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Authors:

Dr. Kramer Winingham,
Arrowhead Center

Dr. Lucinda Vargas, Center for Border
Economic Development

Dr. Christopher A. Erickson, Center
for Border Economic Development
and Carruthers Chair for Economic
Development

New Mexico State University



**Arrowhead Center
New Mexico State University
Las Cruces, NM 88003**

arrowheadcenter.nmsu.edu



Economic Impact of the Las Cruces Innovation and Industrial Park, 2021-2030

May 2022

Prepared by

Dr. Kramer Winingham, Arrowhead Center

Dr. Lucinda Vargas, Center for Border Economic Development

Dr. Christopher A. Erickson, Center for Border Economic Development and Carruthers Chair for

Economic Development

New Mexico State University

Sponsored by

City of Las Cruces

Arrowhead Center

New Mexico State University

Las Cruces, NM 88003

Please send comments or questions to jkramer@nmsu.edu

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Executive Summary

The Center for Border Economic Development (C-BED) and Arrowhead Center (Arrowhead) at New Mexico State University have prepared a study of the expected economic impact of planned construction and development at the Las Cruces Innovation and Industrial Park. The purpose of this analysis is to estimate the economic impact of the Las Cruces Innovation and Industrial Park with and without the proposed construction of High Mesa Road connecting the Industrial Park to Santa Teresa and its international port of entry (POE)

The primary economic impacts of the Las Cruces Innovation and Industrial Park are employment with firms located in the Las Cruces Innovation and Industrial Park and employment from the construction of new buildings in the Las Cruces Innovation and Industrial Park. C-BED and Arrowhead have used available data and construction and employment figures from the City of Las Cruces to estimate the economic impact of employment and new building construction in the Las Cruces Innovation and Industrial Park. The results are stated for three scenarios: (1) Baseline, (2) Intermediate, and (3) Optimistic.

While direct economic benefits of the construction of High Mesa Road were not included in this analysis, the Las Cruces Innovation and Industrial Park is expected to grow faster with the completion of the High Mesa Road project. The 2017 West Mesa Corridor Study Phase 1B, projected High Mesa Road would support Average Weekday Traffic (AWDT) of 4,270 vehicles by 2040—3,350 cars and 920 trucks.¹ However, the projected number of trucks through High Mesa Road may be surpassed given that truck crossings through the Santa Teresa POE have increased 34% since 2017, or at a CAGR of 7.97%, reaching an all-time high of 154,147 crossings in 2021.²

Indeed, commercial traffic through the Santa Teresa POE is likely to expand even more as Mexico has indicated it will shift bilateral trade infrastructure investments to New Mexico and away from Texas. For example, a major rail project Mexico initially contemplated with Texas, has now been routed through Santa Teresa. Mexico's actions are in direct response to Texas Governor Greg Abbott's enhanced safety inspections of trucks entering Texas from Mexico that took place over 10 days in April³ and which caused severe crossing delays that in some cases went beyond 24 hours⁴. During that time, the Santa Teresa POE saw its truck traffic spike as truckers who typically

¹ (Molzen Corbin, 2017)

² (Bureau of Transportation Statistics, DOT, 2022)

³ (Chappell, 2022)

⁴ (Stevenson, 2022)

cross through El Paso chose New Mexico instead.⁵ The already robust trade growth through the Santa Teresa POE will only be enhanced by these developments, raising the rationale for High Mesa Road and, concomitantly, the growth opportunity for the Las Cruces Innovation and Industrial Park⁶

With the construction of High Mesa Road, the Las Cruces Innovation and Industrial Park is expected to add a new Light Manufacturing Building every two years, as contemplated in the Intermediate and Optimistic scenarios. The Optimistic scenario is based on City of Las Cruces' expected job density estimate should High Mesa Road be completed, a more likely scenario now in light of Mexico's refocused attention on New Mexico for bilateral trade

Our study found the employment and construction activities at Las Cruces Innovation and Industrial Park result in the impacts in 2030 shown in Table 1. The direct jobs of this analysis are predominantly manufacturing jobs.

Table 1 - Estimated Economic Impacts: Baseline, Intermediate, Optimistic Scenarios, 2030

Impact	Baseline	Intermediate	Optimistic
Direct Jobs	1,287	2,386	3,996
Total Jobs	2,595	4,323	6,944
Economic Output	\$676,013,544	\$1,001,712,227	\$1,533,260,736
Value-Added Production	\$163,988,759	\$270,373,601	\$433,358,075
Labor Income	\$106,160,882	\$176,412,300	\$278,175,174
Total Taxes:	\$33,060,919	\$54,154,389	\$85,556,254
Federal	\$21,710,671	\$36,121,101	\$57,271,061
State of New Mexico	\$8,045,446	\$12,828,711	\$20,140,471
Doña Ana County (GRT)	\$1,705,704	\$2,686,233	\$4,203,727
City of Las Cruces (GRT)	\$1,599,098	\$2,518,344	\$3,940,995

⁵ (Resendiz, 2022)

⁶ (Economic and Business Research Center, 2022)

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Reliances and Limitations

In the preparation of this report, we used a standard methodology to calculate the economic impact of the Las Cruces Innovation and Industrial Park. In making these calculations, we relied on data available from public sources and on data provided to us by the City of Las Cruces. Our methodology is limited by the accuracy of the input/output model used, which is based on historical relations among the industrial sectors. To the extent that these relationships evolve over time, our estimates will be less accurate.

Introduction

The Center for Border Economic Development (C-BED) and Arrowhead Center (Arrowhead) at New Mexico State University have prepared a study of the expected economic impact of planned construction and development at the Las Cruces Innovation and Industrial Park. The purpose of this analysis is to estimate the economic impact of the Las Cruces Innovation and Industrial Park with and without the proposed construction of High Mesa Road connecting the Industrial Park to Santa Teresa and its international port of entry (POE)

The primary economic impacts of the Las Cruces Innovation and Industrial Park are employment with firms located in the Las Cruces Innovation and Industrial Park and employment from the construction of new buildings in the Las Cruces Innovation and Industrial Park. The construction of High Mesa Road is not included. C-BED and Arrowhead have used available data and construction and employment figures from the City of Las Cruces to estimate the economic impact of employment and new building construction in the Las Cruces Innovation and Industrial Park. The results are stated for three scenarios: (1) Baseline, (2) Intermediate, and (3) Optimistic.

With the construction of High Mesa Road, the Las Cruces Innovation and Industrial Park is expected to add a new Light Manufacturing Building every two years, as shown in the Intermediate and Optimistic scenarios. The Optimistic scenario is based on City of Las Cruces' expected job density estimate should High Mesa Road be completed. The assumptions for each of the three scenarios considered are: (1) Baseline: High Mesa Road is not built, no new building construction, and a 2.79% annual growth in existing manufacturing employment; (2) Intermediate: High Mesa Road completion, a new Light Manufacturing Building added every two years, historical 989-square-foot-to-job ratios, and 2.79% annual growth in existing manufacturing employment; (3) Optimistic: High Mesa Road completion, a new Light Manufacturing Building added every two years, expected 350-square-foot-to-job ratios, and 2.79% annual growth in existing manufacturing employment.

Economic impact analysis is an attempt to measure the net change in economic activity in a given geographic area that results from a change in economic activity. Often, the change in economic activity refers to new spending or employment associated with a new business or a business expansion. The main idea behind economic impact analysis is that a new dollar spent in a local area results in more than one dollar in economic activity in the area due to a multiplier effect from knock-on spending. The economic impacts of the Las Cruces Innovation and Industrial Park activities for each of the three scenarios considered were estimated using IMPLAN Web Version, economic modeling software (www.implan.com).

Background

The Las Cruces Innovation and Industrial Park (hereafter the Park) is located along Interstate 10 (I-10), on the western edge of the city of Las Cruces, New Mexico, and directly south of Las Cruces International Airport (Figure 1).⁷ The Park spans 1,820 acres, 340 of which are occupied by 19 businesses that together employ just over 1,000 workers.⁸ The industry mix of the Park's existing tenants includes manufacturing, warehousing and distribution, agriculture-related businesses, and research and development.⁹ The Park encompasses a portion of Foreign Trade Zone Number 197, including 206 acres of privately and publicly owned lots.¹⁰

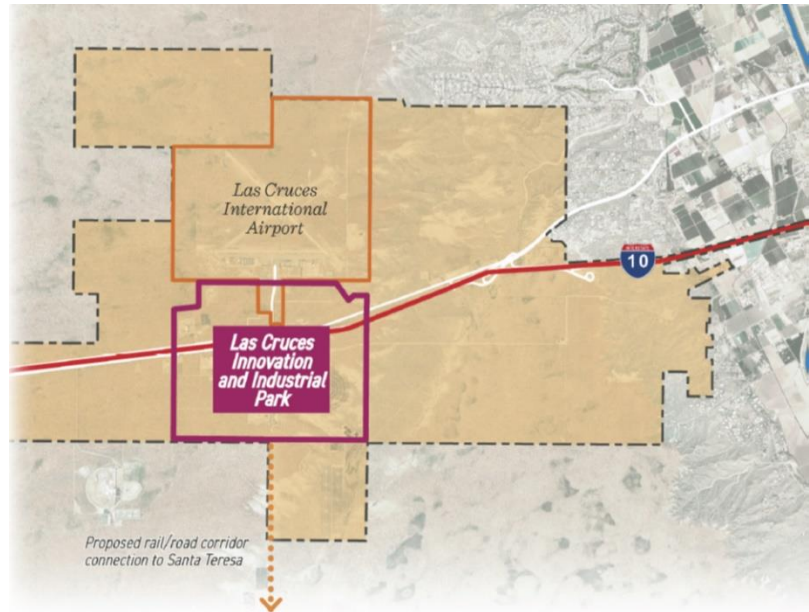


Figure 1 - Map depicting the location of Las Cruces Innovation and Industrial Park

