SECTION 1: Applicant Information *(continued)*

10. Authorized Company Consultant *(if applicable)*

Robert
First Name

Wood
Last Name

Senior Advisor
Title

McGuireWoods Consulting LLC
Firm Name

(512) 743-6063
Phone Number

rwood@mwcllc.com
Email Address

SECTION 2: School District Information

1. Authorized School District Representative

Ginger
First Name

Carrabine
Last Name

Superintendent
Title

Bryan Independent School District
School District Name

(979) 209-1002
Phone Number

ginger.carrabine@bryanisd.org
Email Address

2. Authorized School District Consultant *(if applicable and known)*

Kathy
First Name

Mathias
Last Name

Executive Director of Economic Development
Title

Moak Casey
Firm Name

512-485-7878
Phone Number

kmathias@moakcasey.com
Email Address

SECTION 3: Fee

Provide a copy of the check or electronic transfer of the required application fee to the School District in Tab 1.

SECTION 4: Project Information

NOTE: Job and investment requirements for eligible projects located in more than one county are determined by the county with the smallest population.

1. In Tab 2, provide a detailed description of the proposed project. Include a legal description of the real property on which the proposed project will be located and the address, if known.
2. The county or counties in which the proposed project will be located .... Brazos County
3. The minimum required investment, at the time of application 50,000,000
4. The Central Appraisal District *(CAD)* that will be responsible for appraising the property .... Brazos CAD
5. The population of the County *(or Counties)* per the Federal Decennial Census at the time of application 233,849

SECTION 4: Project Information *(continued)*

6. List all taxing entities that have jurisdiction for the property.

M&O (ISD): Bryan ISD, $0.679200, 100%
(Name, tax rate and percent of project)

I&S (ISD): Bryan ISD, $0.270000, 100%
(Name, tax rate and percent of project)

County: Brazos, $0.409700, 100%
(Name, tax rate and percent of project)

City: Bryan, $0.6240, 100%
(Name, tax rate and percent of project)

Hospital District: N/A
(Name, tax rate and percent of project)

Water District: N/A
(Name, tax rate and percent of project)

Other *(describe)*: N/A
(Name, tax rate and percent of project)

Other *(describe)*: N/A
(Name, tax rate and percent of project)

7. List all state and local incentives.

County: Ch 312, 80% 2026-2030, 50% 2031-2035
(Incentive type, percentage, start and end year)

City: Ch 312, 80% 2026-2030, 50% 2031-2035
(Incentive type, percentage, start and end year)

Hospital District: N/A
(Incentive type, percentage, start and end year)

Water District: N/A
(Incentive type, percentage, start and end year)

Other *(describe)*: See Tab 3
(Incentive type, percentage, start and end year)

Other *(describe)*:
(Incentive type, percentage, start and end year)

8. List any grants or loans of public money this project is receiving or expects to receive in Tab 3.

9. If the project is not located entirely within the ISD listed in Section 2, provide maps of the entire project *(depicting all other relevant school districts)* and any other relevent information in Tab 4. Only the eligible property within the ISD listed in Section 2 is eligible for the limitation from this application.

10. Indicate which zone the land on which proposed new construction or new improvements is located.

   a. An area designated as a Reinvestment Zone under Tax Code Chapter 311 or 312 .... ☑

   b. An Enterprise Zone under Government Code Chapter 2303 .... ☐

   c. A Qualified Opportunity Zone as designated by the Secretary of the United States Treasury .... ☑

   d. Attach the applicable supporting documentation in Tab 4.

      i. evidence that the area qualifies as an Enterprise Zone as defined by the Governor's Office;

      ii. order, resolution, or ordinance establishing the Reinvestment Zone; or

      iii. evidence that the Qualified Opportunity Zone has been designated by the Secretary of the United States Treasury; and

      iv. a high resolution map depicting the eligible property and project boundaries within the Reinvestment/Enterprise zone, any relevant Opportunity Zones, along with the ISD and County boundaries.

      A zone must be designated before the agreement is executed.

11. Did the Applicant consider locating the proposed project in a Qualified Opportunity Zone? .... ☑ Yes ☐ No

SECTION 5: Eligible Property

1. In Tab 5, provide a detailed list and description of the eligible property for which you are requesting a limitation.

2. The property will be used for one of the following activities:

   a. A Manufacturing Facility as classified in NAICS 311111-339999 .... ☑

   b. Provision of Utility Services as classified in NAICS 221111-221118 .... ☐

SECTION 5: Eligible Property *(continued)*

c. Development of Natural Resources defined as Agriculture, Forestry, Fishing and Hunting as classified in NAICS 111110-115310 ☐

d. Development of Natural Resources defined as Mining, Quarrying, and Oil and Gas Extraction as classified in NAICS 211120-213115 ☐

e. Research, Development, or Manufacture of high-tech equipment or technology as classified in NAICS 541713-541720 ☐

f. Related to Critical Infrastructure as classified in:

i. NAICS 221310-221330 ☐

ii. NAICS 424710 ☐

iii. NAICS 486110-486990 ☐

3. Will any of the proposed required investment be leased under a capitalized lease? ☐ Yes ☑ No

SECTION 6: Ineligible Property

1. **Existing Property:** In Tab 6, provide a high-resolution map that includes a specific and detailed description of all existing property. This includes buildings and improvements existing as of the application complete date. The description must provide sufficient detail to distinguish existing property from future proposed property.

2. **Proposed new property that will not be eligible for this limitation:** In Tab 6, provide a high-resolution map that includes a specific and detailed description of all proposed new property within the project boundary that will not become new improvements. The description must provide sufficient information to distinguish existing property from proposed new property that won't be eligible for the limitation.

SECTION 7: Projected Timeline

NOTE: Construction must commence after the agreement is executed to qualify.

1. Projected commencement of construction: Q4 of 2024
2. Projected completion of construction: 2028
3. Projected commencement of commercial operations: 2030
4. First year of the incentive period: 2030
5. Last year of the incentive period: 2039

SECTION 8: Job and Wage Requirements

NOTE: Applicants are required to offer and contribute to a group health plan for each employee employed in a full-time job in connection with the project.

1. Number of new required jobs applicant will create: 35
2. Wage NAICS code: 33441

a. Indicate the NAICS level used *(county, WDA or statewide)*: WDA

b. Texas Workforce Commission Quarterly Census of Employment and Wages Area: Brazos Valley WDA

Q1	Year	2023	Wage	$1,078
Q2	Year	2023	Wage	$1,087
Q3	Year	2023	Wage	$1,174
Q4	Year	2023	Wage	$1,629

c. Average Annual Wage: $64,584

d. 110% of the Average Annual Wage: $71,042

Form AP-243: Application for Taxable Value Limitation on Eligible Property
America's Foundry Bryan LLC
Tab 3 – Grants / Public Money

At the time of filing form AP-243, America's Foundry Bryan has applied for or expects to apply for the following programs:

- Brazos County, Chapter 312 abatement, 80% years 2026-2030, 50% years 2031-2035
- City of Bryan, Chapter 312 abatement, 80% years 2026-2030, 50% years 2031-2035
- Texas Semiconductor Innovation Fund (TSIF), unknown amount
- Texas Enterprise Zone Project Designation, unknown amount
- Texas Skills Development Fund, unknown amount
- United States CHIPS Incentive Program (CHIPS), unknown amount

`

Form AP-243: Application for Taxable Value Limitation on Eligible Property America's Foundry Bryan LLC
Tab 4 – Project Map

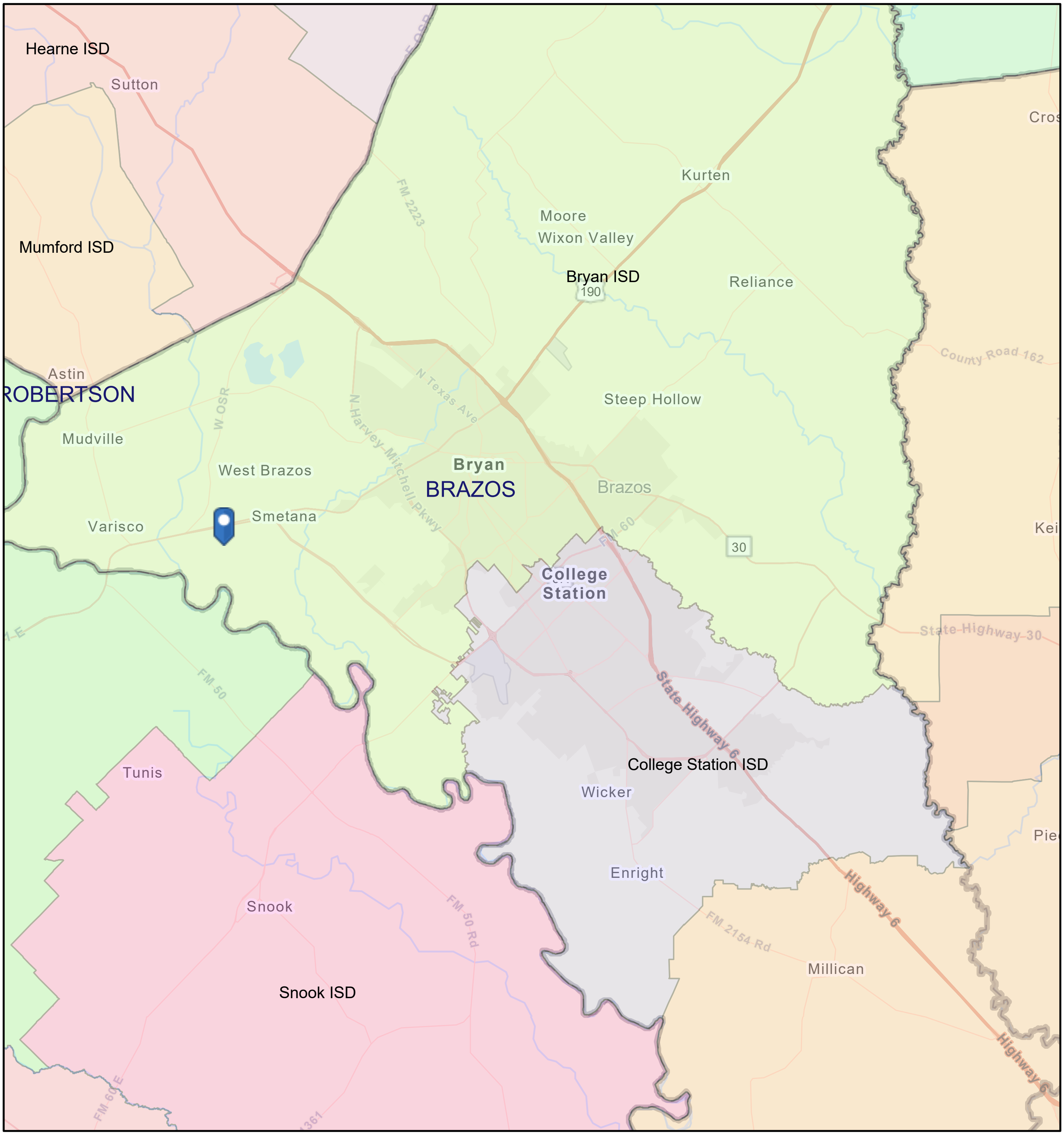
Supplement

Map 1 - ISD map showing the location of the project in Bryan ISD
Map 2 - Partial map of Brazos County showing the RELLIS campus fully inside the County
Map 3 - Map of RELLIS campus showing the Reinvestment Zone Boundary and Project Boundary in red (the property boundary and the RZ boundary are the same)
Map 4 - Opportunity Zone map showing coterminous project boundary and Reinvestment Zone boundary in green

