimating likely TBP revenues and evaluating public assistance.

### **TBP MODEL ADJUSTMENTS**

Following SB Friedman's adjustments to hard costs for Book Tower, Monroe Blocks and the Hudson's Site, the TBP Projections were modified to reflect a reduced sales tax exemption on construction materials and reduced revenue from construction period tax capture reimbursement.

## Developer Capacity

SB Friedman reviewed at a high level the Developer's capacity to undertake the Project. Bedrock Real Estate Services is a full-service developer with in-house design, engineering, finance, development, leasing and property management capabilities. Materials provided by the Developer indicate a staff of approximately 450, with roughly half of those devoted to property management. While detailed information was not provided, the Developer has been involved in the rehabilitation and development of many recent projects in downtown Detroit, including residential, office, retail and hotel space. Organizationally, it appears the Developer has the staff capacity and experience to execute several development projects of varying uses simultaneously.

The Developer's CEO/Managing Partner provided a letter indicating that they have the financial capacity to undertake the Project as proposed using a combination of conventional financing and equity. It is SB Friedman's understanding that one affiliated party will provide all cash equity required for the Project. SB Friedman requested that the Developer provide at least three references related to financial relationships and public-private partnerships. A reference letter from JP Morgan Chase indicates the entity has provided banking services to the Developer and the Quicken Loans Family of Companies since 2005 and affirms the Developer's reputation and track record of undertaking a range of high quality projects in downtown Detroit. No other references were provided to SB Friedman. However, based on the number of Detroit projects undertaken by the Developer and their anticipated source of equity, it appears likely the Developer has the financial capacity to undertake the Project as proposed if appropriate sources of conventional financing can be identified through existing or new lending relationships.

## Need for Financial Assistance

SB Friedman evaluated the Project's need for TBP TIF assistance under two scenarios. In each scenario, the office operating expenses were reduced for the Hudson's Site, permanent debt was sized using the Developer's parameters and 1.3x DCR, and on-going TBP assistance was recognized as annual cash flow. The scenarios are as follows:

1. **Developer Cost Scenario** | Project costs presented by the Developer. Full capture of all available TBP benefit, as projected by Plante Moran.
2. **Adjusted Cost Scenario** | Adjusted costs for the residential, hotel, office and retail uses, using the average cost of first-class Midwest comparables as a baseline and then added the extraordinary and premium feature costs applicable to each Project component. This results in a reduction of approximately \$398.8 million in costs, related to cost differences between the Project and Midwest cost baseline that have not been specified by the Developer. TBP TIF projections were adjusted downward to account for the reduced construction period costs and labor activity.
3. **Adjusted Cost Scenario + Residential Rent Sensitivity** | Using the same cost adjustments in Scenario 2, residential rents were adjusted downward to reflect a 10% premium over existing downtown per-square-foot rents (\$2.75 per square foot in 2018). This sensitivity analysis evaluates the impact on financial feasibility of not achieving the 25-35% residential rent premium currently assumed by the Developer. TBP TIF projections were adjusted downward to account for the reduced construction period costs and labor activity. Income tax capture assumptions were also adjusted to reduced resident incomes aligning with the lower rent assumptions.

SB Friedman typically uses one or more of the following return metrics to evaluate the need for public assistance:

1. **Unleveraged Internal Rate of Return (IRR)** | This is the rate of return or discount rate for a project, accounting for initial expenditures to construct the Project (total project costs, net of HTC equity) and ongoing cash inflows (annual net operating income [NOI] before debt service), as well as a hypothetical sale (reversion) of the Project at the end of the analysis period.
2. **Stabilized Yield on Cost** | This metric is calculated by dividing NOI before debt service in the first year of stabilized operations by total project costs (net of HTC equity) and is an indicator of the annual overall return on investment for the Project.
3. **Leveraged Internal Rate of Return** | This is the annualized rate of return the Project's non-HTC equity investors would be projected to realize over their full investment period, including an assumed hypothetical sale of the Project at the end of the analysis period.
4. **Stabilized Cash-on-Cash Return** | This metric indicates the annual cash return to non-HTC equity investors once the Project reaches stabilization and is calculated by dividing net cash flow (after debt service) in a given year by the total cash equity investment.

MEDC TBP Program Guidelines specify that the leveraged annual cash-on-cash return for a project receiving TBP assistance cannot exceed an average of 15% over the life of the Project, stated as 20 years. While Project financing is preliminary and variation in any financing assumptions would impact the amount of cash equity contributed by the Developer and potentially significantly alter the cash-on-cash returns, SB Friedman has primarily evaluated the need for TBP assistance based on MEDC's Guidelines.

SB Friedman also considered two unleveraged return metrics, stabilized yield on cost and unleveraged IRR, to consider the overall viability of the Project, rather than equity returns based on a particular financing structure. To account for the mix of Project uses, SB Friedman established a range of market-appropriate, risk-adjusted rates of return for each land use, which were then weighted in aggregate to each land uses' percentage of overall Project net operating income. The following ranges were established for the Project: 7.0-7.7% for stabilized yield on cost and 8.3-8.8% for unleveraged internal rate of return.

For the purposes of sizing TBP assistance for the Project, SB Friedman has considered 2024 to be the first stabilized year of operations for the Project overall. In this year, each of the Project components have reached stabilized occupancy and TBP projections have also stabilized. SB Friedman has assumed reversion in Year 24 of operations for each component to align with MEDC's guidelines of a 20-year Project horizon. Reversionary values are based on Year 25 NOI, net of TBP assistance, capitalized at a weighted terminal cap rate ranging by Project component from 6.8-7.3%. TBP assistance that occurs in Year 25 and beyond has been discounted to Year 24, using the terminal capitalization rate and added to cash flow in the reversion year. This treatment of future TBP revenue reflects the price a potential seller would pay for the ongoing TBP revenue streams.

