Land Use Planning by Referendum:
The Economic Consequences of Amendment 4

Haas Center
for business research and economic development
University of West Florida

Florida Council of Economic Advisors at Florida TaxWatch

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Executive Summary

Amendment 4 on the November 2nd, 2010 Florida ballot is entitled: "Referenda Required for Adoption and Amendment of Local Government Comprehensive Land Use Plans." It would amend Florida's Constitution so as to require that alterations of the land use component of local government comprehensive plans be approved by local voters via referendum, thus adding an additional layer of required approval to the existing planning process. The ballot summary is worded as follows:

> "Establishes that before a local government may adopt a new comprehensive land use plan, or amend a comprehensive land use plan, the proposed plan or amendment shall be subject to vote of the electors of the local government by referendum, following preparation by the local planning agency, consideration by the governing body and notice."

If the measure obtains the necessary sixty percent "yes" share of the votes cast, Amendment 4 would alter Florida's *Growth Management Act* (1985), which requires all Florida counties and municipalities to adopt *Local Government Comprehensive Plans* that guide future growth and development. If adopted, the amendment will require direct voter approval in order to go forward with any of the land use changes that are necessary in Florida for many major (and minor) developments to become reality. It will mandate that Floridians vote on each proposed comprehensive plan land use change, of which there are currently hundreds each year, instead of relying, as we currently do, on the planning decisions made by our elected representatives.

The present study assesses the likely impacts of adoption of Amendment 4 on jobs and output in Florida's economy, as well as its likely impact on local governments' fiscal position. We find that passage of Amendment 4 will leave Floridians burdened with inferior and inconsistent local growth outcomes that include increased tendencies towards urban sprawl, and these patterns will only grow worse over time. Our analysis finds that passage of Amendment 4 will reduce Florida growth in jobs, output and personal income, while increasing the cost of housing, particularly for the less affluent, and increasing the per household cost of financing local government. While the initial costs of passage of Amendment 4 are smaller in today's recession-weakened Florida economy and housing market, the negative effects will grow substantially as the economy recovers. We conclude that solutions to the Florida growth management shortcomings cited by Hometown Democracy proponents will not be found

through passage of Amendment 4, but could instead be found through improvements to the existing growth management structure and process.

We use the 2010 Regional Economic Models, Inc (REMI) model of the Florida economy to project likely economic consequences of passage of Amendment 4. Using estimates from the academic literature in economics of the growth changes that result from ballot box initiatives, we construct three alternative scenarios for the likely economic changes in Florida that would result from passage of the amendment.

Table 1: Likely Economic Impacts of Amendment 4 under the 20% Impact Scenario

		20 % Impact					
Economic variable	**Units**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Employment	Number of Jobs	251,867	260,365	263,351	263,066	260,949	258,479
Income	Billions of Current Dollars	13.518	15.109	16.31	17.256	18.034	18.726
Florida GSP	Billions of Fixed (2000) Dollars	15.222	16.342	17.025	17.503	17.891	18.251
State Tax Revenue	Billions of Fixed (2008) Dollars	1.757	1.919	2.073	2.208	2.336	2.458

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Table 1 (above) presents what we view as the most likely scenario. Introduction into the REMI model of the decreased investment and construction activity (taken from the economics literature on ballot box planning initiatives) is associated with decreased economic activity. The loss in Florida gross state product (GSP) associated with passage of Amendment 4 in this scenario is calculated to be about 2.2 percent of Florida's annual GSP and 2.4 percent of jobs. This is the annual shortfall relative to the alternative non-Amendment 4 baseline economic performance for Florida, and it is projected to be larger in subsequent years because the growth-limiting effects of Amendment 4 will be more important in a healthy Florida economy.[1]

Table 1 shows substantial lost tax revenue to the State of Florida due to lower levels of economic activity. These will be seen largely in reduced revenues from sales and use tax, real

[1] The magnitude of these results is quite similar to those obtained by the Washington Economics Group (WEG) earlier in 2010 which were presented as their "most likely" scenario. The WEG study used the IMPLAN model of the Florida economy, which does not contain the dynamic and general equilibrium elements captured by REMI (see appendix for details on the REMI model). The 2010 REMI dynamic simulation model incorporates the severe recession experienced by the nation, and especially Florida, over the 2007 – 2009 period, along with the ongoing (albeit tepid) recovery.

estate transactions and corporate income tax, but the local government fiscal impacts of Amendment 4 are also important. In Table 2, we present likely lost ad valorem property tax revenues, both in total, and as divided among the several subdivisions of local government, at current millage rates, using 2009 annual construction dollar values as the base.

Table 2: Foregone Property Tax Revenue, 20% Impact Scenario, 2009 Actual Construction

	Lost Property Tax Revenue	County Government Operating	County Government Debt Service	County Gov. Dependent Special District	School Board Operating	School Board Debt Service	Independent Special Districts
Residential	17,922,134	6,721,625	93,128	61,582	10,162,662	30,181	852,956
Non-residential	21,195,714	7,444,376	202,632	48,784	12,097,695	61,817	1,340,410
Total	39,117,848	14,166,000	295,760	110,366	22,260,357	91,998	2,193,367

Source: Millage rates are from Florida Property Valuation, 2009. Reed Construction data provides the construction-start data.

Due to the depressed state of construction activity in Florida during 2009, the dollar values presented above massively understate what the local government revenue impacts of Amendment 4 would likely be in a healthy economy.[2] In a normal year for Florida, lost property tax revenue attributable to Amendment 4 is projected to be $227 million annually, for an average across Florida's 67 counties of $3.4 million per county in lost ad valorem revenue per year. County-specific lost property tax revenue tables calculated using county-specific 2009 construction values and millage rates are provided in the Appendix. This property tax revenue loss is in addition to the some $30 million per county in lost revenue to the State of Florida, associated with lower levels of economic activity that are identified in the REMI output.

The transmission channels that will give rise to these negative economic consequences of Amendment 4 include the following:

- Increased uncertainty among project developers about the outcome of the land use change process for any given project increases risk and reduces expected returns, making them more likely to take their business to other states.

- Increased costs to project developers associated with the need to influence public opinion before a referendum (e.g. advertising expense, development and public

[2] A simple linear extrapolation using average annual growth rates in construction values taken from the 1982 to 2001 period may be more representative of a normal economy, insofar as this avoids the problem of inference based on either the boom or the bust period in construction activity that Florida experienced during the most recent decade. Such was the state in 2009 of Florida construction activity that an extrapolation would increase the values in Table 2, which assume a 20% reduction in construction spending, by a factor of 5.8, to $227 million per year.

presentation of project plans, etc.) raise the up-front cost of undertaking Florida projects.

- The likely need to offer incentives to local communities, perhaps in the form of additional public amenities (e.g., construction of parks, or infrastructure, etc.) in order to sway public opinion toward passage of the referendum will function much as impact fees do today, shifting the burden of funding community improvements onto new residents.

Economic impacts associated with the above effects are likely to be quite large, given the availability of suitable non-Florida destinations for real estate investment, for both large-scale residential, industrial and commercial real estate (CRE) projects. There are additional economic effects that flow not via the loss of new investment in real estate development projects, but instead from increased costs to individuals and communities via other channels. These include:

- Planners report that much of the pushback against urban infill projects that would increase urban densities comes from existing urban residents themselves, suggesting that sprawl will be made worse as urban residents use their weight in numbers at the ballot box to keep growth out of their own neighborhoods.

- Because higher densities provide economies in the amount of land and infrastructure per home, urban voters' preference to keep additional growth out of their neighborhoods will likely lead to decreased densities (i.e., sprawl) and consequent higher housing and infrastructure costs.

- Decreased availability of housing, as Amendment 4 curtails development, will lead to higher housing costs due to a limited supply of housing relative to demand, or decreased net migration into Florida which would itself limit real estate demand, or both.

- Because new homes in normal economic times are more expensive than older ones and have not yet accumulated Save Our Homes exemption benefits, then to the extent that Amendment 4 limits new development while many local government costs, particularly pension expense, rise regardless of the number of residents, then Amendment 4 will cause the tax burden per existing household to rise.

- Cost of special elections for voter approval of changes to the comprehensive land use plans. Florida TaxWatch estimates that these costs would be between $44.6 and $83.4 million per year.

- Increased litigation expense, such as has occurred in the City of St. Pete Beach and in Yankeetown following adoption of land planning via referendum, has cost $54 per person to date.

Other effects of the Amendment have less to do with economics. Among the unintended consequences of Amendment 4 is that every voter will have an equal say on every proposed land use amendment, even on those smaller scale amendments that apply to areas well away from their immediate vicinity. The propriety of allowing residents on the far side of the city or county, to decide land use amendments for others in their community far removed from their own immediate vicinity is problematic. Amendment 4 will foster a less open, transparent and predictable planning process by subordinating the professional judgment of planners, subject to approval by elected representatives, to a referenda system of ballot box initiatives that cannot, by its nature, generate a coherent set of planning and land use outcomes. Increased politization of the planning process will be inevitable.

While the problems associated with unbridled growth are real and need to be addressed in order to preserve the quality of life of Florida residents, the economic losses and other problems associated with Amendment 4 bring a different, and in our view, much more severe set of problems. Passing Amendment 4 to correct the deficiencies of influence peddling by developers with their elected officials is a very heavy-handed approach. While there may be instances in some cities and counties in the state where powerful development interests have exerted undue influence on the growth management process to the detriment of the public and the communities, Amendment 4 will directly impact the growth management process in every city, county and municipality in the state. It would be imprudent to treat all of the state with the cure for a malady that may only affect a select few communities. The negative economic consequences of Amendment 4 are likely to be severe and long-lasting, and they will be difficult to undo if and when the Amendment is passed.

Passage of Amendment 4 will add a layer of indeterminate cost, uncertainty of outcome and many months, if not years, to the development process, greatly increasing the risk to developers to taking on a new project that requires changes to the land use element of the comprehensive plan. In our view, the most likely outcome of Amendment 4 and its ballot box referenda system will be to produce a seemingly random set of land use outcomes that will

render unworkable any attempt at rational land use patterns. There is no question that passage of Amendment 4 will serve to discourage and disincentivize new development. There is little doubt that developers and investors will consider the increased time, costs and uncertainty associated with bringing a development project to Florida - be it residential, industrial or commercial – and that many will decide that the risk is too high and locate elsewhere. The economic impacts of these decisions have been studied and estimated, we will attempt to quantify those impacts in this report.

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The Likely Consequences of Adopting Land Use Planning by Referendum

Amendment 4 represents a radical change to the structure of property rights in Florida.[3] The shift of ownership of property rights away from private property owners via the ballot box will increase costs and uncertainty in Florida's land-use approval process and will likely hobble future job creation and economic activity. This study examines how the passage of Amendment 4 may have an impact on the Florida economy in coming years.

The Genesis of the Amendment 4 Initiative

The economics literature suggests that it is the pressure of economic growth and the resulting changes in development patterns that often drives ballot box movements (e.g., Staley, 2001; Acquaye et al. 2007), and Amendment 4 is no exception in this regard. Proponents argue that because elected representatives in state and local government in Florida have failed to control excessive urban growth and its negative spillover effects, voters should now take back direct control of authority to grant permission for changes to existing land use plans.

Public frustration with undesirable outcomes of sprawl, especially for people who live near, or share roads and schools with, these new developments is substantial in many communities in the State. Advocates of direct voter control of development permits reason that current residents will be less tolerant than planning officials of such new development because residents and planners face different incentives regarding growth. This is because existing residents incur substantial costs in the forms of heavy traffic, congestion, environmental degradation, loss of open space, strain on infrastructure, invasion of privacy, and perhaps loss of existing housing values, while they receive few direct benefits in return. This in turn suggests that by voting 'no' on new development, voters might be able to limit urban sprawl more effectively than City Hall. However, evidence from San Diego and other California cities and counties suggests that voter requirements do not really halt growth but, rather, "they appear to change the way current residents are compensated for bearing the costs of growth" (Gerber and Phillips, 2004).

The Planning Process in Florida

Proponents of Amendment 4 argue that that developers and large corporations have been able to exert power and influence to subvert the growth management process, rendering it ineffective in managing or controlling growth to the satisfaction of the majority of residents. The proposed solution is to give local voters the final say in all changes to Land Use amendments to the Comprehensive Plan. However, while this approach sounds inviting, it is

[3]Property rights refer to the rights to decide on the use of resources. That includes the rights to receive any benefits or bear any costs from decisions regarding the use of resources.

not an effective way to handle important growth management issues. Land use amendments are complex, multi-faceted and require careful analysis. They do not lend themselves to the sound bites and 15-second audio clips that will likely govern ballot box outcomes. The application of direct democracy in the land use approval process has an undeniable pluralistic appeal. But is worth remembering that the United States was founded on the principles of representative democracy and the rule of law – we are not a direct democracy. We do not vote directly on the laws that govern us – we elect representatives to serve in our state and federal legislatures to vote for us. We empower them to analyze the issues, craft legislation and vote according to the values and beliefs that we share. If the voting public is not satisfied with the performance of an elected representative, so that we feel that he or she no longer is serving the interests of the constituents, it is the voter's choice and obligation to vote them out of office.

It is likely that most citizens have little knowledge of the present process in place in local governments in Florida for reviewing future land use amendment applications. (See Appendices E and F for examples of the small and large parcel land use amendment process. See Appendix G for an example of concepts that would need to be presented in 75 words under Amendment 4.) Presently, the planning staff conducts what is meant to be a thorough review of any requested change to the land use element of the comprehensive plan. The request is examined for compatibility with the Comprehensive Plan, traffic concerns, infrastructure demands, school requirements, soil type, environmental concerns and many other criteria. Public notice is given and the request is reviewed by the local planning board (LPB) during a regularly scheduled meeting. The applicant attends and states his or her case, and public input is solicited both for and against the proposed change. The LPB then makes a recommendation to the governing elected body of the local jurisdiction (i.e., the Board of County Commissioners, City Council, etc.). Once the amendment request is forwarded to the elected body, the entire public input process is repeated. The elected officials will then approve or disapprove the amendment. For cases that are large scale and call for a land use amendment, the Florida Department of Community Affairs (DCA) is the final adjudication authority.

Amendment 4 Will Change the Process

If Amendment 4 is adopted, the entire set of procedures described above will still be in place; however, the proposed land use amendment, if approved, will then be put on the next general election ballot to be decided by the voting public. The land use amendment is required to appear on the ballot with a 15-word (maximum) title, followed by a 75-word (maximum) legally correct description. Voters will be able to review the LPB and Board of County Commissioners (BOCC) minutes and other public records in order to research the merits of each proposed land

use plan amendment in the days and weeks prior to a vote. However, it is unrealistic to believe that any voter, much less voters in general, will be sufficiently well-versed to vote on these amendments in a way that leads to consistent growth planning, particularly with multiple land use amendments on a ballot. If we are completely honest with ourselves, we know that these amendments will receive cursory, if any, attention and most voters will vote yes-yes-yes or no-no-no all the way down the ballot, with little knowledge of the details or merits of any particular amendment. Many of the proposed amendments will be purely administrative in nature, and require periodic updates that must be made to keep the comprehensive plan current. Many are as simple as changing the year from 2005 to 2010, for example. If these required updates are defeated, the comprehensive plan will become a dated and meaningless document over time.

The current process to review and adjudicate the land use amendment request is open and transparent, with ample opportunity for any member of the public to attend and express their views. All planning staff documents, analysis and presentations are public records. Yet attendance at planning meetings clearly shows that the overwhelming majority of the public does not participate in the process unless the issue in question is in the vicinity of their home or business. This is appropriate because the majority of the land use amendment requests involves small scale changes, perhaps of 10-15 acres or smaller, where the impacts are most likely to be felt in the immediate vicinity of the proposed change, and where residents on the opposite side of the city or county do not have a proprietary interest. Lack of direct citizen participation in the growth management review process does not imply that the process is closed to input, or non-transparent. Failure of voters to attend planning meetings should not be interpreted as a justification to transfer the responsibility for decision-making on land use planning to direct vote by the electorate. Instead, it indicates that becoming well-informed on particular planning issues takes time, and that this decision process is best managed by delegating authority to planning staff and elected representatives. The time cost and/or financial cost to an individual voter of gathering information about the desirability of any particular land use amendment will not decrease with Amendment 4. It would be unreasonable to presume that transferring the decision-making authority to the voting public will inspire increased participation and awareness of the intricacies of each land use amendment request. This will lead inevitably to poorer outcomes in the planning process.

Ballot Box Process Constraints Will Lead to More Litigation in Planning

The very real possibility of dozens of additional items on any given ballot raises the question of correctly crafting the precise ballot language that captures the key elements of each land use amendment in a legally accurate manner. The inherent difficulty in condensing several

hundred pages of analysis into a 15-word title and 75-word description is bound to create contentious and possibly highly litigious results. The obvious conflict between developers demanding specific wording and the local government officials needing to avoid bias and maintain accuracy is sure to lead to legal challenges from both supporters and opponents. A current Florida example concerns the nine state-wide amendments that were proposed for the November 2010 ballot. Several of these were challenged in court, with the result that three of the nine amendments have been removed. Dozens, or perhaps hundreds, of amendments will need to included on city or county ballots, and millions of dollars will be potentially at stake with the outcome of the referenda. It is straightforward to predict that many of these amendments, and the specific ballot language with which they were proposed, will be challenged in the courts. This represents a considerable unfunded liability to the private parties involved and to the local government entities that will be forced to defend themselves. The possibility of costly and lengthy litigation does not end with the election, as groups dissatisfied with the results may sue over the wording of the ballot language, as has happened in the City of St. Pete Beach, one of the only communities in Florida to have adopted ordinances similar in effect to Amendment 4.

