

The Economic Impact of HOLON Autonomous Vehicle Plant in Jacksonville

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Executive Summary

HOLON, a subsidiary of the BENTELER Group, is establishing its first U.S. production facility for autonomous electric vehicles in Jacksonville, Florida. This project marks Florida's first automotive vehicle manufacturing operation and represents a significant economic opportunity for the Jacksonville area.

The study quantifies the economic impact of HOLON's plant investments and ongoing operations, highlighting the contributions to employment, labor income, and economic output. From 2025 to 2027, the total plant investments will generate an estimated 839 jobs, \$62.6 million in labor income, and \$201.1 million in economic output. Starting in 2028, the plant's operations will create an annual impact of 736 jobs, \$54.4 million in labor income, and \$87.2 million in economic output. Key sectors benefiting from these impacts include manufacturing, real estate, healthcare, and professional services.

The results underscore HOLON's pivotal role in transforming Jacksonville into a leader in autonomous vehicle technology and its broader economic contributions to the region. The impact estimated in this study is distinct from those documented in the recent study on the contribution of JTA's Ultimate Urban Circulator (U²C) Project².

² A copy of the report is reproduced in Appendix III.

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Introduction

HOLON is a legally independent entity and a subsidiary of the BENTELEER Group. Specializing in autonomous electric shuttles, the company combines expertise in automotive technology, industrialization, and electromobility. HOLON collaborates with technology companies, public transport operators, and mobility-as-a-service providers to deliver inclusive and sustainable transportation solutions. Its Jacksonville facility marks Florida's first automotive vehicle manufacturing operation, positioning the state and the city as leaders in autonomous vehicle technology.

On September 4, 2024, HOLON announced its first U.S. autonomous vehicle production plant in Jacksonville, Florida. The approximately 500,000-square-foot facility, expected to be completed by 2027 and operational in 2028, will manufacture fully electric and autonomous shuttles, advancing shared mobility and sustainable transportation solutions.

This study quantifies the economic impact of HOLON's investments and operations on the Jacksonville MSA, focusing on plant construction, tooling, assembly line investments, and ongoing operations starting in 2028.

The economic ramifications of such a significant capital project are expected to be extensive. This study will examine the direct impact, which includes the immediate economic activities generated by the project, such as construction and deployment of technology; the indirect impact, considering the supply-chain effect on intermediate inputs and service providers; and the induced impact, which encompasses the economic activity resulting from increased household spending through the direct and indirect impact process. These aspects will be examined in terms of economic output, employment, and labor income.

Method

Modeling Direct, Indirect, and Induced Impacts

This study employs IMPLAN's Input-Output modeling system, utilizing the latest 2022 IMPLAN data, to estimate the direct, indirect, and induced impacts on the Jacksonville economy.

The direct impact is characterized by the initial expenses incurred by HOLON in investment in manufacturing planning, serial tooling, building out the assembly lines, and the subsequent manufacturing activities. For instance, if HOLON invests \$1 million in plant investment, this \$1 million would be a direct impact on the economy.

Subsequently, this initial expenditure by HOLON leads to indirect impacts. Some examples of indirect impacts include the purchase of industrial machinery and raw materials, trucking

services, financial services to support regulatory compliance or manage contracts, utility services, etc.

These business-to-business transactions create additional economic activity and employment within Jacksonville's local economy, magnifying the initial direct investment's overall impact. These transactions will generate revenue for these other businesses. So, when the suppliers for construction materials, engineering firms, and other service providers receive revenue because of HOLON's capital project, this is considered an indirect impact on the economy. The patterns of these business-to-business purchases are captured by IMPLAN's Social Account Matrix (SAM) data, which facilitates this analysis.

Furthermore, as these activities continue, employment opportunities arise, and income for employees engaged in the direct and indirect activities increases. These employees will likely spend their earnings on goods and services across various sectors like food and beverages, automobile maintenance, health care, entertainment, housing, etc. This increase in consumption due to the wages earned by employees engaged in the HOLON project and its supply chain results in induced impacts on the economy.

In summary, the total economic impact of HOLON's capital project and subsequent operation is the sum of their direct, indirect, and induced impacts. It demonstrates the multiplier effect - how an initial investment can lead to a much larger impact on the economy as a whole.

Besides analyzing the economic output in terms of dollar amounts, this study also evaluates the impacts in terms of employment (the number of jobs created by the project and its supply chain) and labor compensation (the total wages paid).

The study relies on multipliers and the input-output relationship drawn from the 2022 IMPLAN data. Specific data regarding HOLON's plant investment and operation, as well as more in-depth technical details for each impact source, will be outlined in the subsequent sections. All impacts are estimated for the Jacksonville MSA and presented in 2025 dollars.

[Modeling Impact via the Autonomous Vehicle Manufacturing Sector](#)

Autonomous vehicle manufacturing is an emerging industry and is yet to be included in the North American Industry Classification System (NAICS). Therefore, it is not adequately represented in the existing industry classification. To address this, we have adapted an existing sector that closely resembles the manufacturing of 15-seat autonomous vehicles similar to those to be used by the Jacksonville Transportation Authority's (JTA) Ultimate Urban Circulator (U²C) program. We chose IMPLAN Sector - Light Truck and Utility Vehicle Manufacturing as the template for this hypothetical sector.

We modified the spending pattern of this sector to represent a higher utilization of intermediate inputs typical to autonomous vehicles. These include electronic computers, computer peripheral equipment, electronic components, storage batteries, and motor vehicle

electric and electronic equipment. Additionally, we set the utilization of gasoline engines and engine parts to zero, reflecting the nature of electric autonomous vehicles.

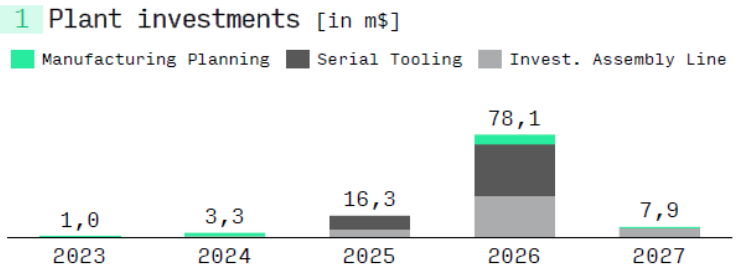
Data

The capital investment of the HOLON plant and the operational budget information are taken from the CAPEX and OPEX Overview as a part of the presentation by HOLON Autonomous Mobility AG³, which was provided by JTA to us.

Plant Investments (2023-2027):

The overview indicated a total plant investment of \$106.7 million, consisting of capital outlays for planning activities (\$12 million), plant equipment (\$44.9 million), and tooling investment (\$49.8 million). The plant investment will spread over 2023-2027, as illustrated in Figure 1.

Figure 1. HOLON Plant Investments during 2023-2027



Source: Jacksonville Facility Deep Dive (Presentation), HOLON Autonomous Mobility AG

To facilitate a detailed impact calculation, we further deduce a breakdown of the investments by investment category and match them to the proper NAICS sectors, as shown in Table 1. Each NAICS sector has an associated IMPLAN sector for modeling. Note that the manufacturing planning listed in 2023 and 2024 will not be included in the impact analysis since these investments likely occurred outside of the region before the announcement of HOLON’s plan to locate in Jacksonville in late 2024.

Table 1. Breakdown of Plant Investment by Investment Category (in millions)

Category	Corresponding NAICS Sector	2023	2024	2025	2026	2027
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³ Jacksonville Facility Deep Dive (Presentation), HOLON Autonomous Mobility AG. (11/21/2024)

Manufacturing Planning	541330: Construction Engineering Services	\$1.0	\$3.3		\$6.7	\$1.0
Serial Tooling	333517: Metal Forming Machine Tool Man.				\$10.8	\$39.0
Invest. Assembly Line	333249: Assembly Machine Manufacturing				\$5.5	\$32.4
Total		\$1.0	\$3.3	\$16.3	\$78.1	\$7.9

Plant Operations (2028 and Beyond):

Starting in 2028, HOLON will incur \$47 million annually in operational expenditures, including \$42 million on personnel. These recurring expenditures will have a sustained economic impact on the Jacksonville MSA.

The impact of the operation is considered in the autonomous vehicle manufacturing sector which we created in the IMPLAN. (See the Method section for details.)

Results

Economic Impact - Employment, Labor Income, and Output

The economic impacts are described in detail in Tables 2 through 8. Each table expands on the contributions made by HOLON’s investments and operations, with a particular focus on employment, labor income, and output generated.

Table 2 highlights the economic impacts generated by HOLON’s plant investments in Jacksonville during 2025.

Table 2: Summary of Economic Impact – 2025 (Plant Investment)

Impact Type	Employment	Labor Income	Value Added	Output
Direct	50	3,771,207	5,410,218	16,300,000
Indirect	44	3,700,674	4,934,391	8,743,599
Induced	36	2,110,683	4,000,275	6,830,356
Total	129	9,582,564	14,344,884	31,873,956

- Direct Impact: HOLON’s plant investment directly created 50 jobs, resulting in \$3,771,207 in labor income. This includes roles directly involved in activities such as construction, equipment installation, and assembly line setup. These activities generated \$5,410,218 in value-added and contributed \$16,300,000 to the total economic output, reflecting the immediate financial injection into the local economy.
- Indirect Impact: The indirect impact stems from supply chain activities triggered by HOLON’s investments. This includes purchases of goods and services such as construction materials, engineering services, and logistics. These activities supported 44

jobs and contributed \$3,700,674 in labor income. The value-added from these activities amounted to \$4,934,391, and the total economic output generated was \$8,743,599. This illustrates how HOLON’s spending creates ripple effects within the supply chain.

- Induced Impact: Induced impacts arise from household spending by employees whose jobs are directly or indirectly linked to HOLON’s project. In 2025, 36 jobs were supported through increased consumption, contributing \$2,110,683 in labor income. These activities created \$4,000,275 in value-added and \$6,830,356 to the economic output. This underscores the role of wages in stimulating further economic activity in sectors such as housing, retail, and healthcare.
- Total Impact: Combining all three impacts, HOLON’s 2025 plant investments generated 129 jobs, \$9,582,564 in labor income, \$14,344,884 in value-added, and \$31,873,956 in economic output.

Table 3 illustrates the significant economic contributions of HOLON’s plant investments in 2026, a peak year for construction and equipment installation activities.

Table 3: Summary of Economic Impact - 2026 (Plant Investment)

Impact Type	Employment	Labor Income	Value Added	Output
Direct	255	20,134,527	27,867,991	78,100,000
Indirect	208	17,276,380	23,213,609	41,411,443
Induced	181	10,573,782	20,040,011	34,217,665
Total	644	47,984,688	71,121,611	153,729,108

- Direct Impact: In 2026, HOLON’s direct investments in plant construction, tooling, and assembly line installation created 255 jobs, contributing \$20,134,527 in labor income. These activities generated \$27,867,991 in value-added to the economy and generated \$78,100,000 in total economic output. This reflects the intense level of construction and manufacturing activity as HOLON’s facility nears completion, with major capital expenditures flowing directly into the local economy.
- Indirect Impact: The indirect impact represents the economic ripple effects on HOLON’s supply chain. HOLON’s spending supported 208 jobs across suppliers and service providers, contributing \$17,276,380 in labor income. These activities generated \$23,213,609 in value-added and \$41,411,443 in total economic output. This impact reflects the extensive business-to-business transactions facilitated by HOLON’s capital investments, benefiting industries such as construction materials, engineering services, and logistics.

- Induced Impact: Induced impacts arise from household spending by employees whose jobs are directly or indirectly connected to HOLON’s project. In 2026, these impacts supported 181 jobs, adding \$10,573,782 in labor income. This spending contributed \$20,040,011 in value-added and \$34,217,665 in total economic output. The findings emphasize the positive effects of increased household consumption on local sectors such as healthcare, housing, retail, and entertainment.
- Total Impact: When combining all three categories, HOLON’s plant investment in 2026 generated 644 jobs, \$47,984,688 in labor income, \$71,121,611 in value-added, and \$153,729,108 in total economic output.

Table 4 presents the economic impact of HOLON’s plant investments in 2027, a year in which construction activity is winding down as the facility nears completion. The economic contributions, while lower than in previous years, continue to generate employment, labor income, and economic output across direct, indirect, and induced categories.

Table 4: Summary of Economic Impact - 2027 (Plant Investment)

Impact Type	Employment	Labor Income	Value Added	Output
Direct	27	2,292,428	3,122,950	7,900,000
Indirect	20	1,638,378	2,241,553	4,028,086
Induced	19	1,111,490	2,106,557	3,596,877
Total	66	5,042,297	7,471,060	15,524,963

- Direct Impact: In 2027, HOLON’s direct investments primarily involve final assembly line installations and remaining construction-related expenditures. These activities created 27 direct jobs, resulting in \$2,292,428 in labor income. The value-added to the economy through these activities amounted to \$3,122,950, with a total economic output of \$7,900,000. Although lower than the previous year, this reflects the project's final stages as the focus shifts from major capital expenditures to final preparations for operational readiness.
- Indirect Impact: The indirect impact captures economic activities generated through HOLON’s supply chain, including purchases of final-stage construction materials, technical services, and equipment installation. This activity supported 20 jobs, contributing \$1,638,378 in labor income. The total value-added was \$2,241,553, with economic output reaching \$4,028,086.

- Induced Impact: Induced impacts arise from household spending by employees engaged in the project and its supply chain. In 2027, these effects supported 19 jobs, generating \$1,111,490 in labor income. This household spending led to \$2,106,557 in value-added to the economy and \$3,596,877 in total economic output.
- Total Impact: HOLON’s plant investment in 2027 resulted in a total economic impact of 66 jobs, \$5,042,297 in labor income, \$7,471,060 in value-added, and \$15,524,963 in total economic output. While these figures are smaller compared to peak construction years, they demonstrate the continued economic benefits as the facility moves closer to full operational capacity.

Table 5 provides a comprehensive overview of the cumulative economic impact of HOLON’s plant investments over the three-year period from 2025 to 2027. The figures highlight the substantial contribution of HOLON’s capital expenditures to employment, labor income, value-added, and total economic output in the Jacksonville MSA.

Table 5: Summary of Economic Impact – 2025-2027 (Plant Investment)

Impact Type	Employment	Labor Income	Value Added	Output
Direct	332	26,198,162	36,401,159	102,300,000
Indirect	272	22,615,433	30,389,553	54,183,129
Induced	236	13,795,954	26,146,843	44,644,898
Total	839	62,609,549	92,937,555	201,128,026

- Direct Impact: Over the three-year period, HOLON’s direct investments created 332 jobs, generating \$26,198,162 in labor income. These investments generated \$36,401,159 in value-added to the regional economy and contributed a total economic output of \$102,300,000.
- Indirect Impact: HOLON’s capital expenditures resulted in significant indirect effects on its supply chain, supporting 272 jobs across various supplier industries. These activities contributed \$22,615,433 in labor income, generated \$30,389,553 in value-added to the economy, and generated \$54,183,129 in economic output. This underscores the importance of business-to-business transactions with construction firms, material suppliers, engineering consultants, and logistics providers.
- Induced Impact: The wages earned by workers in direct and indirect roles led to increased consumer spending, supporting 236 additional jobs. This spending generated \$13,795,954 in labor income, \$26,146,843 in value-added to the economy, and contributed \$44,644,898 in total economic output. This illustrates how HOLON’s

investment extends beyond its immediate operations, benefiting local businesses in sectors such as retail, housing, healthcare, and entertainment.

- **Total Impact:** The combined impact from 2025 to 2027 includes 839 jobs, \$62,609,549 in labor income, \$92,937,555 in value-added, and a total economic output of \$201,128,026. With HOLON’s total plant investment of \$102.3 million generating more than \$201 million in economic output, the multiplier effect of 1.97 demonstrates how each dollar spent leads to nearly double the economic activity within the Jacksonville MSA. The output multiplier is approximately 1.97 during this period.

Table 6 presents the projected economic impact of HOLON’s manufacturing operations in Jacksonville beginning in 2028. Unlike previous years, which focused on construction and capital investments, this table captures the ongoing, recurring economic benefits of plant operations, demonstrating the long-term contribution of the facility to the Jacksonville MSA.

Table 6: Summary of Economic Impact - 2028 (Operation)

Impact Type	Employment	Labor Income	Value Added	Output
Direct	526	42,000,000	42,397,650	47,000,000
Indirect	5	422,017	733,064	1,463,582
Induced	205	11,954,933	22,657,160	38,687,480
Total	736	54,376,950	65,787,874	87,151,062

- **Direct Impact:** HOLON’s manufacturing operations will directly lead to 526 jobs, with a total labor income of \$42,000,000. The plant’s production activities will generate \$42,397,650 in value-added and contribute \$47,000,000 in total economic output. These direct impacts reflect the salaries of employees working at the facility and the direct revenue generated from producing autonomous vehicles.
- **Indirect Impact:** The indirect impact, which accounts for business-to-business expenditures related to ongoing plant operations, is projected to be relatively modest compared to construction years. The plant’s recurring operational purchases—such as parts, maintenance services, and administrative support—will support 5 additional jobs, contributing \$422,017 in labor income. These expenditures will add \$733,064 in value to the economy and result in a total economic output of \$1,463,582. The lower indirect impact compared to prior years reflects the shift from large-scale construction-related spending to more stable, ongoing operational costs.
- **Induced Impact:** Induced impacts remain substantial, highlighting the effects of household spending by employees earning wages through HOLON’s direct and indirect

employment. In 2028, these effects are expected to support 205 jobs, generating \$11,954,933 in labor income. This increased consumer spending will add \$22,657,160 in value to the economy and produce a total economic output of \$38,687,480. These figures demonstrate the strong link between HOLON’s workforce and broader economic activity in the Jacksonville region, particularly in housing, retail, healthcare, and other consumer-driven industries.

- Total Impact: In total, HOLON’s plant operations in 2028 will support 736 jobs, generate \$54,376,950 in labor income, \$65,787,874 in value-added to the local economy, and contribute \$87,151,062 in total economic output. The estimated output multiplier of 1.85 indicates that every dollar generated by HOLON’s operations will result in an additional \$0.85 of economic activity within Jacksonville’s economy.

Economic Impact – Output by Sector

Table 7 identifies the 15 industries in the Jacksonville MSA that are projected to experience the highest economic output impact from HOLON’s plant investments between 2025 and 2027. (A complete picture of all 546 IMPLAN sectors can be found in Appendix I.) The results highlight the diverse range of sectors benefiting from HOLON’s capital expenditures, demonstrating how investments in advanced manufacturing spur growth across multiple industries.

