

The Economic Impact of Willow Run Airport 2014





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I. EXECUTIVE SUMMARY

The Wayne County Airport Authority runs two airports of great importance to the area and its economy – Detroit Metropolitan Airport and Willow Run Airport. Willow Run Airport provides area residents and business with access to convenient and efficient cargo shipment, general aviation, and other related operations. The facilities, workers and businesses operating at Willow Run are responsible for an economic impact of \$123 million at an annual rate, adding \$40 million to area incomes and supporting 950 jobs in southeastern Michigan.

Annual Economic Impact of Willow Run Airport	
Direct Spending	\$59.4 million
Economic Impact	\$123.1 million
Income Impact	\$40.5 million
Jobs Impact	950

The largest contributors to this economic impact are air freight and the impact of capital improvement projects at the airport itself. Willow Run ships tens of millions of pounds of air freight each year. As air freight consists primarily of high-value goods, this signals a high amount of economic activity linked to the airport. The capital improvement projects keep the airport positioned to serve the area economy for the future, and create construction and other jobs in the present.

Other forms of economic impact associated with Willow Run Airport include the visitors that Willow Run brings to the area, the educational activities (such as flight training) occurring at the airport, and the general aviation and other businesses which operate at the Willow Run airport.

Willow Run also has an importance beyond the direct activities identified by this report. It operates as a reliever airport to Detroit Metro and thereby helps support the \$10 billion in economic impact documented for that airport by an earlier study. Willow Run is a vital part of the economy of southeastern Michigan, connecting area businesses to customers and suppliers around the world supporting local production of high-value goods and services.

II. ASSESSING ECONOMIC IMPACT OF WILLOW RUN

II.1 THE SCOPE OF ECONOMIC IMPACT ANALYSIS

II.1.1 Types of Economic Activities

An economic impact report for an airport identifies economic activities directly associated with the airport and quantifies their total impact. For Willow Run Airport, these activities include the activities taking place at the airport as well as the spending of those who earn incomes by providing goods and services at Willow Run.

Economic activities at Willow Run can be divided into a number of categories.

First, Willow Run is an important facility for air freight. The **economic impact of cargo transportation** represents the benefit to the area economy from these cargo shipments.

Next, Willow Run Airport brings visitors to the area who spend money while here – the **economic impact of visitors**.

The **economic impact of general aviation** captures the contribution to the area economy of the corporate and personal planes flown into and kept at Willow Run.

The **economic impact of education** represents the flight training which occurs at the airport.

Finally, Willow Run Airport is experiencing transformations to its runways and facilities to position the airport for the future. These capital improvements have an immediate **economic impact of airport enhancement** representing the construction activity at the airport

II.1.2 Geographic Scope of Economic Impact

Willow Run Airport benefits a broad area of Michigan. However, its measureable economic impact mostly lies within the Airport Authority ten-county Air Trade Area shown on the map below. This region is the focus of this study.



Figure 1: Ten-County Air Trade Area

II.2 QUANTIFYING ECONOMIC IMPACT

The economic impact of airport activity has a direct impact for the businesses operating at the airport and their stakeholders. As the figure on the next page shows, however, there is also generally a further **induced impact**. Economic activity at the airport generates incomes, much of which accrue to area employees and investors. When airport employees receive incomes, they spend much of their income in the local area again. This second “round” of economic impact can similarly generate further induced impact.

Economic impact can be measured in a number of ways. Once the **direct spending** is estimated, the overall **economic impact** measures the total demand for goods and services associated with Willow Run economic activity. To the extent that this demand for goods and services is met locally, it will contribute to the incomes of workers, owners, and investors. This impact is called the **income impact**. Finally, to the extent that these incomes represent increased employment, there is a **jobs impact** of the economic activity at the airport.

These impacts will vary, in general, based on the industry in which the spending occurs, the amount of money spent, and the geographical area over which the economic impact is being estimated. In this case the geographical area is the ten-county Air Trade Area shown in the figure on the previous page.