The City of St. Pete Beach

Even as the proponents and opponents of Amendment 4 are rallying their supporters and trying to influence the voting public in anticipation of the November 2nd election, it is illustrative that the one Florida community that adopted ballot box approval of land use planning amendments has taken a public stand opposing Amendment 4. In 2006, the City of St. Pete Beach adopted legislation that made all land use amendments to the city comprehensive plan subject to public vote. The resulting land development process was so adversely impacted that the measure was overturned and repealed in 2010. Former St. Pete Beach Mayor, Ward Friszolowski, explained:

> "Since the measure was passed, the residents of St. Pete Beach have endured endless lawsuits and seen little progress... In St. Pete Beach, any proposed change to our town's comprehensive plan is thrust onto the ballot. Public planning has been replaced with political infighting and a parade of unintended consequences has ensued. I can only begin to imagine the kind of chaos Amendment 4 would cause if it were ever forced onto every community in Florida. After adopting a local version of Amendment 4, it wasn't long before we realized that 600-page comprehensive plans couldn't easily be condensed into 75-word ballot questions. The elections are confusing, chaotic and expensive."
>
> *The Tampa Tribune*, "Hurting towns and democracy," October 20, 2009

The elected officials of the City of St. Pete Beach felt strongly enough about the fallacy of submitting all land use amendments to the comprehensive plan to public vote and are now publicly in opposition to Amendment 4 (see Appendix H). Resolution 2010-06, issued on the 26th of January, 2010, indicated their opposition to Amendment 4 stating (see Appendix H for text of Resolution):

> "Now, therefore, be it resolved by the City Commission of the City of St. Pete Beach that:
>
> > Section 1. Having dedicated its own policies to advancing smarter growth, recommends defeat of Amendment 4.
> >
> > Section 2. Urges citizens to vote "No" on Amendment 4 when it appears on the ballot."

Therefore, irrespective of the talking points issue by either side of the debate over Amendment 4, the one single Florida community that has adopted growth management process similar to Amendment 4 has repealed the law less than 4 years after initially adopting it.

Kevin Hing, the Chairman of St. Pete Beach's Beach Stewardship Committee and a local attorney, launched a blog entitled "St. Pete Beach and Amendment 4" (http://stpetebeachandhometowndemocracy.blogspot.com/p/kevins-guide-to-amendment-4.html) dedicated to dissecting the nuances of his town's experiment in Amendment 4. Hing wrote that:

> "St. Pete Beach is unique in one respect: when we finally realized how overbroad, costly and unworkable our Hometown Democracy-style system was, we repealed it by an overwhelming majority vote of the people. Unfortunately, if Amendment 4 passes, it will be virtually impossible to repeal. Unlike the people of St. Pete Beach, the people of Florida will not be able to fix their mistake."

Arguments in Favor of Amendment 4

Supporters of Amendment 4 have questioned the reliability of their elected representatives to support the public interest over that of the big developers who may have contributed heavily to their election or re-election campaign. Proponents argue that it is too easy for developers to persuade planning staff and/or commissioners to grant plan changes that violate the spirit and perhaps the letter of existing land use plans. Comprehensive plans are changed so as to accommodate desired development projects, resulting in rampant growth and incoherent patterns of development. It is thought that Hometown Democracy will give voters a seat at the

table when changes are made to growth plans, allowing citizens to have a common-sense oversight over "pay-to-play" politics.

Florida Hometown Democracy (FHD) suggests that real estate development projects typically cost taxpayers more in terms of service provision expenses than is recouped via taxation of the new development. FHD, in a web advertisement supporting the passage of Amendment 4 says: "Politicians keep telling us that new development brings tax money to our community, what they don't tell is that for every dollar a county gets in taxes from new development, it costs us 40 to 50 percent more to provide services". FHD cites four studies in support of its claim that "development does not pay for itself" (PolitiFact, Florida, September, 2010). Among these is a study by Jeffrey H. Dorfman (University of Georgia, 2006) which found that in Leon County (the largest of four counties in the Tallahassee, Florida metro area) new residential development would cost the local government $1.39 for every dollar of revenue it generated. Nevertheless, these studies found that commercial and industrial development did pay more than for itself.[4]

In response, David Denslow (University of Florida) suggested that these results are due to the fact that such studies typically fail to account for the disproportionate share of taxes paid by new residents. According to Dr. Denslow, "new houses are on average more expensive than existing ones, and therefore pay more than their average share of residential property taxes." He also mentioned that "in addition, except for Florida residents with portability, the new houses don't get an initial break from Save Our Homes" (PolitiFact, Florida, September, 2010). In a separate study, he found that the typical new households in Alachua County (Gainesville, Florida) pay more than their share of infrastructure costs by $3,114 (Dewey and Denslow, 2001).

How do Amendment 4 Consequences Become Economic Reality?

While ballot box veto power may sound appealing to voters who are frustrated with sprawl and overdevelopment, there are likely to be negative consequences of such measures. One of the most obvious is that Amendment 4 is likely to discourage private real estate development activity throughout Florida. Development activity refers to the growth in commercial as well as residential construction activity, which in turn leads to higher total production/output of the economy as a whole (measured as GSP), as well as to job growth, and increases in personal income. There are several channels through which Amendment 4 will exert economic impacts, including:

[4] This in turn may suggest that the cost of a development to taxpayers very much depends on the specifics of the development.

1. A drop in the number of project proposals requiring referenda is likely in the first place, even when the average sentiment in a community might be in favor of additional development. Uncertainty about voting outcomes will serve to discourage risk-averse or risk-neutral entrepreneurs and business people from undertaking the proposal process.

2. Increasing uncertainty due to voter approval rate and associated delays in the land approval process is likely to raise transaction costs. Transaction costs can be defined as the "costs of negotiation, monitoring and enforcing contracts" (Staley, 2001, pg. 26).

3. Increased negotiation costs can include several components. One concerns the idea of compensating voters (akin to impact fees, developers may need to provide new public assets). Another type of negotiation cost is related to the expense of funding campaigns that will be necessary to convince a large number of people to vote in favor of the developers.

The following adverse economic outcomes seem inevitable:

1. Both out-of-state and in-state interest in terms of real estate investing in Florida is likely to decrease. These foregone investments in turn will have a negative impact on economic growth, incomes and employment throughout Florida.

2. Higher levels of uncertainty and delay, coupled with the propensity of larger numbers of urban voters to vote against urban infill, will likely encourage developers to look elsewhere beyond the urban fringe, thereby encouraging urban sprawl.

3. These increased transaction costs, along with reduced housing stock, are most likely to be passed along to the consumers in the form of higher housing prices, higher rents and higher prices of other consumer goods.

4. The decrease in development activities will slow growth in the local government tax base as taxing jurisdictions lose the property tax that would have been generated by new residential and CRE projects. Property tax rates may need to be increased to close the funding gap.

5. Reduced growth in the supply of housing and CRE will tend to increase prices, partially offsetting the need for higher millage rates.

6. Higher housing prices will reduce the level of housing affordability, while lessened population growth will increase the per-household burden of property taxes for both new and the current residents over the long term.

7. The amendment may cause increased out-migration from Florida, particularly from border counties, as employment opportunities decrease and the perception that the state is not friendly to business becomes pervasive.

8. The growth management process will be undermined due to the superficial analysis available to be presented in 75-word summaries to the voters. It seems likely that few voters will be able to differentiate amongst the dozens (or perhaps more) land use changes that will be on the ballot. This will result in approval of unworthy measures and defeat of sensible development, relative to current practice.

9. Periodic updates to local comprehensive plans that are required by statute may be defeated, rendering the land use section of the comprehensive plan increasingly less useful over time. The resulting patchwork development which will ensue is likely to have worse effects on the community than the current process.

Additional Elections and Other Costs

Amendment 4 will also add to the costs borne by the Florida residents by permanently increasing the annual costs of holding elections. A “Vote on Everything" initiative would force Floridians to vote on every comprehensive land use plan change. Bringing all these amendments to the voters comes at a cost to local governments and ultimately to the taxpayers. Such increases in election costs may be large enough to constrain already strapped local governments in their spending on other necessary programs, or to call for tax increases. According to the Orlando Sentinel, “The cost to local governments of including the land-use amendments on ballots would soar into the millions.”

Additional elections would then directly raise election costs by requiring added capital investment (e.g., additional voting booths, machines for counting votes, etc.) and administrative measures (e.g., election workers) associated with special elections. Non-cash costs of elections will also be large, and include the value of the time that Florida voters will need to devote in order to be present at the voting booth physically to vote, as well as learning about the issues.

Past experience has shown that such a system also carries significant legal costs.[5] St. Pete Beach, which implemented a local version of Amendment 4 in 2006, has seen nearly a dozen lawsuits that had already cost local taxpayers almost three-quarters of a million dollars in legal fees as of summer 2010.

Projecting Potential Impacts of Amendment 4 on Florida's Economy and its Residents

In this section, we report estimates of the potential impacts that the passage of Amendment 4 would have on Florida's economy over the near to medium term. Based on previous research (e.g., Staley, 1998) and following Acquaye et al. (2007), we present three impact scenarios that range from a 5% (least impact scenario) to a 20% (maximum impact scenario) change in real estate investment associated with passage of Amendment 4.

The Literature on the Economic Effects of Ballot Box Planning

Ballot box planning is generally defined as the process of subjecting land use decisions to public vote, usually on the local level. There were 553 state and local measures on the ballots in 38 states in the 2000 general election (Myers, 2001). The focus of such measures ranged from open space preservation and other smart growth initiatives (e.g., housing caps) to more slow growth initiatives such as limits on population, urban growth boundaries limiting development beyond certain points, regulations on the intensity of land use, and certain land use decisions requiring voter approval.

Ballot box land use regulations are often characterized as increasing transaction costs, uncertainty, or delays to development process (Mayer & Somerville, 2000; Staley, 2001). Using quarterly data from a panel of 44 U.S. metropolitan areas between 1985 and 1996, Mayer and Somerville (2000) find that land use regulation lowers the level of new residential construction. According to their estimates, metropolitan areas with more extensive regulation can have up to 45 percent fewer starts, and a responsiveness of local supply of new construction to price shocks that is more than 20 percent lower than those in less-regulated markets. The theoretical framework suggests that although the effects on new construction vary by the type of regulation, supply restriction is likely to result in increased housing prices in several communities (Mayer & Somerville, 2000).

[5] Amendment 4's most hidden flaw is that by requiring all comprehensive plan changes to go on the ballot, Florida election law requires that those comp plan changes (which often involve hundreds of pages of complex land use language) must be summarized in a ballot summary that is 75 words or less, which exposes cities to massive litigation costs due to ballot language challenges.

California, which is often considered as the epicenter of the ballot box movement, has literally led the nation in the number of referenda. More than 1,000 different land use issues appeared on local ballots in the past 30 years (Myers, 2001). An empirical case study by Fulton et al. (2001) analyzes a series of growth-control measures passed (the "Save Open-space and Agricultural Resources," or SOAR, initiative) in Ventura County, California between 1995 and 2000. The experience from Ventura County, which is the home to one of the most aggressive local approaches to growth management in the United States, has important lessons for all local governments that attempt to plan development (Fulton et al., 2001). Based on the county's comprehensive plan at the time, proponents of SOAR argued that the county had the capacity to accommodate more than 60,000 new housing units before SOAR would expire in 2020. However, after reviewing more than 120 project files (comprising over two thirds of approved permits and almost 12,000 housing units) and forecasted future demand, the authors predicted serious housing shortages to occur even before SOAR expires in 2020. They estimate that that Ventura County will need 312,000 housing units by 2010 when SOAR expires. As cities in Ventura County approved development projects at densities much lower than planned capacities, there will be a shortfall in housing targets of 20 percent below zoned capacities and 45 percent below General Plan capacities by 2020 (Fulton et al., 2001).

In a separate study, Staley (2001) finds that cities in Ohio subject to rezoning referenda on the ballot are more likely to have experienced an annual "growth penalty" of 19.4 to 28.7 housing permits for every 1,000 population. While comparing with the local housing growth, these estimates translate into a reduction of approximately 5 percent in construction starts. A 1998 survey by the National Association of Home Builders revealed that a 10% increase in the cost of building a new home was attributable to regulatory delays and fees, including ballot box land use measures (Acquaye et al., 2007). Other studies (Downs, 1992; Payne, 2001) also argue that such land use regulations in general increase the cost of an average new home.

In an attempt to explore the impacts of ballot box land use measures on housing affordability in Florida, Acquaye et al. (2007) propose varying levels of impacts since the full impact of the increased regulation may depend on a multiplicity of factors. These factors generally include the actual time delays in the development process (mostly based on election frequencies), and the degree that regulations will be needed against new developments that fit within the range of existing comprehensive plans. Based on the previous research experience from California, Ohio and other major U.S. cities, they actually offer the range of impact to vary from 5 percent to 20 percent. Since the restrictive nature of such ballot box measures is location specific, the authors hypothesize that the lower bound of the impact range (5%) is applied mostly in less urbanized areas while the extreme impact (20%) can realistically be applied to the most

urbanized areas where land supply is highly constricted. In our view, the 20% scenario is the most likely scenario due both to the concentration of construction activity in larger counties and to the actual litigation experience that has followed ballot box planning initiatives.

Quantitative Estimates of Impact

This section examines the likely impacts of Amendment 4 in terms of foregone investment in real estate development (both residential and non-residential). Those expenditures for labor and resources that would have been made as part of the development process are counted as investment spending. As was discussed earlier, associated delays in the land development process in conjunction with added uncertainty arising from voters' approval rate are likely to increase the transaction cost of development, thereby leading to a reduction in construction activity (both residential and non-residential).

This decline in construction in turn may generate significant adverse economic consequences. In order to quantify negative spillover impacts on the local economy, we adopt three impact scenarios, ranging from 5% (least impact) to 20 % (most impact) lost in real estate development spending. These figures are based on previous academic research on similar ballot box type regulation.

This current section is organized into three parts. The first part briefly describes the methodology used in the estimation and reports the estimates of adverse economic impacts of Amendment 4 throughout Florida. The second part deals with estimating the likely impacts of Amendment 4 on housing affordability and local government's property tax revenue. The final part reports the additional estimated impacts in terms of increased election and litigation costs.

Economic Impacts of Amendment 4

This study uses the 2010 implementation of a one region, 23-sector, dynamic simulation model with general equilibrium tendencies, to gauge the potential adverse impacts of Amendment 4 on job creation, total income, economic growth (in terms of total production) and state tax revenue for Florida. This model, developed by Regional Economic Models, Inc. (REMI) serves as a dynamic economic forecasting and policy analysis tool widely used by government agencies, universities and other professional agencies in a wide range of topic areas such as economic development, environment, energy, transportation, and taxation (see Appendix I). The methodology incorporates the complete inter-industry linkages found in the input-output models. These input-output models identify how the increase in demand for goods and services in one industry results in the increased demand and eventually increased supply (production) of goods and services from other industries in the economy. The consequent increase in regional output in turn generates more employment and higher labor income; higher income means

greater consumer spending, thereby further amplifying regional production and sales. This phenomenon is generally referred to as "economic multiplier effects", where the final demand and supply of goods and services in the region exceed the initial ones.

REMI is a dynamic model with forecasts and simulations generated on an annual basis. It corresponds to economic changes over time, allowing firms and individuals to change their behavior in response to changing economic conditions. These responses are, however, based in part on general equilibrium economic theory, where the equilibrium is reached as demand and supply are balanced in the long run. For example, in response to a rise in regional real wages relative to the U.S., economic migration will take place and will continue until relative real wage rates equalize across regions. The model is made up of thousands of simultaneous equations with a relatively simple structure.[6] However, the exact number of equations differs based on the extent of industry, demographic, demand, and other detail in the specific model being used. The underlying equations and responses are estimated using advanced statistical techniques. The estimates are then used to measure the structural relationships in the model. It also estimates the speed of economic responses since different adjustment periods will result in different economic and policy outcomes. In a nutshell, REMI integrates input-output, computable general equilibrium and econometric methodologies.

Tables 1, 2 and 3 report the summary of the estimated potential economic impacts due to passage of Amendment 4 on Florida's economy under least impact scenario (5%), moderate impact scenario (10%), and worst impact scenario (20%), respectively. Table 1 shows that even under the least impact scenario, an estimated 64,329 jobs will be at risk in Year 1 due to foregone investment in real estate development activities. In this scenario, the number of jobs lost will reach its peak in Year 3 with an estimated figure of 67,451 jobs. The situation will improve after Year 3 though the amount of job loss in Year 6 will be slightly higher relative to the same in Year 1. Thus, with the passage of Amendment 4, Florida is likely to experience an inverted U-like trend in terms of job loss over the near to medium term. Estimated figures reported in both Table 2 and 3 also confirm a similar trend. The only difference is that the figures reported in these two categories are relatively much larger than those reported in the least impact category. The total number of at risk jobs under the moderate and worst impact scenario during the peak year (Year 3) is estimated at 133,805 and 263,351, respectively. The estimates with 20% impact are quite close to those estimated by the Washington Economic Group (WEG) under their "most likely scenario".