Table 7: Top 15 Industries by Output Impact from HOLON’s Plant Investments (2025-2027)

Display Description	Impact Output
Machine tool manufacturing	\$49,803,077
All other industrial machinery manufacturing	\$44,801,185
Custom computer programming services	\$10,340,543
Architectural, engineering, and related services	\$8,170,639
Owner-occupied dwellings	\$5,987,870
Wholesale - Machinery, equipment, and supplies	\$4,082,759
Management of companies and enterprises	\$4,027,639
Employment services	\$3,668,718
Other real estate	\$3,508,535
Monetary authorities and depository credit intermediation	\$3,373,122
Wholesale - Other durable goods merchant wholesalers	\$2,768,198
Insurance carriers, except direct life	\$2,642,956
Hospitals	\$2,602,835
Wholesale - Household appliances and electrical and electronic goods	\$2,417,669
Data processing, hosting, and related services	\$2,251,235

Table 8 presents the industries in the Jacksonville MSA that will experience the highest economic output impact once HOLON’s autonomous vehicle manufacturing plant begins operations in 2028. (A complete picture of all 546 IMPLAN sectors can be found in Appendix II.) Unlike the construction phase, these impacts will be ongoing and generated annually, providing long-term economic benefits across multiple sectors.

Table 8: Top 15 Industries by Output Impact from HOLON’s Manufacturing Operation (Annual)

Display Description	Impact Output
Autonomous vehicle manufacturing (created)	\$47,000,420
Owner-occupied dwellings	\$5,180,171
Hospitals	\$2,259,514
Insurance carriers, except direct life	\$1,762,723
Monetary authorities and depository credit intermediation	\$1,650,101
Offices of physicians	\$1,412,900
Other real estate	\$1,388,328
Limited-service restaurants	\$1,129,667
Full-service restaurants	\$1,042,602
Retail - Nonstore retailers	\$967,418
Tenant-occupied housing	\$860,899
Insurance agencies, brokerages, and related activities	\$730,820
Employment services	\$657,041
Other financial investment activities	\$615,300
Management of companies and enterprises	\$584,583

Conclusion

The findings of this study illustrate that HOLON’s investment in Jacksonville will generate substantial and lasting economic benefits across multiple industries. The direct impact of HOLON’s capital investments from 2025 to 2027 resulted in over \$102.3 million in economic activity, creating 332 direct jobs and expanding Jacksonville’s manufacturing infrastructure. The combined multiplier effects further increased the impact to 839 total jobs and over \$201.1 million in economic output, showcasing the strength of Jacksonville’s supply chain in supporting large-scale manufacturing projects.

Once operations begin in 2028, HOLON’s manufacturing facility will provide ongoing economic benefits, generating 736 jobs and \$87.2 million in economic output annually. The facility will serve as a cornerstone for Jacksonville’s continued expansion into advanced vehicle production, reinforcing the region’s position as a hub for autonomous mobility solutions. Key industries that

will benefit include manufacturing, real estate, healthcare, financial services, and retail, with spillover effects in local consumer-driven businesses.

Additionally, HOLON's presence will contribute to economic diversification, providing stable employment opportunities and reinforcing Jacksonville's long-term economic resilience. The induced effects from increased household income will stimulate demand across various sectors, leading to sustained growth in regional development. HOLON's continued investment in local talent, research, and supply chain integration will further solidify Jacksonville's role in the emerging autonomous vehicle industry.

Limitations

While this study provides a comprehensive assessment of the economic impact of HOLON's investments and operations in Jacksonville, certain limitations should be acknowledged:

- **Assumption of Localized Economic Activity:** The analysis assumes that all economic activities, including supply chain purchases and employee spending, occur within the Jacksonville MSA. In reality, some portion of HOLON's expenditures may "leak" to other regions, reducing the total local impact.
- **Industry Classification Adjustments:** Since autonomous vehicle manufacturing is not a distinct industry in standard classification systems, the study relies on a modified version of IMPLAN's Light Truck and Utility Vehicle Manufacturing sector, which may not fully capture all nuances of HOLON's unique production model.
- **Macroeconomic and Policy Uncertainties:** The estimated impacts are based on current market conditions and economic assumptions. Changes in regulatory frameworks, technological advancements, or economic downturns could influence HOLON's operations and, consequently, its economic impact.
- **Multiplier Effect Variability:** The results are dependent on multipliers derived from 2022 IMPLAN data. Any future shifts in industry linkages or regional economic conditions may alter the actual multiplier effects observed over time.

Despite these limitations, the study provides a robust projection of HOLON's contributions to the Jacksonville economy, reinforcing the significance of this investment as a driver of regional economic growth and technological advancement.

Appendix I - Industries by Output Impact from HOLON's Plant Investments During 2025-2027 (Full List)

Display Description	Impact Output
Machine tool manufacturing	\$49,803,077
All other industrial machinery manufacturing	\$44,801,185
Custom computer programming services	\$10,340,543
Architectural, engineering, and related services	\$8,170,639
Owner-occupied dwellings	\$5,987,870
Wholesale - Machinery, equipment, and supplies	\$4,082,759
Management of companies and enterprises	\$4,027,639
Employment services	\$3,668,718
Other real estate	\$3,508,535
Monetary authorities and depository credit intermediation	\$3,373,122
Wholesale - Other durable goods merchant wholesalers	\$2,768,198
Insurance carriers, except direct life	\$2,642,956
Hospitals	\$2,602,835
Wholesale - Household appliances and electrical and electronic goods	\$2,417,669
Data processing, hosting, and related services	\$2,251,235
Truck transportation	\$2,089,873
Other computer related services, including facilities management	\$1,812,031
Full-service restaurants	\$1,641,500
Insurance agencies, brokerages, and related activities	\$1,640,661
Offices of physicians	\$1,629,735
Limited-service restaurants	\$1,481,140
Management consulting services	\$1,291,559
Legal services	\$1,217,593
Retail - Nonstore retailers	\$1,155,015
Computer systems design services	\$1,129,696
Accounting, tax preparation, bookkeeping, and payroll services	\$1,128,967
Securities and commodity contracts intermediation and brokerage	\$1,089,588
Internet publishing and broadcasting and web search portals	\$1,078,883
Wholesale - Other nondurable goods merchant wholesalers	\$1,046,824
Nondepository credit intermediation and related activities	\$1,022,172
Tenant-occupied housing	\$988,080
Wholesale - Professional and commercial equipment and supplies	\$924,720
Other financial investment activities	\$867,640
Warehousing and storage	\$858,717

Marketing research and all other miscellaneous professional, scientific, and technical services	\$831,241
Local government electric utilities	\$776,019
Wireless telecommunications carriers (except satellite)	\$672,809
Electric power transmission and distribution	\$645,880
Retail - Food and beverage stores	\$634,299
Advertising, public relations, and related services	\$627,987
Services to buildings	\$601,058
Retail - General merchandise stores	\$596,673
Couriers and messengers	\$579,477
All other food and drinking places	\$577,738
Wholesale - Drugs and druggists' sundries	\$520,678
Automotive repair and maintenance, except car washes	\$504,570
Wired telecommunications carriers	\$502,192
Lessors of nonfinancial intangible assets	\$469,045
Office administrative services	\$420,164
Postal service	\$397,706
Retail - Clothing and clothing accessories stores	\$389,794
Retail - Motor vehicle and parts dealers	\$379,241
Business support services	\$373,084
Wholesale - Wholesale electronic markets and agents and brokers	\$370,270
Investigation and security services	\$364,317
Environmental and other technical consulting services	\$357,809
Commercial and industrial machinery and equipment rental and leasing	\$357,446
Maintenance and repair construction of nonresidential structures	\$348,342
Radio and television broadcasting	\$342,505
Wholesale - Grocery and related product wholesalers	\$337,460
Funds, trusts, and other financial vehicles	\$327,006
Iron and steel mills and ferroalloy manufacturing	\$324,719
Offices of other health practitioners	\$319,832
Scenic and sightseeing transportation and support activities for transportation	\$318,891
Wholesale - Petroleum and petroleum products	\$309,713
Retail - Gasoline stores	\$301,813
Offices of dentists	\$293,662
Car washes	\$289,772
Retail - Building material and garden equipment and supplies stores	\$288,424
Retail - Health and personal care stores	\$283,241
Waste management and remediation services	\$279,610
Nursing and community care facilities	\$279,352
Wholesale - Motor vehicle and motor vehicle parts and supplies	\$276,634
Ferrous metal foundries	\$274,052
Air transportation	\$261,735
Transit and ground passenger transportation	\$252,759

Outpatient care centers	\$251,108
Landscape and horticultural services	\$247,794
Maintenance and repair construction of residential structures	\$239,829
Automotive equipment rental and leasing	\$236,748
Commercial and industrial machinery and equipment repair and maintenance	\$231,790
Rail transportation	\$227,258
Other educational services	\$218,767
Retail - Miscellaneous store retailers	\$210,883
Retail - Furniture and home furnishings stores	\$198,070
Home health care services	\$195,686
Other personal services	\$192,237
Facilities support services	\$185,834
Promoters of performing arts and sports and agents for public figures	\$180,573
Software publishers	\$172,226
Other local government enterprises	\$168,730
Newspaper publishers	\$168,468
Child day care services	\$148,421
Electronic and precision equipment repair and maintenance	\$146,042
Retail - Sporting goods, hobby, musical instrument and book stores	\$144,578
Gambling industries (except casino hotels)	\$140,885
Specialized design services	\$136,375
General and consumer goods rental except video tapes and discs	\$133,684
Commercial Sports Except Racing	\$132,972
Labor and civic organizations	\$132,829
Individual and family services	\$129,375
Personal and household goods repair and maintenance	\$124,366
Retail - Electronics and appliance stores	\$121,308
Water transportation	\$116,304
Cable and other subscription programming	\$116,294
Personal care services	\$115,739
Elementary and secondary schools	\$105,136
Scientific research and development services	\$105,083
Medical and diagnostic laboratories	\$102,371
Electric power generation - Fossil fuel	\$100,290
Other amusement and recreation industries	\$100,213
Junior colleges, colleges, universities, and professional schools	\$98,352
Grantmaking, giving, and social advocacy organizations	\$96,614
Religious organizations	\$94,669
Veterinary services	\$94,348
Tobacco product manufacturing	\$92,374
Machine shops	\$89,623
Other support services	\$89,019
Travel arrangement and reservation services	\$86,575

Business and professional associations	\$81,208
Other ambulatory health care services	\$78,671
Residential intellectual disability, mental health, substance abuse and other facilities	\$76,357
Paint and coating manufacturing	\$73,464
Direct life insurance carriers	\$73,051
Bottled and canned soft drinks & water	\$71,527
Water, sewage and other systems	\$69,218
Book publishers	\$64,152
Paperboard container manufacturing	\$63,408
Independent artists, writers, and performers	\$62,982
Printing	\$61,723
Motion picture and video industries	\$60,555
Community food, housing, and other relief services, including rehabilitation services	\$60,126
Fitness and recreational sports centers	\$56,895
Photographic services	\$55,426
Private households	\$54,728
Valve and fittings, other than plumbing, manufacturing	\$53,807
Oil and gas extraction	\$49,433
Other accommodations	\$49,276
Other federal government enterprises	\$47,679
Sheet metal work manufacturing	\$47,180
Dry-cleaning and laundry services	\$41,751
Electric power generation - Solar	\$39,781
Video tape and disc rental	\$37,903
Ready-mix concrete manufacturing	\$35,756
Wood container and pallet manufacturing	\$35,634
Breweries	\$34,773
Petroleum refineries	\$34,035
Performing arts companies	\$33,352
Other motor vehicle parts manufacturing	\$33,228
Other millwork, including flooring	\$32,911
Satellite, telecommunications resellers, and all other telecommunications	\$26,591
Directory, mailing list, and other publishers	\$23,562
Paperboard mills	\$20,329
Racing and Track Operation	\$20,293
Metal cans manufacturing	\$20,090
Nonferrous metal foundries	\$18,562
Death care services	\$17,925
Bread and bakery product, except frozen, manufacturing	\$17,912
Sound recording industries	\$17,901
Natural gas distribution	\$17,593
Periodical publishers	\$17,301

Wood windows and door manufacturing	\$17,046
Relay and industrial control manufacturing	\$16,125
Concrete block and brick manufacturing	\$15,932
News syndicates, libraries, archives and all other information services	\$15,051
Fabricated structural metal manufacturing	\$14,729
Gypsum product manufacturing	\$14,429
Vegetable and melon farming	\$13,562
Plastics packaging materials and unlaminated film and sheet manufacturing	\$13,360
Asphalt shingle and coating materials manufacturing	\$12,986
Museums, historical sites, zoos, and parks	\$12,730
Spring and wire product manufacturing	\$11,694
Other plastics product manufacturing	\$11,684
Poultry processing	\$11,426
Metal coating and nonprecious engraving	\$11,138
Electric power generation - Biomass	\$11,110
Iron, steel pipe and tube manufacturing from purchased steel	\$11,064
Local government passenger transit	\$10,585
Turned product and screw, nut, and bolt manufacturing	\$10,519
Amusement parks and arcades	\$10,377
Other fabricated metal manufacturing	\$10,327
Other concrete product manufacturing	\$10,284
Petroleum lubricating oil and grease manufacturing	\$10,262
Metal mining services	\$10,005
Electric power generation - Wind	\$8,755
Sawmills	\$8,451
Paper mills	\$8,068
Cement manufacturing	\$7,947
Sanitary paper product manufacturing	\$7,476
Asphalt paving mixture and block manufacturing	\$7,433
Sign manufacturing	\$7,420
Stone mining and quarrying	\$7,339
Bowling centers	\$7,263
Other aluminum rolling, drawing and extruding	\$7,191
Hotels and motels, including casino hotels	\$7,102
Cutting tool and machine tool accessory manufacturing	\$7,073
Fluid milk manufacturing	\$6,166
Paper bag and coated and treated paper manufacturing	\$6,130
Office supplies (except paper) manufacturing	\$5,653
Toilet preparation manufacturing	\$5,496
Electric power generation - All other	\$5,067
All other food manufacturing	\$4,999
Engineered wood member and truss manufacturing	\$4,828
Jewelry and silverware manufacturing	\$4,768

Tire manufacturing	\$4,642
Pesticide and other agricultural chemical manufacturing	\$4,561
Plate work manufacturing	\$4,558
Ornamental and architectural metal work manufacturing	\$4,516
Wineries	\$4,261
Meat processed from carcasses	\$4,108
All other miscellaneous wood product manufacturing	\$3,994
Other animal food manufacturing	\$3,921
Ophthalmic goods manufacturing	\$3,827
Metal tank (heavy gauge) manufacturing	\$3,765
Other rubber product manufacturing	\$3,577
Frozen cakes and other pastries manufacturing	\$3,400
Electroplating, anodizing, and coloring metal	\$3,090
Other snack food manufacturing	\$3,082
Commercial hunting and trapping	\$3,009
Commercial fishing	\$2,979
Cut stone and stone product manufacturing	\$2,907
Storage battery manufacturing	\$2,792
Greenhouse, nursery, and floriculture production	\$2,769
Metal heat treating	\$2,750
Air and gas compressor manufacturing	\$2,726
Mineral wool manufacturing	\$2,659
Poultry and egg production	\$2,575
Special tool, die, jig, and fixture manufacturing	\$2,568
Boat building	\$2,558
Distilleries	\$2,541
Glass product manufacturing made of purchased glass	\$2,491
Surgical and medical instrument manufacturing	\$2,441
Pipeline transportation	\$2,347
Blank magnetic and optical recording media manufacturing	\$2,346
Motor vehicle steering, suspension component (except spring), and brake systems manufacturing	\$2,282
Other miscellaneous chemical product manufacturing	\$2,256
Commercial logging	\$2,221
Frozen fruits, juices and vegetables manufacturing	\$2,184
Spice and extract manufacturing	\$2,131
Support activities for agriculture and forestry	\$2,127
Stationery product manufacturing	\$2,122
Plastics pipe and pipe fitting manufacturing	\$2,113
Mayonnaise, dressing, and sauce manufacturing	\$2,024
Prefabricated wood building manufacturing	\$1,926
Metal barrels, drums and pails manufacturing	\$1,913
Urethane and other foam product (except polystyrene) manufacturing	\$1,912

Travel trailer and camper manufacturing	\$1,902
Animal production, except cattle and poultry and eggs	\$1,902
Ship building and repairing	\$1,889
Motor vehicle electrical and electronic equipment manufacturing	\$1,860
Wood preservation	\$1,787
Wood kitchen cabinet and countertop manufacturing	\$1,779
Military armored vehicle, tank, and tank component manufacturing	\$1,732
All other miscellaneous manufacturing	\$1,697
Plastics material and resin manufacturing	\$1,673
Seafood product preparation and packaging	\$1,587
Air conditioning, refrigeration, and warm air heating equipment manufacturing	\$1,584
Glass container manufacturing	\$1,548
Reconstituted wood product manufacturing	\$1,528
Manufactured ice	\$1,516
Metal window and door manufacturing	\$1,462
Other clay, ceramic, refractory minerals mining	\$1,432
Brick, tile, and other structural clay product manufacturing	\$1,429
Carpet and rug mills	\$1,415
Electric power generation - Hydroelectric	\$1,400
Hardware manufacturing	\$1,377
Roasted nuts and peanut butter manufacturing	\$1,353
Other commercial service industry machinery manufacturing	\$1,315
Animal, except poultry, slaughtering	\$1,254
Concrete pipe manufacturing	\$1,238
Secondary processing of other nonferrous metals	\$1,201
Dairy cattle and milk production	\$1,057
Fluid power pump and motor manufacturing	\$1,017
Ball and roller bearing manufacturing	\$956
Polystyrene foam product manufacturing	\$927
Air purification and ventilation equipment manufacturing	\$899
Other basic organic chemical manufacturing	\$813
Scales, balances, and miscellaneous general purpose machinery manufacturing	\$801
All other miscellaneous electrical equipment and component manufacturing	\$783
Prefabricated metal buildings and components manufacturing	\$771
Automobile manufacturing	\$768
Wiring device manufacturing	\$758
Printed circuit assembly (electronic assembly) manufacturing	\$753
All other crop farming	\$741
Flat glass manufacturing	\$695
Support activities for printing	\$694
Sand and gravel mining	\$688
All other converted paper product manufacturing	\$625
Surgical appliance and supplies manufacturing	\$610

Fruit farming	\$590
Forestry, forest products, and timber tract production	\$587
Cookie and cracker manufacturing	\$558
Soap and other detergent manufacturing	\$556
Gasket, packing, and sealing device manufacturing	\$539
Other communication and energy wire manufacturing	\$535
Handtool manufacturing	\$535
Nitrogenous fertilizer manufacturing	\$523
Plastics bottle manufacturing	\$516
Speed changer, industrial high-speed drive, and gear manufacturing	\$510
Pump and pumping equipment manufacturing	\$505
Light truck and utility vehicle manufacturing	\$487
Industrial process variable instruments manufacturing	\$465
Other nonmetallic minerals	\$456
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	\$440
Nonupholstered wood household furniture manufacturing	\$409
Motor vehicle transmission and power train parts manufacturing	\$402
Heating equipment (except warm air furnaces) manufacturing	\$401
Custom compounding of purchased resins	\$388
Frozen specialties manufacturing	\$365
Motorcycle, bicycle, and parts manufacturing	\$364
Motor vehicle gasoline engine and engine parts manufacturing	\$358
Polish and other sanitation good manufacturing	\$336
Motor and generator manufacturing	\$322
Aircraft engine and engine parts manufacturing	\$321
Grain farming	\$313
Upholstered household furniture manufacturing	\$300
Synthetic dye and pigment manufacturing	\$299
Canned specialties	\$281
Synthetic rubber manufacturing	\$281
Electricity and signal testing instruments manufacturing	\$278
Plumbing fixture fitting and trim manufacturing	\$276
Women's and girls' cut and sew apparel manufacturing	\$259
Lighting fixture manufacturing	\$256
Packaging machinery manufacturing	\$251
Nonchocolate confectionery manufacturing	\$237
Custom architectural woodwork and millwork	\$233
All other transportation equipment manufacturing	\$231
Fasteners, buttons, needles, and pins manufacturing	\$224
Miscellaneous nonmetallic mineral products manufacturing	\$224
Canned fruits and vegetables manufacturing	\$222
Confectionery manufacturing from purchased chocolate	\$218