The results of the returns analysis are described below and shown in **Figure 32**:

1. **Developer Cost Scenario** | Under this scenario, Project returns without TBP assistance are below target return thresholds, indicating the Project is not feasible without TBP assistance. With the full requested \$618.0M in TBP assistance, the Project achieves an average 9.2% cash-on-cash return through 20 years of stabilized operations and is below the unleveraged return ranges listed above.
2. **Adjusted Cost Scenario** | Under this scenario, TBP assistance is reduced to \$406.0 million, with assistance ending after Year 20 of operations. The average cash-on-cash return from stabilization through Year 20 is 15.0%. The reduced assistance results in a stabilized yield on cost of 7.2%, which is within the target return range, and unleveraged IRR of 7.9%, below the target range.
3. **Adjusted Cost Scenario + Residential Rent Sensitivity** | Under this scenario, TBP assistance totals \$496.3 million, with assistance ending after Year 24 of operations. The average cash-on-cash return from stabilization through Year 24 is 14.9%. Any additional TBP assistance in Year 25 would result in the average cash-on-cash return exceeding the 15.0% MEDC guideline. The reduced assistance results in a stabilized yield on cost of 7.0%, which is at the low end of the target return range, and unleveraged IRR of 7.7%, below the target range.

**Figure 32. Required TBP Assistance to Achieve Financial Viability**

Scenario [1]	Total Development Cost	TBP Assistance			Returns with Assistance		
		Total Assistance	Construction Period Assistance	Ongoing Assistance	Average Cash-on-Cash Return	Stabilized Yield on Cost [2]	Unleveraged IRR
1. Developer Cost Scenario	\$2.15 B	\$618.0 M	\$78.8 M	\$539.2 M	9.2%	5.9%	6.5%
2. Adjusted Cost Scenario	\$1.75 B	\$406.0 M	\$64.5 M	\$341.5 M	15.0% [3]	7.2%	7.9%
3. Adjusted Cost Scenario + Residential Rent Sensitivity	\$1.75 B	\$496.3 M	\$64.5 M	\$431.8 M	14.9% [4]	7.0%	7.7%
SBF RETURN BENCHMARK						7.0-7.7%	8.3-8.8%
MEDC TBP GUIDANCE: MAXIMUM AVERAGE TBP RETURN DURING ASSISTANCE PERIOD					15.0%		

[1] All scenarios reflect an adjustment to Hudson’s Site operating expenses and 1.3 DCR on permanent financing. In Scenario 3, income tax capture assumptions were adjusted to reflect reduced resident incomes aligning with the lower rent assumptions.

[2] Overall project stabilization in 2024 (Year 5)

[3] Stabilization through 2039 (Year 20)

[4] Stabilization through 2043 (Year 24); any additional assistance in Year 25 would result in an average cash-on-cash return exceeding the 15.0% MEDC guideline

Source: Bedrock, SB Friedman



## Conclusions and Recommendations

The Developer’s proposed Project is likely to be transformative to downtown Detroit, bringing a density of high-end new construction and renovated product that is expected to attract new office workers, residents and tourists to downtown. While the projected operating revenues associated with the Project are generally expected to exceed rents achieved in existing downtown developments, the Project rents appear to be insufficient to support construction costs associated with the Project’s mix of uses, substantial underground parking, and level of quality and design.

SB Friedman’s financial analysis primarily considered the leveraged annual cash-on-cash metric. With the full Developer estimated construction costs, and permanent financing sized using a 1.3 DCR, the Project requires the full \$618.0 million in TBP assistance to be financially viable. If costs are equal to the average of recent high-end projects in other Midwest cities, adjusted upward for extraordinary and premium costs associated with the Project, TBP assistance would be reduced substantially to \$406.0 million. In a scenario where the residential rents achieve only a 10% premium above the top of the Detroit downtown market, and costs equal the Midwest cost plus extraordinary and premium finishes scenario, approximately \$496.3 million in TBP assistance is needed to achieve financial feasibility.

The Developer’s construction cost estimates for the Project substantially exceed development costs of high-end mid- and high-rise development in major Midwestern cities, including the latest luxury residential and best-in-class office developments in downtown Chicago. The difference in cost between the Project and peer projects appears to be related to site-specific conditions, structural features to support the mix of uses, deterioration and other costs associated with the historic rehabilitation of the Book Tower, labor shortage premiums, and premium exterior and interior finishes. Approximately \$112 million in costs is associated with design elements and premium finishes associated with the residential, office, retail and hotel components of the Project that do not appear to contribute to the Project’s cash flow. SB Friedman estimates that if these elements were eliminated from the Project, TBP assistance could be reduced approximately dollar for dollar. The premium costs do not result in additional cash flow, so each additional budget dollar above a certain level must be funded with equity and then fully serviced with TBP assistance during operations. Under guidance from MEDC, SB Friedman’s analysis includes these premium costs because of their potential transformational impact on downtown Detroit.

Two Project components are primarily driving the financial gap and need for TBP assistance: relatively high construction costs, including premium features, and conservative financing assumptions. While the Developer has identified certain cost components that cause Project costs to exceed typical first-class Midwest downtown projects, nearly \$400 million in Project costs are not accounted for after adjusting the average Midwest cost baseline upward to account for extraordinary costs and premium finishes. Furthermore, the state TBP statute allows for reductions of up to 10% in TBP project budgets before any adjustments to TBP assistance are required. Given the range of costs identified between the Developer submittal and typical Midwest downtown costs, adjusted for particular Project components, and the range of TBP assistance required to achieve viability under alternate cost scenarios, it is recommended that the TBP assistance structure be such that cost savings are reflected in the TBP assistance. In addition, there is currently great uncertainty related to the Developer’s ability to finance the TBP revenues over time; the Developer pro formas and SB Friedman’s analysis assume that the TBP revenues are not financed by a third-party entity, even after stabilization. Changes in the financing structure would impact the amount of equity in the Project and equity returns. SB Friedman therefore strongly recommends that the TBP assistance structure and redevelopment agreement require two “true ups” to right-size public TBP assistance at the time costs are solidified and conversion to permanent financing occurs for each Project component:

- **Construction Cost Verification and Savings Capture** | Costs could be verified at the time competitive bids are awarded, with assistance modified based on approved bids. Alternatively, costs could instead be verified

following construction completion, comparing anticipated costs indicated in the pro formas to actual costs incurred, at the point at which a certificate of occupancy is issued for each component of the Project. The benefit of the latter scenario is that actual construction costs are verified, with the Developer submitting owner's sworn statements for all costs. It is our understanding MEDC intends to certify costs after construction completion and is putting a process in place to do so. In order to incentivize the Developer to reduce costs, any cost savings could be shared between the Developer and the state at a level to be negotiated prior to finalizing the development agreement. Construction-period assistance would be right-sized during construction based on actual costs incurred, and any resulting reduction in assistance during operations would first be taken from income tax revenue, as required by statute, and then real and personal property tax revenues.

