

**Economic and Fiscal Impacts of the Construction Phase of  
Expansion at**

**Myrtle Beach International Airport**

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Dr. Donald L. Schunk  
BB&T Center for Economic and Community Development  
Coastal Carolina University

## **Economic and Fiscal Impacts of the Construction Phase of Expansion at Myrtle Beach International Airport**

A plan to expand the passenger terminal at the Myrtle Beach International Airport would generate substantial economic benefits for the local economy via the construction activity associated with renovating the existing terminal and constructing a new terminal. This plan is currently expected to cost a total of \$130 million. Of this, \$90 million is expected to be spent with local contractors. *The purpose of this report is to estimate the economic impacts associated with this construction activity. The future operations of the expanded airport facility will also have a potentially significant impact on the local economy. However, those ongoing economic impacts are beyond the scope of this study. Again, this report only analyzes the economic impacts of the construction phase of the airport expansion proposal.*

The \$130 million construction project would provide a much needed boost to Horry County's construction sector at a time when this industry has been set back by the worst housing crisis since the Great Depression at the national level, and perhaps the worst housing slump ever for the Myrtle Beach area.

Specifically, the construction phase alone of the proposed airport expansion could be expected to provide the following benefits to the Horry County economy:

- A direct increase in business for the local construction sector of \$90 million.
- The direct support of 300 construction sector jobs with an associated payroll of \$11.7 million.
- A \$147.5 million total impact on the Horry County economy. This represents the total increase in economic activity due to the construction activity, both directly and via economic multiplier effects.
- A total of 862 jobs and \$30.9 million in household income would be supported.
- A total of \$4.8 million in new state-level sales and income tax collections.
- A combined total of \$888.2 thousand in local sales tax collections for the existing RIDE II and proposed Education Capital Improvements programs.

### *Understanding Economic Impacts*

The construction phase of expanding the Myrtle Beach International Airport will entail substantial economic benefits for the local economy. During the construction phase, in addition to the increased activity within the construction sector itself, additional economic benefits will ripple throughout the local economy due to economic linkages and multiplier effects. In this case, firms in the construction sector will purchase goods

and services as inputs from other local businesses. Additionally, workers in the construction sector will see a boost to incomes that can then be spent at area businesses, setting off additional ripple effects.

In standard economic impact analyses, three types of economic impacts can be identified: *direct*, *indirect* and *induced* effects. The direct effect of an activity represents the initial change in economic activity. In this case, the direct effects are the initial changes in the final demand for the output of the construction sector.

The indirect effects refer to all of the additional economic impacts that arise from inter-industry linkages between local firms. For example, as the construction sector purchases inputs from other local businesses – and these suppliers in turn purchase inputs from additional businesses – the input-output relationships between different firms and industries generates indirect effects on businesses in virtually every sector of the local economy.

The induced effects represent all of the additional economic benefits that are driven by the local spending of household income. The increased activity in the construction sector will boost incomes for construction workers. Some of this income will be spent locally on, for example, retail trade, health care, entertainment, housing, and so on. As firms in these industries see a boost to their sales, the employees of these firms will also see additional income that can be spent locally.

The successive rounds of indirect and induced impacts do not go on forever. For example, a portion of an increase in household income will be saved, used to pay taxes, or spent outside the local economy. Money that leaks out of the local area in this way cannot be used to support additional local activity. Therefore, the indirect and induced impacts become smaller and smaller over time until eventually the additional activity in each round goes to zero. Because of these leakages, it is useful to consider the notion of an economic multiplier.

An economic multiplier can be used to determine what the total impact (direct plus indirect plus induced) will be given a certain value for the direct impact. For example, if \$100 of direct spending within a particular sector ultimately results in a total spending impact of \$150, it can be said that the output multiplier is 1.5 – the \$100 in direct spending times the multiplier of 1.5 equals \$150 in total spending or total output. The value of this multiplier varies from sector to sector, and is determined largely by the size of the local supplier network.

The above discussion implies that economic impact analysis essentially involves: 1) determining the appropriate levels of direct business activity, and 2) determining and applying the correct values for economic multipliers to estimate the total impact on output, employment, and labor income.

The direct effects of the construction phase of the airport expansion include total expenditures of \$130 million, of which \$90 million are expected to be spent directly in the local economy.

To estimate the employment and income associated with this direct construction spending, as well as the indirect and induced effects, a detailed structural model of the Horry County economy was utilized. This model is known as an input-output model. An input-output model contains specific information on economic linkages between different industries. Therefore, the input-output model for Horry County is equipped to quantify, for example, the pattern of local input purchases by the local construction sector. This model can be used to estimate the full range of indirect and induced impacts described previously. This report utilizes the input-output modeling software *IMPLAN*.

This model can be used in conjunction with the direct construction spending data to estimate the economic impacts in terms of three distinct measures: economic output, employment and labor income. Economic output can be thought of as an aggregate measure of total spending resulting from the initial direct expenditure. It includes all spending by consumers and businesses on both goods and services. It is therefore a broad, all-inclusive measure of the impact on total economic activity. Employment measures the impact on jobs in terms of the total number of positions. Labor income represents total employee compensation, including wages, salaries and benefits.

