



SHERBURNE COUNTY RAIL IMPACT STUDY



Development Guidelines and Economic Analysis

October 2018



Prepared by



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An aerial photograph of a winding asphalt road cutting through a vast agricultural landscape. The foreground is dominated by a field of golden-brown crops, likely corn, with distinct rows and tire tracks. The road curves from the bottom left towards the top right. In the distance, a residential area with houses and trees is visible under a clear sky. The text '00 EXECUTIVE SUMMARY' is overlaid in large, white, bold, sans-serif font in the lower-left quadrant of the image.

00 EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

BACKGROUND

Sherburne County and the Cities of Becker and Big Lake have recognized increased interest and potential of multi-modal and industrial rail park opportunities within their communities, primarily along the existing Burlington Northern Santa Fe (BNSF) Staples Subdivision mainline. They have co-sponsored this study to better understand the opportunities that rail and related industries can bring to their communities, that would have a major economic impact to the region. Funding for this study was also provided by the Initiative Foundation, a certified community development financial institution serving central Minnesota.

STUDY TEAM

In early 2018, the team of SRF Consulting Group (SRF) and Economic Development Research Group (EDR Group) was selected to lead this study to help assess rail opportunities and economic benefit. During 2018, a small study team was assembled and met regularly to help review and assess the study's outcomes. The following are the key personnel involved in the study team.

SHERBURNE COUNTY

Dan Weber – Assistant County Administrator - Economic Development Specialist
Andrew Witter – Public Works Director / County Engineer

CITY OF BECKER

Greg Pruszinske – City Administrator
Marie Pflipsen – Community Development Director

CITY OF BIG LAKE

Clay Wilfahrt – City Administrator
Hanna Klimmek – Community Development Director

XCEL ENERGY

Mark Osendorf – Manager, Community Relations & Economic Development

CONNEXUS

Bruce Saylor - Principal - Community & Economic Development

BNSF RAILWAY

Justin Pearson - Economic Development - Regional Manager

SRF CONSULTING GROUP

Andy Mielke – Principal – Transportation Planning
Christopher Ryan – Transportation Planner
Paul Schroeder – Site Development Leader

ECONOMIC DEVELOPMENT RESEARCH GROUP

Steve Fitzroy – Executive Vice President
Derek Culter - Economic Analyst
Adam Winston - Senior Associate

STUDY GOALS

The study strived to achieve a variety of outcomes, primarily the following:

DEVELOPMENT GUIDELINES

- Study Areas and Connectivity to the BNSF Railway.
- Concept Site Plan of Multimodal facilities.
- Site and Development Criteria

FUNDING ANALYSIS AND DEVELOPMENT CONCEPTUAL COSTS

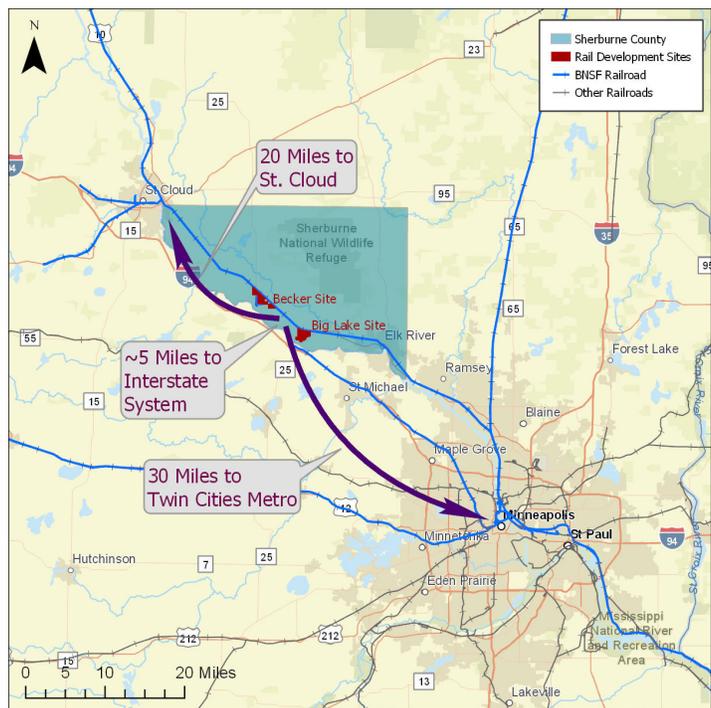
- Funding Sources and Criteria
- Joint Development Partnerships
- Development Conceptual Construction Costs
- Development Conceptual Operation and Maintenance Costs

ECONOMIC ANALYSIS

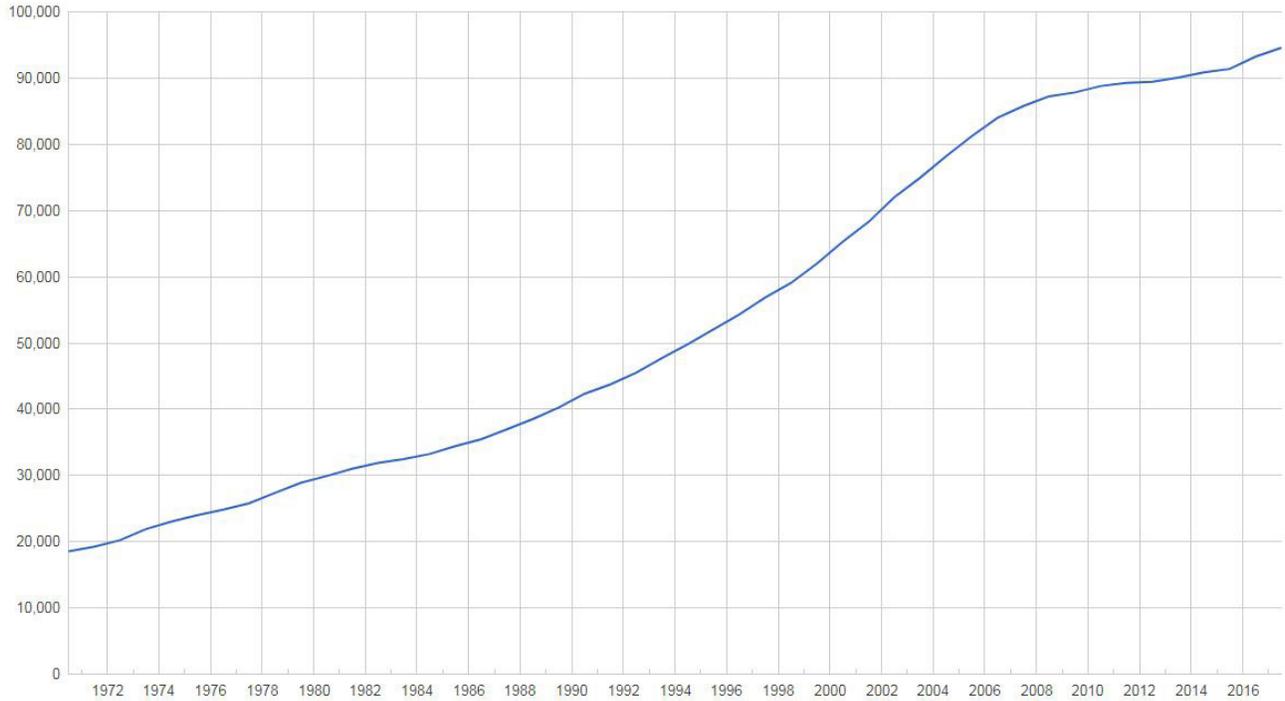
- Economic Profile and Growth
- Freight Data & Growth
- Quantifying Economic Dependence
- Locating Rail Dependent Industries
- Economic Development Profile of Tenants
- Capital Construction and Operations & Maintenance Impacts
- Local Traffic Impacts

STUDY CONTEXT

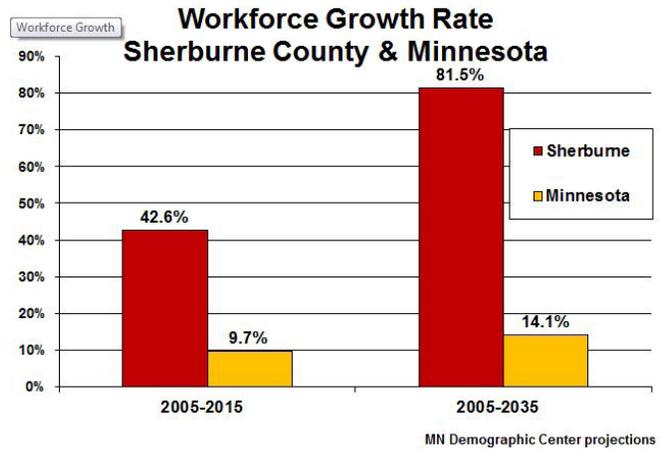
Sherburne County's population is roughly 93,528 (2016 est.) and is generally located between Minneapolis-St. Paul and St. Cloud, with the south perimeter parallel to the Mississippi River, U.S. Highway 10, and the BNSF Staples Subdivision mainline. This area has experienced rapid population and business growth in the past few years and expects continued growth for the foreseeable future. Two communities that have rail industry growth potential are the City of Becker (4,785 est. pop. 2016) and the City of Big Lake (10,638 est. pop. 2016), both with large tracts of developable properties adjacent to the BNSF Railway. BNSF Railway covers central and western portions of the United States and considers this area for high potential of rail development.



SHERBURNE COUNTY'S POPULATION IS ROUGHLY 93,528 (2016 EST.)



Businesses and industries need to find economical ways of receiving raw inputs and distributing final products to their final destinations. Geographic location is a critical factor in determining transportation costs and speed to market. This area has strong transportation corridors for both trucks (U.S. Highway 10 and Interstate 94) and rail (BNSF), along with proximity to the larger Minneapolis-St. Paul metropolitan market. The region is poised for enhanced transportation efficiency with a potential new river crossing and other highway improvements.



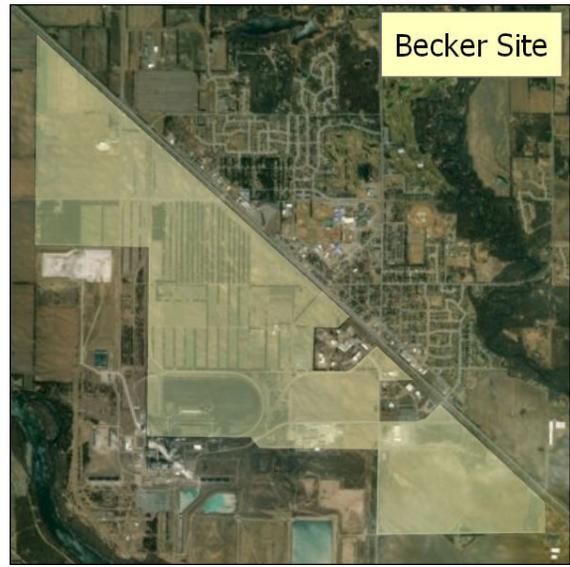
Industrial rail businesses that want to expand or locate in this region are finding challenges with available developable land in the current Minneapolis-St. Paul metropolitan market and are expanding their considerations to the next ring of opportunity, which includes the communities of Becker and Big Lake. These types of businesses can bring substantial economic growth to the region that can provide jobs in a competitive workforce environment, an increase to a community's tax base, and a supportive business environment.

STUDY FINDINGS AND OUTCOMES

The economic data and analysis included in this study shows positive growth trends in rail business and offers suggestions regarding the tenant mix that may be best supported by each community, along with estimated potential economic benefits and job growth in the area. It is expected that development of either the Becker or Big Lake sites will have positive economic benefits for the local community as well as the region as a whole.

BECKER SITE FINDINGS

The Becker site has existing rail business along with a primary rail user in the form of Xcel Energy's Sherco power plant. This is a potential advantage as there are already existing City-owned rail spurs and siding lines in place that can offer shared access and reduce market entry costs. Xcel Energy has recently stated they are decommissioning two of the three coal facilities at the Sherco plant which will noticeably reduce coal delivery, but provides new opportunities for future land development. Finding land suitable for heavy industrial activity while minimizing potential adverse impacts to the surrounding community is a frequent challenge for developers. The Becker site avoids many of these issues as it is largely separated from surrounding residential and environmentally sensitive properties by U.S. Highway 10 and the Mississippi River. The Becker site also has existing access to fiber optic network connections. This study found that the Becker site has great potential for business growth. The City is also supportive of a wide range of development types from light manufacturing to heavy industrial activity.



BIG LAKE SITE FINDINGS

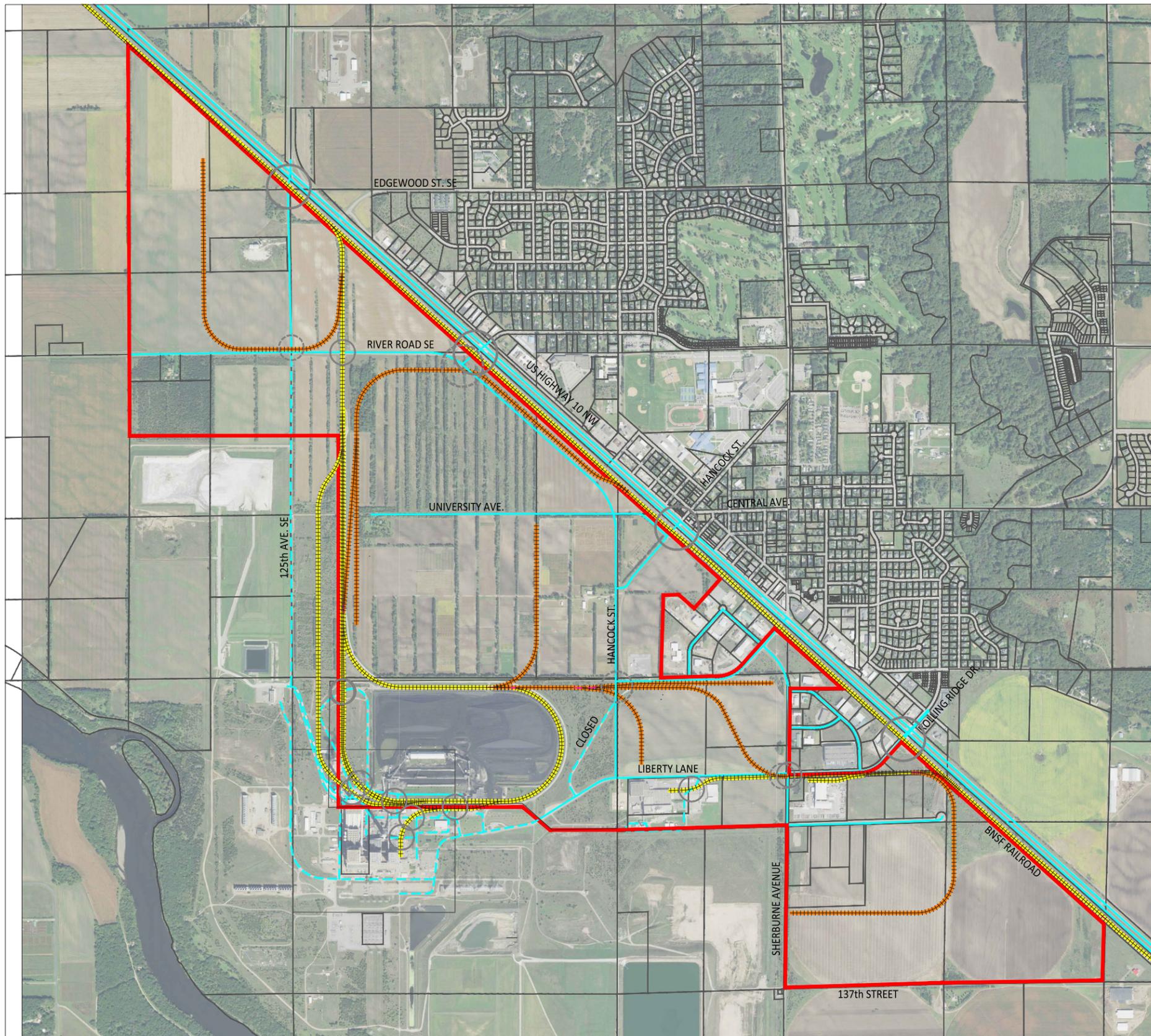
Big Lake is also well positioned for potential rail development with a significant amount of developable land adjacent to the BNSF mainline/U.S. Highway 10 corridor. The site has the potential to be developed into either a single large parcel or multiple smaller parcels. Due to the surrounding land uses, the Big Lake site is more suitable to less intense development such as warehousing or light industrial activity. The proposed site area also offers a short drive to Interstate 94, via Monticello, that provides an additional connection to interstate highways. Potential for fiber optic connectivity would also be available through a small extension of existing fiber lines. Existing developments in the site area primarily consist of small-scale solar farms.



