Des Moines Area MPO Multimodal Economic Impact Study

Multimodal Contribution Analysis Report

In Association with

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Prepared by

METROANALYTICS

TABLE OF CONTENTS

Executive Summary ..... ***iv***
2025 Snapshot iv
Long-Range Impact (2025-2050) iv
Why this Matters v
1 Introduction ***1***
Objectives and Scope 2
Methodology 3
Data Sources 4
Scenario Definition and Modeling Setup 5
Transportation Investment Cost Streams 6
2 MPO's Economic Base and Role of Transportation ***8***
Supply Chain and Dependence on Freight 8
Freight Modes and Trading Partners 8
Transit and Bicycle-Pedestrian (Multimodal) 9
3 Benefits of Enhanced Transportation Investments ***11***
Different Investment Levels 11
Transportation Efficiency Benefits 11
Productivity Gains 13
Benefits of Different Investment Levels 13
4 Economic Impacts of Transportation Investments ***0***
How do savings translate into wider economic impacts? 0
Impacts on Jobs, Household Income, Business Output, and GDP 1
Scenario-Based Comparison of Key Impact Categories 1
5 Fiscal Impacts of Enhanced Investment ***6***
6 Summary and Conclusion ***8***
Summary of Findings 8
Conclusion 9
Appendix I – Total Societal Benefits by Year in Million Dollars ..... ***vi***
Appendix II – Jobs Supported by Year ..... ***viii***
Appendix III – Household Income by Year in Million Dollars ..... ***x***

Appendix IV – Value Added (GDP) by Year in Million Dollars ..... *xii*
Appendix V – Business Output (Sales) by Year in Million Dollars ..... *xiv*
Appendix VI – Fiscal Impacts by Year in Million Dollars ..... *xvi*

Executive Summary

Investments in the Greater Des Moines region's multimodal transportation network deliver substantial annual returns, enhancing system efficiency, safety, environmental quality, and economic opportunity. This summary highlights the key benefits and investments of the Greater Des Moines region's multimodal transportation program, focusing on both the present year (2025) and the full 2025–2050 planning horizon. It is designed for decision-makers and community stakeholders to quickly grasp the economic, social, and environmental returns of continued and expanded capital and operating investments.

2025 Snapshot

In the initial year of the long-range plan, strategic preservation and service enhancements delivered substantial returns on the region's transportation outlays:

Total Annual Benefits vs. Outlays

- In 2025, every dollar invested generates approximately $2.52 in user, societal, and productivity benefits. Total benefits of $850 million, including efficiency, safety, environmental, and market-access gains, far exceed the year's public outlays of $339.5 million.

Efficiency and Reliability

- $93 million in total travel-time, operating-cost, and reliability savings.
- $4.3 million in emissions reduction and safety improvements.
- $6.0 million in freight travel time and reliability gains.
- These savings stem from reduced congestion, smoother traffic flow, and more predictable trips.

Asset Preservation

- $195.8 million in lifecycle benefits from maintaining highways and bridges, which safeguards investments and avoids higher future repair costs.

Market Access and Workforce Participation

- $76.2 million in expanded employer and customer reach.
- $481.7 million in added workforce productivity value for residents without reliable alternatives.
- Enhanced transit services and active-transportation links are connecting more workers to job centers and businesses to new markets.

Environmental and Safety Gains

- $1.2 million in reduced emissions and improved air quality.
- $3.1 million in crash-reduction benefits.
- These co-benefits improve public health and lower cleanup costs for local governments.

Long-Range Impact (2025-2050)

While 2025 provides a tangible starting point, the full plan amplifies these returns over 25 years:

Cumulative Benefit

- $36 billion in undiscounted user and societal benefits (Table 3-1)
- $21 billion net present value (at a 3.5% discount rate)

Economic Growth and Jobs

- Supports an average of 14,400 jobs annually by full implementation (Table 4-1)
- Generates $44.4 billion in regional business output
- Yields $3.7 billion in combined federal, state, and local tax revenues (Table 5-1)

Return on Investment

- Overall ROI of 2.9-to-1 when comparing total benefits to capital and operating commitments
- Preservation-only scenario still returns 5.1 dollars for every dollar invested (Table 6-1)

Why this Matters

Investing in a well-maintained and connected transportation network is not an abstract planning exercise. It directly affects daily life, regional prosperity, and community well-being in the following ways:

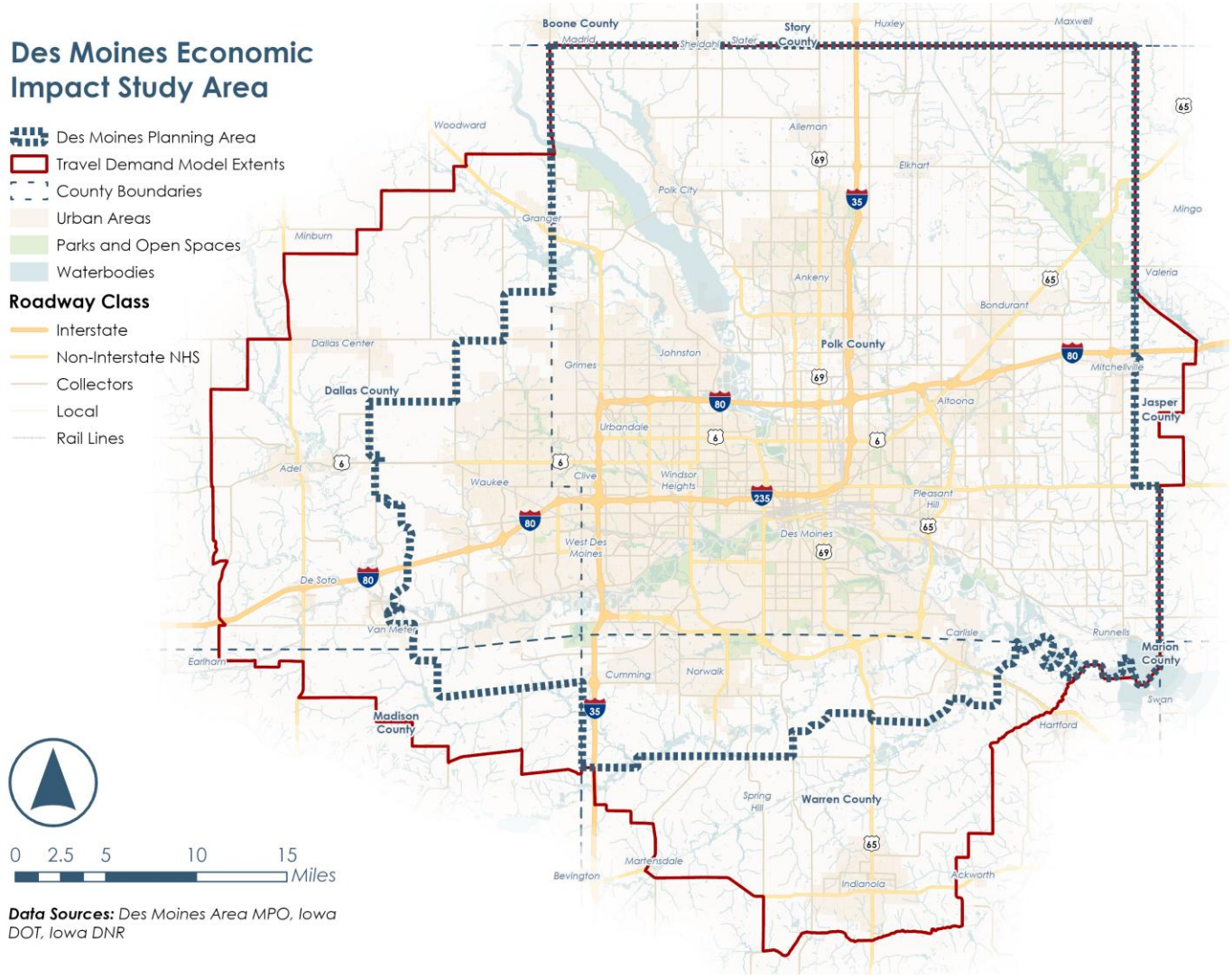
- **Everyday Reliability and Safety:** Commuters and freight operators count on predictable travel times and well-kept roads and bridges. Reliable trips mean less time stuck in traffic, fewer crashes, and lower vehicle repair costs, translating into real dollar savings for families and businesses.
- **Economic Opportunity:** Strong infrastructure connects workers to jobs, businesses to customers, and markets to suppliers. As shown in 2025 alone, improved transit, roadway, and active-transportation links generate nearly half a billion dollars in additional workforce productivity.
- **Fiscal Sustainability:** Every dollar spent today on routine preservation or targeted enhancements returns more than two dollars in benefits. Over 25 years, these returns multiply, funding future maintenance, supporting new investments, and bolstering local tax bases.
- **Quality of Life and Equity:** Cleaner air, safer streets for pedestrians and cyclists, and greater access to jobs promote healthier, more inclusive communities. Transportation investments ensure that all residents share in regional growth and opportunity.

By prioritizing these strategic investments now, the Greater Des Moines region secures dependable mobility, drives economic growth, and upholds the promise of a resilient, thriving community for decades to come.

1 Introduction

This report provides a comprehensive analysis of **Task 1 – Existing and Planned Impacts** within the Des Moines Area Metropolitan Planning Organization (MPO) study area. The project focuses on evaluating the economic benefits and broader fiscal implications derived from an integrated multimodal transportation system that includes highways, transit systems, bicycle lanes, and pedestrian walkways. By synthesizing outputs from travel demand models with supplementary data, such as asset condition assessments, safety records, and operational performance indicators, the study establishes the foundation for understanding the economic stimulus, efficiency gains, and productivity improvements that result from current investments as well as those planned under the long-range transportation plan. The analysis further benchmarks these benefits against a no-build scenario, which hypothetically represents a future where transportation investments cease or occur at sub-optimal levels. This baseline comparison allows the report to quantify the added value of implementing the proposed transportation investments, thereby guiding future decision-making within the region.

Figure 1-1: Des Moines Economic Impact Study Area



The study area, defined by the Des Moines Area MPO travel demand model boundary, encapsulates a diverse range of transportation facilities and corridors that serve the urban, suburban, and rural segments of the Greater Des Moines region (Figure 1-1). This diverse mix of travel patterns and infrastructure assets provides a rich context for economic impact analysis, ensuring that the multifaceted contributions of transportation investments are captured. The analysis incorporates both the immediate monetary benefits, such as cost savings for households and businesses, and the wider fiscal impacts, which include multiplier effects observable through enhanced regional productivity and increased revenue collections at local and state levels.

Objectives and Scope

The primary objective of this report is to quantify and elucidate the monetary benefits and implications associated with existing and planned transportation assets within the Des Moines Area MPO study area. Specifically, Task 1 aims to:

- Establishing a clear baseline for current transportation performance and expenditures, along with identifying the future monetary benefits that can be realized through enhanced infrastructure investments.
- Quantifying cost savings that accrue to both businesses and households through improved travel efficiencies, including reductions in vehicle operating costs, travel-time savings, and enhanced safety outcomes.
- Assessing the fiscal impacts and broader economic benefits using established economic modeling techniques, specifically via the IMPLAN model. This model enables the quantification of direct, indirect, and induced effects of transportation investments on regional employment, income, and overall economic output.
- Evaluating LRTP-based investment levels by comparing the economic outcomes of maintaining existing infrastructure, implementing recommended funding levels, and pursuing a fiscally unconstrained scenario. This analysis is designed to inform stakeholders of the return on investment (ROI) and the potential economic stimulus provided by enhanced transportation services.

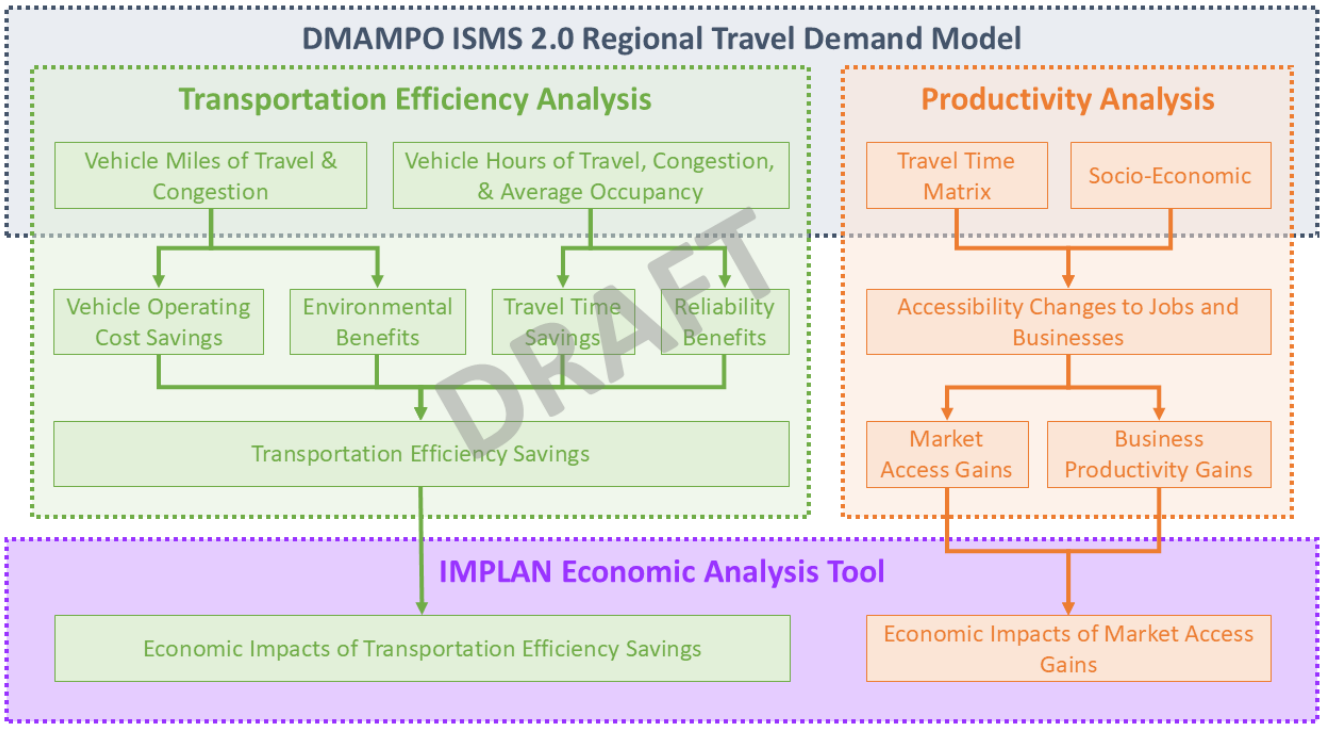
The scope of Task 1 is defined by a multi-tiered analytical framework that begins with data acquisition from the Des Moines Area MPO Regional Travel Demand Model, followed by a systematic monetization of user costs, and culminating in an economic impact assessment. This task sets the stage for subsequent analyses. Future reports will expand on these findings by addressing:

- **Task 2 – Mode-Specific Impacts:** A detailed analysis of the contributions from transit and active transportation facilities, examining how investments in these modes affect overall transportation efficiency and regional mobility.
- **Task 3 – Market Access and Productivity:** An assessment of how transportation performance influences workforce access, business development, and regional economic vitality.
- **Task 4 – Business Operations and Critical Sites:** Field assessments at key business and development sites to understand the practical impacts of multimodal investments on operational conditions.
- **Task 5 – Economic Dashboard:** The development of an interactive leave-behind tool that encapsulates the findings of the economic impact analysis, facilitating ongoing evaluation of transportation investments.

Methodology

The methodology applied in this analysis is both systematic and pragmatic, combining transportation analysis and travel demand modeling with the established economic evaluation techniques. The structured approach is designed to ensure transparency and replicability while retaining the necessary rigor for accurate impact quantification.

Figure 1-2: Schematic Diagram of Economic Impact Analysis Process



The methodological process is outlined in the schematic flow diagram included in Figure 1-2, and consists of the following key steps:

- **Data Acquisition:**
  - A comprehensive data request was issued to all participating agencies, which included travel demand model outputs that reflect various investment levels.
  - Critical datasets were gathered from sources such as asset management records (covering pavement and bridge conditions), safety statistics, transit operational data, and active transportation metrics.
  - Supplemental passive data sources and targeted surveys further enriched the dataset, ensuring that the analysis reflects both quantitative model outputs and real-world observations.
- **Monetizing Benefits:**
  - The analysis employs a cost-benefit framework that calculates user costs across multiple dimensions, including vehicle operating costs (based on vehicle miles traveled and per-mile cost factors) and time-related costs (derived from vehicle hours traveled and per-hour value of time).