Using observed economic connections in the economy, the United States Department of Commerce calculates “multipliers”. These multipliers estimate how much (for example) \$1 million in spending on shipping of air freight will impact economic activity, incomes, and employment in a local region, and include the induced effect combined with the direct effect. The United States Department of Commerce makes these multipliers available through its Regional Input-Output Measurement System. These multipliers show what the eventual effect of (for example) \$1 million in spending will be on economic activity, incomes, and employment. Multipliers are different for each industry, so it is important to identify the nature of the spending as well as its amount.

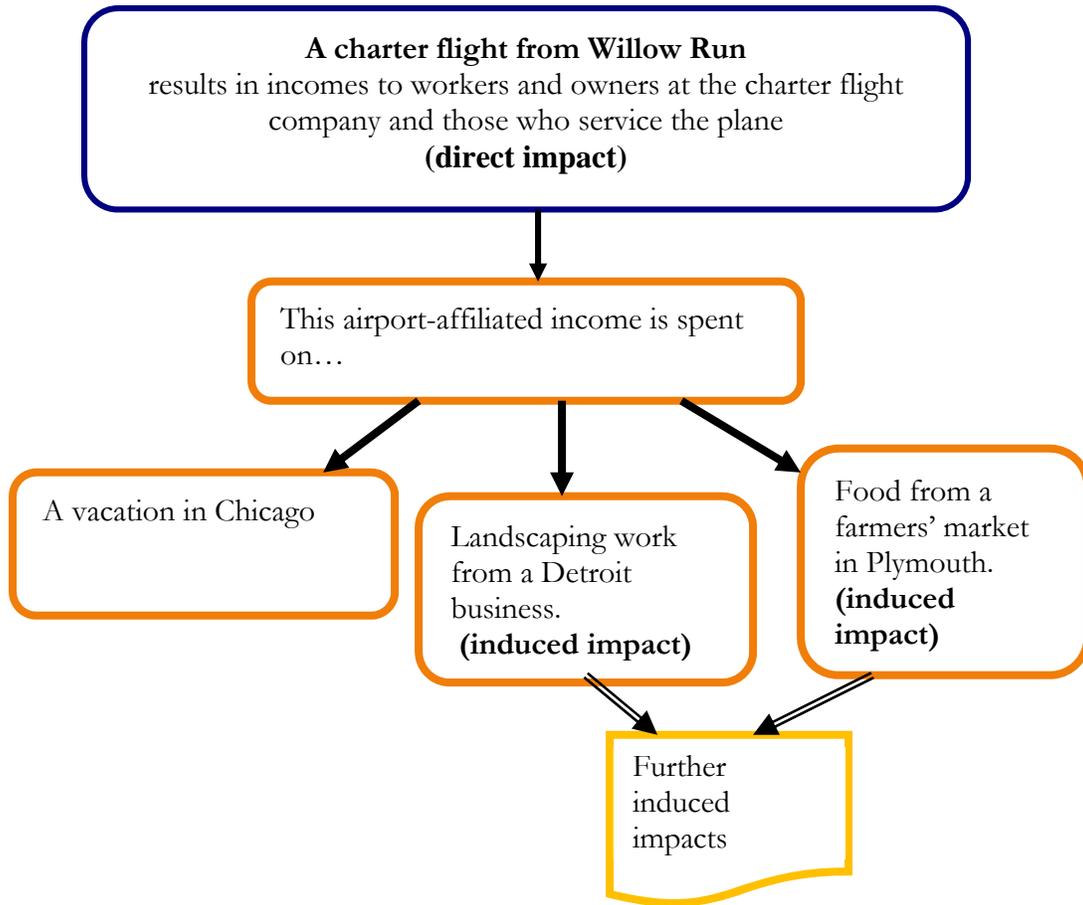


Figure 2: Direct and Induced Economic Impact

II.3 BROADER IMPORTANCE OF WILLOW RUN

In the case of an airport like Willow Run, which handles a large amount of air cargo, the airport is vital to the area's economy for reasons which go beyond the numbers captured in the overall total of economic activity happening on the grounds of the airport itself. Air cargo is a crucial way that production facilities in the United States are connected to the world, and an important means of supporting American exports.

