Review of San Antonio's Annexation 360 Program & Fiscal Impact Assessment

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Prepared for:
Tech Bloc

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Overview

At the request of Tech Bloc, HR&A Advisors (HR&A) reviewed the City of San Antonio's fiscal impact assessment for phase one of San Antonino's proposed Annexation 360 Program (360 Program). This report examines the fiscal impact assessment to identify areas where additional analysis and discussion are appropriate. The report is a tool to support additional dialogue about the merits of the annexations proposed through the 360 Program, as well as San Antonio's broader annexation policies.

Through the 360 Program, the City of San Antonio proposes to annex five additional areas in two phases. The first phase annexes three areas to the north and east of the City, followed by the addition of two areas in southwestern Bexar County the following year. This report focuses on the first phase of the 360 Program.

To prepare the report, HR&A reviewed literature related to annexation and urban growth patterns, along with background material about San Antonio and the areas targeted for annexation in the 360 Program. This review and background research informed the assessment of the assumptions and structure of the City's fiscal analysis. The report summarizes the literature review and background research, identifies areas of concerns and recommends how the fiscal assessment might be revised to better evaluate potential annexations.

Executive Summary

After reviewing the City's fiscal impact assessment, HR&A recommends that the Annexation Technical Workgroup (Annexation Workgroup) and the City evaluate revise the fiscal impact assessment and conduct additional due diligence on the first phase of annexations before making a decision about whether to move forward with annexation. Based on our review, we have identified three primary areas of concern about the fiscal assessment:

- It may moderately underestimate costs associated with annexation;
- It is likely to significantly overestimate revenue associated with annexation; and
- It does not sufficiently evaluate the risk of downside scenarios.

Cities choose to make investments and take on risks—including annexations—when they are consistent with their long-term strategic vision. San Antonio's annexation policy should be part of a broader strategy for the future of the City and its long-range competitiveness.

The approach of annexing growing suburbs has been fiscally positive for San Antonio in the past, as the City has benefited from suburban growth throughout the region. Notwithstanding the areas of concern identified in this report, if San Antonio experiences strong suburban growth the phase one annexations will have a positive fiscal impact. Albeit, the positive fiscal impact will likely be less than presented in the City's fiscal impact assessment.

However, San Antonio continuing to experience suburban growth at historically average levels is far from certain. The patterns of growth in other American cities are shifting, urban growth is accelerating and suburban growth is slowing. San Antonio's growth pattern, a stagnant urban center surrounded by suburban growth is increasingly unique and raises the question of whether San Antonio will continue buck national trends. San Antonio also experienced slower than historically average growth in property tax revenue between 2008 and 2014, which was also below the level assumed in the fiscal impact assessment. Projections of future growth using historical data can change dramatically depending on which time period

they are based on. When major market trends are shifting, relying on historical data can be misleading altogether. With the limitations of using historical data to project future growth it is appropriate and necessary for San Antonio to consider how the fiscal impact of phase one annexations would change if San Antonio experienced continued suburban growth but at a slower rate than the longer historic averages, and other scenarios.

To understand the potential result of slower suburban growth on San Antonio we adjusted the assumptions in the City's fiscal assessment. We found that slower population linked closely with revenue growth and had a dramatic influence on the fiscal impact of annexation, far more significant than rapidly increasing operating costs, discounting future revenue, or other changes to the underlying assumptions. If population along with revenue growth are half of the projection in the fiscal assessment the net fiscal impact of annexation over twenty years approaches zero. Population and revenue growth are by far the most important assumptions within the fiscal assessment and as such require the highest degree of scrutiny.

Given the importance of population and revenue growth to phase one annexations, along with the slower recent growth in property tax revenue in San Antonio and changing growth patterns in other American cities, it is clear that a positive fiscal impact from annexation is not certain. The City should carefully examine the downside risk before doubling down on suburban growth as its economic development strategy.

HR&A recommends that the City develop a strategic growth framework that will allow it to evaluate the impacts of annexation against other economic development investments available to the City. In our opinion the fiscal impact assessment does not present a sufficiently compelling case for the City to move forward with phase one of the 360 Program before considering alternatives.

Areas of Concern

Risk of Underestimated Costs

The City's fiscal assessment is focused on the potential operating costs the City will incur as a result of the 360 Program. We have identified multiple assumptions which may lead the fiscal assessment to underestimate or omit costs. The risk of underestimated or omitted costs is likely to have only a moderate impact on the fiscal impact, but we believe that the City and the Annexation Workgroup should still review assumptions related to costs in greater detail.

- *Initial and Ongoing Infrastructure Investments:* Producing a fiscal assessment without including the initial infrastructure investments underestimates the upfront costs of annexation and distorts the fiscal assessment. Without the inclusion of initial infrastructure investments the analysis of how long it will take an annexation to achieve a net positive fiscal impact is distorted. The City will also be responsible for replacing the existing infrastructure in areas it annexes. An assessment of the conditions and sufficiency of existing infrastructure as part of the analysis of capital needs would be improve the accuracy of the fiscal impact assessment. We recognize that the City plans to conduct an analysis of capital needs in the future before completing annexation.
- *Higher Labor Costs:* While the City's analysis for uniformed police officers accounts for these raises in the early years of the financial analysis, it reverts to a lower rate in the outer years of the assessment. For fire and emergency services, the assessment uses a flat rate that is less than the long-term public safety expense growth rate. It is our understanding that the City is in negotiations to address the long-term cost increases of public safety. It is possible, but not certain, the City will bend the cost curve for public safety and achieve slower growth in public safety costs.

Risk of Overestimated Revenue

Our analysis found concerns with several assumptions about revenue that have a more significant impact on the net fiscal impact of annexation than assumptions related to cost. The most notable of these concerns is that the fiscal assessment uses nominal dollars and does not discount net positive revenue in later years.

- *Time Value of Money*: Since the City is primarily evaluating the annexations on fiscal grounds, this suggests it should evaluate them as if it were an investment rather than a public good. As such, the City's analysis should consider the time value of money in its analysis. Accounting for the time value of money will also more accurately reflect the tradeoff of projected deficits in the earlier years of annexation followed by the projected positive net revenue in later years. To use nominal dollars in the fiscal impact assessment is to give equal weight to a dollar received in year one a dollar received in year twenty.
- *Pace of Revenue Growth:* The fiscal analysis also projects that revenue will grow faster than expenses over the next 20 years. While this may true in some areas of the City's budget, it has not been the case in recent years. When a long-term fiscal projection shows revenue rising faster than costs it favors a positive fiscal impact by assuming improving operating conditions. This assumption should only be made with strong supporting evidence.
- *Annexation Growth Bump:* The City assumed that revenue and property values in the annexed areas will grow rapidly in the years following annexation before returning to a lower long-range growth rate. The impact of these high growth rates in the early years of the fiscal assessment compound over its 20 year time horizon and may inflate revenue projections.

Insufficient Evaluation of Downside Scenarios

When considering the merits of the 360 Program, it is important to also consider the risks that San Antonio will face as a result of its decision to annex additional territory. When a city decides to expand its borders it commits to providing services and building and operating infrastructure in those areas. If the revenue generated does not exceed the costs of providing infrastructure and services then the annexation will be fiscally negative for the city.