CONCLUSION

This document summarizes the results of the Sherburne County Rail Impact Study and includes an overview of development guidelines and criteria, a preliminary estimate of potential development and construction costs, an overview of potential funding and financing sources, and a summary of an economic impact analysis. It is the hope of the study team that this document provides sufficient guidance and information for potential developers and other stakeholders to gain a thorough understanding of the Sherburne County rail sites, and the potential for new business development. The development guidelines and estimated cost information will also assist in the preparation of high-level site development costs.

The communities surrounding both the Becker and Big Lake sites have seen tremendous population and business growth in previous years, and these growth trends are expected to continue for the foreseeable future. Developments on these sites will benefit from rail connectivity, advantageous geographic proximity, and supportive local governments. The development of these sites is expected to have a substantial economic impact to the local community and the region, and multiple funding opportunities are available. Interested parties should contact staff at Sherburne County or the Cities of Becker and Big Lake for additional information.



LEGEND

- STUDY BOUNDARY (1720 ACRES)
- PARCEL BOUNDARIES
- RAIL-EXISTING
- RAIL-PROPOSED
- PUBLIC ROAD/STREET-EXISTING
- PRIVATE ROAD/STREET-EXISTING
- EXISTING RAILROAD CROSSING
- PROPOSED RAILROAD CROSSING

REGIONAL CONCEPT PLAN BECKER

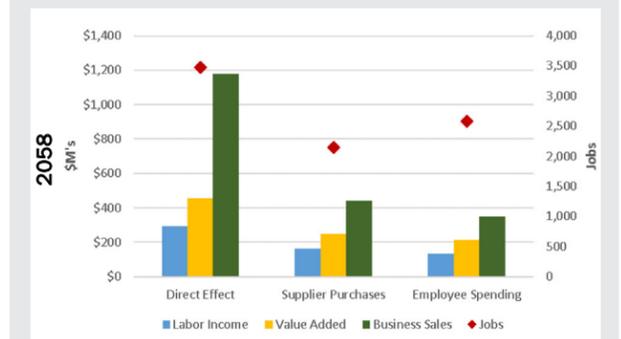
BECKER SITE FINDINGS

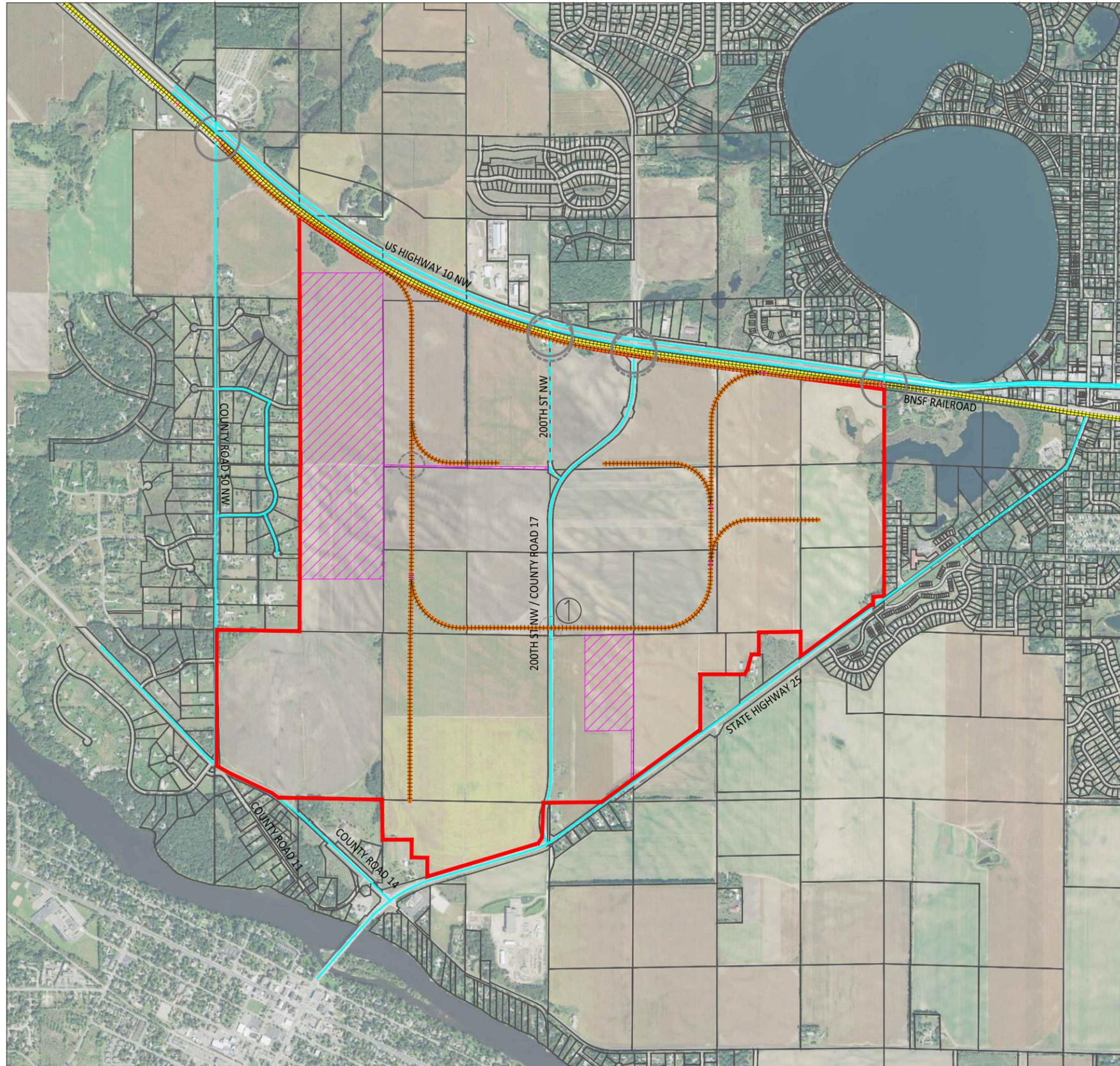
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ESTIMATED TENANT MIX AND ECONOMIC IMPACT AT FULL BUILD-OUT

STUDY AREA = 1,720 ACRES

- 154.8 ac (9.0%) = Warehouse/Distribution
- 398.0 ac (23.1%) = Manufacturing
- 900.0 ac (52.3%) = Industrial (Recycling/scrap/landfill, oil/gas extraction, utility XCEL)
- 250.0 ac (14.6%) = Transload Facilities
- 17.2 ac (1.0%) = Unusable Area (limited ex. wetland/lake/ etc.)





LEGEND

- STUDY BOUNDARY (1500 ACRES)
- PARCEL BOUNDARIES
- ▨ RAIL-EXISTING
- ▨ RAIL-PROPOSED
- PUBLIC ROAD/ STREET-EXISTING
- - - PRIVATE ROAD/ STREET-EXISTING
- EXISTING RAILROAD CROSSING
- PROPOSED RAILROAD CROSSING
- ▨ SOLAR PROJECT AREA / ACCESS
- ① GRADE SEPARATION OR CLOSED ROAD FOR UNIT TRAIN

REGIONAL CONCEPT PLAN

BIG LAKE

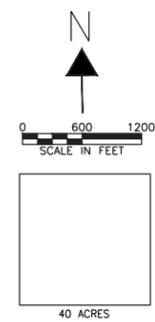
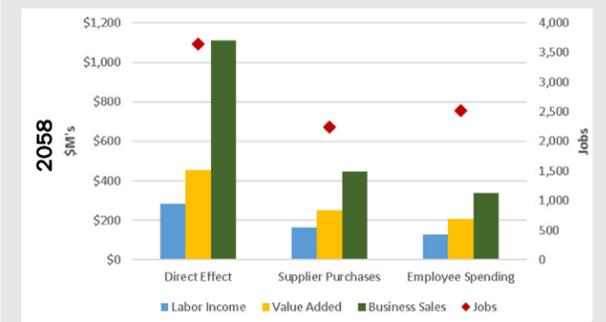
BIG LAKE SITE FINDINGS

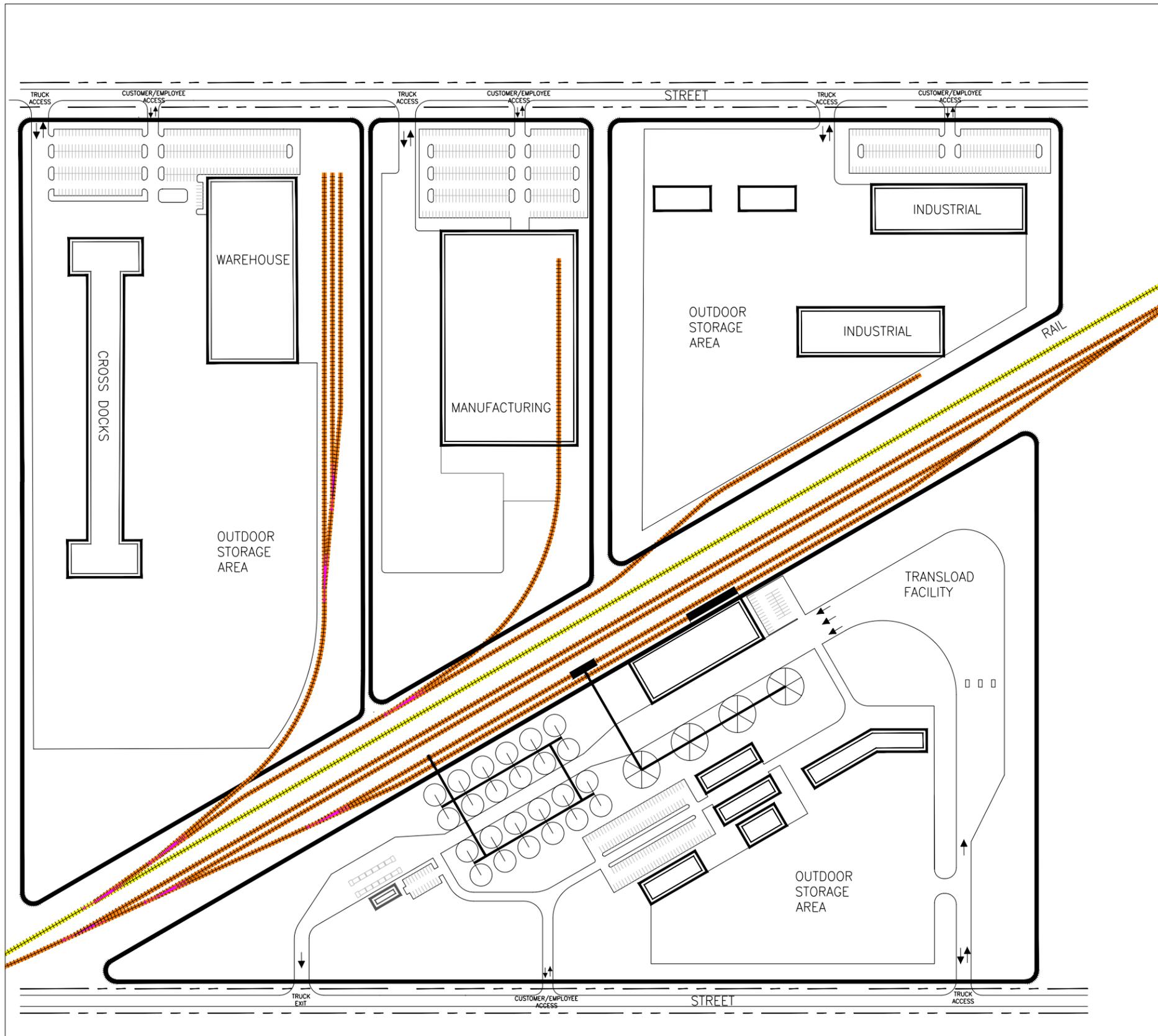
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ESTIMATED TENANT MIX AND ECONOMIC IMPACT AT FULL BUILD-OUT

STUDY AREA = 1,500 ACRES

- 750.0 ac (50.0%) = Warehouse/Distribution
- 120.0 ac (8.0%) = Manufacturing
- 250.0 ac (16.7%) = Industrial/Renewal Energy (ex. solar 173 ac/construction buildings)
- 350.0 ac (23.3%) = Transload/Agricultural Facilities
- 30.0 ac (2.0%) = Unusable Area (some ex. wetland/lake/ etc.)





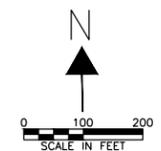
LEGEND

- RAIL-EXISTING
- RAIL-PROPOSED
- PROPERTY ARE.
- ROW
- BUILDING
- CURB OR EDGE OF PAVEMENT

CONCEPT SITE PLAN

160 acre example showing a mixed industrial/manufacturing site plan.

Note: This concept is provided for illustrative purposes only and is not intended as a recommendation or endorsement of a specific industry, facility type, or physical layout.



