



The Economic and Fiscal Impact of Carmel Church Station on Virginia

The completed Carmel Church Station development is expected to support 20,670 jobs and \$3.3 billion in annual economic impact in Virginia in 2035. The project will support an additional 28,413 cumulative jobs during the development period. From only the direct impact, the state is expected to collect \$58.4 million a year from individual income, corporate income, sales, and other taxes from businesses and residents located at Carmel Church Station upon its completion. Cumulative state tax revenue will reach \$501.7 million from 2015 through 2035.

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1. Executive Summary

Carmel Church Station (CCS) is a proposed, planned, mixed-use, and transit-oriented development in Caroline County. Located on approximately 1,100 acres of land along I-95, the current plan calls for the development of one million square feet of retail space and restaurants; 1,560,000 square feet of office space; 600,000 square feet of industrial space; 1,000 hotel rooms, and 8,659 residential units. Project construction is expected to begin in 2015 and will continue for twenty years. A project of this magnitude will generate significant economic and fiscal impacts for the state of Virginia.

In 2010, Chmura Economics & Analytics (Chmura) conducted an economic and fiscal impact study of CCS in Caroline County.¹ An update of the 2010 study is necessary due to the following changes:

- The project schedule has been moved to 2015 through 2035. The original benchmark year of 2032 needed to be updated to 2035, taking inflation into consideration.
- The Chmura 2010 study was based on 2009 state tax rates. Since then, the state has increased its sales tax rate from 5.0% to 5.3%.
- An updated IMPLAN model is used that reflects the most recent economic situation in Virginia. The economic multipliers are consistent with those in Chmura 2010 study.

Using the IMPLAN Pro model to estimate the total economic and fiscal impacts from this project, Chmura found that:

- Spending in businesses located at Carmel Church Station will support 20,670 Virginia jobs (Table 3.2).
- During the 20-year construction and development period, 28,413 cumulative Virginia jobs will be created or supported (Table 3.1).
- The project will generate \$58.4 million in direct tax revenue for the state government from its full operation in 2035 (Table 4.1).
- The cumulative fiscal impact on Virginia during the 20-year construction and development period, as well as the first year of full operation, is \$501.7 million (Table 4.2).
- The total project construction spending is estimated at \$3.76 billion. This will, in turn, generate a total of \$5.72 billion in economic impact in Virginia (Table 3.1).
- Each dollar spent at CCS businesses will have a \$0.82 ripple effect throughout Virginia. Each job located at CCS will support an additional 0.77 jobs in Virginia.

¹ Source: The Economic and Fiscal Impact of Carmel Church Station on Virginia, prepared for Virginia Land Investments, by Chmura Economics & Analytics, June 11, 2010. This is referred to as the Chmura 2010 Study in this report.

2. Background

Virginia Land Investments has proposed the Carmel Church Station (CCS) project—a planned, mixed-use, and transit-oriented development on approximately 1,100 acres of land located along Interstate 95 (I-95) in Caroline County, Virginia.

Commercial, industrial, and residential properties are proposed for the CCS development. The initial plan is presented in Table 2.1. The development phase of the project is expected to span 20 years starting in 2015 through its completion in 2034. The project will host 1,000,000 square feet (SF) of retail space with plans for grocery stores, clothing stores, pharmacies, and home improvement stores. Also included are 80,000 SF for restaurants. In addition to retail and restaurants, CCS will also offer 1,560,000 SF of office space and 600,000 SF of industrial space. In addition, hotels with a total of 1,000 rooms are also included in this plan. For the residential components, the plan includes a total of 8,659 residential units, allocated among apartments, condos, townhomes, and single-family dwellings.

Table 2.1: Plans for Carmel Church Station		
	Square Foot	Units
Commercial		
Grocery	160,000	
Clothing	60,000	
Drug	100,000	
Home Improvement	100,000	
Misc. Retail	500,000	
Restaurants	80,000	
Total Retail & Restaurants	1,000,000	
Office	1,560,000	
Industrial	600,000	
Total Commercial Square Footage	3,160,000	
Hotel		1,000
Residential		
Apartment		2,500
Condos		2,500
Townhomes		2,500
Single Family Dwelling		1,159
Total Residential		8,659

Source: Virginia Land Investments

The entire project is expected to be completed over a 20-year period. The total project spending is estimated to be \$3.76 billion in nominal dollars, which is assumed to be evenly spread during the construction phase. The greatest share of the construction spending will be on the residential units; these expenditures will account for 83% (\$3.10 billion) of the total project cost. Office and retail construction will account for 8.1% and 5.2% of total construction spending, respectively. The rest will go toward the industrial properties (2.6%) and hotels (1.6%).

