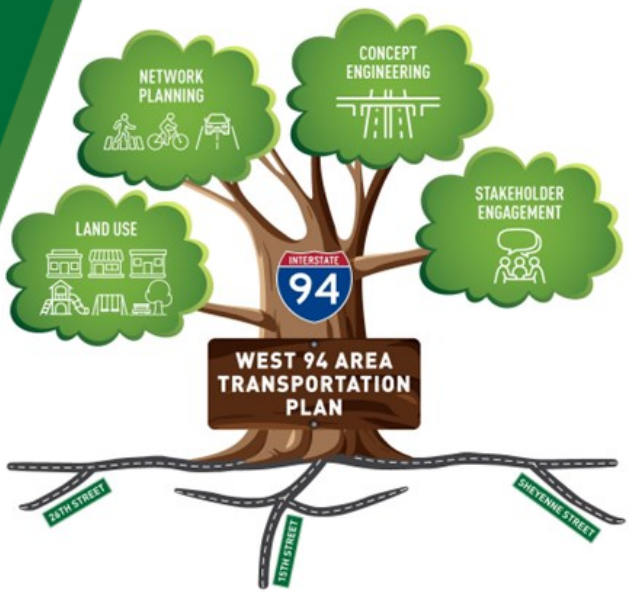
The West 94 Area Transportation Plan

Draft Report
June 11, 2025



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ACKNOWLEDGEMENTS

The West 94 Area Transportation Plan was developed by the Metro Council of Governments (Metro COG) in collaboration with the City of West Fargo, along with other local and regional governmental agencies, under the guidance of a Study Review Committee. Metro COG worked with the consulting firm Bolton & Menk, Inc., to meet project requirements.

This final report is the culmination of months of technical planning, implementation, assessment, analysis, and refinement. It reflects numerous collaborative discussions and countless cups of coffee dedicated to reaching the project's objectives. This document highlights the teamwork of regional leaders and technical experts, directed by community feedback. It evaluates possible transportation enhancements and links to foster preferred development trends, ensure accessibility, optimize mobility, and support Metro COG and West Fargo in achieving their goals.

EXECUTIVE SUMMARY

The FM Area Diversion Project, scheduled for completion in 2027, will provide long-term flood protection for areas that have historically been prone to flooding, thereby opening new development opportunities. One such opportunity is the *West 94 Area*—a 2.5-square-mile section of land located southwest of I-94, bounded by 32nd Avenue West, 38th Street West, and the Sheyenne Diversion.

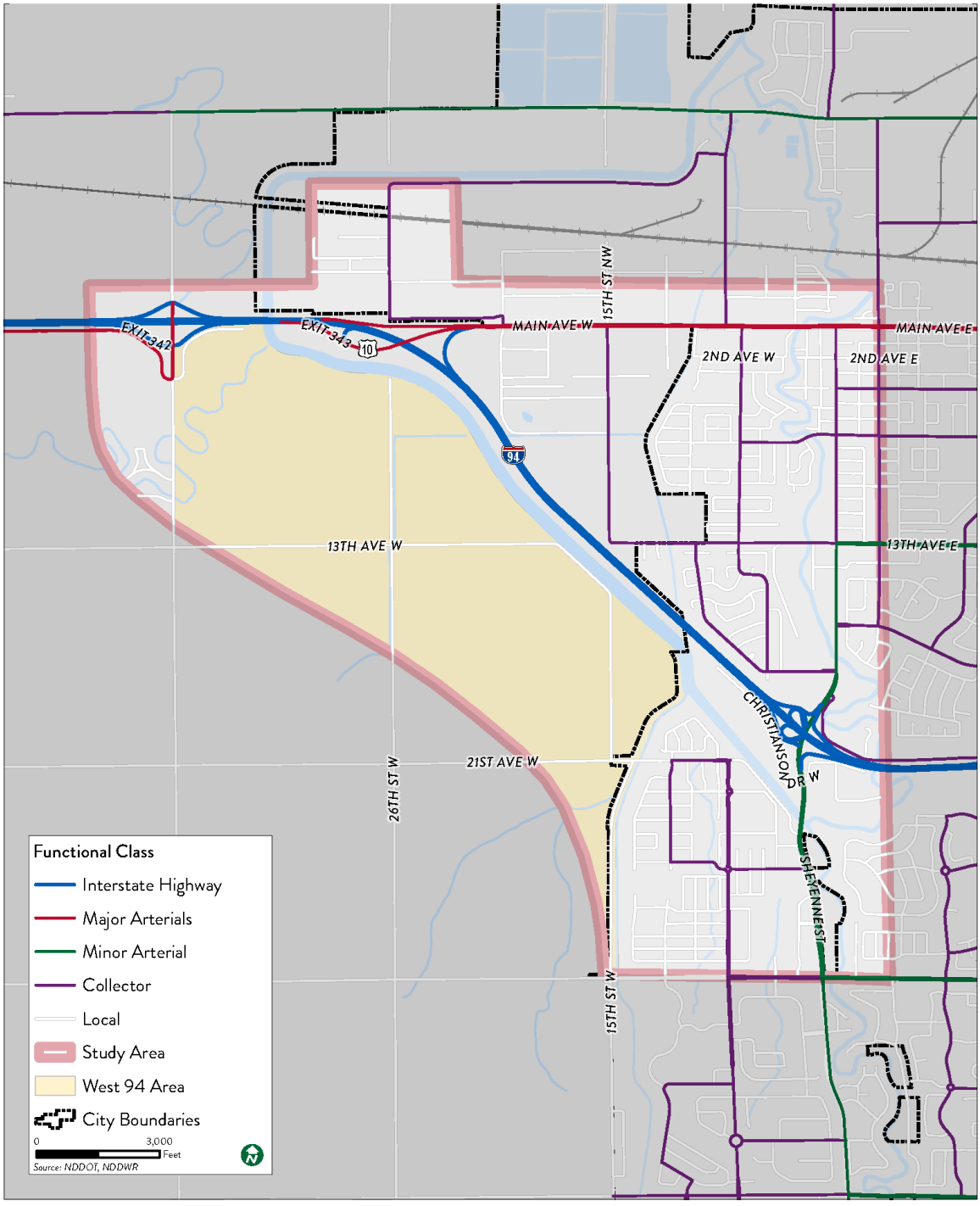
To prepare for this opportunity, the West 94 Area Transportation Plan, initiated by the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) in partnership with the City of West Fargo, offers a strategic framework to guide future development. This plan provides comprehensive land use concepts designed to support West Fargo's long-term goals for fiscally responsible and sustainable growth. It identifies critical infrastructure investments, incorporates public input, and recommends a phased implementation strategy. The plan also emphasizes multimodal connectivity, including roadway links to I-94 and surrounding neighborhoods and communities. This report presents an analysis of existing conditions, forecasts future transportation needs, and outlines a context-sensitive transportation network. Together, these elements form an actionable roadmap that regional leadership and jurisdictions can use to support coordinated, resilient, and well-connected development in the West 94 Area.

Chapter Overviews and Broad Findings

Chapter 1 - Existing Conditions

Assessing existing conditions establishes a baseline understanding of the transportation network, projected land use patterns, and environmental considerations before anticipated development spurred by developers, landowner interests, and future utility extensions. The assessment reviews relevant prior studies, current transportation infrastructure, and constraints. An environmental assessment found no significant barriers to growth once flooding issues are resolved and the right-of-way is secured. However, evaluating the current conditions reveals that while the study area is poised for transformation, it encounters substantial constraints related to access and usability. Completing the Fargo-Moorhead Area Diversion project will free up large sections of land from the floodplain; however, the new Diversion, along with the Sheyenne Diversion and I-94, presents serious physical, logistical, and structural barriers. These challenges significantly limit access to the West 94 Area as it currently stands. Critical infrastructure required for development is largely missing, including the lack of utility services. It will be essential to design and expand these services, likely necessitating connections from the northwest, since the utilities to the southeast cannot accommodate the anticipated scale of development. From an operations perspective, the immediate study area intersections are adequate. However, nearby corridors, particularly Sheyenne Street, which serves Brooks Harbor, already face significant congestion during morning peak hours. Plans should avoid worsening traffic and minimize negative impacts on Elmwood, Brooks Harbor, and Willow Creek.

The study area, with existing road types, is shown in Executive Summary Figure A.



Executive Summary Figure A – Study Area

Chapter 2 - Future Conditions Assessment

This chapter builds on the Existing Conditions assessment to explore design possibilities for the West 94 Area Transportation Plan. It presents conceptual scenarios aligned with regional goals, focusing on West Fargo's objectives to promote commercial development and sustainability. This chapter describes the traffic forecasting method, using the Fargo-Moorhead regional travel demand model to evaluate transportation network demands resulting from these land use concepts over various time and infrastructure scenarios.

The analysis indicates that effectively managing this growth relies heavily on establishing new, high-capacity access points across the Sheyenne and Red River Diversion, which bisect I-94. Two primary mixed-use land scenarios, Scenario A and Scenario B, were created to maximize densities in accordance with City planning goals, enabling the generation of a range of traffic forecasts essential for understanding transportation system needs. These forecasts indicate significant increases in travel demand under 50% (~2050 calendar year) and 100% (estimated 2060 calendar year or later) build-out conditions (Executive Summary Figure B).

Sensitivity analysis demonstrates that restricting access would result in significant overloads on nearby corridors, such as Sheyenne Street and roads through the Brooks Harbor neighborhood, jeopardizing transportation objectives and adversely affecting existing neighborhoods. New interchange access is crucial for distributing traffic and supporting any intended land use concepts, especially regarding commercial growth. This analysis highlights the infrastructure challenges and underscores the urgency for substantial, strategically timed investments to facilitate growth in the West 94 Area. It concludes with evaluating how critical factors, such as roadway design and development densities, influence future transportation needs and potential financial implications.

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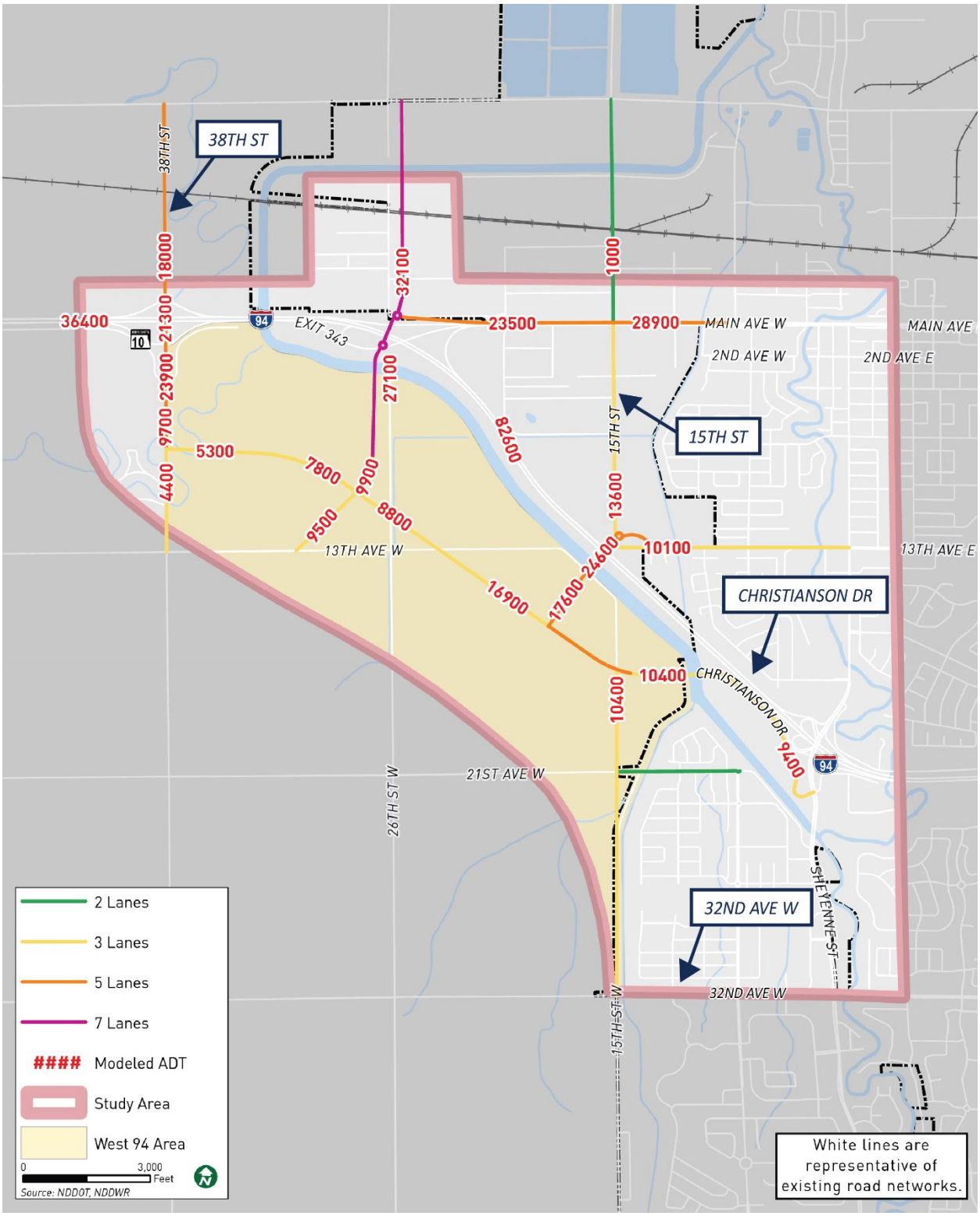

Executive Summary Figure B – Daily Traffic Forecasts – Scenario A 100% Buildout

Chapter 3 - Transportation Network Planning

This chapter establishes a transportation framework for the West 94 Area, moving beyond I-94 access considerations to create a connected roadway system that supports diverse development patterns. It details how carefully designed street typologies—derived from the *Fargo-West Fargo Parking & Access Study*—align with planned development to create livable neighborhoods and efficient transportation corridors. The chapter outlines specific roadway cross-sections for different functional classifications, emphasizing how these designs accommodate multiple travel modes while responding to surrounding development contexts. This approach creates a flexible yet cohesive system that provides developers with various implementation options tailored to their vision. It ensures that transportation infrastructure supports rather than constrains desired land use concepts.

The transportation network analysis reveals that establishing a context-sensitive street hierarchy is crucial for successfully implementing the development vision for the West 94 Area. Rather than applying rigid, one-size-fits-all roadway designs, the framework offers multiple cross-section options that cater to diverse land use contexts, ranging from commercial corridors to mixed-use districts and residential neighborhoods.

A "spine corridor" conceptual design is central to this approach, a critical east-west connection envisioned as a mixed-use collector that balances vehicle mobility with pedestrian accessibility. This corridor serves as the transportation backbone of the West 94 Area, with two design alternatives (median parkway and activated curb space) that can adapt to varying development intensities along its length.

The transportation framework is designed to provide developers with flexibility while maintaining essential connectivity. Cross-sections accommodate multimodal transportation through dedicated bicycle facilities, shared-use paths, and enhanced pedestrian crossings, creating a network that serves all users. This integrated approach ensures that transportation investments not only facilitate movement but also actively support the creation of a vibrant, walkable, mixed-use district that aligns with the region's planning principles (Executive Summary Figure C).

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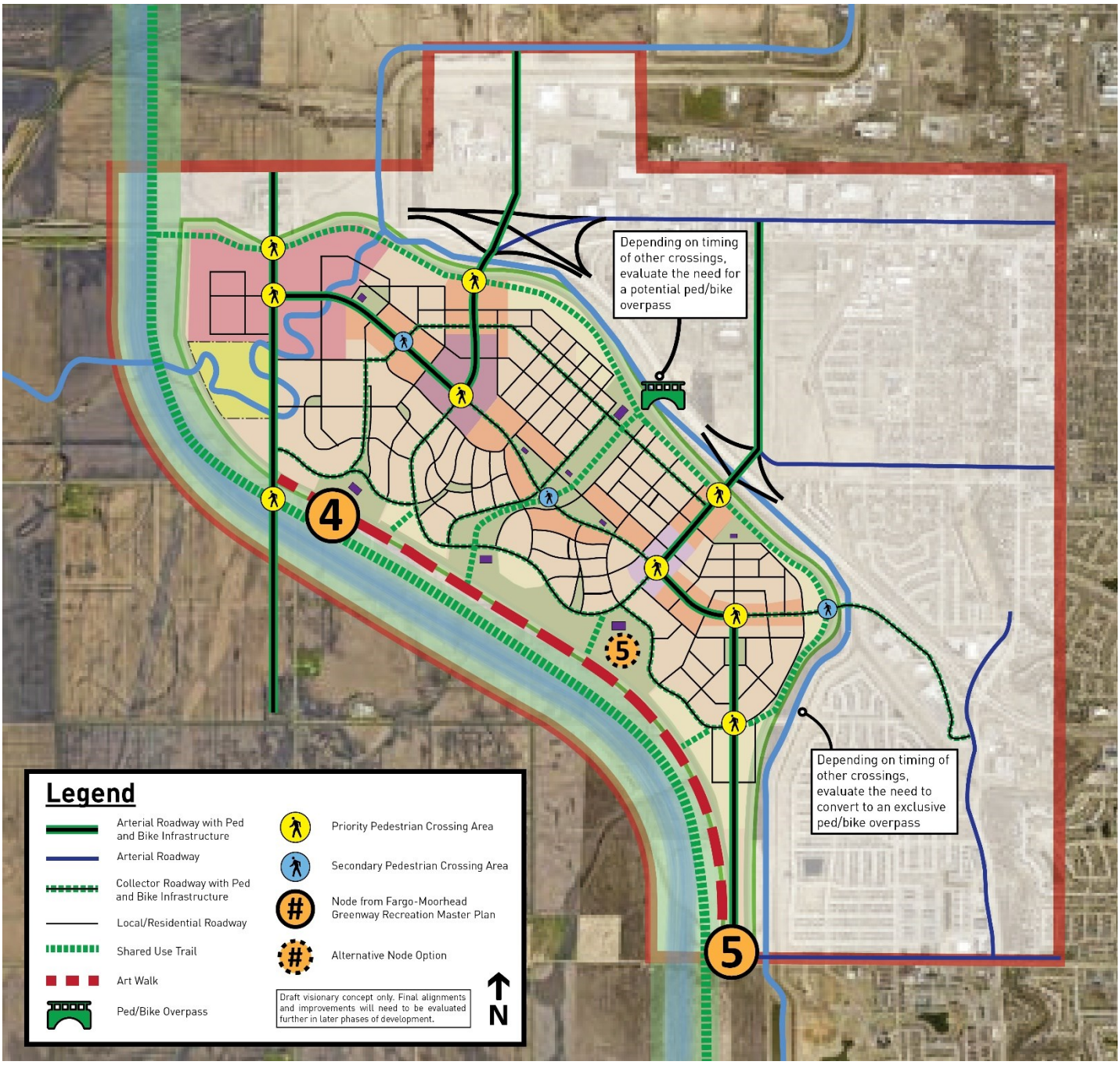

Executive Summary Figure C – Multimodal Network Concept

Chapter 4 - Critical Infrastructure Refinement

This chapter builds upon previous studies of vital transportation infrastructure investments necessary to support the development of the West 94 Area. Infrastructure refinement focuses on specific access solutions at critical connection points. The analysis explores four primary access opportunities: enhancing Christianson Drive as a secondary connection point, developing a new interchange near 13th Avenue and 15th Street, modifying the existing Main Avenue interchange to provide access to 26th Street, and improving the existing 38th Street interchange. For each access point, multiple design concepts were evaluated based on their traffic operations performance, construction challenges, and estimated costs, to identify viable options that can be refined in future project development phases.

The infrastructure analysis confirms that substantial investments will be required to support the development vision for the West 94 Area. Two interchange configurations emerge as viable options for the critical 13th Avenue/15th Street crossing location: a Single Point Urban Interchange (SPUI) and a modified roundabout interchange with loop ramp. While both configurations effectively manage projected traffic volumes, they represent different approaches to balancing construction costs (estimated at $80-90 million for the SPUI versus $70-85 million for the roundabout option) and operational efficiency.

At the Main Avenue/26th Street location, only the Southwest Loop concept with a widened bridge over I-94 provides acceptable operations under full build-out conditions (Executive Summary Figure D). This configuration, estimated at $90-100 million, utilizes the existing Main Avenue bridge with modifications while adding new connections to 26th Street to serve the growth area. The existing 38th Street interchange will require significant improvements estimated at $30-35 million to accommodate future traffic volumes comparable to what Sheyenne Street carries today.

A key finding from the analysis of the mainline lanes of I-94—the primary through lanes excluding ramps and interchanges—is that the current four-lane configuration will not provide sufficient capacity to handle future traffic volumes. This confirms the 2023 Metro COG Interstate Operations Study's recommendation to expand I-94 to six lanes from Sheyenne Street to I-29. The transition from six to four lanes will require careful design to maintain acceptable operations along the corridor.

As development proceeds, future project development activities must include Interchange Justification Reports or Interchange Modification Justification Reports to obtain the necessary FHWA and NDDOT approvals. These reports will require more detailed operational and safety analyses to confirm that the proposed access changes do not adversely impact the Interstate system's safety and efficiency.

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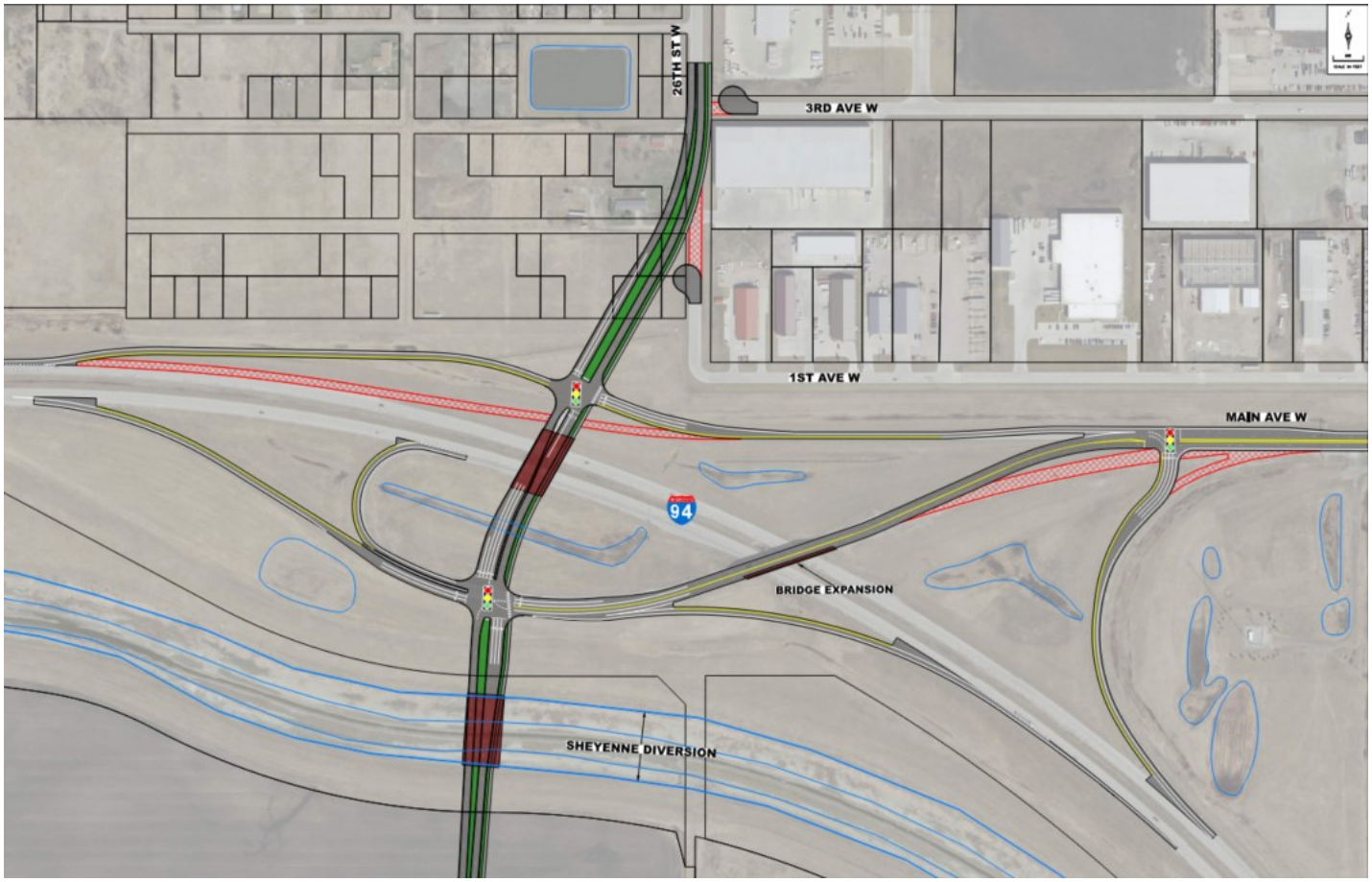

Executive Summary Figure D – Southwest Loop Interchange Concept

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Chapter 5 - Public Engagement

The effectiveness of this plan relies on contributions from the public and stakeholders who will be affected by the proposed enhancements. This chapter details the engagement efforts, and the feedback obtained from agencies, developers, property owners, and the public, which informed the plan's recommendations. The West 94 Area Transportation Plan was overseen by a 16-member study review committee (SRC), which represented the City of West Fargo, the Southeast Cass Water Resource District, the North Dakota Department of Transportation (NDDOT), the Federal Highway Administration (FHWA), the Metropolitan Council of Governments (Metro COG), and the consultant study team. The engagement process was iterative and designed for continuous improvement and communication (Executive Summary Figure E).

Executive Summary Figure E – Iterative Public Engagement Model

Public engagement progressed through three integrated phases. **Phase 1, listening** to jurisdictional agencies, developers, emergency management, economic development agencies, and property owners to establish their priorities and constraints. Next, **Phase 2 involves discerning through facilitated discussions with stakeholders to refine the** initial insights. **Phase 3, strategizing** to synthesize input and finalize concepts through a broader regional engagement process. To support and guide engagement, the SRC convened a total of nine times throughout project implementation.

Public insight was a key component in the development of the West 94 Area Transportation Plan. To support access and promote engagement from diverse demographics and identities, the study team used multiple communication channels to gather public feedback, including online, hybrid, and in-person formats.

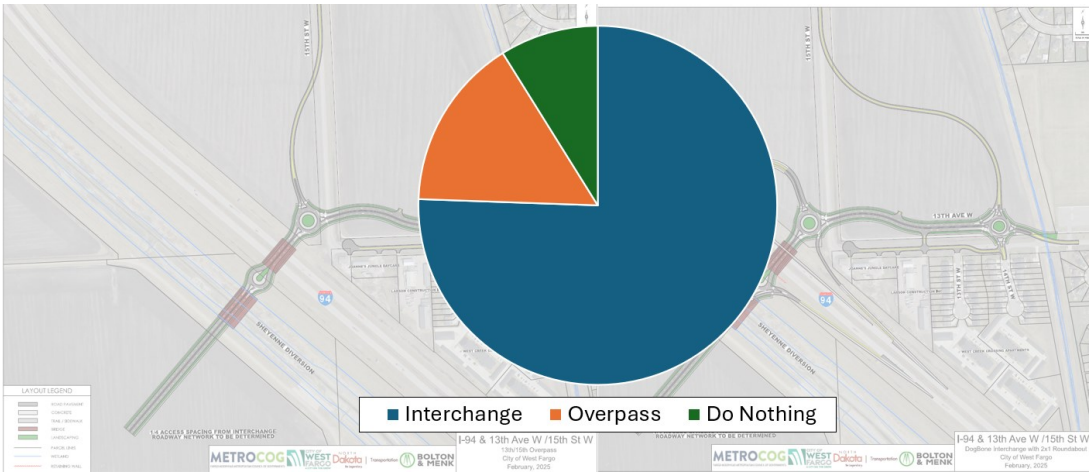
- **Online engagement** included virtual opportunities to attend focus groups and listening sessions, as well as a Project Website with robust digital feedback methods, including surveys and virtual mapping software to track comments and suggestions.
- **In-person engagement** included focus groups, round table discussions, one-on-one interviews, and an open house.

The Elmwood and Brooks Harbor neighborhoods, situated close to the study area, were given priority. Several stakeholders were engaged to update them on the West 94 Area initiatives, gather their feedback, and coordinate planning efforts. These stakeholders included developers, property owners, townships, and notable entities such as the Red River Valley Fairgrounds.

The study team facilitated three listening sessions, four focus groups, and two roundtable meetings with property owners in the study area, as well as members of the business development community. These meetings were held independently of each other to gain a better understanding of the perceived benefits associated with the project, as well as to gain insight into the economics of Fargo and West Fargo and how this area could develop based on various factors. Additional one-on-one meetings were held with the Red River Valley Fairgrounds to bolster future collaboration and communication for future projects. Public engagement culminated in an open house event to refine and extend feedback.

Public Input Summary

- The public was asked to score the value of key infrastructure improvements on a **100-point scale**, with **zero meaning there is minimal value** and 100 meaning the improvement element is of the utmost importance.
  Below are the improvement rankings by location:
  - **Main Avenue / 26th Street interchange –** 66/100
  - **Christianson Drive connection** to the Brooks Harbor neighborhood – 72/100
  - **38th Street interchange** – 58/100
- The public preferred the following **15th Street / 13th Avenue interchange** concepts (Executive Summary Figure F)
  - 76% preferred a new interchange, with a preference for the single-point interchange over the *dogbone interchange* design.
  - 16% preferred the overpass concept with a preference toward the concept that connects directly with 15th Street versus the concept that connects with 13th Avenue
  - 8% preferred a “Do Nothing” vision with no interchange or overpass



Executive Summary Figure F – Public Input: 13th Ave./15th Improvement Preferences

- The public preferred the following **residential development** in the West 94 Area (n = 48):
  - **low-density development** – 56% (top preference)
  - **medium-density development** – 33%
  - **high-density development** – 10% (least preferred)

- The public preferred the following **commercial development** in the West 94 Area (n = 38):
  - Community Center (50% businesses/50% residential) – 61% (top preference)
  - Neighborhood Center (25% businesses/75% residential) - 32%
  - Auto-oriented Center (75% businesses/25% high-density residential) – 8% (least preferred)

The West 94 Area Transportation Plan emphasizes the importance of extensive public involvement and collaboration with stakeholders, incorporating diverse perspectives to ensure a comprehensive approach. Besides collecting input on prioritized infrastructure enhancements and preferences for residential and commercial development, public discussions often centered on topics such as timelines, funding, and resources, highlighting the need for ongoing public dialogues as development progresses. This input has been pivotal in shaping a plan that meets the needs and expectations of regional stakeholders, enabling the City of West Fargo to make community-informed decisions for this area.

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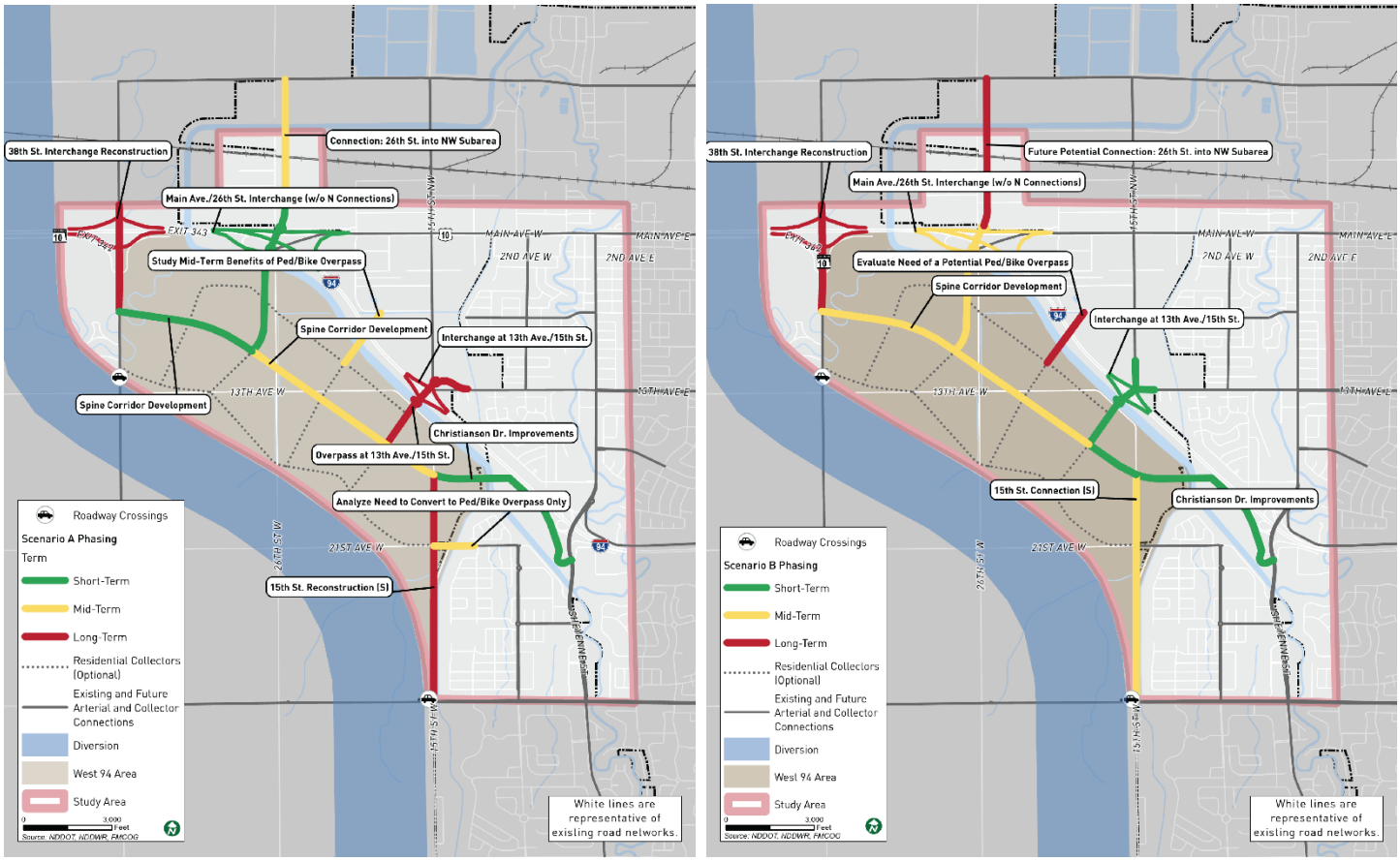
Chapter 6 - Implementation Plan

This chapter combines previous analysis findings into an actionable implementation plan for the *West 94 Area*. It presents phased infrastructure investment strategies, compares implementation scenarios, and outlines funding approaches to support sustainable development.

- The tax analysis confirms that the project delivers significant value to the city at the proposed density, justifying the required infrastructure investments.
- Two viable implementation scenarios offer different approaches to development phasing, each with distinct advantages for achieving the area's growth vision.
- Successful implementation will require the city's sustained commitment to guiding development and securing funding through various sources, particularly grants.
- Perserving right of way for major internal corridors, such as the Spine roadway, is critical to ensure long-term connectivity and development flexibility.

This is illustrated in Executive Summary Figure G below.



Executive Summary Figure G – Implementation Scenarios A and B

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BACKGROUND

The West 94 Area Transportation Plan, developed by the Fargo-Moorhead Metropolitan Council of Governments (Metro COG) in partnership with the City of West Fargo, aims to address the expected growth and development resulting from the Fargo-Moorhead Area Diversion (Diversion) project. Slated for completion by 2027, this flood protection initiative will eliminate nearly 2.5 square miles of land from the floodplain, thus making it available for development. This new developable area lies between the Sheyenne Diversion and I-94, and the future FM Area Diversion west of West Fargo. Metro COG and this report refer to this area as the West 94 Area.

This study aims to develop a regionally tailored framework that informs future land use concepts, density, and transportation infrastructure decisions. It ensures local governments recognize the demand for roadway capacity and cross-sections when evaluating developments in this expanding area. The plan aims to identify potential demographic growth trends and the essential roadway and infrastructure network required to support this growth in a sustainable and efficient manner. Key analyses will assess possible roadway connections to and from the study area. Critical aspects to consider include connections across I-94 and the Sheyenne Diversion to corridors such as 13th Avenue, 15th Street West, Christianson Drive, and 32nd Avenue South, as well as links into the Northwest subarea at 26th Street. The study will also assess the possible need for more access points to Interstate 94 within the region. It also seeks to optimize development opportunities for West Fargo and the larger Fargo-Moorhead metropolitan area. The holistic components of this study are illustrated in Figure 1.0, and the study area is shown in Figure 1.1.