According to the 2012 *Commodity Flow Survey* conducted by the US Bureau of the Census and the Bureau of Transportation Statistics, the average value of freight shipped by air is \$85,000 per ton. This compares to a ton of truck freight being valued at an average of \$1,226 per ton. Air freight is particularly important for high-value exports, accounting for \$367 billion in total value. As shown in the chart, this is about one-third of total export shipments.

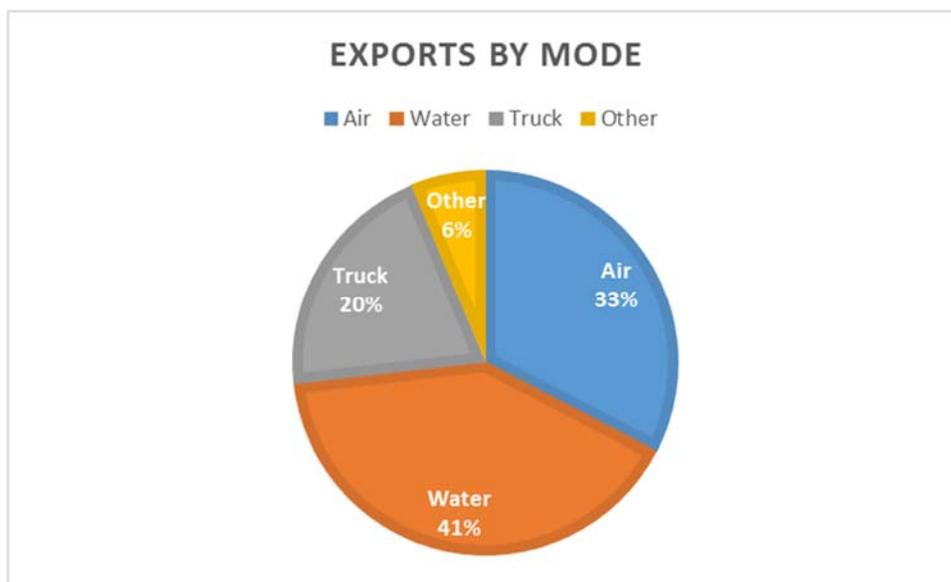


Figure 3: Value of Exports by Mode of Transportation

Based on this value and the estimated weight of cargo leaving Willow Run, the value of shipments leaving Willow Run Airport is about \$2.3 billion per year. Although impossible to measure precisely, having access to facilities like Willow Run where goods can be shipped conveniently and efficiently surely helps attract and retain a number of businesses in southeastern Michigan.

Another important value of Willow Run Airport is its synergy with Detroit Metropolitan Airport. A 2013 economic impact study showed \$10 billion of economic impact of Detroit Metropolitan Airport. While Detroit Metropolitan is the venue most passengers use and Willow Run specializes in cargo, being able to manage both for the good of the region enables the Airport Authority to allocate resources at both airports to achieve the best overall result.

III. ECONOMIC IMPACT OF CARGO TRANSPORTATION

Annual Impact of Cargo Transportation	
Spending	\$22.3 million
Economic Impact	\$44.4 million
Income Impact	\$14.4 million
Jobs Impact	306

Unlike Detroit Metropolitan, its partner airport, Willow Run does not handle scheduled passenger traffic from the major airlines. Instead, its importance lies primarily in general aviation and cargo transportation.

In the 12 months ending in June 2014, Willow Run reported 181,194,916 pounds in landed weight on cargo flights. This weight includes the plane itself. Since the net cargo weight is not reported, it must be estimated for this study. Based on the types of planes used at Willow Run, we estimate about 30% of the weight of the plane is used for actual cargo. This means about 54.4 million pounds of cargo ships annually from Willow Run Airport.