The City's fiscal impact assessment presents a single scenario without providing information about how other potential growth patterns or increases in cost impact the fiscal assessment. Predicating future conditions over 20 years is difficult under any circumstances and modeling a range of scenarios better reflects that uncertainty. To reflect a range of potential outcomes from annexations HR&A ran three scenarios with increasingly pessimistic assumptions.

HR&A also stress tested critical assumptions to identify which were most important to the fiscal impact and to determine how far off an assumption (e.g. operating costs or population growth) would need to be for the net fiscal impact of annexation to be negative. The stress tests indicated that population growth is the assumption the fiscal impact assessment is most sensitive to.

- *Single Projection of Future Population Growth:* A range of scenarios, instead of a single scenario, will better enable evaluation of different potential outcomes of annexation. Relying on a single scenario to evaluate the impact of annexation presents a level of certainty not possible when projecting conditions 20 years into the future.

Recommendations

After reviewing the City's fiscal impact assessment, HR&A has developed a set of specific recommendations for the Annexation Workgroup to consider as it evaluates the proposed 360 Program. These recommendations fall into four primary categories:

- **Develop a strategic growth framework to evaluate potential annexations.** A fiscal assessment is an important tool for considering whether to annex a particular territory, but alone it is not sufficient to make annexation decisions. San Antonio's annexation policy should be built on a broader strategy for the future of the City and its long-range competitiveness. Factors San Antonio may want to include when in evaluating potential annexations are:
    - How annexation will position the City to grow, attract residents and compete with other cities;
    - The impact of adding a residents that may have different preferences for taxes and services than existing residents;
    - How annexations will impact growth in the City and targeted territory;
    - Alternative investments in infrastructure, infill growth, and other annexations; and
    - The impact on the quality of life annexation will have on existing residents.

- **Consider the use of more conservative assumptions about revenue and expenses.** The City's fiscal assessment might overstate the fiscal impact of annexation by underestimating upfront and operating costs, overestimating revenue and growth, assuming that revenue grows faster in the early years of the assessment, and neglecting to account for the time value of money.

- **Estimate initial and future capital investments and include them in the fiscal assessment.** In its current analysis, the City has not identified most of the future capital needs that will arise from phase one annexations. Given the importance of investing in and maintaining the infrastructure for the competitiveness of San Antonio, these costs should be established and included in the fiscal assessment.

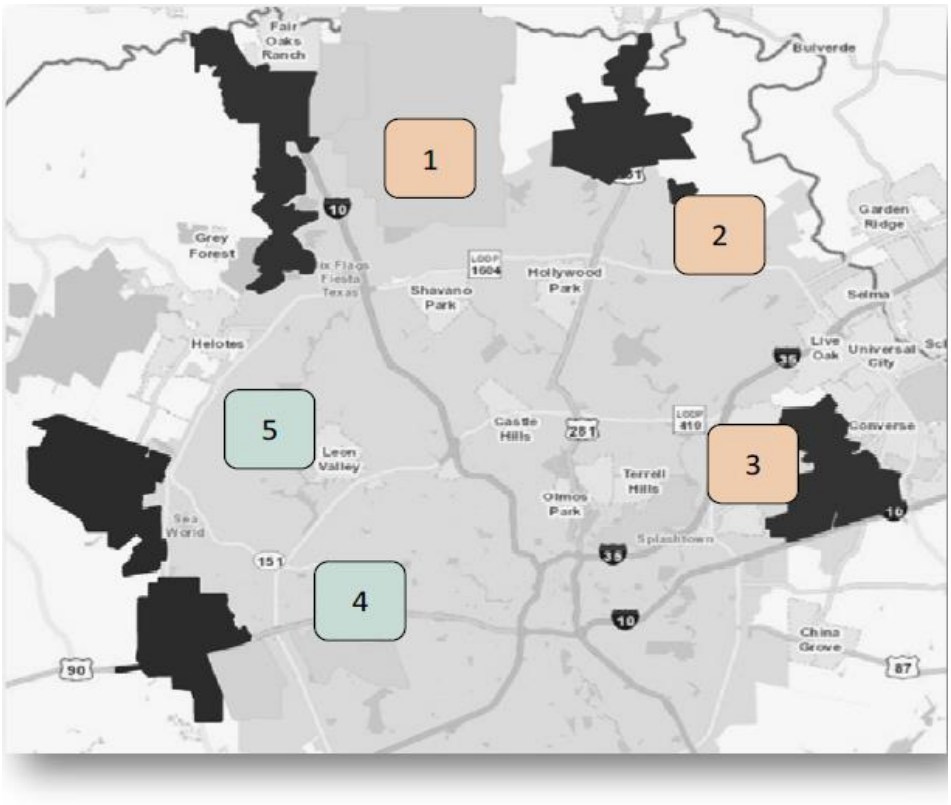
- **Study a range of potential scenarios that reflect different future conditions.** The City's fiscal assessment focuses on a base case scenario where projected development patterns conform to the San Antonio's historical growth patterns. A more robust assessment that includes multiple scenarios based on alternative assumptions about growth and future costs will provide a more informative fiscal impact assessment. It is not certain that the phase one annexations will have a net positive fiscal impact and consideration of multiple scenarios will help the City to evaluate the downside risk.

Background

Description of the Annexation 360 Program

The City of San Antonio is proposing to annex five additional areas as part of its 360 Program. Two phases of annexations are planned for the 360 Program. The first phase would add three areas to the north and east of the city, followed by the addition of two additional areas in southwestern Bexar County the following year. Currently, the City assumes that it would initially pursue a limited purpose annexation before approving a full purpose annexation within three years. During that three year period, the City would begin to provide the newly annexed areas with a level of services comparable to what it provides to current residents and businesses.

Figure 2. Areas Under Consideration for Annexation



PHASE 1	PHASE 2
1: IH-10 West	4: US 90/1604
2: 281 North	5: HWY 151
3: IH-10 East	

Source: City of San Antonio, Office of Management and Budget

Together, the three areas targeted for the first phase are home to over 78,000 people. Some of the areas the City has proposed to annex include established neighborhoods. The IH-10 East area already has population densities comparable to the city as a whole, while the IH-10 West and 281 North areas are comparably less developed and are projected to accommodate a larger share of new growth.

Figure 3. Characteristics of Proposed Phase One Annexation Areas

	City of San Antonio	IH-10 West	281 North	IH-10 East
Population	1,436,723	12,871	24,936	40,352
Land Area (sq. m.)	461	13.9	11.2	12.1
Population Density	3,117	926	2,226	3,335
Driving Time to Alamo Plaza	n/a	32 min	34 min	23 min

Sources: City of San Antonio Fiscal Analysis; US Census Bureau

As it considers whether to go forward with the proposed 360 Program, the City has appointed an Annexation Workgroup to consider the merits of the proposed annexations. The City has tasked the Workgroup with providing "analysis of development and financial assumptions within the proposed annexation areas such as the number of housing starts, home values, potential discount rates in cash flow, net present value of tax collections and projected commercial and multi-family development."[1]

History of Annexation

In many areas of the country, annexation has been a commonly used tool to incorporate growing suburbs into central cities. Beginning in the late nineteenth century, American industrial cities started to grow at a rapid pace. In response, many cities began to expand their boundaries to accommodate this growth, using both forcible annexation and voluntary municipal consolidation. Between 1850 and 1930, for example, New York City grew from 22 to 299 square miles, Chicago from 10 to 207, and Detroit from 6 to 138. For city leaders, annexation was an opportunity to expand their spheres of influence. For their neighbors, municipal consolidation presented an opportunity to benefit from the city's public services and infrastructure.[2]

In the years following World War Two, however, this era of urban growth came to an end. Spurred by the new highway construction and federally subsidized mortgage lending, many households and businesses began leaving urban centers in favor of newly built suburban communities.

