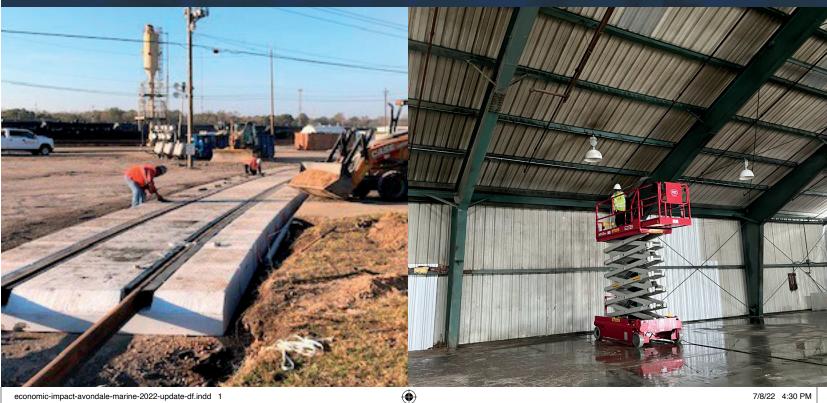
ECONOMIC IMPACT OF AVONDALE MARINE: 2022 UPDATE

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Executive Summary

Avondale has a long history as one of the state's top economic drivers. However, the site had fallen into disrepair and sat idle before its recent acquisition by T. Parker Host (Host) and Hilco Redevelopment Partners (Hilco), which has established a redevelopment plan to transform the site to best serve today's market and return the site to commerce. Despite the challenges of high water on the Mississippi River and the COVID-19 pandemic that have delayed new developments, Host has secured Avondale Marine's first new tenant and brought approximately \$40 million in investment to the site to date. As activity at Avondale Marine has grown in recent quarters, Host expects to secure additional tenants to fulfill the vision laid out in the original master plan. This study provides an assessment of the economic impact of redevelopment activities to date and an updated assessment of the potential economic benefits of fulfilling the redevelopment master plan vision for Avondale Marine as a waterfront industrial park and top economic driver for Louisiana.

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The redevelopment plan includes an up-front capital investment and the long-term operations with new industrial tenants as well as waterfront and river-based activity to support a reimagined Avondale Marine. The specific assumptions utilized in this study are as follows:

- \$40 million in capital investment between 2018 and 2021
- \$950 million in capital investment between 2022 and 2026
- Approximately 2,280 new direct jobs including employees of industrial tenants, waterfront operations and new operations on the river

The total economic impact including cumulative activities to date, the 5-year construction buildout of the master plan and 20-years of operations included in the planning horizon is summarized as follows:

- Total economic impact of \$32.0 billion in output
- Creation of 4,575 new jobs by 2027
- ▶ Increase Louisiana payrolls by \$8.6 billion.

This new activity will generate substantial new tax revenue for the state and local governments. During the full planning horizon, the Avondale Marine redevelopment will generate

- ▶ \$554.9 million in new state tax revenue
- \$286.9 million in new parish sales tax revenue



Background

Avondale has a long history as one of the state's top economic drivers, which at one point was home to the largest employer in the State of Louisiana. After acquisitions and corporate restructuring shifted activity out of state, the site sat idle before a major redevelopment effort began several years ago led by T. Parker Host (Host). Thanks to its location on the Mississippi River and access to a plentiful supply of skilled labor in the surrounding metropolitan area, the site is well positioned to return this prime location to its place as a major economic driver for the region and Louisiana. The new master plan for redeveloping Avondale shipyard was previously analyzed by BEC Research to assess the potential economic benefits of fulfilling that vision. This report documents progress to date as well as a revised assessment of potential economic impact based on fulfilling the vision laid out in the master plan for Avondale Marine.

Shortly after the Avondale site was acquired in October 2018, work began on the master plan. However, several unexpected obstacles slowed the timeline for redevelopment of the site. Beginning in December 2018, the area experienced the longest consecutive "flood stage" on record of 270 days. During this period, no work could be performed on the site within 1500 feet of the river, effectively stopping any improvements at Avondale. This restriction is imposed on all waterfront properties along the river during high river. Once the restrictions were lifted in late 2019. Avondale Marine resumed making improvements to the site



including critical improvements to Dock 2.

