













Leduc County Transportation Master Plan



Acknowledgements

The Leduc County Engineering team wants to thank those individuals and groups from Leduc County and all other organizations without whose cooperation and input this study could not have been accomplished.

- Leduc County Council
- Mr. Garett Broadbent, Director, Road Operations and Agricultural Services, Leduc County
- Mr. Darrell Stone, Manager, Road Operations, Leduc County
- Ms. Laurie Johnson, Senior Planner, Leduc County
- Ms. Katherine Degaust, Communications Coordinator, Leduc County
- Mr. Jordan Evans, Manager, Regional and Long Range Planning, Leduc County
- Mr. Dean Ohnysty, Director, Community Services, Leduc County
- Mr. Nicholaus Moffatt, Manager, Parks, Leduc County

The contents of this document must be credited to numerous other individuals within the above agencies who have inadvertently been excluded from the above list, but which have contributed to the study process through their comments and guidance.



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Executive summary

Introduction

Leduc County's 2024 Transportation Master Plan (TMP) is a blueprint for addressing the growth and progress of transportation infrastructure over the next 25 years. It seeks to build on and address the changes in transportation since the last TMP was prepared in 2001. Over the next 25 years, the County is expected to grow both in population - with an estimated 6,000 -to- 10,000 new residents – and economic development opportunities – providing an estimated 26,000 additional jobs. To support this expansion, the TMP is intended to guide the continued residential, industrial and commercial development by promoting alternatives to the automobile and by facilitating economic opportunities by encouraging the effective and efficient movement of people and goods.

Vision and Principles

Vision: "To provide safe, reliable roads for our residents and businesses and the infrastructure needed to support economic development."

The Transportation Master Plan is guided by a vision, a set of principles and objectives. The vision statement describes Leduc County's goals for the long-term development of its transportation network and initiatives. It depicts a vision of what the transportation network should look like in the future and sets out a defined direction for the planning and execution of County strategies aimed at achieving the vision.

The vision for the Transportation Master Plan was supported by the following five guiding principles:

- 1. Meet the transportation infrastructure needs of the present and future urban, rural, agricultural, industrial, business and lakeshore communities.
- 2. Identify and recommend infrastructure investment and implementation that supports sustainable and integrated multimodal transportation that delivers fiscal responsibility, common-sense investment and supports the needs of Leduc County for the next two decades.
- 3. Create a vision in Leduc County that enhances roadway safety, accessibility, equity and inclusivity that supports active, healthy and livable communities.
- 4. Achieve and support the policy directions of the County's Municipal Development Plan (MDP) and Strategic Plan.
- 5. Undertake a comprehensive public engagement process to seek ideas and input from the broadest possible sample of residents, businesses and industries.

Study Process

The Leduc County Transportation Master Plan was developed using a multi-step process that involved participation from the public, regional stakeholders and Leduc County employees. Effective consultation and engagement were critical components of the process. Input over the course of the study was reviewed to inform the content of the TMP.

Pre-engagement meetings with representatives of adjacent municipalities, community groups, major employers, associations and Alberta Transportation and Economic Corridors were conducted to discuss Leduc County's existing and future transportation services and related infrastructure. This was undertaken to determine the interests and concerns people and organizations had and helped to shape the consultation process.

Public participation events were organized and undertaken to help identify key issues and recommendations that residents have with the current state of the transportation network. After each phase of public participation, the information collected was used to determine and evaluate possible transportation infrastructure improvements. Analyses were conducted assuming the existing and future growth of Leduc County. Three presentations (Dec. 14, 2021, Jan. 11, 2022, and Nov. 24, 2022,) were made to County Council during the development of TMP. Additionally, Council was briefed about the proposed roadway classification methodology in a workshop session that took place on Feb. 1, 2020.

Summary of Recommendations

The TMP includes a set of recommendations that form the foundation for the County's next steps in achieving the above guiding principles. Several policy and improvement recommendations were established in addition to road network improvement solutions. The following is a summary of the recommendations aimed to support the future transportation network in Leduc County.

a. Regional transportation policies

Leduc County is in close proximity with the CANAMEX Trade Corridor (QE II/Highway 2), Edmonton International Airport (YEG) and multiple national railways; therefore, the County's transportation infrastructure must be integrated with the surrounding existing and planned freeways, interchanges and regional transportation infrastructure serving the Edmonton Metropolitan Region and province. Efforts to further enhance this integration can advance and diversify the employment opportunities and services offered to residents, businesses and industries.

The recommended strategies include:

- Support of local and regional transportation initiatives and partnering with Edmonton International Airport (YEG), the province and neighbouring municipalities.
- Alignment of Leduc County's Transportation Master Plan with the long-term Edmonton Metropolitan Regional Board's (EMRB) recommended 25-year project list by remaining a key stakeholder in the future planning of key corridors and infrastructure and engaging with Alberta Transportation and Economic Corridors on key issues of capacity and safety.
- Coordinate where possible with EMRB established roadway priorities while maintaining municipal primacy/jurisdiction over County projects when warranted.
- Support mobility hubs to create connectivity between different modes of transportation that allow
 people to seamlessly move from one travel option to another. The hubs are where different modes
 of transportation (both public and private) come together including air, transit and shared mobility
 (walking or biking) options to create connections to the greater Edmonton region.

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- Support mobility choices for workers within the Nisku Business Park and develop a form of public transit that best fits the needs of Leduc County residents and businesses.
- Introduction of a nodes and corridors structure plan to establish key linkages between employment centres, YEG, park & ride, regional transportation facilities and other destinations.
- Support, enhance and protect the current high-load corridor within Nisku and on the provincial highway network.

b. Truck route network policies

Leduc County's truck route network is intended to ensure that heavy vehicle traffic respects the integrity and physical limitations of its roadway network while leveraging the economic benefit of the region and meeting the requirements of the County's business and agricultural community. The TMP recommends the following to develop a sustainable truck route network:

- Leduc County will monitor the safety of key intersections and corridors that support the movement of heavy vehicles and where necessary establish restrictions on County roadways while prohibiting heavy weight vehicle traffic on all new residential collector and local streets.
- Support intermodal transportation hubs to create connectivity between different modes of transportation that allow goods and cargo to move seamlessly from one mode to another. The hubs are where different modes of transportation (both public and private) come together including air, rail and roads to create connections to the greater Edmonton region.
- Leduc County may encourage the development of an interconnected collector roadway system within the lands bounded by Nisku Spine Road, 41 Ave. SW (Township Road 512), Township Road 510 and Range Road 243.
- Leduc County shall develop roadway improvements to facilitate goods movement while still promoting sustainable and connected multi-modal transportation hubs.
- Leduc County shall coordinate and collaborate with neighbouring municipalities and Alberta
 Transportation and Economic Corridors on goods movement studies and initiatives that may affect
 heavy vehicle routing.
- Leduc County shall designate routes for the purpose of moving dangerous goods.
- Advocating for Alberta Transportation and Economic Corridors and the EMRB to upgrade Highway 19 and extend 170 Street east of the Queen Elizabeth II Highway to accommodate the high volume of regional and inter-regional through truck traffic.

c. Roadway classification policies

Roadway Functional Classification represents a system-based approach used to categorize roadways based on their function, demands and physical characteristics. The TMP recommends that the County's municipal development standards should be refined to assure that the right-of-way, design, material and construction specifications for transportation systems in Leduc County fully and completely integrate with its classification system. Leduc County is encouraged to:

• Identify deficiencies related to roadways and shoulder widths.

- Adopt the recommended roadway functional classification system and consider its design characteristics for all new and widened roadways to ensure consistency within the roadway network.
- Develop and adhere to a roadway design cross-section that incorporates recommended design
 parameters (including active transportation infrastructure, such as concrete sidewalks and widened
 shoulders), where appropriate for arterial, collector and local classifications.

d. Active transportation policies

Active transportation is walking, running or cycling for commuting or recreational purposes. Development of active transportation infrastructure promotes healthy living through sustainable communities and provides an alternative means of travel aside from motorized vehicles. Leduc County shall:

- Develop roadway classifications that appropriately address active transportation modes for arterial, collector and local roadways to provide a safe environment for cyclists and pedestrians, where appropriate.
- New and future developments must consider active transportation access to urban areas and key
 destinations, such as travelling from the East Vistas to the City of Beaumont or a country residential
 subdivision to Saunders Lake.
- Encourage new and future developments to have internal connectivity during the planning process to support a County-wide trail network.
- Target investments in active transportation infrastructure that have a high probability of success and once developed, a monitoring process to determine usage in critical areas.

e. Public transit policies

On May 17, 2021, the City of Leduc approved revisions to the Leduc Transit scope of services. Effective July 2021 some routes transitioned from "fixed routes" to an "on-demand" service. The TMP supports the improvement of the transit system by recommending the following:

- Undertake a feasibility assessment of various transit methods that could best accommodate transit service to Nisku, the East Vistas and rural areas of Leduc County. Note: this was funded with a grant from the Rural Transit Solutions Fund and was completed in 2023
- Develop an official design guideline standard based on transit operation best practices related to transit stop design and location that would be made applicable for new urban residential subdivisions and commercial industrial development throughout the County.
- Engage with surrounding local communities and YEG to develop a transit priority corridor as part of the long-term vision supporting the East Vistas community and the Nisku Business Park.
- Advocate for a seamless transit system experience for the user.

f. Road safety policies

Roadway safety is a critical component within Leduc County's transportation network, and adjacent municipalities are placing significant emphasis in terms of policy and practice toward addressing the issue of road safety. The TMP has highlighted several key roadways and intersection locations as

candidates for consideration of safety improvement measures to be developed over time. Leduc County shall:

- Monitor collision statistics, average daily traffic volumes and intersection operations to assist in identifying areas where safety improvements may be needed and justified.
- Determine how effective roadway and intersection improvements are that have already been implemented.
- Undertake further detailed studies to assess rural and urban intersections that exhibit poor safety characteristics.
- Create a plan to identify and prioritize areas with poor safety characteristics.
- Initiate discussions with Alberta Transportation and Economic Corridors to develop and implement short-term improvements to address the locations identified within the TMP as provincial intersections that exhibit elevated historical collisions.
- Establish safety mitigation measures for use in the redesign, reconstruction and/or resurfacing of Leduc County roads, which may include:
 - Additional lane markings, centerline markings and shoulder markings.
 - Widening roadways to provide wider shoulders.
 - The delineation of roadway shoulders.
 - The addition of centerline and shoulder rumble strips.
- Be encouraged to adopt/develop a speed (traffic calming) policy that would involve a four-step process:
 - 1) project initiation and pre-screening;
 - 2) a point assessment system;
 - 3) traffic calming design considerations; and
 - 4) measuring community support.

This can be used to determine when traffic calming guidelines are to be considered.

g. Paving of gravel roads

The TMP suggests a formal nine-step framework be followed to determine when Leduc County should consider paving a gravel roadway.

h. Transportation investment policies

The TMP recommends that future transportation investment should be economically sustainable, and the following initiatives are encouraged:

- Consider projects for annual implementation over a 20-year time period in a manner that is financially and administratively sustainable for Leduc County.
- Assure that periodic and regular road needs studies are undertaken to identify immediate and longterm maintenance, rehabilitation and geometric deficiencies within its roadway network aimed at implementing best management practices to achieve long-term infrastructure requirements.

Determine roadway infrastructure priorities that are triggered by future development initiatives.

Implementation Strategy

The implementation strategy is a plan to implement the recommended transportation network improvements, plans, policies and recommendations from the Leduc County Transportation Master Plan. The TMP is intended to guide Leduc County's annual transportation budgets. Identified road network improvements were incorporated into an implementation plan over three phases based on implementation timing. These horizons are short-term (2022 to 2026), medium-term (2027 to 2031) and long-term (2032 to 2041). These projects were evaluated and prioritized to:

- Best fit the needs of Leduc County.
- Achieve a net benefit to the overall transportation system on an annual basis.
- Continuously encourage growth while maintaining integrity in the system.
- Accomplish a modern roadway standard.

A summary of the capital expenditure associated with the anticipated roadway improvement projects was created. The summary indicates expenditures in the order of:

- Approximately \$15.3 million per-year over the short-term period (2022 to 2026)
- Approximately \$19.8 million per-year over the medium-term period (2027 to 2031)
- Approximately \$25.1 million per-year over the long-term period (2032 to 2041) assuming no subsidies/grants for major arterial widening and construction.

The recommended improvements and spending are summarized as follows:

Short-term (2022 to 2026)

- Upgrade Nisku Spine Road from a gravel roadway to a two laned paved road from Township Road 510 to Airport Road.
- Upgrade Township Road 510 from Nisku Spine Road east to Range Road 244.
- Pave Range Road 15 from Highway 616X to Highway 616.
- Provide access to new County recreational property and upgrade plan for Range Road 11.
- Continued allocation towards the improvement of identified paved and gravel roads, safety initiatives, rehabilitation and maintenance expenditures.

Medium-term (2027 to 2031)

- Widen Nisku Spine Road to four lanes from Township Road 510 to Airport Road.
- Continued allocation towards the improvement of identified paved and gravel roads, safety initiatives, rehabilitation and maintenance expenditures.
- Widen. Township Road 510 to four-lanes from Nisku Spine Road to Range Road 244.
- Make improvements to Range Road 230 from Highway 616 to Township Road 482 to meet collector road standards.

Long-term (2032 to 2041)

• Widen Nisku Spine Road to four lanes from Airport Road to 65 Avenue East.

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- Widen Airport Road to four lanes from 9 Street/Nisku Spine Road to Highway 21.
- New two-lane expansion of Nisku Spine Road from 65 Avenue East to Rollyview Road.
- Pave Township Road 505 from Range Road 244 to Range Road 245 (development-driven).
- Make improvements to Range Road 245 from Highway 625 to Township Road 510 (development-driven).
- Improve Glen Park Road from Highway 2 (QEII) to Highway 795 to address traffic growth and potential safety concerns.
- Improve Tower Road (Township Road 482) from Highway 2A to Highway 795 to meet collector road standards.
- Improve Range Road 263 from Glen Park Road to Tower Road to meet collector road standards.
- Improve Township Road 481 from Highway 795 to Range Road 274 to meet collector road standards.
- Improve Range Road 40 between Highway 39 and St. Francis Road (Township Road 500) to meet collector road standards.
- Continued allocation towards the improvement of identified paved and gravel roads, safety initiatives, rehabilitation and maintenance expenditures.

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1. INTRODUCTION

Leduc County is a vibrant community ideally located within major air, rail and road networks. The County is home to 14,416 residents and key industries that include agriculture, oil and gas, transportation and logistics, energy and advanced manufacturing.

The County spans 105 km east-to-west and 32 km north-to-south and is located immediately south of the City of Edmonton. It is bordered by Parkland County and Brazeau County in the west, Wetaskiwin County in the south and Camrose County, Beaver County and Strathcona County in the east.

The updated Transportation Master Plan (TMP) seeks to address growth-related challenges and shape long-term investments in transportation infrastructure and programs. The 2022 TMP update provides the County with updated and relevant guidance on priorities for the future development of a transportation system that addresses the requirements of all users of the transportation network under the County's responsibility, including pedestrians, cyclists, passenger vehicle and commercial motorists, and serves Leduc County residents and businesses. The TMP is also designed to address the changes in the transportation landscape that have occurred since the previous 2001 TMP was prepared.

The benefits of long-term transportation planning go far beyond the provision of roads, transit infrastructure, bicycle routes, trails and pedestrian facilities. In fact, transportation can be regarded as a foundational element to achieving community goals and objectives related to health, environment, economy and social sustainability. The TMP is intended to guide the County to achieve larger community aspirations. These include supporting continued residential, industrial and commercial development, promoting alternatives to the automobile, ensuring a vital economy and encouraging the effective and efficient movement of people and goods.

1.1 Purpose

The TMP is intended to provide recommendations for infrastructure and policies that aim to address Leduc County's transportation needs and support the vision for the community. The TMP must support the goals of the Municipal Development Plan (MDP) by defining a transportation system that will:

- Improve transportation in the short-and-long term.
- Be sustainable.
- Offer a competitive economic advantage.
- Offer residents a higher quality of living.
- Deliver a common-sense and affordable plan.
- Ensure transportation modes function effectively together as a system.
- Encourage smart growth for urban and rural residents and businesses.

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The TMP is a strategic plan that guides transportation policy development and infrastructure planning. The document provides the need and justification necessary for Leduc County to confidently invest in transportation infrastructure such as rural, industrial and urban roadways, walking, cycling, and transit infrastructure, safety provisions and maintenance requirements.

The TMP is also intended to be forward-looking. Transportation is rapidly changing with the advent of e-commerce, work-from-home, *uber/lyft*-like applications and new vehicle technologies (autonomous/electric vehicles, biofuels). In addition, changes to goods movement are on the horizon effecting the road haulage sector (e.g., on-demand logistics platforms connecting drivers and suppliers – *Ontruck, FreightSimple*). These changes are accompanying a changing economy in Leduc County, with a growing commercialization sector supporting its resource and agricultural base. The future could well see significant changes¹ to the way people and goods are moved. The TMP considers these trends and suggests policies that would provide the County with the flexibility to quickly adapt to change.

1.2 Process

Figure 1 illustrates the phases that were undertaken as part of the Leduc County TMP. The evolution of the process was documented within eight separate technical working papers that were used to assist in the dialogue with the County and its stakeholders, provide opportunity for feedback and shape the process.

The working papers provide a detailed review, analysis and summary of several key TMP components. These components include policy conditions that influence the County's transportation system and provided guidance for the County as it began to develop the TMP. The papers served to review current strategic plans and processes that address goods movement, active transportation, traffic modeling, safety reviews and functional roadway classifications.

Upon the completion of the working papers, preliminary transportation possibilities for each transportation mode were reviewed to inform long-term planning and investment within the transportation system.

Section 3 of this document details the public engagement process that accompanied the development of the TMP.

Finally, a draft Transportation Master Plan was prepared that included improvement strategies for the County and its partners to enhance the road, transit, pedestrian and bicycle systems. The Plan reflects the input, feedback and directions received throughout the process, providing a clear picture of the County's transportation vision.

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¹ "We are at the edge of a revolution, there's a wave of change that you can see hitting both passenger transport as well as freight, services like Uber and Lyft" Anne Goodchild, founding director of the Supply Chain Transportation and Logistics Center at the University of Washington. CNBC report.

1.3 Why Focus on Transportation?

PROJECT TIMELINE

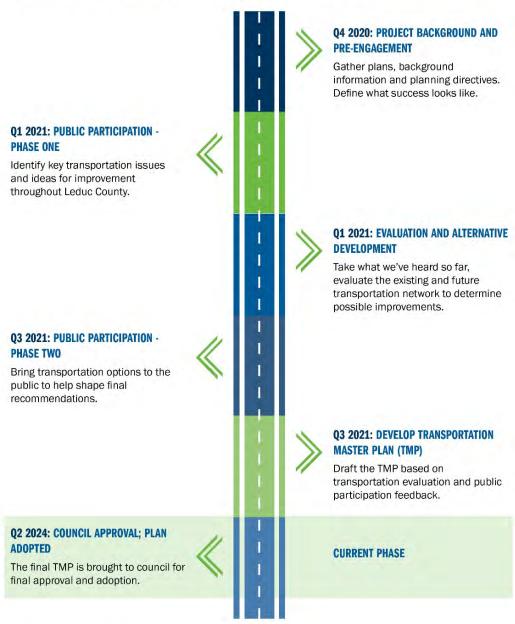


Figure 1: Leduc County Transportation Master Plan project timeline

Transportation is consistently identified as one of the most important issues facing Leduc County residents and businesses. Many stakeholders identified transportation as a significant area of concern facing the County. General transportation issues identified by residents include:

regional through traffic

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- congestion
- pedestrian safety
- volume of regional truck and vehicle traffic
- vehicular safety
- air quality
- · noise and liveability issues

Current land-use patterns in Leduc County present transportation opportunities and challenges. The grid road network developed in much of the County provides high connectivity, and many parts of the built environment are well-suited to supporting sustainable travel modes.

Leduc County recognizes that transportation plays a significant role in the development of healthy communities, as transportation policies, plans and infrastructure are a fundamental part of the impact of the built environment on residents' health.

1.4 Alignment with Overarching Strategic Plans – Integrating the TMP

The TMP builds upon the directions and commitments of several key community policy documents in which the County has made significant advancements and commitments towards establishing a multi-modal transportation network. The term "multi-modal" refers to a transportation system oriented to addresses the requirements of pedestrians, cyclists, passenger vehicle and commercial vehicle motorists and passengers, and transit patrons to best serve Leduc County residents and businesses.

Several relevant plans and strategies have been developed that guide local planning and development activities and provide direction on transportation and mobility. These influential documents include but are not limited to:

2001 Transportation Master Plan

The 2001 Transportation Master Plan addressed a starting point for transportation planning within Leduc County for the following 10-year period (2001 to 2011). The 2001 TMP established road design guidelines, a classification system, the prioritization of projects and surfacing requirements with the purpose of advising on transportation decision making from an objective basis.

The 2022 Transportation Master Plan Update serves to build off the foundation of the previous plan while adopting a modern approach to decision making to accommodate the diverse needs of Leduc County.

Leduc County's Municipal Development Plan, June 2019

Leduc County's **Municipal Development Plan** was approved in 2019 and is scheduled for an update and anticipated approval in 2024. The Municipal Development Plan will provide a 50-year vision that emphasizes the County's economic, social, cultural and environmental goals. The MDP provides the following central principle about transportation:

"The County fosters an effective and fiscally sustainable multi-modal transportation system that is integrated with land use"².

This principle is supported by the following MDP objectives, which:

- Support the coordinated planning and delivery of regional and local transportation initiatives by participating in regional transportation initiatives with Edmonton International Airport, the Province, and neighbouring municipalities.
- Optimize transportation infrastructure by encouraging new development to locate near existing development.
- Develop and maintain the County's transportation infrastructure in a safe, efficient and costeffective manner.
- Ensure the transportation network is well-designed, multi-modal, integrated, and interconnected.
- Ensure transportation modes function effectively together as a system.
- Support Edmonton International Airport (YEG) in achieving its potential as a regional economic generator.
- Take advantage of funding opportunities to invest in infrastructure that will maximize economic development opportunities at YEG and surrounding area.

The Integrated Regional Transportation Master Plan, EMRB, May 2021

The Edmonton Metropolitan Region Board (EMRB) Integrated Regional Transportation Master Plan (IRTMP) is a blueprint that supports the Edmonton Metropolitan Growth Plan serving as an implementation tool that guides transportation investment to help achieve the Region's vision. The IRTMP outlines how the province, member municipalities and transit agencies can collaborate to build an integrated transportation system that supports quality of life, a thriving economy and the natural environment. It serves as a policy framework to guide local municipalities when developing local plans.

The Leduc County TMP update is intended to completely align with the IRTMP and has included the EMRB as a stakeholder in the TMP process.

Edmonton Metropolitan Regional Growth Plan (Amended Jan. 15, 2020)

The EMRB's regional growth strategy³ as it relates to Greater Edmonton's transportation systems have the guiding principle of "ensuring effective regional mobility" by recognizing the interrelationship between the efficient movement of people and goods and regional prosperity.

The following objectives were defined to achieve this guiding principle:

 Develop a regional transportation system to support and enhance growth and regional and global connectivity.

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² "Leduc County Municipal Development Plan", June 2019, Page 68

³ "Edmonton Metropolitan Regional Growth Plan Re-imagine. Plan. Build." (Amended January 15, 2020) Schedule 10A Transportation Systems – Regional Roads to 2044., Page xii

- Encourage a mode shift to transit, high occupancy vehicles and active transportation modes as viable and attractive alternatives to private automobile travel, appropriate to the scale of the community.
- Coordinate and integrate land use and transportation facilities and services to support the efficient and safe movement of people, goods and services in both urban and rural areas.
- Support Edmonton International Airport (YEG) as northern Alberta's primary air gateway to the world.
- Ensure effective coordination of regional transportation policies and initiatives between all jurisdictions.

Section 5.6 of EMRB's growth strategy requires Leduc County⁴ to assure that its municipal TMP assists in implementing the above guiding principle, objectives and the policies of the regional growth plan.

The Leduc County TMP builds upon the EMRB's growth strategy by strategically aligning with the policies and objectives of the EMRB Plan with a focus on building an integrated and multi-modal regional transportation system. Transportation infrastructure is one of the most substantial investments needed to support growth and the economic competitiveness of the region.

Leduc County's Parks and Opens Spaces Plan (2006)

The Parks and Open Spaces Master Plan is a 20-year guiding document to manage current assets and contribute to the planning of new parks and open spaces. Leduc County's Parks and Recreation department updated the Parks and Open Spaces Plan (2006) with a new Recreation and Parks Master Plan in 2023.

The Leduc County Transportation Master Plan supports the vision of a multi-modal and interconnected system which encourages active mode transportation in urban and rural areas. The Leduc County Transportation Master Plan seeks to create a planning foundation for the development of active mode recreation trails throughout the County.

Leduc County's Agricultural Strategy (March 2006)

Leduc County's vision for agriculture looks to the future by "ensuring that agriculture will continue to evolve and thrive ... particularly the demand for grains, oilseeds, pulses and meat proteins." The opportunity is to supply a range of agricultural and food products and/or services to an accessible metropolitan and global market. The study denotes that "addressing this opportunity requires a formal and firm commitment by Leduc County to ensure the conditions for agriculture and agricultural land, play an important role within the context of land use in Leduc County."

However, the strategy also clearly defines:

the "proximity factor" that results from the desire accommodate other economic objectives, which
result in valuable agricultural lands be converted to meet the demands for residential, commercial,
industrial or other infrastructure requirements.

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⁴ "Edmonton Metropolitan Regional Growth Plan Re-imagine. Plan. Build." (Amended Jan 15, 2020), Sec 5.6.3.

 that "given this inherent conflict, the vision (for agriculture) must not only provide direction for realistic and economically sustainable opportunities but also commit to a regular review process to assess and adapt the continuing viability of agriculture in the light of continuous change."

Alberta Transportation and Economic Corridors Regional Priorities

Alberta Transportation and Economic Corridors (formerly Alberta Transportation) has several ongoing planning and design initiatives for the key highways within Leduc County that will impact travel to, from and within the County. These include:

- Highway 19 widening and Highway 60 re-alignment around the Town of Devon
- Phase I and II of the 65 Avenue interchange project
- The 170 Street extension (Terwillegar Drive)
- The realignment of Highway 39 to transition to 65th Avenue west
- Widening of Highway 21 and Highway 625
- A new Highway 2A interchange south of the City of Leduc
- The Highway 2 (QEII) Corridor Improvement Study (CIS)

While the timing and /or staging of these improvements will need to be confirmed, these initiatives were reviewed and considered in development of the Leduc County Transportation Master Plan.

Edmonton International Airport Master Plan

YEG has embarked on an update of its 2010-2035 master plan (completed in 2011), which would address the 2020 to 2045 time period. This update includes a groundside transportation study that will incorporate innovative transportation solutions and multi-modal policies intended to support the sustainability of YEG groundside travel. Covid-19 has disrupted the master planning process, which was scheduled to be completed by 2023 with submission to Transport Canada. The objectives of YEG'S master plan include competitiveness, market access, economic growth, a connected campus and environmental stewardship.

YEG's master plan includes assumptions of regional infrastructure, transit and emerging vehicle technologies. The plan is to identify the necessary infrastructure inclusive of light-rail transit service directly into the terminal, future transit stations along the Perimeter Road and the potential establishment of an inter-modal transportation hub.