The project is located fully inside the boundaries of Brazos County, Bryan ISD, the RELLIS Reinvestment Zone 1 and is within the boundary of an Opportunity Zone.

The Project Boundary and the Reinvestment Zone boundary are the same.

Map 1 - ISD map showing the location of the project in Bryan ISD



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Districts

- Anderson-Shiro Cons ISD
- Bryan ISD
- Caldwell ISD
- College Station ISD
- Franklin ISD
- Hearne ISD
- Iola ISD
- Mumford ISD
- Navasota ISD
- North Zulch ISD
- Snook ISD
- Somerville ISD
- Counties

NOTE: The project site is marked above, and is fully within the boundary of Bryan ISD, shown on this map in pale green (see legend).

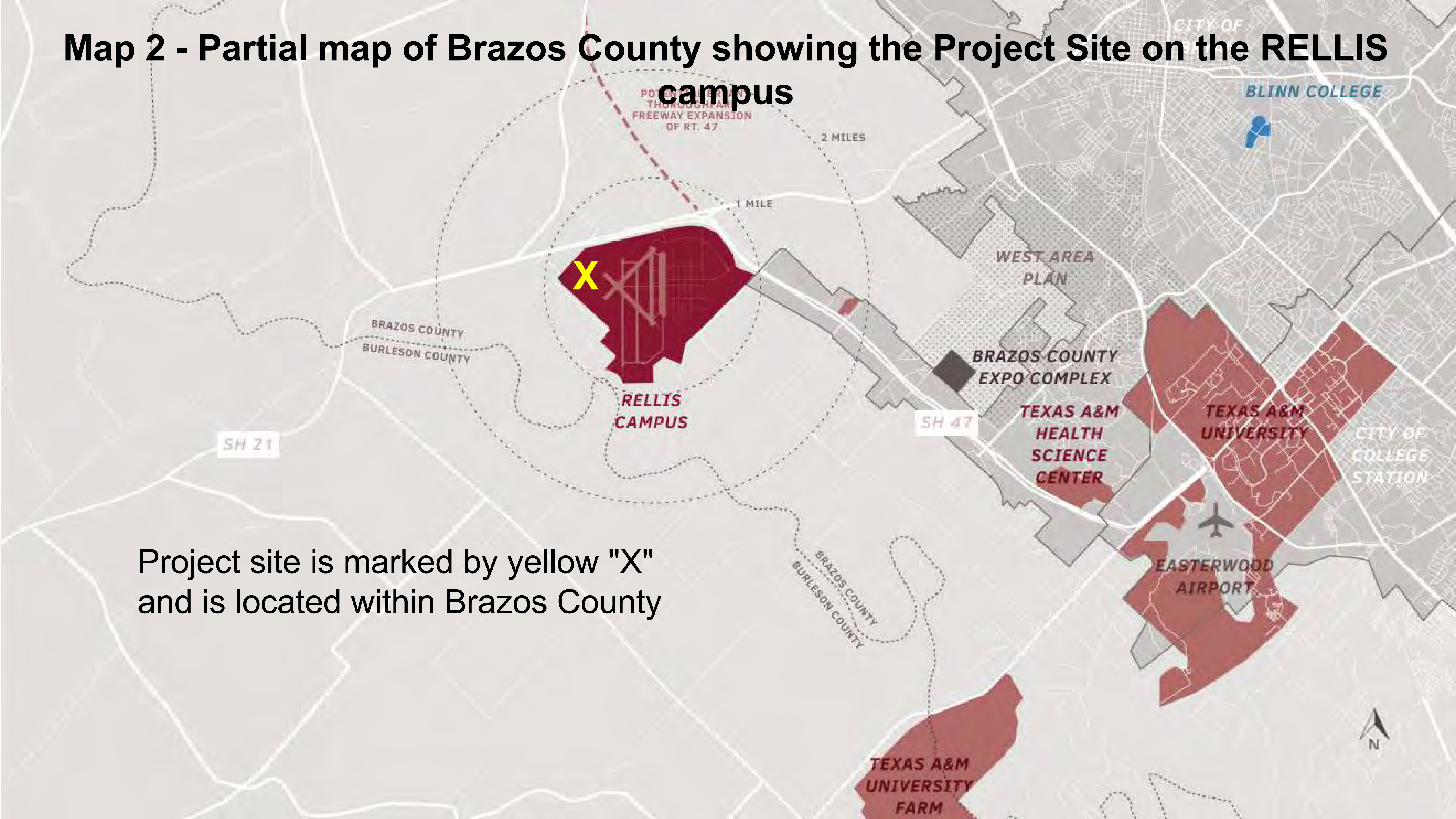
1:288,895

0 2 4 8 mi

0 3.25 6.5 13 km

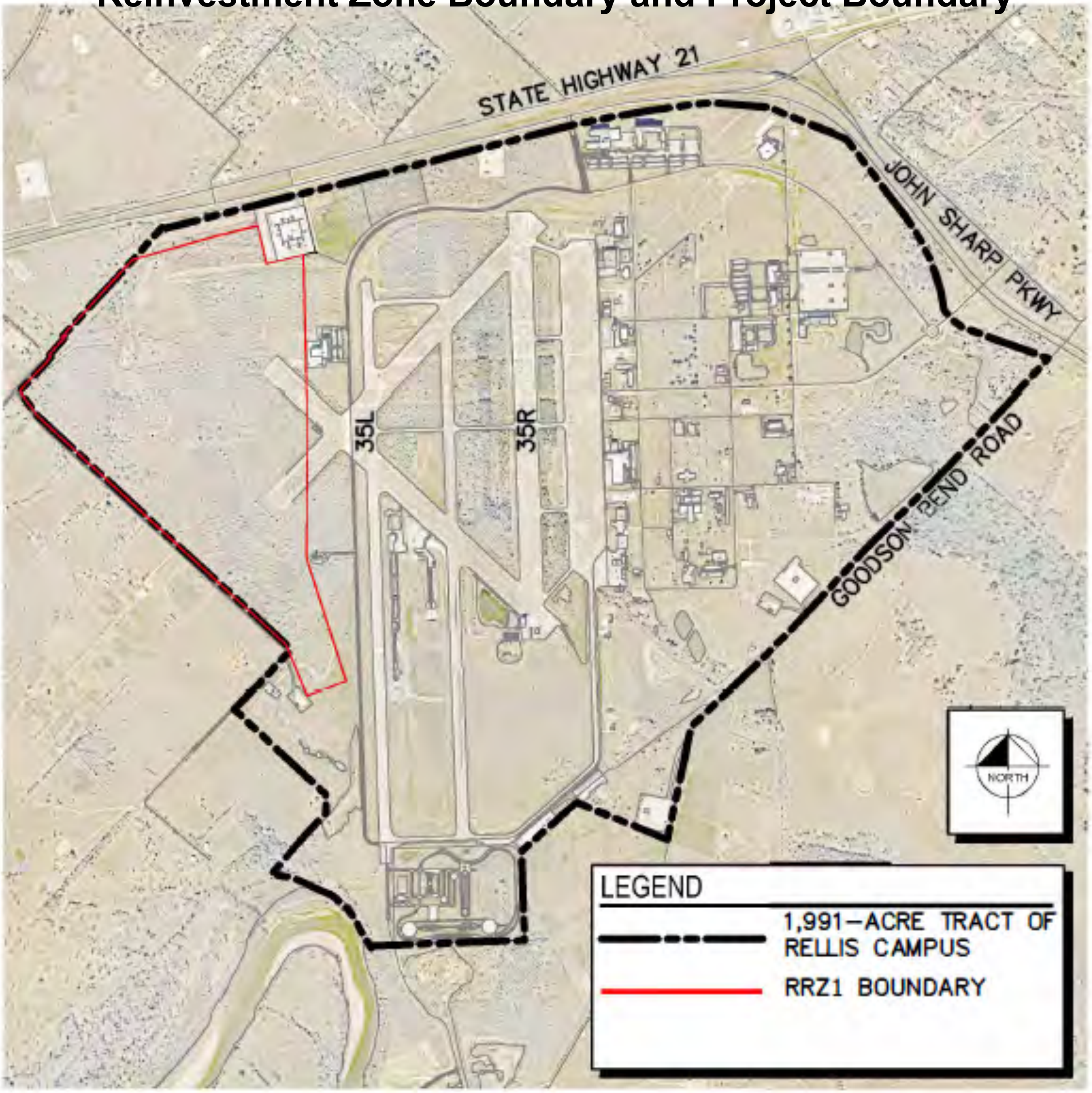
Texas A&M University, City of Bryan GIS, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Map 2 - Partial map of Brazos County showing the Project Site on the RELLIS campus



Project site is marked by yellow "X"
and is located within Brazos County

Map 3 - Map of RELLIS campus showing the Reinvestment Zone Boundary and Project Boundary



NOTE: The red line shows the coterminous project boundary and Reinvestment Zone boundary, located within the boundaries of Brazos County and Bryan ISD.

