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Fiscal Impact Analysis of Lansing Charter Township TIF Development Plan

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Executive Summary

PURPOSE OF THE STUDY

Anderson Economic Group was commissioned by the Charter Township of Lansing DDA to complete an independent fiscal impact study of the development plan supported by tax-increment financing ("TIF"), which was adopted by the Charter Township DDA in 2003.

Project Team. The analysis was conducted by Patrick L. Anderson, Principal of Anderson Economic Group and an expert in regional economics; and Ilhan K. Geckil, an Economist for the firm with experience in conducting fiscal and economic impact analyses.

The credentials of this project team are described in "About the Project Team" on page 16; a reference list including publications authored by members of this team are in "Other References on Fiscal and Economic Impact" on page 14.

TIF Plans Defined. A TIF plan "captures" a portion of tax revenue on newly-developed buildings and property in a specific district, and uses the revenue to finance improvements. TIF plans do not affect the tax revenue on existing property at its existing value, but do capture revenue from any *increase* in that value. Improvements financed by the captured tax revenue—such as roads, streetscape, new public buildings, and other improvements—encourage further development. One objective of TIF development plans is to encourage enough new development that the resulting additional tax revenue exceeds the cost of the TIF improvements. A TIF development plan may also encourage development in the area surrounding the TIF district, although no TIF revenue is captured from such property.

The TIF plan and related assumptions are described in "Municipal Finance Assumptions" on page 11.

Net Fiscal Impact of TIF Plan. Should the TIF plan be executed over the next two decades as adopted, some tax revenue that would otherwise have gone to local governments would be captured and used for planned investments. The DDA expects these investments to make the area more attractive, and encourage development and growth that would be much greater than if no TIF-financed developments occurred.

The key question answered in this study is whether the resulting development in the Lansing Township DDA and surrounding areas will be sufficient to provide *more* tax revenue to local governments in the area than they would have received without the TIF development plan. To answer this question, we estimated the *net fiscal impact* of the TIF development plan, meaning the change in tax revenues that would accrue to local governments, net of the captured TIF revenue, under the plan.

METHODOLOGY RECAP

Our fiscal impact methodology includes the following steps:

1. Model the adopted TIF plan, including the capture rates, current tax base, and millage rates; as well as the planned expenditures from the TIF funds and the duration of

the plan. Baseline data used in the model, such as tax base and millage rates, were reviewed by the Charter Township for accuracy.

2. Project the tax revenue under these baseline assumptions, and compare them with the projections incorporated in the TIF plan.
3. Project tax base growth under two scenarios: the "go" scenario in which the TIF plan is executed, tax revenue captured, and improvements made; and the "no go" scenario, in which the TIF plan is abandoned.
4. The two scenarios were based on an outline of expected development within the DDA prepared by Vandewalle & Associates; on the planned expenditures by the DDA on streetscape improvements and other amenities; and on Anderson Economic Group projections for residential, nonresidential, and commercial and industrial development in the DDA and surrounding areas. Note that we projected growth in the tax base under both scenarios.
5. Estimate the tax revenue that would accrue to local governments under both the "go" and "no go" scenario. The tax revenue projected is net of TIF capture, to provide a true estimate of the benefits to local governments of development in the area. These projections were calculated using a multi-period fiscal impact simulation model. Such models have been developed by Anderson Economic Group and used to estimate fiscal and economic impacts for numerous projects.
6. Compare the tax revenue between the two scenarios, to arrive at the *net fiscal impact.*

See "Fiscal Impact Methodology" on page 13 for a more complete description; see also "Exhibits" on page 18 for the schematics of the model, and data tables.

CONSERVATIVE METHODOLOGY AND ASSUMPTIONS

Anderson Economic Group insists on a fiscal and economic impact methodology that is rigorous, defined, and conservative. We have previously critiqued "impact" analyses that have not followed such a methodology, and have published the results of analyses following a rigorous methodology.[1]

This analysis is quite conservative, as evidenced by the following assumptions:

- We insist on a specific, conservative, and realistic definition of "impact." We define "net fiscal impact" by including only *bona fide,* new, tax revenue or reduced government expenditures. In particular, to arrive at our total net fiscal impact figure, we subtract out TIF-captured revenue.

1. See, e.g., *Preliminary Analysis of West Coast Port Shutdown, (2003); Economic and Fiscal Impact of a Casino in Wayland Township (2003); Fiscal Analysis of the "Link Michigan" Proposal (2002); and Economic and Fiscal Impact of Expansion of the Detroit-Wayne County Port (2001); all available in the Anderson Economic Group website.*

In addition, Patrick L. Anderson, *Business Economics and Finance,* (CRC Press, forthcoming 2004) contains an extensive discussion of proper methodology, and examples of poorly performed and undocumented analyses.

We cite a number of other studies in "Other References on Fiscal and Economic Impact" on page 14.

- The growth assumptions under the TIF development scenario are based on reasonable projections from three parties: the DDA-prepared TIF plan, a memorandum provided by Vandewalle & Associates outlining specific areas and types of development, and projections from Anderson Economic Group. Note that these assumptions include growth in both the "go" and "no go" scenarios. Faster growth under the TIF-plan scenario is reasonable, given the extensive improvements that will be created in the area and funded by the TIF revenue.
- The assumptions about growth in the DDA and just outside the DDA are explicit and reasonable. There are no hidden "multipliers" or other factors that result in exaggerated benefits.

A methodological description, schematic diagrams of the model, and tables of the base data used are included in the methodological appendix. See Table 7, "Fiscal Impact Model Input Data," on page 25; Figure 6, "Fiscal Impact Model Schematic," on page 26; and Figure 7, "Property Tax Base, Development Schematic," on page 27.

LIMITS TO SCOPE

While this analysis provides a focused analysis of an important topic, it does not address certain other issues that members of the greater Lansing area should also consider. These include:

- The specific development opportunities on individual plots of land, or the specific types of retail and commercial development.
- Other likely benefits of well-planned development on the community and the lives of its residents, such as nearby amenities, improved streetscapes, beautification of poorly-used land, environmental remediation, and improved job opportunities.
- The costs and benefits of the additional commercial and residential activity in the area. As this is a fiscal impact analysis, not a full economic impact analysis, we did not quantify the benefits of additional jobs, income, and tax revenue (other than property tax revenue) that increased development would imply.
- Tax revenue and costs other than those explicitly modeled here. In particular, we recognize that some government services will be primarily paid for by user charges or dedicated taxes; both the revenue and costs are excluded from this analysis.

See "Limits to Scope" on page 13.

NET BENEFITS

Using the methodology described in the report, and the conservative assumptions outlined above, we projected the stream of tax revenue that the local units of government could expect under the two scenarios. These projections include the revenue from Lansing Township (including the DDA), and an area immediately surrounding the DDA that extends into other areas of Ingham County.

The projections are not discounted for the time value of money, and are net of the TIF-captured revenue that would be expended on public improvements in the DDA. We present the results in the following tables:

Table 1, "TIF Development Plan Scenario, 2004-2033," describes the cumulative net tax revenue that would accrue to local governments, should the TIF plan be imple-

mented, public improvements made, and the resulting development proceeded as described in our assumptions.

TABLE 1. TIF Development Plan Scenario, 2004-2033

	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library
Tax Rates (Millages)	7.7500	8.6011	3.8544	1.4600
DDA Capture	80%	80%	80%	80%
Tax Revenue to Local Jurisdictions from Lansing Township Property	$12,367,756	$13,725,975	$6,151,004	$2,329,926
Additional Tax Revenue to Local Jurisdictions, Due to Development outside DDA with TIF	$9,061,200	$13,370,015	$7,476,461	$2,831,993
Total Net Tax Revenue	**$21,428,956**	**$27,095,990**	**$13,627,465**	**$5,161,918**

Sources: Development and Tax Increment Financing Plan, Charter Township of Lansing; Anderson Economic Group
Analysis: Anderson Economic Group

Table 2, "Abandon TIF Development Scenario, 2004-2033," describes the same variables assuming that the TIF plan was abandoned at the beginning of 2004, and no public improvements financed by the TIF revenue were made. Note that this scenario does assume development in the area, but at a slower rate, and without the improvements in intensity and amenities that the TIF plan would allow.

TABLE 2. Abandon TIF Development Scenario, 2004-2033

	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library
Tax Rates (Millages)	7.7500	8.6011	3.8544	1.4600
DDA Capture	0%	0%	0%	0%
Tax Revenue to Local Jurisdictions from Lansing Township Property	$14,491,100	$16,082,503	$7,207,032	$2,729,936
Additional Tax Revenue to Local Jurisdictions, Due to Development outside DDA without TIF	$826,846	$1,816,046	$1,216,420	$460,765
Total Net Tax Revenue	**$15,317,946**	**$17,898,550**	**$8,423,452**	**$3,190,701**

Sources: Development and Tax Increment Financing Plan, Charter Township of Lansing; Anderson Economic Group
Analysis: Anderson Economic Group

Table 3, "Difference in Projected Net Tax Revenue, 2004-2033," summarizes the difference between the two scenarios, in terms of net tax revenue (non-discounted for time) over the 30-year period.

TABLE 3. Difference in Projected Net Tax Revenue, 2004-2033

	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library	Sum
Local Net Tax Revenue, with TIF Development Plan	$21,428,956	$27,095,990	$13,627,465	$5,161,918	$67,314,330
Local Net Tax Revenue, without TIF Development Plan	$15,317,946	$17,898,550	$8,423,452	$3,190,701	$44,830,649
Total Net Benefit	**$6,111,010**	**$9,197,441**	**$5,204,013**	**$1,971,217**	**$22,438,681**

Source & Analysis: Anderson Economic Group

COMPARISON WITH DDA PLAN

The focus of our investigation was not a reconstruction of the TIF plan. However, for comparison purposes we summarize the key differences between our analysis and the TIF plan document below.