The City of Las Cruces has identified three target industries for the Park's future development: aviation, aerospace, and defense (primarily Unmanned Aerial Systems or UAS); value-added agriculture; and advanced manufacturing. In addition to accommodating companies in these priority industries, the Park contemplates a commercial district to provide services to the local workforce.¹¹

The Park presents an attractive business location given its proximity to New Mexico State University and White Sands Missile Range, with access to the latter being particularly advantageous to aerospace-related companies.¹² The Park's location is also strategic for

⁷ (City of Las Cruces, 2021) (Economic & Planning Systems, Inc., 2020)

⁸ (City of Las Cruces, 2021)

⁹ (City of Las Cruces, 2021)

¹⁰ (City of Las Cruces, 2022)

¹¹ (City of Las Cruces, 2021)

¹² (City of Las Cruces, 2021)

businesses seeking international trade opportunities since it is close to the U.S.-Mexico border. The Park is 53 miles from the Santa Teresa International Port of Entry (POE) via I-10.

Access to the Santa Teresa POE is of special importance in positioning the Park's strategic value in light of the increased job-creation role that international trade has played in the state of New Mexico, specifically by developments in the Santa Teresa region. For example, in 2020, the economic impact of the Santa Teresa Port of Entry and the Santa Teresa Industrial Parks was estimated at \$1.1 billion in output, with \$24 billion in international trade facilitated. The jobs impact in 2020 was estimated at 3,252 direct jobs and 5,849 in total jobs.¹³

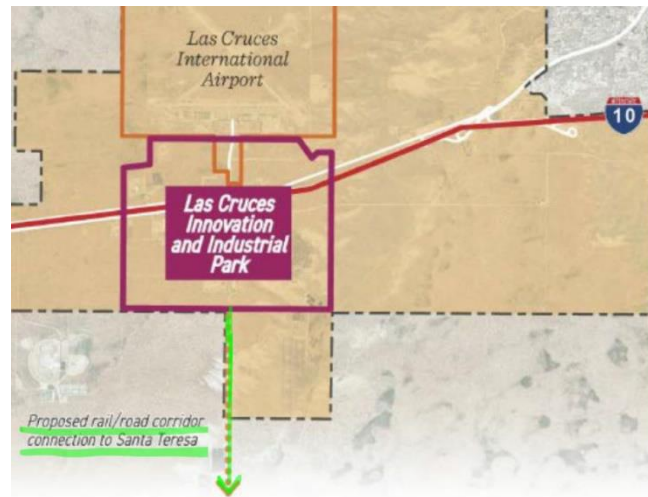


Figure 2 - Map depicting the proposed road connection of the Las Cruces Innovation and Industrial Park to Santa Teresa and its Port of Entry.

The Las Cruces Innovation and Industrial Park's connectivity to the Santa Teresa POE and its appeal for international trade-related businesses, including companies in the three priority target industries, would be enhanced by the construction of High Mesa Road. With this road in place (Figure 2, green highlighted area), the trip from the Park to the Santa Teresa POE would be reduced by about 13 miles, bypassing potential congestion on I-10 and thus expediting transportation of international merchandise trade shipments.¹⁴

With the direct connection via High Mesa Road to the Santa Teresa Port of Entry, the Las Cruces Innovation and Industrial Park would be better positioned logistically to capitalize on its proximity to the U.S.-Mexico border. In this scenario, more businesses seeking to engage in international trade would more likely locate in the Park, resulting in higher job-creation prospects overall.

¹³ (Winingham, Vargas, & Erickson, 2021)

¹⁴ (New Mexico Department of Transportation, 2017)

Methodology

The primary economic impacts of the Las Cruces Innovation and Industrial Park are employment with firms located in the Las Cruces Innovation and Industrial Park and employment from the construction of new buildings in the Las Cruces Innovation and Industrial Park. The construction of High Mesa Road is not included. C-BED and Arrowhead have used available data and construction and employment figures from the City of Las Cruces to estimate the economic impact of employment and new building construction in the Las Cruces Innovation and Industrial Park.

Economic impact analysis is an attempt to measure the net change in economic activity in a given geographic area that results from a change in economic activity. Often, the change in economic activity refers to new spending or employment associated with a new business or a business expansion. The main idea behind economic impact analysis is that a new dollar spent in a local area results in more than one dollar in economic activity in the area because of the multiplier effect from knock-on spending. For example, a construction worker is paid a wage, the worker then spends locally on groceries. The initial increase in wage paid to the construction worker is the new spending; the revenue received by the grocery store is knock-on spending.

The economic impacts of the Las Cruces Innovation and Industrial Park activities were estimated using IMPLAN Web Version, economic modeling software (www.implan.com). Economic impacts are measured in terms of changes in output, value-added, labor income, and employment. The economic impacts presented include the direct, indirect, and induced impacts for each variable described above. IMPLAN's 2019 Economic Impact Model was used for this analysis. Dollars are all stated in 2021 values. The impacts are presented for employment activity occurring in the State of New Mexico. **All terms are defined in the Glossary at the end of this document. For the various tables presented, components may not sum to totals due to rounding.**

With the construction of High Mesa Road, the Las Cruces Innovation and Industrial Park is expected to add a new Light Manufacturing Building every two years, as shown in the Intermediate and Optimistic scenarios. The Optimistic scenario is based on City of Las Cruces' expected job density estimate should High Mesa Road be completed

The economic impacts of the Las Cruces Innovation and Industrial Park were estimated based on three scenarios: (1) Baseline, (2) Intermediate, and (3) Optimistic. Assumptions for each of these three scenarios are outlined in Table 2.

Table 2 - Scenario Assumptions

Scenario	Current Tenant Employment	High Mesa Road Construction	New Light Manufacturing Building Construction	Sq. ft. per job Assumption
Baseline	Current employment growing 2.79% annually	No	No	N/A
Intermediate	Current employment growing 2.79% annually	Yes	Every two years starting 2022	989 sq. ft. per job, 7% vacancy rate
Optimistic	Current employment growing 2.79% annually	Yes	Every two years starting 2022	350 sq. ft. per job, 7% vacancy rate

Our estimated 2.79% employment growth rate is based on Bureau of Labor Statistics State Area Employment (SAE) data and a three-year average of Las Cruces manufacturing employment growth, 2019-2021, as shown in Table 3.¹⁵

Table 3 - Las Cruces Manufacturing Employment Growth, 2019-2021

Year	2019	2020	2021	Three-year average
Las Cruces Manufacturing Employment Growth	2.73%	2.78%	2.86%	2.79%

Current employment figures for the Las Cruces Innovation and Industrial Park were gathered and provided by the City of Las Cruces.¹⁶ Table 4 shows the employment and industry codes used to estimate the impact of current employment in the Las Cruces Innovation and Industrial Park.

¹⁵ (Division of Current Employment Statistics, 2021)

¹⁶ (City of Las Cruces, 2021)

Table 4 - Employment in Las Cruces Innovation and Industrial Park, by IMPLAN Code, 2021

IMPLAN Code	IMPLAN Description	2021 Employment
82	Cheese manufacturing	220
104	Bottled and canned soft drinks & water	8
382	Sporting and athletic goods manufacturing	35
391	All other miscellaneous manufacturing	505
400	Wholesale - Other nondurable goods merchant wholesalers	35
408	Retail - Gasoline stores	30
417	Truck transportation	5
435	Satellite, telecommunications resellers, and all other telecommunications	11
447	Other real estate	30
457	Architectural, engineering, and related services	96
471	Facilities support services	30
Total		1005

The construction activity considered in this analysis was the construction of a planned 204,000 sq. foot Light Manufacturing Building to be located in the Las Cruces Innovation and Industrial Park. Table 5 shows the IMPLAN inputs used for construction of the 204,000 sq. ft. Light Manufacturing Building. In generating our long-range impact forecasts for both the Intermediate and Optimistic Scenarios, we have assumed a 204,000 sq. ft. building will be added to the Las Cruces Innovation and Industrial Park every two years. This aligns with the Las Cruces Innovation and Industrial Park's projected demand of approximately 100,000 sq. ft. of industrial space per year.¹⁷ Impacts have been estimated to 2030 for each of the three scenarios.