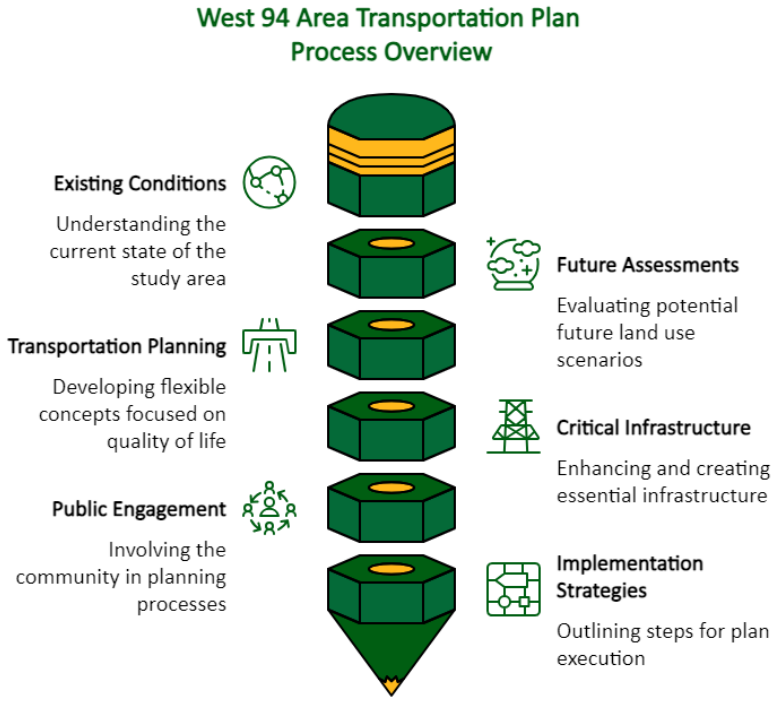

Figure 1.0 - West 94 Area Holistic Elements

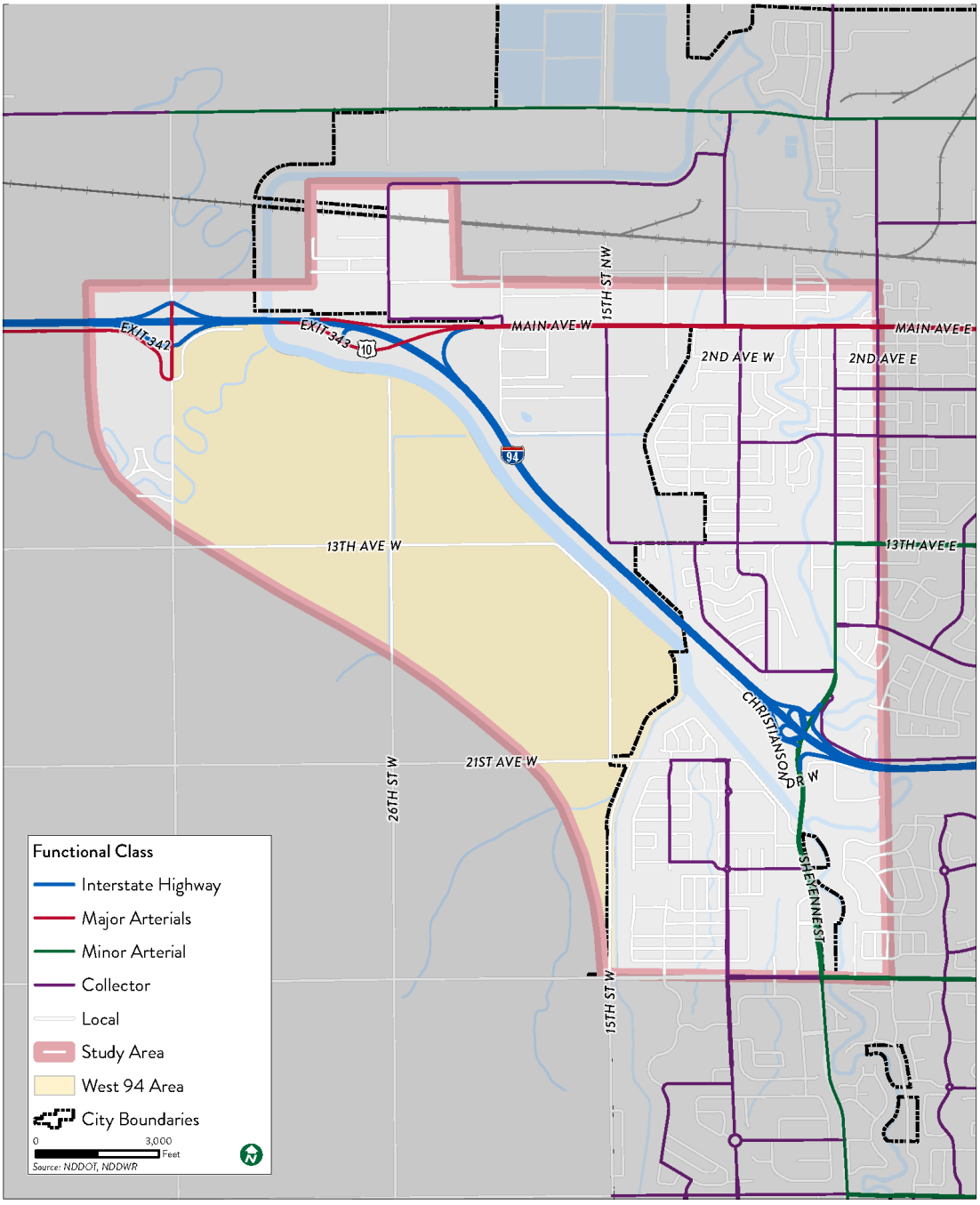

Figure 1.1 - Study Area Map

CHAPTER 1 – EXISTING CONDITIONS ASSESSMENT

Foundational Knowledge and Study Implications

Effective regional transportation planning evolves through iterative processes that draw on established knowledge. This section evaluates key planning initiatives, providing valuable insights into regional projects and policy contexts. By examining previous studies, the Project Management Team and Study Review Committee intentionally address the adverse effects of episodic learning (i.e., short-term memory loss) and the common practice of shelving or forgetting documents that can occur during study closures. Utilizing, enhancing, and adapting existing regional study data and guidelines (e.g., the Fargo/West Fargo Parking & Access Study, Metro Profile, and Metro 2050 - TDP) to amplify and build on prior work highlights shared impact, accountability, and the prudent use of public time and resources.

Reviewing prior studies anchors understanding, ensures a return on investment, and multiplies impact by providing valuable insights into lessons learned from past successes. Moreover, a review of regional infrastructure initiatives, whether directly related or tangential, acts as a natural thought exercise that can challenge presumptions, provide cognitive clarity, enhance troubleshooting, and inspire innovation. This knowledge enables planning partners to avoid costly rework, refine viable concepts, and allocate resources strategically to achieve desired growth outcomes.

Comprehensive Analysis Framework

This section evaluates curated regional formative studies, identifies the connections between their findings, and synthesizes their conclusions to inform the Project Management Team and Study Review Committee.

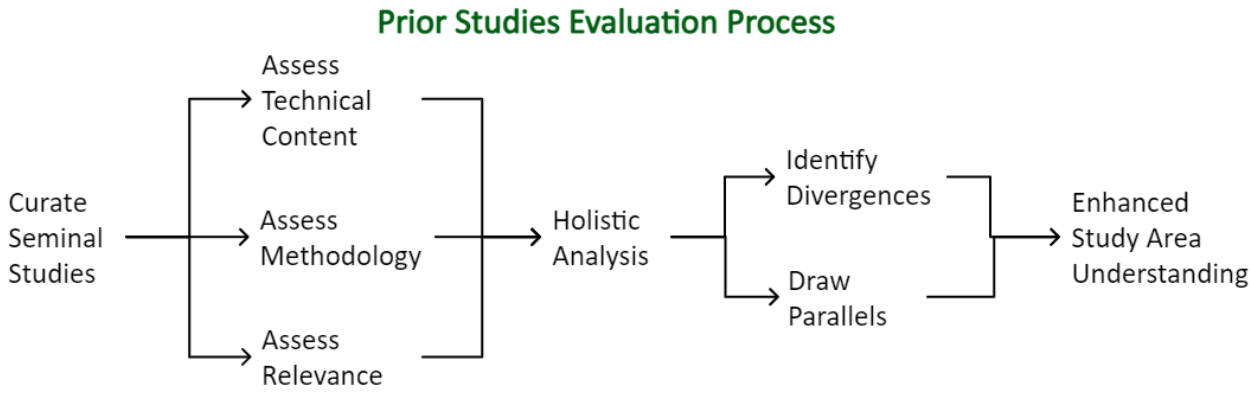

Figure 1.2 - Prior Study Review Process

The following studies highlight the dynamic growth and evolving infrastructure of Metro COG's Transportation Management Area. They focus on accommodating projected population and employment growth, addressing transportation needs and funding, and promoting integrated community development with multimodal options and diverse housing.

Interstate Operations Study & Plan for Future Improvements (2023)

Core Focus and Methodology

The study employs a system-level approach to evaluating interstate operations throughout the Fargo-Moorhead metropolitan area. It uses traffic modeling and capacity analysis to project future conditions through 2050. This analysis examines operational deficiencies under current and forecasted conditions, evaluating solutions ranging from implementation to capacity expansion.

Findings

The anticipated reconstruction of I-94 between Sheyenne Street and MN 336 (including the Red River Bridge) represents a transformative opportunity that directly affects the West 94 Area. With construction scheduled in future years, the study identifies the need for additional capacity on this corridor segment to address growing demand. This finding underscores the importance of aligning the West 94 Area development timeline with this significant infrastructure investment.

Implementation Considerations

In addition to interstate capacity needs, the study emphasizes the importance of right-of-way preservation and access control policies to accommodate a potential highway. This highway directly impacts the West 94 Area, as any possible new access points to I-94 must be coordinated with regional capacity improvements and connect effectively to any future perimeter roadway system (Figure 1.3).

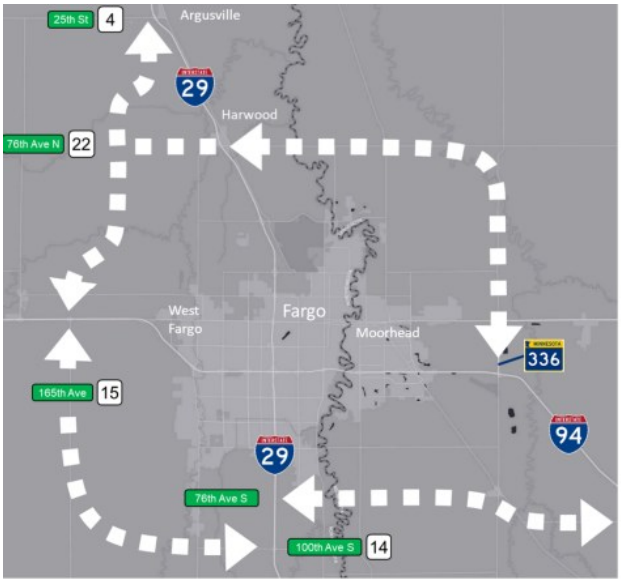

Figure 1.3 Potential Perimeter Routes

Metro COG Baseline 2050 Demographic Forecast

Core Focus and Methodology

This forecast applies demographic modeling techniques to project population, household, and employment growth through 2050, broken down by jurisdiction and including detailed analysis of age, household size, and income characteristics. The methodology acknowledges the region's tendency to consistently exceed growth projections, largely due to its economic resilience in key sectors.

Findings

The forecast projects the metropolitan area's population to reach 357,322 residents by 2050, representing significant growth concentrated in developing areas. The region's track record of exceeding growth projections is particularly noteworthy, suggesting that infrastructure planning should anticipate potential growth rates beyond baseline forecasts.

Implementation Considerations

Transportation infrastructure in the West 94 Area must be designed to accommodate growth rates that may exceed typical projections. This suggests the need for flexible implementation strategies that allow for accelerated development if market conditions warrant, while maintaining coherent overall network functionality.

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Fargo-Moorhead Greenway Recreation Master Plan.

Core Focus and Methodology

This plan aimed to establish a framework for developing recreational concepts in conjunction with the FM Area Diversion Project. It defined specific recreation investment needs for ongoing operations and programming. The methodology involved creating a vision for a 30-mile interconnected system of recreation features, cultural interpretation, and natural landscapes. It includes planning for seasonal trails, trail connections, and other recreational features, along with developing planning-level cost estimates and general design criteria to guide implementation over 20 years after Diversion completion.

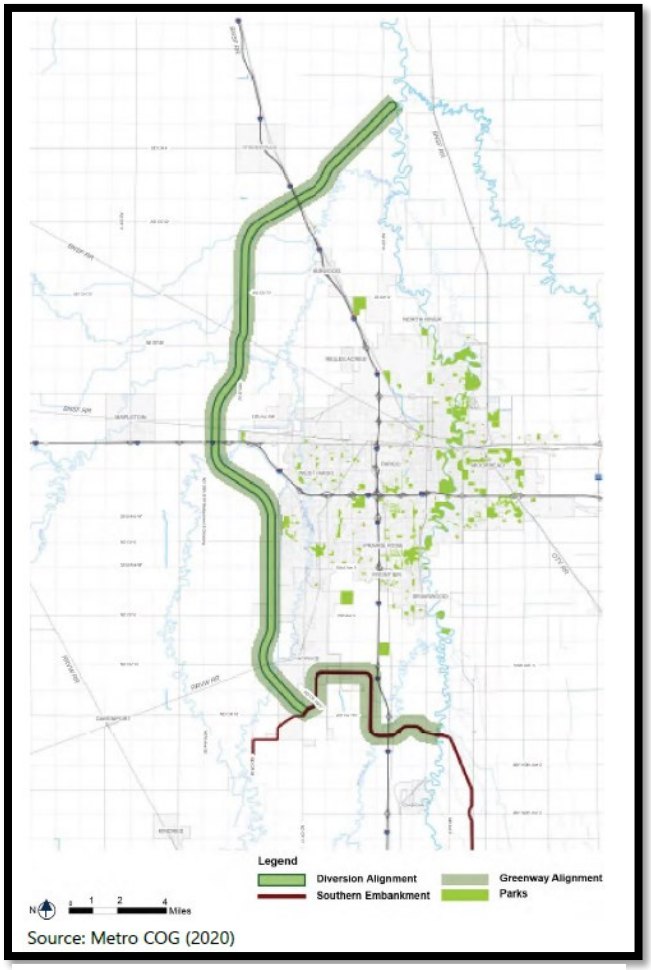

Figure 1.4 - Greenway and Parks

Findings

Recreational opportunities in eastern North Dakota are lacking. The FM Greenway can create a major regional destination, enhancing the Fargo-Moorhead area and catalyzing year-round recreation and economic development. In West Fargo, the bicycle and pedestrian network lacks connectivity due to barriers like the I-94 freeway and possibly the Diversion. While newer developments include shared-use paths, older areas could improve grid connectivity.

Implementation Considerations

The master plan detailed an implementation strategy for future recreation trail needs and investment priorities, identifying partner agencies for governance and maintenance. A key consideration of the West 94 Area Transportation Plan is expanding the number of safe and effective crossings for vehicles, pedestrians, and bicyclists over I-94 and the Diversion to reduce stress on existing arterials and improve network connectivity. Local planning will focus on accommodating a potential greenway along the Diversion's length and ensuring that future active transportation infrastructure is not precluded. Discussions on potential bike/pedestrian perimeter road crossings will occur early in the design process to integrate safe crossing treatments and connect with future infrastructure investments.

Fargo/West Fargo Parking & Access Study

Core Focus and Methodology

This study examined parking and mobility in Fargo and West Fargo during substantial growth. It aims to inform development by investigating parking roles, enhancing street networks, and adjusting regulations. Methods included analyzing land use concepts and street classifications (Figure 1.5), reviewing zoning, conducting parking utilization surveys, and interviewing stakeholders. The primary objectives included ensuring safe, multimodal traffic flow, aligning roadway design with land use concepts, minimizing excess parking, and promoting sustainable development.

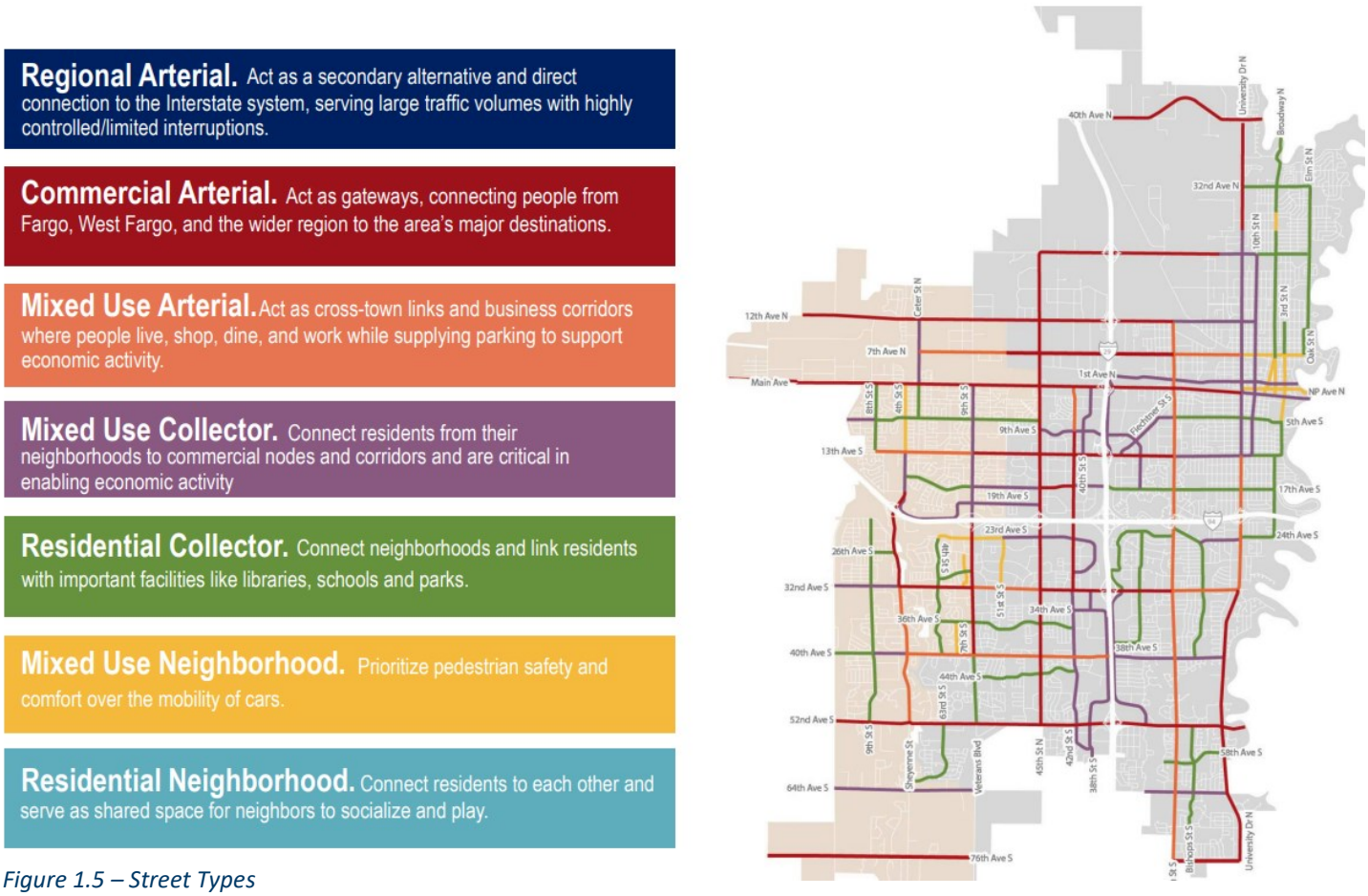

Figure 1.5 – Street Types

Findings

Current conditions highlight fragmented land uses, numerous curb cuts that compromise pedestrian safety, and barriers among developments. Parking surveys show a significant oversupply across all land use types: residential at 74% occupancy, commercial at 31%, and mixed-use at 51%. Minimum parking requirements often exceed national standards and observed demand. Stakeholders avoid questioning these minimums due to perceived time and cost constraints, resulting in underused parking spaces. Conventional street classifications

prioritize vehicular traffic, sometimes at the expense of other users. In addition to these planning efforts, the Fargo-West Fargo Parking and Access Requirement Study provided a roadway typology to guide the development of new and reconstructed roadways.

Metro COG Bicycle and Pedestrian Plan (2022)

Core Focus and Methodology

This plan employs a "Six E's" methodology (Education, Encouragement, Evaluation, Engineering, Enforcement, and Equity) to comprehensively address active transportation needs. The approach includes network analysis, connectivity evaluation, and barrier identification to create an interconnected system.

Findings

The plan identifies planned bicycle facility crossings of the Diversion to maintain regional connectivity. These crossings should be coordinated with vehicular connections to ensure efficient multimodal access. The plan emphasizes the importance of connecting neighborhoods and destinations, particularly across significant barriers like I-94 and the Fargo-Moorhead Diversion Project.

Implementation Considerations

The West 94 Area Transportation Plan must incorporate multimodal connections in its foundational network, not as retrofitted components. Integrating bicycle and pedestrian facilities at key crossing points (particularly across I-94 and the Diversion) should be considered in initial design phases to ensure cost-effective implementation and seamless integration.

2050 Metropolitan Transportation Plan

Core Focus and Methodology

This evolving update addresses the metropolitan area's recent designation as a Transportation Management Area, a classification for urbanized areas with populations exceeding 200,000 residents. This designation changes funding allocation and project prioritization processes, giving Metro COG certain funding authority.

Findings

The Transportation Management Area designation fundamentally alters how transportation projects are funded and prioritized in the region, with Metro COG gaining increased responsibility for project selection. This shift creates new opportunities for the West 94 Area to secure implementation funding if projects align with regional priorities.

Implementation Considerations

The West 94 Area Transportation Plan must align its recommendations with Metro COG's evolving prioritization framework to maximize funding potential. Projects that serve multiple regional objectives (e.g., congestion reduction, multimodal access, economic development) will likely receive higher priority under the goals of the 2050 Metropolitan Transportation Plan.

Cass County Comprehensive and Transportation Plan (2018)

Core Focus and Methodology

This plan establishes livability, resilience, and regional collaboration as guiding principles for county planning and development. The methodology includes corridor classification and prioritization systems, identifying regionally significant corridors for focused investment.

Findings

I-94 is designated as a regionally significant corridor, meaning it is a priority for county investment.

Implementation Considerations

The transportation network within the West 94 Area must provide appropriate connections to the regionally significant corridors while respecting the hierarchical structure established in the county plan. As development proceeds, coordination with county officials regarding road maintenance responsibilities and potential jurisdictional transfers will be critical.

West Fargo Comprehensive Plan (2018)

Core Focus and Methodology

Adopted as "West Fargo 2.0," this plan establishes a vision for the city's future without a definitive end date. Its approach emphasizes urban design principles that promote walkability and multimodal connectivity, creating a comprehensive community vision rather than a transportation-specific framework.

Findings

While not specifically focusing on primary arterial transportation needs, the plan emphasizes traffic demand management strategies for existing infrastructure. This approach aligns with the city's vision of a connected community with diverse transportation options, suggesting that the West 94 Area must strike a balance between capacity needs and urban design considerations.

Implementation Considerations

The West 94 Area Transportation Plan should demonstrate how new infrastructure will manage demand on existing networks while supporting the community design principles established in West Fargo 2.0. Particular attention should be paid to connections with existing neighborhoods and creating a cohesive community fabric.

Northwest Metro Transportation Plan (Northwest Subarea Study)

Core Focus and Methodology

The Northwest Subarea Study revealed access to the West 94 Area presented via the Southwest Gateway analysis, which focuses on addressing transportation barriers building upon the comprehensive subarea planning framework. This component specifically examines infrastructure solutions for a challenging sector constrained by multiple factors: railroad lines, the Sheyenne River Diversion, Interstate 94, and existing industrial development. Our approach incorporated scenario modeling to extend and evaluate transportation network modifications that could support the aggressive growth assumptions for this underdeveloped area. Two strategic infrastructure configurations were identified as viable solutions to enhance access to the West 94 Area. One option suggested transforming the existing 26th Street alignment into a north-south corridor with grade-separated crossings over the Sheyenne Diversion and railroad tracks and reconfiguring the I-94/Main Avenue interchange to provide direct access to 26th Street. The other option expands on option one by introducing an additional viaduct along the 14th Street alignment to enhance connectivity redundancy.

Implementation Considerations

West 94 Area access solutions must align with the broader land use plan and transportation network hierarchy. As development progresses in the West 94 Area, these infrastructure modifications will be essential to accommodate the projected growth while maintaining appropriate service levels throughout the transportation network.

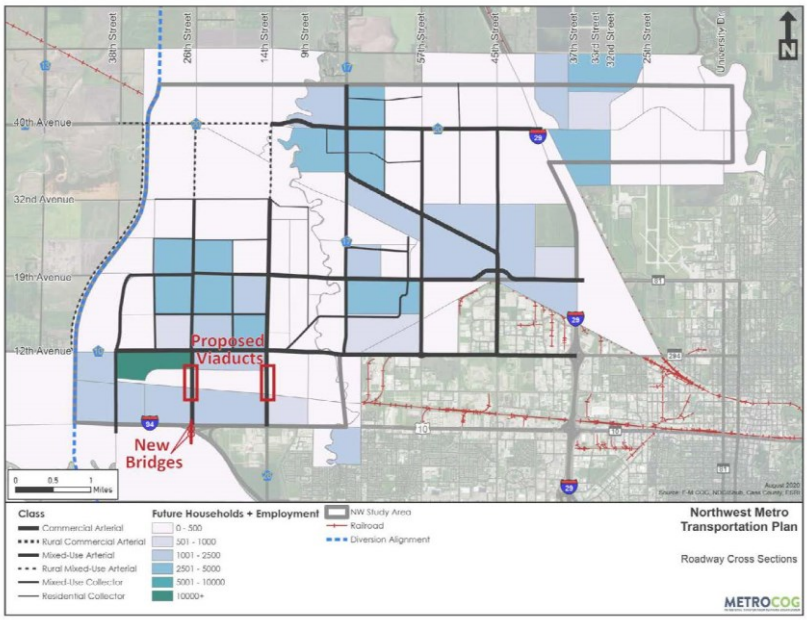

Figure 1.6 - Northwest Area Access

Brooks Harbor Traffic Impact Study – Not Published (2021)

Core Focus and Methodology

This localized analysis evaluates specific intersections affected by proposed commercial development near the Brooks Harbor neighborhood. The methodology includes detailed operational analysis of key intersections to identify necessary modifications.

Findings

The study identifies operational challenges at the intersection of 26th Avenue and Sheyenne Street and recommends modifications to accommodate anticipated traffic patterns. This finding is particularly relevant as Brooks Harbor represents an established neighborhood adjacent to the West 94 Area, already experiencing transportation challenges.

Implementation Considerations

The West 94 Area Transportation Plan must address existing operational issues at key access points to Brooks Harbor while avoiding additional pressure on already-constrained intersections. Solutions should consider how new connections might alleviate existing pressure points rather than exacerbating them.

Fargo-Moorhead Regional Housing Needs Analysis

Core Focus and Methodology

This collaborative housing needs assessment establishes a framework for regional housing coordination based on shared data and priorities. The approach emphasizes five key goals addressing regional coordination, education, retention, diversity, and affordability.

Findings

The analysis identifies the need to accommodate population growth through diverse housing types and tenures, explicitly recommending the integration of housing considerations into transportation planning. This finding emphasizes the relationship between transportation investments and housing diversity.

Implementation Considerations

The West 94 Area Transportation Plan should support diverse housing typologies through network designs that accommodate varying densities and mixed-use configurations. Transportation investments should be evaluated partly based on their ability to support housing diversity objectives.

13th Avenue Corridor Study

Core Focus and Methodology

This study aimed to identify current and future traffic patterns along the 13th Avenue corridor in West Fargo, which has experienced increased traffic and deteriorating pavement amid expected future development.

The methodology involved analyzing existing conditions (traffic operations, safety, and roadway geometrics), forecasting future traffic based on various land-use and transportation scenarios (using the 2045 Travel Demand Model), identifying issues and needs, and developing potential build/no-build alternatives for four distinct segments of the corridor.

Data collection included traffic counts (AADT and turning movements), crash data (2012-2016), traffic signal timings, and public input from surveys and events. Traffic operations were analyzed using Synchro 8 software based on the Highway Capacity Manual Methodology.

Findings

Issues and Needs: A noted need is that "With future growth areas potentially opening up southwest of Interstate 94, an overpass connection across Interstate 94 may be considered." The report emphasizes the importance of addressing the impact of grade separation on traffic and safety.

Implementation Considerations

Alternatives Development (Segment 1): An "Interstate 94 (I-94) Overpass Connection" is one of four alternatives considered for Segment 1 (CR28: Main Avenue to 10th Street W). The report states that this analysis was conducted at the City's request to identify future development areas southwest of I-94 with a shorter connection to the 13th Avenue and Main Avenue corridors (Figure 1.7). Implementing projects in the Metropolitan Transportation Plan framework requires alignment with regional goals and performance metrics. Learning from constraints on adjacent networks (e.g., Brooks Harbor) necessitates solutions prioritizing harm mitigation and responsible integration. Additionally, the ongoing policy commitment to multimodal designs, livability, and integrated planning suggests that this plan should incorporate these principles into its design and recommendations. This approach shifts the focus away from vehicles, aiming to establish a sustainable and functional new district for West Fargo.

Understanding the existing environmental conditions within and adjacent to the West 94 Area is essential for developing effective development strategies and design concepts. This section details the current state of transportation infrastructure, multimodal facilities, traffic operations, and safety within the study's sphere of influence, referencing Metro COG's established goals and performance metrics where applicable.

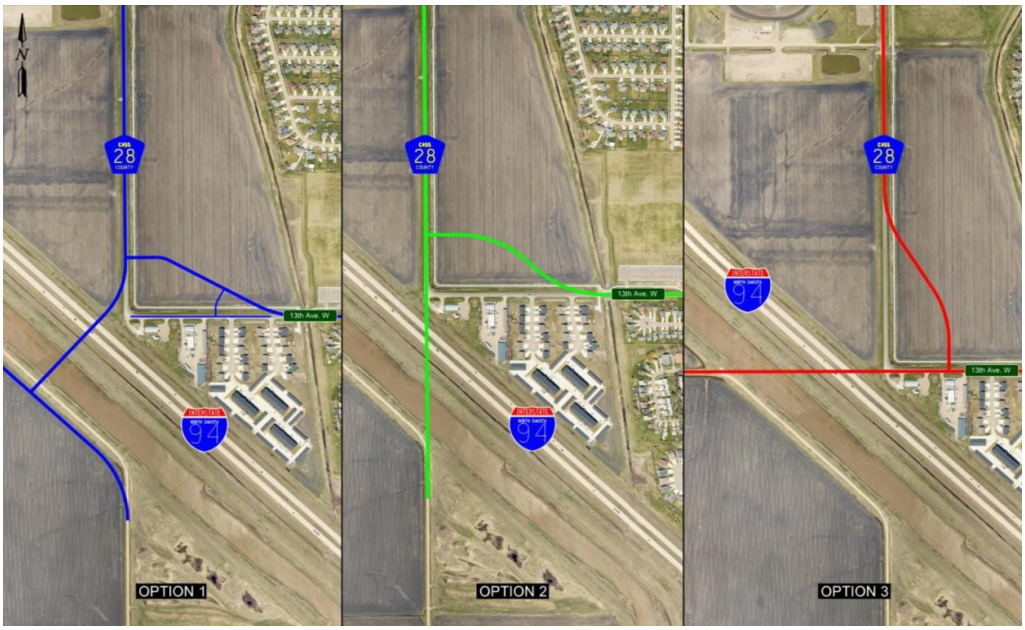

Figure 1.7 - 13th Avenue Corridor Overpass Access

Demographic, Economic, and Environmental Conditions

Evaluating the current demographic, economic, and environmental conditions offers crucial insights for crafting transportation strategies that are efficient and sustainable for the West 94 Area. An extensive examination of ecological aspects revealed minimal constraints that could hinder or limit development. The following regional demographic overview is provided for context.

Regional Demographics

The Fargo-Moorhead Metropolitan Statistical Area (MSA) is witnessing notable population growth that surpasses national averages, driven by a robust economy. West Fargo's population increased from 25,800 residents in 2010 to over 40,000 by 2023. This upward trend is expected to persist, although the region's diversity is on the rise. West Fargo's 2023 demographic estimates reveal a composition of 85.9% White, 6.3% Two or More Races, 3.6% Black or African American, and 2.1% Asian, which is historically behind national patterns. The Native American population is approximately 1.4% in the broader region and 1.07% in West Fargo (2020 US Census).

Despite relatively low overall poverty rates (approximately 6.1%) and a high median household income of $96,877 during this period, there are ongoing inequality issues, particularly with much higher poverty rates for Native American and Black populations in the region (around 30% in some reports) compared to about 7% for the White population. These data underscore the importance of a planning strategy that centers on diverse housing options, transportation, economic opportunities, and culturally respectful community engagement, particularly to ensure access and opportunity for underserved populations.

Land Use Concepts & Zoning

The West 94 study area has a distinct land-use context that significantly influences its current and future potential. As illustrated in the existing zoning map (Figure 1.8), the land within the immediate study area boundaries is predominantly zoned for agriculture, reflecting its current undeveloped status, mainly due to historical floodplain constraints. Immediately surrounding the study area, particularly east of the Sheyenne Street Diversion and north of I-94, existing land uses transition rapidly into established low- and medium-density residential neighborhoods (such as Brooks Harbor and Elmwood), commercial corridors (along Main Avenue and Sheyenne Street), public facilities, and some planned unit developments. This juxtaposition of large-scale, undeveloped agricultural land directly abutting maturing suburban fabric defines the area's unique planning challenge and opportunity.

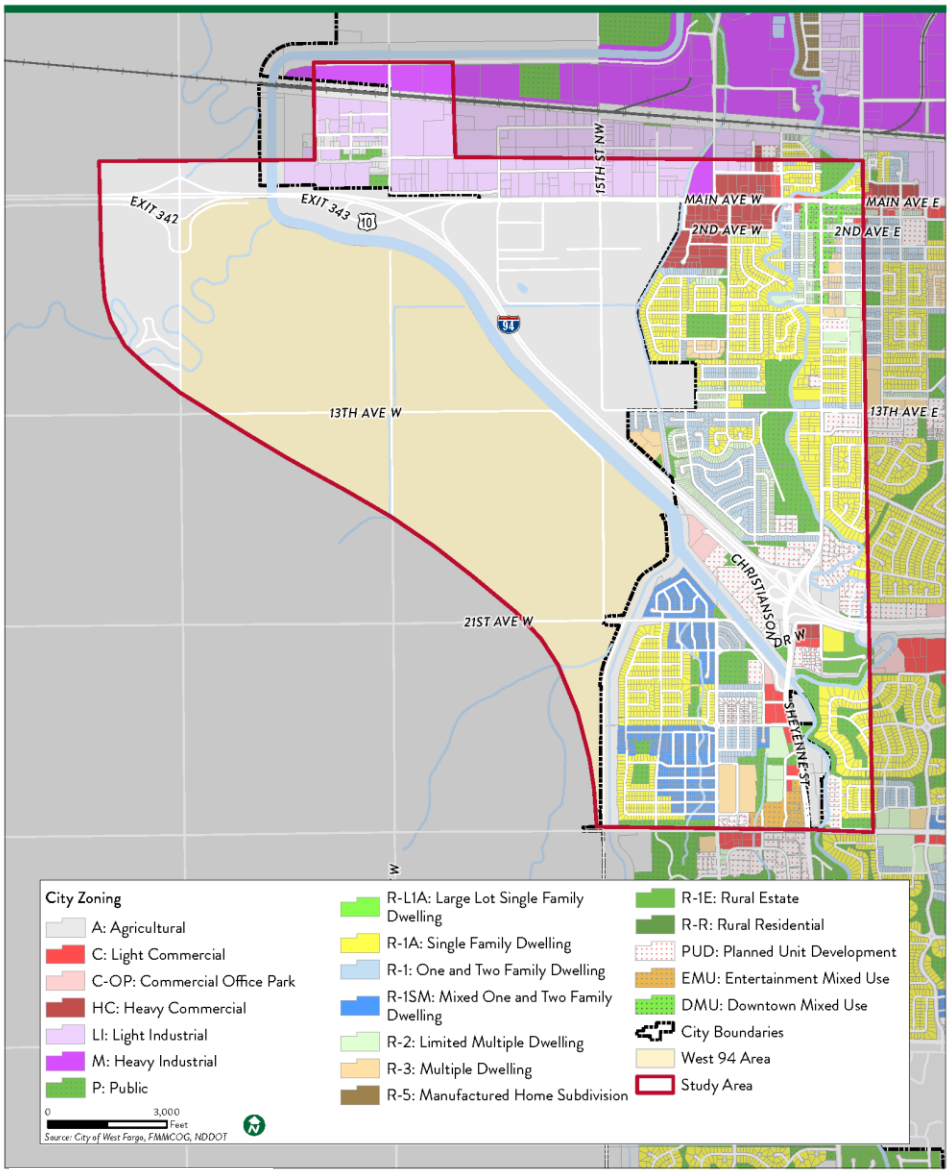

Figure 1.8 - Zoning Map

Farmland and Soil

Much of Cass County, including the project area, has been identified as prime if drained. The United States Department of Agriculture defines prime farmland as land with the best physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. These lands typically have adequate and dependable water, favorable temperatures and growing seasons, acceptable acidity or alkalinity, low salt content, and minimal rock content. Additional land that meets production thresholds but does not meet all the physical and chemical characteristic requirements of prime farmland is characterized by the State of North Dakota as Farmland of Statewide Importance.

The project area primarily consists of existing or former farmland slated for redevelopment (Figure 1.9).

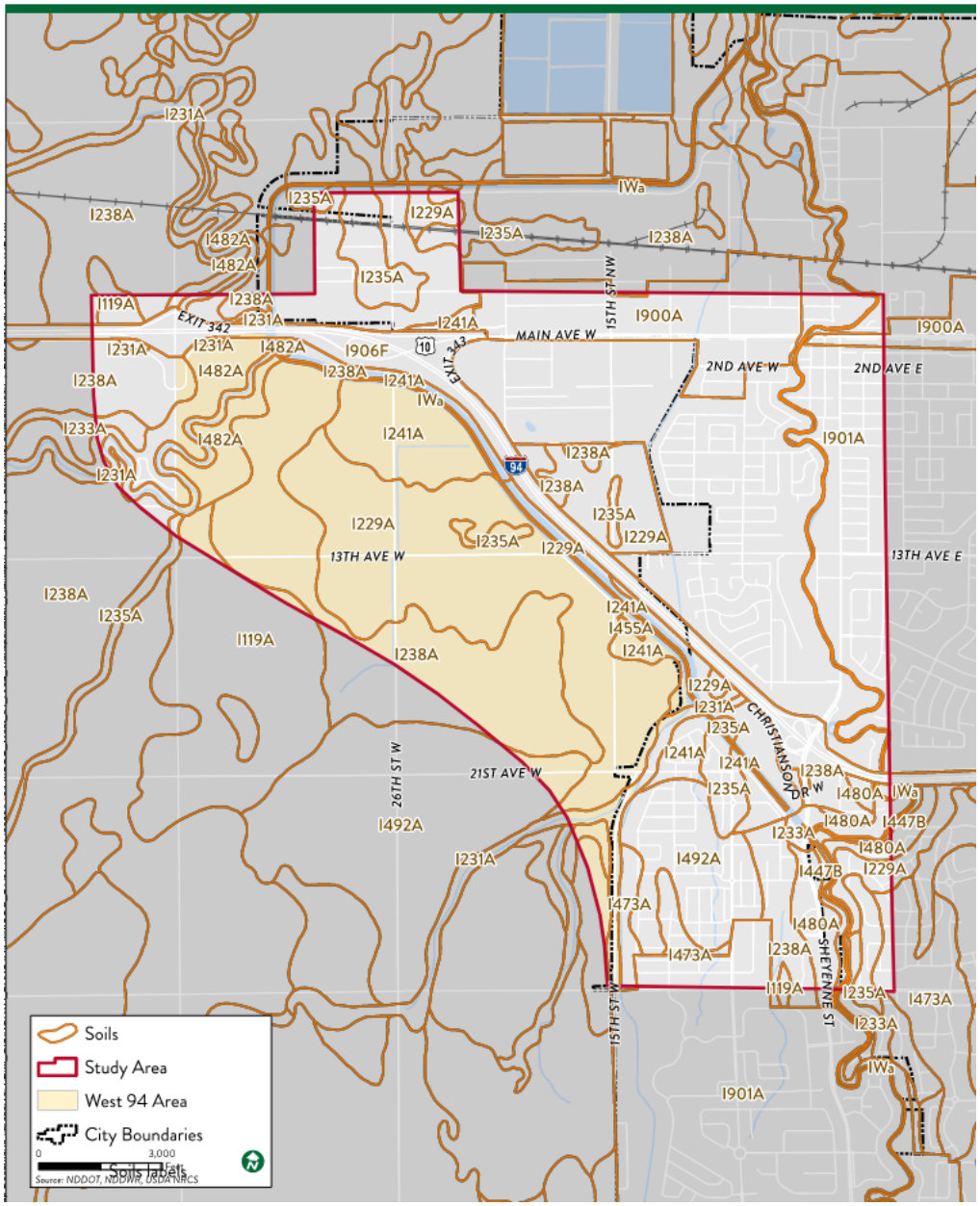

Figure 1.9 – Farmland and Soil Map

Habitat and Wildlife Resources - Threatened and Endangered Species

There are no designated wildlife management areas within West Fargo (Figure 1.10). Future development should be located and designed to minimize its impact on wildlife and habitat. Wetland and Riparian communities are especially significant because they have the highest density and diversity of wildlife species. The U.S. Fish and Wildlife Service primarily oversees threatened and endangered species. North Dakota has twelve species listed as threatened (likely to become endangered soon) or endangered (in danger of extinction now) under the Endangered Species Act.