  - These calculations are benchmarked against an "absolute no build" scenario, representing a future where all additional transportation investments are halted. This comparison allows for the clear identification of cost savings and efficiency gains attributable to current and planned investments.
  - In addition to these direct user cost calculations, secondary factors such as safety improvements and reduced exposure to adverse travel conditions are also monetized.
- **Unified Cost Streams:**
  - The analysis integrates estimates of public expenditure by mode and program, creating a comprehensive view of capital and operating cost streams across different investment levels.
  - This step involved close collaboration with Des Moines Area MPO and other agency staff to ensure that cost assumptions are vetted and realistic, reflecting both current outlays and anticipated future expenditures.
- **Economic Impact Modeling using IMPLAN:**
  - A central component of the analysis is the application of the IMPLAN economic modeling tool, which is used to derive direct, indirect, and induced impacts from the transportation investments.
  - The IMPLAN model facilitates an industry-by-industry breakdown of economic impacts, highlighting how transportation improvements drive outputs, employment, and revenue across multiple sectors.
  - By capturing both the immediate and ripple effects of transportation investments, this component provides a holistic view of the economic benefits that extend beyond simple cost savings.

Data Sources

A diverse array of data sources underpins the analysis, ensuring that the evaluation of transportation investments is both comprehensive and nuanced. The primary dataset is derived from the Des Moines Area MPO Regional Travel Demand Model, which provides granular details on vehicle and person trips, miles of travel, and travel hours segmented by time of day and mode of transportation. Key attributes of this dataset include:

- **Modal Segmentation:**
  - Detailed breakdowns are available for autos (both for work and non-work travel), trucks (categorized by weight classes such as light and heavy), public transit (including both local bus and express bus services), and non-motorized modes.
  - This segmentation facilitates a detailed analysis of travel behavior and infrastructure utilization across different modes.
- **Temporal Segmentation:**
  - Data are stratified by various time periods throughout the day (morning, midday, afternoon/evening, and night), which enables the analysis to account for diurnal variations in travel demand and network performance.
- **Investment Scenarios:**
  - The dataset includes projections for multiple investment levels, ranging from leaving the current system as it is (Absolute No Build) to just maintaining the existing system (E+C) and investing in the projects recommended by the Long Range Transportation Plan (LRTP).
  - This allows for scenario-based analysis, comparing baseline performance with projected benefits under different funding assumptions.

In addition to the travel demand model outputs, the analysis leverages supplementary data sources, including asset management records for pavement and bridge conditions, safety performance data, and transit operational statistics. The monetary values applied in the benefit calculations are primarily based on per-unit cost factors outlined in Appendix A of the *Benefit-Cost Analysis Guidance for Discretionary Grant Programs 2025.*[1] Where available, these factors are refined using localized, peer-reviewed research to ensure that the cost estimates accurately reflect the regional context.

The integration of these diverse data sources ensures that the analysis is grounded in robust, empirical evidence. The comprehensive nature of the dataset enables the evaluation to capture not only direct user benefits but also the broader economic implications, including user benefits, societal gains, productivity gains, and fiscal impacts across the regional economy.

Scenario Definition and Modeling Setup

Three scenarios are established to evaluate the incremental impacts of investments in the Greater Des Moines region's transportation system. These scenarios are designed to compare how different levels of investment influence system performance, economic outputs, and overall regional benefits.

Baseline Condition Scenario (No Investment): The baseline condition represents a scenario in which the Greater Des Moines region makes no additional investments in the transportation system and the system is effectively represented in its current state, with no future maintenance, upgrades, or expansion. This scenario does not assume any policy changes or interventions and serves as a reference point for evaluating the economic and performance benefits of other investment scenarios.

Maintaining Existing System (Investment in Existing and Committed Projects): This scenario represents the investments associated with already programmed and committed projects (about $4.7 billion cumulative over 25 years, 2025-2050) that are necessary to preserve the existing transportation system. It reflects a realistic, fiscally constrained approach and serves to illustrate the economic and performance outcomes of reinvesting in the existing network to prevent further deterioration and maintain regional mobility.

Long Range Transportation Plan (LRTP) (Investment in Existing, Committed and Planned Projects): The LRTP scenario captures the impacts of investing in projects beyond those included in the existing and committed program. It encompasses the full set of transportation improvements recommended in the Greater Des Moines region's 2024 Long-Range Transportation Plan (LRTP) of about $12.56 billion cumulative over the 25 years from 2025-2050. The LRTP includes system expansions, enhancements to connectivity, multimodal upgrades, and strategic infrastructure investments aimed at addressing future growth and mobility needs. This scenario represents a more ambitious and proactive approach to shaping the region's transportation future, focusing not only on preserving the current system but also on increasing capacity, improving accessibility, and supporting economic development. It illustrates the broader economic,

In this report, the term **"planned investment"** is used, where applicable, to refer to the additional projects included in the LRTP scenario beyond those in the Existing and Committed scenario. The associated economic output and performance outcomes presented under "planned investment" reflect the **incremental impact** of implementing the full LRTP compared to maintaining the existing system.

[1] *Benefit-Cost Analysis Guidance for Discretionary Grant Programs 2025 Update (Published on November 18, 2024), U.S. Department of Transportation (Retrieved on April 25, 2025)* https://www.transportation.gov/mission/office-secretary/office-policy/transportation-policy/benefit-cost-analysis-guidance

environmental, and performance benefits that could be achieved through comprehensive, forward-looking transportation planning and investment.

By analyzing both scenarios relative to a common baseline, the analysis framework helps isolate the value of both maintaining existing infrastructure and implementing additional long-range improvements. This approach provides a clear understanding of how transportation investments contribute to regional growth and efficiency over time.

Transportation Investment Cost Streams

The transportation investment cost streams in the Greater Des Moines region reflect a comprehensive set of planned expenditures across highway, transit, and active transportation systems. These outlays represent the financial commitment required to operate, maintain, and enhance the region's multimodal transportation infrastructure over time. The categorization of these investments provides insight into how different aspects of the system are supported and developed.

1. Highway Investment Streams:
Highway-related investments are categorized into several key components:

- **Total Operation & Administration Costs** include ongoing management and system-level operational expenses. These costs are estimated to be $328.67 million from 2025-2050, compounded annually at a growth rate of 2 percent.
- **System Optimization** refers to non-capacity enhancements such as traffic signal upgrades and intelligent transportation systems that improve system efficiency, which account for $707.96 million cumulative from 2025-2050.
- **Preservation Outlays** cover both highway and bridge infrastructure maintenance, ensuring asset longevity and performance. Preservation expenditures are projected to total approximately $2.03 billion cumulatively over the 2025-2050 period.
- **Expansion Outlays** reflect capital expenditures for adding new road capacity or extending the highway network to meet future demand. A total of $6.94 billion is estimated to be spent on expansion projects, especially recommended by the LRTP.

2. Transit Investment Streams:
Transit spending is divided into both operational and capital categories:

- **Total Operating Outlay** includes routine service delivery costs such as labor, fuel, and support services of $1.689 billion during 2025-2050.
- **Capital Outlays (a total of $536.73 million)** are further broken down into:
    - Terminals (stations and hubs),
    - Vehicles and equipment, and
    - Other expansion costs tied to system growth not captured in other categories.

3. Active Transportation Investment Streams:
Dedicated funding is allocated for non-motorized modes:

- **Bicycle and Pedestrian Facility Maintenance of $10 million during 2025-2050** ensures existing pedestrian and bicycle infrastructure remains safe and functional.

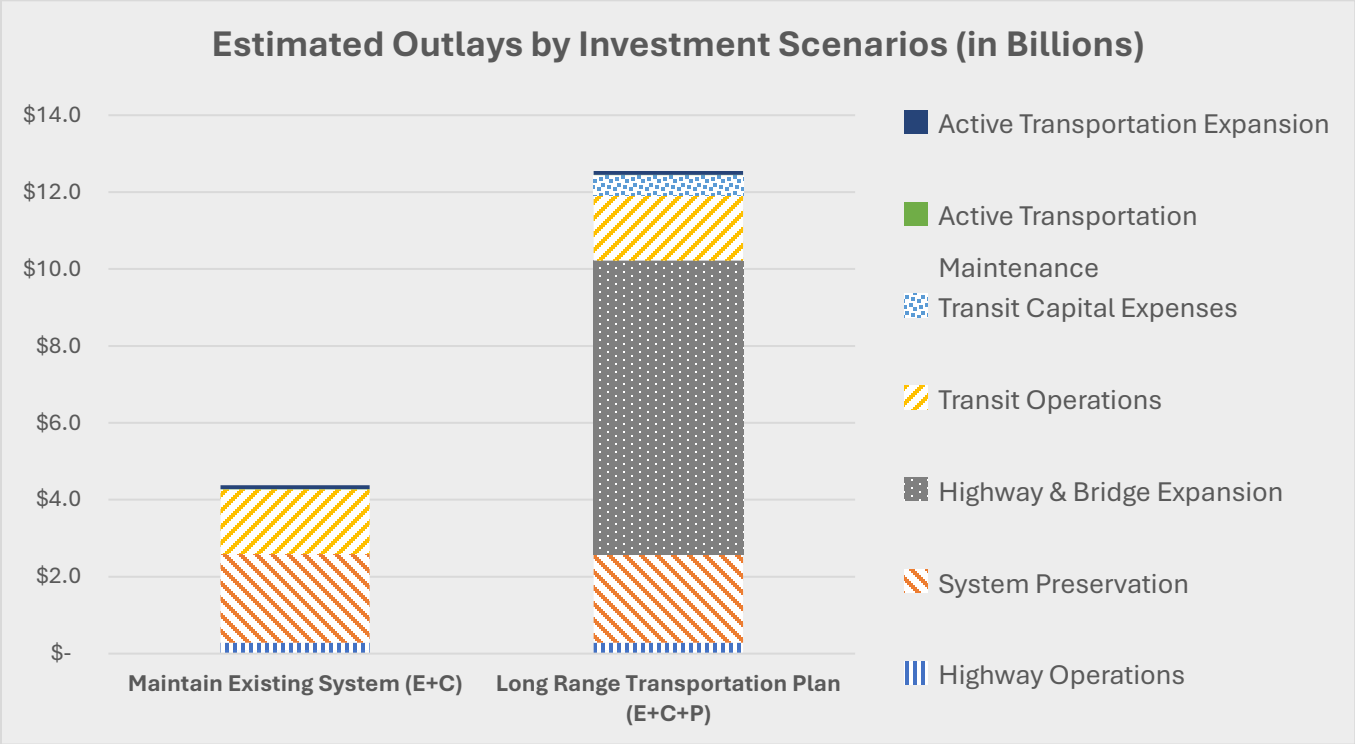
- **Bicycle and Pedestrian Facility Expansion** investment of $96.80 million involves capital investment in new sidewalks, trails, and bike lanes to increase network coverage.

4. Funding Source Streams:
The transportation investments are financed through a variety of funding sources:

- **Highway investments** are supported by federal grants ($566 million), state funds ($1,190 million), and local subsidies ($6,948 million).
- **Transit operations and capital** are funded by federal grants ($202 million), local and state contributions ($1.4 billion), and farebox recovery ($178.5 million) from transit riders.

Figure 1-3 below presents the breakdown of the estimated cost of each investment scenario by category of expense. The total costs for the E+C scenario are estimated at $4.7 billion, while the total costs of the LRTP are estimated at $12.6 billion over the 25-year period.

Figure 1-3: Cumulative Transportation Outlays by Funding Category and Investment Scenarios



2 MPO's Economic Base and Role of Transportation

The Des Moines region and more broadly Central Iowa's industries, including agribusiness, manufacturing, retail distribution, and service sectors, rely heavily on reliable highway corridors for the movement of inputs and finished products. Chapter 3 first explores the Des Moines Area MPO's role in facilitating these supply chains and quantifies the extent to which local businesses depend on freight mobility before detailing the principal truck routes and primary market destinations that sustain regional commerce. This chapter further examines how the Greater Des Moines's transportation network underpins the region's economy, shaping both the location efficiency and competitiveness of its principal industries. The subsequent section explores the role of transit and active transportation in the regional economy.

Supply Chain and Dependence on Freight

The Greater Des Moines metropolitan region serves as a central distribution and logistics hub for central Iowa, with its economy anchored in agribusiness, manufacturing, retail distribution, and financial services. These sectors depend fundamentally on highway freight. "The Des Moines and central Iowa markets are largely dependent on moving goods via truck," according to the Des Moines Area MPO's Long-Range Transportation Plan, which also maps key Iowa DOT freight priority locations within the urbanized area.[2] While some rail-to-truck handling operations existed previously, central Iowa did not have a large-scale dedicated intermodal yard, requiring drayage of 2-5 hours to gateway terminals for most containerized shipments. The development of three local transload facilities (Central Iowa Rail Port, Midwest Transload & Industrial Park, and Des Moines Industrial Transload Facility) expands direct rail-to-truck handling, reducing drayage costs, cutting per-ton carbon emissions, and strengthening supply-chain resilience. However, last-mile and regional shipments remain almost exclusively truck-borne.

Highway corridors through the Des Moines Area MPO carry substantial freight volumes. On I-35 through the Greater Des Moines region, 91,100 vehicles per day traverse the corridor, 19 percent of which (approximately 17,590) are heavy/combo trucks.[3] I-235, the region's urban bypass, handles 94,000 vehicles daily with a 7 percent truck share (6,570 trucks).[4] Even secondary arterials such as the IA 5/US 65 see year-over-year growth. Of the 32,411 vehicles per day in 2024, trucks accounted for roughly one in ten vehicles.[5] These volumes underscore the region's critical dependence on robust surface-transportation capacity to support its supply chains.

Freight Modes and Trading Partners

Within the Des Moines Area MPO boundary, the primary freight network comprises I-35 (north-south), I-80 (east-west), and I-235, supplemented by US-6, US-30, and US-65 connectors. On I-80, 32,700 vehicles travel daily, with trucks comprising 34 percent (over 11,220 vehicles) of traffic, linking Greater Des Moines region

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[2] *Des Moines Area Metropolitan Planning Organization Long-Range Transportation Plan (2024), Chapter 4: Aviation & Freight,* https://dmampo.org/wp-content/uploads/2024/10/Chapter-4-Aviation-Freight.pdf

[3] *Average Annual Daily Traffic on the Interstate System (2022). Iowa DOT Systems Planning Bureau* https://iowadot.gov/maps/msp/pdf/InterstateRouteTrafficMap.pdf

[4] *Average Annual Daily Traffic on the Interstate System (2022). Iowa DOT Systems Planning Bureau* https://iowadot.gov/maps/msp/pdf/InterstateRouteTrafficMap.pdf

[5] *Automatic Traffic Recorder Monthly Report (March 2025), Iowa DOT Systems Planning Bureau,* https://iowadot.gov/maps/reports%28atr%29/march2025internetreport.pdf

directly to the Chicago metropolitan market.[6] On Interstate 35, 20-24 percent of the Vehicle Miles of Travel (VMT) is from truck travel, reflecting its strategic role connecting the metro to Kansas City (south) and Minneapolis-St. Paul (north).[7] I-235 further supports regional distribution, serving local warehousing submarkets and providing relief to the mainline interstates.

Truck flows from the Greater Des Moines region predominantly serve five key markets by surface routes:

1. Chicago–Milwaukee via I-80 E (primary export gateway for retail and light manufacturing goods).
2. Kansas City via I-35 S (hub for bulk agricultural outbound and inbound manufacturing inputs).
3. Minneapolis–St. Paul via I-35 N (linking to Upper Midwest distribution centers).
4. Omaha–Council Bluffs via I-80 W and US-6 (regional solid-bulk and food-processing shipments).
5. St. Louis via IA163-US 63-US34-US218 (serving downstream chemical and refined-products markets).

This surface-focused network underlies the Des Moines Area MPO's freight-dependent economic base, enabling high-frequency, just-in-time delivery services that sustain central Iowa's leading industries.

Transit and Bicycle-Pedestrian (Multimodal)

The bicycle and pedestrian infrastructure in the Greater Des Moines region features a well-developed regional trail network that connects parks, neighborhoods, and nearby communities through paved multi-use trails. This trail system is considered one of the region's key assets, offering recreational and commuting opportunities. Despite the strength of the off-street trail system, there are notable gaps in network connectivity, with 18 critical missing links identified by the Bicycle and Pedestrian Roundtable. Where off-street facilities are not feasible, this limited extent of on-street infrastructure constrains multimodal access to jobs and other destinations. The economic benefits of bicycle and pedestrian infrastructure are quantified in this study based on the health benefits due to induced physical activity effects of using these modes, using the Victoria Transportation Policy Institute's (VTPI) recommended values on per-mile valuation of walking and bicycling.[8]

The Greater Des Moines region's public transit system is operated by the Des Moines Area Regional Transit Authority (DART), which serves Polk County and surrounding member communities through a variety of services. Governed by an independent board representing 11 local governments, DART operates a fleet of 204 active vehicles (including 138 small, medium, and heavy duty buses and 66 vans) and offers multiple transit options tailored to meet diverse mobility needs. These include 19 local fixed routes, 7 express routes serving peak-hour commuters, two free downtown shuttles, on-call pick-up services for residents outside fixed-route areas, vanpool and rideshare programs, and on-demand micro-transit zones. The fare structure is designed to remain affordable, with local route fares generally set at $1.75, express routes at $2, and monthly passes priced at $48. Central to the network is DART Central Station, located in downtown Des Moines, which functions as the primary transfer hub and houses customer service and administrative offices. With approximately 1,600 bus stops, DART's network provides critical connectivity throughout the metropolitan area, though service coverage and frequency can be limited during evenings and weekends.