An aerial photograph of an industrial facility, likely a power plant or refinery, featuring a prominent tall, cylindrical smokestack in the center. The facility includes several large, multi-story buildings with flat roofs and various pipes and structures. The surrounding landscape is a mix of green fields, a large body of water, and a clear blue sky with scattered white clouds. The text '01 DEVELOPMENT GUIDELINES' is overlaid in white on the left side of the image.

01 DEVELOPMENT GUIDELINES

DEVELOPMENT GUIDELINES

OVERVIEW

The intent of these development guidelines is to provide general direction for the local communities to attract and grow industrial businesses as part of a rail park development. This section provides an overview of the development areas for both the Becker and Big Lake communities, along with anticipated/current rail connectivity. This section also includes a Concept Site Plan showing a potential layout for mixed-use rail industries as well as aerial images of existing rail-connected developments as examples. Finally, the Development Guidelines provide some guidance as to typical rail business standards, along with a suggested industry tenant mix for each city's study area. This document should be considered general guidance for preliminary review of potential development costs. Specific design standards and other requirements should be investigated thoroughly prior to site development.

INDUSTRY AND PROPERTY

1. Industry – Industrial businesses that benefit by using rail for shipping raw materials or finished products.
2. Location – Industrial rail parcels tend to benefit from close access to rail and trunk highway systems, which the communities of Becker and Big Lake provide, and tend to be assembled together in areas with flat land, less expensive property, and away from residential or sensitive areas.
 - A. Transportation – The existing BNSF rail line and Highway 10 provide immediate transportation benefits, along with close-proximity to I-94, and a potential new river crossing to I-94.
 - B. Land – Being outside of the Minneapolis-St. Paul metropolitan area, land prices are generally lower in cost hence making them more attractive to industrial rail users.
 - C. Topography – Rail needs a relatively flat area to be effective for track layout, thus the study areas provide parcels that accommodate these low slope grades.
 - D. Compatible Zoning and Land Use – The community of Becker already has rail users, primarily Xcel Energy, and is zoned and guided for industrial. The community of Big Lake has two solar farm projects within the study area and large areas of undeveloped land for industrial use. Both communities have areas designated for this use.

3. Property Size – To provide a facility and benefit from rail, most parcels will start at around 10 acres, may average more in the 20-40 acres, and reach 100+ acres with larger facilities. Industrial Rail properties tend to be a little larger than typical industrial properties. The study area provides a variety of parcel size options.
4. Type – Facilities Using and Complementary to Rail, and may involve multiple uses.
 - A. Transloading - transportation of product typically involving rail and truck, where beginning and end destination are not completed by one option. Also, loading of product may include a variety of options, such as forklift, conveyor, shoot, or other user specific devices. Primarily involving grain elevator, aggregate transport.
 - B. Production/Assembly – Manufacturing plants that ship product both by rail and truck, involving the assembly or use of the product.
 - C. Warehouse – Moving product via rail, for storage and future distribution by truck/rail.
 - D. Crossdock – Direct transfer of product from regional truck to local truck, with no on-site storage, generally a long skinny building that moves product from truck to truck via forklift. A complementary use to rail facilities.
 - E. Not Strong Options – Considered, but not favorable per site locations.
 - i. Intermodal – Transfer of standardized shipping containers, that are universal to many modes of transportation, such as ship, barge, rail, and truck. St. Paul is the location of the regional container transfer site.
 - ii. Multi-Modal – In this case, transportation of more than two options (rail and truck) seems unlikely, as ship/barge traffic is not prevalent in this region.
5. Location – Sherburne County has opportunities for rail industries due to affordable land, access to rail, proximity to trunk highways, close to a major metropolitan area, land use guidance for industry, flat terrain and open land, existing rail businesses, and interest from speculative businesses.

RAIL GUIDELINES

1. BNSF Railway Company is the primary owner and operator of the rail line, and have design standards and preferences on operations.
2. Rail Service – There are two general types of cargo rail service that is used, based on the end user, and are described further below.
 - A. Manifest Rail Services – Typical entry level into rail use, and common amongst small to medium rail users, where a local periodic train provides pick-up and drop-off in small groups of cars to each facility. Thus each train provides multiple stops along the route.
 - B. Unit Train Service – Common among larger tenants, a single train of at least 100 cars is loaded with the same commodity, generally going to the same location.

3. Key Rail Design Standards – Although there are many standard design details for rail, the following provides some general guidance.
 - A. General - Turn-outs and loading sections are almost always on straight segments and when calculating number of train cars, a single car is estimated at 65 feet. Public and private street/road crossings are signalized or signed for railroad crossings, and number of crossings should be minimized and as perpendicular as possible. Loading/unloading and siding tracks must be designed so that they are completely independent of railroad operating lines. Parallel tracks are usually 22 feet on-center from each other. Rails are 4 foot 8.5 inches (inside edge) apart for a single track.
 - B. Types – There are additional standards for the two typical standards of Industrial Trackage and Unit Train/Loop Facilities as further highlighted below.
 - i. Industrial Trackage (Carload or Non-Unit Facilities) has a maximum degree of horizontal curve of 9 degrees 30 minutes (or 603.80' minimum radius) and profile grade maximum of 1.5 percent.
 - ii. Unit Train/Loop Facilities has a maximum degree of horizontal curve of 7 degrees 30 minutes (or 764.49' minimum radius) and profile grade maximum of 1.5 percent, loop tracks at 0.5 percent maximum, and loading/unloading areas must be maintained on a flat grade (0.0 percent).

CITY/COUNTY ZONING REQUIREMENTS

1. Rail Crossings – Rail crossings at public and private streets/road can pose new challenges for regional and local vehicle circulation. Thus it is important to strategically locate these crossings to minimize cost and operations. Crossings can create added expense to developing streets/roads due to necessary realignment or relocation.
2. Access – Development parcel access from public streets/roads may require realignment or extension of public streets/roads and driveway spacing may be more restrictive along County Roads (1/4 mile) versus City Streets.
3. Zoning Type – Generally parcels would be within the city limits and zoned some sort of industrial use. Some of the perimeter parcels may have other zoning classifications which may require additional screening or buffering.
4. Development Standards – Each City has development standards within a general form or specific to the zoning type. The parcel would need to adhere to these items, such as setbacks, building, parking, landscape, and other items.
5. Approvals – Projects would most likely require a variety of approvals depending on the location and involvement of public improvements. This may include not only the user and rail authority, but also state, county, and local governments.
6. Utilities – Some parcels may not be fully serviced by sanitary sewer, watermain, and other small utilities, which may add some cost to bringing services to the project.
7. Stormwater – Sites will also need to adhere to governmental requirements for storm water, which would most likely require storm basins for water quality and quantity.

POTENTIAL TENANT MIX

POTENTIAL RAIL INDUSTRY CATEGORY DISTRIBUTION

STUDY AREA = BECKER = 1,720 ACRES

- 154.8 ac (9.0%) = Warehouse/Distribution
- 398.0 ac (23.1%) = Manufacturing
- 900.0 ac (52.3%) = Industrial (Recycling/scrap/landfill, oil/gas extraction, utility XCEL)
- 250.0 ac (14.6%) = Transload Facilities
- 17.2 ac (1.0%) = Unusable Area (limited ex. wetland/lake/etc.)

STUDY AREA = BIG LAKE = 1,500 ACRES

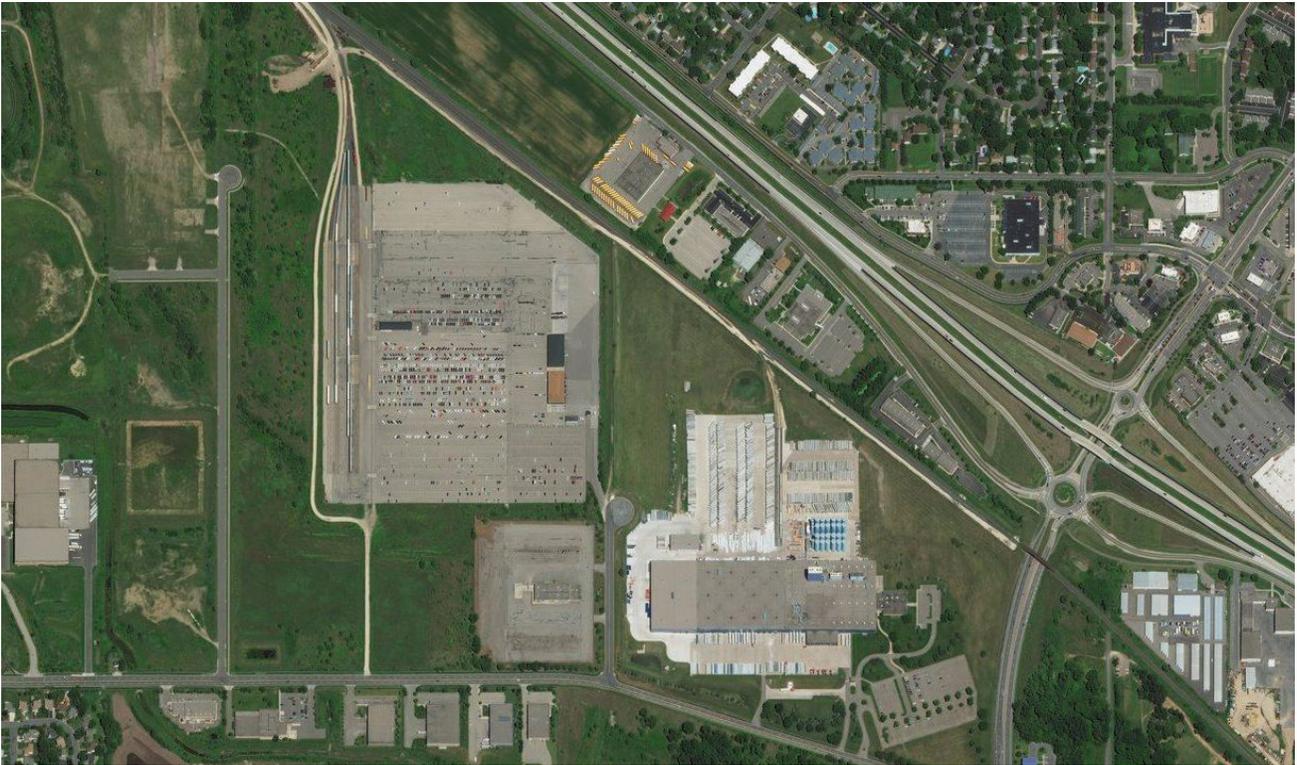
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- 30.0 ac (2.0%) = Unusable Area (some ex. wetland/lake/etc.)



Becker, MN - Example of light industrial/manufacturing rail user



Becker, MN - Example of light industrial/manufacturing rail user



Cottage Grove, MN - Example of light industrial/manufacturing rail user



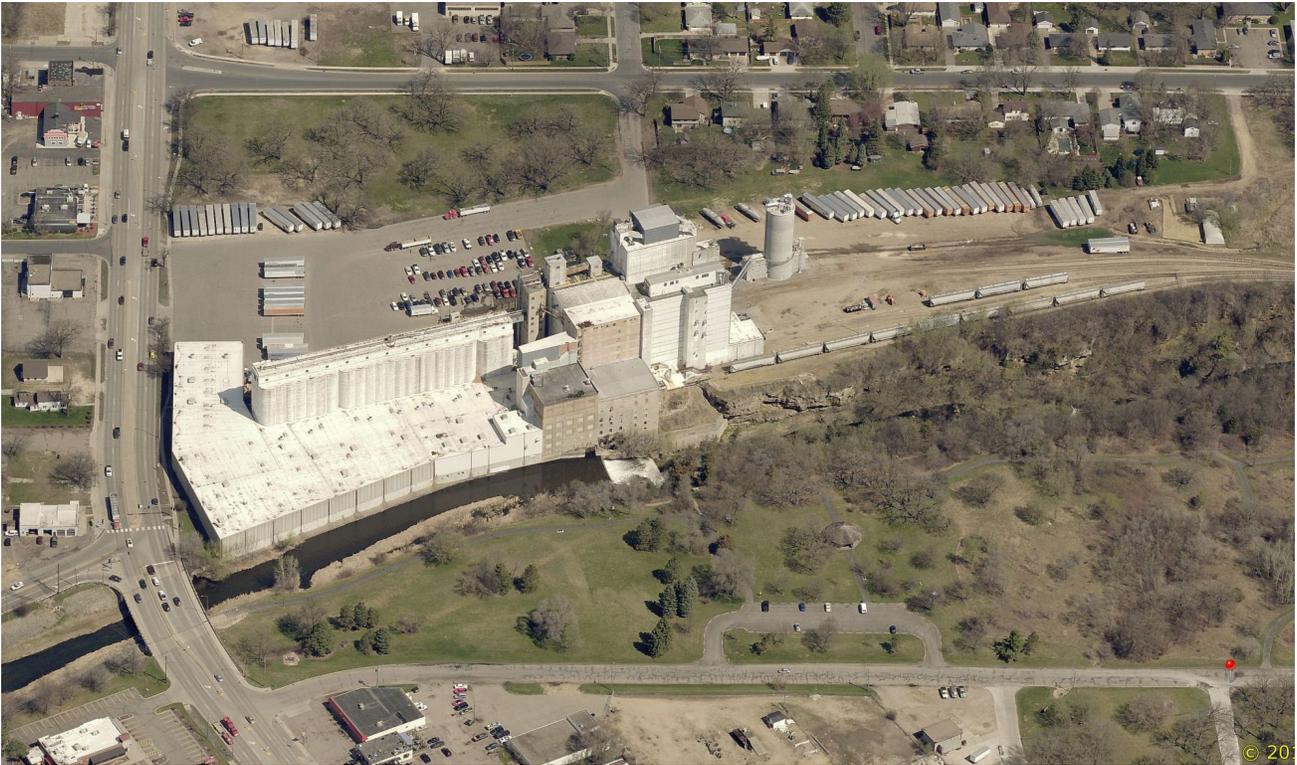
Saint Paul, MN - Example of transload facility (agriculture/urban) and transload/distribution of rail user



East Fairview, MN - Example of storage/transload facility (chemical/fossil fuels) of rail user



Janesville, MN - Example of industrial facility of rail user



Hastings, MN - Example of industrial mill of rail user



Cottage Grove, MN - Example of industrial (chemical) facility of rail user



Becker, MN - Example of industrial (energy coal) of rail user



Hope, MN - Example of storage/transload (agriculture)



Kansas City, KS - Example of Regional Logistics Park - Rail transfer facility



Kansas City, KS - Example of Regional Logistics Park - Full site with Interstate connection

An aerial photograph of a vast agricultural landscape. In the foreground, a green tractor is visible, plowing a field of golden-brown soil. The field is divided into long, straight rows. In the middle ground, there is a large area of blue solar panels. The background shows a line of trees and a clear blue sky.

02

DEVELOPMENT COST AND POTENTIAL FUNDING SUMMARY

DEVELOPMENT COST AND POTENTIAL FUNDING SUMMARY

OVERVIEW

The intent of this section is to provide general direction and guidance on potential development costs for industrial businesses in the study area. This guidance should be used for preliminary cost estimation only. The section also includes an overview of potential funding sources for site development including federal, state, and local grant opportunities.