- **Upside Sharing** | Following stabilized occupancy, a re-underwriting should be triggered when each Project component of the Project as a whole is converted to permanent financing, is sold, is refinanced or undergoes another financial change, such as monetization of the TBP revenues. At this point, the Project would be evaluated using actual costs, revenues, operating expenses and financing. The Developer would be allowed to maintain an agreed-upon return on equity (as indicated in the original underwriting or another market-appropriate threshold), with any additional revenue – the upside – shared between the Developer and state at a set ratio (e.g., the ratio of TBP assistance to developer equity in the Project at construction completion). This upside sharing provision could be structured such that there would be no impacts to the Developer's ability to finance the TBP revenue stream.

### LIMITATIONS OF OUR ENGAGEMENT

Our deliverables are based on estimates, assumptions and other information developed from research of the market, knowledge of the industry, and meetings/teleconferences with the Michigan Economic Development Corporation and the Developer during which we obtained certain information. The sources of information and bases of the estimates and assumptions are stated in the deliverables. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur; therefore, actual results achieved during the period covered by our analysis will necessarily vary from those described in our report, and the variations may be material.

The terms of this engagement are such that we have no obligation to revise analyses or the deliverables to reflect events or conditions that occur subsequent to the date of the deliverable. These events or conditions include, without limitation, economic growth trends, governmental actions, changes in state statute or City ordinance, additional competitive developments, interest rates, and other market factors. However, we will be available to discuss the necessity for revision in view of changes in the economic or market factors affecting the proposed project.

Our deliverables are intended solely for your information, for purposes of reviewing a request for financial assistance, and is not a recommendation to issue bonds or other securities. The report should not be relied upon by any other person, firm or corporation, or for any other purposes. Neither the report nor its contents, nor any reference to our Firm, may be included or quoted in any offering circular or registration statement, appraisal, sales brochure, prospectus, loan, or other agreement or document intended for use in obtaining funds from individual investors without our prior written consent.

We acknowledge that upon submission to the MEDC, the report may become a public document within the meaning of the Freedom of Information Act. Nothing in these limitations is intended to block the disclosure of the documents under such Act.

Figure A1. SB Friedman Inflation Factors

Year	Hard Cost Adjustment Factor	Non-Hard Cost Adjustment Factor
2017	1.00	1.00
2016	1.05	1.02
2015	1.10	1.03
2014	1.15	1.02

Source: SB Friedman, Turner Construction, BLS

Figure A2. SB Friedman Location Factors

Chicago	Cincinnati	Detroit	Kansas City	Milwaukee	Minneapolis	Omaha
120.0	89.1	100.9	102.5	102.7	105.7	90.0

Source: RS Means, SB Friedman

Figure A3. Financial Returns Analysis – Developer Cost Scenario, without Assistance

UNLEVERAGED CASH FLOW NO ASSISTANCE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	Year 0	Year 0	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>OCM Addition</b>													
Net Operating Income	\$0	\$0	\$62,431	\$4,142,855	\$5,650,986	\$5,766,805	\$5,883,778	\$6,002,264	\$6,128,833	\$6,247,635	\$6,365,938	\$6,490,663	\$6,617,909
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$63,188,521	-\$31,594,260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Book Tower</b>													
Net Operating Income	\$0	\$0	\$3,065,762	\$12,113,320	\$13,987,524	\$14,639,741	\$15,105,867	\$15,585,977	\$16,080,491	\$16,589,840	\$17,114,470	\$17,654,838	\$18,209,200
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$9,287,602	-\$112,999,154	-\$112,999,154	-\$76,138,334	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less HTC Equity or Upfront Assistance	\$0	\$0	\$30,521,536	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Monroe Blocks</b>													
Net Operating Income	\$0	\$0	\$0	\$0	\$11,140,556	\$30,646,514	\$39,001,914	\$41,317,615	\$42,790,846	\$44,308,274	\$45,871,225	\$47,481,065	\$49,139,200
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$62,724,837	-\$292,038,513	-\$292,038,513	-\$333,177,680	-\$122,035,763	-\$20,114,422	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Hudson's Site</b>													
Net Operating Income	\$0	\$0	\$0	\$0	\$0	\$19,764,038	\$35,966,317	\$40,292,980	\$41,244,420	\$42,214,757	\$43,643,823	\$45,119,143	\$46,631,856
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$16,494,182	-\$200,679,212	-\$200,679,212	-\$201,229,018	-\$200,679,212	-\$89,219,706	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	-\$25,781,784	-\$439,591,724	-\$606,727,173	-\$603,356,415	-\$293,810,113	-\$39,169,247	-\$95,491,748	-\$102,718,725	-\$105,751,076	-\$108,851,157	-\$112,470,826	-\$116,205,341	-\$120,043,803
<b>Annual Yield on Cost</b>	0.0%	0.0%	0.0%	0.4%	1.4%	3.3%	4.5%	4.9%	5.0%	5.1%	5.3%	5.5%	5.7%
<b>Unleveraged IRR - No Assistance</b>	0.0%	0.0%	0.0%	0.4%	1.4%	3.3%	4.5%	4.9%	5.0%	5.1%	5.3%	5.5%	5.7%