Overall, DART is essential in supporting mobility, especially for individuals without access to private vehicles, and remains a foundational element of the region's long-range transportation planning. It also plays a

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[6] *Average Annual Daily Traffic on the Interstate System (2022). Iowa DOT Systems Planning Bureau* https://iowadot.gov/maps/msp/pdf/InterstateRouteTrafficMap.pdf

[7] *Regional Solutions for a Regional Issue, Mid-America Freight Coalition,* https://midamericafreight.org/index.php/rfs/network-inventory/corridors/profiles/i-80/

[8] *Evaluating Active Transport Benefits and Costs.* https://www.vtpi.org/nmt-tdm.pdf

significant role in supporting economic activity in the Greater Des Moines region by connecting people to jobs, education, healthcare, and essential services. By providing reliable and affordable transportation, DART enables workforce participation, particularly for individuals without access to a personal vehicle. Its services also reduce congestion and support business productivity by improving access to commercial centers and employment hubs. Additionally, transit investments and operations generate local jobs and stimulate spending across various sectors, contributing to the region's overall economic vitality.

3 Benefits of Enhanced Transportation Investments

Investments in multimodal transportation infrastructure generate profound economic and societal returns by fundamentally reshaping the mobility landscape of a region. By expanding system capacity and enhancing connectivity, such investments reduce congestion, shorten trip lengths, and enable a seamless flow of people and goods. These improvements translate into tangible cost savings through lower fuel consumption, diminished vehicle maintenance, and fewer hours lost in traffic, as well as intangible gains, including elevated productivity, enhanced public health, and strengthened community resilience. Moreover, the predictability afforded by a robust transportation network underpins reliability savings and fosters greater confidence among commuters, freight operators, and emergency responders alike. Collectively, these benefits underscore the comprehensive value proposition of strategic transportation investments.

This chapter first discusses the different investment levels, followed by an introduction to the anticipated user and societal benefits of multimodal transportation investments, and then presents the monetized values of these benefits based on the analysis conducted for this report.

Different Investment Levels

To capture the spectrum of possible futures, the economic impact analysis evaluates three investment scenarios, each reflecting a distinct degree of infrastructure commitment and fiscal ambition. This tiered approach enables stakeholders to compare outcomes under minimal intervention, current funding commitments, planned projects, and fully realized network needs.

- ***Baseline Condition Scenario* – Absolute No Build (Existing Network):** In the Baseline Scenario, the region's transportation network remains unchanged from current conditions, with no additional projects or funding allocations. This scenario serves as a control, illustrating the status quo's capacity constraints, escalating congestion, and growing maintenance backlog. All performance metrics, travel times, vehicle operating costs, emissions, and safety outcomes, are projected forward without intervention, highlighting the mounting economic and environmental liabilities of deferred investment.
- **Maintain Existing System (Existing + Committed Network):** This scenario incorporates all projects for which funding is currently secured, including locally approved roadway resurfacing, bridge rehabilitation, and transit procurements. While this level of investment arrests certain declines in system reliability and asset condition, it falls short of addressing capacity shortfalls or major connectivity gaps. The resulting benefits largely accrue from preservation and operational efficiencies, with only modest impacts on congestion relief and network resiliency.
- **Long Range Transportation Plan (Existing + Committed + Fiscally Constrained Projects Network):** Under the Long Range Transportation Plan (LRTP) scenario, the analysis layers in fiscally constrained projects that have been prioritized through the regional planning process. This includes strategic roadway widening/expansion, safety enhancements, corridors and intersection upgrades, and targeted active-transportation enhancements. By aligning investment with realistic revenue forecasts, the LRTP scenario delivers measurable reductions in travel times, vehicle operating costs, and emissions, while also generating reliability savings and initial market-access gains.

Transportation Efficiency Benefits

Transportation efficiency benefits quantify the economic value derived from changes in trip characteristics attributable to infrastructure improvements. These benefits primarily accrue to system users (commuters, freight shippers, and transit operators); and extend to the broader public through reduced public expenditures and environmental impacts. By translating improvements in travel time, reliability, vehicle operating costs, and

safety into monetary terms, the analysis captures both direct user savings and societal gains, providing a holistic view of project performance.

User Benefits

- **Vehicle Operating Cost Benefits:** Enhancements to roadway and transit facilities mitigate stop-and-go conditions, reduce idling, and smooth traffic flow, directly lowering per-mile vehicle operating costs. Improved fuel efficiency, fewer brake cycles, and reduced engine wear translate into tangible savings for personal motorists and commercial fleets. These reductions in fuel, maintenance, and repair expenditures bolster household budgets, decrease business overhead, and contribute to the long-term financial sustainability of the region's transportation network. Estimates of operating-cost savings adhere to the federal Benefit-Cost Analysis Guidance for 2025, disaggregated by mode and trip purpose.
- **Travel Time Savings:** Time savings represent one of the most visible and valued outcomes of transportation investments. By shortening commute durations and streamlining freight routes, projects free up hours that households can reallocate to work, leisure, or caregiving, while businesses benefit from enhanced worker productivity and more efficient logistics. The economic valuation of time savings applies per-person-hour and freight-hour rates as prescribed in the 2025 BCA Guidance, reflecting both market wages and the intrinsic value of reduced congestion-related stress.
- **Reliability Benefits:** Reliability improvements capture the reduction in buffer time that users must factor into their travel to guard against unpredictable delays. By optimizing capacity and smoothing bottlenecks, investments lower the variance in travel times, enabling commuters and shippers to plan schedules with greater certainty. The analysis employs the Travel Time Index methodology developed by the Texas A&M Transportation Institute to quantify buffer-time savings, which are then monetized using the same value-of-time parameters as travel time savings.

Societal Benefits

- **Emission Reduction Benefits:** Reduced congestion and improved flow decrease vehicle idling and accelerate shift toward higher-efficiency modes, yielding significant cuts in greenhouse gas and criteria pollutant emissions. Lower emissions of CO_2, NO_x, VOCs, SO_x, and $PM_{2.5}$ enhance air quality, curtail respiratory health risks, and contribute to climate-change mitigation. Emission rates, sourced from the U.S. EPA's Office of Transportation and Air Quality, are applied on a per-mile basis for automobiles and heavy vehicles. Valuations are based on the social cost of carbon and pollutant-specific damage functions.
- **Safety Benefits:** Infrastructure improvements, such as roadway reconfigurations, upgraded signage, and grade separations, reduce crash frequency and severity. The analysis based on vehicle-miles of exposure monetizes reductions in fatalities, injuries, and property damage using standardized value-of-statistical-life and injury cost metrics, reflecting societal willingness to pay for safety enhancements and the reduction of public and private expenditures associated with traffic incidents.
- **Health and Active Transportation Benefits:** Investments that facilitate walking and cycling yield ancillary health dividends by promoting physical activity. The economic analysis accounts for reductions in all-cause mortality, cardiovascular disease, and associated healthcare expenditures among individuals who shift from sedentary travel modes. These health benefits are quantified using epidemiological evidence on the value of increased active-transportation trips.
- **Preservation Benefits:** Proactive maintenance of pavement and bridge assets defers deterioration, avoiding the exponentially higher costs of full reconstruction. Preservation benefits are calculated as the net present value of avoided rehabilitation and replacement expenses, ensuring that today's investments forestall future capital burdens.

Productivity Gains

- **Market Access Gains:** By alleviating congestion and bridging connectivity gaps, transportation investments expand the effective labor market and consumer reach for businesses. Enhanced access to a larger pool of workers and suppliers fosters economies of scale, increases regional competitiveness, and boosts gross regional product through more efficient allocation of resources.
- **Workforce Participation Gains:** Workforce participation gains reflect the added economic value created when individuals are able to join the labor force solely because transportation infrastructure allows them to reach employment opportunities. Without such infrastructure, these individuals would be unable to participate in the workforce at all.

Benefits of Different Investment Levels

Investments in transportation infrastructure generate user, societal and productivity gains benefits by fundamentally reshaping how people and goods travel throughout the Greater Des Moines Region. These benefits arise from improved travel reliability and time savings due to increased capacity and reduced congestion, lower emissions from both passenger vehicles and freight trucks, and enhanced safety through reductions in crashes, injuries, and fatalities. Additionally, maintaining roads and bridges helps preserve system efficiency, while expanded support for active transportation promotes better public health and reduces vehicle miles of travel.

In addition to broader societal benefits, transportation infrastructure investments in the Greater Des Moines region generate economic value by improving market access and enabling businesses to reach a larger, more skilled labor pool, allowing them to operate more efficiently and create greater output. Transportation also facilitates workforce participation by providing individuals with access to employment opportunities that would otherwise not be possible. This is especially important for DART users, many of whom rely on public transit as their only means to participate in the workforce.

Total Benefits

This section presents the total (user + societal + productivity) benefits associated with transportation investments in the Greater Des Moines region. Table 3-1 shows a substantial increase in total benefits resulting from the additional investments in LRTP program compared to the existing and committed investments over the program's life (i.e., 25 years from 2025-2050). The existing and committed scenario, with a capital outlay of $4.7 billion, yields $24 billion in total benefits, implying a return on investment (ROI) of 5.11. In contrast, the additional $7.8 billion in LRTP program investment generates an incremental $12 billion in benefits, with a marginal ROI of 1.54. This means that for every $1 invested beyond the existing and committed projects, the region receives approximately $1.54 in return in the form of societal and productivity gains. When aggregated, the full implementation of the LRTP results in $36 billion in total benefits for a cumulative investment of $12.5 billion, translating to an overall long-term ROI of approximately 3.

Table 3-1: Cumulative Benefits Over Absolute No Build (in Million 2023 $s) (2025-2050)

Scenarios:	Maintain Existing System (E+C)	Additional Planned Investments (Incremental)	Long Range Transportation Plan (E+C+P)
Total Efficiency Benefits (Undiscounted)	**$24,100.66**	**$12,082.66**	**$36,183.32**
Discounted @ 3.5%	$14,599.87	$6,304.99	$20,904.86
Vehicle Operating Cost Savings	**$1,503.08**	**$2,163.63**	**$3,666.71**
Passenger	$1,439.97	$2,027.25	$3,467.22
Freight	$63.11	$136.38	$199.49
Value of Time and Reliability Savings	**$4,171.27**	**$8,398.29**	**$12,569.55**
Passenger	$3,793.17	$7,942.08	$11,735.25
Freight	$378.09	$456.21	$834.30
Environmental Benefits	**$78.92**	**$130.07**	**$208.99**
Passenger	$23.95	$75.06	$99.01
Freight	$54.98	$55.01	$109.99
Safety Benefits	**$62.66**	**$189.22**	**$251.88**
Passenger	$62.40	$176.07	$238.47
Freight	$0.26	$13.15	$13.42
Active Transportation Benefits	**$1.88**	**$10.82**	**$12.70**
Induced Activity	$0.07	$0.38	$0.44
Travel Time	$1.82	$10.44	$12.26
Preservation Benefits	**$3,865.91**	**$0.00**	**$3,865.91**
Highway	$3,685.09	$0.00	$3,685.09
Bridge	$180.83	$0.00	$180.83
Market Access Gains*	**$713.52**	**$1,190.64**	**$1,904.16**
Workforce Participation	**$13,703.41**	**$0.00**	**$13,703.41**
Total Outlays (Undiscounted)	**$4,712.51**	**$7,849.30**	**$12,561.80**
Discounted @ 3.5%	$3,399.39	$3,953.34	$7,352.73

** **Note:** Market Access Gains will be analyzed in detail in Task 3.*

Transportation Efficiency Benefits

Regional transportation investments optimize network performance by alleviating congestion and resolving capacity constraints. This leads to improved traffic flow, reduced travel time variability for passengers, transit, and freight modes, and decreased vehicle idling, which enhances fuel economy, lowers braking frequency, and minimizes wear and tear. Improved transportation efficiency in the Greater Des Moines region can be quantified into the following categories of benefits:

User Benefits

User benefits are accrued due to (i) Vehicle Operating Cost: Savings to households and businesses due to improved fuel efficiency, fewer brake cycles, and reduced fuel, maintenance, and repair expenses, and (ii) Travel Time and Reliability: Monetized travel time savings for households and businesses due to shorter commutes, faster deliveries, and improved reliability. As shown in Table 3-2, under the existing and committed scenario, vehicle operating cost savings amount to $1.5 billion; with the inclusion of additional LRTP investments, savings increase by $2.1 billion, resulting in a total of $3.6 billion for the whole LRTP program. Households and businesses in the Greater Des Moines region gain the greatest economic value from transportation improvements through travel time and reliability savings. These benefits total $4.1 billion under

the existing and committed scenario and increase to $12 billion with the LRTP, yielding an $8 billion gain from $8.3 billion in additional investments.

Table 3-2: Cumulative Transportation Efficiency Benefits (in Million 2023 $s)

Scenarios:	Maintain Existing System	Additional Planned Investment	Long Range Transportation Plan
Total Transportation Efficiency Benefits	**$10,826.05**	**$10,892.02**	**$21,718.07**
Discounted @ 3.5%	$5,788.42	$5,555.35	$11,343.76
Vehicle Operating Cost Savings	**$1,503.08**	**$2,163.63**	**$3,666.71**
Value of Time and Reliability Savings	**$4,171.27**	**$8,398.29**	**$12,569.55**
Environmental Benefits	**$78.92**	**$130.07**	**$208.99**
Safety Benefits	**$62.66**	**$189.22**	**$251.88**
Active Transportation Benefits	**$1.88**	**$10.82**	**$12.70**
Preservation Benefits	**$3,865.91**	**$0.00**	**$3,865.91**

Societal Benefits

Transportation investments in the Greater Des Moines region generate societal benefits primarily through four mechanisms:

1. *Reducing vehicular emissions*
2. *Improving traffic safety*
3. *Active transportation benefits*
4. *Preservation benefits*

This improved transportation efficiency leads to a measurable decrease in vehicle emissions, which is quantified on a per-mile basis using values established by the U.S. EPA's Office of Transportation and Air Quality. Compared to the absolute no-build scenario, the existing and committed investments result in reduced emissions valued at $78.92 million, while the full LRTP program yields a greater reduction in emissions valued at $208 million.

Investments in transportation infrastructure and related programs such as signage, upgrades (unsignalized to signalized), or lane separation result in a reduction in exposure and risk and eventually a decrease in crash severity and frequency. Such an increase in safety can be quantified by reductions in mortality, fatality and damage (property and others) due to transportation investments and generally computed by the localized crash rates and using the statistical value of life. Compared to the base scenario, the existing and committed investments yield safety benefits totaling $63 million, while the full LRTP program achieves $252 million in safety-related benefits.

Active Transportation Benefits

Active transportation generates significant economic benefits through improved public health. By encouraging regular physical activity, walking and cycling help reduce the risk of chronic diseases such as obesity, heart disease, and diabetes, leading to lower healthcare costs. Healthier populations also result in increased workforce productivity and fewer sick days. Active transportation investments in the Greater Des Moines region can be quantified in dollar terms based on existing research from the Victoria Transportation Policy Institute (VTPI), which provides estimates per mile of walking and biking based on reduced medical costs, mortality, and productivity gains. Using mileage of active transportation activity and estimates provided by VTPI, the existing and committed projects generate $1.88 million in benefits, whereas the LRTP program

generates $12.70 million, resulting in about $10.82 million of benefits due to additional benefits in the LRTP program.

System Preservation Benefits

System preservation benefits underscore the importance of maintaining and prolonging the lifespan of existing transportation infrastructure. By investing in the upkeep and rehabilitation of transportation assets, the Greater Des Moines region's community can avoid the higher costs associated with their deterioration and eventual replacement. System preservation ensures the continued functionality, safety, and efficiency of the transportation network while also delivering substantial cost savings over the long term.

Pavement Preservation

Pavement preservation savings are a key element of system preservation benefits from transportation investments, as they reduce long-term maintenance costs by extending roadway life, minimizing damage, and ensuring safer, smoother, and more cost-effective travel for all users. The savings due to pavement preservation are estimated from the Highway Performance Monitoring System (HPMS) data on the percentage of good, fair, and poor condition roadways. This data comes from the International Roughness Index (IRI) and is organized by roadway functional classification. The benefit is then estimated by calculating the difference in the vehicle operating cost and travel time costs among the base (no build) scenario, the existing and committed scenario, and the LRTP scenario due to the estimated difference in pavement conditions by investment level.