[6] For further detail visit http://www.remi.com/

Table 1: Likely Economic Impacts of Amendment 4 under Least Impact Scenario

		5 % Impact					
Economic Variable	**Units**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Employment	Number of Jobs	64,329	66,767	67,451	67,113	66,234	65,250
Income	Billions of Current Dollars	3.459	3.879	4.19	4.416	4.593	4.749
Florida GSP	Billions of Fixed (2000) Dollars	3.888	4.194	4.37	4.476	4.559	4.633
State Tax Revenue	Billions of Fixed (2008) Dollars	0.448	0.492	0.532	0.566	0.598	0.628

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Income is defined as the sum of wage and salary disbursement, supplements to wages and salaries, and proprietor's income throughout Florida. Table 1 shows that giving up 5 percent in development activity has the potential to reduce the total income of the state by approximately $4 billion in Year 2. In contrast, the amount (approximately $15 billion) is almost four times higher under the worst impact scenario (20% impact). All three tables reveal that estimated loss in income increases over time. However, one needs to be careful in terms of interpreting the results in this manner as the unit of income is in current dollars and is not adjusted for inflation. Comparisons made in current dollars will tend to overstate increases in estimated impacts over time. The income reduction seems persistent over time under all three scenarios.

Table 2: Likely Economic Impacts of Amendment 4 under Moderate Impact Scenario

		10 % Impact					
Economic variable	**Units**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Employment	Number of Jobs	127,735	132,397	133,805	133,312	131,791	130,080
Income	Billions of Current Dollars	6.861	7.691	8.302	8.765	9.13	12.955
Florida GSP	Billions of Fixed (2000) Dollars	7.722	8.314	8.658	8.887	9.059	9.219
State Tax Revenue	Billions of Fixed (2008) Dollars	0.891	0.975	1.054	1.122	1.186	1.247

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Another measure of economic growth that will also be adversely affected if Amendment 4 were to be implemented is the Gross State Product (GSP) of Florida. GSP is defined as the market value of all goods and services produced by labor and property in the state of Florida. From all three tables it is evident that the amounts of GSP endangered by Amendment 4 are likely to increase with time. For instance, under the worst impact scenario, potential fall in GSP is estimated at $18 billion during Year 6, an increase by more than $3 billion from Year 1.

Table 3: Likely Economic Impacts of Amendment 4 under Worst Impact Scenario

		20 % Impact					
Economic variable	**Units**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Employment	Number of Jobs	251,867	260,365	263,351	263,066	260,949	258,479
Income	Billions of Current Dollars	13.518	15.109	16.31	17.256	18.034	18.726
Florida GSP	Billions of Fixed (2000) Dollars	15.222	16.342	17.025	17.503	17.891	18.251
State Tax Revenue	Billions of Fixed (2008) Dollars	1.757	1.919	2.073	2.208	2.336	2.458

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Finally, the foregone economic development activities due to Amendment 4 have the potential to negatively impact the state government tax base. With the passage of Amendment 4, the loss in state tax revenue will amount to around $500 million during Year 2 under the least impact scenario (5% impact). In contrast, Amendment 4 will cost almost $2 billion annually of tax revenue to the State of Florida under the worst impact scenario (20% impact). The tables also show that such negative impacts on state tax revenue are likely to amplify with the passage of time.

The negative economic impacts of Amendment 4 across different sectors of the economy are provided in the appendix. Tables A1-A3 report the estimates of job loss by different types of industries under the 5%, 10% and 20% impact scenario, respectively. These tables reveal that of the total projected job loss, 29-33 percent of the jobs will be at risk in the Construction sector, followed by 17-19 percent in the Professional and Business Services, 14-16 percent in the Trade, Transportation and Utilities sectors, and the remaining 32-40 percent will be distributed among the other sectors of the Florida economy.[7] Tables B1-B3 report the estimated negative impacts of foregone development activities on the total labor income across diverse sectors of the economy throughout Florida. The largest percentage income losses are found to be in the Construction sector (25-31%), followed by the Professional and Business Services (19-21%), and the Trade, Transportation and Utilities sectors (13-14%). These in turn suggest that particularly the high-wage workers are likely to be at potential risk directly or indirectly from the undesirable economic outcomes associated with the passage of

[7] Trade includes both retail and wholesale trade.

Amendment 4. Finally, Tables C1-C3 account for the estimated potential loss in GSP across various sectors of the Florida economy. The Construction sector is once again identified as the worst-hit sector in terms of producing goods and services followed by the Financial sector, the Trade sector, and the Professional and Business sector. This is clearly suggestive of the inter-industry linkages that will spread the impact of Amendment 4 beyond simply real estate construction and development.

Impacts on Property Tax Revenue

One of the unintended costs associated with Amendment 4 is the forgone property tax that would be generated by the foregone constructions of both the residential and non-residential units during the capital projects phases of the real estate development process. Table 4 shows the amount of property tax lost due to decrease in construction activities. Table 4 also reports the amount of foregone tax revenue that would normally go towards county government, school boards and independent special districts. Tax revenue is estimated using the average county-wide millage rate (Florida Property Valuation, 2009) and the valuation of the construction-start in 2009 (Census Building Permits; Reed Construction Data).[8] Under the worst impact scenario, a 20 percent decrease of almost $14 billion in both residential and non-residential construction leads to an overall reduction of $39 million in property tax revenue. Of the total loss in revenue $14 million would have gone towards Florida's county government, $22 million towards school boards, and $2 million towards special independent districts (municipality government). Although the maximum is estimated at $39.1 million loss in tax revenue, the loss amount would be much higher during the normal years (i.e., years without housing price boom or bust). Based on the historic residential construction valuation in the state of Florida for the 1982-2001 time period, a linear extrapolation methodology estimates the construction valuation for 2009 at $35 billion, which is well over the actual amount of $6.8 billion in the same year.

[8] Tax revenues are first estimated at the county level using county millage rate and then are aggregated at the state level.

Table 4: Foregone Property Tax Revenue due to Amendment 4

	Lost Property Tax Revenue	County Government Operating	County Government Debt Service	County Gov. Dependent Special District	School Board Operating	School Board Debt Service	Independent Special Districts
	Unit: US Dollar (current)						
	Least Impact Scenario (5% Impact)						
Residential	4,480,533	1,680,406	23,282	15,395	2,540,665	7,545	213,239
Non-residential	5,298,929	1,861,094	50,658	12,196	3,024,424	15,454	335,103
Total	9,779,462	3,541,500	73,940	27,592	5,565,089	23,000	548,342
	Moderate Impact Scenario (10% Impact)						
Residential	8,961,067	3,360,812	46,564	30,791	5,081,331	15,090	426,478
Non-residential	10,597,857	3,722,188	101,316	24,392	6,048,847	30,909	670,205
Total	19,558,924	7,083,000	147,880	55,183	11,130,178	45,999	1,096,683
	Worst Impact Scenario (20% Impact)						
Residential	17,922,134	6,721,625	93,128	61,582	10,162,662	30,181	852,956
Non-residential	21,195,714	7,444,376	202,632	48,784	12,097,695	61,817	1,340,410
Total	39,117,848	14,166,000	295,760	110,366	22,260,357	91,998	2,193,367

Source: Millage rate are from Florida Property Valuation, 2009. Reed Construction data provides the construction-start data.

Impacts on Housing Affordability

Another undesirable consequence of Amendment 4 can be traced to lower housing affordability. Ballot box regulations like Amendment 4 are likely to increase transaction costs, leading to a rise in housing prices. This in turn has a substantial impact on housing affordability. Table 5 reports the actual real median sales price of single-family houses in 2009 along with the estimated prices under three different impact scenarios. Table 5 also shows how these increases in prices relate to a qualifying income needed for a mortgage. Calculations are based on two situations: the standard situation and the special situation.

Table 5: Qualifying Income Needed for 2009 Single-family Housing Sales Price

	Actual	5% Impact	10% Impact	20% Impact
Healthy Financial Markets				
Real Median Sales Price (2009 dollars)	168,399	176,819	185,239	202,079
Qualifying Income for Real Median Price	45,155	47,412	49,670	54,186
Illiquid Financial Markets				
Real Median Sales Price (2009 dollars)	168,399	176,819	185,239	202,079
Qualifying Income for Real Median Price	66,130	69,436	72,743	79,355

Source: Real median sales price (2009 dollars) data are from Shimberg Center for Affordable Housing, 2009.

The standard situation refers to a "healthy financial market" good year condition, and is based on the assumption that the household places a 5 percent down payment, and then spends 25 percent of its income on housing, and that the interest rate is 5.82 percent (the average 30-year conventional mortgage rate for 2003). The illiquid financial market situation is intended to portray less liquid financial markets taking into account events like a recession/housing bust in the economy. It is based on the assumption that the household places a 10 percent down payment, and then spends 15 percent of its income on housing, and that the interest rate is 5.14 percent (the average 30-year conventional mortgage rate for 2009).[9]

Table 5 reveals that if Amendment 4 were to cause a 5 percent increase in prices, then households would need to have approximately $2000 more in income to qualify for a mortgage under the healthy financial market situation. If the housing price were to increase by 20 percent, households would require more than four times the extra income needed with the 5 percent increase. In contrast, 5 percent hike in price under the illiquid financial market situation calls for extra $3000 to qualify for a mortgage, and using the upper bound of housing price estimate (20% impact) will require households to have approximately $13000 more in income to buy the median priced home.

[9] Assumption based on information from National Association of Realtors and Freddie Mac.

Additional Impact on Election and Litigation Costs

In addition to its negative impact on Florida's jobs and economic growth, Amendment 4 is likely to increase local government revenue needs through added elections and litigation. This in turn will affect taxpayers, as these fiscal burdens will be borne by citizens. Florida cities and counties in recent years have made approximately 8,000 changes to their comprehensive plans annually; therefore, bringing the amendments relating to land use to voters will likely require additional elections at substantial cost to taxpayers. However, precise estimates of these local fiscal impacts due to Amendment 4 cannot be made with certainty. According to Florida's Financial Impact Estimating Conference (FIEC), Amendment 4 will add costs for local governments:

"The amendment's impact on local government expenditures cannot be estimated precisely. Local governments will incur additional costs due to the requirement to conduct referenda in order to adopt comprehensive plans or amendments thereto. The amount of such costs depends upon the frequency, timing and method of the referenda, and includes the costs of ballot preparation, election administration, and associated expenses. The impact on state government expenditures will be insignificant."

Although the associated fiscal impact of Amendment 4 cannot be known with precision, based on the 2005 election data, FIEC provides an estimate of cost for one extra election which is depicted in the following table.

Table 6: FIEC Estimates of Special Election Costs, per Election

	Averaged sized city	Averaged sized county	State
Minimum cost	$10,500	$143,300	$10,000,000
Maximum cost	$22,000	$287,700	$20,000,000

According to information supplied to FIEC, the city of Tallahassee experienced a cost of $337,275 due to voting by mail for 103,316 registered voters in 2005. This amount translates into a cost of $3.75 per voter. If adjusted for inflation at the rate of 14.9 percent (2004-11), the resulting cost figures will be estimated at $41.7 million and $3.75 for 11,120,316 and per voter respectively (Florida TaxWatch, September '10). FIEC also estimates the cost of a physical location election at $19.4 million for all voters of the state in 2005. The inflation-adjusted cost of the same in Year 2 will be around $22.3 million and $2 for the state and per voter

respectively. This clearly suggests that voting by mail is in fact much more expensive as claimed by FIEC study.

Although local governments usually consider comprehensive plan amendments twice a year, one cannot predict with certainty the number of special elections that local governments may need to call, as it will vary with the volume of land use amendments upon the passage of Amendment 4. It will still add to the cost of local governments even if comprehensive plan amendments are included in the regular ballot. Based on the estimates by FIEC, and further assuming that Amendment 4 will demand an average of two special elections for each Florida voter, Florida TaxWatch estimates the direct annual cost ranging from $44 million to $83 million approximately. However, the picture will be incomplete until we take into account two indirect costs that are likely to happen with any election. These indirect costs are due to the value of the time that Florida voters will have to take both to vote, and to learn about the issues. Since time has value, these add to the costs borne by the taxpayers.

Conclusions

We use the 2010 REMI model of the Florida economy to project likely economic consequences of passage of Amendment 4. Using estimates from the academic economics literature of the growth changes that result from ballot box initiatives, we construct three alternative scenarios for the likely economic changes in Florida that would result from passage of the Amendment. The loss in Florida gross state product (GSP) associated with passage of Amendment 4 in this scenario is calculated to be about 2.2 percent of Florida's annual GSP and 2.4 percent of jobs. This is the annual shortfall relative to the alternative non-Amendment 4 baseline economic performance for Florida, and it is projected to be larger in subsequent years because the growth-limiting effects of Amendment 4 will be more important in a healthy Florida economy.

The negative fiscal impacts will be seen largely in reduced revenues from sales and use tax, real estate transactions and corporate income tax, but the local government fiscal impacts of Amendment 4 are also important. In a normal year for Florida, lost property tax revenue attributable to Amendment 4 is projected to be $227 million annually, for an average across Florida's 67 counties of $3.4 million per county in lost ad valorem revenue per year. This property tax revenue loss is in addition to the some $30 million per county in lost revenue to the State of Florida associated with lower levels of economic activity that are identified in the REMI output.

Passage of Amendment 4 will add a layer of indeterminate cost, uncertainty of outcome and many months, if not years, to the development process, greatly increasing the risk to developers to taking on a new project that requires changes to the Land Use element of the

Comprehensive Plan. There is little doubt that developers and investors will consider the increased time, costs and uncertainty associated with bringing a development project to Florida – be it residential, industrial or commercial – and that many will decide that the risk is too high and locate elsewhere. The negative economic consequences of Amendment 4 are likely to be severe and long-lasting, and they will be difficult to undo if and when the Amendment is passed.

Appendix A: Likely Impacts on Employment

Table A - 1: Likely Impacts on Employment under Least Impact Scenario

Employment	5 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	175	170	159	144	130	115
Construction	21,354	22,029	21,706	20,886	19,783	18,596
Manufacturing	2,772	2,802	2,812	2,807	2,800	2,800
Trade, Transportation, and Utilities	8,900	9,352	9,678	9,916	10,112	10,315
Information	1,569	1,638	1,697	1,749	1,795	1,842
Financial Activities	4,912	4,897	4,781	4,586	4,363	4,149
Professional and Business Services	11,116	11,684	12,014	12,203	12,298	12,363
Education and Health Services	3,837	3,921	3,997	4,048	4,093	4,154
Leisure and Hospitality	2,111	2,280	2,406	2,488	2,549	2,604
Other Services	2,528	2,576	2,603	2,599	2,583	2,567
Government	5,055	5,418	5,598	5,687	5,728	5,745
Total	64,329	66,767	67,451	67,113	66,234	65,250

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Table A - 2: Likely Impacts on Employment under Moderate Impact Scenario

Employment	10 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	349	338	315	286	257	229
Construction	42,414	43,701	43,116	41,603	39,551	37,331
Manufacturing	5,503	5,554	5,570	5,558	5,545	5,547
Trade, Transportation, and Utilities	17,667	18,537	19,180	19,662	20,066	20,485
Information	3,116	3,247	3,362	3,463	3,554	3,648
Financial Activities	9,751	9,709	9,488	9,117	8,692	8,288
Professional and Business Services	22,069	23,162	23,809	24,193	24,399	24,547
Education and Health Services	7,614	7,771	7,927	8,038	8,140	8,275
Leisure and Hospitality	4,193	4,524	4,773	4,941	5,066	5,183
Other Services	5,017	5,106	5,161	5,160	5,135	5,113
Government	10,042	10,748	11,104	11,291	11,386	11,434
Total	127,735	132,397	133,805	133,312	131,791	130,080

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Table A - 3: Likely Impacts on Employment under Worst Impact Scenario

Employment	20 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	687	663	620	565	508	455
Construction	83,682	86,014	85,087	82,557	79,048	75,210
Manufacturing	10,851	10,915	10,932	10,903	10,876	10,880
Trade, Transportation, and Utilities	34,815	36,426	37,677	38,662	39,509	40,394
Information	6,142	6,379	6,595	6,791	6,970	7,155
Financial Activities	19,217	19,093	18,685	18,017	17,257	16,533
Professional and Business Services	43,508	45,521	46,762	47,551	48,022	48,387
Education and Health Services	14,993	15,271	15,593	15,847	16,099	16,413
Leisure and Hospitality	8,275	8,905	9,398	9,745	10,012	10,265
Other Services	9,881	10,032	10,149	10,170	10,150	10,139
Government	19,816	21,146	21,853	22,258	22,498	22,648
Total	251,867	260,365	263,351	263,066	260,949	258,479

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Appendix B: Likely Impacts on Income