RELLIS REINVESTMENT ZONE 1 (RRZ1)

LOCATION EXHIBIT

June 18, 2024

Kimley»Horn

Opportunity Zone Map

July 18, 2024

Map 4 - Opportunity Zone map. The green line shows the coterminous project boundary and Reinvestment Zone boundary, located within the Opportunity Zone (in purple).

1:36,112

0 0.28 0.55 1.1 mi

0 0.42 0.85 1.7 km

Baylor University, Texas A&M University, City of Bryan GIS, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, Maxar

Form AP-243: Application for Taxable Value Limitation on Eligible Property
America's Foundry Bryan LLC
Tab 7 – Limitation as Compelling Factor

Section 9.1: Limitation as Compelling Factor, Question 1. In Tab 7, explain how the limitation is a compelling factor in a competitive site selection process. Provide information regarding potential project sites outside of Texas and include incentive offers, permits obtained or any incentive programs applied to.

Advanced semiconductor manufacturing is arguably the most competitive and desirable economic activity that states compete for when looking to attract a large scale project delivering long term economic benefit to that state and their residents. A successful foundry can generate hundreds of billions of dollars in direct economic impact and trillions of dollars of indirect economic impact over the long term. Each establishment of a successful foundry draws entire ecosystems of the most advanced manufacturing methods and employs individuals at every level of the respective economy.

The company's headquarters is located in San Francisco, California, currently home to our research and engineering teams. Due to the competitive nature of semiconductor manufacturing, the company is confident that a robust site selection process for the initial facility is necessary. We are currently engaged in a multi-state site selection process for our initial semiconductor manufacturing facility and do not have a current business presence in the state of Texas.

Our site selection process has been ongoing for more than a year and a half. Our company initially focused our site selection evaluation criteria on workforce availability, transportation infrastructure, and tax and regulatory environment (including incentives). In May 2023, at our request, SelectUSA produced a "U.S. Locations and Resources Report" on six states: Arizona, California, Ohio, Oregon, Texas, and Utah. Each of these states have specific incentives for the semiconductor industry; since federal policymakers enacted the CHIPS and Science Act last year to provide $280 billion of incentives for domestic semiconductor investment and research and development (R&D), at least 12 states have followed suit by enacting new or expanding existing tax incentives and funding programs for the semiconductor industry. Those states include Arizona, California, Colorado, Florida, Idaho, Illinois, Kansas, New York, Ohio, Oregon, Pennsylvania, and Texas. Based on our target criteria of workforce, transportation, and tax/ regulation environment, we narrowed the search to three potential states: Texas, Oregon, and New York in close proximity to existing critical supply chain clusters.

Based on the SelectUSA study, Oregon and Texas offer a high employment specialization share in the semiconductor subcluster. The Southwest region, including Texas, and the West Coast region, including Oregon have among the lowest trucking costs. While New York was not included in the initial Select USA report, it was added based on their robust tax incentive program, along with the industry concentration there.

SelectUSA made direct introductions between us and potential host state's departments for economic development so we could further explore our options at the state by state level. From

July 2023 to September 2023, we conducted independent research, performed inquiries around specific site offerings, and evaluated responses from agencies across multiple states.

We are a startup company in a highly competitive and capital-intensive industry. The company has undergone our site selection process based on conversations with state program representatives and our own analysis of the programs and expected benefits. We have three non-disclosure agreements in place with state agencies outside of Texas and are not able to share specific details of our discussions with these parties covered under these agreements, however we are able to present publicly available data points that are significant factors in our decision process and components of the incentives offered by competing states.

New York

Like Texas and Oregon, the state of New York has placed a significant emphasis on semiconductor manufacturing in recent years.

In 2022, New York committed $10 billion to the Green Chips Act. Under this act, PFO would be eligible for the following incentives:

Investment Tax Credit: Up to 5% of project capital expenditures
R&D Tax Credit: Up to 8% of R&D expenditures
Salaries and Wages Tax Credit: Up to 7.5% of salaries and wages expenditures
Real Property Taxes/PILOTs Tax Credit: Eligible for schedule of credits based on amount of real property taxes/PILOT paid over 10 years
Discounted Utility Service Delivery Rates: Discounted utility service delivery rates conveyed via private utility

Sales and use tax rates are similar in both states (8.25% average for Texas, and 8.53% average for New York). Property tax rates vary widely; the combined rate for the proposed site in Texas is approximately 1.98% on real and tangible personal property, which is competitive with rates in many parts of New York. Our company is mindful, however, that Texas has repeatedly compressed school tax rates using budget surpluses, thus leading the company to question whether the lower rates are permanent. Additionally, Texas taxes business personal property, while New York does not; this gives New York a significant advantage over Texas, assuming valuations and rates are not significantly different. Texas franchise tax appears to compare favorably to New York's business income tax. The R&D tax credit in New York is attractive; America's Foundry Bryan LLC is mindful that the R&D tax credit/exemption program expires in 2026.

The New York Green Chips program provides a decreasing reduction on property tax over ten years, starting at a 50% reduction, and reducing 5% per year. The JETI program provides a 75% reduction over ten years. The fact that business personal property isn't taxed brings the numbers closer since Texas will be taxing more property than New York.

The federal government recently committed $6.1 billion to the new Micron plant in New York, $6.4 billion to Samsung in Texas, and $8.5 billion of which part will fund Intel's $36 billion investment in Oregon which seems to indicate that the federal government is supporting a robust ecosystem in all three states, which is a benefit to America's Foundry Bryan LLC.

After considering Texas, chip manufacturer Micron Technologies announced a 20-year investment of up to $100 billion in chip manufacturing to be located outside Syracuse, New York. The state of New York has committed $5.5 billion in performance based Green CHIPS incentives. The state's emphasis on semiconductor manufacturing provides our company with opportunities related to workforce and supply chains.

It's clear that with each state's incentive in place, the JETI program provides the company a larger benefit than the Green Chips program and without the JETI program benefit, the Green Chips program is significantly more beneficial to the company's property tax bill.

Oregon

Similar to Texas and New York, Oregon has a significant semiconductor manufacturing presence, and has recently added incentives to partner with the federal CHIPS act to increase the industry in that state. In 2023, the Oregon legislature approved over $190 million to incentivize semiconductor manufacturing; by January 2024, the state had secured new commitments from Intel, HP and Microchip. Intel is already Oregon's largest private employer, with six campuses located around the Portland area, and totaling more than 20,000 workers statewide.

The cumulative property tax rate in Oregon varies significantly, though the highest rate in the state is close to the rate of the site we are considering in Texas. Most Oregon counties have property tax rates that are significantly less, again pointing to the fact that with a JETI agreement in place, the Texas property tax environment is preferable, but without JETI, Oregon rates are more competitive than Texas.

Oregon does not currently offer a research and development tax credit, giving Texas slight advantage (acknowledging the uncertain future of the state's program).

While incentive programs in New York and Texas appear more robust, Oregon's lack of a sales tax and ongoing commitment to semiconductor manufacturing, as well as the proximity to our technical and scientific teams and ample existing workforce infrastructure makes the state a potential location should the Texas site not be viable.

Conclusion

As outlined, our evaluation of the incentives available in each state, the existing workforce and supply chain cluster availability, and overall economic opportunity are important factors in our decision. While each state has slightly differentiated offerings in each of these important categories, state incentives are a significant driver of our decision because of the stage of our project and our company. Without the JETI incentives, Texas is not competitive economically with Oregon and New York.

According to the 2024 State Tax Business Climate survey by the Tax Foundation, New York and Oregon provide competitive tax climate environments, making incentives a critical part of the decision-making process. Due to the capital investment, property tax incentives will play one of the most significant roles in the company's site location decision.

2024 State Business Tax Climate Index | Tax Foundation			
State	**Corporate Tax Rank**	**Sales Tax Rank**	**Property Tax Rank**
New York	24	42	49
Oregon	49	4	20
Texas	46	37	39

In summary, it's clear that the three states' workforce, economic, geographical, and tax structures are competitive with each other, making the incentives offered by each state, and specifically the JETI program, a compelling factor in determining which state America's Foundry Bryan LLC ultimately elects to partner with.

Section 9.2: Limitation as Compelling Factor, Question 2. Has the applicant entered into any agreements, contracts or letters of intent related to this project? If Yes, provide details in Tab 7.

America's Foundry Bryan's parent company, Substrate Inc., has entered into a non-binding memorandum of understanding with Texas A&M University indicating interest in a collaborative investment benefiting both America's Foundry Bryan and the Texas A&M University System. This partnership is a compelling factor for America's Foundry Bryan to locate in Texas and is dependent on receiving acceptable financing and governmental incentives.

Section 9.3: Limitation as Compelling Factor, Question 3. Has the applicant made any publicly available statements regarding the proposed project? (Include any alternate project names). If Yes, attach statements and explain how the limitation is a compelling factor in Tab 7.

Due to the sensitive nature of the trade secrets and proprietary information used in our construction and operations, America's Foundry Bryan has made no public statements about our project as of the time of our filing form AP-243.

Section 9: Limitation as Compelling Factor, Question 4. Has the applicant applied for or received any federal, state or local permits for activities at the proposed project site? If Yes, include a list of all permits and dates applied for and received in Tab 7.

Neither America's Foundry Bryan nor its parent company, Substrate Inc., have applied for or received any federal, state, or local permits for activities at the proposed project site because the site selection process is not final. As a part of our due diligence, we have researched the necessary permits covering federal, state, and local areas. If the agency would like more detailed information on the permits required, we can provide that detail.

Continued

U.S. Locations and Resources Report

Prepared by SelectUSA for Substrate
April 2023

U.S. Locations and Resources Report

Prepared by SelectUSA for

Substrate

April 2023

U.S. Department of Commerce
International Trade Administration

SELECTUSA®

Table of Contents

Introduction

This report is designed to assist Substrate with expansion of its business operations in the United States. The report includes information on industry clusters, semiconductor fabrication plants, utilities, and logistics infrastructure.

Inclusion of a non-governmental entity in this report does not constitute an endorsement of the entity or of its products, services, or technology by SelectUSA or the U.S. Department of Commerce.