Bridge Preservation

Proactive inspection, maintenance, and rehabilitation efforts help extend bridge lifespans, enhance public safety, and avoid the high costs and disruptions associated with major repairs or replacements. The Bridge preservation analysis utilizes the 'National Bridge Investment Allocation System (NBIAS) version 5.4' tool provided by the Federal Highway Administration to estimate the cost and benefits of bridge preservation for different scenarios. The NBIAS tool uses the current National Bridge Inventory data to simulate and estimate the number of good, fair, and poor bridges in the future under each investment level.[9]

The Greater Des Moines region's investments in pavement and bridge preservation will save households and businesses about $3.96 billion, cumulatively over the period of 2025-2050, due to reduced operating costs, efficiency, and reduced infrastructure replacement costs. Preservation-related savings are identical across both scenarios, as maintaining existing infrastructure to a baseline condition is a necessary requirement in each case.

Market Access Gains

Over the 2025-2050 planning horizon, improvements in labor-market connectivity and corresponding increases in business productivity generate substantial economic benefits for the Greater Des Moines region. Under the existing and committed investment scenario, where the existing transportation network is preserved but no capacity-expansion projects are undertaken, the region is projected to realize approximately $713.5 million in market-access gains. By contrast, implementing the full suite of investments recommended in the Long-Range Transportation Plan (LRTP) yields roughly $1.9 billion in benefits. In other words, the additional LRTP expansions deliver an incremental $1.2 billion in market-access value beyond what would be achieved under a no-expansion baseline. Further discussion of the aggregate economic impacts associated with

[9] *National Bridge Inventory* https://www.fhwa.dot.gov/bridge/nbi/ascii2023.cfm

enhanced market access appears in Section 6, and Task 3 of this study will provide a more detailed market-access analysis.

Increased Workforce Participation

The regional travel-demand model forecasts daily transit boardings rising from about 11,000 work trips in 2021 to 13,400 work trips by 2050 under the LRTP investment scenario. Assuming a typical two-trip work commute, this translates to approximately 5,500 daily transit-enabled workers, individuals whose access to jobs depends on the availability of public transportation.

Data from the 2019–2023 American Community Survey indicate that 37 percent of transit commuters in the Greater Des Moines region do not have access to a personal vehicle. That corresponds to roughly 2,100-2,400 workers whose participation in the local economy would be severely constrained or entirely prevented without transit service. While the remaining 63 percent of transit riders could switch to carpooling, ridesharing, walking, biking, or other modes, these non-auto households depend on transit to remain in the workforce.

This analysis is based on the **B08141: Means of Transportation to Work by Vehicles Available** table from the 2019-2023 ACS 5-year Estimates.[10] The DART onboard survey results for vehicle availability (Question 32) showed that 61 percent of respondents reported having no working vehicle in their household (excluding non-responses).[11] Assuming roughly half of this group are work-related riders and the other half non-work riders, the estimate aligns closely with the ACS figure. To maintain consistency with an official source, the ACS estimate was used.

The onboard survey also asked how riders would make their trip if DART service were not available (Question 11). About 11 percent of respondents indicated they would not make the trip at all (excluding non-responses).[12] These results were not used for this analysis because the question wording may have led respondents to think about a short-term disruption rather than a permanent loss of service.

Over the 2025-2050 period, the resulting drag on regional output, measured as foregone value added, would total approximately $13.7 billion. Conversely, by sustaining this level of transit service, the region secures an additional $13.7 billion in economic value through continued workforce participation. Because transit coverage does not differ materially between maintaining the existing system (E+C) scenario and the full LRTP (E+C+P) scenario, these workforce-participation benefits are effectively identical under both investment paths. For a comprehensive assessment of the wider economic implications of transit-enabled labor-market participation, please see Section 6.

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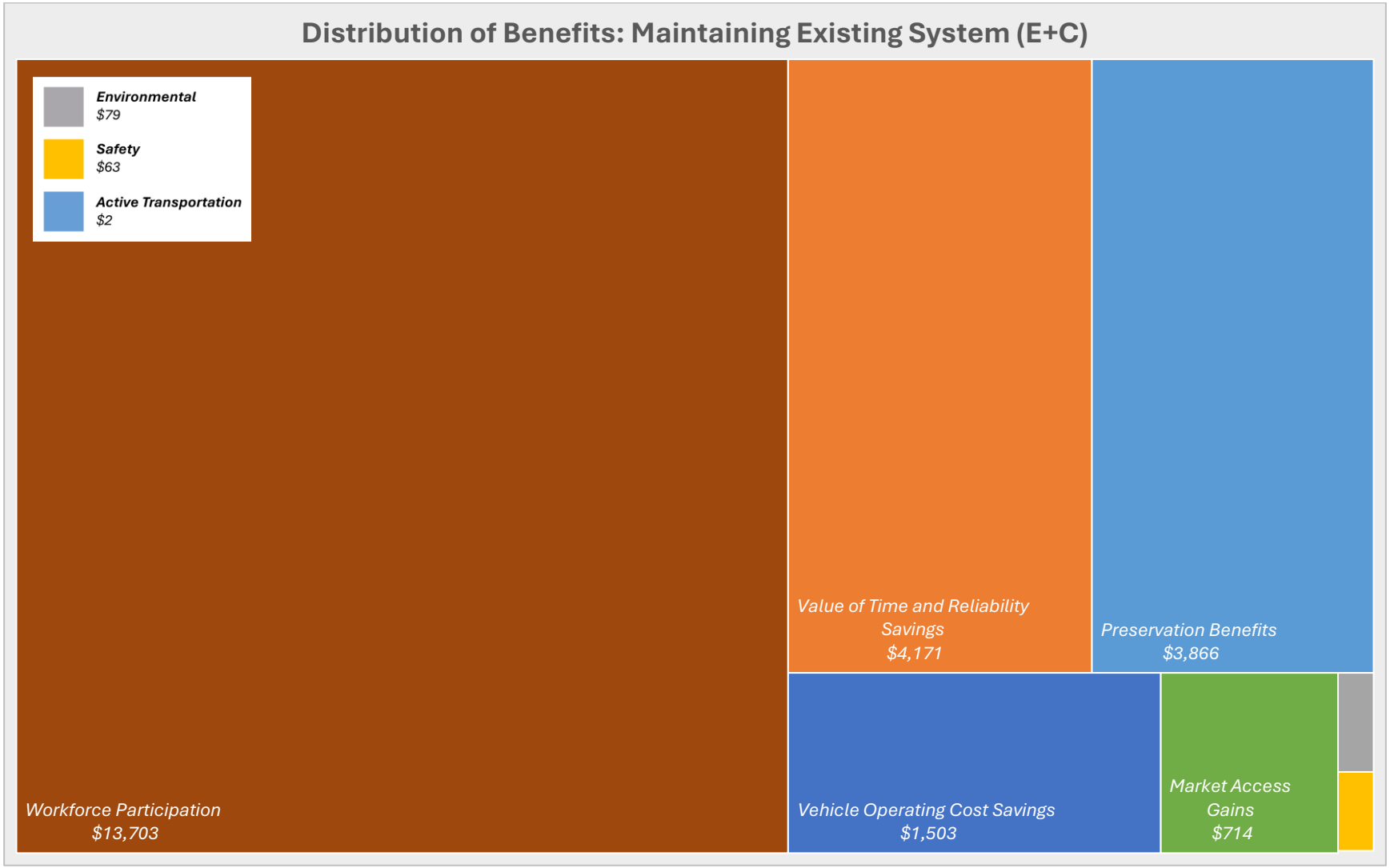
[10] *B08141 Means of Transportation to Work by Vehicles Available; Polk County, IA; 2023 5-Year Estimates Detailed Tables; https://data.census.gov/table?q=B08141&g=050XX00US19153&y=2023&d=ACS+5-Year+Estimates+Detailed+Tables*

[11] *Des Moines Area Regional Transit Authority Customer Service Satisfaction Survey: Fixed Routes (November 2022), Page 91, Q32. How many working vehicles are available to your household? (without "not provided")*

[12] *Des Moines Area Regional Transit Authority Customer Service Satisfaction Survey: Fixed Routes (November 2022), Page 60, Q11. If DART service is not available or can't get you where you need to go, how would you make your trip? (without "not provided")*

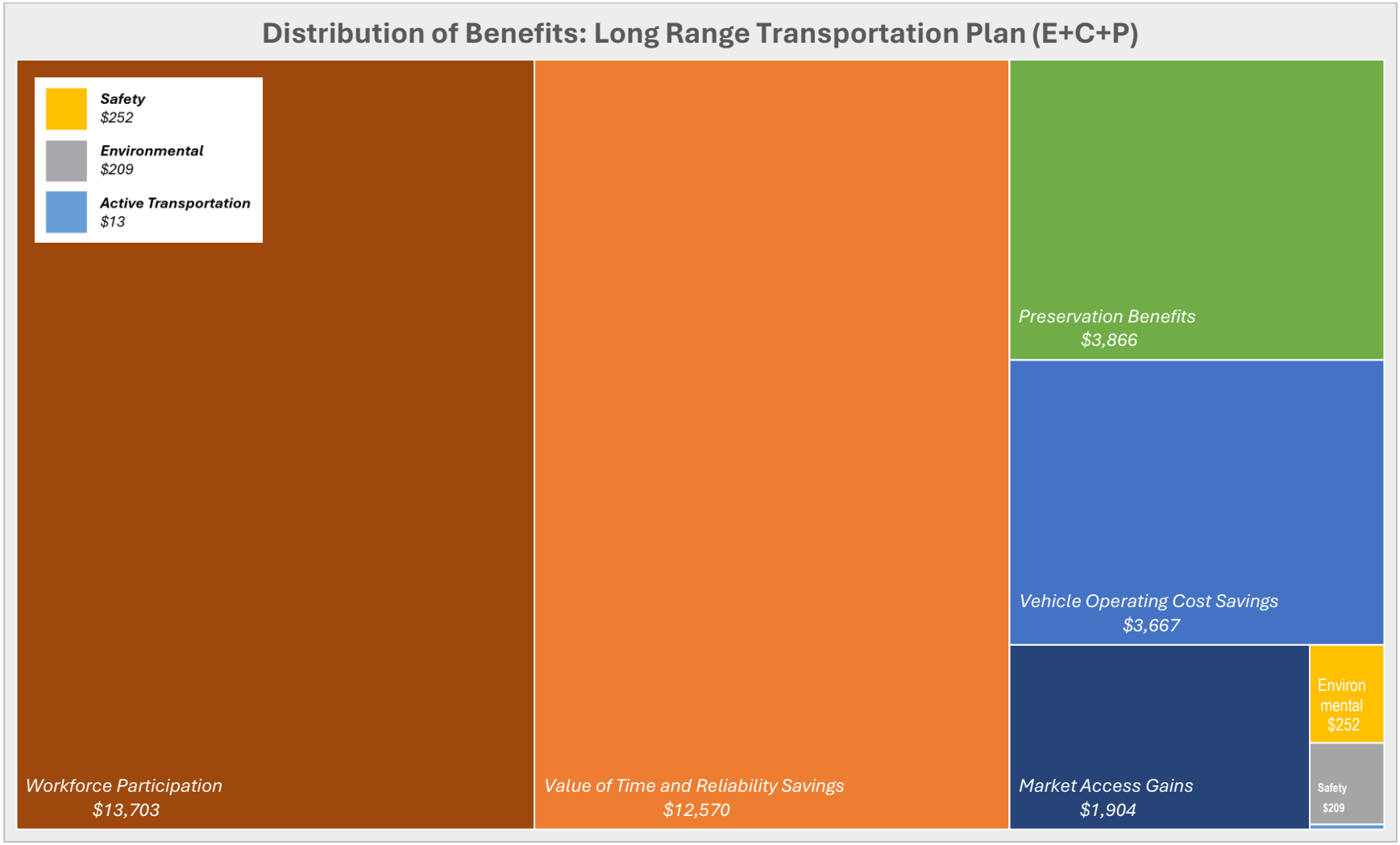
Multimodal Contribution Analysis Report

Figure 3-1: Distribution of Cumulative Benefits of Maintaining Existing System (in Million $s)



Multimodal Contribution Analysis Report

Figure 3-2: Distribution of Cumulative Benefits of Long-Range Transportation Plan Investments (in Million $s)



4 Economic Impacts of Transportation Investments

The benefits of investing in transportation infrastructure extend beyond savings/benefits for households and businesses, by generating wider economic impacts through enhanced productivity, increased competitiveness, and expanded economic opportunities. In the Greater Des Moines region, transportation investments contribute to measurable economic outcomes such as job creation, higher household incomes, increased business output, and growth in gross domestic product (GDP). These impacts occur as cost savings from improved travel time, safety, and infrastructure reliability allow businesses to reinvest in operations, expand production, and hire more workers. Additionally, the multiplier effects of these reinvestments through increased demand for goods, services, and labor stimulate further economic activity across supply chains and consumer markets. As a result, the initial transportation savings produce amplified economic returns, supporting long-term growth and resilience in the state's economy.

How do savings translate into wider economic impacts?

In the Greater Des Moines region, savings from transportation improvements such as reduced travel time, increased reliability, and lower vehicle operating costs generate widespread economic impacts through a combination of direct, indirect, and induced effects:

- **Direct Effects:** The immediate economic activity resulting from the initial event or investment, such as spending, cost savings, or productivity gains within the affected industry.
- **Indirect Effects:** The secondary economic activity generated in the supply chain as businesses purchase goods and services from other industries to support direct activity.
- **Induced Effects:** The additional economic activity created when workers and business owners spend their increased income on goods and services in the broader economy.

The following provides an example of how travel time savings due to the Greater Des Moines region's investments on transportation produce wider economic impacts.

- **Direct Effect:** Improved transportation infrastructure saves time for commuters and freight operators. These savings can be monetized as productivity gains or lower operating costs for businesses. For instance, a delivery company that completes more trips in less time can serve more customers without increasing costs.
- **Indirect Effect:** The delivery company, now more productive, may expand operations and increase purchases from suppliers such as vehicle maintenance shops, fuel providers, and logistics software firms. This increased demand stimulates activity and job creation in these supporting industries.
- **Induced Effect:** Employees in both the delivery company and its supply chain earn more income or work more hours due to increased demand. They spend this income on groceries, healthcare, entertainment, and housing, boosting demand in consumer-facing sectors and generating further economic activity in the region.

How are direct, indirect and induced effects calculated?

The calculation of economic effects from transportation savings begins with determining the direct costs or benefits. Direct costs are measured by quantifying the immediate changes in output, expenses, or productivity within the industry directly affected by the improvement of transportation. This involves assessing the value of cost savings or increased efficiency resulting from factors such as reduced travel time or lower vehicle operating costs. Once the direct effects are established, the model estimates indirect effects by tracing how

the affected industry increases its demand for goods and services from supplier industries. Regional data is used to identify how much of this supplier activity occurs locally versus outside the region. Finally, induced effects are calculated by evaluating how increased household income from direct and indirect activities translates into additional consumer spending within the region. Variations in household spending patterns by income level and geography help quantify the further jobs and output supported in consumer-oriented sectors. Together, this approach captures the full ripple effect of transportation savings on regional employment, income, and economic output.

Impacts on Jobs, Household Income, Business Output, and GDP

As described in Section 4, the Greater Des Moines region's transportation investments create wider economic impacts in five ways:

(i) **Transportation efficiency:** Total economic activity resulting from improved transportation conditions.
(ii) **Spending:** Total economic activity created through spending investments.
(iii) **System Preservation:** Total economic activity resulting from maintaining the physical condition of transportation assets.
(iv) **Market Access:** Total economic activity resulting from expanded labor and commodity markets.
(v) **Workforce Participation:** Total economic activity resulting from commuters who could not work without transit.

Economic impacts due to each of the sources above can be quantified in terms of:

- ***Jobs:*** Number of employees at maximum impact during the period
- ***Household Income:*** The amount of income that the employees will be able to earn over the long-term horizon of the analysis
- ***Value Added (GDP):*** Overall gain that households, businesses, and nonprofits get over the long term (including wages, profits, taxes, and other proceeds of how benefit is used)
- ***Business Output:*** Total additional goods and services that can be made and sold in/from the region due to the result of the transportation investments

As shown in Table 4-1, under the existing and committed scenario, transportation investments in the Greater Des Moines region are projected to support 10,180 jobs, generate $11.2 billion in household income, contribute $19.4 billion to the region's GDP, and result in $34.05 billion in overall business output. With the additional investments proposed in the LRTP, the Greater Des Moines region could realize further economic gains, creating 4,219 more jobs, $3.7 billion in added household income, $5.9 billion in additional GDP, and $10 billion in increased business output.

Scenario-Based Comparison of Key Impact Categories

This subsection provides a detailed analysis of the magnitude of economic impact across the two scenarios due to the five impact categories, as shown in Table 4-1.

Return on Investment

Investments in the existing and committed projects aimed at maintaining the existing system over the performance period of 25 years (2025-2050) are estimated to generate about $34 billion in total business output from $4.7 billion in spending. This represents a return on investment (ROI) of 7.2, so that for every dollar invested, the resulting economic activity, amplified through multiplier effects, produces $7.20 in business output.

