Downtown Phoenix Economic Impact Study

Prepared for:

Downtown Phoenix Inc.

Prepared by:

Rounds Consulting Group, Inc.
Downtown Phoenix Inc. partnered with Rounds Consulting Group, Inc. to analyze the aggregate impact of the Downtown Phoenix Service Area on the broader City of Phoenix and regional economy. The Downtown area is a major employment, educational, innovation, and tourism hub within the state, and contributes significantly to the local economy.

The following displays the summary of key economic findings...

### $21.2B Economic Impact in 2022
- Compared to $19.1B in 2018, an 11.0% increase.
- The economic impact is equivalent to about 50,000 high-tech manufacturing employees.
- Employment projected to increase 10.6% by 2027.

### Downtown Phoenix Supported – 2022

- **140,100 Total Jobs**
  - 67,900 Direct Jobs
  - 72,200 Secondary Jobs

A total of 140,100 jobs supported by construction, downtown businesses and workers, residents, concerts, conferences, sporting events, and other activity in Downtown Phoenix during 2022.

- **$8.6 BILLION** in Personal Income
- **$635.1 MILLION** in State & Local Taxes
- **23,900 people** living in Downtown Phoenix

The Downtown Phoenix Inc. mission of facilitating collaborations, encouraging connections, and contributing to the growth and liveliness of the Downtown Phoenix community has proven to significantly enhance the urban environment and created a more vibrant Downtown.
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Introduction

Downtown Phoenix Inc. (“DPI”) partnered with Rounds Consulting Group, Inc. (“RCG”) to analyze the economic and fiscal impact of DPI’s Service Area (“Downtown Phoenix”, “Downtown” or “Service Area”) and the extent to which the area supports the broader City and region; as well as provide growth forecasts over the next 5 years.

The DPI Service Area is defined by the approximate 1.7 square miles bounded by the red outline and displayed below in the heart of the Phoenix metro region. The DPI Service Area is generally bounded by 7th Street to the east, 7th Avenue to the west, McDowell Road to the north, and Jackson Street to the south.

Downtown Phoenix Inc.’s. Service Area (Bounded by the Red Outline)

Source: Downtown Phoenix Inc.
Executive Summary

Downtown Phoenix is a major hub for employment, education, innovation, culture, and tourism within the state and contributes significantly to the local economy. The area also contains several essential government facilities and is becoming a substantial population center.

Acknowledgements

The impressive economic performance of Downtown Phoenix and the monitoring and support provided by Downtown Phoenix, Inc. was possible through the highly efficient partnerships that have been formed to help the region not just grow, but to GROW WELL. The region has transformed into a dynamic economic hub that includes growing high-tech sectors in various areas of scientific research and development.

In addition to the public-private partnerships that have been established, including proactive leadership from the Mayor and collaboration with Councilmembers and City staff, DPI also credits much of the recent growth in the region to its supporting investors included below.
Background and Study Area

To quantify the economic impact of DPI’s Service Area, various economic impact models were developed. The models estimate the economic output, jobs, personal income, and tax revenues generated by the commercial activity, construction, workers, residents, visitors, concerts, conferences, sporting events, and various other activities that occurred within the Downtown Phoenix Service Area in 2022.

Assessing the economic impact of an isolated area presents a complex challenge, as the economic dynamics are intricately linked to activities occurring beyond the area’s borders. Because of these complexities and interconnectedness, several adjustments were applied to the methodology to account for the intricate issues and to ensure the removal of any potential double-counting of the economic impacts.

Activity within Downtown Phoenix, along with Downtown Phoenix Inc. efforts and coordination with City of Phoenix, business leaders and affiliates, plays a crucial role in the regional and state economy for several reasons and serves multiple purposes, including being a hub for innovation, tourism, spirits, arts and culture, and a highly sought after center for general business clustering.

Hub for Economic Activity & Innovation

- Downtown Phoenix is home to a wide range of businesses and is an economic hub for various industries, including finance, technology, healthcare, bioscience, research and development, post-secondary education, entertainment, and hospitality. This ecosystem promotes innovation and substantial job opportunities.

Center for Arts & Culture

- The Downtown area is a diverse central location for museums, performance centers, cultural events, festivals, open space and community gatherings, and home to various civic advocacy organizations – contributing to the overall quality of life in Phoenix and the region.

Host to Sports, Tourism, & Visitors

- DPI’s Service Area is home to the Arizona Diamondbacks, Phoenix Suns, Phoenix Mercury, and Arizona Rattlers; and is host to major sporting events such as the Super Bowl Experience, Final Four Fan Fest, College Football Playoff Champ Campus, MLB, NBA and WNBA All-star Weekends, and various others. The area also hosts various major conferences, concerts, and numerous other events.

Work, Live, Play & Learn Environment

- Downtown Phoenix is a growing center for residents to call home. More than 12,000 units have been built in the Downtown area since 2000, strengthening the live, work, and play environment of Downtown Phoenix.
Key Findings – Economic Impact of Downtown Phoenix (2022)

The following summarizes the key insights and economic impacts generated by the direct commercial, workers, construction, residents, visitors, concerts, conferences, sporting events, and various other activities that occurred within Downtown Phoenix in 2022, as well as the spinoff effects (i.e., indirect and induced effects) produced beyond the Downtown boundary.

- As of 2022, there were approximately 15,900 households and nearly 23,900 residents living within the 1.7 square miles of the DPI Service Area.¹

- The total full-cash value of all residential, commercial, governmental, medical, vacant, and all other property within Downtown Phoenix was estimated to equal approximately $12.2B as of the latest tax year, according to estimates from the Maricopa County Assessor’s Office.

- The total consumer spending of Downtown households reached an estimated $426.5M in 2022 – consumer spending includes the sum of all the money spent by households on local goods and services (e.g., apparel, food, personal care products, home goods, shelter, vehicle maintenance and repair, etc.).²

- In 2022, nearly 6.0M people attended events at the Phoenix Convention Center, Footprint Center, Chase Field, Symphony Hall, the Orpheum Theatre, and other venues, including local music venues, comedy clubs, art galleries, parks, hotel meeting rooms, etc.³

- Approximately 2,400 new multi-family and student housing units and approximately 108,000 square feet of retail space were under construction within Downtown Phoenix during 2022.⁴

- There were nearly 1,900 business establishments and over 62,500 non-construction related workers within Downtown Phoenix. The area’s construction activity supported nearly 5,400 construction workers – for a total of 67,900 persons working within the Downtown Phoenix Service Area in 2022.⁵

- In addition to the 67,900 persons working in the Downtown area, activity in the DPI’s Service Area supported an additional 72,200 secondary jobs (i.e., the spinoff jobs created beyond the Downtown Phoenix boundaries as money is spent and re-spent throughout the local economy) in 2022 – for a total of 140,100 jobs.⁶

¹ Based on estimates derived from U.S. Census Bureau and Downtown Phoenix Inc.
² Based on estimates derived from the U.S. Bureau of Labor Statistics’ Consumer Expenditure Survey by Esri.
³ Based on estimates from Downtown Phoenix Inc.
⁴ According to estimates from CoStar.
⁵ Based on estimates derived from U.S. Census Bureau data by Esri, CoStar, and IMPLAN.
⁶ Calculated using Arizona-specific IMPLAN multipliers.
In total, Downtown Phoenix activity added $8.6B in personal income (i.e., employee-earned wages) to the regional economy in 2022. Direct activity added nearly $5.0B in wages, and secondary (i.e., indirect and induced) activity added approximately $3.6B in wages.