By February 2020, Avondale Marine was ready to reengage in commerce and hosted its first cargo vessel in late February 2020. In March 2020, Host had reconnected to the Union Pacific (UP) railroad and could begin providing rail service to UP destinations. Shortly thereafter, progress on implementing the master plan was once again disrupted with Covid-19 restrictions starting in mid-March of 2020 with severe economic and workforce challenges to follow. Despite the Covid downturn, Avondale loaded or discharged approximately 30 ships during 2020 and handled almost a half of million tons of cargo. With the continuation of Covid into 2021, Avondale Marine worked approximately 50 ships that year with over a half of million tons of cargo. Today, Host has grown their Avondale Marine team from the 8 who helped launch the redevelopment in 2018 to over 250 jobs with an average annual income of \$65,000 per job.

Through 2022, Host plans to hire 50 more people this year to reach a total of 300 team members on site by the end of 2022. With pandemic-related challenges subsiding, Host plans to accelerate the redevelopment of Avondale Marine and fulfill the master plan vision by 2026. Relative to the initial redevelopment master plan, today's outlook includes larger up front capital investments to upgrade facilities and equipment and enable tenants to leverage the unique characteristics of the site. This study provides an assessment of the economic impact of cumulative work to date on the site as well as the potential future economic impact of the updated redevelopment scenario provided by Host based on the Avondale redevelopment master plan and updated assessments of likely capital investments at the site.

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Inputs

The new capital investments directly infuse dollars into the state's economy. Investments by Host help to re-establish core long-term activity on the site and help attract new tenants, which often make sizeable investments of their own to support long-term activities on the site. To characterize the full economic benefits of redeveloping the site, we consider past investments and current operational activity on the site as well as a future development scenario of front-loaded capital investments alongside a gradual increase in economic activity on site up to full capacity by 2026. Long-term operations are examined over a 20-year horizon after the site reaches full scale operations. The scenario inputs tied to redevelopment of the site are summarized in four categories:

- construction
- industrial activity
- waterfront activity
- new river activity

Construction

The first phase of economic activity is the initial capital investment to modernize the site and position Avondale Marine's current and future tenants to make best use of the site in today's economic landscape. Historically, the site functioned as a shipyard, but the dated infrastructure in place when it was acquired by Host has been undergoing significant investment to transform the site into a waterfront industrial park. After full implementation of the master plan, the site will accommodate a mix of smaller and larger companies who will take advantage of the direct access to the river for operations at various scales. However, significant up-front capital investments by Host and the tenants are needed to return the site to its historical place as one of the top economic drivers in the state.

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Table 1: Construction Spending by Year			
Year	Capital expenses (in millions)		
Past	\$40.0		
2022	\$63.3		
2023	\$193.3		
2024	\$313.3		
2025	\$250.0		
2026	\$130.0		
Total	\$990.0		

Source: Host

With cumulative investments at the site totaling approximately \$40 million, future capital investments are expected to span a five-year period as long-term tenants are attracted to the site. Future investments are based on Host's own planned expenditures, investments underway from an existing tenant, and estimates of the size and number of future tenants that would utilize the site given the remaining available space. For future tenants, it was assumed that four additional tenants would bring the site to full capacity with investments ranging from \$130 million to \$250 million per tenant to establish those operations at Avondale Marine, investments that are well within the range of recently-developed facilities along the Mississippi River. For purposes of this analysis, it was assumed that two future tenants would make investments at the low end of that range and two would make investments at the high end of that range. In total, these investments would reach \$990 million.

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Industrial Activity

The vision for Avondale Marine is to develop a modernized waterfront industrial park. While some progress has already been made to refurbish, repurpose, or replace existing infrastructure, there continues to be a wide range of future opportunities for use of this unique site. The initial economic impact assessment based expected future industrial activity heavily on the existing facilities. Given the current state of development, the mix of industrial activities has been updated for this analysis to align with the distribution of activities between office, warehousing, and manufacturing. A comparison of the earlier scenario with the revised full development scenario is provided below.