The assumed industry mix for these new buildings is based on the recommended mix of development of the Las Cruces Innovation and Industrial Park's real estate analysis.¹⁸ Table 6 shows the percentage shares and employment figures of each industry expected in each new 204,000 sq. ft. Light Manufacturing Building. The square-footage-per-job estimates are based on the historical figure of 989 square feet per job currently observed in the Las Cruces Innovation and Industrial Park and the expected figure of 350 square feet per job for new construction. A 7% vacancy rate is assumed on all new properties.¹⁹

¹⁷ (City of Las Cruces, 2021)

¹⁸ (Economic & Planning Systems, Inc., 2020)

¹⁹ (National Association of Realtors, 2021)

Table 5 - IMPLAN Inputs for 204,000 sq. ft. Light Manufacturing Building

	IMPLAN Code	IMPLAN Description	Output
Construction	51	Construction of new manufacturing structures	\$45,638,880
Design	457	Architectural, engineering, and related services	\$2,913,120
Total		Total	\$48,552,000

Table 6 - Expected Industry Mix and Employment for 204,000 sq. ft. Light Manufacturing Building, Intermediate and Optimistic Scenarios

Industry	IMPLAN Code	IMPLAN Description	Percentage Share	Intermediate Scenario (989 sq. foot per job)	Optimistic Scenario (350 sq. foot per job)
Aviation manufacturing and testing (UAS focused)	356	Other aircraft parts and auxiliary equipment manufacturing	15%	30	87
Value added agriculture manufacturing	103	All other food manufacturing	25%	52	146
General manufacturing and production	391	All other miscellaneous manufacturing	25%	52	146
Warehouse and distribution	447	Other real estate	25%	52	146
Construction related and other	457	Architectural, engineering, and related services	10%	20	58
Total			100%	206	583

Analysis of Impacts

The primary economic impacts of the Las Cruces Innovation and Industrial Park are employment with firms located in the Las Cruces Innovation and Industrial Park and employment from the construction of new infrastructure and buildings in and around the Las Cruces Innovation and Industrial Park. The construction of High Mesa Road is not included. C-BED and Arrowhead have used available data and construction and employment figures from the City of Las Cruces to estimate the economic impact of employment and new building construction in the Las Cruces Innovation and Industrial Park. A 7% vacancy rate is assumed on all new properties. The results are stated for three scenarios: (1) Baseline, (2) Intermediate, and (3) Optimistic.

The following sections individually detail the employment impacts under the three scenarios analyzed, construction impacts for new building developments, total impacts, and tax revenue impacts.

Note:

For each of the tables presented in the next sections, components may not sum to totals due to rounding.

Scenario 1: Baseline

The Baseline Scenario assumes no road or building construction and includes a 2.79% annual increase in existing employment. Table 7 shows the estimated economic impact of the current tenants in the Las Cruces Innovation and Industrial Park for 2021.

Table 7 - Estimated Economic Impacts, Baseline Scenario, 2021

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	1,005	\$42,359,900	\$56,314,637	\$341,314,892
2 - Indirect	743	\$28,506,362	\$49,363,125	\$147,754,290
3 - Induced	280	\$12,005,530	\$22,335,889	\$38,643,585
Total	2,028	\$82,871,791	\$128,013,651	\$527,712,768

Table 8 shows the estimated impact of current tenants in the Las Cruces Innovation and Industrial Park in 2030, assuming a 2.79% annual increase in current employment and no new construction.

Table 8 - Estimated Economic Impacts, Baseline Scenario, 2030

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	1,287	\$54,264,116	\$72,140,488	\$437,233,101
2 - Indirect	950	\$36,517,378	\$63,235,425	\$189,277,021
3 - Induced	358	\$15,379,389	\$28,612,846	\$49,503,420
Total	2,598	\$106,160,882	\$163,988,759	\$676,013,544

Figure 3 shows the estimated direct, indirect, and induced jobs for the Baseline Scenario, 2021-2030. Figure 4 shows the estimated labor income, value added production, and economic output for the Baseline Scenario, 2021-2030.

Figure 3 - Estimated Jobs, Baseline Scenario, 2021-2030

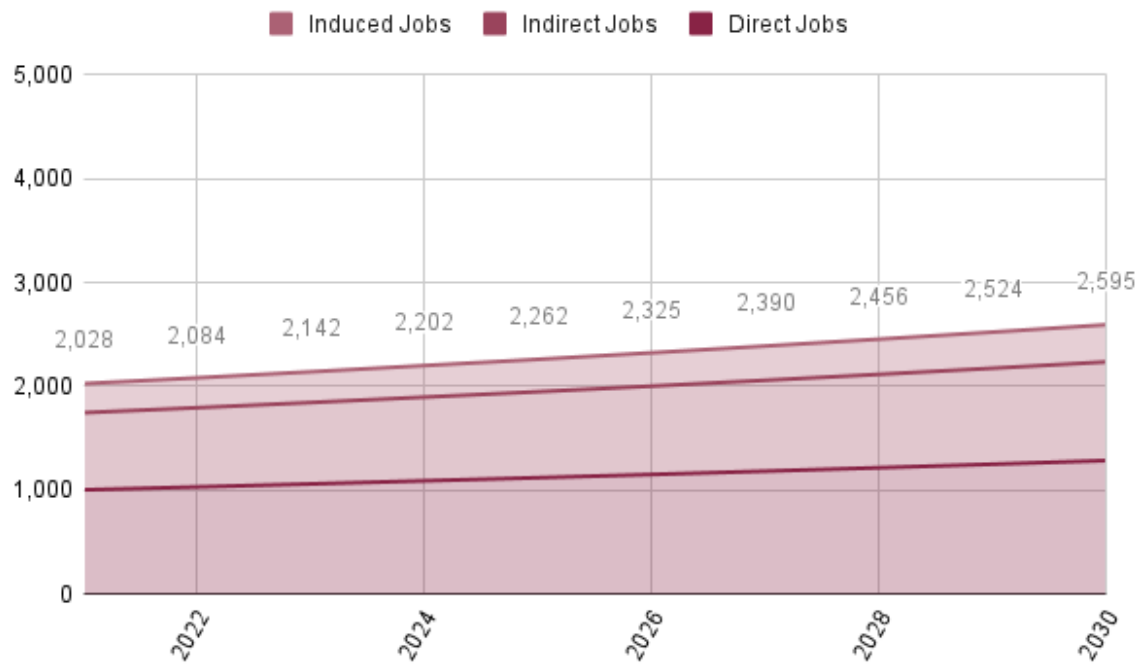
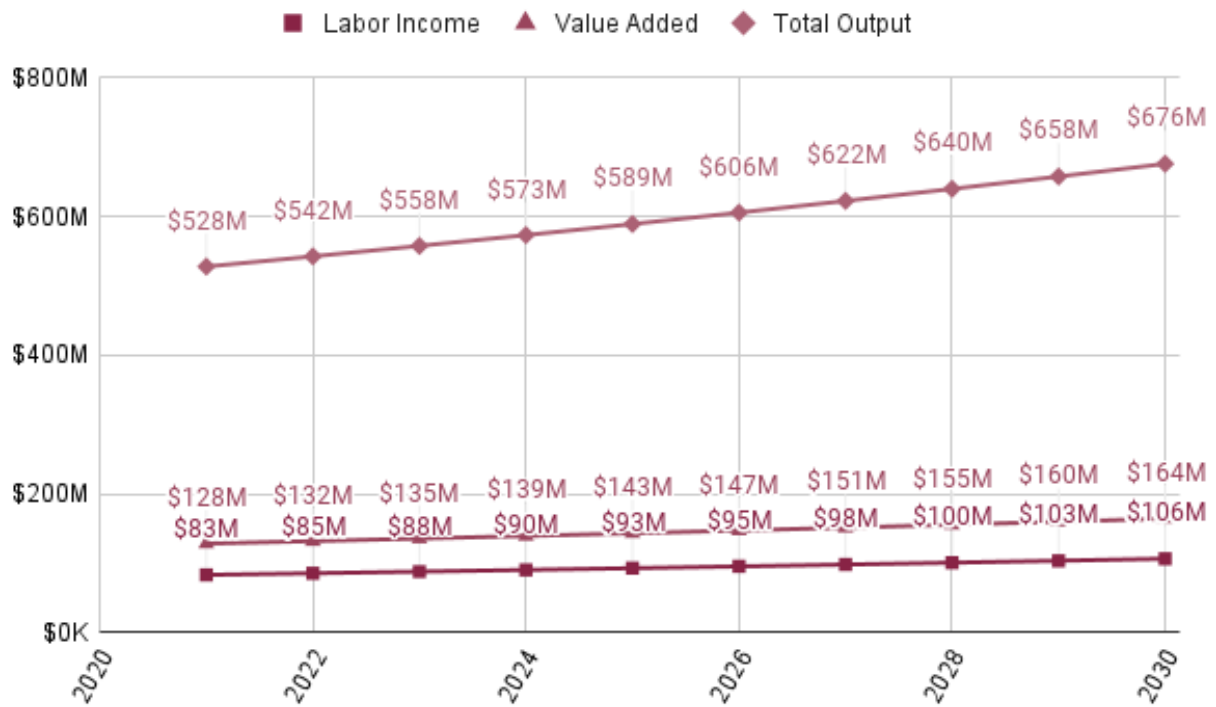


Figure 4 - Estimated Economic Impacts, Baseline Scenario, 2021-2030



Scenario 2: Intermediate

The Intermediate Scenario assumes High Mesa Road will be built and a new Light Manufacturing Building will be constructed every two years. Under this scenario, each building could house 206 jobs at 989 sq. ft. per job. This estimate is based on historical data in the Las Cruces Innovation and Industrial Park. A 7% vacancy rate is assumed on all new properties, so the starting employment for these buildings was estimated to be 192 jobs. It is also assumed that existing employment will grow at a rate of 2.79% annually. Construction employment from new buildings is included in this scenario. Table 9 shows the estimated economic impact under the Intermediate Scenario in 2023 after the completion of the first Light Manufacturing Building.