LEVERAGED CASH FLOW NO ASSISTANCE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	Year 0	Year 0	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>OCM Addition</b>													
Equity Contribution	\$0	\$0	\$0	\$16,876,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$0	\$0	\$62,431	\$1,969,399	\$1,304,074	\$1,419,893	\$1,536,865	\$1,655,352	\$1,782,920	\$1,900,723	\$2,019,026	\$2,143,751	\$2,270,987
<b>Book Tower</b>													
Equity Contribution	-\$9,287,602	-\$112,999,154	-\$18,486,042	\$0	\$0	\$34,665,125	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$0	\$0	\$0	\$3,065,762	\$12,113,320	\$11,172,189	\$3,378,402	\$3,844,528	\$4,324,639	\$4,819,152	\$5,328,501	\$5,853,131	\$6,393,499
<b>Monroe Blocks</b>													
Equity Contribution	-\$62,724,837	-\$292,038,513	-\$292,038,513	-\$18,777,697	\$0	\$0	\$0	\$54,420,859	\$9,874,811	\$11,392,239	\$12,955,190	\$14,565,029	\$16,223,164
Equity Distribution	\$0	\$0	\$0	\$0	\$11,140,556	\$30,646,514	\$39,001,914	\$40,292,980	\$41,244,420	\$42,214,757	\$43,643,823	\$45,119,143	\$46,631,856
<b>Hudson's Site</b>													
Equity Contribution	-\$16,494,182	-\$200,679,212	-\$200,679,212	-\$89,219,706	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$0	\$0	\$0	\$0	\$0	\$19,764,038	\$35,966,317	\$40,292,980	\$41,244,420	\$42,214,757	\$43,643,823	\$45,119,143	\$46,631,856
<b>TOTAL</b>	-\$25,781,784	-\$420,583,420	-\$511,141,337	-\$86,392,460	-\$24,557,950	-\$97,667,760	-\$79,883,497	-\$108,615,298	-\$99,542,477	-\$98,600,394	-\$92,220,062	-\$85,954,577	-\$79,793,039
<b>Annual Cash-on-Cash Return</b>	0.0%	0.0%	0.5%	2.3%	6.2%	7.9%	7.9%	5.6%	2.8%	3.2%	3.6%	4.0%	4.4%
<b>Average Annual Cash-on-Cash Return (Yrs 5-24)</b>													
<b>Leveraged IRR - No Assistance</b>	0.0%	0.0%	0.5%	2.3%	6.2%	7.9%	7.9%	5.6%	2.8%	3.2%	3.6%	4.0%	4.4%

Source: Bedrock Management Services, LLC; SB Friedman

Figure A3: Financial Returns Analysis – Developer Cost Scenario, without Assistance – CONTINUED

UNLEVERAGED CASH FLOW NO ASSISTANCE	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24
<b>OCM Addition</b>														
Net Operating Income	\$6,747,278	\$6,878,792	\$7,012,472	\$7,148,337	\$7,286,408	\$7,426,704	\$7,569,243	\$7,714,043	\$7,861,121	\$8,010,494	\$8,162,177	\$8,316,185	\$8,472,532	\$8,631,230
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$118,555,530
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Book Tower</b>														
Net Operating Income	\$18,212,800	\$18,788,355	\$19,387,058	\$17,859,983	\$18,399,296	\$18,954,902	\$19,527,297	\$20,117,465	\$20,787,294	\$21,447,407	\$22,128,445	\$22,831,070	\$23,555,967	\$24,303,839
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$320,968,879
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less HTC Equity or Upfront Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Monroe Blocks</b>														
Net Operating Income	\$50,847,079	\$52,615,716	\$50,422,869	\$51,993,762	\$53,265,421	\$53,529,793	\$55,272,248	\$57,072,023	\$58,973,493	\$61,058,730	\$63,217,079	\$65,451,088	\$67,763,391	\$70,156,711
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,031,785,118
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Hudson's Site</b>														
Net Operating Income	\$48,193,435	\$49,801,861	\$51,464,316	\$50,473,382	\$52,166,967	\$51,986,216	\$53,602,030	\$55,268,406	\$56,986,937	\$58,906,628	\$60,890,653	\$62,941,158	\$65,060,361	\$67,250,554
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$928,980,351
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	\$124,000,591	\$128,084,724	\$128,281,714	\$127,475,465	\$131,118,692	\$131,837,615	\$135,970,818	\$140,201,937	\$144,608,845	\$149,423,258	\$154,398,353	\$159,539,301	\$164,852,250	\$2,570,632,012
<b>Annual Yield on Cost</b>	<b>5.9%</b>	<b>6.1%</b>	<b>6.1%</b>	<b>6.0%</b>	<b>6.2%</b>	<b>6.2%</b>	<b>6.4%</b>	<b>6.6%</b>	<b>6.8%</b>	<b>7.1%</b>	<b>7.3%</b>	<b>7.5%</b>	<b>7.8%</b>	<b>8.1%</b>
<b>LEVERAGED CASH FLOW NO ASSISTANCE</b>														
<b>OCM Addition</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$2,400,366	\$2,531,880	\$2,665,560	\$2,801,425	\$2,939,496	\$3,079,792	\$3,222,331	\$3,367,131	\$3,514,209	\$3,663,582	\$3,815,265	\$3,969,273	\$4,125,620	\$98,759,292
<b>Book Tower</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$6,951,461	\$7,527,016	\$8,120,719	\$6,598,644	\$7,137,957	\$7,693,563	\$8,265,958	\$8,866,126	\$9,525,955	\$10,186,068	\$10,867,106	\$11,569,731	\$12,294,628	\$254,333,973
<b>Monroe Blocks</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$17,931,043	\$19,699,681	\$17,506,833	\$19,077,727	\$20,349,385	\$20,613,757	\$22,356,213	\$24,155,987	\$26,057,458	\$28,142,694	\$30,301,044	\$32,535,053	\$34,847,355	\$808,753,236
<b>Hudson's Site</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$16,466,958	\$18,075,384	\$19,237,839	\$18,746,905	\$20,440,490	\$20,259,739	\$21,875,553	\$23,541,929	\$25,260,460	\$27,180,151	\$29,164,176	\$31,214,681	\$33,333,884	\$701,656,269
<b>TOTAL</b>	\$43,749,828	\$47,833,961	\$48,030,950	\$47,224,702	\$50,857,329	\$51,646,852	\$55,720,055	\$59,951,123	\$64,358,082	\$69,172,494	\$74,147,590	\$79,268,738	\$84,601,487	\$1,863,502,770
<b>Annual Cash-on-Cash Return</b>	<b>4.9%</b>	<b>5.3%</b>	<b>5.4%</b>	<b>5.3%</b>	<b>5.7%</b>	<b>5.8%</b>	<b>6.2%</b>	<b>6.7%</b>	<b>7.2%</b>	<b>7.7%</b>	<b>8.3%</b>	<b>8.9%</b>	<b>9.4%</b>	<b>10.1%</b>