INDIVIDUAL GENERAL COST SUMMARY

Since this study represents two larger segments within the communities of Becker and Big Lake, individual site plans and related costs are not available for the entire area, but an individual general improvement cost summary is provided below to assist in understanding typical development costs. These figures are in current dollars and derived from a variety of sources, thus costs are deemed generalized and not specific.

RAIL IMPROVEMENTS

- \$1,250,000 to \$1,750,000 per mile for Rail Track of Spurs and Siding(non-BNSF)
- \$1,250,000 to 1,750,000 per each Mainline Turnout (Enter/Exit System Off Main)
- \$75,000 to \$150,000 per each Spur and Siding Turnout(switch)
- \$300,000 to \$400,000 per each Major Road Crossing
- \$125,000 to \$175,000 per each Minor Road Crossing
- \$10,000 to \$20,000 per linear foot of RR Bridge
- \$8,000 to \$15,000 per acre for RR right-of-way land acquisition costs(rural)
- 14% to 38% of construction cost for Soft Costs (Legal, Administration, Design, Fiscal)
- Variable Cost – Land Acquisition/Easement/Agreement Costs





STREET/ROAD IMPROVEMENTS (RURAL/SUBURBAN)

- \$2,000,000 to \$3,000,000 per mile for 2-Lane Rural/Suburban Local Street (with intersections, sanitary, water, and sidewalk)
- \$4,000,000 to \$6,000,000 per mile for 4-Lane Rural/Suburban Local Street / Regional Road (with intersections, sanitary, water, and sidewalk)
- 25% to 38% of construction cost for Soft Costs (Legal, Administration, Design, Fiscal)
- Variable Cost – Right-of-Way Land Acquisition Costs (Dedicated or Purchased)

PRIVATE DEVELOPMENT IMPROVEMENTS (SUBURBAN)

- \$70 to \$125 per square foot for Office-Warehouse, Light Industrial Building (may not include full interior buildout or tenant equipment), typical range
- \$200,000 to \$400,000 per acre for Site Improvements (grading, storm, utilities, pavement, lighting, landscaping), but may not include significant demo costs.
- 14% to 38% of construction cost for Soft Costs (Legal, Administration, Design, Fiscal)
- Variable Cost – Land Acquisition Costs

GENERAL DEVELOPMENT AND STUDY AREA COSTS

To assess possible development costs for rail businesses, the following illustrates a general full build-out development cost per acre, based on a 160-acre parcel with four different parcels/users. This model is provided to help balance variations in development per site, to obtain a better average. Using this per acre development cost, the study areas can provide a general overall potential development cost for each community, which in turn can help derive economic impacts.

EXAMPLE SITE = 160-ACRE, 4 PARCELS, DIFFERENT USE, CONCEPT SITE PLAN AREA COSTS

RAIL DEVELOPMENT COST = \$12,853,120

- \$1,450,000 per mile X 5.27 miles for Rail Track of Spurs/Siding = \$7,641,500
- \$1,500,000 per each X 2 each Mainline Turnout X 0.1 (10% study area) = \$300,000
- \$100,000 per each X 13 Spur and Siding Industry Turnout(switch) = \$1,300,000
- \$200,000 per each X 4 Road Crossing = \$800,000
- 28% Soft Costs (Legal, Admin, Design, Fiscal), \$10,041,500 X 0.28 = \$2,811,620
- Does not include Land Costs - Land Acquisition/Easement/Agreement Costs

STREETS / ROADS DEVELOPMENT COST = \$4,793,600

- \$3,500,000 per mile for Streets / Roads X 1.07 miles = \$3,745,000
- 28% Soft Costs (Legal, Admin, Design, Fiscal), \$3,745,000 X 0.28 = \$1,048,600
- Does not include Right-of-Way Land Acquisition Costs (Dedicated or Purchased)

PRIVATE PROPERTY DEVELOPMENT COST = \$218,732,400

- Building: \$90 per square foot of building X 1,468,464 SF = \$132,161,760
 - Site Plan illustrates 734,232 SF (0.13 Floor-Area-Ratio)
 - Potential 0.25 to 0.29 FAR
 - 734,232 SF X 2 = 1,468,464 SF (0.26 Floor-Area-Ratio) or 33.71 acres
- Site: \$300,000 per property acre (excluding building) X 91.60 acres = \$27,480,000
 - 125.31 acres(site and building) – 33.71 acres(building) = 91.60 acres (site)
- 28% Soft Costs (Legal, Admin, Design, Fiscal), \$211,038,000 X 0.28 = \$59,090,640
- Does not include Land Acquisition Costs

160 ACRE – FULL DEVELOPMENT BUILD-OUT DEVELOPMENT COST = \$236,379,120 (\$1,477,370 PER ACRE)

- \$12,853,120 (Rail) + \$4,793,600 (Road) + \$218,732,400 (Property) = \$236,379,120
- \$236,379,120 / 160 Acres = \$1,477,370 per Acre of Full Build-out Cost

FULL BUILD-OUT DEVELOPMENT COST = \$4,757,131,400

BECKER STUDY AREA (1,720 ACRES X \$1,477,370 PER ACRE) = \$2,541,076,400

BIG LAKE STUDY AREA (1,500 ACRES X \$1,477,370 PER ACRE) = \$2,216,055,000

OPERATION AND MAINTENANCE COSTS

Operation and Maintenance Costs tend to be considered when assessing property's long-term costs. Although each site is variable, the following provides a general estimate to some of these typical costs for annual maintenance and operation and does not include reconstruction, major improvements(mill and overlay), and possibly taxes/insurance. These figures are in current dollars to this study and derived from a variety of sources, thus costs are deemed generalized and not specific.

ANNUAL SPUR/SIDING RAIL OPERATIONS AND MAINTENANCE (RAIL LINE, INTERSECTIONS, ETC.)

- \$15,000 to \$40,000 per mile for Rail Track of Spurs and Siding(non-BNSF)

STREET/ROAD OPERATION AND MAINTENANCE COST (SNOW REMOVAL, PAVEMENT PATCHING, ETC.)

- \$5,000 to \$15,000 per mile for Streets / Roads

PRIVATE PROPERTY OPERATION AND MAINTENANCE COST (BUILDING AND SITE, SNOW REMOVAL, PAVEMENT PATCHING, LAWN MOWING, ETC.).

- \$20,000 to \$60,000 per acre for Private Property (for building and site)
- \$2.50 to \$4.50 per square foot of industrial building (for building and site)



GENERAL OPERATION AND MAINTENANCE COST EXAMPLE SUMMARY OF STUDY AREAS

To assess possible operation and maintenance costs for rail businesses, the following illustrates a general cost per acre, based on a 160-acre parcel with four different parcels/users, per concept site plan. This model is provided to help balance variations in development per site, to obtain a better average. Using this per acre development cost, the study areas can provide a general overall potential operation and maintenance cost for each community's study area, which in turn can help derive economic impacts.

EXAMPLE SITE = 160-ACRE, 4 PARCELS, DIFFERENT USE, CONCEPT SITE PLAN AREA COSTS

ANNUAL RAIL OPERATION AND MAINTENANCE COST = \$158,100

- \$30,000 per mile for Rail Track X 5.27 miles = \$158,100

ANNUAL STREETS / ROADS OPERATION AND MAINTENANCE COST = \$10,700

- \$10,000 per mile for Streets / Roads X 1.07 miles = \$10,700

ANNUAL PRIVATE PROPERTY OPERATION AND MAINTENANCE COST = \$5,100,000

- \$3.50 per square foot of building X 1,468,464 SF = \$5,139,624
 - Site Plan illustrates 734,232 SF (0.13 Floor-Area-Ratio)
 - Potential 0.25 to 0.29 FAR
 - 734,232 SF X 2 = 1,468,464 SF (0.26 Floor-Area-Ratio)
- \$40,000 per property acre (building/site, excl rail/road) X 125.31 acres = \$5,012,400
 - Or 0.26 Floor-Area-Ratio of 125.31 acres = 32.58 acres
 - Calculates to 1,419,210 sf X \$3.5 per SF = \$4,967,238

160 ACRE - ANNUAL OPERATION AND MAINTENANCE COST = \$5,268,800 (\$32,930 PER ACRE)

- \$158,100 (Rail) + \$10,700 (Road) + \$5,100,000 (Property) = \$5,268,800
- \$5,268,800 / 160 Acres = \$32,930 per Acre of O + M

ANNUAL OPERATION AND MAINTENANCE COST = \$106,034,600

BECKER STUDY AREA (1,720 ACRES X \$32,930 PER ACRE) = \$56,639,600

BIG LAKE STUDY AREA (1,500 ACRES X \$32,930 PER ACRE) = \$49,395,000

POTENTIAL FUNDING SOURCES

Funding for multi-modal transportation infrastructure projects may be found through a variety of sources including private sector contributions, competitive federal grants, state programs, and other sources. The table below summarizes the key characteristics of programs that may be applicable to all or part of a potential multi-modal development at the Sherburne County rail sites. Additional information regarding funding limits/minimums, project eligibility, evaluation and selection criteria, a summary of the application process, and examples of projects funded using each program is also provided. Additional funding opportunities not discussed in detail in this table include public-private partnerships, tax credits, and tax increment financing. The Minnesota Department of Employment and Economic Development¹ provides a number of financial assistance programs and certification programs that may assist in project funding and development.

It is very common for multi-modal transportation infrastructure projects to be funded through a combination of private and public sources, but the precise breakdown in cost share will be determined by the characteristics of each project individually. For example, the planned Cedar Rapids, Iowa Logistic Park was awarded a federal FASTLANE Grant which provided funding for more than half of the estimated project costs. Meanwhile, two recent logistics park developments in Kansas City and Oklahoma City were developed entirely through private funding sources. Private funding sources are typically applied toward site features such as buildings and equipment (inside the fence), while public funding sources are more often applied to -or restricted to- features such as roadway and rail connections or other public infrastructure improvements (outside the fence).

	FUNDING PROGRAM/SOURCE	FUNDING AMOUNTS/LIMITS/ MINIMUMS	ELIGIBILITY	EVALUATION/SELECTION CRITERIA	APPLICATION PROCESS	FREQUENCY/ AVAILABILITY	PROJECT EXAMPLES
1	Better Utilizing Investments to Leverage Development (BUILD) Grants (Replaces TIGER)	<ul style="list-style-type: none"> For 2017 round: <ul style="list-style-type: none"> \$1M min award (rural) \$25M max award \$50M max per state 20% funding reserved for rural projects Cost Share: 80% urban projects; 100% rural projects 	<ul style="list-style-type: none"> Applicants: State, local and tribal governments, transit agencies, port authorities, MPOs, and other political subdivisions of State or local governments. Use: Road or bridge projects, public transportation projects, passenger and freight rail transportation projects, port infrastructure investments and intermodal projects. 	<ul style="list-style-type: none"> Safety State of Good Repair Economic Competitiveness Environmental Sustainability Quality of Life Innovation Partnership 	<ol style="list-style-type: none"> Submit Application to DOT DOT staff determine whether project satisfies statutory requirements and selection criteria and determines awards 	<ul style="list-style-type: none"> Annual appropriation 	<ul style="list-style-type: none"> Willmar Rail Connector and Industrial Access South Dakota Freight Capacity Expansion Project
2	Infrastructure for Rebuilding America Grants (INFRA) (Replaces FASTLANE)	<ul style="list-style-type: none"> Minimum grant award: <ul style="list-style-type: none"> Large Project: \$25M Small Project: \$5M Large Project defined as lesser of: <ul style="list-style-type: none"> \$100M 30% of State's Federal-aid apportionment 50% larger State's apportionment for multi-state projects 	<ul style="list-style-type: none"> Applicants: State, MPO in urbanized area > 200,000, Local government, Political subdivision of a State or local government, Special purpose district or public authority with a transportation function, Federal land management agency, Tribal government or a consortium of tribal governments, Multi-State or multijurisdictional group of public entities. Use: Highway freight projects on NHFN, highway or bridge project carried out on NHS, railway-highway grade crossing or grade separation projects, intermodal or freight rail freight projects or surface transportation projects facilitating direct intermodal interchange, transfer, or access to the facility. 	<ul style="list-style-type: none"> Support for national or regional economic vitality Leveraging of Federal funding Potential for innovation in environmental review/permitting, use of experimental project delivery authorities, or safety and technology. Performance and Accountability Additional considerations Geographic diversity Project readiness 	<ol style="list-style-type: none"> Submit Application to DOT DOT staff determine whether project satisfies statutory requirements and selection criteria and determines awards 	<ul style="list-style-type: none"> Annual appropriation 	<ul style="list-style-type: none"> Cedar Rapids Logistics Park Port of Savannah International Multi-Modal Connector
3	Minnesota Highway Freight Program	<ul style="list-style-type: none"> \$20.8 to 25.5M available annually through 2022 Minimum award is \$500,000 Up to 10% may be spent on intermodal projects May be used for up to 80 percent of eligible project cost 	<ul style="list-style-type: none"> Applicants: Cities, Counties, and other governmental entities Use: Project must be on public road and provide clear benefit to highway-based freight transportation. Projects should improve the safety, mobility, or efficiency of freight transportation, or improve road access to freight facilities. 	<ul style="list-style-type: none"> Truck volumes Safety Mobility Facility Access Readiness Cost Effectiveness 	<ol style="list-style-type: none"> Submit Application to MnDOT MnDOT staff determine whether project satisfies statutory requirements and selection criteria and determines awards 	<ul style="list-style-type: none"> Annual solicitation 	<ul style="list-style-type: none"> Duluth Port Intermodal Container Terminal Expansion