A substantial amount of the cargo shipping has some data, including distance travelled, reported to the U.S. federal government through the Bureau of Transportation Statistics. Based on this data, the average flight of a cargo flight departing Willow Run is 607 miles

To convert this to spending, we use the figure of \$1.3545 for revenue per ton-mile provided in the most recent figures (2012) of the *National Transportation Statistics* compiled by the U.S. Department of Transportation. Combining the estimated weight, distance, and revenue per ton-mile produces the spending shown above. Overall, the \$22 million in estimated spending produces an economic impact of \$44 million, supporting over 300 jobs and incomes of \$14 million per year.

IV. ECONOMIC IMPACT OF VISITORS

Annual Impact of Visitors	
Spending	\$1.1 million
Economic Impact	\$2.1 million
Income Impact	\$0.6 million
Jobs Impact	21

Although Detroit Metropolitan Airport is the area's main passenger airport, there are some passengers travelling to and from southeastern Michigan using Willow Run. FAA data for calendar year 2013 reports enplanements of 2527 passengers.

Passengers create economic impact in two ways: through the air travel itself and from money spent on other things while visiting here. The 2013 Economic Impact Report for Detroit Metropolitan Airport provides survey evidence for spending per visitor, and this study uses these spending figures as estimates for Willow Run visitors. We presume that half the passengers arriving at Willow Run are visitors, while the other half are residents of southeastern Michigan. This generates an estimate that the visitors to Michigan using Willow Run are spending about \$1 million annually.

For the air travel itself, FAA data provides an average flight segment of 465 miles for passenger travel from Willow Run. Using this with the National Transportation Statistics estimate for revenue per passenger mile of 13.8 cents produces an estimate of the spending on air transportation itself.

These estimates are allocated to the appropriate industries as described in the appendix, providing estimates that visitors create an economic impact of \$2.1 million, supporting \$600,000 in local incomes and 21 jobs. Willow Run also has the capability to support large corporations operating regular flights for their employees. This has occurred in the past, including a company which concluded such a program during 2014. Because this is not an ongoing operation, it is not included in the totals above. However, there is the potential for a substantially larger number of business visitors to use Willow Run in the future and thereby generate additional economic impact.

V. ECONOMIC IMPACT OF GENERAL AVIATION

Annual Impact of General Aviation	
Spending	\$9.4 million
Economic Impact	\$18.7 million
Income Impact	\$6.1 million
Jobs Impact	129

Willow Run also has many arrivals and departures during the year that are not accounted for in other categories in this report. In the twelve months ending June 2014, there were 70,597 arrivals and departures reported at the airport. These generate economic impact in a number of ways – including the spending represented in acquiring, maintaining, fueling, and storing these planes. Since general aviation is not included in much of the data available on the Bureau of Transportation Statistics data, it must be estimated by other means. We have estimated the effects of each of the departures from Willow Run not otherwise accounted for as having the same overall economic impact as a two-hour use of a plane costing \$147 per hour. This \$147 per hour is the hourly rental rate for a Cessna 172 from the Eagle Flight Center at Willow Run.

The results, as shown above, are estimated economic impact of \$19 million including income impact of \$6 million and 129 jobs from general aviation transportation, in addition to the transportation in the other categories in this study.

VI. ECONOMIC IMPACT OF EDUCATION

Annual Impact of Education	
Spending	\$1.4 million
Economic Impact	\$3.1 million
Income Impact	\$1.1 million
Jobs Impact	37

Willow Run Airport provides the opportunity for people to learn flying skills through a program run by the Eagle Flight Center of Eastern Michigan University. The four-year Bachelor of Science degree program in Aviation Flight Technology started in 2002, and has 92 full time and 30 part time students. To estimate the amount of spending associated with this activity we have used figures from a State of Michigan House Fiscal Study report into the planned expenditures at Eastern Michigan University per full time student. Net of financial aid expenses, the spending per student was budgeted at \$13,451. Presuming the part-time students were, on average, half time gives 107 FTE students, and using the RIMS multipliers for higher education gives the impact numbers shown above.