It should be noted that this report is for informational purposes only and is in no way advisory. We suggest that the company engage legal counsel and conduct further research, as applicable, to ensure compliance with applicable federal and state regulations and to optimize its business operations in the United States.

If you have further questions after reviewing this report, SelectUSA is available to provide information and to perform further research.

Definitions

Cluster – A cluster is a regional concentration of related industries that arise out of the various types of linkages or externalities that span across industries in a particular location.

High Employment Specialization – Areas with high employment *specialization* have a location quotient ranking among the top 25 percent of areas with employment information for an industry.

High Employment Share – Areas with high employment *share* rank among the top 10 percent of areas with employment information by number of employees in an industry.

Location Quotient (LQ) – The LQ value is the ratio of an industry's share of total area employment relative to its share of total national employment. An LQ value greater than 1 indicates a higher than average industry concentration in a location.

SelectUSA Contacts

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Executive Summary

This report provides Substrate with information on establishing business operations in the United States. Per the client's guidance, this report focuses on six states. Herein referred to as the "targeted states," these include Arizona, California, Ohio, Oregon, Texas, and Utah.

Key highlights include:

- Of the targeted states, Arizona, Oregon, and Texas offer high employment specialization and share in the Semiconductors subcluster.
- Of the targeted states, Texas offers high employment specialization and share in the Construction Products and Services cluster.
- Of the targeted states, Texas offers high employment specialization and share in the Upstream Chemical Products cluster.
- According to fDi Markets, from January 2021 to December 2022, there have been 26 announced greenfield foreign direct investment (FDI) projects in the Semiconductors sector in the United States with an estimated capital expenditure (capex) of $52.8 billion. The top destination state was Arizona with an estimated $28.2 billion combined capex from four projects. The top source market was Taiwan with an estimated $33.2 billion combined capex from six projects.
- In January 2023, of the targeted states, Utah had the lowest cost of electricity in the commercial sector at 7.97¢ per kilowatthour. Texas had the lowest cost of electricity in the industrial sector at 6.93¢ per kilowatthour.
- In December 2022, of the targeted states, Ohio had the lowest average price of natural gas in the commercial sector at $8.33 per thousand cubic feet. Arizona had the lowest average price for natural gas in the industrial sector at $7.01 per thousand cubic feet.
- In 2022, of the targeted states, Oregon had the highest share of renewable-sourced utility-scale energy generation (69.8 percent), followed by California (43.5 percent).
- Information on trucking costs and logistics infrastructure is provided.

Industry Clusters

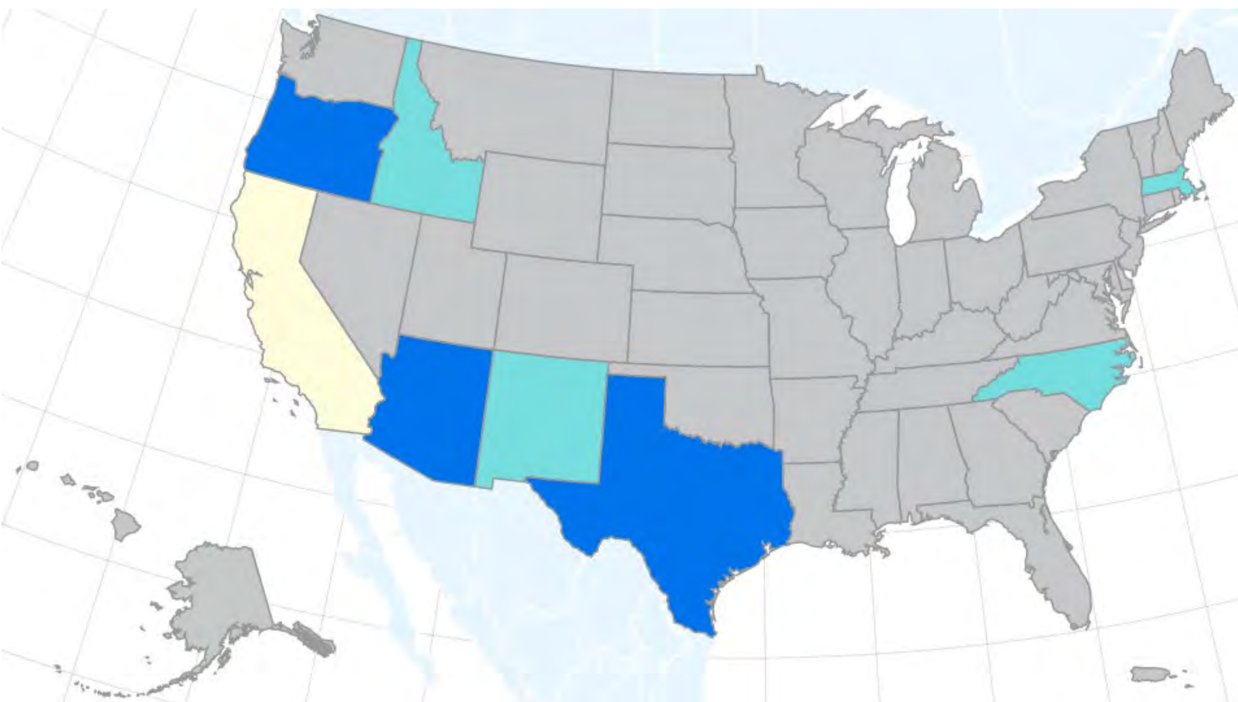
Semiconductors Subcluster

Per the client's request, this report focuses on six states. Herein referred to as the "targeted states," these include Arizona (AZ), California (CA), Ohio (OH), Oregon (OR), Texas (TX), and Utah (UT).

The U.S. Cluster Mapping Tool is an open-source resource on industry clusters and regional business environments in the United States. The Semiconductors subcluster is part of the larger Information Technology and Analytical Instruments cluster and includes industries such as semiconductor manufacturing and semiconductor machinery manufacturing. Figure 1 shows the states with high employment specialization and share in the Semiconductors subcluster. Of the targeted states, Arizona, Oregon, and Texas offer high employment specialization and share in the Semiconductors subcluster. In addition, California offers high employment share in the Semiconductors subcluster.

Figure 1: Employment Specialization and Share in the Semiconductors Subcluster by State, 2020

High Employment Specialization and Share | High Employment Specialization | High Employment Share



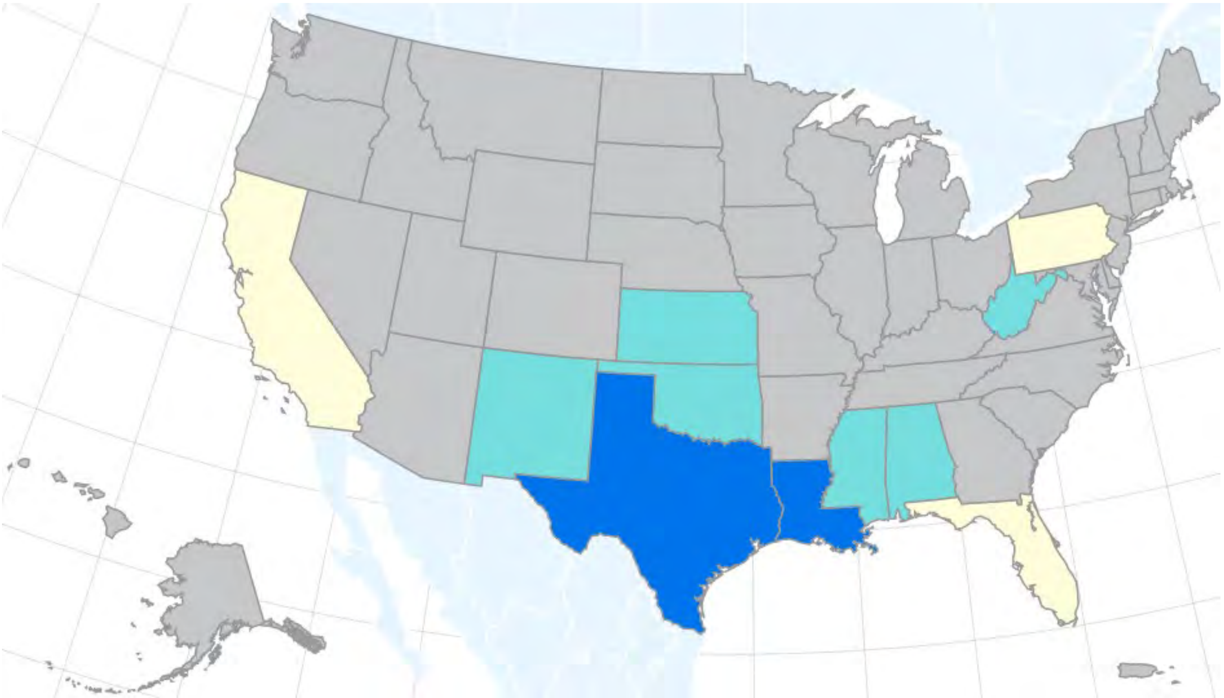
Source: [U.S. Cluster Mapping]()

Construction Products and Services Cluster

The Construction Products and Services cluster includes industries such as industrial building construction and heavy and civil engineering construction. Figure 2 shows the states with high employment specialization and share in the Construction Products and Services cluster. Of the targeted states, Texas offers high employment specialization and share in the Construction Products and Services cluster. In addition, California offers high employment share in the Construction Products and Services cluster.