Black Footed Ferret – Endangered

Dakota Skipper - Threatened

Gray Wolf - Endangered

Northern Long-Eared Bat - Endangered

Pallid Sturgeon - Endangered

Piping Plover -Threatened

Poweshiek Skipperling - Endangered

Red Knot - Threatened

Rusty Patch Bumble Bee -Endangered

Western Prairie Fringed Orchid -Threatened

Whooping Crane – Endangered Least Tern - Recently Delisted

Monarch Butterfly - Candidate Species

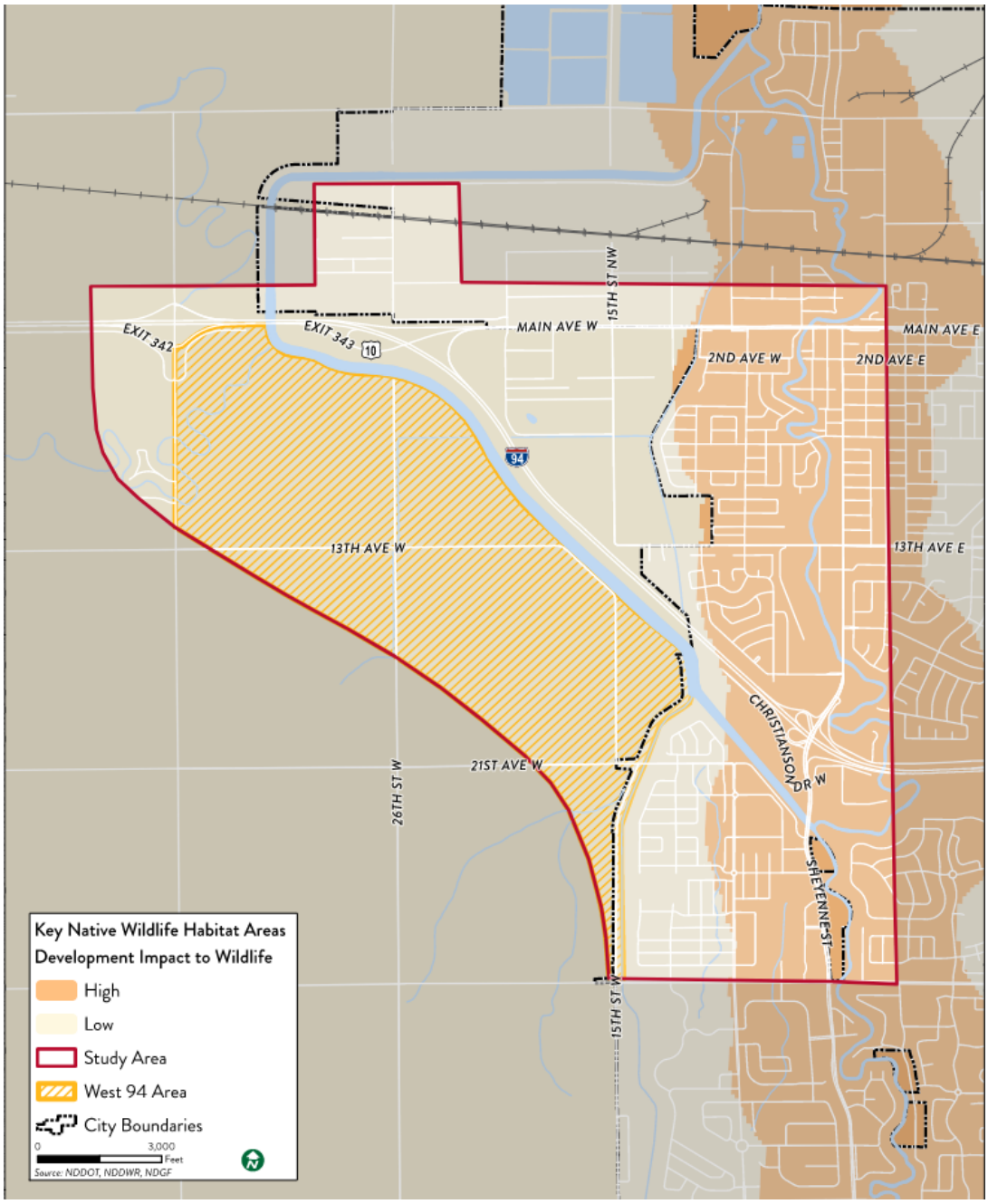

Figure 1.10 - Biotic Resources Map

Parks, Trails, Open Spaces, Wildlife and Waterfowl Refuges, and Section 4(f) & Section 6(f)

West Fargo is home to approximately 400 acres of parks owned and operated by the West Fargo Park District. This translates to 12.88 acres per thousand residents, which is well above the national standard for cities with a similar population. This would include a detailed park needs assessment, identifying parks based on their type, and providing the park district and West Fargo Park Board with an in-depth analysis of the community's needs for possible changes to parking amenities or the creation of future parks—a sample of some parks and amenities are described below (Figure 1.11).

Name	Owner/System	Description/Amenities	Address
Shadow Wood Splash pad	West Fargo Park District	Neighborhood park with splash pad, basketball courts and fitness equipment.	3545 4th St E, West Fargo
Maplewood Park	West Fargo Park District	Neighborhood park with hiking and biking paths, a playground and picnic shelters.	1504 17th Ave E, West Fargo
River's Bend	West Fargo Park District	Neighborhood park with sledding hills and playground.	2548 1st St E, West Fargo
Elmwood South	West Fargo Park District	Neighborhood Park with batting cages, playground and hiking and biking paths.	535 13th Ave W, West Fargo
Arbor Woods	West Fargo Park District	Neighborhood park with hiking and biking paths and a playground.	1554 Baywood Ave, West Fargo
Northridge Way	West Fargo Park District	Neighborhood park with hiking and biking path.	725 18th Ave E, West Fargo
Brooks Harbor School	West Fargo Park District	Neighborhood park with playground.	801 22nd Ave W, West Fargo

Figure 1.11 – Sample of Parks and Amenities Close to Project Area

Section 6(f) resources to be determined during the environmental process.

Vegetation

Much of West Fargo's extra-territorial jurisdiction is still designated for agrarian preservation or urban reserve, ensuring the protection of the land's rural character while also making provisions for future development. The city has shown a sustained dedication to environmental stewardship. For over three decades, it has earned the Tree City designation, and the West Fargo Forestry Department actively fosters a safe and vibrant urban forest, improving both the city's aesthetic and its environmental quality. Part of the land within this jurisdiction will participate in the FM Area Diversion Project. West Fargo features significant agricultural areas, predominantly located on the western side of the extraterritorial jurisdiction, categorized as an agrarian preservation/urban reserve to maintain the land's character and prepare it for future growth (Figure 1.12).

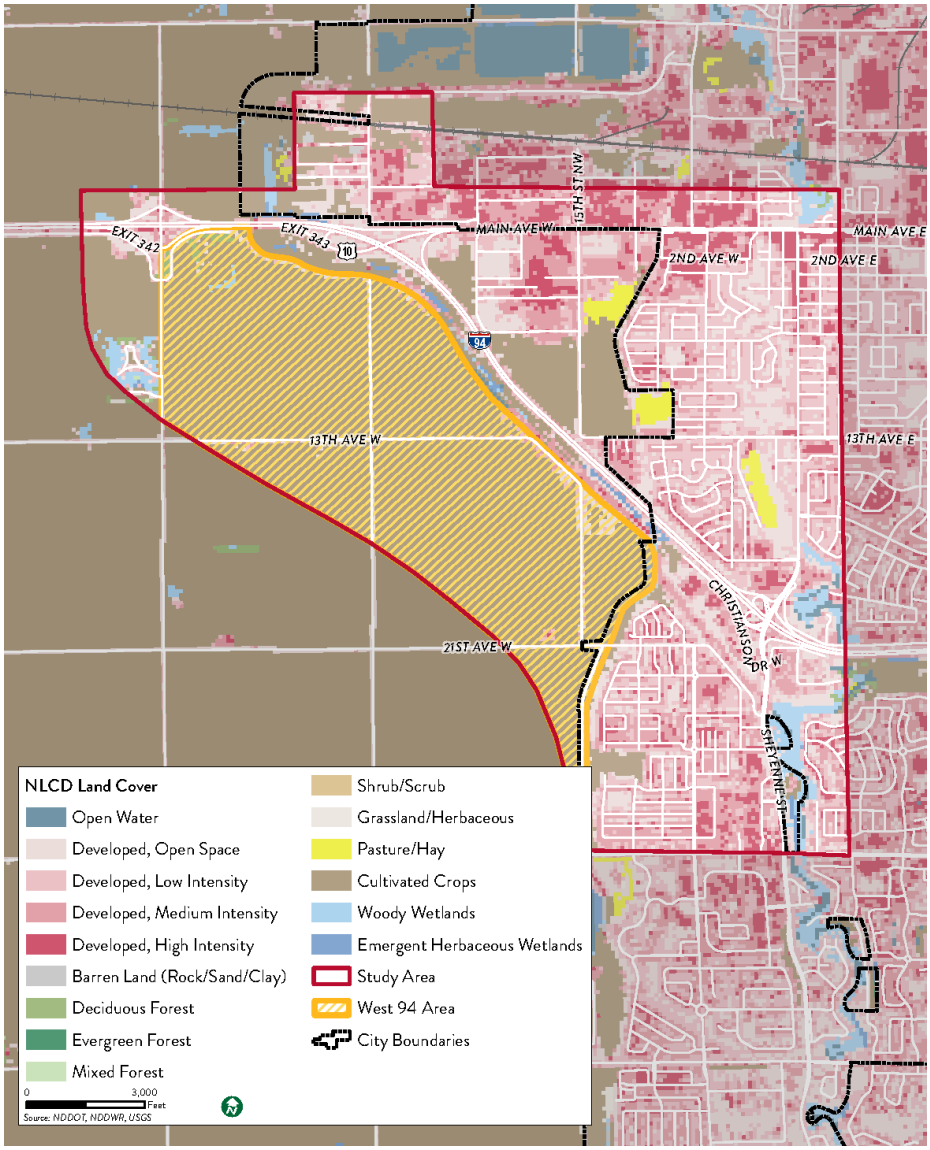

Figure 1.12 – Vegetation and Land Cover

Floodplains

Cass County's comprehensive plan identified one of its goals as "To use and preserve natural resources in an environmentally sound manner." Objectives contained within this goal focus on protecting ground and surface water resources, natural vegetation along rivers, and wetlands. Policies identified for achieving these objectives are broad, but they provide a framework and basis for implementing additional rules and regulations as needed.

Within the study area, both regulated floodways and 100-year floodplains are present. Executive Order 11988, Floodplain Management, outlines measures to reduce the floodplain risk, requires agencies to identify whether a project would cause an encroachment into a floodplain, and directs agencies to evaluate alternatives to such an encroachment and analyze potential floodplain impacts. The Red River bisects the Study Area and has a history of frequent flooding. If any roadway enhancements intrude upon the 100-year floodplain (Figure 1.13) or regulated floodway, coordination will be necessary to obtain the relevant local floodplain permits.

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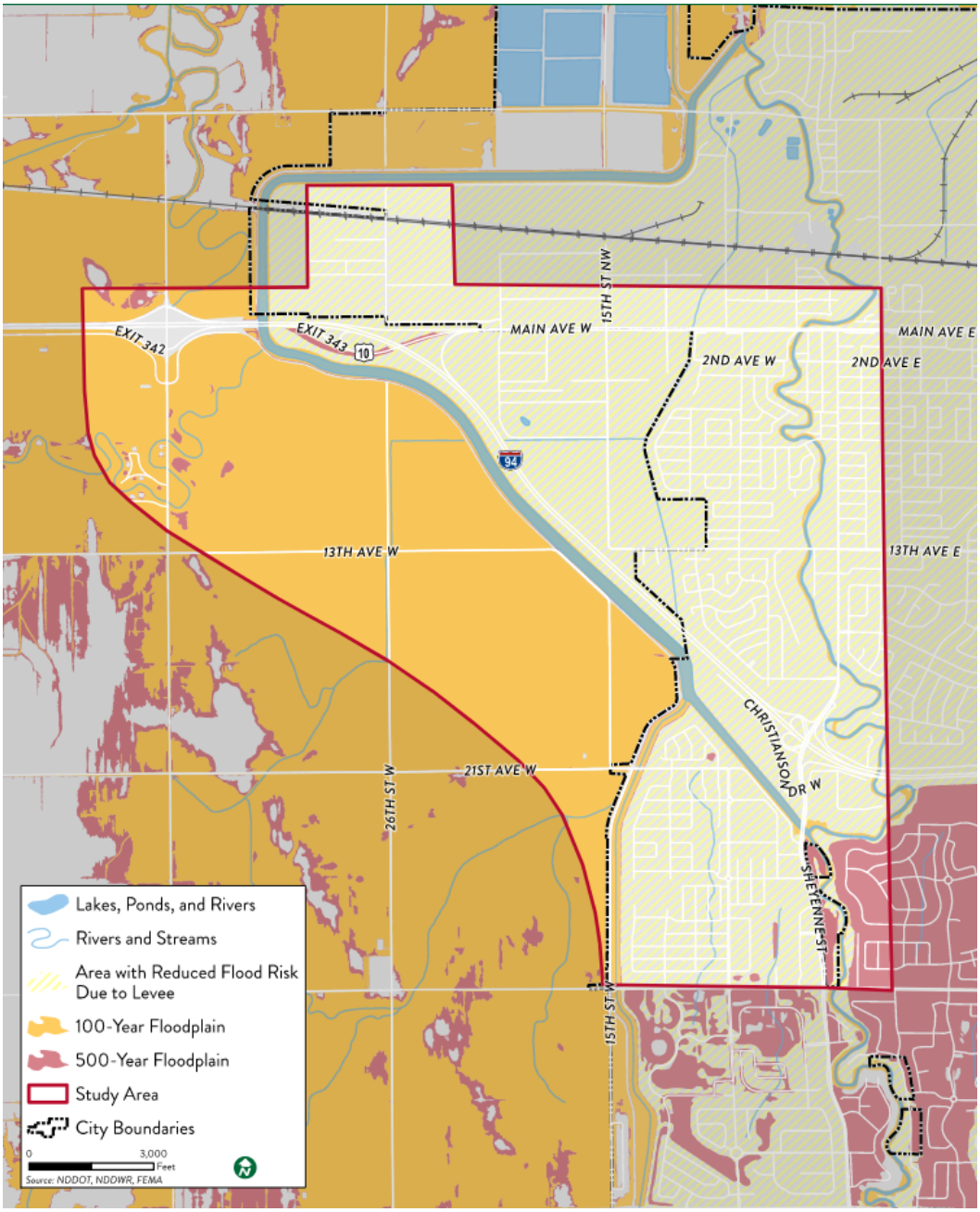

Figure 1.13 – Study Area Floodplains

CHAPTER 2 – FUTURE CONDITIONS ASSESSMENT

Land use conceptual planning

A core principle of effective transportation planning is recognizing that land use analysis is essential for generating accurate traffic forecasts and understanding future transportation needs. Developing plausible future land use scenarios for the West 94 Area was crucial. Existing conditions inform these scenarios, public and stakeholder preferences for balanced mixed-use development, and guidance from the City of West Fargo. The scenarios reflect the City's goal to increase commercial land use for a better fiscal balance against the current residential dominance and to maximize development densities where suitable, given the limited availability of growth land. While these scenarios inform transportation analysis, the City of West Fargo is also developing a Growth Area Master Plan to refine the a detailed land use vision in the future.

The planning team established development benchmarks by analyzing mixed-use areas in Fargo and West Fargo, categorizing them into place types (Centers, Districts, Neighborhoods) and deriving typical Floor Area Ratios (FAR) for non-residential uses and housing units per acre (density) for residential uses across low, medium, and high intensities. This data and input from the Study Review Committee (SRC) aided in creating two distinct development scenarios (A & B), distributed spatially across the study area using a hexagon analysis grid.

Scenario analysis assumed the following land use templates:

- **C1 – Regional/Auto-Oriented Center**
  - 75% commercial/25% residential
  - Commercial FAR = 0.25
  - Residential uses are apartments (15 units/acre)
- **C2 – Community Center**
  - 50% commercial/50% residential
  - Commercial FAR = 0.6
  - Residential uses are apartments (10 units per acre)
- **C3 – Neighborhood Center**
  - 25% commercial/75% residential
  - Commercial FAR = 0.35
  - Residential uses are a mix of apartments, twin homes, and single-family units (6 units per acre)
- **N1 – High Density Residential**
  - 15 units per acre, all apartments
- **N2 – Medium Density Residential**
  - 10 units per acre, mix of apartments and twin homes
- **N3 – Low Density Residential**
  - 6 units per acre, mix of twin homes and single family residential

Scenario Descriptions and Conceptual Phasing

Two primary scenarios were developed to explore different potential development patterns and major access priorities, evaluated at 25%, 50%, and 100% build-out levels:

- **Scenario A (26th Street Gateway Focus):** This scenario concentrates higher-density commercial uses near a prioritized, full-access interchange at Main Avenue and 26th Street, with this connection also serving the northwest growth area. Development along 15th Street tends toward more residential and lower-intensity mixed-use, assuming a second interchange near 13th and 15th.
- **Scenario B (15th Street/13th Avenue Gateway Focus):** This scenario concentrates higher-density, non-residential uses along both the 15th Street/13th Avenue and 26th Street corridors, assuming the primary interchange and connection to the northwest growth area occurs near 15th Street/13th Avenue, with secondary access via a revised Main Ave/26th Street interchange.

Estimated demographic growth in each scenario (Figure 2.1).

Phase	Housing Units	Jobs	Potential Property Tax Per Year
Scenario A - 25%	2,236	1,139	$9,996,231
Scenario A - 50%	5,562	4,250	$30,017,813
Scenario A - 100%	12,083	4,250	$48,064,865
Scenario B - 25%	2,263	2,251	$13,568,118
Scenario B - 50%	6,338	4,501	$30,663,508
Scenario B - 100%	11,958	5,360	$51,866,058

Figure 2.1 – Estimated Demographic Growth by Scenario

Development is assumed to occur in phases, triggered by the availability of enabling infrastructure, such as sanitary sewer systems, and the completion of the FM Area Diversion Project. Based on regional growth trends and SRC input, a 50% build-out level is estimated for the 2050 planning horizon, with 100% build-out anticipated to occur by 2060 or later.

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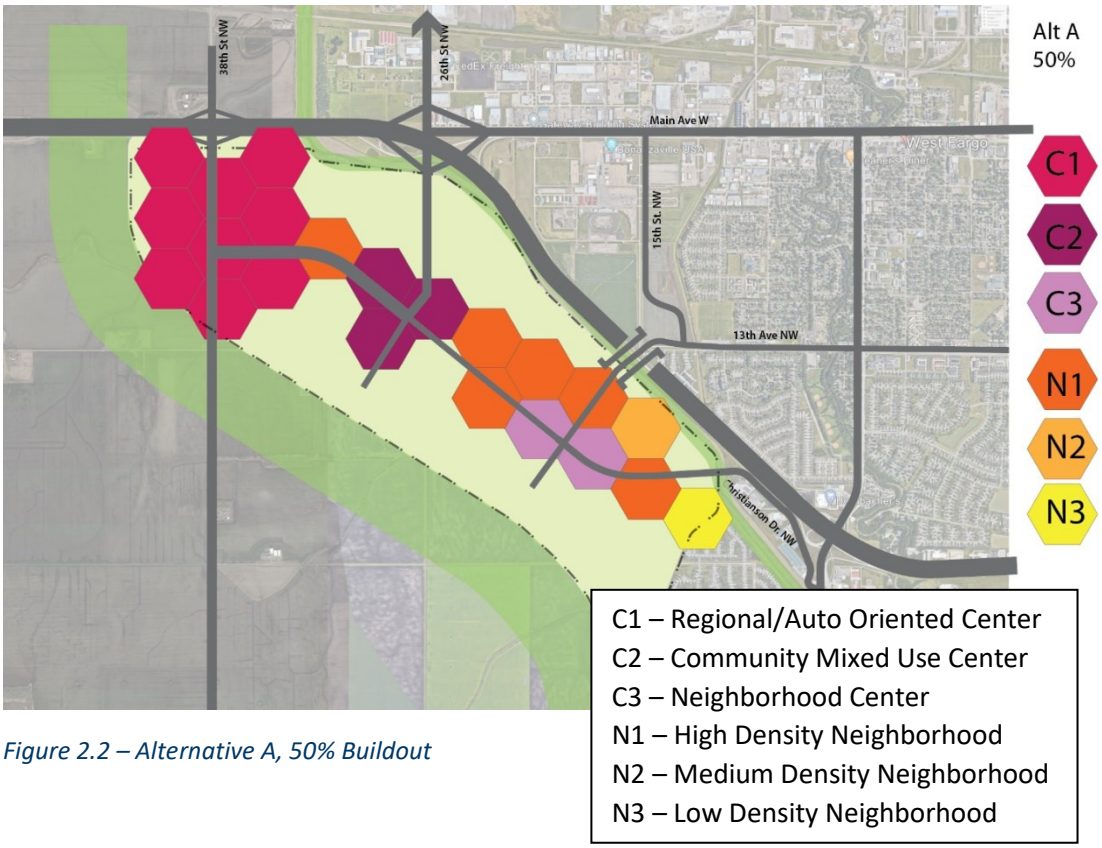

Figure 2.2 – Alternative A, 50% Buildout

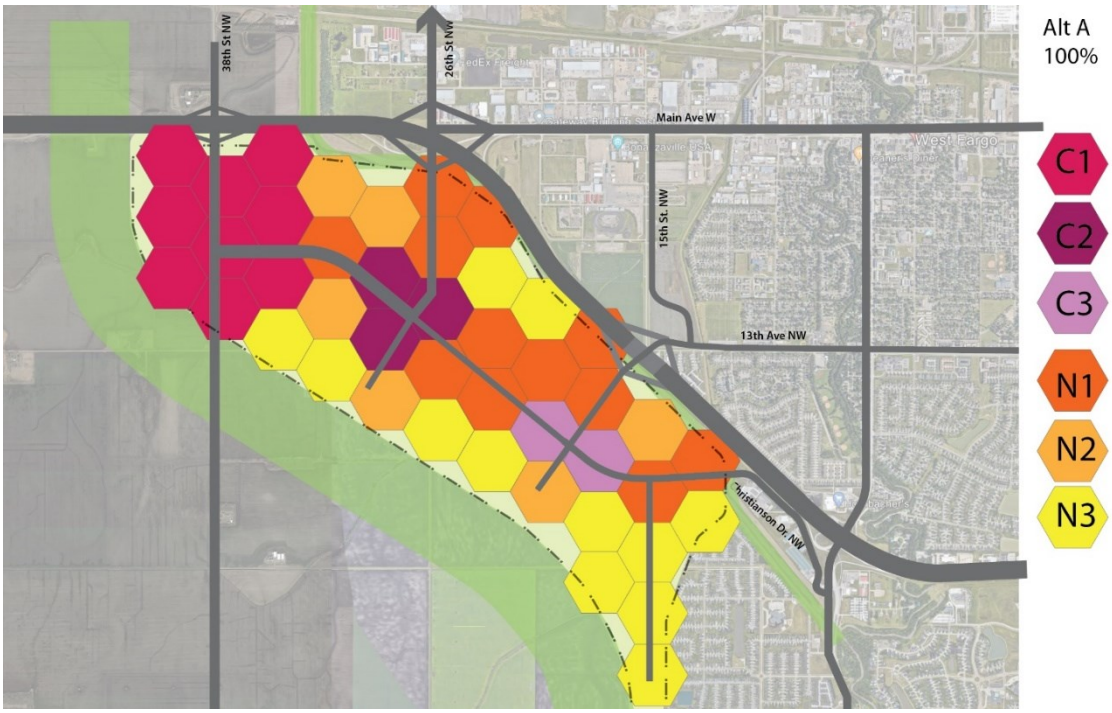

Figure 2.3 – Alternative A, 100% Buildout

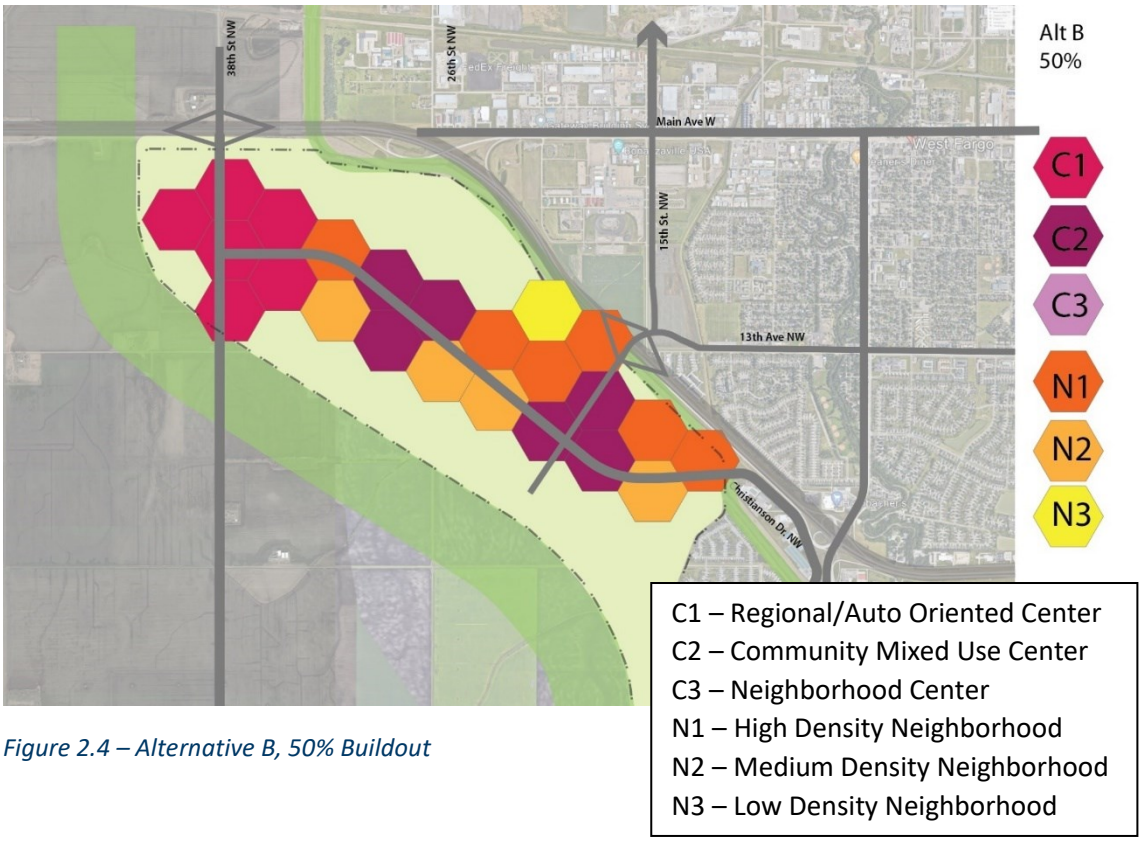

Figure 2.4 – Alternative B, 50% Buildout

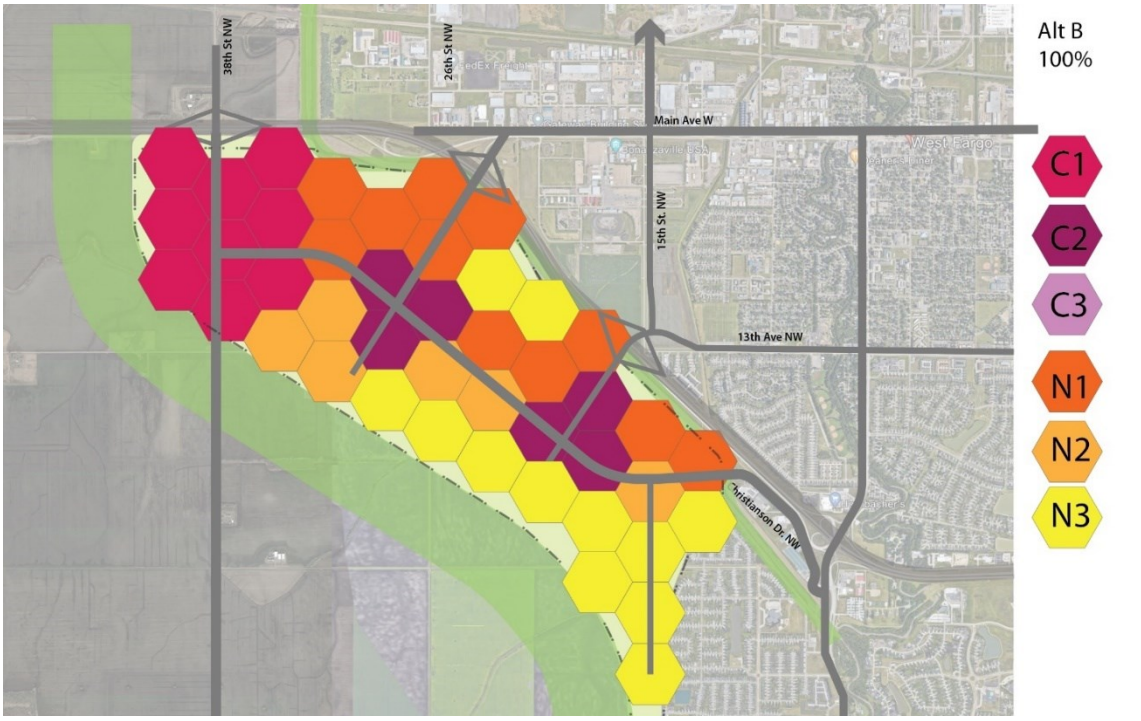

Figure 2.5 – Alternative B, 100% Buildout

Transect Design Approach

A transect design palette (Figure 2.6) offers a flexible framework for guiding development intensity across the West 94 Area, ranging from more suburban edges to denser urban cores. Consistent with smart growth principles, this approach provides clear expectations while allowing developers flexibility, potentially streamlining approvals if integrated into future City design standards. It supports the creation of integrated neighborhoods with a distinct sense of place and promotes efficient land use.

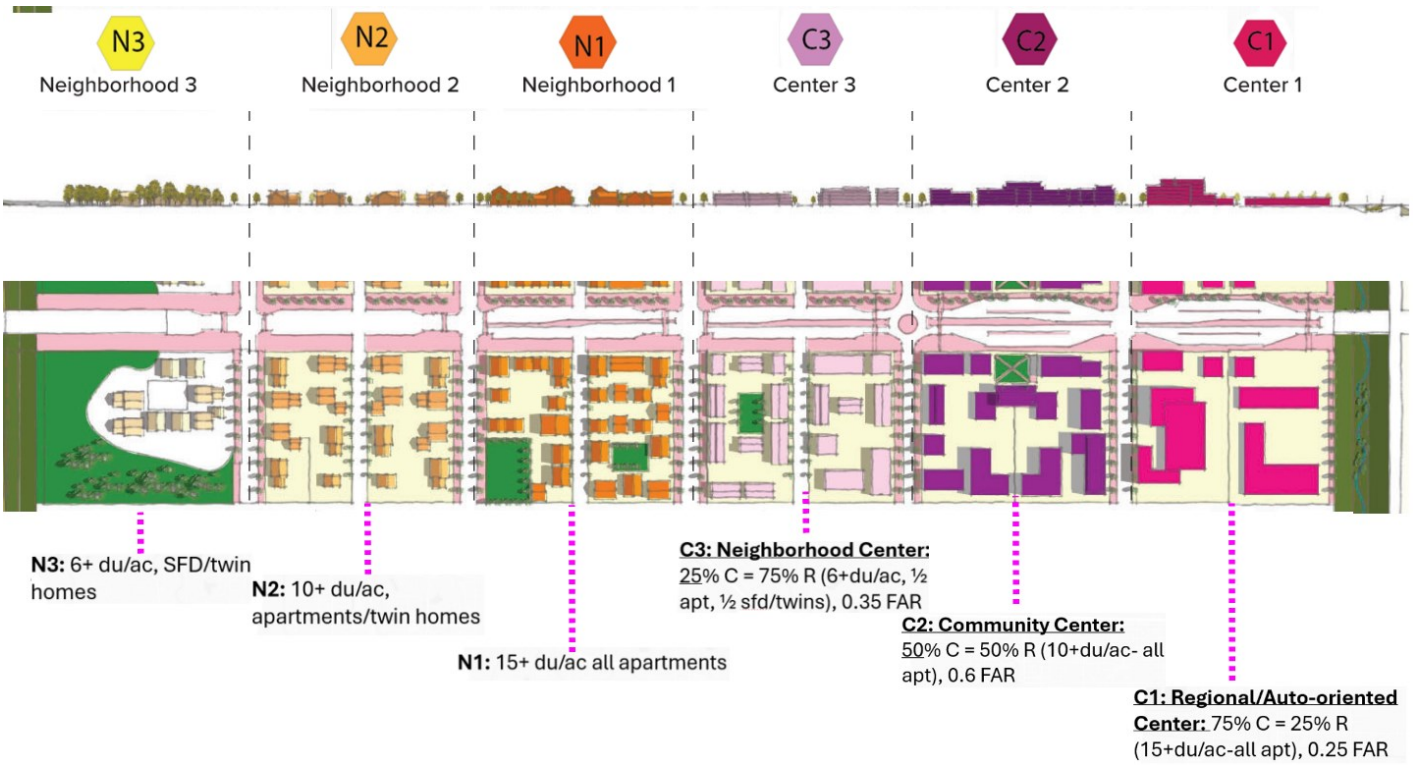

Figure 2.6 - Transect Design

Traffic Forecasting

Understanding the potential future land use patterns, as detailed in Section 2.1, is the first step; the next critical step is quantifying the transportation demand these patterns generate. This traffic forecasting effort translates the potential household and employment growth within the West 94 Area scenarios into estimated traffic volumes on the surrounding transportation network. This analysis addresses the directive to use land scenarios to understand future transportation needs, enabling the evaluation of access configurations and network requirements.

Fargo-Moorhead Travel Demand Model Overview

This study utilized the Fargo-Moorhead regional travel demand model (TDM) to estimate future traffic volumes. Maintained and updated by Metro COG, most recently in 2024 to support the development of the Metro 2050 Metropolitan Transportation Plan, this computer model estimates travel patterns based

on the distribution of socioeconomic data (primarily households and jobs) across defined Traffic Analysis Zones (TAZs). The model projects trip generation, distribution, mode choice (though mainly focused on vehicle trips in this application), and route assignment, resulting in projected traffic volumes on the region's functionally classified roadway network (collectors, arterials, interstates).

Growth Assumptions for Traffic Forecasting

The traffic forecasts incorporate the region-wide 2050 household and employment growth projections established for the Metro 2050 Metropolitan Transportation Plan (MTP). Within the West I-94 study area TAZs, these regional projections were refined to reflect the specific household and job numbers associated with the 50% build-out level (estimated to occur around 2050) and 100% build-out level (estimated to be 2060 or later) of Land Use Scenarios A and B (detailed in Section 2.1). Consistent with regional planning, the forecasts also assume significant development will occur in the Northwest Growth Area (north of Main Avenue, west of I-29) by 2050, adding approximately 26,400 jobs and 5,300 households. This growth is expected to significantly influence traffic demands on I-94 and connecting arterials (Figure 2.7).

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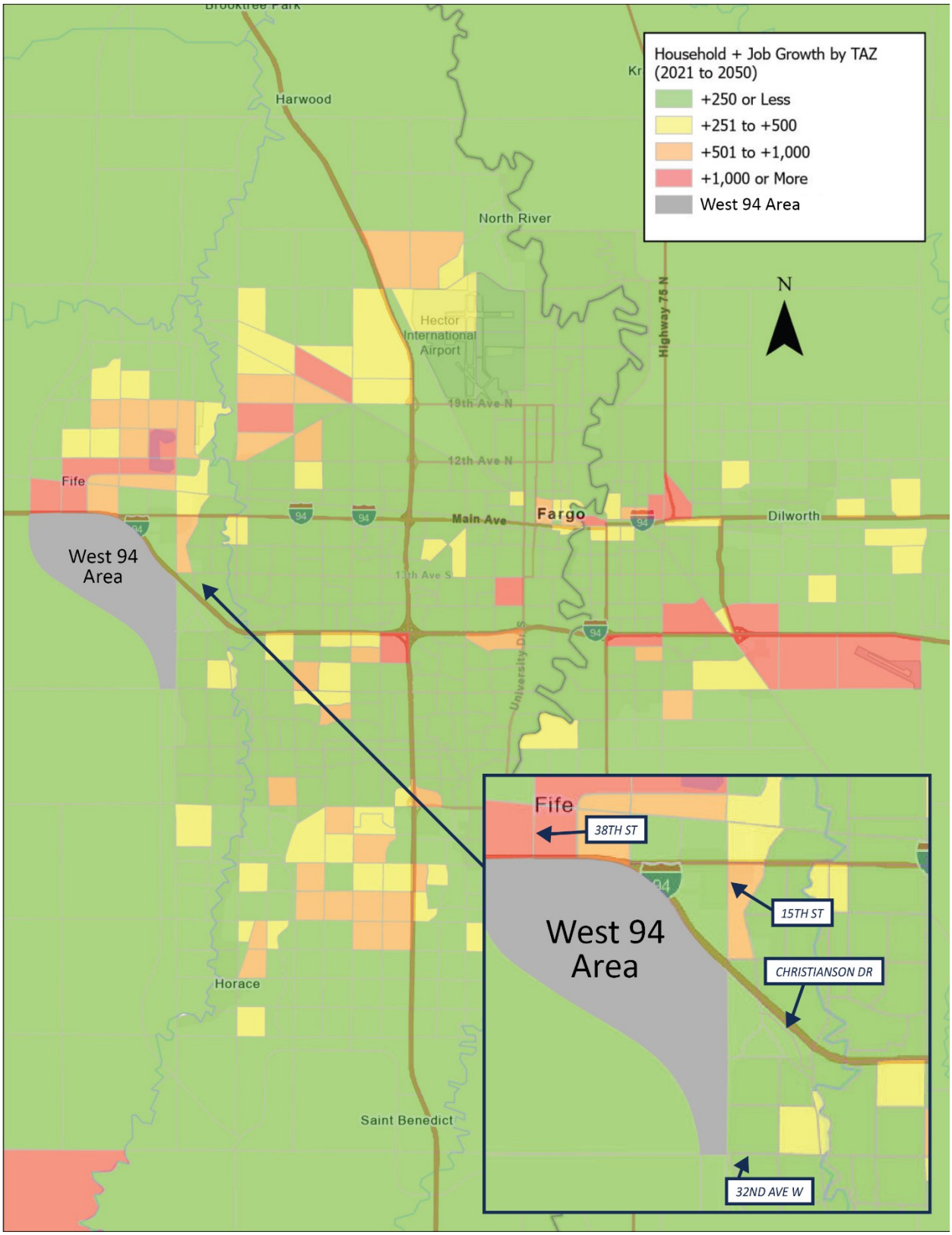

Figure 2.7 – Estimated Change in Households and Employment: 2021 - 2050

To accurately reflect the potential future transportation system serving the West 94 Area, the baseline 2050 TDM roadway network (which assumes minimal infrastructure within the currently undeveloped area) was modified. These modifications, vetted with the Study Review Committee, include adding potential new arterial and collector roadways within the study area and testing different I-94 access configurations. Figure 2.8 illustrates key network assumptions applied across the evaluated scenarios, including:

- A primary east-west "Spine Roadway": This new arterial road is envisioned as the central organizing element of the internal West 94 network, running roughly parallel to I-94 through the development area. Its purpose is to collect and distribute traffic efficiently between the significant north-south connections and the internal neighborhood and district roads. Functioning as the backbone, the design and capacity of this spine roadway are critical for internal circulation and ensuring smooth connections to the broader regional network under future developed conditions.
    - Extension of 15th Street West south to at least 32nd Avenue West.
    - Extension of Christianson Drive into the study area, connecting to the Spine Roadway.
    - Assumed Fargo-Moorhead Area Diversion crossings for 38th Street West and 32nd Avenue West.
    - The primary difference between the main traffic modeling scenarios lies in the configuration of access to I-94, directly impacting how traffic enters and exits the area via the Spine Roadway and other collectors.