Switchgear and switchboard apparatus manufacturing	\$217
Pharmaceutical preparation manufacturing	\$217
Coffee and tea manufacturing	\$214
Rendering and meat byproduct processing	\$203
Pulp mills	\$202
Fabricated pipe and pipe fitting manufacturing	\$202
Sawmill, woodworking, and paper machinery	\$194
Other aircraft parts and auxiliary equipment manufacturing	\$192
Other basic inorganic chemical manufacturing	\$191
Overhead cranes, hoists, and monorail systems manufacturing	\$190
Industrial truck, trailer, and stacker manufacturing	\$189
Dental equipment and supplies manufacturing	\$186
Power boiler and heat exchanger manufacturing	\$171
Blind and shade manufacturing	\$169
Maintenance and repair construction of highways, streets, bridges, and tunnels	\$156
Other electronic component manufacturing	\$154
Motor vehicle body manufacturing	\$152
Other textile product mills	\$142
Dental laboratories	\$136
Software and other prerecorded and record reproducing	\$131
Institutional furniture manufacturing	\$130
Coal mining	\$126
Fiber optic cable manufacturing	\$124
Cut stock, resawing lumber, and planing	\$118
Showcase, partition, shelving, and locker manufacturing	\$103
Carbon and graphite product manufacturing	\$100
Mining machinery and equipment manufacturing	\$99
Printing ink manufacturing	\$98
Other household nonupholstered furniture manufacturing	\$96
Textile bag and canvas mills	\$91
Pottery, ceramics, and plumbing fixture manufacturing	\$89
Semiconductor and related device manufacturing	\$73
Capacitor, resistor, coil, transformer, and other inductor manufacturing	\$66
Sporting and athletic goods manufacturing	\$65
Men's and boys' cut and sew apparel manufacturing	\$65
Railroad rolling stock manufacturing	\$61
Adhesive manufacturing	\$61
Electronic connector manufacturing	\$60
Food product machinery manufacturing	\$56
Ice cream and frozen dessert manufacturing	\$52
Search, detection, and navigation instruments manufacturing	\$47
Tree nut farming	\$46
Other nonmetallic minerals services	\$45

Other engine equipment manufacturing	\$45
Apparel accessories and other apparel manufacturing	\$42
Aircraft manufacturing	\$41
Other cut and sew apparel manufacturing	\$40
Construction machinery manufacturing	\$40
Welding and soldering equipment manufacturing	\$39
Other leather and allied product manufacturing	\$39
Fertilizer mixing	\$39
Watch, clock, and other measuring and controlling device manufacturing	\$39
Other metal ore mining	\$37
Curtain and linen mills	\$36
Manufactured home (mobile home) manufacturing	\$36
Cut and sew apparel contractors	\$35
Computer terminals and other computer peripheral equipment manufacturing	\$35
Potash, soda, and borate mineral mining	\$34
Surface active agent manufacturing	\$34
Farm machinery and equipment manufacturing	\$31
Dehydrated food products manufacturing	\$30
Cheese manufacturing	\$29
Other communications equipment manufacturing	\$27
In-vitro diagnostic substance manufacturing	\$26
Photographic and photocopying equipment manufacturing	\$23
Industrial mold manufacturing	\$23
Rubber and plastics hoses and belting manufacturing	\$23
Nonwoven fabric mills	\$22
Power-driven handtool manufacturing	\$20
Small arms ammunition manufacturing	\$18
Electronic computer manufacturing	\$18
Drilling oil and gas wells	\$17
Other apparel knitting mills	\$17
Audio and video equipment manufacturing	\$16
Guided missile and space vehicle manufacturing	\$15
Printing machinery and equipment manufacturing	\$15
Small arms, ordnance, and accessories manufacturing	\$15
Dry, condensed, and evaporated dairy product manufacturing	\$13
Lawn and garden equipment manufacturing	\$12
Power, distribution, and specialty transformer manufacturing	\$11
Fabric coating mills	\$11
Chocolate and confectionery manufacturing from cacao beans	\$10
Electric lamp bulb and part manufacturing	\$10
Support activities for oil and gas operations	\$10
Medicinal and botanical manufacturing	\$9
Phosphate rock mining	\$9

Hosiery and sock mills	\$9
Musical instrument manufacturing	\$7
Electromedical and electrotherapeutic apparatus manufacturing	\$7
Dog and cat food manufacturing	\$7
Turbine and turbine generator set units manufacturing	\$7
Textile and fabric finishing mills	\$7
Broadcast and wireless communications equipment manufacturing	\$5
Biological product (except diagnostic) manufacturing	\$5
Truck trailer manufacturing	\$4
Footwear manufacturing	\$3
Small electrical appliance manufacturing	\$3
Leather and hide tanning and finishing	\$3
Other chemical and fertilizer mineral mining	\$3
Telephone apparatus manufacturing	\$2
Analytical laboratory instrument manufacturing	\$2
Knit fabric mills	\$1
Elevator and moving stairway manufacturing	\$1
Optical instrument and lens manufacturing	\$1
Totalizing fluid meter and counting device manufacturing	\$1
Wood office furniture manufacturing	\$1
Irradiation apparatus manufacturing	\$1
Oilseed farming	\$0
Sugarcane and sugar beet farming	\$0
Tobacco farming	\$0
Cotton farming	\$0
Copper, nickel, lead, and zinc mining	\$0
Iron ore mining	\$0
Gold ore mining	\$0
Silver ore mining	\$0
Uranium-radium-vanadium ore mining	\$0
Electric power generation - Nuclear	\$0
Electric power generation - Geothermal	\$0
Construction of new health care structures	\$0
Construction of new manufacturing structures	\$0
Construction of new power and communication structures	\$0
Construction of new educational and vocational structures	\$0
Construction of new highways and streets	\$0
Construction of new commercial structures, including farm structures	\$0
Construction of other new nonresidential structures	\$0
Construction of new single-family residential structures	\$0
Construction of new multifamily residential structures	\$0
Construction of other new residential structures	\$0
Flour milling	\$0

Rice milling	\$0
Malt manufacturing	\$0
Wet corn milling	\$0
Soybean and other oilseed processing	\$0
Fats and oils refining and blending	\$0
Breakfast cereal manufacturing	\$0
Beet sugar manufacturing	\$0
Sugar cane mills and refining	\$0
Creamery butter manufacturing	\$0
Dry pasta, mixes, and dough manufacturing	\$0
Tortilla manufacturing	\$0
Flavoring syrup and concentrate manufacturing	\$0
Fiber, yarn, and thread mills	\$0
Broadwoven fabric mills	\$0
Narrow fabric mills and schiffli machine embroidery	\$0
Rope, cordage, twine, tire cord and tire fabric mills	\$0
Veneer and plywood manufacturing	\$0
All other petroleum and coal products manufacturing	\$0
Petrochemical manufacturing	\$0
Industrial gas manufacturing	\$0
Artificial and synthetic fibers and filaments manufacturing	\$0
Phosphatic fertilizer manufacturing	\$0
Explosives manufacturing	\$0
Photographic film and chemical manufacturing	\$0
Unlaminated plastics profile shape manufacturing	\$0
Laminated plastics plate, sheet (except packaging), and shape manufacturing	\$0
Other pressed and blown glass and glassware manufacturing	\$0
Lime manufacturing	\$0
Abrasive product manufacturing	\$0
Ground or treated mineral and earth manufacturing	\$0
Rolled steel shape manufacturing	\$0
Steel wire drawing	\$0
Alumina refining and primary aluminum production	\$0
Secondary smelting and alloying of aluminum	\$0
Aluminum sheet, plate, and foil manufacturing	\$0
Nonferrous metal (exc aluminum) smelting and refining	\$0
Copper rolling, drawing, extruding and alloying	\$0
Nonferrous metal, except copper and aluminum, shaping	\$0
Custom roll forming	\$0
Crown and closure manufacturing and metal stamping	\$0
Iron and steel forging	\$0
Nonferrous forging	\$0
Cutlery, utensil, pot, and pan manufacturing	\$0

Ammunition, except for small arms, manufacturing	\$0
Oil and gas field machinery and equipment manufacturing	\$0
Semiconductor machinery manufacturing	\$0
Rolling mill and other metalworking machinery manufacturing	\$0
Mechanical power transmission equipment manufacturing	\$0
Conveyor and conveying equipment manufacturing	\$0
Industrial process furnace and oven manufacturing	\$0
Fluid power cylinder and actuator manufacturing	\$0
Computer storage device manufacturing	\$0
Bare printed circuit board manufacturing	\$0
Automatic environmental control manufacturing	\$0
Household cooking appliance manufacturing	\$0
Household refrigerator and home freezer manufacturing	\$0
Household laundry equipment manufacturing	\$0
Other major household appliance manufacturing	\$0
Primary battery manufacturing	\$0
Heavy duty truck manufacturing	\$0
Motor home manufacturing	\$0
Motor vehicle seating and interior trim manufacturing	\$0
Motor vehicle metal stamping	\$0
Propulsion units and parts for space vehicles and guided missiles manufacturing	\$0
Office furniture, except wood, manufacturing	\$0
Mattress manufacturing	\$0
Doll, toy, and game manufacturing	\$0
Broom, brush, and mop manufacturing	\$0
Burial casket manufacturing	\$0
Greeting card publishing	\$0
Federal electric utilities	\$0
State government passenger transit	\$0
State government electric utilities	\$0
Other state government enterprises	\$0
* Not an industry (Used and secondhand goods)	\$0
* Not an industry (Scrap)	\$0
* Not an industry (Rest of world adjustment)	\$0
* Not an industry (Noncomparable foreign imports)	\$0
* Employment and payroll of state govt, education	\$0
* Employment and payroll of state govt, hospitals and health services	\$0
* Employment and payroll of state govt, other services	\$0
* Employment and payroll of local govt, education	\$0
* Employment and payroll of local govt, hospitals and health services	\$0
* Employment and payroll of local govt, other services	\$0
* Employment and payroll of federal govt, military	\$0

Appendix II – Industries by Annual Output Impact from HOLON’s Manufacturing Operation from 2028 and Beyond (Full List)

Display Description	Impact Output
Autonomous vehicle manufacturing (created)	\$47,000,420
Owner-occupied dwellings	\$5,180,171
Hospitals	\$2,259,514
Insurance carriers, except direct life	\$1,762,723
Monetary authorities and depository credit intermediation	\$1,650,101
Offices of physicians	\$1,412,900
Other real estate	\$1,388,328
Limited-service restaurants	\$1,129,667
Full-service restaurants	\$1,042,602
Retail - Nonstore retailers	\$967,418
Tenant-occupied housing	\$860,899
Insurance agencies, brokerages, and related activities	\$730,820
Employment services	\$657,041
Other financial investment activities	\$615,300
Management of companies and enterprises	\$584,583
Data processing, hosting, and related services	\$579,052
Nondepository credit intermediation and related activities	\$571,747
Wholesale - Motor vehicle and motor vehicle parts and supplies	\$547,244
Retail - Food and beverage stores	\$546,300
Truck transportation	\$539,047
Wholesale - Other nondurable goods merchant wholesalers	\$507,574
Retail - General merchandise stores	\$506,017
Legal services	\$423,179
Internet publishing and broadcasting and web search portals	\$394,689
Securities and commodity contracts intermediation and brokerage	\$389,797
All other food and drinking places	\$381,976
Wholesale - Drugs and druggists’ sundries	\$359,549
Wholesale - Other durable goods merchant wholesalers	\$339,539
Retail - Clothing and clothing accessories stores	\$337,650
Local government electric utilities	\$335,013
Wholesale - Professional and commercial equipment and supplies	\$323,216
Management consulting services	\$305,135
Accounting, tax preparation, bookkeeping, and payroll services	\$302,544
Automotive repair and maintenance, except car washes	\$298,939
Retail - Motor vehicle and parts dealers	\$297,137
Warehousing and storage	\$295,762
Wireless telecommunications carriers (except satellite)	\$289,055

Offices of other health practitioners	\$276,583
Electric power transmission and distribution	\$276,429
Funds, trusts, and other financial vehicles	\$276,346
Wholesale - Grocery and related product wholesalers	\$264,357
Offices of dentists	\$255,107
Wired telecommunications carriers	\$245,531
Retail - Health and personal care stores	\$245,296
Nursing and community care facilities	\$243,110
Retail - Gasoline stores	\$226,917
Outpatient care centers	\$217,567
Maintenance and repair construction of residential structures	\$207,098
Retail - Building material and garden equipment and supplies stores	\$200,540
Car washes	\$197,541
Advertising, public relations, and related services	\$197,258
Wholesale - Household appliances and electrical and electronic goods	\$196,317
Couriers and messengers	\$183,494
Wholesale - Petroleum and petroleum products	\$183,267
Other educational services	\$181,603
Retail - Miscellaneous store retailers	\$180,171
Services to buildings	\$176,102
Wholesale - Machinery, equipment, and supplies	\$175,644
Home health care services	\$168,997
Retail - Furniture and home furnishings stores	\$166,419
Air transportation	\$154,895
Other personal services	\$152,773
Other computer related services, including facilities management	\$146,132
Child day care services	\$127,768
Gambling industries (except casino hotels)	\$122,540
Retail - Sporting goods, hobby, musical instrument and book stores	\$121,751
Maintenance and repair construction of nonresidential structures	\$118,841
Waste management and remediation services	\$117,734
Radio and television broadcasting	\$116,942
Labor and civic organizations	\$114,868
Scenic and sightseeing transportation and support activities for transportation	\$114,011
Individual and family services	\$111,866
Landscape and horticultural services	\$111,735
Other local government enterprises	\$111,584
Promoters of performing arts and sports and agents for public figures	\$110,211
Software publishers	\$105,780
Automotive equipment rental and leasing	\$105,471
Retail - Electronics and appliance stores	\$103,727
Personal care services	\$100,285
Wholesale - Wholesale electronic markets and agents and brokers	\$99,518

Investigation and security services	\$97,990
Marketing research and all other miscellaneous professional, scientific, and technical services	\$97,550
Business support services	\$96,832
Commercial and industrial machinery and equipment rental and leasing	\$92,097
Elementary and secondary schools	\$90,297
Medical and diagnostic laboratories	\$88,855
Transit and ground passenger transportation	\$87,957
Environmental and other technical consulting services	\$87,281
Grantmaking, giving, and social advocacy organizations	\$83,457
Water transportation	\$83,190
Religious organizations	\$81,867
Veterinary services	\$81,773
Tobacco product manufacturing	\$80,482
Commercial Sports Except Racing	\$79,055
Junior colleges, colleges, universities, and professional schools	\$77,804
General and consumer goods rental except video tapes and discs	\$77,697
Office administrative services	\$76,297
Other amusement and recreation industries	\$75,603
Postal service	\$73,523
Personal and household goods repair and maintenance	\$71,236
Lessors of nonfinancial intangible assets	\$69,096
Commercial and industrial machinery and equipment repair and maintenance	\$68,565
Other ambulatory health care services	\$68,083
Architectural, engineering, and related services	\$67,186
Residential intellectual disability, mental health, substance abuse and other facilities	\$66,358
Direct life insurance carriers	\$62,340
Newspaper publishers	\$60,636
Bottled and canned soft drinks & water	\$60,278
Rail transportation	\$54,587
Travel arrangement and reservation services	\$53,977
Electronic and precision equipment repair and maintenance	\$53,804
Community food, housing, and other relief services, including rehabilitation services	\$51,988
Private households	\$47,100
Water, sewage and other systems	\$46,696
Custom computer programming services	\$45,521
Computer systems design services	\$45,500
Cable and other subscription programming	\$44,063
Electric power generation - Fossil fuel	\$43,063
Fitness and recreational sports centers	\$40,932
Business and professional associations	\$40,322
Other accommodations	\$39,306

Motion picture and video industries	\$39,087
Book publishers	\$38,885
Video tape and disc rental	\$32,880
Dry-cleaning and laundry services	\$31,591
Facilities support services	\$30,913
Specialized design services	\$30,796
Other federal government enterprises	\$29,907
Photographic services	\$29,220
Breweries	\$28,910
Scientific research and development services	\$24,523
Other support services	\$24,208
Oil and gas extraction	\$23,163
Storage battery manufacturing	\$23,119
Printing	\$21,570
Performing arts companies	\$20,763
Independent artists, writers, and performers	\$19,798
Other motor vehicle parts manufacturing	\$18,768
Petroleum refineries	\$18,198
Racing and Track Operation	\$17,383
Electric power generation - Solar	\$17,081
Death care services	\$15,597
Bread and bakery product, except frozen, manufacturing	\$15,255
Vegetable and melon farming	\$11,641
Museums, historical sites, zoos, and parks	\$11,011
Paperboard container manufacturing	\$11,000
Sound recording industries	\$10,888
Directory, mailing list, and other publishers	\$10,437
Satellite, telecommunications resellers, and all other telecommunications	\$10,131
Motor vehicle electrical and electronic equipment manufacturing	\$10,099
News syndicates, libraries, archives and all other information services	\$9,771
Poultry processing	\$9,580
Ready-mix concrete manufacturing	\$9,078
Amusement parks and arcades	\$8,796
Glass product manufacturing made of purchased glass	\$7,979
Tire manufacturing	\$7,909
Periodical publishers	\$7,854
Asphalt shingle and coating materials manufacturing	\$6,757
Bowling centers	\$6,272
Motor vehicle steering, suspension component (except spring), and brake systems manufacturing	\$6,003
Other plastics product manufacturing	\$5,531
Natural gas distribution	\$5,463
Fluid milk manufacturing	\$5,245