Source: Bedrock Management Services, LLC; SB Friedman

Figure A4. Financial Returns Analysis – Developer Cost Scenario, with Assistance

UNLEVERAGED CASH FLOW - FULL ASSISTANCE		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
		Year 0	Year 0	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
<b>OCM Addition</b>															
Net Operating Income		\$0	\$62,431	\$4,142,855	\$5,650,986	\$5,766,805	\$5,883,778	\$6,002,264	\$6,129,833	\$6,247,635	\$6,365,938	\$6,484,663	\$6,603,387	\$6,722,109	
Total TBP TIF Reimbursement		\$0	\$0	\$2,137,369	\$2,282,506	\$2,324,292	\$2,440,530	\$2,484,907	\$2,551,415	\$2,604,789	\$2,652,864	\$2,702,594	\$2,751,033	\$2,799,109	
PV of Remaining Assistance (Year 24)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Reversion Proceeds		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Project Costs		-\$60,781,530	-\$30,390,765	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Book Tower</b>															
Net Operating Income		\$0	\$0	\$0	\$3,065,762	\$12,113,320	\$13,987,524	\$14,639,741	\$15,105,867	\$15,585,977	\$16,080,491	\$16,589,840	\$17,114,470	\$17,654,838	
Total TBP TIF Reimbursement		\$0	\$0	\$0	\$0	\$1,209,536	\$1,389,938	\$1,419,943	\$1,454,577	\$1,485,178	\$1,537,541	\$1,574,631	\$1,603,690	\$1,633,837	
PV of Remaining Assistance (Year 24)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Reversion Proceeds		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Project Costs		-\$8,956,589	-\$108,971,828	-\$108,971,828	-\$73,444,027	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Less HTC Equity or Upfront Assistance</b>															
Monroe Blocks		\$0	\$0	\$29,433,739	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Net Operating Income		\$0	\$0	\$0	\$11,140,556	\$30,646,514	\$39,001,914	\$39,001,914	\$41,317,615	\$42,790,846	\$44,308,274	\$45,871,225	\$47,481,065	\$49,139,200	
Total TBP TIF Reimbursement		\$0	\$0	\$0	\$0	\$0	\$0	\$8,016,672	\$8,273,998	\$8,451,763	\$8,605,704	\$8,841,089	\$9,031,102	\$9,198,440	
PV of Remaining Assistance (Year 24)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Reversion Proceeds		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Project Costs		-\$60,697,619	-\$282,600,059	-\$322,409,639	-\$118,091,663	-\$19,464,340	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Hudson's Site</b>															
Net Operating Income		\$0	\$0	\$0	\$0	\$0	\$19,764,038	\$35,966,317	\$40,292,980	\$41,244,420	\$42,214,757	\$43,643,823	\$45,119,143	\$46,631,856	
Total TBP TIF Reimbursement		\$0	\$0	\$0	\$0	\$0	\$233,166	\$4,262,979	\$4,779,076	\$4,629,859	\$4,484,695	\$4,574,578	\$4,694,786	\$4,799,147	
PV of Remaining Assistance (Year 24)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Reversion Proceeds		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Project Costs		-\$15,817,627	-\$192,447,791	-\$192,447,791	-\$192,975,045	-\$192,447,791	-\$85,560,109	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL</b>		-\$24,774,215	-\$422,898,768	-\$584,914,272	-\$579,682,725	-\$278,142,550	-\$30,912,172	\$111,631,872	\$119,711,283	\$122,869,291	\$126,083,886	\$130,113,887	\$134,237,512	\$138,436,259	
<b>Annual Yield on Cost</b>		<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.6%</b>	<b>1.7%</b>	<b>3.6%</b>	<b>5.5%</b>	<b>5.9%</b>	<b>6.0%</b>	<b>6.2%</b>	<b>6.4%</b>	<b>6.6%</b>	<b>6.8%</b>	
<b>Unleveraged IRR - Full Assistance</b>		<b>6.5%</b>													
<b>LEVERAGED CASH FLOW - FULL ASSISTANCE</b>															
Equity Contribution					\$18,804,152	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Equity Distribution				\$62,431	\$4,106,768	\$3,586,580	\$3,744,184	\$3,977,395	\$4,140,259	\$4,334,335	\$4,505,512	\$4,671,890	\$4,846,345	\$5,032,029	
<b>Book Tower</b>															
Equity Contribution		-\$8,956,589	-\$108,971,828	-\$17,827,194	\$0	\$0	\$39,660,113	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Equity Distribution					\$3,065,762	\$13,322,855	\$12,562,128	\$4,798,344	\$5,299,105	\$5,809,817	\$6,356,693	\$6,903,132	\$7,456,821	\$8,027,337	
<b>Monroe Blocks</b>															
Equity Contribution		-\$60,697,619	-\$282,600,059	-\$282,600,059	-\$18,170,816	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Equity Distribution					\$0	\$0	\$30,646,514	\$47,018,586	\$49,176,201	\$51,826,574	\$54,997,943	\$58,179,279	\$61,596,132	\$65,242,604	
<b>Hudson's Site</b>															
Equity Contribution		-\$15,817,627	-\$192,447,791	-\$192,447,791	-\$85,054,331	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Equity Distribution					\$0	\$19,997,205	\$40,229,296	\$44,472,055	\$48,729,775	\$53,447,802	\$58,633,122	\$64,279,224	\$70,387,452	\$76,954,456	
<b>TOTAL</b>		-\$24,774,215	-\$404,614,533	-\$492,812,612	-\$78,048,465	-\$28,049,992	\$106,610,143	\$96,023,621	\$140,363,198	\$123,133,502	\$126,083,122	\$149,863,224	\$153,986,749	\$188,185,496	
<b>Annual Cash-on-Cash Return</b>					<b>0.7%</b>	<b>2.8%</b>	<b>6.9%</b>	<b>9.9%</b>	<b>7.9%</b>	<b>5.2%</b>	<b>5.6%</b>	<b>6.1%</b>	<b>6.6%</b>	<b>7.1%</b>	
<b>Average Annual Cash-on-Cash Return (Yrs 5-24)</b>		<b>8.2%</b>													
<b>Unleveraged IRR - No Assistance</b>		<b>8.2%</b>													

Source: Bedrock Management Services, LLC; SB Friedman





Figure A5. Financial Returns Analysis – Adjusted Cost Scenario, without Assistance