Backed by growing tax bases, these suburbs no longer needed to rely on cities to provide basic municipal services. After physically distancing themselves from urban centers, many suburbs sought to distance themselves economically and politically, as well. During this period, suburban communities began to incorporate themselves as independent municipalities, and many state legislatures passed laws to prohibit cities from annexing territory without voter approval. As a result, many older cities in the Northeast and Midwest stopped growing outwards in the years following World War Two.

Meanwhile, cities like San Antonio began to grow rapidly as people and jobs relocated to lower cost locations in the South and Southwest, an area of the country that came to be known as the Sun Belt. During these years, most Sun Belt states placed few restrictions on municipal annexations. As a result, many southern and western cities were able to expand their city limits to incorporate the growing suburbs where this new development was occurring. While some states have tightened their annexation policies over time, it continues to be widely used in some of the country's fastest growing states, including Texas, Arizona and North Carolina.[3]

The Rationale for Annexation | Cities that annex territory commonly cite three reasons for expanding their boundaries: to expand and protect their tax base; to prevent municipal fragmentation; and to manage growth and development.

Of these, the most common argument in favor of annexation is that it is a financial management tool to mitigate the effects of suburbanization on city tax bases.[4] In recent years, advocates like David Rusk have pointed to annexation as one of the primary reasons why Sun Belt cities have financially outperformed their

Rust Belt counterparts. Rusk suggests that elastic cities—those with legal structures that encourage annexation and municipal consolidation—better capture tax revenue that would otherwise flee to suburban locations.[5]

Rusk's position that annexation has a positive fiscal impact on cities has been challenged by other surveys of the net fiscal impact of annexation on cities. Such surveys have found that annexation has a mixed record of success, and that is difficult to separate the effects of annexation from the impacts of underlying regional economic conditions. **The fiscal benefits of annexation depend heavily on specific local conditions, including a city's ability to control expenses and its ability to attract new development and increase the value of the territory it has annexed.**[6] Studies that show ongoing fiscal benefits from annexation do not control for broader factors like economic trends and infrastructure investments that affect where businesses locate and people choose to live and work.[7]

Annexation is also cited as a tool to avoid the inefficiencies associated with municipal fragmentation. . While municipal consolidation can result in cost savings due to the more efficient delivery of services, there is little conclusive evidence that annexation has a significant impact on municipal operating costs in either direction.[8] Analyzing the impact of annexation on municipal operations is complicated by the fact that many cities that use annexation also have lower rates per capita spending on municipal services.[9] **This suggests that municipalities may lower levels of services as a result of annexation, possibly due to the stated preferences of residents in these lower-density areas or to the higher cost of providing services in low-density communities.**

Annexation is also cited as a tool that allows cities to manage growth and development within their economic regions. There has been limited research on the effects of annexation on the ability of cities to shape development patterns, though there is some evidence that cities with aggressive annexation policies also are less dense and more sprawling than cities with fixed borders.[10]

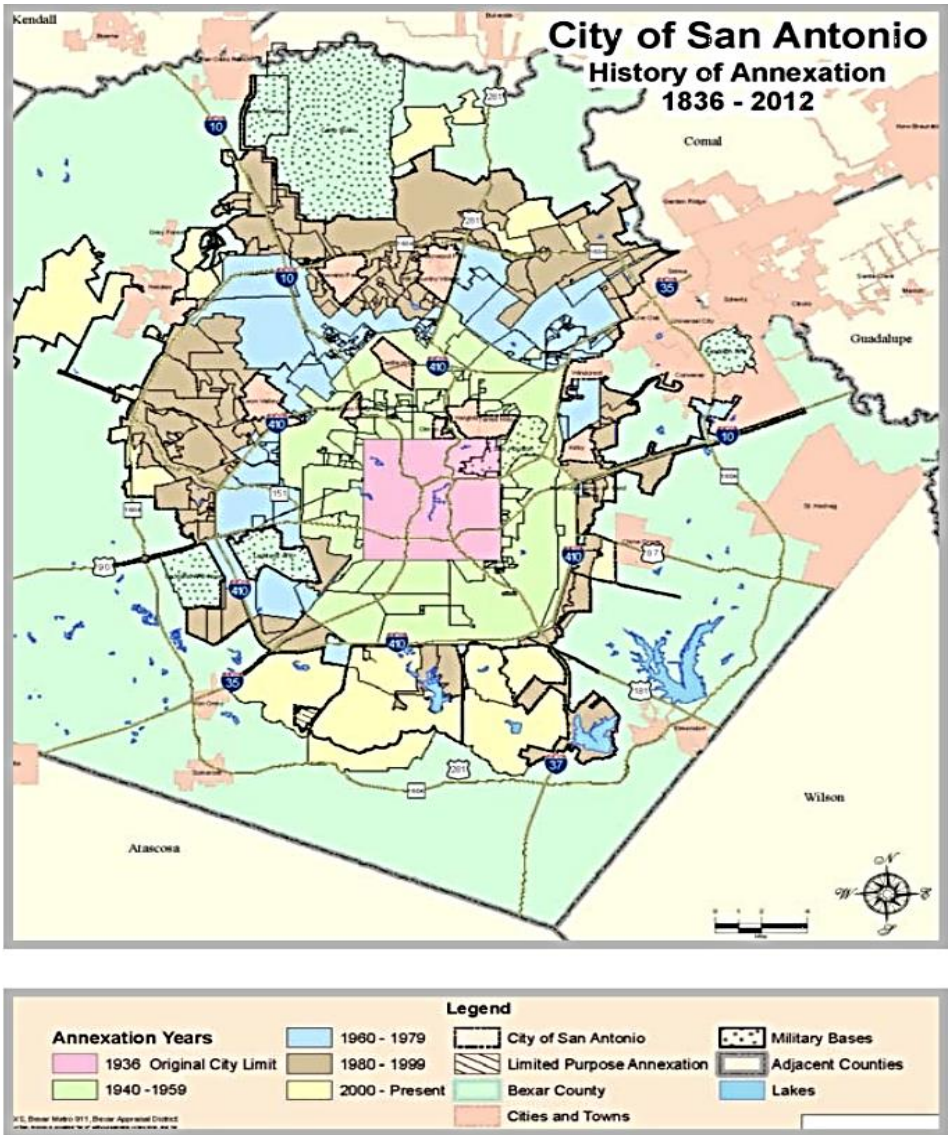
Texas Context | Within Texas, annexation takes on additional importance because of the relative independence of local governments. Texas cities receive little categorical aid from the state government to fund essential municipal services. Historically, the State of Texas has dedicated approximately four percent of its budget to funding municipalities. Only West Virginia has a lower rate of state aid to cities. **As a result, Texas cities rely on municipal revenue sources like property taxes, their share of sales taxes, fines and user fees to fund essential services.**[11] In San Antonio, for example, state grants made up 1 percent of the City's revenue budget in 2014.[12] Annexation is among the few tools Texas cities can use to share in the local tax revenue generated by new development in their regions.