Table B - 1: Likely Impacts on Income under Least Impact Scenario

Income (Billions of Current Dollars)	5 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	$0.007	$0.007	$0.009	$0.009	$0.008	$0.008
Construction	$1.059	$1.147	$1.185	$1.195	$1.187	$1.169
Manufacturing	$0.207	$0.224	$0.238	$0.249	$0.260	$0.270
Trade, Transportation, and Utilities	$0.431	$0.496	$0.549	$0.594	$0.635	$0.674
Information	$0.135	$0.150	$0.165	$0.178	$0.190	$0.203
Financial Activities	$0.240	$0.259	$0.271	$0.275	$0.276	$0.275
Professional and Business Services	$0.663	$0.751	$0.822	$0.883	$0.934	$0.984
Education and Health Services	$0.217	$0.247	$0.273	$0.295	$0.313	$0.331
Leisure and Hospitality	$0.071	$0.087	$0.101	$0.111	$0.120	$0.129
Other Services	$0.073	$0.083	$0.091	$0.096	$0.101	$0.104
Government	$0.356	$0.428	$0.486	$0.531	$0.569	$0.602
Total	$3.459	$3.879	$4.190	$4.416	$4.593	$4.749

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Table B - 2: Likely Impacts on Income under Moderate Impact Scenario

Income (Billions of Current Dollars)	10 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	$0.013	$0.015	$0.016	$0.016	$0.016	$0.015
Construction	$2.102	$2.273	$2.351	$2.378	$2.368	$2.341
Manufacturing	$0.411	$0.444	$0.472	$0.494	$0.514	$0.535
Trade, Transportation, and Utilities	$0.855	$0.982	$1.087	$1.179	$1.259	$1.340
Information	$0.268	$0.298	$0.326	$0.352	$0.377	$0.402
Financial Activities	$0.475	$0.513	$0.537	$0.547	$0.549	$0.547
Professional and Business Services	$1.317	$1.489	$1.630	$1.750	$1.854	$1.951
Education and Health Services	$0.429	$0.490	$0.542	$0.586	$0.623	$0.659
Leisure and Hospitality	$0.141	$0.173	$0.199	$0.219	$0.239	$0.256
Other Services	$0.145	$0.164	$0.180	$0.191	$0.200	$0.208
Government	$0.705	$0.850	$0.962	$1.053	$1.131	$4.701
Total	$6.861	$7.691	$8.302	$8.765	$9.130	$12.955

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Table B - 3: Likely Impacts on Income under Worst Impact Scenario

Income (Billions of Current Dollars)	20 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	$0.026	$0.030	$0.032	$0.032	$0.033	$0.031
Construction	$4.142	$4.464	$4.627	$4.704	$4.718	$4.700
Manufacturing	$0.809	$0.872	$0.924	$0.968	$1.008	$1.049
Trade, Transportation, and Utilities	$1.683	$1.928	$2.134	$2.313	$2.478	$2.640
Information	$0.528	$0.585	$0.638	$0.689	$0.738	$0.788
Financial Activities	$0.936	$1.009	$1.056	$1.078	$1.086	$1.087
Professional and Business Services	$2.593	$2.922	$3.197	$3.434	$3.643	$3.839
Education and Health Services	$0.845	$0.962	$1.064	$1.155	$1.232	$1.306
Leisure and Hospitality	$0.278	$0.342	$0.393	$0.433	$0.473	$0.506
Other Services	$0.286	$0.323	$0.353	$0.376	$0.395	$0.411
Government	$1.392	$1.672	$1.892	$2.074	$2.230	$2.369
Total	$13.518	$15.109	$16.310	$17.256	$18.034	$18.726

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Appendix C: Likely Impacts on GSP

Table C - 1: Likely Impacts on GSP under Least Impact Scenario

GSP (Billions of Fixed (2000) Dollars)	5 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	$0.004	$0.004	$0.004	$0.003	$0.003	$0.003
Construction	$0.898	$0.942	$0.938	$0.913	$0.876	$0.834
Manufacturing	$0.315	$0.341	$0.363	$0.381	$0.399	$0.416
Trade, Transportation, and Utilities	$0.619	$0.686	$0.746	$0.798	$0.852	$0.909
Information	$0.238	$0.265	$0.290	$0.314	$0.340	$0.367
Financial Activities	$0.652	$0.673	$0.674	$0.661	$0.644	$0.625
Professional and Business Services	$0.589	$0.631	$0.657	$0.675	$0.689	$0.702
Education and Health Services	$0.167	$0.174	$0.179	$0.184	$0.189	$0.195
Leisure and Hospitality	$0.064	$0.070	$0.075	$0.078	$0.081	$0.084
Other Services	$0.062	$0.065	$0.067	$0.068	$0.069	$0.070
Government	$0.280	$0.343	$0.377	$0.401	$0.417	$0.428
Total	$3.888	$4.194	$4.370	$4.476	$4.559	$4.633

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Table C - 2: Likely Impacts on GSP under Moderate Impact Scenario

GSP (Billions of Fixed (2000) Dollars)	10 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	$0.008	$0.008	$0.008	$0.007	$0.007	$0.006
Construction	$1.783	$1.868	$1.863	$1.817	$1.750	$1.672
Manufacturing	$0.626	$0.677	$0.718	$0.754	$0.789	$0.824
Trade, Transportation, and Utilities	$1.231	$1.363	$1.476	$1.584	$1.691	$1.806
Information	$0.473	$0.525	$0.573	$0.622	$0.672	$0.726
Financial Activities	$1.295	$1.335	$1.337	$1.315	$1.282	$1.248
Professional and Business Services	$1.168	$1.248	$1.299	$1.337	$1.367	$1.392
Education and Health Services	$0.331	$0.344	$0.356	$0.366	$0.375	$0.387
Leisure and Hospitality	$0.127	$0.139	$0.148	$0.155	$0.161	$0.167
Other Services	$0.123	$0.128	$0.132	$0.135	$0.137	$0.139
Government	$0.557	$0.679	$0.748	$0.795	$0.828	$0.852
Total	$7.722	$8.314	$8.658	$8.887	$9.059	$9.219

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Table C - 3: Likely Impacts on GSP under Worst Impact Scenario

GSP (Billions of Fixed (2000) Dollars)	20 % Impact					
Industry	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Natural Resources and Mining	$0.016	$0.016	$0.015	$0.014	$0.014	$0.012
Construction	$3.517	$3.673	$3.672	$3.600	$3.490	$3.361
Manufacturing	$1.234	$1.330	$1.409	$1.478	$1.547	$1.615
Trade, Transportation, and Utilities	$2.426	$2.676	$2.898	$3.110	$3.325	$3.553
Information	$0.933	$1.031	$1.124	$1.219	$1.318	$1.423
Financial Activities	$2.553	$2.625	$2.634	$2.598	$2.544	$2.488
Professional and Business Services	$2.303	$2.453	$2.552	$2.626	$2.688	$2.741
Education and Health Services	$0.651	$0.676	$0.699	$0.721	$0.742	$0.768
Leisure and Hospitality	$0.250	$0.274	$0.292	$0.306	$0.318	$0.330
Other Services	$0.241	$0.252	$0.260	$0.265	$0.270	$0.275
Government	$1.098	$1.336	$1.470	$1.566	$1.635	$1.685
Total	$15.222	$16.342	$17.025	$17.503	$17.891	$18.251

Source: Estimation is based on data and methodology provided by Regional Economic Models, Inc.

Appendix D: County-Specific Foregone Property Tax Revenue due to Amendment 4

Table D - 1: County-Specific Foregone Property Tax Revenue due to Amendment 4 (5% Impact)

County	County Wide Millage Rate	Construction Valuation Resi & Non-resi	Lost Property Tax Revenue	County Gov. Operating	County Gov. Debt Service	County Gov. Dependent Special District	School Board Operating	School Board Debt Service	Independent Special Districts
Alachua	19.0846	146729356	140014	59055	1834	0	64311	4710	10103
Baker	16.1446	12696274	10249	4493	0	45	5039	0	671
Bay	11.318	125787106	71183	22956	0	0	47944	0	283
Bradford	16.864	5604302	4726	2571	0	0	2154	0	0
Brevard	12.0574	424393163	255854	78854	0	4329	163116	0	9555
Broward	13.9027	1034541489	719146	252888	25864	0	384384	0	56010
Calhoun	17.291	6602922	5709	3301	0	0	2392	0	15
Charlotte	13.306	118785791	79028	35099	0	0	43695	0	234
Citrus	15.5409	127349578	98956	36485	0	1975	49762	0	10734
Clay	12.9106	132637600	85622	31580	0	0	51284	0	2758
Collier	9.5642	580436091	277570	110704	0	850	152045	0	13971
Columbia	18.3627	26272675	24122	10366	0	163	10326	0	3267
Dade	14.2763	1048330263	748314	253586	14939	0	403502	15568	60719
DeSoto	15.235	21274121	16206	7338	0	0	8262	0	606
Dixie	18.3499	3608182	3310	1804	0	0	1427	0	79
Duval	8.0323	932759026	374610	0	0	0	353609	0	21001
Escambia	14.8805	226193756	168294	78891	0	0	88894	0	509
Flagler	13.4662	56713925	38186	13865	1017	0	22028	0	1277
Franklin	8.2703	7376431	3050	1356	0	0	1678	0	17
Gadsden	16.9314	32880244	27835	14642	0	0	13119	0	74
Gilchrist	17.807	5094910	4536	2107	0	280	2037	0	112
Glades	17.4133	5412056	4712	2472	0	0	2095	0	145
Gulf	12.4609	13800775	8599	3980	0	0	4587	0	31
Hamilton	18.4999	2132456	1973	1066	0	0	859	0	47
Hardee	17.4218	5063104	4410	2165	0	0	2016	0	229
Hendry	17.887	13447551	12027	4370	0	0	5287	0	2369
Hernando	14.2087	60716275	43135	19256	0	0	22705	0	1174
Highlands	14.787	38773216	28667	13764	0	0	14902	0	0
Hillsborough	14.5738	1400088589	1020231	401986	4228	0	538474	0	75542
Holmes	15.831	6189677	4899	2940	0	0	1945	0	14
Indian River	11.0731	157113258	86987	24268	3047	0	57315	2357	0
Jackson	13.4943	20756174	14005	7392	0	0	6566	0	47
Jefferson	16.1186	6879024	5544	2863	0	0	2681	0	0
Lafayette	16.9329	2248682	1904	984	0	0	871	0	49
Lake	12.5062	291552361	182311	67802	1605	0	109799	0	3105

Lee	12.3497	645488802	398580	133958	0	0	242316	0	22305
Leon	15.642	173278681	135521	68012	0	0	67119	0	390
Levy	15.1722	21741639	16493	8067	0	0	8426	0	0
Liberty	17.738	8934611	7924	4467	0	0	3437	0	20
Madison	17.3289	4605337	3990	2060	0	0	1829	0	101
Manatee	14.6371	308552680	225816	97183	1682	0	116340	0	10611
Marion	11.378	196815289	111968	37493	886	0	73589	0	0
Martin	13.161	130971172	86186	34766	905	0	43895	0	6619
Monroe	6.8969	56902496	19623	8774	0	0	9636	0	1213
Nassau	13.8253	66511856	45977	18514	0	0	25966	0	1498
Okaloosa	10.9739	147704106	81045	24297	0	0	56416	0	332
Okeechobee	16.1439	16567833	13373	6215	215	0	6684	0	258
Orange	12.1077	1081296193	654600	239761	0	0	414839	0	0
Osceola	14.4603	244168666	176538	78904	947	3133	93553	0	0
Palm Beach	15.0378	939469662	706378	204053	10212	0	374989	0	117124
Pasco	14.0934	357496084	251917	113805	0	0	131201	0	6910
Pinellas	14.7296	455481513	335453	110978	0	285	190072	0	34118
Polk	14.4525	386497236	279293	132694	0	0	146598	0	0
Putnam	16.3895	17506648	14346	7507	0	0	6839	0	0
Saint Johns	13.9584	323896244	226054	89834	0	0	126336	0	9884
Saint Lucie	17.6406	102694463	90580	32131	0	315	40955	0	17179
Santa Rosa	13.7153	125733348	86224	38319	0	0	47622	0	283
Sarasota	12.4261	337301903	209567	52369	3466	467	125257	0	28008
Seminole	13.1839	426421217	281095	104473	3094	0	164663	0	8865
Sumter	13.46	635439766	427651	190950	0	0	236701	0	0
Suwannee	16.2609	12495919	10160	4998	0	0	4887	0	275
Taylor	15.1992	8938593	6793	3134	0	0	3463	0	197
Union	18.7819	3557036	3340	1779	0	89	1395	0	78
Volusia	14.6297	311311837	227720	83561	0	15661	121489	0	7009
Wakulla	16.638	16048954	13351	6620	0	0	6330	365	36
Walton	8.1066	113443214	45982	19328	0	0	26398	0	255
Washington	16.4445	12167256	10004	5243	0	0	4734	0	27
Total		14789680657	9779462	3541500	73940	27592	5565089	23000	548342

Table D - 2: County-Specific Foregone Property Tax Revenue due to Amendment 4 (10% Impact)

County	County Wide Millage Rate	Construction Valuation Resi & Non-resi	Lost Property Tax Revenue	County Gov. Operating	County Gov. Debt Service	County Gov. Dependent Special District	School Board Operating	School Board Debt Service	Independent Special Districts
Alachua	19.0846	146729355.8	280027.1	118109.8	3668.233895	0	128622.9533	9420.024643	20206.09959
Baker	16.1446	12696273.59	20497.63	8986.295	0	90.90531894	10078.30198	0	1342.123082
Bay	11.318	125787106.5	142365.8	45912.29	0	0	95887.51126	0	566.0419791
Bradford	16.864	5604301.673	9451.094	5142.507	0	0	4308.587126	0	0
Brevard	12.0574	424393163.2	511707.8	157708.7	0	8657.620529	326231.0245	0	19110.42414
Broward	13.9027	1034541489	1438292	505777	51727.07447	0	768767.7808	0	112020.1525
Calhoun	17.291	6602922	11417	6603	0	0	4784	0	30
Charlotte	13.306	118785791	158056	70198	0	0	87391	0	468
Citrus	15.5409	127349578	197913	72970	0	3950	99524	0	21469
Clay	12.9106	132637600	171243	63159	0	0	102569	0	5515
Collier	9.5642	580436091	555141	221407	0	1701	304090	0	27942
Columbia	18.3627	26272675	48244	20732	0	326	20653	0	6533
Dade	14.2763	1048330263	1496628	507172	29877	0	807005	31135	121439
DeSoto	15.235	21274121	32411	14676	0	0	16524	0	1211
Dixie	18.3499	3608182	6621	3608	0	0	2854	0	159
Duval	8.0323	932759026	749220	0	0	0	707218	0	42002
Escambia	14.8805	226193756	336588	157781	0	0	177788	0	1018
Flagler	13.4662	56713925	76372	27730	2033	0	44055	0	2554
Franklin	8.2703	7376431	6101	2711	0	0	3356	0	33
Gadsden	16.9314	32880244	55671	29284	0	0	26238	0	148
Gilchrist	17.807	5094910	9073	4213	0	560	4075	0	224
Glades	17.4133	5412056	9424	4945	0	0	4190	0	289
Gulf	12.4609	13800775	17197	7960	0	0	9175	0	62
Hamilton	18.4999	2132456	3945	2132	0	0	1719	0	94
Hardee	17.4218	5063104	8821	4331	0	0	4033	0	457
Hendry	17.887	13447551	24054	8741	0	0	10574	0	4739
Hernando	14.2087	60716275	86270	38513	0	0	45410	0	2347
Highlands	14.787	38773216	57334	27529	0	0	29805	0	0
Hillsborough	14.5738	1400088589	2040461	803973	8457	0	1076948	0	151084
Holmes	15.831	6189677	9799	5880	0	0	3891	0	28
Indian River	11.0731	157113258	173973	48535	6094	0	114630	4713	0
Jackson	13.4943	20756174	28009	14783	0	0	13132	0	93
Jefferson	16.1186	6879024	11088	5725	0	0	5363	0	0
Lafayette	16.9329	2248682	3808	1968	0	0	1741	0	99
Lake	12.5062	291552361	364621	135604	3210	0	219597	0	6210