There are differences in the focus of our analysis and the TIF plan, including:

1. The TIF plan was designed to meet the legal requirements for TIFs, and therefore only considered the tax revenue and capture in the DDA itself. By contrast, our analysis considered the fiscal impact on the local jurisdictions, including the fiscal impact from increased tax revenue on new development outside the DDA.
2. The TIF plan included three scenarios, all with steady growth rates. By contrast, having the benefit of knowledge of construction activity and plans in 2003 and part of 2004, we were more specific about the tax base in those years. We more carefully specify both real and nominal growth rates, as well as specific types of development investment.
3. The TIF plan started in 2003. We assume that the 2003 TIF capture already occurred, and analyzed the scenarios from 2004 forward. This is implied by the titles of our two scenarios: "implement TIF development plan," and "abandon TIF development plan."

Table 4, "Projected DDA Tax Revenue Capture," on page 9 reports the total tax revenue that we project the DDA will capture under our assumptions, and under the 5% scenario included in the TIF Development Plan. The AEG projections for captured revenue are somewhat smaller than those from the TIF plan's 5% scenario, although they are larger than the TIF plan's 2.5% scenario. This is consistent with our growth projections, which fall, in aggregate, between these two assumptions.

Note that, in each case, the TIF revenue exceeds the planned expenditures by the DDA on improvements. This would allow for an earlier end to the TIF plan, and increased revenue to the local units of government. However, as with other conservative assumptions in this analysis, we have not reduced the net tax captured to account for this.

TABLE 4. Projected DDA Tax Revenue Capture

	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library	Total
DDA Plan (5% Real Annual Growth Case)	$31,646,160	$33,542,480	$15,816,138	$5,161,387	$86,166,164
Anderson Economic Group Calculation (3% Real Annual Growth + 1.5% Annual Inflation Rate)	$23,886,554	$26,509,760	$11,879,785	$4,499,919	$66,776,017

Sources: Development and Tax Increment Financing Plan, Charter Township of Lansing; Anderson Economic Group Analysis: Anderson Economic Group

PRECISION OF ESTIMATES

The purpose of the report was to assess the difference in the likely tax revenue that would accrue to local governments over a 30-year time period, using two scenarios. While our methodology accomplishes this, we note that it is not intended to predict property tax revenue for any individual municipality during any specific year. It is the overall, long-term trend in tax base that determines the net tax revenue over time.

We believe our projections are, given available information, a reliable indicator of this. However, we note that our assumptions (such as steady growth rates and constant millage rates) do not take into account changes in government policy or tax rates, nor individual timing of investment decisions, nor changes in the economy and demography of the area.

OUTLINE OF THIS REPORT

This executive summary includes a recap of the methodology used, and a summary of the findings. The rest of the report includes an explanation of the methodology, a description of the data sources, data tables, schematic diagrams of the model used, reference sources on fiscal impact studies, and a description of the background and credentials of the report authors.

EXHIBITS

The following exhibits summarize the methodology, assumptions, and results of the analysis.

1. The fiscal impact projections table and figures are in the following tables:
   - Table 5, “Fiscal Impact Model Output - TIF Development Plan,” on page 18; and
   - Table 6, “Fiscal Impact Model Output - Abandon TIF Development Plan,” on page 19.

   These tables show, for each year, the projected net tax revenue for each municipality under both scenarios.
2. We illustrate the analysis with the following figures:
   - Figure 1, “Comparison of Total Tax Base: Development with TIF Plan v. Development without TIF Plan,” on page 20. Note that the tax base (in Lansing Township) under both scenarios starts from the same 2003 base, but grows faster under the TIF development plan scenario.

- Figure 2, "Annual Net Tax Revenue, Development with TIF v. Development without TIF, 2004-2033," on page 21, illustrates the path of net tax revenue under each scenario.
- Figure 3, "Comparison of Net Tax Revenue (TIF Plan Less Non-TIF Plan)," on page 22, shows how the net tax revenue under the abandon-TIF scenario is somewhat higher in the early years, and then becomes smaller as the benefits of the increased development are seen.
- Figure 4, "Total Net Tax Revenue Over the Next 30 Years," on page 23, shows the total net tax revenue for each municipality, and the net benefit they receive from the TIF development plan. We anticipate that Ingham County will receive the largest net benefit because it has the combination of the largest area surrounding the DDA will be positively influenced by increased development, and also the highest millage rate.
- Figure 5, "Comparison of Total Tax Base, 2003-2063 (Hypothetical): Development with TIF Plan v. Development without TIF Plan," on page 24, shows a 60-year projection, under a hypothetical assumption that after the TIF plan is completed, property values grow at the same slow rate under either scenario. This figure illustrates the benefits of having the development occur during the next 30 years, even though it must be supported by captured tax revenue. After the TIF plan is completed, and indefinitely thereafter, the entire development is taxed by all jurisdictions.

3. The base data used in the model is shown in Table 7, "Fiscal Impact Model Input Data," on page 25, in the Appendix.
4. The fiscal impact model is illustrated by schematic diagrams in Figure 6 on page 26 and Figure 7 on page 27 in the Appendix. These diagrams illustrate, in flow-chart fashion, how variables describing the project itself are then used to estimate costs, as well as benefits to the community. In addition to this simulation model, we also used a simpler spreadsheet calculation model to project future revenue.

CONCLUSION

Our analysis indicates that, using conservative assumptions and counting only *net* tax revenue, the TIF development plan is likely to generate *increased* tax revenue for the local municipalities over the next 30 years. The reasons for this increase are clear; the attractiveness of the DDA's development area has already been proven. We anticipate future development both within and outside the DDA will occur much faster over the next ten years with a TIF-supported program of streetscape and amenity improvements.

While there are risks to our forecast, they are relatively low. The development is already proven; the attraction of the area to out-of-Lansing visitors has already been demonstrated; the alternative uses of the property in question include a number of unattractive and tax-base-depressing uses. Therefore, we conclude that it is highly likely that the overall benefits of the plan will be positive, and that the financing of the improvements by a TIF plan would result in increased tax revenue that more than compensates for the cost of the improvements.

Municipal Finance Assumptions

TIF PLAN OUTLINE

Our analysis relied upon the following assumptions:

1. **Tax Base.** Initial real property value in the DDA was $24 million in 2002 and $43 million in 2003; the initial personal property value in the DDA was $3.5 million in 2002 and $8.3 million in 2003.
2. **DDA Development Scenarios.** We assumed real property value increasing due to development in the DDA by $5 million annually for the first ten years. In addition, we forecast baseline real growth (before inflation) in real property (buildings and land) by 3.0% annually over the next 30 years. Additionally, we assumed personal property value increasing by slightly less than $1 million annually in the first ten years, in addition to baseline real growth of 0.6% annually over the next 30 years. This front-loaded schedule of new construction is consistent with the planned improvements over the initial years.

   Under the abandon-TIF scenario, we forecast slower underlying real growth, and no specific investments in the early years. The baseline inflation rates, and the baseline property values for 2002 and 2003, were the same under both scenarios.
3. **TIF-Financed Improvements.** We reviewed the list of planned improvements included in the TIF plan. These included physical improvements (sewer, road, footbridge); new buildings (fire station, police substation); streetscape (sidewalks, lighting, buried overhead lines); planning for traffic, development, and a master plan; and funds for brownfield redevelopment and the purchase of landlocked property. Such improvements would support and encourage additional development both within and outside the DDA, as well as increase the market value of existing property.
4. **TIF Plan.** According to the TIF plan, the DDA will capture 80% of taxes paid by the township's property owners within the DDA to Lansing Township, Ingham County, Lansing Community College and the Capital Area District Library, over the next 30 years. In non-DDA areas surrounding the development, the DDA will capture none of these jurisdictions' tax revenue.
5. **Millage Rates.** Millages used for Lansing Township, Ingham County, Lansing Community College and the Capital Area District Library were 7.75, 8.6011, 3.8544, and 1.46, respectively. We assume these are constant over time.
6. **Residential Development.** According to Census Data, the number of residential units in Lansing Township as of the last decennial census was 1,953, and the DDA area was 311. The average house value in Lansing Township and DDA area were $90,800 and $98,000, respectively. Under the TIF development scenario, we assumed 0.99% annual residential growth and 1.43% annual residential value growth over the next 30 years.
7. **Indirect Effects of Development.** The development within the DDA will spur development of related service, commercial, and residential development nearby. To project this, we used an indirect tax base multiplier of 0.3 for the Lansing Township, 0.4 for the Ingham County, and 0.5 for the Lansing Community College and the Capital Area District of Library with TIF plan, and 0.1, 0.2, and 0.3 respectively with the abandon-TIF plan. We also used an indirect residential multiplier of 0.4 with TIF plan and 0.2 with the abandon-TIF plan.

The higher indirect effect with the TIF plan is due to the public road, streetscape, and other improvements that will lead to more development in nearby areas. Note that such a "multiplier" is quite conservative, and does not result in the distortion or exaggeration that many naive "economic impact" analyses include.

Note that there are other beneficiaries of this indirect development. In particular, Clinton County and the State of Michigan would earn increased tax revenue under the TIF development scenario. The additional tax revenue to the State of Michigan, Clinton County, and other jurisdictions was not included in our projections.

FEE-PAID AND DEDICATED TAXES

We estimated the net operating tax revenue in this report. We did not include either the revenue, or the costs, of many services that are largely funded by dedicated taxes and fees. However, we discuss this topic below.