The table above shows \$3 million in economic impact, 37 jobs, and about \$1 million in annual incomes driven by the current educational spending. These programs will have further economic impact in the years ahead based on the earnings capability of the pilots being trained.

VII. ECONOMIC IMPACT OF AIRPORT ENHANCEMENT

Annual Impact of Airport Enhancement	
Spending	\$25.0 million
Economic Impact	\$54.9 million
Income Impact	\$18.2 million
Jobs Impact	457

The Wayne County Airport Authority includes in its budget each year a five-year Capital Improvement Plan to ensure that the facilities at Willow Run Airport and Detroit Metropolitan Airport are able to meet the needs of the area and its economy. The plan in the Fiscal Year 2014 budget therefore focuses on Fiscal Years 2014 through 2018.

The portion applying to Willow Run called for \$25 million in spending for Fiscal Year 2014 and \$129 million for the entire term. These investments are supported largely by Airport Improvement Program (AIP) grants from the federal government. A number of projects to prepare Willow Run for the future are included and these are itemized and classified in the Appendix.



The most important part of this airport enhancement is keeping Willow Run in position to remain a vital component of the area economy in the years ahead, but the Fiscal Year 2014 spending also has an immediate economic impact of \$54 million, with income impact of \$18 million supporting 457 jobs.

VIII. TOTAL ECONOMIC IMPACT OF WILLOW RUN AIRPORT

	Direct Spending	Economic Impact	Income Impact	Jobs Impact
Cargo Transportation	\$22.3 million	\$44.4 million	\$14.4 million	306
Visitors	\$1.1 million	\$2.1 million	\$0.6 million	21
General Aviation	\$9.4 million	\$18.7 million	\$6.1 million	129
Education	\$1.4 million	\$3.1 million	\$1.1 million	37
Airport Enhancement	\$25.0 million	\$54.9 million	\$18.2 million	457
TOTAL	\$59.4 million	\$123.1 million	\$40.5 million	950

Due to rounding, stated numbers may not add to stated totals

Combining the results of the previous sections, the above table shows the overall economic impact of Willow Run Airport. On an annual basis, the activities of Willow Run generate \$59 million in direct spending and economic impact of \$123 million, supporting 950 area jobs and \$40 million in income to local residents.



Appendix A: SOURCES

A primary source for this report is data provided by Willow Run airport itself. This includes the total number of operations at the airport as well as the landed weight of cargo planes. A large amount of information about both Willow Run and Detroit Metropolitan Wayne County Airport is contained at the website for the Airport Authority (<http://wcaa.us>). Of particular interest to those interested in economic impact are:

- Aviation Statistics at <http://wcaa.us/About/FactsFigures/AviationStatistics.aspx> including monthly and annual reports on activities at Willow Run and Detroit Metro
- Financial Information at <http://wcaa.us/About/FactsFigures/FinancialInformation.aspx> including the WCAA budget which in turn contains detailed information about financial activities and the Capital Improvement Plans for both airports.

This report uses the methodology found in a number of other airport economic impact studies. In particular, a 2013 study of the economic impact of Detroit Metropolitan Wayne County Airport and a 2007 study of the economic impact of Willow Run Airport, were both conducted by iLabs. The present study is an update of the 2007 study and incorporates parts of that study where appropriate. Economic impact studies and other publications of the Airport Authority can be found at <http://wcaa.us/MediaCenter/Publications.aspx>

The Willow Run Airport webpage at <http://www.willowrunairport.com/> contains information about the airport itself including information about the services available through the businesses and people of Willow Run.