Intermunicipal Development Plans and Intermunicipal Planning Framework

Leduc County's MDP highlights the importance of joint planning of land use and infrastructure inclusive of transportation projects with municipal neighbours, regional partners, all levels of government and First Nations communities. The County has participated in several initiatives, such as:

Intermunicipal Planning Framework: an agreement signed by the City of Edmonton, the City of
Beaumont and Leduc County committing to the development of a high-level conceptual framework
to address joint intermunicipal land use, <u>transportation</u>, servicing, and shared cost for shared
benefit.

- The Inter-Jurisdiction Cooperation Accord: a collaborative initiative between Leduc County, the City
 of Edmonton, the City of Leduc, and the Edmonton Regional Airport Authority to create conditions
 that will allow Edmonton International Airport to achieve its potential as a key economic driver and
 contributor to the Edmonton Metropolitan Region's sustainability and success (MDP Policy 8.1.4.2).
- The Joint Infrastructure Master Plan and Services Evaluation (JIMPSE): this joint effort with the City of Leduc seeks to create an integrated strategy for the joint development of prioritized transportation, water, sanitary, sewer and storm water projects. The effort is intended to provide effective and efficient service delivery.

Leduc County has established several Intermunicipal Development Plans (IDPs) with neighbouring municipalities to ensure long-term transportation corridors are secured to maintain a safe, coordinated and efficient road network for all new and expanding development(s) proposed within the Plan Area. The policies established in this TMP ensure transportation and infrastructure development policies are aligned with those set out in the IDPs.

Area Structure Plans and Local Area Structure Plans

The purpose of ASPs and LASPs are to guide development of areas for the next 20 to 30 years, establishing the general areas for major land uses, major roadways, trails and utility servicing. These documents also set out the direction for integrating differing land uses and identify future transportation and servicing issues and opportunities.

Area structure plans that were reviewed as part of this study include, but are not limited to:

- The East Vistas LASP
- Blackmud Creek Area ASP
- Nisku ASP
- Nisku Major Employment Centre ASP
- Nisku West ASP
- North of Kerr Care, Pigeon Lake ASP
- North Major ASP
- North Pigeon Lake ASP
- WAM Industrial Park LASP

- The Royal Cubera LASP & TIA
- The Wizard Lake ASP;
- The Pigeon Lake ASP;
- The Northwest Saunders Lake ASP
- The Genesee ASP
- South of Devon Industrial ASP
- The New Sarepta ASP
- Queen Elizabeth II Business Park LASP

Where available, the Leduc County TMP reviewed these studies to better understand key growth areas in the County. ASP and LASP findings were considered in the development of transportation strategies outlined in the Leduc County TMP.

City of Edmonton's City Plan

Edmonton's City Plan presents a future city, a city that has the benefits the city enjoys today with new opportunities for the future. City Plan is about spaces and places and how residents move around the city. It is about the community and what is needed to grow, adapt and succeed.

The City Plan combines a Municipal Development Plan and Transportation Master Plan, and includes strategic direction in environmental planning, social planning and economic development.

Edmonton's City Plan sets strategic direction for the way Edmonton grows, its land use, mobility systems, open spaces, employment and social networks, generally touching on most aspects of life in Edmonton.

The Leduc County TMP recognizes the direction of City Plan regarding interdependent physical systems like transportation infrastructure.

City of Leduc 2018 Transportation Master Plan

The City of Leduc is located completely within Leduc County borders and represents the largest population centre that, over the last decade, exhibited the third fastest growth characteristics in the province. The City of Leduc completed its Transportation Master Plan in 2018, which included a long-term transportation infrastructure plan suitable to meet the growing development needs of the urban municipality. The 2018 TMP adopted a sustainable approach to all modes of transportation as a guide to future developments, and as a long-term plan for funding the recommended improvements. The TMP also ensured the City remains compliant to off-site levy requirements in terms of updating and validating future planning projects within the municipality. The timeframe of the City TMP represents a 30-year horizon and is fully integrated with the vision and principles its Municipal Development Plan (MDP). The City of Leduc TMP addressed areas of transportation concerns such as heavy vehicle routes, Leduc Transit, active transportation requirements, CP Rail corridors, noise levels and several inter-municipal transportation projects involving the province's freeways, highways, and interchanges. As concerns Leduc County, the City of Leduc's TMP addressed its future requirements for:

- Spine Road (Airport Road to SE Boundary Road).
- The SW Boundary Road (QE II to 74 Street).
- 74 Street (SW Boundary Road to 65 Avenue W).
- The proposed IRTMP's Terwillegar (170 Street)⁵ South Extension from 41 Ave to 50 Ave and further south to the Highway 2 (QEII) corridor.
- Infrastructure improvements related to industrial growth within Leduc County (e.g. Saunders Lake) that would have a significant influence upon City infrastructure or require joint planning.
- The desire for the formation of partnerships with agencies such as the County to form a connected and seamlessly integrated transportation system.

City of Beaumont Transportation Master Plan

Beaumont's Transportation Master Plan, titled "Our Connectivity," maps out how the City of Beaumont will plan, build, operate and sustain its transportation system into the future. The plan facilitates the continued development of a transportation system where residents and visitors, as well as goods and services, move effectively within and around the community and region.

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⁵ "City of Leduc 2018 Transportation Master Plan", Page 3-7, Exhibit 3-4 follows the alignment recommended in the "170 Street South Planning Study – Report #3", Executive Summary, ISL Engineering & Al-Terra Engineering, March 2011 report.

Leduc County Transportation Master Plan

The plan incorporates a variety of best practices in transportation planning to guide the City's transportation system's growth. The purpose of the City's TMP is to provide direction for the development and maintenance of the transportation system that supports local development, services, and land use, and that ensures appropriate connections to the broader Edmonton Metropolitan Region.

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2. Shaping the Plan

2.1 The Vision

The vision, goals and directions for the TMP were established early in its development and are intended to support the central criteria and reflect the County's ambitions and objectives. They helped shape the direction of the TMP and influenced recommendations by setting the future vision. The version of the vision and guiding principals/goals was developed by incorporating language and directions from other recent and relevant County planning documents. The draft was presented to the public and stakeholders in February 2021 during the first round of public participation.

The Transportation Master Plan's vision statement describes what Leduc County wishes to achieve in the long-term (five to 25 years). It depicts a vision of what the transportation network will look like in the future and sets out a defined direction for the planning and execution of County strategies.

THE TMP VISION: "To provide safe, reliable roads for our residents and businesses and the infrastructure needed to support economic development."

The intent of the vision statement it to emphasize the elements of the TMP that would best describe Leduc County's desired future transportation network, which would:

- Result in a high-quality of life.
- Result in regional economic growth.
- Be *integrated* with provincial, regional and adjacent municipal policies, initiatives, infrastructure and objectives and assure ease-of-access between destinations within and outside of Leduc County.
- Be multimodal and offer travel choices that best respond to the traffic demand and safety requirements of motor-vehicle, commercial, agricultural and resource goods movement, pedestrian, cyclists and heavy vehicle infrastructure.
- Offer sustainable travel choices, which refers both to existing and future fiscal sustainability (in terms of ensuring that transportation infrastructure and policy decisions must be affordable for the municipality and taxpayers) and environmental sustainability that's necessary to meet community demands and challenges.
- Acknowledge the *industries* important to the County inclusive of agricultural, tourism, resource, energy, commercial/industrial and distribution centres which are all central to the County's prosperity.
- Be responsive to residents regardless of age, abilities and their chosen mode of travel.

2.2 Goals and Objectives

Leduc County's vision statement is supported by a set of TMP guiding principles that define what is to be achieved. These principles are in turn supported by corresponding policy objectives or directions that define "how and what is to be done" to realize the principles.

The five principles developed within the planning phase of Leduc County's TMP are as follows:

- 1. Meet the transportation infrastructure needs of the present and future urban, rural, agricultural, industrial, business and lakeshore communities.
- 2. Identify and recommend infrastructure investment and implementation that supports sustainable and integrated multi-modal transportation that delivers fiscal responsibility, commonsense investment and supports the needs of Leduc County for the next two decades.
- 3. Create a vision in Leduc County that enhances roadway safety, accessibility, equity and inclusivity, and supports active, healthy and livable communities.
- 4. Achieve and support the policy directions of the County's MDP and Strategic Plan.
- 5. Undertake a comprehensive public participation process to seek ideas and input from the broadest possible sample of residents, businesses and industries.

The principles serve to build upon the vision statement and provide additional detail and more specific direction for the Transportation Master Plan.

All strategies, projects and recommendations developed for the TMP address at least one of the guiding principles and are consistent with the overall vision for the future transportation network of Leduc County.

2.3 The Seven Elements of the Plan

The Transportation Master Plan has been structured into seven basic elements, as follows:

- Regional Transportation
- Roadway Classification
- Heavy Truck Network
- Active Transportation
- Roadway Safety
- Infrastructure Investment
- Public Transit

REGIONAL TRANSPORTATION

ROADWAY CLASSIFICATIONS

MEANY TRUCK NETWORK

ACTIVE TRANSPORTATION

INFRASTRUCTURE
INVESTMENT

PUBLIC TRANSIT

Figure 1: The Elements of the Transportation

Each of the individual components of the plan are applicable throughout Leduc County and provide structure to the initiatives going forward.

3. COMMUNITY ENGAGEMENT

The Leduc County TMP followed the International Association of Public Participation's (IAP2) public participation spectrum to define the public's role and level of influence in decision making in the public engagement processes.

The level of influence for this project was set at *involve*, where we worked directly with the public throughout the process to ensure that public concerns and aspirations were consistently understood and considered. Through the public participation process, we:

- Utilized a SWOT analysis, where we identified strengths, weaknesses, opportunities and threats, and was used to refine the public outreach process that was proposed for the TMP; and
- identified the wide variety of audiences within the County and assigned methods to assure communication with the project team.

The TMP public participation process responded to the COVID-19 health measures implemented by the province by utilizing the following engagement strategies:

Online, live facilitated workshops

The Zoom platform was used in early February 2021 to conduct live workshops with the public that encouraged participation from the comfort of their homes or offices. The venues provided the opportunity to share in the development of the TMP and provide feedback. Two sessions were held on Feb. 18 and Feb. 22 from 6 to 7:30 p.m. to accommodate availability; both sessions covered identical content.

Online, static engagement

Online engagement was initiated for individuals to contribute their ideas whenever and wherever it was most convenient for them. The Social Pinpoint[™] platform was utilized throughout February 2021 and from Aug. 26 to Sept. 9, 2021. The platform included:

- A landing page that referenced all TMP resources, materials and events and the engagement processes.
- A mapping tool where issues and ideas were able to be pinned to a map of Leduc County for ease of geographical reference. This tool contained a variety of information on Leduc County roadways, provincial roadways, background information for the Leduc Transportation Master Plan.
- Online surveys that were used to gather opinions on the draft vision statement for the TMP, its objectives and key transportation issues facing the County.

In-person drop-in public information sessions

Two in-person public open house sessions were held on Sept. 1 and Sept. 2, 2021, at Rolly View Hall and Glen Park Hall, respectively. Members of the community were invited to attend to learn more about the recommended plan and provide their feedback and direction. These venues were open to the public and took the form of drop-in sessions, which provided a variety of information through hand outs and poster board material. Several staff members were at the open houses to speak with attendees and answer any questions.

3.1 Pre-engagement

In April and May 2021, several pre-engagement interviews, surveys and meetings were conducted to gather feedback on what each group perceived as meaningful engagement and to provide insight into the variety of interests and issues concerning transportation services offered within the County. Interviews were conducted with:

- adjacent municipalities
- organizations
- community associations
- hamlets
- major firms

The information collected during the pre-engagement period was used to help guide the communication process, provide a vision related to the required information materials, and help identify considerations and issues concerning public participation planning.

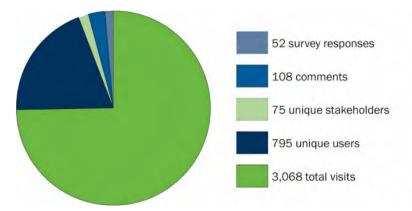
As part of the pre-engagement process:

- Six interviews were conducted with representatives from key audiences, including:
 - Rolly View Community Association
 - Glen Park Community Association
 - Agricultural grain producer from west Leduc County
 - Edmonton International Airport (YEG)
 - · Leduc, Nisku and Wetaskiwin Regional Chamber of Commerce
 - City of Leduc's director of engineering
- 23 online surveys were completed by various audience:
 - residents
 - community organizations
 - businesses
 - agricultural sector
 - surrounding municipalities
 - municipalities within Leduc County
 - members of Leduc County administration, including representatives from Agricultural Services,
 Engineering, Road Operations, Parks and Recreation, Economic Development and Fire Services
- A Supporting Success workshop was held to highlight TMP planning undertaken to date, share the
 public participation approach, confirm input required to inform project decision making and
 commitment to consider public input, and explore roles in the successful implementation of the
 engagement process. The workshop included the following members:
 - Leduc County Council

- Leduc County Executive Leadership Team
- Directors of Planning and Development, Engineering and Utilities and Agricultural Services and Road Operations

3.2 Phase One Public Participation

Phase one of the public engagement process involved participation that was used to gain an appreciation of the public's understanding of the transportation and traffic-related issues and concerns associated with the existing transportation network and to identify areas and ideas for improvements, enhancements and changes. The input received was reflected in the identification and analyses associated with current transportation challenges, needs and solutions.



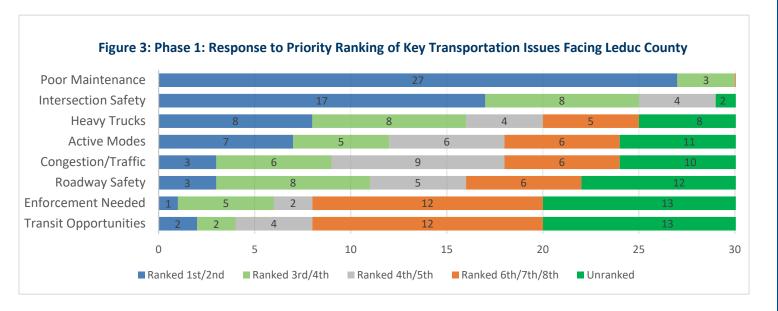
A month-long public participation campaign was launched in February 2021 that utilized an online engagement platform called Social Pinpoint™, which provided opportunities for the pubic to share their input using an interactive mapping tool and online surveys. In addition, two virtual workshops were hosted on Feb. 18 and 22.

Figure 2: Number of responses to Social Pinpoint Site, Phase 1

Throughout the month of February, participants were asked for input on the following:

- Current modes of transportation they utilize.
- The top three locations they travel to on a weekly basis.
- Most and least critical transportation issues in Leduc County; and
- Input on the draft TMP vision statement and goals.

The interactive map of Leduc County was used by participants to identify "what's working, what's not working and suggest ideas for improvement."



The phase one public participation identified the following key issues:

- Maintenance of existing roads suffer from annual freeze-thaw cycles and annual flooding, resulting
 in poor travel conditions that impact residents, delivery vehicles, agricultural vehicles and
 emergency services. The quality and quantity of paving is viewed as insufficient and should be
 improved at several locations.
- Roadway operations, such as speeding or the need for improved intersections along roadways such as Township Road 510.
- Transportation planning needs that revolved around comments regarding future plans for new
 roadways, new active transportation opportunities and provisions for the movement of goods.
 These comments related to the future extension of Nisku Spine Road along 9 Street, the concern
 that heavy trucks bypass weigh scales to utilize Glen Park Road, and the long-term function of
 Township Road 500 nearest the future Northwest Saunders Lake ASP lands.
- Roadway and intersection safety concerns, such as sight lines, busy intersections, and the
 prevalence of illegal maneuvers that could increase collision rates. Some of the identified locations
 include:
 - Highway 2A/Highway 623 (provincial jurisdiction)
 - Glen Park Road and Range Road 263
 - The intersection of Highway 2A/Glen Park Road and Highway 623/Range Road 263
- Active Transportation related comments requesting additional opportunities for recreational activities, such as walking and cycling options throughout Leduc County. This theme is well supported from the primary survey that identified active transportation as a key issue for the Leduc County TMP to address.

3.3 Phase Two Public Participation

A second public participation campaign took place in early fall 2021 and included two evening public information sessions held on held September 1 and 2 at Rolly View Hall and Glen Park Hall,

respectively. The sessions were arranged with information boards placed throughout the room that addressed each of the seven elements (See Section 2.3) of the TMP. Both the consultant and Leduc County representatives were in attendance to address concerns and/or answer questions that attendees may have had with the Transportation Master Plan.

Between Aug. 26 and Sept. 12, 2021, Social PinpointTM was used as an online platform that provided Leduc residents and study participants an interactive mapping tool and online survey to provide input, comments and questions.

Table 3-1 presents the number of participants/attendees and comment sheets/evaluation surveys that were completed either online or at the public information sessions.

Session	Attendance	Comment Sheets / Responses Received
Online Platform (Social Pinpoint), August 26 to September 12	1,871 unique visits 5,027 total visits	six survey responses 73 map comments
Rolly View Community Hall, September 1	28 people	five comment sheets three evaluation surveys
Glen Park Hall, September 2	34 people	six comment sheets four evaluation surveys

Table 3-1: Phase 2 Participation

In general, the following issues/concerns were identified during phase two of the public participation process:

- Maintenance: various roadways were viewed as being insufficiently maintained and in need of
 upgrading. Requests were noted for the paving of several gravel roads, as well as repair/repaving of
 existing roadways. Additional comments were made on the need for roadway widening, lack of
 road shoulders, and the occurrence of "washboard-like" surfaces.
- County trail network: a desire was expressed supporting a trail in the vicinity of Saunders Lake, east of Leduc, as well as along the North Saskatchewan River. Some participants deemed trails were not important.
- Township Road 490 (Glen Park Road): was noted as having several unsafe intersections along its length inclusive of:
 - Glen Park Road/Highway 2A
 - Glen Park Road/RR263
 - Glen Park Road/Highway 795
 - Glen Park Road/Highway 2A was perceived as a high collision location with the suggestion that dedicated turning lanes and/or conversion to a signalized intersection be considered.

Despite the above concerns, other participants noted their opposition to the speed reduction that was implemented along the corridor from 100 km/hr to 90 km/hr.

- **Public transit:** on-demand transit between communities was well received, but there were other comments regarding concerns with the cost-benefit of its implementation.
- **Speed enforcement:** suggestions were made requesting the need for improved/increased monitoring of posted speed limits.
- Further comments were made related to links and intersections outside Leduc County's jurisdiction.

3.4 Municipal and Stakeholder Engagement

The Transportation Master Plan public participation process also included an extensive outreach to adjacent municipal partners, key industry stakeholders and major businesses that would be impacted. Meetings were held in the spring 2021 to inform the partners, stakeholders and businesses of the Leduc County TMP update, collect feedback and suggest possible future transportation issues where collaboration may be beneficial.

Meetings were held with representatives from:

- Edmonton Metropolitan Region Board (EMRB)
- Alberta Transportation: North-Central Region
- Town of Thorsby
- Town of Devon
- Town of Calmar
- Village of Warburg
- Edmonton International Airport (YEG)
- Capital Power: Genessee Power Station

- City of Leduc
- City of Beaumont
- Parkland County
- Strathcona County
- County of Wetaskiwin
- Camrose County
- Brazeau County

The stakeholder engagement process informed the Leduc County TMP on many key issues, including:

- The long-term vision and planning requirements for Township Road 510.
- The desire to connect Leduc County, the City of Beaumont, the City of Edmonton and the City of Leduc through recreation trails.
- Investigating a walking trail partnership and community/senior van agreement with the Village of Warburg.
- Discussions with Alberta Transportation and Economic Corridors regarding future improvements along Highway 60, Highway 19, Highway 39 and Highway 21.
- Discussing the future needs of the Nisku Spine Road corridor as design and construction proceeds to the south.

The municipal engagement process outreach to external stakeholders is a starting point for Leduc County to be a regional leader in transportation planning.

4. LEDUC COUNTY TODAY

4.1 Demographics

Leduc County's population in 2016 was recorded as 13,780 persons, which has since decreased to 13,172 persons due to the City of Edmonton annexation process that became effective in January 2019. This has resulted in an overall population decline since the 2011 census period.

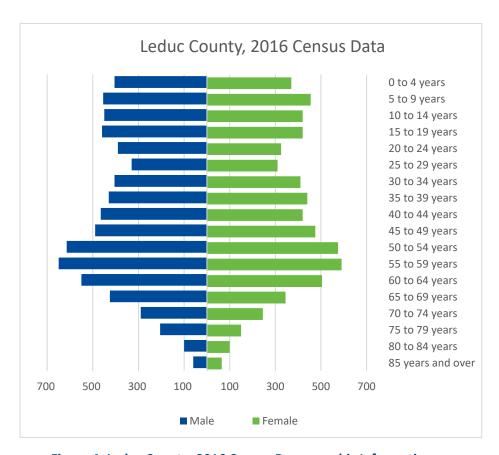


Figure 4: Leduc County, 2016 Census Demographic Information

A review of Figure 4 and other 2016 Census information indicated that, for Leduc County:

- Leduc County accommodates an aging population.
- The average persons per household was found to be 2.7 persons-per-dwelling.
- Leduc County has a population density of 5.3 persons/km².
- Outside of the Edmonton International Airport (YEG), Leduc County employs more than 12,500 persons, of which 85 per cent are located in Nisku.

4.2 Diverse Transportation Needs

Leduc County, situated south of the City of Edmonton, is home to Canada's largest airport by land mass and the second largest energy park in North America⁶. The physical boundaries of the County span 105 kilometers east to west and 32 kilometers north to south. Within the County's borders are six distinct municipalities, seven hamlets, three localities and three summer villages.

Transportation needs are unique for:

- The Nisku Business Park
 accommodates more than 11,000
 jobs and continues to grow as a
 world-leading industrial park.
- Country residential areas that accommodate people driving to and from work, activities and shopping.
- Urban areas, including the East Vistas and hamlets, that have additional active mode needs to connect people to the businesses and amenities around them.
- A diverse agricultural and resource sector that is accommodated by more than 2,130 km of paved and unpaved roadways.
- The lakeshore communities of Pigeon Lake and Wizard Lake that experience year-round recreationrelated travel.

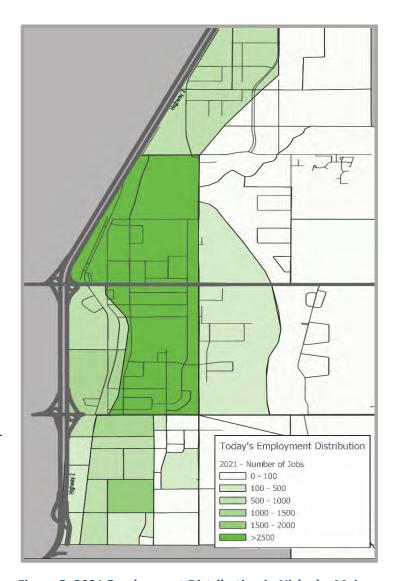


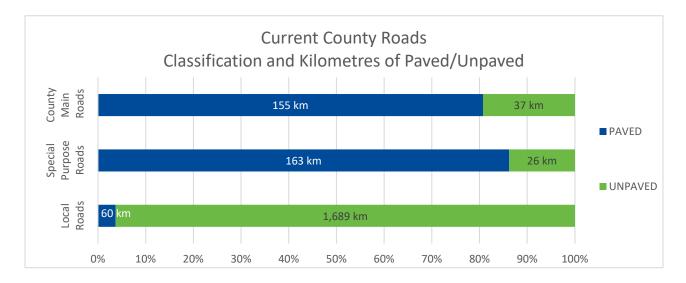
Figure 5: 2021 Employment Distribution in Nisku by Major Zone

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⁶ Source: Leduc County Municipal Development Plan, 2019

4.3 Leduc County Roads

Leduc County owns and maintains a roadway network with more than 2,130 km of roadways. The current roadway classification system, as established from the previous 2001 Master Plan, designated three classifications:



- County Main Roads are major County roads that connect primary and secondary provincial
 Highways. County Main Roads serve as primary arterials with lengths greater than 8 km. Examples
 include Township Road 510 and Airport Road. Eighty per cent of the 191 km of County Main Roads
 are paved.
- **Special Purpose Roads** provide connections between County Main Roads, the provincial highway system and other special purpose roads. This classification includes:
 - All roads in the Nisku Business Park.
 - Connections to parks/recreational areas.
 - Summer village accesses.
 - Country residential areas with a density greater than six residences per mile.
 - Oil and gas with five producing wells/one plant per-mile.
 - Connections to towns and villages of at least 100 people.
- Local Roads represent more than 80 per cent of the overall network by length, and include all other roadways in the County, such as the rural grid network.

4.4 Leduc County Travel Patterns

Leduc County residents rely on a transportation system designed for the passenger vehicle. This mode of choice is reflected in the 2016 Census, which indicated that the personal automobile represents the dominant mode of choice for getting to and from work for 92 per cent of commuters (See Figure 7). Only five per cent of commuters rely on an alternative mode from the passenger vehicle.

Main Mode Choice for Work Commute Public transit Other 1% Walking, Cycling 1% 3% Auto Driver Auto Passenger Auto Passenger 3% Walking, Cycling Other Auto Driver 92% Public transit

Figure 6: Main Mode of Commuting, Leduc County Census Profile, StatsCan 2016

The Transportation Master Plan adopted Streetlight[™] origin-destination information to identify major destinations for Leduc County residents. Streetlight[™] is an on-demand mobility analytics platform and provided the capacity to analyze travel information prior to the Covid-19 pandemic.

To identify major origin-destination pairs within the region, a 50-zone traffic model was developed for Leduc County and surrounding municipalities. On a daily basis, it was found that:

- Roughly 59,000 trips travel between the City of Edmonton and County lands (inclusive of YEG).
- The central Nisku area (between Airport Road and Highway 19) is the major traffic generator within the County and was estimated to generate some 11,100 trips per day. The traffic is distributed as follows:
 - 32 per cent destined to greater Edmonton.
 - 36 per cent of trips are destined to the City of Leduc (perhaps representing the local work force component).
 - 12 per cent of trips destined to YEG.
 - Nine per cent of trips destined to Nisku North.
 - Six per cent to Beaumont.
 - The remainder spread throughout the County's rural areas.

4.5 Today's Traffic Volumes

Annual Average Daily Traffic (AADT) volumes were compiled from existing information sources to establish a snapshot of today's daily traffic. The information referenced more than 2,000 data points collected by Leduc County, the Province of Alberta (Alberta Transportation and Economic Corridors) and surrounding municipalities. The information utilized to establish the base model, where prudent, excluded traffic counts undertaken during the COVID-19 public health measures as roadway travel demand was negatively impacted at this time.

Figure 8 illustrates the existing two-way average annual daily traffic volumes extracted from the Transportation Master Plan demand model. The model was developed specifically for the Leduc County TMP in specialized PTV Visum software that considers current population and employment trends to establish daily traffic volumes throughout the network.

The following Leduc County roadways accommodate significant two-way daily traffic volumes:

- The completed sections of the Nisku Spine Road within the County's jurisdiction currently accommodate less than 11,000 vehicles per day.
- Township Road 510, nearest the East Vistas community, accommodates more than 5,000 vehicles per day.
- Airport Road, east of the Highway 2 (QEII) corridor, accommodates between 16,000 to 18,000 vehicles per day.
- Glen Park Road (Township Road 490) accommodates up to 3,000 vehicles per day nearest the Highway 2 (QEII) corridor.

4.6 The Provincial Highway Network

The Province of Alberta is responsible for the safe operation and continued maintenance of several highways within Leduc County. While Leduc County can work closely with the province, it is ultimately their jurisdiction to instigate improvements on their highways.

