

From Springfield to Harrisburg: The Economic Impacts of Relocating IDOT's Division of Traffic Safety

An IMPLAN-based analysis

Prepared for the Commission for Government Forecasting and Accountability
by the Rural Economic Technical Assistance Center
Illinois Institute for Rural Affairs

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1. Introduction

The following is a comparative analysis of economic impacts associated with the proposed relocation of Illinois Department of Transportation Division of Traffic Safety (IDOT DTS) from its current location in Springfield (Sangamon County) to Harrisburg (Saline and Williamson County). The Rural Economic Technical Assistance Center, a unit with the Illinois Institute for Rural Affairs at WIU, conducted the analysis per a request from the Commission for Government Forecasting and Accountability (COGFA).

The study utilized the IMPLAN economic impact modeling program to generate estimated effects of the relocation. IMPLAN is an input-output model that estimates annualized impacts resulting from a “shock” to an area’s economy. The economic impacts reflect the interactions that occur between an area’s industries through supply and consumer interactions. The area affected relative to the changes in Springfield is Sangamon County. The affected area in southern Illinois is Saline and Williamson Counties (see Figure 1).

In this study, we examine several scenarios associated with the proposed relocation. To measure the impact of the Division’s move from the Springfield area, we model the negative changes likely to occur. These include the area’s loss of IDOT DTS employees and their disposable income, the loss of facility-related expenditures (i.e., lease, utilities, services), as well as miscellaneous costs moving the office equipment between the two locations. It is assumed that the majority of these costs are permanent and the related impacts would occur annually. Impacts anticipated to affect the southern Illinois area include the costs of purchasing and retrofitting the building, annualized utilities and building services, and the introduction of IDOT DTS employees and their spendable income into the Saline and Williamson County economy. Some of these costs are temporary and will affect the economy only once. Others, like the employees’ spendable income, will continue to influence economic interactions on an annual basis.

The positive impacts realized in southern Illinois are not the inverse of the negative impacts to be experienced in Sangamon County. A summary of relocation impacts by area include:

Sangamon County: In addition to the loss of 136 positions at IDOT DTS, the area is expected to experience the following negative impacts each year:

Permanent (On-going Impacts)

- **Employment: -57.6 Full-time equivalent (FTE) positions;**
- **Annual Labor Income: -\$2.15 million;**
- **Annual Economic Output: -\$9.26 million;**
- **Annual Total Value-Added: -\$4.6 million; and**
- **Annual Local, State, and Federal Revenues: -\$1.36 million**

Saline and Williamson Counties: In addition to the addition of 136 new positions with IDOT DTS, it is expected that the two-county region will realize the following gains annually:

Permanent (On-going Impacts)

- **Employment: 44.5 FTE positions**
- **Annual Labor Income: \$1.45 million;**
- **Annual Economic Output: \$7.5 million;**
- **Annual Total Value-Added: \$2.9 million; and**
- **Annual Local, State, and Federal Revenues: \$785K**

Temporary (One-time Impacts)

- **Employment: 31.6 FTE positions**
- **Annual Labor Income: \$1.2 million;**
- **Annual Economic Output: \$3.3 million;**
- **Annual Total Value-Added: \$1.7 million; and**
- **Annual Local, State, and Federal Revenues: \$415K**

A number of factors account for the differences in outcome between the two scenarios, including:

- Differences between the facility lease in Sangamon County and the costs of purchasing and retrofitting a building in Harrisburg;
- Differences in the two areas' total income versus spendable income. The latter represents the total income less savings, taxes, and other fixed costs.

- Variations in the level of opportunities for intra-regional economic interactions and purchases occurring between the two areas;

When all things are considered, the negative impacts associated with the proposed relocation of IDOT's Division of Traffic Safety from Sangamon County will far outweigh the positive impacts that might be realized by Saline and Williamson Counties. The amount of impact is reduced when the temporary gains for southern Illinois are included, the increase is short-lived. After the temporary gains are exhausted, a comparison of permanent gains in southern Illinois and permanent losses for Sangamon County will continue to result in strongly negative net impact of almost \$1.8 million annually (see Table 1).