Figure 2: Employment Specialization and Share in the Construction Products and Services Cluster by State, 2020

■ High Employment Specialization and Share ■ High Employment Specialization ■ High Employment Share



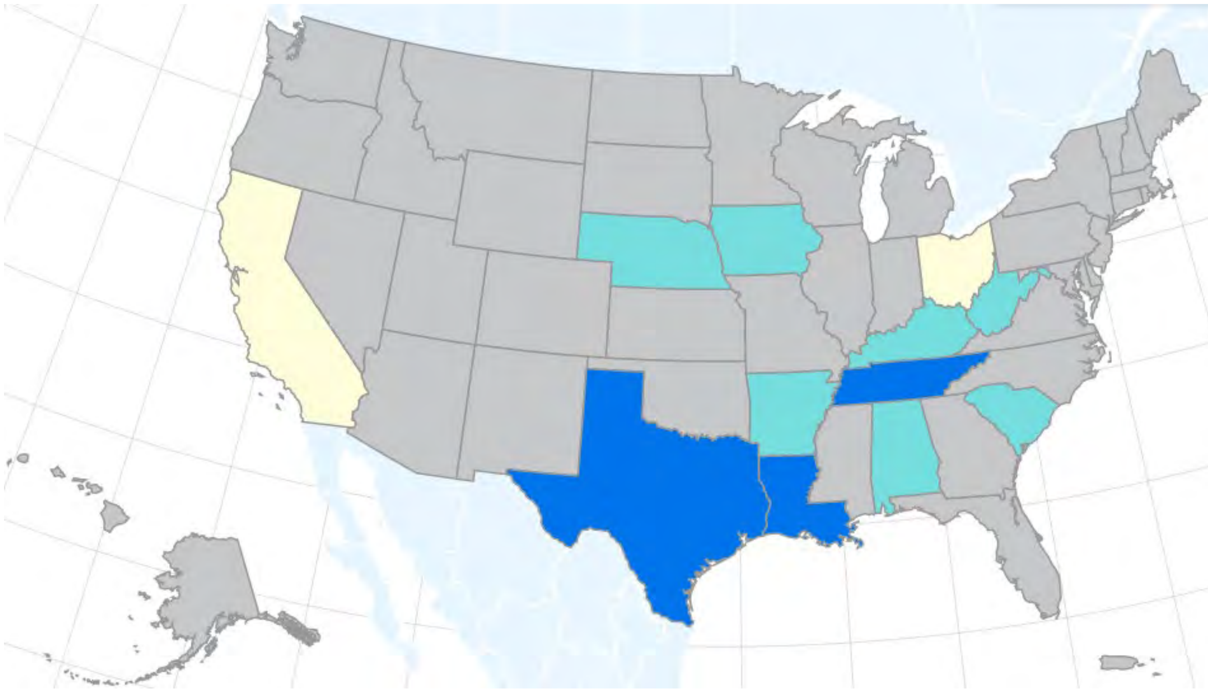
Source: [U.S. Cluster Mapping]

Upstream Chemical Products Cluster

The Upstream Chemical Products cluster includes industries such as organic and inorganic chemical manufacturing, as well as industrial gas manufacturing. Figure 3 shows the states with high employment specialization and share in the Upstream Chemical Products cluster. Of the targeted states, Texas offers high employment specialization and share in the Upstream Chemical Products cluster. In addition, both California and Ohio offer high employment share in the Upstream Chemical Products cluster.

Figure 3: Employment Specialization and Share in the Upstream Chemical Products Cluster by State, 2020

High Employment Specialization and Share | High Employment Specialization | High Employment Share



Source: [U.S. Cluster Mapping]

Semiconductor Fabrication Plants

The Semiconductor Industry Association (SIA) works with industry stakeholders to promote policies that strengthen U.S. leadership in semiconductor manufacturing, design, and research. The SIA's Semiconductor Ecosystem Map utilizes public and internal sources to provide locations of existing and announced semiconductor projects at all stages of the supply chain, from research and development to semiconductor manufacturing. Figure 4 provides the number of existing and announced semiconductor manufacturing facilities that the SIA has identified in the targeted states. Of the targeted states, SIA has identified the most existing and announced semiconductor manufacturing facilities in California (31), followed by Arizona (22).

Figure 4: Number of Identified Existing and Announced Semiconductor Manufacturing Facilities in the Targeted States

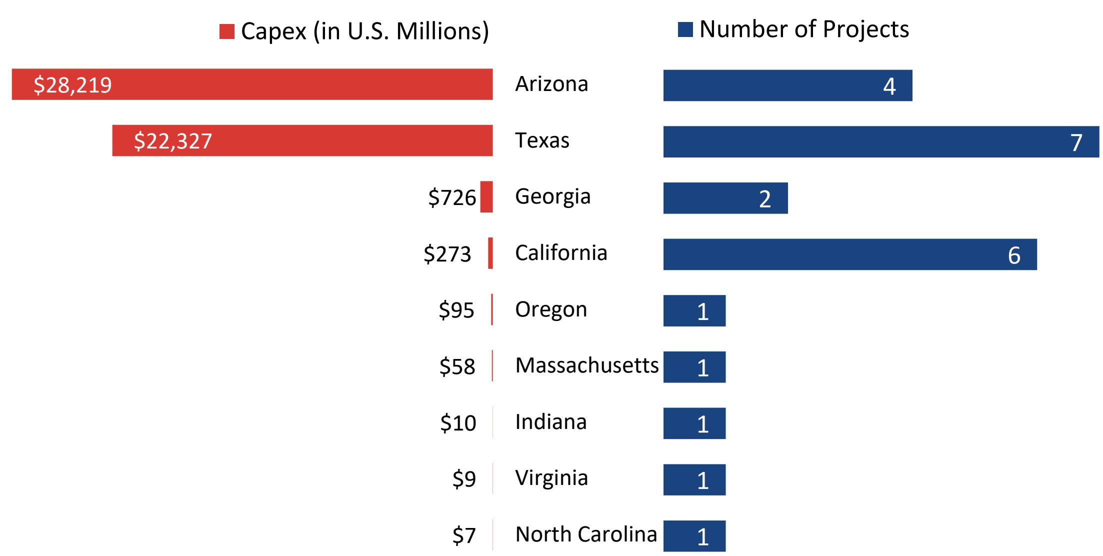
State	Facilities
California	31
Arizona	22
Texas	19
Oregon	12
Ohio	6
Utah	1

Source: Semiconductor Industry Association, Semiconductor Ecosystem Map

Foreign Direct Investment

According to fDi Markets, from January 2021 to December 2022, there have been 26 announced greenfield foreign direct investment (FDI) projects in the Semiconductors sector in the United States with an estimated capital expenditure (capex) of $52.8 billion. Figure 5 provides the destination states by estimated capex of announced greenfield FDI projects in the Semiconductors sector in the United States from January 2021 to December 2022. (Note: Two of the 26 projects identified by fDi Markets with a combined capex of $1.1 billion were announced to an unspecified location.) The top destination state was Arizona with an estimated $28.2 billion combined capex from four projects, followed by Texas with $22.3 billion in combined capex from seven projects.

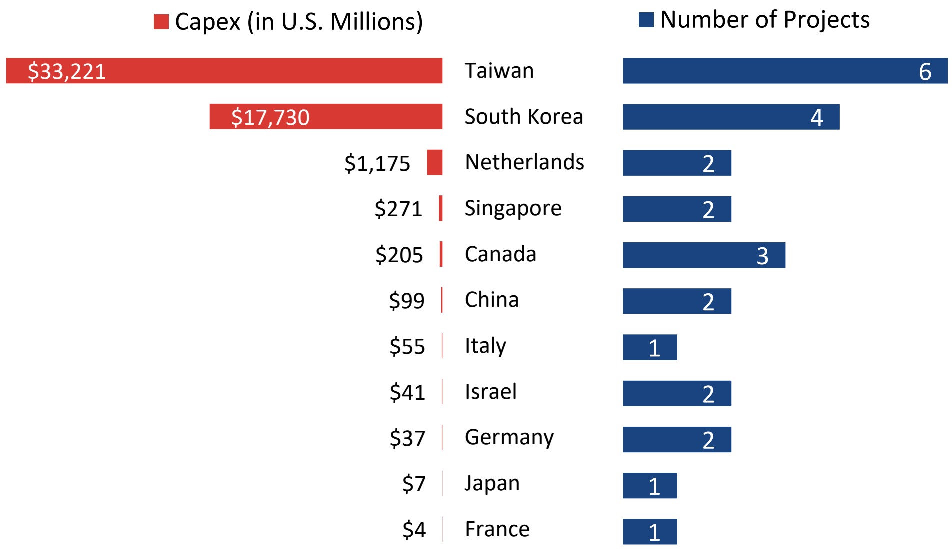
Figure 5: Announced Greenfield FDI Projects in the Semiconductors Sector in the United States by Destination State, January 2021-December 2022



Source: *fDi Markets*

Figure 6 provides the source markets by estimated capex of announced greenfield FDI projects in the Semiconductors sector in the United States from January 2021 to December 2022. The top source market was Taiwan with an estimated $33.2 billion combined capex from six projects, followed by South Korea with $17.7 billion in combined capex from four projects.

Figure 6: Announced Greenfield FDI Projects in the Semiconductors Sector in the United States by Source Market, January 2021-December 2022