Electric power generation - Biomass	\$4,771
Toilet preparation manufacturing	\$4,620
All other food manufacturing	\$4,269
Sanitary paper product manufacturing	\$4,268
Jewelry and silverware manufacturing	\$4,085
Hotels and motels, including casino hotels	\$4,060
Asphalt paving mixture and block manufacturing	\$4,001
Wood windows and door manufacturing	\$3,920
Electric power generation - Wind	\$3,759
Petroleum lubricating oil and grease manufacturing	\$3,714
Local government passenger transit	\$3,682
Meat processed from carcasses	\$3,561
Wineries	\$3,542
Gypsum product manufacturing	\$3,526
Pesticide and other agricultural chemical manufacturing	\$3,491
Ophthalmic goods manufacturing	\$3,309
Iron and steel mills and ferroalloy manufacturing	\$3,151
Office supplies (except paper) manufacturing	\$3,125
Other animal food manufacturing	\$3,120
Other concrete product manufacturing	\$3,066
Wood container and pallet manufacturing	\$2,939
Paper mills	\$2,935
Carpet and rug mills	\$2,930
Frozen cakes and other pastries manufacturing	\$2,896
Concrete block and brick manufacturing	\$2,692
Paperboard mills	\$2,642
Commercial hunting and trapping	\$2,610
Other snack food manufacturing	\$2,609
Flat glass manufacturing	\$2,431
Sign manufacturing	\$2,339
Stone mining and quarrying	\$2,284
Cut stone and stone product manufacturing	\$2,283
Commercial fishing	\$2,239
Poultry and egg production	\$2,206
Electric power generation - All other	\$2,176
Boat building	\$2,175
Greenhouse, nursery, and floriculture production	\$2,167
Distilleries	\$2,076
Paint and coating manufacturing	\$2,059
Other millwork, including flooring	\$1,874
Cement manufacturing	\$1,868
Frozen fruits, juices and vegetables manufacturing	\$1,867
Spice and extract manufacturing	\$1,781

Sawmills	\$1,768
Mayonnaise, dressing, and sauce manufacturing	\$1,692
Spring and wire product manufacturing	\$1,691
Support activities for agriculture and forestry	\$1,666
Travel trailer and camper manufacturing	\$1,589
Animal production, except cattle and poultry and eggs	\$1,587
Metal cans manufacturing	\$1,483
Valve and fittings, other than plumbing, manufacturing	\$1,448
Mineral wool manufacturing	\$1,412
Engineered wood member and truss manufacturing	\$1,382
Other fabricated metal manufacturing	\$1,318
Fabricated structural metal manufacturing	\$1,316
Manufactured ice	\$1,278
Seafood product preparation and packaging	\$1,272
All other miscellaneous wood product manufacturing	\$1,213
Glass container manufacturing	\$1,200
Pipeline transportation	\$1,184
Roasted nuts and peanut butter manufacturing	\$1,144
Sheet metal work manufacturing	\$1,130
Urethane and other foam product (except polystyrene) manufacturing	\$1,115
Machine shops	\$1,111
Ship building and repairing	\$1,066
Wiring device manufacturing	\$1,055
Animal, except poultry, slaughtering	\$1,048
Hardware manufacturing	\$1,047
Motor vehicle transmission and power train parts manufacturing	\$944
Other rubber product manufacturing	\$925
Ornamental and architectural metal work manufacturing	\$899
Dairy cattle and milk production	\$897
Plastics packaging materials and unlaminated film and sheet manufacturing	\$877
Air conditioning, refrigeration, and warm air heating equipment manufacturing	\$851
Surgical and medical instrument manufacturing	\$841
Prefabricated wood building manufacturing	\$834
All other miscellaneous manufacturing	\$819
Wood kitchen cabinet and countertop manufacturing	\$764
Blank magnetic and optical recording media manufacturing	\$739
Motor vehicle gasoline engine and engine parts manufacturing	\$732
Other miscellaneous chemical product manufacturing	\$712
Motor vehicle body manufacturing	\$670
Automobile manufacturing	\$638
All other crop farming	\$634
Stationery product manufacturing	\$617
Electric power generation - Hydroelectric	\$601

Plastics pipe and pipe fitting manufacturing	\$576
Metal coating and nonprecious engraving	\$535
Fruit farming	\$510
Polystyrene foam product manufacturing	\$510
Brick, tile, and other structural clay product manufacturing	\$510
Other basic organic chemical manufacturing	\$483
Cookie and cracker manufacturing	\$480
Forestry, forest products, and timber tract production	\$478
Wood preservation	\$475
Other aluminum rolling, drawing and extruding	\$472
Ferrous metal foundries	\$428
Reconstituted wood product manufacturing	\$412
Soap and other detergent manufacturing	\$376
Commercial logging	\$374
Nonupholstered wood household furniture manufacturing	\$362
Plastics bottle manufacturing	\$356
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	\$354
Metal window and door manufacturing	\$322
Motorcycle, bicycle, and parts manufacturing	\$314
Frozen specialties manufacturing	\$313
Concrete pipe manufacturing	\$307
Surgical appliance and supplies manufacturing	\$298
Plastics material and resin manufacturing	\$295
Turned product and screw, nut, and bolt manufacturing	\$264
Grain farming	\$264
Upholstered household furniture manufacturing	\$261
Air purification and ventilation equipment manufacturing	\$249
Nitrogenous fertilizer manufacturing	\$244
All other converted paper product manufacturing	\$242
Canned specialties	\$238
Paper bag and coated and treated paper manufacturing	\$234
Women's and girls' cut and sew apparel manufacturing	\$223
Support activities for printing	\$205
Nonchocolate confectionery manufacturing	\$203
Polish and other sanitation good manufacturing	\$198
Fasteners, buttons, needles, and pins manufacturing	\$192
Pharmaceutical preparation manufacturing	\$188
Canned fruits and vegetables manufacturing	\$188
Confectionery manufacturing from purchased chocolate	\$187
Heating equipment (except warm air furnaces) manufacturing	\$180
Coffee and tea manufacturing	\$179
All other transportation equipment manufacturing	\$174

Rendering and meat byproduct processing	\$171
Other textile product mills	\$167
Dental equipment and supplies manufacturing	\$157
Sand and gravel mining	\$154
Metal heat treating	\$153
Secondary processing of other nonferrous metals	\$147
Electroplating, anodizing, and coloring metal	\$143
Maintenance and repair construction of highways, streets, bridges, and tunnels	\$133
Blind and shade manufacturing	\$129
Plumbing fixture fitting and trim manufacturing	\$121
Dental laboratories	\$118
Other engine equipment manufacturing	\$113
Synthetic rubber manufacturing	\$111
Prefabricated metal buildings and components manufacturing	\$111
Metal mining services	\$109
Other basic inorganic chemical manufacturing	\$102
Plate work manufacturing	\$101
Miscellaneous nonmetallic mineral products manufacturing	\$95
Lighting fixture manufacturing	\$95
Other communication and energy wire manufacturing	\$89
Iron, steel pipe and tube manufacturing from purchased steel	\$86
Rubber and plastics hoses and belting manufacturing	\$85
Other household nonupholstered furniture manufacturing	\$83
Metal tank (heavy gauge) manufacturing	\$74
Textile bag and canvas mills	\$71
Industrial truck, trailer, and stacker manufacturing	\$69
Other clay, ceramic, refractory minerals mining	\$67
Overhead cranes, hoists, and monorail systems manufacturing	\$67
Electronic computer manufacturing	\$66
Military armored vehicle, tank, and tank component manufacturing	\$58
Other commercial service industry machinery manufacturing	\$56
Pottery, ceramics, and plumbing fixture manufacturing	\$56
Sporting and athletic goods manufacturing	\$53
Handtool manufacturing	\$50
Men's and boys' cut and sew apparel manufacturing	\$49
Adhesive manufacturing	\$48
Other aircraft parts and auxiliary equipment manufacturing	\$46
Metal barrels, drums and pails manufacturing	\$45
Coal mining	\$44
Software and other prerecorded and record reproducing	\$42
Ice cream and frozen dessert manufacturing	\$42
Custom architectural woodwork and millwork	\$40
Tree nut farming	\$39

Apparel accessories and other apparel manufacturing	\$38
Nonferrous metal foundries	\$38
Relay and industrial control manufacturing	\$38
Cut stock, resawing lumber, and planing	\$35
Other leather and allied product manufacturing	\$34
Other cut and sew apparel manufacturing	\$32
Curtain and linen mills	\$31
Motor and generator manufacturing	\$30
Pulp mills	\$30
Institutional furniture manufacturing	\$27
Dehydrated food products manufacturing	\$25
Semiconductor and related device manufacturing	\$25
Gasket, packing, and sealing device manufacturing	\$25
Fabricated pipe and pipe fitting manufacturing	\$24
Cheese manufacturing	\$24
Printing ink manufacturing	\$23
In-vitro diagnostic substance manufacturing	\$22
Fabric coating mills	\$22
Audio and video equipment manufacturing	\$21
Fertilizer mixing	\$20
Showcase, partition, shelving, and locker manufacturing	\$20
Scales, balances, and miscellaneous general purpose machinery manufacturing	\$20
Fiber optic cable manufacturing	\$18
Cut and sew apparel contractors	\$18
Aircraft manufacturing	\$18
Cutting tool and machine tool accessory manufacturing	\$18
Watch, clock, and other measuring and controlling device manufacturing	\$17
Surface active agent manufacturing	\$16
Special tool, die, jig, and fixture manufacturing	\$16
Printed circuit assembly (electronic assembly) manufacturing	\$16
Fluid power pump and motor manufacturing	\$15
Other apparel knitting mills	\$14
Potash, soda, and borate mineral mining	\$14
Industrial process variable instruments manufacturing	\$14
Railroad rolling stock manufacturing	\$12
Other nonmetallic minerals	\$12
Carbon and graphite product manufacturing	\$12
Computer terminals and other computer peripheral equipment manufacturing	\$11
Small arms ammunition manufacturing	\$11
Manufactured home (mobile home) manufacturing	\$11
Dry, condensed, and evaporated dairy product manufacturing	\$11
Leather and hide tanning and finishing	\$11
Ball and roller bearing manufacturing	\$10

All other miscellaneous electrical equipment and component manufacturing	\$10
Other communications equipment manufacturing	\$10
Custom compounding of purchased resins	\$10
Pump and pumping equipment manufacturing	\$10
Aircraft engine and engine parts manufacturing	\$9
Chocolate and confectionery manufacturing from cacao beans	\$9
Power-driven handtool manufacturing	\$8
Machine tool manufacturing	\$8
Electronic connector manufacturing	\$8
Hosiery and sock mills	\$7
All other industrial machinery manufacturing	\$7
Farm machinery and equipment manufacturing	\$7
Other nonmetallic minerals services	\$7
Lawn and garden equipment manufacturing	\$7
Medicinal and botanical manufacturing	\$7
Switchgear and switchboard apparatus manufacturing	\$6
Musical instrument manufacturing	\$6
Dog and cat food manufacturing	\$6
Nonwoven fabric mills	\$6
Electric lamp bulb and part manufacturing	\$6
Synthetic dye and pigment manufacturing	\$5
Mining machinery and equipment manufacturing	\$5
Construction machinery manufacturing	\$5
Small arms, ordnance, and accessories manufacturing	\$5
Support activities for oil and gas operations	\$5
Electromedical and electrotherapeutic apparatus manufacturing	\$4
Power, distribution, and specialty transformer manufacturing	\$4
Air and gas compressor manufacturing	\$4
Capacitor, resistor, coil, transformer, and other inductor manufacturing	\$4
Biological product (except diagnostic) manufacturing	\$4
Textile and fabric finishing mills	\$3
Phosphate rock mining	\$3
Packaging machinery manufacturing	\$3
Speed changer, industrial high-speed drive, and gear manufacturing	\$3
Footwear manufacturing	\$3
Photographic and photocopying equipment manufacturing	\$2
Truck trailer manufacturing	\$2
Other electronic component manufacturing	\$2
Small electrical appliance manufacturing	\$2
Other metal ore mining	\$2
Search, detection, and navigation instruments manufacturing	\$2
Other chemical and fertilizer mineral mining	\$2
Turbine and turbine generator set units manufacturing	\$2

Power boiler and heat exchanger manufacturing	\$2
Broadcast and wireless communications equipment manufacturing	\$2
Guided missile and space vehicle manufacturing	\$1
Telephone apparatus manufacturing	\$1
Industrial mold manufacturing	\$1
Sawmill, woodworking, and paper machinery	\$1
Optical instrument and lens manufacturing	\$1
Printing machinery and equipment manufacturing	\$1
Wood office furniture manufacturing	\$1
Totalizing fluid meter and counting device manufacturing	\$1
Welding and soldering equipment manufacturing	\$1
Analytical laboratory instrument manufacturing	\$0
Electricity and signal testing instruments manufacturing	\$0
Irradiation apparatus manufacturing	\$0
Food product machinery manufacturing	\$0
Drilling oil and gas wells	\$0
Knit fabric mills	\$0
Oilseed farming	\$0
Elevator and moving stairway manufacturing	\$0
Sugarcane and sugar beet farming	\$0
Greeting card publishing	\$0
Secondary smelting and alloying of aluminum	\$0
Ground or treated mineral and earth manufacturing	\$0
Industrial gas manufacturing	\$0
Soybean and other oilseed processing	\$0
* Employment and payroll of local govt, hospitals and health services	\$0
* Employment and payroll of local govt, other services	\$0
Beet sugar manufacturing	\$0
Primary battery manufacturing	\$0
Industrial process furnace and oven manufacturing	\$0
Broom, brush, and mop manufacturing	\$0
Nonferrous forging	\$0
Burial casket manufacturing	\$0
Construction of other new residential structures	\$0
Mechanical power transmission equipment manufacturing	\$0
* Employment and payroll of federal govt, non-military	\$0
Construction of new single-family residential structures	\$0
Other major household appliance manufacturing	\$0
Flavoring syrup and concentrate manufacturing	\$0
Gold ore mining	\$0
Tortilla manufacturing	\$0
Ammunition, except for small arms, manufacturing	\$0
Photographic film and chemical manufacturing	\$0

* Employment and payroll of state govt, other services	\$0
Cotton farming	\$0
Other pressed and blown glass and glassware manufacturing	\$0
Semiconductor machinery manufacturing	\$0
Crown and closure manufacturing and metal stamping	\$0
Wet corn milling	\$0
Artificial and synthetic fibers and filaments manufacturing	\$0
Construction of new educational and vocational structures	\$0
Mattress manufacturing	\$0
* Not an industry (Used and secondhand goods)	\$0
* Employment and payroll of state govt, education	\$0
Construction of new manufacturing structures	\$0
Fluid power cylinder and actuator manufacturing	\$0
Explosives manufacturing	\$0
Iron ore mining	\$0
State government passenger transit	\$0
Motor vehicle seating and interior trim manufacturing	\$0
Dry pasta, mixes, and dough manufacturing	\$0
Construction of new commercial structures, including farm structures	\$0
Construction of new highways and streets	\$0
Conveyor and conveying equipment manufacturing	\$0
Propulsion units and parts for space vehicles and guided missiles manufacturing	\$0
Heavy duty truck manufacturing	\$0
Construction of other new nonresidential structures	\$0
Aluminum sheet, plate, and foil manufacturing	\$0
Electric power generation - Geothermal	\$0
Construction of new power and communication structures	\$0
Nonferrous metal (exc aluminum) smelting and refining	\$0
Doll, toy, and game manufacturing	\$0
Fiber, yarn, and thread mills	\$0
Tobacco farming	\$0
Broadwoven fabric mills	\$0
Veneer and plywood manufacturing	\$0
* Employment and payroll of state govt, hospitals and health services	\$0
* Not an industry (Rest of world adjustment)	\$0
Rolling mill and other metalworking machinery manufacturing	\$0
* Not an industry (Noncomparable foreign imports)	\$0
Federal electric utilities	\$0
Fats and oils refining and blending	\$0
Lime manufacturing	\$0
Malt manufacturing	\$0
Uranium-radium-vanadium ore mining	\$0
Motor home manufacturing	\$0

Cutlery, utensil, pot, and pan manufacturing	\$0
Laminated plastics plate, sheet (except packaging), and shape manufacturing	\$0
Phosphatic fertilizer manufacturing	\$0
Household refrigerator and home freezer manufacturing	\$0
Construction of new multifamily residential structures	\$0
Motor vehicle metal stamping	\$0
Other state government enterprises	\$0
Creamery butter manufacturing	\$0
Alumina refining and primary aluminum production	\$0
Flour milling	\$0
Construction of new health care structures	\$0
* Employment and payroll of local govt, education	\$0
Nonferrous metal, except copper and aluminum, shaping	\$0
Sugar cane mills and refining	\$0
Custom roll forming	\$0
Electric power generation - Nuclear	\$0
Bare printed circuit board manufacturing	\$0
Steel wire drawing	\$0
State government electric utilities	\$0
Abrasive product manufacturing	\$0
Automatic environmental control manufacturing	\$0
Computer storage device manufacturing	\$0
* Employment and payroll of federal govt, military	\$0
Unlaminated plastics profile shape manufacturing	\$0
Petrochemical manufacturing	\$0
Silver ore mining	\$0
Rope, cordage, twine, tire cord and tire fabric mills	\$0
Household cooking appliance manufacturing	\$0
Oil and gas field machinery and equipment manufacturing	\$0
Breakfast cereal manufacturing	\$0
Copper rolling, drawing, extruding and alloying	\$0
Office furniture, except wood, manufacturing	\$0
Narrow fabric mills and schiffli machine embroidery	\$0
All other petroleum and coal products manufacturing	\$0
Rice milling	\$0
Copper, nickel, lead, and zinc mining	\$0
Rolled steel shape manufacturing	\$0
Iron and steel forging	\$0
* Not an industry (Scrap)	\$0

Appendix III – Reference Document: Economic Impact Analysis – Assessing the Contribution of JTA’s Ultimate Urban Circulator (U²C) Project to the Jacksonville Economy

Economic Impact Analysis – Assessing the Contribution of JTA’s Ultimate Urban Circulator (U²C) Project to the Jacksonville Economy

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Executive Summary

The JTA's Ultimate Urban Circulator (U²C) capital project is positioned to make a significant economic contribution to the Jacksonville Metropolitan Statistical Area (MSA) through its three phases. The following summary outlines key findings:

Economic Impact:

- The U²C capital project will generate a substantial effect on employment, labor income, and economic output in the Jacksonville MSA.
- Phase I will generate 604 jobs, \$42.3 million in labor income, and \$117.4 million in economic output.
- Phase II will contribute 2,349 jobs, \$157.2 million in labor income, and \$470.4 million in economic output.
- Phase III will add 1,188 jobs, \$94.4 million in labor income, and \$235.0 million in economic output.
- In total, across all three phases, the project will create 4,141 jobs, nearly \$294 million in labor income, and approximately \$823 million in economic output through direct, indirect, and induced effects.
- The timing of the capital expenditures and project activities is essential in interpreting these impacts, as they are cumulative and spread over the project's duration.

Impact on Employment by Education Levels:

- The project largely benefits individuals with a high school diploma or equivalent, creating 1,115.3 jobs across all phases.
- There will also be a considerable number of jobs for individuals with bachelor's degrees (671.8) and post-secondary certificates (389.3).
- The project will significantly shape the educational demand in the local labor market, with a substantial demand for workers having high school or above education.