Many Texas cities also believe that suburban areas benefit from city services without paying taxes to support them. Following the logic of this assumption, annexation ensures that these areas finance the central cities in proportion to the benefits they gain from proximity. Little research has been done to evaluate this belief, and it is likely that cities capture a significant share of sales tax revenue paid by residents and businesses in unincorporated areas. Annexation also allows cities to capture additional federal grant funding, particularly for transportation and housing, which are awarded on a per capita basis.[13]

San Antonio's Annexation History | The City of San Antonio has a long history of growth through annexation. After more than a century as a small regional center, San Antonio began to grow rapidly following World War Two. Most of this growth was located in new suburban subdivisions built beyond its original city limits. In response, the City of San Antonio has steadily annexed these areas as its metropolitan region spread outwards. In the 1950s and 1960s, the City annexed most of the neighborhoods between the original city limits and the newly built Interstate 410 loop. During the 1980s and 1990s, San Antonio grew north and west of Loop 410, pushing into the Hill Country. Eventually, the City grew past its second ring road, Loop 1604. Over the past decade, San Antonio continued to annex land north and west of Loop 1604. It has also started to annex parts of southern Bexar County, including a new Toyota manufacturing plant built south of Loop 410.

Because the City was able to annex successive waves of suburban growth, it has been able to capture the revenue generated by nearly all of the new growth in the San Antonio metropolitan area. However, since most of this growth has occurred in low-density suburban neighborhoods, San Antonio's population density fell over time even as its population quadrupled. **San Antonio's density fell from approximately 6,400 people per square mile in 1930 (roughly the current density of Minneapolis-St. Paul) to 3,100 per square mile in 2014, which ranks among the lowest population densities of American cities with more than 1 million people.**[14] While this lower density is not necessarily a negative or a positive attribute it is unusual among cities that have continued to grow and prosper.

Figure 1: History of Annexation in San Antonio



Source: City of San Antonio Annexation Policy, 2013

Urban Growth Patterns

National Urban Growth Patterns | After six decades in which suburban areas grew rapidly and urban areas experienced disinvestment and population decline, many city centers have begun to grow again. While many suburban regions continued to attract new development and population growth, **the assumption that suburban communities will continue to appreciate and develop while urban cores struggle is no longer a certainty.**

Across the country, a subset of affluent professionals are increasingly choosing to live in central cities rather than suburban communities. Alan Ehrenhalt has described this process as an inversion of the long-standing suburban growth model. This inversion has multiple, interrelated root causes, including the dramatic reduction in violent crime rates, improvements in air quality, the availability of property following deindustrialization, and above all, the country's shifting demographics. Americans are marrying later and having smaller families, which has led to a corresponding rise in the share of singles and seniors, many with substantial spending power. Many households continue to prefer suburban locations, but the cumulative effect of these changes has led growing number of affluent households to move back into urban areas.[15]

This echoes the research of Richard Florida, who has found that the revitalization of many older cities is attributable in part to preference of some affluent professionals for a more urban lifestyle. Florida's research shows that cities that offer the amenities preferred by the "creative class" have captured a disproportionate share of new job creation, while less urban Sun Belt cities and other post-war suburbs have lagged behind.[16]

These trends are borne out in recently released demographic and economic data. **Between 2010 and 2014, the population of central cities has grown at a faster rate than outlying suburban areas, reversing the trend over the previous decade in which suburbs grew at more than three times the rate of urban areas.**[17]

Central cities are also attracting a growing share of job creation and investment. **Nationally, since 2007, central city business districts have added jobs at an average rate of 1.2 percent annually, while peripheral suburban communities have yet to regain jobs lost during the recession.**[18] This reverses the trend during the pre-recession years, in which employment grew faster in suburban job markets than in central cities. Surveys of companies that have moved to downtown locations have said that their moves were necessary to attract and retain the best workers.[19]

Part of this employment growth in central cities is explained by companies deciding to locate near where their workers want to live. In recent years, many central cities have attracted increasing numbers of young, college educated professionals. Between 2000 and 2012, the number of college educated 25 to 34 year olds living in close-in urban neighborhoods grew by 15 percent.[20] These workers form the core of the creative class and play an increasingly prominent role in the economic competitiveness of cities.

Nationally, real estate prices have also begun to reflect the increasing urban growth. **Since 2000, single-family home prices in central city neighborhoods have grown 50 percent faster than comparable homes in suburban areas**, driven by an increase in demand, particularly among higher-income households, for urban amenities and shorter commute times.[21] Over the same period, the values of multifamily and office buildings in central cities have appreciated at twice the rate as their suburban counterparts, partly due to the disproportionate share of job growth occurring in central cities.[22]

Even as central cities are being revitalized, many suburban communities throughout the country continue to grow. A detailed analysis of urban growth by ZIP code found that the fastest growing areas are the country's densest and least dense neighborhoods. **Existing suburbs are experiencing the least growth, while central cities and newly built exurban communities expand.**[23]

San Antonio's Distinct Growth Pattern | Along with other regions in Texas, San Antonio is among the regions that have continued to see the expansion of its suburban and exurban communities. **The national**

trend of urban growth has not taken hold in San Antonio, which ranks among the fastest growing cities in America while remaining one of the country's most suburban metropolitan areas.

The number of jobs in San Antonio's downtown core has fallen by nearly 1 percent annually since 2007, while suburban areas have grown 2 percent per year.[24] Accordingly, San Antonio's central business district has the highest vacancy rate and lowest asking rents of the city's largest office submarkets, and in recent years, the majority of new office and multifamily buildings have been built in the city's northern suburbs, which also achieve the highest rents in the metropolitan area.[25]

Figure 2. Average Annual Employment Growth Rate in Downtown Cores and Peripheral Suburbs

	2002-2007		2007-2011	
	Core	Periphery	Core	Periphery
Austin	0.6%	3.1%	3.4%	2.3%
Charlotte	0.5%	1.9%	2.5%	-0.1%
US Average	0.1%	1.2%	1.2%	-0.1%
Dallas	0.8%	2.0%	0.5%	1.0%
Houston	-0.1%	2.0%	-0.1%	2.0%
San Antonio	-1.2%	2.0%	-0.9%	2.0%
Jacksonville	-1.0%	5.3%	-3.8%	-4.4%
Las Vegas	0.4%	5.6%	-5.1%	-2.6%

Source: City Observatory

San Antonio also has not attracted a critical mass of young knowledge workers to live in its downtown core. Only four percent of the region's college educated young professionals live in central city neighborhoods, which is well below the national average of 12.7 percent. Additionally, the share of college-educated young professionals living in downtown San Antonio fell between 2000 and 2012.[26]