UNLEVERAGED CASH FLOW NO ASSISTANCE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	Year 0	Year 0	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
OCM Addition													
Net Operating Income	\$0	\$0	\$62,431	\$4,142,855	\$5,650,986	\$5,766,805	\$5,883,778	\$6,002,264	\$6,129,833	\$6,247,635	\$6,365,938	\$6,490,663	\$6,617,909
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$63,188,521	-\$31,594,260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Book Tower													
Net Operating Income	\$0	\$0	\$3,065,762	\$12,113,320	\$13,987,524	\$14,639,741	\$15,105,867	\$15,585,977	\$16,080,491	\$16,589,840	\$17,114,470	\$17,654,838	\$18,209,200
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$7,592,880	-\$92,380,040	-\$92,380,040	-\$62,261,616	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less HTC Equity or Upfront Assistance	\$0	\$0	\$24,952,228	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Monroe Blocks													
Net Operating Income	\$0	\$0	\$0	\$0	\$11,140,556	\$30,646,514	\$39,001,914	\$41,317,615	\$42,790,846	\$44,308,274	\$45,871,225	\$47,481,065	\$49,139,200
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$54,174,452	-\$252,229,057	-\$287,760,306	-\$105,400,363	-\$17,372,509	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hudson's Site													
Net Operating Income	\$0	\$0	\$0	\$0	\$0	\$19,764,038	\$35,956,317	\$40,292,980	\$41,244,420	\$42,214,757	\$43,643,823	\$45,119,143	\$46,631,856
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$12,307,363	-\$149,739,586	-\$149,739,586	-\$150,149,831	-\$149,739,586	-\$68,470,881	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	-\$19,900,243	-\$359,482,598	-\$500,928,283	-\$492,963,136	-\$226,235,087	-\$15,678,509	\$95,491,748	\$102,718,725	\$105,751,076	\$108,851,157	\$112,470,826	\$116,205,341	\$120,043,803
Annual Yield on Cost	0.0%	0.0%	0.0%	0.5%	1.8%	4.1%	5.7%	6.0%	6.1%	6.3%	6.5%	6.8%	7.0%
Unleveraged IRR - No Assistance	6.9%												

LEVERAGED CASH FLOW NO ASSISTANCE	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Year 0	Year 0	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
OCM Addition													
Equity Contribution	-\$44,180,217	\$0	\$16,876,588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$0	\$0	\$1,969,399	\$1,304,074	\$1,419,893	\$1,536,865	\$1,655,352	\$1,782,920	\$1,900,723	\$2,019,026	\$2,143,751	\$2,270,997	\$2,400,997
Book Tower													
Equity Contribution	-\$7,592,880	-\$92,380,040	-\$15,112,868	\$0	\$0	\$60,238,476	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$0	\$0	\$3,065,762	\$12,113,320	\$11,172,189	\$3,378,402	\$3,844,528	\$4,324,639	\$4,819,152	\$5,328,501	\$5,853,131	\$6,393,499	\$6,939,499
Monroe Blocks													
Equity Contribution	-\$54,174,452	-\$252,229,057	-\$16,216,000	\$0	\$0	\$30,646,514	\$39,001,914	\$41,317,615	\$42,790,846	\$44,308,274	\$45,871,225	\$47,481,065	\$49,139,200
Equity Distribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Hudson's Site													
Equity Contribution	-\$12,307,363	-\$149,739,586	-\$149,739,586	-\$67,861,086	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$0	\$0	\$0	\$0	\$0	\$19,764,038	\$35,956,317	\$40,292,980	\$41,244,420	\$42,214,757	\$43,643,823	\$45,119,143	\$46,631,856
TOTAL	-\$19,900,243	-\$340,474,295	-\$417,019,080	-\$62,167,337	-\$24,557,950	\$123,241,110	\$79,883,497	\$170,850,288	\$190,644,689	\$28,600,394	\$32,270,062	\$35,954,577	\$39,793,039
Annual Cash-on-Cost Return	10.6%												
Average Annual Cash-on-Cost Return (Trs 5-24)	9.1%												
Leveraged IRR - No Assistance	9.1%												

Source: Bedrock Management Services, LLC; SB Friedman

**Figure A5. Financial Returns Analysis – Adjusted Cost Scenario, without Assistance - CONTINUED**

UNLEVERAGED CASH FLOW NO ASSISTANCE	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24
<b>OCM Addition</b>														
Net Operating Income	\$6,747,278	\$6,878,792	\$7,012,472	\$7,148,337	\$7,286,408	\$7,426,704	\$7,569,243	\$7,714,043	\$7,861,121	\$8,010,494	\$8,162,177	\$8,316,185	\$8,472,532	\$8,631,230
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$118,555,530
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Book Tower</b>														
Net Operating Income	\$18,212,800	\$18,788,355	\$19,382,058	\$17,859,983	\$18,399,296	\$18,954,902	\$19,527,297	\$20,117,465	\$20,727,294	\$21,447,407	\$22,128,445	\$22,831,070	\$23,555,967	\$24,303,839
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$320,988,679
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Less HTC Equity or Upfront Assistance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Monroe Blocks</b>														
Net Operating Income	\$50,847,079	\$52,615,716	\$50,422,869	\$51,993,762	\$53,265,421	\$53,529,793	\$55,272,248	\$57,077,023	\$58,973,493	\$61,058,730	\$63,217,079	\$65,451,088	\$67,763,391	\$70,156,711
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,031,765,118
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Hudson's Site</b>														
Net Operating Income	\$48,193,435	\$49,801,861	\$51,464,316	\$50,473,382	\$52,166,967	\$51,986,216	\$53,602,030	\$55,268,406	\$56,986,937	\$58,906,628	\$60,890,653	\$62,941,158	\$65,060,361	\$67,250,554
Reversion Proceeds (Year 24)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$928,980,351
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	\$124,000,591	\$128,084,724	\$128,281,714	\$127,475,465	\$131,118,092	\$131,897,615	\$135,970,818	\$140,201,937	\$144,608,845	\$149,423,258	\$154,398,353	\$159,539,501	\$164,852,250	\$170,370,012
<b>Annual Yield on Cost</b>	<b>7.2%</b>	<b>7.4%</b>	<b>7.5%</b>	<b>7.4%</b>	<b>7.6%</b>	<b>7.7%</b>	<b>7.9%</b>	<b>8.1%</b>	<b>8.4%</b>	<b>8.7%</b>	<b>9.0%</b>	<b>9.3%</b>	<b>9.6%</b>	<b>9.9%</b>
<b>LEVERAGED CASH FLOW NO ASSISTANCE</b>														
<b>OCM Addition</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$2,400,366	\$2,531,880	\$2,665,560	\$2,801,425	\$2,939,496	\$3,079,792	\$3,222,331	\$3,367,131	\$3,514,209	\$3,663,582	\$3,815,265	\$3,969,273	\$4,125,620	\$4,284,292
<b>Book Tower</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$6,951,461	\$7,527,016	\$8,120,719	\$6,598,644	\$7,137,957	\$7,693,563	\$8,265,958	\$8,866,126	\$9,525,955	\$10,186,068	\$10,867,106	\$11,569,731	\$12,294,628	\$13,033,973
<b>Monroe Blocks</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$17,931,043	\$19,699,681	\$17,506,833	\$19,077,727	\$20,349,385	\$20,613,757	\$22,356,213	\$24,155,987	\$26,057,458	\$28,142,694	\$30,301,044	\$32,535,053	\$34,847,355	\$38,087,533,236
<b>Hudson's Site</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution	\$16,466,958	\$18,075,384	\$19,737,839	\$18,746,905	\$20,440,450	\$20,259,739	\$21,875,553	\$23,541,929	\$25,260,460	\$27,180,151	\$29,164,176	\$31,214,681	\$33,333,884	\$35,526,269
<b>TOTAL</b>	\$43,749,828	\$47,244,702	\$48,030,950	\$47,244,702	\$50,867,329	\$51,646,852	\$55,720,055	\$59,951,173	\$64,358,082	\$69,172,994	\$74,147,590	\$79,288,718	\$84,601,487	\$90,002,770
<b>Annual Cash-on-Cash Return</b>	<b>8.7%</b>	<b>9.5%</b>	<b>9.6%</b>	<b>9.4%</b>	<b>10.1%</b>	<b>10.3%</b>	<b>11.1%</b>	<b>11.9%</b>	<b>12.8%</b>	<b>13.8%</b>	<b>14.8%</b>	<b>15.8%</b>	<b>16.8%</b>	<b>18.0%</b>