Potential Impact of a Hypothetical Autonomous Vehicle Manufacturing Sector:

- Should an autonomous vehicle manufacturing sector be established in Jacksonville, it could potentially yield significant economic benefits. Currently, such a sector is absent in the area.
- Simulation results suggest that locally manufacturing the autonomous vehicle fleet needed for the three phases itself would create approximately 74 jobs, generate \$5.56 million in labor income, and produce \$45.14 million in economic output.
- Subsequent operation and maintenance of the fleet could also influence the decision of autonomous vehicle manufacturers to come to Jacksonville.

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Introduction

In an age where urbanization is rapidly progressing, cities are in a race to implement sustainable and efficient transportation systems that meet the evolving needs of their residents. Jacksonville, Florida, is no exception and has embarked on an ambitious project to revolutionize its public transportation through the Ultimate Urban Circulator (U²C) program. The U²C project represents a visionary approach towards integrating cutting-edge autonomous vehicle (AV) technology with the existing infrastructure, aimed at creating a more connected, vibrant, and revitalized Downtown Jacksonville. This study intends to evaluate the multifaceted impacts of the U²C project on the Jacksonville Metropolitan Statistical Area (MSA), focusing primarily on its economic and educational contributions.

The U²C project is a comprehensive program that encompasses the modernization and expansion of the Skyway, a monorail system that has been operational since the 1980s. The program is being executed in three distinct phases. Phase I, referred to as the Bay Street Innovation Corridor (BSIC), involves the introduction of autonomous vehicles on an eastward route that begins at the Skyway's Central Station and extends to the Sports/Entertainment District/TIAA Bank Field. Phase II, termed as the Skyway Conversion, is centered on the modification of the existing Skyway Superstructure and its stations into an elevated roadway tailored for autonomous vehicles. This phase integrates the Skyway into the U²C network and involves a substantial infrastructural transformation. Phase III, though not initiated at the time of this study, plans to extend the U²C routes into surrounding neighborhoods, namely the Southwest Corridor, Southbank Corridor, and North Corridor, each possessing unique characteristics and historical significance.

The economic ramifications of such a significant capital project are expected to be extensive. This study will examine the direct impact, which includes the immediate economic activities generated by the project, such as construction and deployment of technology; the indirect impact, considering the supply-chain effect on intermediate inputs and service providers; and the induced impact, which encompasses the economic activity resulting from increased household spending through the direct and indirect impact process. These facets will be analyzed in terms of economic output, employment, and labor income.

Furthermore, the implementation of the U²C project necessitates a skilled workforce with specialized educational backgrounds and work experiences. This study seeks to evaluate the demand for workers in various education levels and occupations which underlie the economic impact on employment.

Another intriguing aspect of this study is the simulation of the establishment of an autonomous vehicle manufacturing industry in the Jacksonville MSA. Considering the autonomous vehicles needed for the U²C project, the study will analyze the potential presence and scale of the autonomous vehicle manufacturing industry under the assumption that these vehicles are

manufactured locally. As of now, Jacksonville lacks an autonomous vehicle manufacturing sector, and this simulation could provide valuable insights into the possibilities and implications of developing such an industry.

It is imperative to note that this study is focused on the capital aspects and does not delve into the operational impacts of the U²C system post-completion. The operational impacts cannot be evaluated until the operation budget and ridership statistics become available in the future, which is beyond this analysis' scope.

With urbanization and technological advancements forging ahead, projects like U²C are poised to shape the cities of the future. This study aims to offer a thorough understanding of the economic and educational landscape that arises as a result of undertaking such an ambitious project. Through the evaluation of its direct, indirect, and induced economic impacts, analysis of the educational requirements for the workforce, and simulation of a potential new manufacturing industry, this study will offer insights that can inform decision-making for Jacksonville.

Method

Modeling Direct, Indirect, and Induced Impacts

This study employs IMPLAN's Input-Output modeling system, utilizing the latest 2021 IMPLAN data, to estimate the direct, indirect, and induced impacts of the Jacksonville Transportation Authority's (JTA) transit capital project on the Jacksonville economy.

The direct impact is characterized by the initial expenses incurred by the JTA in implementing the transit capital project. For instance, if JTA invests \$200 million in constructing and upgrading public transportation infrastructure, this \$200 million would be the direct impact on the economy.

Subsequently, this initial expenditure by JTA leads to indirect impacts. For example, in the construction phase of the transit capital project, JTA would need to purchase materials from suppliers, engage construction companies, and may also need services like engineering consultancy. These transactions will generate revenue for these other businesses. So, when the suppliers for construction materials, engineering firms, and other service providers receive revenue because of JTA's capital project, this is considered an indirect impact on the economy. The patterns of these business-to-business purchases are captured by IMPLAN's Social Account Matrix (SAM) data, which facilitate this analysis.

Furthermore, as these activities continue, employment opportunities arise and income for employees engaged in the direct and indirect activities increases. These employees will likely spend their earnings on goods and services across various sectors like food and beverages,

automobile maintenance, health care, entertainment, housing, etc. This increase in consumption due to the wages earned by employees engaged in the JTA project and its supply chain results in induced impacts on the state economy.

In summary, the total economic impact of JTA's transit capital project is the sum of its direct, indirect, and induced impacts. It demonstrates the multiplier effect - how an initial investment can lead to a much larger impact on the economy as a whole.

Besides analyzing the economic output in terms of dollar amounts, this study also evaluates the impacts in terms of employment (the number of jobs created by the project and its supply chain) and labor compensation (the total wages paid).

The study relies on multipliers and the input-output relationship drawn from the 2021 IMPLAN data. Specific data regarding JTA's transit capital project activities, as well as more in-depth technical details for each impact source, will be outlined in the subsequent sections. All impacts are estimated for the Jacksonville MSA and presented in 2023 dollars.

[Modeling Impact via the Autonomous Vehicle Manufacturing Sector](#)

Presently, there is no autonomous vehicle (AV) manufacturing industry in the area.

Consequently, if the autonomous vehicles required for the Ultimate Urban Circulator (U²C) program are procured directly from a foreign manufacturer, this expenditure will not yield any direct impact on the local economy and is likely to contribute minimally through indirect supply chain relationships.

However, we consider a different scenario where the significant order from the U²C program coupled with the prospective demand for maintenance and future purchases once in the operational phase, entice the foreign supplier to establish a manufacturing branch in Jacksonville. This development could potentially lead to a substantial economic impact locally.

In light of this, our study aims to gauge the economic impact of procuring autonomous vehicles with the following assumptions:

- Establishment of a hypothetical sector for autonomous vehicle manufacturing in Jacksonville MSA.
- Manufacturing of the vehicles needed for Phase I, II, and III of the U²C program within this hypothetical sector in Jacksonville.

It is imperative to note that autonomous vehicle manufacturing is an emerging industry and is yet to be included in the North American Industry Classification System (NAICS). Therefore, it is not accurately represented in the existing industry classification. To address this, we have adapted an existing sector that closely resembles the manufacturing of the types of autonomous vehicles used by the U²C program, such as Navya, EV Star, and Olli 2.0. We chose

IMPLAN Sector 341 - Light Truck and Utility Vehicle Manufacturing as the template for this hypothetical sector.

We modified the spending pattern of this sector to represent a higher utilization of intermediate inputs typical to autonomous vehicles. These include electronic computers, computer peripheral equipment, electronic components, storage batteries, and motor vehicle electric and electronic equipment. Additionally, we set the utilization of gasoline engines and engine parts to zero, reflecting the nature of electric autonomous vehicles.

We then applied the costs associated with acquiring autonomous vehicles for the U²C project to simulate the impact of manufacturing the fleet locally. This simulation helps us to estimate what kind of economic stimulus might be generated if the vehicles were to be produced in Jacksonville MSA.

It is important to distinguish this simulated impact from the rest of the impacts discussed in this report. The results of this simulation provide valuable insights into how the establishment of an autonomous vehicle manufacturing sector in Jacksonville might contribute to the local economy and serve as a foundation for further discussions and considerations.

Data

In this section, we provide a detailed overview of the cost estimates for Phase I, Phase II, and Phase III of the JTA's Ultimate Urban Circulator (U²C) program.

Phase I – Bay Street Innovation Corridor

JTA provided detailed cost estimates for Phase I, which can be grouped into several categories around construction, engineering services, technology, and autonomous vehicles. These categories include:

- Construction – roadway
- Construction – stations
- Engineering Services – program management
- Engineering Services – civil project design
- Technology – software and supervisory system
- Technology – electric charging & storage
- Technology – traffic signals, sensors, and Smart technology
- Technology – V2X communication and database
- Autonomous Vehicles

The costs under each category is an aggregation of the costs of all relevant components, along with a proportionate share of the contingency cost of \$2 million. This share is calculated based

on the ratios of the initial aggregated cost in each category to the sum of costs across all categories. The in-kind gifts from JEA for fiber and TOP/COJ for cam and sensor are not included in this evaluation. Table 1: Phase I Cost Breakdown Table 1 below summarizes the final cost estimates for each category in Phase I.

Table 1: Phase I Cost Breakdown

Cost Category	Amount
Construction – Roadway	\$18,528,070
Construction – Stations	\$17,182,456
Program Management	\$7,763,158
Technology - Software & supervisory system	\$7,763,158
Technology - Electric charging & storage	\$2,587,719
Technology - Traffic signals, sensors, and smart system	\$2,587,719
Technology - V2X Communication & database	\$2,587,719
Autonomous Vehicles	\$6,000,000
Total	\$65,000,000

Phase II – Skyway Conversion

For Phase II, the total cost is estimated to include two parts that were previously proposed as LOGT projects, namely:

- Skyway Rehabilitation & Downtown Service Expansion – Capital (Infrastructure, Systems)
- Skyway Rehabilitation & Downtown Service Expansion – Fleet

The estimated cost for rehabilitation of the Skyway infrastructure, systems, and IT network, and expansion of services to support the transition to autonomous vehicles is \$240,075,000.

According to JTA, 80 percent of the cost is allocated to construction and 20 percent to technology. The cost allocation percentages from Phase I are used to further divide these costs into more detailed categories. Specifically, the cost allocated to construction is further split into 52% for roadway construction and 48% for station construction. The cost assigned to technology in Phase II is divided into software and supervisory system (50%), electric charging and storage (16.67%), traffic signals, sensors, and Smart system (16.67%), and communication and database (16.67%).

The estimated cost for acquiring a vehicle fleet to support Skyway rehabilitation, downtown service expansion, and neighborhood extensions in Phase II is \$6,765,000. Table 2 summarizes the cost breakdown for Phase II.

Table 2: Phase II Cost Breakdown

Cost Category	Amount	Note
Construction - Roadway	\$99,648,522	52% of construction
Construction - Stations	\$92,411,478	48% of construction
Technology - Software & supervisory system	\$24,007,500	50% of technology
Technology - Electric charging & storage	\$8,002,500	16.67% of technology
Technology - Traffic signals, sensors, and smart system	\$8,002,500	16.67% of technology
Technology - V2X Communication & database	\$8,002,500	16.67% of technology
Autonomous Vehicles	\$6,765,000	
Total	\$246,840,000	

Phase III – Neighborhood Extensions

Phase III has an estimated total cost of \$136.6M, including \$4.6M for project design and \$132M for construction (20%), technology (65%), and autonomous vehicles (15%). Similarly, the cost for construction and technology are further broken down using the percentages reflected in Phase I costs. Table 3 is a summary of the cost breakdown for Phase III.

Table 3: Phase III Cost Breakdown

Cost Category	Amount	Note
Construction - Roadway	\$13,697,391	52% of construction
Construction - Stations	\$12,702,609	48% of construction
Technology - Software & supervisory system	\$42,900,000	50% of technology
Technology - Electric charging & storage	\$14,300,000	16.67% of technology
Technology - Traffic signals, sensors, and smart system	\$14,300,000	16.67% of technology
Technology - V2X Communication & database	\$14,300,000	16.67% of technology
Autonomous Vehicles	\$19,800,000	
Design service	\$4,600,000	
Total	\$136,600,000	

It is crucial to note that these categories are employed to serve as the foundation for modeling economic impacts in the IMPLAN system. Each category is separately modeled in the corresponding IMPLAN sector.

Results

Economic Impact - Employment, Labor Income, and Output

This section presents a summary of the economic impact of the JTA's Ultimate Urban Circulator (U²C) capital project from each of the three phases and all phases combined.

The economic impact of Phase I, shown in Table 4, includes 604 jobs, \$42,292,679 in labor income, and \$117,399,315 in economic output.

Table 4: Summary of Economic Impact - Phase I

Impact Type	Employment	Labor Income	Value Added	Output
Direct	294	\$23,260,782	\$29,295,424	\$59,000,000
Indirect	141	\$9,296,681	\$14,994,262	\$27,808,490
Induced	170	\$9,735,217	\$17,890,443	\$30,590,827
Total	604	\$42,292,679	\$62,180,129	\$117,399,317

The economic impact of Phase II of the U²C project, presented in Table 5, consists of 2,349 jobs, \$157,230,468 in labor income, and \$470,437,902 in economic output.

Table 5: Summary of Economic Impact - Phase II

Impact Type	Employment	Labor Income	Value Added	Output
Direct	1,151	\$83,388,905	\$111,302,917	\$240,075,000
Indirect	567	\$37,633,940	\$62,939,789	\$116,588,673
Induced	631	\$36,207,624	\$66,538,841	\$113,774,229
Total	2,349	\$157,230,468	\$240,781,547	\$470,437,902

Phase III generated 1,188 jobs, \$94,437,523 in labor income, and \$235,043,333 in output, as shown in Table 6.

Table 6: Summary of Economic Impact - Phase III

Impact Type	Employment	Labor Income	Value Added	Output
Direct	558	\$55,520,158	\$66,542,357	\$116,800,000
Indirect	251	\$17,182,731	\$26,694,598	\$49,946,829
Induced	379	\$21,734,634	\$39,941,823	\$68,296,504
Total	1,188	\$94,437,523	\$133,178,778	\$235,043,333

Combining all three phases of the U²C Capital Project, the full economic impacts include 4,141 jobs, \$293,960,671 in labor income, and \$822,880,550 in economic output, as reported in Table 7.

Table 7: Summary of Economic Impact - All Phases Combined

Impact Type	Employment	Labor Income	Value Added	Output
Direct	2,002	\$162,169,845	\$207,140,698	\$415,874,999
Indirect	959	\$64,113,352	\$104,628,649	\$194,343,992
Induced	1,179	\$67,677,474	\$124,371,106	\$212,661,560
Total	4,141	\$293,960,671	\$436,140,453	\$822,880,550

It is essential to understand that these figures are cumulative and should be interpreted based on the duration over which the capital was spent and the work was executed. For instance, if the entire capital was expended and all work was completed within one year, then the Jacksonville MSA would experience the full impact within that year.

Take the employment impact as an example - the figure of 4,141 jobs is measured in person-years. This means that if the project spanned one year, then 4,141 individuals were employed for that year. However, if the project took two years, with the capital and work evenly distributed over that period, then it would mean that, on average, 2,070.5 individuals were employed each year for two years.

Similarly, the other impacts, such as labor income and economic output, should also be apportioned over the period in which the capital was invested and the work was carried out. The longer the duration of the project, the more spread out these impacts will be.

Table 8 lists the top 15 industries in Jacksonville MSA that are expected to experience growth due to the impact of the U²C capital project. It presents each industry's total output in millions of dollars, the impact output contributed by the U²C project in millions of dollars, and the estimated percentage growth resulting from the project. (A complete picture with all 546 sectors can be found in

Appendix I.)

Table 8: Top 15 Industries by Estimated Growth Percentage from U²C Impact

Display Description	Industry Total Output (in millions)	Impact Output (in millions)	Estimated Growth Percentage
Maintenance and repair construction of highways, streets, bridges, and tunnels	\$206.42	\$131.88	63.89%
All other miscellaneous electrical equipment and component manufacturing	\$75.24	\$24.89	33.08%
Construction of other new nonresidential structures	\$708.42	\$122.30	17.26%
Custom computer programming services	\$1,290.39	\$75.30	5.84%
Concrete pipe manufacturing	\$6.55	\$0.33	5.01%
Asphalt shingle and coating materials manufacturing	\$129.24	\$6.32	4.89%
Stone mining and quarrying	\$46.16	\$1.82	3.94%
Prefabricated wood building manufacturing	\$11.20	\$0.32	2.87%
Electric power transmission and distribution	\$938.85	\$26.61	2.83%
Other concrete product manufacturing	\$55.26	\$1.55	2.81%
Retail - Building material and garden equipment and supplies stores	\$1,032.81	\$22.77	2.20%
Miscellaneous nonmetallic mineral products manufacturing	\$11.34	\$0.20	1.78%
Asphalt paving mixture and block manufacturing	\$263.26	\$4.46	1.69%
Ready-mix concrete manufacturing	\$199.33	\$2.71	1.36%
Sand and gravel mining	\$3.77	\$0.05	1.33%

It is important to note that the growth percentages mentioned in Table 8 are also subject to the duration over which the U²C capital project is implemented. The spread of capital injection and activities over time can moderate the intensity of the impact within a given year.

For example, consider the top-ranked sector, “Maintenance and repair construction of highways, streets, bridges, and tunnels,” which is estimated to experience a 63.89% growth due to an impact output of \$131.88 million. If the U²C capital project is executed within a single year, this sector might experience the full 63.89% growth within that year. However, if the project is spread over, say, three years, the annual growth rate might be lower, and the total impact of \$131.88 million would be distributed across those three years. In such a case, the growth in the first of the three years would be about 21.3%, followed by 17.6% in year two (since the growth in year one raises the base for year two), and 14.9% in year three.

Impact on Employment by Education Levels

The U²C capital project will have a varied impact on employment across different education levels. The following table (Table 9: Employment Impact by Education LevelTable 9) and analysis

provide an overview of how employment opportunities were distributed among different education levels through the different phases of the project and in total.

Table 9: Employment Impact by Education Level

Education Level	Employee Count			
	Phase I	Phase II	Phase III	All Phases Combined
Less than a High School Diploma	49.7	223.9	73.8	347.4
High School Diploma - or the equivalent (for example, GED)	159.6	680.8	275.0	1115.3
Post-Secondary Certificate ¹	56.4	251.2	81.7	389.3
Some College Courses	35.8	138.9	74.7	249.3
Associate's Degree (or other 2-year degree)	36.3	133.1	77.1	246.5
Bachelor's Degree	100.2	322.8	248.8	671.8
Post-Baccalaureate Certificate ²	7.0	22.8	17.6	47.4
Master's Degree	15.7	46.7	38.8	101.2
Post-Master's Certificate ³	1.7	5.4	3.8	10.9
First Professional Degree ⁴	3.1	9.3	5.8	18.2
Doctoral Degree	3.4	12.1	7.4	22.9
Post-Doctoral Training	1.3	4.8	2.8	8.9

¹ Post-Secondary Certificate - awarded for training completed after high school

² Post-Baccalaureate Certificate - awarded for completion of an organized program of study; designed for people who have completed a Baccalaureate degree but do not meet the requirements of academic degrees carrying the title of Master.