3. Economic Impact of Carmel Church Station

3.1. One-time Economic Impact from Construction Spending

The building phase of CCS will create jobs in construction and related industries in Virginia. As a result, CCS construction spending will bring more business to Virginia’s suppliers and construction companies. In addition, area restaurants and shops will benefit as the construction workers spend money at local establishments. The IMPLAN Pro model was used to estimate job creation and the ripple economic effects of the related construction activities.

The model shows that between 2015 and 2034, a total of \$3.31 billion will be directly spent in Virginia to support the construction of the CCS project (Table 3.1). On average, yearly construction spending is estimated at \$165.5 million with 796 jobs created directly in construction trades in Virginia. The annual indirect impact is expected to result in \$61.7 million in additional sales and 274 additional jobs. These jobs will be in industries supporting construction, such as truck transportation and site services. The annual induced impact is projected to total \$59.0 million and 351 jobs in Virginia. The induced jobs will be concentrated in consumer services-related industries such as restaurants, healthcare, and retail stores. Overall, during the 20-year construction phase, the CCS project is expected to generate a total of \$5.72 billion in spending and support 28,413 cumulative jobs in Virginia.

Table 3.1: Economic Impact of Construction of Carmel Church Station-Virginia (2015-2034, Nominal Dollars)					
		Direct	Indirect	Induced	Total
Total (2015-2034)	Spending (\$Million)	\$3,309.7	\$1,234.5	\$1,179.1	\$5,723.3
	Employment	15,915	5,471	7,027	28,413
Annual Average (2015-2034)	Spending (\$Million)	\$165.5	\$61.7	\$59.0	\$286.2
	Employment	796	274	351	1,421

Source: Virginia Land Investments and IMPLAN Pro 2012

3.2. Ongoing Economic Impact of CCS Development

After the planned construction is finished, businesses and residents located in CCS will sustain ongoing economic impact for Virginia. Table 3.2 presents the total output and employment from the ongoing economic activities located in CCS beginning in 2035. When all components are operating, businesses in CCS are estimated to have direct sales of \$1.81 billion. Of the commercial components, the largest contributors to economic output will come from the office space sector, followed by the manufacturing industries located in CCS, while the remaining direct sales are expected to come from retail merchants, restaurants, and hotels. In addition, apartments are expected to generate \$33.9 million in annual sales in the form of rental income. Finally, it is estimated that 11,654 people will be directly employed by the businesses within CCS.²

² Please see Appendix for detailed impact of each component.

Table 3.2: Annual Economic Impact of Carmel Church Station (2035 Onward)		Direct	Indirect	Induced	Total
Commercial	Spending (\$Million)	\$1,772.1	\$656.8	\$729.5	\$3,158.4
	Employment	11,524	3,773	4,841	20,138
Residential	Spending (\$Million)	\$33.9	\$53.6	\$38.6	\$126.1
	Employment	131	189	212	532
Total CCS	Spending (\$Million)	\$1,806.0	\$710.5	\$768.1	\$3,284.6
	Employment	11,654	3,962	5,054	20,670

Source: Virginia Land Investments, IMPLAN 2012

The indirect and induced impacts measure the extent to which other businesses in Virginia benefit from CCS operations. The indirect impacts are estimated to be \$710.5 million of spending per year. The businesses located at CCS support another 3,962 jobs around Virginia. The estimated annual induced impacts of \$768.1 million and 5,054 jobs are the result of increased spending by local consumers who are employed by CCS businesses. On average, one dollar spent at CCS businesses is expected to have a \$0.82 ripple effect throughout the state's economy. One job located in CCS will support an additional 0.77 jobs in the state.



4. Fiscal Impact on State Government

CCS will also produce significant tax revenue for the state government after completion. Major tax revenue will come from individual and corporate income taxes and sales tax. In addition, the state will benefit from the recordation tax and grantors tax from real estate transactions in CCS. To be conservative, only tax revenue from the direct impact was estimated.

4.1. State Taxes by Tax Category

Employees working at CCS will pay a state individual income tax from their wages and salaries. From businesses located in CCS, the state will collect a corporate income tax.