Figure 3. Share of College-Educated 25 to 34 Year Olds Living in Central City Neighborhoods

	2000	2012	Growth
Austin	17.6%	15.3%	-13%
US Average	11.0%	12.7%	15%
Charlotte	8.4%	11.0%	30%
Raleigh	9.7%	10.1%	4%
Houston	5.7%	6.8%	18%
Dallas	3.6%	5.7%	57%
Jacksonville	4.2%	4.3%	1%
San Antonio	4.0%	3.7%	-6%
Las Vegas	4.4%	2.9%	-34%
Phoenix	1.8%	1.6%	-7%

Source: City Observatory

San Antonio accordingly ranks 44th among the country's 51 largest metropolitan areas in its share of workers that fall into Richard Florida's definition of the creative class and has seen slow growth in the number of creative class workers, ranking 46th in growth between 2000 and 2014.[27]

Fitch Ratings ranks San Antonio as the second most overvalued housing market in the country, behind only Austin, with home prices 19.8% higher than what would be expected based on the region's economic

fundamentals, including household incomes, unemployment and mortgage rates. By contrast, prices across the country are estimated to be only 1.4 percent overvalued.[28]

As the national urban growth pattern shifts toward slower suburban growth and increased urban growth, it is difficult to forecast growth in San Antonio. It is possible that San Antonio will continue to be an outlier with respect to growth trends reshaping other American cities. The region's largest job centers are located in established suburban neighborhoods along the city's loop highways, and most of the city's infrastructure and housing was built to serve those areas. However, **it is also possible that the same changes in preferences that have slowed suburban growth in other American cities may also influence growth in San Antonio over the next twenty years**. Given the increasingly important role that healthy central cities play in driving economic growth and competitiveness, it is possible that growth patterns San Antonio may begin to resemble the growth models adapted by other American cities.

Low-Density Communities Have Higher Costs and Long-Term Liabilities

For suburban annexation to be a net fiscal gain for the annexing city, revenue and population must outpace expenses. This can present a challenge for annexations that involve the addition of low-density neighborhoods.

When a city annexes areas that are less dense than its existing citywide average, it is likely to encounter higher marginal per capita costs. It is possible that the marginal cost of adding population in lower-density neighborhoods could be mitigated by spreading fixed costs of existing municipal services over the newly annexed areas. However, **the higher marginal cost of providing services to residents in lower-density neighborhoods may exceed the potential efficiencies gained through consolidation if those neighborhoods are less dense than the city as a whole**.

Upfront Infrastructure Costs | Lower population densities require municipalities to build more expansive infrastructure networks relative to what is needed to serve denser neighborhoods. **As a result, the per capita cost of providing infrastructure to low-density suburban neighborhoods is 38 to 50 percent higher than the cost of providing infrastructure for higher density infill growth.**[29]

An analysis by Robert Burchell found that low-density development requires more than 10 percent more lane miles as compared to denser, infill development. His analysis also found that low-density land use patterns have a similar effect on water and sewer systems. Low-density development requires 11 percent more water and sewer laterals than dense development.[30] In the City of San Antonio and Bexar County, these higher costs are passed on to residents who pay the costs of building and operating the San Antonio Water and Sewer utility.

Low-density development can also raise the per capita cost of point infrastructure like schools and municipal facilities. Since fewer residents live within the practical service area of municipal facilities, a greater number of facilities must be built to serve the same population. In a study of Rhode Island school costs, the Sierra Club found that infill development lowered the per pupil cost of school construction by 35 percent.[31] Similarly, a study by the Charlotte Department of Transportation found that a fire station in a low-density neighborhood serves one-quarter the number of households at four times the cost of an identical fire station in a compact neighborhood.[32]

Replacement & Maintenance Costs | As a result of annexation, cities commit not just to financing upfront capital and ongoing operating costs; they also commit to maintaining and replacing infrastructure and other capital assets in the future. As with upfront capital costs, it is more expensive to replace infrastructure in low-density neighborhoods than in denser communities. Cities that annex lower-density communities can end up dedicating a higher portion of their budget on a per capita basis to maintaining and replacing infrastructure in those communities.

Capital assets need to be replaced as they reach the end of their useful lives. The duration of useful lives vary widely. For example, the useful life of a major arterial roadway ranges from 15 to 18 years, while the lifespan of a minor arterial road ranges from 25 to 50 years. Fire trucks have a useful life of approximately 15 years.[33]

Additionally, the cost of operating and maintaining infrastructure grows over time as assets grow older.[34] These costs typically rise until the point at which it costs more to repair an asset than replace it.

Operating Costs | Low-density development patterns modestly increase the cost of providing services on a per capita basis, particularly in labor-intensive services like public safety and sanitation. A study conducted by Smart Growth America found that infill development patterns can save municipalities an average of 10 percent on the cost of public services, including police, EMS and fire service.[35] A separate analysis by Robert Burchell found a similar cost premium for suburban areas. His research shows that municipal operating costs in conventional suburban development are $2,267 per resident and $120 per employee while operating costs in denser, infill development are $2,203 per resident and $117 per employee.[36] A National Resources Defense Council study of 10 water and wastewater systems in the Chicago and Cleveland metropolitan areas found that operating costs as much as double as density decreases.[37]

Findings

As part of its Annexation 360 Program, the City of San Antonio has conducted a preliminary assessment of the 360 Program's impact on the City's future financial position. The City shared its multi-year financial analysis for the proposed first phase of the 360 Program with HR&A and Tech Bloc. The assessment estimates the cumulative net operating impact of annexing each of the three phase one areas over a 20 year period. To estimate revenue, the City projects the incremental property tax, sales tax, CPS, SAWS and other miscellaneous revenue it would capture as a result of annexing these areas, as well as revenue generated by future population growth and development. The analysis excludes revenue the City already collects from residents and businesses in these areas. It also estimates the annual operating expenses required to provide these areas with police, fire, emergency services, road maintenance and other services at levels comparable existing levels of service elsewhere in San Antonio.

After analyzing the model, HR&A believes that its structure is generally appropriate, but that there are several limitations in its approach. We have also identified areas where the underlying assumptions may result in overly optimistic projections of the 360 Program's fiscal impact. The City appropriately examines only incremental revenue and expenses that it would not collect (or incur) but for the proposed annexations. Examining the fiscal impact of annexation over a 20 year period is a reasonable and appropriate study period. It also conservatively uses the average costs of providing services to newly annexed areas rather than the potentially lower marginal per capita cost of extending the City's existing infrastructure to serve the annexed areas. Additionally, the City clearly sets forth the data on which most assumptions are based, which allows for informed discussion of those assumptions and fiscal analysis.

Our concerns fall into three areas:

- **Infrastructure and operating costs where assumptions may underestimate costs;**
- **Revenue and growth where assumptions and the structure of the model may overestimate the revenue; and**
- **Model structure where the value of net revenue is likely to be overestimated and the downside risk is not presented.**

The concerns raised are areas that we believe the City and the Annexation Workgroup should consider when making adjustments to the fiscal assessment.