Table 9 - Estimated Economic Impacts, Intermediate Scenario, 2023

Impact	Employment	Labor Income	Value Added	Output
1 – Direct	1,475	\$63,534,229	\$81,977,846	\$431,517,738
2 – Indirect	893	\$34,518,756	\$59,724,453	\$173,018,220
3 – Induced	386	\$16,582,625	\$30,787,306	\$53,205,137
	2,753	\$114,635,608	\$172,489,603	\$657,741,094

Table 10 shows the estimated impact of current tenants in the Las Cruces Innovation and Industrial Park in 2030, assuming a 2.79% annual increase in current employment, High Mesa Road construction, and a new Light Manufacturing Building added every two years.

Table 10 - Estimated Economic Impacts, Intermediate Scenario, 2030

Impact	Employment	Labor Income	Value Added	Output
1 – Direct	2,386	\$98,354,996	\$132,806,816	\$670,063,002
2 – Indirect	1,346	\$52,593,443	\$90,332,708	\$250,061,325
3 – Induced	591	\$25,463,862	\$47,234,080	\$81,587,904
	4,322	\$176,412,300	\$270,373,601	\$1,001,712,227

Figure 5 shows the estimated direct, indirect, and induced jobs for the Intermediate Scenario, 2021-2030. Figure 6 shows the estimated labor income, value added production, and economic output for the Intermediate Scenario, 2021-2030.

Figure 5 - Estimated Jobs, Intermediate Scenario, 2021-2030

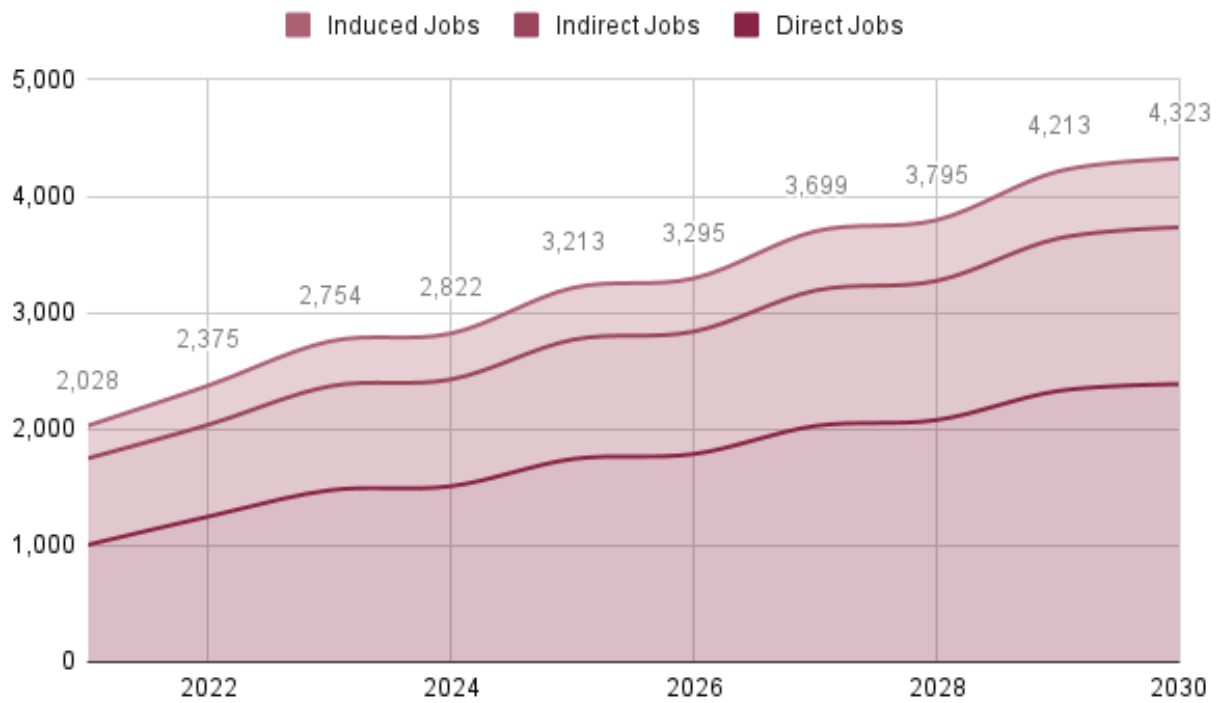
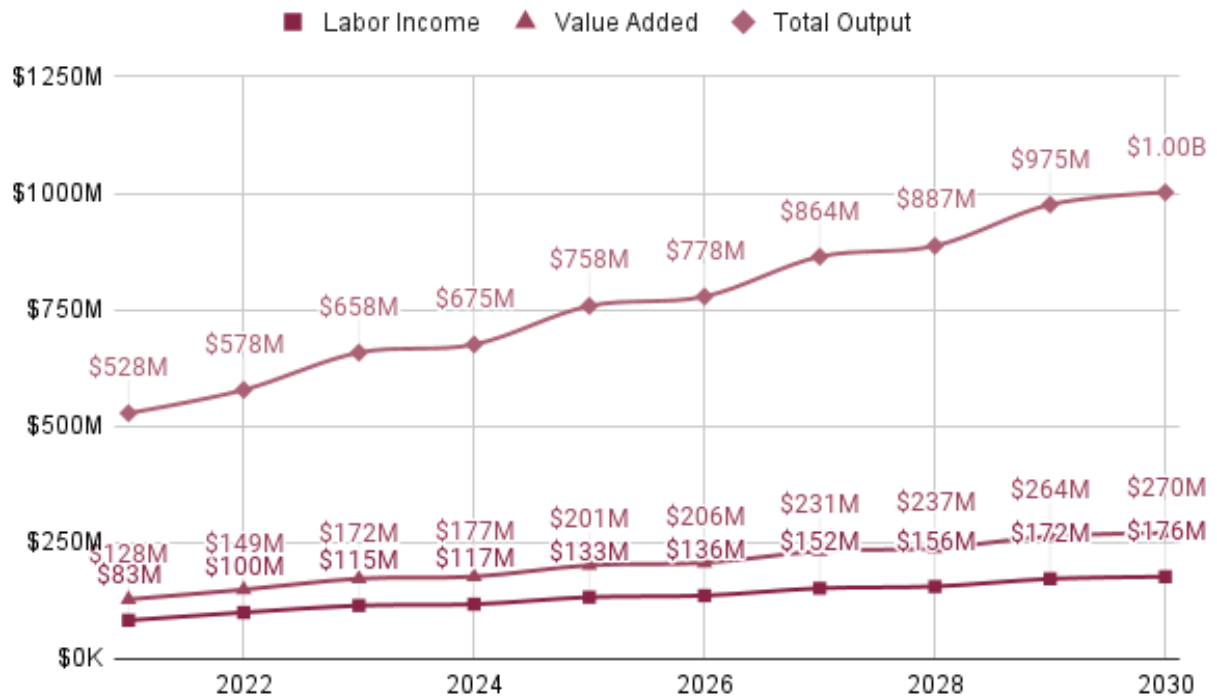


Figure 6 - Estimated Economic Impacts, Intermediate Scenario, 2021-2030



Scenario 3: Optimistic

The Optimistic Scenario assumes High Mesa Road will be built and a new Light Manufacturing Building will be constructed every two years. Under this scenario, each building could house 583 jobs at 350 sq. ft. per job. This estimate is based on the planned employment of new and prospective tenants in the Las Cruces Innovation and Industrial Park. A 7% vacancy rate is assumed on all new properties, so the starting employment for these buildings was estimated to be 542 jobs. It is also assumed that existing employment will grow at a rate of 2.79% annually. Construction employment from new buildings is included in this scenario. Table 11 shows the estimated economic impact under the Optimistic Scenario in 2023 after the completion of the first Light Manufacturing Building.

Table 11 - Estimated Economic Impacts, Optimistic Scenario, 2023

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	1,835	\$76,869,607	\$102,096,547	\$516,829,161
2 - Indirect	1,043	\$40,670,120	\$70,012,539	\$196,134,901
3 - Induced	462	\$19,841,834	\$36,810,670	\$63,588,305
	3,339	\$137,381,559	\$208,919,755	\$776,552,366

Table 12 shows the estimated impact of the Las Cruces Innovation and Industrial Park in 2030, assuming a 2.79% annual increase in current employment, High Mesa Road construction, and a new Light Manufacturing Building added every two years.

Table 12 - Estimated Economic Impacts, Optimistic Scenario, 2030

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	3,996	\$158,016,006	\$222,815,662	\$1,051,736,888
2 - Indirect	2,016	\$80,113,966	\$136,360,469	\$353,482,807
3 - Induced	932	\$40,045,203	\$74,181,945	\$128,041,048
	6,944	\$278,175,174	\$433,358,075	\$1,533,260,736

Figure 7 shows the estimated direct, indirect, and induced jobs for the Optimistic Scenario, 2021-2030. Figure 8 shows the estimated labor income, value added production, and economic output for the Optimistic Scenario, 2021-2030.