The province provides four levels of highway service classes:

- The National Highway System (NHS) is entirely composed of Level 1 Highways (Freeways) intended
 to move people, goods and services interprovincially and internationally. Within the Edmonton
 Metropolitan Region, this includes the Highway 2 (QEII) corridor and the Highway 16 (Yellowhead
 Trail) corridors. These roadways are generally designed to freeway or multi-lane standards and are
 accessed solely at interchanges with arterial roadways.
- Level 2 highways are similar to a standard arterial corridor and provide for intra-provincial
 movement of people, goods and services. Within Leduc County, Highway 39, Highway 60, Highway
 19/625 and Highway 21 form the Level 2 highway network. The level 2 system connects Highway 2
 (Level 1) to the level 3 system.
- Level 3 highways connect major residential and employment centers to the level 2 highway system
 with overall shorter travel distances. Within Leduc County, this includes Highway 770, Highway 771
 Highway 778, Highway 795, Highway 616, Highway 623, Highway 625 and Highway 814. The level 3
 highways could also be signed as regional.

Leduc County Transportation Master Plan

• Level 4 highways are local highways intended for intra-jurisdictional travel and often serve as a function to benefit the global tourist industry of Alberta. The only Alberta highway within Leduc County that carries the Level 4 classification is Highway 622.

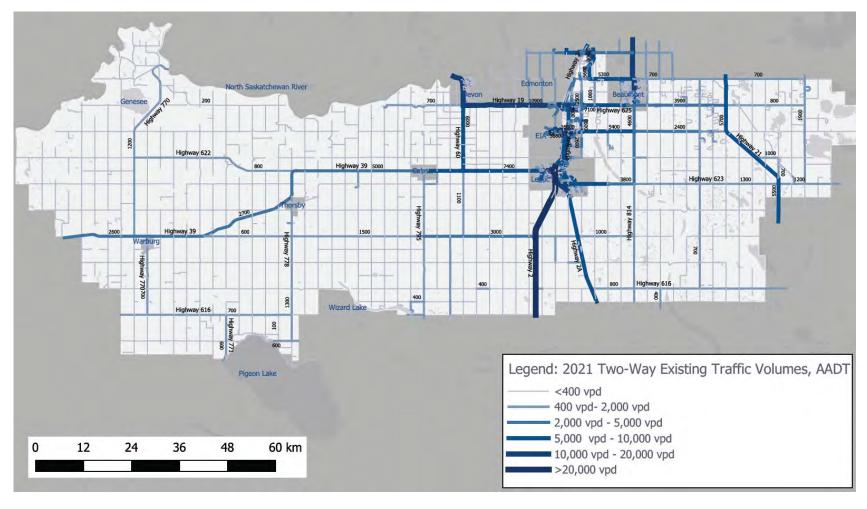


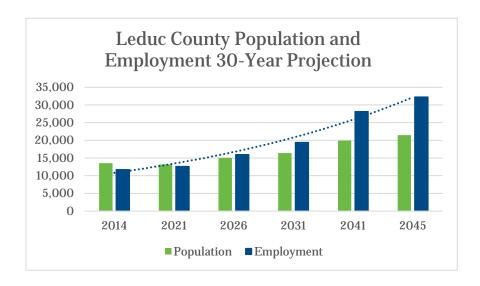
Figure 7: 2021 Two-Way Average Annual Daily Traffic Volumes, Leduc County TMP Model

5. FUTURE CONDITIONS

5.1 Forecast Population and Employment

According to the Edmonton Metropolitan Region Growth Plan⁷, Leduc County's population is expected to grow by 6,000 to 10,000 people and 26,000 jobs⁸ over 25 years. The growth in population and economic development will directly influence an increase in travel demand on Leduc County's roadway network. While this growth may exacerbate current transportation issues, it also presents opportunities to develop a robust transportation system to ensure sustainable development.

The Leduc County TMP reviewed available land use information to develop a five-year, 10-year and 20-year growth picture to depict future travel demand on Leduc County roadways.



For the purposes of transportation planning, the Leduc TMP adopted the following modest 20-year growth targets:

- A population increase of 6,800 people, which would result in a Leduc County population of approximately 20,000. A review of current planning documents resulted in assigning the population growth to the following areas:
 - The East Vistas, in Leduc County's Urban Centre, is anticipated to accommodate up to 65 per cent of the forecast population growth over 20 years.
 - Approximately 20 per cent of the population growth is anticipated to occur in existing
 residential areas, such as the country residential areas on the east side of the County and in the
 hamlet of New Sarepta.

Page - 26 5. Future Conditions

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⁷ Edmonton Metropolitan Region Growth Plan, January 2020

⁸ Includes EMRB employment estimate for the Edmonton International Airport (YEG)

- The communities of Wizard Lake and Pigeon Lake are anticipated to each accommodate approximately five per cent of the population growth; and
- The remaining growth (10 per cent) would be accommodated in the rural areas of the County.
- An employment increase of 15,500 jobs (excluding YEG), which was assigned to the following areas:
 - 60 per cent of the employment growth to Nisku north of Township Road 510.
 - 20 per cent of the employment growth to Nisku between Airport Road and Town Road 510.
 - 15 per cent of the employment growth to Nisku south of Airport Road in the Northwest Saunders Lake lands.
 - The remaining five per cent of growth in the South of Devon ASP lands.

Over the next 20 years, more than 60 per cent of population growth and 95 per cent of new Leduc County jobs are anticipated to be located within Leduc County's Nisku area (MDP, Map 3).

5.2 Evolving Transportation

The Leduc County TMP builds upon the regional plans and directions established from previous regional planning initiatives undertaken by surrounding municipalities and the Province of Alberta.

What long-term infrastructure will have the greatest impact on Leduc County?

The EMRB has identified several projects in its 25-year plan, as illustrated in Figure 8, that will require inter-jurisdictional planning. Examples include:

- The EMRB has indicated a desire to develop a Regional NS Arterial located west of the QEII (Highway 2) corridor through a southerly extension of 170 Street that would link Terwillegar Drive on the north (202-C, 902-B) to the Highway 2 (QEII) corridor south of the City of Leduc and connect with a realigned Highway 2A corridor. However, the conceptual depiction of this facility as depicted in EMRB exhibits bisects significant tracts of agricultural lands between YEG lands and the Highway 60 corridor. Additional planning is required to determine the ultimate alignment of this Regional NS Arterial and the County is not supportive of the EMRB's conceptual alignment. Further investigation/studies should be required with the EMRB partners. The alignment of the Regional NS Arterial should ideally be located as close as possible to YEG lands.
- A realigned Highway 2A and new Highway 2 (QEII)/Highway 2A interchange (902-A).
- The Highway 39 entry into the City of Leduc is currently characterized by six traffic signals (69 St., Deer Valley Drive/West Haven Blvd, Grant MacEwan Blvd, Bridgeport Crossing/Alton Drive, Discovery Way, QE II West Ramp Terminal) and plans are in place for an additional traffic signal (at 70 Avenue). This section of the Highway within the City of Leduc's jurisdiction has become congested, characterized by heavy vehicle traffic and is limited in its purpose of facilitating a direct highway connection to the QEII (Highway 2) corridor. The EMRB has recognized this constraint and has incorporated the realignment of Highway 39 onto 65 Avenue West (939-B) leading to the future 65 Avenue interchange as part of their transportation plan.
- The widening of Highway 19 (19-A, 19-C) and the realignment of Highway 60 in the vicinity of the Town of Devon (60-B).

A challenge exists in that all of the above transportation initiatives underscore the necessity of assuring that a coordinated multi-agency transportation planning initiative takes place well before such plans become formalized. This is essential to determine and define what regional corridors and connections are necessary and what mitigation measures are to be in place to assure that Leduc County's MDP objectives of "maintaining

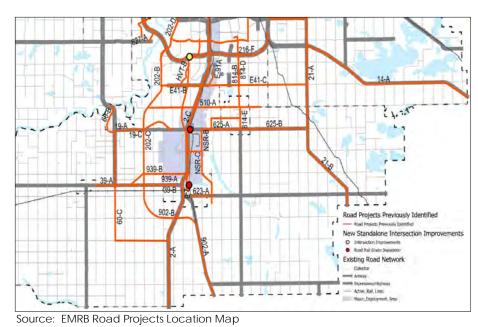


Figure 8: General Location of EMRB Road Projects

the rural character of" ... the north-central rural area west of YEG lands ... "while conserving agricultural land uses" can indeed be achieved to avoid "the fragmentation of agricultural lands" are effectively managed.

Global technological trends

In addition to coordination with the EMRB and provincially-lead infrastructure initiatives noted above, the TMP recognizes that technology is rapidly changing those transportation considerations that municipalities must account for.

One of the dynamic shifts taking place currently is the effect upon vehicle technology. Recent articles ¹⁰ note that "there is an expected sell point of 97 million electric vehicles globally by 2025," "electric vehicle trends are continually evolving through new innovations, and there are at least 50 electric car models available at the end of 2020." This shift towards electric vehicles requires all municipalities to consider the advent of the availability of charging stations to meet the coming need. Leduc County is encouraged to develop policies aimed at enhancing the availability and providing convenient access to charging stations. The County is encouraged to consider policies such as:

- · Examining opportunities for electrical charging stations at public facilities; and
- Changes to land use bylaws that would require a minimum number of charging parking facilities within private parking lots.

Page - 28 5. Future Conditions

⁹ "Leduc County MDP Plan" (June 2019), Policy 4.3.1.5

^{10 &}quot;Electric Car Innovation: How Electric Vehicles are Changing the World" www.plugandplaytechcenter.com/resources/electric-car-innovation-how-electric-vehicles-are-changing-world/

5.3 Transportation Modelling

Transportation demand modelling is an analytic approach to determine future traffic volumes based on forecast population and employment scenario. The Leduc County travel demand model was developed using PTV Visum[™] software to provide average annual daily traffic on roadways throughout the County.

What horizons were considered?

The Leduc County TMP analyzed the following horizon years:

- The existing scenario, which establishes current traffic conditions based on today's levels of traffic.
- A five-year horizon, which represents short-term growth in the region.
- A 10-year horizon, which represents medium-term growth in the region.
- A 20-year horizon, which represents a long-term view of the region.

Each of the above-listed horizons were utilized to test the effects of different infrastructure improvements and their impacts on the Leduc County transportation network. The model is also sensitive to the growth in other regions, such as the City of Leduc, City of Beaumont, City of Edmonton and Town of Devon.

Traffic simulation results: existing conditions

A review of the existing (2021) forecast conditions indicated that:

- Minor congestion was evident on the northbound QE II between Highway 19 and 41 Avenue.
- There were no other significant capacity issues along County corridors evident within the travel demand model.
- Other areas of congestion were evident at provincial highway intersections near ramp terminals, such as Highway 625, and localized intersections within urban areas, such as the City of Leduc.
- The significant downturn in the energy sector that occurred in 2014 throughout the province
 resulted in a significant decline in traffic volumes generated to and from the Nisku Business Park,
 which can still be felt today. Current traffic volumes at the Airport Road interchange, for example,
 (up to 2019 which was pre-Covid) were still down by 150 to 20 per cent from the time of peak
 activity.

Traffic simulation results: a five-year forecast

A review of the five-year (2026) forecast conditions indicated that:

- Minor congestion is forecast to continue to occur along the QE II corridor between Airport Road and the Highway 19 corridors.
- The demand from the Beaumont ELAN lands and the East Vistas community is anticipated to drive minor improvements to the local and collector roadway network.

The following projects are anticipated to be completed over the coming five-year period:

By the County (in concert with other funding partners):

- Nisku Spine Road from Township Road 510 to Highway 625. (Completed in 2022)
- Nisku Spine Road from 18 Ave. to Airport Road. This project is assumed to involve paving the two-lane corridor and occur in 2022. (Completed in 2022)
- Township Road 510 re-construction, assuming no widening and the facility remaining twolanes. (Substantially completed in 2023)
- Access to new County recreational property and an upgrading plan for Range Road 11.
- Paving Range Road 15 from Highway 616 X to Highway 616 to accommodate the recreational traffic generated by Pigeon Lake. Range Road 15 vertical and horizontal profiles to be analyzed prior to surfacing.

By other jurisdictions:

- An additional fourth northbound QEII lane from Highway 19 to 41 Avenue.
- 65 Avenue Phase 1, inclusive of a two-lane Airport Perimeter Road connecting to 65 Avenue, and a two-lane Grant MacEwan West corridor.
- A four-lane Discovery Way within the City of Leduc.
- 65 Avenue east upgraded from to two to four lanes between 50 Street and 39 Avenue.
- Highway 19: four lane widening to be completed on the west section closest to the Town of Devon.
- Nisku Spine Road: two lanes paved between 65 Avenue and Airport Road.
- ELAN (Beaumont) connections to Range Road 243.

By the development community:

- The Nisku Area (southeast of Township Road 512/Nisku Spine Road intersection) was assumed to have a connection to a new east leg at the Nisku Spine Road/39 Avenue intersection as well as a connection to Township Road 512.
- The development within East Vistas is envisioned to trigger at least one new connection to Range Road 245 in the west of the development.
- The Royal Cubera lands at the southwest quadrant of Township Road 512/Range Road 243 is assumed to provide a connection to Township Road 512.

Traffic simulation results: a 10-year forecast

A review of the ten-year (2031) forecast conditions indicated that:

• A lack of north-south capacity along the QE II corridor, which essentially diverts vehicles onto alternate routes. Widening of the QE II corridor is paramount to maintaining network integrity should land develop in a "business-as-usual" case.

The following projects are anticipated to be completed over the subsequent five to 10-year period:

- By the County (in concert with development initiatives) primarily to address connections to the arterial network:
 - The north half of the East Vistas community is assumed to be developed with the local and collector roadway system in place, resulting in connections to Township Road 505 and Range Road 244 being required.
 - Range Road 244 is to be paved to a collector standard between Highway 625 to Township Road 510.

• The Nisku Spine Road/37 Avenue intersection would likely require traffic signal control given the advent of development on the east side of Nisku Spine Road over the next decade.

By the County (in concert with other funding partners):

- Widen Nisku Spine Road from two to four lanes between Township Road 510 to Airport Road.
- Widen 41 Ave. (six lanes on east side) and Township Road 512 (two to four lanes to Range Road 243).
- Township Road 510 is forecast to exhibit a volume-to-capacity ratio above 80 per cent. A four-lane cross-section of Township Road 510 is envisioned to be required.
- Improvement to Range Road 40 between Highway 39 and St. Francis Road (Township Road 500) to meet collector road standards.

By other jurisdictions:

- Highway 625 would require widening from two to four lanes to 50 Street (Beaumont). This is envisioned by Leduc County as an Alberta Transportation and Economic Corridors improvement.
- An eight-lane QE II corridor between 50 Street to Highway 19, while four lanes continue south of 50 Street.
- 65 Avenue East: widen from two to four lanes from 45 Street to 39 Street.
- Widen the middle portion of Highway 19 to four lanes, inclusive of re-alignment and limited connection opportunities,
- The City of Edmonton lands surrounding Cawes Lake have been provided accesses to 50 Street and Township Road 512.
- Widen Highway 21 from two to four lanes from Highway 14 to Highway 625.

Traffic simulation results: a 20-year forecast

The 20-year (2041) forecast assumed that:

- The South of Devon ASP as envisioned would be approximately 15 per cent built-out and a single access would be required onto/from the Highway 60 corridor.
- Township Road 505 between Range Road 244 and Range Road 245 was found to require paving to a collector standard to support East Vistas growth in the area.
- The southern half of the East Vistas development was assumed to have been developed requiring an east-west collector between Range Road 245 and Range Road 244.
- Other traffic conditions at the 20-year horizon forecast that:
 - Travel congestion is evident along the major north-south and east-west routes within the study area.
 - The East Vistas lands would require additional connections to support the future development in the south area.

The following projects were anticipated to be completed over the subsequent 10 to 20-year period:

By the County (in concert with other funding partners):

Widen Nisku Spine Road from Airport Road south to 65 Avenue. It is anticipated that this
project can be divided into two phases, with the segment north of Airport Road happening first.

- Widen Airport Road to four lanes from 9 Street/Nisku Spine Road to Highway 21. It is
 anticipated that this project can be divided into two phases, with the segment east of Highway
 814 happening first.
- Improvement to Glen Park Road from Highway 2 (QEII) to Highway 795 to address traffic growth and potential safety concerns. It is anticipated that this project can be divided into two phases, with the segment east between QE II and Range Road 263 happening first.
- Improvement to Tower Road (Township Road 482) from Highway 2A to Highway 795 to meet collector road standards.
- Improvement to Township Road 481 from Highway 795 to Range Road 274 to meet collector road standards.
- Improvement to Range Road 40 between Highway 39 and St. Francis Road (Township Road 500) to meet collector road standards.
- Improvement to Range Road 230 from Highway 616 to Township Road 482 to meet collector road standards.
- Improvement to Range Road 263 from Glen Park Road to Tower Road to meet collector road standards.
- Continued allocation towards the improvement of identified paved and gravel roads, safety initiatives, rehabilitation and maintenance expenditures.

• By other jurisdictions:

- Range Road 243 would be upgraded to a collector standard by the City of Edmonton to support development in the area.
- The 65 Avenue Phase II Interchange is anticipated to be in place.
- A 12-lane QE II (eight collector and four core lanes) corridor extended south to 65 Avenue.
- Eight QE II lanes to 50 Avenue and six QE II lanes south of 50 Avenue.
- The existing Highway 2A interchange is anticipated to remain in place and the QE II corridor would remain as four-lanes within the area on the interchange.
- 65 Avenue west would be improved to a six-lane cross section to as far west as Grant MacEwan Blvd
- 65 Avenue East would be widened to four lanes as far as Nisku Spine Road
- 74 Street would be implemented as a two-lane paved roadway between 65 Avenue and the City of Leduc/Leduc County boundary.
- Nisku Spine Road would be widened to a four-lane cross-section from Highway 19 to 65
 Avenue. Nisku Spine Road would also be extended as a two-lane roadway from 65 Avenue to
 Rolly View Road.
- Widen the Township Road 512 corridor between Range Road 243 and 50 Street eastward. (This is required to support the growth from Nisku, City of Edmonton and City of Beaumont. Given the benefits of this project, this could potentially be jointly funded).
- A new QE II/Township Road 510 interchange was assumed to be in place as a four-lane structure to accommodate the development of the annexation areas south of 41 Avenue. (In the absence of the Township Road 510 interchange, widening of Nisku Spine Road to six lanes south of 41 Avenue must be considered as the Spine Road corridor would exceed 80 per cent of its daily capacity. This would likely include intersection modifications to the 41 Avenue/ Nisku

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- Spine Road intersection and Nisku Spine Road/39 Avenue intersection to accommodate the additional lanes.).
- Rolly View Road would be widened to four lanes to connect to the new Nisku Spine Road corridor.

Traffic simulation results: after 20 years

It is envisioned, for the purposes of this TMP, that the following infrastructure would not be completed until after the 25-year time horizon:

- The new Highway 2A interchange.
- Any form of Terwillegar Drive/170 Street south extension beyond Highway 19.
- The relocation of the existing provincial Vehicle Inspection Station (VIS), which is currently located 2.4 km south of the existing Highway 2A interchange.

6. TRANSPORTATION STRATEGIES

6.1 Regional Transportation

Leduc County is ideally situated and served by the CANAMEX Trade Corridor, the Edmonton International Airport (YEG) and two national railways. This location advantage underscores the importance of achieving integration with transportation within the region so Leduc County can continue to offer opportunities to advance and diversify the economy, which will increase employment and services offered to residents, businesses and industry.



Leduc County's MDP indicates its central principle regarding infrastructure as

"The County fosters an effective and fiscally sustainable multi-modal transportation system that is integrated with land use" 11.

The Transportation Master Plan supports the MDP principles by recommending the following strategic policies and their objectives:

- Leduc County shall support the coordinated planning and delivery of regional and local transportation initiatives. This will be accomplished by:
 - Participating in regional transportation initiatives with Edmonton International Airport (YEG), the province and neighbouring municipalities.
 - Engaging surrounding municipalities to lead the efforts in establishing regional rural public transit.
- Leduc County shall work collaboratively with adjacent municipalities, organizations, and regional partners to support and enhance the growth of regional and global connectivity. This includes:
 - Recognizing that the Nisku Business Park is an intermodal hub and will require coordination with adjacent jurisdictions to promote multi-modal travel and goods movements.
 - Recognizing the importance of a future transit priority connecting communities and the Edmonton International Airport (YEG).
- Leduc County shall establish policies, directions and strategies that complement (where applicable) the Edmonton Metropolitan Regional Board's (EMRB) recommended 25-year project list (Figure 8). This can include:
 - Remaining a key stakeholder in the future planning of the Highway 2A interchange realignment, the Terwillegar Drive (170 Street) south extension and the potential for a Highway 2 (QEII)/Township Road 510 interchange.
 - Engage Alberta Transportation and Economic Corridors on key issues of capacity and safety to improve the movement of goods and people throughout the County.
 - Leduc County will use municipal primacy/jurisdiction over EMRB established roadway priorities when warranted or required.

¹¹"Leduc County Municipal Development Plan", June 2019, Page 68

- Leduc County shall support mobility hubs. Mobility hubs are strategically located at transit stations
 and serve as critical places for trip origins, destinations and transfer points. They create connectivity
 to different modes of transportation that permit people to seamlessly move from one travel option
 to another. The hubs are where different modes of transportation (both public and private) come
 together including walking, biking, transit and shared mobility options to create connections to the
 greater Edmonton region. A current example of an emerging mobility hub includes a County Centre
 Park and Ride facility. Leduc County shall support:
 - Mobility choices for employees and employers within the Nisku area.
 - The development of a form of public transit that best fits the needs of Leduc County.
 - The work of major employers who implement strategies that encourage multi-modal travel or have workforce that require transit services.
- Introduction of a nodes and corridors structure plan that would serves to establish key linkages between employment centres, Edmonton International Airport (YEG), park and ride, regional transportation facilities, and other destinations with general policies related to the ambitions for such corridors and locations.
- Leduc County shall support YEG in achieving its potential as a regional economic generator by:
 - Planning for and supporting transit access to YEG.
 - Improving and maintaining connectivity between YEG and surrounding major employment areas.

6.2 Heavy Truck Movements

The regional network

One of the primary strategies of the EMRB is the recognition that transportation infrastructure is a regional asset and an economic driver. The IRTMP has adopted a strategy that supports the efficient flow of goods to regional, national and international markets through the implementation of a planned regional goods movement network. The EMRB's transportation master plan has designated the following links as part of their goods movement network:



- Highway 20, Highway 39, Highway 60, Highway 19/625, Highway 21 and Highway 14 all serve as existing High Load corridors linking east-to-west; and
- Highway 60 north of Devon is a recommended high load corridor.

Alberta Transportation and Economic Corridors' plans for oversized and overweight loads designate the same routes as the EMRB transportation master plan; however, it is noted that between the north-south Highway 20 (in the vicinity of Breton) and Highway 21 (in the vicinity of New Sarepta) designated connector routes – 100 km – there are no other high load corridor routes. The EMRB goods movement plan also does not recommend any additional future north-south routes between Highway 20 and Highway 21. As these routes are separated by 100 km, it remains likely that operators are finding their own north-south routes through Leduc County's roadways to address this deficiency independent of the designation.

Consideration should be given to encourage Alberta Transportation and Economic Corridors and the EMRB to upgrade Highway 19 and proposed extension of 170 Street east of Highway 2 (QEII) to accommodate the high volume of out-of-County through truck traffic.

Dangerous goods routing

The main available resource regarding the transportation of dangerous goods is provincial legislation¹², which indicates that local authorities may, with the approval of the Minister of Transportation and Economic Corridors, enact bylaws with respect to the roadways under its direction, control and management that:

- Designate the route and time-of-travel of vehicles transporting dangerous goods on such roadways.
- May prohibit the carriage of dangerous goods specified on such roadways.
- May specify conditions/restrictions or conditions to ensure the safe transport, storage and controls necessary for public safety.

A review of the manner is which adjacent municipalities address dangerous goods indicated:

- City of Edmonton: heavy vehicles (over 8000 kg GVW/12.5 m long) and vehicles carrying dangerous
 goods must adhere to the Truck Route Network. If the destination cannot be reached directly from
 a Truck Route, take the most direct and practical road off the nearest Truck Route.
- **Parkland County:** the December 2014 Transportation Master Plan indicated that a key objective was to identify potentially dangerous goods and trucks routes, and review emergency vehicle routing. The masterplan did not provide any guidance regarding dangerous goods routing.
- **Strathcona County:** County Bylaw 16-2015¹³ addresses both restricted and temporary dangerous goods routes by noting specific roadways, the "from" and "to" limits, prohibition and permitted route signage, penalties, maps and permits.
- **City of Leduc:** City Bylaw 558-2004¹⁴ designates Sparrow Drive, 43/45 Street, 50 Street and a portion of 65 Avenue as dangerous goods routes noting prohibition and permitted route signage, penalties, maps and permits.

In general, most municipalities were found to:

- Restrict the movement of dangerous goods to highways aligned through their municipality that are under Alberta Transportation and Economic Corridors' jurisdiction.
- Restrict the movement of dangerous goods to an established truck route network.
- Restrict the movement of dangerous goods to the most direct and practical route that would connect to a designated truck route.

The TMP encourages Leduc County to determine which County corridors are being used to transport dangerous goods through a safety assessment and determine if development of a dangerous goods bylaw has merit and remains in the interest of public safety.

[&]quot;Dangerous Goods Transportation and Handling Act and Regulations of Alberta", RSA Chapter D-4, July 30, 2021, Section 17(1).

^{13 &}quot;Bylaw 16-2015 Traffic Bylaw", Section 4, Transportation of Dangerous Goods, Schedules "A", "B" and "C."

¹⁴ "Bylaw 558-2004 Dangerous Goods Transportation Bylaw", Dec 8, 2008.

Leduc County's truck route network

Leduc County's truck route network and corresponding bylaws and regulations are intended to ensure that heavy vehicle traffic operating within Leduc County's jurisdiction respects the integrity and physical limitations of the roadway network while still assuring the economic integrity of the region is achieved.

The planning for goods movement along the County's roadway network must not only accommodate heavy vehicle traffic volumes, but also assure integration with, and the integrity of, adjacent land use planning objectives. Mobility and physical and financial sustainability are to be achieved. The County's Municipal Development Plan states:

"Development and subdivision adjacent to local and regional roads and over dimensional corridors (as identified in Schedule "F": Transportation Infrastructure) shall not impede the existing or future flow of traffic on local and regional roads or over dimensional corridors."

Leduc County currently deploys a hybrid system of regulations controlled by signage that includes truck prohibitions including no truck routes, seasonal road bans and temporary road bans. The seasonal bans are based on the percentage of maximum allowable axle weights on specified roadways (typically in increments of 25 per cent) and include all vehicles' gross-vehicle weight (GVW) greater than five tonnes (but provide for full and partial exemptions). Temporary road bans are implemented on an as-needed basis.

Truck route network policies

The Transportation Master Plan supports the development of a sustainable truck system by recommending the following strategic policies and their objectives:

- Leduc County shall monitor the safety of key intersections and corridors that support the movement of trucks on an annual basis.
- Leduc County shall establish a truck ban policy in the urban area (East Vista) not allowing truck route within East Vista residential area.
- Leduc County may encourage the development of an interconnected collector system within the lands bounded by Nisku Spine Road, Township Road 512, Township Road 510 and Range Road 243. The interconnected system shall:
 - Ensure the efficient movement of heavy vehicles by providing a sufficiently paved width and, at minimum, paved shoulders.
- Leduc County shall develop roadway cross-sections and intersection design strategies to facilitate goods movement while still promoting sustainable and connected multi-modal transportation hubs.
- Leduc County shall coordinate and collaborate with neighbouring municipalities and Alberta Transportation and Economic Corridors on goods movement studies and initiatives.