There are a class of services that are supported by taxpayers in a local municipality largely through dedicated taxes, user fees, and special assessments. We did not explicitly model these costs or benefits, as we assume they will be largely supported by charges paid by the development itself. We describe the most important of these services below.

Sewer and water costs are generally supported by a combination of user charges (per unit of water), as well as special assessments or other charges that fund the capital costs for providing service to certain properties. We assume sewer and water costs for the development will be funded in this manner.

Road costs are primarily supported by gas tax reciepts, as allocated by the State under Act 51. Highways and primary roads are the responsibility of the County and State governments. Given the County and State responsibility for roads, we assumed that State and County taxes (notably gas taxes) would cover any increased costs of road maintenance in the Township due to the project.

School taxes will generate substantial tax revenue that will be captured by the public school system, through state and school district property tax levies. This will reduce the citizens' contribution to debt millage, providing a benefit to the local taxpayers. However, the added business tax base cannot be expected to increase the operating revenue of the local public school district under the state per-pupil guarantee funding system adopted by the voters as "Proposal A" in 1994.

Fiscal Impact Methodology

MODEL AND DATA APPROACH

For this project, we used a revised version of the economic and fiscal impact model that we have used in several previous studies within the State, including those for the Detroit-Wayne County Port Authority, SBC, The City of Detroit, and for renaissance zone applications and economic development plans filed with the State by the counties of Van Buren, Ionia, and Barry, as well as by the City of Detroit. This approach relies on actual data for state and local governments in the State of Michigan, and a rigorous, conservative, and transparent methodology. See "Other References on Fiscal and Economic Impact" on page 14.

BASE DATA SOURCES

Base data for the project, including the number of employees, capital investment, construction schedule, and tax base, were gathered from the following sources:

1. The TIF Development plan adopted by the Charter Township of Lansing DDA.
2. Minutes of meetings discussing the plan.
3. Additional information on the tax base, tax rates, and plan assumptions provided by Steven Hayward, Director of Planning and Development of the DDA.
4. A memorandum prepared by Vandewalle & Associates projecting aggregate development within the DDA under the "go" and "no go" scenarios, by acreage and market value per square foot of retail or commercial space, as well as aggregate residential development.
5. AEG assumptions about the likely investment outside the DDA boundaries that would occur given growth within the DDA.
6. Base knowledge of the fiscal and economic structure of the State of Michigan, including other tax rates, assessment ratios, and trends in demographic and economic growth.

We assume the representation made by the DDA in the plan document is correct in all material respects.[2] Furthermore, we accepted the Vandewalle & Associates projections as reasonable, within the scope of their projections.

LIMITS TO SCOPE

While this report methodically projects net tax revenue for the future, it does not cover many related issues of concern to residents. These include:

- The study does not attempt to estimate the costs of providing services to additional businesses and residents due to additional growth. However, the report also does not include revenue that would be associated with that additional growth, including gas tax, per-capita revenue sharing, city income tax, property taxes other than those identified in this report, fees paid for services, special assessments, and direct purchases of services.

2. In particular, we accepted the DDA's statement that the TIF plan was valid and legally enforceable, and that the effective date of beginning capturing tax revenue under the plan was January 1, 2003.

- The study accepts as valid the TIF plan adopted by the township in 2003, and except where noted (such as for the starting date of our analysis, and correcting the first-year SEV) have modeled the program based on its original statement.
- While the topic is of interest to the parties, the report is not intended to address all the issues raised in the lawsuit(s) filed by various entities against the Lansing Charter Township DDA, and the authors of the report are not providing it pursuant to any agreement requiring the filing of an expert report on one or more of the questions posed by the cases.
- This fiscal impact study quantifies the operating tax revenue projected to only the following municipalities: the Charter Township of Lansing, Ingham County, the Lansing Community College, and the Capital Area District Library. It does not include any changes in the millage rate that may occur in the future, nor include any revenue for bonded indebtedness that may be adopted by the voters in the future.
- The analysis also does not project the benefits from additional state sales tax revenue, state income tax revenue, state single business tax revenue, state property tax revenue, or state gasoline tax revenue that would accrue to the state from additional development in the area.
- The study does not take into account the benefits of improved appearance, better traffic flow, better availability and use of community amenities, plantings of trees and streetscape improvements, or environmental remediation that would accompany the implementation of the TIF development plan.
- Citizens should also consider those aspects of the Township's character that cannot be quantified, including availability of jobs, support for modernizing local government or expanding its services; amenities available to residents; and other factors.
- This analysis focuses on the aggregate tax revenue under two separate scenarios of trend growth. It is not intended to estimate the tax revenue from any one parcel, or in any one year. Demographic, industrial, and other changes; as well as future decisions from investors, consumers, and managers; will result in actual development varying from both scenarios.

OTHER REFERENCES ON FISCAL AND ECONOMIC IMPACT

We have completed, or reviewed, numerous economic and fiscal impact analyses. The following are a selected group, which illustrate the conservative and realistic approach taken by the project team in this report, and other well-described methodologies.

1. Patrick L. Anderson, Ilhan K. Geckil, "Northeast Blackout Likely to Reduce US Earnings by $6.4 Billion," Anderson Economic Group, August 2003. These AEG estimates of the impact of the August 14, 2003 blackout in the Eastern United States were widely cited in the news media, and used in the Federal Government's own review of the blackout.
2. Patrick L. Anderson, Christopher Cotton, "Market and Economic Impacts of a Tribal Casino in Wayland Township, Michigan," Anderson Economic Group, March 2003; an assessment of the economic impacts of a proposed tribal casino in West Michigan.
3. Patrick L. Anderson, Ilhan K. Geckil, "Fiscal Analysis of the 'Link Michigan' Proposal," Anderson Economic Group, January 2002; an evaluation the effects of the original "Link Michigan" legislation showing taxes and fees, tax base, tax rates, and income projections.

4. Patrick L. Anderson, Ilhan K. Geckil, "Economic Impact Study: Detroit/Wayne County Port Authority," Anderson Economic Group, August 2001; an economic and fiscal impact study of the proposed Port of Detroit Project on the City of Detroit, Wayne County, and the Metro Detroit region.
5. Martin Associates, *Economic Impact Study of the Great Lakes St. Lawrence Seaway System,* St. Lawrence Seaway Development Corporation, August 2001; a well-described and reasonable analysis.
6. Patrick L. Anderson, "Economic and Financial Impact Assessment of a Change in Residency Requirements in the City of Detroit, Michigan," BBK Ltd., Anderson Economic Group, October 2000. An executive summary is available on our web site at: http://www.AndersonEconomicGroup.com.
7. Patrick L. Anderson, Ian Clemens, "Fiscal and economic impact analysis for Van Buren County, Michigan." The analysis measured the effects of a number of proposed development incentive programs. Unpublished report, March 2000.
8. Patrick L. Anderson et. al, "Fiscal and economic impact analysis for Barry and Ionia counties," analyzing the effects of a tax-free incentive program on the local and regional economy. Unpublished Report, May 2001.
9. Patrick L. Anderson, "Economic and Fiscal Impact Assessment of a Large Retailer in Tucson, Arizona," BBK Ltd., September 2000; This study properly takes into account displacement effects on other retailers.
10. Charney, et. al, *University of Arizona, Economic Impact 1994-1995*, University of Arizona Dept. of Community Affairs, December 1996, using a reasonable input-output multiplier methodology, but not reducing the gross economic impact for the economic activity the University replaces.
11. Patrick L. Anderson, Ian Clemens, "Impact of Proposed Police Station Projects," Anderson Economic Group, unpublished report, February 1998; notable for including comparable state expenditures as well as impact of reduced crime and changes in the tax base.
12. Roger Noll, editor, *Sports, Jobs, and Taxes: The Economic Impact,* Brookings, 1997; this is the seminal work cataloging the methodological errors that have plagued many "economic impact" studies, especially those that promise net benefits from sports stadia.
13. Norgard, et. al*, Fiscal Impacts of Alternative Land Development Patterns in Michigan: the One Town Model*, MSU and SEMCOG, 1998; this spreadsheet model relies on data inputs and a set of assumed parameters, and is very comprehensive.
14. Siedel and Syal, *The Fiscal and Economic Impact of Housing Development on Michigan Communities,* MSU and Housing Education Research Council, HERC report 5, November 1998. This review of different applications of comprehensive fiscal impact analyses that included economic impact projections concludes that residential developments in Michigan tend to have overall positive fiscal effects.

About the Project Team

This report was prepared by Patrick L. Anderson, a principal in the firm and an expert in regional economic impact analysis, and Ilhan K. Geckil, Economist. The backgrounds of the authors are summarized below.

PATRICK L. ANDERSON

Mr. Anderson founded the consulting firm of Anderson Economic Group in 1996, and serves as a Principal in the company. In this role he has successfully directed projects for state governments, cities, counties, nonprofit organizations, and corporations in over half of the United States.

Prior to founding Anderson Economic Group, Mr. Anderson served as the chief of staff of the Michigan Department of State, where he supervised over 182 offices, 2,100 employees and annual tax collections of over $1.4 billion. He also served as a deputy director of the Michigan Department of Management and Budget, where he was involved in the largest state privatization project in U.S. history and the landmark 1994 school finance reform constitutional amendment.

Prior to his involvement in State Government, Mr. Anderson was an assistant vice president of Alexander Hamilton Life Insurance, where he shared responsibility for $5 billion in invested assets, an economist for Manufacturers National Bank of Detroit, and a graduate fellow with the Central Intelligence Agency in Washington DC.

Mr. Anderson has written over ninety articles published in periodicals such as *The Wall Street Journal, The Detroit News, The Detroit Free Press, American Outlook, Crain's Detroit Business*; and monographs published by the Mackinac Center for Public Policy, The Economic Enterprise Foundation of Detroit, the Ethan Allen Institute in Vermont, and the Heartland Institute of Chicago. His book *Business Economics and Finance* will be published by CRC Press in April 2004.