During 2022, visitor, event, business, construction, worker, and residential activity in the Downtown Service Area contributed approximately $10.1B in direct economic output (i.e., the total value of the economic activity) to the state’s economy.

The secondary effects of DPI’s Service Area created an additional $11.1B in indirect and induced economic output – for a total economic impact of $21.2B during 2022.

In total, the overall tourism, construction, residential, event, and commercial activity originating from Downtown Phoenix generated a combined $635.1M in state and local tax revenues in 2022.

Economic Impact of Downtown Phoenix (2022)

- 23,900 Residents
- 140,100 Jobs
- $21.2 Billion Economic Output
- $8.6 Billion Personal Income
- $635.1 Million Tax Revenues

Living Within the Downtown Area

Total Jobs Supported Statewide

The Total Value of the Economic Activity

The Employee-Earned Wages

Sum of State and Local Tax Revenues

Note: Impact estimates include the direct, indirect, and induced impacts of construction and non-construction activity during 2022.
Source: Downtown Phoenix Inc., Rounds Consulting Group, Inc.

Key Findings – Tax Revenue Impacts by Type (2022)

The following summarizes the tax revenue impacts generated by the direct activity that occurred within Downtown Phoenix in 2022, as well as the spinoff effects (i.e., indirect and induced effects) produced beyond the Downtown boundary by type.

2. Calculated using Arizona-specific IMPLAN multipliers.
5. Calculated using Arizona-specific IMPLAN multipliers and Arizona’s tax structure.
The fiscal impacts were calculated based on numerous data sources and currently available information regarding local tax structures and rates, including actual sales tax collections from the City of Phoenix and property values by type from the Maricopa County Assessor’s Office.

- The State of Arizona collected approximately $259.9M in direct and $166.5M secondary (i.e., indirect and induced) in tax revenues from Downtown Phoenix activity in 2022 – for a total of $426.4M in state tax revenues. This includes personal income, sales, lodging, restaurant/bar, vehicle use, and numerous other taxes collected by the state.

- Maricopa County collected an estimated $89.9M in direct ($53.5M), indirect ($14.2M), and induced ($22.1) tax revenues generated by the Downtown Phoenix activity in 2022. This includes the various commercial and personal property, sales, lease, utility, and other taxes imposed by the County.

- The City of Phoenix directly collected approximately $84.3M in transaction privilege taxes (i.e., sales taxes) and property taxes from businesses, workers, residents, and visitors spending their incomes on taxable goods and services within Downtown and from the taxes imposed on residential and commercial buildings located within the DPI’s Service Area.

- The City of Phoenix collected an additional $34.6M in sales and property taxes from the spinoff activity that occurred outside of Downtown Phoenix in 2022 – for a total of $118.9M in City tax revenues.

### Tax Revenue Impact of Downtown Phoenix by Type (2022)

<table>
<thead>
<tr>
<th></th>
<th>State of Arizona</th>
<th>Maricopa County</th>
<th>City of Phoenix</th>
<th>Total (AZ, County &amp; City)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct</strong></td>
<td>$259.9M</td>
<td>$53.5M</td>
<td>$84.3M</td>
<td>$397.7M</td>
</tr>
<tr>
<td><strong>Indirect</strong></td>
<td>$68.2M</td>
<td>$14.2M</td>
<td>$13.7M</td>
<td>$96.2M</td>
</tr>
<tr>
<td><strong>Induced</strong></td>
<td>$98.3M</td>
<td>$22.1M</td>
<td>$20.8M</td>
<td>$141.2M</td>
</tr>
</tbody>
</table>

Note: Impact estimates include the direct, indirect, and induced impacts of construction and non-construction activity during 2022. Source: Downtown Phoenix Inc., Rounds Consulting Group, Inc.
Additional Considerations and Future Outlook

While the economic impacts that have occurred due to Downtown Phoenix activity are impressive, they do not fully capture the extent the region will grow in size and value during the remainder of this decade and beyond.

Part of this optimism has to do with the fact that the most recent data related to economic growth, the same data used in making forecast predictions, was dampened during and after the COVID-19 pandemic. Conservative adjustments were made to the historical data to produce a forecast, but the forecast still retains upward potential.

Another reason to be optimistic about the region’s future relates to the aggressive economic development policies of the City’s government, DPI, and local economic development organizations. Proactive policies related to business development, partnerships with university entities, and acknowledgment that housing support will be needed to ensure future economic success will all likely translate into additional growth beyond the current projections.
For example, on the 30-acre Phoenix Bioscience Core ("PBC"), the Wexford Science+Technology development, and the University of Arizona’s Center for Advanced Molecular Immunotherapies ("CAMI") projects (part of the region’s surge in bioscience research and development) will positively impact job growth throughout the City and region, as well as enhance the region’s job quality and incomes, and generate significant new government tax revenues.

The CAMI project alone translates into between 150 and 185 new businesses being developed and 7,500 to 9,250 new high-wage, science-related jobs being created over the next 10 years.

Another 13,000 to 16,000 secondary jobs will be created in scores of other occupations and varying levels of skill and wage. More than 75% of this activity will be in the City with the majority of that being in the Downtown Phoenix area.

As economic growth begins to reach and occur beyond the boundaries of DPI’s Service Area, the borders will need to be modified accordingly. For example, high-quality growth is expected just east of the 7th Street boundary – meaning the boundary line should be extended east to capture the additional economic activity.

Furthermore, while other cities will need to adjust economic development policies to account for a change in demanded office space, Downtown Phoenix is projected to maintain a strong office market presence as well as “industrial” jobs in the science sectors that will require lab and other related research space. The demand for this space will appear more like office product as opposed to typical industrial development.
5-Year Outlook – A Reason form Continued Optimism

The Phoenix metro area’s economy will continue to outperform the state and nation for the foreseeable future. The local economy was highly resilient during the COVID-19 recession due to its diversified employment base and high influx of new residents.

Employment Outlook

- Over the next 5 years, the employment base of the Downtown Phoenix Service Area (62,500 workers as of 2022) is expected to increase by 10.6%, adding approximately 6,700 workers.