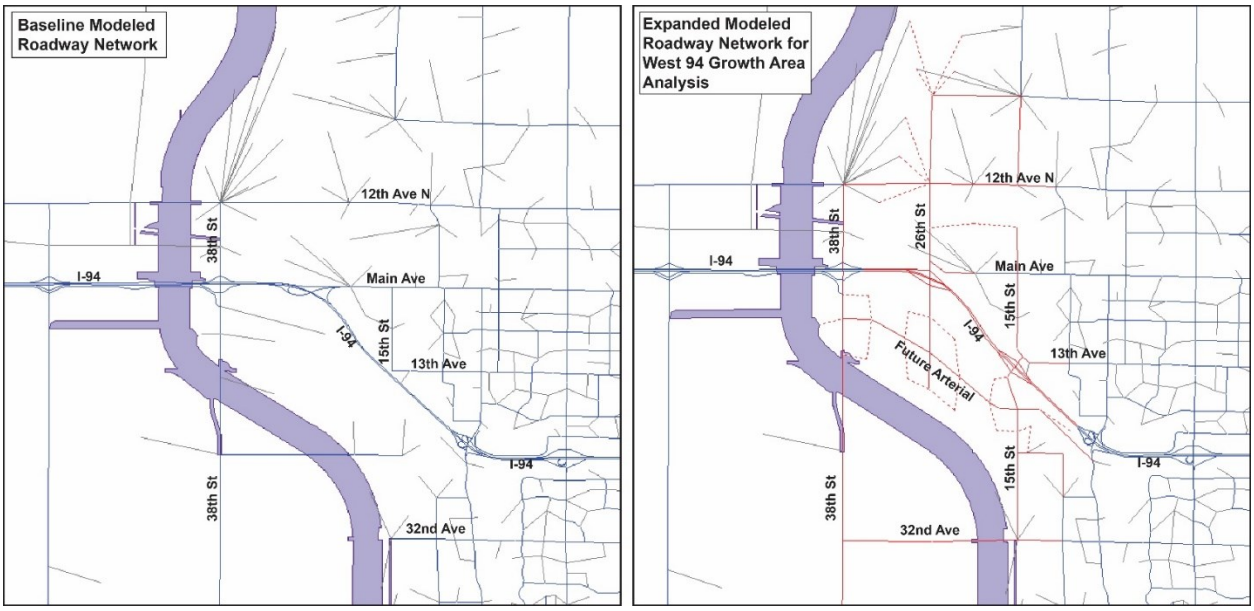

Figure 2.8 – Revisions to Modeled Roadway Network

Overview of Forecasted Volumes

Using the methodology and assumptions outlined in Section 2.2, the Fargo-Moorhead travel demand model was used to estimate future daily traffic volumes for each of the four primary growth scenarios (Scenarios A and B at 50% and 100% build-out). These forecasts provide a quantitative basis for understanding the scale of transportation demand the network must accommodate and identify potential infrastructure requirements.

The detailed daily traffic forecasts for each scenario are illustrated in the figures that follow. These maps depict projected average daily traffic (ADT) volumes on key roadway segments within and surrounding the West 94 study area, with color-coded lines indicating the general roadway cross-section likely needed to accommodate the projected volumes (e.g., 2-lane, 4-lane, etc.).

- Figure 2.9: Daily Traffic Forecasts - Scenario A 50% Build-Out (around 2050 Horizon)
- Figure 2.10: Daily Traffic Forecasts - Scenario A 100% Build-Out (post-2050 Horizon)
- Figure 2.11: Daily Traffic Forecasts - Scenario B 50% Build-Out (around 2050 Horizon)
- Figure 2.12: Daily Traffic Forecasts - Scenario B 100% Build-Out (post-2050 Horizon)

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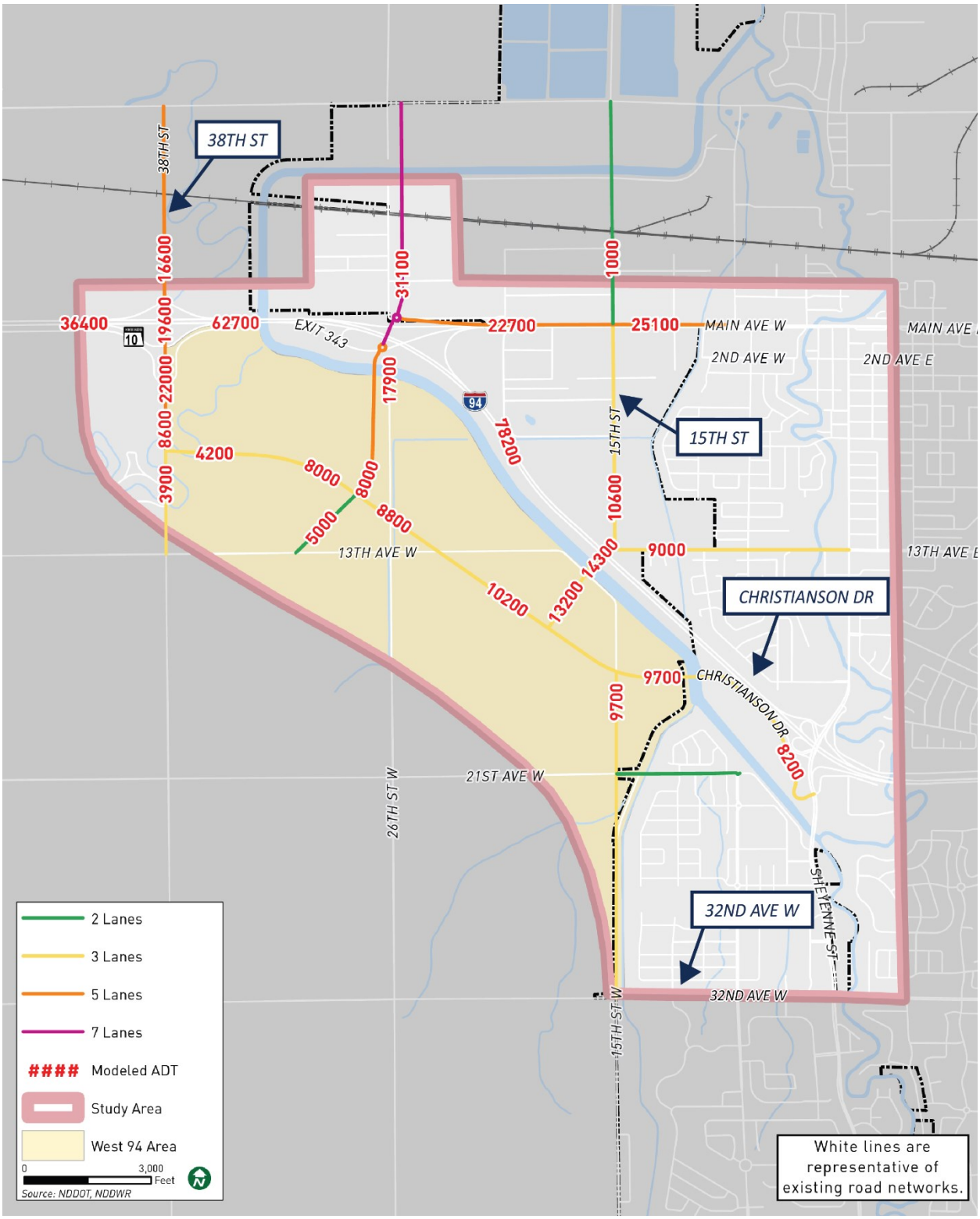

Figure 2.9 – Daily Traffic Forecasts: Scenario A 50% Buildout

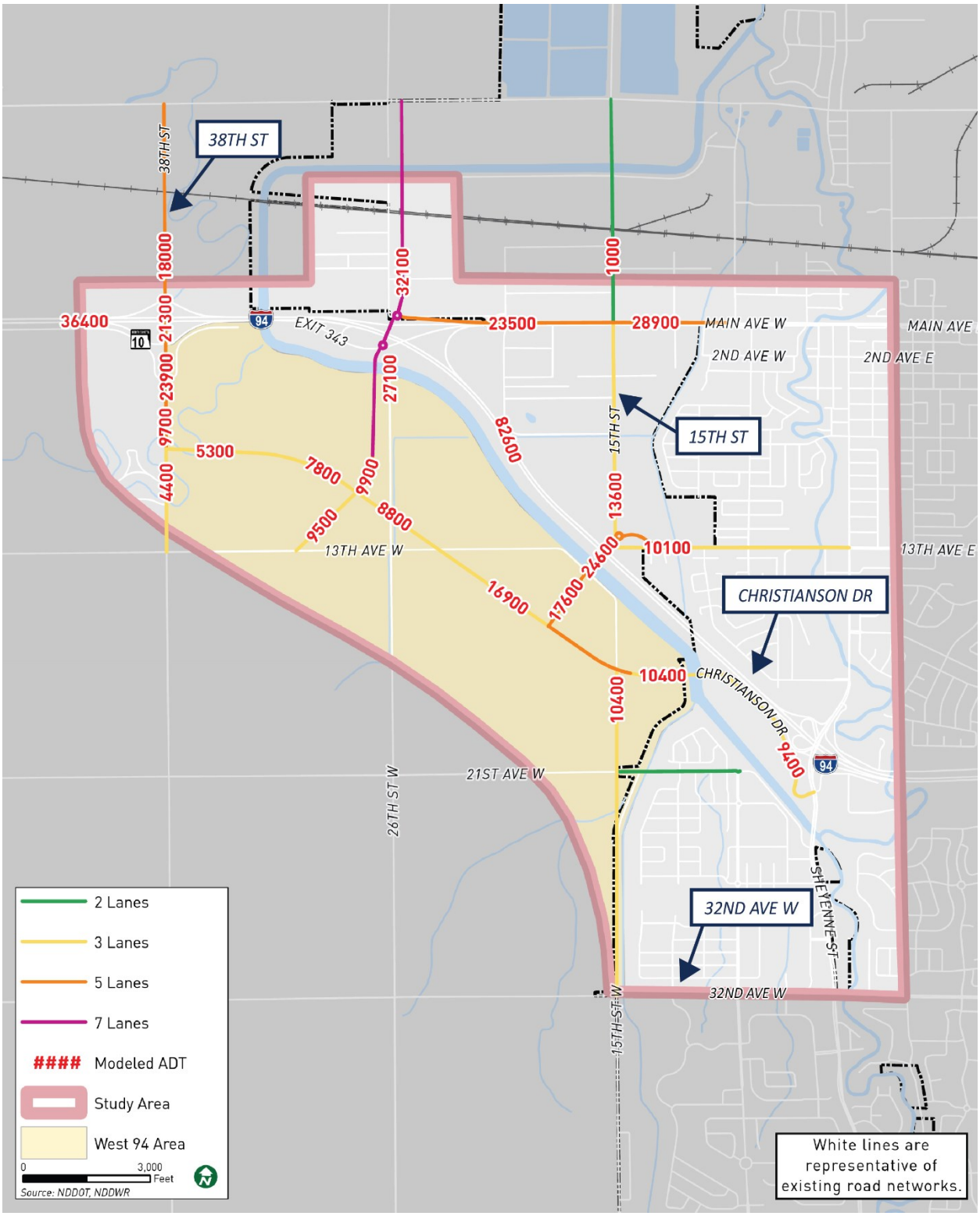

Figure 2.10 – Daily Traffic Forecasts: Scenario A 100% Buildout

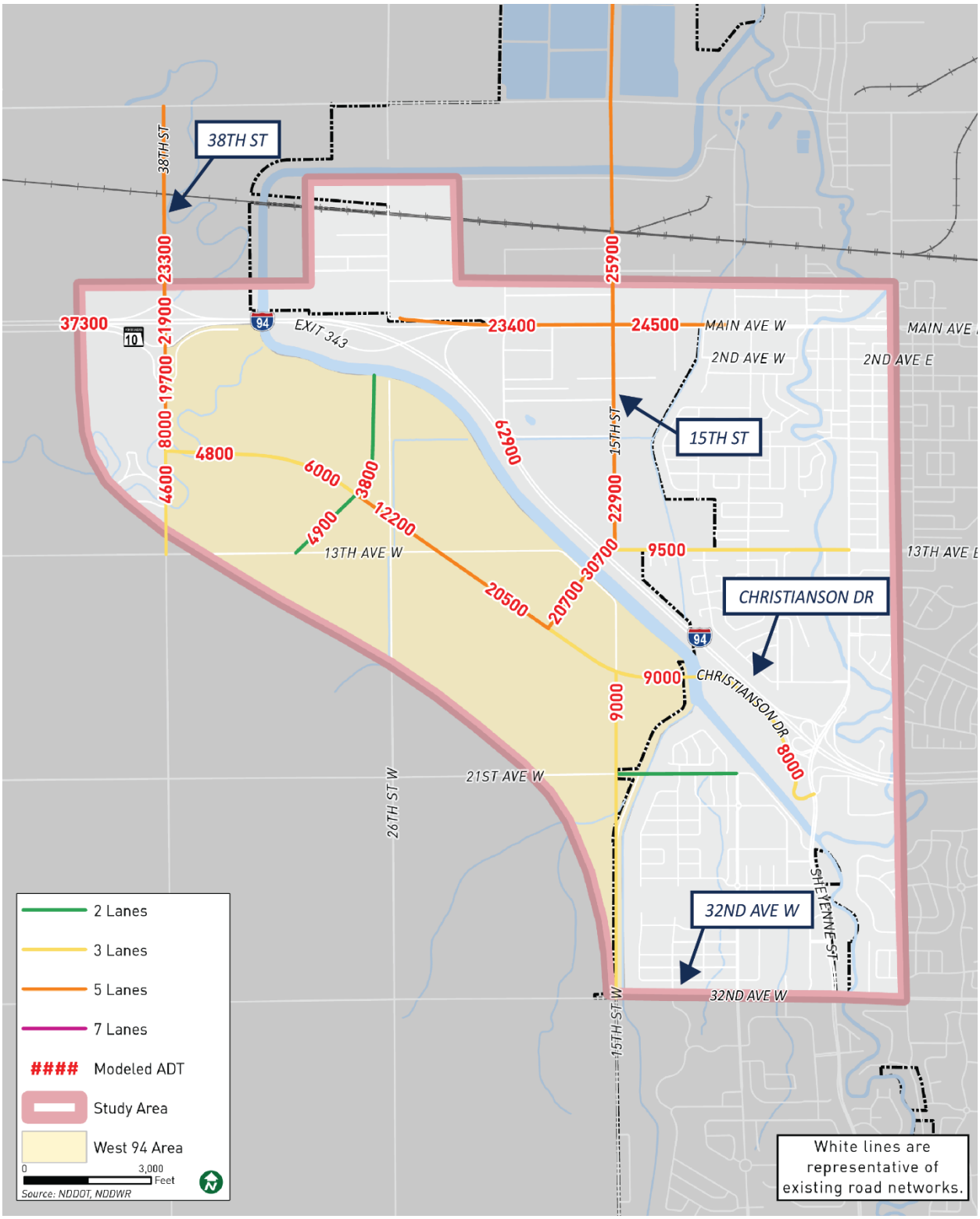

Figure 2.11 – Daily Traffic Forecasts: Scenario B 50% Buildout

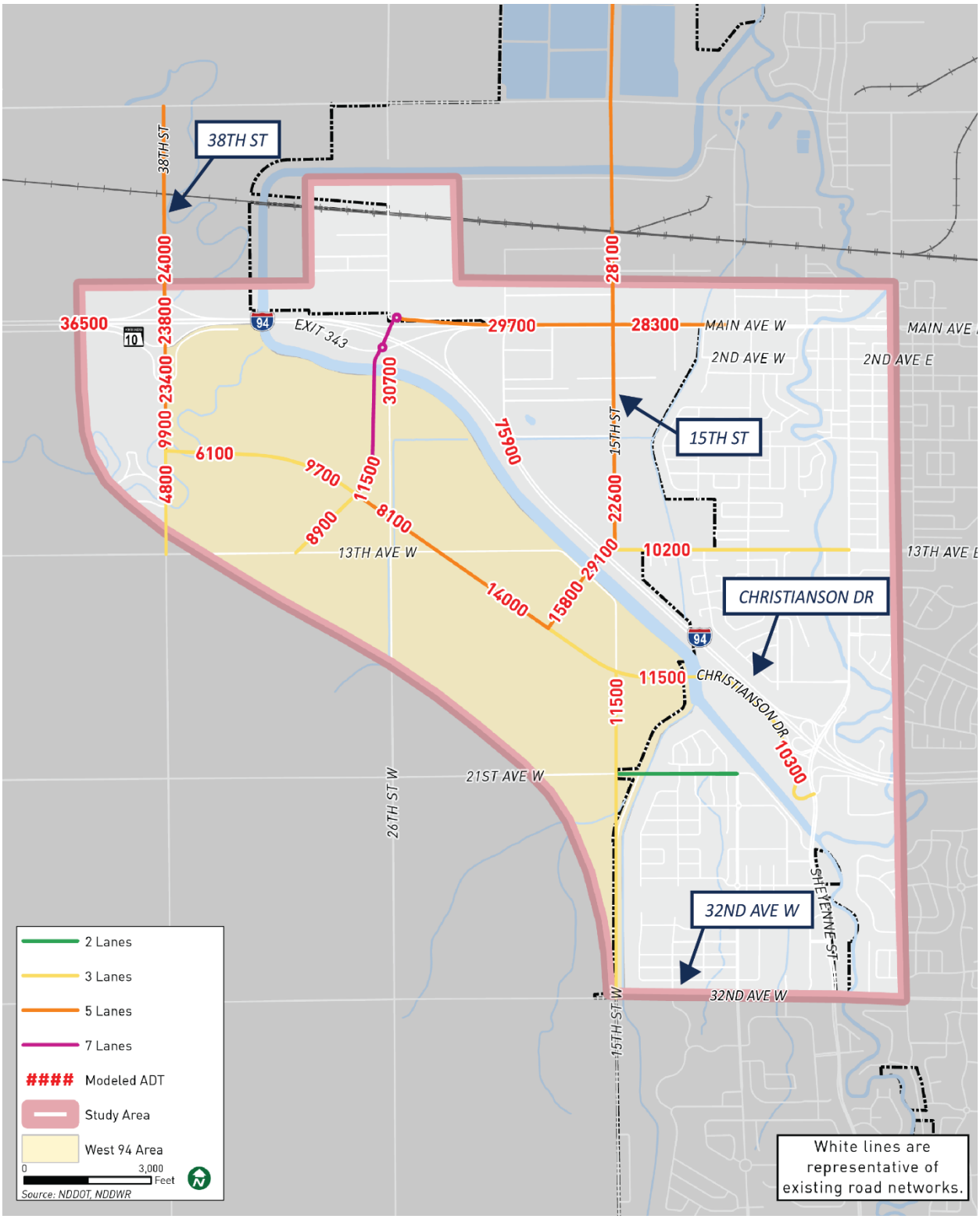

Figure 2.12 – Daily Traffic Forecasts: Scenario B 100% Buildout

Analysis Takeaways: Comparing Scenario Outcomes

Comparing the traffic forecasts across the different scenarios reveals key insights into how access configurations and development patterns influence travel demand and network loading:

- **Impact of I-94 Access**
    - In Scenario A and Scenario B, interchanges at 15th Street/13th Avenue and 26th Street/Main Avenue are both expected to carry significant traffic volumes in the future, with volumes resembling those seen at urban interchanges like Sheyenne Street, Veterans Boulevard, and 45th Street today.
    - Prioritizing the 15th Street/13th Avenue connection (Scenario B) results in more evenly distributed traffic volumes across the various I-94 access points than prioritizing the 26th Street connection (Scenario A), which tends to concentrate more traffic at that specific interchange.
    - Providing only an overpass at 15th Street/13th Avenue (as assumed in the 50% build-out Scenario A) attracts significant traffic (around 15,000 vehicles per day), highlighting the inherent demand for an additional I-94 crossing. However, as the area approaches full build-out, the need for multiple interchanges becomes more evident, with both the 13th Avenue/15th Street and 26th Street/Main Avenue interchange locations carrying volumes that exceed those of most interchanges across the region today. Meaning, that despite the interim value of the overpass, the ultimate needs indicate two interchanges are necessary to avoid inundating the other access roads and interchanges in this area.
    - Traffic volumes on the I-94 mainline are expected to be very similar in each scenario. New or revised access to I-94 is unlikely to change the amount of traffic using I-94. However, new access can better distribute traffic across interchanges
- **Impact on Surface Streets:**
    - North of I-94: Traffic volumes on collectors and arterials north of I-94 (such as 26th St and 15th St) are heavily influenced by the assumed development in the Northwest Growth Area and the specific I-94 access configuration that provides connectivity to it. Scenario A shows a higher concentration on 26th St, while Scenario B shows a more balanced distribution.
    - South of I-94 (Within West 94 Area): At full build-out (100%), both Scenarios A and B show relatively balanced use of the primary north-south arterials (15th St, 26th St, 38th St) for accessing the growth area. In the interim 50% build-out condition for Scenario A, the presence of the 13th Avenue/15th Street overpass helps draw some traffic away from the heavily used 26th Street interchange access.

These forecast results indicate the substantial traffic volumes associated with the planned growth and underscore the critical role that new I-94 access points could play in managing this demand effectively.

Purpose: Testing Key Assumptions and Understanding Trade-offs

The traffic forecasts rely on assumptions about future land use densities and new transportation infrastructure, particularly access to Interstate 94. Due to the long-term planning horizon and uncertainties, a sensitivity analysis was conducted to explore how outcomes might shift with varying assumptions. This analysis reveals critical infrastructure needs, potential impacts on nearby areas with limited access, and trade-offs between development density, infrastructure cost, and fiscal sustainability.

Roadway Network Sensitivity Analysis: The Critical Role of I-94 Access

Recognizing the substantial cost and complexity of providing new access across I-94 and the Sheyenne Diversion, this sensitivity analysis examined how traffic patterns would change if fewer access points were provided compared to the baseline Scenario A (100% build-out, assuming full interchanges at both 26th Street and 13th Avenue/15th Street).

- **Scenario 1 (Interchange at 26th St + Overpass at 13th/15th)**: Removing the interchange ramps at 13th/15th (leaving only an overpass) shifts around 4,000 additional vehicles per day to the 26th Street/Main Avenue interchange. The 26th Street/Main Avenue interchange is expected to handle very high traffic volumes (around 30,000 ADT north and south of I-94, similar to Veterans Boulevard and 45th Street today). Even with a full-access 13th/15th interchange provided, any additional traffic at the 26th Street/Main Avenue interchange would increase traffic stress at this location. This scenario also leads to a shift of some traffic to other access points, such as Christianson Drive and 15th Street South, resulting in an increase of around 3,000 more ADT on each roadway.

- **Scenario 2 (No Main Ave Changes + Overpass at 13th/15th)**: Further limiting access by removing the 26th Street connection south of I-94 (while keeping the 13th/15th overpass) significantly increased traffic on Christianson Drive and 15th Street South (~17,000 ADT, a 60% increase over baseline), potentially requiring additional lane capacity on those routes. Traffic increased notably (+18%) at the 38th Street interchange and through the constrained Brooks Harbor neighborhood (+11%).

- **Scenario 3 (No New I-94 Access - "Do Nothing" regarding interchanges/overpasses)**: Eliminating all new I-94 access significantly overloaded the remaining connection points. Compared to the baseline with two interchanges, traffic increased dramatically on Christianson Drive (+108%), 15th Street South (+108%), the 38th Street interchange (+33%), the Sheyenne Street interchange (+22%), and critically, through the Brooks Harbor neighborhood (+46%). Such increases would likely require significant capacity additions on supporting routes and are considered unacceptable for adjacent communities.

This analysis highlights a key finding: providing at least one new, high-capacity access point (interchange) to I-94 is essential to support the anticipated development density without causing unacceptable congestion and adverse impacts on adjacent neighborhoods and existing interchanges. Providing two full-access, high-capacity access points would optimize traffic flow and access to the growth area, reducing the risk of traffic from the growth area spilling into the Brooks Harbor neighborhood.

Development Density Sensitivity Analysis: Balancing Costs and Benefits

This analysis explored the relationship between development density, transportation infrastructure costs, and potential municipal tax revenue, directly addressing the City's goals of maximizing densities for fiscal purposes. Reductions of 15% and 30% from the baseline Scenario A (100% build-out) density were tested under two network configurations (two full interchanges vs. one interchange + one overpass).

- **Findings**: Reducing development density yields modest savings in significant roadway construction costs (ranging from $3.5M to $23M less in required arterial/collector lane-miles, excluding interchange/overpass costs). However, these savings are significantly outweighed by the estimated reduction in annual property tax revenue ($7.2M to $14.4M per year). Over a typical 20- to 30-year infrastructure design life, the cumulative loss in tax revenue ($140M to $430 M+) far exceeds the upfront roadway cost savings (Figure 2.13).

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Density Sensitivity Scenario	Change in Centerline Mileage by Cross Section*				Change in Lane-Miles*	Change in Estimated Roadway Cost**	Estimated Change in Annual Tax Revenue
	2 Lane Roads	3 Lane Roads (TWLTL)	4 Lane Roads	6 Lane Roads			
Density Scenario 1A Full Interchanges at 26th St and at 13th Ave/15th St Development Density Reduced by 15%	+1.2 miles	-0.6 miles	-0.2 miles	-0.3 miles	-2.0 lane miles	-$10 million	-$7.2 million per year
Density Scenario 1B Full Interchanges at 26th St and at 13th Ave/15th St Development Density Reduced by 30%	+1.2 miles	+0.6 miles	-1.1 miles	-1 miles	-4.6 lane miles	-$23 million	-$14.4 million per year
Density Scenario 2A Full Interchange at 26th St and Overpass at 13th Ave/15th St Development Density Reduced by 15%	No change	+0.3 miles	-0.4 miles	No change	-0.7 lane miles	-$3.5 million	-$7.2 million per year
Density Scenario 2B Full Interchange at 26th St and Overpass at 13th Ave/15th St Development Density Reduced by 30%	+0.4 miles	+1.4 miles	-1.1 miles	-0.6 miles	-3.0 lane miles	-$15 million	-$14.4 million per year

*Change compared to 100% land buildout condition in Development Scenario A

**Does not include local roadway costs (i.e. only considers roads functionally classified as collector or above) or interchange/overpass costs

Figure 2.13 – Development Density Sensitivity Analysis Summary

Future Conditions: Implications for Transportation Network Planning

Assessing future conditions reveals insights that shape the West 94 Area's transportation network requirements. The land use concepts and scenarios, designed to achieve the City of West Fargo's balanced commercial mix and optimized density goals, generate substantial future travel demand. Traffic forecasts indicate that meeting this demand requires significant infrastructure investment, particularly for access across Interstate 94. Sensitivity analyses confirm that without new high-capacity interchange access, traffic would shift to adjacent networks, causing congestion and neighborhood impacts, while also highlighting essential fiscal trade-offs linked to different development densities.

These findings have a direct impact on transportation network planning, as discussed in Chapter 3. First, projected traffic volume necessitates a robust network with ample capacity, particularly at critical gateways like the proposed I-94 interchanges and key connections (e.g., Spine Roadway, 15th St, 38th St). Second, the Design must manage traffic to minimize adverse effects on sensitive areas, such as the Brooks Harbor neighborhood. Third, the analysis prioritizes network alternatives that support higher-density, mixed-use land scenarios and align transportation investments with the City's economic goals.

This assessment outlines the essential performance requirements and challenges associated with transportation network alternatives.

With this understanding of the anticipated future demands and their implications, the focus in Chapter 3 shifts to the detailed planning and evaluation of the physical transportation network, including roadway classifications, cross-sections, and infrastructure refinements, designed to meet these needs and support the vision for the West 94 Area.

This analysis emphasizes a vital trade-off. Increased densities require a larger initial investment in transportation infrastructure (reflected in the traffic forecasts). Yet, they align with the City's financial objectives by producing substantially more long-term tax revenue, which is crucial for sustaining services and maintaining future infrastructure. Additionally, higher densities often promote broader community goals such as livability, sustainability, and multimodal travel, although it is vital to ensure compatibility with the transportation system's capacity.

CHAPTER 3: TRANSPORTATION NETWORK PLANNING

Future Roadway Functional Classification

Functional Classification Framework

The successful development of the West 94 Area requires a thoughtfully planned transportation system that extends beyond simply providing access to Interstate 94. A hierarchical network of complementary streets is essential for:

Supporting diverse development patterns

Creating efficient connections between destinations

Providing appropriate mobility and access based on context

Balancing the needs of all transportation modes

Establishing a framework for implementation, phasing, and funding

The foundation for this approach is a functional classification system that categorizes streets based on their roles in the transportation network. In traditional transportation planning, functional classification often focuses exclusively on vehicle mobility. This study adopts a more nuanced approach that recognizes how street design directly influences—and is influenced by—the surrounding land use context.

Functional Classification and Land Use Integration

The Fargo-West Fargo Parking and Access Requirement Study identifies seven functional classification categories – street typologies – that comprise a complete street hierarchy, from high-mobility arterials to access-focused local streets aligning with existing and future regional land use. These typologies each include guidance on speed limits, lane configuration, traffic control, and access spacing. The typologies were also referenced in the Existing Conditions – Previous Studies Analysis as baseline knowledge and framework for the multimodal element of the Northwest Metro Transportation Plan. Taking the typologies into consideration, rather than strictly implementing this classification system, this strategy for the West 94 Area focuses on how street function relates to land use context. This holistic view ensures that transportation infrastructure bolsters, rather than hinders, the desired development patterns, especially in realizing the area's mixed-use vision.

The seven street types that form the transportation framework (Figure 3.1).

	Functional Classification	Grade Separation	Land Use	Pedestrian Crossing	Median	Travel lanes	Speed Limit	Parking	Access spacing			
									Traffic Signal:	Unsignalized Full Access:	Right-in/ Right-out:	Driveways:
Regional Arterial	Primary Artery	Interstate, other Regional Arterials	Commercial, Industrial, High-density residential	Grade separation, Signal	Yes	4 travel Lanes	45 mph	No	1/2-mile	None/ frontage system	1/4-mile	None
Commercial Arterial	Primary Artery Minor Artery	Interstate, probably Regional Arterials	Commercial, Mixed Use, Multi-family	Signal	Yes	4-6 travel Lanes	30-40 mph	No	1/4-mile	None	400 feet	None
Mixed Use Arterial	Minor Artery	Interstate	Neighborhood, Commercial, Mixed Use, Institutional	Signal, Median protected	Yes or No	3-5 travel Lanes	30-35 mph	Yes	600-800 feet	300-400 feet	200 feet	Preferred on minor street
Mixed Use Collector	Major Collector	No	Commercial, Mixed Use, Multi-family	Median protected, Crosswalk	No	3 travel Lanes	25-30 mph	Yes	N/A	300-400 feet	N/A	200 feet
Residential Collector	Minor Collector	No	Mixed Use, Residential	Crosswalk	No	2 travel Lanes	25 mph	Yes	N/A	300-400 feet	N/A	50-100 feet
Mixed Use Neighborhood	Major/ Minor Collector Local	No	Pedestrian-oriented commercial, Mixed Use, Residential	Highest priority	No/Blvd	2 travel Lanes	25 mph	Yes	600-800 feet	300-400 feet	N/A	150-200 feet
Residential Neighborhood	Local	No	Residential	Crosswalk	No	2 travel Lanes	25 mph	Yes	N/A	300-400 feet	N/A	30-50 feet

Figure 3.1 – Road Typologies: Metro COG Fargo/West Fargo Parking & Access Study

This classification system provides the foundation for developing a future roadway network in the West 94 Area. By correlating roadway functions to planned land use and creating a hierarchical and connected system.

Proposed Future Functionally Classified Roadway Network

A proposed functionally classified roadway network was developed for the two development scenarios to consider planned connections in and out of the study area, including connections to and across I-94, the FM Area, and the Sheyenne Diversions. They incorporate the requirement for a connected collector and arterial roadway system, with functional class category assignments that reflect planned land use contexts.

Final design and alignments will be part of the development process for a residential collector system within the study area. (Figure 3.2)

Functional Classification*	New Mileage within West 94 Area	% of Total	FHWA Guidance*
Regional/Commercial/Mixed Use Arterials (Minor Arterial)	3.5	8.8%	7-14%
Mixed Use Collector (Major Collector)	3.1	7.8%	3-16%
Residential Collector (Minor Collector)	6.2	15.5%	3-16%
Residential Streets (Local Road)	27.1	67.9%	62-74%

Figure 3.2 – Functional Classification Mileage Overview

**Highway Functional Classification Concepts, Criteria and Procedures 2023 Edition, Tables 3-5 & 3-6, Using Urban System Mileage Extent for Rural States*

The map below extends and illustrates this concept (Figure 3.3).

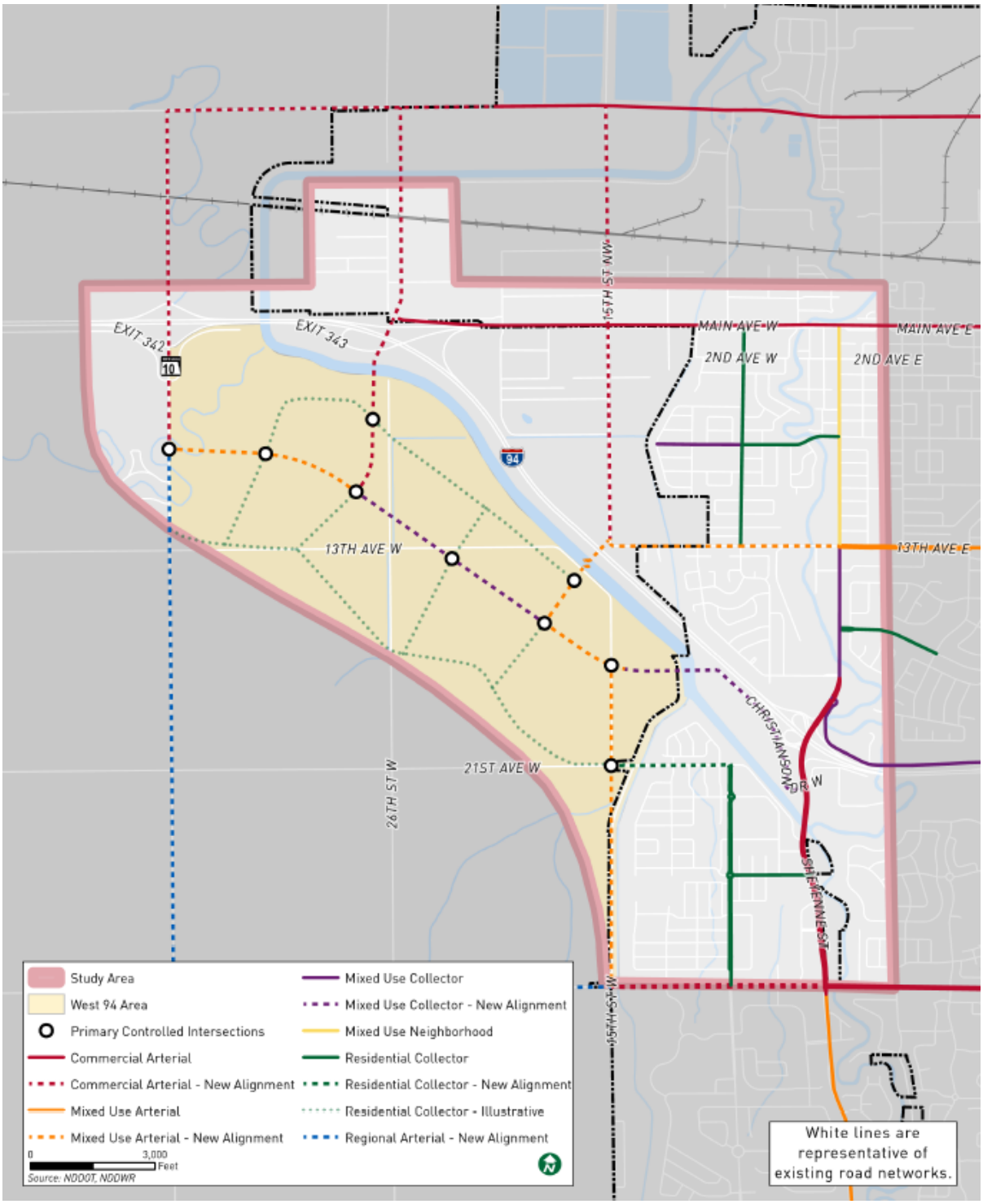

Figure 3.3 – Proposed Functional Classification Map

Spine Roadway Concept

A spine roadway is a main route forming the backbone of a transportation network, linking various regions. It manages high traffic volumes for the efficient transport of people and goods. Major freeways, interstates, and certain bus routes exemplify this. Spine roadways are pivotal in transportation networks from both functional and aerial views; an illustrative concept is shown in Figure 3.4.

The proposed roadway cutting through the West 94 Area is envisioned as a crucial growth corridor, balancing vehicle mobility with infrastructure for pedestrians, thereby ensuring walkability and accessibility for all. This roadway has been referred to as the "spine corridor" throughout the study, as it will create an east-west link across the entire growth area and act as a hub for key proposed development nodes, particularly those with higher density. The spine roadway connects to an extended Christianson Drive, ultimately providing connectivity between 38th Street West and Sheyenne Street.

This study identifies the spine corridor as a mixed-use collector for most of its length, reflecting a heightened focus on achieving a balance between travel modes compared to other regional commercial corridors.

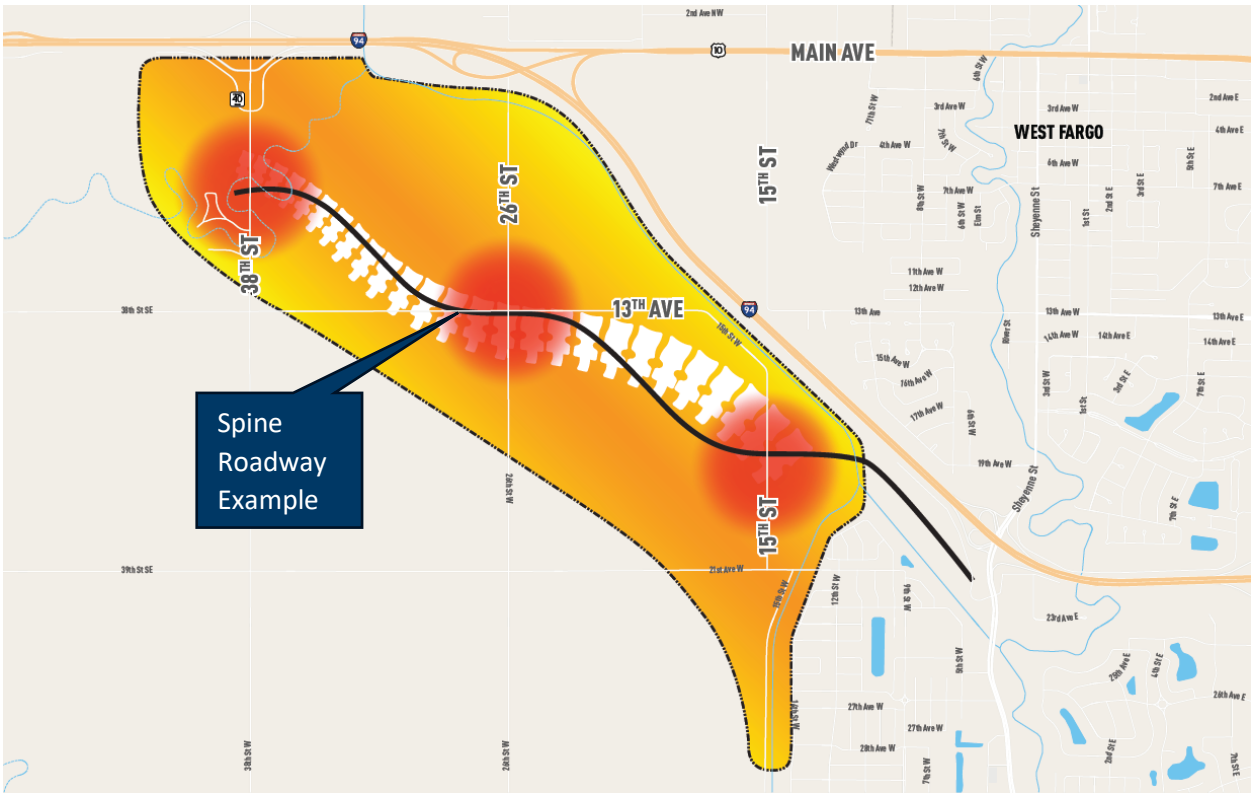

Figure 3.4 – Study Area Spine Corridor Concept

Other Mixed-Use Arterials and Collectors

Implementing a combination of mixed-use arterials and collectors in the growth area is essential to support the mixed-use development strategy of the West 94 Area.