6.3 Roadway Classifications

Roadway functional classification is a transportation planning process where roadways are assigned into a system based on the character of service that the infrastructure is intended to provide. These services may include the surrounding land use context, the core function of the roadway and its physical characteristics. The classification of roadways by function is important in the planning of appropriate design components for each type of facility.



Roadway classification is intended to serve as a tool to identify the role of a roadway and provide consistent motorist expectations when navigating the roadways related to speed, capacity, access management and various cross-sectional elements. The MDP policies recognize that the functional classification of roadways relates directly to the design of infrastructure through municipal development standards.

The County's municipal development standards should be refined to assure that the design, material, and construction specifications for transportation systems in Leduc County fully and completely integrate with its classification system. Municipal development standards include both rural and urban road cross sections detailing pavement, subgrade and base requirements for each roadway classification. The roadway standards may also include roadside infrastructure such as pathways, utility corridors, servicing, transit provisions, street furniture, lighting, boulevard landscaping and other considerations to implement the vision for the desired transportation system.

Leduc County's existing roadway system has been established through a network of provincial highways, County main roads, special purpose roads and local roads. The County currently operates and maintains primary main roads such as Township Road 510, Glen Park Road, the Genesee bypass and Nisku Spine Road.

The TMP undertook an assessment of the existing transportation network and current literature to provide roadway classification recommendations with the intent of:

- Accommodating the diversity of roadways within the County.
- Accommodating the purpose or function of roadways in terms of emergency vehicle routes.
- Integrating with provincial, EMRB and adjacent municipality classification standards.
- Addressing the requirements for a sustainable multi-modal transportation network as defined in the current MDP.

While considering the following items:

- The rural or urban surrounding environment.
- The surrounding existing and forecast land uses such as industrial, commercial, lakeshore, country-residential, hamlet, agricultural, resource and recreational.
- The proximity to major activity centers that are destination oriented.
- The forecast daily amount of passenger traffic.

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- The forecast daily amount of truck traffic.
- The desired physical roadway characteristics necessary to meet future demands.
- The desired operating speed along the corridor.
- The desired intersection and access spacing along the corridor.
- The effect of new proposed provincially significant infrastructure (Highway 2 (QEII)/ Township Road 510 interchange, new Highway 2/2A interchange, relocated vehicle inspection stations, Highway 21 improvements, Highway 19 improvements), including high-load corridor requirements.

The proposed roadway classification framework considered existing and forecast land uses separated into the following classifications:

- The *Industrial/Commercial* designation is characterized primarily by significant employment and commercial development. These areas are located close to or directly adjacent to the denser urban residential centres.
- The Resource/Agriculture designation is characterized by the transportation of goods and services related to heavy equipment and heavy loads. These roads are primarily characterized by lower volumes of traffic but experience heavier loading demands.
- The *Residential Areas* are primarily located outside of the urban centre and major industrial/commercial and resource/agricultural areas and include:
 - country-residential communities
 - hamlets, villages
 - lakeshore communities/areas
 - recreational areas, such as campsites

Residential Areas may continue to have classifications referred to as *special roadways* because they are characterized by unique attributes that may be scenic, historic, tourism or special-community related.

Within each of these land-use categories, the TMP proposes a functional roadway classification (see Schedule B) to accommodate the different demands of arterial, collector and local roadways. The functional classification has been based on a sampling of the characteristics of various representative Leduc County roadways.

Roadway design and planning best practices

The following section outlines considerations for road design and planning initiatives undertaken by Leduc County. These do not require policy language for the TMP, but instead guidance is provided on how to address these issues moving beyond the plan.

Common factors that should be considered in the design of the roadside environment include:

- road classification
- design speed
- operation speed
- posted speed

- drainage
- pavement design
- right-of-way constraints
- access requirements

traffic volumes and composition

other factors

Generally, roadsides should be designed to provide a clear, recoverable and forgivable clear zone where feasible. Where obstacles are identified, consideration should be given to remove, relocate and/or redesign the obstacle to reduce the probability and severity of collisions with an obstruction.

Where roadsides cannot be designed free of obstacles, safety devices should be introduced (inclusive of guardrails) to reduce risks. Roadside safety devices are part of the roadway infrastructure that functions to maintain a safe operating environment. Some common measures and potential roadside safety devices to mitigate the risk of run-off-the-road collisions that could be considered include:

- Provide roadside clear zone free of obstacles, such as trees, signage or poles.
- Install delineation warning devices, such as chevron alignment signs, raised pavement markers or wider pavement markers.
- Install rumble strips (shoulder or center line).
- Install guardrails.
- Change curve alignment.

Through annual monitoring and evaluation of key intersections, Leduc County is encouraged to identify deficiencies related to roadway or shoulder widths. The monitoring strategy would identify deficient locations that would benefit from a roadway re-design. The strategy would be conducted as part of a network-wide screening initiative involving a collision assessment that could be attributed to narrow roadway, clear zone or shoulder widths.

Service roadways, which are initially constructed by the province, ultimately fall within Leduc County's jurisdiction, which is responsible for operation, maintenance, construction standards and liability. Overtime, these responsibilities cumulate and can represent a significant financial burden to the County, especially when such service roadways include bridges and large bridge-like culvert structures. The County is encouraged to examine the local roadway network for opportunities to provide alternative routes to divert heavy traffic so closures/bridge removals may be considered.

Roadway classification policies

The Transportation Master Plan recommends the following strategic policies and their objectives:

- Leduc County shall adopt the recommended roadway functional classification system as illustrated in Schedule B.
- Leduc County shall consider the functional classification for all new and widened roads for incorporation into Schedule B to ensure consistency within the roadway network.
- Leduc County shall develop and adhere to its municipal engineering standards that:
 - Incorporate the design parameters recommended within Schedule C.
 - Incorporate active transportation infrastructure, such as concrete sidewalks and widened shoulders, for appropriate arterial, collector and local classifications.
 - Support to accommodate transit stops and lay-bys in the urban area for multi-modal transportation.

- The County is encouraged to assess the local roadway network and determine opportunities that
 would identify redundancies leading to possible closures of roadways and the removal of bridges,
 respecting the need to assure alternative access is provided.
- Development of a Complete Streets policy for the major employment, urban centre areas and identified priority locations. A Complete Streets policy ensures that transportation planners and engineers consistently design and operate the designated roadways to which the policy applies for all road users (people who walk, bicycle, take transit, or drive, and people of all ages and abilities), not only motorists.

6.4 Active Transportation

Active transportation modes involve people of all ages walking and cycling throughout Leduc County for commuting or recreational purposes. The intent of developing active transportation infrastructure is to promote healthy living through sustainable communities and serve as an important way for communities to remain connected aside from motorized vehicle-use.



The Leduc County TMP is intended to:

- Act as a catalyst to focus and develop active modes in the urban areas (Nisku, Vistas).
- Identify gaps in the existing and future trails system to promote active transportation within the rural areas of the County.
- Establish active transportation policies that support active modes throughout the County.
- Integrate, where applicable, with provincial¹⁵ and EMRB active transportation initiatives.

The TMP process involved a survey, which results showed that active transportation infrastructure is important to Leduc County residents.

• Respondents ranked *Active Modes Infrastructure* as the first or second-highest concern in almost 60 per cent of the responses.

The County's MDP policies specifically relate to rural open space corridors trails and pathways with the objectives of:

- Establishing well-connected, clearly identifiable and multi-functional networks of open space and recreation corridors across the County.
- Developing a regional open space system that connects to environmental features such as wetlands, rivers, creeks, habitat areas and tree stands that are an important part of maintaining environmental function.

[&]quot;A Long-Term Transportation Strategy for Alberta". Draft Strategy https://www.transportation.alberta.ca/Content/docType5513/Production/Draft%20Strategy.pdf " Suggested Actions include ccollaborating with partners on a needs assessment for, and promotion of, active transportation (such as walking and biking) within and between all Alberta communities, developing multi-use trails for commuting, as well as recreation, ssecuring a consistent and predictable source of funding for active transportation needs. Encourage municipalities to implement processes and build infrastructure that makes their community accessible to all

Current Active Transportation Infrastructure

Leduc County's active mode infrastructure currently consists of two infrastructure elements:

- Multi-purpose trails: these trails are dedicated pathways often separate from (but could be parallel to)
 the Leduc County road system. Trails are often located next to significant geographical features and
 are utilized for recreational purposes. The trails throughout Leduc County are currently maintained
 by various organizations and associations.
- Sidewalks: the Hamlet of New Sarepta and the East Vistas provide a variety of concrete sidewalks within the community to facilitate pedestrian travel, which were implemented as part of the County's annual surfacing program. The implementation of raised sidewalks often goes hand-in-hand with curbing, which requires an underground storm sewer network to accommodate drainage and are more typical of urban environments.

Leduc County operates and maintains several trails that serve individual locations/ attractions as opposed to being long linear connection routes. Examples include:

- Jubilee Park Campground trails
- Business and Entrepreneur Centre (BEC) park trails
- The Genesee Heritage Park trail

The Leduc County trail system includes several existing trails maintained by others as identified in the Parks and Open Spaces Master Plan.

Leduc County's active recreational plans

Leduc County's *Open Space Master Plan* (2006) detailed several action steps required to implement the objectives of the plan, which included:

Trail development policies

- Provide trails in the development/redevelopment of County Parks.
- Link trails in County parks to regional trails.
- Work with partners in the development of trails.
- · Review County bylaws regarding trails.

New open spaces

- New open spaces included the North Saskatchewan River Valley, the Genesee Area, North Pigeon Lake and Saunders Lake.
- Increase emphasis on protection of Open Spaces.
- Continue policy of protecting the North Saskatchewan River Valley.
- Identify open spaces in area structure plans.
- Provide input on new open spaces in land-use planning.
- In residential subdivisions, only accept recreation reserves that meet criteria.

The County's *Intermunicipal Planning Framework* (IPF) (between the City of Edmonton, Beaumont and Leduc County) calls for a coordinated, integrated, regional approach to active transportation planning

in the vicinity of Nisku, East Vistas, the City of Beaumont and the City of Edmonton to avoid inconsistencies.

Various area structure plans, such as the Leduc East Vistas Local ASP (2010), the Wizard Lake ASP (2010) and the South of Devon ASP (2015) have a trail component. The Devon ASP identified multi-use paths, which would be considered upgrades to the existing Leduc-to-Devon Connector section of The Great Trail and the Wizard Lake ASP recommended expanded trails providing access to Jubilee Park and other amenities.

The First Mile/Last Mile connection

The EMRB IRTMP introduced the concept of *Mobility Hubs*, which serve as a focal point of multi-modal services to better connect communities. To maximize the use of a mobility hub, *First-Mile/Last-Mile* strategies are emphasized to better connect transit riders to their destination (IRTMP Policy 4.1.1.4). *First-Mile/Last-Mile* strategies describe the connection between the beginning or end of a user trip in the transportation network. For transit users, this is how the user reaches the bus stop.

County infrastructure

During the development of the County's Economic Development and Growth Management Strategy (EDGMS), Nisku business owners stressed not only the importance of transit, but the interaction of transit with supporting active transportation facilities. Employers expressed difficulty in attracting employees due to the lack of active transportation linkages to those transit stops serving Nisku. Employees find it difficult walking along busy roads characterized by heavy vehicle traffic particularly in the winter.

The County should:

Consider protecting additional reserves and/or additional rightsof-way to accommodate interconnected walkways/pathways outside of the current roadway right-of-way. Figure 9 illustrates the isolated "pod-like" developments along Range Road 232, which are isolated from one another. Pedestrians and cyclists are forced to use Range Road 232 to visit their neighbours. An alternative would be to provide policies and infrastructure that would encourage connecting pathways linking each of the "pods."

Determine which Nisku



Figure 9: Country residential "pods" result in isolated neighbourhoods corridors would best benefit from sidewalks accounting for the location of planned transit stops.

- Provide for active transportation investments as part of the existing off-site levy bylaw.
- Assure that investments in active transportation infrastructure have a high probability of success and once developed, a monitoring process to determine usage in critical areas.
- The cross-section of roadways within the "urban centre" should ideally assure for significant collector roadways within the residential subdivisions:
 - a physical separation from vehicle traffic in the form of concrete monolithic sidewalks of at least 1.8m in width; or
 - the use of separate off-street interconnected multi-use pathways of 3.0m in width. The provisions for multi-use pathways would require significant right of way to be protected.

Active Transportation policies

The Transportation Master Plan supports the active transportation by recommending the following strategic policies and their objectives:

- Leduc County shall develop roadway classifications that appropriately address active transportation modes for arterial, collector and local roadways. Such cross-sections should consider:
 - At minimum, a paved shoulder, with appropriate safety edge and markings, of sufficient width on all collector and arterial roadways.

- A physical separation from vehicle traffic in the form of concrete monolithic sidewalks of at least 1.8m in width; or
- the use of separate off-street interconnected multi-use pathways of 3.0m in width. The
 provisions for multi-use pathways would require significant right of way protection
 requirements.
- Leduc County shall undertake a Recreational Trail and Open Space Master Plan to begin a planning process to formalize the Leduc County trail network and support active mode connections. This planning exercise should:
 - Identify and prioritize all required active transportation infrastructure so when development proceeds in an area, the County's intentions would be pre-determined.
 - Determine which Nisku corridors would best benefit from sidewalks accounting for the location of planned transit stops.
 - Consider protecting additional reserves and/or additional rights-of-way to accommodate interconnected walkways/pathways outside of the current roadway right-of-way.
 - Consider the provisions for active transportation investments and the maintenance of such facilities, once developed, within the existing off-site levy bylaw.
 - Formalize roadway design guidelines for cross-section of roadways within the "urban centre" that would assure for significant collector roadways within residential sub-divisions.
- Leduc County shall encourage the development of County-wide trail infrastructure as illustrated in Schedule "F", which include:
 - The Telford-Saunders Southern Route
 - The Blackmud Creek Trail-Existing Vistas
 - The East Vistas Oil Pipeline Trail
 - The Trunk Sewer Pipeline ROW Trail
 - Irvine Creek Trail, Township Road 510 and future connection to North Nisku Industrial area
 - Township Road 505 (future connection) to country residential area (east of Beaumont)
 - Saunders Lake West Trail
 - The Old Railway Corridor route (west of Sunnybrook)

6.5 Public Transit

Public transit provides a host of primary and secondary benefits to the community, residents, employers and patrons of services where transit services are offered.

Transit services:

- Contribute to both the economical and physical health of individuals.
- Bring financial benefits to communities.
- Provide jobs in the industry itself.
- Are a key component of a healthy business ecosystem.
- Increase mobility options for both employment commuters and customers.
- Provide for a mobility alternative for residents to access a variety of destinations to access local goods and services and employment destinations.



Leduc County Transportation Master Plan

- Provide an affordable alternative for individuals who do not have access to a personal vehicle (children, students, seniors, workers and low-income residents).
- Offer a sustainable option that offers independence.
- Generate economic development opportunities by assuring convenient transit access to employment centres.

Transit service opportunities

On May 17, 2021, Leduc Transit approved a scope of services to be effective July 2021, which would see a transition for some routes from "fixed routes" to an "on-demand" service.

The "on-demand" service will offer trips within the City of Leduc and Nisku Business Park and is expected to operate during the same time periods as the existing fixed routes: weekday mornings and afternoon peak periods.

• The "fixed route" service applies to Route 1 (Leduc-Nisku-Amazon-Edmonton) and will remain unchanged; however, additional early morning trips will be added to Route 10 to replicate the morning Route 3 service to Edmonton International Airport (YEG).

The benefits to Leduc transit patrons and those coming into the area from around the region include:

- Increased pick up and destination points in Leduc and the Nisku Business Park.
- Transit stops that are closer to where people live and work.
- Flexibility to book more convenient times.
- More efficient and easier connections to Route 1.

Leduc County is presently evaluating its transit options to provide future service.

The TMP has identified the following strategies to be considered by the County to provide transit solutions:

- **Intermunicipal and private sector partnerships:** this involves the purchase of select services from established transit systems or services located adjacent to communities.
- Federal and provincial partnerships: the Federal Government announced in February 2021 that it will be providing nearly \$15 billion in funding for new public transit projects across the country over the next eight years, in order to deliver "efficient and modern" public transit systems, while helping in restarting the economy and fighting climate change. Alberta is expected to receive \$2.1 billion for public transit over the next 10 years (2018-28). Eligible communities with existing transit authorities can apply for funding to improve or expand public transportation.
- Market-oriented service planning: one way that smaller communities maximize ridership and stay ahead of rising costs is to focus on understanding and serving key market segments, such as assuring that transit service is scheduled to accommodate the needs of shift workers or operating accessible services in partnership (by way of subsidy) with accessible taxis services.
- Flexible delivery: flexible approaches are intended to be more demand-responsive and include dialaride services during both on and off-peak hours. These services may be more expensive per trip

- because these vehicles carry fewer passengers, but also provide for a lower cost-per-vehicle mile than a fixed-route system, which is likely attributed to the ridership levels typical of the system.
- Marketing: this involves implementing specific strategies to communicate with key segments of the
 transit market such as a community outreach toolkit, and a centralized production of printed and
 web-based public information that yields higher-quality materials at more affordable prices.

Transit planning in the region

The IRTMP strategy for "Getting People to Jobs and Services" concentrates on a shift from the auto mode to alternate modes such as transit, walking and cycling. Schedule 2 from the IRTMP illustrates the long-term transit network that would connect to Leduc County. The IRTMP schedule presents the following key infrastructure that have been considered in the development of the Leduc County Transportation Master Plan:

- The establishment of an LRT or similar higher-order level of transit to connect the City of Edmonton to the Edmonton International Airport (YEG); and
- A future transit priority corridor to connect the City of Beaumont, Nisku, the East Vistas and Edmonton International Airport (YEG).

However, the above IRTMP initiatives do little for the dispersed smaller communities within Leduc County such as New Sarepta, Calmar, Thorsby and Warburg.



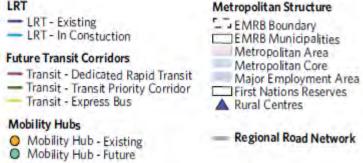


Figure 10: Planned Regional Higher Order Transit Network, Schedule 2, IRTMP - EMRB (May 2021)

Public transit transportation policies

The Transportation Master Plan supports the establishment of a public transit system by recommending the following strategic policies and their objectives:

- Leduc County shall undertake a feasibility assessment of various transit methods that could best accommodate transit service to Nisku, the East Vistas and rural areas of Leduc County. This feasibility assessment should consider:
 - inter-jurisdictional partnerships as integral to the success of the system;
 - new technologies and innovative methods of service delivery;
 - the ability of the service to meet needs of the rural and urban communities, as well as the daily needs of residents of all ages, abilities and socio-economic backgrounds; and
 - obtaining federal and provincial partnership funding sources.
- Develop official design guideline standards based on transit operation best practices related to transit stop designs that would be made applicable for new subdivision development throughout the County.
- Leduc County, as part of Leduc Transit, shall engage with the City of Beaumont and Edmonton
 International Airport (YEG) to develop a transit priority corridor as part of the long-term vision for
 the East Vistas community and Nisku Business Park.

6.6 Roadway Safety

Roadway safety is a critical component within the overall County transportation network and adjacent municipalities are placing significantly greater emphasis in terms of policy and practice toward addressing the issue of road safety. The City of Edmonton has adopted "Vision Zero" targets through its "Safe Mobility Strategy (2021-2025)". "Vision Zero" design is intended to achieve a roadway system that permits mistakes from the driver but reduces the severity of the crashes. The City of Calgary's "Safer Mobility Plan (2019-2023)" identifies a key target of achieving a 25 per cent reduction in the number of major traffic related injury and fatal collision/incidents.

The TMP has highlighted several key roadways and intersection locations as candidates for consideration of safety improvement measures that are to be developed over time. The safety improvement program is intended to minimize significant injury and loss of life while providing system-wide benefits.

The TMP's public participation process canvassed residents and employers by way of a survey question that requested participants to rank, in terms of level of concern or importance, various transportation and traffic issues. The survey indicated that:

- 95 per cent (29 of 31) identified "safety at intersections" as a concern; and
- 80 per cent (23) of the respondents ranked "safety at intersections" as one of the top three highest concerns.

As well, Leduc County residents expressed concern regarding the effects of speeding traffic, which raises the issues of traffic calming, roadway design standards, pedestrian safety, collision history and speed limits.

The TMP indicates recommended design speeds (which are 10-to-20 km/hr higher than the posted speed) for each of the recommended road classifications. However, once a roadway has been designed, constructed and open for public use, compliance to a desired lower-posted speed limit may well be ineffective.

Leduc County may find itself with several roadways where speed complaints become prevalent if the roadway design did not accommodate measures to be implemented at the project outset. These routes are defined by having an 85th percentile operating speed that exceeds the desired posted speed.

Leduc County recognizes safety as a major concern and the objective of improving safety for all modes of travel remains a core part of the TMP. Implementing safety-related improvements after a roadway being constructed and open to the public can be costly. Hence, retrofitting speed effective, speed reduction measures necessitates an approach that assesses severity of the problem and prioritization of improvements based on cost and the anticipated benefit. The theme of safety is addressed throughout this TMP, including the development of a traffic calming policy and procedure, the promotion of active transportation networks and strategies, and other related policies.

Traffic calming best practices

With the anticipated advent of the development of more densely urbanized residential subdivisions (such as the East Vistas), Leduc County will ultimately be faced with addressing traffic concerns that are much more familiar to larger urban centres. Issues such as rolling through intersections, speeding, pedestrian-vehicle conflict points and safety are anticipated to present themselves with increasing regularity.

It remains prudent for the County to develop a policy that serves to identify:

the process used to identify and substantiate areas/locations of concern;

Table 6-1: Advantages and Disadvantages of Traffic Calming Measures

Advantages	Disadvantages
Reduce vehicle speeds	Potential increase in emergency vehicle response time
Reduce traffic volumes	 Increased expenses/resources (time/manpower)
Reduce through-traffic	 Increased maintenance expenses/resources (time/manpower)
 Improve neighbourhood safety (specifically for pedestrians) 	May divert traffic to neighbouring roadways
Reduce conflicts between roadway users	Addition of visually unattractive warning signs
Increase compliance with regulatory signs	May cause civil disputes between 'for and against' opinions

- solutions/measures acceptable to the County;
- the potential suitability/application of the solutions/measures; and
- the warrants necessary to trigger the need for such solutions/measures.

Several intersections, such as Highway 795/Glen Park Road and Highway 2A/Glen Park Road, were noted as possibly warranting safety assessments. As these intersections involve provincial highway infrastructure, the County should ideally encourage Alberta Transportation and Economic Corridors to lead the safety assessments aimed at identifying possible solutions where safety is a concern.

Road safety transportation policies

The Transportation Master Plan supports roadway and intersection safety by encouraging the following:

- Leduc County shall monitor collision statistics and average daily traffic volumes on an annual basis
 to assist in identifying areas where safety improvements may be needed and justified. This
 monitoring process should form a standardized screening process that:
 - Assures historical collisions by frequency, type, severity, location and vehicle type are reviewed.
 - Identifies problem areas, locations and low-cost solutions.
 - Recommends locations for more detailed study and design to mitigate safety concerns.
 - Evaluates the performance characteristics of roadway and intersection improvements that have been implemented to determine their effectiveness.
- Leduc County shall undertake further detailed study dedicated to assessing rural and urban intersections that exhibit poor safety characteristics. The study should best identify both low-cost and other measures to be implemented over time.
- Leduc County shall initiate discussion with Alberta Transportation and Economic Corridors to develop and implement short-term improvements to address the locations identified within the TMP as provincial intersections that exhibit elevated historical collisions.
- Leduc County shall establish a toolbox of safety mitigation measures for use in the redesign, reconstruction and/or resurfacing of County roadways, which may include:
 - · additional lane markings, centerline markings and shoulder markings
 - implementation of a road safety edge
 - the delineation of roadway shoulders
 - centerline and shoulder rumble strips
- Leduc County shall establish a dedicated portion of the annual roadway capital budget to implement specific low-cost, safety-related improvements.
- Undertake a roadside safety device assessment and safety audit of roadways that have deficiencies related to roadway or shoulder widths. This review would compare the built roadway environment to design guidelines to identify where the roadway design elements are substandard.
- Be encouraged to adopt/develop a speed (traffic calming) policy that:
 - acknowledges that STOP signs are not typically appropriate for use to protect pedestrians, as a speed control device or as a means of deterring through traffic; and

 would involve a four-step process to determine when traffic calming guidelines are to be considered, which would include the following steps: 1) Project Initiation and Pre-screening; 2) A point Assessment System; 3) Traffic Calming Design Considerations; and 4) Measuring Community Support.

6.7 The Basis of Roadway Investment

The Leduc County transportation network is diverse, consisting of more than 2,130 km of roadways of which 1,734 km (82 per cent) are unpaved gravel or oiled roads. The network poses a unique challenge of demanding significant resources for operation and maintenance to ensure all residents and businesses are afforded the opportunity to utilize the network. The TMP enhances the overall transportation network by guiding the County on the



future development of its roadways, coordinates infrastructure improvements with land uses, and responds to future growth and demands within the network.

The TMP presents an opportunity to ensure that transportation investment aligns with the vision and objectives of Alberta Transportation and Economic Corridors, the EMRB and adjacent municipalities.

Improvement categories

The Leduc County TMP's intention is to identify major projects and initiatives to resolve existing transportation issues while enabling future growth in the County.

The following improvement types have been included in the TMP:

- Major arterial construction: this includes widening or rehabilitation (subgrade stabilization, GBC and ACP for the existing road width etc.).
- Travel surface improvement: this applies to rural gravel and paved roadways respecting the proposed roadway classification system requirements.
- **Improvements for existing paved roads:** this type of improvement is intended to satisfy the proposed roadway classification standards when reconstruction is warranted.
- **Intersection improvements:** these improvements are intended to support the general growth within the County and may be recommended from planning initiatives/documents.

In addition to specific projects, the TMP has identified a series of funding requirements to meet the needs of the transportation. The TMP recommends Leduc County allocate appropriate resources to:

- Monitoring, evaluating and implementing safety improvements at key intersections throughout the County.
- Fund an appropriate transit system that can accommodate both rural and urban needs, in conjunction with surrounding municipalities.
- Contribute to the planning, development, implementation and support of a regional trail network.

Paving of gravel roads

Leduc County faces a significant undertaking in maintaining its extensive network of 1,734 km of gravel roads. ¹⁶ In addition, with the advent of annexation and planned (EMRB) regional roadway arterials, the County is likely to find traffic volumes increasing along many of its connecting corridors. This is anticipated to further intensify maintenance requirements, which may lead to additional consideration of paving as an option to avoid increasing maintenance costs. A 2006 report¹⁷ indicated that 88 per cent of the County's roadways were gravel surface or oiled roads in 2005. A more recent review indicated that the proportion of gravel surface or oiled roadways has declined to 82 per cent since that time. If the 2,130 km of roadway inventory remained the same from 2006 to present, the six per cent (88 per cent minus 82 per cent) decline could well translate to over 128 km of roadways that have been paved over the last 16 years.

Some of the considerations in assessing a candidate roadway for paving include:

- existing roadway paved surface and shoulder width
- the level of daily traffic
- network connectivity
- · existing maintenance requirements
- drainage

Leduc County continues to maintain and improve the condition of the gravel road network throughout the entire year; however, the winter gravelling program accounts for a significant component of the annual maintenance effort expended on the gravel roadway network. Each winter, approximately one-third of Leduc County's gravel roadways are re-graveled, requiring approximately 120,000 tonnes of gravel to complete the winter gravelling program. For more than 35 years, the gravel program has been undertaken to reduce the impact to residents caused by heavy vehicle traffic and to preserve the existing gravel road infrastructure. Frozen roads can withstand more weight and produce less dust concerns when compared to summer operations.