The United States Department of Transportation provides a large amount of transportation information. This includes a large amount of information from the Bureau of Transportation Statistics. Detailed transportation databases are available at <http://www.transtats.bts.gov>, including information about landed weight and passenger activities from United States airport. Form T-100 data here has been used to estimate the average length of a flight segment leaving Willow Run for both cargo and passengers. The average length of a cargo flight and of a passenger flight was calculated using data for the twelve months ending March 2014. T-100 data also includes information on the types of planes arriving and departing from airports. Revenue per ton-mile was taken from Table 3-21 of *National Transportation Statistics*, also available on the Bureau of Transportation Statistics web site.

The Commodity Flow Survey is conducted by the United States Government as a partnership between the Bureau of the Census (in the Department of Commerce) and the Bureau of Transportation Statistics (in the Department of Transportation). The Survey is conducted every five years, and results from the 2012 Survey were used in this study to provide numbers on the value of air freight and its importance to exports. Information about the survey can be found at http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/commodity_flow_survey/index.html

Information on the education impact was taken from the Eastern Michigan University website at <http://www.emich.edu> (which provided enrollment information) and a study by the (State of Michigan) House Fiscal Agency which provided per-student spending both including and excluding financial aid. This study can be found at http://www.house.mi.gov/hfa/PDF/HigherEducation/State_Appropriations_Tuition,and_Public_University_OperatingCosts.pdf

The various measures of impact created by a given amount of direct spending has been calculated with the aid of Regional Input-Output Measuring System (RIMS) data. Based on the ten-county Air Trade Area, the RIMS model enables us to estimate the amount of induced economic impact, income impact, and jobs impact resulting from a given amount of spending. Maintenance of the RIMS system is done by the U.S. Department of Commerce's Bureau of Economic Analysis. Information about the RIMS program is available at <http://www.bea.gov/regional/rims/index.cfm/>.

Appendix B: QUANTIFYING ECONOMIC IMPACT: METHODOLOGY

This study uses the Regional Input-Output Multiplier (RIMS II) program to estimate the effects of the identified spending on overall economic impact, incomes impact, and jobs impact. The Bureau of Economic Analysis has provided multiplier data for the ten-county Air Trade Area specified by the Airport Authority. The multipliers for this study were computed by the Bureau of Economic Analysis using 2002 national benchmark input-output data and 2010 regional data, which are the latest data available.

Multipliers vary based on the geographic area, but also based on the industry in which the initial spending occurs. This is partially because different industries have different employment patterns, and also because in some industries most of the demand is met by local employment, whereas in other industries Michigan demand creates jobs further away.

The RIMS industries for which spending was identified in this study include:

Spending Category	RIMS Industry	NAICS Code
Air Transportation (passenger and cargo)	Air transportation	481000
Education	Junior colleges, colleges, universities, and professional schools	611800
Capital Improvement Plan	Construction	230000
Capital Improvement Plan	Architectural, engineering, and related services	
Lodging	Hotels and Motels, including casino hotels	7211A0
Ground Transportation	Auto equipment rental & leasing	532100
Dining	Food services and drinking places	722000
Entertainment	Other amusement and recreation industries	713B00
Retail	Retail Trade	4A0000
Other	Other Personal Services	812900

For each industry, three multipliers provided by the RIMS data are used:

- 1) The **output multiplier** shows the total amount of output induced by a dollar of initial spending. This multiplied amount contributes to the total economic impact figures reported in this study.
- 2) The **earnings multiplier** shows the total amount of income (wages, profits, etc.) earned by area residents associated with each dollar of initial spending in the

industry. This multiplied amount contributes to the total income impact figures reported in this study.

- 3) The **employment multiplier** estimates the number of jobs in the area generated by each \$1 million (in 2010 dollars) of initial spending in the specified industry. This multiplied amount contributes to the total jobs impact figure reported in this study. To convert the spending to its approximate purchasing power in 2010, as required by the multiplier, spending has been converted to 2010 dollars using the Consumer Price Index. Specifically, all spending has been multiplied by the ratio of 217.677 (the CPI for all urban consumers, seasonally adjusted, for July 2010) to 234.933 (the same figure for January 2014).