Mr. Anderson is a graduate of the University of Michigan, where he earned a Masters degree in Public Policy and a Bachelors degree in Political Science. He has been a member of the National Association for Business Economics since 1983.

ILHAN K. GECKIL

Mr. Geckil is an Economist with Anderson Economic Group with a background in applied economics, industrial organization, statistics, and public finance. Mr. Geckil's work includes economic and financial analysis, business valuation and damage analyses, strategy development, advanced statistical & econometric analysis, and forecasting.

He has contributed to projects for clients in automotive and beer industries; retailers; and local and state governments. Additionally, he provides economic forecasts for Bloomberg's monthly economic survey. Recent papers by Mr. Geckil include “A Game Theoretical Model of Corporate Average Fuel Efficiency,” “Male-Female Wage Discrimination in Turkish Labor Market,” and “Living Wage.”

Prior to joining Anderson Economic Group, Mr. Geckil worked as an Assistant Consultant for PDF Corporation in Istanbul, Turkey, and as a research assistant at Michigan State University.

Mr. Geckil holds a Masters degree in Economics from the Eli Broad Graduate School of Management at Michigan State University, and a Bachelor degree in Economics from KOC University in Istanbul, Turkey. He is a member of the National Association for Business Economics (NABE), and the National Association of Forensic Economists (NAFE).

CONTACTING ANDERSON ECONOMIC GROUP

Anderson Economic Group maintains a web site at http://www.AndersonEconomic-Group.com, with additional information on recent projects of their economic and public policy practice group, publications that can be downloaded, a sample of recent press coverage, and contact information.

Table 5. Fiscal Impact Model Output* - TIF Development Plan

Development with TIF Plan

	Net Tax Revenue from DDA Property				Net Tax Revenue from Non-DDA Property				Net Total Tax Revenue			
Years	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library
2004	$ 260,735	$ 289,369	$ 129,674	$ 49,119	$ 73,162	$ 107,572	$ 60,026	$ 22,737	$ 333,897	$ 396,941	$ 189,700	$ 71,856
2005	$ 271,804	$ 301,653	$ 135,180	$ 51,204	$ 89,839	$ 132,223	$ 73,825	$ 27,964	$ 361,643	$ 433,876	$ 209,005	$ 79,168
2006	$ 283,333	$ 314,449	$ 140,913	$ 53,376	$ 107,210	$ 157,899	$ 88,198	$ 33,408	$ 390,543	$ 472,347	$ 229,111	$ 86,785
2007	$ 295,342	$ 327,777	$ 146,886	$ 55,639	$ 125,303	$ 184,643	$ 103,169	$ 39,079	$ 420,645	$ 512,419	$ 250,055	$ 94,718
2008	$ 307,852	$ 341,660	$ 153,108	$ 57,995	$ 144,151	$ 212,502	$ 118,765	$ 44,987	$ 452,003	$ 554,163	$ 271,872	$ 102,982
2009	$ 320,885	$ 356,124	$ 159,589	$ 60,451	$ 163,785	$ 241,525	$ 135,011	$ 51,141	$ 484,670	$ 597,649	$ 294,601	$ 111,591
2010	$ 334,462	$ 371,193	$ 166,342	$ 63,008	$ 184,241	$ 271,762	$ 151,938	$ 57,552	$ 518,703	$ 642,955	$ 318,280	$ 120,561
2011	$ 348,609	$ 386,893	$ 173,378	$ 65,673	$ 205,554	$ 303,265	$ 169,573	$ 64,232	$ 554,163	$ 690,158	$ 342,951	$ 129,906
2012	$ 363,349	$ 403,252	$ 180,709	$ 68,450	$ 227,761	$ 336,090	$ 187,948	$ 71,193	$ 591,109	$ 739,341	$ 368,657	$ 139,643
2013	$ 369,563	$ 410,148	$ 183,799	$ 69,621	$ 237,183	$ 349,995	$ 195,725	$ 74,138	$ 606,746	$ 760,144	$ 379,524	$ 143,759
2014	$ 376,046	$ 417,343	$ 187,023	$ 70,842	$ 247,011	$ 364,500	$ 203,837	$ 77,211	$ 623,057	$ 781,843	$ 390,860	$ 148,053
2015	$ 382,809	$ 424,848	$ 190,387	$ 72,116	$ 257,264	$ 379,631	$ 212,300	$ 80,416	$ 640,072	$ 804,480	$ 402,686	$ 152,533
2016	$ 389,864	$ 432,678	$ 193,896	$ 73,445	$ 267,959	$ 395,417	$ 221,128	$ 83,761	$ 657,823	$ 828,095	$ 415,023	$ 157,206
2017	$ 397,224	$ 440,847	$ 197,556	$ 74,832	$ 279,117	$ 411,885	$ 230,338	$ 87,249	$ 676,342	$ 852,732	$ 427,894	$ 162,081
2018	$ 404,904	$ 449,370	$ 201,376	$ 76,279	$ 290,758	$ 429,065	$ 239,947	$ 90,889	$ 695,662	$ 878,436	$ 441,322	$ 167,168
2019	$ 412,916	$ 458,262	$ 205,361	$ 77,788	$ 302,904	$ 446,991	$ 249,972	$ 94,686	$ 715,820	$ 905,253	$ 455,333	$ 172,474
2020	$ 421,276	$ 467,541	$ 209,518	$ 79,363	$ 315,575	$ 465,693	$ 260,432	$ 98,648	$ 736,852	$ 933,234	$ 469,950	$ 178,012
2021	$ 429,999	$ 477,222	$ 213,857	$ 81,006	$ 328,797	$ 485,207	$ 271,346	$ 102,783	$ 758,796	$ 962,429	$ 485,203	$ 183,789
2022	$ 439,102	$ 487,323	$ 218,384	$ 82,721	$ 342,593	$ 505,569	$ 282,734	$ 107,096	$ 781,694	$ 992,892	$ 501,118	$ 189,817
2023	$ 448,600	$ 497,865	$ 223,107	$ 84,510	$ 356,988	$ 526,815	$ 294,617	$ 111,597	$ 805,587	$ 1,024,680	$ 517,724	$ 196,108
2024	$ 458,511	$ 508,864	$ 228,037	$ 86,378	$ 372,008	$ 548,986	$ 307,017	$ 116,294	$ 830,520	$ 1,057,850	$ 535,054	$ 202,672
2025	$ 468,854	$ 520,343	$ 233,181	$ 88,326	$ 387,683	$ 572,121	$ 319,957	$ 121,196	$ 856,537	$ 1,092,464	$ 553,138	$ 209,522
2026	$ 479,648	$ 532,323	$ 238,549	$ 90,360	$ 404,040	$ 596,264	$ 333,460	$ 126,311	$ 883,688	$ 1,128,587	$ 572,009	$ 216,670
2027	$ 490,913	$ 544,825	$ 244,152	$ 92,482	$ 421,110	$ 621,460	$ 347,552	$ 131,649	$ 912,023	$ 1,166,284	$ 591,704	$ 224,130
2028	$ 502,669	$ 557,872	$ 249,999	$ 94,696	$ 438,924	$ 647,754	$ 362,259	$ 137,219	$ 941,594	$ 1,205,626	$ 612,257	$ 231,916
2029	$ 514,939	$ 571,490	$ 256,101	$ 97,008	$ 457,516	$ 675,196	$ 377,608	$ 143,033	$ 972,455	$ 1,246,686	$ 633,709	$ 240,041
2030	$ 527,746	$ 585,702	$ 262,470	$ 99,420	$ 476,919	$ 703,837	$ 393,627	$ 149,101	$ 1,004,665	$ 1,289,539	$ 656,097	$ 248,522
2031	$ 541,112	$ 600,537	$ 269,118	$ 101,939	$ 497,170	$ 733,729	$ 410,346	$ 155,434	$ 1,038,282	$ 1,334,265	$ 679,464	$ 257,373
2032	$ 555,063	$ 616,020	$ 276,056	$ 104,567	$ 518,307	$ 764,928	$ 427,797	$ 162,044	$ 1,073,370	$ 1,380,948	$ 703,853	$ 266,611
2033	$ 569,625	$ 632,181	$ 283,299	$ 107,310	$ 540,368	$ 797,493	$ 446,011	$ 168,944	$ 1,109,994	$ 1,429,674	$ 729,310	$ 276,254
Total (2004-2033)	**$ 12,367,756**	**$ 13,725,975**	**$ 6,151,004**	**$ 2,329,926**	**$ 9,061,200**	**$ 13,370,015**	**$ 7,476,461**	**$ 2,831,993**	**$ 21,428,956**	**$ 27,095,990**	**$ 13,627,465**	**$ 5,161,918**

Summary	
Total DDA Benefit (All Jurisdictions)	$ 34,574,661
Total Non-DDA Benefit (All Jurisdictions)	$ 32,739,669
Total Benefit (All Jurisdictions)	$ 67,314,330

* Model is intended to forecast aggregate revenue over 30-year period, not revenue in any one specific period.