Leduc County's consideration for paving a segment of gravel road includes:

- Consideration of current traffic information, inclusive of both passenger vehicle and truck vehicle traffic
- Consideration of the current level of maintenance
- · General engineering judgement
- Available funding

Alberta's provincial highway network in 2009 consisted of nearly 31,000 kilometres, of which 24,850 kilometres were paved. The approximate 6,200 km of unpaved highways are maintained by Alberta Transportation (AT). For comparison purposes the County's 1700 km responsibility represents 25% of the entire 6,200km length of unpaved highways that the province is responsible for.

¹⁷ "Roadway Management System" Final Report, January 2006, ISL Engineering, Page 9

Safety

With traffic volumes, the following appears to be the general applied guideline for selecting the most appropriate surface treatment for the County's roadways:

- Fewer than 200 vehicles per-day: granular
- Between 200 and 400 vehicles per-day: surface treated (LCB¹⁸)
- More than 400 vehicles per-day: paved (HCB¹⁹)

Basing the decision upon only traffic (AADT) volumes suggests a road's surface should be changed, but ideally further assessment is required, and decisions should be treated on a case-by-case basis to assess other factors that can contribute to determining the appropriate surface type.

As new technologies, innovations and materials are developed, Leduc County should periodically review thresholds and surface treatment types by engaging with industry, academia, professionals and peer municipalities to explore and adapt municipal practices to continually refine its best practices.

A nine-step framework established through a review of literature is recommended to be considered to determine when Leduc County should pave a gravel roadway:

- 1. Enhance the road inventory (management) program to provide a complete inventory of all County roads their classification, geometric parameters, operational characteristics (function, speed), traffic volumes, percent heavy vehicle traffic etc.
- 2. Enhance the traffic collection program where annual updates of traffic volumes be undertaken on 20 per cent of the network. Leduc County's GIS application is the natural repository for current AADT and heavy vehicle information.
- 3. Formal adoption of road standards inclusive of roadway cross-sections, design quality standards and maintenance standards.
- 4. Address safety considerations prior to paving, such as sight distances, design speeds, roadway alignments, lane widths and superelevation concerns.
- 5. Account for road base and drainage improvements inclusive of related costs and sub-base requirements.
- 6. Account for the costs of road preparation, which could include the costs of imported materials, clearing, new culverts, change in slopes, installation of guard rails and upgrades to signage.
- 7. Undertake cost comparison including life cycle costing to determine future maintenance costs of a paved versus gravel surface.
- 8. Weigh public opinion to ensure information is transparent and the decision-making process carries a sound rational.
- 9. Encouraged staged construction when paving gravel roads during the design process of which road base and drainage improvements are identified on their own drawing.

Leduc County is encouraged to develop a "best practice" policy to address the paving of granular surface roadways based on a framework that serves to identify which corridors are to be upgraded

¹⁸. "LCB" - Low Class Bituminous Surface (e.g. Seal Coat, Chip Seal)

¹⁹ "HCB" - High Class Bituminous Surface (e.g. Asphalt Concrete)

and why and identifies what other related upgrades are required aside from the paved surface and how the construction should be staged.

Recommended policies for transportation investment

To support fiscally sustainable transportation investment, the Leduc County Transportation Master Plan recommends the following strategic objectives and actions:

- Leduc County shall consider projects within Section 7 for annual implementation over a 20-year time period in a manner that is financially and administratively sustainable for Leduc County.
- Leduc County shall undertake a road needs study to identify immediate and long-term maintenance, rehabilitation and geometric deficiencies within its rural network to best manage their long-term infrastructure requirements.
- Leduc County shall prioritize projects on an annual basis, recognizing its ability to fund major transportation projects over the next 25 years may be limited by funding limitations and competing needs. Therefore, prioritization of network improvements should consider:
 - The projects that would pose the greatest risk in safety, operations and maintenance to the public.
 - The projects highlighted by the Transportation Master Plan as being integral to the growth and development of the County.
 - The projects that benefit urban and rural collector roadways to establish a well-connected system of roadways.
 - The projects that benefit rural local roadways, whether gravel or paved, to meet the needs of Leduc County's agricultural and oil extraction communities.
 - Improvements to minor local roadways and secondary rural gravel roadways that serve a low density of residential, agricultural or other industry-related uses.
- Leduc County shall, through the development application process, determine roadway infrastructure priorities that are triggered by future development initiatives.

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7. THE IMPLEMENTATION STRATEGY

The Implementation Strategy is a plan to implement the recommended transportation network improvements, plans, policies and recommendations from the Leduc County Transportation Master Plan. The recommended projects and initiatives are divided into short, medium and long-term timeframes. The Implementation Strategy recognizes that no project will be constructed without the funding and approval from Council. The Implementation Strategy has been designed to be dynamic and respond to changing land use and growth scenarios to best fit the needs of Leduc County.

7.1 Network Evaluation

To best support transportation in Leduc County, projects were identified and carried forward based on:

- Forecast transportation demands as extracted from the 20-year modelling process. Roadways that exceed accepted thresholds for capacity or paving criteria are advanced.
- A review of the proposed design standards against the existing roadway characteristics to determine where current collector and local roads are deficient.
- A project has been brought forward for specific safety, capacity or reconstruction-related improvements.

7.2 Prioritization

The Leduc County Transportation Master Plan recommendations have been prioritized into four timeframes:

- Short-term (2022 to 2026)
- Medium-term (2026 to 2031)
- Long-term (2031 to 2041)
- Ultimate (2041 and beyond)

The projects, recommendations and strategies have been categorized based on:

- Achieving fiscal sustainability while continuously achieving a net improvement in the overall Leduc County transportation network.
- Importance to the County regarding the hierarchy of the roadway and its contribution to encouraging growth.
- The presence of significant safety elements or geometric concerns that present short-term concerns.
- The requirement to align the roadway features with the proposed roadway classification and roadway design parameters recommended by this Transportation Master Plan.

7.3 Implementation Strategy

The Transportation Master Plan is intended to guide transportation investment over the next two decades. To accomplish this, the following tables have been prepared to guide Leduc County on developing annual transportation-related budgets for the short, medium and long-term planning horizons.

These projects were evaluated and prioritized to:

- Best fit the needs of Leduc County.
- Achieve a net benefit to the overall transportation system on an annual basis.
- Continuously encourage growth while maintaining integrity in the system.
- Accomplish a modern roadway standard.

It is recommended that, on an annual basis, Leduc County consider selecting projects from the following implementation tables for the purpose of generating an annual roadway improvement budget.

Table 7.1 thru Table 7.4 provide a summary of the capital expenditure estimates associated with the anticipated roadway improvement projects. The summary tables indicate expenditures in the order of:

- Approximately \$15.6 million per-year over the short-term period (2022 to 2026)
- Approximately \$19.8 million per-year over the medium-term period (2027 to 2031)
- Approximately \$25.1 million per-year over the long-term period (2032 to 2041) assuming no subsidies/grants for major arterial widening and construction.

						Table	e 7-1: Sho	ort Tern	n: 2022 -t	o- 2026								
Roadway / Intersection	From	То	Length (Km)		oject fication	Se	ection	L	anes	Total Cost Estimate	AADT	Count Year	s	tate	Improvement Rationale	Program Year/ Status	Growth Rate	Projected Construction Year
				Current	Improved	Current	Improved	Current	Improved				Current	Improved				
1. Network Upgrades (Arterial/Colle	ctor/Local Imp	rovements)																
Range Road 15	Highway 616	Highway 616X	2.3	Local	Collector	Rural	Rural	2	2	\$ 1,610,000.00	225	2022	Gravel	Base Paved	Connectivity	2024	3%	2025
Range Road 11	Township Road 502	County Boundary	2.8	Local	Local	Rural	Rural	2	2	\$ 2,240,000.00	83	2017	Gravel	Gravel	County Property Access	2025	3%	2027
Range Road 11	Highway 39	County Boundary	7.6	Local	Local	Rural	Rural	2	2	\$ 5,320,000.00	144	2021	Gravel	Base Paved	County Property Access	2031	3%	2032
										\$ 9,170,000.00								
2. Intersection Improvement										\$ 500,000.00								
3. Rehabilitation										\$ 30,000,000.00								
4. Rural Roads Initiatives										\$ 6,500,000.00								
5. Completed Projects										\$ 32,000,000.00								
Nisku Spine Road	Township Road 510	Airport Road	7	Arterial	Arterial	Rural	Rural	2	2	\$ 23,000,000.00			Paved	Base Paved	Traffic Volume	Completed	8%	2022
Township Road 510	Range Road 244S	Range Road 245N	2.8	Arterial	Arterial	Rural	Rural	2	2	\$ 9,000,000.00	8,070	2021	Paved	Base Paved	Traffic Volume	2023	8%	2023
			5-	-Year Short	-Term (2022	-to- 2026)	Anticipated	Capital Ex	penditures:	\$ 78,170,000.00								

						T	able 7-2:	Mediun	n Term: 2	027 -to- 203	1							
Roadway / Intersection	From	То	Length (Km)	Project Cla	assification	Se	ction	La	anes	Total Cost Estimate	AADT	Count Year	S	tate	Improvement Rationale	Program Year	Growth Rate	Projected Year
				Current	Improved	Current	Improved	Current	Improved				Current	Improved				
1. Network Upgrades (Arte	erial/Collector/L	ocal Improve	ments)															
Nisku Spine Road	Township Road 510	Airport Road	7	Arterial	Arterial	Rural	Rural	2	4	\$ 45,000,000.00			Paved	Base Paved	Traffic Volume	2029	8%	2031
Township Road 510	Range Road 244S	Range Road 245N	2.8	Arterial	Arterial	Rural	Rural	2	4	\$ 12,000,000.00	8,070	2021	Paved	Base Paved	Traffic Volume	2027	8%	2030
RR230	Township Road 482	Highway 616	6.4	Collector	Collector	Rural	Rural	2	2	\$ 4,000,000.00			Gravel	Gravel	Connectivity	2027		2029
										\$ 61,000,000.00								
2. Intersection Improvement										\$ 500,000.00								
3. Rehabilitation										\$ 30,000,000.00								
4. Rural Roads Initiatives										\$ 7,500,000.00								
			5-	Year Mediu	m-Term (202	7 -to- 2031	.) Anticipated	l Capital Ex	penditures:	\$ 99,000,000.00								

							Tabl	e 7-3: Lo	ong Term:	2032 -to- 204	ļ 1							
Roadway/ Intersection	From	То	Length (Km)	Project Cl	assification	Se	ction	L	anes	Total Cost Estimate	AADT	Count Year		State	Improvement Rationale	Program Year	Growth Rate	Projected Year
				Current	Improved	Current	Improved	Current	Improved				Current	Improved				
1. Network Upgrade	Network Upgrades (Arterial/Collector/Local Improvements)																	
Nisku Spine Road	Airport Road	Township Road 500/ 65 Ave	3.2	Arterial	Arterial	Rural	Rural	2	4	\$ 16,000,000.00			Paved	Paved	Traffic Volume	2032	%	2034
Airport Road	9 Street	Highway 814	6.4	Arterial	Arterial	Rural	Rural	2	4	\$ 30,000,000.00	3680	2021	Paved	Paved	Traffic Volume	2032	8%	2037
Airport Road	Highway 814	Highway 21	11.52	Arterial	Arterial	Rural	Rural	2	4	\$ 50,000,000.00	2220	2021	Paved	Paved	Traffic Volume	2038	8%	2043
Glen Park Road	Queen Elizabeth 2	Range Road 263	8.5	Arterial	Arterial	Rural	Rural	2	2	\$ 8,500,000.00	3490	2018	Paved	Paved	Safety	2039	5%	2044
Glen Park Road	Range Road 263	Highway 795	4.8	Arterial	Arterial	Rural	Rural	2	2	\$ 4,500,000.00	2080	2018	Paved	Paved	Safety	2038	5%	
Range Road 245	Highway 625	Township Road 510	3.2	Collector	Collector	Rural	Urban	2	4	\$ 14,500,000.00	1570	2021	Paved	Paved	Development Driven		5%	
Township Road 481	Range Road 271	Range Road 274	6.4	Collector	Collector	Rural	Rural	2	2	\$ 6,500,000.00	135	2021	Gravel	Gravel	Development Driven		3%	
Range Road 263	Glen Park Road	Tower Road	6.5	Collector	Collector	Rural	Rural	2	2	\$ 8,000,000.00	93	2022	Gravel	Paved	Connectivity		3%	
Township Road 505	Range Road 245	Range Road 244	1.6	Local	Collector	Rural	Rural	2	2	\$ 2,500,000.00			Gravel	Paved	Development Driven		5%	
Township Road 482	Highway 2A	Highway 795	20.8	Local	Collector	Rural	Rural	2	2	\$ 14,500,000.00	150	2021	Gravel	Paved	Connectivity		3%	
Nisku Spine Road	Township Road 500/ 65 Ave	Highway 623	2.2	Local	Arterial	Rural	Rural	2	2	\$ 16,000,000.00	254	2022	Gravel	Paved	Development Driven		5%	
Range Road 40	Highway 39	Township Road 500	9.6	Local	Collector	Rural	Rural	2	2	\$ 4,000,000.00	137	2022	Gravel	Gravel	Connectivity		3%	
										\$ 175,000,000.00								
2. Intersection Improvement										\$ 1,000,000.00								
3. Rehabilitation										\$ 60,000,000.00								
4. Rural Roads Initiatives										\$ 15,000,000.00								
				10-Year Lo	ong-Term (20	32 -to- 204	1) Anticipate	d Capital E	xpenditures:	\$ 251,000,000.00								

Table	7-4: Trail Construc	tion/Upgrades: 2022 -to- 2041							
Roadway / Intersection	Length (Km)	Total Cost Estimate	Improvement Rationale	Program Year					
Trail Construction/Upgrades									
Trunk Sewer Pipeline ROW Corridor	3.25	\$ 812,500.00	Developer Driven	2022-2026					
Township Road 510 Trail	1.80	\$ 450,000.00	Connectivity	2022-2026					
Pipeline ROW Corridor	3.28	\$ 820,000.00	Developer Driven	2027-2031					
Old Railway Corridor	16.6	\$ 6,640,000.00	Third Party Driven (Village of Warburg)	2027-2031					
Township Road 505 Trail	4.85	\$ 1,212,500.00	Connectivity	2027-2031					
Township Road 505 (East Vistas) Trail	2.5	\$ 625,000.00	Developer Driven	2027-2031					
Blackmud Creek Trail	8.35	\$ 2,087,500.00	Connectivity	2032-2041					
Saunders Lake Trail	4.75	\$ 1,187,500.00	Developer Driven	2032-2041					
Telford Lake - Saunders Lake Trail	2.6	\$ 650,000.00	Third Party Driven (City of Leduc)	2032-2041					
5-Year Short-Term (2022 -to- 2026) Anticipa	ted Capital Expenditures:	\$ 1,262,500							
10-Year Medium-Term (2027 -to- 2031) Anticipa	ted Capital Expenditures:	\$ 9,297,500							
20-Year Long-Term (2032 -to- 2041) Anticipa	ted Capital Expenditures:	\$ 3,925,000							

7.4 Innovative Strategies to Reduce Costs

Cost savings when roadway planning

At the planning level, it is recommended that Leduc County consider:

- An update to the Roadway and Bridge Asset Management Program, which would include a
 complete inventory assessment, an annual condition assessment, and the development of a
 condition prediction methodology to generate an annual net benefit report update to prioritize
 projects. This tool would be used as a resource allocation instrument to prioritize the maintenance
 and rehabilitation of bridges, culverts, guard rails, roads, signage, traffic signal systems, storm water
 management systems, sidewalks and maintenance equipment.
- Updating and establishing modern standards for roadways, pavement construction, safety barriers, transit supportive elements, active modes, etc.
- The implementation of an information management system that would involve collecting annual traffic volumes and collision data to make more informed decisions while building better public support and acceptance on roadway infrastructure decisions.
- Develop a Vendor Performance Management System to improve overall vendor performance on Leduc County contracts. The goal is to improve quality of work through establishing a history of vendor performance to ensure there is a historical performance perspective when awarding contracts.

Cost savings when undertaking design and construction

- Leduc County should consider undertaking value engineering (VE), a nationally recognized
 technique for improving function or reducing the cost of large-scale projects during the design
 process. Value engineering is intended to analyze project decisions to best achieve the project
 function at the lowest cost, including within its life cycle, for elements such as:
 - · construction costs and timeframe
 - key roadway safety elements
 - innovative design concepts

Value engineering can be applied at the planning, design and construction levels to improve functionality and reduce project costs; and

 Provide cost reduction incentive clauses when procuring design, construction and maintenance projects so the cost savings are shared between the contractor and the municipality.

Cost savings when undertaking maintenance and operation activities

- Develop policies and practices for proper inspection and maintenance to ensure cost-effective repairs are undertaken at the right point in time for the life of the pavement or gravel roadways.
 Pavement maintenance costs rise as conditions worsen. Chip sealing or a thin overlay can be appropriate to delay full reconstruction and could be considered as pavement preservation measures.
- Consider the application of "un-paving roads" (active conversion to gravel) for paved roads that
 have deteriorated to the point of requiring major reconstructive work. Rural municipalities have

historically paved roads due to the cost efficiency and long-term effectiveness, as realized by the low cost of asphalt, fuel and construction while axle loads were considerably lower than today²⁰. However, paved roads have resulted in high maintenance costs despite low traffic volumes. One potential strategy for these roadways is to convert deteriorated paved roads to unpaved, which has been found to be a sustainable, cost-effective way to maintain these roads for several jurisdictions in the U.S, including 27 states. The cost of converting paved roads to unpaved ranged from \$1,000 to \$100,000 per road segment or mile within the United States and Canada depending on conversion methods, equipment requirements, supplemental materials, surface stabilization and dust abatement, and addressing drainage and road base issues. The County is recommended to explore methods, policies and practices according to the *NCHRP Synthesis 485: Converting Paved Roads to Unpaved Roads (2016)* to determine best practices applicable to the County.

7.5 Funding Opportunities

The EMRB's IRTMP identified that "member municipalities will have to explore new funding programs to support and sponsor regional priorities...The Region should also explore and monitor advancements and trends in mobility pricing and consider its application as a sustainable source of funding that supports regional transportation priorities."

Appendix "B" of the IRTMP identifies the following municipal funding opportunities:

- Property taxes as the primary source of revenue that contribute towards funding operating expenditures.
- Local improvement levies that are applied to a specific area for projects that are most beneficial for local property owners or local area.
- Developer capital contributions are funds contributed by developers or partners to specific infrastructure projects.
- User fees, transit fares and parking revenues which vary by municipality in terms of impact.
- Off-site levies/development charges which, under the authority of Alberta's *Municipal Government Act*, permits a municipality to impose charges against new developments to cover incremental capital costs of new or expanded municipal infrastructure. This mechanism is reflective of the policy that "growth pays for growth" as levies are imposed.

Provincial funding opportunities

Grant opportunities for a wide range of projects.

- The provincial grant program to support municipalities for their infrastructure needs.
- Green Transit Incentive Program (GreenTRIP) aligned with the federal Public Transit Infrastructure Fund (PTIF).
- Strategic Transportation Infrastructure Program (STIP) this program provides financial assistance to rural and smaller urban municipalities for developing and maintaining key transportation infrastructure under four funding streams with:

²⁰ Fay, L., et al. Converting paved roads to unpaved roads. Transportation Research Board of the National Academies, Washington, D.C. 2016

Leduc County Transportation Master Plan

- Community Airport Program
- · Local Road Bridge Program
- Resource Road Program
- Local Municipal Initiatives Program

The STIP program has four primary goals:

- Improving the accessibility and the movement of goods and people.
- Increasing the capacity of municipal transportation infrastructure to support economic growth.
- Enhance safety and efficiency.
- Extend the service life of key transportation infrastructure.

Cost-sharing with federal funding programs

Federal funding opportunities

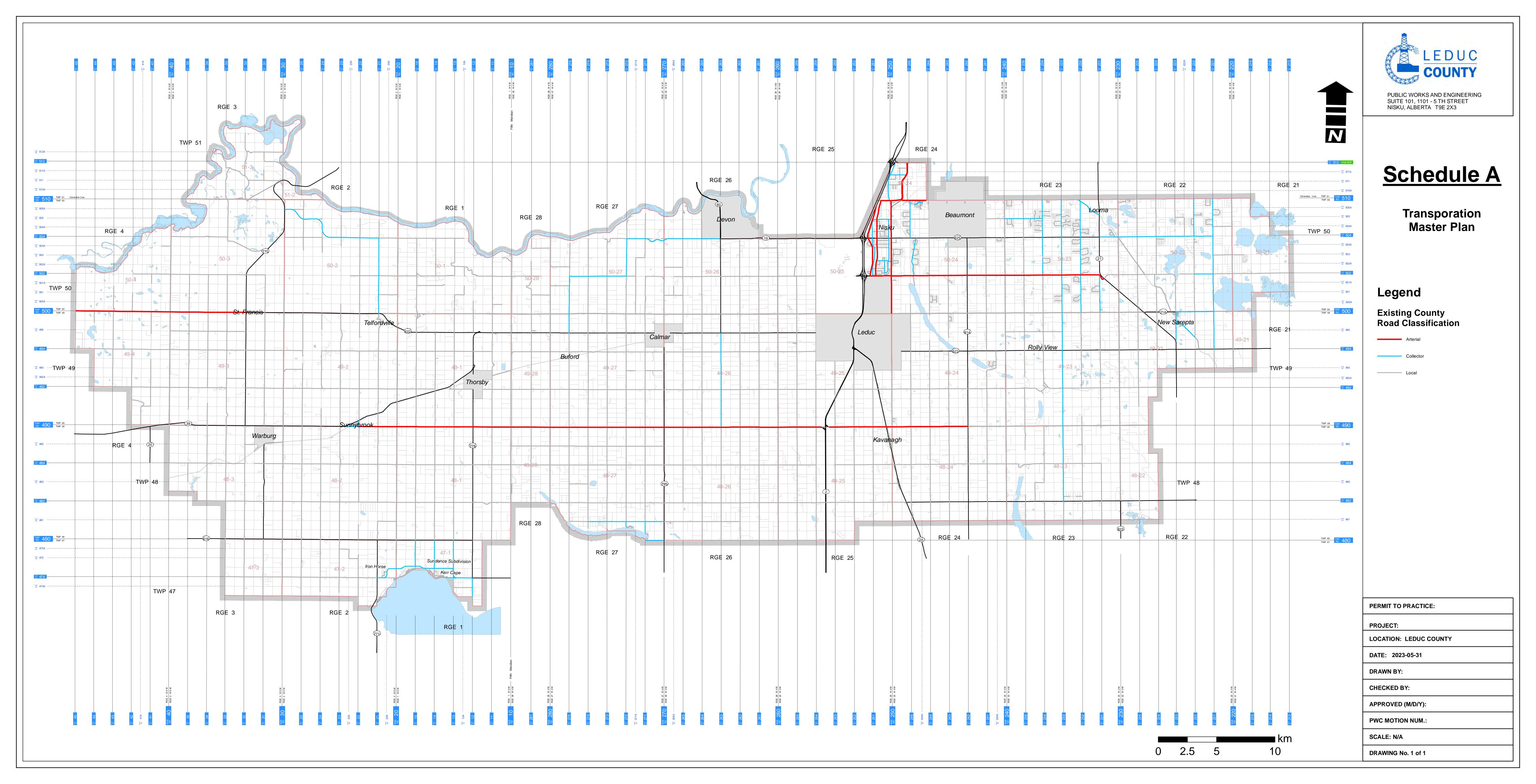
- Federal Gas Tax Fund intend to cover capital costs of infrastructure for municipalities.
- Investing in Canada Infrastructure Program the primary objective of this program is to support the construction of local public transit, green infrastructure, rural and north communities' infrastructure and community, culture and recreation infrastructure.
- New Building Canada Fund (NBCF) this federal program supports economic growth, job creation and job productivity. It has three components:
 - National Infrastructure
 - Provincial-Territorial Infrastructure
 - Small communities fund

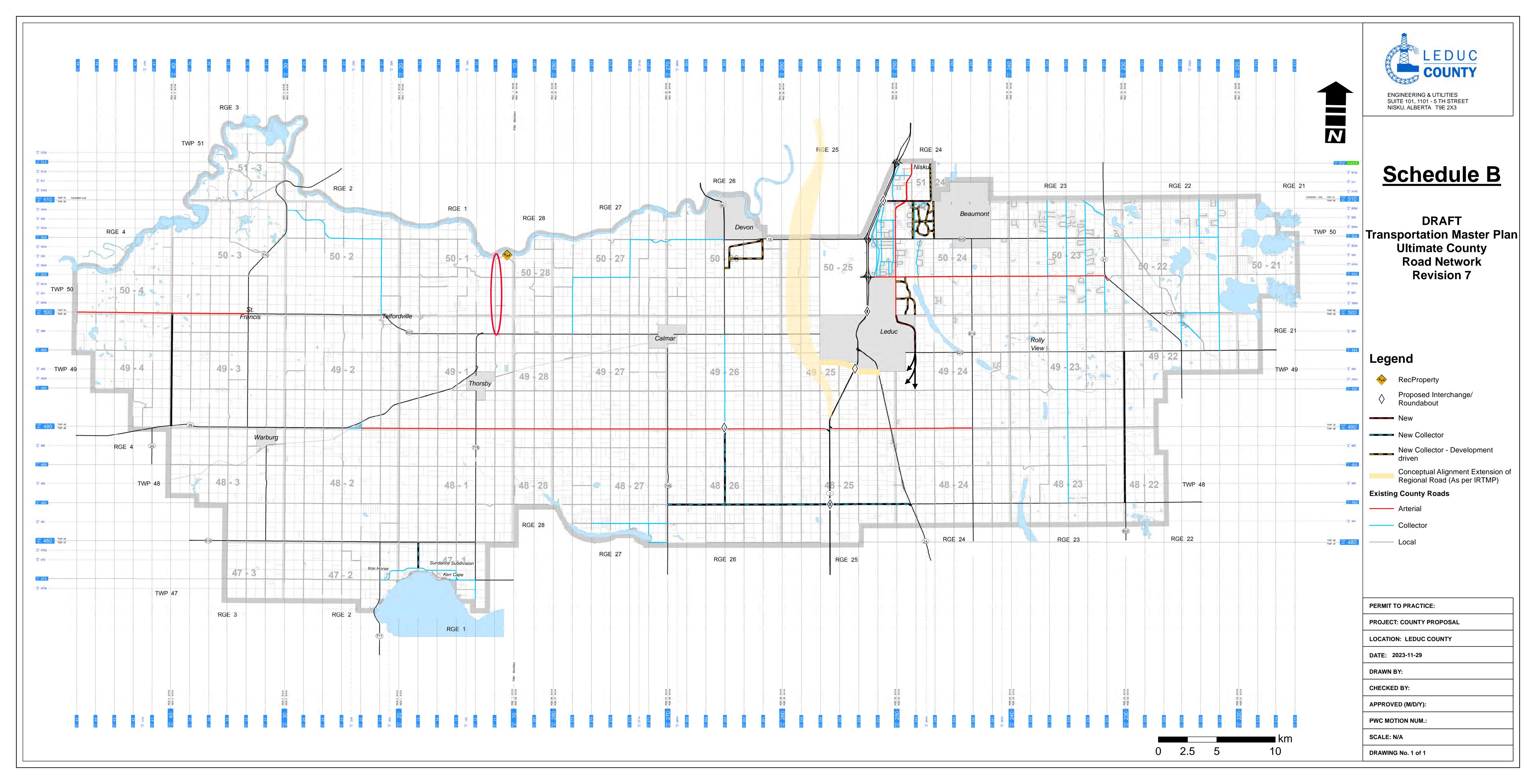
APPENDIX A

LIST OF SCHEDULES (MAPS)