Infrastructure and Operating Costs

Initial Infrastructure Investments | The Annexation 360 Program will increase the City's long-term liabilities, particularly in terms of expanding and replacing capital assets. The City acknowledges that annexation will result in future capital needs, but outside of the need for additional fire stations, which the City assumes will be paid for on a pay-as-you-go basis rather than through debt financing, the City has said in the technical memorandum for its fiscal impact assessment that it will assess these needs during the three-year limited-purpose annexation period. **Producing a fiscal assessment without including the initial infrastructure investments underestimates the upfront costs of annexation and can distort the fiscal assessment.** It makes it difficult to determine when an annexation will achieve a net positive fiscal impact. It is worth noting that the City will likely avoid many of the upfront costs of building infrastructure to serve suburban neighborhoods since many of the areas proposed to be annexed are already developed.

Replacement Infrastructure | The City will also be responsible for replacing the existing infrastructure in areas it is proposing to annex—a cost that is not reflected in its financial analysis. **These needs would need to be added to the City's future capital plans and potentially could divert attention and funding from other capital needs.**

An estimate of the condition and remaining useful life of existing infrastructure and the cost of replacing these assets would help to determine how much of the property tax revenue will be dedicated to future capital needs. The City's fiscal impact assessment projects the incremental property tax revenue dedicated to debt service and notes that these funds could finance future improvements. Since the future capital needs are not identified, it is unclear what portion of the debt service component of property tax revenue will need to be dedicated.

Average vs. Marginal Operating Costs | The literature review suggests that the per capita costs of serving low-density neighborhoods is generally higher than the costs of serving more densely developed neighborhoods. The City's fiscal analysis relies on historical average per capita costs to estimate operating costs for the proposed annexation areas. This assumes that the cost of providing municipal services to the areas under consideration for annexation are equal to citywide averages, even though two of the three territories being considered for annexation are less dense than the city as a whole. The assessment's calculation for street maintenance costs, for example, assumes that the annexed communities have the same population density as the existing city. While it is possible that annexation could lower the cost of delivering municipal services to these areas, the cost of providing services to the lower density annexation areas may be more expensive on a per capita basis than the citywide average.

A more conservative assumption would be to use the City's average costs in territories of equal density (IH-10 East) and a slightly higher per capita operating cost for lower-density territories (IH-10 West and 281 North).

Higher Labor Costs | A second area of concern is that the cost of labor-intensive services like public safety tend to be higher in low-density suburban areas. This trend may already be occurring in San Antonio. Public safety costs, which account for half of the City's expense budget (excluding debt service), have grown an average annual rate of 6 percent since 2003, faster than the rate of population growth and the overall growth in the City's operating budget.[38]

While the City's analysis of the cost of hiring additional police officers accounts for higher growth rates in the early years of the financial analysis, it reverts to a lower rate in the outer years of the assessment. For fire and emergency services, the assessment uses a flat rate that is less than the long-term public safety expense growth rate. The City is currently negotiating a new collective bargaining agreement with its uniformed police officers. The outcome of these negotiations will affect the cost of providing police services to the newly annexed areas.

Revenue and Growth

Historic vs. National Growth Pattern |The City derives its revenue assumptions from several sources. Property tax growth is based on current median property values within the annexation areas, while annual property tax growth rates come from the City's Debt Plan. Its projections about population growth and the pace of new development in the annexation areas come from the Planning and Community Development department, which it derives its estimates based on filed master development plans. Other assumptions are drawn from existing citywide averages or recent growth rates.

All of these inputs assume that San Antonio will grow over the next 20 years in the same manner that it has grown in the recent past. San Antonio, however, is an outlier with respect to demographic and economic growth trends that are reshaping metropolitan areas across the country. Given these shifts, it is less certain that San Antonio's historical growth patterns can be used to project the City's future growth. While there are significant structural reasons why this growth pattern may continue, it is possible that residential and commercial development patterns may slow or change in the near future. **The fiscal assessment does not consider the possibility that residential and commercial development growth in San Antonio will slow down.**

Pace of Revenue Growth | **The fiscal analysis projects that revenue will grow faster than expenses over the next 20 years.** While this may be true in some areas of the City's budget, it has not been the case in recent years. Since 2008, current year expenses, excluding capital outlays but including debt service, have grown at an average rate of 2.9 percent per year, while revenues have grown at only 2.4 percent annually.[39]

Annexation Growth Bump | **The City has assumed that revenue, property values and population in the annexed areas will grow rapidly in the years following annexation** before returning to a more conservative long-range growth rate. The impact of these high growth rates in the early years of the assessment compound over the assessment's 20 year time horizon. It is unclear on what factors the City has based the assumption of higher upfront growth.

CPS and SAWS Revenue | In its fiscal assessment, the City includes the incremental CPS and SAWS revenue paid by new households and businesses in the annexation areas. It is our understanding that the City would capture this revenue regardless of annexation. If this understanding is correct then CPS and SAWS revenue should not be included in the fiscal impact assessment as it is not a result of the annexation decision and does not represent a net change.

CPS and SAWS revenue totals $79 million over the 20 year study period, with the majority accruing in the later years of the assessment. While we have included this revenue in our analysis, to avoid overshadowing other changes to the fiscal impact assessment, the City and the Annexation Workgroup should consider whether incremental CPS and SAWS revenue should be included in the fiscal assessment.

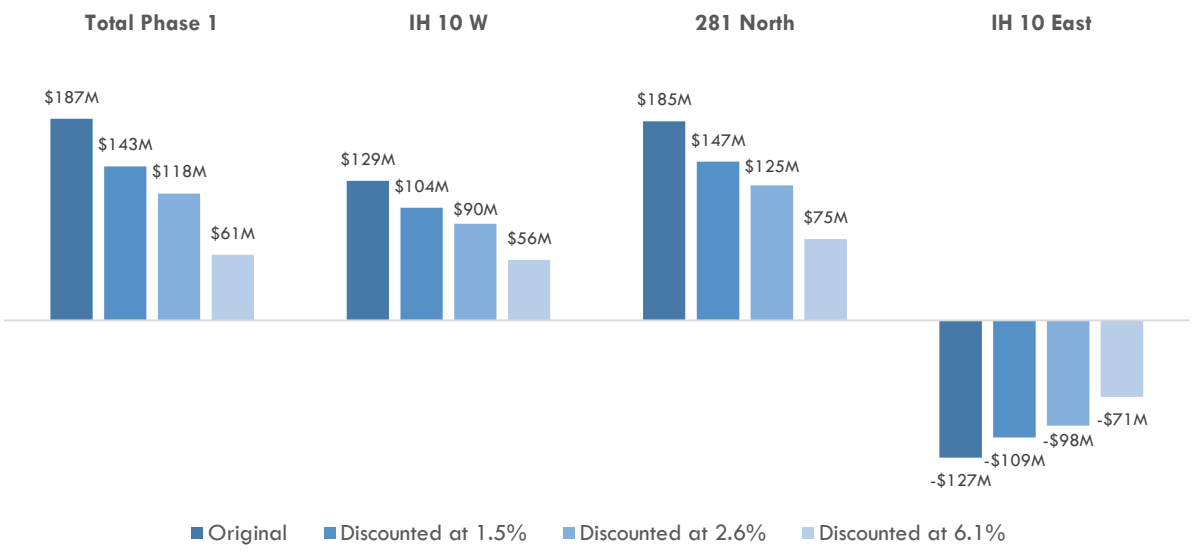
Model Structure

Two additional aspects of the assessment's structure represent important limitations: the use of nominal dollars and the use of a single scenario. While these limitation are separate from the concerns we raised about costs and revenue, they are fundamental to how the City evaluates annexations.