³ Post-Master's Certificate - awarded for completion of an organized program of study; designed for people who have completed a Master's degree but do not meet the requirements of academic degrees at the doctoral level.

⁴ First Professional Degree - awarded for completion of all requirements for becoming a practitioner in area such as law, medicine, etc.

Table 9 shows that the majority of employment opportunities were generated for individuals with a high school diploma or equivalent, with a total of 1,115.3 jobs created across all three phases. The second-highest number of jobs was created for individuals with bachelor's degrees, amounting to 671.8 jobs across all phases. There was also significant employment for those with post-secondary certificates, with 389.3 jobs created across all phases.

These figures point to a substantial increase in demand in the Jacksonville MSA for workers with an education level of high school or above. This illustrates that the project not only contributes to the economy by creating jobs but also significantly affects the local labor market's educational demand structure. The project's effects, however, should also be interpreted in light of its duration, as the spread of these job opportunities will depend on the project's timeframe.

Impact on Employment by Occupations

Table 10 presents the top 12 occupations receiving the highest impact in terms of employee count during the U²C project. (See Appendix II – for a complete list of all occupations.) The “Construction Trades Workers” and “Computer Occupations” are the two occupations at the top of the list, which is expected given the significant capital investment allocated to the construction and technology sectors. Most of the occupations on the top 12 list are expected to see a greater needs for new workers due to directly participating in the U²C project. Food and beverage serving occupations made the list likely due to their significant role in the indirect and induced impact process.

Table 10: Employment Impact by Occupations (Top 12)

Occupation	Employee Count			
	Phase I	Phase II	Phase III	All Phases Combined
Construction Trades Workers	70.0	370.9	55.0	496.0
Computer Occupations	33.1	99.4	148.4	280.9
Business Operations Specialists	25.5	88.8	58.8	173.1
Retail Sales Workers	23.5	105.9	35.3	164.7
Material Moving Workers	21.2	87.3	40.3	148.8
Other Installation, Maintenance, and Repair Occupations	14.6	69.3	20.0	104.0
Information and Record Clerks	13.8	51.9	31.9	97.5
Top Executives	13.9	54.1	27.5	95.5
Motor Vehicle Operators	12.2	54.2	18.6	85.1
Food and Beverage Serving Workers	12.4	44.4	27.6	84.5
Other Office and Administrative Support Workers	12.3	50.4	21.1	83.8
Supervisors of Construction and Extraction Workers	10.1	53.2	7.8	71.1

Impact via a Potential Autonomous Vehicle Manufacturing Sector

This section describes the potential economic impact on the Jacksonville economy if an autonomous vehicle manufacturing sector were to be established in the area, which is currently not present. The figures discussed are based on a simulation and should be taken as hypothetical estimates.

If the autonomous vehicle fleets needed throughout the project were to be manufactured locally, this production activity will potentially lead to 74 jobs, generate around \$5.56 million in labor income, and produce an economic output of about \$45.14 million. (Table 11)

Table 11: Economic Impact of Manufacturing U²C Autonomous Vehicles Locally

Impact Type	Employment	Labor Income	Value Added	Output
Direct	20	\$1,827,218	\$5,985,801	\$32,565,000

Indirect	32	\$2,455,159	\$4,311,352	\$8,553,488
Induced	22	\$1,278,537	\$2,349,581	\$4,017,622
Total	74	\$5,560,914	\$12,646,734	\$45,136,110

The simulation also provides insights into the education levels and occupations that are impacted by U²C spending on autonomous vehicles assuming the vehicles were manufactured by the hypothetical autonomous vehicle manufacturing sector in Jacksonville MSA: Table 12 suggests that across all phases, 30 jobs could be created for individuals with a high school diploma or equivalent, 10 for individuals with bachelor’s degrees, 5.2 for those with post-secondary certificates, and 5.1 for those with some college education.

Table 13 shows that the majority of employment opportunities added could be for the “assemblers and fabricators” occupation.

Table 12: Employment Impact by Education Level via a Potential AV Manufacturing Sector in Jacksonville

Education Level	Employee Count			
	Phase I	Phase II	Phase III	All Phases Combined
Less than a High School Diploma	1.0	1.1	3.2	5.3
High School Diploma - or the equivalent (for example, GED)	5.6	6.3	18.3	30.1
Post-Secondary Certificate	1.0	1.1	3.1	5.2
Some College Courses	0.9	1.1	3.1	5.1
Associate's Degree (or other 2-year degree)	0.7	0.8	2.3	3.7
Bachelor's Degree	1.7	2.0	5.8	9.5
Post-Baccalaureate Certificate	0.1	0.1	0.4	0.7
Master's Degree	0.3	0.3	0.9	1.4
Post-Master's Certificate	0.0	0.0	0.1	0.2
First Professional Degree	0.1	0.1	0.2	0.3
Doctoral Degree	0.1	0.1	0.2	0.4
Post-Doctoral Training	0.0	0.0	0.1	0.2

Table 13: Employment Impact by Occupation via a Potential AV Manufacturing Sector in Jacksonville (Top 12)

Occupation	Employee Count			
	Phase I	Phase II	Phase III	All Phases Combined

Assemblers and Fabricators	2.3	2.6	7.6	12.5
Material Moving Workers	0.8	0.9	2.7	4.5
Motor Vehicle Operators	0.5	0.6	1.8	3.0
Business Operations Specialists	0.4	0.5	1.5	2.4
Retail Sales Workers	0.4	0.5	1.4	2.3
Metal Workers and Plastic Workers	0.4	0.5	1.4	2.2
Information and Record Clerks	0.4	0.4	1.2	2.0
Food and Beverage Serving Workers	0.3	0.3	1.0	1.6
Other Installation, Maintenance, and Repair Occupations	0.3	0.3	1.0	1.6
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	0.3	0.3	0.9	1.5
Sales Representatives, Wholesale and Manufacturing	0.3	0.3	0.9	1.5
Other Production Occupations	0.3	0.3	0.9	1.5

Discussion

The results presented in this study show that the JTA's Ultimate Urban Circulator (U²C) capital project has a significant economic impact on the Jacksonville MSA. This section discusses the implications, limitations, and broader context of these findings.

Economic Impact:

The data reflects that the economic impact of the U²C capital project is substantial. The project has injected considerable capital into the local economy through its three phases, creating jobs, generating labor income, and producing economic output. This is particularly evident from the number of jobs created, which stands at 4,141, and the total economic output, which is approximately \$823 million.

Limitations – Scope of Impact:

However, it is essential to understand that the study's scope is limited to capital investment during the three phases of the U²C project. The results do not account for the economic impacts arising from subsequent operations, maintenance of the fleet, or the benefits that the project brings to travelers, such as time and cost savings due to using public transportation. Additionally, the study does not capture the potential economic benefits that could be realized if an autonomous vehicle manufacturing sector were introduced to the area as a result of the project. Such a sector could lead to further job creation and economic diversification.

Impact Interpretation and Project Duration:

A vital aspect to consider is the duration of the project. The impact figures presented are cumulative, and their interpretation should be made in light of the project's timeframe. For instance, the employment impact measured in person-years means that if the project spanned one year, then 4,141 individuals were employed for that year. However, if the project took longer, the employment figures should be apportioned over that period. Similar considerations apply to other impacts, such as labor income and economic output.

Implications and Limitations of the Simulation of a Hypothetical Autonomous Vehicle Sector:

The U²C project could potentially serve as a catalyst in attracting an autonomous vehicle manufacturing sector to Jacksonville. By demonstrating a commitment to advanced transportation solutions, the U²C project could position Jacksonville as a forward-thinking city that is receptive to new technologies, thereby making it an attractive destination for companies in the autonomous vehicle industry. The simulation suggests that this could lead to the creation of additional jobs, labor income, and economic output. It is necessary to highlight that the simulated effect discussed in this study does not take into account the subsequent economic impacts that may arise from the operation and maintenance of the autonomous vehicle fleet. This is an important consideration, as the long-term sustainability and growth of such a sector would also be dependent on factors like workforce skills, supply chain development, regulatory environment, and market demand for autonomous vehicles.

Appendix I - Industries by Estimated Growth Percentage from U²C Impact (Full List)

Display Description	Industry Total Output (in millions)	Impact Output (in millions)	Estimated Growth Pct.
Maintenance and repair construction of highways, streets, bridges, and tunnels	\$206.42	\$131.88	63.89%
All other miscellaneous electrical equipment and component manufacturing	\$75.24	\$24.89	33.08%
Construction of other new nonresidential structures	\$708.42	\$122.30	17.26%
Custom computer programming services	\$1,290.39	\$75.30	5.84%
Concrete pipe manufacturing	\$6.55	\$0.33	5.01%
Asphalt shingle and coating materials manufacturing	\$129.24	\$6.32	4.89%
Stone mining and quarrying	\$46.16	\$1.82	3.94%
Prefabricated wood building manufacturing	\$11.20	\$0.32	2.87%
Electric power transmission and distribution	\$938.85	\$26.61	2.83%
Other concrete product manufacturing	\$55.26	\$1.55	2.81%
Retail - Building material and garden equipment and supplies stores	\$1,032.81	\$22.77	2.20%
Miscellaneous nonmetallic mineral products manufacturing	\$11.34	\$0.20	1.78%
Asphalt paving mixture and block manufacturing	\$263.26	\$4.46	1.69%
Ready-mix concrete manufacturing	\$199.33	\$2.71	1.36%
Sand and gravel mining	\$3.77	\$0.05	1.33%
Concrete block and brick manufacturing	\$77.91	\$0.96	1.24%
Architectural, engineering, and related services	\$1,630.56	\$19.82	1.22%
Electric power generation - Hydroelectric	\$2.48	\$0.03	1.15%
Electric power generation - Biomass	\$48.06	\$0.55	1.15%
Electric power generation - Fossil fuel	\$273.97	\$3.16	1.15%
Electric power generation - Solar	\$69.32	\$0.80	1.15%
Cement manufacturing	\$62.69	\$0.70	1.11%
Data processing, hosting, and related services	\$2,744.94	\$30.49	1.11%
Brick, tile, and other structural clay product manufacturing	\$8.08	\$0.07	0.82%
Wood preservation	\$30.93	\$0.24	0.77%
Prefabricated metal buildings and components manufacturing	\$30.58	\$0.22	0.73%
Wood windows and door manufacturing	\$32.50	\$0.21	0.64%
Commercial and industrial machinery and equipment rental and leasing	\$815.54	\$5.11	0.63%
Employment services	\$3,054.45	\$17.59	0.58%
Other millwork, including flooring	\$51.36	\$0.28	0.55%
Office administrative services	\$265.34	\$1.42	0.54%
Wholesale - Household appliances and electrical and electronic goods	\$1,076.92	\$5.55	0.52%
Pipeline transportation	\$6.36	\$0.03	0.48%

Petroleum refineries	\$61.49	\$0.29	0.48%
Local government electric utilities	\$3,034.25	\$13.63	0.45%
Mineral wool manufacturing	\$45.69	\$0.18	0.40%
Commercial and industrial machinery and equipment repair and maintenance	\$466.35	\$1.81	0.39%
Wholesale - Wholesale electronic markets and agents and brokers	\$379.16	\$1.44	0.38%
Wholesale - Machinery, equipment, and supplies	\$997.89	\$3.74	0.38%
Wholesale - Petroleum and petroleum products	\$807.06	\$2.93	0.36%
Accounting, tax preparation, bookkeeping, and payroll services	\$1,306.26	\$4.70	0.36%
Wholesale - Other durable goods merchant wholesalers	\$2,669.46	\$9.58	0.36%
Specialized design services	\$96.83	\$0.34	0.35%
Management consulting services	\$1,332.72	\$4.65	0.35%
Photographic services	\$82.88	\$0.28	0.34%
Cut stone and stone product manufacturing	\$21.20	\$0.07	0.34%
Radio and television broadcasting	\$716.96	\$2.44	0.34%
Marketing research and all other miscellaneous professional, scientific, and technical services	\$504.23	\$1.71	0.34%
Management of companies and enterprises	\$2,262.59	\$7.55	0.33%
Transit and ground passenger transportation	\$328.68	\$1.09	0.33%
Legal services	\$1,672.47	\$5.49	0.33%
Local government passenger transit	\$102.09	\$0.33	0.33%
Satellite, telecommunications resellers, and all other telecommunications	\$44.39	\$0.14	0.32%
Facilities support services	\$254.85	\$0.83	0.32%
Wireless telecommunications carriers (except satellite)	\$846.45	\$2.72	0.32%
Cable and other subscription programming	\$63.25	\$0.20	0.32%
Ornamental and architectural metal work manufacturing	\$72.54	\$0.23	0.32%
Advertising, public relations, and related services	\$528.81	\$1.67	0.32%
Electronic and precision equipment repair and maintenance	\$276.64	\$0.85	0.31%
Internet publishing and broadcasting and web search portals	\$1,243.88	\$3.78	0.30%
Personal and household goods repair and maintenance	\$268.26	\$0.80	0.30%
Automotive equipment rental and leasing	\$317.16	\$0.94	0.30%
Performing arts companies	\$57.78	\$0.17	0.30%
Business and professional associations	\$114.20	\$0.33	0.29%
Newspaper publishers	\$28.32	\$0.08	0.29%
Retail - Miscellaneous store retailers	\$406.60	\$1.15	0.28%
Landscape and horticultural services	\$744.47	\$2.08	0.28%
Waste management and remediation services	\$561.31	\$1.56	0.28%
Investigation and security services	\$684.79	\$1.89	0.28%
Directory, mailing list, and other publishers	\$14.06	\$0.04	0.27%
Postal service	\$405.91	\$1.10	0.27%
General and consumer goods rental except video tapes and discs	\$252.93	\$0.68	0.27%
Water, sewage and other systems	\$136.79	\$0.36	0.27%
Periodical publishers	\$35.77	\$0.10	0.27%

Monetary authorities and depository credit intermediation	\$3,774.80	\$9.95	0.26%
Plastics pipe and pipe fitting manufacturing	\$47.05	\$0.12	0.26%
Fitness and recreational sports centers	\$140.29	\$0.37	0.26%
Truck transportation	\$2,738.60	\$7.17	0.26%
Retail - Furniture and home furnishings stores	\$398.38	\$1.04	0.26%
Full-service restaurants	\$2,500.99	\$6.54	0.26%
Software publishers	\$391.67	\$1.02	0.26%
Independent artists, writers, and performers	\$73.88	\$0.19	0.26%
Other support services	\$106.34	\$0.27	0.26%
Retail - Electronics and appliance stores	\$248.67	\$0.63	0.25%
Services to buildings	\$1,030.61	\$2.61	0.25%
Individual and family services	\$259.81	\$0.66	0.25%
Automotive repair and maintenance, except car washes	\$1,098.17	\$2.77	0.25%
Sawmills	\$156.54	\$0.40	0.25%
Other financial investment activities	\$1,668.58	\$4.20	0.25%
Owner-occupied dwellings	\$11,418.01	\$28.69	0.25%
Offices of other health practitioners	\$631.27	\$1.58	0.25%
Bowling centers	\$16.74	\$0.04	0.25%
All other food and drinking places	\$961.49	\$2.40	0.25%
Business support services	\$680.49	\$1.69	0.25%
Outpatient care centers	\$480.24	\$1.19	0.25%
Direct life insurance carriers	\$247.29	\$0.61	0.25%
Private households	\$113.12	\$0.28	0.25%
Home health care services	\$476.18	\$1.18	0.25%
Retail - General merchandise stores	\$1,229.40	\$3.04	0.25%
Limited-service restaurants	\$2,868.45	\$7.04	0.25%
Personal care services	\$216.98	\$0.53	0.25%
Nondepository credit intermediation and related activities	\$1,711.72	\$4.18	0.24%
Offices of dentists	\$586.36	\$1.43	0.24%
Retail - Gasoline stores	\$539.09	\$1.31	0.24%
Other personal services	\$293.21	\$0.71	0.24%
Other ambulatory health care services	\$196.38	\$0.47	0.24%
Environmental and other technical consulting services	\$627.62	\$1.52	0.24%
Retail - Health and personal care stores	\$551.59	\$1.32	0.24%
Maintenance and repair construction of residential structures	\$563.74	\$1.35	0.24%
Retail - Clothing and clothing accessories stores	\$611.21	\$1.46	0.24%
Wholesale - Professional and commercial equipment and supplies	\$1,474.31	\$3.52	0.24%
Natural gas distribution	\$34.68	\$0.08	0.24%
Securities and commodity contracts intermediation and brokerage	\$1,754.70	\$4.17	0.24%
Retail - Food and beverage stores	\$1,250.86	\$2.95	0.24%
Other local government enterprises	\$325.13	\$0.77	0.24%
Promoters of performing arts and sports and agents for public figures	\$141.69	\$0.33	0.24%
Junior colleges, colleges, universities, and professional schools	\$215.85	\$0.51	0.23%

Medical and diagnostic laboratories	\$211.14	\$0.49	0.23%
Wired telecommunications carriers	\$1,172.90	\$2.74	0.23%
Funds, trusts, and other financial vehicles	\$774.15	\$1.80	0.23%
Retail - Sporting goods, hobby, musical instrument and book stores	\$364.78	\$0.85	0.23%
Other nonmetallic minerals	\$13.44	\$0.03	0.23%
News syndicates, libraries, archives and all other information services	\$46.06	\$0.11	0.23%
Hospitals	\$5,563.38	\$12.77	0.23%
Other real estate	\$6,932.97	\$15.76	0.23%
Warehousing and storage	\$1,568.65	\$3.56	0.23%
Video tape and disc rental	\$80.27	\$0.18	0.23%
Veterinary services	\$186.26	\$0.42	0.23%
Other educational services	\$407.36	\$0.92	0.23%
Dry-cleaning and laundry services	\$77.57	\$0.17	0.22%
Child day care services	\$289.23	\$0.64	0.22%
Gambling industries (except casino hotels)	\$316.84	\$0.70	0.22%
Air transportation	\$302.30	\$0.67	0.22%
Retail - Motor vehicle and parts dealers	\$833.28	\$1.83	0.22%
All other crop farming	\$3.55	\$0.01	0.22%
Residential mental retardation, mental health, substance abuse and other facilities	\$164.50	\$0.36	0.22%
Couriers and messengers	\$1,223.22	\$2.58	0.21%
Commercial Sports Except Racing	\$215.81	\$0.45	0.21%
Metal window and door manufacturing	\$40.42	\$0.08	0.20%
Car washes	\$762.64	\$1.53	0.20%
Retail - Nonstore retailers	\$3,098.80	\$6.21	0.20%
Amusement parks and arcades	\$20.13	\$0.04	0.20%
Wholesale - Other nondurable goods merchant wholesalers	\$2,183.19	\$4.26	0.20%
Carpet and rug mills	\$3.59	\$0.01	0.19%
Wholesale - Drugs and druggistsâ€™ sundries	\$1,012.36	\$1.95	0.19%
Elementary and secondary schools	\$263.94	\$0.50	0.19%
Book publishers	\$16.48	\$0.03	0.19%
Other computer related services, including facilities management	\$1,316.21	\$2.46	0.19%
Lessors of nonfinancial intangible assets	\$1,057.74	\$1.97	0.19%
Other amusement and recreation industries	\$271.84	\$0.50	0.18%
Offices of physicians	\$4,349.23	\$7.89	0.18%
Tenant-occupied housing	\$2,849.08	\$5.10	0.18%
Sound recording industries	\$34.71	\$0.06	0.18%
Motion picture and video industries	\$143.43	\$0.25	0.17%
Death care services	\$50.70	\$0.09	0.17%
Oil and gas extraction	\$420.01	\$0.71	0.17%
Fabricated structural metal manufacturing	\$128.48	\$0.21	0.17%
Travel arrangement and reservation services	\$57.77	\$0.09	0.16%
Vegetable and melon farming	\$40.58	\$0.07	0.16%