Figure 7 - Estimated Jobs, Optimistic Scenario, 2021-2030

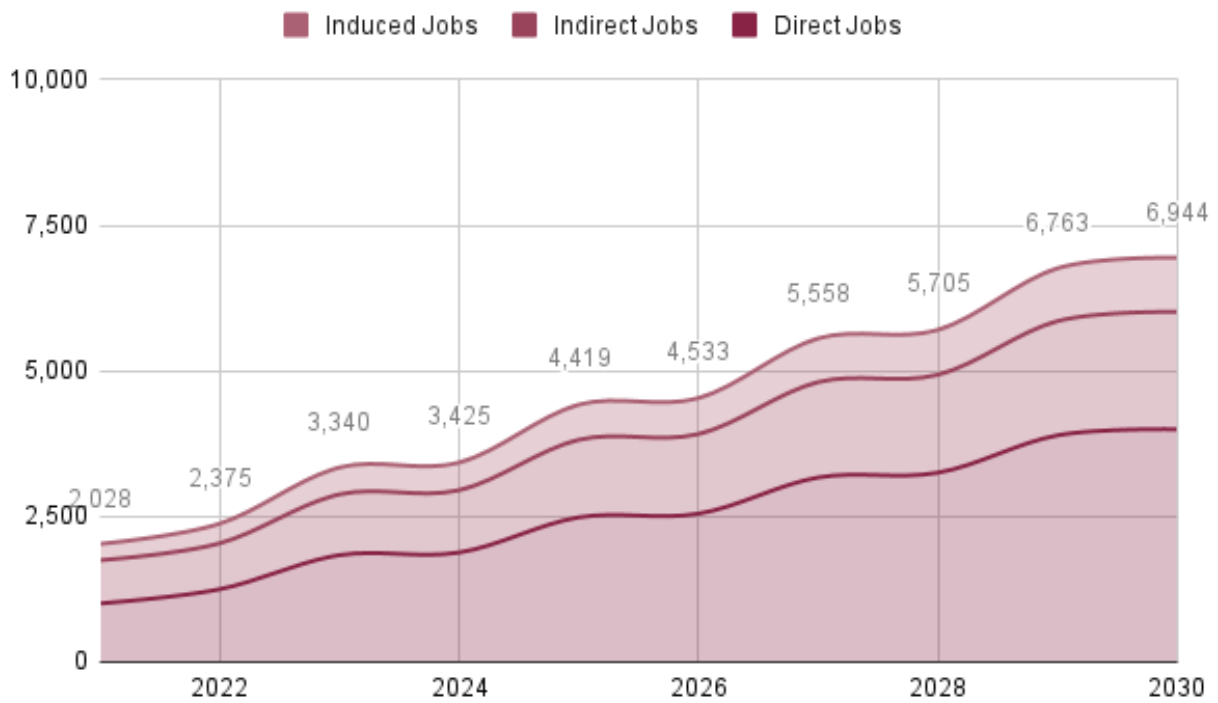
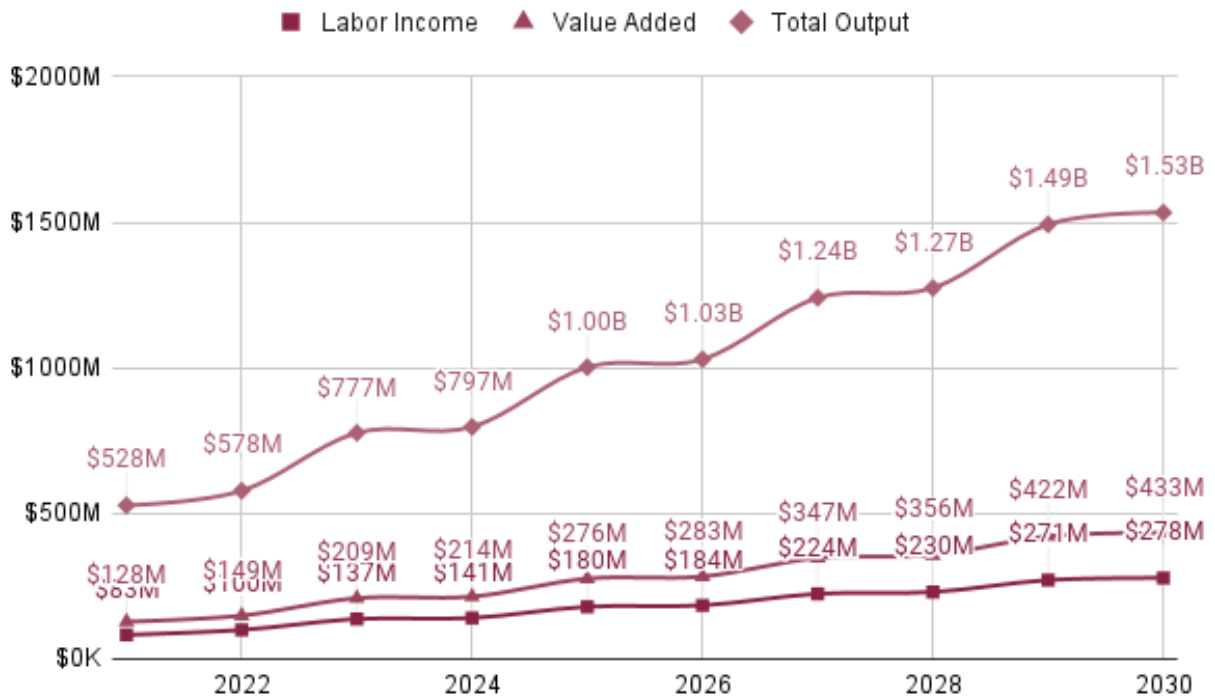


Figure 8 - Estimated Economic Impacts, Optimistic Scenario, 2021-2030



Construction Impacts

The Intermediate and Optimistic Scenarios have identical construction assumptions: both assume the construction of a 204,000 sq. ft. Light Manufacturing Building every two years in Park development. In both scenarios, the construction of High Mesa Road is not included.

Table 13 shows the estimated impact of the construction of a single 204,000 sq. ft. Light Manufacturing facility. We assumed a new building like this would be added every two years to support the projected demand growth and that construction of each building would take two years.

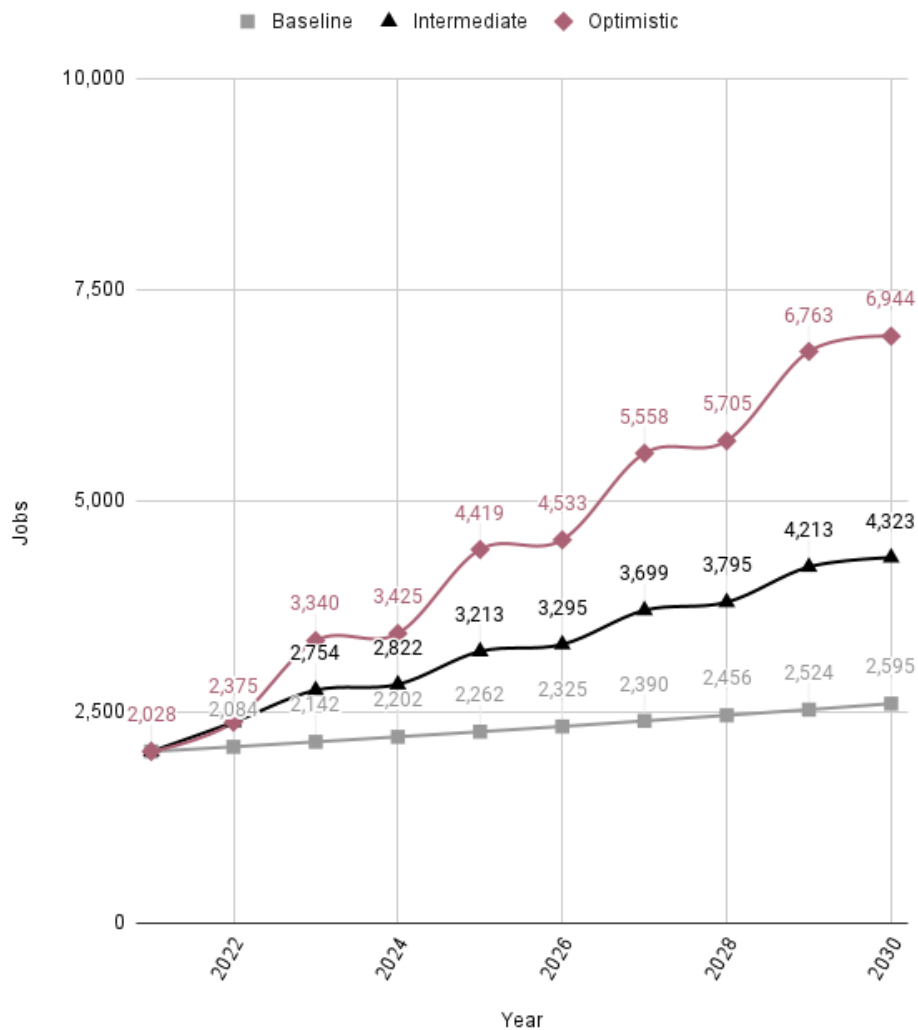
**Table 13 - Estimated Economic Impacts of Construction of
Single 204,000 sq. ft. Light Manufacturing Building**

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	432	\$22,981,935	\$22,967,548	\$48,552,000
2 - Indirect	51	\$2,076,653	\$3,893,667	\$8,545,660
3 - Induced	97	\$4,233,894	\$7,792,811	\$13,403,197
	579	\$29,292,482	\$34,654,026	\$70,500,857