Chmura utilizes the following methodology to estimate state individual and corporate income taxes. The IMPLAN Pro model provides profit margins and the relative weight of wages and salaries in the total output for each industry located in CCS. For grocery stores, IMPLAN Pro shows that profits account for 8.1% of the total output while wages and salaries account for 52.4% of total sales. For restaurants, these percentages are 10.6% and 39.8%, respectively. From this information, Chmura estimated total profits along with the wages and salaries of all businesses located in CCS. Moreover, the state corporate income tax rate is 6.0% of profit, and the average individual income tax rate is 5.5% of wages and salaries.³ The resulting individual income tax in 2035 is estimated to be \$27.8 million while corporate income tax is estimated to be \$9.1 million (Table 4.1).

Table 4.1: State Annual Ongoing Tax Revenues (2035 Onward)	
Individual Income Tax	\$27,845,049
Corporate Income Tax	\$9,062,107
Sales Tax	\$20,723,482
Recordation Tax	\$559,606
Grantor Tax	\$223,842
Total	\$58,414,086
Source: Chmura Economics & Analytics	

The Virginia state sales tax is 5.3% of total retail sales, 1% of which is returned to the county by the state. The state essentially receives sales tax equaling 4.3% of total sales. In this study, sales tax is applied to sales at restaurants, hotels, and retail shops located at CCS. The total sales tax from all CCS businesses in 2035 is estimated to be \$20.7 million.⁴

For real estate transactions, the state of Virginia collects a recordation tax. The current tax rate is 25 cents per \$100 transaction value.⁵ Chmura applies this rate on the estimated sales value of residential units in CCS. Based on the construction schedule, there are 433 units of new houses for sale each year. As a result, the total

³ Virginia’s individual income tax is progressive. This is the rate based on the estimated wages of jobs located at CCS.

⁴ In the Chmura 2010 study, the state sales tax rate is 5% with 1% going to local governments and 4% going to the state government.

⁵ Source: Virginia State Recordation Tax Act, available at: <http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+TOC5801000>.

recordation tax is estimated to be \$0.33 million in 2015 and \$0.56 million in 2035, assuming housing prices appreciate at the rate of the Consumer Price Index.

In addition to the state recordation tax, the state of Virginia also collects a grantor tax at the rate of 50 cents per \$500 on the purchase price or the fair market value of the property.⁶ Chmura applies this rate on the estimated sales value of residential units in CCS. The total grantor tax is estimated to be \$0.13 million in 2015 and \$0.22 million in 2035, assuming housing prices appreciate at the rate of the Consumer Price Index.

4.2. State Fiscal Revenue Summary

When the development is fully operational in 2035, CCS is expected to generate annual direct state tax revenue of \$58.4 million (Table 4.2). Of this amount, \$27.8 million is expected to come from individual income tax, \$9.1 million from corporate income tax, \$20.7 million from sales tax, and the rest from recordation and grantor taxes. Over the 20-year development period and the first year of full operation, the project will generate \$501.7 million in additional state tax revenues.

Table 4.2: State Fiscal Revenue Summary (Annual 2015-2035, \$Million)						
Year	State Sales Tax	Individual Income Tax	Corporate Income Tax	Recordation Tax	Grantor Tax	Total State Tax
2015	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2016	\$0.6	\$0.8	\$0.3	\$0.3	\$0.1	\$2.1
2017	\$1.2	\$1.7	\$0.5	\$0.3	\$0.1	\$3.9
2018	\$1.9	\$2.6	\$0.8	\$0.3	\$0.1	\$5.8
2019	\$2.6	\$3.5	\$1.1	\$0.4	\$0.1	\$7.8
2020	\$3.3	\$4.5	\$1.5	\$0.4	\$0.1	\$9.8
2021	\$4.1	\$5.5	\$1.8	\$0.4	\$0.1	\$12.0
2022	\$4.9	\$6.6	\$2.1	\$0.4	\$0.2	\$14.2
2023	\$5.8	\$7.7	\$2.5	\$0.4	\$0.2	\$16.6
2024	\$6.6	\$8.9	\$2.9	\$0.4	\$0.2	\$19.0
2025	\$7.6	\$10.2	\$3.3	\$0.4	\$0.2	\$21.6
2026	\$8.5	\$11.4	\$3.7	\$0.4	\$0.2	\$24.3
2027	\$9.5	\$12.8	\$4.2	\$0.4	\$0.2	\$27.1
2028	\$10.6	\$14.2	\$4.6	\$0.4	\$0.2	\$30.0
2029	\$11.7	\$15.7	\$5.1	\$0.5	\$0.2	\$33.1
2030	\$12.8	\$17.2	\$5.6	\$0.5	\$0.2	\$36.3
2031	\$14.0	\$18.8	\$6.1	\$0.5	\$0.2	\$39.6
2032	\$15.2	\$20.5	\$6.7	\$0.5	\$0.2	\$43.1
2033	\$16.5	\$22.2	\$7.2	\$0.5	\$0.2	\$46.7
2034	\$17.9	\$24.0	\$7.8	\$0.5	\$0.2	\$50.5
2035	\$20.7	\$27.8	\$9.1	\$0.6	\$0.2	\$58.4
Total	\$176.2	\$236.7	\$77.0	\$8.4	\$3.4	\$501.7