Table 2: Industrial Jobs at Full Capacity				
Category	Initial Target	Revised Target		
Office	652	59		
Warehousing	22	616		
Manufacturing	1,430	1,430		
Totals	2,104	2,104		

Source: Host

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Waterfront Activity

In addition to the activity within the Avondale Marine industrial park, there will be new waterfront activity on site to handle cargo being brought to the site and connected to the warehousing and logistics activities on site. In the initial economic impact assessment projected tonnages were used as a basis for estimating potential new economic activity in the region. As noted previously, development of these activities were hampered by the COVID-19 pandemic. Despite those challenges, the site handled approximately 30 ships in 2020 and 50 ships in 2021. With demonstrated growth in labor hours handling cargo from those vessels in recent quarters, the projection for future growth in waterfront activity includes the same full capacity target of 100 jobs as was used in the initial analysis with remaining growth occurring between 2022 and 2026, when the site would be at full capacity. It is assumed that waterfront activity would increase 1.5% per year after 2026.

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New River Activity

With the Avondale site operating as an industrial park hosting a number of new manufacturers, there will also be new activity on the river as vessels bring new cargo to the site for further processing. In addition, warehousing and logistics activities at the site are expected to attract new cargo to the region. In the initial economic impact analysis, estimates of the operating expenses for handling this new river activity were used as a basis for the analysis. As with the waterfront activity, the river activity is still expected to reach a similar level and assumed to support 75 additional jobs when the site is operating at full capacity in 2026. Following the trend in waterfront activity, it was assumed that river activity would increase 1.5% per year after 2026.

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Summary of Inputs

The new activities expected to be created from Host's redevelopment of the Avondale site include construction, industrial operations, waterfront and river-based activities. For most of these categories, estimates of the new jobs created were provided by Host and reflect updated assessments from the initial master plan analysis based on progress to date and the mix of activities already occurring at the site. The construction jobs are front-loaded in the first five years peaking in 2024 at close to 2,000 jobs when significant site work is still ongoing and multiple tenant investments would be occurring simultaneously. Operations gradually ramp up driven by new industrial and warehousing activity with a relatively small number of waterfront and river-based jobs supporting that activity.

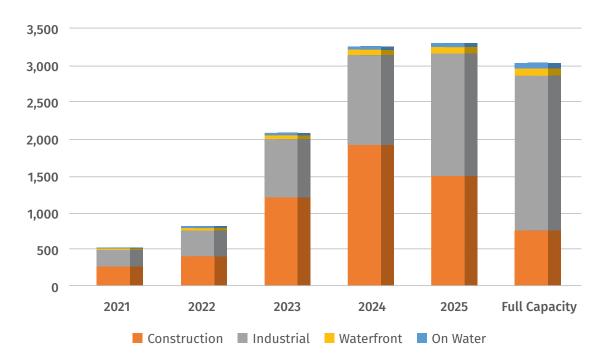


Figure 1: Direct Jobs by Category

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Methodology

In addition to the new direct jobs identified in the redevelopment scenario above, we used a standard approach to model the total economic impact of returning the Avondale site to commerce. Economic impact assessments capture the broader set of economic activities generated by an initial infusion of new dollars into the economy. When new economic activity occurs, businesses will purchase additional inputs and workers will have additional dollars for purchasing goods and services. The total economic effect accounts for indirect spending by businesses and induced spending by workers benefiting from additional dollars. Economic impact analysis provides the tools to quantify the full economic impact including these broader effects within a regional economy using jobs, earnings, and output multipliers.

Economic impact assessments are based on the inter-industry linkages across the economy and commonly utilize the input-output method developed by Wassily Leontief, for which he was awarded the Nobel Prize in Economics. While input-output models have advanced considerably over the time since Leontief's award, the same fundamental principles apply. The methodology relies on the assumption of linear relationships (and technology) to capture commodity flows from producers to intermediate and final consumers.

The model is attractive because it allows economists to quantify the spillovers from additional activity in one sector. For instance, an expansion in one industry leads to greater income for workers in other industries. These groups in turn spend more in the economy, creating another round of activity. Input-Output analysis provides a method of estimating the sum total of these ripples through the economy. Miller and Blair (2009) provide a full overview of input-output analysis. This study uses RIMS multipliers developed by the U.S. Bureau of Economic Analysis (2020) to carry out the analysis.

To align dollar values in 2022 and beyond with the time period implicit in the RIMS multipliers, we use the Consumer Price Index (United States Department of Labor, 2022) to adjust values for past inflation between 2021 and 2022 consensus expectations from the Livingston Survey to account for anticipated inflation beyond that time (Federal Reserve Bank of Philadelphia, 2021).