### *Economic Impacts of Airport Construction*

The airport expansion is expected to provide a \$90 million boost to the local construction sector. This local construction spending is expected to create 300 positions directly with an estimated associated payroll of \$11.7 million. These direct impacts on the local construction sector would help counteract sharp losses for the industry in the face of the housing downturn. Between just the first quarter of 2007 and the first quarter of 2008, Horry County's construction sector shed 2,205 jobs.<sup>1</sup> These direct impacts on the construction sector are given in Table 1.

Economic Output	\$90.0 million
Employment	300 jobs
Labor Income	\$11.7 million

The \$90 million in direct local construction spending will lead to additional ripple effects within Horry County's economy. It is estimated that the construction activity will

<sup>1</sup> Based on data from the U.S. Bureau of Labor Statistics' *Quarterly Census of Employment and Wages*.

generate an additional \$39.5 million in indirect economic activity and an additional \$18.0 million in induced activity. Taken together, the \$90 million in direct spending is expected to lead to a total economic impact of \$147.5 million for the Horry County economy. These impacts on economic output are summarized in Table 2.

Direct	\$90.0 million
Indirect	\$39.5 million
Induced	\$18.0 million
<b>Total</b>	<b>\$147.5 million</b>

The airport expansion project is currently expected to directly support 300 jobs within the local construction sector. The estimated level of indirect economic activity is expected to support an additional 377 jobs within the local economy. These positions would be spread across the economy, not only within the construction sector itself. The level of induced economic activity would support another 185 jobs. In total, the construction phase of airport expansion would work to support a total of 862 jobs in Horry County. These employment impacts are summarized in Table 3.

Direct	300 jobs
Indirect	377 jobs
Induced	185 jobs
<b>Total</b>	<b>862 jobs</b>

The direct construction spending is expected to generate \$11.7 million in local household income for construction sector workers. The indirect activity associated with the project is expected to support another \$13.5 million in labor income, while the induced activity supports an additional \$5.7 million in income. The total impact on household income would reach \$30.9 million. The income impacts are given in Table 4.

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**Table 4. Construction Phase Impacts on Labor Income**

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Direct	\$11.7 million
Indirect	\$13.5 million
Induced	\$5.7 million
Total	\$30.9 million

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In addition to these economic impacts, the airport expansion construction project will also entail fiscal impacts as the construction activity generates state and local tax revenues. A portion of the direct construction expenditures will be spent on materials subject to state and local sales taxes. For this analysis, it is assumed that 40 percent of the direct construction spending will be on sales taxable items. Further, the newly generated household income will generate state-level individual income tax revenues. Finally, the spending of this new household income will support additional state and local sales tax collections.

Table 6 summarizes the fiscal impacts at the state level for South Carolina. Specifically, statewide direct construction spending is expected to be \$130 million. Of this, \$52 million is expected to be spent on sales taxable goods. This level of spending would amount to \$3.1 million in state sales tax collections using the state sales tax rate of 6 percent. A portion of the direct, indirect and induced household income will be spent in-state on taxable items. Specifically, it is assumed that 86 percent (\$26.6 million) of the total household income impact will represent new disposable income. Of this, 75 percent (\$19.9 million) will be spent in South Carolina. Finally, of this level of in-state spending, 50 percent (just under \$10 million) is assumed to be spent on sales taxable items. At the state's 6 percent sales tax rate, this amounts to another \$597.9 thousand in sales tax revenues. An average statewide effective income tax rate of 3.7 percent is used to estimate that the newly generated household income of \$30.9 million will generate \$1.1 million in state-level individual income tax revenues.

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**Table 5. South Carolina State Government Revenues**

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*Sales Tax Collections*

Due to Direct Construction Spending on Taxable Goods	\$3.1 million
Due to Household Spending of Newly Created Income	\$0.6 million
Total	\$3.7 million

*Individual Income Tax Collections*

\$1.1 million

*Total State Sales and Individual Income Tax Revenues*

\$4.8 million

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At the local level, Horry County currently imposes a one percent local sales tax to support the RIDE II capital projects program. In addition, there is currently a proposed Education Capital Improvement local sales tax under consideration. Table 7 summarizes the estimated local sales tax revenues that stand to be generated by the airport expansion construction phase. The direct local construction spending on taxable items is expected to generate \$360 thousand in local sales tax revenues for each penny of local sales taxes. The newly supported local household spending will generate an additional \$84.1 thousand in local tax collections per penny. Therefore, if the proposed Education Capital Improvement sales tax passes, then the airport construction project can be expected to generate a total of \$888.2 thousand in sales tax revenues for road and education capital improvements in Horry County.

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**Table 6. Horry County Government Revenues**

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*Local Sales Tax Collections*

**RIDE II**

Due to Direct Construction Spending on Taxable Goods	\$360.0 thousand
Due to Household Spending of Newly Created Income	\$84.1 thousand

**Education Capital Improvements**

Due to Direct Construction Spending on Taxable Goods	\$360.0 thousand
Due to Household Spending of Newly Created Income	\$84.1 thousand

*Total Local Sales Tax Collections, RIDE II and Education Capital Improvements*

*\$888.2 thousand*

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This report has provided the estimated economic impacts of the construction phase of the proposed passenger terminal expansion at Myrtle Beach International Airport. Understanding the potential longer-term impacts of the ongoing operations of the expanded airport is also critical. However, an analysis of those impacts is beyond the scope of the present study. At this point, the results given here indicate the substantial benefits that can accrue to the local economy via the construction activity associated with airport expansion, especially when considering the ongoing job losses within the local construction sector.