Table 4-1: Cumulative Economic Impacts of Investments (in Million 2023 $s) (2025-2050)

	Transportation Efficiency	Spending	Preservation	Market Access	Workforce Participation	Total
Maintaining Existing System (E+C)						
Employment (in # of Jobs)	589	3,770	857	455	4,457	**10,128**
Household Income	$526.0	$2,147.4	$539.6	$293.2	$7,606.3	**$11,112.4**
Value Added (GDP)	$923.2	$3,233.6	$950.2	$514.7	$13,703.4	**$19,325.2**
Business Output (Sales)	$1,585.3	$5,914.8	$1,629.6	$883.8	$23,768.2	**$33,781.7**
Long Range Transportation Plan (E+C+P)						
Employment (in # of Jobs)	1,748	5,820	857	1,465	4,457	**14,347**
Household Income	$1,290.7	$4,644.7	$539.6	$780.5	$7,606.3	**$14,861.9**
Value Added (GDP)	$2,271.6	$6,994.2	$950.2	$1,373.6	$13,703.4	**$25,293.0**
Business Output (Sales)	$3,896.7	$12,793.5	$1,629.6	$2,356.0	$23,768.2	**$44,443.9**
Additional Planned Investment (Incremental)						
Employment (in # of Jobs)	1,159	2,049	*Same across scenarios*	1,010	*Same across scenarios*	**4,219**
Household Income	$764.8	$2,497.3		$487.3		**$3,749.4**
Value Added (GDP)	$1,348.4	$3,760.6		$858.9		**$5,967.8**
Business Output (Sales)	$2,311.3	$6,878.7		$1,472.2		**$10,662.2**

Workforce Participation

The primary driver of business output is found to be economic activity resulting from workforce participation. The Greater Des Moines region's transit system (DART) enables individuals who might otherwise face barriers due to limited transportation options to access employment opportunities. At its peak year of impact, the system is expected to support workforce participation for approximately 4,500 individuals, who earn $7.6 billion in household income, generate $13.7 billion in value-added GDP, and a total business output of about $24 billion.[13] Given the lack of substantial variation in transit service and investment between the existing and committed and the LRTP scenarios, the resulting economic impact due to workforce participation remains the same.

Spending

Spending on transportation in the Greater Des Moines region, especially through construction, maintenance, and related activities, generates broad economic impacts by channeling funds into various sectors of the economy. Direct spending creates jobs in construction, engineering, and other sectors, which results in increased household income and consumer spending. This, in turn, supports additional employment in retail, hospitality, and local services. The demand for materials, equipment, and professional services also stimulates activity in supporting industries such as manufacturing, logistics, and wholesale trade. These effects multiply as businesses and households reinvest their earnings back into the economy. As a result, transportation investments lead to increased business output, higher gross regional product, and overall economic growth in the Greater Des Moines region. Impacts of spending $4.7 billion on existing and

[13] *In most economic measures such as household income, GDP, and business output, the impacts are added together from year to year. Employment is measured differently. Jobs created or supported in one year are generally assumed to continue into the following years, so they are not added up each year. Instead, for the entire study period, the maximum of the single-year employment impact is reported.*

committed scenario generate a total of 3,770 jobs, about $2.1 million in household income, $3.2 billion in GDP, and $5.9 billion in total output. Investments in the additional projects from the LRTP ($7.8 billion) will produce an additional 2,049 jobs, $2.5 billion in household income, $3.7 billion in GDP and $6.8 billion in total output.

Preservation

Maintaining the existing pavement and bridges provides savings to users and businesses by improving reliability, lowering fuel consumption and vehicle operating costs, and, in the case of the Greater Des Moines region, reducing maintenance expenses. These savings then translate into wider economic impacts through direct, indirect and induced effects of preservation savings in the Greater Des Moines regional economy. These broader economic impacts remain the same under both the existing and committed scenario and the LRTP scenario, as they reflect baseline preservation investments that are included in both cases.

Transportation Efficiency

Operating savings and travel time savings are key components of transportation efficiency that generate wider economic impacts by improving productivity, reducing business costs, and increasing household disposable income. As businesses operate more efficiently and individuals spend less time and money on travel, these savings are reinvested into the economy through increased output, higher employment, and greater consumer spending. This leads to growth across multiple sectors and strengthens overall regional economic performance. Under the existing and committed scenario, household and business savings resulting from transportation efficiency are projected to support 589 jobs, generate $526 million in household income, contribute $923 million to value added (GDP), and produce around $1.58 billion in total business output. With the additional investments outlined in the LRTP, these benefits are expected to increase, resulting in 1,159 jobs, $764.8 million in household income, $1.3 billion in value added, and $2.3 billion in total business output.

Market Access

Economic benefits derived from transportation improvements are closely associated with accessibility to the transportation network, which facilitates more efficient connections between households, labor, and businesses. Market access benefits and impacts capture the increase in economic output resulting from expanded geographic reach and connectivity of the transportation system. Market access impacts occur through two ways: (i) Increase in business output due to a greater proportion of labor gaining access to employment opportunities within a commuting shed (30 mins) due to improved transportation efficiency, and (ii) Increase in business output due to businesses increased access to supplier and seller markets within a larger catchment area (generally 180 min) due to transportation efficiency.

Market access impacts are estimated by analyzing the relationship between business output and accessibility, taking into account the composition of local industry and the structure of the transportation network in the Greater Des Moines region. For this report, however, the market access values are derived from multipliers/relationships used in comparable studies.[14] A more detailed and rigorous analysis tailored to local conditions will be conducted as part of the Market Access Analysis (Task 3) deliverable.

Increased market access under the existing and committed scenario is estimated to support 455 jobs, generate $293.2 million in household income, $514.7 million in GDP, and $883.8 million in total business output. Additional investment in the LRTP program would provide 1010 jobs, $487.9 million additional household income, $858.9 million in value added, and $1.5 billion in business output.

[14] *Since more detailed calculations will be conducted in Task 3, the market access impact estimates presented here are preliminary and will be subject to revision.*

Figure 4-1 through Figure 4-4 show the comparison of the impact of each of these five impact categories across the two investment scenarios for employment, household income, GDP, and business output.

Figure 4-1: Cumulative Employment Impacts by Funding Scenarios

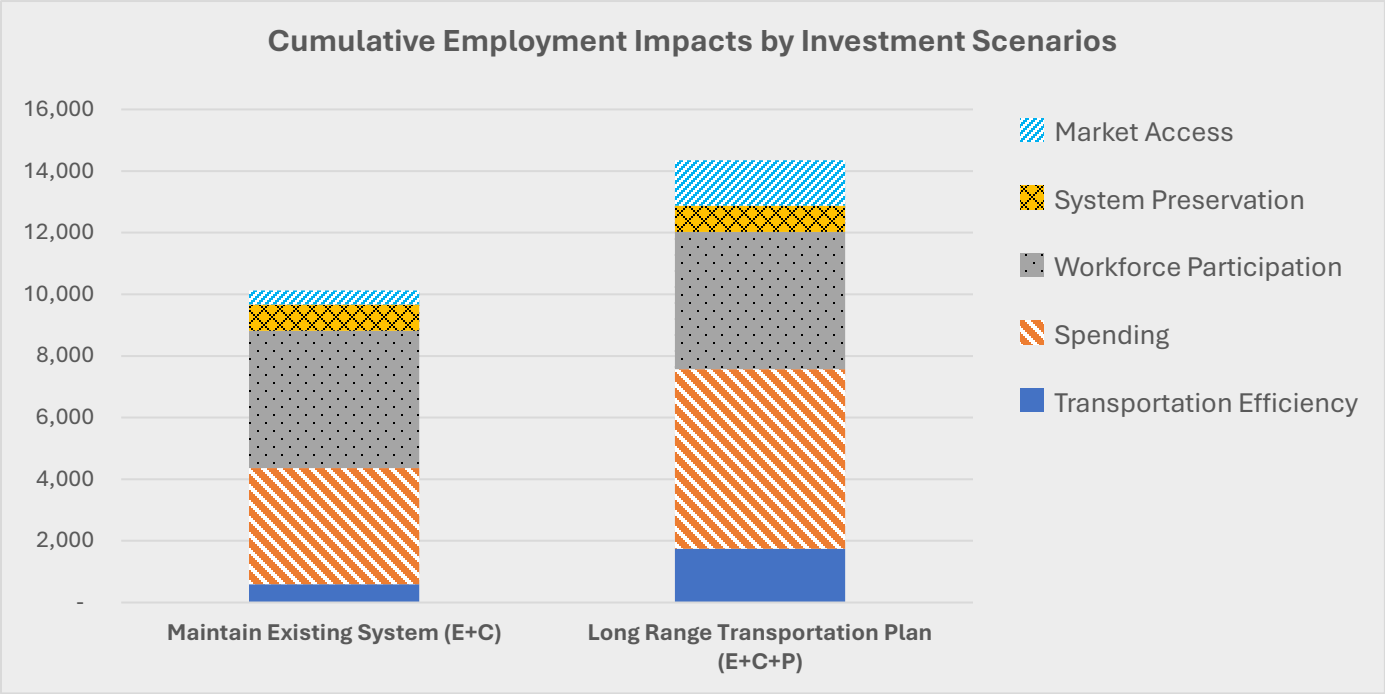


Figure 4-2: Cumulative Household Income Impacts by Investment Scenario (in Million $s)

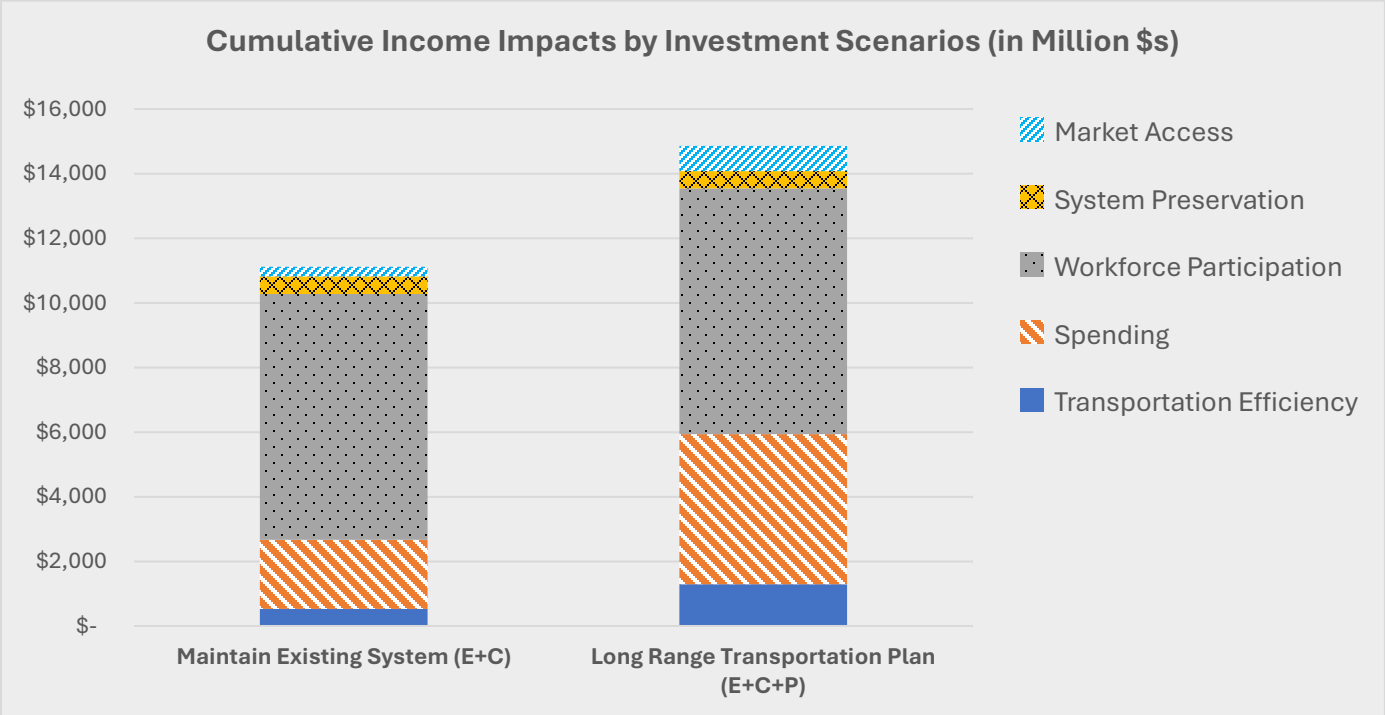


Figure 4-3: Cumulative GDP Impacts by Investment Scenarios (in Million $s)

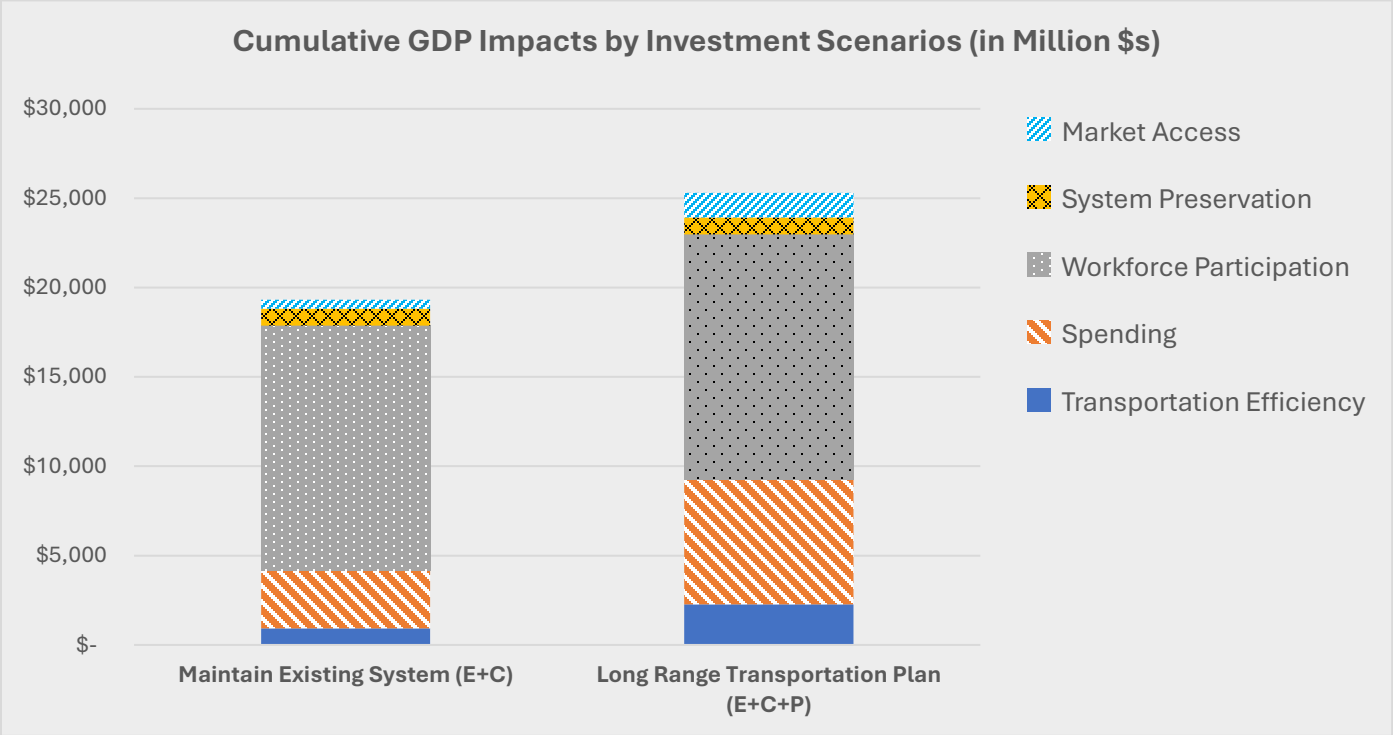
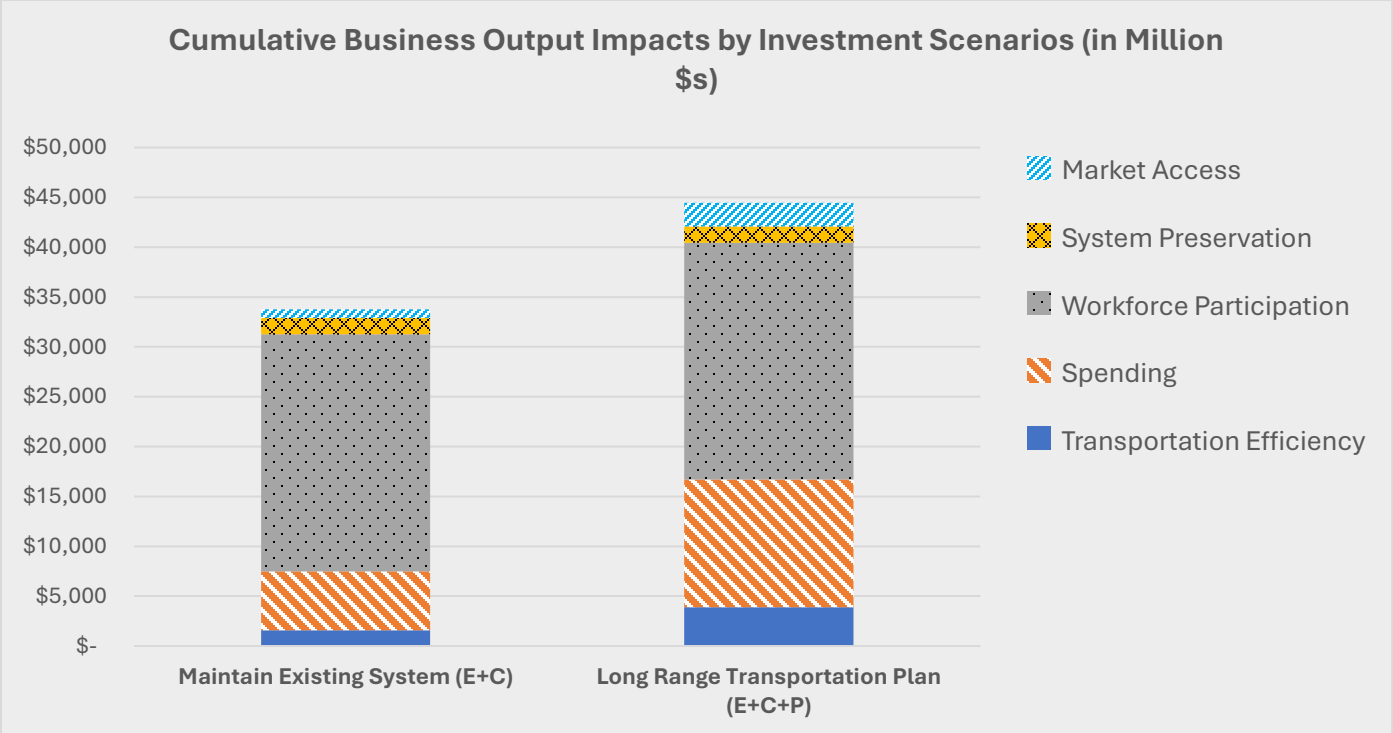