- Schedule A: Leduc County Roadway Classification System Existing Roads
- Schedule B: Leduc County Roadway Classification System Ultimate
- Schedule C: Leduc County Roadway Classification System Ultimate Functional Designations
- Schedule D: Projects Map
- Schedule E: Proposed Ultimate County Road Network
- Schedule F: Ultimate Trails Network
- Schedule G: Transportation Infrastructure Source "Leduc County Municipal Development Plan, June 2019"

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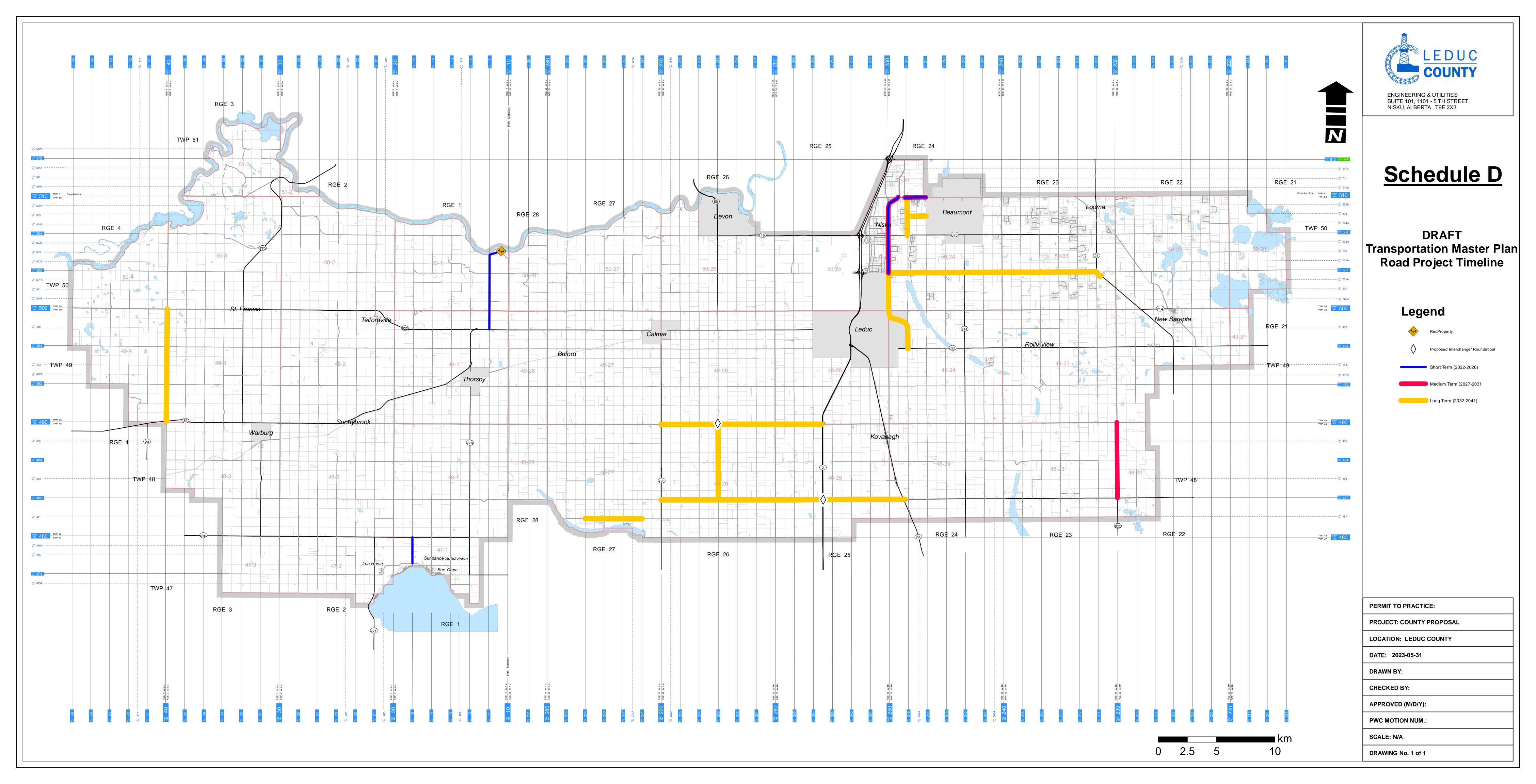


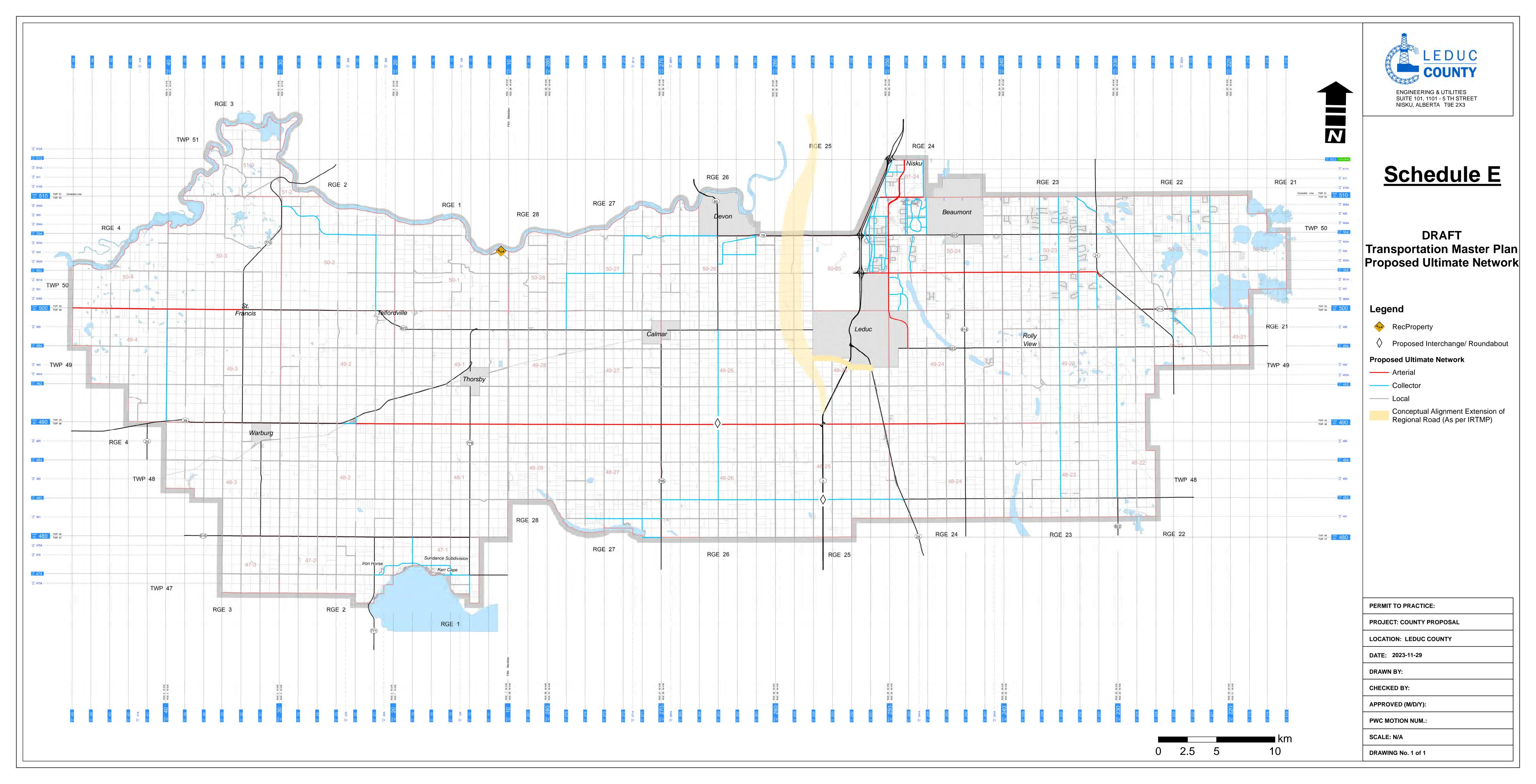


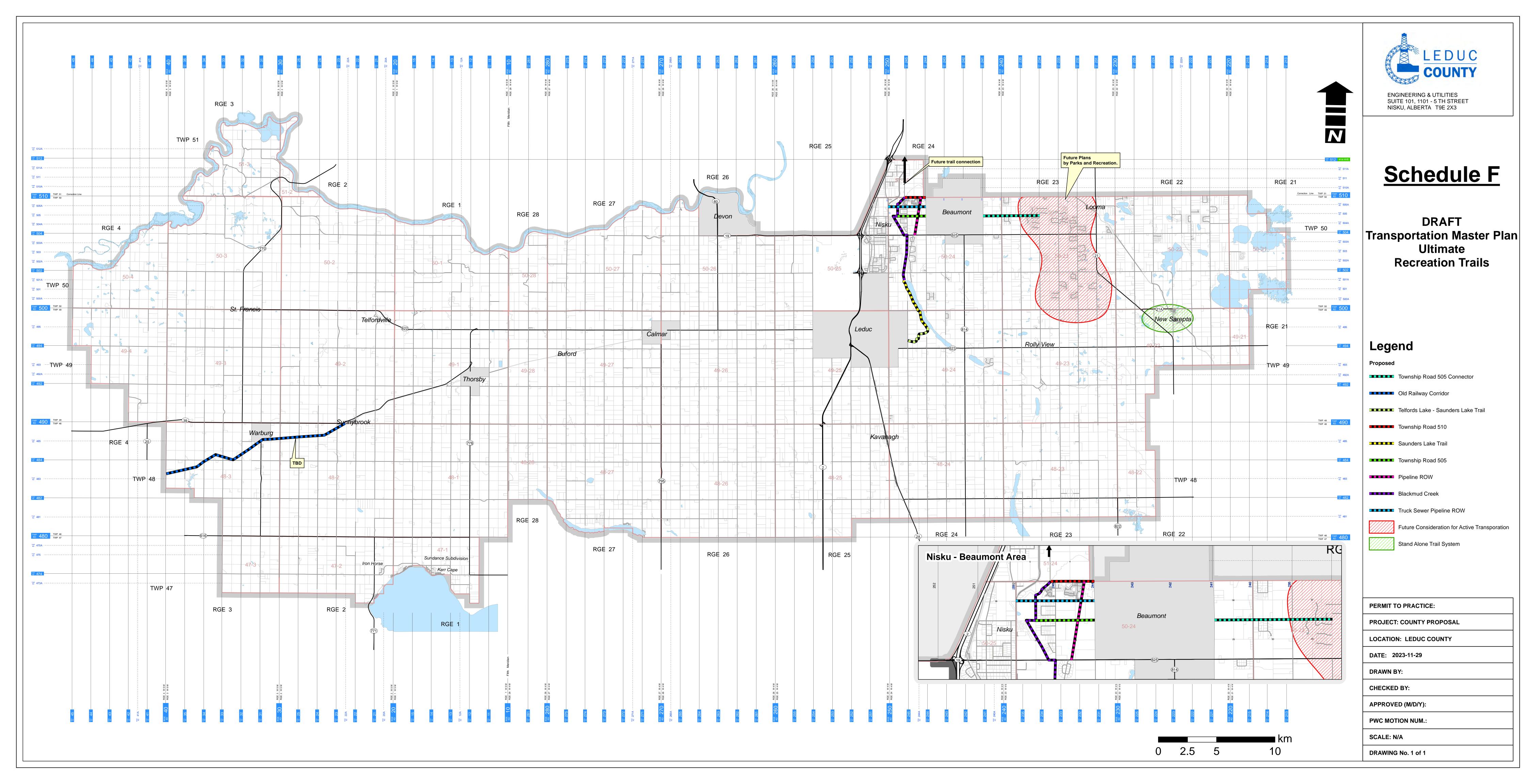
	Ir	ndustrial/Commerci	al				Schedule C: Leduc C Urban Residential	ounty Roadway Classification		unctional Designati Agriculture designat		n Rural A	reas	Reside	ntial Areas						
Situated		to, directly adjacent to		Centre			Urban Residentia	l Centre	nesource,	Predominantly withir			i cus	County residential acreages, hamlets and lakefront, communities							
Situatea	Arterial	Collector		Local		Arterial	Collector	Local	Arterial	Collector		Local		Collector	Local		diiicies				
Traffic Flow Services	Traffic flow is primary	Traffic flow and access is equal	Traffic flo	Traffic flow is secondary to access provisions			Traffic flow and access is equal	Traffic flow is secondary to access provisions		Traffic flow and access is equal	Traffic flow is secondary to access provisions				Traffic flow is secondary to access provision						
Typical Traffic (veh/day, 2-way)	1,000-20,000 Multi-lane	<5,000		<1,000		1,000-20,000 Multi-lane	<5,000	<1,000	>2,500	<2,500		<1000		>1,000	<1,000						
Access Control	Controlled	Some control	Land ac	Land access is primary function		Land access is primary function		Controlled	Some control	Land access is primary function	Controlled	Some control	Land access is primary function		ry function	Some control	Land access is primary function		function		
Traffic Flow	Uninterrupted except for intersections	Interrupted		Interrupted		Uninterrupted except for intersections	Interrupted	Uninterrupted Uninterrupted except for m		Interrupted	Interrupted		d	Interrupted	Interrupted						
Design Speed (kph)	70-100	60-80		60-80		60-90	50-80	40-60	80-120	70-100		60-90		60-90	50-70						
Common Connections	Provincial highways, Arterials, Collectors	Arterials, Local	Drive	ways, Lanes, (Collectors	Provincial highways, Arterials, Collectors	Arterials, Local	Driveways, Lanes, Collectors	Provincial highways, Arterials, Collectors	Arterials, Local	Drive	Driveways, Lanes, Collectors		Arterial, Collector, Local	Driveways, Lanes, Collectors		llectors				
Cyclist Accommodations		Shared Right-of-way, pav	ved shoulders	d shoulders		Designed facilities such as Multi-Use Paths, Cycle lanes	Shared Right-of-way, paved shoulder	Shared Right-of-way, paved shoulders	Alternate facility (Rec Paths)	Shared Right-of-way, paved shoulder	SI	nared Right-o	f-way	Shared Right-of-way, paved shoulders	Sha	red Right-of-v	way				
Pedestrian Accommodations		Sidewalks (one-side), Pav	ved shoulders			Multi-Use Paths	Sidewalks (both sides, one side)	Sidewalks (one-side), Paved shoulders	Alternate facility (Rec Paths)	Shared Right-of-way, paved shoulder	Shared Right-of-way, paved shoulder		aved shoulder	Shared Right-of-way, paved shoulders	Sha	Shared Right-of-way					
			Land Use	Between Driveways	From Collector Intersection to Local driveway						Land Use	Between Driveways	From Collector Intersection to Local driveway	О	Land Use	Between Driveways	From Collector Intersection to Local driveway				
Minimum Access Point Spacing (m)	400m to the next collector or arterial	100 m separation between the nearest driveway connecting to	Industrial	15 m	50 m	collector or arterial d	100 m separation between the nearest driveway connecting to the Collector and the	Separation is dependent on drainage design	400m to the next major collector or arterial	100m separation between the nearest driveway connecting to	the nearest Resource 100m 100m		100m	100m separation between the nearest driveway connecting to the collector	County residential	30m	40m				
	intersection	the Collector and the Arterial	Commercial	10 m	40 m	intersection	Arterial		intersections	the collector	Agricultural	50m	60m		Outside of Hamlet/Village	60m	35m				
									g. routest a.			Lakeshore	10m	25m							
Surface Width excluding Parking Provisions	Design dependent	Minimum 13.5m	11.5m		Design dependent	14.5m	14.5m 11.5m		8.0m to 11.0m		8.0m to 9.0m		8.0m to 14.5m	7.0m to 10.0m		1					
Rural Urban Servicing	Rural or Urban	Rural or Urban		Rural or Urb	pan	Urban	Urban	Urban	Rural	Rural	Rural			Rural or Urban	Rural or Urban						
Recommended Surface	АСР	ACP		АСР		ACP		ACP		АСР	АСР	ACP	Gravel or Pavement	Gravel or Pavement	G	ravel or Pave	ment	ACP	ACP		

Pathways, sidewalks and cyclist accommodations are to be considered for all new roadway development to remain consistent with the Municipal Development Plan, particularly in the more urbanized residential development areas. However, the county is to determine the appropriateness of such facilities on a case-by-case basis.

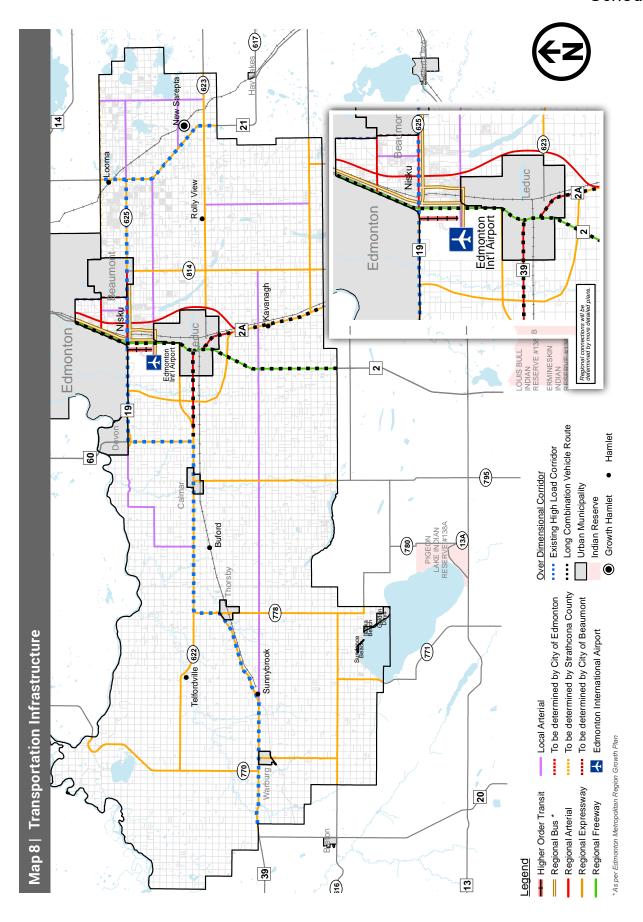
Access will be determined in the field.







Schedule G



APPENDIX B PUBLIC CONSULTATION REPORTS

Page B-1 Appendix B



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Background

Transportation Master Plan

Leduc County is updating its Transportation Master Plan (TMP), which will guide short, medium and long-term transportation infrastructure investment and establish our vision for transportation in Leduc County over the next 20 years.

Transportation in Leduc County includes many different forms of movement for a wide-range of residents, businesses and industries. The TMP will take a location-based approach to evaluate and plan for each of the unique areas throughout the county to develop an integrated multi-modal transportation system where people can drive, walk, bike and ride transit efficiently, safely and conveniently.

The TMP will include an assessment of our current transportation system, and the regional growth nodes, to develop comprehensive infrastructure plans to address the diverse needs of the urban, rural, business, industrial, agricultural, recreational and lakeshore communities.

The TMP will guide Leduc County using a two-phased approach:

- 1) Transportation Master Plan: Leduc County's Transportation Master Plan is the framework that guides transportation-related decision making. The TMP will consider all types of movement in order to design an interconnected, multi-modal transportation system where people can drive, walk, bike and ride transit efficiently and conveniently to their desired location. It is a broad, long-term view of the county's transportation network, highlighting important transportation corridors within the county and region to facilitate industrial and residential growth and strive for continued safe transportation routes.
- 2) **Affordability/Implementation Plan:** This part of the final plan will reflect the strategic objectives of Leduc County, provide direction for sound roadway investments and guide efficient transportation within the county for the upcoming five-and-10-year capital plans.

Public participation

Pre-engagement

In Nov. 2020, pre-engagement Interviews and surveys were conducted with a sample of individuals representing firms, organizations, community associations, hamlets and adjacent municipalities. Pre-engagement was completed to gather feedback on what each individual perceived as meaningful engagement and to provide insight into the variety of interests and issues concerning transportation services offered within the county.

The information collected during the pre-engagement period was used to help guide the communication process, provide a vision related to the required information materials and serve to identify considerations and issues concerning engagement planning.

As part of the pre-engagement process, we conducted the following:

- Six interviews were conducted with representatives from key audiences, including:
 - o Rolly View Community Association
 - o Glen Park Community Association
 - Agricultural grain producer from west Leduc County
 - o Edmonton International Airport
 - o Leduc Chamber of Commerce
 - City of Leduc's director of engineering
- 22 online surveys were completed by various audiences*:
 - o residents
 - o community organizations
 - o businesses
 - o agricultural sector
 - surrounding municipalities
 - o municipalities within Leduc County
 - o members of administration (Agriculture Services, Engineering, Road Operations, Parks and Recreation, Economic Development and Fire Services)
- *See Appendix A for a complete list of those who were invited to participate in the survey.
- A Supporting Success workshop was held to highlight TMP planning undertaken to date, share the
 engagement approach, confirm input required to inform project decision making and commitment
 to consider public input, and explore roles in the successful implementation of the engagement
 process. The workshop included the following members:
 - o Leduc County council
 - o Leduc County Executive Leadership Team
 - Directors of Planning and Development, Engineering and Utilities and Agriculture
 Services and Road Operations

Public participation

The Leduc County TMP will affect many different audiences, including the general public, surrounding municipalities, the province (Alberta Transportation) and Leduc County staff. It's important to Leduc County to hear from and work with these audiences throughout the TMP process to gather meaningful feedback.

For phase one public participation, we worked with the public to understand the issues, concerns and causes of those concerns within the existing transportation network and to identify areas and ideas for improvements, enhancements and changes. The input received will be reflected in the analysis of our current transportation challenges, needs and solutions. For this reason, **IAP2 spectrum level: involve** was selected for this project.

We launched a month-long engagement plan in February that utilized an online engagement platform called Social Pinpoint, which allowed our audiences to provide their input using an interactive mapping tool and online surveys. We also hosted two virtual workshops on Feb. 18 and Feb. 22.

What we asked of you

Throughout the month of February, participants were asked for input on the following:

- Current modes of transportation they utilize
- Top three locations they travel to on a weekly basis
- Most and least critical transportation issues in Leduc County
- Input on the draft TMP vision statement and goals

By using our interactive map of Leduc County, participants were also asked to identify what's working, what's not working and ideas for improvement.

How we communicated



Figure one: How we communicated

Advertisements

We undertook an extensive advertising campaign that included:

- 12 roadside signs placed throughout the county
- Utility bill inserts
- Paid and organic social media ads
- A webpage created for the TMP, <u>www.leduc-county.com/transportation-planning</u>
- Two 30-second videos
- A web notice on the Leduc County website
- Direct mailed letters to stakeholders

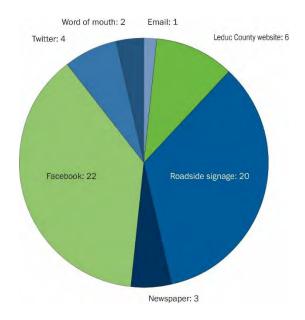


Figure two: How did you hear about the Leduc County Transportation Master Plan public participation opportunity?

Methods of Engagement



Figure three: How you participated

Online, live facilitated workshops

Using the Zoom platform, these open public sessions allowed participants to join online from their homes or offices, learn about what's being considered in developing the TMP, ask questions and provide their feedback. Two choices of dates and times were offered to accommodate availability, both which covered the same content.

Online, Static Engagement

Online engagement was initiated for individuals to contribute their ideas whenever and wherever it was most convenient for them. The Social Pinpoint platform was utilized for static engagement, and included:

 A landing page to post all resources, materials and events related to the TMP and the engagement process.

- A mapping tool where issues and ideas were able to be pinned to a map of Leduc County for ease of geographical reference. This tool contained a variety of information on Leduc County roadways, Alberta Transportation roadways, background information for the Leduc Transportation Master Plan and access to surveys.
- Built-in survey capabilities where questions were embedded within the mapping tools and included as stand-alone survey for the draft vision statement and TMP objectives.

Engagement by numbers: Social Pinpoint statistics

The Leduc County TMP team measured the following Social Pinpoint statistics throughout the four-week, phase one public participation period:

- More than 3,000 Social Pinpoint site visits from almost 800 unique individuals.
- 75 individuals that provided 108 comments on the project map.
- More than 45 comments on Leduc County Facebook posts in the months of January and February.
- More than 50 survey responses to the Issues and Concerns survey and TMP Vision and Goals survey.

The team also hosted two zoom sessions which had an attendance of 10 participants.

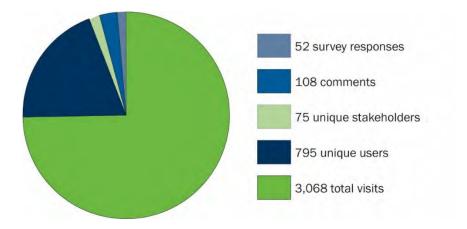


Figure four: Social Pinpoint engagement metrics, Leduc County Transportation Master Plan, phase one public participation

What you told us

The following sections provide a summary of the comments and survey responses received through the online survey and the online mapping tool. It also summarizes the key concerns we heard during the two public Zoom sessions.

The received comments, concerns, questions and survey responses are from an open information location, and are not a statistically random sample of all Leduc County residents. Due to the nature of the surveys and responses, the results are a collection of opinions and perceptions from interested or potentially affected residents, are qualitative in nature and cannot be said to represent all views of Leduc County citizens.

Draft TMP Vision

This survey asked participants to rate their support and provide an open-ended comment on the following statement:

"High quality of life and regional economic growth are achieved through the Leduc County integrated multi-modal transportation network, emboldening sustainable travel choices while supporting residents and industries to move with confidence."

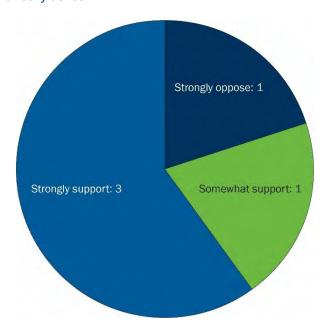


Figure five: Leduc County Transportation Master Plan draft vision statement, "Indicate your level of support for the draft vision"

Key takeaways

80 per cent of respondents indicated positive support for the draft vision statement. The primary themes garnered from responses to the draft vision statement are concerns of safety, sustainability and active transportation. Some of the comments received include the following:

- "As a Leduc County resident and business owner, I support this statement."
- "Confidence is not something I consider when driving roads. A roadway system needs to be sustainable and continually maintained to ensure a proper level of service. Micro surfacing, crack sealing etc. A road quality index should be maintained."
- "Sustainable travel choices while supporting residents and business move forward"
- "I agree with it but I think there is work to get there. My main concern is the safety of our roads. The area continues to become busier and improvements are needed for the safety of drivers. I also think that activities like walking and biking are becoming more common but many of the roads are not safe or supportive of these things."

Goals and objectives

We asked respondents to rank the following goals and provide an open-ended statement regarding their opinion on what could be included.

Goal 1: Meet the transportation infrastructure needs of the present and future urban, rural, agricultural, industrial, resource, business and lakeshore communities.

Goal 2: Identify and recommend infrastructure investment and implementation that supports sustainable and integrated multi-modal transportation that delivers fiscal responsibility, common-sense investment and supports the needs of Leduc County as a whole for the next two decades.

Goal 3: Create a vision in Leduc County that enhances roadway safety, accessibility, equity and inclusivity; that supports active, healthy and livable communities.

Goal 4: Achieve and Support the policy directions of the County's MDP and Strategic Plan.