Plumbing fixture fitting and trim manufacturing	\$2.23	\$0.00	0.16%
Wholesale - Grocery and related product wholesalers	\$1,008.88	\$1.60	0.16%
Commercial hunting and trapping	\$9.25	\$0.01	0.16%
Animal production, except cattle and poultry and eggs	\$5.56	\$0.01	0.16%
Pottery, ceramics, and plumbing fixture manufacturing	\$0.11	\$0.00	0.15%
Engineered wood member and truss manufacturing	\$165.40	\$0.25	0.15%
Nursing and community care facilities	\$877.26	\$1.33	0.15%
Insurance agencies, brokerages, and related activities	\$3,379.01	\$5.12	0.15%
Petroleum lubricating oil and grease manufacturing	\$47.02	\$0.07	0.15%
Scenic and sightseeing transportation and support activities for transportation	\$1,017.11	\$1.45	0.14%
Insurance carriers, except direct life	\$10,496.85	\$14.83	0.14%
Gypsum product manufacturing	\$207.58	\$0.29	0.14%
Rail transportation	\$1,255.02	\$1.73	0.14%
Other federal government enterprises	\$157.54	\$0.21	0.14%
Community food, housing, and other relief services, including rehabilitation services	\$261.14	\$0.35	0.13%
Maintenance and repair construction of nonresidential structures	\$1,148.99	\$1.50	0.13%
Nitrogenous fertilizer manufacturing	\$9.82	\$0.01	0.13%
Computer systems design services	\$577.77	\$0.69	0.12%
Pesticide and other agricultural chemical manufacturing	\$23.91	\$0.03	0.12%
All other miscellaneous wood product manufacturing	\$26.82	\$0.03	0.12%
Museums, historical sites, zoos, and parks	\$52.58	\$0.06	0.11%
Tobacco product manufacturing	\$425.43	\$0.48	0.11%
Spring and wire product manufacturing	\$37.53	\$0.04	0.11%
Crown and closure manufacturing and metal stamping	\$5.26	\$0.01	0.11%
Printing	\$220.61	\$0.23	0.11%
Wholesale - Motor vehicle and motor vehicle parts and supplies	\$1,055.65	\$1.10	0.10%
Motor vehicle electrical and electronic equipment manufacturing	\$15.88	\$0.02	0.10%
Wood container and pallet manufacturing	\$19.04	\$0.02	0.10%
Fruit farming	\$4.88	\$0.00	0.10%
Commercial logging	\$36.46	\$0.04	0.10%
Tree nut farming	\$0.41	\$0.00	0.10%
Electroplating, anodizing, and coloring metal	\$9.03	\$0.01	0.10%
Wineries	\$14.13	\$0.01	0.10%
Reconstituted wood product manufacturing	\$67.61	\$0.06	0.09%
Commercial fishing	\$27.33	\$0.02	0.09%
Manufactured ice	\$8.00	\$0.01	0.09%
Paint and coating manufacturing	\$109.66	\$0.09	0.08%
Racing and Track Operation	\$92.48	\$0.08	0.08%
Greenhouse, nursery, and floriculture production	\$24.16	\$0.02	0.08%
Fluid milk manufacturing	\$44.68	\$0.04	0.08%
Fabricated pipe and pipe fitting manufacturing	\$9.55	\$0.01	0.08%

Metal heat treating	\$6.04	\$0.00	0.08%
Machine shops	\$66.15	\$0.05	0.08%
Polystyrene foam product manufacturing	\$10.11	\$0.01	0.07%
Sign manufacturing	\$42.74	\$0.03	0.07%
Bottled and canned soft drinks & water	\$530.11	\$0.38	0.07%
Metal coating and nonprecious engraving	\$26.44	\$0.02	0.07%
Religious organizations	\$876.97	\$0.62	0.07%
Sheet metal work manufacturing	\$202.41	\$0.14	0.07%
Travel trailer and camper manufacturing	\$11.61	\$0.01	0.07%
Labor and civic organizations	\$938.76	\$0.64	0.07%
Other fabricated metal manufacturing	\$38.29	\$0.03	0.07%
Grantmaking, giving, and social advocacy organizations	\$574.80	\$0.37	0.06%
Dairy cattle and milk production	\$7.69	\$0.00	0.06%
Flat glass manufacturing	\$69.04	\$0.04	0.06%
Other plastics product manufacturing	\$122.44	\$0.07	0.06%
Turned product and screw, nut, and bolt manufacturing	\$6.99	\$0.00	0.06%
Cookie and cracker manufacturing	\$6.89	\$0.00	0.06%
Other motor vehicle parts manufacturing	\$20.41	\$0.01	0.06%
Tire manufacturing	\$40.48	\$0.02	0.06%
Paperboard container manufacturing	\$251.90	\$0.14	0.05%
Urethane and other foam product (except polystyrene) manufacturing	\$33.02	\$0.02	0.05%
Valve and fittings, other than plumbing, manufacturing	\$94.37	\$0.05	0.05%
Grain farming	\$3.63	\$0.00	0.05%
Frozen specialties manufacturing	\$4.79	\$0.00	0.05%
Poultry and egg production	\$15.33	\$0.01	0.05%
Poultry processing	\$98.70	\$0.05	0.05%
Breweries	\$344.40	\$0.16	0.05%
Ice cream and frozen dessert manufacturing	\$2.56	\$0.00	0.05%
Meat processed from carcasses	\$36.07	\$0.02	0.05%
Other clay, ceramic, refractory minerals mining	\$25.96	\$0.01	0.05%
Support activities for agriculture and forestry	\$22.98	\$0.01	0.04%
Water transportation	\$1,756.84	\$0.75	0.04%
Roasted nuts and peanut butter manufacturing	\$16.67	\$0.01	0.04%
Jewelry and silverware manufacturing	\$38.07	\$0.02	0.04%
Boat building	\$46.90	\$0.02	0.04%
Support activities for printing	\$3.74	\$0.00	0.04%
Bread and bakery product, except frozen, manufacturing	\$210.84	\$0.08	0.04%
Forestry, forest products, and timber tract production	\$12.63	\$0.00	0.04%
Adhesive manufacturing	\$10.17	\$0.00	0.04%
Glass product manufacturing made of purchased glass	\$68.62	\$0.02	0.04%
Wood kitchen cabinet and countertop manufacturing	\$58.63	\$0.02	0.03%
Fertilizer mixing	\$6.94	\$0.00	0.03%
Iron and steel mills and ferroalloy manufacturing	\$356.88	\$0.11	0.03%

Animal, except poultry, slaughtering	\$17.34	\$0.01	0.03%
Office supplies (except paper) manufacturing	\$105.01	\$0.03	0.03%
Custom compounding of purchased resins	\$1.46	\$0.00	0.03%
Stationery product manufacturing	\$25.07	\$0.01	0.03%
Paper mills	\$41.87	\$0.01	0.03%
Other animal food manufacturing	\$64.47	\$0.02	0.03%
Heating equipment (except warm air furnaces) manufacturing	\$21.87	\$0.01	0.03%
Iron, steel pipe and tube manufacturing from purchased steel	\$3.46	\$0.00	0.03%
Sanitary paper product manufacturing	\$187.93	\$0.05	0.03%
Metal mining services	\$39.78	\$0.01	0.03%
Seafood product preparation and packaging	\$38.96	\$0.01	0.03%
Other snack food manufacturing	\$40.02	\$0.01	0.03%
Doll, toy, and game manufacturing	\$2.61	\$0.00	0.02%
All other converted paper product manufacturing	\$13.63	\$0.00	0.02%
Musical instrument manufacturing	\$0.25	\$0.00	0.02%
Scientific research and development services	\$1,477.79	\$0.34	0.02%
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	\$8.21	\$0.00	0.02%
Dry, condensed, and evaporated dairy product manufacturing	\$0.15	\$0.00	0.02%
All other miscellaneous manufacturing	\$28.56	\$0.01	0.02%
Hardware manufacturing	\$24.59	\$0.00	0.02%
Other nonmetallic minerals services	\$39.28	\$0.01	0.02%
Frozen cakes and other pastries manufacturing	\$82.24	\$0.02	0.02%
Gasket, packing, and sealing device manufacturing	\$0.13	\$0.00	0.02%
Plate work manufacturing	\$7.67	\$0.00	0.02%
Other miscellaneous chemical product manufacturing	\$87.29	\$0.01	0.02%
Construction machinery manufacturing	\$5.53	\$0.00	0.02%
Plastics packaging materials and unlaminated film and sheet manufacturing	\$101.30	\$0.02	0.02%
Lawn and garden equipment manufacturing	\$0.57	\$0.00	0.02%
Cutting tool and machine tool accessory manufacturing	\$0.36	\$0.00	0.02%
Laminated plastics plate, sheet (except packaging), and shape manufacturing	\$0.45	\$0.00	0.02%
Light truck and utility vehicle manufacturing	\$1.61	\$0.00	0.02%
Glass container manufacturing	\$50.69	\$0.01	0.02%
Fasteners, buttons, needles, and pins manufacturing	\$1.25	\$0.00	0.02%
Soap and other detergent manufacturing	\$15.20	\$0.00	0.02%
Polish and other sanitation good manufacturing	\$10.45	\$0.00	0.01%
Canned specialties	\$0.41	\$0.00	0.01%
All other food manufacturing	\$165.46	\$0.02	0.01%
Air conditioning, refrigeration, and warm air heating equipment manufacturing	\$95.21	\$0.01	0.01%
Upholstered household furniture manufacturing	\$7.56	\$0.00	0.01%
Custom architectural woodwork and millwork	\$18.88	\$0.00	0.01%

Other textile product mills	\$9.21	\$0.00	0.01%
Metal tank (heavy gauge) manufacturing	\$62.42	\$0.01	0.01%
Ferrous metal foundries	\$146.60	\$0.02	0.01%
Dog and cat food manufacturing	\$9.03	\$0.00	0.01%
Coffee and tea manufacturing	\$137.81	\$0.02	0.01%
Spice and extract manufacturing	\$28.67	\$0.00	0.01%
Nonupholstered wood household furniture manufacturing	\$12.35	\$0.00	0.01%
Electronic connector manufacturing	\$12.26	\$0.00	0.01%
Paper bag and coated and treated paper manufacturing	\$56.45	\$0.01	0.01%
Software and other prerecorded and record reproducing	\$4.05	\$0.00	0.01%
Fabric coating mills	\$0.79	\$0.00	0.01%
Other commercial service industry machinery manufacturing	\$91.03	\$0.01	0.01%
Cheese manufacturing	\$1.95	\$0.00	0.01%
Ball and roller bearing manufacturing	\$4.62	\$0.00	0.01%
Other household nonupholstered furniture manufacturing	\$8.16	\$0.00	0.01%
Canned fruits and vegetables manufacturing	\$35.22	\$0.00	0.01%
Nonchocolate confectionery manufacturing	\$18.38	\$0.00	0.01%
Confectionery manufacturing from purchased chocolate	\$8.01	\$0.00	0.01%
Wiring device manufacturing	\$28.96	\$0.00	0.01%
Blind and shade manufacturing	\$6.86	\$0.00	0.01%
Air purification and ventilation equipment manufacturing	\$139.00	\$0.01	0.01%
Other basic inorganic chemical manufacturing	\$18.83	\$0.00	0.01%
Fiber optic cable manufacturing	\$18.76	\$0.00	0.01%
Storage battery manufacturing	\$217.78	\$0.02	0.01%
Other metal ore mining	\$21.06	\$0.00	0.01%
Rendering and meat byproduct processing	\$11.19	\$0.00	0.01%
Chocolate and confectionery manufacturing from cacao beans	\$0.73	\$0.00	0.01%
Office furniture, except wood, manufacturing	\$0.10	\$0.00	0.01%
Plastics bottle manufacturing	\$24.95	\$0.00	0.01%
Lighting fixture manufacturing	\$53.72	\$0.00	0.01%
Other rubber product manufacturing	\$41.32	\$0.00	0.01%
Metal cans manufacturing	\$193.05	\$0.01	0.01%
Other communication and energy wire manufacturing	\$221.87	\$0.01	0.01%
Showcase, partition, shelving, and locker manufacturing	\$10.13	\$0.00	0.01%
Institutional furniture manufacturing	\$53.71	\$0.00	0.01%
Other electronic component manufacturing	\$6.70	\$0.00	0.01%
Dehydrated food products manufacturing	\$2.77	\$0.00	0.01%
Toilet preparation manufacturing	\$495.43	\$0.03	0.01%
Textile bag and canvas mills	\$19.71	\$0.00	0.01%
Handtool manufacturing	\$7.66	\$0.00	0.01%
Women's and girls' cut and sew apparel manufacturing	\$6.06	\$0.00	0.01%
Mayonnaise, dressing, and sauce manufacturing	\$160.78	\$0.01	0.01%
Motorcycle, bicycle, and parts manufacturing	\$14.18	\$0.00	0.00%

Plastics material and resin manufacturing	\$34.18	\$0.00	0.00%
Other basic organic chemical manufacturing	\$74.89	\$0.00	0.00%
Other apparel knitting mills	\$4.33	\$0.00	0.00%
Small arms ammunition manufacturing	\$4.27	\$0.00	0.00%
Ship building and repairing	\$301.37	\$0.01	0.00%
Capacitor, resistor, coil, transformer, and other inductor manufacturing	\$5.27	\$0.00	0.00%
Wood office furniture manufacturing	\$5.13	\$0.00	0.00%
Industrial mold manufacturing	\$0.59	\$0.00	0.00%
Overhead cranes, hoists, and monorail systems manufacturing	\$22.93	\$0.00	0.00%
Paperboard mills	\$775.35	\$0.03	0.00%
Motor vehicle transmission and power train parts manufacturing	\$60.77	\$0.00	0.00%
Cut and sew apparel contractors	\$6.15	\$0.00	0.00%
Hotels and motels, including casino hotels	\$775.18	\$0.03	0.00%
Surgical and medical instrument manufacturing	\$284.38	\$0.01	0.00%
Other cut and sew apparel manufacturing	\$5.44	\$0.00	0.00%
Railroad rolling stock manufacturing	\$10.12	\$0.00	0.00%
Machine tool manufacturing	\$5.50	\$0.00	0.00%
Men's and boys' cut and sew apparel manufacturing	\$3.51	\$0.00	0.00%
Other accommodations	\$82.51	\$0.00	0.00%
Other aluminum rolling, drawing and extruding	\$133.34	\$0.00	0.00%
Apparel accessories and other apparel manufacturing	\$11.52	\$0.00	0.00%
Motor vehicle seating and interior trim manufacturing	\$3.30	\$0.00	0.00%
Motor vehicle gasoline engine and engine parts manufacturing	\$14.98	\$0.00	0.00%
Rubber and plastics hoses and belting manufacturing	\$1.22	\$0.00	0.00%
Carbon and graphite product manufacturing	\$8.23	\$0.00	0.00%
Synthetic dye and pigment manufacturing	\$0.96	\$0.00	0.00%
Distilleries	\$338.14	\$0.01	0.00%
Printing ink manufacturing	\$9.16	\$0.00	0.00%
Special tool, die, jig, and fixture manufacturing	\$2.01	\$0.00	0.00%
Hosiery and sock mills	\$1.29	\$0.00	0.00%
Pump and pumping equipment manufacturing	\$68.31	\$0.00	0.00%
Mining machinery and equipment manufacturing	\$13.06	\$0.00	0.00%
Small arms, ordnance, and accessories manufacturing	\$4.30	\$0.00	0.00%
Dental laboratories	\$45.49	\$0.00	0.00%
Printed circuit assembly (electronic assembly) manufacturing	\$39.69	\$0.00	0.00%
Sugarcane and sugar beet farming	\$0.00	\$0.00	0.00%
Sporting and athletic goods manufacturing	\$16.10	\$0.00	0.00%
Scales, balances, and miscellaneous general purpose machinery manufacturing	\$18.06	\$0.00	0.00%
Nonferrous metal foundries	\$10.29	\$0.00	0.00%
Ophthalmic goods manufacturing	\$826.39	\$0.01	0.00%
Elevator and moving stairway manufacturing	\$2.77	\$0.00	0.00%
Curtain and linen mills	\$12.80	\$0.00	0.00%

Motor vehicle body manufacturing	\$28.72	\$0.00	0.00%
Oilseed farming	\$0.11	\$0.00	0.00%
Semiconductor and related device manufacturing	\$93.26	\$0.00	0.00%
Synthetic rubber manufacturing	\$104.35	\$0.00	0.00%
Electricity and signal testing instruments manufacturing	\$9.30	\$0.00	0.00%
Pharmaceutical preparation manufacturing	\$79.97	\$0.00	0.00%
In-vitro diagnostic substance manufacturing	\$28.95	\$0.00	0.00%
Surface active agent manufacturing	\$7.16	\$0.00	0.00%
Totalizing fluid meter and counting device manufacturing	\$1.04	\$0.00	0.00%
Small electrical appliance manufacturing	\$7.61	\$0.00	0.00%
Power boiler and heat exchanger manufacturing	\$8.05	\$0.00	0.00%
Packaging machinery manufacturing	\$5.14	\$0.00	0.00%
Other communications equipment manufacturing	\$4.16	\$0.00	0.00%
Switchgear and switchboard apparatus manufacturing	\$67.45	\$0.00	0.00%
Footwear manufacturing	\$1.77	\$0.00	0.00%
Air and gas compressor manufacturing	\$28.38	\$0.00	0.00%
Textile and fabric finishing mills	\$3.90	\$0.00	0.00%
Relay and industrial control manufacturing	\$197.75	\$0.00	0.00%
Surgical appliance and supplies manufacturing	\$207.22	\$0.00	0.00%
Industrial process variable instruments manufacturing	\$47.38	\$0.00	0.00%
Farm machinery and equipment manufacturing	\$12.95	\$0.00	0.00%
Power-driven handtool manufacturing	\$5.27	\$0.00	0.00%
All other industrial machinery manufacturing	\$47.81	\$0.00	0.00%
Electronic computer manufacturing	\$2.22	\$0.00	0.00%
All other transportation equipment manufacturing	\$108.59	\$0.00	0.00%
Computer terminals and other computer peripheral equipment manufacturing	\$12.32	\$0.00	0.00%
Military armored vehicle, tank, and tank component manufacturing	\$82.63	\$0.00	0.00%
Motor and generator manufacturing	\$20.23	\$0.00	0.00%
Speed changer, industrial high-speed drive, and gear manufacturing	\$9.36	\$0.00	0.00%
Support activities for oil and gas operations	\$37.28	\$0.00	0.00%
Industrial truck, trailer, and stacker manufacturing	\$21.15	\$0.00	0.00%
Pulp mills	\$112.51	\$0.00	0.00%
Other leather and allied product manufacturing	\$26.55	\$0.00	0.00%
Dental equipment and supplies manufacturing	\$128.38	\$0.00	0.00%
Fiber, yarn, and thread mills	\$1.62	\$0.00	0.00%
Truck trailer manufacturing	\$1.50	\$0.00	0.00%
Other aircraft parts and auxiliary equipment manufacturing	\$73.69	\$0.00	0.00%
Audio and video equipment manufacturing	\$7.41	\$0.00	0.00%
Medicinal and botanical manufacturing	\$10.34	\$0.00	0.00%
Watch, clock, and other measuring and controlling device manufacturing	\$7.32	\$0.00	0.00%
Photographic and photocopying equipment manufacturing	\$0.32	\$0.00	0.00%