Source: Chmura Economics & Analytics

⁶ Ibid.

The cumulative tax revenue for Virginia from 2015 to 2035 is listed in Table 4.3. By 2035, the cumulative tax revenue for the state can reach \$501.7 million.

Table 4.3: State Fiscal Revenue Summary (Cumulative, 2015-2035, \$Million)

Year	State Sales Tax	Individual Income Tax	Corporate Income Tax	Recordation Tax	Grantor Tax	Total State Tax
2015	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2016	\$0.6	\$0.8	\$0.3	\$0.3	\$0.1	\$2.1
2017	\$1.8	\$2.5	\$0.8	\$0.7	\$0.3	\$6.1
2018	\$3.8	\$5.1	\$1.6	\$1.0	\$0.4	\$11.9
2019	\$6.4	\$8.6	\$2.8	\$1.4	\$0.5	\$19.6
2020	\$9.7	\$13.1	\$4.2	\$1.7	\$0.7	\$29.4
2021	\$13.8	\$18.6	\$6.0	\$2.1	\$0.8	\$41.4
2022	\$18.7	\$25.2	\$8.2	\$2.5	\$1.0	\$55.6
2023	\$24.5	\$32.9	\$10.7	\$2.9	\$1.1	\$72.1
2024	\$31.1	\$41.8	\$13.6	\$3.3	\$1.3	\$91.1
2025	\$38.7	\$52.0	\$16.9	\$3.7	\$1.5	\$112.7
2026	\$47.2	\$63.4	\$20.6	\$4.1	\$1.6	\$137.0
2027	\$56.7	\$76.2	\$24.8	\$4.5	\$1.8	\$164.1
2028	\$67.3	\$90.4	\$29.4	\$5.0	\$2.0	\$194.1
2029	\$79.0	\$106.1	\$34.5	\$5.4	\$2.2	\$227.2
2030	\$91.8	\$123.3	\$40.1	\$5.9	\$2.3	\$263.5
2031	\$105.8	\$142.1	\$46.3	\$6.3	\$2.5	\$303.1
2032	\$121.0	\$162.6	\$52.9	\$6.8	\$2.7	\$346.1
2033	\$137.6	\$184.9	\$60.2	\$7.3	\$2.9	\$392.8
2034	\$155.5	\$208.9	\$68.0	\$7.8	\$3.1	\$443.3
2035	\$176.2	\$236.7	\$77.0	\$8.4	\$3.4	\$501.7