Appendix C: CAPITAL IMPROVEMENT PLAN COMPONENTS

CAPITAL IMPROVEMENT PLAN DETAILS

The Fiscal Year 2014 budget for the Airport Authority laid out a five year Capital Improvement Plan. Shown below are the elements applicable to Willow Run Airport. The Fiscal Year 2014 numbers are used to calculate economic impact for this report, but the overall numbers are also shown below to provide the context of the scope of the plan.

	Project	FY14 (Thousands)	Overall (Thousands)
	AIRFIELD		
WR1	Runway 5R/23L Design & Reconstruction	\$15,000	\$41,872
WR2	Runway 14/32 Decommission & Removal	\$2,000	\$2,000
WR3	Runway 5R Touchdown Zone Lights	\$500	\$500
WR4	Airfield Sign Replacement Plan Development	\$50	\$50
WR5	Airport Layout Plan Update	\$0	\$350
WR6	New Taxiway Parallel East of Runway 5R/23L Construction	\$0	\$19,900
WR7	West Ramp Isolated Repairs and Interim Resurface	\$0	\$5,250
WR8	5L/23R Rehabilitation & Shorten	\$0	\$6,000
WR9	Runway 9/27 Reconstruction	\$0	\$31,800
WR10	Runway 9 Displace Threshold & Safety Area Structure Removal	\$0	\$2,000
	NOISE PROGRAM		
WR11	Residential Sound/Noise Mitigation Program	\$0	\$2,900
	FLEET & EQUIPMENT		
WR12	Fleet & Heavy Equipment Plan	\$235	\$2,679
	SECURITY & COMMUNICATIONS		
WR13	Security Improvements	\$500	\$1,500

	Project	FY14 (Thousands)	Overall (Thousands)
	SUPPORT FACILITIES		
WR14	Hangar 1 Hangar Bay IR Heating Installation	\$850	\$1,000
WR15	Hangar 1 Fire Suppression System Installation	\$200	\$650
WR16	Hangar 1 Electrical/Lighting Rehabilitation	\$500	\$2,000
WR17	Hangar 1 Air Handler Replacement Replacements	\$830	\$830
WR18	Hangar 1 Building Exterior Rehabilitation	\$1,000	\$1,660
WR19	Hangar 1 Parking Lot Overlay	\$0	\$800
WR20	Oil-Water Separator Installations - Westside	\$500	\$600
WR21	Hangar 2 Demolition	\$2,200	\$3,900
WR22	Fuel Farm Improvements	\$80	\$80
WR23	East Side Oil-Water Separator	\$375	\$375
WR24	Existing Maintenance Building Improvements	\$200	\$500
WR25	Oil-Water Separator Installations -- Hangar 2 Site	\$0	\$250
TOTAL		\$25,020	\$129,446

CLASSIFICATION OF CAPITAL IMPROVEMENT PLAN COMPONENTS

To use the RIMS multipliers, it is necessary to classify each of the projects into the proper industry. Most of the projects are included as Construction, with a few included as Architectural, engineering, and related services.

	Project	RIMS Classification
	AIRFIELD	
WR1	Runway 5R/23L Design & Reconstruction	Construction
WR2	Runway 14/32 Decommission & Removal	Construction
WR3	Runway 5R Touchdown Zone Lights	Construction
WR4	Airfield Sign Replacement Plan Development	Architectural, engineering, and related services
WR5	Airport Layout Plan Update	Architectural, engineering, and related services
WR6	New Taxiway Parallel East of Runway 5R/23L Construction	Construction
WR7	West Ramp Isolated Repairs and Interim Resurface	Construction
WR8	5L/23R Rehabilitation & Shorten	Construction
WR9	Runway 9/27 Reconstruction	Construction
WR10	Runway 9 Displace Threshold & Safety Area Structure Removal	Construction
	NOISE PROGRAM	
WR11	Residential Sound/Noise Mitigation Program	Architectural, engineering, and related services
	FLEET & EQUIPMENT	
WR12	Fleet & Heavy Equipment Plan	Architectural, engineering, and related services
	SECURITY & COMMUNICATIONS	
WR13	Security Improvements	Construction