- However, as previously noted, accelerated science and technology growth will likely occur beyond the baseline forecast and the current boundaries of the DPI Service Area. Therefore, the current forecast of future Downtown Phoenix development over the next decade is potentially understated by between 10% and 20%.

Office Market Outlook

- While the broader Greater Phoenix office market continues to navigate through the COVID-19 disruptions, excess office construction is not likely within Downtown Phoenix. Furthermore, office conversions will also prevent significant occupancy issues. Over the next 5 years, construction related to the office market in the Downtown area will mainly consist of office conversions rather than new office inventory.

Retail Market Outlook

- The lack of available retail space and limited construction pipeline has made it difficult for retailers to find suitable space. The historically low levels of vacancy are the result of over construction during the early 2000’s and subsequent limited construction thereafter. The increased demand will lead to over 260,000 square feet of retail space to be added to the Downtown area over the next 5 years.

Residential Multi-Family Market Outlook

- While demand for multi-family housing across the Greater Phoenix area has dampened, absorption in Downtown Phoenix has held up well compared to other parts of the Valley, even with the inundation of new supply.

- The vibrant community and expected high growth of employment in the area will continue to strengthen the work, live, and play environment of Downtown Phoenix – reinforcing the long-term stability of the multi-family housing market. Over the next 5 years, 2,900 new multi-family units are expected to be added to the Downtown market.
About Downtown Phoenix Inc.

For context, Downtown Phoenix Inc. serves the community with the revitalization of Downtown by promoting the area’s business development, community engagement, events, and marketing. DPI is pursuing an energetic and healthy Downtown that provides the experience of the community enriching and engaging with residents, visitors, and businesses.

The organization has a collaborative approach to enhancing the local area’s economy by working closely with the City of Phoenix and other economic development and community groups. DPI delivers enhanced municipal services to the Downtown business core on behalf of the City of Phoenix and manages the work plans of its affiliate organizations, Phoenix Community Alliance and Downtown Phoenix Community Development Corporation. The mission of DPI has been to facilitate collaborations, cultivate connections, and contribute to the growth and vitality of the Downtown Phoenix community.

Downtown Phoenix Inc. focuses efforts to attract new residents and businesses into the region by highlighting what makes it such a great place to relocate/expand. The group emphasizes the benefits of living in the area by having walkable access to shopping, dining, hotels, sporting events, transportation, art and culture, and musical events.

In addition, the Downtown Phoenix Inc. team is working toward sustainable growth by building a progressive and more inclusive city core. These factors contribute to building positive perceptions of the Downtown area and City while also bringing memorable experiences and a sense of community in Downtown.

https://dtphx.org

About Rounds Consulting Group, Inc.

Rounds Consulting Group advises both public and private sector entities on matters of economics and policy development. The firm specializes in economic development and tax policy analysis; education research; healthcare economics; transportation economics; fiscal planning including revenue forecasting and budget development; strategic planning and marketing; environmental economics; impact and market studies; tourism analysis, and litigation support.

The knowledge and skills of Rounds Consulting Group’s personnel have helped policymakers, businesses, advocacy groups, non-profits, government organizations, and other entities make informed decisions related to economic development, public policy, finance, real estate, community planning, market trends, and other related areas.

https://roundsconsulting.com
Modeling and Assumptions

Economic and fiscal impact and forecasting models are an effective way to demonstrate the regional implications of a particular project, policy, business, development or other activities in a given area. The study area can range from a single neighborhood or city to an entire state or country. Typically, the level of effects resulting from the activity are estimated in terms of output, earnings, employment, and tax revenues.

RCG developed various econometric models to estimate the economic and fiscal impacts of activities within DPI’s Service Area as well as 5-year growth forecasts for Downtown Phoenix. The RCG models employ an input-output model methodology commonly used by economists to determine impacts. This method was used to estimate the “multiplier” effects caused by the activities being analyzed. Activity was then used to calculate tax revenue impacts in each of the relevant categories. The forecast model methodology is also summarized in the following section.

Economic Impact Model Methodology

An economic impact model provides a quantifiable method to estimate the economic activity of a particular activity in a given area. Impacts can be used to measure existing activity and measure potential expansions/contractions of an area’s economy resulting from changes in economic activity.

Typically, the level of economic effects resulting from the activity is estimated in terms of economic output, personal income, and employment. These are defined as:

- **Economic output** captures the broader level of economic activity, or the total value of goods and services produced, in the region similar to how statistics like GDP (“Gross Domestic Product”) capture economic volume in individual states and across the country.

- **Personal income or earnings**, a component of output, represents employee-earned wages. The earnings component is used to measure the total change in income throughout the economy due to the economic or business activity.

- **Employment or jobs** is the total number of full-time equivalent jobs supported in the economy on an annualized basis.

The economic effects occurring as a direct consequence of the initial activity create additional activity in the regional economy. This relationship is known as the “multiplier” effect. The basis for multiplier effects is the interdependencies between industries, how one industry impacts other sectors, and the cycle of spending and responding within the regional economy.

An input-output model is used to generate these multipliers. These multipliers quantify relationships among industries and estimate the extent that the area being analyzed can capture sales, earnings, and job impacts within the region.
Input-output models measure impacts based on their source. Direct effects are the result of the initial activity being analyzed. The multiplier effects, or spinoff effects, are measured as either indirect or induced. These are defined as:

- **Direct effects, or impacts**, measure business activity at an individual site or the initial change in the economy attributed to the development under consideration. For this analysis, the direct impacts include the construction and business activity that is occurring within DPI’s Downtown Phoenix Service Area.

  For example, direct jobs and personal income referenced in this report include the 62,500 persons employed within Downtown Phoenix and their respective earnings. Direct tax revenues include all the state and local tax revenues (e.g., sales, lease, utility, and property taxes) generated within Downtown.

- **Indirect impacts** capture additional output, earnings, and employment changes generated as a result of increased demand in the industries that supply services or products to the direct business or development under consideration.

  As an example, restaurants within Downtown Phoenix purchase goods and services (e.g., food products, supplies, cleaning services, etc.) from other businesses in the region. As a result, the direct businesses indirectly support workers in these other supplier companies.

- **Induced impacts** capture additional output, earnings, and employment changes generated as a result of increased spending in the local economy made by the households of both the direct and indirect employees. These induced companies respond by hiring, increasing payroll hours, and increasing wages.

  For instance, direct and indirect employees will spend their income on local goods and services (e.g., groceries, gas, clothing, haircuts, etc.). This supports workers of local grocery stores, gas stations, clothing stores, and hair salons, among others.

The total impact is the sum of all direct, indirect, and induced jobs, personal income, economic output, and tax revenues.
A commonly used input-output model used to generate economic multipliers is IMPLAN (short for “impact analysis for planning”). Originally developed by the United States Forest Service in the 1970’s, the responsibility for developing IMPLAN data sets shifted to the University of Minnesota as demand grew for regional models. Now, IMPLAN runs as its own private organization and is the leading provider of nationwide economic impact data and analytical software.