Table 1. Net annual (Permanent) impacts of IDOT DTS relocation

	Net Annual Impacts
Output	-\$1,782,124
FTE Employment	-13.1
Employment Compensation	-\$580,217
Labor Income	-\$701,589
Total Value Added	-\$1,655,654
Public revenues	-\$583,045

2. Methodology and Data

The analysis utilizes data distributed by the Minnesota IMPLAN Group featuring a complex collection of secondary data including the Regional Economic Information Systems (REIS), Bureau of Economic Analysis, Bureau of Labor Statistics, County Business Patterns, and Department of Labor –Covered Employment and Wages Program. In addition, project-specific data was provided by the Illinois Department of Corrections.

The economic impacts are reported as annualized changes in a variety of categories, including

- **Output**: represents the value of production. $\text{Output} = \text{Sales} \pm \text{Inventory Change}$. Since public agencies do not produce a commodity to be sold, Output represents the effects associated with the relocated IDOT DTS employees expenditure of spendable income;
- **Employment**: full-time equivalent positions;
- **Labor Income**: Employee compensation (Total payroll costs including salaries, wages, bonuses, benefits and employer-paid retirement) and proprietor (self-employed) income;
- **Total Value-Added**: Include Employee Compensation, Proprietors Income, Other Property Type Income, and Indirect Business Taxes; and
- **Public Revenues**: Include payroll taxes, property taxes, sales taxes, and other business taxes at local/state and federal levels.

To capture the full range of impacts across an area's economy, the effects for each category consist of three different levels:

- **Direct Effects**: these represent several categories of activity. For public agencies, this includes the annual changes associated with the expenditures employees' spendable income. For private businesses, this includes expenditures by the targeted industry;
- **Indirect Effects**: annual changes in inter-industry purchases as they respond to the changes in demand; and
- **Induced Effects**: the annual changes in household spending by employees among the affected interconnected industries;

The following is a discussion of measurements used in the analysis of impacts for each study area:

a. Sangamon County:

To estimate the economic impacts, a variety of negative events were incorporated into the model for Sangamon County, including:

Table 2. Inputs for determining Sangamon County impacts

<u>Permanent factors</u>			
Employment-related			
	The loss of FTE IDOT DTS employees		-136
	Average compensation	-\$41,072	
	Average employer-paid healthcare	-\$8,060	
	Average employer-paid SERS contribution(21.049%)	-\$8,645	
	Per-worker Employee compensation	-\$57,778	
	Total Employment Compensation	-\$7.86 million	
	Total Spendable Income		-\$5.48 million¹
Facility-related costs			
	Annual lease	-\$1.36 million	
	Annual electric charges	-\$184,900	
	Annual water, sewer, waste	-\$5,500	
	Total Facility-related costs		-\$1,558,904
Note: \$250,000 one-time cost of for moving office equipment from Springfield to Harrisburg was also included.			

¹ Estimated personnel services at IDOT DTS, including salaries, wages, bonuses, benefits, and employer-paid retirement totaled \$7.86 million. This amount is reduced by ratios of 69.7 percent for Sangamon County. The reduced amounts represent the available income less taxes, savings, and other fixed items. Note: The difference in ratios suggests that Household Incomes in Sangamon County are more greatly affected by taxes and other fixed costs than in the area in southern Illinois.

b. Saline and Williamson Counties:

Estimates of economic impacts associated with the relocation to Southern Illinois were developed by incorporating the events expected to occur in relation to the move. These included:

Table 3. Inputs for determining Southern Illinois impacts

<u>Permanent factors</u>			
Employment-related			
	The loss of FTE IDOT DTS employees		136
	Average compensation	\$41,072	
	Average employer-paid healthcare	\$8,060	
	Average employer-paid SERS contribution (21.049%)	\$8,645	
	Per-worker Employee compensation	\$57,778	
	Total Employment Compensation	\$7.86 million	
	Total Spendable Income		\$6.03 million²
Facility-related costs			
	Annual electric charges	\$88,690	
	Annual natural gas charges	\$33,358	
	Services to building	\$4,864	
	Annual waste removal charges:	\$3,129	
	Annual water, sewer, and other charges	\$3,098	
	Total Facility-related costs		\$133,139
Temporary (One-time costs)			
	Building purchase price (including \$56,840 real estate fee)		\$812,000
	Build out and building preparation costs		\$750,000
	IT Setup costs		\$250,000
	Employee moving costs		\$480,000³
	Total Temporary Costs		\$2,292,00

² Estimated personnel services at IDOT DTS including salaries, wages, bonuses, benefits, and employer-paid retirement totaled \$7.86 million. This amount is reduced by a ratio of 76.7 percent for southern Illinois region. The reduced amounts represent the available income less taxes, savings, and other fixed items. Note: The difference in ratios suggests that Household Incomes in Sangamon County are more greatly affected by taxes and other fixed costs than in the area in southern Illinois.