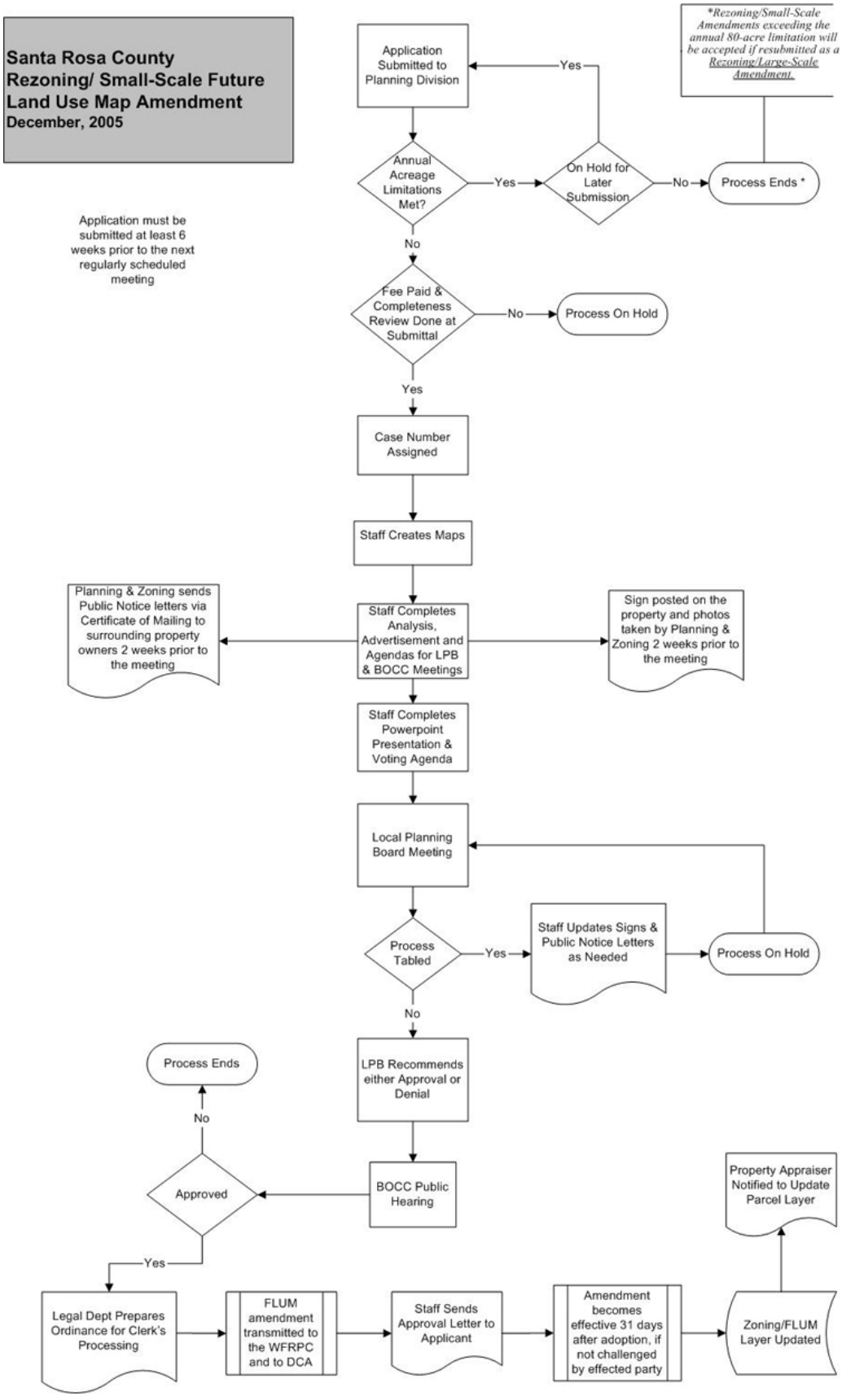
Lee	12.3497	645488802	797159	267917	0	0	484633	0	44610
Leon	15.642	173278681	271043	136024	0	0	134239	0	780
Levy	15.1722	21741639	32987	16135	0	0	16852	0	0
Liberty	17.738	8934611	15848	8935	0	0	6873	0	40
Madison	17.3289	4605337	7981	4119	0	0	3659	0	203
Manatee	14.6371	308552680	451632	194367	3363	0	232680	0	21222
Marion	11.378	196815289	223936	74987	1771	0	147178	0	0
Martin	13.161	130971172	172371	69533	1810	0	87790	0	13239
Monroe	6.8969	56902496	39245	17547	0	0	19273	0	2425
Nassau	13.8253	66511856	91955	37027	0	0	51932	0	2995
Okaloosa	10.9739	147704106	162089	48593	0	0	112831	0	665
Okeechobee	16.1439	16567833	26747	12431	431	0	13369	0	517
Orange	12.1077	1081296193	1309201	479522	0	0	829679	0	0
Osceola	14.4603	244168666	353075	157809	1895	6265	187106	0	0
Palm Beach	15.0378	939469662	1412756	408106	20424	0	749979	0	234247
Pasco	14.0934	357496084	503834	227611	0	0	262402	0	13821
Pinellas	14.7296	455481513	670906	221956	0	569	380145	0	68236
Polk	14.4525	386497236	558585	265388	0	0	293197	0	0
Putnam	16.3895	17506648	28693	15015	0	0	13678	0	0
Saint Johns	13.9584	323896244	452107	179668	0	0	252671	0	19767
Saint Lucie	17.6406	102694463	181159	64262	0	630	81909	0	34358
Santa Rosa	13.7153	125733348	172447	76638	0	0	95243	0	566
Sarasota	12.4261	337301903	419135	104739	6932	934	250514	0	56016
Seminole	13.1839	426421217	562189	208946	6187	0	329325	0	17731
Sumter	13.46	635439766	855302	381899	0	0	473403	0	0
Suwannee	16.2609	12495919	20319	9997	0	0	9773	0	550
Taylor	15.1992	8938593	13586	6267	0	0	6926	0	393
Union	18.7819	3557036	6681	3557	0	178	2789	0	156
Volusia	14.6297	311311837	455440	167122	0	31321	242979	0	14018
Wakulla	16.638	16048954	26702	13240	0	0	12659	730	72
Walton	8.1066	113443214	91964	38657	0	0	52796	0	510
Washington	16.4445	12167256	20008	10486	0	0	9467	0	55
Total		14789680657	19558924	7083000	147880	55183	11130178	45999	1096683

Table D - 3: County-Specific Foregone Property Tax Revenue due to Amendment 4 (20% Impact)

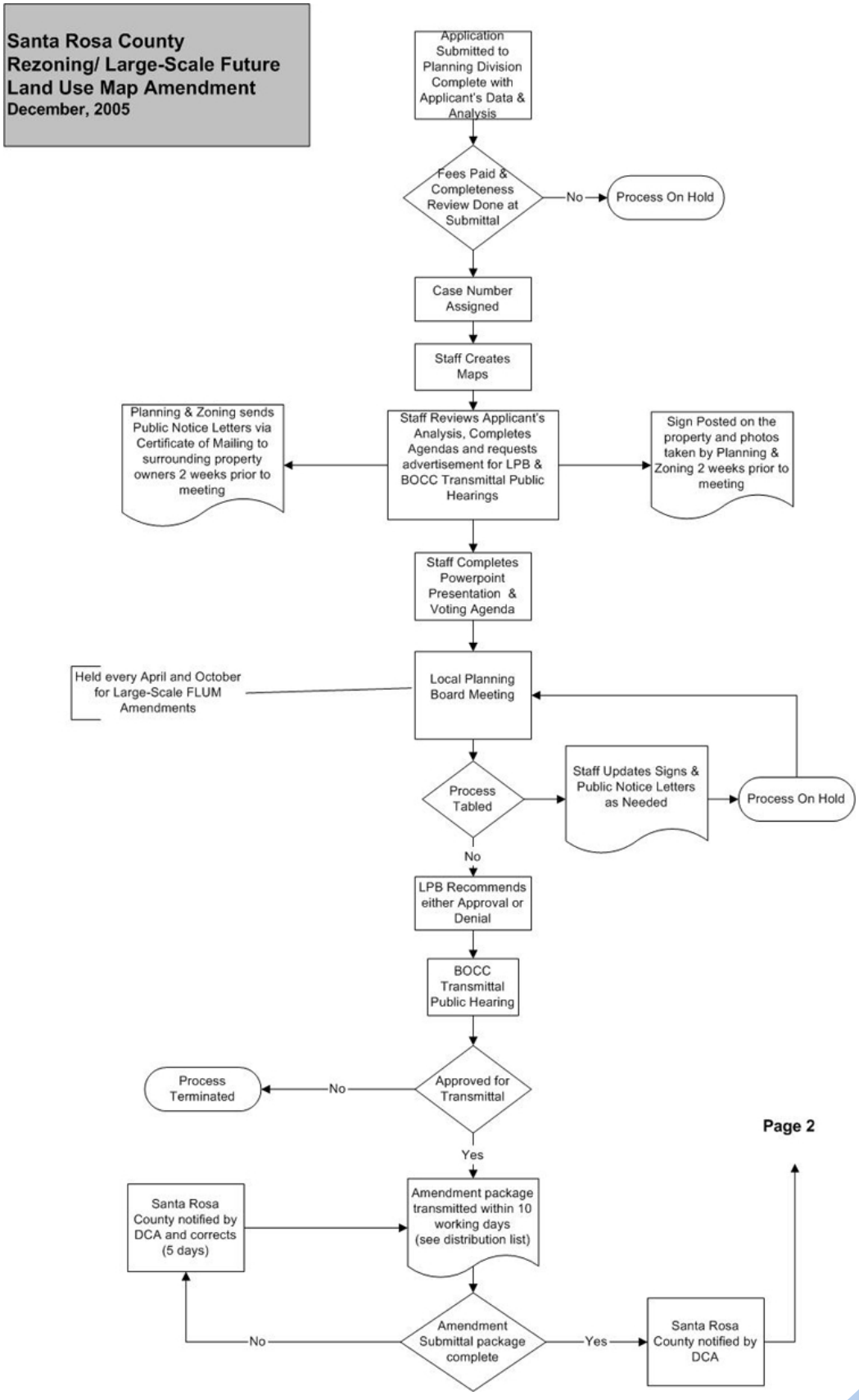
County	County Wide Millage Rate	Construction Valuation Resi & Non-resi	Lost Property Tax Revenue	County Gov. Operating	County Gov. Debt Service	County Gov. Dependent Special District	School Board Operating	School Board Debt Service	Independent Special Districts
Alachua	19.0846	146,729,356	560,054	236,220	7,336	-	257,246	18,840	40,412
Baker	16.1446	12,696,274	40,995	17,973	-	182	20,157	-	2,684
Bay	11.318	125,787,106	284,732	91,825	-	-	191,775	-	1,132
Bradford	16.864	5,604,302	18,902	10,285	-	-	8,617	-	-
Brevard	12.0574	424,393,163	1,023,416	315,417	-	17,315	652,462	-	38,221
Broward	13.9027	1,034,541,489	2,876,584	1,011,554	103,454	-	1,537,536	-	224,040
Calhoun	17.291	6,602,922	22,834	13,206	-	-	9,569	-	59
Charlotte	13.306	118,785,791	316,113	140,395	-	-	174,781	-	936
Citrus	15.5409	127,349,578	395,825	145,940	-	7,901	199,047	-	42,937
Clay	12.9106	132,637,600	342,486	126,319	-	-	205,137	-	11,030
Collier	9.5642	580,436,091	1,110,281	442,815	-	3,401	608,181	-	55,884
Columbia	18.3627	26,272,675	96,487	41,464	-	652	41,306	-	13,066
Dade	14.2763	1,048,330,263	2,993,255	1,014,343	59,755	-	1,614,009	62,271	242,877
DeSoto	15.235	21,274,121	64,822	29,353	-	-	33,047	-	2,422
Dixie	18.3499	3,608,182	13,242	7,216	-	-	5,708	-	317
Duval	8.0323	932,759,026	1,498,440	-	-	-	1,414,436	-	84,004
Escambia	14.8805	226,193,756	673,175	315,563	-	-	355,577	-	2,036
Flagler	13.4662	56,713,925	152,744	55,459	4,066	-	88,111	-	5,108
Franklin	8.2703	7,376,431	12,201	5,422	-	-	6,713	-	66
Gadsden	16.9314	32,880,244	111,342	58,569	-	-	52,477	-	296
Gilchrist	17.807	5,094,910	18,145	8,426	-	1,120	8,150	-	448
Glades	17.4133	5,412,056	18,848	9,890	-	-	8,380	-	579
Gulf	12.4609	13,800,775	34,394	15,920	-	-	18,350	-	124
Hamilton	18.4999	2,132,456	7,890	4,265	-	-	3,438	-	188
Hardee	17.4218	5,063,104	17,642	8,662	-	-	8,066	-	914
Hendry	17.887	13,447,551	48,107	17,482	-	-	21,148	-	9,478
Hernando	14.2087	60,716,275	172,540	77,026	-	-	90,819	-	4,695
Highlands	14.787	38,773,216	114,668	55,058	-	-	59,610	-	-
Hillsborough	14.5738	1,400,088,589	4,080,922	1,607,946	16,913	-	2,153,896	-	302,167
Holmes	15.831	6,189,677	19,598	11,760	-	-	7,782	-	56
Indian River	11.0731	157,113,258	347,946	97,071	12,189	-	229,260	9,427	-
Jackson	13.4943	20,756,174	56,018	29,566	-	-	26,265	-	187
Jefferson	16.1186	6,879,024	22,176	11,450	-	-	10,726	-	-
Lafayette	16.9329	2,248,682	7,615	3,935	-	-	3,482	-	198
Lake	12.5062	291,552,361	729,242	271,208	6,420	-	439,194	-	12,420
Lee	12.3497	645,488,802	1,594,319	535,833	-	-	969,266	-	89,219
Leon	15.642	173,278,681	542,085	272,048	-	-	268,478	-	1,560
Levy	15.1722	21,741,639	65,974	32,270	-	-	33,704	-	-

Liberty	17.738	8,934,611	31,696	17,869	-	-	13,747	-	80
Madison	17.3289	4,605,337	15,961	8,238	-	-	7,318	-	405
Manatee	14.6371	308,552,680	903,263	388,733	6,726	-	465,359	-	42,445
Marion	11.378	196,815,289	447,873	149,973	3,543	-	294,357	-	-
Martin	13.161	130,971,172	344,742	139,065	3,620	-	175,580	-	26,477
Monroe	6.8969	56,902,496	78,490	35,094	-	-	38,546	-	4,850
Nassau	13.8253	66,511,856	183,909	74,054	-	-	103,865	-	5,990
Okaloosa	10.9739	147,704,106	324,178	97,186	-	-	225,662	-	1,329
Okeechobee	16.1439	16,567,833	53,494	24,862	862	-	26,737	-	1,034
Orange	12.1077	1,081,296,193	2,618,402	959,045	-	-	1,659,357	-	-
Osceola	14.4603	244,168,666	706,150	315,617	3,789	12,531	374,213	-	-
Palm Beach	15.0378	939,469,662	2,825,511	816,211	40,848	-	1,499,957	-	468,495
Pasco	14.0934	357,496,084	1,007,667	455,221	-	-	524,804	-	27,642
Pinellas	14.7296	455,481,513	1,341,812	443,912	-	1,139	760,290	-	136,471
Polk	14.4525	386,497,236	1,117,170	530,777	-	-	586,394	-	-
Putnam	16.3895	17,506,648	57,385	30,029	-	-	27,356	-	-
Saint Johns	13.9584	323,896,244	904,215	359,337	-	-	505,343	-	39,535
Saint Lucie	17.6406	102,694,463	362,318	128,524	-	1,259	163,818	-	68,717
Santa Rosa	13.7153	125,733,348	344,894	153,276	-	-	190,486	-	1,132
Sarasota	12.4261	337,301,903	838,269	209,478	13,863	1,869	501,028	-	112,031
Seminole	13.1839	426,421,217	1,124,379	417,893	12,375	-	658,650	-	35,461
Sumter	13.46	635,439,766	1,710,604	763,799	-	-	946,805	-	-
Suwannee	16.2609	12,495,919	40,639	19,993	-	-	19,546	-	1,099
Taylor	15.1992	8,938,593	27,172	12,534	-	-	13,851	-	786
Union	18.7819	3,557,036	13,362	7,114	-	356	5,579	-	313
Volusia	14.6297	311,311,837	910,880	334,243	-	62,642	485,958	-	28,037
Wakulla	16.638	16,048,954	53,404	26,481	-	-	25,319	1,460	144
Walton	8.1066	113,443,214	183,928	77,314	-	-	105,593	-	1,021
Washington	16.4445	12,167,256	40,017	20,973	-	-	18,935	-	110
Total		14,789,680,657	39,117,848	14,166,000	295,760	110,366	22,260,357	91,998	2,193,367