Source: Bedrock Management Services, LLC; SB Friedman

Figure A6. Financial Returns Analysis – Adjusted Cost Scenario, with Adjusted Assistance

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>UNLEVERAGED CASH FLOW - ADJ ASSISTANCE</b>													
Net Operating Income	\$0	\$0	\$62,431	\$7,208,617	\$28,904,862	\$70,164,881	\$95,491,748	\$102,187,251	\$105,751,076	\$108,470,826	\$112,470,826	\$116,205,341	\$120,043,803
TBP Assistance	\$0	\$0	\$0	\$2,137,369	\$3,492,042	\$3,947,396	\$16,140,123	\$16,992,557	\$17,118,214	\$17,232,728	\$17,643,160	\$18,032,171	\$18,392,456
Reversion Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$19,182,886	-\$346,331,548	-\$482,500,882	-\$481,719,125	-\$245,557,649	-\$82,608,890	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	-\$19,182,886	-\$346,331,548	-\$482,500,882	-\$472,373,139	-\$213,160,745	-\$58,496,612	\$11,153,871	\$119,711,282	\$122,869,290	\$125,083,885	\$130,113,986	\$134,237,511	\$138,436,258
Annual Yield on Cost	0.0%	0.0%	0.0%	0.7%	2.1%	4.5%	6.7%	7.2%	7.4%	7.6%	7.8%	8.1%	8.4%
<b>Unleveraged IRR - Adj Assistance</b>													
	7.9%												

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>LEVERAGED CASH FLOW - ADJ ASSISTANCE</b>													
Equity Contribution	-\$19,182,886	-\$328,047,313	-\$401,532,723	-\$62,106,450	\$0	\$64,043,936	\$0	\$131,331,126	\$176,502,132	\$0	\$0	\$0	\$0
Equity Distribution from Cash Flow	\$0	\$0	\$62,431	\$5,035,161	\$24,557,950	\$63,000,635	\$75,883,497	\$54,194,439	\$35,500,313	\$28,600,394	\$32,220,062	\$35,954,577	\$39,793,039
Equity Distribution from TBP	\$0	\$0	\$0	\$2,137,369	\$3,492,042	\$3,947,396	\$16,140,123	\$16,992,557	\$17,118,214	\$17,232,728	\$17,643,160	\$18,032,171	\$18,392,456
<b>TOTAL</b>	-\$19,182,886	-\$328,047,313	-\$401,470,292	-\$54,933,920	-\$28,049,592	\$130,993,966	\$96,023,620	\$207,518,121	\$219,120,659	\$45,833,121	\$69,863,223	\$53,986,748	\$58,185,495
Annual Cash-on-Cash Return	15.0%		9.0%	0.9%	3.5%	9.0%	12.9%	11.6%	9.7%	10.4%	11.4%	12.3%	13.3%
Average Annual Cash-on-Cash Return (Yr 5-20)													
<b>Leveraged IRR - Adj Assistance</b>													
	10.9%												

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
<b>UNLEVERAGED CASH FLOW - ADJ ASSISTANCE</b>														
Net Operating Income	\$124,000,591	\$128,084,724	\$128,881,714	\$127,475,465	\$131,118,092	\$135,970,818	\$140,201,937	\$144,608,845	\$149,423,258	\$154,398,353	\$159,539,501	\$164,852,250	\$170,342,335	
TBP Assistance	\$18,781,067	\$19,193,474	\$20,162,408	\$21,350,452	\$22,014,810	\$23,821,612	\$24,380,550	\$25,034,894	\$25,629,706	\$26,000,000	\$0	\$0	\$0	
Reversion Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL</b>	\$142,781,658	\$147,278,198	\$149,044,122	\$148,825,917	\$153,132,902	\$155,719,227	\$160,351,368	\$165,236,831	\$170,238,532	\$175,423,258	\$181,398,353	\$187,174,481	\$193,102,012	
Annual Yield on Cost	8.6%	8.9%	9.0%	9.0%	9.2%	9.4%	9.7%	10.0%	10.3%	9.6%	9.3%	9.9%	10.3%	

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
<b>LEVERAGED CASH FLOW - ADJ ASSISTANCE</b>														
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Equity Distribution from Cash Flow	\$43,749,828	\$47,833,961	\$48,030,950	\$47,224,702	\$50,867,329	\$51,646,852	\$55,720,055	\$59,951,173	\$64,358,082	\$69,172,494	\$74,147,590	\$79,288,738	\$84,601,487	
Equity Distribution from TBP	\$18,781,067	\$19,193,474	\$20,162,408	\$21,350,452	\$22,014,810	\$23,821,612	\$24,380,550	\$25,034,894	\$25,629,706	\$26,000,000	\$0	\$0	\$0	
<b>TOTAL</b>	\$62,530,895	\$67,027,435	\$68,193,359	\$68,575,154	\$72,882,139	\$75,468,463	\$80,100,605	\$84,986,067	\$89,987,788	\$95,172,494	\$101,147,590	\$107,288,738	\$113,603,202	
Annual Cash-on-Cash Return	14.2%	15.3%	15.5%	15.6%	16.6%	17.2%	18.2%	19.4%	20.5%	18.0%	16.9%	18.1%	19.3%	