Figure 4-4: Cumulative Business Output Impacts by Investment Scenarios (in Million $s)



5 Fiscal Impacts of Enhanced Investment

Investing in the Greater Des Moines region's transportation infrastructure focused on roadway improvements, system preservation, and network expansion has the potential to produce substantial fiscal impacts across all levels of government. Transportation investments are expected to stimulate broad economic activity throughout the region by improving connectivity, reducing travel times, and enhancing overall system efficiency. These improvements translate into increased employment opportunities, higher labor income, greater business output, and added value to the regional economy. The fiscal impacts stem from a combination of direct, indirect, and induced effects, driven by spending on construction and maintenance, development of a more efficient transportation system, and expanded market access. As a result, federal, state, and local governments are projected to benefit from increased tax revenues through income, sales, and business tax channels. This section presents the wide-ranging economic and fiscal advantages of transportation investment in the Greater Des Moines region, reflecting different levels of investment.

Table 5-1 provides an overview of total federal, state and local taxes generated over the 25-year cumulative period (2025-2050) as a result of the Greater Des Moines region's transportation investments.

Table 5-1: Cumulative Fiscal Impacts of Transportation Investments in the Greater Des Moines Region (in Millions)

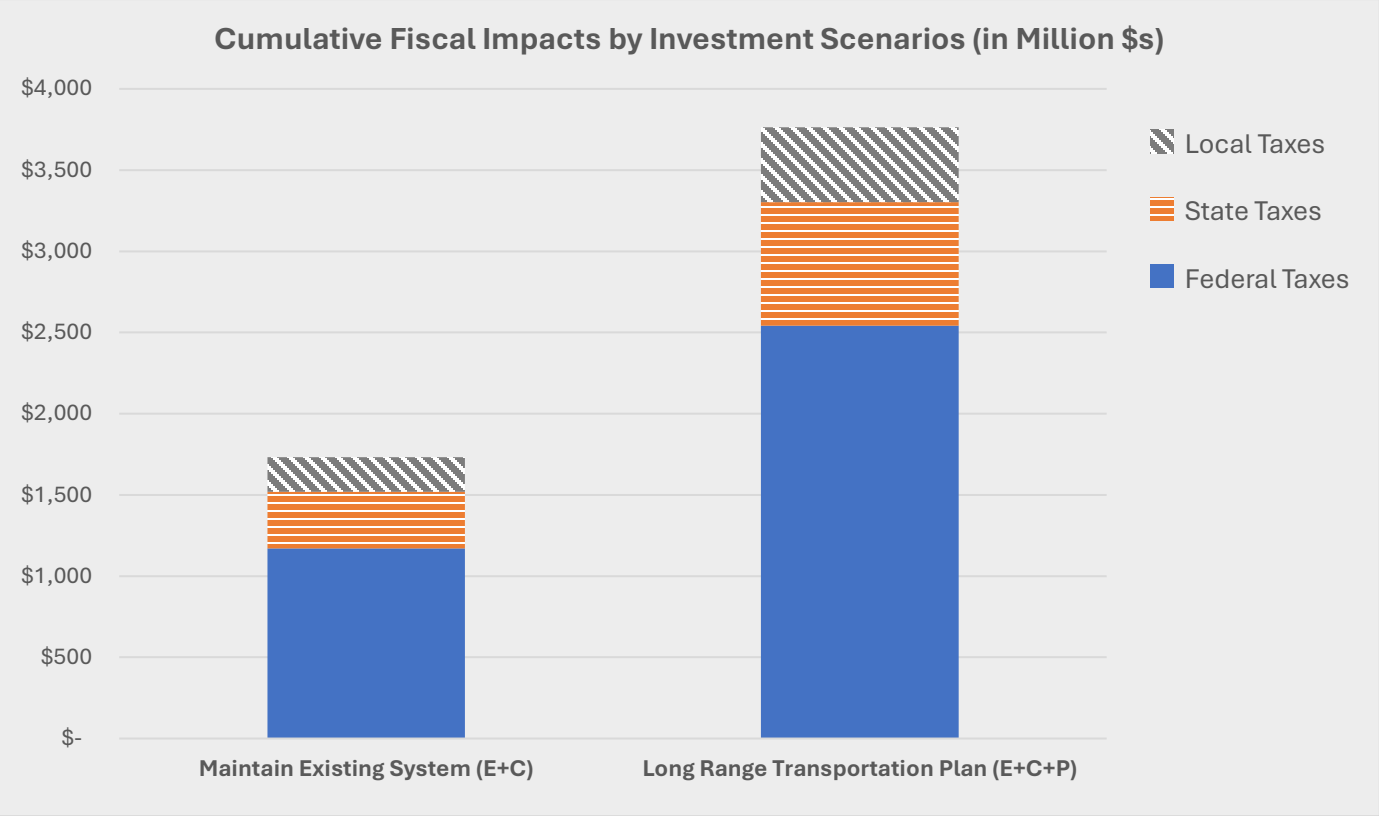
	Federal	State	Local	Total
Maintaining Existing System (E+C)				
Employee Compensation	$581.0	$0.4	$0.0	**$581.4**
Proprietor Income	$27.6	$0.0	$0.0	**$27.6**
Taxes on Production and Imports Net of Subsidies	$13.3	$185.0	$210.8	**$409.1**
Households	$410.2	$132.4	$1.2	**$543.8**
Enterprises (Corporations)	$138.1	$32.2	$0.0	**$170.2**
Total	**$1,170.2**	**$350.0**	**$212.0**	**$1,732.1**
Long Range Transportation Plan (E+C+P)				
Employee Compensation	$1,262.4	$0.9	$0.0	**$1,263.3**
Proprietor Income	$60.0	$0.0	$0.0	**$60.0**
Taxes on Production and Imports Net of Subsidies	$28.9	$402.5	$458.5	**$889.8**
Households	$891.3	$287.6	$2.6	**$1,181.5**
Enterprises (Corporations)	$300.0	$69.9	$0.0	**$369.9**
Total	**$2,542.5**	**$760.9**	**$461.1**	**$3,764.5**
Additional Planned Investment (Incremental)				
Employee Compensation	$681.4	$0.5	$0.0	**$681.9**
Proprietor Income	$32.4	$0.0	$0.0	**$32.4**
Taxes on Production and Imports Net of Subsidies	$15.6	$217.5	$247.7	**$480.8**
Households	$481.1	$155.3	$1.4	**$637.7**
Enterprises (Corporations)	$161.9	$37.7	$0.0	**$199.6**
Total	**$1,372.4**	**$410.9**	**$249.1**	**$2,032.4**

Note: *These fiscal impacts do not integrate market access impacts. The fiscal impacts of market access will be developed as part of the Market Access Analysis (Task 3) deliverable*

Investments in existing and committed projects are projected to result in approximately $1.2 billion in federal tax revenue, $350 million in state taxes, and $212 million in local taxes, totaling around $1.7 billion in combined fiscal impact. Further investments through the LRTP program are expected to generate an additional $2.0 billion in tax revenues, including $1.4 billion at the federal level, $410 million in state taxes, and $249 million in local taxes.

As shown in Figure 5-1 below, the federal government receives the highest portion of total fiscal impacts under both scenarios, which is largely driven by employee compensation and household-related revenues that include income and payroll taxes. The federal government also captures significant corporate tax revenue. At the state level, a greater portion of the total taxes comes from the taxes on production and imports net of subsidies, suggesting a strong reliance on sales taxes, fuel taxes, and other use-based taxes. The local government share follows a similar pattern, with most of the total coming from production and import-related taxes.

Figure 5-1: Cumulative Fiscal Impacts by Investment Scenarios (in Million $s)



6 Summary and Conclusion

This report has quantified the economic and fiscal value of multimodal transportation investments in the Greater Des Moines region through a comprehensive analysis of user benefits, societal gains, productivity improvements and downstream economic impacts. By comparing a No-Build baseline to scenarios reflecting maintenance of existing system infrastructure (E+C) and full implementation of the LRTP program (E+C+P), the study demonstrates that strategic investments yield substantial returns in cost savings, regional output, job creation and tax revenues over the 2025-2050 horizon.

Summary of Findings

The analysis indicates that preserving and enhancing the region's multimodal network generates benefits in three broad categories. These metrics are summarized in Table 6-1 below:

- **User and Societal Benefits:** Maintaining existing commitments produces $24 billion in undiscounted efficiency, safety, environmental and health benefits; fully implementing the LRTP raises total benefits to $36 billion. When discounted at 3.5 percent, these scenarios yield net present values of $14.6 billion and $20.9 billion, respectively.
- **Productivity and Market Access:** Expanded roadway capacity and more efficient transportation system improve market-access gains by $1.9 billion under the LRTP, compared to $0.7 billion in the maintenance-only scenario. Operating and maintaining the existing transit service preserves $13.7 billion in workforce-participation value for those without other travel options.
- **Wider Economic and Fiscal Impacts:** The existing and committed scenario supports 10,180 jobs and $11.2 billion in household income; full LRTP implementation creates an additional 4,219 jobs and $3.7 billion more in income. Total business output rises from $34 billion to $44.7 billion, generating combined federal, state, and local tax revenues of $1.7 billion under maintenance and $3.7 billion with the LRTP.

Table 6-1: Key Metrics by Investment Scenario (2025-2050) (in Millions)

Metric	Maintain Existing System (E+C)	Long Range Transportation Plan (E+C+P)	Incremental
Projected Outlays			
Undiscounted	$ 4,712.51	$ 12,561.80	$ 7,849.29
Discounted @ 3.5%	$ 3,399.39	$ 7,352.73	$ 3,953.34
User and Societal Benefits			
Undiscounted	$24,100.66	$36,183.32	$12,082.66
Discounted @ 3.5%	$14,599.87	$20,904.86	$6,304.99
Benefit Per $1 Outlay			
Undiscounted	$5.11	$2.88	$1.54
Discounted @ 3.5%	$4.29	$2.84	$1.59
Jobs Supported	10,128	14,347	4,219
Household Income	$ 11,112.45	$ 14,861.85	$ 3,749.40
Value Added	$ 19,325.20	$ 25,293.03	$ 5,967.83
Business Output	$ 33,781.70	$ 44,443.89	$ 10,662.19
Output per $1 Outlay	7.17 to 1	3.54 to 1	1.36 to 1
Additional Taxes	$ 1,732.13	$ 3,764.52	$ 2,032.39

Conclusion

The data affirm that even a fiscally constrained renewal of current commitments delivers high returns by preserving system reliability and safety, generating more than five dollars of benefit for every dollar invested. The incremental LRTP investments extend this value proposition across congestion relief, active-transportation enhancements and targeted expansions, yielding a broader set of environmental, health and accessibility gains. Importantly, the translation of user savings into regional economic activity underscores the multiplier effects inherent in transportation spending: while the LRTP's average benefit per dollar is lower than that of pure preservation (discounted benefit per $1 = $2.84 for the LRTP vs. $4.29 for maintaining the existing system), the incremental LRTP investment still returns roughly $1.59 in discounted benefits for every $1 of additional outlay, and produces substantial absolute gains in jobs, income, output and tax receipts..

Decision-makers should therefore prioritize a two track approach: (1) full fund and sequence preservation investment to protect reliability and safety, and (2) pursue full funding of LRTP-identified strategic enhancements where the incremental returns and broader efficiency, productivity, and economic benefits justify the capital commitment. Key near term actions include:

- aligning local match requirements to federal grant opportunities,
- accelerating low-cost active-transportation link closures, and
- advancing critical freight corridor upgrades to the I-35 and I-80.

Moreover, the creation of an interactive economic dashboard (Task 5) will enhance transparency and support adaptive management as conditions evolve. Finally, a deeper Market Access Analysis (Task 3) will refine investment prioritization by quantifying localized productivity gains and equity outcomes.

In closing, the evidence presented herein confirms that continued and expanded multimodal investments are essential for sustaining economic vitality, improving quality of life, and strengthening the Greater Des Moines region's competitive position. By maintaining momentum on preservation and committing to strategic enhancements, the Des Moines Area MPO and its partners can ensure a resilient transportation system that supports growth for decades to come.

Appendix I – Total Societal Benefits by Year in Million Dollars

Maintaining Existing System (E+C) Investment Scenario

Year	Vehicle Operating Cost Savings	Value of Time and Reliability Savings	Environmental Benefits	Safety Benefits	Active Transportation Benefits	Preservation Benefits	Market Access Gains	Workforce Participation	Total Undiscounted Benefits	Discounted Benefits @ 3.5%
2025	$ 6.52	$ 51.98	$ 1.24	$3.26	$ 0.03	$ 195.84	$ 6.29	$ 487.14	$746.74	$697.09
2026	$ 7.61	$ 63.39	$ 1.30	$3.23	$ 0.04	$ 219.25	$ 7.45	$ 487.14	$789.42	$712.01
2027	$ 9.45	$ 76.55	$ 1.37	$3.20	$ 0.05	$ 247.35	$ 9.00	$ 492.83	$839.80	$731.84
2028	$ 12.48	$ 91.79	$ 1.45	$3.16	$ 0.06	$ 275.81	$ 11.14	$ 498.51	$894.40	$753.06
2029	$ 17.36	$ 109.51	$ 1.54	$3.12	$ 0.06	$ 304.86	$ 14.11	$ 504.19	$954.76	$776.70
2030	$ 23.32	$ 130.16	$ 1.65	$3.07	$ 0.07	$ 12.39	$ 18.10	$ 510.10	$698.86	$549.30
2031	$ 26.39	$ 133.81	$ 1.72	$3.00	$ 0.07	$ 24.02	$ 19.32	$ 512.78	$721.10	$547.61
2032	$ 30.10	$ 137.60	$ 1.79	$2.92	$ 0.07	$ 37.13	$ 20.71	$ 515.45	$745.77	$547.19
2033	$ 34.58	$ 141.56	$ 1.88	$2.84	$ 0.07	$ 51.69	$ 22.29	$ 518.13	$773.03	$548.01
2034	$ 40.01	$ 145.68	$ 1.98	$2.75	$ 0.07	$ 67.67	$ 24.09	$ 520.80	$803.06	$550.05
2035	$ 46.63	$ 149.98	$ 2.10	$2.67	$ 0.08	$ 14.64	$ 26.14	$ 523.47	$765.71	$506.73
2036	$ 54.74	$ 154.46	$ 2.24	$2.57	$ 0.08	$ 28.69	$ 28.49	$ 526.26	$797.53	$509.94
2037	$ 64.72	$ 159.14	$ 2.41	$2.48	$ 0.08	$ 44.36	$ 31.20	$ 528.94	$833.31	$514.80
2038	$ 77.10	$ 164.00	$ 2.60	$2.38	$ 0.08	$ 61.63	$ 34.32	$ 531.61	$873.73	$521.52
2039	$ 92.56	$ 169.08	$ 2.82	$2.28	$ 0.08	$ 80.48	$ 37.95	$ 534.51	$919.76	$530.43
2040	$ 130.68	$ 174.38	$ 3.09	$2.17	$ 0.08	$ 53.16	$ 51.05	$ 537.18	$951.80	$530.35
2041	$ 125.61	$ 180.54	$ 3.31	$2.10	$ 0.08	$ 105.25	$ 49.43	$ 539.08	$1,005.39	$541.26
2042	$ 119.43	$ 186.90	$ 3.55	$2.03	$ 0.08	$ 164.39	$ 47.45	$ 541.08	$1,064.91	$553.92
2043	$ 112.08	$ 193.47	$ 3.82	$1.96	$ 0.08	$ 230.44	$ 45.07	$ 542.98	$1,129.90	$567.85
2044	$ 103.48	$ 200.26	$ 4.11	$1.88	$ 0.08	$ 303.29	$ 42.28	$ 544.98	$1,200.37	$582.87
2045	$ 93.60	$ 207.28	$ 4.44	$1.81	$ 0.08	$ 60.21	$ 39.03	$ 546.99	$953.43	$447.30
2046	$ 82.40	$ 214.51	$ 4.80	$1.73	$ 0.08	$ 119.09	$ 35.30	$ 549.00	$1,006.92	$456.42
2047	$ 69.88	$ 221.99	$ 5.22	$1.65	$ 0.08	$ 185.76	$ 31.06	$ 551.00	$1,066.64	$467.14
2048	$ 56.10	$ 229.70	$ 5.66	$1.56	$ 0.08	$ 260.07	$ 26.28	$ 553.01	$1,132.45	$479.19
2049	$ 41.12	$ 237.66	$ 6.16	$1.48	$ 0.08	$ 341.88	$ 20.94	$ 554.90	$1,204.22	$492.33
2050	$ 25.12	$ 245.87	$ 6.70	$1.39	$ 0.08	$ 376.57	$ 15.03	$ 556.91	$1,227.67	$484.94
Total	**$ 1,503.08**	**$ 4,171.27**	**$ 78.92**	**$62.67**	**$ 1.88**	**$ 3,865.91**	**$ 713.52**	**$ 13,708.98**	**$24,100.66**	**$14,599.87**