¹ <https://mn.gov/deed/government/financial-assistance/>

	FUNDING PROGRAM/SOURCE	FUNDING AMOUNTS/LIMITS/ MINIMUMS	ELIGIBILITY	EVALUATION/SELECTION CRITERIA	APPLICATION PROCESS	FREQUENCY/ AVAILABILITY	PROJECT EXAMPLES
4	Rail Rehabilitation and Improvement Financing Program (RRIF)	Direct loans and loan guarantees up to \$35 billion (up to 100% of project, repayment period up to 35 years) \$5.37 billion awarded to date Average: \$145 million Range: \$56,204 to \$2.45 billion	<ul style="list-style-type: none"> Applicants: railroads, state/local governments, joint ventures (w/ one railroad), and limited option freight shippers constructing new rail connections Use: railroad infrastructure development (new intermodal or railroad facilities, track, bridges, yards, buildings, and shops) 	<ul style="list-style-type: none"> Creditworthiness, including present and probable demand for rail service Safety enhancements Local, regional, national economic benefits Environmental improvements Rail system service or capacity improvements 	<ol style="list-style-type: none"> Complete RRIF Application Form, including project description, project costs/benefits, plans/drawings, amount requested, and other assumptions. FRA will conduct initial review within 30 days and request additional information as necessary. Final approval determined within 90 days 	<ul style="list-style-type: none"> Currently open DOT implementing changes under the FAST Act. The program will remain open during the transition. 	<ul style="list-style-type: none"> MBTA Positive Train Control Iowa Interstate Railroad locomotive purchases
5	Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program	<ul style="list-style-type: none"> No predetermined minimum or maximum thresholds for funding awards May be used for up to 80 percent of eligible project cost 20 percent non-Federal match; preference given to projects with 50 percent or less Federal share 	<ul style="list-style-type: none"> Applicants: State or group of States, political subdivision of a State, public agencies, Class II or III Railroads, any rail carrier in partnership with another eligible entity. Use: Highway-rail grade crossing improvement projects, rail line relocation and improvement, project necessary to enhance multimodal connections or facilitate service integration between rail service and other modes 	<ul style="list-style-type: none"> Benefit-cost analysis Effects on system and service performance Effect on safety, competitiveness, reliability and resilience Efficiencies from multi-modal integration Project readiness Qualifications of personnel and capacity to carry out project 	<ol style="list-style-type: none"> Screen applications for completeness and eligibility as outlined in Notice of Funding Opportunity Technical Panels evaluation eligible applications using evaluation criteria FRA Administrator selects projects using the evaluation criteria 	<ul style="list-style-type: none"> Multiple rounds per year but often with focus area (example: February 2018 round focused on positive train control) 	<ul style="list-style-type: none"> Current round not yet awarded as of this date.
6	Minnesota Rail Service Improvement (MRSI) Program Capital Improvement Loans	<ul style="list-style-type: none"> Maximum Loan Amount: \$200,000 	<ul style="list-style-type: none"> Eligible for projects that increase rail usage (e.g. expanding industrial spurs, adding storage and transfer capacity, loading efficiency improvements) 	<ul style="list-style-type: none"> Priority given to projects on lines rehabilitated under the MRSI program with or without applicant financial investment followed by project on Class II or III rail lines, then project on Class I railroads carrying less than 5,000,000 gross tones per mile per year. All other projects given lowest priority. 	<ol style="list-style-type: none"> Complete loan application and provide the following information: Detailed description of proposed project Audited financial statements for past two years Approval letter from primary lender Written description of collateral Letter of support from railroad Three bids for project work Legal description of property improved 	<ul style="list-style-type: none"> Applications accepted on rolling basis 	<ul style="list-style-type: none"> 103 capital improvement projects completed since 2000 totalling more than \$57 million.
7	Transportation Infrastructure Finance and Innovation Act (TIFIA)	<ul style="list-style-type: none"> Under FAST Act, \$275 to \$300M annually Minimum project costs: <ul style="list-style-type: none"> \$10M for TOD/local/rural projects \$15M for ITS projects \$50M for other surface transportation projects Limited to 33% of project costs 	<ul style="list-style-type: none"> Applicants: State governments, State infrastructure banks, private firms, special authorities, local governments, transportation improvement districts Use: Highways/bridges, ITS, intermodal connectors, transit/intercity bus/passenger rail vehicles/facilities, freight transfer facilities, ped/bicycle infrastructure, TOD, elements of port projects 	<ul style="list-style-type: none"> Creditworthiness Project readiness Ability to foster public/private partnerships Ability of TIFIA financing to encourage earlier construction Ability to reduce federal grant assistance <ul style="list-style-type: none"> Construction contracting can begin 90 days after execution of TIFIA credit 	<ol style="list-style-type: none"> Engage Bureau outreach staff Submit letter of interest/draft application Oral presentation to DOT Submit complete application DOT staff make recommendation to Council on Credit and Finance DOT executes credit agreement and distributes funds 	<ul style="list-style-type: none"> Annual funding available through FAST Act Applications accepted on rolling basis 	<ul style="list-style-type: none"> Southern California Logistics Rail Authority – Intermodal Facility Sea Point Intermodal Freight Transfer Facility
8	Private Activity Bonds	<ul style="list-style-type: none"> \$15B in tax-exempt bonds available in total \$10.3B issued/allocated to date 	<ul style="list-style-type: none"> Applicants: No eligibility requirements Use: Any surface transportation project receiving Federal assistance, any international bridge/tunnel with responsible international entity, and any facility for the transfer of freight from truck to rail or rail to truck receiving Federal assistance under Title 23 or Title 49. 	<ul style="list-style-type: none"> No specific standards apply to the consideration of applications beyond those set forth in applicable laws or regulations. 	<ol style="list-style-type: none"> Submit Application to DOT. No form is specified for application, but DOT recommends including project description, amount requested, financial structure and other information DOT staff reviews application and notified applicant of award. DOT has no specific standards for consideration of applications. 	<ul style="list-style-type: none"> Applications accepted on rolling basis 	<ul style="list-style-type: none"> CenterPoint Intermodal Center (3 issuances), Joliet, IL



03

ECONOMIC ANALYSIS

ECONOMIC ANALYSIS

The objective of the economic analysis was to estimate the potential long-term economic impacts generated by prospective tenants at the Becker and Big Lake Rail Park sites commonly known as the Sherburne County Rail Park. Development at each site is expected to generate additional economic activity for suppliers who support these tenants and from tenant or supplier employee spending. The profile of prospective tenants was initially derived from development guidelines and available capacity at each site. The economic impacts generated by these tenants (measured by employment, income, value-added, and business sales) was based on the expected full build-out capacity of each rail park site by 2058. This growth is considered “net-new” to each of the rail park sites. However, some of this growth may be attributable to relocation or transfer within the 6-County region¹ or within the state of Minnesota.

The analysis consisted of four primary tasks:

1. Developing a freight profile of rail shipments to/from the 6-County Region
2. Identifying manufacturing industries that use and produce these commodities for consideration as prospective tenants
3. Evaluating comparable rail parks (e.g. Mid-West and other) to identify other potential industries consistent with site development guidelines
4. Estimating economic impacts (e.g. jobs, income, business sales) generated by:
 - A. Rail Park Tenants
 - B. Operations and Maintenance activities
 - C. Site Construction

Long-term economic activity at each of the rail park sites includes both tenants and jobs providing operational and maintenance support. Combining both of these activities results in nearly 3,500 jobs at the Becker site and over 3,600 jobs at the Big Lake site (Table 1 & Table 2, respectively) associated with tenants. Inclusion of operating and maintenance activities adds an additional 266 to 305 jobs.

Including the additional economic contribution of supplier purchases and employee spending generates a total of nearly 8,800 jobs, \$628 million in income, and over \$2 billion in business sales at the Becker site and nearly 8,900 jobs, \$613 million in income, and nearly \$2 billion in business sales at the Big Lake site.

¹ The 6-County regions consists of the following Counties: Anoka, Ramsey, Hennepin, Sherburne, Stearns, & Wright

Table 1: Tenant and Operations and Maintenance Impacts – Becker Site (2058)

IMPACT TYPE	JOBS	LABOR INCOME (\$M'S)	VALUE ADDED (\$M'S)	BUSINESS SALES (\$M'S)
Tenants (Direct)	3,479	\$293	\$456	\$1,177
O&M (Direct)	305	\$23	\$29	\$53
Supplier Purchases	2,251	\$171	\$259	\$462
Employee Spending	2,748	\$142	\$226	\$370
Total	8,783	\$628	\$970	\$2,063

Table 2: Tenant and Operations and Maintenance Impacts – Big Lake Site (2058)

IMPACT TYPE	JOBS	LABOR INCOME (\$M'S)	VALUE ADDED (\$M'S)	BUSINESS SALES (\$M'S)
Tenants (Direct)	3,638	\$285	\$453	\$1,112
O&M (Direct)	266	\$20	\$25	\$46
Supplier Purchases	2,329	\$171	\$262	\$465
Employee Spending	2,658	\$137	\$219	\$358
Total	8,891	\$613	\$960	\$1,981

Additional truck traffic generated at each site in 2058 (Becker: 670 daily trucks and Big Lake: 448 daily trucks) was based on the types of businesses and estimates of business sales for each rail park tenant. These round-trip truck estimates were added to the expected growth in passenger car vehicles in 2058 (Becker: 3,784 and Big Lake: 3,904) used by rail park employees commuting to and from work both of which are expected to have an impact on the local road network.

Because this economic evaluation is based on a capacity analysis, it should be classified under the genre of a “capacity study”. This contrasts with other types of studies such as a marketing analysis or a revenue study. A marketing analysis study concentrates on evaluating the demand, supply of industrial lands, and siting requirements for prospective rail park sites and the expected growth in tenants given the absorption potential of industrial real estate markets. A revenue study focuses on estimating the property tax base, expected tax revenues, and wage effects dependent on full-build out within a pro-forma spreadsheet. These latter two types of studies are required to assess the timing of development and the flow of funds resulting from site development over time.

A

APPENDIX A

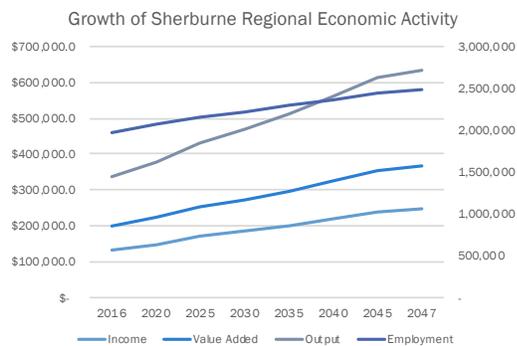
ECONOMIC ANALYSIS SUPPORTING DOCUMENTATION

Provided by Economic Development Research Group, Inc. (EDR Group)

Elements of Economic Analysis

- Economic Profile and Growth
- Freight Data & Future Growth
- Quantifying Economic Dependence on Rail Shipments
- Locating Rail Dependent Industries
- Economic Development Profile of Tenants
- Capital Construction and O&M Impacts
- Traffic Impacts on Local Road Network

Regional Economic Activity



Industry Activity in 2047: 6 County Sherburne Region				
Industry Name	Employment	Income (\$M)	Value Added (\$M)	Output (\$M)
Professional & Business Services	552,457	\$ 68,236.5	\$ 79,523.1	\$ 118,058.0
Education & Health Services	421,737	\$ 31,135.8	\$ 34,869.0	\$ 53,604.0
Other Services	385,633	\$ 13,210.6	\$ 18,305.6	\$ 30,364.2
Financial Activities	268,956	\$ 24,146.3	\$ 58,148.7	\$ 96,733.8
Government	233,739	\$ 18,631.3	\$ 22,986.0	\$ 23,681.9
Retail Trade	197,281	\$ 11,952.9	\$ 20,307.9	\$ 30,805.4
Manufacturing	114,219	\$ 28,908.2	\$ 49,711.1	\$ 130,002.2
Construction	97,486	\$ 6,486.7	\$ 8,440.2	\$ 15,626.6
Wholesale Trade	86,396	\$ 24,467.3	\$ 40,952.6	\$ 60,167.9
Transportation	45,504	\$ 8,065.7	\$ 11,880.2	\$ 24,231.5
Media and Information	37,636	\$ 7,621.2	\$ 14,662.5	\$ 34,281.2
Postal & Warehousing	26,473	\$ 2,957.6	\$ 3,578.0	\$ 5,616.8
Agriculture & Extraction	12,363	\$ 573.9	\$ 932.8	\$ 3,003.1
Utilities	5,032	\$ 1,149.4	\$ 2,840.3	\$ 7,497.8
Total	2,484,912	\$ 247,543.4	\$ 367,138.0	\$ 633,674.4

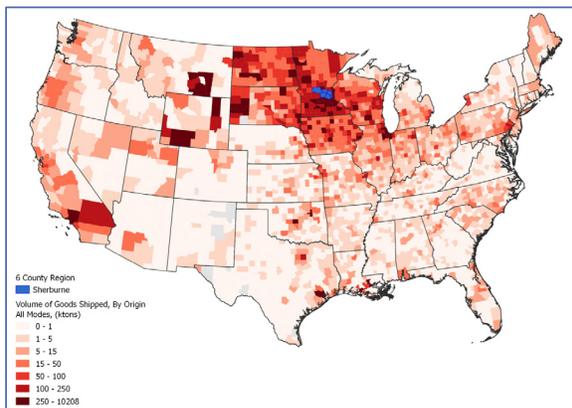
- Current forecasts from Moody's Extend to 2047. These show the forecast growth by major industry sector for the 6-county region. The 6-county region includes Anoka, Ramsey, Hennepin, Sherburne, Stearns, & Wright counties.
- Note that total output grows more rapidly than employment. This is due to the anticipated effects of increasing productivity – primarily in the manufacturing sector.

Methodology of Deriving County-Level Freight Data

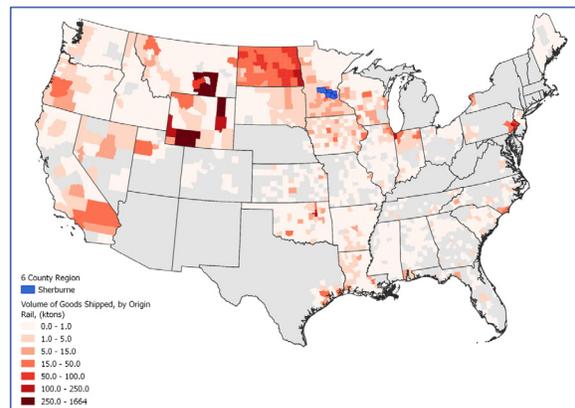
- Used to Isolate 6 county Region from wider FAFzone
 - FAF 4.2 Data Used
 - Interpolated between 2015 – 2020 to get at 2016
 - Allocate activity based on industry production and consumption of FAF commodities
 - Ties into IMPLAN model (County – Industry)
 - More accurate than simple employment Counts
 - Decomposes FAF Regions into Counties
- The exercise to develop a baseline set of rail flows was accomplished by down allocating freight from the Minneapolis Combined Statistical Area (CSA) FAF region to the 6-County region by linking the FAF commodity profiles to industries that use and produce these commodities (using IMPLAN industry data) and then proportionally allocating these freight flows to each county individually.

Inbound Freight Tonnage (2016)

All Modes



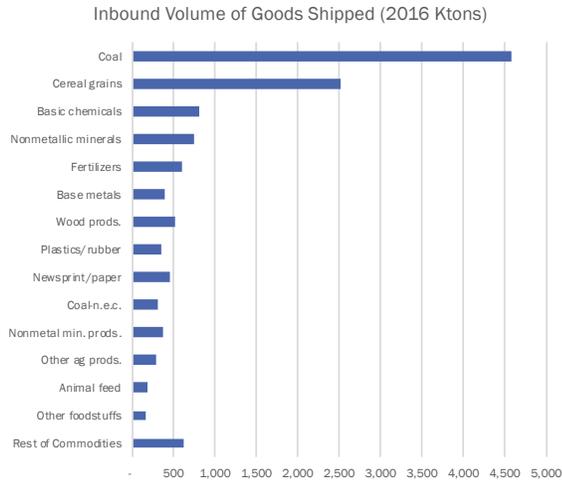
Rail Only



- Inbound freight for the 6-county region comes primarily from adjacent states and from the coal fields in Montana and Wyoming. There is also some trade with West Coast states – primarily through the ports of Los Angeles and Long Beach in Southern California
- Rail commodities are currently heavily oriented toward coal shipments, with additional rail-dependent industries involved in the exchange of commodities with North Dakota – primarily due to grain shipments and shale oil development in that state.