Source: Bedrock Management Services, LLC; SB Friedman

Figure A7. Financial Returns Analysis – Adjusted Cost Scenario + Residential Rent Sensitivity, with Adjusted Assistance

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>UNLEVERAGED CASH FLOW - ADJ ASSISTANCE</b>													
Net Operating Income	\$0	\$0	\$62,431	\$7,185,173	\$28,738,161	\$68,998,160	\$92,621,518	\$99,174,512	\$102,100,536	\$105,091,101	\$108,597,968	\$112,216,297	\$115,935,087
TBP Assistance	\$0	\$0	\$0	\$2,137,369	\$3,486,490	\$3,904,582	\$15,776,591	\$16,605,071	\$16,802,673	\$16,992,782	\$17,197,782	\$17,781,885	\$18,137,165
Reversion Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	-\$19,199,285	-\$346,531,067	-\$482,700,401	-\$481,919,191	-\$245,757,168	-\$81,793,869	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	<b>-\$19,199,285</b>	<b>-\$346,531,067</b>	<b>-\$482,637,969</b>	<b>-\$472,586,648</b>	<b>-\$213,531,518</b>	<b>-\$6,891,128</b>	<b>\$108,398,129</b>	<b>\$115,779,585</b>	<b>\$118,903,209</b>	<b>\$122,083,262</b>	<b>\$125,995,750</b>	<b>\$129,998,182</b>	<b>\$134,072,252</b>
Annual Yield on Cost	0.0%	0.0%	0.0%	0.7%	2.0%	4.4%	6.5%	7.0%	7.2%	7.4%	7.4%	7.6%	7.8%
Unleveraged IRR - Adj Assistance	0.0%	7.7%											8.1%
<b>LEVERAGED CASH FLOW - ADJ ASSISTANCE</b>													
Equity Contribution	-\$19,199,285	-\$328,246,832	-\$401,732,242	-\$61,691,014	\$0	\$62,748,505	\$0	\$116,175,531	\$150,916,427	\$0	\$0	\$0	\$0
Equity Distribution from Cash Flow	\$0	\$0	\$62,431	\$5,021,717	\$24,391,248	\$61,856,775	\$77,096,737	\$1,709,977	\$24,652,798	\$27,643,363	\$31,150,230	\$34,768,559	\$38,487,350
Equity Distribution from TBP	\$0	\$0	\$0	\$2,137,369	\$3,486,490	\$3,904,582	\$15,776,591	\$16,605,071	\$16,802,673	\$16,992,782	\$17,197,782	\$17,781,885	\$18,137,165
<b>TOTAL</b>	<b>-\$19,199,285</b>	<b>-\$328,246,832</b>	<b>-\$401,669,811</b>	<b>-\$54,531,927</b>	<b>\$27,877,738</b>	<b>\$128,509,862</b>	<b>\$92,873,928</b>	<b>\$184,490,582</b>	<b>\$192,371,898</b>	<b>\$44,635,524</b>	<b>\$48,598,013</b>	<b>\$52,550,444</b>	<b>\$56,624,514</b>
Annual Cash-on-Cash Return	0.9%	3.4%	8.8%	12.4%	10.8%	8.6%	9.3%	10.1%	10.1%	10.9%	10.9%	11.0%	11.6%
Average Annual Cash-on-Cash Return (Yrs 5-24)	14.9%												
Leveraged IRR - Adj Assistance	10.5%												
<b>UNLEVERAGED CASH FLOW - ADJ ASSISTANCE</b>													
Net Operating Income	\$19,768,615	\$123,725,809	\$123,792,084	\$126,355,247	\$126,992,037	\$130,918,262	\$134,998,035	\$139,249,098	\$143,903,036	\$146,712,889	\$148,821,437	\$151,563,888	\$154,131,121
TBP Assistance	\$18,520,670	\$18,927,869	\$19,891,491	\$21,074,116	\$21,732,947	\$23,534,112	\$24,087,301	\$24,735,780	\$25,543,202	\$25,543,202	\$25,623,664	\$25,623,664	\$25,623,664
Reversion Proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Project Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	<b>\$18,289,284</b>	<b>\$142,653,678</b>	<b>\$143,683,575</b>	<b>\$143,975,346</b>	<b>\$150,526,149</b>	<b>\$155,005,563</b>	<b>\$159,733,814</b>	<b>\$164,573,708</b>	<b>\$169,768,743</b>	<b>\$172,556,091</b>	<b>\$176,307,552</b>	<b>\$182,032,294</b>	<b>\$184,865,526</b>
Annual Yield on Cost	8.3%	8.6%	8.7%	8.7%	8.9%	9.1%	9.3%	9.6%	9.9%	10.2%	10.4%	10.6%	10.9%
<b>LEVERAGED CASH FLOW - ADJ ASSISTANCE</b>													
Equity Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equity Distribution from Cash Flow	\$42,320,877	\$46,344,346	\$45,403,492	\$48,907,509	\$49,544,239	\$53,470,525	\$57,550,297	\$61,801,361	\$66,555,298	\$71,265,151	\$76,236,150	\$81,373,699	\$1,795,406,594
Equity Distribution from TBP	\$18,520,670	\$18,927,869	\$19,891,491	\$21,074,116	\$21,732,947	\$23,534,112	\$24,087,301	\$24,735,780	\$25,543,202	\$25,543,202	\$25,623,664	\$25,623,664	\$25,623,664
<b>TOTAL</b>	<b>\$60,841,547</b>	<b>\$65,205,941</b>	<b>\$65,477,609</b>	<b>\$70,640,456</b>	<b>\$73,078,411</b>	<b>\$77,557,825</b>	<b>\$82,286,076</b>	<b>\$87,135,970</b>	<b>\$92,331,005</b>	<b>\$94,608,153</b>	<b>\$98,599,814</b>	<b>\$104,584,556</b>	<b>\$1,805,112,514</b>
Annual Cash-on-Cash Return	12.6%	13.6%	13.8%	14.7%	15.2%	16.1%	17.1%	18.1%	19.2%	19.7%	20.6%	21.7%	20.2%

Source: Bedrock Management Services, LLC; SB Friedman