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Results

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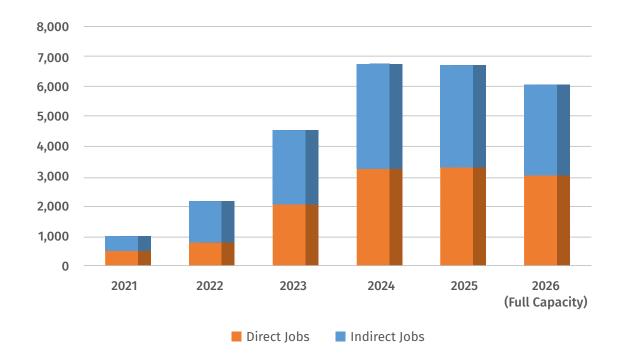


Figure 2: Jobs Created by Avondale Redevelopment

The jobs created by the proposed Avondale redevelopment are illustrated in Figure 2. Direct jobs peak just above 3,300 in 2025 when major construction activities are still ongoing, but operations have ramped up considerably. In that year, these activities would generate an additional 3,395 jobs bringing the total jobs created in the peak year to over 6,700. The full results of the economic impact analysis are presented in Table 3. As operations ramp up toward full capacity, the total annual economic impact is expected to grow to \$1.4 billion by 2025. As construction activity winds down, the economic impact dips slightly and then steadily grows with inflation and modest increases in river and waterfront activity for the remainder of the project planning horizon. Including the 5-year buildout and ramp-up, and 20-years of full-scale operations, the site's redevelopment plan is expected to generate a total economic impact of nearly \$33 billion dollars in nominal output. This new economic activity includes an annual payroll exceeding \$290 million in 2027 with more than 4,500 permanent jobs created by the site's redevelopment.

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Table 3: Economic Impact on Louisiana by Year				
Year	Output*	Earnings*	Jobs	
Past	\$172.0	\$52.2	1,016	
2022	\$429.0	\$120.3	2,177	
2023	\$886.4	\$261.7	4,555	
2024	\$1,331.6	\$398.2	6,739	
2025	\$1,407.1	\$406.2	6,705	
2026	\$1,375.0	\$376.2	6,059	
2027	\$1,134.7	\$290.7	4,575	
2028	\$1,163.9	\$298.1	4,583	
2029	\$1,193.8	\$305.7	4,590	
2030	\$1,224.4	\$313.5	4,597	
2031	\$1,256.0	\$321.5	4,605	
2032	\$1,288.3	\$329.7	4,613	
2033	\$1,321.5	\$338.2	4,620	
2034	\$1,355.6	\$346.8	4,628	
2035	\$1,390.6	\$355.7	4,636	
2036	\$1,426.6	\$364.9	4,644	
2037	\$1,463.5	\$374.2	4,653	
2038	\$1,501.4	\$383.8	4,661	
2039	\$1,540.3	\$393.7	4,670	
2040	\$1,580.3	\$403.9	4,678	
2041	\$1,621.4	\$414.3	4,687	
2042	\$1,663.5	\$425.0	4,696	
2043	\$1,706.8	\$435.9	4,705	
2044	\$1,751.3	\$447.2	4,714	
2045	\$1,797.0	\$458.8	4,723	
Total	\$32,982.2	\$8,616.5		

* \$ in millions

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The top industries with the largest number of new jobs based on full scale operations are listed in Table 4. The highest concentration of jobs is in durable goods manufacturing thanks to a large new base of direct jobs operating on site. In addition, a significant number of transportation and warehousing jobs will be created to support the site and facilitate the flow of goods to and from Avondale Marine. Those

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new jobs will provide wages that induce a sizeable amount of new economic activity in retail trade, health care and social assistance, food and beverage services, as well as several other service-oriented industries. Indirect activity will also be stimulated by business expenditures, which explains the large number of jobs in administrative and waste management services, but also provides some indirect revenue across most of the other top industries listed below. It is also notable that these are generally high-paying jobs, with earnings in many of these industries paying well above the statewide average earnings of \$38,368.