2016 Inbound Rail Commodities

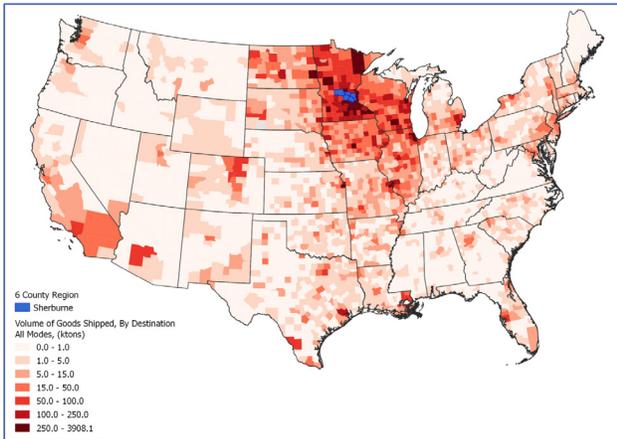
Commodities	Value of Goods Shipped (\$M)	Volume of Goods Shipped (Ktons)
Coal	\$ 66.8	4,580.4
Cereal grains	\$ 700.6	2,505.2
Basic chemicals	\$ 582.2	803.0
Nonmetallic minerals	\$ 85.8	745.2
Fertilizers	\$ 252.4	601.1
Base metals	\$ 295.6	388.8
Wood prods.	\$ 253.8	518.6
Plastics/rubber	\$ 728.7	342.0
Newsprint/paper	\$ 244.0	445.8
Coal-n.e.c.	\$ 351.2	314.2
Nonmetal min. prods.	\$ 68.8	359.7
Other ag prods.	\$ 176.4	282.3
Animal feed	\$ 104.7	181.7
Other foodstuffs	\$ 109.6	169.6
Rest of Commodities	\$ 4,123.9	\$ 618.1
Total	\$ 8,144.5	\$ 12,855.6



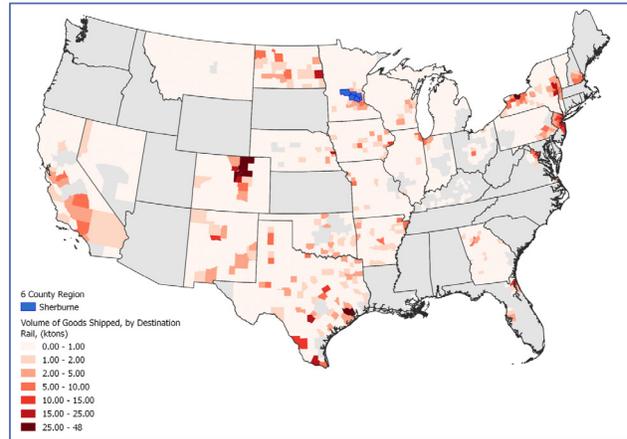
- This chart shows the distribution of inbound commodities shipped by rail to the 6-country region. Inbound shipments are dominated by coal and grain.

Outbound Freight Tonnage (2016)

All Modes



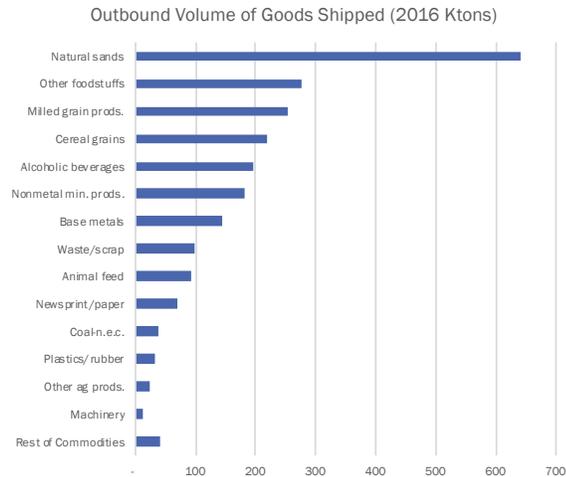
Rail Only



- Outbound rail shipments show a slightly different pattern. The dominant pattern of outbound shipments are to Upper Midwest and North Dakota – primarily attributable to oil shale development. However, there is a relatively high volume of outbound rail shipments are primarily destined to states east and south of the 6-country region. There is more diversity in long-distance rail shipments. They appear to be destined to the US Gulf and East Coast ports.

2016 Outbound Rail Commodities

Commodities	Value of Goods Shipped (\$M)	Volume of Goods Shipped (Ktons)
Natural sands	\$ 38.6	641.9
Other foodstuffs	\$ 223.9	275.7
Milled grain prods.	\$ 156.3	253.9
Cereal grains	\$ 83.1	218.1
Alcoholic beverages	\$ 135.0	196.2
Nonmetal min. prods.	\$ 77.7	182.8
Base metals	\$ 83.5	145.5
Waste/scrap	\$ 52.2	98.8
Animal feed	\$ 63.5	92.6
Newsprint/paper	\$ 46.5	68.7
Coal-n.e.c.	\$ 35.0	39.5
Plastics/rubber	\$ 203.9	31.9
Other ag prods.	\$ 63.4	23.2
Machinery	\$ 110.5	11.2
Rest of Commodities	\$ 286.2	\$ 40.7
Total	\$ 1,659.4	2,320.8



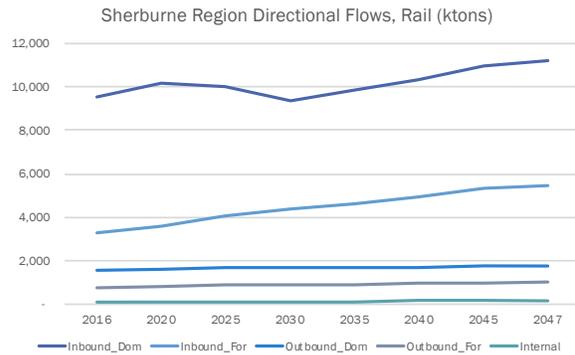
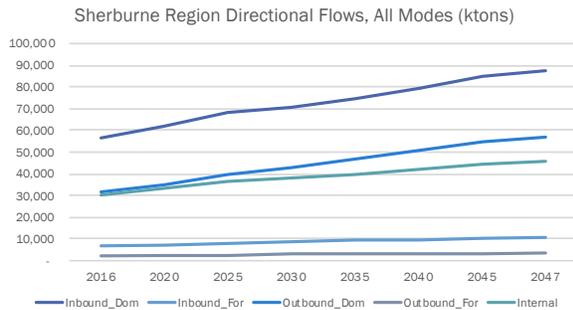
- As reflected in the geographic distribution of outbound rail shipments, the dominant outbound commodity is natural sands followed by food stuffs, milled grain products, and cereal grains.

Commodity Growth Methodology

- Grown by County-Industry Forecasts
 - Moody's as source of data
 - County x Industry Change
- Uses Input-Output models to relate economic growth into:
 - Commodity Production (Outbound, Internal)
 - Commodity Consumption (Inbound, Internal)
 - Assumes Constant Spatial Pattern of Activity
- Mode Choice a function of revealed preference in data for Origin-Destination-Commodity combinations

- We forecasted the growth of commodity shipments using economic forecasts.

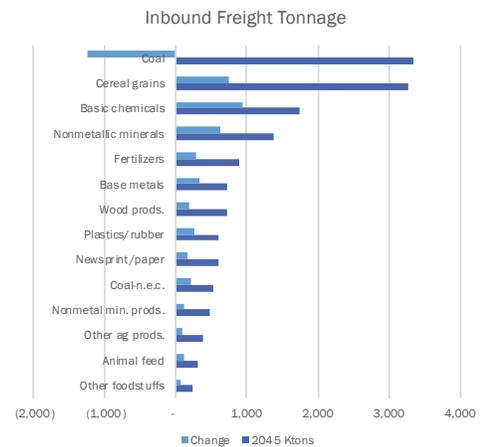
Commodity Growth



- Using this methodology, EDR Group forecasts steadily, but slowly growing commodity shipments for all modes through 2047. Inbound domestic shipments reflect a drop-off in coal shipments due to the planned retirement of several existing generation units in the 6-county region.

Inbound Rail Commodity Growth

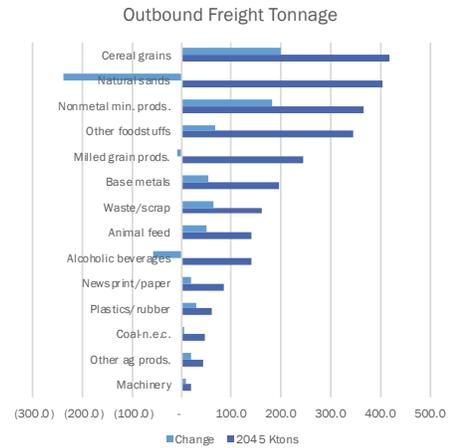
Commodities Moving Via Rail	Value of Goods Shipped (\$M)		Volume of Goods Shipped (ktons)	
	2016	2045	2016	2045
Coal	\$ 66.8	\$ 48.7	4,580.4	3,343.0
Cereal grains	\$ 700.6	\$ 911.4	2,505.2	3,259.1
Basic chemicals	\$ 582.2	\$ 1,259.2	803.0	1,736.7
Nonmetallic minerals	\$ 85.8	\$ 157.3	745.2	1,366.8
Fertilizers	\$ 252.4	\$ 369.8	601.1	880.9
Base metals	\$ 295.6	\$ 550.5	388.8	724.1
Wood prods.	\$ 253.8	\$ 350.5	518.6	716.1
Plastics/rubber	\$ 728.7	\$ 1,306.3	342.0	613.0
Newsprint/paper	\$ 244.0	\$ 335.3	445.8	612.7
Coal-n.e.c.	\$ 351.2	\$ 587.1	314.2	525.3
Nonmetal min. prods.	\$ 68.8	\$ 93.5	359.7	488.5
Other ag prods.	\$ 176.4	\$ 236.0	282.3	377.7
Animal feed	\$ 104.7	\$ 176.1	181.7	305.5
Other foodstuffs	\$ 109.6	\$ 154.1	169.6	238.5
Rest of Commodities	\$ 4,123.9	\$ 7,706.4	618.1	1,068.2
Total	\$ 8,144.5	\$ 14,242.2	12,855.6	16,256.0



- This chart shows a breakdown of inbound rail commodity shipments by commodity type. Note that the effect of coal-fired power plant retirements is reflected in the coal shipment forecasts. All other commodities show increases in rail shipments during the period from 2016 to 2045.

Outbound Rail Commodity Growth

Commodities Moving Via Rail	Value of Goods Shipped (\$M)		Volume of Goods Shipped (ktons)	
	2016	2045	2016	2045
Cereal grains	83.1	158.6	218.1	416.4
Natural sands	38.6	24.4	641.9	405.4
Nonmetal min. prods.	77.7	154.7	182.8	363.9
Other foodstuffs	223.9	279.1	275.7	343.6
Milled grain prods.	156.3	150.8	253.9	245.0
Base metals	83.5	113.3	145.5	197.3
Waste/scrap	52.2	85.9	98.8	162.6
Animal feed	63.5	97.1	92.6	141.5
Alcoholic beverages	135.0	95.5	196.2	138.8
Newsprint/paper	46.5	58.2	68.7	85.9
Plastics/rubber	203.9	380.4	31.9	59.6
Coal-n.e.c.	35.0	40.8	39.5	45.9
Other ag prods.	63.4	115.0	23.2	42.2
Machinery	110.5	183.8	11.2	18.6
Rest of Commodities	286.2	702.5	40.7	75.4
Total	1,659.4	2,640.0	2,320.8	2,742.3



- Outbound rail shipments show a decline in shipment of natural sands through 2045. This is primarily due to the retirement and slacking of oil shale plays in North Dakota. Other than milled grain products, outbound rail shipments of agricultural commodities show relative strong growth over the next 30 years.

Economic Dependence Definition

- The share of regional economic activity supported by bulk commodity movements
 - Intermediate inputs (Inbound)
 - Value Added (outbound)
- Uses freight data to stratify by mode
 - Based on FAF data (full modal detail)
 - Unsuppressed geography/commodity detail
- Gives idea of bulk physical capital intensity
- Stratifies industries served by specific modes specializing in movement of certain goods

- EDR Group defines freight dependence using economic linkages between production, consumption (primarily industrial consumption) and industrial composition of the 6-county region. This approach takes into account both the productivity and industry-specific characteristics of the region.

Modal Economic Dependence

Mode Specific Economic Freight Dependence (Percent of Output)					
Industry	% Total	Truck Related	Rail Related	Multiple Modes Related	RestOfModes
Crop Production	64.0%	48.8%	6.3%	2.0%	6.8%
Animal Production	85.5%	73.0%	6.3%	4.6%	1.6%
Fishing, etc.	95.1%	72.7%	13.6%	8.1%	0.7%
Oil and Gas Extraction	44.5%	9.4%	23.9%	0.9%	10.4%
Mining, Quarrying, & Support	68.5%	54.9%	5.9%	6.9%	0.8%
Food Manufacturing	84.5%	76.1%	5.4%	2.5%	0.5%
Beverage & Tobacco Product Mfg	81.1%	69.4%	5.8%	5.2%	0.7%
Textile Mills & Products Mfg	84.7%	52.7%	4.7%	26.1%	1.1%
Paper Mfg	79.1%	65.1%	7.7%	5.4%	1.0%
Chemical Mfg	78.6%	55.2%	7.0%	14.3%	2.0%
Plastics & Rubber Products Mfg	83.1%	60.9%	7.6%	12.9%	1.7%
Primary Metal Mfg	81.2%	67.1%	5.3%	6.8%	2.0%
Transportation Equipment Mfg	90.5%	59.7%	7.9%	19.6%	3.3%

- Different Modes Focus on Serving Different Industries
- Rail specializes in serving Oil and Gas Extraction
- Serves a lot of Agriculture and Mining Related activity

This “heat” chart shows how industries depend on either rail or trucking for their shipping needs. As with most industries, trucking is the primary mode of transportation for most industries - with the exception of oil and gas extraction. This dependence takes into consideration both inbound and outbound flows of industry inputs and outputs. These flows are measures as a percentage of output as shown in the chart.