Goal 5: Undertake a comprehensive public engagement process to seek ideas and input from the broadest possible sample of residents, businesses and industries.

Some of the comments we received include the following:

- "I would prefer the improvements of the systems we have more of a priority than the addition of new transportation options. Thinking of the future needs is also important as short-term fixes have been exactly that short-term and probably more expensive in the long term."
- "Need a walking/biking trail to Beaumont. I believe this would be frequently used. Would allow
 the community to be more active and access Beaumont without needing to drive your vehicle.
 Would be a step to reduce carbon footprint and improve quality of life."

We also heard that goals related to active transportation should be considered in the Leduc County Transportation Master Plan.

Survey: key transportation issues and concerns

We received 48 responses to our key transportation issues and concerns survey in the phase one public participation period. This survey was intended to gather general feedback on how citizens travel in Leduc County and what the key transportation issues are.

Key takeaways

- The primary travel mode is by personal vehicle (100 per cent of respondents), while five per cent of respondents also travel by heavy truck and by transit.
- Heavy truck traffic was ranked as the highest transportation concern, as 90 per cent of respondents ranked this issue as their top issue (see exhibit four below).

 Active transportation opportunities were ranked as the second key concern for Leduc County transportation, with more than 50 per cent of respondents having ranked this issue in their top two concerns (see exhibit four below).

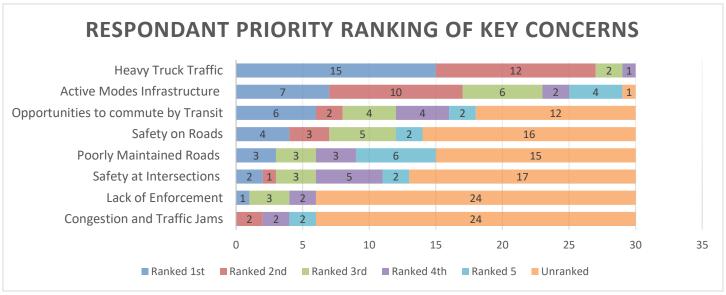


Figure six: Summary of the ranking of key concerns; the lower the rank indicates the greater priority

In addition to the transportation issues identified by the study team, respondents indicated that roadway maintenance, paving and general improvements to county roads to reduce wear and tear on vehicles were important issues to be considered in the Leduc County TMP. Some of the comments we received include the following:

- "Buford highway is full of potholes and frost cracks, and is poorly maintained with road emulsion tar and rock chips. This mile and a quarter section need proper repair and resurfacing.
- The intersection at RR 275 & TWP 494 at the hamlet itself, the road has a huge sunken frost heave across both lanes that is a safety concern if someone loses control and crashes into adjacent properties, homes or pedestrians."

Social Pinpoint map comments

The Social Pinpoint mapping tool (see figure 11) was used to gather public comments by geolocation and provide an opportunity for the public to engage in discussions stemming from these comments. Comments were separated into three categories:

1. Ideas and suggestions: 29 comments received

2. What's not working: 77 comments received

3. What's working: five comments received

A variety of comments related to traffic operations along Highway 2, Highway 2A, Highway 19, Highway 60 and Highway 623 – all roads under the Alberta Transportation's jurisdiction – were received. The Leduc County TMP update will consider these comments for future discussions with the province.

The Leduc County-related comments were reviewed and divided into the following key themes:

Maintenance issues

Existing roads suffer from annual free-thaw cycles and annual flooding, resulting in poor travel
conditions that impact residents, delivery vehicles, agricultural vehicles and emergency services.
 The quality and quantity of paving is viewed as insufficient and should be improved at several
locations.

Roadway operation concerns

- These types of concerns were related to the speed of roadways, the need for intersection turning lanes, the need for intersection traffic signals and the general operation of major corridors. Examples include:
 - Township Road 510 was frequently identified as a narrow road with poor shoulders, high traffic volumes and shallow ditches with a need to be widened.
 - Several rail crossings (namely, the Township Road 504 railway crossing) were also considered under poor condition.
 - Finally, concerns were raised due to desired change in the posted speed limits along
 Glen Park Road and 9 Street.

Transportation planning needs

• This theme involved comments regarding future plans for new roadways, new active transportation opportunities and provisions for the movement of goods. These comments related to the future extension of the Nisku Spine Road along 9 Street, the concern that heavy trucks by-pass weigh scales to utilize Glen Park Road, and the long-term function of Township Road 500 nearest the future Northwest Saunders Lake ASP.

Intersection safety concerns

- Respondents identified key intersection safety concerns, such as sight lines, busy intersections, and the prevalence of illegal maneuvers that could increase collision rates. Some of the identified locations include:
 - Highway 2A / Highway 623 (Alberta Transportation jurisdiction)
 - o Glen Park Road and Range Road 263
 - The intersection of Highway 2A / Glen Park Road and Highway 623/Range Road 263
 - Sample comment:

"Really really hate the Highway 2A and Glen Park road intersection!! People pass in the turn lanes all the time making it extremely dangerous to make a left turn. We often make a turn with a horse trailer and people will pass us on the right hand side and they cannot be seen beside the trailer while passing. Either a set of lights or stepping up enforcement to start nailing those who pass illegally both at that intersection and along highway 2A. Highway 2A also needs to be twinned asap!"

Active transportation

Several comments requested additional opportunities for recreational activities, such as walking
and cycling options throughout Leduc County. This theme is well supported from the primary
survey that identified active transportation as a key issue for the Leduc County TMP to address.

Who engaged

The Leduc County phase one public participation process reached a wide variety of audiences within and surrounding the county. This included:

- More than 50 per cent of participants were between the ages of 34 and 50
- More than 85 per cent of participants live and pay taxes to Leduc County;
- More than 30 per cent of participants learned something about Leduc County transportation
- More than 40 per cent believed they are well informed.
- About 30 per cent of participants were in agreement that Leduc County is listening, understanding and committed to considering public input in the Leduc County TMP process.

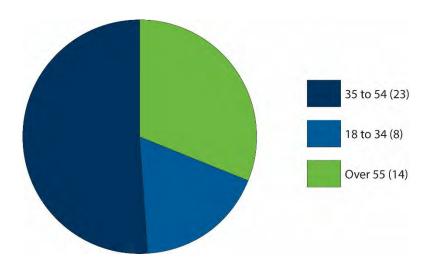


Figure seven: Age demographics of participants

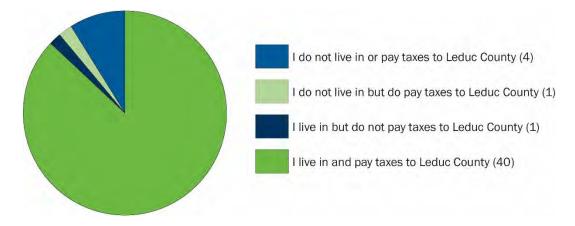


Figure eight: Location demographics

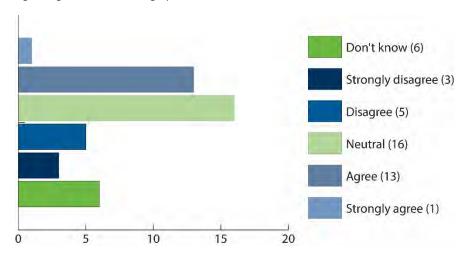


Figure nine: Leduc County will consider my input

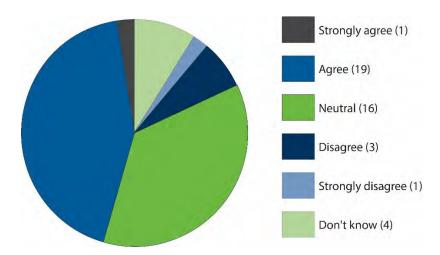


Figure 10: Was the right information provided?



Figure 11: Social Pinpoint map

Municipal and key stakeholder engagement

Phase one of the TMP public participation process also included an extensive outreach to adjacent municipal partners, key industry stakeholders and major businesses that would be impacted. We held meetings to inform them of the Leduc County TMP update, collect their feedback and to collaborate on future transportation issues.

Meetings were held with representatives from:

- Edmonton Metropolitan Region Board (EMRB)
- Alberta Transportation, north-central region
- City of Leduc
- City of Beaumont
- Parkland County
- Strathcona County
- County of Wetaskiwin
- County of Camrose
- Brazeau County
- Town of Thorsby
- Town of Devon
- Town of Calmar
- Village of Warburg
- Edmonton International Airport
- Capital Power Genesee Generating Station

The stakeholder engagement process informed the Leduc County TMP on many key issues, including:

- The long-term vision and planning requirements for Township Road 510.
- The desire to connect Leduc County, the City of Beaumont, the City of Edmonton and the City of Leduc through recreation trails.
- Investigating a walking trail partnership and community/senior van agreement with the Village of Warburg.
- Discussions with Alberta Transportation regarding future improvements along Highway 60, Highway 19, Highway 39 and Highway 21.
- Discussing the future needs of the Nisku Spine Road corridor as design and construction proceeds to the south.

We will continue to engage with key stakeholders throughout the TMP process, as their input will help provide a well-informed plan.

Next steps

The next phase of the Leduc County Transportation Master Plan will evaluate forecast land-use scenarios derived from the Leduc County Municipal Development Plan (MDP). This evaluation will be used to develop a variety of transportation network improvement options to better improve Leduc County's auto, cycling, pedestrian and transit network. The evaluation will strongly consider and incorporate the public information obtained to date, which will help develop a plan that supports the betterment of Leduc County's transportation system.

Phase two of public participation will involve the presentation of draft recommendations, policies and strategies proposed in the draft Transportation Master Plan. Phase two will take place in July 2021.



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B-1 CONTEXT

The second phase of public participation to address the Leduc County Transportation Master Plan consisted of the following:

- In-person public participation session held at Rolly View Community Hall on Wednesday,
 September 1st, 2021, between 6:00 pm and 8:00 pm;
- In-person public participation session held at Glen Park Hall on Thursday, September 2nd,
 2021, between 6:00 pm and 8:00 pm; and
- Online public participation via Social Pinpoint website, accessible to public between August 26th and September 12th, 2021.

In-person public participation session presented the information contained within the TMP document on poster boards spread out throughout the venue. Attendees were encouraged to leave their responses and feedback on comment sheets. Representatives from CastleGlenn Consultants and Leduc County were on-hand to explain the extent of the project, and to answer any questions or concerns the attendees may have had.

Online public participation website consisted of a public presentation accessible in a PDF format, seven pages with background information related to each element, as well as an interactive map of proposed infrastructure investments. Visitors to the site were encouraged to leave their comments on the interactive map and fill a comment and evaluation survey.

B-2 ATTENDANCE

Attendees to the in-person participation sessions were required to fill in sign-in sheets upon arrival to collect attendance data. While the attendees were encouraged to leave their feedback on the comment sheets, it was not mandatory. In addition to the comment sheets, attendees were given an opportunity to evaluate the event organization and quality of information presented using an evaluation survey.

Social Pinpoint website indicated the number of unique visitors to the platform. Despite the high interest in the online engagement, only a small fraction of unique visitors left comments on the map or provided a survey response

The attendance to the public participation sessions and number of responses received was as follows:

Table B-1: Number of Attendees and Responses

Session	Attendance	Comment Sheets / Responses Received
Rolly View Community Hall, September 1 st	28 people	5 comment sheets 3 evaluation surveys
Glen Park Hall, September	34 people	6 comment sheets 4 evaluation surveys
Online (Social Pinpoint), August 26 – September 12	1871 unique visits 5027 total visits	6 survey responses 73 map comments

The public was advised of the public participation sessions by way of the following:

- Leduc County website;
- Leduc County social media (Facebook and Twitter);
- Social media advertisements (Facebook);
- Newspaper Advertisements;
- Roadside signs along Glen Park Road (See Appendix B-1); and
- Utility notices.

B-3 INFORMATION PRESENTED

The in-person sessions were conducted in a "drop-in" format without a formal presentation. The attendees could arrive any time between 6:00 pm and 8:00 pm and were invited to read over the information contained within the TMP on poster boards (see Appendix B-8). Poster boards were spread out across the venue and formed stations focusing on each of the seven elements of the TMP (see Appendix B-6 for pictures of the event). Representatives from CastleGlenn Consultants and Leduc County were on-hand to explain the extent of the project, and to answer any questions or concerns the attendees may have had.

B-4 COMMENT SHEETS & ONLINE SURVEYS

The comment sheets were filled out by attendees during each event. Additionally, comment sheets were available online as a survey on Social Pinpoint.

• The comment sheet was designed to provide feedback on several of the key elements of the TMP (See Appendix B-4).

- In addition to the comment sheets, individuals were encouraged to provide input through other modes of communication including on-line (Social Pinpoint™), telephone, fax, email and letters.
- In total, CastleGlenn received 11 paper comment sheets from in-person events, 73 comments on the Social Pinpoint interactive map, and 5 online survey responses

The following summarizes the comments from survey sheets received. Some of the feedback received was related to specific roadway corridor improvements, which is indicated as being outside of the TMP's scope.

1. The TMP proposes a new roadway classification system that addresses both land use and roadway function. When reviewing the map, do you feel that the assigned classifications are appropriate? Are there any roadways that you feel should be "re-classified"?

Table B-2: Roadway Classification Comments

Comment	
1. Road use is better reflected	
2. No need for extra collector from Chubolka highway	
3. Classification is appropriate	
4. Everything looks good, TR500 collector is good	

2. The TMP proposes the long-term development of a County Trail network. Upon reviewing the map, identify the 3 most important recreation trails that are important to you.

Table B-3: Active Transportation Prioritization

Trail	Count of Votes
1. Weskahegan – South	3
2. Saunders Lake Trail	3
3. North Saskatchewan River Trail	2
4. Telford Lake- Saunders Lake Trail	2
5. Alternative Great Trail	1
6. Blackmud Creek	1
7. Old Railway Corridor	1
8. Trunk Sewer Pipeline ROW	0
9. Twp Rd 505	0
10. Twp Rd 510	0
11. Pipeline ROW	0
12. Kiskayo Corridor	0

Additional comments or additional trails to be considered:	
1. Don't use trails	
2. None are important	
3. Not important	
4. Additional connection between North Saskatchewan River trail and the Old Railway Trail, somewhere to the west of Calmar (perhaps Buford or Thorsby)	
5. Bike path on TWP 490 east of 2A . Leduc Beaumont	
6. I am curious about access to these trails, right now it is difficult to have continuous access along the trails without going around/over or through fences.	

7. Somewhere east of Beaumont as there seems to be a lot of bike riders on the roads

3. Below are 5 intersections where others have identified safety concerns. Identify the top 3 intersections you'd like Leduc County to evaluate further:

Table B-4: Collision Safety Review

Intersection	Count of Votes
1. TR490 (Glen Park Road) / Highway 2A	9
2. TR490 (Glen Park Road) / RR263	8
3. TR490 (Glen Park Road) / Highway 795	7
4. TR510 / Highway 21	4
5. TR510 / Looma Road	2
Are there any other important intersections where safety is a concern?	

- 1. RR262 South of Glen Park Road
- 2. Glen Park / Highway 60
- 3. Twin lanes for highway 21 (note provincial jurisdiction)
- 4. Highway 625 / Highway 21 (note provincial jurisdiction)
- 5. 50th Street . 41st Ave North of Beaumont
- 6. Highway 814 / Highway 625 (note provincial jurisdiction)
- 7. Twp 243/44 / RR510 difficult to turn left with increasing traffic flows

Do you have other ideas or suggestions to help further improve safety on our roads? Please describe:

- 1. Improve Speed Enforcement
- 2. Speed zones on Glen Park Road being different in each direction (90 / 100) km/h make no sense
- 3. Reduced speed and dedicated left turn lanes at Glen Park Road/ Highway 2A
- 4. Addition of scales for large trucks Glen Park and Highway 60
- 5. Larger signage
- 6. Roads with shoulders
- 7. Greater enforcement of speed limits on collector roads.
- 8. More rumble strips at paved intersections on collector roads. Rumble strips could also be used AFTER an intersection to discourage drivers from accelerating too quickly as they continue on a collector road.
- 9. More traffic circles, better than lights.
- 10. Widening busy intersections for left turns similar to Hwy 625 @ RR245. it works very well.

4. Do you have any specific direction or other considerations for Leduc County as they explore public transit options?

Table B-5: Public Transit Considerations

1. Transit is useful but needs to be cost effective
2. On-demand public transit is a good approach
3. The county should look very closely at the cost-benefit of public transit and carbon footprint
4. Improve public transit in Nisku + 10 km radius
5. Public transit / on-demand is a waste of money
6. On Demand access for towns (such as Calmar) in the County of Leduc to support travel between communities.
7. If pursued it is important to have a collector stop that can take people quickly to 1-3 key collectors to Edmonton/Leduc rather than the county provide that service.

Public Transit Comments

5. The TMP illustrated infrastructure improvements to County Roads. Which ones are most important to you?

Table B-6: Infrastructure Improvements Considerations

Infrastructure Improvements Comments
1. Glen Park Road at Michigan Centre is too narrow for wide loads
2. Pavement conditions (pothole) on Glen Park Road east of 795
3. Maintenance of potholes and cracks, washboard on gravel
4. Culverts need to be upgraded and maintained – water flowing over roads in spring takes years to recover
5. RR263 (south of Glen Park Road) should be upgraded before classifying it as collector
6. Lights on TR490 (Glen Park Road)
7. Highway 21 and TR 510

6. Are there any improvements that you feel that the TMP may have missed?

Table B-7: Missing Improvements

Missing Improvements
1. Glen Park Road needs turn out lanes north and south
2. Widening of RR263 south of Glen Park Road – truck traffic concerns. Currently dirt is pushing up from the middle of the non-upgraded portion
3. Improvements of drainage systems on gravel roads
4. Decommissioning redundant / not travelled often roads
5. Interconnecting subdivisions with trail networks

8. Don't use public transit

7. Do you have any other concerns or comments about improving transportation in Leduc County?

Table B-8: Other Comments and Concerns

Other Comments and Concerns	

- 1. Pothole on EB lane on Glen Park Road, east of Hwy 795 and west of RR265
- 2. Significant truck traffic on Glen Park Road between Hwy 39 and RR263 onto Highway 2
- 3. Significant truck traffic on the EIA ring road, province should be providing funding
- 4. "tend to look downstream when problems are upstream"
- 5. Incorporate dust control learning into roads
- 6. Graders make more passes on gravel roads, don't wait until washboard is out of control.

Make gravel road intersections clearer for safety of drivers

- 7. Intersection lights at Highway 625 / Highway 21 (note provincial jurisdiction)
- 8. Signage for wide loads placed on both sides of the road at exact same position. Place defined barrier guard rails at dangerous road segments
- 9. Pavement on the bridge over highway 2 on TR482 needs to be re-done

B-5 COMMENTS RECEIVED THROUGH SOCIAL PINPOINT

Social Pinpoint allows stakeholders to leave comments relating to infrastructure improvements on an interactive map. The "upvote" feature allows visitors to the website to upvote other people's comments that they agree with rather than leaving a new one. In turn, this helps highlight the most important issues for Leduc County residents. Below table summarizes comments received via the social pinpoint website starting with the most upvoted:

Note – Rows that are highlighted "red" represent issues related to links and intersections in either the province of Alberta jurisdiction, City of Leduc jurisdiction or City of Edmonton jurisdiction, thus being outside of the Leduc County's TMP scope.

Table B-9: Social Pinpoint Comments

Location	Comment	Upvotes
TR490/RR255	Remove 90 km/h speed zone/re-up it to 100 km/h. no need for the reduction. It is a major connector road operated by the county not the province. If for whatever reason 100 km/h is not 'safe' as deemed by whoever upgrades to the road/intersections should be done	32
TR510/Goudreau Crescent	510 needs repaired and widened. It is in terrible shape and is dangerous to drive in the winter.	19
Highway 2A/Highway 2	The turn-on to Highway 2 is very dangerous. Not enough distance to get up to speed of the flow of traffic on the highway.	19
Highway 39 Between Leduc and Calmar	Highway 39 needs to be twinned from Leduc to Calmar. At minimum up to the Devon Turnoff. Large trucks reduce the entire stretch of road to 80 km/h	18
TR490/Highway 795	Bring speed back to 100kmph. No one goes 90km	15
TR510/29 th Street	Widening township road 510 long overdue as it is such a high traffic road. Needs to be done ASAP.	10
TR490/Highway 2A	Something needs to be done with the intersection at Glen Park Road and highway 2A. There is an accident there at least weekly if not more from people trying to turn left onto Glen Park Road and oncoming traffic not stopping behind the turning vehicle. The right lanes are turning lanes to turn right, not to continue through. Need a turning lane or a light or something.	10
50 th Ave/Highway 2	From 50ave and to access the highway toward Edmonton. There are a lot of holes and the road is really rough, especially the middle section until a point where the highway closer to Edmonton it has been repaved. I would like to add one more comment. How come this province don't know how to pave two side by side section? There is always a big crack that build up like a trench. We don't see that in other provinces. I think we should ask those compagnie to get their personal for update training.	10
50 th St/Highway 2A, Leduc	Bottle neck. Two lanes down to one back to two. Slows down those getting and from to highway 2a at 50st. Deep ditches there too seen roll overs due to ice or speeding.	9

Location	Comment	Upvotes
	Widen it to two would be helpful. Lights by coop hardware stone. Not on sensors. Waiting long red light with no one around. Please put sensors there.	
Highway 819/41 st Ave SW	It's criminal that this road isn't twinned - I appreciate its Edmonton, but EMRB must have some sway to influence or force response to a road that has left so many victims to unnecessary collisions because of deferred investment.	9
Highway 616/Highway 814	Hwy 616 East needs to be re-paved. The pot holes and long, deep cracks are dangerous especially for motorcycles and vehicles with smaller tires. A turn lane at the top of the Coal Lake would also increase safety as traffic must slow down dramatically when drivers ahead are turning south on the range road heading to Wetaskiwin	9
TR505A/RR232	Chronic washboard and poor rail crossing	8
TR490/RR254	Why did it ever drop to 90 km/h. Bring it back to 100. It's not like anyone actually goes 90km since it was changed.	7
TR504/RR230	Rail crossing is awful.	6
TR492/RR263	Making this a "safety corridor" sure wrecked this road for daily users.	6
TR500/RR223A	Rail crossing pavement is very unsafe with the 80 km/h speed limit causing drivers in both directions to slam on their brakes to safely navigate the crossing. Pavement needs to be leveled as there our big dips/bumps.	6
TR490/RR261	For a short time, electronic signs that showed your speed on Glen Park Road by RR 261 till a guy in a Chev truck ran them down and stole them (which for some reason the Police and the county seemed to have no interest in knowing)	5
	Those signs actually helped a lot with the speeders.	_
TR490/RR255	The 90 km/h speed reduction on GPR between Hwy 2 and RR 263 is pointless. Raise it back to the original 100 km/h as the Hwy runs to Sunnybrook. If the concern is that "ditches are too steep" in that section for 100 km/h zone, why don't I point out other roads in the county with narrow shoulders and steep ditches that remain at 100 km/h. This is a major route for county residents and the appropriate action should be to invest in upgrades for the road, rather than lowering the limit as a quick fix	5
50 th Ave/Highway 2, Leduc	The ramp from Leduc to Highway 2 - speed limit of 80 km/h until you hit the highway needs to change. There is no way all the traffic can safely merge onto Hwy 2 when the Hwy speed is 110 and off ramp is 80. See so many potential accidents and near misses. The police sitting there watching speed does not help.	5
Highway 616/Highway 778	This highway has taken out numerous hubs on my SUV	4
Highway 2/ Highway 2A	Need a bypass lane linked up to the exit to highway 2A.	3
RR14, just north of TR474	We would like to have our road paved and do not understand why paving was not part of the requirements for the subdivision when it was approved. All the other roads are paved around us.	3
TR490/Highway 2A	People going straight through in the turn lanes. I have witnessed 4 accidents. Enforcement or light	3
59 Ave/32St (new collector)	Paving this or even making it a dirt road would create an alternate exit/access for Royal Oaks/ Diamond Estates residents. This would make it feasible to bike out to the range road and even to Beaumont more safely as biking on township road 510 is dangerous. As Royal Oaks residents for 4 years we have been waiting for this to open up and would love to have a way to bike to Beaumont amenities	3

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Location	Comment	Upvotes
Windrose Dr., Leduc	Lower speed limit from 60 km/hour to 50 km/hour. A lot of speeders. Unsafe conditions	3
50 th St/ Highway 2A	Please add a left turning lane here, it's a major bottleneck for people coming off 2A	3
Highway 625/ RR240	It would be great to have some sort of safe bike path from Hwy 21 to Beaumont (either airport road or Hwy 625) as these roads are too narrow and busy to safely be able to ride into town. It would be great to have alternate (safe) modes of transportation.	3
RR234/ Yellowbrick Rd.	Range Road 234 is currently a gravel road. In the past 25 years it has been gravel, oiled surface, dust free surface and now back to gravel. It has a lot of traffic, dust, gravel and pot holes are a major issue. It was slated for some sort of permanent dust control years ago then put on hold due to a culvert needing to be replaced. That time has passed and nothing has happened. This road is very much in need of better maintenance as well as dust suppression for this 2-mile stretch.	2
RR260/ TR505	The road to rabbit hill needs to be repaved the whole way from the highway and the shoulders made wider. Lots of potholes and washboard gravel road closer to the resort. Not safe for travelers and school busses that go there daily. Also needs better clearing and sanding in the winter.	2
RR15, north of Highway 622	bridge was to be widen to accommodate 2 vehicles at the same time and road straighten to allow for safer flow of traffic	2
Highway 2/ Airport Road	Hwy 2 southbound has large cracks and large potholes that are unsafe as they grab the tires of motorists and pull them. I have already contacted the department of transportation over a year ago and was assured this would be fixed. It's a hazard and so far, only a short section has been repaired.	2
TR490/ Highway 2A	I usually turn right and go east then pull a U-turn and cross 2A at right angles as it's not safe at busy times to turn Left both going North or South.	1
TR490/RR255	Since the speed got lowered, I have been doing the speed limit and countless people have nearly crashed into me or have tried forcing me off the road, when it was 100 km/h this was a lot less common. Glen Park and Michigan Centre communities are the places that a lower speed limit would actually help the residents.	1
RR240A/ TR494	Sections of this road already have packed crushed asphalt. The rest of 240A should also get that or should be paved. There is excessive wash board and the grader operator is not maintaining proper road management.	1
RR10/ Highway 39	I have noticed on numerous occasions that the sight lines from the east are short due to the weed creek valley. During the winter there is minimal amount of time to gain traction to avoid a possible accident with highway traffic.	1
TR490 / RR261	Fix the bump just west Hwy 2A on Glen Park road. Right where the culvert is for the slews the cross the road.	1
TR505A/ RR232	The Looma road should be paved. The washboard is terrible.	1
TR510/ Nisku Spine Rd	Motion detection camera needs to pick up cyclists so they don't run the red light. Currently two or three light cycles happen before a green light if no vehicles. Also, the barricade prevents visibility of oncoming traffic which makes this intersection very dangerous.	1
TR480/ Highway 778	In cooperation with Wetaskiwin County, this road should be paved from 778 to 795 to provide another connector for lake traffic.	1