The mixed-use arterials have a specialized street character that enhances connectivity between key development nodes. They support a blend of retail, office, and high-density residential uses and play a key role in connecting the arterial system through the study area.

The mixed-use collectors support traffic distribution from mixed-use arterials to local streets, facilitate multimodal access, and enhance neighborhood connectivity while maintaining a balance between mobility and walkability. These roadways serve as the foundation for integrating commercial, residential, and public spaces, aligning with the land use vision for the West 94 Area.

Residential Collectors

The proposed collector streets in the growth area are essential for traffic distribution, supporting expansion, and connecting communities with key locations. These streets accommodate low vehicle traffic (under 5,000 vehicles per day) and include pedestrian and bicycle facilities.

Residential collector connections are essential for local mobility within the study area. A well-designed collector network enhances roadway connectivity and offers diverse housing options, including multi-family homes, apartments, and mixed-use developments. This strategy supports a vibrant community with low, mid, and high-density residential choices.

Key Findings of Functionally Classified Network Vision

Establishing a strong arterial-to-residential collector system is crucial for ensuring access to local neighborhoods, promoting smooth traffic flow, and improving connections to commercial services. The dashed-line roads in Figures 3.3 and 3.4 represent future essential connections that will be enhanced or expanded to integrate seamlessly with the existing network, allowing for effortless mobility and accessibility.

The functional classification framework in the West 94 study area is tailored to correspond with the land use vision, facilitating an effective and cohesive integration of various development zones:

- Commercial arterials like 26th Street, 38th Street, and 15th Street act as vital regional connectors, linking the study area to the larger transportation network and enabling commercial and mixed-use districts access. These arterials connect fluidly with corridors such as Main Avenue and 13th Avenue, fostering a continuous transition between established and new commercial centers.

- The spine corridor, featuring a mix of mixed-use arterials and collectors, fosters a pedestrian-friendly atmosphere that promotes a harmonious blend of residential, commercial, and recreational spaces.

- Residential collector streets are thoughtfully situated to control local traffic, link neighborhoods, and offer direct access to community amenities, enhancing the quality of life in residential areas.

The proposed transportation network not only enhances the internal functionality of the West 94 Area but also ensures robust connectivity to surrounding regions, stimulating economic growth and community development in alignment with the intended land use concepts.

Typical Roadway Cross-Sections

A series of typical roadway cross sections was developed to establish general design characteristics of key West 94 Area roadways. Typical roadway sections can guide the right-of-way preservation efforts, communicate design features to both technical and non-technical audiences, and support cost estimates and associated funding needs assessments.

Given the City's vision for a vibrant, mixed-use growth area, the network comprises a variety of street types that are carefully planned to support the intended land-use conceptual visioning of the area. Too often, roadway design overlooks land use context, limiting the potential for development to take shape as intended. Hence, the following roadway cross-section alternatives were developed.

Cross-sections were created considering the designated functional class, land use context, anticipated traffic volumes, and planned bicycle and pedestrian links. Instead of enforcing a strict layout, these options enable developers to customize roadway designs according to the region’s unique vision and related land use, fostering greater adaptability.

Ultimately, the roadway network and cross-section design were developed with a focus on livability. By accommodating various road users, the proposed network ensures a vision of multimodal connectivity of the growth area to the study area and beyond. The concepts below provide planning-level details on the planned typical section, including information on the number of lanes, median requirements, shoulder or parking requirements, boulevard widths, greenspace and trails widths, and bicycle and pedestrian facilities for each new corridor segment.

38th Street and 26th Street

38th Street and 26th Street are both proposed as future commercial arterials. These segments are envisioned as four-lane divided urban sections, featuring an 18-foot center median to accommodate intersectional turn lanes. This typical design for the region can typically accommodate traffic volumes up to 30,000 vehicles per day (Figure 3.5).

Pedestrian and multimodal accommodations are enhanced with 10-foot trails on each side, separated from the roadway by green landscape buffers, and typical arterial designs throughout the region. This design reflects the corridors' role as primary access routes while ensuring safe and comfortable facilities for non-motorized users. This design is also key to meeting NDDOT safety and design standards.

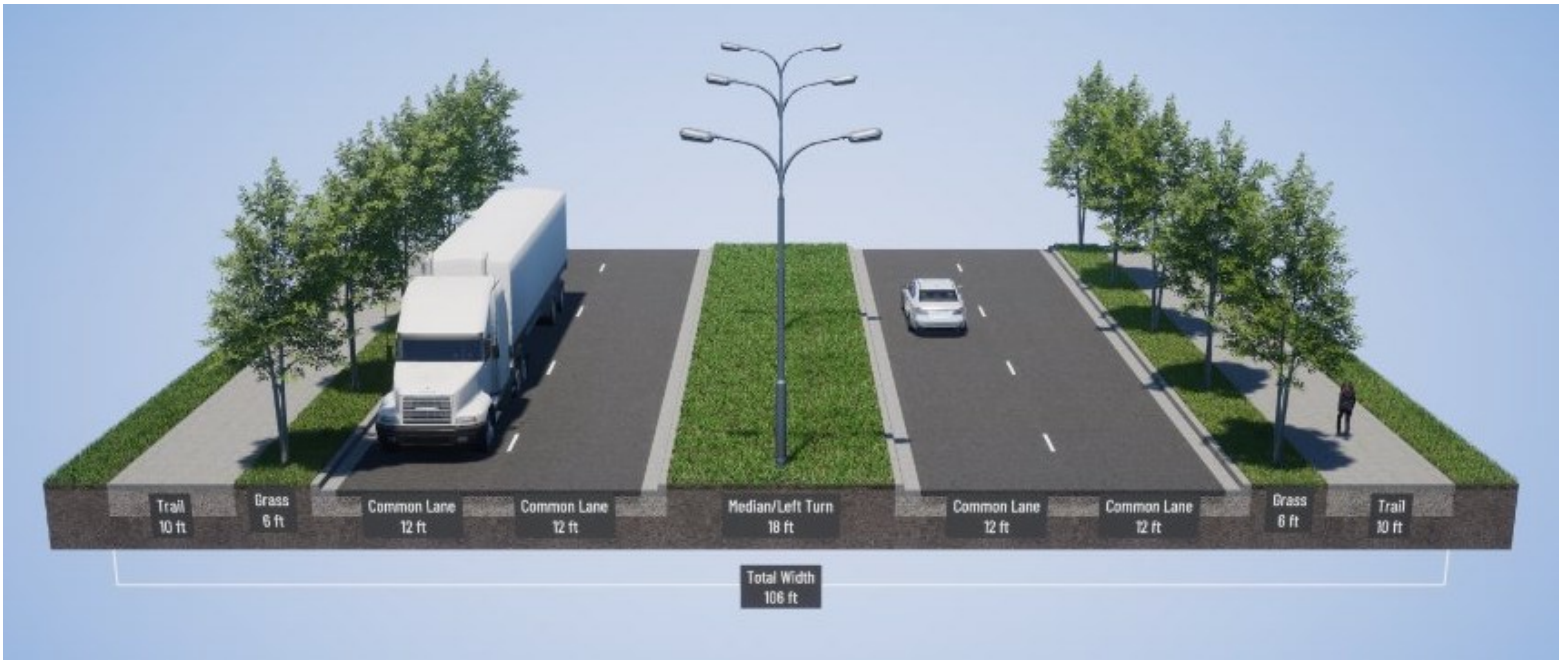

Figure 3.5 – Commercial Arterial Typical Section

15th Street

15th Street is proposed as a mixed-use arterial. The roadway concept features a two-lane, undivided roadway with turn lanes at key intersections. This cross-section can accommodate traffic volumes of up to approximately 15,000 vehicles per day, provided there is appropriate traffic control at higher-volume intersections. This arterial corridor is unique because it is specifically designed to move traffic in and out of the study area. There are limited growth opportunities adjacent to the corridor due to the constraints of the Sheyenne Diversion to the East and the FM Area Diversion to the west.

Pedestrian and multimodal accommodations are enhanced with 10-foot trails on each side, separated from the roadway by green landscape buffers. When adjacent to a facility, an additional trail may be combined with the planned diversion trail on the west side. This cross-section supports the corridor's role in connecting mixed-use development while maintaining a pedestrian-friendly character (Figure 3.6).

Figure 3.6 - Mixed Use Arterial Typical Section

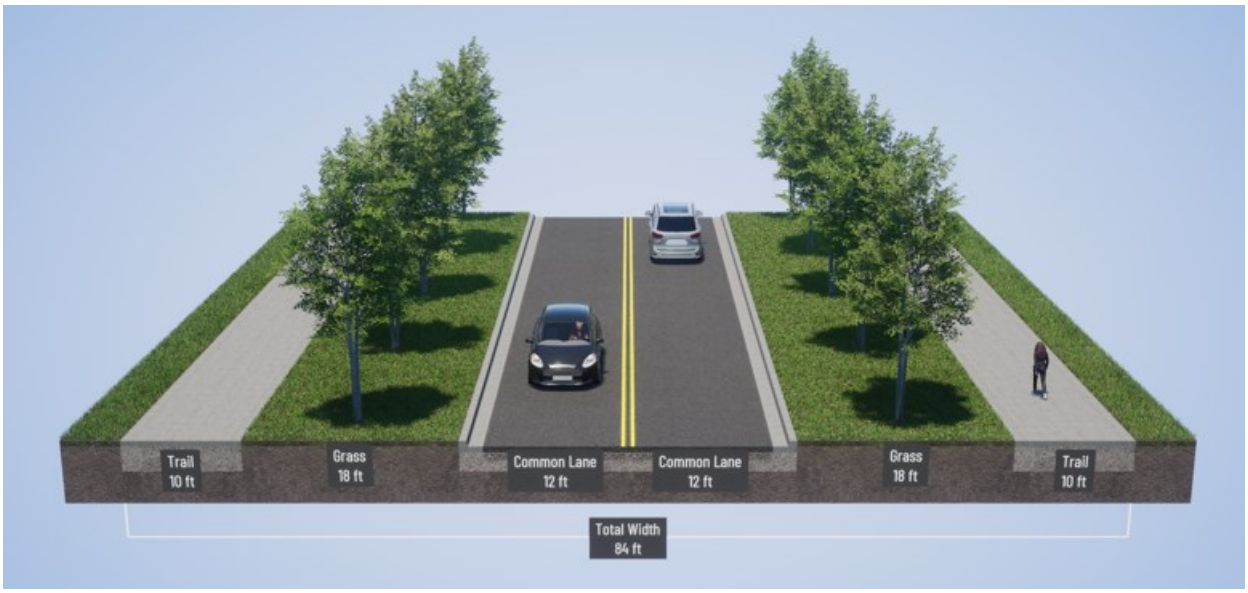

Figure 3.7 - Mixed Use Arterial Typical Section, Extended Boulevard

Christianson Drive Extension

The extended Christianson Drive is proposed as a mixed-use collector. This concept features an undivided two-lane roadway with a center-left turn lane, effectively managing traffic flow and enhancing intersectional safety. This roadway section can accommodate traffic volumes up to 20,000 vehicles per day.

Pedestrian and multimodal accessibility are prioritized by including a 10-foot trail on one side and a 6-foot sidewalk on the other, promoting active transportation and community connectivity. This design strikes a balance between the corridor's role in distributing traffic and supporting the adjacent mixed-use development context (Figure 3.8).

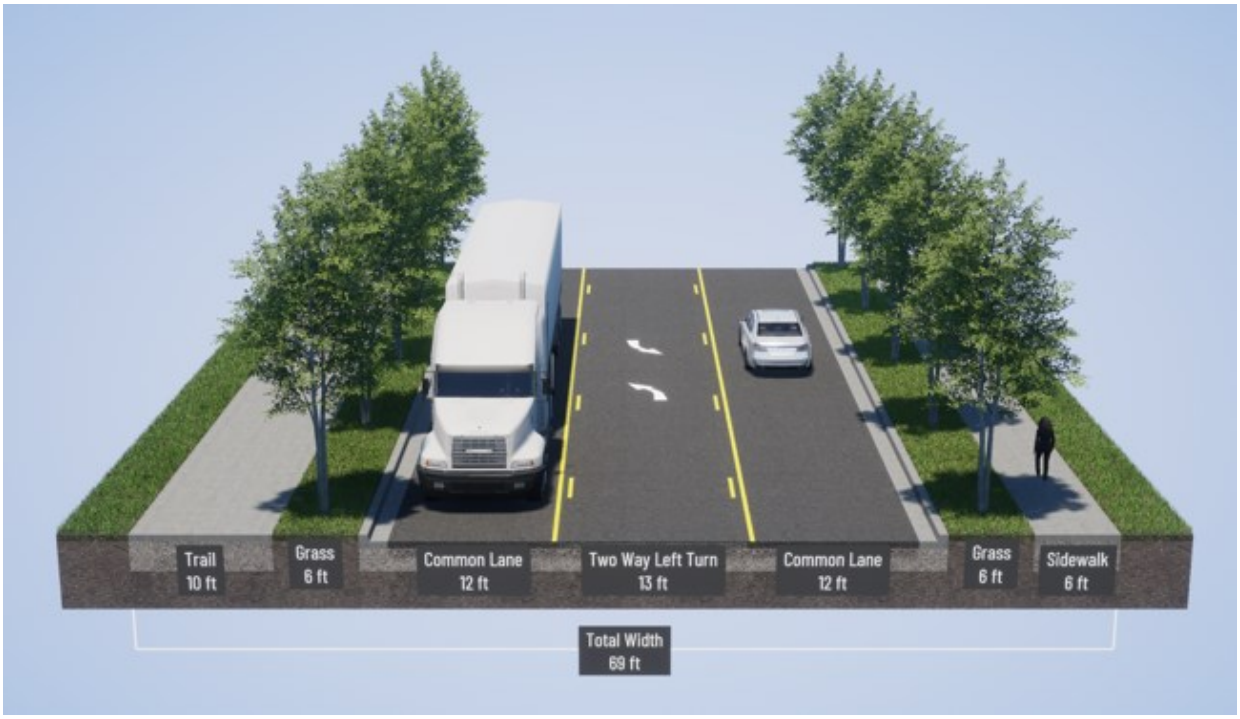

Figure 3.8 – Mixed Use Collector Typical Section

Residential Collectors

Planned residential collectors are key connectors within neighborhoods, linking residents to essential destinations such as libraries, schools, and parks. These roadways are proposed as undivided two-lane urban sections with bicycle and pedestrian facilities.

Three options are identified with varying multimodal accommodations, including different combinations of trail, sidewalk, and on-road bike lane facilities. Shoulder uses also vary within the options, featuring different arrangements for parking, bike lanes, and shoulders. The total planned roadway width typically ranges between 58 and 68 feet, providing flexibility to meet various transportation needs.

The various configurations of residential collectors offer multiple transportation options, accommodating vehicles, cyclists, and pedestrians while maintaining efficient traffic flow and accessibility.

Figure 3.8 illustrates a roadway configuration with dedicated bicycle facilities, with a 4-foot bike lane on each side of the road. Sidewalks with a landscaped buffer enhance pedestrian comfort, making this option ideal for residential areas with higher cycling demand and a focus on non-motorized transportation.

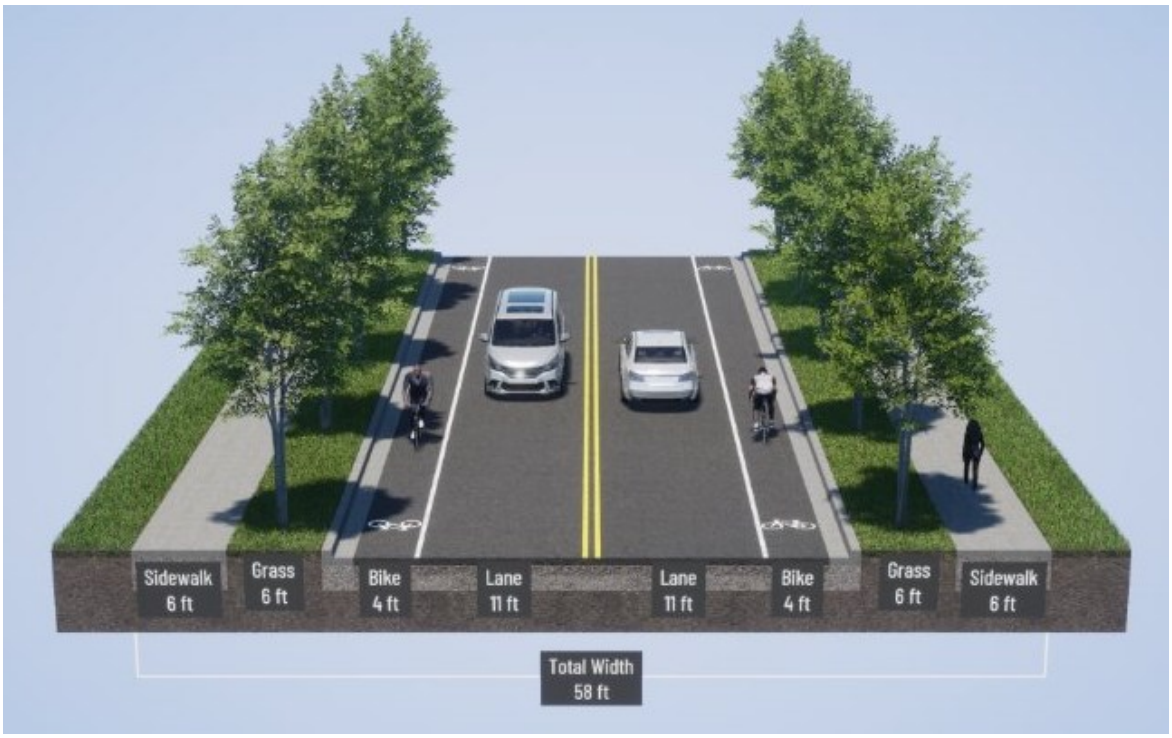

Figure 3.9 – Dedicated Bicycle Facilities

Figure 3.10 presents an alternative design that replaces dedicated bike lanes with parking shoulders and a 10-foot shared-use trail on one side. This configuration provides flexibility by offering a shared-use space for pedestrians and cyclists while maintaining vehicle travel lanes and parking on both sides.

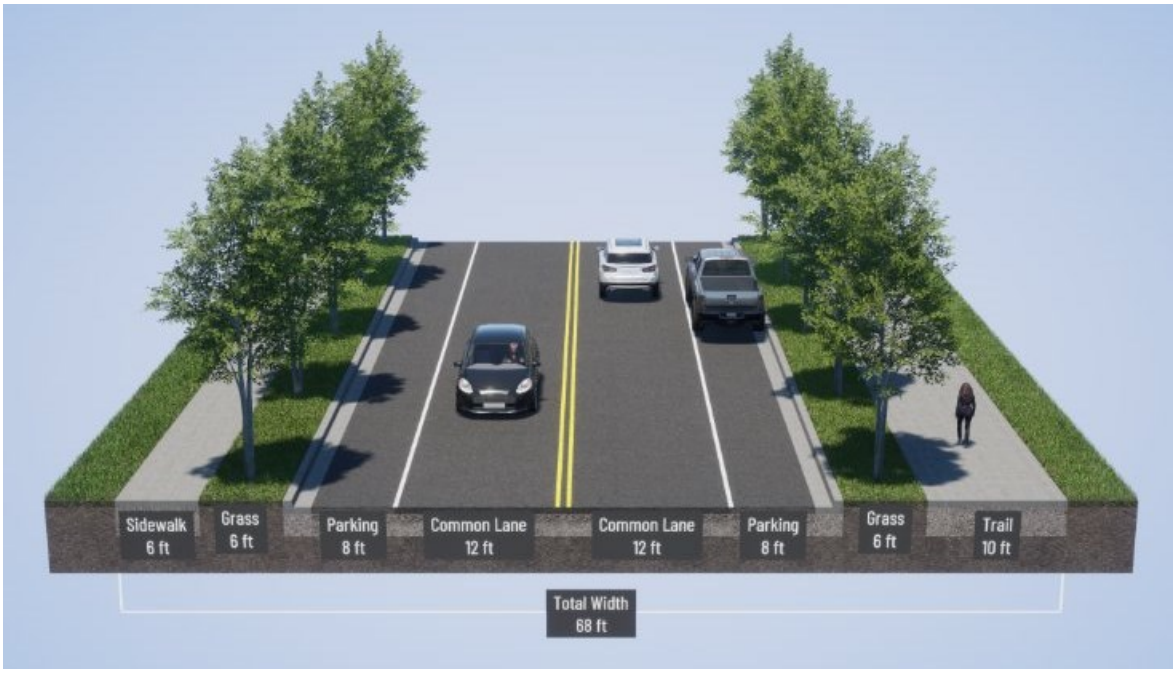

Figure 3.10 – Shared Use: Pedestrian and Bicycle

Similarly, Figure 3.11 maintains the 10-foot shared-use trail but has on-street parking on one side, rather than on both, reducing the total right-of-way width from 68 feet to 60 feet. These options provide adaptability based on neighborhood priorities, available space, and multimodal infrastructure goals, ensuring safe and efficient travel for all users.

Figure 3.11 – Shared Use: On-Street Parking

Spine Roadway Land Use Concepts Transect

The spine roadway serves as the primary east-west corridor for the development vision of the West 94 Area. The Transect Design Palette provides an overview of the development options for defining the transition from suburban to urban areas using different land use zones. The spine palette presents two road design options to accommodate the land use visions: an activated curb space or a median parkway. The median parkway option aims to create an environment that welcomes pedestrians and gives a low-speed, walkable, downtown feel. In contrast, the activated curb space option accommodates pedestrians and is ideal for transit service and other rideshare-type drop-offs. The graphic below progresses from left to right based on density and activity level, with the left side representing less dense areas, such as neighborhoods and park spaces, followed by the middle section envisioned for mixed-use development, and the right side representing the highest density and activity in a downtown-type area (Figure 3.12).

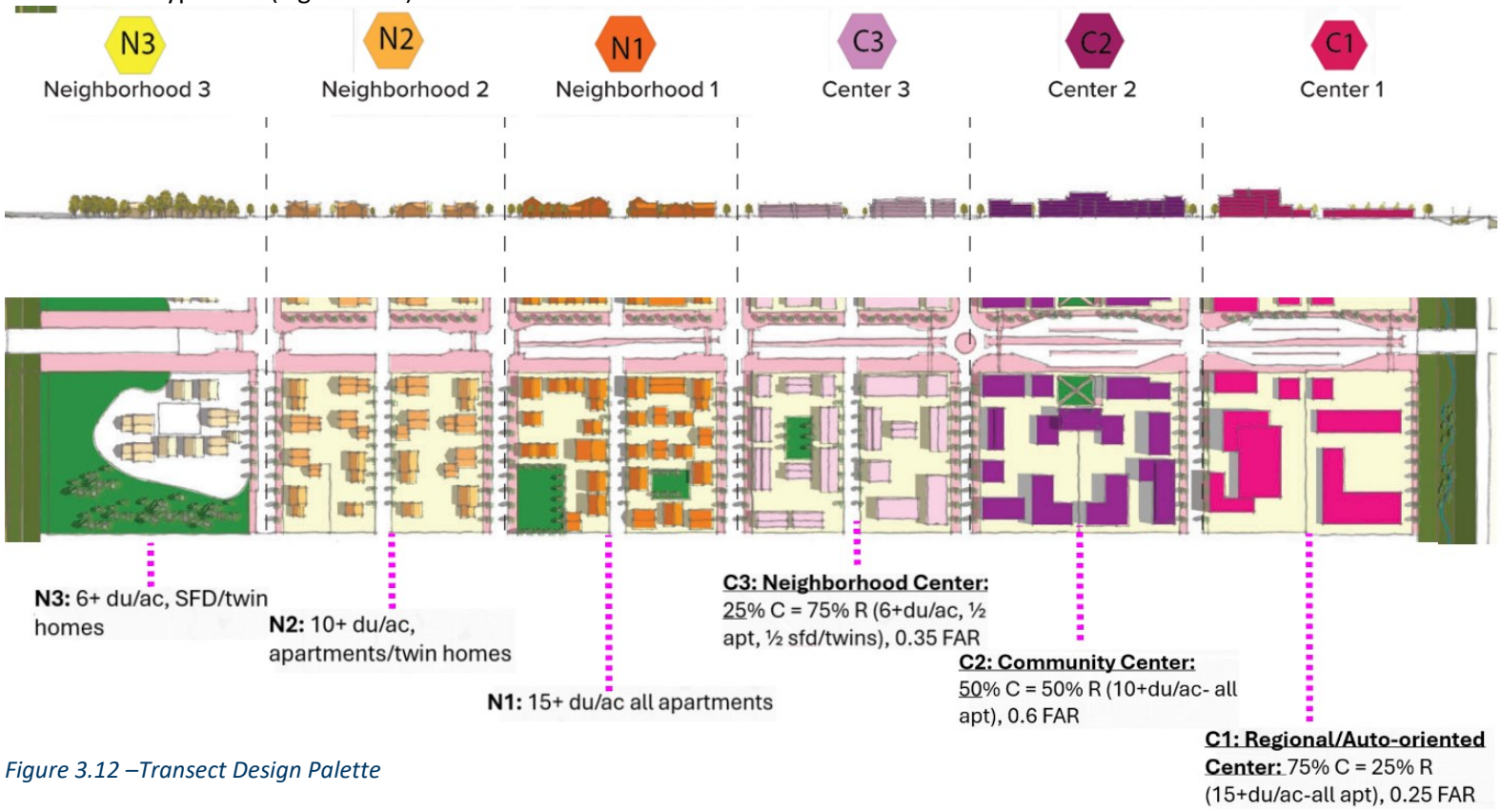

Figure 3.12 –Transect Design Palette

Figure 3.13 displays the median parkway spine transect option, a concept focused on enhancing mobility, safety, and aesthetics through a green, multi-modal corridor design. This configuration uses a central landscaped median to separate travel lanes. It incorporates a series of modern roundabouts at key intersections to manage traffic flow, reduce vehicle speeds, and enhance user safety.

This concept is well-suited to areas expected to experience steady, long-term growth, with a focus on maintaining mobility while preserving a park-like character. The landscape not only contributes to stormwater management and urban cooling but also enhances the corridor's visual identity, making it a signature design for the district. The design maintains dedicated travel lanes in each direction, with continuous multi-use paths on both sides for pedestrians and cyclists, physically separated by landscape buffers for safety and comfort.

The median parkway spine option prioritizes safety and continuity, striking a balance between efficient traffic movement and green infrastructure and active transportation needs. It is ideal for fostering a cohesive, sustainable development pattern along the West 94 spine corridor.

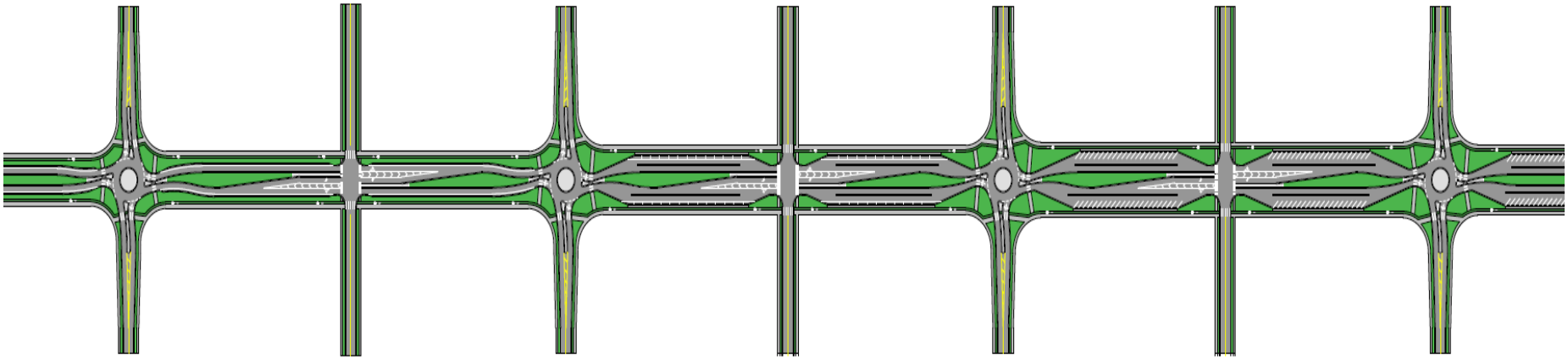

Figure 3.13 – Median Parkway Spine Transect Option

Figure 3.14 illustrates a spine transect option with an activated curb space concept, a flexible and context-sensitive approach to designing street edges that respond to diverse urban functions along a key corridor. This spine segment is structured to accommodate evolving land use patterns and multimodal demands by integrating a variety of curbside uses, including parklets, bicycle parking, bus turnouts, ride-hailing zones, loading/unloading areas, and parallel parking.

This design supports a mixed-use corridor vision by promoting accessibility, vibrancy, and safety. Including bus turnouts and ride-hailing pick-up zones improves transit efficiency and traffic flow, while parklets and bike parking foster active street life and non-motorized mobility. Loading/unloading zones serve commercial and residential needs, particularly in higher-density nodes, and parallel parking offers convenient short-term stops for visitors.

The activated curb design allows the corridor to function as both a transportation spine and a social space, making it more resilient to changing urban conditions. It reflects the study's vision for a multimodal, development-ready corridor that integrates land use and transportation, supports economic activity, and enhances user experience.

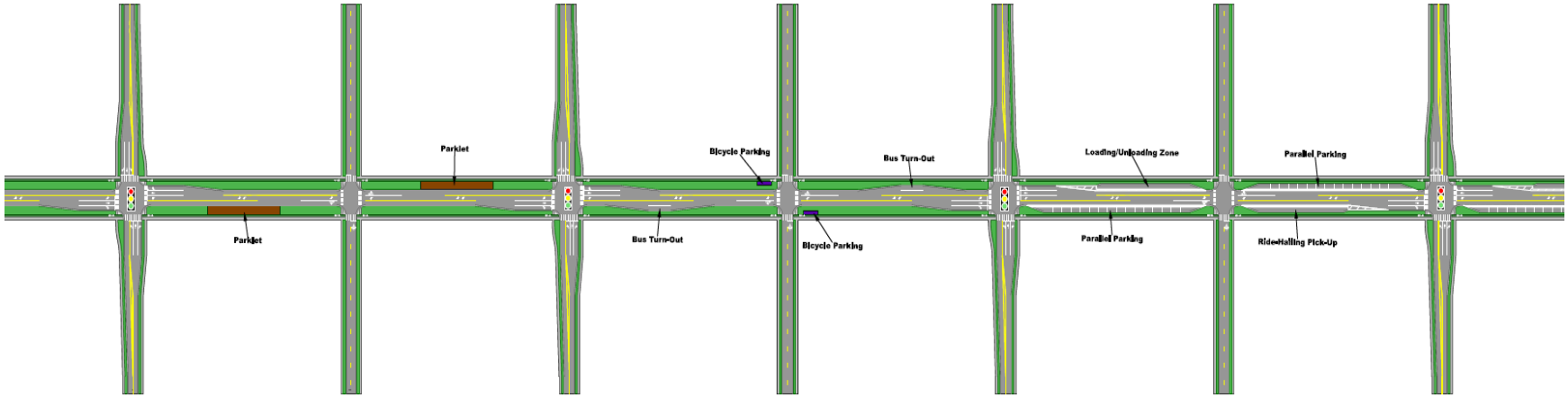

Figure 3.14 – Activated Curb Spine Transect Option

Multimodal Connections - Integrated Multimodal Network Vision

While roadway design underpins the transportation system, the West 94 Area plan integrates all transportation modes. This multimodal concept (Figure 3.15) includes non-motorized infrastructure and essential components for a connected system within and beyond the study area, such as:

- Bicycle and pedestrian infrastructure along all arterial and collector roadways
- Dedicated primary shared-use trails
- Pedestrian bridges over infrastructure barriers
- Pedestrian crossing investment nodes
- Connectivity to planned regional assets

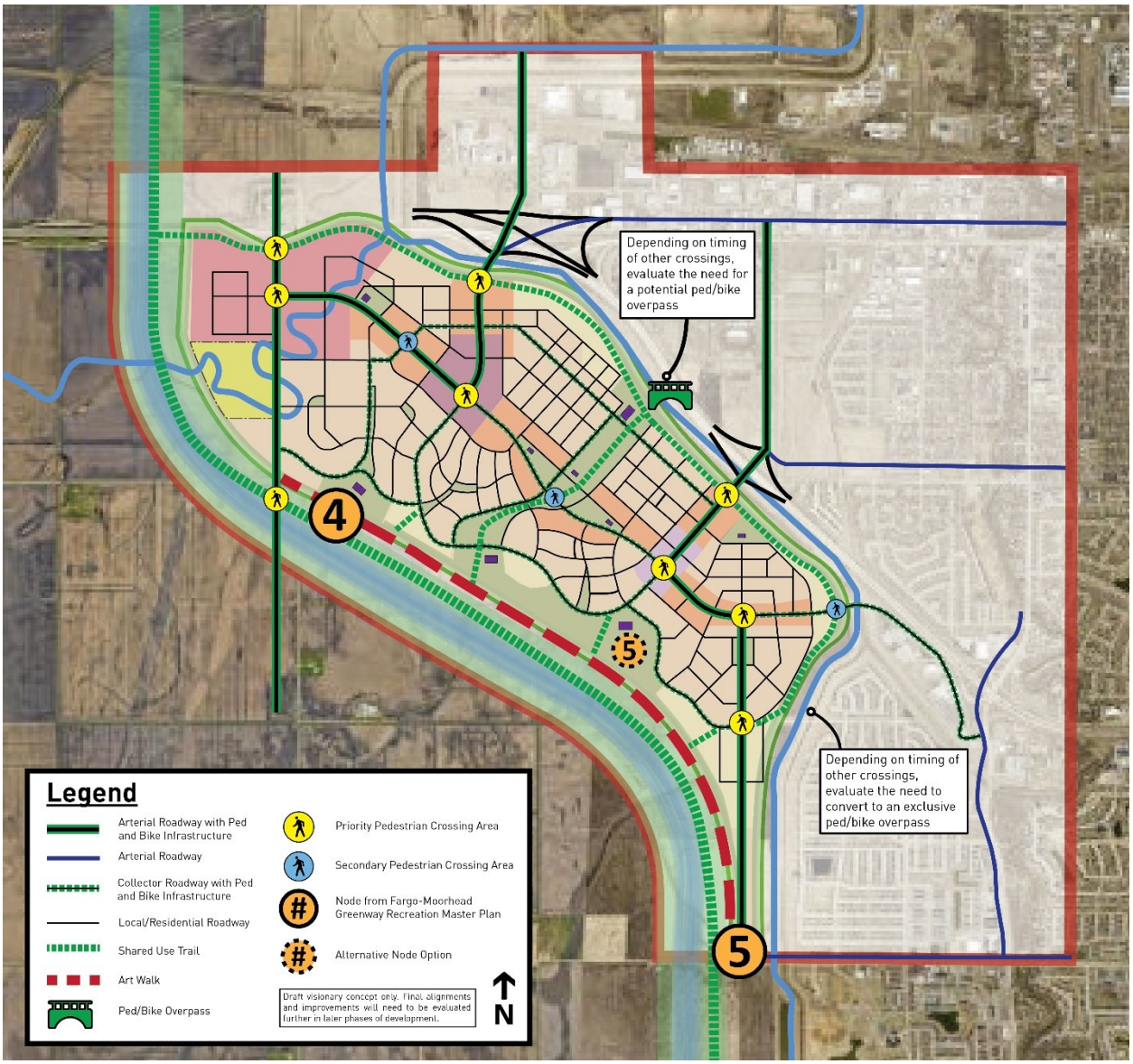

Figure 3.15 – Multimodal Network Concept

Multimodal Facilities Along Arterials and Collectors

Dedicated pedestrian and bicycle infrastructure is incorporated along all arterial and collector roadways, including the spine roadway, to offer safe and efficient travel networks for non-motorized users. The spine corridor, running northwest to southeast from 38th Street West to Christianson Drive, serves as a key corridor for connectivity within the study area.

This corridor is the main access for the proposed development, integrating multimodal transportation options and ensuring seamless access and facilities for pedestrians, cyclists, and vehicles. Residential collectors will prioritize non-motorized users by implementing complete street concepts to include sidewalk and trail options along these future corridors.

Multimodal Considerations at Major Intersections

Multiple intersections within the growth area, specifically along the spine roadway, are designated as priority pedestrian crossing areas. These priority crossing areas are identified at arterial intersections where higher volumes of pedestrians and bicyclists are expected.

The designation as a priority pedestrian crossing area means that a higher level of investment will be needed at these locations to facilitate safe pedestrian crossings. This includes infrastructure solutions such as traffic signals, roundabouts, or grade separations.

In addition, secondary pedestrian crossing areas are identified at collector or shared-use trail intersections. Pedestrian crossing enhancements are recommended at these locations and include facilities requiring a lower level of investment, including pedestrian-activated beacons, bulb-outs, and pedestrian refuge islands.

Components From Greenway Master Plan

Recreational and community hubs within the West 94 Area, are identified in the Fargo-Moorhead Greenway Recreation Master Plan.

Node four, located on the study area's western edge, functions as the primary entry point to the recreational corridor. It features an amphitheater and adjacent mixed-use spaces that promote outdoor community activities. Node four is directly linked to node five via the Art Walk, a dedicated pedestrian route enhancing walkability between the two recreation zones (Figure 3.15).

Node five, situated on the southern edge of the study area, will serve as a year-round recreation hub, integrating a connection to Rendezvous Park and offering winter sports amenities alongside summer trailhead access. The proposed multi-use trail network is strategically positioned to connect these nodes, ensuring direct pedestrian and bicycle connectivity.

Multiuse Trails

The proposed multi-use trail network includes an extension along the Sheyenne Diversion to ensure seamless non-motorized access while providing residents with direct access to recreational areas,

residential neighborhoods, and the broader transportation network. It also connects facilities along roadways to key pedestrian bridges that extend accessibility beyond the study area.