The RCG custom economic impact models employ this input-output model methodology and use area specific IMPLAN multipliers.

**Fiscal Impact Model Methodology**

Fiscal impact models provide estimates for the governmental revenues that are generated by a particular project, policy, business, development or activity in a given area. Impacts can be used to estimate tax revenue impacts, return-on-investment evaluations, and cost-benefit calculations, among others.

Typically, fiscal impacts examine revenues that are likely to result from a proposed project or activity and are determined by the study area’s tax structure. In general, the types of government taxes analyzed include sales taxes, excise taxes, restaurant/bar taxes, hotel taxes, income taxes, and property taxes. The type of activities subject to these taxes include retail and restaurant sales, hotel lodging, leases, and construction, to name a few.

Fiscal impacts are categorized similar to economic impact studies and are broken down at the **direct**, **indirect** and **induced** levels in which they are created (as described in the economic impact model methodology).

Typically, direct tax revenues can be estimated by definable sources such as sales taxes calculated by construction expenditures, sales taxes from on-site retail sales, direct business property taxes, or the wages, residency and spending of the direct employees. Whereas indirect and induced tax revenues are solely generated by the wages, residency and spending of the indirect and induced employees who are supported by the business or economic activity.

- For this analysis, **direct tax revenues** include all taxes collected within Downtown. These include: 1) tax revenues from Downtown retail, restaurant, and hotel sales, 2) property taxes levied on property located within Downtown, 3) residential and commercial lease taxes, and 4) ticket sales from Downtown events, among others.

  **Note:** The City of Phoenix provided actual tax revenue data for the 2022 calendar year – this information was used to estimate the corresponding State and County tax revenues. The Maricopa County Assessor’s Office provided property values by type for the Downtown area which was used to estimate the County and City property tax revenue estimates.

- **Indirect and induced tax revenues** include the additional taxes collected outside of the Downtown area that are generated as a result of Downtown Phoenix activity. These include the sales tax revenues generated as indirect and induced households spend their income on goods and services outside of the Downtown area, as well as the property taxes generated by indirect/induced employee-owned real estate outside of DPI’s Service Area.
The models were designed to produce revenue information for the City of Phoenix, Maricopa County and the State of Arizona; and expressed as either State, County, or City tax revenues.

The RCG custom fiscal impact models employ this methodology. Tax revenues are based on current tax rates and the state and local tax structure as of August 2023.

**Forecast Model Methodology**

A comprehensive econometric forecasting model was developed to project the DPI Service Area’s employment and construction activity over the next 5 years.

The model combines *moving average* and *exponential smoothing* forecasting techniques utilizing both quantitative and qualitative information. Quantitative forecasting methods rely heavily on the available data and historical trends. Various federal and state government and private sector data was collected and analyzed as part of the quantitative research.

*Qualitative forecasting is based on expert judgments or speculations about the trends in the factors that affect the projections. For example, the University of Arizona’s Center for Advanced Molecular Immunotherapies (“CAMI”) recent project (part of the region’s surge in bioscience research and development) will positively impact job growth in the City.*

*This example illustrate how specific “unicorn” projects can significantly impact growth trajectories by attracting and enhancing additional economic development activity. This type of qualitative information was applied to the forecasts.*

Both moving average and exponential smoothing forecast techniques rely on the assumption that patterns seen in historical data will continue in the future but are adjusted based on expert knowledge. The patterns are generally characterized as 1) part of a trend, 2) seasonal, 3) cyclical, which refers to the employment changes being affected by the business cycle, 4) an inflection point, or 5) a random component.

Each of these patterns, combined with current community development, unique economic conditions, or other interventions, can impact future employment and real estate development; and different forecast techniques account for these variances with differing degrees of accuracy. Identifying which patterns impact employment and real estate statistics is critical in providing a thorough forecast.

Three forecast scenarios (i.e., a low, baseline, and high) were developed to account for uncertainty, measure the sensitivity of the projections, and capture different possible combinations of the factors. This provides a range of potential outcomes and their associated probabilities.

The three forecast scenarios are defined as:

1) **Low Forecast:** The low forecast represents a scenario where economic conditions or factors are expected to be less favorable or challenging. It assumes that certain negative events or limitations might occur, leading to less-than-optimal outcomes.
2) **Baseline Forecast:** The baseline forecast represents the most likely or expected scenario. It assumes that conditions will unfold as anticipated without significant deviations or major disruptions. The baseline forecast serves as the reference point for other scenarios and is often considered the most probable outcome.

3) **High Forecast:** The high forecast represents a scenario where conditions or factors are expected to be more favorable or advantageous. It assumes that positive events or developments might occur, leading to better-than-expected outcomes. The high forecast is the most optimistic scenario and reflects the best-case situation among the possible outcomes.

The following is a brief description of the econometric modeling techniques used to analyze patterns and produce employment and real estate development forecasts.

**Moving Average Technique**

A moving average technique is a very common and reliable method of forecasting. It is often used as a baseline on which to compare other forecasting techniques. The moving average technique smooths any outliers in the data in order to isolate a reliable trend by averaging observed data points in the period being considered.

For example, a 3-year moving average for a dataset would consist of the average of years one, two and three. The next point in the trend would be the average of the values in years two, three and four. This process continues until the trend is established.

This historical trend is then assumed to continue into the future, following a similar pattern. The forecast is then made based on the trend. Additionally, the accuracy of the forecast can be enhanced by assigning weights to the various data points observed.

For example, if the trend suggests a smooth and continued growth pattern, then a greater weight can be assigned to the most recent observations. The moving average can be defined by the following equation. Where $x_t$ is defined as the employment estimate being forecasted, $w_i$ is the set of weights assigned, $f$ is the number of future periods, and $p$ is the number of past periods.

$$M_{x,t} = \frac{\sum_{i=p}^{f} w_i x_{t+i}}{\sum_{i=p}^{f} w_i}$$

**Exponential Smoothing Technique**

Exponential smoothing is a popular method of leveling a data series when there is not an easily identified trend but has a mean that changes over time. This technique is similar to the moving average technique in the sense that varying weights are given to different observations in the time series. In this case, however, the weight applied to past observations declines automatically. An exponential smoothing model can be defined by the following equation.

$$S_1 = (1 - \alpha)^t S_0 + \alpha \sum_{k=0}^{k=t-1} (1 - \alpha)^k + x_{t-k}$$
In this case, \( \alpha \) is the smoothing parameter that has a value between 0 and 1. This can be thought of as a weight or probability that removes the uncertainty or “noise” from the estimate \( x_t \). The value for \( \alpha \) is chosen by the forecaster after consideration of various factors such as national, regional, or local economic conditions, world events, etc.