Source: Anderson Economic Group

Table 6. Fiscal Impact Model Output* - Abandon TIF Development Plan

Development without TIF Plan

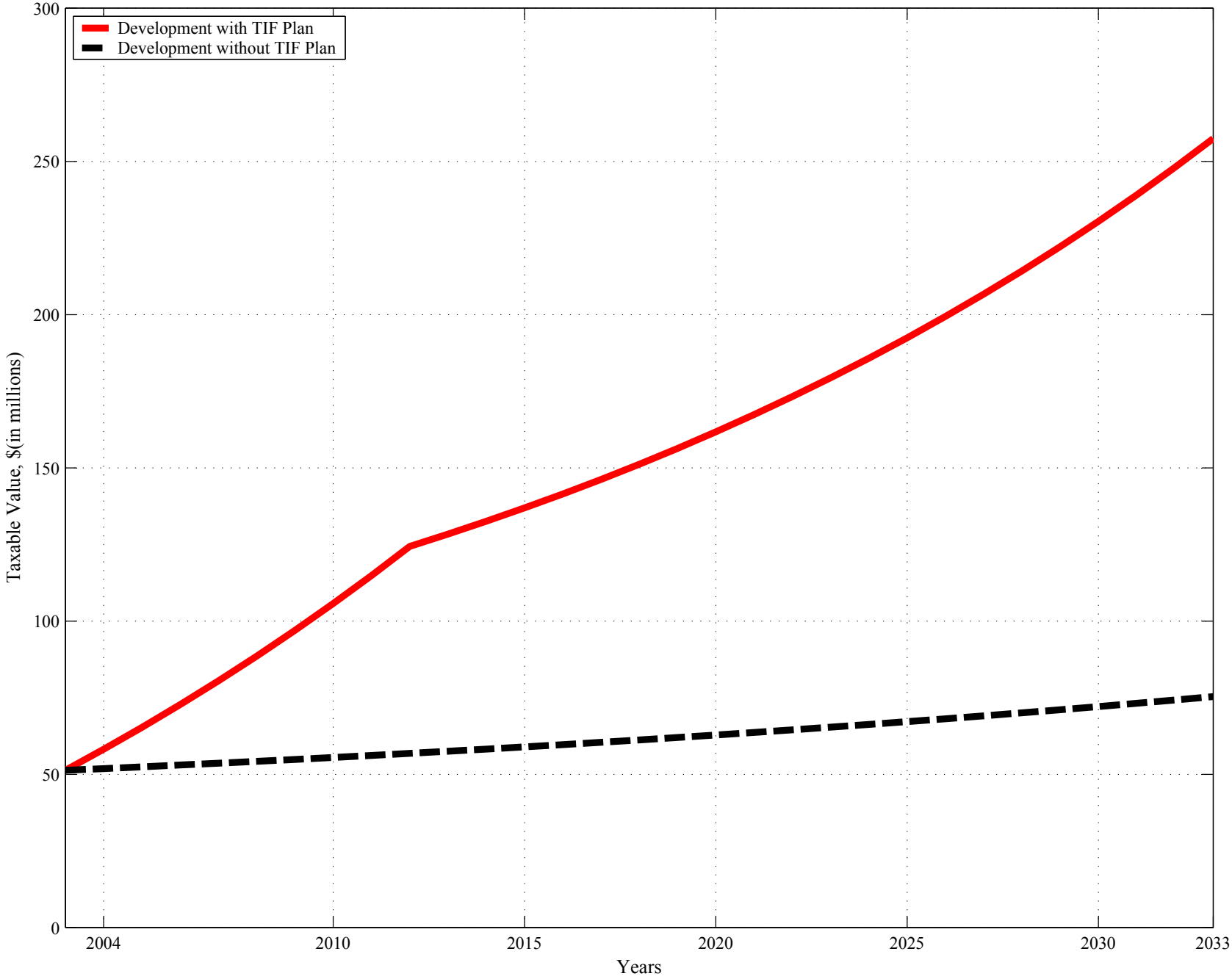
	Net Tax Revenue from DDA Property				Net Tax Revenue from Non-DDA Property				Net Total Tax Revenue			
Years	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library	Lansing Township	Ingham County	Lansing Community College	Capital Area District Library
2004	$ 402,036	$ 446,187	$ 199,949	$ 75,738	$ 19,321	$ 42,400	$ 28,392	$ 10,754	$ 421,357	$ 488,587	$ 228,341	$ 86,493
2005	$ 406,456	$ 451,092	$ 202,147	$ 76,571	$ 19,771	$ 43,390	$ 29,055	$ 11,006	$ 426,226	$ 494,482	$ 231,203	$ 87,577
2006	$ 410,981	$ 456,114	$ 204,398	$ 77,423	$ 20,232	$ 44,403	$ 29,735	$ 11,263	$ 431,212	$ 500,517	$ 234,132	$ 88,687
2007	$ 415,614	$ 461,256	$ 206,702	$ 78,296	$ 20,703	$ 45,441	$ 30,430	$ 11,527	$ 436,317	$ 506,697	$ 237,132	$ 89,823
2008	$ 420,357	$ 466,520	$ 209,061	$ 79,190	$ 21,186	$ 46,503	$ 31,142	$ 11,796	$ 441,543	$ 513,023	$ 240,203	$ 90,986
2009	$ 425,214	$ 471,910	$ 211,477	$ 80,105	$ 21,681	$ 47,591	$ 31,871	$ 12,072	$ 446,894	$ 519,501	$ 243,348	$ 92,177
2010	$ 430,186	$ 477,429	$ 213,950	$ 81,042	$ 22,187	$ 48,704	$ 32,617	$ 12,355	$ 452,373	$ 526,134	$ 246,567	$ 93,397
2011	$ 435,278	$ 483,080	$ 216,482	$ 82,001	$ 22,705	$ 49,845	$ 33,381	$ 12,644	$ 457,983	$ 532,924	$ 249,863	$ 94,645
2012	$ 440,491	$ 488,865	$ 219,074	$ 82,983	$ 23,235	$ 51,012	$ 34,164	$ 12,941	$ 463,726	$ 539,877	$ 253,238	$ 95,924
2013	$ 445,828	$ 494,789	$ 221,729	$ 83,988	$ 23,779	$ 52,207	$ 34,965	$ 13,244	$ 469,607	$ 546,996	$ 256,694	$ 97,233
2014	$ 451,293	$ 500,854	$ 224,447	$ 85,018	$ 24,335	$ 53,431	$ 35,785	$ 13,555	$ 475,628	$ 554,285	$ 260,232	$ 98,573
2015	$ 456,889	$ 507,064	$ 227,230	$ 86,072	$ 24,904	$ 54,684	$ 36,625	$ 13,873	$ 481,793	$ 561,748	$ 263,855	$ 99,945
2016	$ 462,619	$ 513,423	$ 230,080	$ 87,151	$ 25,487	$ 55,966	$ 37,485	$ 14,199	$ 488,106	$ 569,390	$ 267,564	$ 101,350
2017	$ 468,485	$ 519,934	$ 232,997	$ 88,257	$ 26,084	$ 57,280	$ 38,365	$ 14,532	$ 494,569	$ 577,214	$ 271,362	$ 102,789
2018	$ 474,493	$ 526,601	$ 235,985	$ 89,388	$ 26,695	$ 58,625	$ 39,266	$ 14,874	$ 501,187	$ 585,226	$ 275,251	$ 104,262
2019	$ 480,643	$ 533,427	$ 239,044	$ 90,547	$ 27,320	$ 60,001	$ 40,189	$ 15,223	$ 507,964	$ 593,429	$ 279,233	$ 105,770
2020	$ 486,942	$ 540,417	$ 242,177	$ 91,734	$ 27,961	$ 61,411	$ 41,134	$ 15,581	$ 514,902	$ 601,829	$ 283,311	$ 107,315
2021	$ 493,391	$ 547,575	$ 245,384	$ 92,948	$ 28,617	$ 62,855	$ 42,102	$ 15,948	$ 522,007	$ 610,429	$ 287,486	$ 108,896
2022	$ 499,994	$ 554,903	$ 248,668	$ 94,192	$ 29,288	$ 64,333	$ 43,093	$ 16,323	$ 529,282	$ 619,236	$ 291,761	$ 110,515
2023	$ 506,756	$ 562,408	$ 252,031	$ 95,466	$ 29,975	$ 65,846	$ 44,107	$ 16,707	$ 536,732	$ 628,254	$ 296,138	$ 112,174
2024	$ 513,680	$ 570,092	$ 255,475	$ 96,771	$ 30,679	$ 67,396	$ 45,146	$ 17,101	$ 544,359	$ 637,488	$ 300,621	$ 113,871
2025	$ 520,770	$ 577,961	$ 259,001	$ 98,106	$ 31,400	$ 68,983	$ 46,210	$ 17,504	$ 552,170	$ 646,943	$ 305,211	$ 115,610
2026	$ 528,030	$ 586,018	$ 262,612	$ 99,474	$ 32,138	$ 70,607	$ 47,299	$ 17,916	$ 560,168	$ 656,626	$ 309,910	$ 117,390
2027	$ 535,465	$ 594,269	$ 266,309	$ 100,875	$ 32,894	$ 72,271	$ 48,414	$ 18,339	$ 568,358	$ 666,540	$ 314,723	$ 119,213
2028	$ 543,077	$ 602,718	$ 270,095	$ 102,309	$ 33,667	$ 73,974	$ 49,556	$ 18,771	$ 576,744	$ 676,692	$ 319,651	$ 121,080
2029	$ 550,873	$ 611,369	$ 273,972	$ 103,777	$ 34,459	$ 75,719	$ 50,725	$ 19,214	$ 585,332	$ 687,088	$ 324,698	$ 122,992
2030	$ 558,856	$ 620,229	$ 277,942	$ 105,281	$ 35,270	$ 77,505	$ 51,923	$ 19,668	$ 594,126	$ 697,734	$ 329,865	$ 124,949
2031	$ 567,030	$ 629,301	$ 282,008	$ 106,821	$ 36,101	$ 79,334	$ 53,149	$ 20,132	$ 603,131	$ 708,635	$ 335,157	$ 126,953
2032	$ 575,401	$ 638,591	$ 286,171	$ 108,398	$ 36,951	$ 81,207	$ 54,405	$ 20,608	$ 612,352	$ 719,798	$ 340,576	$ 129,006
2033	$ 583,973	$ 648,105	$ 290,434	$ 110,013	$ 37,822	$ 83,124	$ 55,690	$ 21,095	$ 621,795	$ 731,229	$ 346,125	$ 131,108
Total (2004-2033)	**$ 14,491,100**	**$ 16,082,503**	**$ 7,207,032**	**$ 2,729,936**	**$ 826,846**	**$ 1,816,046**	**$ 1,216,420**	**$ 460,765**	**$ 15,317,946**	**$ 17,898,550**	**$ 8,423,452**	**$ 3,190,701**

Summary	
Total DDA Benefit (All Jurisdictions)	$ 40,510,571
Total Non-DDA Benefit (All Jurisdictions)	$ 4,320,077
Total Benefit (All Jurisdictions)	$ 44,830,649

* Model is intended to forecast aggregate revenue over 30-year period, not revenue in any one specific period.