Two pedestrian bridges are suggested for future analysis as part of development processes within a proposed multimodal network to improve connectivity beyond the study area:

- The first bridge crosses I-94, linking the West 94 Area with the eastern side of West Fargo, facilitating access to regional destinations. This bridge presents an opportunity to access the already existing pedestrian network on 15th Street NW, connecting Main Avenue W to the 13th Avenue W trails.
- The second bridge, crossing the Sheyenne Diversion at 21st Avenue W, may be closed to vehicles but remain open to non-motorized traffic. It will connect bicyclists and pedestrians to the south side of I-94, integrating the development into West Fargo. This connects with the existing arterial roadway by extending the pedestrian network along Christianson Drive NW.

Transportation Network Implementation Considerations

Key implementation considerations include:

1. **Right-of-Way Preservation:** To realize the planned network, it is crucial to identify and preserve corridors for future streets early on, especially for arterials and collectors. This often involves collaborating with property owners and developers to set appropriate setbacks and dedications.
2. **Development-Driven Implementation**: A significant portion of the transportation network, especially residential collectors and neighborhood streets, will be developed through private initiatives. By implementing distinct design standards and expectations via the functional classification system, it can ensure that these streets are constructed to align with the overall vision.
3. **Phased Construction**: Major infrastructure elements, such as new I-94 crossings and primary arterials, will likely be constructed in phases as development progresses and funding becomes available. Interim solutions may be necessary to maintain connectivity during this transition.
4. **Funding Mechanisms**: To implement the transportation network, a combination of funding sources, including developer contributions, special assessments, and public infrastructure funding, may be needed. The City of West Fargo and Metro COG should coordinate closely to identify and secure appropriate financing for key system elements.
5. **Design Flexibility**: While the typical sections provide a framework for street design, specific implementation may require adjustments based on site constraints, development patterns, and evolving best practices. The framework is intentionally flexible to accommodate these adaptations while maintaining the overall vision. This flexible framework gives a foundation for a connected, multimodal system that aligns with the West 94 growth vision while promoting efficient movement for all users.

CHAPTER 4: CRITICAL INFRASTRUCTURE REFINEMENT

Investments at Christianson Drive

Based on coordination with the Study Review Committee, an extended and enhanced Christianson Drive concept has been assumed as a secondary connection into the West 94 Area. Future traffic demands are expected to reach approximately 10,000 vehicles per day, which is significantly higher than the current 2,000 vehicles per day the roadway can accommodate.

To support its new role in providing access to the anticipated developable land, this roadway should be updated to an urban design with curbs and gutters and a broader cross-section to accommodate turning lanes, medians at key locations, and off-street multimodal facilities. A bridge across the Sheyenne Diversion will be needed to facilitate access. Figure 4.1 illustrates a plan view of the extended Christianson Drive.

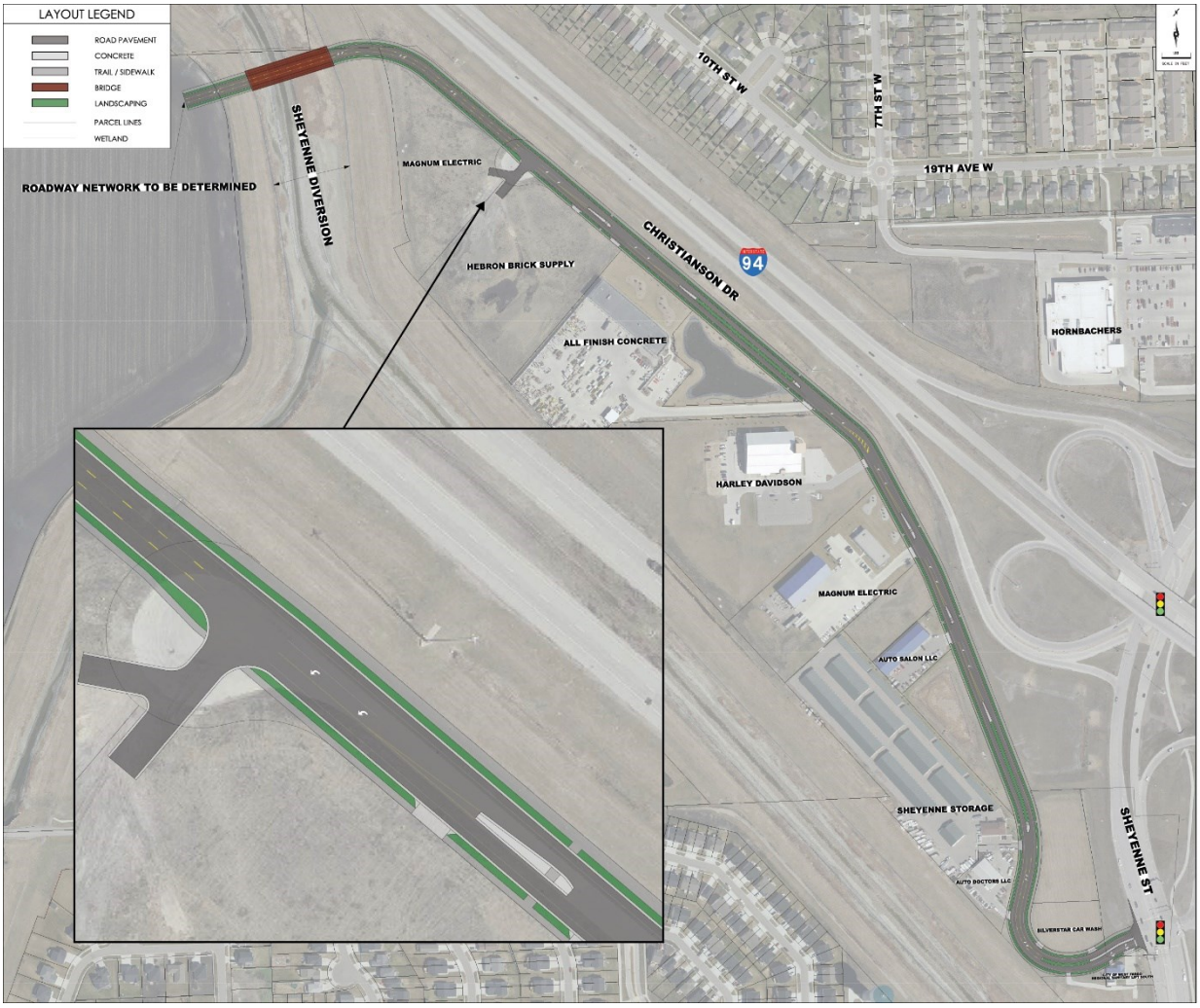

Figure 4.1 – Christianson Drive Extension

Estimated Cost for Christianson Drive Improvements

The reconstruction of the existing roadway, the extension itself, and the bridge over the Sheyenne River Diversion are estimated to cost between $20 and 25 million. Property acquisition of a portion of the Magnum Electric property is accounted for in this cost estimate. The existing signal at Sheyenne Street is assumed to remain but will require adjustments to timing and ADA improvements.

Potential Connection to Brooks Harbor Neighborhood

Through discussions with the Study Review Committee, consideration was given to a new connection into the Brooks Harbor neighborhood via Christianson Drive. A primary goal of this concept was to provide an alternative access point to the Brooks Harbor neighborhood, thus relieving congestion on 26th Avenue West.

Travel demand modeling suggests that this connection would alleviate 26th Avenue's congestion by 27% (resulting in a daily reduction of around 1,000 vehicles) if additional access to Brooks Harbor is provided (Figure 4.2). While modeling shows some benefits associated with this concept, the following should also be considered:

- This would create a new intersection on Christenson Drive that would be very close to the traffic signal at Sheyenne Street. Closely spaced intersections increase crash potential and deteriorate the quality of traffic flow
- The new intersection would be on a curve, which is not desirable
- A new connection could spur development in currently empty parcels. Development of this land could result in more traffic through the Brooks Harbor Neighborhood.

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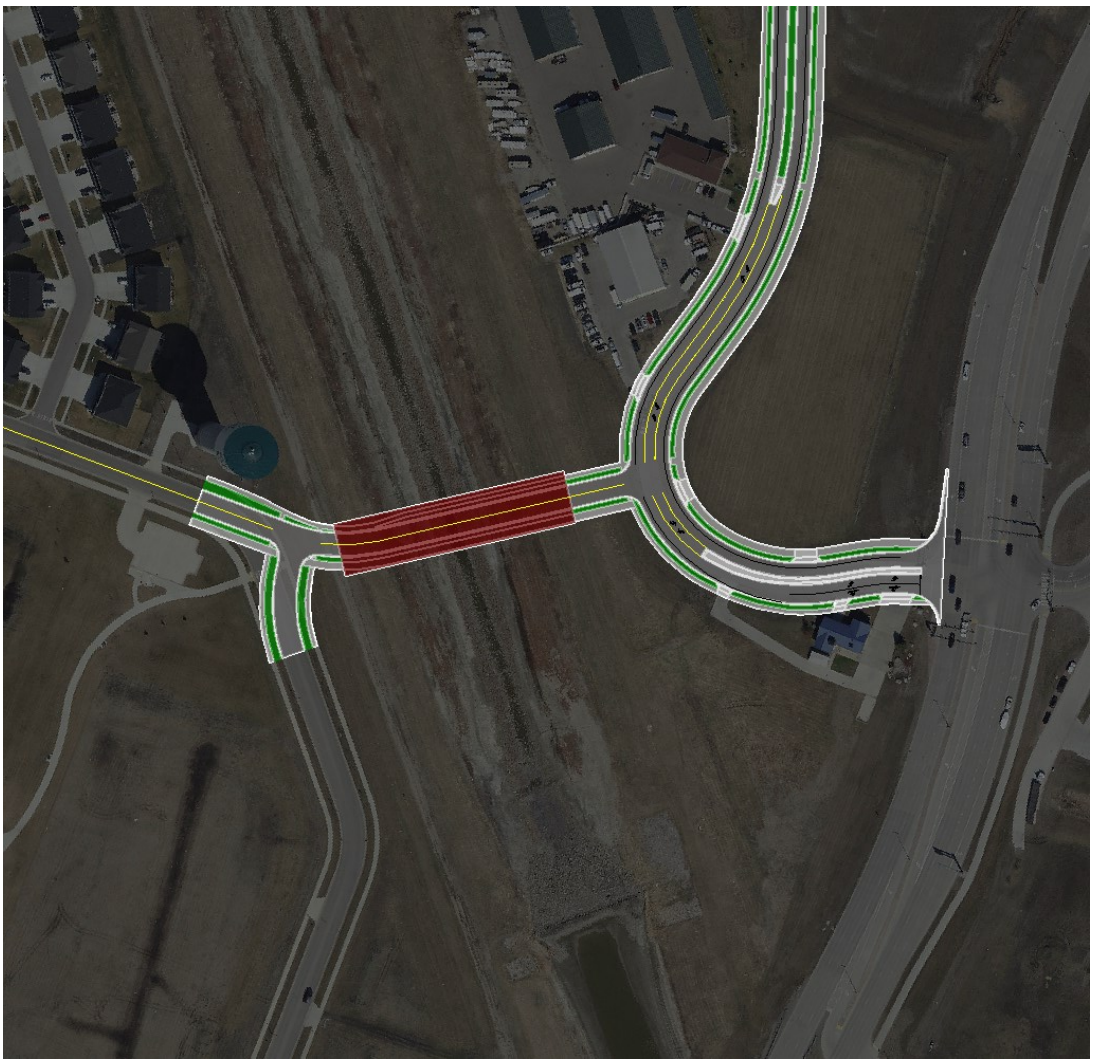

Figure 4.2 – Brooks Harbor Connector Road

Access Options at 13th Avenue/15th Street

The proposed additional I-94 access near 13th Avenue/15th Street is between the Main Avenue and Sheyenne Street interchange. The conceptual design and traffic analysis revealed two interchange concepts that cFould meet future demands at this site. Preliminary studies also evaluated an overpass as an alternative to an interchange; however, it was determined that this configuration would not align with West Fargo's development objectives.

Interchange Options at 13th Avenue/15th Street

Multiple interchange options at 13th Avenue/15th Street West were evaluated, with some prioritizing alignment with 13th Avenue and others prioritizing alignment with 15th Street West. Note that all concepts presented here assume bridge structures are perpendicular to I-94 to manage project costs associated with longer bridge lengths.

Traffic operations under future traffic demands were estimated using the Vissim traffic simulation software. This analysis estimated the intersection level of service at ramp intersections for all interchange concepts during the future AM and PM peak hours in a full build-out condition (estimated to occur around 2060, based on discussions with the project Study Review Committee). Intersection level of service is a letter grade that is used to describe the quality of traffic operations, with levels of service ranging from LOS A ("very good" traffic operations with minimal delays) and LOS F (failing operations with high amounts of delay). In North Dakota, traffic operations at LOS D or better are typically considered acceptable.

A SPUI is expected to accommodate full build-out traffic demands, with a peak-hour estimated level of service (LOS) of C under future demand. Relative to many other concepts described below Figures 4.3 and 4.4, this option provides good traffic flow, an overview provided in the tables below.

	Traffic Delay (sec/veh)					Traffic Queuing (feet)					
Approach	Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
	L	T	R			Avg	Max	Avg	Max	Avg	Max
EB	31 - C	-	27 - C	4 - A	22 - C	25	125	0	0	25	125
WB	35 - D	-	33 - C	9 - A		50	200	0	0	50	250
NB	30 - C	21 - C	4 - A	16 - B		25	200	75	500	25	225
SB	29 - C	13 - B	1 - A	22 - C		50	250	25	75	0	25

Figure 4.3 – Full Build-Out AM Peak Hour Traffic Operations – SPUI

	Traffic Delay (sec/veh)					Traffic Queuing (feet)					
Approach	Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
	L	T	R			Avg	Max	Avg	Max	Avg	Max
EB	53 - D	-	59 - E	57 - E	31 - C	50	175	0	0	50	225
WB	47 - D	-	34 - C	42 - D		100	525	0	0	50	250
NB	38 - D	27 - C	4 - A	19 - B		50	250	50	325	0	50
SB	35 - D	17 - B	1 - A	24 - C		100	525	25	150	25	150

Figure 4.4 – Full Build-Out PM Peak Hour Traffic Operations - SPUI

The construction of the SPUI, including bridges over I-94 and the Sheyenne River Diversion, is estimated to cost between $80 million and $90 million. Cost accounts for significant retaining wall needs, right-of-way, wide bridges spanning I-94 to the Sheyenne Diversion, and the realignment of 13th Avenue and 15th Street. The bridge required for a SPUI is larger than most interchanges, and due to the proximity of the Sheyenne Diversion, that bridge is similarly sized. Together, both bridges account for approximately $20 million of the total cost. Approximately ¼ mile of reconstruction of both 13th Avenue and 15th Street west was included to account for the realignment of 13th Avenue.

Single Point Urban Interchange (SPUI)

A single-point urban interchange (SPUI) is an interchange configuration that typically performs well in constrained right-of-way environments, especially when high volumes of left turns are present. However, SPUIs tend to have high implementation costs, primarily due to the large bridge structures required to accommodate such designs.

The SPUI concept for the 13th Avenue/15th Street location is shown (Figure 4.5). This design provides alignment with 15th Street. The geometric requirement for this design would not be compatible with alignment with 13th Avenue.

Figure 4.5 – 13th Ave/15th St Single Point Urban Interchange

Roundabout Interchange

Several iterations of a roundabout interchange were evaluated. After the concepts were considered, the following design is expected to provide acceptable traffic flow includes the following elements:

- Provides alignment with 13th Avenue
- Loop ramp for westbound off-ramp
    - Required to accommodate traffic flows from westbound I-94 to locations south of the interchange
- Roundabout for the intersection of 13th Avenue and 15th Street (east of the interchange). The placement of this roundabout was based on NDDOT design standards for intersection spacing near interchanges (Figure 4.6).

Figure 4.6 – Roundabout Interchange

This concept is anticipated to provide full build-out traffic operations at LOS C at all intersections in the AM and PM peak hours. Modeled delays for the eastbound offramp are higher than other movements. However, modeled queues do not extend back onto the I-94 mainline.

The tables show a Full Build-Out Peak Hour Traffic Operations - 4-Legged North Ramp Intersection with Loop Ramp (No ¾ Access) for both AM and PM scenarios, respectively (Figures 4.7 and 4.8).

Figure 4.7 Full Build-Out PM Peak Hour Traffic Operations - 4-Legged North Ramp Intersection with Loop Ramp (No ¾ Access)

Intersection	Approach	2060 AM Peak Hour											
		Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R			Avg	Max	Avg	Max	Avg	Max
13th/15th South Ramp Terminal *Roundabout*	EB (Exit Ramp)	15 - C	-	13 - B	15 - C	7 - A	25	125	-	-	25	125
	NB (13th)	-	7 - A	9 - A	8 - A		-	-	25	375	25	300
	SB (13th)	1 - A	0 - A	-	1 - A		0	25	0	25	-	-
13th/15th North Ramp Terminal *Roundabout*	EB (Exit Ramp)	-	-	5 - A	5 - A	3 - A	-	-	-	-	25	125
	WB (Exit Ramp)	-	-	3 - A	3 - A		-	-	-	-	0	0
	NB (13th)	2 - A	3 - A	-	3 - A		25	75	25	75	-	-
	SB (13th)	-	2 - A	2 - A	2 - A		-	-	25	100	25	100
13th Ave & 15th St *Roundabout*	EB	11 - B	9 - A	8 - A	11 - B	11 - B	50	700	50	700	50	700
	WB	12 - B	23 - C	23 - C	23 - C		50	400	50	400	50	400
	NB	17 - C	-	6 - A	13 - B		25	100	-	-	25	100
	SB	3 - A	-	1 - A	2 - A		25	150	-	-	25	150

Figure 4.7 - Full Build-Out AM Peak Hour 4-Legged N. Ramp Intersection w/Loop Ramp (No ¾ Access)

Intersection	Approach	2060 PM Peak Hour											
		Traffic Delay (sec/veh)					Traffic Queuing (feet)					
		Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn	
		L	T	R			Avg	Max	Avg	Max	Avg	Max
13th/15th South Ramp Terminal *Roundabout*	EB (Exit Ramp)	89 - F	-	37 - E	60 - F	16 - C	150	750	-	-	150	750
	NB (13th)	-	10 - B	21 - C	15 - C		-	-	50	400	25	300
	SB (13th)	2 - A	1 - A	-	2 - A		0	100	0	100	-	-
13th/15th North Ramp Terminal *Roundabout*	EB (Exit Ramp)	-	-	17 - C	17 - C	6 - A	-	-	-	-	50	525
	WB (Exit Ramp)	-	-	4 - A	4 - A		-	-	-	-	0	25
	NB (13th)	1 - A	2 - A	-	2 - A		0	100	0	100	-	-
	SB (13th)	-	3 - A	3 - A	3 - A		-	-	25	125	25	125
13th Ave & 15th St *Roundabout*	EB	14 - B	17 - C	16 - C	16 - C	9 - A	100	650	100	650	100	650
	WB	7 - A	7 - A	7 - A	7 - A		25	300	25	300	25	300
	NB	16 - C	-	8 - A	10 - B		25	75	-	-	25	75
	SB	5 - A	-	2 - A	3 - A		25	400	-	-	25	400

Figure 4.8 - Full Build-Out PM Peak Hour 4-Legged N. Ramp Intersection w/Loop Ramp (No ¾ Access)

Discarded Roundabout Interchange Concepts

The following roundabout interchange designs were considered, but importantly, discarded due to unacceptably high modeled delays and/or queue lengths.

5-Legged North Ramp Intersection

- This option was developed to incorporate 13th Avenue and 15th Street into the north ramp intersection. The primary goal of this alternative was to minimize right-of-way needs and associated impacts to developable land, especially on the north side of I-94. This concept is shown in Figure 4.9.
- Discarded due to failing operations (LOS F) at both ramp intersections under full-buildout peak hour traffic demands. Modeled westbound offramp queues are expected to spill back onto the I-94 mainline (modeled queue lengths of around ¾ mile).
- Roundabout sizing limitations constrain the ability to improve operations at the eastbound ramps intersection due to proximity to the Sheyenne River Diversion.

Figure 4.9 – 15th Street and 13th Avenue Roundabout Interchange

Diverted Roundabout Interchange

- This concept was considered to mitigate issues associated with roundabout sizing at the south roundabout (eastbound ramps). This however requires that roundabout to be on the south side of the Sheyenne River diversion, making the eastbound ramps right-in/right-out only movements. This concept is shown in Figure 4.10.
- This option was discarded due to poor traffic operations. Over 600 peak hour U-turn movements are expected at the south roundabout in a full build-out condition, which has a major impact on performance at that intersection

Figure 4.10 – 15th Street and 13th Avenue Diverted Roundabout Interchange

4-Legged North Ramp Intersection

- This option was considered to determine if removing the fifth approach from the north roundabout can improve expected delays at the westbound off-ramp.
- This option assumes alignment with 13th Avenue, with a roundabout and a ¾ access to accommodate the intersection of 13th Avenue and 15th Street. This concept is shown in Figure 4.11 on the following page.
- This option was discarded due to failing operations, especially at the westbound off-ramp. Modeled peak hour queues on the westbound off-ramp are expected to spill back onto the I-94 mainline.
- A variant of this alternative that assumes free right turn movements on the westbound offramp was considered; however this did not improve traffic operations to an acceptable level

Figure 4.11 – Roundabout Interchange – 4-Legged North Ramp Intersection

Viable Interchange Options at 13th Avenue/15th Street

Based on the analysis that was completed for several interchange concepts at 13th Avenue/15th Street, the following concepts are considered viable:

- Single point urban interchange (SPUI)
    - Planning level cost estimate: $80-90 million
    - Cost accounts for significant retaining wall needs, right of way, wide bridges spanning I-94 and the Sheyenne Diversion, potentially pore soil conditions and the realignment of 13th Avenue and 15th Street.
    - Improves multimodal connectivity across I-94, as well as being the best solution for regional travel demand across the various I-94 interchanges of Main Avenue, Sheyenne Street, and 38th Street.
    - High construction cost as the SPUI requires a significant bridge width over I-94.
    - Reduces the Right-of-Way footprint compared to the roundabout interchange, although it requires a significant realignment of 13th Avenue to meet access spacing requirements along 15th Street.
    - Access can be maintained to the existing properties along 13th Avenue along a frontage road.

- Roundabout interchange with 4-legged north ramp intersection and westbound loop offramp
    - Planning level cost estimate: $70-85 million
    - Cost accounts for significant retaining wall needs, right of way, bridges spanning I-94 and the Sheyenne Diversion, potentially poor soil conditions and the realignment of 13th Avenue and 15th Street.
    - Improves multimodal connectivity across I-94, as well as being the best solution for regional travel demand across the various I-94 interchanges of Main Avenue, Sheyenne Street, and 38th Street.
    - Lower cost as bridge widths are reduced compared with the SPUI alternative
    - Additional Right-of-Way required compared with the SPUI for the loop ramp, and realignment of 15th Street to meet access spacing requirements.
    - Access to the existing properties along 13th Avenue along a frontage road can be maintained.

Overpass vs. Interchange

Preliminary analysis considered two overpass concepts (without ramps to I-94) at this location. One concept prioritized alignment with 13th Avenue, and the second prioritized alignment with 15th Street. The 2019 13th Avenue Corridor Study recommended an overpass at this location.

While an overpass would have some cost savings if implemented instead of a full interchange, an overpass-only concept at this location was ultimately discarded due to incongruency with City development goals (mostly a desire to avoid non-contiguous development with existing developed areas). Travel demand analysis presented in Chapter 2 also found that movement to and from the West 94 Area is optimized if a full-access interchange is provided at this location.

Consideration was given to an overpass as an interim project before conversion to a full-access interchange. However, this was ultimately discarded due to potential funding challenges. If federal funds were used to construct the overpass bridge, future federal funds could not be used to remove features before the end of their useful life. As such, an interim overpass with plans to add ramps later would create a challenging funding and design environment.

Revised Interchange Alternatives at Main Avenue/26th Street

New access to the West 94 Area was also considered via revisions to the existing Main Avenue interchange. This concept was first presented during the NW Subarea Study. The vision is to provide additional access to the north and south at the Main Avenue interchange, supporting growth in central areas and providing traffic relief at the 38th Street interchange. The existing interchange only provides access to Main Avenue, with no connection to locations south of I-94. Some benefits of providing improved access at this location are its more central location within the West 94 Area and the potential to utilize existing bridge infrastructure.

Each scenario below assumed a connection to the West 94 Area via tying 26th Street into the Main Avenue interchange. No overpass-only options were considered for this location.

Southwest Loop Interchange

An interchange with the following features was found to provide acceptable traffic operations.

- Adds a new bridge structure generally on the alignment of 26th Street
- 26th Street is incorporated into the interchange (north and south of I-94)
- Southwest loop ramp for movements from southbound 26th Street to eastbound I-94
- The intersection of ramps with Main Avenue is reconfigured to allow left turns from the eastbound offramp
- Traffic signals at all intersections within the interchange
- Widening of existing Main Avenue bridge structure to accommodate full-buildout traffic demands
    - Interim year analysis (assumes 50% buildout) found that the existing Main Avenue bridge structure could be utilized for some time until increased development-generated traffic begins to require a wider structure. Widening of this bridge could potentially occur when it reaches the end of its design life.

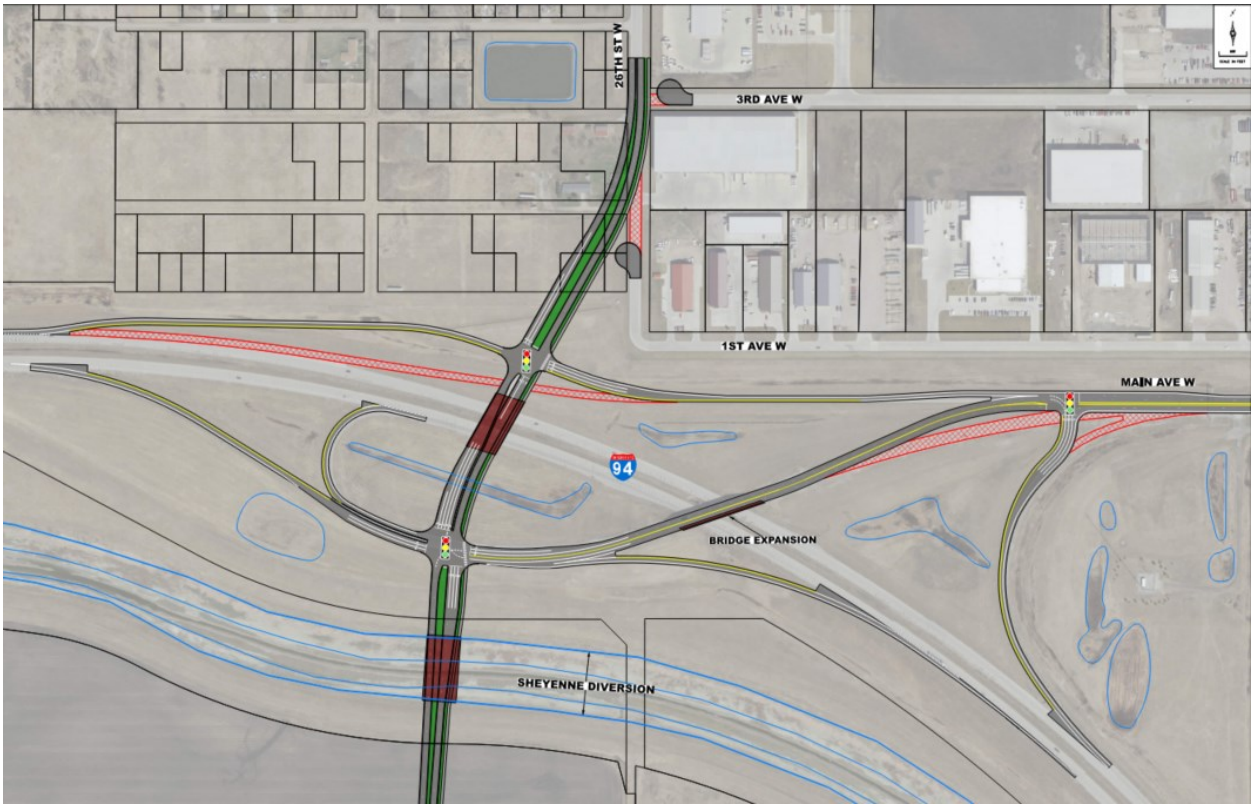

Figure 4.11 – Southwest Loop Concept

Traffic Operations Analysis

After incorporating the concept elements described above (except the widened Main Avenue bridge), traffic operations analysis was performed for full build-out condition (approximately 2060) traffic volumes.

Traffic simulation indicates acceptable operations (LOS C or better) during the full build-out AM peak hour but significant delay and queuing during the PM peak hour. This indicates that this option could operate well for some time; however, additional capacity would likely be required as the area approaches full build-out. Capacity issues are expected to become most notable at the intersection of the westbound I-94 offramp and Main Avenue.

		2060 AM Peak Hour											
		Traffic Delay (sec/veh)					Traffic Queuing (feet)						
Intersection	Approach	Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn		
		L	T	R			Avg	Max	Avg	Max	Avg	Max	
26th St South Ramp Terminal *Signalized Intersection*	EB	46 - D	34 - C	14 - B	31 - C	29 - C	50	250	50	275	25	175	
	WB	38 - D	34 - C	-	37 - D		50	200	50	325	-	-	
	NB	-	31 - C	21 - C	25 - C		-	-	75	275	100	475	
	SB	60 - E	19 - B	9 - A	32 - C		75	275	25	75	25	200	
26th St North Ramp Terminal *Signalized Intersection*	WB	-	42 - D	28 - C	30 - C	18 - B	-	-	25	200	100	650	
	NB	28 - C	4 - A	-	12 - B		50	325	25	125	-	-	
	SB	-	15 - B	9 - A	14 - B		-	-	50	375	25	225	
Main Ave & WB I-94 Exit Ramp *Signalized Intersection*	EB	-	14 - B	-	14 - B	18 - B	-	-	50	225	-	-	
	WB	-	11 - B	16 - B	15 - B		-	-	50	425	50	425	
	NB	23 - C	22 - C	22 - C	23 - C		50	300	50	300	50	350	

Figure 4.12 – Table: Full Build-Out AM Peak Hour Traffic Operations - Southwest Loop with Dual Turn Lanes (Maintain Existing Bridge)

		2060 PM Peak Hour											
		Traffic Delay (sec/veh)					Traffic Queuing (feet)						
Intersection	Approach	Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn		
		L	T	R			Avg	Max	Avg	Max	Avg	Max	
26th St South Ramp Terminal *Signalized Intersection*	EB	71 - E	58 - E	58 - E	62 - E	58 - E	100	425	75	300	150	775	
	WB	99 - F	82 - F	-	94 - F		1050	2375	150	1175	-	-	
	NB	-	58 - E	24 - C	38 - D		-	-	100	375	100	325	
	SB	86 - F	23 - C	17 - B	45 - D		250	750	25	150	25	675	
26th St North Ramp Terminal *Signalized Intersection*	WB	-	53 - D	35 - D	38 - D	64 - E	-	-	50	325	150	950	
	NB	48 - D	6 - A	-	21 - C		100	450	25	150	-	-	
	SB	-	99 - F	81 - F	96 - F		-	-	1150	2150	175	650	
Main Ave & WB I-94 Exit Ramp *Signalized Intersection*	EB	-	28 - C	-	28 - C	91 - F	-	-	100	550	-	-	
	WB	-	149 - F	121 - F	135 - F		-	-	825	1875	825	1875	
	NB	123 - F	103 - F	78 - E	106 - F		1150	4325	1150	4325	25	300	

Figure 4.13 – Table: Full Build-Out PM Peak Hour Traffic Operations - Southwest Loop with Dual Turn Lanes (Maintain Existing Bridge)

Enhanced Southwest Loop Interchange: Widen Main Avenue Bridge with Triple Northbound Left at Main Avenue Ramp Intersection

A variation of the Southwest Loop option that assumes a widened Main Avenue bridge structure and a triple northbound left turn lane at Main Avenue and the Westbound I-94 Exit was modeled.

The two inside northbound left turn lanes at Main Avenue and the Westbound I-94 Exit Ramp would lead traffic over the new bridge to the 26th Street South Ramp Terminal (traffic destined for southbound 26th Street). The outside (third) northbound left turn lane would lead traffic to the 26th St North Ramp Terminal. The Main Ave and the Westbound I-94 Exit Ramp intersection is shown below to illustrate these movements better.

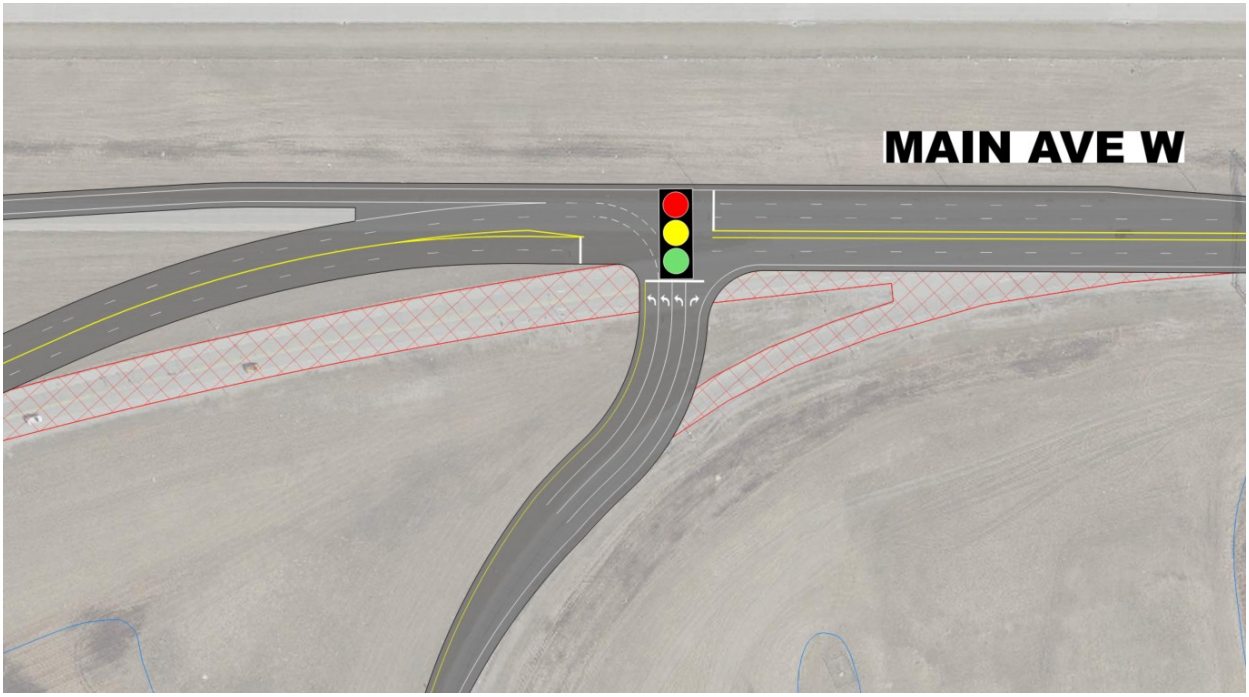

Figure 4.14 – Main Avenue/Westbound I-94 Exit Ramp Intersection (Full Build)

Traffic operations analysis that assumes increased capacity at the westbound off-ramp/Main Avenue intersection shows improved operations, with an acceptable LOS D or better at all intersections within the interchange. This option shows some longer maximum queues along 26th Street and Main Avenue, but minimal queuing along I-94 exit ramps. The maximum modeled queue along an exit ramp is 425 feet and therefore would not impact mainline I-94 operations.

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Figure 4.15 – Table: Full Build-Out AM Peak Hour Traffic Operations - Southwest Loop with Widened Bridge

		2060 AM Peak Hour											
		Traffic Delay (sec/veh)					Traffic Queuing (feet)						
Intersection	Approach	Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn		
		L	T	R			Avg	Max	Avg	Max	Avg	Max	
26th St South Ramp Terminal *Signalized Intersection*	EB	46 - D	35 - D	14 - B	31 - C	28 - C	50	250	50	275	25	175	
	WB	38 - D	33 - C	-	36 - D		50	200	50	300	-	-	
	NB	-	30 - C	18 - B	23 - C		-	-	75	275	100	350	
	SB	52 - D	20 - C	9 - A	29 - C		75	250	25	75	25	200	
26th St North Ramp Terminal *Signalized Intersection*	WB	-	43 - D	29 - C	31 - C	18 - B	-	-	25	200	125	700	
	NB	29 - C	4 - A	-	13 - B		50	325	25	125	-	-	
	SB	-	15 - B	9 - A	14 - B		-	-	50	375	25	250	
Main Ave & WB I-94 Exit Ramp *Signalized Intersection*	EB	-	12 - B	-	12 - B	17 - B	-	-	50	275	-	-	
	WB	-	10 - B	16 - B	15 - B		-	-	50	450	50	450	
	NB	20 - C	22 - C	23 - C	22 - C		50	275	50	275	50	375	

Figure 4.16 – Table: Full Build-Out PM Peak Hour Traffic Operations - Southwest Loop with Widened Bridge

		2060 PM Peak Hour											
		Traffic Delay (sec/veh)					Traffic Queuing (feet)						
Intersection	Approach	Movement (Delay - LOS)			Approach (Delay - LOS)	Intersection (Delay - LOS)	Left Turn		Through		Right Turn		
		L	T	R			Avg	Max	Avg	Max	Avg	Max	
26th St South Ramp Terminal *Signalized Intersection*	EB	73 - E	60 - E	61 - E	65 - E	52 - D	100	425	75	325	175	725	
	WB	93 - F	75 - E	-	88 - F		475	1425	250	1075	-	-	
	NB	-	57 - E	21 - C	36 - D		-	-	100	400	100	325	
	SB	47 - D	16 - B	17 - B	29 - C		125	700	25	125	50	650	
26th St North Ramp Terminal *Signalized Intersection*	WB	-	52 - D	38 - D	41 - D	49 - D	-	-	50	275	200	1325	
	NB	43 - D	6 - A	-	19 - B		75	425	25	175	-	-	
	SB	-	69 - E	55 - E	67 - E		-	-	800	2150	100	525	
Main Ave & WB I-94 Exit Ramp *Signalized Intersection*	EB	-	25 - C	-	25 - C	34 - C	-	-	100	425	-	-	
	WB	-	26 - C	50 - D	38 - D		-	-	225	1000	225	1000	
	NB	37 - D	38 - D	36 - D	38 - D		50	375	50	375	25	275	

Discarded Interchange Options

Several other interchange options were considered at Main Avenue and 26th Street. However, none of these options provided acceptable traffic operations under anticipated full build-out traffic demands.

Roundabout Interchange

- A roundabout interchange was considered, with a significant benefit being the ability to tie into both Main Avenue and 26th Street on the north side of I-94. This concept would construct a new bridge, generally along the 26th Street alignment, and utilize the existing Main Avenue bridge.
- This option was discarded due to roundabout capacity constraints. Even with dual lane roundabouts at both ramp intersections, all intersection/ramp approaches are expected to be over capacity with full build-out traffic demands.