Secondary processing of other nonferrous metals	\$67.25	\$0.00	0.00%
Printing machinery and equipment manufacturing	\$2.01	\$0.00	0.00%
Telephone apparatus manufacturing	\$10.59	\$0.00	0.00%
Other engine equipment manufacturing	\$47.10	\$0.00	0.00%
Leather and hide tanning and finishing	\$5.58	\$0.00	0.00%
Biological product (except diagnostic) manufacturing	\$9.02	\$0.00	0.00%
Electromedical and electrotherapeutic apparatus manufacturing	\$6.07	\$0.00	0.00%
Aircraft engine and engine parts manufacturing	\$168.03	\$0.00	0.00%
Food product machinery manufacturing	\$2.57	\$0.00	0.00%
Power, distribution, and specialty transformer manufacturing	\$6.06	\$0.00	0.00%
Analytical laboratory instrument manufacturing	\$4.69	\$0.00	0.00%
Drilling oil and gas wells	\$18.35	\$0.00	0.00%
Broadcast and wireless communications equipment manufacturing	\$27.40	\$0.00	0.00%
Search, detection, and navigation instruments manufacturing	\$73.13	\$0.00	0.00%
Aircraft manufacturing	\$325.71	\$0.00	0.00%
Turbine and turbine generator set units manufacturing	\$42.59	\$0.00	0.00%
Sawmill, woodworking, and paper machinery	\$10.38	\$0.00	0.00%
Irradiation apparatus manufacturing	\$7.32	\$0.00	0.00%
Guided missile and space vehicle manufacturing	\$154.36	\$0.00	0.00%
Gold ore mining	\$0.00	\$0.00	0.00%
Oil and gas field machinery and equipment manufacturing	\$0.00	\$0.00	0.00%
Secondary smelting and alloying of aluminum	\$0.00	\$0.00	0.00%
* Not an industry (Used and secondhand goods)	\$0.00	\$0.00	0.00%
Federal electric utilities	\$0.00	\$0.00	0.00%
Tobacco farming	\$0.00	\$0.00	0.00%
Construction of other new residential structures	\$1,930.15	\$0.00	0.00%
* Employment and payroll of state govt, other services	\$420.36	\$0.00	0.00%
Primary battery manufacturing	\$0.00	\$0.00	0.00%
Welding and soldering equipment manufacturing	\$0.00	\$0.00	0.00%
* Not an industry (Noncomparable foreign imports)	\$0.00	\$0.00	0.00%
Household laundry equipment manufacturing	\$0.00	\$0.00	0.00%
Wet corn milling	\$0.00	\$0.00	0.00%
Bare printed circuit board manufacturing	\$0.00	\$0.00	0.00%
* Employment and payroll of federal govt, non-military	\$2,270.59	\$0.00	0.00%
* Not an industry (Rest of world adjustment)	\$0.00	\$0.00	0.00%
Household refrigerator and home freezer manufacturing	\$0.00	\$0.00	0.00%
State government electric utilities	\$0.00	\$0.00	0.00%
Cut stock, resawing lumber, and planing	\$0.00	\$0.00	0.00%
Construction of new manufacturing structures	\$442.06	\$0.00	0.00%
Creamery butter manufacturing	\$0.00	\$0.00	0.00%
Coal mining	\$0.00	\$0.00	0.00%
Breakfast cereal manufacturing	\$0.00	\$0.00	0.00%
Copper, nickel, lead, and zinc mining	\$0.00	\$0.00	0.00%

Steel wire drawing	\$0.00	\$0.00	0.00%
Iron and steel forging	\$0.00	\$0.00	0.00%
Other state government enterprises	\$0.00	\$0.00	0.00%
Automatic environmental control manufacturing	\$0.00	\$0.00	0.00%
Soybean and other oilseed processing	\$0.00	\$0.00	0.00%
Lime manufacturing	\$0.00	\$0.00	0.00%
Ground or treated mineral and earth manufacturing	\$0.00	\$0.00	0.00%
Rolling mill and other metalworking machinery manufacturing	\$0.00	\$0.00	0.00%
Heavy duty truck manufacturing	\$0.00	\$0.00	0.00%
Other pressed and blown glass and glassware manufacturing	\$0.00	\$0.00	0.00%
* Not an industry (Scrap)	\$0.00	\$0.00	0.00%
Beet sugar manufacturing	\$0.00	\$0.00	0.00%
* Employment and payroll of state govt, hospitals and health services	\$27.37	\$0.00	0.00%
Dry pasta, mixes, and dough manufacturing	\$0.00	\$0.00	0.00%
Broom, brush, and mop manufacturing	\$0.00	\$0.00	0.00%
Industrial process furnace and oven manufacturing	\$0.00	\$0.00	0.00%
Fluid power pump and motor manufacturing	\$0.00	\$0.00	0.00%
* Employment and payroll of federal govt, military	\$2,627.17	\$0.00	0.00%
Copper rolling, drawing, extruding and alloying	\$0.00	\$0.00	0.00%
Abrasive product manufacturing	\$0.00	\$0.00	0.00%
Greeting card publishing	\$0.00	\$0.00	0.00%
Electric power generation - Geothermal	\$0.00	\$0.00	0.00%
Construction of new multifamily residential structures	\$488.74	\$0.00	0.00%
Construction of new single-family residential structures	\$1,767.33	\$0.00	0.00%
State government passenger transit	\$0.00	\$0.00	0.00%
Electric lamp bulb and part manufacturing	\$0.00	\$0.00	0.00%
Propulsion units and parts for space vehicles and guided missiles manufacturing	\$0.00	\$0.00	0.00%
Silver ore mining	\$0.00	\$0.00	0.00%
Custom roll forming	\$0.00	\$0.00	0.00%
Industrial gas manufacturing	\$0.00	\$0.00	0.00%
Motor vehicle steering, suspension component (except spring), and brake systems manufacturing	\$0.00	\$0.00	0.00%
Cutlery, utensil, pot, and pan manufacturing	\$0.00	\$0.00	0.00%
Explosives manufacturing	\$0.00	\$0.00	0.00%
Household cooking appliance manufacturing	\$0.00	\$0.00	0.00%
Frozen fruits, juices and vegetables manufacturing	\$0.00	\$0.00	0.00%
Conveyor and conveying equipment manufacturing	\$0.00	\$0.00	0.00%
All other petroleum and coal products manufacturing	\$0.00	\$0.00	0.00%
Construction of new educational and vocational structures	\$667.27	\$0.00	0.00%
* Employment and payroll of local govt, hospitals and health services	\$6.55	\$0.00	0.00%
Unlaminated plastics profile shape manufacturing	\$0.00	\$0.00	0.00%
Malt manufacturing	\$0.00	\$0.00	0.00%

Construction of new health care structures	\$323.28	\$0.00	0.00%
Other major household appliance manufacturing	\$0.00	\$0.00	0.00%
Phosphate rock mining	\$0.00	\$0.00	0.00%
Electric power generation - Nuclear	\$0.00	\$0.00	0.00%
Photographic film and chemical manufacturing	\$0.00	\$0.00	0.00%
Rolled steel shape manufacturing	\$0.00	\$0.00	0.00%
Electric power generation - All other	\$0.00	\$0.00	0.00%
Other chemical and fertilizer mineral mining	\$0.00	\$0.00	0.00%
Flour milling	\$0.00	\$0.00	0.00%
Electric power generation - Wind	\$0.00	\$0.00	0.00%
Ammunition, except for small arms, manufacturing	\$0.00	\$0.00	0.00%
Knit fabric mills	\$0.00	\$0.00	0.00%
Aluminum sheet, plate, and foil manufacturing	\$0.00	\$0.00	0.00%
* Employment and payroll of local govt, education	\$1,359.91	\$0.00	0.00%
Construction of new power and communication structures	\$773.66	\$0.00	0.00%
Construction of new commercial structures, including farm structures	\$1,098.24	\$0.00	0.00%
Automobile manufacturing	\$0.00	\$0.00	0.00%
Manufactured home (mobile home) manufacturing	\$0.00	\$0.00	0.00%
Computer storage device manufacturing	\$0.00	\$0.00	0.00%
Sugar cane mills and refining	\$0.00	\$0.00	0.00%
Construction of new highways and streets	\$846.55	\$0.00	0.00%
Motor home manufacturing	\$0.00	\$0.00	0.00%
Artificial and synthetic fibers and filaments manufacturing	\$0.00	\$0.00	0.00%
Phosphatic fertilizer manufacturing	\$0.00	\$0.00	0.00%
Nonferrous metal, except copper and aluminum, shaping	\$0.00	\$0.00	0.00%
Tortilla manufacturing	\$0.00	\$0.00	0.00%
Alumina refining and primary aluminum production	\$0.00	\$0.00	0.00%
Iron ore mining	\$0.00	\$0.00	0.00%
Rice milling	\$0.00	\$0.00	0.00%
Nonferrous metal (exc aluminum) smelting and refining	\$0.00	\$0.00	0.00%
Potash, soda, and borate mineral mining	\$0.00	\$0.00	0.00%
Blank magnetic and optical recording media manufacturing	\$0.00	\$0.00	0.00%
Fluid power cylinder and actuator manufacturing	\$0.00	\$0.00	0.00%
* Employment and payroll of state govt, education	\$573.57	\$0.00	0.00%
Mechanical power transmission equipment manufacturing	\$0.00	\$0.00	0.00%
Nonferrous forging	\$0.00	\$0.00	0.00%
Petrochemical manufacturing	\$0.00	\$0.00	0.00%
Burial casket manufacturing	\$0.00	\$0.00	0.00%
Metal barrels, drums and pails manufacturing	\$0.00	\$0.00	0.00%
Optical instrument and lens manufacturing	\$0.00	\$0.00	0.00%
Motor vehicle metal stamping	\$0.00	\$0.00	0.00%
Rope, cordage, twine, tire cord and tire fabric mills	\$0.00	\$0.00	0.00%
Fats and oils refining and blending	\$0.00	\$0.00	0.00%

Broadwoven fabric mills	\$0.00	\$0.00	0.00%
Semiconductor machinery manufacturing	\$0.00	\$0.00	0.00%
Veneer and plywood manufacturing	\$0.00	\$0.00	0.00%
Cotton farming	\$0.00	\$0.00	0.00%
Nonwoven fabric mills	\$0.00	\$0.00	0.00%
Flavoring syrup and concentrate manufacturing	\$0.00	\$0.00	0.00%
Mattress manufacturing	\$0.00	\$0.00	0.00%
Narrow fabric mills and schiffli machine embroidery	\$0.00	\$0.00	0.00%
Uranium-radium-vanadium ore mining	\$0.00	\$0.00	0.00%
* Employment and payroll of local govt, other services	\$1,436.86	\$0.00	0.00%

Appendix II – Employment Impact by Occupations (Full List)

Occupation	Employee Count			
	Phase I	Phase II	Phase III	All Phases Combined
Construction Trades Workers	70.0	370.9	55.0	496.0
Computer Occupations	33.1	99.4	148.4	280.9
Business Operations Specialists	25.5	88.8	58.8	173.1
Retail Sales Workers	23.5	105.9	35.3	164.7
Material Moving Workers	21.2	87.3	40.3	148.8
Other Installation, Maintenance, and Repair Occupations	14.6	69.3	20.0	104.0
Information and Record Clerks	13.8	51.9	31.9	97.5
Top Executives	13.9	54.1	27.5	95.5
Motor Vehicle Operators	12.2	54.2	18.6	85.1
Food and Beverage Serving Workers	12.4	44.4	27.6	84.5
Other Office and Administrative Support Workers	12.3	50.4	21.1	83.8
Supervisors of Construction and Extraction Workers	10.1	53.2	7.8	71.1
Financial Clerks	10.1	40.4	18.9	69.4
Healthcare Diagnosing or Treating Practitioners	9.6	35.1	21.8	66.4
Sales Representatives, Services	8.7	33.2	22.6	64.4
Other Management Occupations	10.3	39.7	14.3	64.2
Financial Specialists	9.3	33.6	20.8	63.7
Secretaries and Administrative Assistants	9.3	34.8	16.9	61.0
Operations Specialties Managers	8.0	26.6	26.2	60.7
Engineers	13.4	19.8	17.6	50.8
Cooks and Food Preparation Workers	6.9	24.7	15.5	47.0
Material Recording, Scheduling, Dispatching, and Distributing Workers	5.9	23.6	11.6	41.1
Home Health and Personal Care Aides; and Nursing Assistants, Orderlies, and Psychiatric Aides	5.5	20.2	12.7	38.4
Building Cleaning and Pest Control Workers	5.4	20.7	11.1	37.1
Assemblers and Fabricators	4.5	15.0	16.7	36.2
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	4.8	20.7	7.6	33.0
Health Technologists and Technicians	4.6	16.6	10.4	31.5
Other Production Occupations	4.7	16.1	9.5	30.3
Sales Representatives, Wholesale and Manufacturing	4.1	17.0	8.9	30.0
Supervisors of Office and Administrative Support Workers	4.3	16.8	8.6	29.7
Supervisors of Sales Workers	4.1	17.7	6.8	28.6
Helpers, Construction Trades	3.7	19.6	2.8	26.0
Other Protective Service Workers	3.5	12.4	8.6	24.5

Drafters, Engineering Technicians, and Mapping Technicians	7.1	8.9	7.4	23.3
Metal Workers and Plastic Workers	3.1	12.5	7.4	23.0
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	2.9	10.0	9.0	21.9
Other Healthcare Support Occupations	3.0	11.0	6.8	20.8
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	2.5	10.8	4.9	18.2
Grounds Maintenance Workers	2.7	11.3	4.2	18.1
Supervisors of Food Preparation and Serving Workers	2.5	9.1	5.6	17.2
Other Food Preparation and Serving Related Workers	2.6	8.9	5.7	17.2
Supervisors of Installation, Maintenance, and Repair Workers	2.2	10.1	3.4	15.7
Art and Design Workers	2.5	8.8	4.0	15.3
Other Construction and Related Workers	2.8	9.8	2.3	14.8
Other Sales and Related Workers	1.9	7.0	4.4	13.3
Other Personal Care and Service Workers	1.9	6.9	4.2	12.9
Counselors, Social Workers, and Other Community and Social Service Specialists	1.6	5.9	3.6	11.2
Supervisors of Transportation and Material Moving Workers	1.6	6.8	2.6	10.9
Lawyers, Judges, and Related Workers	1.5	5.5	3.7	10.6
Architects, Surveyors, and Cartographers	3.9	3.2	2.7	9.7
Mathematical Science Occupations	1.2	3.5	4.3	9.0
Media and Communication Workers	1.3	3.8	3.6	8.7
Preschool, Elementary, Middle, Secondary, and Special Education Teachers	1.2	4.5	2.7	8.3
Supervisors of Production Workers	1.1	4.0	2.6	7.7
Legal Support Workers	1.0	3.6	2.2	6.8
Personal Appearance Workers	0.9	3.3	2.0	6.1
Plant and System Operators	0.7	2.9	1.7	5.3
Extraction Workers	0.7	3.6	0.6	4.9
Food Processing Workers	0.7	2.4	1.6	4.7
Other Teachers and Instructors	0.7	2.5	1.6	4.7
Other Educational Instruction and Library Occupations	0.6	2.2	1.4	4.2
Other Transportation Workers	0.6	2.4	1.2	4.2
Entertainers and Performers, Sports and Related Workers	0.6	2.1	1.4	4.0
Life, Physical, and Social Science Technicians	1.2	1.5	1.3	4.0
Occupational Health and Safety Specialists and Technicians	0.6	2.4	0.8	3.7
Supervisors of Building and Grounds Cleaning and Maintenance Workers	0.6	2.2	0.9	3.7
Animal Care and Service Workers	0.5	2.0	1.1	3.6
Entertainment Attendants and Related Workers	0.5	1.9	1.2	3.6
Agricultural Workers	0.5	2.3	0.7	3.6

Woodworkers	0.5	2.4	0.5	3.3
Physical Scientists	1.0	1.2	1.1	3.2
Textile, Apparel, and Furnishings Workers	0.4	1.7	0.9	3.1
Media and Communication Equipment Workers	0.4	1.4	0.9	2.7
Postsecondary Teachers	0.3	1.3	0.7	2.4
Occupational Therapy and Physical Therapist Assistants and Aides	0.3	1.1	0.7	2.1
Rail Transportation Workers	0.2	1.1	0.5	1.8
Religious Workers	0.3	0.9	0.6	1.7
Life Scientists	0.4	0.7	0.6	1.6
Supervisors of Personal Care and Service Workers	0.2	0.9	0.5	1.6
Other Healthcare Practitioners and Technical Occupations	0.2	0.7	0.5	1.5
Water Transportation Workers	0.2	0.9	0.3	1.4
Air Transportation Workers	0.2	0.7	0.4	1.3
Social Scientists and Related Workers	0.3	0.6	0.4	1.3
Printing Workers	0.2	0.6	0.4	1.2
Supervisors of Protective Service Workers	0.2	0.6	0.4	1.2
Communications Equipment Operators	0.1	0.4	0.2	0.7
Law Enforcement Workers	0.1	0.2	0.2	0.5
Baggage Porters, Bellhops, and Concierges	0.1	0.3	0.2	0.5
Funeral Service Workers	0.1	0.3	0.2	0.5
Librarians, Curators, and Archivists	0.1	0.2	0.1	0.4
Forest, Conservation, and Logging Workers	0.1	0.2	0.1	0.3
Supervisors of Farming, Fishing, and Forestry Workers	0.0	0.2	0.1	0.2
Tour and Travel Guides	0.0	0.1	0.1	0.2
Firefighting and Prevention Workers	0.0	0.1	0.0	0.1
Fishing and Hunting Workers	0.0	0.0	0.0	0.0
Military - Known	0.0	0.0	0.0	0.0
Military - Unknown	0.0	0.0	0.0	0.0