Source: Anderson Economic Group

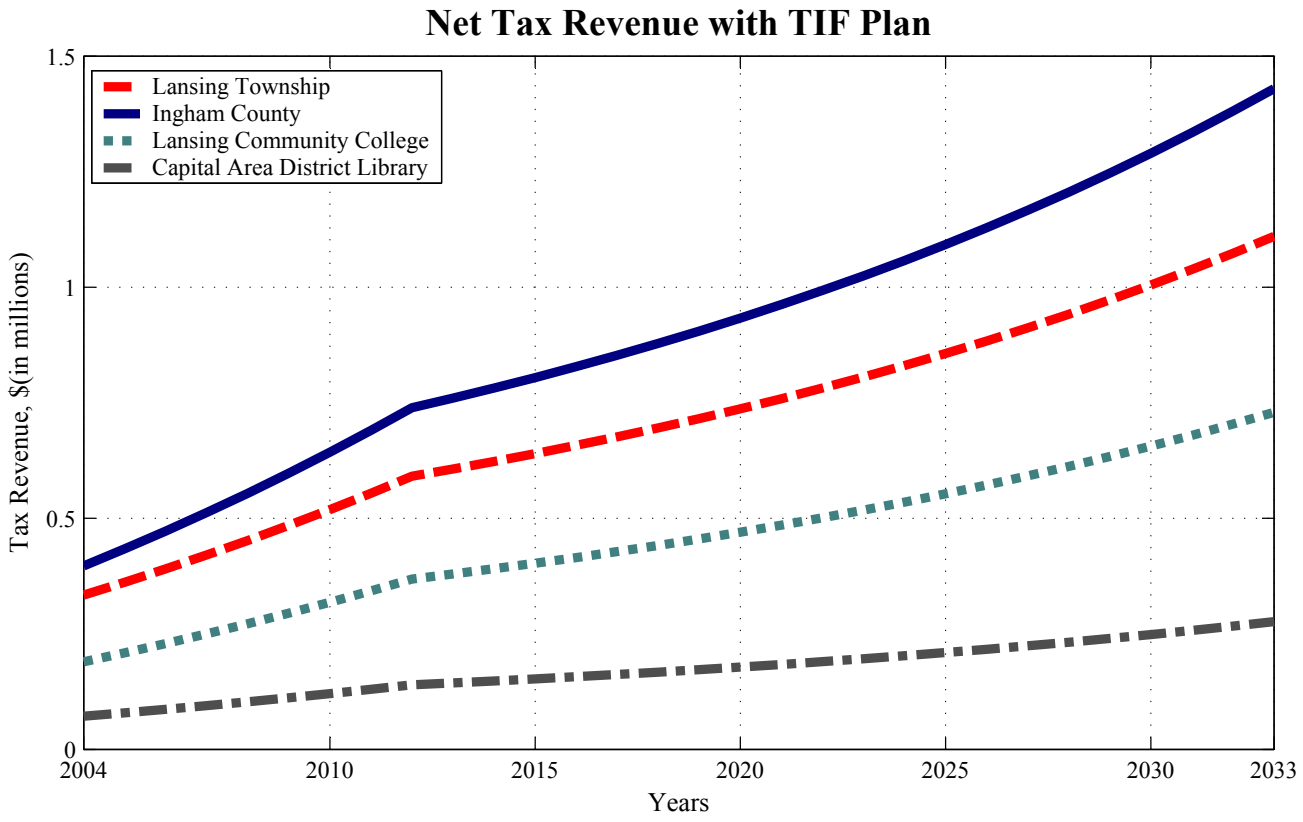
Figure 1. Comparison of Total Tax Base: Development with TIF Plan v. Development without TIF Plan

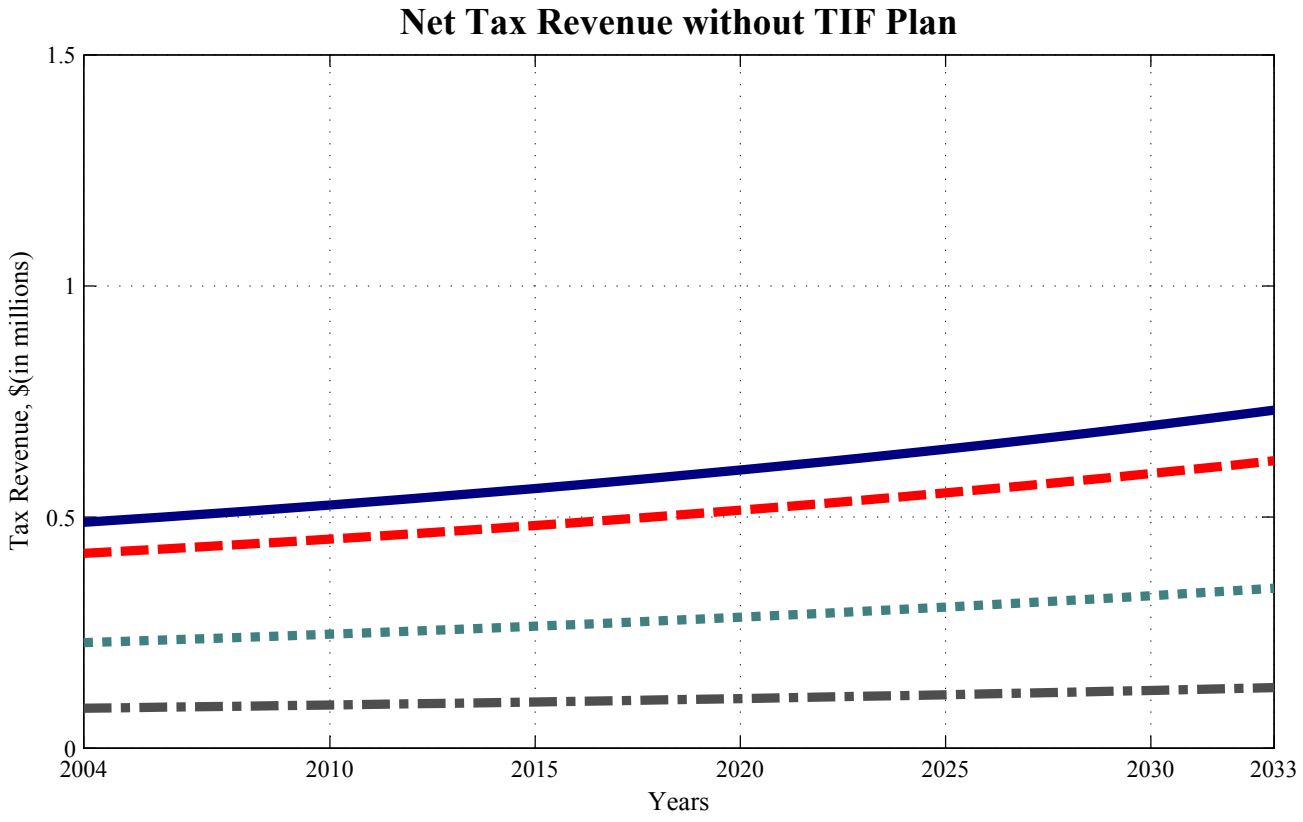


Source & Analysis: Anderson Economic Group, LLC

Generated Date: 03/01/2004

Figure 2. Annual Net Tax Revenue, Development with TIF v. Development without TIF, 2004-33