Source: fDi Markets

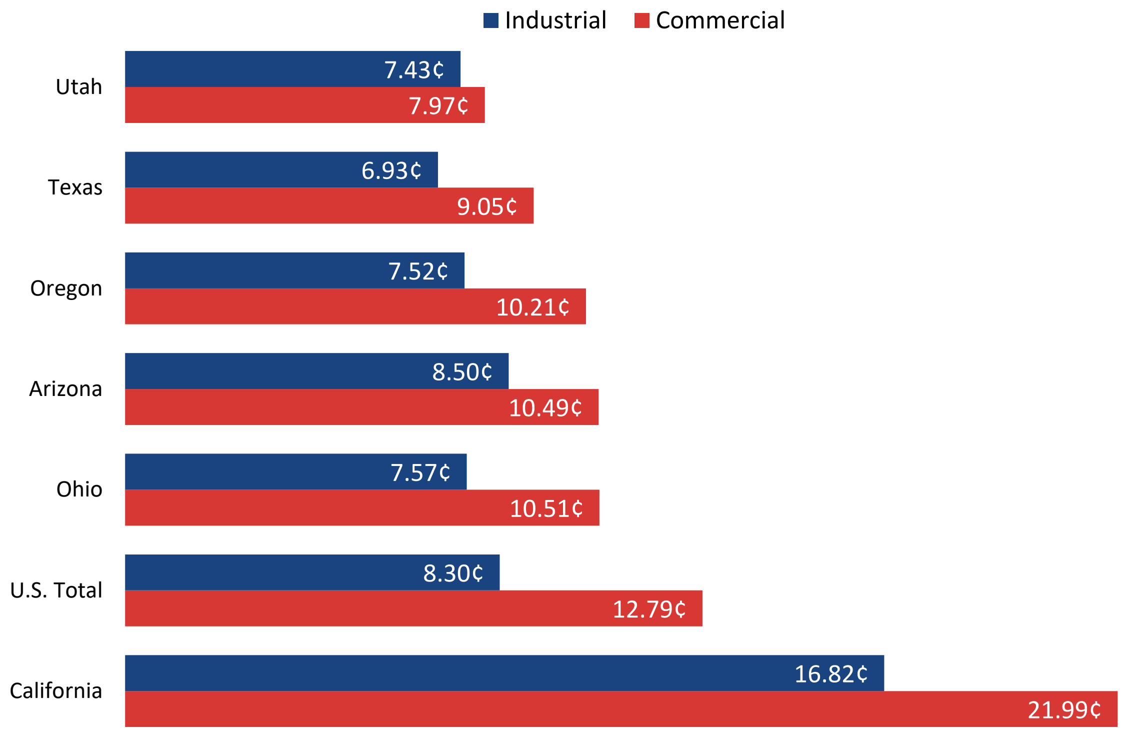
Energy

Electricity Cost

The U.S. Energy Information Administration (EIA) provides monthly data on the price of electricity for the residential, commercial, and industrial sectors. Figure 7 illustrates the average price of electricity for the commercial and industrial sectors in cents (¢) per kilowatthour in January 2023 in the targeted states. The average electricity price in the United States in January 2023 was 12.79¢ per kilowatthour for the commercial sector and 8.30¢ for the industrial sector. Of the targeted states, Utah had the lowest cost of electricity in the commercial sector at 7.97¢ per kilowatthour, and Texas had the lowest cost of electricity in the industrial sector at 6.93¢ per kilowatthour.

Figure 7: Average Price of Electricity for the Commercial and Industrial Sector, January 2023

In Cents per Kilowatthour



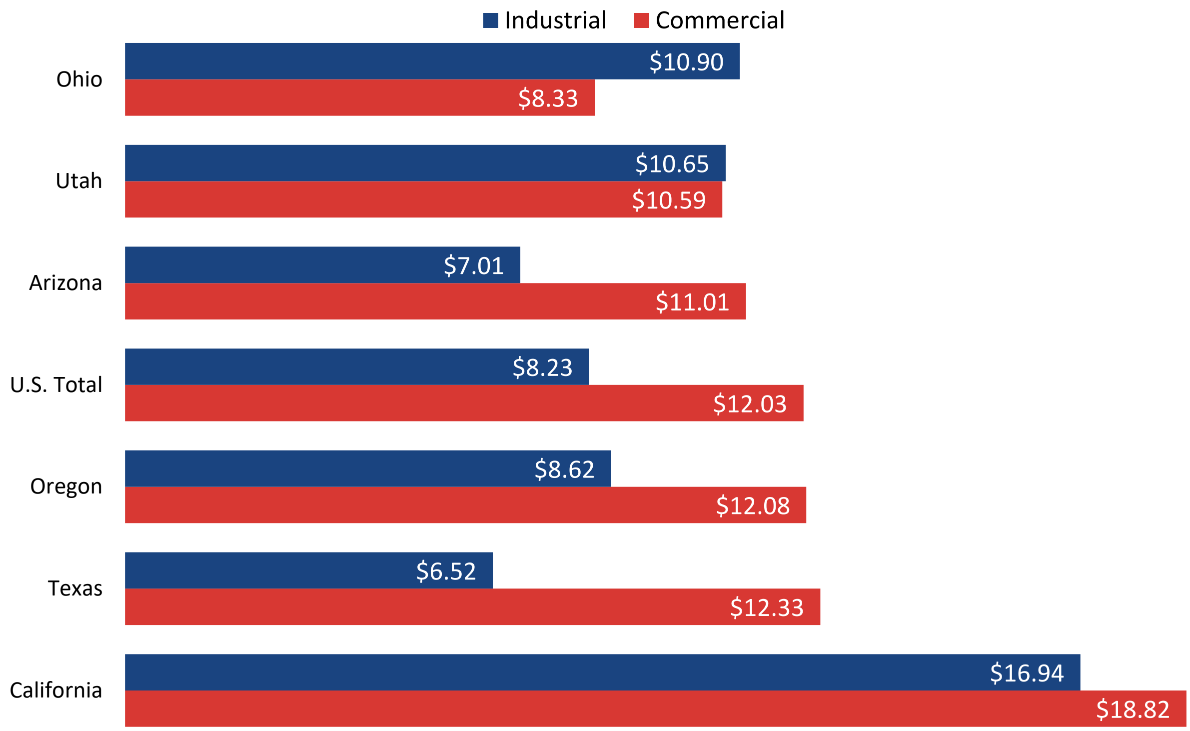
Source: *U.S. Energy Information Administration, Electric Power Monthly*

Natural Gas

The EIA also provides monthly and yearly data on the price of natural gas for residential, commercial, and industrial sectors. The latest available data on the average price for natural gas in the commercial and industrial sectors for all targeted states is from December 2022. Figure 8 illustrates the average price of natural gas for the commercial and industrial sectors in December 2022. The average price of natural gas in the United States in December 2022 was $12.03 per thousand cubic feet in the commercial sector and $8.23 in the industrial sector. Of the targeted states, Ohio had the lowest average price of natural gas in the commercial sector at $8.33 per thousand cubic feet. Arizona had the lowest average price for natural gas in the industrial sector at $7.01 per thousand cubic feet.

Figure 8: Price of Natural Gas for Commercial and Industrial Use by State, December 2022

In Dollars per Thousand Cubic Feet (MCF)



Source: U.S. Energy Information Administration, Natural Gas Prices

Renewables

The EIA also provides data on electricity generation by energy source at the nationwide and state levels. Figure 9 provides the estimated total amount and share of utility-scale electricity generated from renewable sources in the targeted states and the United States in 2022. (Note: the 'Net Renewables' category includes solar, wind, biomass, geothermal, and hydroelectric energy generation.) Of the targeted states, Oregon had the highest share of renewable-sourced utility-scale energy generation (69.8 percent), followed by California (43.5 percent).

Figure 9: Utility-Scale Renewable Energy Generation in the Targeted States, 2022

In Thousand Megawatthours

State	Net Renewables	
	Generation	Share
Arizona	14,470	13.8%
California	89,318	43.5%
Ohio	5,150	3.8%
Oregon	44,110	69.8%
Texas	138,538	26.4%
Utah	5,643	14.4%
United States	**906,835**	**21.4%**

Source: U.S. Energy Information Administration, Electricity Data Browser

Water

Every five years, the U.S. Geological Survey (USGS) compiles water withdrawal and use data at the county level. This data is published on a USGS webpage for Industrial Water Use. The most recent dataset comes from 2015 and was released in 2019. The USGS also maintains a National Water Dashboard with an interactive map of real-time data on water monitoring locations around the United States. The dashboard covers surface water, groundwater, and spring water. It provides a discharge rate and a comparison with normal discharge rates for the time period of analysis. This and other Water Resources tools can help ascertain the availability of freshwater for manufacturing operations.

In the United States, water as a utility is governed by different districts and not at the state level. Within a state, water rates can vary significantly depending on the utility company that manages the local water supply, the size of the local population, water scarcity, and other factors. Therefore, it can be difficult to provide accurate state-level water price estimates. The officials most familiar with and most capable of assisting businesses with water rates are state or local officials. For a fee, the American Water Works Association provides utility rates for many water districts in its annual *Water and Wastewater Rate Survey*.

Some resources do exist which provide public information about water and wastewater rates across different states. UNC Chapel Hill provides online interactive water and wastewater rates dashboards for 22 states. Of the targeted states, four have water and wastewater rates dashboards available through the UNC Chapel Hill tool. These include Arizona, California, Ohio, and Texas. UNC Chapel Hill has also compiled abbreviated resources on commission and noncommission-regulated utilities in Oregon. (Note: no official statewide data on water and wastewater rates was found for Utah.)

SelectUSA Investor Guide

The SelectUSA Investor Guide is a resource designed to assist investors with establishing and expanding business operations in the United States. The Investor Guide provides a high-level overview of many of the most common topics of interest to investors, including:

- Business Structure
- Taxes
- Workforce
- Restrictions on Foreign Direct Investment
- Intellectual Property
- The Committee on Foreign Investment in the United States (CFIUS)
- Banking
- Site Selection

Logistics

Trucking Costs

The American Transportation Research Institute (ATRI) is a nonprofit organization that conducts research on the trucking industry and conducts an annual survey on industry costs. In 2021, ATRI calculated the average marginal trucking cost per mile across the United States to be $1.86. The report also breaks down the average marginal cost per mile by region. States are classified in the following regions (targeted states are marked in bold):

- ***Midwest***: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, **Ohio**, South Dakota, Wisconsin
- ***Northeast***: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
- ***Southeast***: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia
- ***Southwest***: New Mexico, Oklahoma, **Texas**
- ***West Coast***: Alaska, **Arizona**, **California**, Colorado, Hawaii, Idaho, Montana, Nevada, **Oregon**, **Utah**, Washington, Wyoming

Figure 10 provides ATRI's breakdown of its trucking cost estimates in each region. The West Coast has the lowest average marginal trucking cost per mile ($1.80), followed by the Southwest ($1.81).