Time Value of Money | As discussed earlier, annexation is an investment in which a city chooses to incur short term losses in anticipation of long-term benefits. While the short-term costs of annexation to the annexing city are relatively certain, the long-term gains are more speculative.

Even though government accounting standards typically present nominal rather than discounted cash flows, this fiscal approach to annexation more closely resembles the creation of a tax-increment financing district than spending on a public good. The City's financial analysis reflects this distinction: the City is primarily evaluating the 360 Program on fiscal grounds, which suggests it should evaluate it as if it were an investment rather than a public good. As such, **the City's analysis should consider the time value of money in its analysis**. Additionally, since the City uses a 20 year horizon, using nominal figures treats a dollar in year 20 the same a dollar in year 1. The use of nominal dollars does not incorporate the tradeoff of losses in early years followed by gains in later years. It also does not factor in inflation or the risk of projecting future growth.

Figure 4. Total Net Operating Balance by Area through Year 20, Before and After Accounting for the Time Value of Money



In Figure 4, above, we modeled the City's base case from its fiscal impact assessment using three different discount rates. The first reflects the long-term inflation rate. The second rate is based on Bloomberg's 20 year municipal bond index as of January 7, 2016, which reflects the risk of AAA-rated municipal investments—the City of San Antonio's current bond rating and the rate we view as most appropriate. The third rate is the average cap rate for multifamily apartments at end of the third quarter of 2015, as calculated by Reis, which treats the annexations as if they were real estate investments and requires a higher rate of return reflecting the greater risk of real estate investment.

Discounting the projected 20 year operating impact of the first phase of the 360 program at 2.6 percent would reduce the present value from $187 million to $18 million, a decrease of 37 percent. While accounting for the time value of money does not swing any of the areas from positive to negative results, it suggests that the fiscal impacts in many areas may be less substantial than it would appear using nominal figures. **In particular, it illustrates that most of the fiscal benefits of annexation occur in the later years of the study period.**

Alternative Scenarios | The City's fiscal impact assessment presents a single scenario without providing information about how other potential population growth patterns would impact the fiscal assessment. The City's analysis of the proposed first phase of the 360 Program found that annexation would generate net operating surplus of $187 million. In its fiscal impact assessment, the City anticipates that these areas will operate at a deficit totaling $44 million for the first two years following annexation before turning positive for the remaining years under consideration.[40] The City also projects that the IH 10 East region will be net negative for the full 20 year period, but the gains from the other two areas, IH 10 West and 281 North, will more than offset the projected deficits generated by the IH 10 East.

Presenting a single scenario fails to reflect the range of possible fiscal impacts of annexation. By contrast, studying multiple scenarios provides a more complete representation of the potential upside and downside

of each annexation. A stress test of the key variables can also help the City gauge the likelihood of a downside scenario.

To facilitate further discussion of these risks, we developed three alternatives to the City's base case scenario guided by the areas of concerns identified in our review of the City's assessment. Each alternative makes adjustments to the assessment's base assumptions to reflect potential downside scenarios. All of the cash flows are discounted over time using Bloomberg 20 year municipal bond index rate of 2.6 percent. In all cases, uniformed personnel costs are unchanged through 2025. Unless otherwise noted, all figures are presented as present values calculated using a discount rate of 2.6%

While the City's base case assessment shows that the first phase of the 360 Program is net positive, adjusting the assessment to use more conservative assumptions significantly reduces the long-term fiscal impact of annexation and in some cases pushes it into the negative.

Scenario 1: Revenue and Expenses Grow at the Same Rate

This scenario retains the City's assumptions about population growth and the pace of development and adjusts all **revenue sources and operating costs to grow at 2.5 percent** instead of revenue growing faster than costs as assumed in the base case scenario. The City's assumptions about the pace of new development remain unchanged.

The slower pace of revenue growth causes a modest change in the fiscal impact, reducing the cumulative operating surplus from $117 million to $63 million – a decrease of 46 percent from the base case scenario. **This scenario begins to show how small changes in assumptions about revenue growth can negatively affect the accretive nature of annexation**. Changing these assumptions does not change the length of the projected deficit.

Scenario 2: Slower Growth and Higher Costs

This scenario tests what would happen if operating and maintenance costs prove to be higher than citywide averages as a result of the annexed areas' low-density development pattern. It also examines what would happen if demand for real estate in the annexed areas prove to be slower than expected. **In this scenario, the growth rate of operating and infrastructure maintenance costs is 10 percent higher than expected, and population, development and revenue grow at half their assumed long-term rates**. For example, in this scenario, the long term growth in roads and traffic signal operating costs is increased from 2.5 percent to 2.75 percent, while the long-term growth of property tax revenue falls from 3 percent annually to 1.5 percent.

This scenario begins to show circumstances in which the 360 Program would have a net negative fiscal impact. While the IH 10 West and the 281 North corridors remain positive, annexation is slightly better than a break even proposition in these areas. The cumulative impact of the IH 10 West area falls 85 percent to $13 million, while 281 North falls 51 percent to $60 million. After adding in the IH 10 East area, which is now projected to accumulate a deficit of $186 million—96 percent higher than forecasted—the phase one annexation proposal would be a net loss for the City, representing a total shortfall of $113 million. In this scenario, the IH 10 West and 281 North areas do not produce positive net revenue until 2020, though the losses in the IH 10 East area continue to exceed their net revenue throughout the time period of the fiscal impact assessment. As a result, the entire phase 1 area does not generate a surplus in any year of the assessment.

This demonstrates that changes to the assessment's projections about revenue and population growth have far greater influence on the fiscal impact of annexation than changes to the cost projections.

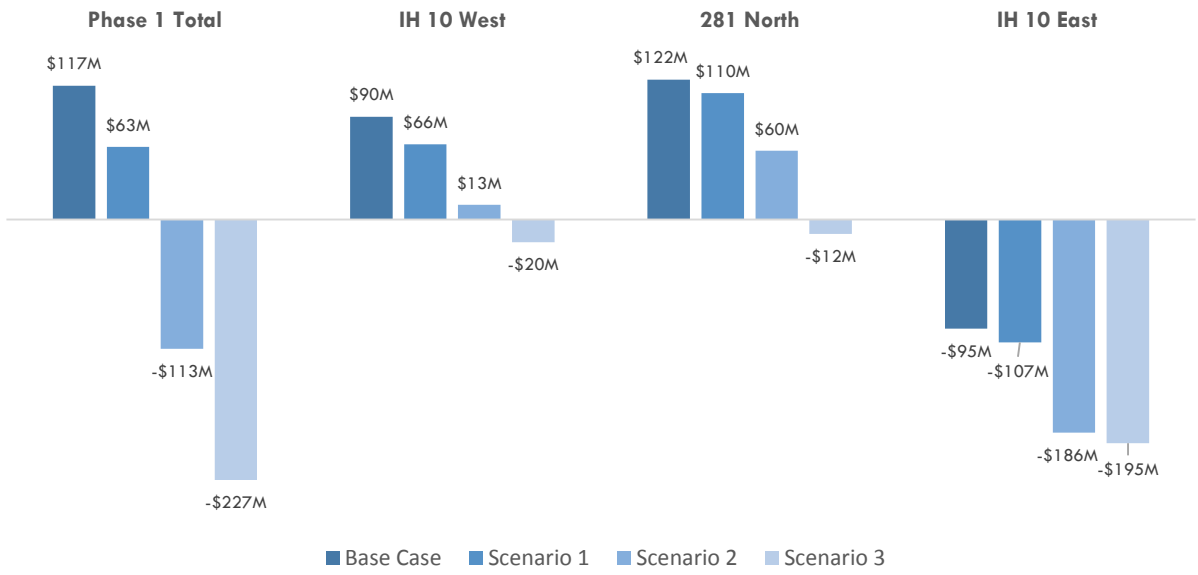
Scenario 3: Population Decline plus Rapid Expense Growth