Source: Chmura Economics & Analytics



Appendix

Table A1: Economic Impact of Construction of Carmel Church Station (2015-2034, Nominal \$)					
Year		Direct	Indirect	Induced	Total
2015	Spending (\$Million)	\$129.9	\$48.4	\$46.3	\$224.6
	Employment	796	254	351	1,401
2016	Spending (\$Million)	\$133.1	\$49.6	\$47.4	\$230.1
	Employment	796	254	351	1,401
2017	Spending (\$Million)	\$136.4	\$50.9	\$48.6	\$235.8
	Employment	796	254	351	1,401
2018	Spending (\$Million)	\$139.8	\$52.1	\$49.8	\$241.7
	Employment	796	254	351	1,401
2019	Spending (\$Million)	\$143.2	\$53.4	\$51.0	\$247.7
	Employment	796	254	351	1,401
2020	Spending (\$Million)	\$146.8	\$54.7	\$52.3	\$253.8
	Employment	796	254	351	1,401
2021	Spending (\$Million)	\$150.4	\$56.1	\$53.6	\$260.1
	Employment	796	254	351	1,401
2022	Spending (\$Million)	\$154.1	\$57.5	\$54.9	\$266.5
	Employment	796	254	351	1,401
2023	Spending (\$Million)	\$157.9	\$58.9	\$56.3	\$273.1
	Employment	796	254	351	1,401
2024	Spending (\$Million)	\$161.9	\$60.4	\$57.7	\$279.9
	Employment	796	254	351	1,401
2025	Spending (\$Million)	\$165.9	\$61.9	\$59.1	\$286.8
	Employment	796	254	351	1,401
2026	Spending (\$Million)	\$170.0	\$63.4	\$60.6	\$293.9
	Employment	796	254	351	1,401
2027	Spending (\$Million)	\$174.2	\$65.0	\$62.1	\$301.2
	Employment	796	254	351	1,401
2028	Spending (\$Million)	\$178.5	\$66.6	\$63.6	\$308.7
	Employment	796	254	351	1,401
2029	Spending (\$Million)	\$182.9	\$68.2	\$65.2	\$316.3
	Employment	796	254	351	1,401
2030	Spending (\$Million)	\$187.5	\$69.9	\$66.8	\$324.1
	Employment	796	254	351	1,401
2031	Spending (\$Million)	\$192.1	\$71.6	\$68.4	\$332.2
	Employment	796	254	351	1,401
2032	Spending (\$Million)	\$196.9	\$73.4	\$70.1	\$340.4
	Employment	796	254	351	1,401
2033	Spending (\$Million)	\$201.7	\$75.2	\$71.9	\$348.8
	Employment	796	254	351	1,401
2034	Spending (\$Million)	\$206.7	\$77.1	\$73.6	\$357.5
	Employment	796	254	351	1,401
Total	Spending (\$Million)	\$3,309.7	\$1,234.5	\$1,179.1	\$5,723.3
	Employment	15,915	5,073	7,027	28,015
Annual Average	Spending (\$Million)	\$165.5	\$61.7	\$59.0	\$286.2
	Employment	796	254	351	1,401

Source: Virginia Land Investments and IMPLAN Pro 2012

Table A2: Annual Economic Impact of Carmel Church Station (2035 Onward)		Direct	Indirect	Induced	Total
Grocery Store	Spending (\$Million)	\$42.2	\$4.6	\$6.1	\$52.9
	Employment	391	21	42	454
Clothing	Spending (\$Million)	\$39.6	\$8.0	\$7.2	\$54.8
	Employment	372	39	60	470
Drug Store	Spending (\$Million)	\$28.3	\$3.4	\$4.4	\$36.0
	Employment	322	22	42	385
Home Improvement Store	Spending (\$Million)	\$47.1	\$6.0	\$7.5	\$60.6
	Employment	390	30	57	476
Misc. Retail	Spending (\$Million)	\$235.6	\$20.6	\$31.5	\$287.7
	Employment	2,781	128	366	3,276
Restaurant	Spending (\$Million)	\$60.3	\$27.6	\$26.0	\$113.9
	Employment	580	89	87	756
Office	Spending (\$Million)	\$837.9	\$348.0	\$490.6	\$1,676.4
	Employment	5,278	2,461	3,356	11,095
Industry	Spending (\$Million)	\$452.3	\$223.5	\$145.0	\$820.8
	Employment	1,226	930	789	2,945
Hotel	Spending (\$Million)	\$28.9	\$15.2	\$11.2	\$55.4
	Employment	183	53	44	280
Total Commercial	Spending (\$Million)	\$1,772.1	\$656.8	\$729.5	\$3,158.4
	Employment	11,524	3,773	4,841	20,138
Apartment	Spending (\$Million)	\$33.9	\$9.8	\$7.0	\$50.7
	Employment	131	34	39	204
Condominium	Spending (\$Million)	\$0.0	\$16.3	\$11.7	\$28.0
	Employment	0	57	64	122
Townhouse	Spending (\$Million)	\$0.0	\$16.3	\$11.7	\$28.0
	Employment	0	57	64	122
Single Family Dwelling	Spending (\$Million)	\$0.0	\$11.3	\$8.1	\$19.5
	Employment	0	40	45	85
Total Residential	Spending	\$34	\$54	\$39	\$126
	Employment	131	189	212	532
Total CCS	Spending	\$1,806.0	\$710.5	\$768.1	\$3,284.6
	Employment	11,654	3,962	5,054	20,670

Source: Virginia Land Investments and IMPLAN 2012