Table 4: Top 10 Industry Job Impacts in 2027			
Industry	Total Jobs	Average Earnings	
Durable goods manufacturing	1,384	\$60,792	
Transportation and warehousing	940	\$41,289	
Health care and social assistance	298	\$39,878	
Administrative and waste management services	259	\$25,989	
Retail trade	249	\$25,238	
Real estate and rental and leasing	234	\$14,140	
Food and beverage services	181	\$19,026	
Other services	153	\$20,957	
Nondurable goods manufacturing	143	\$87,197	
Professional, scientific, and technical services	137	\$45,441	

Average LA Earnings from 2019, Bureau of Economic Analysis

These new activities will generate additional state and local taxes. Table 5 shows the estimated new tax revenues that would be created each year according to the redevelopment scenario. State taxes include sales, individual income, alcohol, beer, gasoline, gaming, lottery, tobacco, and a number of smaller taxes and fees that would vary with increases in business activity or earnings. By 2025, state tax revenues reach \$16.4 million with total state tax revenue of nearly \$555 million during the planning horizon. Parish sales taxes are estimated based on the local sales tax. Parish sales taxes would increase by more than \$13.5 million in 2025. In total, parish sales taxes would increase by over \$285 million during the planning horizon.



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Table 5: State and Local Tax Impacts				
Year	State Taxes	Parish Taxes		
Past	\$1.7	\$1.7		
2022	\$5.4	\$4.0		
2023	\$8.9	\$8.7		
2024	\$12.6	\$13.3		
2025	\$16.4	\$13.5		
2026	\$19.8	\$12.5		
2027	\$20.3	\$9.7		
2028	\$20.9	\$9.9		
2029	\$21.4	\$10.2		
2030	\$21.9	\$10.4		
2031	\$22.5	\$10.7		
2032	\$23.1	\$11.0		
2033	\$23.7	\$11.3		
2034	\$24.3	\$11.5		
2035	\$24.9	\$11.8		
2036	\$25.5	\$12.1		
2037	\$26.2	\$12.5		
2038	\$26.9	\$12.8		
2039	\$27.6	\$13.1		
2040	\$28.3	\$13.4		
2041	\$29.0	\$13.8		
2042	\$29.7	\$14.1		
2043	\$30.5	\$14.5		
2044	\$31.3	\$14.9		
2045	\$32.1	\$15.3		
Total	\$554.9	\$286.9		



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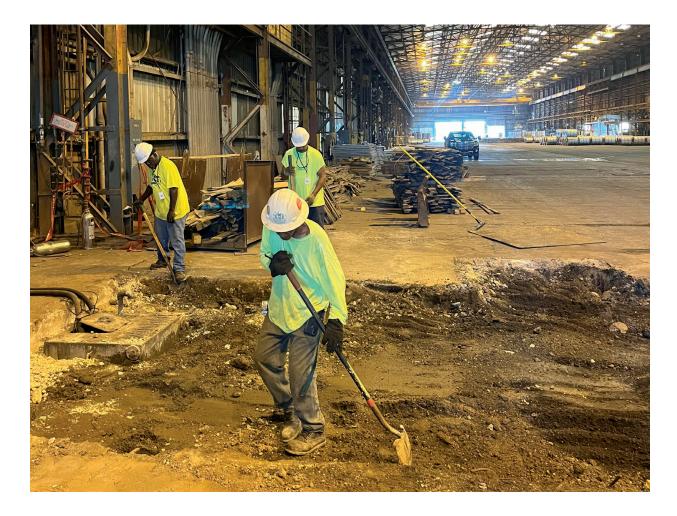
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Conclusion

This study provides an assessment of the economic impact of redevelopment activities to date and an updated assessment of the potential economic benefits of fulfilling the redevelopment master plan vision for Avondale Marine as a waterfront industrial park. Given challenges of high water on the Mississippi River and the COVID-19 pandemic, the redevelopment timeline has been extended, but approximately \$40 million of infrastructure and capital investment has already occurred and a first major tenant has been secured. Activity on the site has accelerated in recent quarters and the vision for fully returning the site to commerce remains intact. A total of \$990 million in capital investments is expected on site including investments by Host and current and future tenants. At full capacity, Avondale Marine is expected host direct employment of approximately 2,280.

The total economic impact for the 5-year construction and operations phase-in plus 20-year planning horizon is nearly \$33 billion. In total, the site's redevelopment is expected to create 4,575 new jobs by 2027 with modest additional growth as waterfront activity grows over time. These new jobs will increase Louisiana payrolls by \$8.6 billion over the planning horizon. This new activity will generate substantial new tax revenue for the state and local governments. In total, the activities outlined in the redevelopment scenario would generate \$554.9 million in new state tax revenue. In addition, local government entities in Jefferson Parish would benefit from approximately \$286.9 million in new sales tax revenue.



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