³ Ascribing this item to vendors in the southern Illinois counties is problematic since the location of vendors to be contracted by IDOT employees is uncertain.

3. Study Areas

a. Sangamon County

In 2000, Sangamon County had a population of 188,951⁴. By 2008, this figure is expected to have grown by more than 3 percent to 194,891. During that same period; the county's median household income has increased by close to \$12,000 from \$43,048 to an estimated \$54,982. The county's Annual Unemployment Rate has consistently fallen below that for the state. From 2005 through 2007, the county's rate stood at 4.7 percent, 4.4 percent, and 4.6 percent respectively as compared to the annual rate for the state (5.8 percent, 4.6 percent, and 5.0 percent). The Monthly Unemployment Rate (non-seasonally adjusted) for May and June was also below that for the State (5.1 percent v. 6.2 percent and 6.2 percent v. 7.1 percent)⁵.

The three largest communities in Sangamon County are:

<u>City</u>	<u>2000 Population</u>	<u>2008 Population</u>
Springfield	111,454	112,002
Chatham	8,583	10,357
Auburn	4,317	4,482

b. Saline and Williamson Counties

As of the 2000 Decennial Census, Saline and Williamson Counties reported populations of 26,733 and 61,296 respectively. Current estimates for 2008 population stand at 26,514 and 64,056, respectively. The two counties rank 52nd and 22nd by population. Combined the two counties have slightly less than half the population of Sangamon County. The two-county region's median household income has increased 23 percent in the past eight years from \$31,164 in 2000 to \$38,217 in 2008. The combined Annual Unemployment Rate for the two counties has been increasing of late. In 2005, the combined rate was 5.6 percent. While it dropped to 5.1 percent in 2006, recent trends have been disturbing. The rate climbed by more than 1.6 percent in 2007. Data for the two most recent months suggest that the trend is continuing. In May 2008 and June 2008, the Monthly Unemployment Rate (non-seasonally adjusted) for Saline and

⁴ Source: 2000 US Census (<http://www.census.gov>) and Business Analyst Online (<http://www.bao.esri.com>)

⁵ Source: Illinois Department of Employment Security, Local Area Unemployment Statistics (<http://lmi.ides.state.il.us/laus/laushis.htm>)

Williamson Counties was 7.7 percent and 9.2 percent and 6.0 percent and 7.5 percent, respectively. During that same period, the State's Rate rose from 6.0 percent to 7.1 percent.

The three largest communities in Saline and Williamson Counties are:

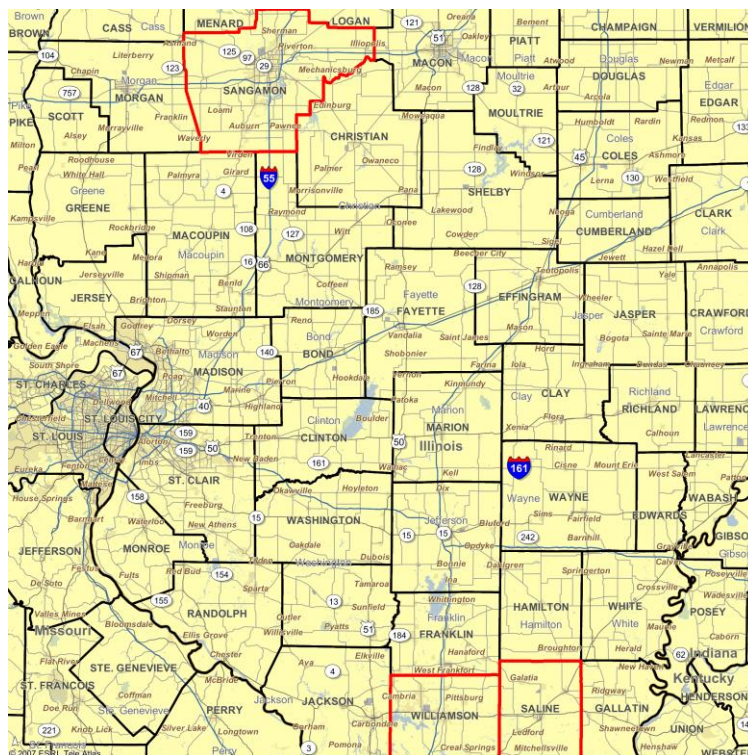
Saline County

<u>City</u>	<u>2000 Population</u>	<u>2008 Population</u>
Harrisburg	9,860	9,423
Eldorado	4,534	4,368
Carrier Mills	1,886	1,906