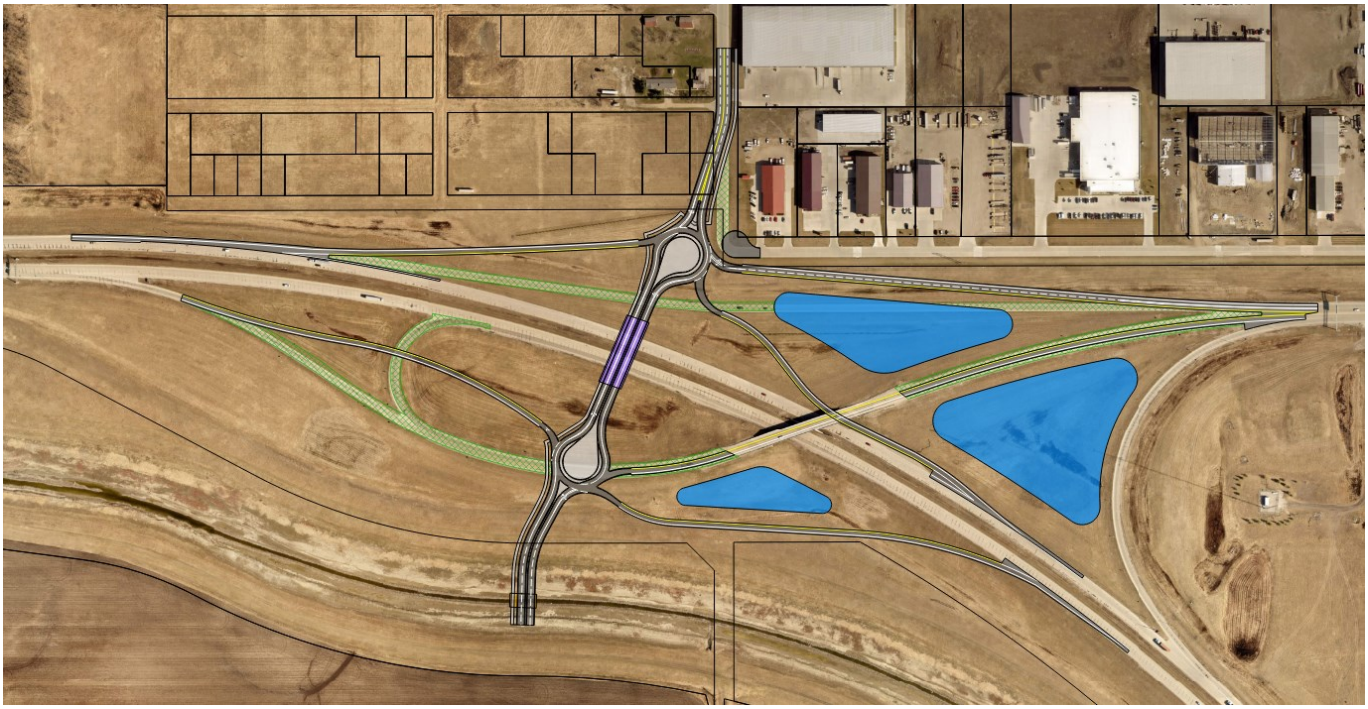

Figure 4.17 – Roundabout Interchange

Diverging Diamond Interchange

- A diverging diamond interchange was also considered due to this design typically accommodating heavy left-turning volumes efficiently.
- This concept would require the reconstruction of the existing Main Avenue bridge as well as a new bridge generally on the 26th Street alignment.
- This concept was discarded due to poor traffic operations. To achieve acceptable traffic operations under full build-out traffic demands, several triple left-turn lanes and double right-turn lanes would be required. Such configurations are uncommon in North Dakota, and may not be desirable with this design since these would be necessary on nearly all intersection approaches within the interchange.

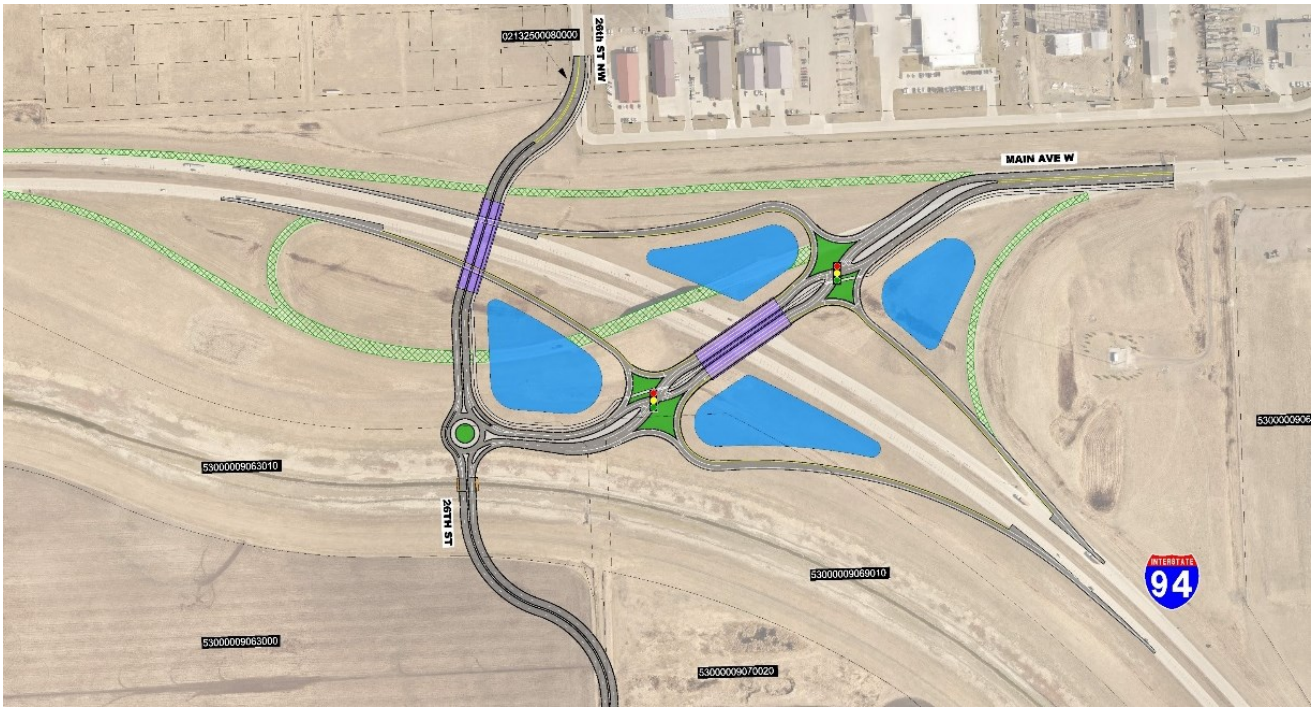

Figure 4.17 – Main Ave/26th St Diverging Diamond Interchange

Viable Interchange Options at Main Avenue/26th Street West

The only interchange concept expected to provide acceptable traffic operations is the Southwest Loop Concept, which also widens the existing Main Avenue interchange bridge.

The estimated cost for constructing the revised interchange, which includes bridges over I-94 and the Sheyenne Diversion, ranges from $90 to $100 million. This estimate covers the costs associated with the bridges spanning I-94 and the Sheyenne Diversion, the widening of the existing Main Avenue bridge over I-94, and potential poor soil conditions. It does not, however, encompass the right of way, as previous efforts have been made to acquire the necessary properties for building the interchange at this site. This estimate excludes the secondary improvements needed to link the new interchange to the NW Subarea to the north. Implementing these improvements would demand another significant investment to cross the Sheyenne Diversion and to create a grade separation at the existing railroad crossing. Furthermore, these enhancements could lead to further property acquisitions and business displacements along 26th Street to complete this project connection.

Collector-Distributor System Considerations

Collector-distributor systems have been studied throughout the Fargo-Moorhead area for locations where interchanges are around one mile apart (similar to what would occur between 38th Street and 26th Street/Main Avenue). The guidance for this study was not to evaluate a collector-distributor system, but this may be considered in the future.

Traffic Operations on Sheyenne Street with New Connections

An analysis was conducted to determine whether any additional improvements are needed at key intersections along Sheyenne Street in the full build-out scenario. The intersections analyzed and improvements required to provide acceptable peak hour operations are listed below:

- 13th Avenue at Sheyenne Street:
  - Have the second southbound through lane start north of the intersection
  - Convert the westbound approach to a dual westbound left and shared thru/right
  - Optimize signal timing
- Christianson Drive at Sheyenne Street
  - Convert the eastbound left movement phasing to protected/permitted
  - Optimize signal timing
- 26th Avenue at Sheyenne Street
  - Add a southbound right turn lane
  - Optimize signal timing

Overview for 38th Street Interchange

With the proposed development concepts, the 38th Street interchange is expected to handle traffic volumes similar to those carried by Sheyenne Street today. Detailed analysis of this interchange was beyond the scope for this study. However, the traffic forecasting modeling described in Chapter 2 indicates that investments will be necessary at this interchange to support area development goals and associated traffic growth. A high-level analysis was conducted to translate forecasted volumes and existing configurations, resulting in the following concept.

Figure 4.17 illustrates proposed changes to the current 38th St interchange. These modifications entail expanding to 2 lanes heading north and 3 lanes heading south, incorporating signalized intersections, reconfigured turn lanes, a trail crossing the interstate, and a loop ramp from southbound to eastbound I-94. Implementing this concept necessitates reconstructing the existing bridge over I-94.

The reconstruction of the 38th Street interchange is estimated to cost between $30 and $ 35 million. This cost primarily accounts for the replacement of a bridge and the additional earthwork required for the southbound to eastbound loop, as well as the widening of 38th Street.

Figure 4.18 – 38th Street Interchange Concept

I-94 Mainline

A detailed analysis of I-94 is outside the scope of this project; however, mainline operations were reviewed as part of the Vissim analysis that was completed. This section summarizes the implications for I-94 with the proposed new access along I-94.

FHWA Interchange Justification Reports/Interchange Modification Justification Reports

FHWA and NDDOT are vested in maintaining safe and efficient traffic flow on the Interstate system. As such, changes to interstate access must be confirmed to avoid any adverse impact on the safety and operation of the freeway and the surrounding roadway system.

To obtain FHWA approval for interchange modifications, Interchange Justification Reports (IJR) for new interchanges or Interchange Modification Justification Reports (IMJR) for revised interchanges must be prepared as project development progresses. Key elements of these reports include:

- An IJR/IMJR must be a stand-alone document that contains all relevant information described below

- Confirmation that proposed interstate access changes connect to public roadways and provide for all traffic movements
- An operational and safety analysis that concludes that the proposed change in interstate access does not have a significant adverse impact on the safety and operation of the Interstate facility (including mainline lanes, existing, new, or modified ramps, and ramp intersections with the crossroad)
- This analysis must consider existing and planned future traffic projections
- This analysis should include at least the first adjacent existing or proposed interchange on either side of the proposed change in access
- The crossroads and local street network, to at least the first major intersection on either side of the proposed change in access should be included in the analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access may have on the local street network
- Confirmation that the proposed access change is consistent with local and regional land use and transportation plans
- Where multiple interchange additions/modifications are expected, a comprehensive network study must accompany all requests for new or revised access
- Interchange access requests should include conceptual plans of the type and locations of the signs proposed to support each design alternative

The preparation of IJRs is beyond the scope of this study and is more appropriate once stakeholders have confirmed the preferred interstate access concept in conjunction with evolving land development trends. This study can, however, serve as a foundational document when preparing future IJRs/IMJRs.

Volumes on I-94

The West 94 Area must access I-94 somewhere in the project area. If new interchanges are not added, the additional traffic will overburden the existing interchanges at 38th Street, Main Avenue, and Sheyenne Street. Without adding access, it is unlikely that the desired land use development can occur to its full potential. Still, adding interchanges at Main Avenue/26th Street and 13th Avenue/15th Street does not add more traffic to I-94. Rather it redistributes traffic so that the existing interchanges are not overburdened.

The estimated 2050 daily volume along I-94 is projected to be as follows by location:

- 64,000 between 38th Street and Main Avenue
- 83,000 between Main Avenue and 13th Avenue/15th Street
- 97,000 between 13th Avenue/15th Street and Sheyenne Street
- 90,000 east of Sheyenne Street

According to guidance from the Highway Capacity Manual, the daily capacity of a four-lane urban freeway is around 75,000 vehicles per day (actual capacity varies depending on peaking characteristics and interchange density, among other factors). Therefore, the projected volume is over capacity for a four-lane freeway east of Main Avenue with development north and south of the project area.

Traffic operations for mainline I-94 were analyzed as a part of the full build-out peak hour operational analysis in Vissim.

Methodology

This analysis was based on freeway level of service, where levels of service are a function of the density of traffic on the freeway (vehicles per mile per lane).

LOS	Density (pc/mi/ln)		
	Basic Freeway Segments	**Merge and Diverge Segments**	**Freeway Weaving Segments**
A	</= 11	</= 10	</= 10
B	>11-18	>10-20	>10-20
C	>18-26	>20-28	>20-28
D	>26-35	>28-35	>28-35
E	>35-45	>35	>35-43
F	>45 or demand exceeds capacity	demand exceeds capacity	>43 or demand exceeds capacity

Figure 4.19 – Level of Service Criteria: ***(Exhibits 12-15, 13-6, and 14-3 in the Highway Capacity Manual)***

The Highway Capacity Manual describes the LOS thresholds as follows:

- LOS A: free-flow operations. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.
- LOS B: reasonably free-flow operations. The freedom of vehicles to maneuver within the traffic steam is only slightly restricted.
- LOS C: travel speeds are near the free-flow speed. The freedom of vehicles to maneuver within the traffic steam is noticeably restricted so lane changes require more care and vigilance on the driver.
- LOS D: traffic speeds begin to decline with increasing traffic flow. The freedom of vehicles to maneuver within the traffic steam is seriously limited and drivers experience reduced comfort
- LOS E: the highway is operating near capacity. Operations are highly volatile as there is little room for vehicles to maneuver withing the traffic stream.
- LOS F: traffic flow is unstable. Traffic demand exceeds capacity. Traffic congestion/queuing occurs.

Analysis Results

The operational analysis indicated that the existing four-lane roadway is over capacity, which is consistent with findings from the 2023 Metro COG Interstate Operations Study. That study recommends converting I-94 to a six-lane roadway from Sheyenne Street to I-29. The results summarized below confirm that with development north and south of the project area the six-lane roadway needs to extend further west to Main Avenue.

Near the Proposed 13th Avenue/15th Street West Interchange

Initial I-94 mainline operational analysis was completed in conjunction with the 13th Ave/15th St interchange analysis. The build-out PM peak hour operations with a four-lane and a six-lane roadway section in this area are illustrated in Table 4.20 below.

Failing operations with the existing four-lane freeway design are expected to be improved with capacity expansion, however some areas of LOS E are still expected in both travel directions.

Existing Four-Lane			Six-Lane		
Segment	**Density**	**LOS**	**Segment**	**Density**	**LOS**
EB I-94 West of 13th-15th	49	F	EB I-94 West of 13th-15th	23	C
EB I-94 and 13th-15th Exit Ramp	30	D	EB I-94 and 13th-15th Exit Ramp	20	B
	30	D		20	B
EB I-94 btwn 13th-15th Ramps	80	F	EB I-94 btwn 13th-15th Ramps	18	B
EB I-94 and 13th-15th Entry Ramp	205	F	EB I-94 and 13th-15th Entry Ramp	35	E
	70	F		34	D
EB I-94 East of 13th-15th	36	E	EB I-94 East of 13th-15th	27	C
WB I-94 East of 13th-15th	69	F	WB I-94 East of 13th-15th	34	D
WB I-94 and 13th-15th Exit Ramp	33	D	WB I-94 and 13th-15th Exit Ramp	29	D
	32	D		29	D
WB I-94 btwn 13th-15th Ramps	24	C	WB I-94 btwn 13th-15th Ramps	21	C
WB I-94 and 13th-15th Entry Ramp	42	E	WB I-94 and 13th-15th Entry Ramp	34	D
	39	E		39	E
WB I-94 West of 13th-15th	33	D	WB I-94 West of 13th-15th	39	E

Figure 4.20 – 2060 PM Peak Hour Mainline I-94 LOS

Between 15th Street and 38th Street

Building upon the assessment of the mainline near 13th Avenue/15th Street, which confirmed capacity issues without freeway modifications, the build-out condition of AM and PM peak hour operations between 38th Street and 13th Avenue/15th Street was also analyzed.

Since a six-lane section was needed near the 13th Avenue/15th Street interchange, the analysis assumed the six-lane segment extended to Main Avenue. The transition from the six-lane back to the existing four-lane section was assumed to occur by dropping the outside westbound I-94 lane as an exit-only lane at Main Ave. Along eastbound I-94 the six-lane section was assumed to start with the southbound 26th Street to eastbound I-94 lane starting the third eastbound I-94 travel lane. Figure 4.21 shows the assumed lane configuration and how the six-lane to four-lane transition was assumed.

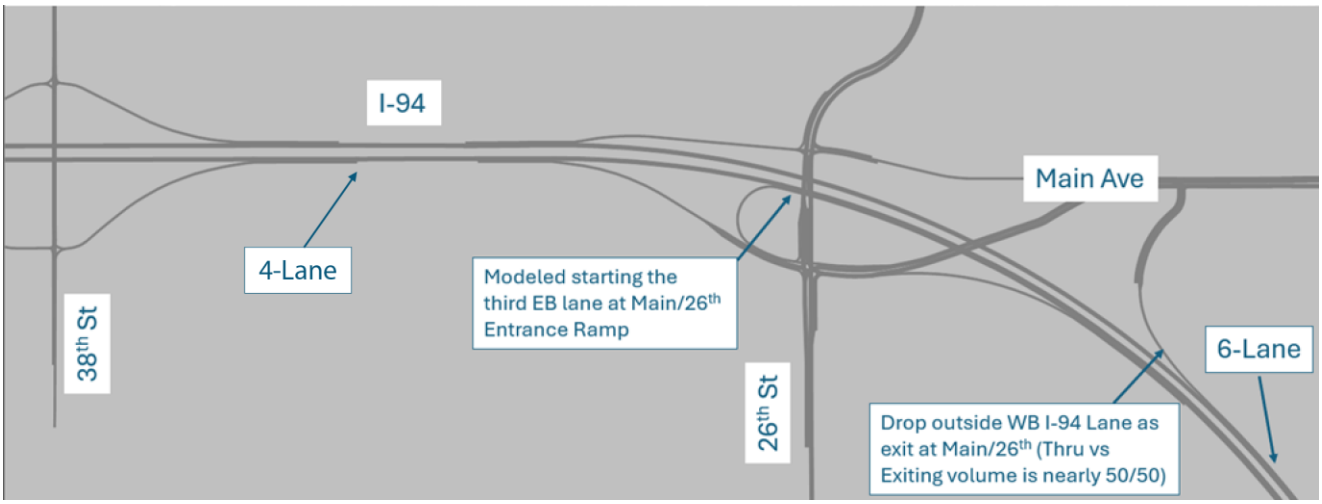

Figure 4.21 – 94 Mainline Traffic Model

The operations shown in Figure 4.22 demonstrate acceptable performance during the full build-out AM peak hour; however, the PM peak operations indicate a need for an eastbound auxiliary lane between the 38th Street and Main Avenue/26th Street interchanges.

Segment	2060 AM		2060 PM	
	Density	LOS	Density	LOS
EB I-94 Entry Ramp from 38th	27	D	58	F
EB I-94 between 38th and Main Ramp	26	C	47	E
EB I-94 Main Exit Ramp	21	C	28	D
EB I-94 between Main Ramps	12	B	16	B
EB I-94 Main Entry Ramp	14	B	23	C
EB I-94 between Main Entry Ramps	11	B	15	B
EB I-94 Main Entry Ramp	14	B	19	B
EB I-94 East of Main	15	B	18	B
EB I-94 13-15th Exit Ramp	15	B	18	B
EB I-94 between 13-15th Ramps	12	B	16	B
WB I-94 between 13-15th Ramps	19	B	39	E
WB I-94 13-15th Entry Ramp	32	D	54	E
WB I-94 East of Main	30	D	46	E
WB I-94 Main Exit Ramp	16	B	30	D
WB I-94 between Main Ramps	10	A	13	B
WB I-94 Main Entry Ramp	19	C	28	D
WB I-94 btw between 38th and Main Ramps	21	C	28	D
WB I-94 38th Exit Ramp	20	C	25	C

Figure 4.22 – 2060 Peak Hour Mainline I-94 1

The infrastructure concepts presented in Chapter 4 provide a framework for future project development activities. As the West 94 Area develops, these concepts must be enhanced via formal project development, stakeholder feedback, and contributions, including environmental review, detailed design, and construction. These concepts were presented as alternatives and the basis for the Public Engagement phase of the project.

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CHAPTER 5 - PUBLIC ENGAGEMENT

Project Leadership

Public engagement is a key component to any successful plan and its future implementation. The West 94 Area Transportation Plan employed numerous strategies and reached out to various entities to hear the needs of the community, City, and stakeholders. These strategies included the development of a study review committee (SRC), meetings with jurisdictional agencies and developers, meetings with a property owner focus group, and comprehensive public engagement, which included both in-person and online engagement.

This chapter discusses the various public engagement strategies utilized and summarizes the feedback heard from these engagement efforts. Full public engagement summaries can be found in the appendix of this document.

Study Review Committee Structure

The Study Review Committee's (SRC) leadership guided the West 94 Area Transportation Plan's design, development, and implementation through strategic and focused meetings. The SRC included members from the Federal Highway Administration, North Dakota Department of Transportation, Southeast Cass Water Resource Districts, Cass County, Metro COG, and Bolton & Menk, as depicted in Figure 5.1 below.

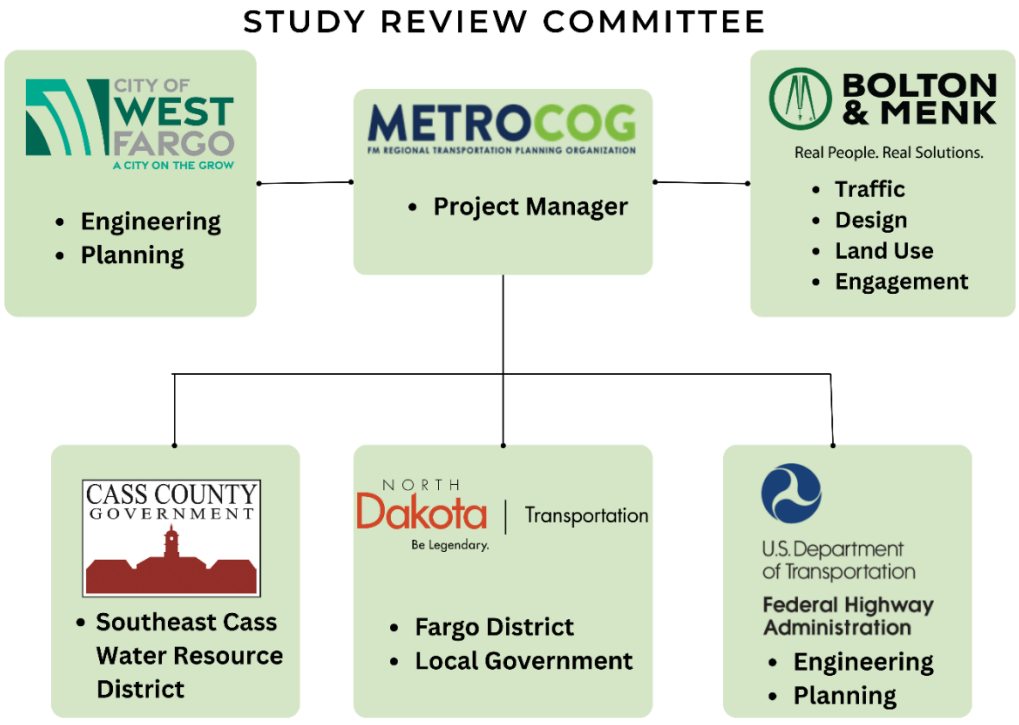

Figure 5.1 – Study Review Committee Structure

Metro COG

1. Dan Farnsworth – Project Manager

City of West Fargo

2. Dan Hanson – City of West Fargo, Senior Director of Community Development
3. Aaron Nelson – City of West Fargo, Planner
4. Kyle McCamy – City of West Fargo, Assistant City Engineer

Southeast Cass Water Resource Districts

5. Kurt Lysne – Representative Contractor Engineer (Moore Engineering)

North Dakota Department of Transportation

6. Aaron Murra – Fargo District Engineer
7. Wayne Zacher – Local Government Division – MPO Coordinator
8. Will Hutchings – Local Government Division – Urban Projects/MPO Coordinator

Federal Highway Administration

9. Kristen Sperry – Planning Program Manager
10. Logan Beise – Engineering and Operations Team Leader

Bolton & Menk

11. Mike Bittner – Project Manager
12. Mojra Hauenstein – Land Use Planner
13. Angie Stenson – Transportation Planner
14. Chris Braband – Transportation Engineer
15. Kevin Mackey – Traffic Forecaster
16. Blue Weber – Engagement Leader

Each Study Review Committee session was led by a different Bolton & Menk staff member. Based on their expertise and relevant project timing, they discussed project components, focusing on key elements to improve efficiency.

Study Review Committee Process and Progression

The Study Review Committee served as the central guiding body and executive oversight for the West 94 Area Transportation Plan. Comprised of representatives from key regional and federal agencies and the consultant team, the SRC met regularly to steer the project from its initial stages through the development of final recommendations.

Across the eight meetings, the SRC focused on several core areas essential to the plan's development:

- Project Foundations & Scope: Early meetings established the project's aggressive schedule and scope of work and introduced the key technical and engagement components.

- Land Use & Growth: Discussions frequently revisited land use scenarios, demographic assumptions (including the 2050 forecast), density targets, and how potential development patterns would influence transportation needs. The link between land use vision and fiscal outcomes was also reviewed.
- Transportation Network & Concepts: A primary focus was on the physical transportation network, including functional classification, typical cross-sections, and particularly, concept engineering for key access points like interchanges and overpasses at 13th/15th Street and Main/26th Street. Discussions also included other critical connections like Christianson Drive and the Spine Roadway.
- Traffic Analysis & Impacts: The SRC reviewed traffic modeling methodology, growth assumptions, forecasted volumes, and sensitivity analyses to understand the impacts of different development and access scenarios. Significant attention was given to how new infrastructure would affect I-94 mainline operations and adjacent areas like the Brooks Harbor neighborhood.
- Stakeholder & Public Engagement: The strategy and findings from engaging with various stakeholders – jurisdictional agencies, developers, property owners, and the public – were integrated throughout the process. Feedback on concepts and preferences heavily informed the technical work.
- Implementation & Phasing: Discussions progressed to the practicalities of implementing the plan, including initial cost assumptions, challenges (geotechnical, hydraulic), phasing scenarios based on prioritizing different interchanges, and overall project development next steps and funding considerations.

The progression across the meetings reflects the iterative nature of the planning process. Initial meetings involved brainstorming and defining the goals for the project. Subsequent meetings reviewed data collection, presented draft analyses and concepts based on technical work and early feedback, and incorporated refinements. Later meetings focused on synthesizing public input, validating findings, refining viable infrastructure concepts, and developing a framework for long-term implementation, including phasing and costs.

The consistent inclusion of action Items at the end of each meeting demonstrates the SRC's active role in directing the project team, requiring revisions, further analysis, and coordination based on the discussions. This iterative review and feedback loop was crucial in shaping the final recommendations presented in the report.

The SRC meetings provided essential oversight and direction for the West 94 Area Transportation Plan. They were the forum for integrating technical analysis, public and stakeholder feedback, and policy guidance. They moved the study from initial concepts to a refined transportation network vision and a pragmatic implementation framework for future growth.

Project Management Team

The Project Management Team (PMT) was the implementation arm responsible for implementing primary tasks and tertiary functions to support the SRC's decision-making process.

The PMT's responsibilities included:

- Executing technical assessments and analyses
- Conducting internal quality assurance/quality control reviews
- Synthesizing complex data into insights and actionable recommendations
- Identifying issues and developing potential solutions
- Filtering information to present decision-ready options to the SRC

This team included representatives and staff from:

- Metro COG – Project Manager
- City of West Fargo – Project Engineer & Planning
- Bolton & Menk – Project & Deputy Managers

Targeted Engagement Audiences and Phasing

The public engagement plan, co-developed by the Study Review Committee, followed a structured approach. Stakeholders—including agencies, developers, property owners, and the public—were engaged sequentially, ensuring their feedback shaped the process in line with Metro COG's Public Participation Plan (PPP) while also aligning with project phases.

Phase 1: Listening to Understand
Jurisdictional entities lay the groundwork and act as the initial North Star for proceeding engagement.

Phase 2: Discerning to Refine
Members of the development community and property owners shape and inform *why and how* concepts will manifest.

Phase 3: Strategizing to Create Trust and Buy-in Broader
Bring concepts and input from earlier phases to the community to help guide recommendations.

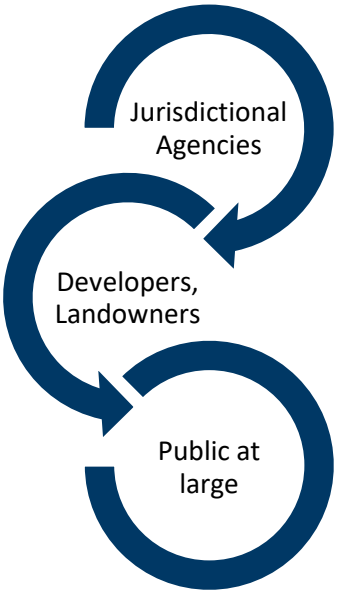

Figure 5.2 – Engagement Phases and corresponding audience

Phase 1: Listening to Understand

To help inform the project team of existing conditions as well as regional efforts that would be relevant to project success, these listening sessions were organized to meet with various jurisdictional agencies. These agencies were selected based on their proximity to the project area as well as being key decision makers who will either be affected or will affect future implications of implementation. The contacts were identified through the Public Engagement Plan and were addressed during a Study Review Committee meeting.

Jurisdictional Agency Sessions

Meeting Details:

- **When:** September 6, 2024 & September 16th, 2024
- **Where:** Combination of Virtual & West Fargo Public Library and Bolton & Menk Office
- **Who:** 13 stakeholders representing eight agencies, including:
    - West Fargo Economic Development Team
    - West Fargo Parks Department
    - Mapleton Township
    - West Fargo Emergency Management
    - Cass County Planning
    - Federal Highway Administration
    - North Dakota Department of Transportation
    - Red River Valley Fair* (Invited but meeting not set at this session – later met at Open House)

Jurisdictional Understanding

These sessions involved local, state, and federal transportation officials to explore requirements for interchange spacing, wetland considerations around the Main Avenue interchange, utility impacts, and major access points. The Brooks Harbor neighborhood was identified as currently at traffic capacity, establishing an essential constraint for future planning. The project team employed a Study Area Context Map to establish baseline knowledge, facilitate discussions, and present the study area to participants. This Study Area Context Map can be seen in Figure 5.3.

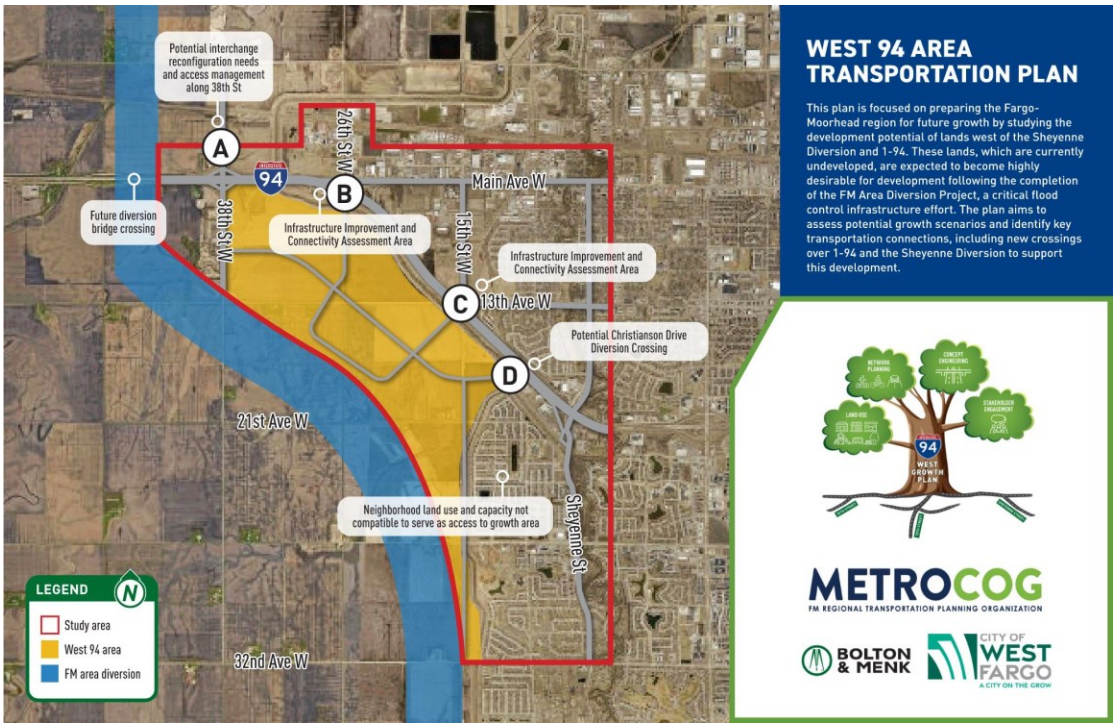

Figure 5.3 – Study Area Context Map

Phase 2: Discerning to Refine

This phase engaged stakeholders through focused discussions with developers and property owners. Developers were invited to share their insights into the future of development within the West 94 Area. While emphasizing that changes would not be immediate, the sessions aimed to gather thoughtful input for refining potential concepts that align with the region's long-term goals.

Developer Roundtable:
Since developers will play a key role in the future of the West 94 Area, area developers were identified, and a roundtable meeting was held.

- **When**: October 25, 2024
- **Where**: West Fargo Fire Department Conference Room & Virtual
- **Who**: 13 stakeholders representing seven organizations, including:
    - Eagle Ridge Developers
    - Roers
    - McGough
    - Christianson Companies
    - Enclave
    - Magnum Electric
    - FMWF Chamber of Commerce
    - West Fargo Economic Development

Developer Findings

Discussions were productive, engaging, and informative, and contributed to the subsequent property owner focus group session. Infrastructure and utilities emerged as common barriers. Most developers expressed that an overpass would limit development potential to residential only, while an interchange would provide greater economic diversity and opportunities. Many developers indicated they seek opportunities for commercial and mixed-use development in West Fargo, but these opportunities are limited by available land and existing infrastructure.

Figure 5.4 – Developers Roundtable

Property Owner Focus Group:

Invitations were mailed to 37 landowners within the West 94 study boundary area to gain their perspectives regarding the study process and its potential impact. Their insights set the stage for a deeper exploration of community priorities and challenges in Phase 2.

- **When**: November 20, 2024
- **Where**: West Fargo Fire Department Conference Room & Virtual
- **Who**: 10 property owners

Property Owner Findings: Property owners inquired about impacts from a proposed 13th Avenue/15th Street interchange and proposed infrastructure, acknowledging the long-term implementation timeline of 20-30 years. While better access to I-94 through a 13th Avenue/15th Street interchange was desirable, concerns were raised about increased traffic surrounding existing neighborhoods. Property owners also emphasized the need for comprehensive planning, including emergency services and specified school locations.

Phase 3: Strategizing to Create Trust & Buy-in

Phase 3 aimed to engage community members and stakeholders through intentional dialogue and outreach strategies, fostering collaboration and trust. By connecting diverse perspectives, this phase laid the groundwork for actionable solutions and sustained engagement, addressing key priorities and challenges identified during earlier phases of the study.

In-Person Engagement

Phase 3 focused on ensuring public involvement by providing opportunities for community members to meet with the project team, ask questions, and discuss the study. The open house was organized to share updates on the study, displayed potential concepts, and gather input to guide study recommendations.

Public Open House:

- **When**: February 27, 2025
- **Where**: Rustad Center, West Fargo
- **Who**: 32 community members

Figure 5.5 – Open House Attendees

Notification Methods:

- Direct communications through school district channels
- Physical posters at the Rustad Center, Hornbacher's, and West Fargo Public Library
- Social media posts on the City of West Fargo and Metro COG Facebook groups
- Lawn signs at key locations
- Email to interested persons list
- Newspaper ad in Forum
- Media release, resulting in coverage by Forum and KVRR

Website & Digital Survey

The digital engagement tools were created to offer convenient ways for the community to share perspectives on the project. Through online tools like surveys, individuals could provide feedback, explore potential alternatives, and express alternative preferences. The tools used included:

- Interactive project website with crossing options and surveys
- Digital engagement platform showing development density options
- Opportunities for direct feedback to the project team

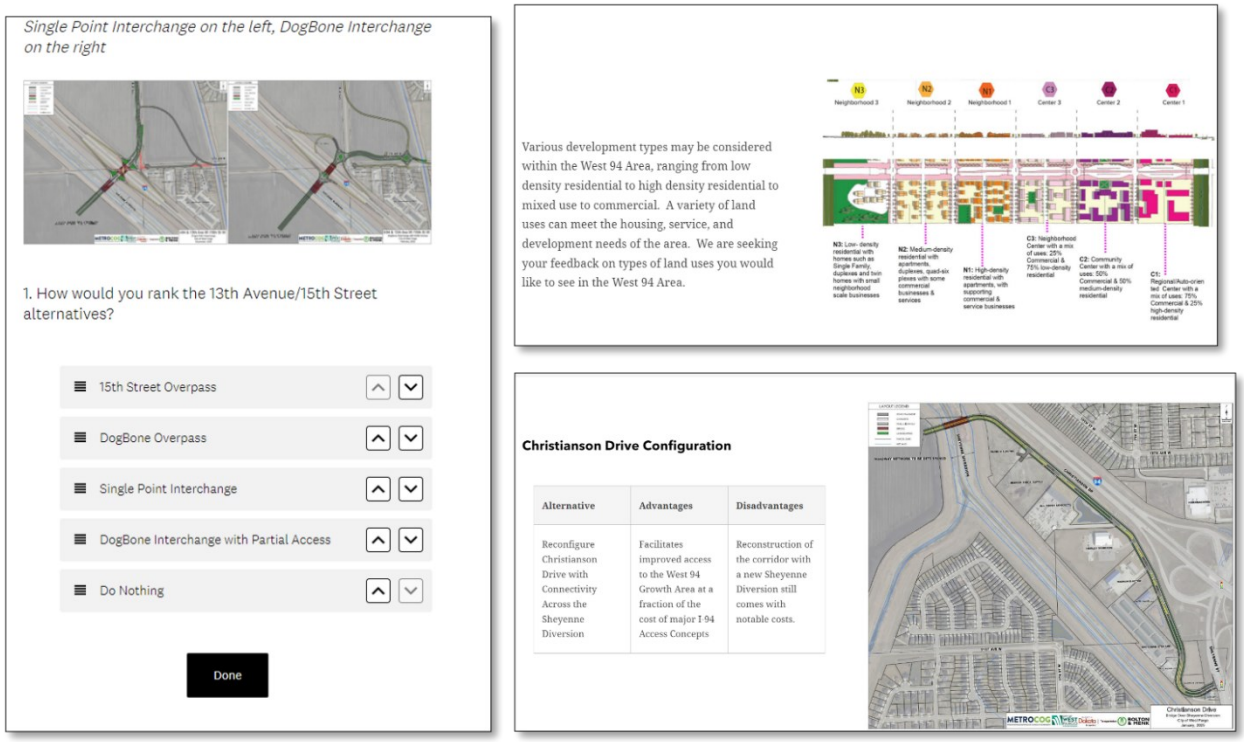

Figure 5.6 – Website & Digital Survey

Phase 3 Engagement Results

Phase 3 Engagement results consisted of feedback from both the February 27th public open house and the corresponding online engagement.