Multimodal Contribution Analysis Report

Long Range Transportation Plan (E+C+P) Investment Scenario

Year	Vehicle Operating Cost Savings	Value of Time and Reliability Savings	Environmental Benefits	Safety Benefits	Active Transportation Benefits	Preservation Benefits	Market Access Gains	Workforce Participation	Total Undiscounted Benefits	Discounted Benefits @ 3.5%
2025	$ 6.34	$ 87.87	$ 1.22	$3.11	$ 0.04	$ 195.84	$ 16.80	$ 481.57	$792.80	$740.08
2026	$ 7.52	$ 111.15	$ 1.26	$3.04	$ 0.05	$ 219.25	$ 19.88	$ 487.14	$849.29	$766.01
2027	$ 9.61	$ 137.73	$ 1.30	$2.96	$ 0.06	$ 247.35	$ 24.03	$ 492.83	$915.85	$798.11
2028	$ 13.17	$ 168.18	$ 1.33	$2.87	$ 0.07	$ 275.81	$ 29.72	$ 498.51	$989.68	$833.28
2029	$ 19.08	$ 203.23	$ 1.35	$2.78	$ 0.08	$ 304.86	$ 37.67	$ 504.19	$1,073.25	$873.09
2030	$ 22.71	$ 243.69	$ 1.37	$2.68	$ 0.09	$ 12.39	$ 48.29	$ 510.10	$841.32	$661.27
2031	$ 28.75	$ 269.68	$ 1.92	$3.42	$ 0.15	$ 24.02	$ 51.57	$ 512.78	$892.29	$677.61
2032	$ 35.92	$ 296.89	$ 2.52	$4.19	$ 0.22	$ 37.13	$ 55.28	$ 515.45	$947.59	$695.27
2033	$ 44.46	$ 325.39	$ 3.18	$4.97	$ 0.28	$ 51.69	$ 59.49	$ 518.13	$1,007.58	$714.29
2034	$ 54.67	$ 355.21	$ 3.89	$5.79	$ 0.35	$ 67.67	$ 64.28	$ 520.80	$1,072.66	$734.71
2035	$ 66.92	$ 386.42	$ 4.66	$6.62	$ 0.42	$ 14.64	$ 69.76	$ 523.47	$1,072.92	$710.04
2036	$ 81.67	$ 419.07	$ 5.51	$7.49	$ 0.48	$ 28.69	$ 76.04	$ 526.26	$1,145.20	$732.25
2037	$ 99.51	$ 453.21	$ 6.44	$8.38	$ 0.55	$ 44.36	$ 83.26	$ 528.94	$1,224.65	$756.57
2038	$ 121.18	$ 488.92	$ 7.46	$9.30	$ 0.62	$ 61.63	$ 91.60	$ 531.61	$1,312.32	$783.31
2039	$ 147.67	$ 526.25	$ 8.56	$10.25	$ 0.69	$ 80.48	$ 101.27	$ 534.51	$1,409.68	$812.97
2040	$ 198.89	$ 565.26	$ 9.80	$11.23	$ 0.76	$ 53.16	$ 136.24	$ 537.18	$1,512.52	$842.78
2041	$ 207.99	$ 596.08	$ 10.52	$12.08	$ 0.76	$ 105.25	$ 131.91	$ 539.08	$1,603.67	$863.35
2042	$ 217.88	$ 627.96	$ 11.31	$12.96	$ 0.77	$ 164.39	$ 126.62	$ 541.08	$1,702.96	$885.80
2043	$ 228.76	$ 660.91	$ 12.14	$13.86	$ 0.77	$ 230.44	$ 120.28	$ 542.98	$1,810.15	$909.72
2044	$ 240.86	$ 694.98	$ 13.00	$14.78	$ 0.77	$ 303.29	$ 112.82	$ 544.98	$1,925.48	$934.96
2045	$ 254.45	$ 730.18	$ 13.94	$15.71	$ 0.78	$ 60.21	$ 104.16	$ 546.99	$1,726.42	$809.95
2046	$ 269.89	$ 766.56	$ 14.94	$16.67	$ 0.78	$ 119.09	$ 94.20	$ 549.00	$1,831.14	$830.03
2047	$ 287.61	$ 804.15	$ 16.05	$17.65	$ 0.78	$ 185.76	$ 82.88	$ 551.00	$1,945.89	$852.22
2048	$ 308.14	$ 842.98	$ 17.16	$18.66	$ 0.79	$ 260.07	$ 70.13	$ 553.01	$2,070.93	$876.31
2049	$ 332.13	$ 883.08	$ 18.39	$19.68	$ 0.79	$ 341.88	$ 55.88	$ 554.90	$2,206.74	$902.20
2050	$ 360.94	$ 924.50	$ 19.80	$20.73	$ 0.80	$ 376.57	$ 40.11	$ 556.91	$2,300.35	$908.67
Total	**$ 3,666.71**	**$ 12,569.55**	**$ 208.99**	**$251.88**	**$ 12.70**	**$ 3,865.91**	**$ 1,904.16**	**$ 13,703.41**	**$36,183.32**	**$20,904.86**

Appendix II – Jobs Supported by Year

Maintaining Existing System (E+C) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	70	3,770	3,854	473	56	**8,223**
2026	86	3,746	3,899	528	66	**8,326**
2027	108	3,636	3,944	594	80	**8,362**
2028	135	3,540	3,990	660	99	**8,425**
2029	172	3,448	4,035	728	126	**8,509**
2030	218	2,103	4,083	30	161	**6,595**
2031	227	2,057	4,104	57	172	**6,617**
2032	237	2,007	4,125	88	185	**6,642**
2033	247	1,959	4,147	122	199	**6,674**
2034	259	1,913	4,168	160	215	**6,714**
2035	271	809	4,190	34	233	**5,538**
2036	286	802	4,212	67	254	**5,621**
2037	302	795	4,233	104	278	**5,712**
2038	320	788	4,255	144	306	**5,812**
2039	341	781	4,278	187	338	**5,925**
2040	589	775	4,299	124	455	**6,241**
2041	580	769	4,315	244	441	**6,348**
2042	569	763	4,331	380	423	**6,466**
2043	555	757	4,346	532	402	**6,592**
2044	538	751	4,362	699	377	**6,727**
2045	517	746	4,378	138	348	**6,127**
2046	493	741	4,394	273	315	**6,215**
2047	465	736	4,410	425	277	**6,313**
2048	433	731	4,426	594	234	**6,419**
2049	398	727	4,441	780	187	**6,532**
2050	359	723	4,457	857	134	**6,530**
Max	**589**	**3,770**	**4,457**	**857**	**455**	**10,128**

Multimodal Contribution Analysis Report

Long Range Transportation Plan (E+C+P) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	97	3,770	3,854	473	78	**8,273**
2026	124	3,746	3,899	528	95	**8,392**
2027	157	3,636	3,944	594	119	**8,450**
2028	199	3,540	3,990	660	151	**8,540**
2029	254	3,448	4,035	728	196	**8,661**
2030	317	3,453	4,083	30	251	**8,134**
2031	352	3,364	4,104	57	285	**8,162**
2032	390	3,273	4,125	88	323	**8,200**
2033	432	3,185	4,147	122	367	**8,254**
2034	479	3,101	4,168	160	417	**8,324**
2035	530	2,496	4,190	34	475	**7,725**
2036	588	2,434	4,212	67	542	**7,843**
2037	653	2,375	4,233	104	620	**7,984**
2038	726	2,317	4,255	144	710	**8,152**
2039	810	2,262	4,278	187	816	**8,353**
2040	1,129	3,184	4,299	124	1,032	**9,768**
2041	1,176	3,099	4,315	244	1,068	**9,901**
2042	1,224	3,017	4,331	380	1,105	**10,057**
2043	1,275	2,938	4,346	532	1,143	**10,233**
2044	1,329	2,861	4,362	699	1,182	**10,432**
2045	1,385	4,234	4,378	138	1,223	**11,358**
2046	1,446	4,114	4,394	273	1,265	**11,492**
2047	1,511	3,997	4,410	425	1,310	**11,653**
2048	1,581	3,885	4,426	594	1,357	**11,843**
2049	1,657	3,776	4,441	780	1,407	**12,062**
2050	1,748	5,820	4,457	857	1,465	**14,347**
Max	**1,748**	**5,820**	**4,457**	**857**	**1,465**	**14,347**

Appendix III – Household Income by Year in Million Dollars

Maintaining Existing System (E+C) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	$ 4.2	$ 200.5	$ 267.3	$ 28.3	$ 2.6	**$ 502.9**
2026	$ 5.2	$ 199.3	$ 270.4	$ 31.6	$ 3.1	**$ 509.4**
2027	$ 6.4	$ 193.4	$ 273.6	$ 35.5	$ 3.7	**$ 512.6**
2028	$ 8.1	$ 188.3	$ 276.7	$ 39.5	$ 4.6	**$ 517.2**
2029	$ 10.3	$ 183.4	$ 279.9	$ 43.5	$ 5.8	**$ 522.9**
2030	$ 13.1	$ 111.9	$ 283.1	$ 1.8	$ 7.4	**$ 417.3**
2031	$ 13.6	$ 109.4	$ 284.6	$ 3.4	$ 7.9	**$ 418.9**
2032	$ 14.1	$ 106.7	$ 286.1	$ 5.3	$ 8.5	**$ 420.8**
2033	$ 14.7	$ 104.2	$ 287.6	$ 7.3	$ 9.2	**$ 423.0**
2034	$ 15.4	$ 101.7	$ 289.1	$ 9.5	$ 9.9	**$ 425.6**
2035	$ 16.1	$ 43.0	$ 290.6	$ 2.1	$ 10.7	**$ 362.5**
2036	$ 16.9	$ 42.6	$ 292.1	$ 4.0	$ 11.7	**$ 367.4**
2037	$ 17.8	$ 42.3	$ 293.6	$ 6.2	$ 12.8	**$ 372.7**
2038	$ 18.9	$ 41.9	$ 295.1	$ 8.6	$ 14.1	**$ 378.6**
2039	$ 20.1	$ 41.5	$ 296.7	$ 11.2	$ 15.6	**$ 385.1**
2040	$ 35.2	$ 41.2	$ 298.2	$ 7.4	$ 21.0	**$ 402.9**
2041	$ 34.7	$ 40.9	$ 299.2	$ 14.6	$ 20.3	**$ 409.7**
2042	$ 34.1	$ 40.6	$ 300.3	$ 22.7	$ 19.5	**$ 417.2**
2043	$ 33.3	$ 40.3	$ 301.4	$ 31.8	$ 18.5	**$ 425.3**
2044	$ 32.3	$ 40.0	$ 302.5	$ 41.8	$ 17.4	**$ 433.9**
2045	$ 31.1	$ 39.7	$ 303.6	$ 8.3	$ 16.0	**$ 398.7**
2046	$ 29.7	$ 39.4	$ 304.7	$ 16.3	$ 14.5	**$ 404.7**
2047	$ 28.1	$ 39.2	$ 305.8	$ 25.4	$ 12.8	**$ 411.3**
2048	$ 26.3	$ 38.9	$ 307.0	$ 35.5	$ 10.8	**$ 418.5**
2049	$ 24.3	$ 38.7	$ 308.0	$ 46.6	$ 8.6	**$ 426.2**
2050	$ 22.0	$ 38.4	$ 309.1	$ 51.2	$ 6.2	**$ 427.0**
Total	**$ 526.0**	**$ 2,147.4**	**$ 7,606.3**	**$ 539.6**	**$ 293.2**	**$ 11,112.4**

Multimodal Contribution Analysis Report

Long Range Transportation Plan (E+C+P) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	$ 5.8	$ 200.5	$ 267.3	$ 28.3	$ 3.2	**$ 505.2**
2026	$ 7.5	$ 199.3	$ 270.4	$ 31.6	$ 3.9	**$ 512.6**
2027	$ 9.5	$ 193.4	$ 273.6	$ 35.5	$ 4.9	**$ 516.8**
2028	$ 12.0	$ 188.3	$ 276.7	$ 39.5	$ 6.2	**$ 522.7**
2029	$ 15.3	$ 183.4	$ 279.9	$ 43.5	$ 8.0	**$ 530.1**
2030	$ 19.1	$ 183.7	$ 283.1	$ 1.8	$ 10.3	**$ 498.0**
2031	$ 21.2	$ 178.9	$ 284.6	$ 3.4	$ 11.7	**$ 499.8**
2032	$ 23.4	$ 174.1	$ 286.1	$ 5.3	$ 13.3	**$ 502.2**
2033	$ 25.9	$ 169.4	$ 287.6	$ 7.3	$ 15.1	**$ 505.3**
2034	$ 28.7	$ 164.9	$ 289.1	$ 9.5	$ 17.1	**$ 509.3**
2035	$ 31.7	$ 132.7	$ 290.6	$ 2.1	$ 19.5	**$ 476.6**
2036	$ 35.1	$ 129.5	$ 292.1	$ 4.0	$ 22.3	**$ 483.0**
2037	$ 38.9	$ 126.3	$ 293.6	$ 6.2	$ 25.5	**$ 490.5**
2038	$ 43.2	$ 123.3	$ 295.1	$ 8.6	$ 29.2	**$ 499.3**
2039	$ 48.1	$ 120.3	$ 296.7	$ 11.2	$ 33.5	**$ 509.8**
2040	$ 67.4	$ 169.3	$ 298.2	$ 7.4	$ 42.4	**$ 584.7**
2041	$ 70.2	$ 164.8	$ 299.2	$ 14.6	$ 43.9	**$ 592.8**
2042	$ 73.2	$ 160.5	$ 300.3	$ 22.7	$ 45.4	**$ 602.1**
2043	$ 76.2	$ 156.2	$ 301.4	$ 31.8	$ 46.9	**$ 612.6**
2044	$ 79.5	$ 152.2	$ 302.5	$ 41.8	$ 48.6	**$ 624.5**
2045	$ 82.9	$ 225.2	$ 303.6	$ 8.3	$ 50.2	**$ 670.2**
2046	$ 86.6	$ 218.8	$ 304.7	$ 16.3	$ 52.0	**$ 678.4**
2047	$ 90.5	$ 212.6	$ 305.8	$ 25.4	$ 53.8	**$ 688.2**
2048	$ 94.7	$ 206.6	$ 307.0	$ 35.5	$ 55.7	**$ 699.6**
2049	$ 99.4	$ 200.8	$ 308.0	$ 46.6	$ 57.8	**$ 712.6**
2050	$ 104.9	$ 309.6	$ 309.1	$ 51.2	$ 60.2	**$ 834.9**
Total	**$ 1,290.7**	**$ 4,644.7**	**$ 7,606.3**	**$ 539.6**	**$ 780.5**	**$ 14,861.9**