Williamson County

<u>City</u>	<u>2000 Population</u>	<u>2008 Population</u>
Marion	16,035	16,609
Herrin	11,298	11,349
Cartersville	4,616	4,800

Figure 1. Map of Sangamon County and Southern Illinois Study Areas



4. Results

Relocating IDOT's Division of Traffic Safety from Springfield (Sangamon County) to Saline and Williamson Counties in southern Illinois will result in significant economic impacts to both areas. Sangamon County will be negatively affected and the two-county region in southern Illinois realizing positive impacts. However, the two sets of impacts are not inversely related. That is, the relocation is not a zero-sum outcome. The negative economic effects for Sangamon County far outweigh the positive impacts for southern Illinois study area. The imbalance stems from differences in the regional economy and variables considered on each side of the equation. A summary of impacts for each study area is reported in Tables 4-6.

The proposed relocation raises some significant concerns for businesses and residents of Sangamon County. The majority of impacts are linked to the loss of \$5.5 million of IDOT DTS employees' annual disposable income. Another set of impacts are associated with loss of the annual lease, utility charges and other fees for the Springfield IDOT DTS facility. The combined effects of these losses translate into decrease of in annual Output approaching \$9.3 million (see Table 4). The decline in Output (production of goods and services) within the County will put more than 51 FTE positions and more than \$2.1 million in Labor Income (Employment Compensation and Proprietors Income) at risk throughout the local economy. Among the most affected industries (by Output) are Hospitals, Wholesale trade, Offices of physicians, Food services and drinking places, state and local government, non-education, and insurance carriers. The impacts will be felt across the economy including the public sector. The Public revenues will fall in relation to the declining economy resulting in a drop in public revenues of almost \$1.4 million annually.

The relocation will provide both permanent and temporary benefits to Saline and Williamson Counties. Permanent gains are linked with activities and events such as the introduction of income of IDOT employees that will contribute to economic activity each and every year. A summary of the region's annual permanent gains is provided in Table 5. Temporary gains are those stemming from events and activities having a finite term, for example, the one-time purchase and retrofitting of IDOT's new facility in

Harrisburg. These will generate or support economic activity only during their term of activity. For this study, all temporary impacts are limited to one year of activity. A summary of temporary gains is provided in Table 6.

Table 4. Permanent impacts to be experienced annually by Sangamon County

	Direct	Indirect	Induced	Total
Output	-\$7,035,256	-\$925,567	-\$1,297,880	-\$9,258,702
Employment	-39.0	-6.1	-10.5	-57.6
Employment Compensation	-\$1,111,853	-\$304,682	-\$435,096	-\$1,851,632
Labor Income	-\$1,338,331	-\$340,493	-\$473,906	-\$2,152,728
Total Value Added	-\$3,252,364	-\$520,422	-\$827,165	-\$4,599,953
Public Revenues	State and Local: -\$645,934		Federal: -\$722,570	-\$1,368,504

Saline and Williamson County can expect a series of permanent economic gains associated with the relocation. The total permanent increase in annual output (economic activity) approaches \$7.5 million. The additional activity will generate or support an additional 44.5 full time positions with \$1.45 in Labor Income (see Table 5). The most affected industries (by Output) for the permanent gains are the same as those negatively impacted in Sangamon County, (i.e., Hospitals, Offices of Physicians,...), only to a lesser extent. Gains will be realized by local, state, and federal agencies with an additional \$785,000 in revenues annually.

Table 5. Permanent gains to be realized annually by Saline and Williamson Counties

	Direct	Indirect	Induced	Total
Output	\$6,160,088	\$596,169	\$720,323	\$7,476,578
FTE Employment	32.4	4.7	6.3	44.5
Employment Compensation	\$917,432	\$152,301	\$201,681	\$1,271,415
Labor Income	\$1,024,890	\$196,114	\$230,135	\$1,451,139
Total Value Added	\$2,181,680	\$320,176	\$442,444	\$2,944,299
Public revenues	State and Local \$358,254		Federal \$427,205	\$785,459

The temporary impacts bring the total combined gains close to the level of loss experienced by Sangamon County (see Tables 6 and 7). The combined gains to be realized in southern Illinois include \$10.75 million in additional economic activity (Output), 76 FTE jobs, and \$2.65 million in additional Employment Compensation and

Proprietors Income. During the year in which the temporary effects are realized, government revenues will increase by more than \$1.2 million.