**Model Assumptions**

Economic and fiscal implications of an activity are determined by the interaction of a number of factors including business characteristics (e.g., type of businesses, number of employees, etc.), location and study area characteristics (e.g., state and local tax structure), taxable activity (e.g., area retail sales), and by the nature of any economic or demographic effects resulting from the activity (e.g., new population added to area).

Typical analyses involve the short-term (e.g., effects from construction of new buildings) and the ongoing (operational) regional economic impacts of a particular project or activity.

*Short-term impacts* are typically analyzed as construction impacts. Effects related to construction impacts are generally related to on- and offsite construction employment and the other industries that support construction. In order to calculate construction impacts, the type, size, and costs associated with constructing the buildings or development under consideration are utilized.

The following assumptions were utilized to estimate the construction impact. In 2022, there were 2,164 multi-family units (8 buildings) and 240 student housing units (1 building) under construction. Approximately 108,000 square feet of retail space was also under construction in 2022.

*Ongoing impacts*, or non-construction impacts, typically analyze the long-term annual impacts. Effects related to non-construction ongoing impacts are generally related to the day-to-day operations of a particular activity or business. Inputs needed to calculate operational impacts vary by the type of activity. In general, impacts can be derived from employment/population counts and annual salaries, and by the type of business or industry the activity is in. The following assumptions were utilized to estimate the 2022 ongoing impacts.

**Downtown Phoenix Annual Non-Construction Activity - 2022**

<table>
<thead>
<tr>
<th>Residents</th>
<th>Business Establishments</th>
<th>Non-Construction Jobs</th>
<th>Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>23,900</td>
<td>1,900</td>
<td>65,200</td>
<td>6 Million</td>
</tr>
</tbody>
</table>

Source: CoStar; Esri; U.S. Census Bureau; Downtown Phoenix Inc.
The DPI Service Area is defined by the approximate 1.7 square-mile area displayed below in the heart of the Phoenix metro region. The Downtown Phoenix area is generally bounded by 7th Street to the east, 7th Avenue to the west, Filmore Street to the north, and Jackson Street to the south.

The total full-cash value of all residential, commercial, governmental, medical, vacant, and all other property was estimated to equal approximately $12.2B as of latest tax year, according to estimates from the Maricopa County Assessor’s Office.

Downtown Phoenix Inc.’s. Service Area (Bounded by the Red Outline)

Source: Downtown Phoenix Inc.
Analytical Qualifiers

Assessing the economic impact and forecasted growth of an isolated area presents a complex challenge, as the economic dynamics are intricately linked to activities occurring beyond the area's borders. Because of these complexities and interconnectedness, several adjustments were applied to the methodology to account for the intricate issues and to ensure the removal of any potential double-counting of the economic impacts.

The following points highlight this complexity:

- A portion of the economic values are derived from activity originating within the DPI Downtown Service Area, and a portion originates outside of the immediate area but is captured Downtown. For example, people work Downtown and live elsewhere, live Downtown and work elsewhere, live and work Downtown, or live and work elsewhere but travel to Downtown for entertainment. Each scenario requires a different analysis.

- A portion of the activity in the area is based on basic economic momentum (self-sustaining private sector development trends), and a portion is based on designed efforts to expand the economic base (induced by economic development efforts). However, economic development efforts cannot always be detached from private sector momentum since infrastructure, amenities, and economic volume all enhance development activity.

- To complete the analysis, several economic and fiscal impact models were created for major categories of development such as retail; restaurants and bars; office; government; education and science/technology; and multi-family housing. Additional activity was captured in separate analyses such as sports entertainment, arts and music festivals, among others.

- As economic growth begins to reach and occur beyond the boundaries of the Downtown Service Area, the borders will need to be modified accordingly. For example, high-quality growth is expected just east of the 7th Street boundary. The boundary line will need to also be extended east to capture the additional economic activity.

Disclaimer: This report is intended to be read in its entirety and should not be interpreted or relied upon in isolated sections or parts. The analysis provided is based on available information from a variety of sources up to the date of this report and is subject to change, uncertainty, and variation.

Therefore, actual estimates may vary, and some impacts and projections may not materialize due to unanticipated events and changing circumstances. However, RCG and DPI have made extensive efforts to confirm the accuracy of the information contained in this study.
Activity within Downtown Phoenix, along with Downtown Phoenix Inc. efforts and coordination with the City of Phoenix, business leaders, and affiliates, plays a crucial role in the regional and state economy for several reasons and serves as a:

**Hub for Economic Activity & Innovation**

- Downtown Phoenix is home to a wide range of businesses and is an economic hub for various industries, including finance, technology, healthcare, bioscience, research and development, post-secondary education, entertainment, and hospitality. This ecosystem promotes innovation, an urban environment, and substantial job opportunities.

- The Bioscience Core is a 30-acre, urban life sciences and medical education hub in Downtown Phoenix. Leading bioscience pioneers and innovators include ASU, UA, NAU, TGEN, Wexford, Dignity Health, Banner Health, TGen, Calviri, Exact Sciences, ElectraTect, and many more.

**Center for Arts & Culture**

- The Downtown area is a diverse central location for museums, performance venues, cultural events, festivals, open space and community gatherings, and home to various civic advocacy organizations – contributing to the overall economic impact and quality of life in Phoenix and the region.

- Downtown Phoenix is home to 50 arts and culture venues, 7 parks, green/open space, historic architecture and 200 murals.

**Host to Sports, Tourism, & Visitors**

- DPI’s Service Area is home to the Arizona Diamondbacks, Phoenix Suns, Phoenix Mercury, and Arizona Rattlers; and is host to major sporting events such as the Super Bowl Experience, Final Four Fan Fest, College Football Playoff Champ Campus, MLB, NBA, and WNBA All-star Weekends, and various others.

- The area also hosts various major conferences, concerts, and numerous other events at the Phoenix Convention Center, the Orpheum Theatre, Footprint Center, and many other venues.

**Work, Live, Play & Learn Environment**

- Downtown Phoenix is a growing center for residents to call home. More than 12,000 units have been built in the Downtown area since 2000, strengthening the work, live, and play environment of Downtown Phoenix.
Impact of Construction (2022)

Calculating the economic and fiscal impacts of the 2022 construction projects involves a comprehensive assessment of the construction activity that occurred within the Downtown Phoenix Service Area. This includes the number of new housing units (multi-family and student housing) that were under construction as well as the total square footage of all commercial space (i.e., retail, office, restaurant/bar, industrial, and hotel) that was under construction within Downtown Phoenix.

In 2022, there were 2,164 multi-family housing units, 240 student housing units, and 108,000 square feet of retail space under construction within Downtown, according to estimates from CoStar. The area experienced an absence of construction projects in the office, industrial, and hotel categories during 2022.