Figure 10: Average Marginal Trucking Costs Per Mile by Region, 2021

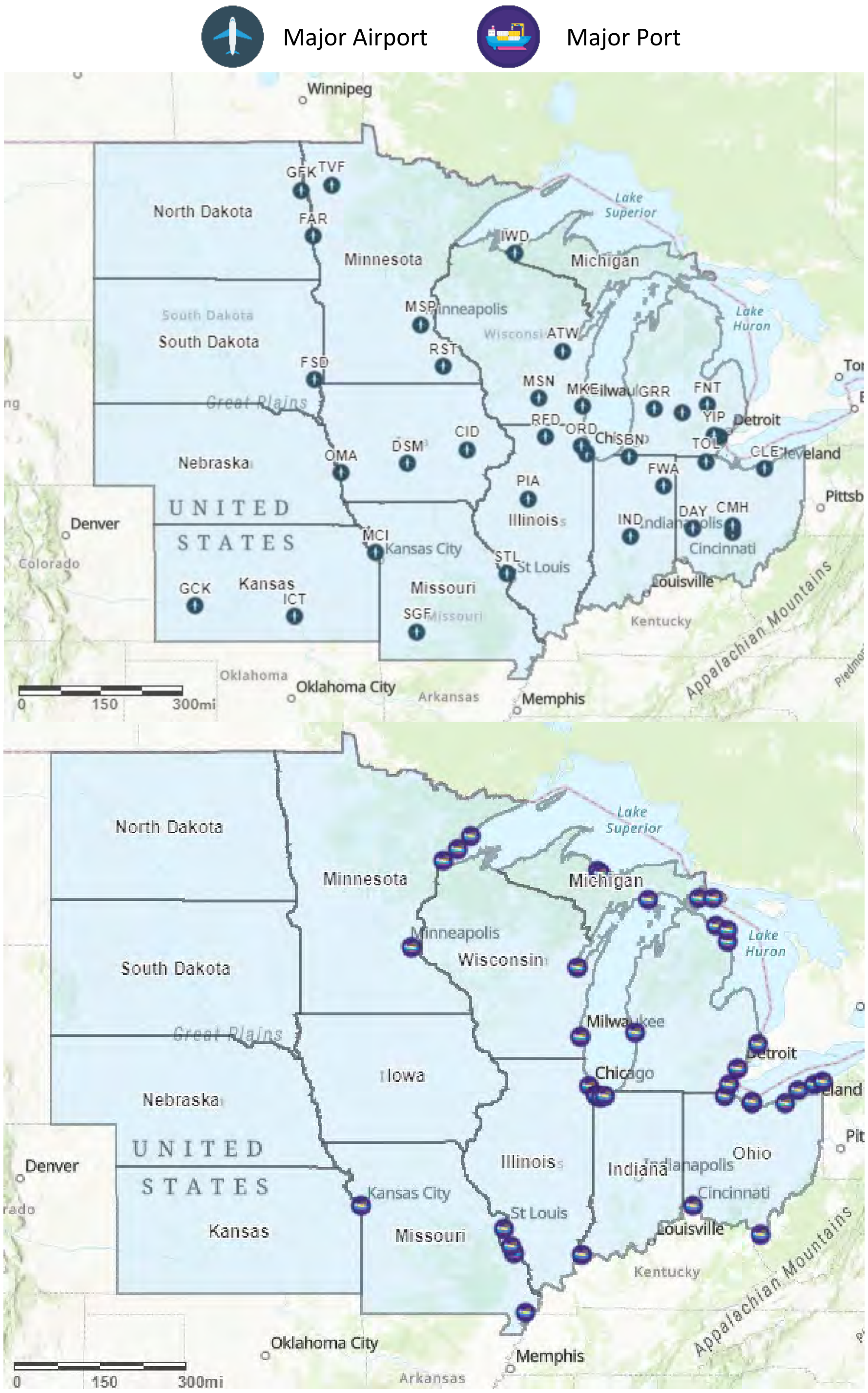
Motor Carrier Costs	Midwest	Northeast	Southwest	Southeast	West Coast
Vehicle-Based					
Fuel Costs	$0.41	$0.42	$0.41	$0.04	$0.43
Truck/Trailer Lease or Purchase Payments	$0.29	$0.28	$0.25	$0.28	$0.30
Repair and Maintenance	$0.18	$0.18	$0.17	$0.17	$0.16
Insurance	$0.09	$0.08	$0.09	$0.09	$0.08
Permits and Licenses	$0.02	$0.02	$0.02	$0.02	$0.01
Tires	$0.04	$0.04	$0.05	$0.04	$0.04
Tolls	$0.04	$0.05	$0.03	$0.03	$0.02
Driver-Based					
Driver Wages	$0.63	$0.65	$0.60	$0.62	$0.60
Driver Benefits	$0.18	$0.17	$0.20	$0.20	$0.16
TOTAL	$1.86	$1.89	$1.81	$1.86	$1.80

Source: ATRI, An Analysis of the Operational Costs of Trucking: 2022 Update

Infrastructure Maps

The Bureau of Transportation Statistics (BTS) publishes geospatial information, visualization tools, and datasets related to logistics infrastructure. The following figures were created using the BTS Airports, Ports, Rail, and Highways datasets. Figures 11 to 16 provide airport, port, rail, and highway infrastructure in the Midwest, South, and West regions.

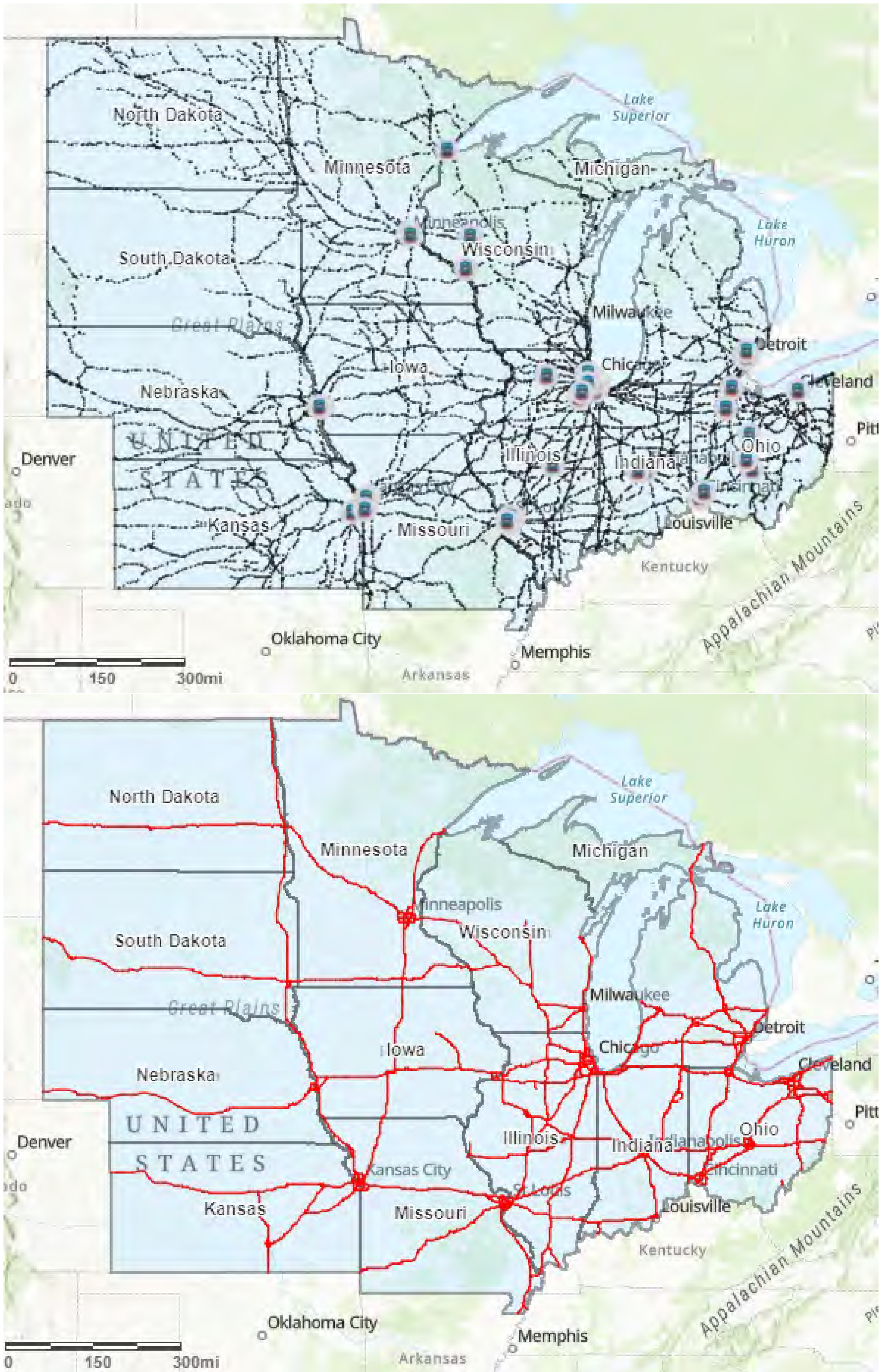
Figure 11: Airport and Port Infrastructure in the Midwest Region



Source: [Bureau of Transportation Statistics](), May 2022

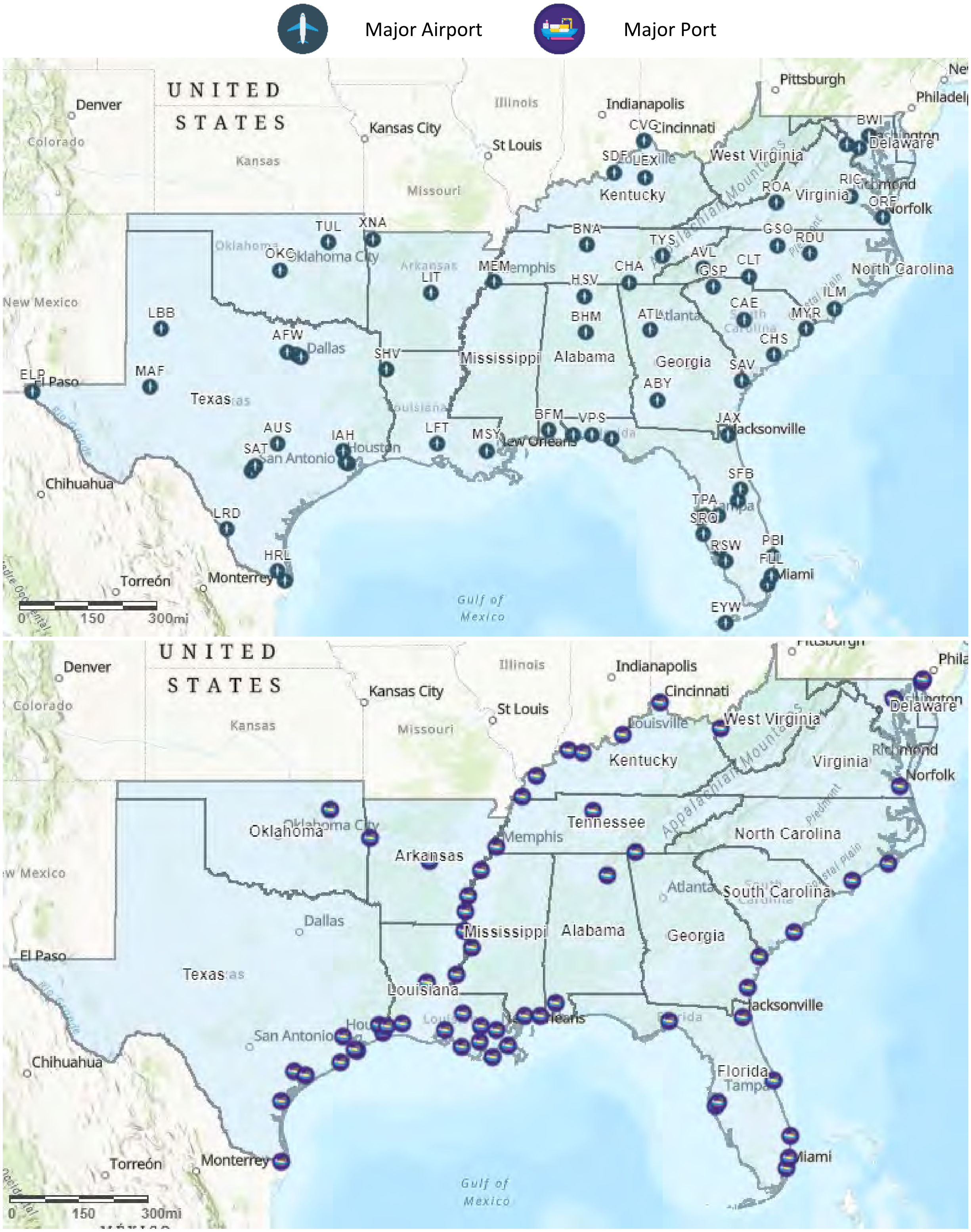
Figure 12: Rail and Highway Infrastructure in the Midwest Region