Table 6. Temporary (one-time) gains to be realized by Saline and Williamson Counties

	Direct	Indirect	Induced	Total
Output	\$2,348,840	\$341,378	\$590,940	\$3,281,159
Employment	23.7	2.4	4.4	31.6
Employment Compensation	\$692,824	\$95,261	\$164,203	\$952,288
Labor Income	\$896,701	\$116,514	\$187,363	\$1,200,577
Total Value Added	\$1,150,654	\$187,873	\$362,773	\$1,701,300
Public revenues	State and Local: \$143,079		Federal: \$271,807	\$414,886

Table 7. Combined Permanent and Temporary gains by Saline and Williamson Counties

	Permanent Gains	Temporary Gains	Combined Gains
Output	\$7,476,578	\$3,281,159	\$10,757,737
Employment	44.5	31.6	76.1
Employment Compensation	\$1,271,415	\$952,288	\$2,223,703
Labor Income	\$1,451,139	\$1,200,577	\$2,651,716
Total Value Added	\$2,944,299	\$1,701,300	\$4,645,599
Public revenues	\$785,459	\$414,886	\$1,200,345

The difference in impacts appears even greater when “leakage” of spending is included. Sangamon County offers many more opportunities for local spending and related business interaction than are available in Saline and Williamson Counties. Accordingly, residents and businesses expend a large portion of income for goods and services that need to be imported from outside the southern Illinois study area. Almost 35 percent of spendable income is “leaked” from that area. With the greater opportunities for interaction that exist in Sangamon County, only 26 percent is lost in leakage out of the County economy. The differences in leakage further increases the net loss in economic impacts associated with the relocation project. When the two areas are combined, the net difference is -\$1.8 million in Total Output. When the spending leakage for domestic and foreign imported goods and services is considered, the gap widens to almost -\$2.4 million.

5. Conclusions

When all of the events and activities generated or required are considered, the proposed relocation of IDOT's Division of Traffic Safety will have significant impacts to the economies of both locations. The project will provide substantial gains to Saline and Williamson Counties. However, the gains will be realized at a far greater cost to Sangamon County. While the economic effects of relocation appears relatively even when temporary gains are included, (see Table 7), the gains are limited. Once these are exhausted, the net effects are sizeable and on-going (Table 8).

Table 8. Net annual impacts of IDOT DPS relocation (Year One)

	Total Southern Illinois Gains (less imports)	Total Sangamon Losses less imports	Net Annual Impacts (Year One)
Output	\$7,914,887*	-\$7,368,226*	\$546,661
FTE Employment	76.1	-57.6	18.5
Employment Compensation	\$2,223,703	-\$1,851,632	\$372,071
Labor Income	\$2,651,716	-\$2,152,728	\$498,988
Total Value Added	\$4,645,599	-\$4,599,953	\$45,646
Public revenues	\$1,200,345	-\$1,368,504	-\$168,159
*\$10,757,737 in Total Output (Permanent and Temporary Impacts) less leakage of \$ for purchase of goods and services produced outside of leaked out of Saline and Williamson Counties. **-\$9,258,702 in Total Output (Permanent and Temporary Impacts) less leakage of \$ for purchase of goods and services produced outside of leaked out of Sangamon County.			

Table 9. Net annual impacts of IDOT DPS relocation (Year Two and beyond)

	Total Saline and Williamson County Gains	Total Sangamon Losses	Net Annual Impacts (Year Two +)
Output	\$4,971,4265	-\$7,368,226	-\$2,396,961
FTE Employment	44.5	-57.6	-13.1
Employment Compensation	\$1,271,415	-\$1,851,632	-\$580,217
Labor Income	\$1,451,139	-\$2,152,728	-\$701,589
Total Value Added	\$2,944,299	-\$4,599,953	-\$1,655,654
Public revenues	\$785,459	-\$1,368,504	-\$583,045
*\$7,476,578 in Total Output (Permanent and Temporary Impacts) less leakage of \$ for purchase of goods and services produced outside of leaked out of Saline and Williamson Counties. **-\$9,258,702 in Total Output (Permanent and Temporary Impacts) less leakage of \$ for purchase of goods and services produced outside of leaked out of Sangamon County.			