	Project	RIMS Classification
	SUPPORT FACILITIES	
WR14	Hangar 1 Hangar Bay IR Heating Installation	Construction
WR15	Hangar 1 Fire Suppression System Installation	Construction
WR16	Hangar 1 Electrical/Lighting Rehabilitation	Construction
WR17	Hangar 1 Air Handler Replacement Replacements	Construction
WR18	Hangar 1 Building Exterior Rehabilitation	Construction
WR19	Hangar 1 Parking Lot Overlay	Construction
WR20	Oil-Water Separator Installations - Westside	Construction
WR21	Hangar 2 Demolition	Construction
WR22	Fuel Farm Improvements	Construction
WR23	East Side Oil-Water Separator	Construction
WR24	Existing Maintenance Building Improvements	Construction
WR25	Oil-Water Separator Installations -- Hangar 2 Site	Construction

ECONOMIC IMPACT OF CAPITAL IMPROVEMENT PLAN

For each component of the Capital Improvement Plan, the total impact (direct impact plus induced impact) can be estimated by multiplying the amount spent on that project by the multipliers appropriate for the industry of the spending. Depending on the multiplier used, the result will be the total economic impact (total sales), the impact on area incomes, or the total impact on area jobs.

Shown are the amounts for Fiscal Year 2014.

Project	Spending	Economic Impact	Income Impact	Jobs Impact
AIRFIELD				
Runway 5R/23L Design & Reconstruction	\$15,000	\$32,913	\$10,937	274
Runway 14/32 Decommission & Removal	\$2,000	\$4,388	\$1,458	37
Runway 5R Touchdown Zone Lights	\$500	\$1,097	\$365	9
Airfield Sign Replacement Plan Development	\$50	\$105	\$36	1
Airport Layout Plan Update	\$0	\$0	\$0	0
New Taxiway Parallel East of Runway 5R/23L Construction	\$0	\$0	\$0	0
West Ramp Isolated Repairs and Interim Resurface	\$0	\$0	\$0	0
5L/23R Rehabilitation & Shorten	\$0	\$0	\$0	0
Runway 9/27 Reconstruction	\$0	\$0	\$0	0
Runway 9 Displace Threshold & Safety Area Structure Removal	\$0	\$0	\$0	0
NOISE PROGRAM				
Residential Sound/Noise Mitigation Program	\$0	\$0	\$0	0
FLEET & EQUIPMENT				
Fleet & Heavy Equipment Plan	\$235	\$492	\$170	4
SECURITY & COMMUNICATIONS				
Security Improvements	\$500	\$1,097	\$365	9

Project	Spending	Economic Impact	Income Impact	Jobs Impact
SUPPORT FACILITIES				
Hangar 1 Hangar Bay IR Heating Installation	\$850	\$1,865	\$620	16
Hangar 1 Fire Suppression System Installation	\$200	\$439	\$146	4
Hangar 1 Electrical/Lighting Rehabilitation	\$500	\$1,097	\$365	9
Hangar 1 Air Handler Replacement Replacements	\$830	\$1,821	\$605	15
Hangar 1 Building Exterior Rehabilitation	\$1,000	\$2,194	\$729	18
Hangar 1 Parking Lot Overlay	\$0	\$0	\$0	0
Oil-Water Separator Installations - Westside	\$500	\$1,097	\$365	9
Hangar 2 Demolition	\$2,200	\$4,827	\$1,604	40
Fuel Farm Improvements	\$80	\$176	\$58	1
East Side Oil-Water Separator	\$375	\$823	\$273	7
Existing Maintenance Building Improvements	\$200	\$439	\$146	4
Oil-Water Separator Installations -- Hangar 2 Site	\$0	\$0	\$0	0
TOTAL	\$25,020	\$54,870	\$18,240	457