13th Avenue/15th Street Overpass/Interchange

When looking for feedback on the 13th Avenue and 15th Street crossings, participants were asked to rank the five proposed alternatives with a rating from 1st place (most preferred) to 5th place (least preferred). 51 responses were received in total with 7 in-person and 44 from the virtual feedback survey. The *15th Street Single Point* Interchange received the most 1st-place votes, showing strong support, while the *Do Nothing* option was most often ranked lowest, indicating less favor. This demonstrates not only the support for an interchange but also the preference for a crossing type of some sort for this area being the most supported.

To illustrate the community's preferences, Figure 5.8 provides a weighted analysis of the feedback on crossing types. This chart aggregates rankings by assigning points to each position—1st place receives 5 points, 2nd place receives 4 points, down to 1 point for 5th place. The *15th St. Single Point Interchange* has the highest score. In contrast, the *13th Ave Overpass* and the *Do Nothing* options scored the lowest.

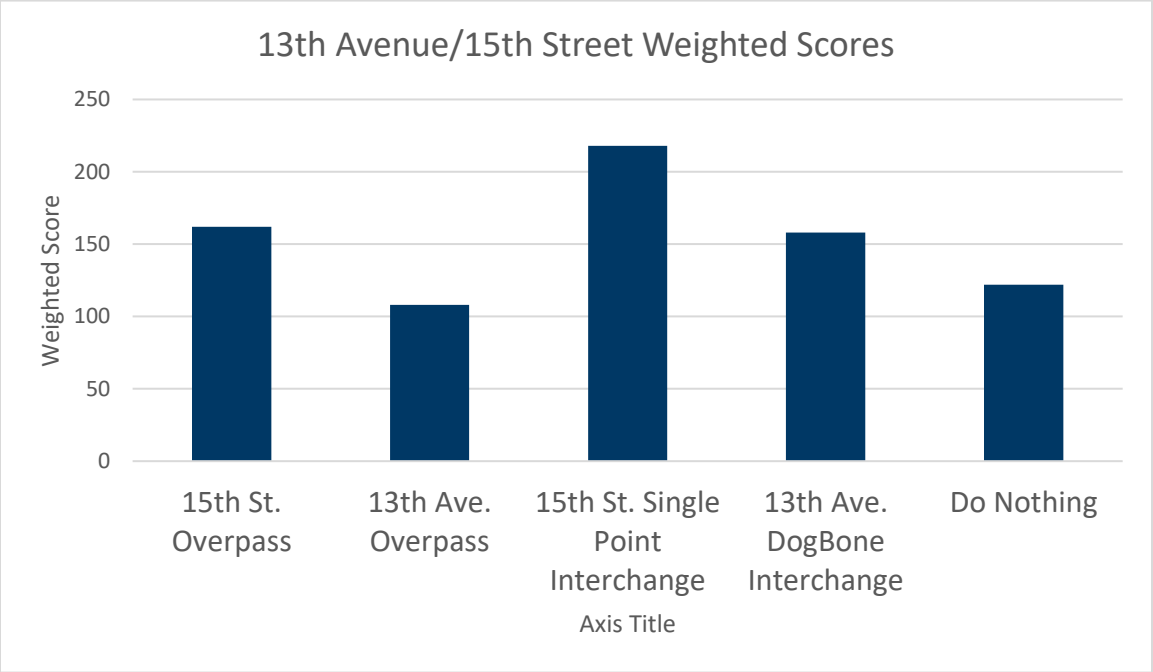

Figure 5.7 – 13th Avenue/15th Street Weighted Scores

As an analysis to identify the preference for type of crossing at the 13th Avenue/15th Street crossing, the data has been shown as a bar chart to illustrate the significant preference gap between the Interchange and the Overpass in Figure 5.7.

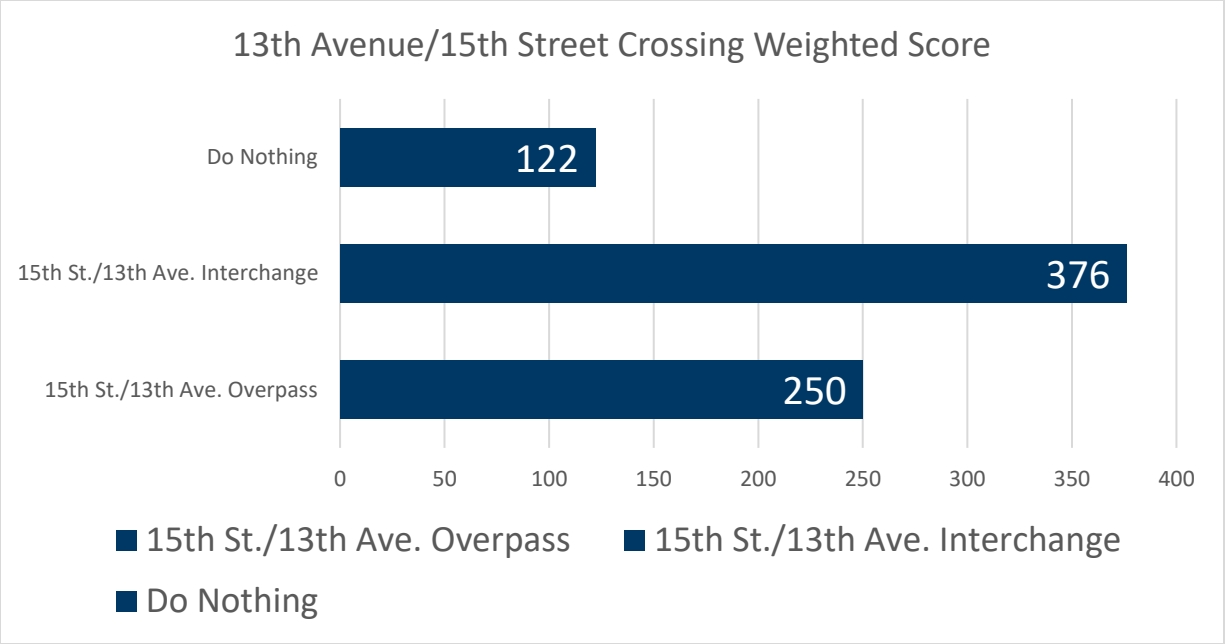

Figure 5.7 – 13th Avenue/15th Street Crossing Preference

The feedback received on crossing types highlighted the community's preference for an interchange compared to an overpass, but location had varied support. In showing crossing types and locations, an important note is the design of the *15th Street Single Point Interchange* was praised over its location.

Additional Connections

Community engagement efforts also focused on identifying public support of additional connections that could improve connectivity and accessibility in the area. The Christianson Drive connection, the reconfigured Main Ave/26th St Interchange, and the upgraded 38th St Interchange concepts were brought to the public to gauge public interest. These additional connections were scored on a scale out of 100 to determine their criticality.

- **Christianson Drive Connection**: This roadway currently functions as a dead-end but has been identified as a pivotal location for a future connection into the West 94 Area. A Christianson Drive connection received a public score of 72 out of 100.
- **Main Avenue/26th Street Interchange**: The existing Main Avenue/26th Street Interchange could serve the West 94 Area if reconfigured to incorporate a north-south 26th Street connection. This reconfigured Main Ave/26th St Interchange received a public score of 66 out of 100.
- **38th Street Interchange**: As the West 94 Area approaches full build-out, additional capacity to the existing 38th Street Interchange is anticipated to be necessary. These improvements to the 38th Street Interchange received a public score of 58 out of 100

Figure 5.9 – Additional Connections Public Scores

Land Use Feedback

The public was asked to provide feedback on desired land use typologies within the West 94 Area by ranking density options on a scale of 1-3 with 1 being the most preferred and 3 being the least preferred. These scores were then weighted using a point system of Land use typologies were scored by the public with the results as shown:

- Commercial Density
    - Low-density commercial (C1): Auto-oriented centers with 75% businesses and 25% high-density residential. Scored 52 weighted points.
    - Medium-density commercial (C2): Community centers with a 50-50 mix of businesses and residential areas. Scored 96 weighted.
    - High-density commercial (C3): Neighborhood centers with 25% businesses and 75% residential. Scored 80 weighted points.
- Residential Density
    - Low-density residential (N3): Encompasses single-family homes, twin homes, and small neighborhood businesses, emphasizing quiet streets and spacious layouts. Scored 114 points.
    - Medium-density residential (N2): Includes duplexes, quad-sixplexes, and some apartments, combined with commercial businesses and services to create balanced and accessible neighborhoods. Scored 111 points.
    - High-density residential (N1): Primarily features apartments with some inclusion of commercial and service businesses. Scored 63 points.

Red River Valley Fair Follow-up Meeting

Following the open house, a meeting focused on traffic management for various events was conducted. Fair staff indicated that the 15th Street interchange concept could enhance traffic access, stressing the need for strong access via the Main Avenue interchange and expressing interest in land partnerships. They also raised concerns about whether the proposed roundabouts would handle high traffic volumes during major events. This feedback improved the study team's understanding of event traffic demands, access needs, and other transportation needs of the Red River Valley Fair.

Engagement Summary

Public engagement played an important role in the planning process for the West 94 Area Transportation Plan. Feedback was gathered through meetings, surveys, and outreach involving community members, developers, property owners, and local agencies. This input shaped the study by identifying priorities, challenges, and preferences for infrastructure and land use in the area.

As heard from stakeholders and members of the public, the next steps for the West 94 Area were looked at with excitement and opportunity. With that, recognizing the timing of implementation helps manage expectations and promotes community involvement. Clear communication about implementation encourages understanding and participation.

The input outlined in this chapter guided the technical team to refine their analysis for implementation. The next chapter turns these insights and analysis into potential implementation strategies of future conditions for the West 94 Area.

CHAPTER 6: IMPLEMENTATION PLAN

Phased Implementation Plans by Development Concepts

Phased implementation strategies were developed for the two full-buildout development concepts discussed in previous chapters, which are described here as *Scenario A* and *Scenario B*.

The phased implementation plans outline the sequence of roadway project execution to support the land use vision. These roadway projects are divided into four categories of implementation timeline; immediate, short, mid-term, and long-term. This section also identifies project development steps and specific next steps to build towards project implementation.

Implementation Scenario A – Prioritize Main Avenue/26th Street West Interchange

Scenario A (see Figure 6.1) prioritizes the short-term phase, which includes the construction of Christianson Drive improvements, the initiation of spine corridor development, and the reconfiguration of the Main Avenue/26th Street interchange. The mid-term phase focuses on extending the spine corridor connection, the potential connection of 26th Street (north of I-94) into the northwest subarea, and further studying of pedestrian/bike overpasses. The long-term phase involves completing major interchange reconstruction at the 38th Street interchange, building a new interchange at the 13th Avenue/15th Street intersection, and constructing an arterial roadway on 15th Street south between 32nd Avenue and the spine roadway.

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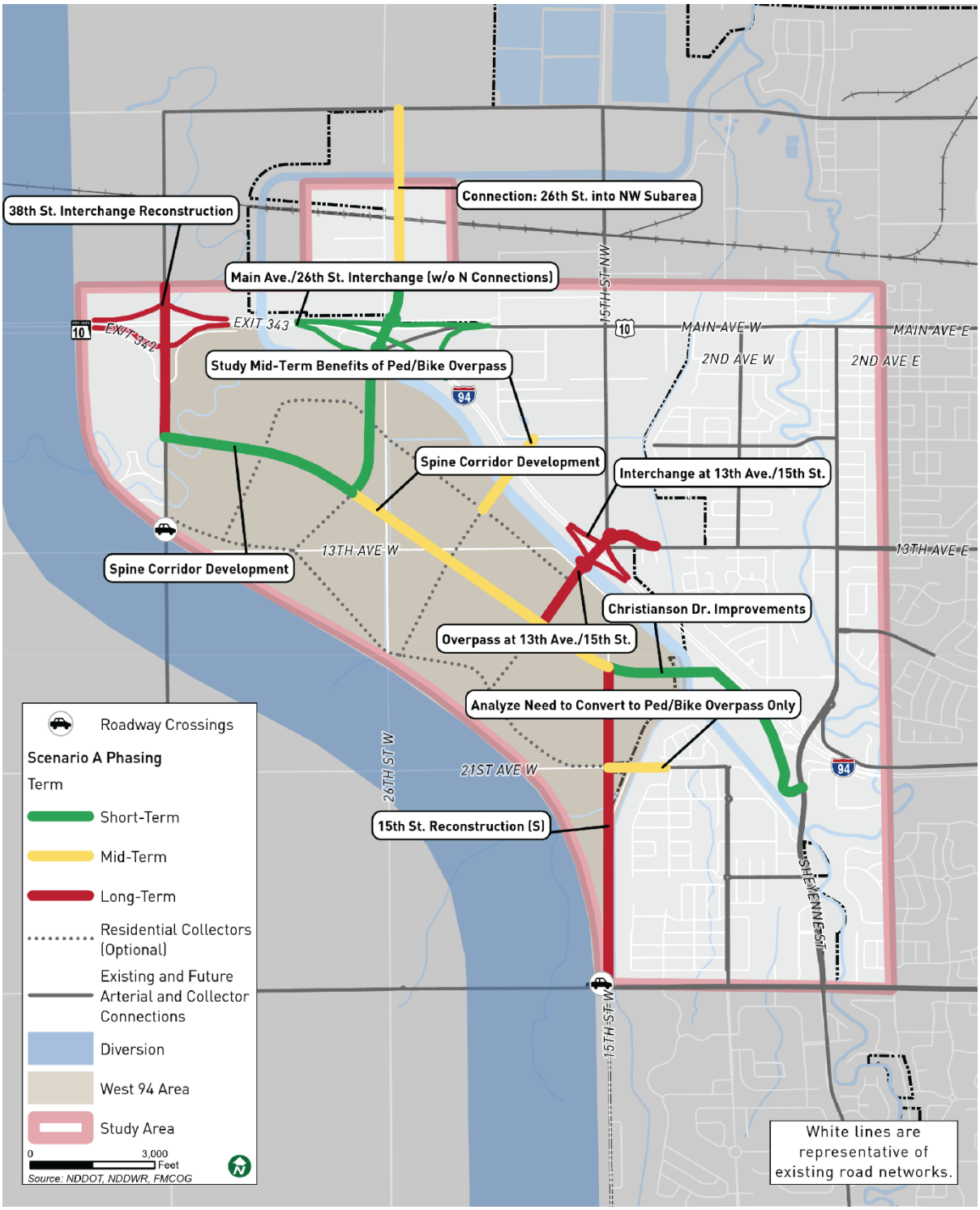

Figure 6.1 – Phasing Implementation Scenario A

Scenario A – Advantages

Scenario A takes a proactive approach to future traffic demands by addressing long-term mobility needs ahead of anticipated congestion. Prioritizing significant infrastructure investments enables a mid-term connection to the Northwest subarea, unlocking substantial development opportunities. Enhanced connectivity through new interchanges and arterial connections can attract large-scale development projects that benefit from proximity to high-capacity roadways, supporting regional economic growth.

Challenges of Scenario A

Short-term growth in this scenario depends on a high-cost interchange scenario, making initial development costly and potentially delaying projects until sufficient funding is secured. The west-to-east development pattern may diverge from the city's desired development vision, potentially fostering "leapfrog" development, although it better aligns with utility connections which must come from the Northwest. Additionally, focusing early infrastructure investments in the northwest sector could lead to highway-centric development patterns that prioritize vehicle-oriented land uses over more diverse, mixed-use urban growth. Placing the 13th Avenue/15th Street interchange in the long-term implementation category may constrain growth in this area until later phases.

Scenario A (26th Street/Main Avenue	Projects
Short Term	• Christianson Drive Improvements • Main Ave/26th Interchange • Spine Corridor Development
Medium Term	• Spine Corridor Connection • Analysis of Pedestrian/Bike Overpass across I-94 • Connection: 26th St into NW Subarea
Long Term	• 13th Ave/15th St Interchange • 38th St Interchange Reconfiguration • 15th St Reconstruction

Figure 6.2 – Scenario A Project List

Implementation Scenario B – Prioritize 13th Avenue/15th Street West Interchange

Scenario B (see Figure 6.3) focuses on the short-term phase, which enhances Christianson Drive and the 13th Avenue/15th Street interchange as the primary entry point to the new development zone. The mid-term phase involves the implementation of the Main Ave/26th Street interchange, significant development along the spine corridor, and the establishment of the 15th Street connection (running south to 32nd Avenue) to foster an interconnected development layout. Lastly, the long-term phase involves reconfiguring the 38th Street interchange, linking 26th Street to the northwest subarea, and constructing a pedestrian and bike overpass over I-94.

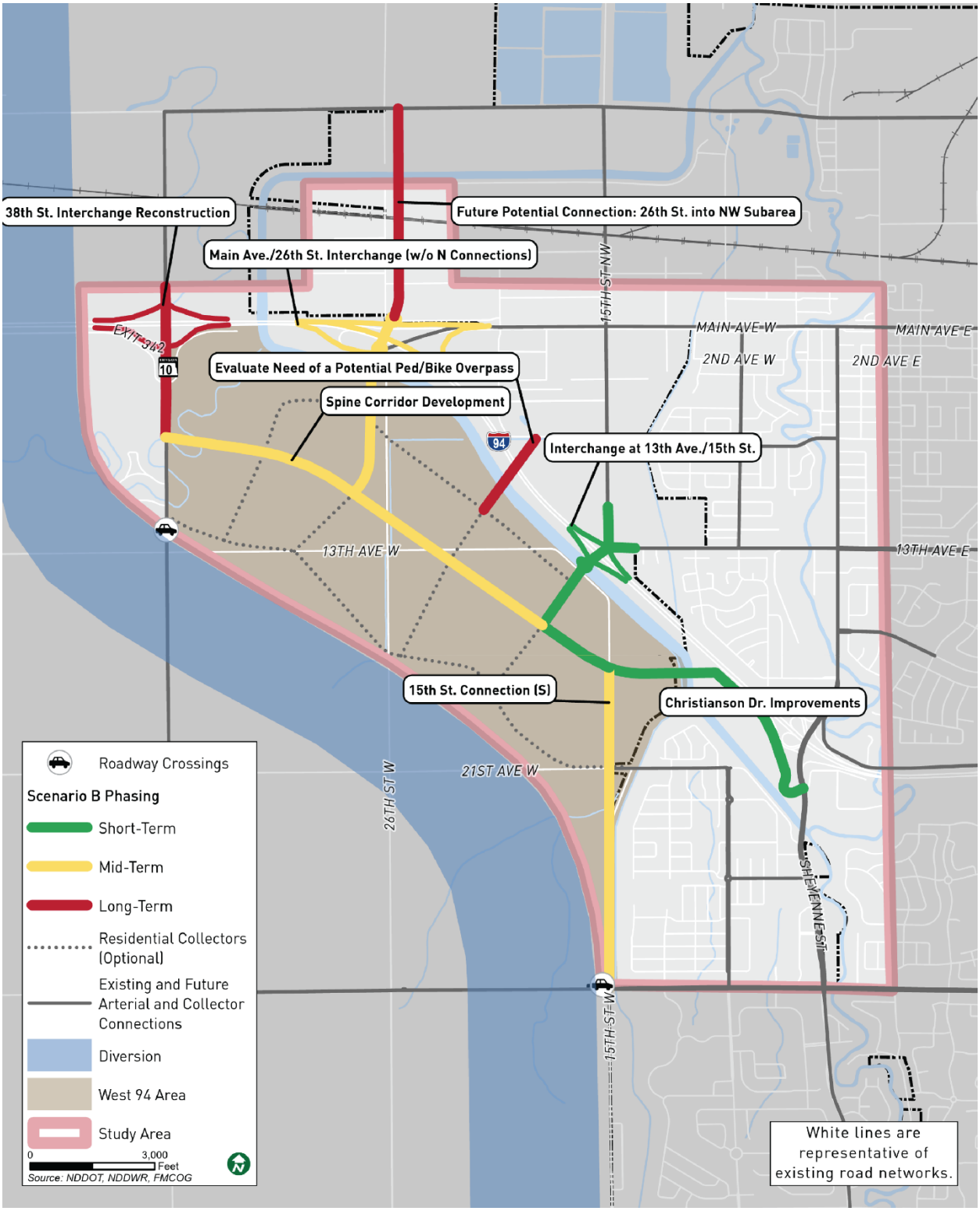

Figure 6.3 – Phasing Implementation Scenario B

Scenario B – Advantages

Scenario B fosters a more organic, contiguous southeast-to-northwest growth pattern that aligns with existing development trends and ensures connected expansion of infrastructure and services. Starting with the 13th Avenue/15th Street interchange supports more immediate commercial investment on both sides, creating a high-activity economic corridor. Short-term improvements provide faster relief to the Brooks Harbor Neighborhood, addressing existing congestion concerns. The phased infrastructure investments allow for a more gradual and cost-effective development approach.

Challenges of Scenario B

The proposed 13th Avenue/15th Street interchange requires federal access approval—a potentially lengthy and uncertain process that could delay early development plans. Growth in the northwest suburban area remains reliant on 38th Street until long-term infrastructure investments are completed, which may create bottlenecks and temporary congestion. While increased interstate access in the short term is beneficial, it may lead to over-reliance on the interstate system before local road networks are fully developed to manage increased traffic.

Scenario B (15th Street/13th Avenue)	Projects
Short Term	• Christianson Drive Improvements • 13th Ave/15th St Interchange
Medium Term	• Main Ave/26th St Interchange • Spine Corridor Development • 15th St Reconstruction
Long Term	• 38th St Interchange Reconfiguration • Analysis of Pedestrian/Bike Overpass across I-94 • Potential Connection: 26th St into NW Subarea

Figure 6.4 – Scenario B Project List

Phasing Scenarios Score Card

Each development phasing scenario has distinct merits and challenges. Figure 6.5 summarizes the key differences between scenarios for each criterion, with grey indicating a fair rating and green indicating a good rating. The scorecard matrix is a valuable tool to provide a clear, visual comparison of both scenarios across key criteria, making it easier to evaluate trade-offs and support informed decision-making. By summarizing complex factors such as cost, development patterns, land-use impacts, and community feedback, the matrix provides a straightforward, visual framework for assessing the strengths and challenges of each scenario. The rubric and color coding—green indicating a good rating and grey indicating a fair rating—were established based on how well each scenario aligns with city goals, implementation readiness, stakeholder input, and technical considerations, such as utility connections and multimodal access.

Scenario A Characteristics

Scenario A, focused on the 26th Street/Main Avenue gateway, envisions development progressing from northwest to southeast, aligning with existing utility availability. While this scenario requires a high short-term investment, the Right-Of-Way (ROW) for the interchange is already secured. It is better suited to accommodate initial heavy commercial growth and provides a mid-term connection to the Northwest subarea. However, this scenario may temporarily reduce short-term access to I-94 and delay traffic relief to the Brooks Harbor neighborhood. Multimodal connectivity will be supported by a bike/pedestrian overpass of I-94, integrated with spine corridor development.

Scenario B Characteristics

Scenario B supports an east-to-west development pattern with reduced potential for leapfrog growth. It offers a more cost-effective implementation but requires additional project development steps, including approval of the Federal Highway Administration's (FHWA) Interchange Justification Report (IJR) and engagement with neighborhood and fairground stakeholders. This scenario aligns well with a mixed-use growth vision but establishes a long-term (rather than mid-term) connection to the Northwest subarea. While the fairground community has shown interest in the proposed 13th Avenue/15th Street interchange, the Elmwood neighborhood has expressed concerns. In this scenario, the primary multimodal connection over I-94 would be through the 13th/15th interchange.

Key Criteria	Scenario A – 26th St/Main Ave		Scenario B – 15th St/13th Ave	
Development Location	From northwest to southeast, aligned with utility availability		From east to west, there is less potential for leapfrog growth.	
Implementation	High short-term cost, ROW is already purchased for the Main Ave/26th St. interchange.		More feasible implementation and cost, but requires more project development steps (coordination with FHWA, NDDOT, neighborhoods and fairgrounds)	
Land Use Impacts	It is likely to serve initial heavy commercial growth better.		More likely to be well-suited for a mixed-use growth vision.	
Northwest Subarea	**Mid-term** connection to the Northwest subarea		**Long-term** connection to the Northwest subarea	
Multimodal	May require a ped/bike overpass to be built in the mid-term to allow reasonable access across I-94		Primary bike/pedestrian connection over I-94 will be through the 13th/15th Interchange	
Property Owners	Right-of-way has already been purchased for Main/26th to the north, but there will be slower relief to the Brooks Harbor neighborhood.		Interest from Fairgrounds, but concern from Elmwood neighborhood on interchange at 13th/15th	
Interstate 94 (I-94)	Add more reliance to I-94 overall, but potentially reduce short-term access.		Receive traffic support from the Christianson Drive improvement.	

Figure 6.5 – Phasing Scenarios Score Card

Implementation Plan

The phasing plans (see Figures 6.7 and 6.8) present the recommended sequencing of infrastructure projects under both scenarios, including implementation phases and suggested project development steps. The tables are structured to help prioritize actions based on project type and readiness within a long-range implementation timeline. The phasing timeline is broken down into four categories: immediate (0-5 years), short (5-10 years), medium (10-20 years), and long (20+ years), which best represent project development activities.

Figure 6.6 – Phasing Timeline

Each row in the table represents a specific infrastructure improvement that is identified as critical:

- Christianson Drive Extension
- 13th Avenue/15th Street Interchange
- Main Avenue/26th Street Interchange
- 38th Street Interchange
- 15th Street Reconstruction
- Spine Corridor Development
- 26th Street Connection to Northwest Subarea
- Analysis of Bike/Pedestrian Overpass on I-94

Beneath each column, the table outlines a series of key development steps necessary to advance the infrastructure projects through the planning and implementation process. These steps include the preservation of Right-of-Way (ROW), preparation of Interchange Justification Reports (IJR) or Interchange Modification Justification Reports (IMJR), and environmental documentation that satisfies the requirements of the National Environmental Policy Act (NEPA). Preserving the right-of-way (ROW) for major internal corridors, such as the spine roadway, is crucial to ensure long-term connectivity and flexibility. Additional steps involve building local support, pursuing funding or grant opportunities, demonstrating project readiness, and ensuring inclusion in local or regional plans.

The phasing matrix below uses shaded cells to indicate the specific actions required for each project, following the four phasing categories outlined in Figure 6.6. This format enables planners and decision-makers to visualize and coordinate development activities efficiently, considering budgetary and logistical factors over time.

Next Step	Inclusion of the project in local/ regional plans	Right-of-Way Preservation (official mapping, platting)	Interchange Justification Report (IJR)	Interchange Modification Justification Report (IMJR)	Environmental Document (NEPA)	Gather Local Support (community engagement, stakeholders)	Funding Application	Project Readiness (risk assessment, ROW acquisition, scope of work, budget estimation)	Construction
Christianson Drive Extension	*Immediate*	*Immediate*	*N/A*	*N/A*	*Immediate*	*Immediate*	*Immediate*	*Immediate*	*Short*
Main Avenue/26th Street Interchange	*Immediate*	*Completed*	*N/A*	*Short*	*Immediate*	*Immediate*	*Immediate*	*Immediate*	*Short*
Spine Corridor Development	*Short*	*Immediate*	*N/A*	*N/A*	*Short*	*Immediate*	*Short*	*Short*	*Short*
26th Street Connection to NW Subarea	*Mid*	*Short*	*N/A*	*N/A*	*Short*	*Short*	*Mid*	*Short*	*Mid*
Bike/Ped Overpass on I-94	*Mid*	*N/A*	*N/A*	*N/A*	*Mid*	*Short*	*Mid*	*Short*	*Mid*
13th Avenue/15th Street Interchange	*Mid*	*Long*	*Mid*	*N/A*	*Mid*	*Mid*	*Long*	*Long*	*Long*
38th Street Interchange Reconfiguration	*Long*	*Long*	*Mid*	*Mid*	*Mid*	*Mid*	*Long*	*Long*	*Long*
15th Street Reconstruction	*Long*	*Long*	*N/A*	*N/A*	*Mid*	*Mid*	*Long*	*Long*	*Long*

Figure 6.7 – Scenario A Phasing Plan

Next Step	Inclusion of the project in local/ regional plans	Right-of-Way Preservation (official mapping, platting)	Interchange Justification Report (IJR)	Interchange Modification Justification Report (IMJR)	Environmental Document (NEPA)	Gather Local Support (community engagement, stakeholders)	Funding Application	Project Readiness (risk assessment, ROW acquisition, scope of work, budget estimation)	Construction
Christianson Drive Extension	*Immediate*	*Immediate*	*N/A*	*N/A*	*Immediate*	*Immediate*	*Immediate*	*Immediate*	*Short*
13th Avenue/15th Street Interchange	*Immediate*	*Immediate*	*Immediate*	*N/A*	*Immediate*	*Immediate*	*Immediate*	*Immediate*	*Short*
Spine Corridor Development	*Short*	*Immediate*	*N/A*	*N/A*	*Short*	*Immediate*	*Immediate*	*Short*	*Mid*
Main Avenue/26th Street Interchange	*Short*	*Completed*	*N/A*	*Short*	*Short*	*Short*	*Short*	*Short*	*Mid*
15th Street Reconstruction	*Mid*	*Mid*	*N/A*	*N/A*	*Mid*	*Mid*	*Mid*	*Mid*	*Mid*
Bike/Ped Overpass on I-94	*Mid*	*N/A*	*N/A*	*N/A*	*Mid*	*Mid*	*Long*	*Long*	*Long*
38th Street Interchange Reconfiguration	*Long*	*Long*	*Mid*	*Mid*	*Mid*	*Mid*	*Long*	*Long*	*Long*
26th Street Connection to NW Subarea	*Long*	*Long*	*N/A*	*N/A*	*Mid*	*Mid*	*Long*	*Long*	*Long*

Figure 6.8 – Scenario B Phasing Plan

Fiscal Sustainability

This fiscal overview is a broad financial estimation using the North Dakota Department of Commerce's development calculator (ND2C). It should serve as a starting point for high-level fiscal discussions. The city of West Fargo is undergoing a more detailed fiscal analysis as part of its Growth Area Study.

The ND2C provides conservative estimates and serves as a starting point for discussions on the fiscal impact of new developments. It excludes costs for services such as police, fire, and general government, treating them as fixed costs. The model assumes that development revenue is generated in the first year, while development costs are spread over the project's duration. It provides estimates rather than precise calculations and does not specify who or how the expenses are paid.

The ND2C was utilized to estimate potential revenues and costs, thereby enhancing the understanding of the overall net fiscal impact of Land Development Scenario A at full build-out (100%). This analysis, summarized below, indicated that the projected Annualized Revenues, around $46 million, surpass the Annualized Costs, estimated at $8 million, suggesting a likely positive fiscal outcome for the study area.

Key Takeaways

- The project is **capital-intensive upfront** but **fiscally sustainable long-term**, with annual revenues far exceeding annualized costs.
- **Property tax** is the dominant revenue stream, emphasizing the importance of full residential and commercial occupancy.
- **Exclusion of service costs** means the actual net fiscal impact may be lower than projected.
- The model is **conservative**, making it a valuable tool for risk-averse planning.

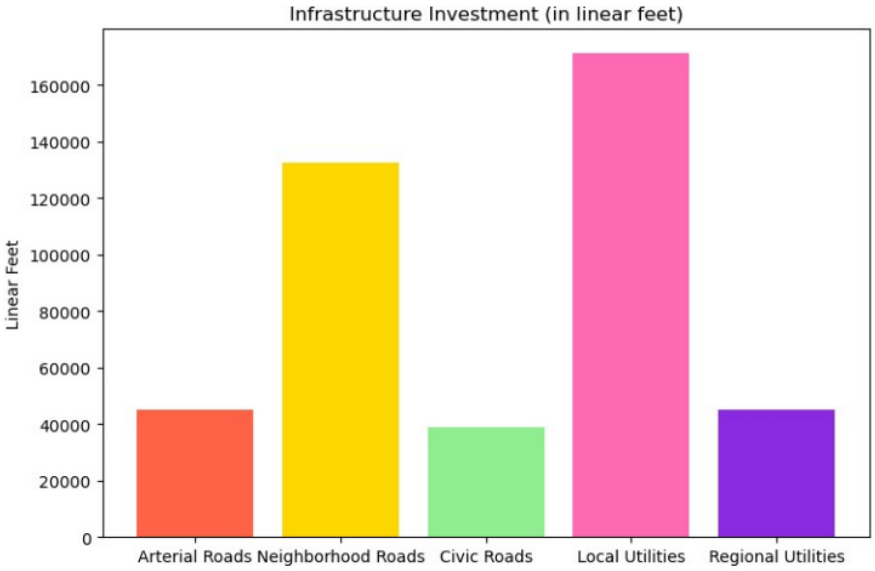

Figure 6.9 – Estimated Infrastructure Investment Requirements

Funding Plan

The successful development of the West 94 Area will require sustained commitment from the City of West Fargo to guide development and secure significant funding. While both phasing plans present feasible paths forward, progress will depend on continued leadership and proactive efforts to align financing with infrastructure needs. Pursuing grant opportunities will be essential to accelerating project delivery and achieving the desired pace and density of development.

Figure 6.10 provides a comparative summary of estimated infrastructure costs for Scenario A (prioritize 26th Street/Main Avenue interchange) and Scenario B (prioritize 15th Street/13th Avenue interchange) across three implementation phases of short-term, medium-term, and long-term. While both scenarios result in a similar total investment range of $385M–$455M, their phasing costs differ. Scenario A anticipates higher short-term costs ($140M–$165M) due to early investment in the Main Avenue Interchange and associated improvements. In contrast, Scenario B presents lower short-term costs ($105M–$125M) but shifts more investment to the medium term ($155M–$180M) as more project development and stakeholder coordination are required. Both scenarios conclude with comparable long-term costs.

Scenario A (26th Street/Main Avenue)	Timeline	Scenario B (15th Street/13th Avenue)
$140-165M	**Short Term**	$105-125M
$125-145M	**Medium Term**	$155-180M
$120-145M	**Long Term**	$125-145M
$385-455M	**Total Cost**	**$385-455M**

Figure 6.10 – Scenario A Phasing Plan

Implementing the phasing plan requires a coordinated approach to funding and project phasing. By leveraging federal, state, and local resources through the ND2C Calculations Methodology and adhering to regulatory processes, the city can efficiently and effectively advance these critical infrastructure projects. A preliminary overview of grant opportunities (current as of May 2025) is shown below.

Grant Programs	Description	Infrastructure Project
Infrastructure for Rebuilding America (INFRA) and Rural Surface Transportation Programs	Provides funding for highway and freight projects that improve safety, efficiency, and reliability in rural and urban areas.	13th Avenue/15th Street Interchange Main Avenue/26th Street Interchange 38TH Street Interchange
Better Utilizing Investments to Leverage Development (BUILD) Program	Provides competitive grants for transportation projects that boost economic development and improve infrastructure resilience.	13th Avenue/15th Street Interchange Main Avenue/26th Street Interchange 38TH Street Interchange
Bridge Investment Program (BIP)	Funds bridge replacement, rehabilitation, preservation, and protection to enhance safety, efficiency, and reliability for people and freight.	Main Avenue/26th Street Interchange 38TH Street Interchange

Rural Surface Transportation Grant Program	Funds projects in rural areas that improve highway safety, reliability, and access to key freight corridors and regional economic hubs — including new interchanges, corridor upgrades, and bridge replacements. Designed to address rural infrastructure challenges, the program offers favorable match rates and is well-suited for large-scale projects that enhance economic development and freight mobility.	15th Street Reconstruction Main Avenue/26th Street Interchange 38TH Street Interchange Spine Corridor Development 26th Street Connection to Northwest Subarea
National Highway Freight Program	Supports projects that enhance freight mobility, reduce bottlenecks, and improve safety on key freight corridors. Eligible projects include highway improvements, interchange modifications, and truck parking facilities that directly benefit freight movement.	13th Avenue/15th Street Interchange Main Avenue/26th Street Interchange 38TH Street Interchange
NDDOT Transportation Alternative (TA)	Funds for non-motorized transportation projects, including pedestrian and bicycle infrastructure, to enhance mobility and safety.	15th Street Reconstruction Spine Corridor Development 26th Street Connection to Northwest Subarea Bike/Ped Overpass on I-94
NDDOT Flexible Transportation Fund (Flex)	Provides discretionary funding for various transportation needs, including transit, highway, and multimodal improvements.	Christianson Drive Extension 15th Street Reconstruction Spine Corridor Development Bike/Ped Overpass on I-94 26th Street Connection to Northwest Subarea
Highway Safety Improvement Program (HSIP)	Aims to reduce traffic fatalities and serious injuries by funding roadway safety infrastructure improvements.	13th Avenue/15th Street Interchange Main Avenue/26th Street Interchange

		38TH Street Interchange
Safe Streets and Roads for All (SS4A) Program - Planning	Provides funding for communities to develop comprehensive safety action plans aimed at preventing roadway fatalities and serious injuries.	Christianson Drive Extension 15th Street Reconstruction Spine Corridor Development Bike/Ped Overpass on I-94
Safe Streets and Roads for All (SS4A) Program - Implementation	Supports the execution of safety projects and strategies, such as infrastructure improvements and policy changes, to enhance roadway safety and reduce traffic-related incidents.	Christianson Drive Extension 15th Street Reconstruction Spine Corridor Development Bike/Ped Overpass on I-94

Figure 6.11 – Funding Options for West 94 Implementation Plan

Recommendations

Key recommendations must inform the City of West Fargo and the Metro Council of Governments' strategy for effectively executing the West 94 Area Transportation Plan.

Key implementation considerations include:

- **Right-of-Way Preservation**: Immediate action is necessary to preserve the right-of-way (ROW) for major internal corridors, particularly the Spine roadway. This should be accomplished through official mapping, requirements, and development agreements that secure necessary corridors before land values increase with development pressure.
- **Project Development Continuity**: Both implementation scenarios require ongoing attention to project development activities to ensure continuity. Establishing a dedicated project management team or position responsible for coordinating these efforts will maintain momentum and ensure consistent progress.
- **Grant Pursuit Strategy**: Given the significant funding needs, developing a strategic approach to grant applications is essential. This should include maintaining "shovel-ready" projects, cultivating relationships with funding agencies, and aligning local planning documents with grant priorities.
- **Collaborative Stakeholder Approach**: Successful implementation will require ongoing collaboration among numerous stakeholders, including property owners, developers,

transportation agencies, and community groups. Establishing regular coordination forums can help address challenges proactively and build consensus.

- **Flexible Phasing**: While the phasing plans provide a framework for implementation, they should be viewed as flexible guides rather than rigid prescriptions. Regular reassessment of market conditions, funding availability, and development progress will allow for strategic adjustments while maintaining the overall vision.

CONCLUSION

The West 94 Area Transportation Plan represents a significant opportunity for the City of West Fargo to shape future development in alignment with their vision for mixed-use, connected, and sustainable growth. The implementation plan presented in this chapter provides a framework for realizing this vision through strategic infrastructure investments and careful phasing.

Both implementation scenarios offer viable paths forward, each with distinct advantages and challenges. The tax analysis confirms that the development density envisioned for this area will generate sufficient revenue to justify the substantial infrastructure investments required, ensuring long-term fiscal sustainability.

Success will ultimately depend on the city's sustained commitment to guiding development, preserving critical corridors, and pursuing diverse funding sources, particularly grants. With proper attention to these factors, this project can become a model for thoughtful, connected development that enhances the region's economic vitality and quality of life.