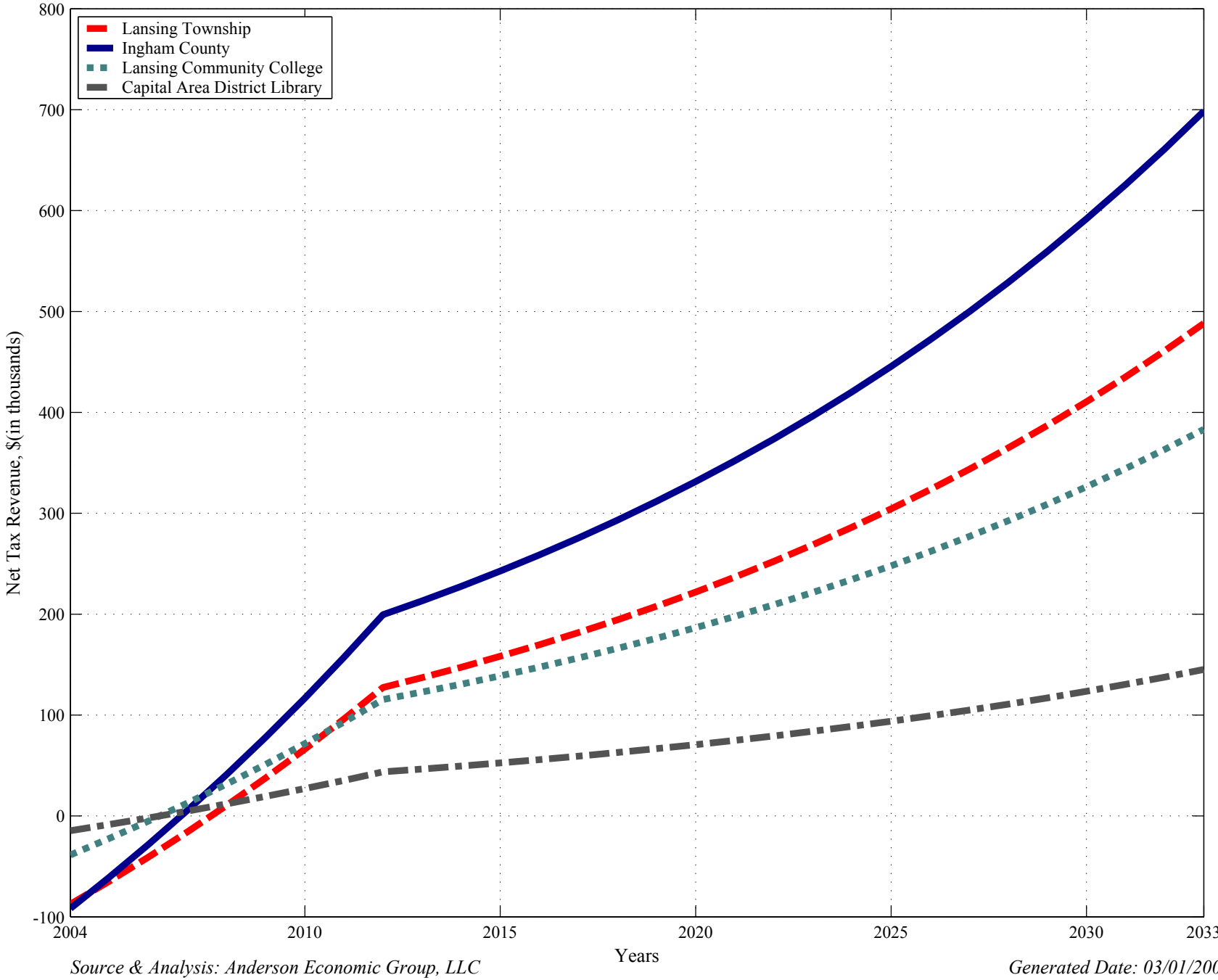




Source & Analysis: Anderson Economic Group, LLC

Generated Date: 03/01/2004

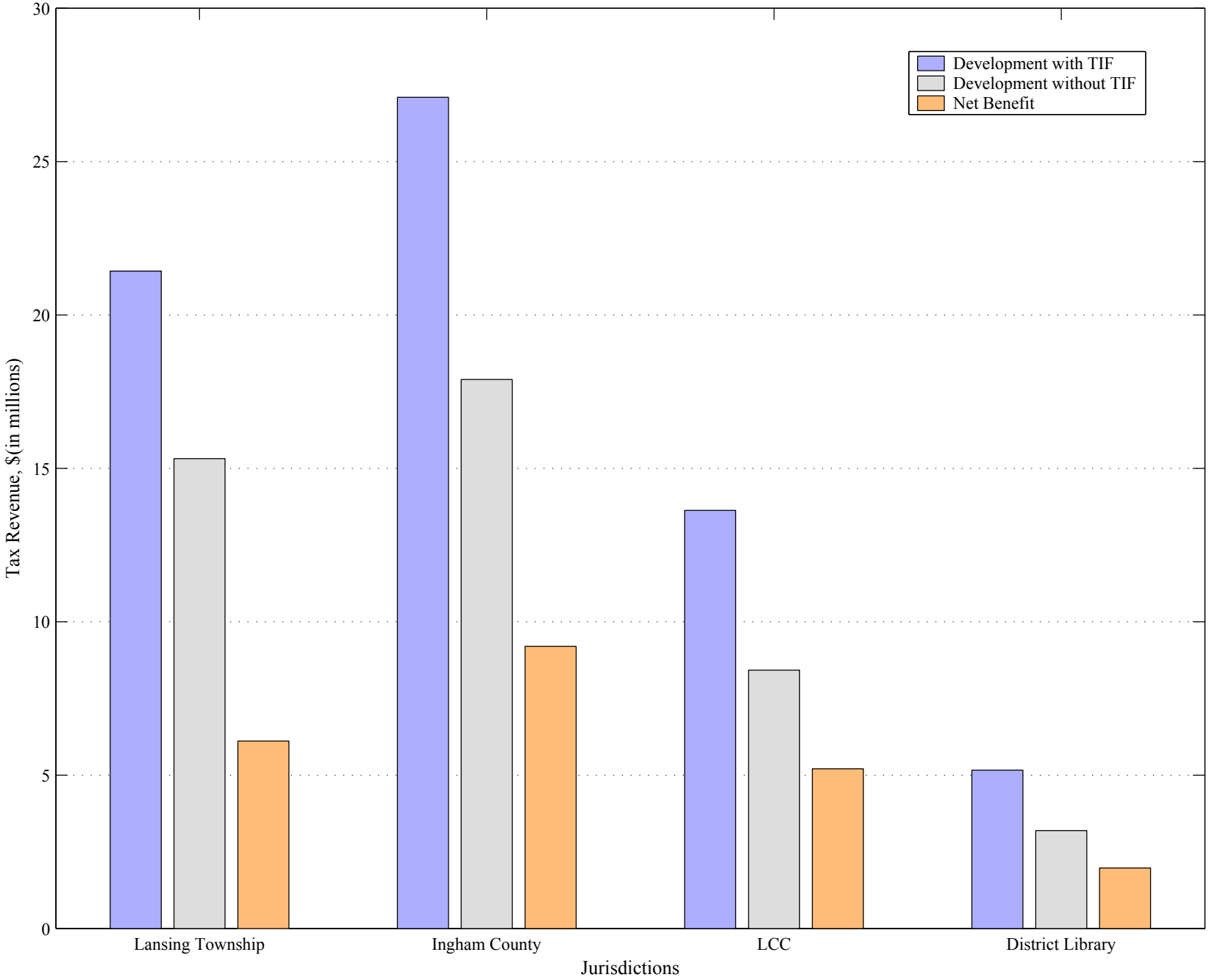
Figure 3. Comparison of Net Tax Revenue (TIF Plan Less Non-TIF Plan)



Source & Analysis: Anderson Economic Group, LLC

Generated Date: 03/01/2004

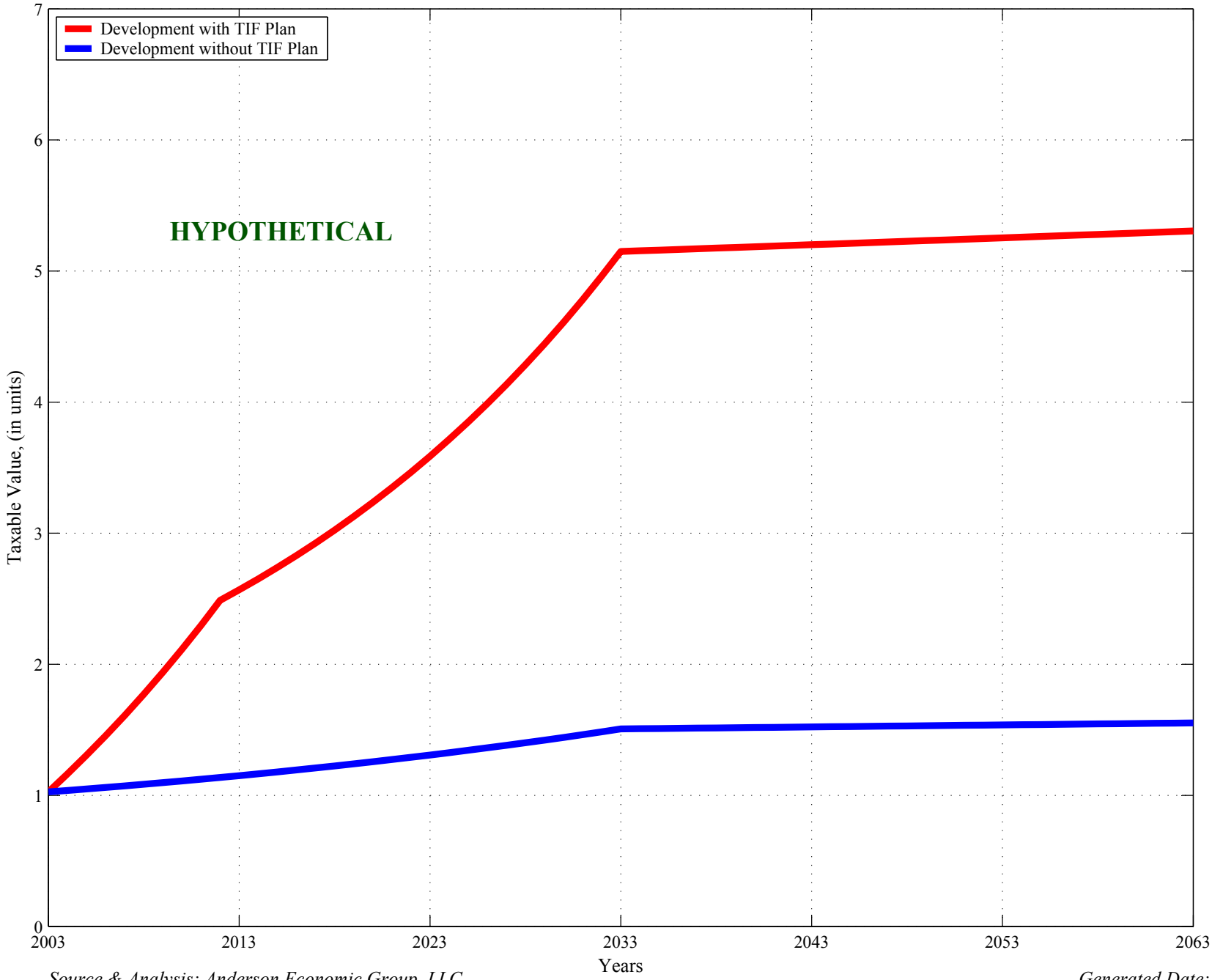
Figure 4. Total Net Tax Revenue Over the Next 30 Years