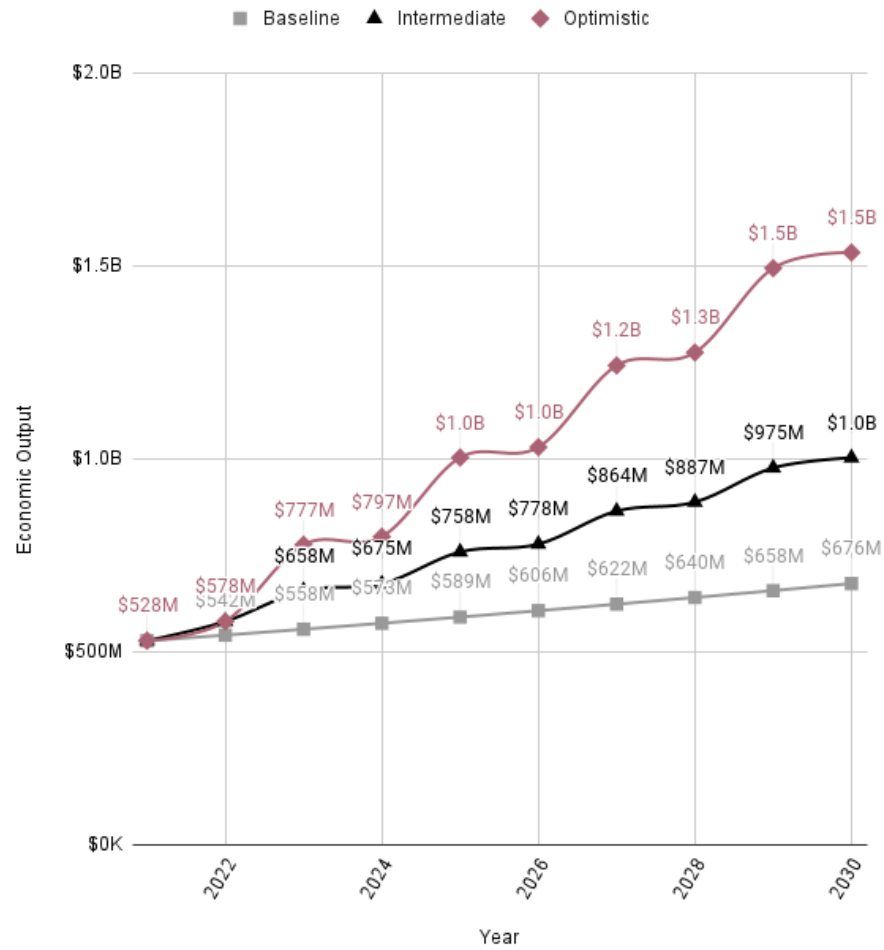
Total Economic Impact

Figure 9 shows the estimated total jobs supported under each scenario, 2021-2030. The direct jobs of this analysis are predominantly manufacturing jobs. Figure 10 shows the estimated total economic impact supported under each scenario, 2021-2030.

**Figure 9 - Estimated Jobs Supported by Las Cruces Innovation and Industrial Park:
Baseline, Intermediate, Optimistic Scenarios, 2021-2030**



**Figure 10 - Estimated Economic Impact of Las Cruces Innovation and Industrial Park:
Baseline, Intermediate, Optimistic Scenarios, 2021-2030**



Tax Revenue Impact

The figures in this section show the tax impacts under each scenario, 2021-2030. Figures include local taxes, state taxes, federal taxes, and total taxes generated based on activity at the Las Cruces Innovation and Industrial Park. One shortcoming of IMPLAN's tax impact estimates is that it does not match the tax estimates to state-specific taxes, such as the New Mexico Gross Receipts Tax (GRT). Since GRT is an important source of revenue for the City of Las Cruces, IMPLAN tax estimates were reconciled with GRT data to estimate the portions of local taxes, as estimated in IMPLAN, that are attributable to GRT for the City of Las Cruces and Doña Ana County. Based on this reconciliation and analysis, we concluded that the local taxes calculated by IMPLAN are comprised nearly entirely of the portion of GRT that is returned to the City of Las Cruces and Doña Ana County. Our analysis and results are described below. Table 14 shows the current GRT rates and portions attributable to State of New Mexico, City of Las Cruces, and Doña Ana County.

Table 14 - City of Las Cruces Gross Receipts Tax Rate, 2019-2022²⁰

Location	Rate	Portion of Total Rate
State	5.2500%	63%
City of Las Cruces	1.9375%	23%
Doña Ana County	1.1250%	14%
Total	8.3125%	100%

New Mexico RP-80 documents show GRT paid by Manufacturing businesses in Doña Ana County is roughly 0.8% of Gross Sales, as shown in Table 15. Note, this rate is less than the GRT rates, because roughly 90% of the Gross Receipts among Manufacturing businesses in Doña Ana County are not considered taxable. This could be due to many reasons but most likely due to exemptions and out-of-state sales which are not subject to GRT.

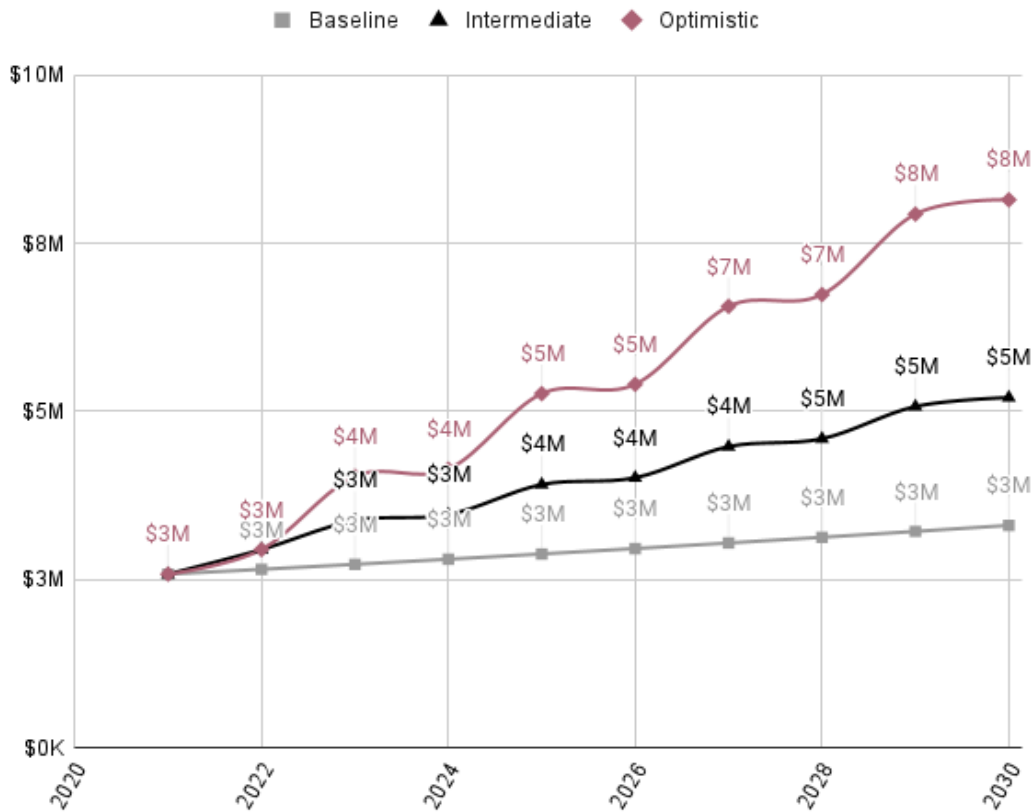
Of the portion of GRT paid by the Manufacturing industry, the percentages for the City of Las Cruces and Doña Ana County are 0.15% and 0.16%, respectively. To reconcile with our IMPLAN estimates, our figures for 2021, for example, showed \$1,067,462 of local tax impacts for \$341,314,892 in output from direct impacts. This implies local taxes equal to 0.31% of output. Output in IMPLAN should be considered synonymous with Gross Receipts in a GRT context. For this reason, GRT should be considered the bulk of local taxes estimated by IMPLAN, roughly 2/3 of which are attributable to City of Las Cruces, and the other 1/3 to Doña Ana County. Local tax estimates are shown in Figure 11.