Downtown Phoenix Construction Activity in 2022

- 2,164 Multi-Family Rental Units
- 240 Student Housing Units
- 108,000 Square Feet Retail Space

Note. The area experienced an absence of new construction projects in the office, industrial, and hotel categories.
Source: CoStar

The direct economic impacts of Downtown construction activity encompass the immediate effects generated by the construction of the residential and commercial buildings within the Downtown area during 2022. The direct effects include the construction personnel working on the construction projects and their respective wages, the economic output produced in the area, and the tax revenues collected as a result of construction expenditures as well as the taxes levied on the construction workers’ income and spending.
The multiplier effects (i.e., indirect and induced impacts) estimate how a dollar spent in one sector ripples through the economy, creating additional jobs, income, output, spending, and taxes.

Indirect impacts refer to the secondary effects resulting from the construction projects on other tangential industries in the region.

For example, increased demand for construction materials will stimulate local suppliers, manufacturing, warehousing, and transportation businesses.

These businesses respond to the additional demand by hiring new employees or extending working hours for current employees. Induced impacts capture the changes in consumer spending resulting from increased employment and income generated by the construction projects. As workers receive wages and suppliers earn revenues, they spend money on local goods and services, thereby benefiting local businesses and further driving economic growth.

**Economic and Fiscal Impact of Construction Activity**

Construction activity within Downtown Phoenix during 2022 generated a total of 8,971 jobs, $479.4M in personal income, $1.3B in economic output, and $26.8M in state and local tax revenues. Of the total taxes collected from construction activity, approximately $20.1M was generated for the State of Arizona, $3.2M for Maricopa County, and $3.5M for the City of Phoenix. **Note:** Additional detailed information is summarized in the Appendix.

**Economic Impact of Downtown Phoenix Construction Activity (2022)**

<table>
<thead>
<tr>
<th></th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs</td>
<td>5,383</td>
<td>1,126</td>
<td>2,462</td>
</tr>
<tr>
<td>Personal Income</td>
<td>$287.7M</td>
<td>$72.9M</td>
<td>$118.8M</td>
</tr>
<tr>
<td>Economic Output</td>
<td>$287.7M</td>
<td>$72.9M</td>
<td>$118.8M</td>
</tr>
<tr>
<td>State and Local Taxes</td>
<td>$20.1M</td>
<td>$3.2M</td>
<td>$3.5M</td>
</tr>
</tbody>
</table>

Note: May not sum to total due to rounding.  
Source: IMPLAN; CoStar; Rounds Consulting Group, Inc.
## Fiscal Impact of Downtown Phoenix Construction Activity (2022)

<table>
<thead>
<tr>
<th></th>
<th>State of Arizona</th>
<th>Maricopa County</th>
<th>City of Phoenix</th>
<th>Total (State, County, &amp; City)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct</strong></td>
<td>$11.3M</td>
<td>Direct - $1.4M</td>
<td>Direct - $1.7M</td>
<td>Direct - $14.5M</td>
</tr>
<tr>
<td><strong>Indirect</strong></td>
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<td>Indirect - $0.6M</td>
<td>Indirect - $0.6M</td>
<td>Indirect - $4.5M</td>
</tr>
<tr>
<td><strong>Induced</strong></td>
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<td>Induced - $1.2M</td>
<td>Induced - $7.9M</td>
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</table>

Note: May not sum to total due to rounding.
Source: IMPLAN; City of Phoenix; CoStar; Downtown Phoenix Inc.; Rounds Consulting Group, Inc.
The economic impact of non-construction operations activity in Downtown Phoenix was conducted over a one-year timeframe for activity in 2022. This evaluation accounts for the direct impacts, which are the immediate economic contributions made by Downtown Phoenix employees, businesses, residents, and visitors.

It is estimated that the DPI Service Area was comprised of nearly 1,900 business establishments with over 62,500 daytime workers and was home to nearly 23,900 residents as of 2022.\(^{12}\)

Furthermore, nearly 6.0M people attended events at the Phoenix Convention Center, Footprint Center, Chase Field, Symphony Hall, the Orpheum Theatre, and other venues, including local music venues, comedy clubs, art galleries, parks, and hotel meeting rooms, among others.\(^{13}\)

Additionally, the analysis considers the indirect impacts, which stem from the supply chain and business-to-business transactions generated by Downtown activities. For example, restaurants, bars, and vendors selling goods within Downtown Phoenix will buy supplies from local wholesalers located beyond the DPI Service Area, supporting indirect jobs throughout the region.

The analysis also takes into consideration the induced impacts, which are the economic effects resulting from the spending of those directly or indirectly supported by Downtown activity.

For instance, the revenue earned by direct and indirect businesses, as well as the income earned by direct and indirect workers, is spent throughout the regional economy. This creates additional demand and supports ancillary businesses, such as grocery stores, gas stations, retail shops, hair salons, and fast-food restaurants, beyond the DPI Service Area.

\(^{12}\) Based on estimates derived from U.S. Census Bureau data by Esri and Downtown Phoenix Inc.

\(^{13}\) Based on estimates from Downtown Phoenix Inc.
Economic and Fiscal Impact of Non-Construction Activity

Non-construction activity within Downtown Phoenix during 2022 supported a total of 131,104 jobs, $8.1B in personal income, $19.9B in economic output, and $608.3M in state and local tax revenues.

Of the total taxes collected from construction activity, approximately $406.3M was generated for the State of Arizona, $86.6M for Maricopa County, and $115.4M for the City of Phoenix. Note: Additional detailed information is summarized in the Appendix.

Economic Impact of Downtown Phoenix Non-Construction Activity (2022)

<table>
<thead>
<tr>
<th></th>
<th>Jobs</th>
<th>Personal Income</th>
<th>Economic Output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8,971</td>
<td>$479.4M</td>
<td>$1.3B</td>
</tr>
<tr>
<td>Direct</td>
<td>5,383</td>
<td>Direct - $287.7M</td>
<td>Direct - $287.7M</td>
</tr>
<tr>
<td>Indirect</td>
<td>1,126</td>
<td>Indirect - $72.9M</td>
<td>Indirect - $72.9M</td>
</tr>
<tr>
<td>Induced</td>
<td>2,462</td>
<td>Induced - $118.8M</td>
<td>Induced - $118.8M</td>
</tr>
</tbody>
</table>

Note: May not sum to total due to rounding.
Source: IMPLAN; CoStar; Rounds Consulting Group, Inc.