Source & Analysis: Anderson Economic Group, LLC

Generated Date: 03/01/2004

Figure 5. Comparison of Total Tax Base, 2003-2063 (Hypothetical): Development with TIF Plan v. Development without TIF Plan



Source & Analysis: Anderson Economic Group, LLC

Generated Date: 03/01/2004

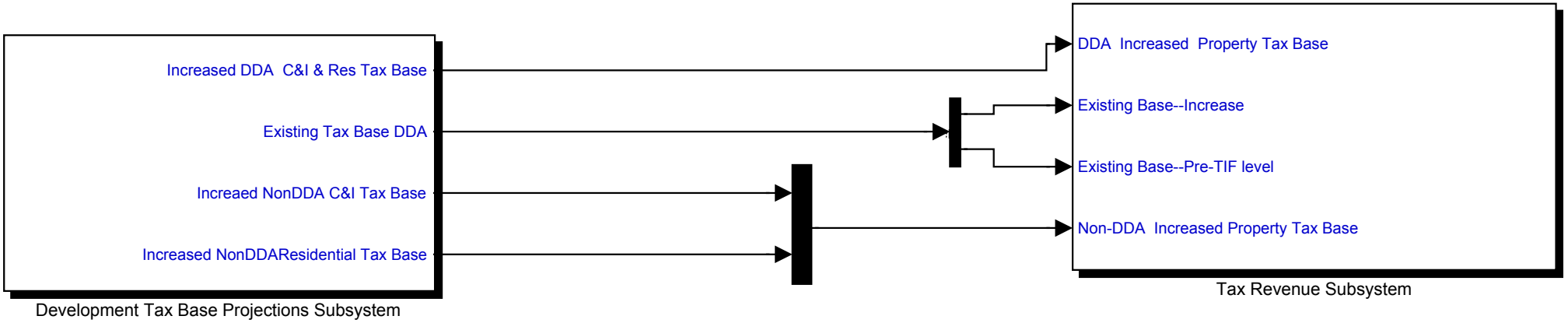
Table 7. Fiscal Impact Model Input Data

Lansing Charter Township - Eastwood Development

Variable Name	*Variables*		*Values*
1. Plant and Property Data			
initial_real_property_value_2003	*Initial Real Property Value, 2003 (Lansing Township)*		$ 43,005,300
initial_personal_property_value_2003	*Initial Personal Property Value, 2003 (Lansing Township)*		$ 8,313,300
initial_real_property_value_2002	*Initial Real Property Value, 2002 (Lansing Township)*		$ 23,972,884
initial_personal_property_value_2002	*Initial Personal Property Value, 2002 (Lansing Township)*		$ 3,537,300
initial_increase_real_property_value	*Initial Increase in Real Property Value, for TIF (Lansing Township)*		$ 19,032,416
initial_increase_personal_property_value	*Initial Increase in Personal Property Value, for TIF (Lansing Township)*		$ 4,776,000
1.1 Go Scenario			
change_real_property_value	*Direct Investment in DDA, per year for the first 10 years (Real Property Value)*		$ 5,000,000
change_personal_property_value	*Direct Investment in DDA, per year for the first 10 years (Personal Property Value)*		$ 900,000
real_growth	*Annual Growth Rate, Real Property, Development with TIF*	%	3.00
personal_growth	*Annual Growth Rate, Personal Property, Development with TIF*	%	0.60
indirect_tax_base_multiplier_township	*Lansing Township Indirect Tax Base Multiplier, Development with TIF*		0.30
indirect_tax_base_multiplier_county	*Ingham County Indirect Tax Base Multiplier, Development with TIF*		0.40
indirect_tax_base_multiplier_LCC	*LCC Indirect Tax Base Multiplier, Development with TIF*		0.50
indirect_tax_base_multiplier_district_library	*District Library Indirect Tax Base Multiplier, Development with TIF*		0.50
1.2 Alternate Scenario			
change_real_property_value_alt	*Direct Investment in DDA, per year for the first 10 years (Real Property Value)*		$ -
change_personal_property_value_alt	*Direct Investment in DDA, per year for the first 10 years (Personal Property Value)*		$ -
real_growth_alt	*Annual Growth Rate, Real Property, Development without TIF*	%	1.00
personal_growth_alt	*Annual Growth Rate, Personal Property, Development without TIF*	%	0.20
indirect_tax_base_multiplier_township_alt	*Lansing Township Indirect Tax Base Multiplier, Development without TIF*		0.10
indirect_tax_base_multiplier_county_alt	*Ingham County Indirect Tax Base Multiplier, Development without TIF*		0.20
indirect_tax_base_multiplier_LCC_alt	*LCC Indirect Tax Base Multiplier, Development without TIF*		0.30
indirect_tax_base_multiplier_district_library_alt	*District Library Indirect Tax Base Multiplier, Development without TIF*		0.30
2. Tax Rates & Shares			
Tax Rates			
Township	*Township Property Tax Rate*		7.7500
County	*County Property Tax Rate*		8.6011
LCC	*Lansing Community College Millage*		3.8544
District_library	*District Library Millage*		1.4600
millage_rates	*Combined Millage Rates Vector*		
2.1 Go Scenario			
DDA_Township_share	*Township Share of Township Property Tax Revenue; Development with TIF*		20%
DDA_County_share	*County Share of Township Property Tax Revenue; Development with TIF*		20%
DDA_LCC_share	*Lansing Com. College Share of Township Property Tax Revenue; Development with TIF*		20%
DDA_District_library_share	*District Library Share of Township Property Tax Revenue; Development with TIF*		20%
DDA_Share_Vector	*Combied DDA Shares, Development with TIF*		
NonDDA_Township_share	*Township Share of Non Township Tax Revenue; Development with TIF*		100%
NonDDA_County_share	*County Share of Non Township Tax Revenue; Development with TIF*		100%
NonDDA_LCC_share	*Lansing Com. College Share of Non Township Tax Revenue; Development with TIF*		100%
NonDDA_District_library_share	*District Library Share of Non Township Tax Revenue; Development with TIF*		100%
NonDDA_Share_Vector	*Combined Non-DDA Share of Non Township Tax Revenue; Development with TIF*		
2.2 Alternate Scenario			
DDA_Township_share_alt	*Township Share of Township Property Tax Revenue; Development without TIF*		100%
DDA_County_share_alt	*County Share of Township Property Tax Revenue; Development without TIF*		100%
DDA_LCC_share_alt	*Lansing Com. College Share of Township Property Tax Revenue; Development without TIF*		100%
DDA_District_library_share_alt	*District Library Share of Township Property Tax Revenue; Development without TIF*		100%
DDA_Share_Vector_alt	*Combied DDA Shares, Development without TIF*		
NonDDA_Township_share_alt	*Township Share of Non Township Tax Revenue; Development without TIF*		100%
NonDDA_County_share_alt	*County Share of Non Township Tax Revenue; Development without TIF*		100%
NonDDA_LCC_share_alt	*Lansing Com. College Share of Non Township Tax Revenue; Development without TIF*		100%
NonDDA_District_library_share_alt	*District Library Share of Non Township Tax Revenue; Development without TIF*		100%
NonDDA_Share_Vector_alt	*Combined Non-DDA Share of Non Township Tax Revenue; Development without TIF*		
3. Township data			
number_of_residential_units	*Number of Residential Unit, DDA*		311
average_value_residential_unit	*Average Value of Resiential Units, DDA*		98,000
inflation_rate	*Annual inflation rate, 2004-2033*	%	1.50
3.1 Go Scenario			
residential_growth	*Residential Growth, Development with TIF*	%	0.99
residential_value_growth	*Residential Value Growth, Development with TIF*	%	1.43
indirect_residential_multiplier	*Indirect Residential Multiplier, Development with TIF*		0.40
3.2 Alternate Scenario			
residential_growth_alt	*Residential Growth, Development without TIF*	%	0.15
residential_value_growth_alt	*Residential Value Growth, Development without TIF*	%	0.20
indirect_residential_multiplier_alt	*Indirect Residential Multiplier, Development without TIF*		0.20
4. Simulation Parameters			
Tstart	*Model Start Time (year)*		2,004
Tstop	*Model Stop Time (year)*		2,033
Tstep	*Model Increments*		1

Source: Development and Tax Increment Financing Plan, Charter Township of Lansing; Vandewalle & Associates; Anderson Economic Group

Figure 6. FISCAL IMPACT MODEL



Local Fiscal Impact Model
Version 5.195, Modified 01-Mar-2004 16:56:12
General Economic Impact Model.
The Project Subsystem Projects the Tax Base, in two areas;
broken into Commerical and Industrial, and Residential categories.

The Tax Revenue Subsystem calculates the resulting tax revenue, to
multiple municipalities, under two scenarios.

"Patrick L Anderson and Ilhan Geckil"

Initialize Variables & Start

Initialization Block--Lansing Twp

Figure 7. Development Tax Base Projections