²⁰ (New Mexico Taxation & Revenue, 2022)

Table 15 - Gross Receipts Taxes Paid by Manufacturing Industry in Doña Ana County, FY 2018-2020²¹

Year	Industry	Gross Receipts	Taxable Gross Receipts	Gross Tax	% GRT of Gross Receipts
FY 2018	31-33: Manufacturing	\$652,667,830	\$57,574,952	\$4,564,048	0.70%
FY 2019	31-33: Manufacturing	\$595,692,942	\$62,124,082	\$4,963,407	0.83%
FY 2020	31-33: Manufacturing	\$692,419,162	\$71,070,026	\$5,640,152	0.81%
				Average	0.78%

Figure 11 - Estimated Local Taxes: Baseline, Intermediate, Optimistic Scenarios, 2021-2030



²¹ (New Mexico Taxation & Revenue, 2022)

Figure 12 - Estimated State Taxes: Baseline, Intermediate, Optimistic Scenarios, 2021-2030

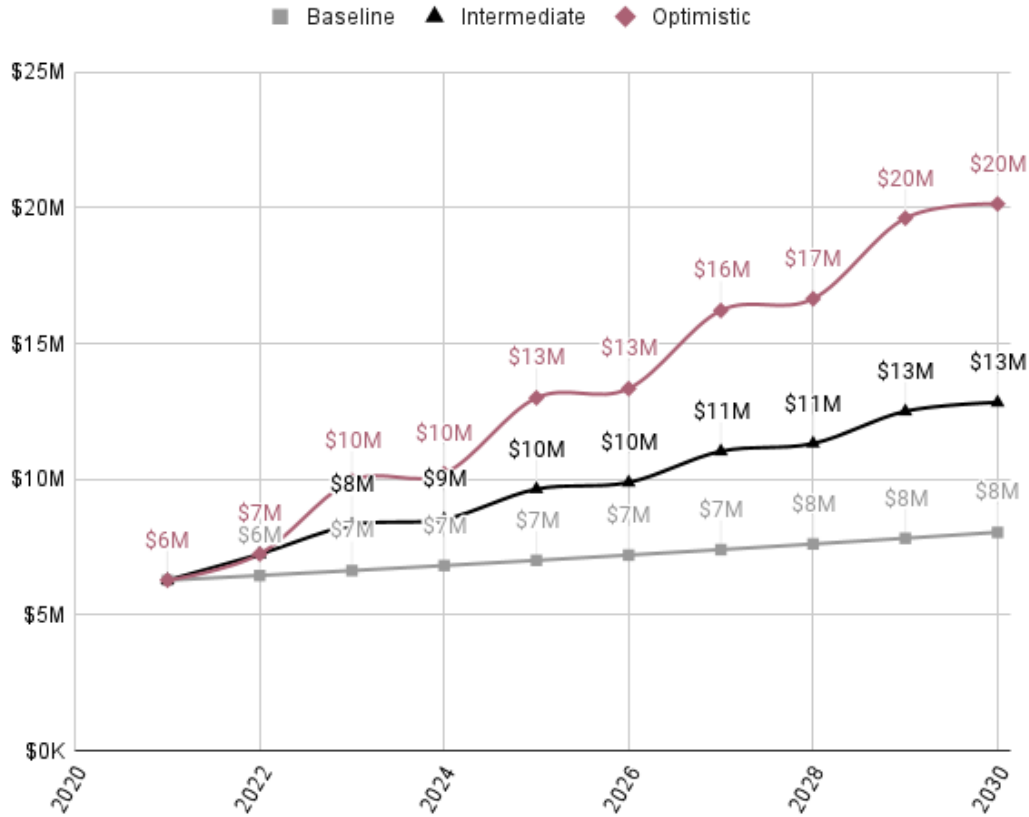


Figure 13 - Estimated Federal Taxes: Baseline, Intermediate, Optimistic Scenarios, 2021-2030

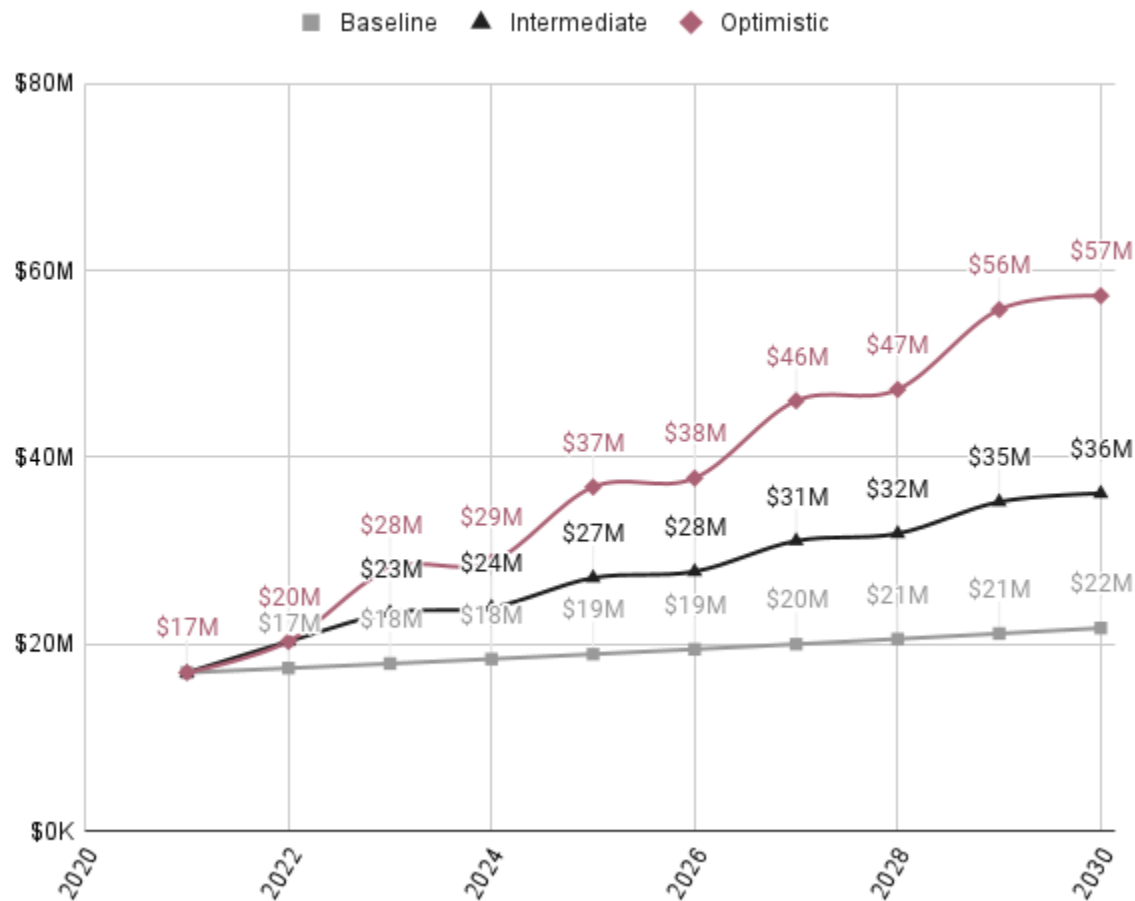
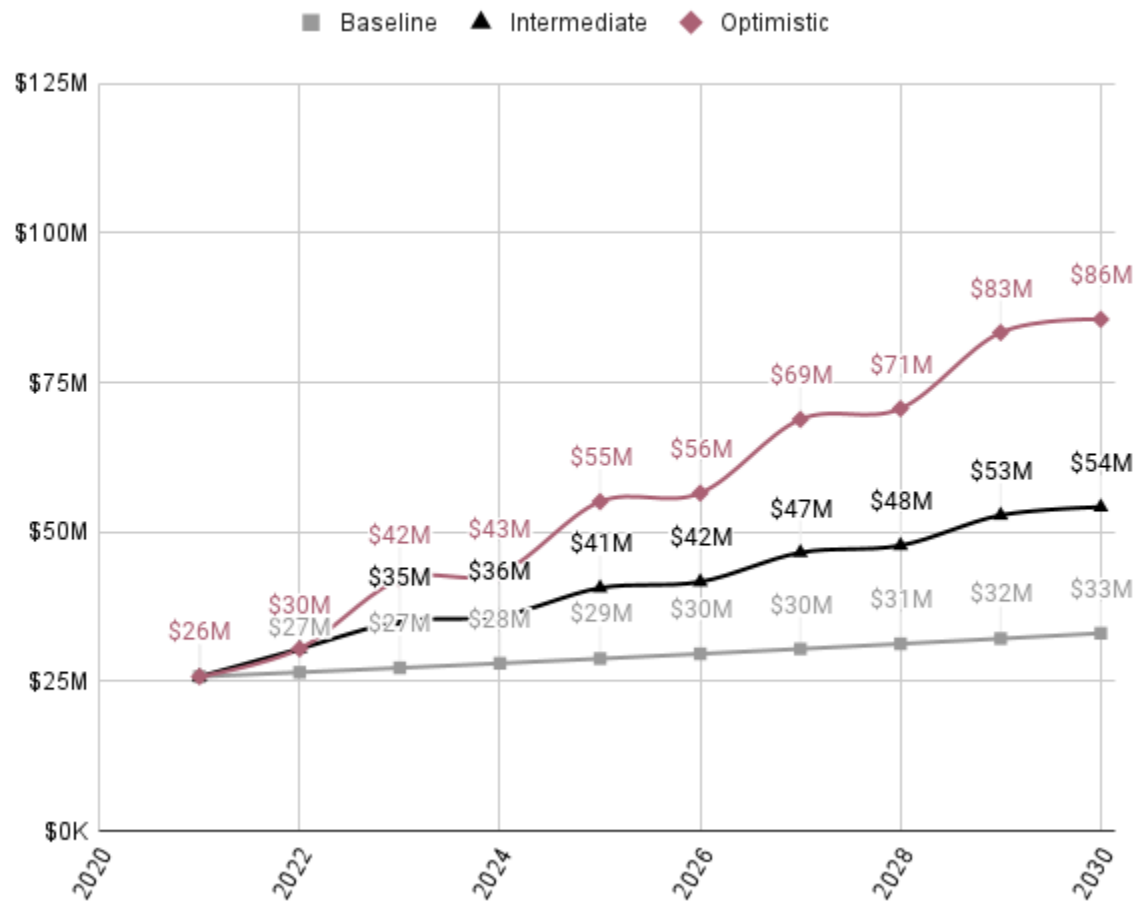


Figure 14 - Estimated Total Taxes: Baseline, Intermediate, Optimistic Scenarios, 2021-2030



Conclusion

The Las Cruces Innovation and Industrial Park is an attractive location for businesses given its proximity to New Mexico State University and White Sands Missile Range. The Park is also close to the U.S.-Mexico border, so it is advantageous for companies engaged in international trade or seeking new opportunities on this front. The construction of High Mesa Road would provide the Park with a direct route to the Santa Teresa Port of Entry (POE), thereby enhancing its international-trade logistical advantages for many companies, including businesses from the three priority target industries identified for the Park's future development: aviation, aerospace, and defense; value-added agriculture; and advanced manufacturing.