Fiscal Impact of Downtown Phoenix Non-Construction Activity (2022)

<table>
<thead>
<tr>
<th></th>
<th>State of Arizona</th>
<th>Maricopa County</th>
<th>City of Phoenix</th>
<th>Total (State, County, &amp; City)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>$248.5M</td>
<td>Direct - $52.1M</td>
<td>Direct - $82.6M</td>
<td>Direct - $383.2M</td>
</tr>
<tr>
<td>Indirect</td>
<td>$64.9M</td>
<td>Indirect - $13.7M</td>
<td>Indirect - $13.2M</td>
<td>Indirect - $91.7M</td>
</tr>
<tr>
<td>Induced</td>
<td>$92.9M</td>
<td>Induced - $20.9M</td>
<td>Induced - $10.7M</td>
<td>Induced - $133.4M</td>
</tr>
</tbody>
</table>

Note: May not sum to total due to rounding.
Source: IMPLAN; City of Phoenix; CoStar; Downtown Phoenix Inc.; Rounds Consulting Group, Inc.
The economic activity generated by the businesses, employees, and residents who call Downtown Phoenix home, as well as the construction activity and millions of visitors who travel to Downtown to attend sporting events, concerts, conferences, and other local events ripples through the state economy – creating job opportunities, income, and additional tax revenues.

Economic activity (construction and non-construction activity) within Downtown Phoenix during 2022 supported a total of 140,075 jobs, $8.6B in personal income, $21.2B in economic output, and $635.1M in state and local tax revenues.

Of the total taxes collected from construction activity, approximately $426.4M was generated for the State of Arizona, $89.9M for Maricopa County, and $118.9M for the City of Phoenix. Note: Additional detailed information is summarized in the Appendix.

### Total Economic Impact of Downtown Phoenix (2022)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs</td>
<td>140,075</td>
</tr>
<tr>
<td>Personal Income</td>
<td>$8.6B</td>
</tr>
<tr>
<td>Economic Output</td>
<td>$21.2B</td>
</tr>
</tbody>
</table>

#### Direct Impacts
- Jobs: $5.0B
- Personal Income: $1.5B
- Economic Output: $2.1B

#### Induced Impacts
- Jobs: $10.1B
- Personal Income: $4.5B
- Economic Output: $6.6B

Note: May not sum to total due to rounding. Includes the impact of construction and non-construction activities.

Source: IMPLAN; CoStar; Rounds Consulting Group, Inc.

### Total Fiscal Impact of Downtown Phoenix (2022)

<table>
<thead>
<tr>
<th>Source</th>
<th>Total Impact</th>
</tr>
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<tbody>
<tr>
<td>State of Arizona</td>
<td>$426.4M</td>
</tr>
<tr>
<td>Maricopa County</td>
<td>$89.9M</td>
</tr>
<tr>
<td>City of Phoenix</td>
<td>$118.9M</td>
</tr>
<tr>
<td>Total (State, County, &amp; City)</td>
<td>$635.1M</td>
</tr>
</tbody>
</table>

#### Direct Impacts
- State of Arizona: $259.9M
- Maricopa County: $53.5M
- City of Phoenix: $84.3M
- Total (State, County, & City): $397.7M

#### Induced Impacts
- State of Arizona: $68.2M
- Maricopa County: $14.2M
- City of Phoenix: $13.7M
- Total (State, County, & City): $96.2M

Note: May not sum to total due to rounding. Includes the impact of construction and non-construction activities.

Source: IMPLAN; City of Phoenix; CoStar; Downtown Phoenix Inc.; Rounds Consulting Group, Inc.
Downtown Phoenix Forecast

The Phoenix metro area’s economy will continue to outperform the state and nation for the foreseeable future. The local economy was highly resilient during the COVID-19 recession due to its diversified employment base and high influx of new residents.

**Employment Outlook**
- Over the next 5 years, the employment base of the Downtown Phoenix Service Area (62,500 workers as of 2022) is expected to increase by 10.6%, adding approximately 6,700 workers.
- However, as previously noted, accelerated science and technology growth will likely occur beyond the baseline forecast and the current boundaries of the DPI Service Area. Therefore, the current forecast of future Downtown Phoenix development over the next decade is potentially understated by between 10% and 20%.

**Office Market Outlook**
- While the broader Greater Phoenix office market continues to navigate through the COVID-19 disruptions, excess office construction is not likely within Downtown Phoenix. Furthermore, office conversions will also prevent significant occupancy issues. Over the next 5 years, construction related to the office market in the Downtown area will mainly consist of office conversions rather than new office inventory.

**Retail Market Outlook**
- The lack of available retail space and limited construction pipeline has made it difficult for retailers to find suitable space. The historically low levels of vacancy are the result of over construction during the early 2000’s and subsequent limited construction thereafter. The increased demand will lead to over 260,000 square feet of retail space to be added to the Downtown area over the next 5 years.

**Residential Multi-Family Market Outlook**
- While demand for multi-family housing across the Greater Phoenix area has dampened, absorption in Downtown Phoenix has held up well compared to other parts of the Valley, even with the inundation of new supply.
- The vibrant community and expected high growth of employment in the area will continue to strengthen the work, live, play & learn environment of Downtown Phoenix – reinforcing the long-term stability of the multi-family housing market. Currently, over 3,800 new multi-family units are under construction. There are over 2,000 units in pre-development expected to be added to the Downtown market over the next five years.
Appendix

Fiscal Impact of Construction Activity by Type – State, County, and City (2022)

<table>
<thead>
<tr>
<th>Construction Activity</th>
<th>State of Arizona</th>
<th>Maricopa County</th>
<th>City of Phoenix</th>
<th>Total (State, County &amp; City)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Impact</td>
<td>$11,345,000</td>
<td>$1,396,000</td>
<td>$1,727,100</td>
<td>$14,468,100</td>
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<tr>
<td>Construction Sales Tax</td>
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<td>$246,800</td>
<td>$810,800</td>
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<tr>
<td>Sales Taxes</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Lease Taxes</td>
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<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Hotel Taxes</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Restaurant and Bar Taxes</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>Payroll &amp; Income Taxes</td>
<td>$8,689,900</td>
<td>$ -</td>
<td>$ -</td>
<td>$8,689,900</td>
</tr>
<tr>
<td>Vehicle Taxes &amp; Fees</td>
<td>$939,700</td>
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<td>$ -</td>
<td>$939,700</td>
</tr>
<tr>
<td>State Shared Revenues</td>
<td>$ -</td>
<td>$1,149,200</td>
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<td>$2,065,500</td>
</tr>
<tr>
<td>Indirect Impact</td>
<td>$3,287,500</td>
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<td>Payroll &amp; Income Taxes</td>
<td>$2,276,900</td>
<td>$ -</td>
<td>$ -</td>
<td>$2,276,900</td>
</tr>
<tr>
<td>Vehicle Taxes &amp; Fees</td>
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<td>$ -</td>
<td>$196,600</td>
</tr>
<tr>
<td>State Shared Revenues</td>
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<td>$251,000</td>
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<tr>
<td>Induced</td>
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<td>$1,230,300</td>
<td>$1,160,500</td>
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<tr>
<td>Property Taxes</td>
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<td>$842,800</td>
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<td>$3,546,600</td>
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<td>$ -</td>
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<td>Vehicle Taxes &amp; Fees</td>
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<td>$ -</td>
<td>$429,900</td>
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<tr>
<td>State Shared Revenues</td>
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<tr>
<td>Total</td>
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<td>$3,222,500</td>
<td>$3,489,000</td>
<td>$26,821,200</td>
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</tbody>
</table>

In 2023 dollars. May not sum to total due to rounding.