Appendix E: Santa Rosa County Rezoning/Small-Scale Future Land Use Map Amendment



Appendix F: Santa Rosa County Rezoning/Large-Scale Future Land Use Map Amendment



Santa Rosa County
Rezoning/ Large-Scale Future Land Use Map Amendment
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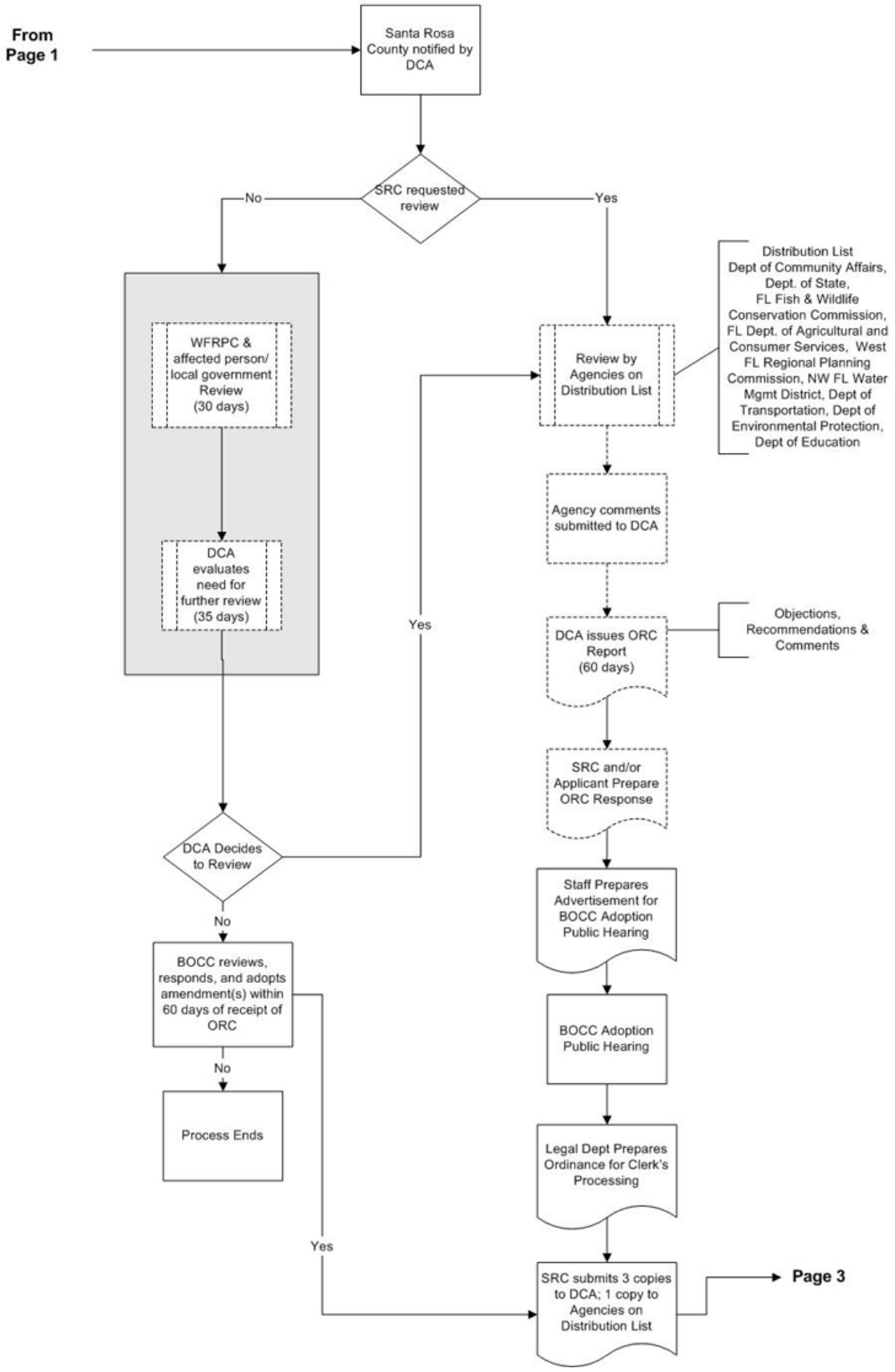

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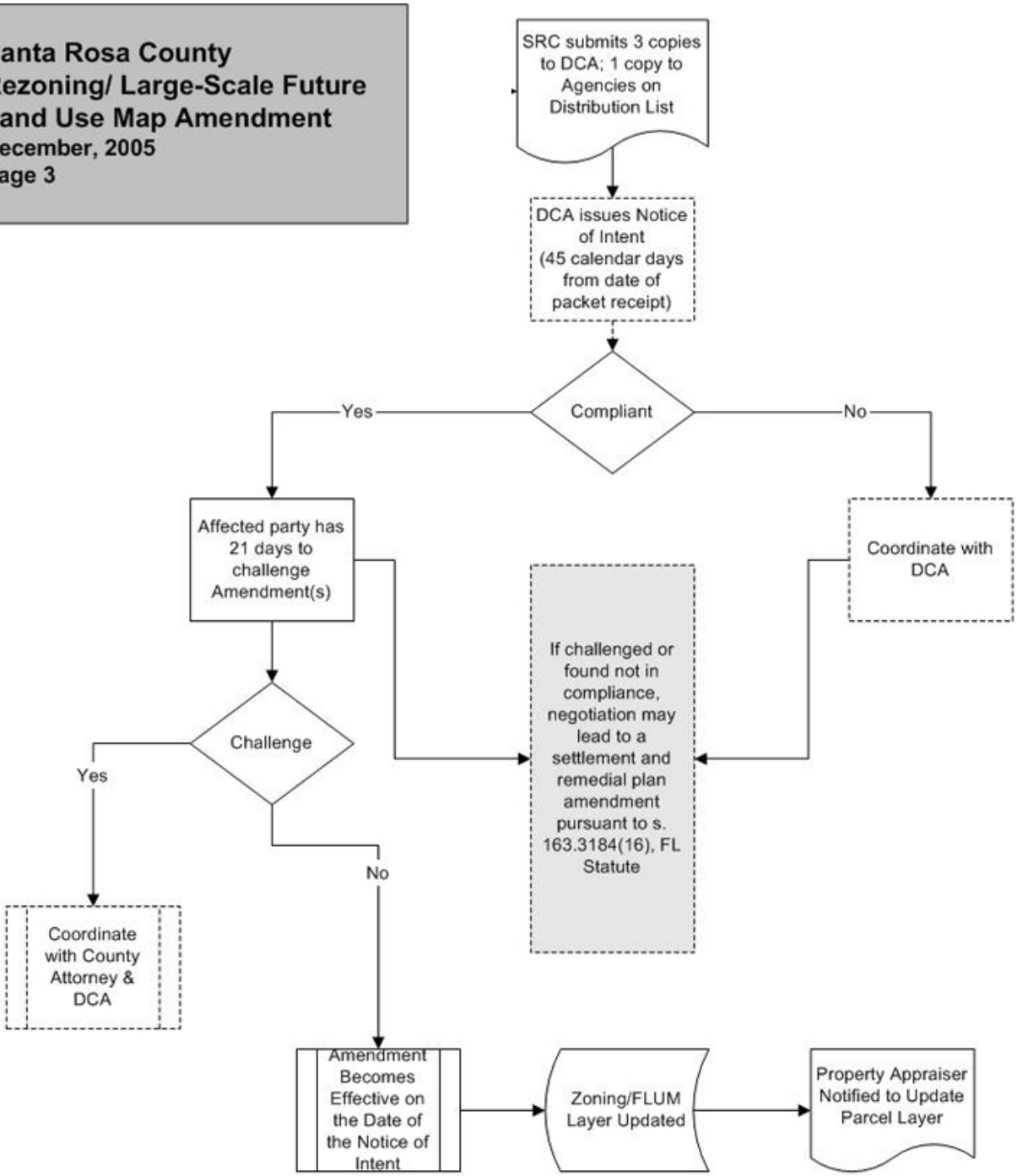

Appendix G: Future Land Use Element

April 6 Planning Board Version

Future Land Use Element

Policy 3.1.A.10 ● ~~By December 2005, the County will develop a Rural Development Plan designed to protect the rural character, agricultural viability, and natural resources of Northern Santa Rosa County. The project area is generally described as that area beginning north of the Community of Pace and the City of Milton and extending north to the Alabama state line. The project will be coordinated by the Planning, Zoning and Community Development Division, with input from the County Extension Office and TEAM Santa Rosa Economic Development Council.~~

~~The rural development planning process will be designed to encourage public input in the form of town hall meetings throughout the community. Issues to be addressed in the Rural Development Plan will include land use impacts and alternatives, infrastructure provision, natural resource protection, and the agricultural economy. Upon completion, the Rural Development Plan and Land Development Code as appropriate. The Rural Development Plan will evaluate available planning tools, including transfer of development rights, agriculture and conservation easements, urban growth boundaries and other land use regulations, and recommend implementation of those tools most suited for use in Santa Rosa County. Comprehensive Plan and Land Development Code language will be developed that will allow for Planned Rural Development (PRD) in identified growth areas. PRD requirements will include minimum open space requirements, density incentives to promote clustering of development, provisions for mixed use development, and minimum buffering requirements to provide for land use compatibility.~~ Reserved

Comments/Recommendations
Delete the policy as the PRD has been adopted.

Policy 3.1.A.15 ~~**Policy 7.1.B.1●**~~ At least 45 % of the developable land within the Navarre Beach Zoning Overlay District shall remain within the Low Density Residential and Conservation/Recreation Future Land Use Map Designations.

Comments/Recommendations
Moved from Chapter 7 as it applies only to Navarre Beach.

Policy 3.1.B.1 • The County shall encourage farmland retention through investigation of the County's provision of various incentives for farmland protection, such as voluntary agricultural districts, agricultural and conservation easements, and through the agricultural exemption (greenbelt) for property tax assessments.

Comments/Recommendations

Policy 3.1.B.5 • ~~By December 2004,~~ tThe County will continue to implement its ~~develop a~~ program ~~for~~of ~~the~~ purchase~~ing~~ ~~of~~ agriculture and conservation easements for the purposes of preserving farmland and limiting development adjacent to military facilities. ~~Upon completion, the County will amend the Comprehensive Plan and Land Development Code as appropriate to implement the program.~~

Comments/Recommendations

Policy 3.1.B.6 • By December ~~2004~~2010, the County will work with the State Division of Forestry to evaluate the potential impacts that may result from the development of out parcels within the Blackwater State Forest and identify alternatives for addressing those impacts. Upon completion, the County will amend the Comprehensive Plan and Land Development Code as appropriate to implement the recommended alternatives.

Comments/Recommendations

Policy 3.1.E.5 • The extraction of natural resources shall be permitted only where compatible with adjacent land uses and when minimal resource degradation will occur. Further, resource extraction shall be strictly prohibited within a 200-foot zone around potable water wells or wellfields. Note: The determination of minimal degradation, if necessary, will be made in cooperation with the appropriate State or Federal Agency regulating resource extraction activities. Further, resource extraction in environmentally sensitive areas which cannot be restored shall be prohibited. For the purposes of this policy, routine silvicultural and agricultural activities are not considered resource extraction activities. Also, see Policy~~ies~~ 6.4.E.3 and ~~11.B.3.3~~ 8.1.A.8.

Comments/Recommendations

Policy 3.1.E.8 • The County adopts wellhead protection zones of 200-foot radius for Floridan Aquifer and 500-foot radius for Sand and Gravel Aquifer public supply water wells, measured from the center of the wellhead. Activity within these zones will be limited according to the standards found in Policy 6.4.~~D~~E.3 of the Infrastructure Element.

Comments/Recommendations

Policy 3.1.F.1 • Population densities shall be limited to those limitations reflected on the Future Land Use Map Series and as described in Policy ~~6~~3.1.~~AG~~.6.

Comments/Recommendations
Changed to reflect the correct referenced Policy.

Policy 3.1.I.~~3~~2 • Development of the leased parcels on Navarre Beach may continue provided that:

A) Development is consistent with this Comprehensive Plan and regulations governing development in the Navarre Beach administrative area;

B) The development is consistent with the lease agreement governing the parcel; and

C) The County has reviewed the lease agreement and has determined that the provisions within the agreement provide for the density and/or intensity of use requested by the applicant for development approval. Note: For those parcels which have been leased and said lease does not specify the density or intensity of use, then such density or intensity shall be limited to the density/intensity restrictions within this Comprehensive Plan (reference Policy 3.1.A.8 and the FLUM

Comments/Recommendations
Correct numbering scheme.

Objective 3.1.J • Provide for the Transfer of Development Rights from active agriculture areas and military Airport Zones to facilitate the protection of farmland and to avoid encroachment of incompatible land uses around military properties.

Comments/Recommendations
Establish the guidelines for a TDR program

Policy 3.1.J.1 • By December 2011, the County will establish a Transfer of Development Rights program which will include the identification of sending and receiving areas as well as program application and administration requirements.

Comments/Recommendations
Establish the TDR Program specifics

Policy 3.2.B.4 • Public schools shall be an allowable use in the following Future Land Use Map categories: Commercial; Agriculture; Single Family Residential; Medium Density Residential; ~~General~~ Residential; Garcon Point Rural Residential; Garcon Point Single Family Residential; Mixed Residential/Commercial and Bagdad Historic District.

Comments/Recommendations
Add two categories previously omitted and correct the title of a third category.

Appendix H: Resolution 2010-06

Resolution 2010-06

A RESOLUTION OF THE CITY OF ST. PETE BEACH, FLORIDA, OPPOSING AN AMENDMENT TO THE FLORIDA CONSTITUTION THAT WOULD FORCE VOTERS TO DECIDE ALL CHANGES TO A CITY OR COUNTY'S COMPREHENSIVE PLAN

WHEREAS, the State of Florida has experienced tremendous growth; and

WHEREAS, the challenges presented by growth require that communities embrace smart growth policies aimed at protecting our State's quality of life, engendering greater economic prosperity, and building connected communities; and

WHEREAS, smart growth requires careful planning and direction combined with a clear and effective means of engaging the people's voice; and

WHEREAS, Amendment 4 seeks to place a constitutional amendment before Florida's voters to amend Article II, Section 7, of the Florida Constitution, (Title: REFERENDA REQUIRED FOR ADOPTION OF LOCAL GOVERNMENT COMPREHENSIVE LAND USE PLANS); and

WHEREAS, this amendment poses a grave threat to Florida's unique quality of life, the stability of its communities, and the prosperity of its economy; and

WHEREAS, this amendment will further disenfranchise millions of Florida's already fatigued electorate, paralyze local governments and cripple local businesses.

NOW, THEREFORE, BE IT RESOLVED by the City Commission of the City of St. Pete Beach that:

Section 1. Having dedicated its own policies to advancing smarter growth, recommends defeat of Amendment 4.

Section 2. Urges citizens to vote "No" on Amendment 4 when it appears on the ballot.

Passed and adopted this 26th day of January, 2010.

Mike Finnerty
Michael Finnerty, Mayor

ATTEST:

Theresa McMaster
Theresa McMaster, City Clerk

Appendix I: Description of Economic Impact Calculation and Associated Modeling Software

Economic impact analysis relates particular economic activities to economic measures such as spending, employment, labor income and tax revenue. Economic activities such as real estate development, tourism, healthcare, manufacturing or military activities generate spending in our local area, and cause jobs to be created that pay income to area residents and generate tax revenue that flows to government.

Conceptually, the total economic impact of an event can be separated into three different types of effects. First is the direct effect of spending; which is the impact of new spending on first tier suppliers. Thus, ten dollars spent by construction worker at a local restaurant counts as a direct effect of ten dollars. This direct spending has the advantage that it can be counted relatively easily, but it does not capture the "multiplier effect" of the additional economic activity set in motion by the purchase of the meal.

To the direct effect must be added the indirect effect, or supply-chain effect, of spending. In order to produce the ten-dollar meal, the restaurant must purchase certain inputs from other businesses. To the extent that these inputs are local, these purchases represent additional local economic activity. For example, the restaurant may purchase two dollars worth of food inputs from the local produce market for every ten-dollar meal sold. The produce market may have paid a local farmer one dollar for the goods that are then sold to the restaurant, and the farmer may have paid 10 cents for local inputs into the farm. The indirect effect measures the cumulative local purchases from other businesses that are generated from the ten dollars spent on the meal. Because much of this spending goes either immediately or eventually to businesses outside our geographic region, this indirect effect tends to be smaller than the direct effect. A reasonable estimate of the indirect effect of a ten-dollar meal might be four dollars.

To the direct and indirect effects must be added the induced effect, which measures the additional spending that occurs across the economy because of the income paid by all of the businesses involved, directly or indirectly, in producing the meal. There is a flow of wages received by the waiters, cooks, produce store clerks, and others who play a part in putting that meal in front of the visitor. These people receive most of those wages as take-home pay, and they spend most of that take-home pay and save some. To the extent that their spending generates jobs in the local economy, there is additional economic impact attributable to the meal. However, much of that pay may go to a mortgage or car payment that leaves the local economy. In fact, most of the grocery store spending will leave the local economy to pay for food produced elsewhere in the country. But the part that pays the local banker administering the car loan, or the clerk at the local store, or other

local employees, represents a local economic impact of that ten-dollar meal. A reasonable value for the induced effect might be two dollars.

Thus, the total local economic impact of the ten-dollar meal would be sixteen dollars, representing the initial purchase (the direct effect), plus the local purchases made from other businesses in producing the meal (the indirect effect), plus the local purchases resulting from the spending by households who received wage income while producing the meal (the induced effect). Here, "the multiplier" is said to be 1.6, meaning that every dollar spent on that category (restaurant meals) has a total impact of $1.60 on the local economy, once the direct, indirect and induced effects are accounted for.

In order to say that the multiplier is 1.6 (versus some other number like 1.2 or 3.7), the U.S. Department of Commerce, Bureau of Economic Analysis, uses actual historical data, specific to each county in the country, to describe how goods and services are produced in each county. These tables show the amount of inputs from other industries used to produce a dollar's worth of output in a particular industry. A number of commercial firms has elaborated on these basic input-output tables and used them to produce software that models these economic relationships. These are called economic impact models, or Input-Output models. Analysts use these models of a local economy's structure to calculate the multiplied impact, or total economic impact, of an economic event such as new payroll associated with a change in mission at an installation. Popular examples of these sorts of models include IMPLAN and RIMSII.