Appendix IV – Value Added (GDP) by Year in Million Dollars

Maintaining Existing System (E+C) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	$ 7.3	$ 302.0	$ 481.6	$ 49.8	$ 4.5	**$ 845.2**
2026	$ 9.1	$ 300.0	$ 487.1	$ 55.6	$ 5.4	**$ 857.3**
2027	$ 11.3	$ 291.2	$ 492.8	$ 62.5	$ 6.5	**$ 864.4**
2028	$ 14.2	$ 283.6	$ 498.5	$ 69.6	$ 8.0	**$ 873.9**
2029	$ 18.1	$ 276.2	$ 504.2	$ 76.7	$ 10.2	**$ 885.3**
2030	$ 23.0	$ 168.5	$ 510.1	$ 3.1	$ 13.1	**$ 717.7**
2031	$ 23.9	$ 164.7	$ 512.8	$ 6.0	$ 13.9	**$ 721.4**
2032	$ 24.9	$ 160.7	$ 515.5	$ 9.3	$ 14.9	**$ 725.3**
2033	$ 26.1	$ 156.9	$ 518.1	$ 12.9	$ 16.1	**$ 730.0**
2034	$ 27.3	$ 153.2	$ 520.8	$ 16.8	$ 17.4	**$ 735.5**
2035	$ 28.7	$ 64.8	$ 523.5	$ 3.6	$ 18.9	**$ 639.5**
2036	$ 30.2	$ 64.2	$ 526.3	$ 7.1	$ 20.6	**$ 648.3**
2037	$ 31.9	$ 63.6	$ 528.9	$ 10.9	$ 22.5	**$ 658.0**
2038	$ 33.9	$ 63.1	$ 531.6	$ 15.2	$ 24.8	**$ 668.5**
2039	$ 36.2	$ 62.6	$ 534.5	$ 19.7	$ 27.4	**$ 680.3**
2040	$ 62.0	$ 62.0	$ 537.2	$ 13.0	$ 36.8	**$ 711.1**
2041	$ 61.1	$ 61.6	$ 539.1	$ 25.7	$ 35.7	**$ 723.1**
2042	$ 59.9	$ 61.1	$ 541.1	$ 40.1	$ 34.2	**$ 736.4**
2043	$ 58.4	$ 60.6	$ 543.0	$ 56.0	$ 32.5	**$ 750.6**
2044	$ 56.5	$ 60.2	$ 545.0	$ 73.6	$ 30.5	**$ 765.8**
2045	$ 54.3	$ 59.8	$ 547.0	$ 14.6	$ 28.2	**$ 703.8**
2046	$ 51.7	$ 59.4	$ 549.0	$ 28.8	$ 25.5	**$ 714.3**
2047	$ 48.7	$ 59.0	$ 551.0	$ 44.8	$ 22.4	**$ 725.9**
2048	$ 45.3	$ 58.6	$ 553.0	$ 62.6	$ 19.0	**$ 738.4**
2049	$ 41.5	$ 58.2	$ 554.9	$ 82.1	$ 15.1	**$ 751.9**
2050	$ 37.4	$ 57.9	$ 556.9	$ 90.2	$ 10.8	**$ 753.2**
Total	**$ 923.2**	**$ 3,233.6**	**$ 13,703.4**	**$ 950.2**	**$ 514.7**	**$ 19,325.2**

Multimodal Contribution Analysis Report

Long Range Transportation Plan (E+C+P) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	$ 10.2	$ 302.0	$ 481.6	$ 49.8	$ 5.6	**$ 849.2**
2026	$ 13.0	$ 300.0	$ 487.1	$ 55.6	$ 6.9	**$ 862.7**
2027	$ 16.5	$ 291.2	$ 492.8	$ 62.5	$ 8.6	**$ 871.7**
2028	$ 20.9	$ 283.6	$ 498.5	$ 69.6	$ 10.9	**$ 883.4**
2029	$ 26.7	$ 276.2	$ 504.2	$ 76.7	$ 14.2	**$ 897.9**
2030	$ 33.3	$ 276.6	$ 510.1	$ 3.1	$ 18.2	**$ 841.3**
2031	$ 37.0	$ 269.4	$ 512.8	$ 6.0	$ 20.6	**$ 845.8**
2032	$ 41.0	$ 262.2	$ 515.5	$ 9.3	$ 23.4	**$ 851.3**
2033	$ 45.5	$ 255.1	$ 518.1	$ 12.9	$ 26.5	**$ 858.1**
2034	$ 50.4	$ 248.3	$ 520.8	$ 16.8	$ 30.1	**$ 866.5**
2035	$ 55.9	$ 199.9	$ 523.5	$ 3.6	$ 34.3	**$ 817.2**
2036	$ 62.0	$ 195.0	$ 526.3	$ 7.1	$ 39.2	**$ 829.5**
2037	$ 68.9	$ 190.2	$ 528.9	$ 10.9	$ 44.8	**$ 843.7**
2038	$ 76.7	$ 185.6	$ 531.6	$ 15.2	$ 51.3	**$ 860.4**
2039	$ 85.6	$ 181.2	$ 534.5	$ 19.7	$ 59.0	**$ 879.9**
2040	$ 119.0	$ 255.0	$ 537.2	$ 13.0	$ 74.6	**$ 998.8**
2041	$ 123.9	$ 248.2	$ 539.1	$ 25.7	$ 77.2	**$ 1,014.1**
2042	$ 129.0	$ 241.6	$ 541.1	$ 40.1	$ 79.9	**$ 1,031.7**
2043	$ 134.3	$ 235.3	$ 543.0	$ 56.0	$ 82.6	**$ 1,051.3**
2044	$ 140.0	$ 229.2	$ 545.0	$ 73.6	$ 85.4	**$ 1,073.1**
2045	$ 145.9	$ 339.1	$ 547.0	$ 14.6	$ 88.4	**$ 1,135.0**
2046	$ 152.3	$ 329.5	$ 549.0	$ 28.8	$ 91.4	**$ 1,151.0**
2047	$ 159.0	$ 320.2	$ 551.0	$ 44.8	$ 94.7	**$ 1,169.7**
2048	$ 166.4	$ 311.1	$ 553.0	$ 62.6	$ 98.1	**$ 1,191.2**
2049	$ 174.4	$ 302.4	$ 554.9	$ 82.1	$ 101.7	**$ 1,215.6**
2050	$ 183.9	$ 466.1	$ 556.9	$ 90.2	$ 105.9	**$ 1,403.0**
Total	**$ 2,271.6**	**$ 6,994.2**	**$ 13,703.4**	**$ 950.2**	**$ 1,373.6**	**$ 25,293.0**

Appendix V – Business Output (Sales) by Year in Million Dollars

Maintaining Existing System (E+C) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	$ 12.6	$ 552.4	$ 835.3	$ 85.4	$ 7.8	**$ 1,493.4**
2026	$ 15.6	$ 548.8	$ 844.9	$ 95.3	$ 9.2	**$ 1,513.9**
2027	$ 19.5	$ 532.7	$ 854.8	$ 107.3	$ 11.2	**$ 1,525.4**
2028	$ 24.4	$ 518.7	$ 864.7	$ 119.3	$ 13.8	**$ 1,540.8**
2029	$ 31.0	$ 505.1	$ 874.5	$ 131.5	$ 17.5	**$ 1,559.7**
2030	$ 39.4	$ 308.2	$ 884.8	$ 5.3	$ 22.4	**$ 1,260.1**
2031	$ 41.0	$ 301.3	$ 889.4	$ 10.3	$ 23.9	**$ 1,266.0**
2032	$ 42.7	$ 294.0	$ 894.0	$ 15.9	$ 25.7	**$ 1,272.4**
2033	$ 44.6	$ 287.0	$ 898.7	$ 22.1	$ 27.6	**$ 1,280.0**
2034	$ 46.7	$ 280.2	$ 903.3	$ 28.8	$ 29.8	**$ 1,288.9**
2035	$ 49.0	$ 118.6	$ 908.0	$ 6.2	$ 32.4	**$ 1,114.1**
2036	$ 51.6	$ 117.5	$ 912.8	$ 12.2	$ 35.3	**$ 1,129.3**
2037	$ 54.4	$ 116.4	$ 917.4	$ 18.8	$ 38.6	**$ 1,145.7**
2038	$ 57.7	$ 115.4	$ 922.1	$ 26.0	$ 42.5	**$ 1,163.7**
2039	$ 61.4	$ 114.4	$ 927.1	$ 33.9	$ 47.0	**$ 1,183.8**
2040	$ 106.3	$ 113.5	$ 931.7	$ 22.3	$ 63.2	**$ 1,237.1**
2041	$ 104.8	$ 112.6	$ 935.0	$ 44.1	$ 61.2	**$ 1,257.7**
2042	$ 102.9	$ 111.7	$ 938.5	$ 68.7	$ 58.8	**$ 1,280.5**
2043	$ 100.3	$ 110.9	$ 941.8	$ 96.1	$ 55.8	**$ 1,304.9**
2044	$ 97.2	$ 110.1	$ 945.3	$ 126.2	$ 52.4	**$ 1,331.1**
2045	$ 93.5	$ 109.3	$ 948.7	$ 25.0	$ 48.3	**$ 1,224.9**
2046	$ 89.1	$ 108.6	$ 952.2	$ 49.4	$ 43.7	**$ 1,243.0**
2047	$ 84.1	$ 107.9	$ 955.7	$ 76.8	$ 38.5	**$ 1,262.9**
2048	$ 78.4	$ 107.2	$ 959.2	$ 107.3	$ 32.5	**$ 1,284.6**
2049	$ 72.0	$ 106.5	$ 962.5	$ 140.8	$ 25.9	**$ 1,307.7**
2050	$ 65.1	$ 105.9	$ 965.9	$ 154.8	$ 18.6	**$ 1,310.3**
Total	**$ 1,585.3**	**$ 5,914.8**	**$ 23,768.2**	**$ 1,629.6**	**$ 883.8**	**$ 33,781.7**

Multimodal Contribution Analysis Report

Long Range Transportation Plan (E+C+P) Investment Scenario

Year	Transportation Efficiency	Spending	Workforce Participation	System Preservation	Market Access	Total Undiscounted Impacts
2025	$ 17.6	$ 552.4	$ 835.3	$ 85.4	$ 9.7	**$ 1,500.3**
2026	$ 22.4	$ 548.8	$ 844.9	$ 95.3	$ 11.8	**$ 1,523.3**
2027	$ 28.4	$ 532.7	$ 854.8	$ 107.3	$ 14.7	**$ 1,537.9**
2028	$ 36.0	$ 518.7	$ 864.7	$ 119.3	$ 18.7	**$ 1,557.3**
2029	$ 45.9	$ 505.1	$ 874.5	$ 131.5	$ 24.3	**$ 1,581.4**
2030	$ 57.3	$ 505.9	$ 884.8	$ 5.3	$ 31.2	**$ 1,484.5**
2031	$ 63.6	$ 492.8	$ 889.4	$ 10.3	$ 35.3	**$ 1,491.5**
2032	$ 70.5	$ 479.5	$ 894.0	$ 15.9	$ 40.1	**$ 1,500.0**
2033	$ 78.1	$ 466.7	$ 898.7	$ 22.1	$ 45.5	**$ 1,511.0**
2034	$ 86.5	$ 454.3	$ 903.3	$ 28.8	$ 51.7	**$ 1,524.6**
2035	$ 95.8	$ 365.6	$ 908.0	$ 6.2	$ 58.9	**$ 1,434.5**
2036	$ 106.2	$ 356.6	$ 912.8	$ 12.2	$ 67.2	**$ 1,455.0**
2037	$ 117.9	$ 347.9	$ 917.4	$ 18.8	$ 76.8	**$ 1,478.8**
2038	$ 131.1	$ 339.5	$ 922.1	$ 26.0	$ 88.0	**$ 1,506.7**
2039	$ 146.1	$ 331.4	$ 927.1	$ 33.9	$ 101.1	**$ 1,539.6**
2040	$ 204.0	$ 466.4	$ 931.7	$ 22.3	$ 128.0	**$ 1,752.4**
2041	$ 212.4	$ 454.0	$ 935.0	$ 44.1	$ 132.5	**$ 1,777.9**
2042	$ 221.1	$ 442.0	$ 938.5	$ 68.7	$ 137.0	**$ 1,807.3**
2043	$ 230.3	$ 430.4	$ 941.8	$ 96.1	$ 141.7	**$ 1,840.3**
2044	$ 240.0	$ 419.2	$ 945.3	$ 126.2	$ 146.6	**$ 1,877.2**
2045	$ 250.3	$ 620.3	$ 948.7	$ 25.0	$ 151.6	**$ 1,995.9**
2046	$ 261.2	$ 602.7	$ 952.2	$ 49.4	$ 156.8	**$ 2,022.3**
2047	$ 273.0	$ 585.6	$ 955.7	$ 76.8	$ 162.4	**$ 2,053.5**
2048	$ 285.6	$ 569.1	$ 959.2	$ 107.3	$ 168.2	**$ 2,089.5**
2049	$ 299.5	$ 553.2	$ 962.5	$ 140.8	$ 174.5	**$ 2,130.4**
2050	$ 315.9	$ 852.6	$ 965.9	$ 154.8	$ 181.6	**$ 2,470.8**
Total	**$ 3,896.7**	**$ 12,793.5**	**$ 23,768.2**	**$ 1,629.6**	**$ 2,356.0**	**$ 44,443.9**

Appendix VI – Fiscal Impacts by Year in Million Dollars

Year	Maintaining Existing System (E+C)				Long Range Transportation Plan (E+C+P)			
	Federal Taxes	State Taxes	All Local Taxes	Total Taxes	Federal Taxes	State Taxes	All Local Taxes	Total Taxes
2025	$109.3	$32.7	$19.8	**$161.8**	$109.8	$32.9	$19.9	**$162.5**
2026	$108.6	$32.5	$19.7	**$160.7**	$109.1	$32.6	$19.8	**$161.5**
2027	$105.4	$31.5	$19.1	**$156.0**	$105.9	$31.7	$19.2	**$156.8**
2028	$102.6	$30.7	$18.6	**$151.9**	$103.1	$30.8	$18.7	**$152.6**
2029	$99.9	$29.9	$18.1	**$147.9**	$100.4	$30.0	$18.2	**$148.6**
2030	$61.0	$18.2	$11.0	**$90.2**	$100.5	$30.1	$18.2	**$148.9**
2031	$59.6	$17.8	$10.8	**$88.2**	$97.9	$29.3	$17.8	**$145.0**
2032	$58.2	$17.4	$10.5	**$86.1**	$95.3	$28.5	$17.3	**$141.1**
2033	$56.8	$17.0	$10.3	**$84.0**	$92.7	$27.8	$16.8	**$137.3**
2034	$55.4	$16.6	$10.0	**$82.1**	$90.3	$27.0	$16.4	**$133.7**
2035	$23.5	$7.0	$4.2	**$34.7**	$72.7	$21.7	$13.2	**$107.6**
2036	$23.2	$7.0	$4.2	**$34.4**	$70.9	$21.2	$12.9	**$104.9**
2037	$23.0	$6.9	$4.2	**$34.1**	$69.1	$20.7	$12.5	**$102.4**
2038	$22.8	$6.8	$4.1	**$33.8**	$67.5	$20.2	$12.2	**$99.9**
2039	$22.6	$6.8	$4.1	**$33.5**	$65.9	$19.7	$11.9	**$97.5**
2040	$22.5	$6.7	$4.1	**$33.2**	$92.7	$27.7	$16.8	**$137.2**
2041	$22.3	$6.7	$4.0	**$33.0**	$90.2	$27.0	$16.4	**$133.6**
2042	$22.1	$6.6	$4.0	**$32.7**	$87.8	$26.3	$15.9	**$130.1**
2043	$21.9	$6.6	$4.0	**$32.5**	$85.5	$25.6	$15.5	**$126.6**
2044	$21.8	$6.5	$3.9	**$32.2**	$83.3	$24.9	$15.1	**$123.3**
2045	$21.6	$6.5	$3.9	**$32.0**	$123.3	$36.9	$22.4	**$182.5**
2046	$21.5	$6.4	$3.9	**$31.8**	$119.8	$35.8	$21.7	**$177.3**
2047	$21.3	$6.4	$3.9	**$31.6**	$116.4	$34.8	$21.1	**$172.3**
2048	$21.2	$6.3	$3.8	**$31.4**	$113.1	$33.9	$20.5	**$167.5**
2049	$21.1	$6.3	$3.8	**$31.2**	$109.9	$32.9	$19.9	**$162.8**
2050	$20.9	$6.3	$3.8	**$31.0**	$169.4	$50.7	$30.7	**$250.9**
Total	**$1,170.2**	**$350.0**	**$212.0**	**$1,732.1**	**$2,542.5**	**$760.9**	**$461.1**	**$3,764.5**

Note: The fiscal Impacts of Market Access have not been included in the total fiscal impacts. This will be analyzed in detail in Task 3 Report.