Sources: Rounds Consulting Group, Inc.; Downtown Phoenix Inc; City of Phoenix; Arizona Department of Revenue; Maricopa County Assessor’s Office; CoStar; IMPLAN; U.S. Census Bureau; U.S. Bureau of Labor Statistics; Esri; among others.
# Fiscal Impact of Non-Construction Activity – State, County, and City (2022)

<table>
<thead>
<tr>
<th>Non-Construction Activity</th>
<th>State of Arizona</th>
<th>Maricopa County</th>
<th>City of Phoenix</th>
<th>Total (State, County &amp; City)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Impact</strong></td>
<td>$248,525,700</td>
<td>$52,130,600</td>
<td>$82,576,100</td>
<td>$383,232,400</td>
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<tr>
<td>Construction Sales Tax</td>
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<td>$132,729,800</td>
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<td>Restaurant and Bar Taxes</td>
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<tr>
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<tr>
<td>State Shared Revenues</td>
<td></td>
<td>$14,467,100</td>
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<tr>
<td><strong>Indirect Impact</strong></td>
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<td>$13,136,600</td>
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<td>$9,192,600</td>
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<tr>
<td>Vehicle Taxes &amp; Fees</td>
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<tr>
<td>State Shared Revenues</td>
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<td>$5,725,800</td>
<td>$4,550,000</td>
<td>$10,275,800</td>
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<tr>
<td><strong>Induced</strong></td>
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<td>Property Taxes</td>
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<td>State Shared Revenues</td>
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<td><strong>Total</strong></td>
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<td>$115,385,900</td>
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</table>

In 2023 dollars. May not sum to total due to rounding.
Sources: Rounds Consulting Group, Inc.; Downtown Phoenix Inc; City of Phoenix; Arizona Department of Revenue; Maricopa County Assessor’s Office; CoStar; IMPLAN; U.S. Census Bureau; U.S. Bureau of Labor Statistics; Esri; among others.
## Total Fiscal Impact (Construction & Non-Construction) – State, County, and City (2022)

<table>
<thead>
<tr>
<th></th>
<th>State of Arizona</th>
<th>Maricopa County</th>
<th>City of Phoenix</th>
<th>Total (State, County &amp; City)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Impact</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Sales Tax</td>
<td>$1,715,400</td>
<td>$246,800</td>
<td>$810,800</td>
<td>$2,733,000</td>
</tr>
<tr>
<td>Sales Taxes</td>
<td>$76,902,900</td>
<td>$13,026,300</td>
<td>$42,800,600</td>
<td>$132,729,800</td>
</tr>
<tr>
<td>Lease Taxes</td>
<td>$-</td>
<td>$322,900</td>
<td>$2,837,000</td>
<td>$3,159,900</td>
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<tr>
<td>Hotel Taxes</td>
<td>$3,236,300</td>
<td>$1,435,200</td>
<td>$4,554,900</td>
<td>$9,226,400</td>
</tr>
<tr>
<td>Restaurant &amp; Bar Taxes</td>
<td>$8,017,000</td>
<td>$1,358,000</td>
<td>$4,461,900</td>
<td>$13,836,900</td>
</tr>
<tr>
<td>Property Taxes</td>
<td>$-</td>
<td>$21,521,100</td>
<td>$14,484,400</td>
<td>$36,005,600</td>
</tr>
<tr>
<td>Payroll &amp; Income Taxes</td>
<td>$158,149,300</td>
<td>$-</td>
<td>$148,400</td>
<td>$158,149,300</td>
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<tr>
<td>Vehicle Taxes &amp; Fees</td>
<td>$11,849,800</td>
<td>$-</td>
<td>$-</td>
<td>$11,849,800</td>
</tr>
<tr>
<td>State Shared Revenues</td>
<td>$-</td>
<td>$15,616,300</td>
<td>$14,353,500</td>
<td>$29,969,800</td>
</tr>
<tr>
<td><strong>Indirect Impact</strong></td>
<td>$68,210,400</td>
<td>$14,249,500</td>
<td>$13,738,000</td>
<td>$96,197,900</td>
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<tr>
<td>Sales Taxes</td>
<td>$18,069,800</td>
<td>$2,565,300</td>
<td>$5,099,400</td>
<td>$25,734,500</td>
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<tr>
<td>Property Taxes</td>
<td>$-</td>
<td>$5,707,400</td>
<td>$3,870,500</td>
<td>$9,577,900</td>
</tr>
<tr>
<td>Payroll &amp; Income Taxes</td>
<td>$45,255,200</td>
<td>$-</td>
<td>$-</td>
<td>$45,255,200</td>
</tr>
<tr>
<td>Vehicle Taxes &amp; Fees</td>
<td>$4,885,400</td>
<td>$-</td>
<td>$-</td>
<td>$4,885,400</td>
</tr>
<tr>
<td>State Shared Revenues</td>
<td>$-</td>
<td>$5,976,800</td>
<td>$4,768,100</td>
<td>$10,744,900</td>
</tr>
<tr>
<td><strong>Induced</strong></td>
<td>$98,327,900</td>
<td>$22,086,400</td>
<td>$20,833,700</td>
<td>$141,248,000</td>
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<tr>
<td>Sales Taxes</td>
<td>$26,941,400</td>
<td>$3,824,700</td>
<td>$7,642,600</td>
<td>$38,408,700</td>
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<tr>
<td>Property Taxes</td>
<td>$-</td>
<td>$9,015,200</td>
<td>$6,113,700</td>
<td>$15,128,900</td>
</tr>
<tr>
<td>Payroll &amp; Income Taxes</td>
<td>$63,669,800</td>
<td>$-</td>
<td>$-</td>
<td>$63,669,800</td>
</tr>
<tr>
<td>Vehicle Taxes &amp; Fees</td>
<td>$7,716,700</td>
<td>$-</td>
<td>$-</td>
<td>$7,716,700</td>
</tr>
<tr>
<td>State Shared Revenues</td>
<td>$-</td>
<td>$9,246,500</td>
<td>$7,077,400</td>
<td>$16,323,900</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$426,409,000</td>
<td>$89,862,500</td>
<td>$118,874,900</td>
<td>$635,146,400</td>
</tr>
</tbody>
</table>

In 2023 dollars. May not sum to total due to rounding.

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