Econometric simulation models combine the sector detail and geography detail of input/output models but provide for functioning economic linkages between sectors and regions over time. The current study uses REMI PI+, Version 1.1.14 (Regional Economic Models Inc.), in a 23 sector, 1 region model for the state of Florida. It incorporates the basic input/output linkages, but also uses econometrically estimated county-specific parameters, for example, interregional migration in response to changes in economic opportunities, in generating impact results. Because of these between-sector linkages, the model incorporates general equilibrium tendencies as the economy responds to shocks over time. That is, changes in spending in a region affect not just conditions in that market, but also in other markets within the region (economists term this a "general equilibrium") and outside the region (via trade and also via migration in response to changes in economic opportunities). This is in contrast to traditional input-output models that are both static (all effects are assumed to occur simultaneously, so there is no adjustment path over time) and partial equilibrium (e.g., changes in employment do not change wage rates) in nature. This describes the phenomenon whereby, for example, a new financial services back-office call center opens in a county, and bank managers throughout

the county find they have to give staff a raise in order to keep them from leaving to take a job at the new call center. A traditional input-output model description of the economic impact would have held everything else fixed (including bank wages across the county) and simply documented the employment and job creation effects resulting directly at the new call center and indirectly via businesses in its supply chain, as well as household spending induced by the new income flows.

A simulation model such as REMI captures not only the spending effects flowing from the call center and its local suppliers and employees and owners, but also the spillover effects into other markets as wages and prices change due to competition for the same employees and other resources. These are the general equilibrium (equilibrium across all markets simultaneously) tendencies of the model. It also simulates the adjustment path over time of these market responses, using historical parameters estimated specifically for that county (the dynamic component). A rule of thumb is that the smaller the spending change being considered, the more appropriate it is to use the traditional input/output model. However, the general equilibrium and dynamic characteristics of an economic simulation model are particularly important when considering "large" changes. The presence or absence of multi-million dollar real estate investment projects in Florida is a "large" change, because spending of this magnitude is likely to have spillover impacts in other markets not directly in the real estate-related supply chain.

Appendix J: Report of Independent Reviewer Stefan C. Norrbin, Ph.D.

Reviewer's Report

Of

"Land Use Planning by Referendum:
The Economic Consequences of Amendment 4"

Reviewed by
Stefan C. Norrbin, Ph.D.
Professor of Economics and
Director of the Master's Program in Economics
Department of Economics
Florida State University
Tallahassee, Florida

October 17, 2010

Table of Contents

Executive Summary

Amendment 4 will be decided on November 2nd, 2010. Amendment 4 will require changes to the land use component of local government comprehensive plan to be decided by local voters, instead of elected officials. An October 13, 2010 study entitled "*Land Use Planning by Referendum: The Economic Consequences of Amendment 4*" examined the economic effects of the proposed Amendment 4. This study was conducted by the *Haas Center for Business Research and Economic Development at the University of West Florida.* The study indicates that Amendment 4 will have a strong negative impact on Florida production and employment. Florida's production is expected to fall anywhere from -4.6 billion to -18.7 billion, whereas the employment is expected to fall by 65 thousand to 258 thousand employees. In addition, state tax revenues are expected to fall ranging from $0.6 billion to $2.5 billion in revenues.

Table: The Expected Economic Impact of Amendment 4

Economic variable	Potential Impact[1]	Relative to Current levels[2]
Florida GSP ($ billion)	-4.6 to -18.3	-0.75% to -3.00%
Employment (thousands)	-65 to -258	-0.91% to -3.60%
State Tax Revenue ($ billion)	-0.6 to -2.5	-1.97% to -7.70%

Source: Reviewer's calculations based on results in Amendment 4 study

Furthermore, the study argues that the property tax revenue will decrease between $9.8 million to $39 million, and the direct cost to local counties will increase by $44 million to $83 million.

This report provides a review of the findings and provides an objective, un-biased assessment of the methodology, modeling and the assumptions chosen for the study. The report finds that the study, "*Land Use Planning by Referendum: The Economic Consequences of Amendment 4*" by the *Haas Center for Business Research and Economic Development at the University of West Florida,* has, in general, used plausible assumptions of the parameters needed to make an informed decision about Amendment 4, and has used state of the art modeling and methodology to estimate the impact of the proposed Amendment 4.

[1] This is the range for the potential 5%-20% impact after a six-year period.
[2] As compared to the levels in 2009

I. Introduction

Amendment 4 will be decided on November 2nd, 2010. Amendment 4 will require changes to the land use component of local government comprehensive plan to be decided by local voters, instead of elected officials. A study was conducted by the *Haas Center for Business Research and Economic Development at the University of West Florida* estimating the impact of Amendment 4. This review provides an independent unbiased review of the study entitled, "*Land Use Planning by Referendum: The Economic Consequences of Amendment 4*" examining the economic effects of the proposed Amendment 4 (hereafter referred to as Amendment 4 study). The study estimates the economic impact of Amendment 4, and also provides some estimates of property tax losses to counties, potential house price increases and an estimate of the direct costs of additional elections.

The bulk of my comments will pertain to the overall estimation of the economic impact on Florida, but I will also review each of the other three contributions. To provide a useful review I will focus my comments on two areas, the **best practice of modeling and methodology** and the **plausibility of the assumptions** used in the computation of the models. The best practice of modeling and methodology will examine whether the report uses sound and appropriate economic theory to model the issue, and the most appropriate empirical framework to compute the effects. The plausibility of the assumptions made is examined to determine whether the authors used to best available assumptions, and that they were made in an unbiased way. In particular, I want to provide some guidance on whether the assumptions are reasonable conservative choices, rather than unusual extreme choices.

II. Economic Impact of a reduction in construction activity

The most important part of the study is the economic impact analysis. Here the authors want to estimate the expected economic impact for Florida of the expected slowdown in construction activity if Amendment 4 is passed. Such a slowdown would be expected as there is an incentive for people to vote against expansion of their own neighborhood in which they live, and new developers would be less likely to propose projects for such areas. The authors use the REMI model to estimate the economic impact for Florida from the expected reduction in approved construction development projects. The REMI methodology allows for the initial shock to the construction industry to be transmitted across different industries through a set of input-output relationships. See figure 1 for an illustration of the methodology.

Figure 1: Illustration of the methodology used to calculate economic impact

The transmission of the initial effect to other industries may take some time. Therefore the REMI model allows a dynamic adjustment across time. The authors use a six-year period to reach the long run effects.

A summary of the estimated expected losses from Amendment 4 is presented in Table 2.

Table 2: The Expected Economic Impact of Amendment 4

Economic variable	Potential Impact[3]	Relative to Current levels[4]
Florida GSP ($ billion)	-4.6 to -18.3	-0.75% to -3.00%
Employment (thousands)	-65 to -258	-0.91% to -3.60%
State Tax Revenue ($ billion)	-0.6 to -2.5	-1.97% to -7.70%

Source: Reviewer's calculations based on results in Amendment 4 study

Examining Table 2 one can see that even with a modest 5% expected loss of construction activity the effect on Florida is substantial. Especially in state tax revenue estimates. The REMI model estimates the effect of the reduction in tax revenue from both property taxes and the loss of sales tax revenue due to the expected slowdown in the economy.

Is this methodology the best practice model and methodology? The methodology used incorporates the methodology that captures as much of the economic interactions as possible. The dynamic multiplier model that has been designed by REMI, Inc. is state-of-the art in economic impact studies. It is an unbiased methodology designed to estimate linkages in the economy. **Therefore it is the reviewer's professional judgment that the Amendment 4 study used the best practice available to estimate the long run economic impact from the expected construction slowdown as a consequence of amendment 4.**

The other question, that needs to be addressed, is the appropriateness of the assumed slowdown in the construction industry. The 5%-20% construction slowdown, used in the Amendment 4

[3] This is the range for the potential 5%-20% impact after a six-year period.
[4] As compared to the levels in 2009

study, is based on a study by Acquaye et al. (2007). In their study they estimate the impact on the housing market of a potential ballot-box initiative in 2006. They use a range from 5-20% in their article that is based on work by Samuel Staley. Staley (2001) is a very thorough look at the effect of the ballot-box initiative in Ohio. Staley uses a generalized least square regression method to identify the effect of the ballot-box initiative. He estimates a large decrease in housing construction in cities with ballot-box initiatives. Over the 1980-1994 period an average city that had adopted the ballot-box initiative experienced an average reduction of 21.8% *per year*! Using the 95% confidence interval of the estimated coefficients, the range of the average effects is from 13.7% to 29.7% annually.[5] Thus, between 13.7% to 29.7% less housing units were built in cities with the ballot-box initiative each year. In view of the results in Stanley (2001), the use in the Amendment 4 study of a 5-20% range of potential slowdown in construction activity is a conservative range. **Therefore it is this reviewer's professional opinion that the assumptions used in the economic impact model are reasonable and conservative estimates of the potential effects from Amendment 4.**

III. Fiscal Impact

III.1 County Tax Revenue Impact

A substantial loss in construction activity would lead to a substantial loss of future property tax revenue. The study of the economic impact of Amendment 4 proceeds to highlight the expected loss in property tax revenues for the Florida counties. The revenue losses are estimated using average county-wide millage rates and use the 2009 new construction levels. This is a conservative modeling approach as the first year tax revenue is likely to be higher for people that do not have portability of the their Save-Our-Homes tax savings. As we expect new home construction to have a disproportionate share of first home buyers and out-of-state immigrants, we would expect many to be without a prior Save-Our-Home tax savings. Therefore the impact on county revenues is likely to be even more severe than that estimated here. Furthermore, the 2009 new construction base was unusually low, by historic standards.[6] The Amendment 4 study points this out and estimates a "normal" year level. However, the study uses the conservative estimated effect on tax revenues from the 2009 construction base instead of the estimated "normal" year base. **Therefore it is the reviewer's professional judgment that the Amendment 4 study used the best practice available to estimate the reduction of property taxes from the expected construction slowdown as a consequence of amendment 4. In addition, it is this reviewer's professional opinion that the assumptions used in the computing the effect on local county's tax revenues are reasonable and conservative estimates of the potential effects from Amendment 4.**

[5] Reveiwer's calculations using the regression estimates reported by Staley (2001).
[6] Note that this might also cause the economic impact numbers to be understated.

III.2 County Expenditure Impact

The study does a good job estimating the slowdown in tax revenues. However, in the theory the study also mentions that the fiscal impact might not be negative if local county expenditures also are reduced. The slowdown in construction will slow down county expenditures which makes the net effect on local county expenditures more difficult to determine. In fact some previous studies, mentioned in the study of Amendment 4 have argued that the expenditure savings for residential housing are larger than the losses in tax revenues. These studies are usually Cost of Community Services (COCS) type studies. A COCS study "is a type of fiscal impact analysis that determined the fiscal impact of current land uses on a municipality's budget" (Harrison and French, p. 1). COCS studies use the direct average fiscal costs and the direct average revenues generated. The purpose is not to assess the cost of residential housing, but to point out that although farm land generates less revenue, they also cost less on average for the county. Unfortunately using the average cost approach is likely to overstate the fiscal impact of a new residence. Adding another residential house does not add the average expenditures per capita. Instead additional school costs, for example, might be negligible for an additional family, if sufficient space exists. Thus, the *marginal impact* should be used to calculate fiscal impacts. Similarly, the tax revenues are usually calculated as the average property tax revenues. This potentially underestimates the effect of a new resident in two ways. Firstly, many are likely to pay higher taxes the first year due to the lack of portability of the Save-our-homes savings. Secondly, the new residential housing will partly be composed of immigrants into the city, These bring with them additional consumption spending that needs to be taken into account. Thus the fiscal impact is a complex issue, and the Amendment 4 study has chosen to highlight only the tax effects.

IV. Housing prices

In addition to estimating the economic impact and the tax impacts of the slowdown in new construction, the authors also examine the potential effects of a reduction of new construction to the price of housing. In the Amendment 4 study the authors assume that the decrease in new construction will lead to an increase in the price of housing of 5-20%. This is an assumption taken from Acquaye et al. (2007), who also have a 5-20% increase in the price of housing. This assumption would imply that the price elasticity of the demand is unitary for housing. That is a strong assumption considering the relatively small share of new construction in the total housing market. In Acquaye et al. (2007, p. 50) the authors argue that:

> "The large population concentration in the three fastest growing counties is projected to continue through 2025. As land supply becomes more constricted in the urbanized areas, housing prices will continue to rise. Coupling this with a decreased supply of housing …"

This is their justification for later in the article arguing that "We propose a range of cost impacts of 5% (least impact scenario in less urbanized areas) to a high of 20% (worst case scenario and realistically applied to the most urbanized areas where land supply is highly constrained." Acquaye (2007, p.53).

In today's housing market Floridians are much less concerned about the possibility of housing shortages. Instead, most Floridians would welcome price increases. It is likely that there is a large "shadow inventory" that exists, waiting for the housing market to stabilize. Thus, prices are unlikely to change much for the foreseeable future, until the existing inventories and "shadow inventories" are drawn down. If the 5-20% price increases in housing would actually be a result of Amendment 4, then it is likely that Floridians would vote for Amendment 4 just for that reason. However, in reality prices are unlikely to be affected by much, in today's economy. Therefore the assumption in Amendment 4 that prices will increase by 5%-20% is unlikely in today's economy. Once the economy returns to a steady-state such an assumption might be more appropriate.

V. Direct Election Costs

The final estimation, calculates the costs of the additional elections. Here the authors of the Amendment 4 study use the Florida's Financial Impact Estimating Impact cost assessment to find a value for the per election cost. That value is then multiplied by the assumed increase in the number of election per year. The authors estimate the number to be two additional elections per Florida voter. Although it is unclear how that number was derived, the number seems conservative. In addition, the study has left out indirect election costs such as citizens' travel and information acquisition costs, that are likely to dwarf the tangible costs. Thus the $44 million to $83 million is a conservative estimate of the costs of having additional elections. [7]

Therefore it is the reviewer's professional judgment that the Amendment 4 study used the best practice available to estimate the increase in election costs if Amendment 4 is passed. In addition, it is this reviewer's professional opinion that the assumption in the additional number of elections is reasonable and conservative estimates of the potential effects from Amendment 4.

[7] It is useful to note that this would affect the fiscal impact study that was discussed earlier, as the direct election costs add to the expenditure burden for local counties.

VI. Summary of Assessment

This review has examined the study, "*Land Use Planning by Referendum: The Economic Consequences of Amendment 4"* by the *Haas Center for Business Research and Economic Development at the University of West Florida.* In particular, I have reviewed the overall estimation of the economic impact on Florida from Amendment 4, and also discussed three other contributions by the study. The comments have focused on two areas, the **best practice of modeling and methodology** and the **plausibility of the assumptions** used in the computation of the models. The best practice of modeling and methodology examined whether the report uses sound and appropriate economic theory to model the issue, and the most appropriate empirical framework to compute the effects. The plausibility of the assumptions were also examined to determine whether the authors used the best available assumptions, and that they were reasonable conservative choices, rather than unusual extreme choices.

It is this reviewer's best professional judgment that the study, "*Land Use Planning by Referendum: The Economic Consequences of Amendment 4"* by the *Haas Center for Business Research and Economic Development at the University of West Florida,* has, in general, used plausible assumptions of the parameters needed to make an informed decision about Amendment 4, and has used state of the art modeling and methodology to estimate the impact of the proposed Amendment 4.

VII. References

Acquaye, Lucy, Joseli Macedo, Rhonda Phillips and Douglas White, "Exploring the Impacts of Ballot Box Land Use Measures on Affordable Housing," *Housing and Society*, Vol. 34, No. 1, 45-63, 2007

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Stanley, Samuel, "Ballot-box Zoning, Transactions Costs, and Urban Growth," *Journal of American Planning Association*, 67:1, 25-37, 2001

VIII. Appendices

Appendix 1: Disclaimers and Disclosures

The Executive Director of The Haas Center for Business Research and Economic Development at the University of West Florida is Dr. Rick Harper. Dr. Harper also serves as a member of the Florida Council of Economic Advisors at Florida TaxWatch. Various members of the Florida Council of Economic Advisors at Florida TaxWatch, have had professional relationships with Dr. Harper over time.

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The Florida Council of Economic Advisors at Florida TaxWatch is a group of eight distinguished academic, public sector and private sector economists who provide research and policy advice to public and private sector organizations, institutions and individuals on issues of importance and relevance to the Florida economy. Part of its mission is to render independent, objective evaluations and critiques of research conducted by other CEA members as well by economists not affiliated with the CEA. Now in its fourth year, the CEA has authored timely research reports and presented testimonies on a number of issues, ranging from windstorm insurance to corporate taxes to testimonies before various committees of the Florida legislature.

More information on the Florida Council of Economic Advisors at Florida TaxWatch may be found at www.floridataxwatch.org

Appendix 3: Biographic Sketch, Stefan C. Norrbin, Ph.D.

Stefan is a Professor of Economics and the Director of the Applied Master's program in Economics at Florida State University, Tallahassee, Florida. Stefan's research areas are in Applied Econometrics, International Economics and Applied Macroeconomics. He has a broad research agenda with over 45 journal articles in various areas of Economics and Finance including articles in the leading Economics journals, such as: *Journal of Political Economy*, *Journal of Monetary Economics* and *Journal of International Economics*. He is presently working on his second book, to be published by *Academic Press*.