National Highway System ------- Rail Lines Intermodal (Rail)



Source: [Bureau of Transportation Statistics](), May 2022

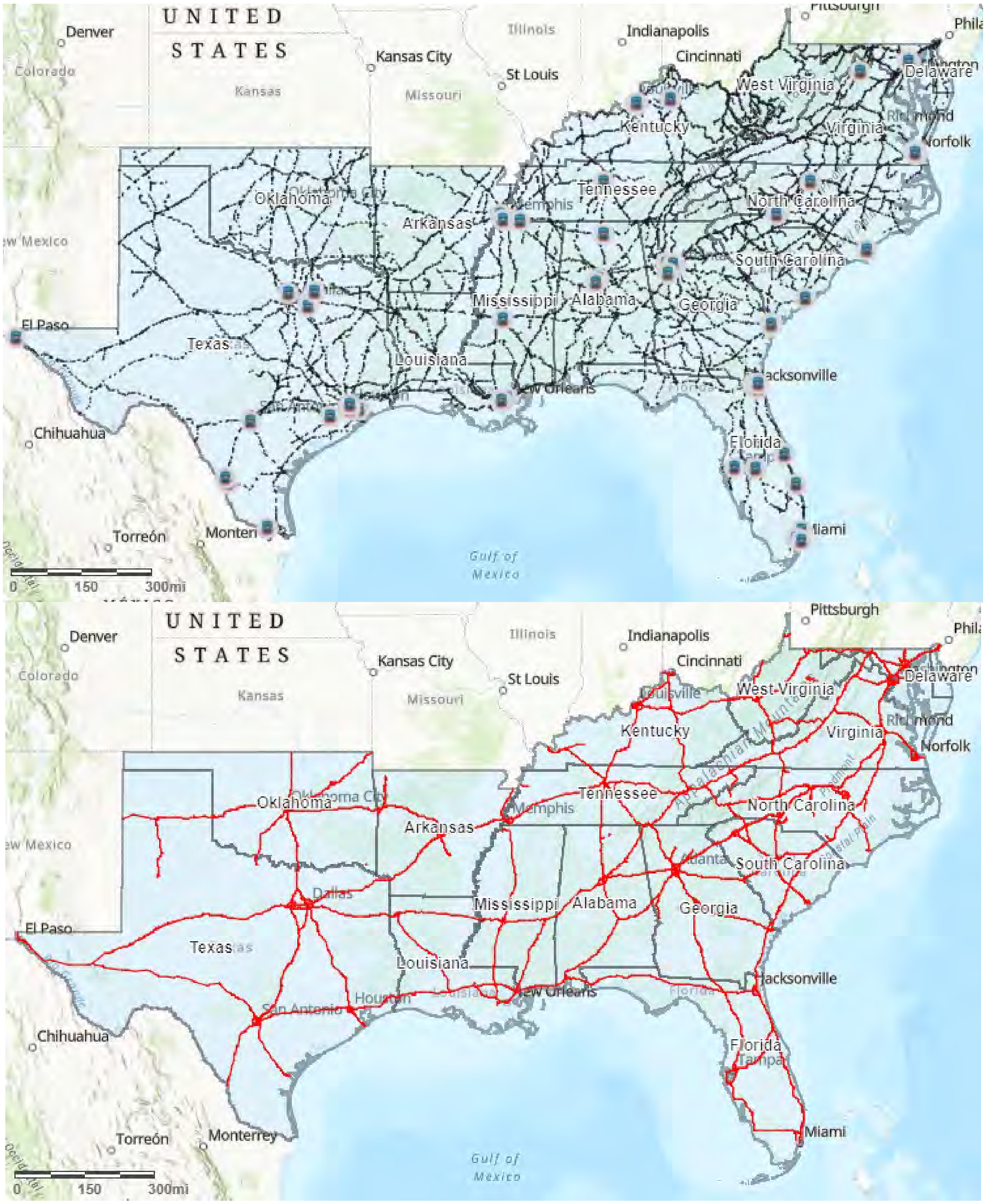
Figure 13: Airport and Port Infrastructure in the South Region



Source: Bureau of Transportation Statistics, May 2022

Figure 14: Rail and Highway Infrastructure in the South Region

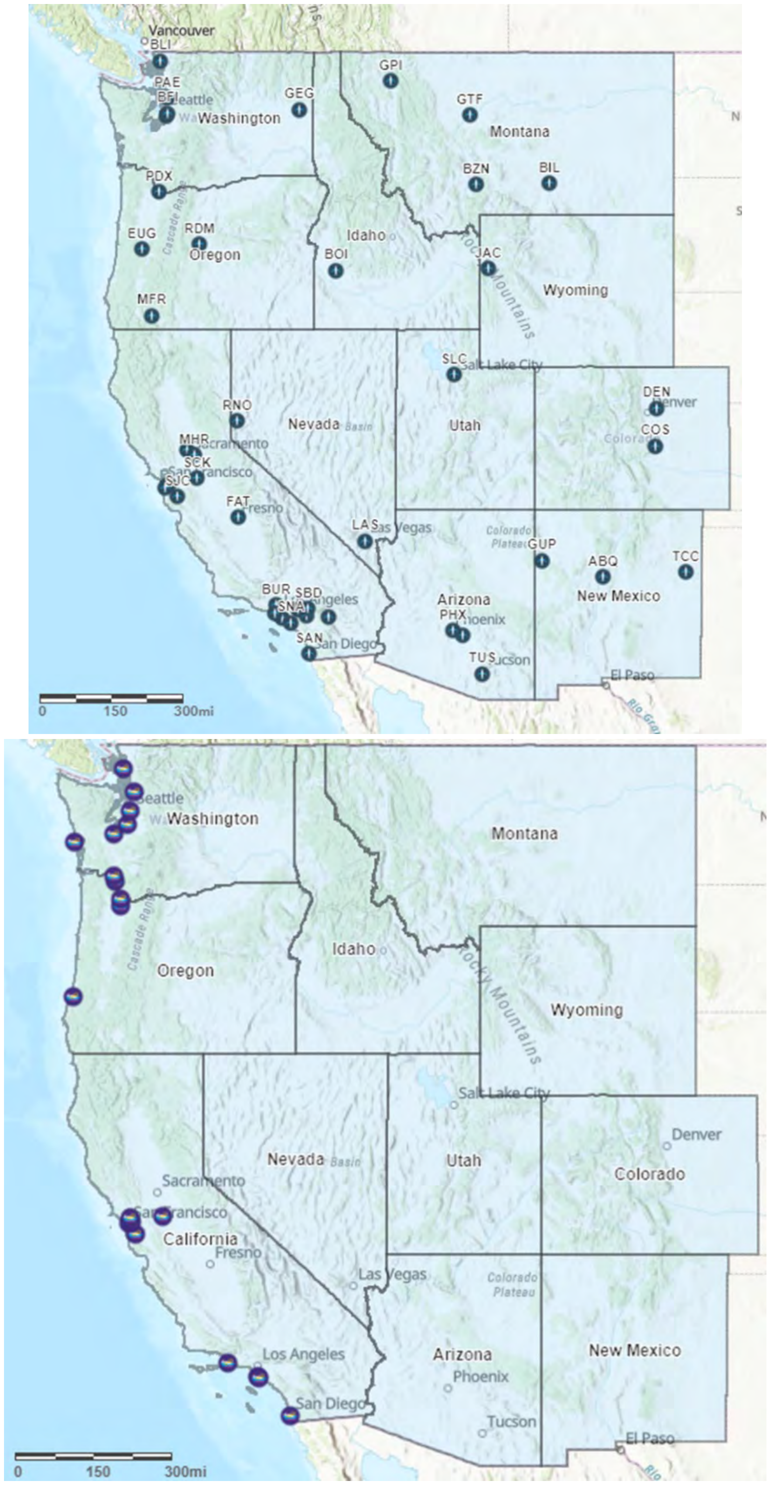
National Highway System ------- Rail Lines Intermodal (Rail)



Source: *[Bureau of Transportation Statistics](#), May 2022*

Figure 15: Airport and Port Infrastructure in the West Region

Major Airport Major Port



Source: Bureau of Transportation Statistics, May 2022

Figure 16: Rail and Highway Infrastructure in the West Region

National Highway System ------- Rail Lines Intermodal (Rail)

Source: *[Bureau of Transportation Statistics](), May 2022*