While direct economic benefits of the construction of High Mesa Road were not included in this analysis, the Las Cruces Innovation and Industrial Park is expected to grow faster with the completion of the High Mesa Road project. Since 2017, truck crossings through the Santa Teresa POE have increased 34%, reaching an all-time high of 154,147 crossings in 2021.²² Commercial traffic through the Santa Teresa POE is likely to expand even more as Mexico has indicated it will shift bilateral trade infrastructure investments to New Mexico and away from Texas. This will enhance the already robust trade growth through the Santa Teresa POE, raising the rationale for High Mesa Road and, concomitantly, the growth opportunity for the Las Cruces Innovation and Industrial Park²³

The Park's economic impact was analyzed under three scenarios: (1) Baseline: High Mesa Road is not built, no new building construction, and 2.79% annual growth in existing manufacturing employment; (2) Intermediate: High Mesa Road construction, a new Light Manufacturing Building added every two years, historical 989-square-foot-to-job ratios, and 2.79% annual growth in existing manufacturing employment; (3) Optimistic: High Mesa Road construction, a new Light Manufacturing Building added every two years, expected 350-square-foot-to-job ratios, and 2.79% annual growth in existing manufacturing employment.

Our study found the employment and construction activities at Las Cruces Innovation and Industrial Park result in the impacts in 2030 shown in Table 16. Based on U.S. Census data, 75% of the employees in these estimates are expected to live in the City of Las Cruces.²⁴ The direct jobs of this analysis are predominantly manufacturing jobs.

²² (Bureau of Transportation Statistics, DOT, 2022)

²³ (Economic and Business Research Center, 2022)

²⁴ (U.S. Census Bureau, 2020)

Table 16 - Estimated Economic Impacts: Baseline, Intermediate, Optimistic Scenarios, 2030

Impact	Baseline	Intermediate	Optimistic
Direct Jobs	1,287	2,386	3,996
Total Jobs	2,595	4,323	6,944
Economic Output	\$676,013,544	\$1,001,712,227	\$1,533,260,736
Value-Added Production	\$163,988,759	\$270,373,601	\$433,358,075
Labor Income	\$106,160,882	\$176,412,300	\$278,175,174
Total Taxes:	\$33,060,919	\$54,154,389	\$85,556,254
Federal	\$21,710,671	\$36,121,101	\$57,271,061
New Mexico	\$8,045,446	\$12,828,711	\$20,140,471
Doña Ana County (GRT)	\$1,705,704	\$2,686,233	\$4,203,727
City of Las Cruces (GRT)	\$1,599,098	\$2,518,344	\$3,940,995

The more likely scenario appears to be the Optimistic scenario given Mexico's refocused attention on New Mexico for bilateral trade where the Santa Teresa POE plays a central role, directly and positively impacting the Las Cruces Innovation and Industrial Park.

References

- Bureau of Economic Analysis. (2020, December). *NIPA Handbook: Concepts and Methods of the U.S. National Income and Product Accounts*. From Bureau of Economic Analysis: <https://www.bea.gov/resources/methodologies/nipa-handbook>
- Bureau of Transportation Statistics, DOT. (2022, May 20). *U.S. Department of Transportation*. From Bureau of Transportation Statistics: <https://www.bts.gov/browse-statistical-products-and-data/border-crossing-data/border-crossingentry-data>
- Chappell, B. (2022, April 20). *NPR*. From A key Texas bridge lost \$1 billion per week during governor's slowdown: <https://www.npr.org/2022/04/20/1093729789/texas-border-bridge-order-cost-billions>
- City of Las Cruces. (2021). *Las Cruces Innovation and Industrial Park Employment Survey*.
- City of Las Cruces. (2021). *Las Cruces Innovation and Industrial Park Master Plan*.
- City of Las Cruces. (2022). *Las Cruces Innovation and Industrial Park*. From City of Las Cruces: <https://www.las-cruces.org/2420/Las-Cruces-Innovation-and-Industrial-Par>
- Division of Current Employment Statistics. (2021, December). *State and Metro Area Employment, Hours, & Earnings*. From U.S. Bureau of Labor Statistics: <https://www.bls.gov/sae/>
- Economic & Planning Systems, Inc. (2020). *West Mesa Industrial Park Real Estate Analysis*.
- Economic and Business Research Center. (2022). *Arizona-Mexico Economic Indicators*. From The University of Arizona: <https://azmex.eller.arizona.edu/border-crossings/truck-crossings>
- IMPLAN. (2021). *Economic Impact Analysis for Planning* | IMPLAN. From IMPLAN: <https://www.implan.com/>
- Molzen Corbin. (2017). *West Mesa Corridor Study Phase 1B*.
- National Association of Realtors. (2021). *NAR Commercial Real Estate Metro Market Report, 2021.Q2, Las Cruces, NM*.
- New Mexico Department of Transportation. (2017). *West Mesa Corridor Study*.
- New Mexico Taxation & Revenue. (2022). *Fiscal Year RP-80 Reports: Gross Receipts by Geographic Area and NAICS code*. From New Mexico Taxation & Revenue:

<https://www.tax.newmexico.gov/all-nm-taxes/gross-receipts-taxes-overview/fiscal-year-rp-80-reports-gross-receipts-by-geographic-area-and-naics-code/>

New Mexico Taxation & Revenue. (2022). *Gross Receipts Location Code and Tax Rate Map*. From New Mexico Taxation & Revenue: <https://www.tax.newmexico.gov/governments/gross-receipts-location-code-and-tax-rate-map/>

Resendiz, J. (2022, April 19). *Border Report*. From Border Report: <https://www.borderreport.com/hot-topics/trade/mexico-joining-efforts-to-expand-santa-teresa-port-of-entry/>

Statistics, B. o. (2022, May 2022). *U.S. Department of Transportation, Bureau of Transportation Statistics*. From Bureau of Transportation Statistics: <https://www.bts.gov/browse-statistical-products-and-data/border-crossing-data/border-crossingentry-data>

Stevenson, M. (2022, May 3). *Change trains: Mexico favors New Mexico over Texas*. From ABC News: <https://abcnews.go.com/International/wireStory/change-trains-mexico-favors-mexico-texas-84475006>

U.S. Census Bureau. (2020). *American Community Survey, 5-Year Estimates: Place Of Work For Workers 16 Years And Over--Metropolitan Statistical Area Level*. U.S. Census Bureau.

Weber, P. (2022, May 2). *Texas Gov. Abbott's border inspections prompt Mexico to move lucrative trade link to New Mexico*. From The Week: <https://theweek.com/greg-abbott/1013145/texas-gov-abbotts-border-inspections-prompt-mexico-to-move-lucrative-trade-link>

Winingham, K., Vargas, L., & Erickson, C. A. (2021). *Economic Impact of the Santa Teresa Port of Entry and the Santa Teresa Industrial Parks*. Las Cruces: New Mexico State University. From <https://arrowheadcenter.nmsu.edu/economic-and-policy-studies/>

Glossary

Direct effects are the immediate (or first round) consequences of a change in economic activity or policy. For example, if a firm spends \$1 million on construction of a new building, the direct effect on output (sales) in the construction sector is \$1 million. If eight workers are employed on the construction of the building, then those eight workers are also a direct effect.

Employment refers to jobs. Jobs may be full- or part-time and a single worker may be employed at multiple jobs.

Indirect effects occur as industries purchase inputs from other industries. If a construction project requires steel beams, there will be indirect effects on iron mining and coke producing industries.

Induced effects result from households spending the wage and salary income received by those employed directly or indirectly on a new activity.

Input-output model refers to a type of economic model designed to capture relationships among industries and ultimate consumers.

Intermediate spending refers to the demand of industry for the goods and services produced by other industries that will be used in the production process.

Labor income consists of employee compensation (including benefits), supplements to wages and salaries (such as employer contributions to pension funds), and proprietor's income.

Merchandise trade refers to international trade in goods: goods exports and goods imports.

Multi-Regional Input-Output (MRIO) expands the region of study to include more than one region of study, allowing for spillover effects to be calculated between regions.

Output refers to gross industry sales or expenditures, depending on the consequences.

Total effects refer to the sum of direct, indirect, and induced effects.

Value added refers to the change in value of a good or service during each stage of production. Gross Domestic Product is a value-added concept.²⁵

²⁵ (Bureau of Economic Analysis, 2020)



Arrowhead Center
New Mexico State University
Las Cruces, NM 88003

arrowheadcenter.nmsu.edu