This scenario tests an extreme, and unlikely, case that illustrates the circumstances under which all three areas annexed in Phase 1 would have a negative fiscal impact. In this scenario, operating costs grow at 5 percent annually, infrastructure maintenance costs are 10 percent higher per lane mile, population grows at 1 percent for five years and then declines at 0.1 percent annually, and revenue, property values and development grow at 1 percent annually.

The most pessimistic scenario modeled, this shows how **high expense growth and declining population lead to a significantly negative fiscal impact.**

In this scenario, the cumulative net operating loss amounts to $227 million. The IH 10 West and 281 North areas begin to generate a surplus in 2020, but the slow population decline eventually leads to operating deficits in later years. IH 10 West turns negative in 2026, while 281 North turns negative in 2030. IH 10 East remains negative in every year, and its losses exceed the early gains in the other areas. As with scenario 2, the entire phase 1 area does not generate a surplus in any year of the assessment.

Figure 5. Total Net Operating Impact by Annexation Area through Year 20, Base Case and Alternative Scenarios



HR&A also stress tested the growth assumptions for revenue, population and development growth. We selected these categories because our analysis showed that the assessment was most sensitive to changes in revenue and population and our assumption that these factors are strongly correlated.

In the stress test, we calculated how far the growth rates would have to fall for the net present value of each annexation area to reach a breakeven point. The City's base case scenario assumes that revenue will grow at a long-term rate of 2.8 to 3 percent annually with similar rates of population growth and development, with the exception of the IH 10 East area, which is expected to see little additional development.

Under our stress test, we determined that **growth rates would have to change significantly for each area to break even**. For IH 10 West, revenue would have to grow at 0.8 percent annually, or 72 percent slower than expected. For 281 North, it would have to decline at a rate of -0.1 percent annually, roughly 103 percent slower than expected. For IH 10 East, it would have to grow between 5.2 and 5.7 percent

annually, depending on the type of revenue, approximately 90 percent higher than current estimates. The population and the pace of new development in each area would have to change at similar rates, as well.

Recommendations

After reviewing the City's fiscal assessment, HR&A has identified several recommendations for the Annexation Workgroup to consider as it evaluates the first phase of the Annexation 360 Program.

Consider developing a strategic growth framework to evaluate potential annexations. A fiscal assessment is an important tool for considering whether to annex a particular territory, but that alone is not sufficient to make annexation decisions. Cities choose to make investments and take on risks—including annexations—when they are consistent with their long-term vision for the future. San Antonio's annexation policy should be part of a broader strategy for the future of the city and its long-range competitiveness.

Annexation presents a series of risks and opportunity costs. In the short term, the 360 Program will almost certainly generate a deficit in the years following annexation. In these early years, the City will make the choice to invest in the annexation areas as opposed to other public projects. Taxpayers will ultimately foot the bill for annexation until the areas begin generating a surplus.

In the long term, annexation can change the nature of a city. Over the past 70 years, the continued use of annexation has transformed San Antonio from a moderately dense regional city into one of the nation's most suburban cities. While annexation has allowed the City of San Antonio to capture nearly all of the incremental tax revenue generated by its region's rapid growth, it has also fundamentally changed the City's political culture and economic geography. Further expanding the City through annexation will have implications for the City's economic competitiveness in the decades to come. It is possible that San Antonio will continue to follow its current path. However, it is also possible that the same changes in preferences that have slowed suburban growth in other American cities may also influence growth in San Antonio over the next twenty years.

The investments associated with annexation might be beneficial for both to the City's operating budget and its residents, but the City should make decisions about whether to pursue annexation as part of a broader plan for what it sees as the future of San Antonio.

1) *We recommend that the City develop a framework to evaluate annexations in the context of a broader strategy for San Antonio's long-term economic competitiveness.*

Study a range of potential scenarios that reflect different future conditions. The City's fiscal assessment focuses on one scenario based on historical average costs and projected development patterns that conform to San Antonio's historical growth patterns. An assessment that considers multiple scenarios, including alternative assumptions about population growth and future costs, would provide a more informative fiscal impact assessment.

2) *We recommend that City consider multiple scenarios involving revenue and population growth, including rates that are below San Antonio's historic average and in-line with the growth patterns occurring in other American cities.*

3) *We recommend that City consider calculating the level of revenue growth rates for each area at which annexation is a break-even proposition.*

4) *We recommend that the City consider identifying peer city-regions in Texas and nationally to benchmark its assumptions about growth.*

Consider the use of more conservative assumptions about revenue and expenses. The City's fiscal assessment might overstate the fiscal impact of annexation by underestimating upfront and operating costs, overestimating revenue and growth, assuming that revenue grows faster in the early years of the assessment, and neglecting to account for the time value of money.

To produce a more accurate projection of the fiscal impact of annexation, we recommend that the Annexation Workgroup consider the impact on the assessment of the following changes:

5) *Higher than average operating expenses in the IH-10 West and 281 North areas, which are less dense than the citywide average. This is to reflect the possibility that higher marginal per capita costs of maintaining infrastructure and providing services to low density suburban or exurban neighborhoods will exceed the efficiencies from adding residents to the City's existing system.*

6) *Expenses and revenue that grow at similar rates, rather than assuming that revenue will exceed expense in perpetuity.*

7) *Not assuming that revenue will grow faster in the years immediately following annexation, without strong data to support this assumption.*

8) *The possibility that public safety expenses will continue to grow at historic rates.*

9) *The impact of removing incremental CPS and SAWS revenue from the assessment.*

10) *Discounting future cash flows to account for the time value of money. Since the City is primarily evaluating the annexations on fiscal grounds, we recommend that the City consider evaluating those decisions as if they were investments rather than public goods.*

Consider estimating initial and future capital needs and including them in the fiscal assessment. In its current analysis, the City has not identified most of the future capital needs that may arise from its proposed annexations. Given the importance of investing in and maintaining the infrastructure for the competitiveness of San Antonio, these costs should be established and included in the fiscal assessment.

11) *The City should consider identifying new capital needs required to support development in the annexed areas, estimate the condition and remaining useful life of existing infrastructure, and project the timing and cost of building or replacing these assets.*

End Notes

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