Rail - Economic Dependence

Industry	Economic Freight Dependence (Rail Mode Only)							
	Employment		Income (\$M)		Value Added (\$M)		Output (\$M)	
	Dependent	% IDF	Dependent	% IDF	Dependent	% IDF	Dependent	% IDF
Oil and Gas Extraction	225.7	20%	3.9	37%	7.8	35%	22.1	24%
Fishing, etc.	5.3	11%	0.1	14%	0.5	14%	0.5	14%
Paper Mfg	322.6	8%	29.9	8%	46.4	8%	175.6	8%
Plastics & Rubber Products Mfg	595.0	8%	39.4	8%	55.2	8%	188.8	8%
Transportation Equipment Mfg	184.1	7%	11.3	7%	32.6	7%	133.4	8%
Animal Production	332.4	7%	10.1	7%	14.5	7%	52.4	6%
Chemical Mfg	292.7	6%	44.9	6%	78.5	5%	303.6	7%
Crop Production	154.8	6%	4.3	5%	6.4	5%	27.9	6%
Beverage & Tobacco Product Mfg	98.8	6%	5.9	6%	18.7	6%	60.2	6%
Mining, Quarrying, & Support	61.3	6%	3.0	6%	12.9	6%	21.7	6%
Food Manufacturing	651.4	5%	37.2	5%	59.5	5%	272.6	5%
Textile Mills & Products Mfg	39.8	5%	1.5	4%	2.2	4%	7.2	5%
Primary Metal Mfg	156.1	5%	13.0	5%	14.8	5%	59.0	5%
Rest of Industries	9,540.8		661.7		990.8		2,112.1	
Total	12,660.8	1%	866.0	1%	1,341.0	1%	3,437.4	1%

* % IDF: Refers to % Industry Dependence on Freight
(Relative to total Industry behavior)

- Top dependent industries by employment
- Overall small % of economy due to size of services sector
- Significant presence in primary materials and manufacturing

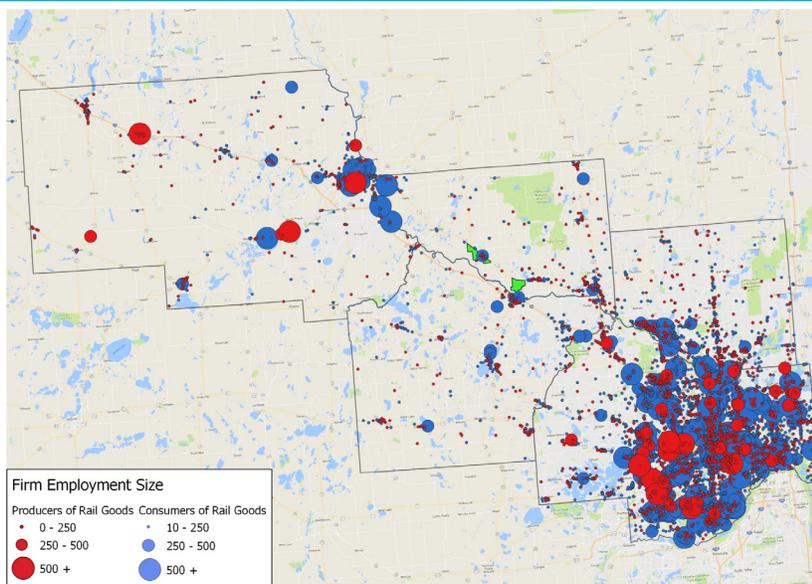
- This table presents the magnitude of industry activity (as measured in terms of employment, income, value-added, and output (business sales)) that is reliant on rail shipments to transport goods used as inputs to production or to transport finished goods to customers and markets. These industries reliance/ dependent on rail shipments for their operations are primarily concentrated in the manufacturing industries.
- Consideration was given only to the top third of all industries which corresponds to industries with business sales (output) over \$100 million. The rationale for this approach is that commodities currently being shipped along the BNSF rail line are an indication of the likely profile of tenants that use and made these commodities and therefore would be interested in locating operations at either rail park location.

Locating Rail Dependent Industry

- Based on Public 2016 Waybill Data
 - 4 Digit HS Code Based
- Draws on I-O relationships to look at Industries involved in:
 - Production of goods of type that moves by rail
 - Consumption of goods of type that moves by rail
- Adjusted Industries involved in consumption
 - Most industries consume primary goods like furniture
 - Many industries aren't doing so because of rail

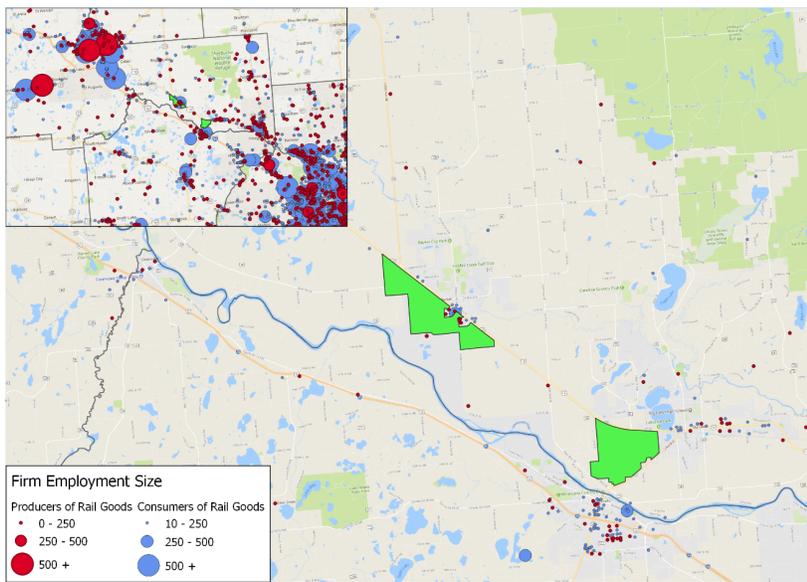
- EDR Group used the following criteria to locate rail-dependent industries in the 6-county region.

Rail Dependent Business Location



- By using establishment-level data, EDR Group was able to provide a map of the location of rail-dependent industries by size (employment) for most of the businesses in the 6-county region and plot their location in relation to the two sites – Becker and Big Lake.

Identified Businesses in Relation to Proposed Park Locations



- This map shows how we were able to “window in” on the areas immediately surrounding the two sites and map the location of rail dependent nearby industries.

List of Rail Dependent Businesses (By NAICS-3)

Rail Dependent Producers

Crop Production
Forestry and Logging
Oil and Gas Extraction
Mining (except Oil and Gas)
Food Manufacturing
Beverage and Tobacco Product Manufacturing
Textile Mills
Wood Product Manufacturing
Paper Manufacturing
Petroleum and Coal Products Manufacturing
Chemical Manufacturing
Plastics and Rubber Products Manufacturing
Primary Metal Manufacturing
Fabricated Metal Product Manufacturing
Machinery Manufacturing
Computer and Electronic Product Manufacturing
Electrical Equipment, Appliance, and Component Manufacturing
Transportation Equipment Manufacturing
Miscellaneous Manufacturing
Waste Management and Remediation Services

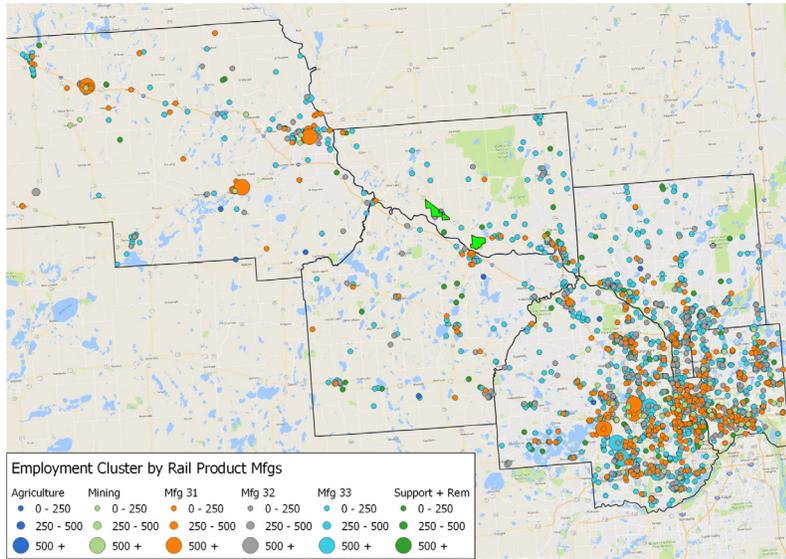
Rail Dependent Consumers

Crop Production
Animal Production
Support Activities for Agriculture and Forestry
Mining (except Oil and Gas)
Utilities
Food Manufacturing
Beverage and Tobacco Product Manufacturing
Textile Mills
Textile Product Mills
Wood Product Manufacturing
Paper Manufacturing
Printing and Related Support Activities
Petroleum and Coal Products Manufacturing
Chemical Manufacturing
Plastics and Rubber Products Manufacturing
Nonmetallic Mineral Product Manufacturing
Primary Metal Manufacturing
Fabricated Metal Product Manufacturing
Machinery Manufacturing
Computer and Electronic Product Manufacturing
Electrical Equipment, Appliance, and Component Manufacturing
Transportation Equipment Manufacturing
Furniture and Related Product Manufacturing
Miscellaneous Manufacturing
Merchant Wholesalers, Durable Goods
Merchant Wholesalers, Nondurable Goods
Wholesale Electronic Markets and Agents and Brokers

Air Transportation
Rail Transportation
Truck Transportation
Transit and Ground Passenger Transportation
Scenic and Sightseeing Transportation
Support Activities for Transportation
Couriers and Messengers
Publishing Industries (except Internet)
Telecommunications
Data Processing, Hosting and Related Services
Other Information Services
Monetary Authorities-Central Bank
Credit Intermediation and Related Activities
Real Estate
Rental and Leasing Services
Lessors of Nonfinancial Intangible Assets
Professional, Scientific, and Technical Services
Management of Companies and Enterprises
Administrative and Support Services
Waste Management and Remediation Services
Educational Services
Ambulatory Health Care Services
Hospitals
Nursing and Residential Care Facilities
Social Assistance
Accommodation
Food Services and Drinking Places

- These industries typically include those shown in this table.

INFOUSA Maps Producer by Industry



- This map shows the location of rail-dependent industries segmented by type of industry that produce goods for sale to other businesses and consumers throughout the US.

Tenant Profile

- **Becker Site: Tenant Profile (1,720 acres)**
 - Heavy Manufacturing Usage:
 - Chemicals
 - Machinery
 - Plastics/Rubber
 - Fabricated Metals Manufacturing
 - Other uses: Warehouse/Distribution, Industrial (recycling/scrap), and Transload
- **Big Lake Site: Tenant Profile (1,500 acres)**
 - Light Manufacturing:
 - Food
 - Computer
 - Transportation
 - Miscellaneous
 - Others uses: Solar Farm and Transload

As outlined in the Development Guideline section, SRF estimated the mix of industry use for each rail site. This mix of usage included categories of use such as warehouse and distribution, manufacturing, industrial, and transload facilities. To determine the likely mix of prospective industries within the manufacturing sector, EDR Group consulted and synthesized a several sources of information which included:

- EDR Group Analysis of manufacturing industries (over \$100M in sales) heavily reliant on rail shipments for production inputs (e.g. raw materials) or to ship final goods
- Existing tenant profiles – Becker site (Sherco power plant, Liberty Paper (heavy industrial)), BNSF St. Paul facility, & Canadian Pacific Minneapolis facility
- Desired Land Use - Big Lake Rail Park (light industrial)
- Government Agencies – Minnesota Department of Employment and Economic Development
- Tenant profile of comparable rail parks in the Mid-West region (IL, IN, KS, MO, & OH)
- EDR Group rail intermodal logistical studies in Michigan and Galesburg, IL
- Rail freight intermodal case studies for the Strategic Highway Research Program (SHRP2) across the nation

Types of Studies

- Capacity Study
- Market Analysis Study
- Revenue Study

- This economic impact study is based on a capacity analysis and therefore should be considered as a “capacity study”. The employment, income, and business sales estimates are based on the expected full build-out capacity of each rail park site.
- This contrasts with other types of studies such as a marketing analysis study which evaluates the demand and supply of industrial lands, and siting requirements for a rail park and the expected growth in tenants given the absorption potential of industrial real estate markets, or a revenue study which concentrates on estimating the property tax base, expected tax revenues, and wage effects dependent on full-build out within a pro-forma spreadsheet. These latter two types of studies are required to assess the timing of development and the flow of funds resulting from site development over time.

Employment Estimates

- **Methodology**

- Acreage footprint (SRF)
- Vacancy rate for tenant build-up
- Floor Area Ratios (FAR) to estimated building footprint (SRF)
- Employment estimates based on square footage per employee ratios (NAIOP Commercial Real Estate Development Association)

- **Adjustments**

- Occupational Profile: Jobs in Production (SOC 51) and Transportation (SOC 53) jobs for each industry
- Shift Share Analysis: Industry decline in Minnesota vs. National trends (2017-2048)
- Comparative Analysis: Per acre ratios from comparative rail parks (Case Studies - Strategic Highway Research Program (SHRP2) within the EconWorks database)

- The employment estimates are initially based on the development capacity and industry usage types for each site as outlined by SRF. Assumptions regarding estimated vacancy rates, Floor Area Ratios (FAR), and square footage per employee ratios were then applied to estimate the job potential at each site for full build out in the year 2058. Refinements in the analysis included adjustments for industry and occupational mix of jobs to reflect production and transportation oriented jobs in manufacturing. Adjustments were also made for manufacturing sectors expected to decline faster than national trends using a Shift-Share analysis. Based on comparisons of jobs per acre ratios between Becker/Big Lake and case studies of other rail intermodal parks throughout the nation, additional employment adjustments were factored into the analysis.

Employment Estimates

Becker Site

Industry	2018	2058
Utilities	350	150
Paper Mfg	175	175
Chemical Mfg		139
Plastics & Rubber Mfg		280
Primary Metal Mfg		173
Fabricated Metal Mfg		1,068
Machinery Mfg		643
Truck Transp.		188
Warehouse/Storage		233
Waste Management	85	430
Total	610	3,479

Big Lake Site

Industry	2018	2058
Utilities (Solar)		25
Food Mfg		556
Computer & Electron.		766
Transp. Equip. Mfg		73
Misc. Mfg		435
Truck Transp.		337
Warehouse/Storage		1,445
Total		3,638

- These employment estimates are based on estimated capacity analysis for a full-build out by 2058. The rate of tenant growth and site development likely can be estimated by a marketing or revenue study which is beyond the scope of this current analysis.
- The job estimates for the Becker site in 2018 reflect the existing Sherco Coal Power Plants, Liberty Paper, and recently announced Northern Metal Recycling. There are no tenants at the currently undeveloped Big Lake site.
- Based on the capacity analysis and square footage per jobs ratios by industry, by 2058 the Becker site has the capacity to employ nearly 3,500 jobs and the Big Lake City over 3,600 jobs. The concentration of jobs by industry reflects the anticipated land usage.