Stefan's professional experience includes working as consultant for McKinsey & Co., as well as serving as a professor at University of Alabama, University of Hawaii and Samford University. He has also served as a consultant to the Swedish Central Bank and participated in numerous studies for the Florida legislature. He is also a member of the Florida Council of Economic Advisors at Florida Tax Watch - a public policy research organization in Tallahassee, Florida.

Stefan received his A.B. degree from Brown University and his M.S. and Ph.D. from Arizona State University.

Appendix K: Report of Independent Reviewer Stephen O. Morrell, Ph.D.

Reviewer's Report

"Land Use Planning by Referendum:
The Economic Consequences of Amendment 4"

Reviewed by
Stephen O. Morrell, Ph.D.
Chair, Florida Council of Economic Advisors at Florida TaxWatch
Tallahassee, Florida

Professor of Economics and Finance
Andreas School of Business
Barry University
Miami Shores, Florida

October 15, 2010

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I. Executive Summary

An October 13, 2010 study conducted by the Haas Center for Business Research and Economic Development at the University of West Florida, entitled *"Land Use Planning by Referendum: The Economic Consequences of Amendment 4"* indicates the state of Florida will suffer sizable, significant, long-term economic losses to employment, Gross State Product, incomes and tax revenues should Amendment 4 be approved by voters and enacted into law.

This report provides an independent, objective, un-biased, professional and qualified review, assessment and evaluation of the Haas Center's Study. The report finds that the Haas Center's research is methodologically sound and appropriate; that the study employs the 'best practice' state-of –the-science empirical model; that the critical assumptions made by the Haas Center in estimating the model and deriving economic and fiscal impacts exceed any standards of reasonableness and may set new benchmarks for future studies. This report therefore concludes that the empirical economic and fiscal impact estimates presented in the Haas Center Study should be viewed as highly credible and accurate.

II. Introduction

Professional, un-biased, objective refereeing, reviewing and commenting on research studies is a widespread and long-standing practice in many disciplines – including economics. The purposes are to render an evaluation of the research by examining it for theoretical and/or empirical inconsistencies and errors as well as other shortcomings, and to recommend changes in order to improve the quality of the research. This report is intended to be solidly in that vein.

Its purpose is to provide an objective, un-biased, professionally qualified review, assessment and evaluation of a study entitled *"Land Use Planning by Referendum: The Economic Consequences of Amendment4"* (Hereinafter referred to as A4 Study). The study was prepared by the Haas Center for Business Research and Economic Development at the University of West Florida.

Amendment 4, also known as "Hometown Democracy," has emerged as a highly controversial potential change to Florida's constitution as it would fundamentally alter the process by which proposed changes to localities Comprehensive Development Master Plans are either approved or rejected. One important dimension of the controversy is the likely economic effects Amendment 4 would have on Florida's economy. The A4 study provides empirical estimates of these likely economic effects. As such, if the findings of the A4 study are credible and accurate then it can shed light in the swirl of heat enveloping Amendment 4 and provide valuable and useful information to voters throughout Florida.

From this reviewer's perspective, three criteria are employed to determine the credibility and accuracy of the A4 Study. They are:

1. The methodological soundness and appropriateness of the research. In other words, is the research grounded on accepted economic theory and does it apply and extend economic theory in a manner that is relevant, useful and appropriate in addressing the issues at hand?

2. The quality of the empirical model(s) used in the research. In other words, is the empirical model used in the research the best one(s) to use? In other words, is the model consistent with the methodological approach, and does it have the structure and capacity to provide empirical estimates that are credible and appropriate to addressing the issue(s) at hand?

3. The reasonableness (also known as strong versus weak) of the assumptions used by the researchers in 'running' the empirical model(s). In all empirical/econometric models, researchers put into the model quantitative values for variables that are determined outside of the model. These 'outside' variables, also known as exogenous variables, are the forcing ones and are used within the empirical model to solve the model for the values of the variables of interest – the so-called endogenous ones. Here, the critical questions are whether or not the values for the exogenous variables are reasonable or instead based on strong, *ad hoc* assumptions.

III. Summary of A4 Findings

The A4 Study derives and presents economic and fiscal impact analyzes and empirical dollar and numerical employment estimates from the passage and enactment of Amendment 4. Dollar economic impact estimates are provided at the State of Florida level for Income, Gross State Product and Tax Revenues for each of the first six years subsequent to the passage of Amendment 4 (A4 Study, Table 1, page 3). Employment estimates in the form of numbers of jobs are also provided at the state level for the same time frame (A4 Study, Table 1, page 3).

Additionally, the A4 Study presents detailed state-level dollar estimates of the likely impacts of Amendment 4s passage on Income and Gross State Product over six years for twelve (12) key economic sectors (A4 Study, Appendices B and C, pages 33-36). Detailed employment estimates (number of jobs) for these twelve (12) economic sectors are also presented (A4 Study, Appendix A, pages 31-32). County specific foregone property tax revenues are also contained in the study (A4 Study, Table D, pages 41-42).

Table 1 below, reproduced from the A4 Study, summarizes the state-wide economic impacts on Employment, Incomes, Gross State Product, and State Tax revenues from the passage of Amendment 4.

Likely Economic and Fiscal Impacts of Amendment 4 under the 20% Impact Scenario

20 % Impact Scenario

Economic Variable	Units	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Employment	Number of Jobs	251,867	260,365	263,351	263,066	260,949	258,479
Income	Billions of Current $	13.518	15.109	16.310	17.256	18.034	18.726
Florida GSP	Billions of 2000 $	15.222	16.342	17.025	17.503	17.891	18.251
Lost State Tax Revenue	Billions of 2008$	1.757	1.919	2.073	2.208	2.336	2.458
Lost Local Government Tax Revenues	Millions of $	39.12					

Source: A4 Study, page 3

As indicated in the table, the A4 Study expects significant adverse economic impacts from the passage of Amendment 4 during the six years after its enactment. Relative to current (2009) levels, the declines in the above variables in the first year alone would be:

Economic Variable	First Year Percent Change
Employment	- 3.50%
Income	- 1.95%
Gross State Product	-2.52%
State Tax Revenue	-5.50%

Source: Reviewer's Estimates

IV. Review, Assessment, Evaluation of A4 Study Methodology

Economic development professionals, elected and appointed public officials, business people and citizens in general have long been interested in answers to questions such as, "How many new jobs might this project create in the economy?" "How much tax revenue might this project generate for the government?" "What might be the impact on wages and salaries if this organization locates here?"

Over the years economists have applied economic principles and concepts to the design, development and implementation of models in efforts to address these questions. Advances in economic theory, particularly in fields related to economic growth and development, have substantially improved and enhanced the economics profession's ability to address these questions.

Ideally, in answering the above questions the researcher should employ a methodology that is 'general equilibrium' rather than 'partial equilibrium' in nature, and also 'dynamic' rather than 'static.' By general equilibrium it is meant that instead of focusing solely on direct and narrow economic and fiscal effects confined to just one economic sector, such as manufacturing, the methodology should encompass a holistic, economy -

wide approach including effects on markets for resources used in the provision of goods and services, such as labor and capital markets, and markets for the purchase and sale of goods and services, such as consumer and business product markets. This holistic approach recognizes the inter-relationships between and among markets and economic sectors.

Moreover, in order to provide more accurate economic and fiscal estimates the researcher should incorporate the facts that the economic and fiscal impacts accrue and change over time, owing to such things as the evolution of people's behavior and the law of diminishing returns. In other words the methodology should be dynamic and not static in nature.

It is this reviewer's professional judgment that the A4 Study was based on sound and appropriate methodology. The A4 Study was based on a widely used dynamic, general equilibrium model which gave it the proper theoretical foundations for the subsequent empirical model and estimates. Appendix I, especially pages 52-53, as well as the discussion on pages 15-17 of the A4 Study clearly demonstrate the dynamic, general equilibrium approach underlying the study.

V. Review, Assessment and Evaluation of A4 Study's Empirical Model

Significant, ongoing progress in data collection methods and in empirical/statistical modeling have accompanied the theoretical progress noted above in dynamic, general equilibrium models. Arguably, of even greater importance have been the waves of technological progress in computational hardware and software, for these have significantly lowered the costs, and increased the depth and breadth of the economics profession's ability to address questions such as those addressed above.

The empirical economic impacts developed in the A4 Study were based on a dynamic, general equilibrium model designed and developed by Regional Economic Models, Inc. (REMI). [1] REMI was founded in 1980 for the purpose of developing regional forecasting and policy analysis models to inform and improve the quality of public policy decisions. Its founder, Dr. George Treyz, was a protégé of the pioneers in the field of econometric/empirical/statistical modeling. Over the years the REMI team of researchers have made continuous advances and improvements to the original, basic model. REMI models now serve as the 'state of the art' and 'best practices' in the field of regional economic modeling.

Moreover, the version of the REMI model used in the A4 Study is designed particularly for Florida. The Florida REMI model consists of 23 industry sectors and takes into consideration economic activity in the rest of the nation and the rest of the world. The state's economy is linked to the national and international economies via cross border industry trade flows (firms and consumers in the state buying goods and services from

[1] See www.remi.com

producers beyond the state's borders and vice versa) and, to a lesser degree, through employee commuter flows. Additionally, the structure and equations of the model had been recently updated by REMI prior to use in the A4 Study, implying that the empirical estimates of the A4 Study were the most current available.

It is this reviewer's professional judgment that the A4 Study Employed Appropriate, Indeed Best Practices, Empirical/Statistical Models Designed to Measure Dynamic, General Equilibrium Economic Impacts. Appendix I, pages 53-54, and pages 18-19 of the A4 Study clearly demonstrate the use of a best practices, state-of-the-art empirical model.

VI. Review, Assessment and Evaluation of Assumptions and Methods Employed in the A4 Study

Assumptions are a critical feature of all economic impact studies. The researcher – economist uses the numerical values of the assumptions as the key driving elements to generate estimates for such things as employment effects, changes in earnings, output, gross domestic product, etc.

Often, external third parties will provide estimates of the so-called exogenous/driving variables. An economic impact study of, for example a major business expansion, would rely on the business to provide data on the dollar size and composition of the expansion. These values would be the assumptions used by the researcher in deriving economic impact estimates.

In the A4 Study the researchers adapted research findings on policies similar to Amendment 4 published in scholarly and professional journals to obtain estimates of the assumed initial, direct effects of Amendment 4s passage. This literature supplied a rich source of estimates for the exogenous/driving variables. Moreover, by using data and research that were independently derived and had already been 'screened and cleaned' the A4 Study researchers were adding considerable credibility to their economic impact estimates.

Furthermore, the A4 Study researchers appeared to have gone well beyond standard practice in economic impact studies. Instead of using the midpoints of the range of the driving variables, they estimated economic impacts for three separate scenarios where the scenarios differed by the size of the assumed values for the driving variables.

It is this reviewer's professional opinion that the A4 Study was not only reasonable and appropriate in its use of assumptions but went well beyond standard industry practice of economic impact studies. The A4 Study, pages 18-20, clearly demonstrates the insightful use of assumptions.

VII. Discussion of Limitations Associated with A4 Study's Primary Findings

All economic impact studies suffer from limitations. While enormous theoretical, empirical and modeling advances have occurred in REMI type models as well as in the talent and skills of the economists who use them, such models, indeed all econometric/empirical/statistical models remain works in progress.

In thoroughly reviewing the A4 Study it is apparent the authors are careful to identify the Study's limitations. Such transparency is to be applauded.

Indeed, the only limitation worth noting is not specific to the study and beyond its scope:

1. Fiscal impacts are one area where some criticism has been directed towards REMI type models. The criticism has been that REMI type models do not include state and local government budget constraints. That is, the notion that significant, permanent declines in state and/or local government revenues owing to a notable event – such as the passage of Amendment 4 – entails economic impacts *as well as* fiscal impacts.
   Fiscal induced economic impacts arise if state and local governments cut spending in order to balance their respective budgets. These impacts may be short-term/ one time events. However, if budgets are balanced via either increases in taxes and/or other government fiscal alternatives such as increases in borrowing then longer –term adverse impacts will emerge. According to this criticism lower spending by those directly affected by either higher taxes or higher government borrowings should be weighed against the maintenance of higher spending by state and local governments.[2]

   In this regard the A4 Study's adverse economic impacts may be *understated*. According to the A4 Study, the passage of Amendment 4 will clearly reduce state and local government tax revenues, setting off a chain of events as described above.

[2] See, for example, Edwin S. Mills, "The Misuse of Regional Economic Models." Cato Journal, volume 13 (Spring/Summer, 1993) pp 29 – 39.

VIII. Overall Evaluation of A4 Study

In this reviewer's professional opinion the economic impact estimates of Amendment 4 as presented in the A4 Study are: (1) based on sound and appropriate methodology; (2) derived from professionally used state of the art, best practices empirical models; and to have insightfully and creatively employed quite reasonable assumptions in estimating the economic impacts. No theoretical or empirical shortcomings were found in the research. It is therefore concluded that the economic impact estimates should be viewed as credible and accurate.

IX. Appendices

Appendix 1: Disclaimers and Disclosures

The Executive Director of The Haas Center for Business Research and Economic Development at the University of West Florida is Dr. Rick Harper. Dr. Harper also serves as a member of the Florida Council of Economic Advisors at Florida TaxWatch. Various members of the Florida Council of Economic Advisors at Florida TaxWatch, including the author of this report, have had professional relationships with Dr. Harper over time.

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Appendix 3: Biographic Sketch, Stephen O. Morrell, Ph.D.

Stephen is Professor of Economics and Finance in the Andreas School of Business of Barry University in Miami Shores, Florida where he teaches and conducts research in financial institution strategy, financial markets analysis, and portfolio theory.

Stephen also currently serves as Executive Director of the Center for Competitive Florida as well as Chair of the Florida Council of Economic Advisors at Florida Tax Watch - a public policy research organization in Tallahassee, Florida. His monthly *Economic Commentary on the Florida Economy* discusses timely and important issues to the state's business community.

Stephen's professional experiences include service as Senior Vice President and Chief Economist for Southeast Banking Corporation; as a Financial Economist for the Federal Reserve System; and as Chairman of the Board of Directors of First State Bank of Ft. Lauderdale, Florida.

Stephen received his B. S. degree from Virginia Commonwealth University and his M.A. and Ph.D. degrees in economics from Virginia Polytechnic Institute where he studied under Nobel Prize winners James M. Buchanan and James E. Meade.

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About Florida TaxWatch

Florida TaxWatch is a statewide, non-profit, non-partisan taxpayer research institute and government watchdog that over its 31-year history has become widely recognized as the watchdog of citizens' hard-earned tax dollars. Its mission is to provide the citizens of Florida and public officials with high quality, independent research and education on government revenues, expenditures, taxation, public policies, and programs, and to increase the productivity and accountability of Florida Government.

Florida TaxWatch's research recommends productivity enhancements and explains the statewide impact of economic and tax and spend policies and practices on citizens and businesses. Florida TaxWatch has worked diligently and effectively to help state government shape responsible fiscal and public policy that adds value and benefit to taxpayers.

This diligence has yielded impressive results: in its first two decades alone, policymakers and government employees implemented three-fourths of Florida TaxWatch's cost-saving recommendations, saving the taxpayers of Florida more than $6.2 billion -- approximately $1,067 in added value for every Florida family, according to an independent assessment by Florida State University.

Florida TaxWatch has a historical understanding of state government, public policy issues, and the battles fought in the past necessary to structure effective solutions for today and the future. It is the only statewide organization devoted entirely to Florida taxing and spending issues. Its research and recommendations are reported on regularly by the statewide news media.

Supported by voluntary, tax-deductible memberships and grants, Florida TaxWatch is open to any organization or individual interested in helping to make Florida competitive, healthy and economically prosperous by supporting a credible research effort that promotes constructive taxpayer improvements. Members, through their loyal support, help Florida TaxWatch bring about a more effective, responsive government that is accountable to the citizens it serves.

Florida TaxWatch is supported by all types of taxpayers -- homeowners, small businesses, large corporations, philanthropic foundations, professionals, associations, labor organizations, retirees -- simply stated, the taxpayers of Florida. The officers, Board of Trustees and members of Florida TaxWatch are respected leaders and citizens from across Florida, committed to improving the health and prosperity of Florida.

With your help, Florida TaxWatch will continue its diligence to make certain your tax investments are fair and beneficial to you, the taxpaying customer, who supports Florida's government. Florida TaxWatch is ever present to ensure that taxes are equitable, not excessive, that their public benefits and costs are weighed, and government agencies are more responsive and productive in the use of your hard-earned tax dollars.

The Florida TaxWatch Board of Trustees is responsible for the general direction and oversight of the research institute and safeguarding the independence of the organization's work. In his capacity as chief executive officer, the president is responsible for formulating and coordinating policies, projects, publications, and selecting professional staff. As an independent research institute and taxpayer watchdog, Florida TaxWatch does not accept money from Florida state and local governments. The research findings and recommendations of Florida TaxWatch do not necessarily reflect the view of its members, staff, distinguished Board of Trustees, or Executive Committee, and are not influenced by the positions of the individuals or organizations who directly or indirectly support the research.

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