Construction Costs: Capital and Operations & Maintenance

Capital Investments

- Rail Development
- Streets/Roads
- Private Property Development
- Legal, Admin, Design, Fiscal (Soft Costs)
 - 28% of development costs

Full Build Out by 2058

Operational & Maintenance Costs

- Becker Site: \$57M per year in 2058
- Big Lake Site: \$49M per year in 2058

Cost Type	Becker (\$M's)	% of Total	Big Lake (\$M's)	% of Total
Rail	\$138	5%	\$120	5%
Road	\$52	2%	\$45	2%
Property	\$2,351	93%	\$2,051	93%
Total	\$2,541	100%	\$2,216	100%

To prepare each rail park site for tenant growth requires capital investment preparing and constructing each land parcel to meet industry requirements.

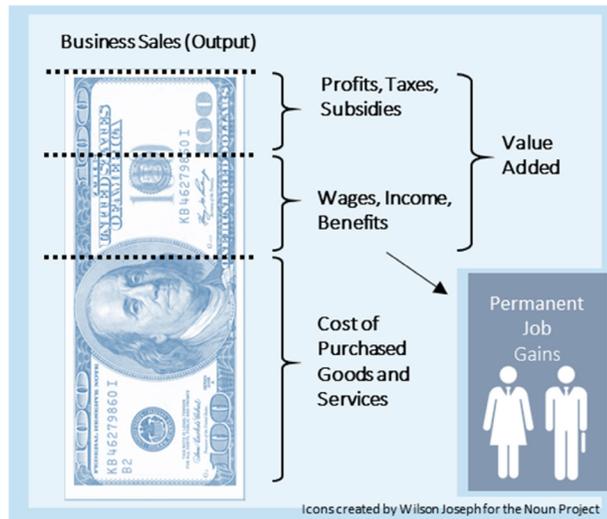
The full development of the Beck and Big Lake rail park sites are estimated to cost \$2.5 billion and \$2.2 billion respectively. The majority of costs (93%) are concentrated in property development with other infrastructure investment in rail track and roadways. An estimated 28% of development costs are considered to be “soft costs” associated with legal, administrative, design, and fiscal.

Because the trajectory of future site development at either location is unknown, the construction impacts were estimated cumulatively over the time period 2019-2058. The growth of tenants at these locations will likely be “lumpy” meaning growth likely will not be consistent but variable year over year. However, because the rate of growth is unknown, the impacts of construction were estimated from now until the full-build scenario with job estimates representing an average year of employment.

An estimated \$57M and \$49M are required to provide operational and maintenance services to the Becker and Big Lake site respectively for full-build out in the year 2058. Similarly, because the expected growth in development at each site is unknown, the economic impacts generated by these activities were estimated only for the year 2058.

Economic Analysis

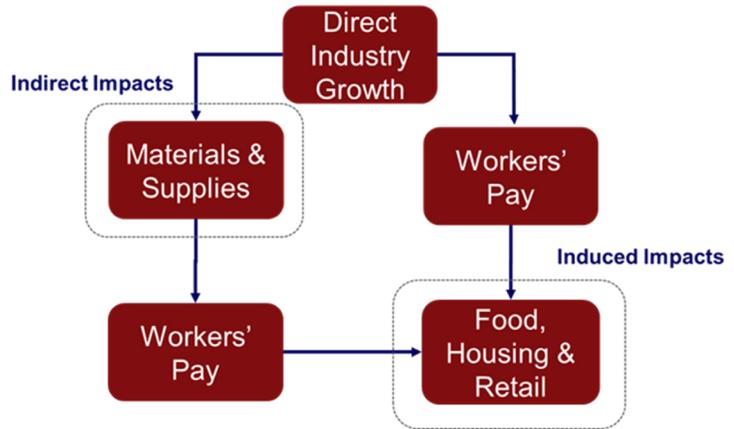
- Application of IMPLAN Economic Model
- Tenants: Business sales and Labor Income estimated based on industry ratios
- Construction: Employment and Labor Income estimated by on industry ratios



The economic analysis used data from the IMPLAN Economic Model in two ways. The first was to estimate the business sales and labor income generated from rail park tenants using the initial employment estimates and employment and labor income generated from construction and operations and maintenance expenditures. This graphic reflects the inter-relationship between the different economic measures of business sales, value-added, Labor Income, and Jobs. Ratios between these measures were used to estimate the full spectrum of direct impacts.

Economic Analysis: Multipliers

- Indirect: Supplier Purchases
- Induced: Employee Spending
- Adjustments made for construction purchases inside and outside of Minnesota.



The second way data from the IMPLAN Economic Model was used was to estimate the “multiplier” impact which reflects the additional economic activity generated by tenants or construction activity at each site. Indirect impacts reflect supplier purchases such as transportation/machine equipment, fuel, or other materials purchased by tenants or steel, asphalt, concrete or other materials purchases by construction firms.

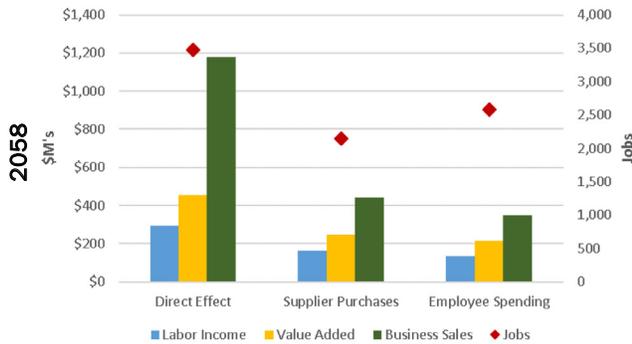
Induced impacts reflect the additional economic activity associated with spending of employee wages on food, clothing, transportation, housing, entertainment, and other purchases. Including these additional “waves” of economic activity provides a comprehensive estimate on the additional growth in the economy generated from tenants, operations & maintenance, and construction activity at the rail park sites.

Economic Analysis: Tenant Impact

Becker

Tenant Impacts (2058)

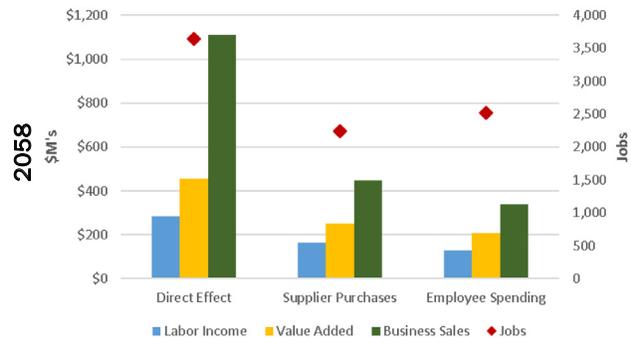
- Direct Jobs: 3,479. Total Jobs: 8,211
- Direct Income: \$293M. Total Income: \$590
- Direct Sales: \$1,177M. Total Sales: \$1,969M



Big Lake

Tenant Impacts (2058)

- Direct Jobs: 3,638. Total Jobs: 8,393
- Direct Income: \$285M. Total Income: \$580
- Direct Sales: \$1,112M. Total Sales: \$1,899M

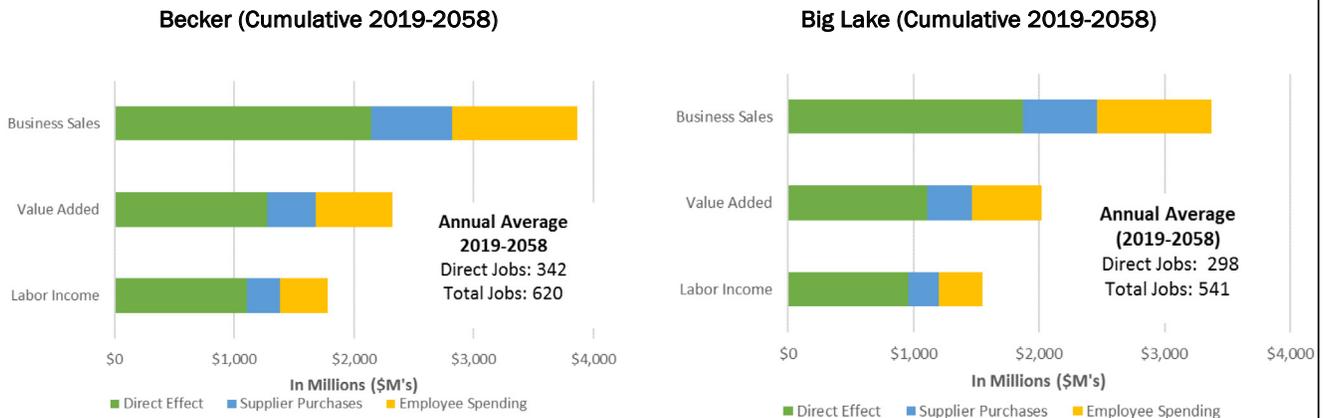


The economic impacts at the Becker site include nearly 3,500 jobs, \$293 million in income, and \$1.2 billion in business sales. With the inclusion of supplier purchases and employee spending, this expands employment to over 8,200 jobs, \$590 million in income and over \$1.9 billion in business sales.

The economic impacts at the Big Lake include over 3,600 jobs, \$285 million in income, and \$1.1 billion in business sales. With the inclusion of supplier purchases and employee spending, this expands employment to nearly 8,400 jobs, \$580 million in income and nearly \$1.9 billion in business sales.

These economic impacts are considered to be “net-new” to each rail park site but may be considered as a “relocation” or “transfer” if the tenant already exists within the 6-County region or the state of Minnesota.

Economic Analysis: Construction Impact



The economic impacts generated from construction of the Becker site over the years 2019-2058 include:

- \$2.1 billion in Direct Business Sales, \$3.9 billion in Total Business Sales.
- \$1.3 billion in Direct Value-Added, \$2.3 billion in Total Value-Added
- \$1.1 billion in Direct Income, \$1.8 billion in Total Income.
- 342 average annual direct jobs and 620 annual average total jobs assuming development at the site grows at a constant rate.

The economic impacts generated from construction of the Big Lake site over the years 2019-2058 include:

- \$1.9 billion in Direct Business Sales, \$3.4 billion in Total Business Sales.
- \$1.1 billion in Direct Value-Added, \$2.0 billion in Total Value-Added
- \$961 million in Direct Income, \$1.5 billion in Total Income.
- 298 average annual direct jobs and 541 annual average total jobs assuming development at the site grows at a constant rate.

Economic Analysis: Operations & Maintenance Impact

Becker (2058-Annual)

Year	Impact Type	Jobs	Labor Inc. (\$M's)	Value Added (\$M's)	Bus. Sales (\$M's)
Annual (2058)	Direct Effect	305	\$23	\$29	\$53
	Supplier Purch.	105	\$7	\$11	\$18
	Empl. Spending	162	\$9	\$14	\$23
	Total Effect	572	\$38	\$54	\$94

Big Lake (2058-Annual)

Year	Impact Type	Jobs	Labor Inc. (\$M's)	Value Added (\$M's)	Bus. Sales (\$M's)
Annual (2058)	Direct Effect	266	\$20	\$25	\$46
	Supplier Purch.	91	\$6	\$9	\$16
	Empl. Spending	141	\$8	\$12	\$20
	Total Effect	498	\$33	\$47	\$82

Operations and Maintenance (O&M) services are required to keep each rail park site functioning and addresses needed repairs. The estimated costs for O&M services in the year 2058 are \$57 million for the Becker site and \$49 million for the Big Lake site. Some of these O&M expenditures are for services or supplies produced outside of Minnesota and as such as considered as economic leakage outside of the Minnesota economy.

The number of jobs required to operate and maintain the Becker and Big Lake rail parks range from 266-305 jobs which pay between \$20 and \$23 million dollars in income and generate between \$46 and \$53 million in business sales.

Including the economic activity associated with supplier purchases and employee spending raises the total employment supported by operations and maintenance to between 489 and 572 jobs, between \$33 and \$38 million in income, and between \$82 and \$94 million in business sales.

These impacts were estimated for the year 2058 and the magnitude of impacts for previous interim years likely will be commensurate with the growth in tenants for each site.

Economic Analysis: Tenant and O&M Impact

Impact Type	Jobs	Labor Inc. (\$M's)	V.A. (\$M's)	Bus. Sales (\$M's)
Tenants (Direct)	3,479	\$293	\$456	\$1,177
O&M (Direct)	305	\$23	\$29	\$53
Supplier Purchases	2,251	\$171	\$259	\$462
Employee Spending	2,748	\$142	\$226	\$370
Total	8,783	\$628	\$970	\$2,063

Becker (2058)

Impact Type	Jobs	Labor Inc. (\$M's)	V.A. (\$M's)	Bus. Sales (\$M's)
Tenants (Direct)	3,638	\$285	\$453	\$1,112
O&M (Direct)	266	\$20	\$25	\$46
Supplier Purchases	2,329	\$171	\$262	\$465
Employee Spending	2,658	\$137	\$219	\$358
Total	8,891	\$613	\$960	\$1,981

Big Lake (2058)

Long-term economic activity at each of the rail park sites includes both tenants and jobs providing operational and maintenance support. Combining both of these activities results in nearly 3,800 jobs at both the Becker and Big Lake site respectively.

Including the additional economic contribution of supplier purchases and employee spending generates a total of nearly 8,800 jobs, \$628 million in income, and over \$2 billion in business sales at the Becker site and nearly 8,900 jobs, \$613 million in income, and nearly \$2 billion in business sales at the Big Lake site.

Local Traffic Impacts: Becker and Big Lake Sites

Becker (2058)

- Daily Trucks: 670
- Daily Passenger Cars: 3,784
- % Trucks: 18%
- Annual Trains: 305

Big Lake (2058)

- Daily Trucks: 448
- Daily Passenger Cars: 3,904
- % Trucks: 11%
- Annual Trains: 97

The operations occurring at each rail park site is expected to generate additional inbound and outbound vehicle traffic which will likely impact the local road network. To gauge the extend of this impact, EDR Group evaluated the commodity profile and truck fleet size based on freight flows associated with the expected tenant profile. These insights are based on the industry dependence analysis previously completed to identify the likely amount of freight consumed (inputs) and produced (outputs) and the number of trucks this would generate. Based on this analysis, an estimated 670 daily trucks would travel inbound and outbound (round-trip) to and from the Becker site and an estimated 448 daily trucks would travel to and from the Big Lake site. This truck volume reflects between 11% and 18% of all new vehicle traffic.

In addition, employees working in operations and maintenance at each site were assumed to commute using passenger cars with an average vehicle occupancy of 1.0 person per car.

The number of annual trains (assuming 3,000 metric tons per train) estimated to pick up and deliver freight to Becker was 305 and 97 for Big Lake. The differences in truck and train estimates reflect the differences in tenant profiles with Becker expected support more heavy-duty manufacturing requiring higher volumes of freight shipments.