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Location	Comment	Upvotes
RR275/ TR484	The traffic on Range Road 275 is increasing because of the oil tankers and businesses in the area and the boat launch on Wizard Lake it should be dust controlled by the county because of the heavy traffic.	1
TR504/ RR21	if TR504 is considered "bypass road" it needs paid dust control all the way to RR15	1
TR473A/ RR13	Not stop sign or yield sign at this "T" intersection. There used to be a yield sign but has been gone for a few years.	1
RR13/ Highway 622	Range Road 13 and 12A north of Hwy 622 should be paved in the very near future due to multiple acreage subdivisions and as a result a lot more traffic. Road is busy already and not all acreages are occupied with residential yet. Maybe survey the land owners on the range road and see if this a concern for everyone. Some increased tax for being on a paved road would be expected.	1
TR490/ RR21	Replace grader operator with someone who knows how to take care of roads.	1
Highway 21/ TR510	Not sure if this is provincial, Strathcona County, or Leduc County but this intersection could really use some safety improvements like adding highway entering/exiting lanes. It was noted in the survey but I didn't see anything marked on this map.	1
RR275/ Highway 39	Why does the County not extend the pavement south to Glen Park Road, it would only make sense to tie it in with the Road to nowhere or whatever you call the road to the north of highway 39	1
Grant MacEwan Blvd, Leduc	Continue the soon to be new 4 lane road up to the 711. It's a busy road. Having to go back to one lane road each direction will cause accidents and congestion	1
50 th St/ Highway 2A, Leduc	I don't disagree with you about it being a bottle neck, but it is a city of Leduc problem, not a county of Leduc problem.	0
TR502/ RR223	Pave township road 502 from Hwy 21/Airport Road east and then south on range road 223 where it meets New Sarepta on township road 500.	0
TR504/ RR23	Genesse Bypass Road was supposed to be paved when the power plant went in. Somehow the plant was able to change the plan. I would request a rethink. Traffic increases are evident especially gravel trucks.	0
House Crescent	I don't know what local road improvements that have been/or will be made to this Crescent? And what improvements are planned for this road	0
Highway 2A/ Highway 616	This intersection is becoming more dangerous and drivers do not follow traffic rules (not passing on the right of someone making left turn), accidents are increasing at this intersection. New signage, widening or lights?	0
RR233 south of TR502	RR233 has become very busy with cars doing over 100 in 80. Find it impossible to go for a bike or walk without traffic speeding past. Especially where there are subdivision turn offs. Would be nice to see a slow down around these subdivisions. Speed bumps even?	0
TR510/ 29 St E	The widening needs to include proper shoulders to provide a safe distance for traffic to allow with the cyclists on the road.	0
TR504/ RR22	people use RR22 as a short cut from Highway 622 to Highway 770 it needs to be better maintained	0
RR15/ TR482	Range Road 15 pavement should be pushed through to either Glen Park Road or Highway 39 to provide better lake access.	0
RR245/ Beau Vista	to ensure the safety of people who walk and/or walk their pets on the road well as well as to maintain heavy transportation restrictions are maintained, the county should consider reducing the speed limit on this residential collector roadway back down to 60 km/h from 80 km/h. The 80 km/h speed limit seems to be in opposition to the great signage put up at the ends of the road way "this is your neighborhood, slow down"	0

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Location	Comment	Upvotes
TR490/RR255	I totally agree. 90 km/h is pointless for such a straight flat highway. British Columbians are laughing at us!	0
TR474	Push Mission Beach 7th street through to the north-west (to TS474B) to provide quicker access to the main artery. It would cut the summer traffic in half and allow Mission Beach to have their own access that is not Sundance Beach Controlled. There was an existing trail through the trees 50 years ago. I do not know if it is a county road allowance. The 20 km/h speed limit (Lakeshore Drive) is too slow to access main road.	0
TR504/ RR230	Seems fine to me. Smooth and rarely a delay	0
TR504/ RR15	if road was upgraded to become the "new by pass road" it needs to be better maintained and either repaved all the way to Twp Rd 504 or the bad /rough/potholed pavement ripped out	0
Highway 616/ Highway 778	Totally agree, the first 3 miles of this road going west is terrible.	0
Mission Beach	The paving on Mission Beach barely lasted 3 years. The potholes are horrible.	0
RR260/ Highway 19	The Leduc section of this road should be widened and shouldered.	0
Highway 616	Hwy616 need to be replaced lol the way to Millet, need to be cleared better in the snow and cut better in the summer. Lots of blind spots due to poor care (grass too high to see from some side streets, or snow drills in the winter. Lots a of patches pot holes, could use to be paved). The main road company girded to do the care are awful, not as well taken care of as it was before main road go the contract. Main road needs to go, get back the other people much better workmanship and better people	0
Highway 39/ RR10	There needs to be a better drainage there on the south side of this bridge. The current orientation causes significant deep-water pooling. Many instances of severe hydroplaning.	0
TR505A/ RR232	I don't know why they keep coming back every couple of months to fix this small section of road. The way board is terrible and it's a tiny stretch that should just be placed	0
Meadowview Blvd, Leduc	Better snow removal is needed. This crescent is crammed. When the snow flies, we have nowhere to put it the snow.	0
RR233/ TR502	Traffic of turning vehicles is getting heavy at RR233 and Rd 502. Need turn lanes in both directions.	0
RR260/ TR484	260 should get paved, it's a high traffic road supporting a gravel trucking company, dairy farm, and a kennel. It's always covered with washboards.	0

B-6 EVALUATION SHEETS

Attendees to the two in-person public participation sessions, as well as the online engagement platform were given an opportunity to provide their feedback and evaluation about the events and the information presented using event evaluation sheets (See Appendix B-5). Below table summarizes the feedback received from the public.

Table B-10: Evaluation Survey Summary

Summary of Evaluation Surveys							
	Count of Responses						
Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know	
I believe that sufficient information wa	S	2	7	2		1	1
provided.							
I learned something new about transportation in Leduc County and future		5	5	2		1	
I believe this was a meaningful process.		4	6	1	1	1	
I believe that Leduc County is listening and understands my perspectives		4	5	2	1	1	
I believe that Leduc County will consider my input		4	8	1			
How did you hear about this engagement opportunity? (Select all	Leduc County Website	Roadside Signage	Utility Notice	Newspaper	Facebook	Twitter	Word of Mouth
that apply)	1	9		2	1		

B-7 ADDITIONAL FEEDBACK

Leduc County received additional feedback on the Public Participation Sessions and the contents of the TMP via Facebook comments on the Leduc County Facebook page. Appendix B-7 provides a summary of social media comments received during the public participation phase.

Annex "B-1"

Advertisments of Public Participation Session





Leduc County TMP September, 2021 Annex -B-1-

Annex "B-2"

Handout Information Sheets

Leduc County TMP September, 2021 Annex -B2-1-

Leduc County Transportation Master Plan

Phase 2 - Public Participation — September 1st and 2nd, 2021

BACKGROUND AND STUDY PURPOSE

Leduc County is a vibrant and historic centrally located county in Alberta. With a population of approximately 13,200 residents, the County has become an employment, business, and service hub for its residents and for many surrounding communities.

The updated Transportation Master Plan (TMP) seeks to address growth-related challenges and shape long-term investments in transportation infrastructure and programs.

The 2021 TMP update is intended to provide the County with updated and relevant guidance on priorities for development of a multi-modal transportation system, which serves Leduc County residents and businesses into the future. The TMP is also designed to address the changes in the transportation landscape seen since the previous 2001 TMP was prepared.

The TMP is intended as a strategic plan that will guide transportation policy development and infrastructure planning. The document is intended to provide the need and justification necessary for Leduc County to confidently invest in transportation infrastructure such as rural and urban roadways, walking/cycling/transit infrastructure, safety provisions and maintenance requirements.

METHODOLOGY

The evolution of the TMP process has been documented within eight (8) separate technical working papers that were used to assist in the dialogue with stakeholders and to provide opportunity for feedback, and more importantly, to shape the process.

The TMP encompasses a detailed review, analysis and summary of a number of components including policy conditions that influence County's transportation system to provide guidance for the County leading to overarching strategic plans, plan integration, goods movement, active transportation, traffic modeling, safety reviews, public engagement and functional roadway classifications.

Preliminary transportation possibilities for each transportation mode were reviewed in order to inform planning and investment within the transportation system into the long-term.







Leduc County TMP September, 2021

Annex	"B	-3"
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List of Attendees to the Public Participation Sessions

Wednesday, September 1st, 2021, 6:00 pm-8:00 pm - Sign-In Sheet						
First Name	Last Name	Address (Box No.)	Town/County/City	Postal Code	Phone No.	E-Mail
I Tolen & Clint	Kosinski	50158 RR 235	Leduc Cany	TOB 343	780-504-5115	jekosnski egmeller
None 3 Jerry	Kosinski	20504 tup 502	Ledus Carry	TOIS 3HI	750-941-248	Nunck49@gmal.com
JERRY PHOLING	moy wing	49547- RR 243	11 12	T4X 128	788-777-3078	Plant @ YELLOW HELD GROUP, COM
Gul	Montes	49355-BR 233	11 11	T4X1X9	281-387-6570	
Kyle	Pontes.	49355-RR233.	11 11	TYXIXY	780-387-6507	Exemutes Eller ca
5 J.n.	FARRELL	BEAUmone		T4x 019	280-191-680	
7 George	Debbink	Leduc	Leden	T9E 6m8	780-722-4950	
8 Mark	Huberman	Ellando 17623 ST Ou	Edmanfor	THM IEI	780.916 4039	Make habemate.com.
9 Patricia + Karl	Enns	A50226 RF 225	Leduc Country	TOB 3MI	780-245-2123	Kokm 11@ yahooca
O Stel Horneman	Herneman	23435 Hwy 623	Leduc County		7809405858	
1 LORRY WANCHUK		25525 TWP 484	LEPUL COUNTY		780-986-9319	
2 Kelly Vandent	perghe	48520 Huy 2A	-		6907858	
3 Robel Havid	ليسو	23037 TWP. RU SOT	"	108 3M1	780-1671790	
4 Singer Handfield	d	22377 Two Pd 502	it	TOBEME		15 handfuld anvil
5 MYRON OHLMAN		31 cornied Lude		+9E 4411	780-4547773	myrew of Her brail con
6 LEONAAD	OHENENN	49236. AR 241	lenve	TYX IN8	785- 694-1740	
7 Keerin	Nersa	50351 Ray Rd 225	1 Dec County	TOB 3m1	780 9405392	kucilsonekucilson com
8 Vere & fathy	Ansorger	23248 TWP RD 500	Leduc County	TYX OPT	780-719-8551	Kard Vanscraro holmail com
9 Laun Brenne	0	49272 RR252	k /1		780-908-2815	Khreane. Lagranto com
O Suesketh	Pennen	823021 TUP Rd 502	Ledoc Cooky	TOB 3m1		Kgpermen eyahoo.ca
1 Ervin	Gatzhe	RR#1 Millet	Mary 11	TOC 120	780 387-56/3	
2 Gara	Hutchison	23016 Tapped 501	Lidge Country	TOB 3171	750-713-9918	huthonydeoutlik me





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Day 1 – Rollyview Hall, September 1, 2021

Leduc County TMP

	auc Count	y Transportatio	n Master Plan Study Upd	ote Phase 2 - Pub	lic Participat	tion (Wednesday, Septem	ther 1st, 2021)	
	wednesday, September 1st, 2021, 6:00 pm-8:00 pm - Sign-In Sheet							
23	Murray	Brunken	49310 BR 244	Leduc County	T4x 2P9	780 914 - 201721	Brunker 7 @ hot mail.	
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Day 1 – Rollyview Hall, September 1, 2021

Leduc County TMP

	Leduc Cou	nty Transportation	on Master Plan Study Upd	late - Phase 2 - P.	ublic Partici	pation (Thursday,	Sept 2 nd , 2021)
Thursday, September 2nd, 2021, 6:00 pm-8:00 pm - Sign-In Sheet							
£5	First Name	Last Name	Address (Box No.)	Town/County/City	Postal Code	Phone No.	E-Mail
1	Douglas San	y Kijewski	Box 754 Thoshy	Ledie Cour	14 TOCOR	408-391-0	424 Kyough Co
2	Brian Edution	Aborton	BX 19 PR 15 Str 87 FOR	p	58638T	780 5340574	masses DASA to dual com
3	LONEL MILLER		BRY SITEG BONIO CALMAN			780-951-0183	
4	Star Dose		RR # Calman Toxon		TOC OVO	780-915-652	5 moonsline@ glzis.
5	Johan	ter Bough	RR#4 Calman Tocov	0			ri, terborgho xploone
6	Du defined	de Groot	ASSTEREDA Lador	Lediclounty	TUX 256	780-387-M35	4 001
7	Simon Goodsin		49325 HWY 795	11	TUC 010	780-975944	summande i axplanet.
8	JONATHAN	PRIDE	BOX30 SITE 8 RR4 CALMAN	CALMAR	TOLOVO	780 985 2024	
9	KAHV	Toews	Box 309 RS RR4	Calmar	TOCOVO	740 955 2004	
10	Done	Sucyron	25567-TUP484	Lediconly	T44761	587-938.9021	1
11	Tomb	Flynn	4224475 Kalic	Ledic	T92-525	780-718-8461	toral @investake
12	Margie - John	Ridderikhoff	Box 5425 Sta Main Ladue	Laduc County	798 662	780-980 319	short-sorpxplornet.ca
13	Denver Roya Merrica	MORAWSKI	BOY 3067 Lence	Lanue Contro	T9F-629	780-786-6774	denarmorausk.53 @ Gma
14	Pesiree Robertso	Kobertson	Box 19, Site 8, RR1	Lelin County	706280	780.702.0489	briandes 2424 ognil.com
15	Kent wille		RRH4 CALMAR TOCOVO	LEDUCCOUNTY	TOC OVO	780-985-3709	
16	MORICY	54CH	Box 1500 6 RRHY CHAME	LEXIC COUNTY	TOCOVO	780-916-6244	MOSTEREGRALLOM
17	Garry	G-BAHN	48273 RR281	LEDue County	Toc-270	780-9202199	Jany Braha Oxplox
18	WAYN JOANNE	HALWA	RR 262	Look con	4 THH ZX9	780 819 4086	WATE- HAWA OF AT.
19	Peter	Schafer	rr #2,	warburg	TO CATO		74 Peterschafere
20	Bols	Rutaless	RR	Leduc		780-886-24	15
21	Stan	Ratzlaff	49331 RgRd255	Leduc	T4X2K4	780-7189741	
22	LESTER	FEDOR	49022 RR 263	CALMER	TOC OVO	786-785 2582	





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Day 2 – Glen Park Hall, September 2, 2021

Leduc County TMP

	Leduc Cou	nty Transportati	on Master Plan Study Upd	ate - Phase 2 - P	ublic Partici	pation (Thursday, S	ept 2 nd , 2021)
Thursday, September 2nd, 2021, 6:00 pm-8:00 pm - Sign-In Sheet							
23	FIRST NAME	LASTNAME	ADDRESS. LBOX NO)	TOWN COUNTY		PHONE NO	EMAIL.
24	Proc	Bureno	RR#2 Mact HOT	MILLET	TOC 120	100 100	- Oberedetto Olashot mail.c
25	Tom & Eleanor	LOGAN	RR4,	Colmar	TOC OVO	780-985-2987	telogan 55@ gmil. com Athebaol Darail.com
26	LO TUOTH HOTEL	Lerrat	48506- 22262	hear	14X 251	780-986 560F	Atrebaol Danil do-
27	Norm	Eigent .	485 23 RR 251	THORSTH	TOC 270	780 84 374	normetent@ lue com
28	TANNIDORONCO	DOBLANCO	PO BOX 941	Calmar	Tocovo	You Know	,
29	Carton	Fensly HAHA	RRH South	Thorsby	TOCOPO		
30	Tarry	HAHN	26073-TNA 490	Leduc	T4x 261	780-986-8760	TCHAHWID Gmaleon
31	aura	Halin	26013 Imp 490	Ceduc	74x 261	780-986-5760	
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Day 2 – Glen Park Hall, September 2, 2021

Leduc County TMP

Annex "B-4"

Comment Sheets

Leduc County TMP September, 2021 Annex -B4-1-

Leduc County – Transportation Master Plan Fill out this comment sheet online!

Visit: Leduc-County.com/Transportation-Planning

Or email us at akirillov@castleglenn.ca

Phase Two: Public Participation - September, 2021

Personal information provided is collected in accordance with Section 33(c) of the Alberta Freedom of Information and Protection of Privacy Act (the FOIP Act) and will be protected under Part 2 of that Act. It will be used for the development of Leduc County's Transportation Master Plan. Should you require further information about collection, use and disclosure of personal information, please email our FOIP coordinator at foip@leduc-county.com.

1. Your postal code:	
2. What best represents you: ☐ I live in and pay taxes to Leduc County ☐ I live in but do not pay taxes to Leduc County ☐ I do not live in but do pay taxes to Leduc County ☐ I do not live in or pay taxes to Leduc County ☐ I am not sure Optional Name:	3. What age category do you fall in: Under 18 years 18 to 34 years 35 to 54 years Over 55 years I prefer not to say
Roadway Classification 4. The TMP proposes a new roadway classifica roadway function. When reviewing the map appropriate? Are there any roadways that you	do you feel that the assigned classifications are
□ Blackmud Creek □ Twp Rd : □ Kiskayo Corridor □ Twp Rd : □ Old Railway Corridor □ Weskahe	ant recreation trails that are important to you. wer Pipeline ROW 505 510 gan — South skatchewan River Trail

Leduc County TMP September, 2021

	ere others have identified safety e Leduc County to evaluate furtl	
☐ Highway 795 / Twp Rd 490☐ Twp Rd 490 / RR 263	☐ Highway 2A / Twp Rd 490 ☐ Highway 21 / Twp Rd 510	☐ Twp Rd 510 / Looma Rd
a. Are there other important intersect	tions where safety is a concern? Please	e describe:
b. Do you have other ideas or suggest	stions to help further improve safety o	n our roads? Please describe:
Public Transit 7. Do you have any specific dire- public transit options?	ction or other considerations for	Leduc County as they explore
Infrastructure Investment 8. The TMP illustrated infrastrimportant to you?	ucture improvements to County	Roads. Which ones are most
9. Are there any improvements	that you feel that the TMP may	have missed?
10. Do you have any other conce County?	erns or comments about improvin	ng transportation in Leduc
LEDUC Mr. An	have any questions or concerns pleas drey Kirillov, CastleGlenn Consulta ne: (780) 652-1534 / Fax: (780-652)-1 Email: akirillov@castleglenn.ca	nts Inc. Castleglenn

Annex "B-5"

Evaluation Sheets

Leduc County TMP September, 2021 Annex -B5-1-

Leduc County - Transportation Master Plan Evaluation Survey

Please tell us about your engagement experience

Phase 2 Public Participation – September, 2021

I believe that sufficient information was provided. □ Strongly agree □ Agree □ Neutral □ Disagree □ Strongly disagree □ Don't know	2. I learned something new about transportation in Leduc County and future plans. Strongly agree Agree Neutral Disagree Strongly disagree Don't know
3. I believe this was a meaningful process. Strongly agree Agree Neutral Disagree Strongly disagree Don't know	4. I believe that Leduc County is listening and understands my perspectives. Strongly agree Agree Neutral Disagree Strongly disagree Don't know
5. I believe that Leduc County will consider my input. □ Strongly agree □ Agree □ Neutral □ Disagree □ Strongly disagree □ Don't know	6. How did you hear about this engagement opportunity? (select all that apply) Leduc County website Roadside signage Utility notice Newspaper Facebook Twitter Word of mouth
Thank you for	participating!

Leduc County TMP September, 2021

Annex "B-6"

Pictures of the events

Leduc County TMP September, 2021 Annex -B7-1-





Day 1 – Rollyview Hall, September 1, 2021





Day 1 – Rollyview Hall, September 1, 2021





Day 2 – Glen Park Hall, September 2, 2021





Day 2 – Glen Park Hall, September 2, 2021

Annex "B-7"

Social Media Comments

Public participation input tracking sheet

For more information refer to page 21 of the Public Participation Guide and/or page 23 of the Public Participation Workbook

All input received through public participation efforts must be tracked. This is often a shared responsibility and various individuals may need to track different aspects of public participation efforts. This includes tracking emails, phone calls, online comment form submissions, social media comments, input shared at public participation activities and more. This information is required to accurately present findings to the decision maker and/or make recommendations, as well as to report back to the public. Multiple tracking sheets may be needed, and each individual responsible for tracking input can work off their own sheet.

This input tracking sheet details the input we received throughout the public participation for the Transportation Master Plan (TMP) project between Aug. 20 to Sept. 3.

Date	Name (if applicable)	Platform	Comment (verbatim unless otherwise noted)
Aug. 21	Mandy Bods	Facebook	Is there a map to see what we would be giving feedback on?
Aug. 21	Leduc County	Facebook	REPLY TO MANDY BODS: Mandy Bods yes, the map will launch on August 26 and will be accessible from www.leduc-county.com/transportation-planning
Aug. 21	John G Albert	Facebook	I guarantee sustainable development will dictate every move in this development. Don't expect any ideas to be heard. Regular people have no say. Don't be fooled.
Aug. 21	Mary Williams	Facebook	I lived in a small community and they had volunteer drivers. I paid \$10 for the trip and a \$1 for each store I needed to go towish they had something here like that for the elderly
Aug. 23	Leduc County	Facebook	REPLY TO JOHN G ALBERT: Hi John, we would love for you to participate and provide feedback at one of our open houses or through our website. Online participation begins on Aug. 26, where you will be able to fill out a survey and comment on an interactive map. If you would like to speak

Leduc County TMP September, 2021

			to a member of the project team, please call 780-979-6185.
Sept. 1	Dave Czajkowski	Facebook	Maybe try chipping in with costs to bring the LRT from Edmonton.

Public participation input tracking sheet

For more information refer to page 21 of the Public Participation Guide and/or page 23 of the Public Participation Workbook

All input received through public participation efforts must be tracked. This is often a shared responsibility and various individuals may need to track different aspects of public participation efforts. This includes tracking emails, phone calls, online comment form submissions, social media comments, input shared at public participation activities and more. This information is required to accurately present findings to the decision maker and/or make recommendations, as well as to report back to the public. Multiple tracking sheets may be needed, and each individual responsible for tracking input can work off their own sheet.

This input tracking sheet details the input we received throughout the public participation for the Transportation Master Plan (TMP) project between Aug. 27 and Sept. 9.

Date	Name (if applicable)	Platform	Comment (verbatim unless otherwise noted)
Aug. 27	Wesley Daniels	Facebook	Why does American infrastructure BS come up on this site?
Aug.	Kim	Facebook	REPLY TO WESLEY DANIELS
27	Johnston		Wesley Daniels because it's pertinent to Leduc County?
			Does the link go to an American site? Can't seem to load it.
Aug.	Wesley	Facebook	REPLY TO KIM JOHNSTON
27	Daniels		Kim Johnston It goes to an American site talking about
			nothing but the American infrastructure plan. There was a
			prompt to take a survey I clicked on it and this crap came
			up! Which is not pertinent to Leduc County!
Aug.	Leduc	Facebook	REPLY TO WESLEY DANIELS AND KIM JOHNSTON
28	County		Hi Kim and Wesley, the site is set to a map of Leduc
			County. It can also be accessed from our website
			here: https://www.leduc-county.com//transportation-
			master
Sept. 1	Dean Gerber	Facebook	Alvina Young-Gerber (tag)
Sept. 1	Jason	Facebook	All main road lights should be on sensors. It's annoying
	Meloche		stopping at almost all lights with no one around
Sept. 1	Leduc	Facebook	REPLY TO JASON MELOCHE
	County		Jason Meloche thanks for your feedback, Jason. If there is a
			specific location you'd like to highlight on our interactive
			map, we would appreciate the input! Here is a direct link to

Leduc County TMP September, 2021

			the
		the second of	map: https://castleglenn.mysocialpinpoint.ca/leduc/map
Sept. 2	Troy N Monica	Facebook	It seems all the pertinent and safe logical ways to improve traffic flow is rejected by the canned answers from the county. The county will not listen to the people who drive the roads every day. Some overpaid fat cat in an office 50 miles from the area of concern will decide for us. After all, what do we know. We just live and drive here all day
Sept. 2	Leduc County	Facebook	REPLY TO TROY N MONICA Hi Troy, we appreciate all feedback, and would love to hear from you. We are hosting an open house tonight at Glen Park Hall. You can drop in anytime from 6 to 8 p.m. If you're unable to attend, we also have online options available for you to share your feedback. Further, you are welcome to contact the project manager directly. His name is Khushnud Yousafzai and he can be reached at 780-955-4590 or khushnud@leduc-county.com.
Sept. 2	Paddi Towne Sadler	Facebook	Something needs to be done with the intersection at Glen Park Road and highway 2A. There is an accident there at least weekly if not more from people trying to turn left onto Glen Park Road and oncoming traffic not stopping behind the turning vehicle. The right lanes are turning lanes to turn right not to continue through . Need a turning lane or a light or something. Tried to add to map but it won't let me.
Sept. 2	Leduc County	Facebook	REPLY TO PADDI TOWNE SADLER Paddi Towne Stadler thank you for the feedback. I've submitted it to our project team and it will get added to the map.
Sept. 1	Ryan Woolfey	Facebook	I cant seem to add it on the map but there was for a short time electronic signs that showed your speed on Glen Park Road by RR 261 till a guy in a Chev truck ran them down and stole them (which for some reason the Police and the county seemed to have no interest in knowing) Those signs actually helped a lot with the speeders.
Sept. 1	Leduc County	Facebook	REPLY TO RYAN WOOLLEY Hi Ryan, I'm sorry you're having difficulty with the map. I've shared your comments with the project team - thank you for the input!
Sept. 1	Ryan Woolley	Facebook	REPLY TO LEDUC COUNTY

Leduc County TMP September, 2021 Annex -B7-5-

			Leduc County if the location of the east sign was moved 100 feet west my yard cameras will see it and capture anyone messing with it.
Sept. 1	Leduc County	Facebook	REPLY TO RYAN WOOLLEY Thank you! We'll add it to the map!
Sept. 1	Dale Marinoski	Facebook	REPLY TO RYAN WOOLLEY Ryan Woolley I Always find my self trying to break my last record going through those speed tellers. A lot of people do that.
Sept. 1	Ryan Woolley	Facebook	REPLY TO DALE MARINOSKI Dale Marinoski I like using them to make sure my speedometer is accurate or see how fast I can run! LOL
Sept. 1	Dale Marinoski	Facebook	REPLY TO RYAN WOOLLEY Rvan Woolley that's what I do too. Haha everytime a little faster
Sept. 1	Stephane Mochon	Facebook	Why would you need to cut a new road through the farmers field on the east of Telford lake when there's already a dirt road there that you could pave?
Sept. 1	Leduc County	Facebook	REPLY TO STEPHANE MOCHON Hi Stephane, our project team would be happy to answer any questions you may have. You can contact Khushnud Yousafzai at 780-955-4590 or Khushnud@leduc-county.com.
Sept. 1	Matthew McIsaac	Facebook	Fix the pavement on highway 2 and it's on ramps, unless the province s responsible and not you
Sept. 1	Leduc County	Facebook	REPLY TO MATTHEW MCISAAC Hi Matthew, yes, the Government of Alberta is responsible for maintenance, construction and snow removal on all numbered highways.
Sept. 3	Justin Ward	Facebook	Highway 39 is riddled with potholes and cheap patch jobs. The thorsby speed curve has 2 big bumps that are really sketchy in the winter
Sept. 3	Leduc County	Facebook	REPLY TO JUSTIN WARD Justin Ward Hi Justin, the Government of Alberta is responsible for maintenance, construction and snow removal on all numbered highways, including Highway 39. If you have a road concern for a provincial (or numbered) highway, please contact EMCON at 1-800-390-2242
Sept. 5	Rick Reichert	Facebook	Dropping the speed limit on Glen park road west of highway 2 is joke

Leduc County TMP September, 2021 Annex -B7-6-

Sept. 4	Norm Wilson	Facebook	When is the sound barrier on Hwy 2 going to get done. The MP for our area said it was starting this spring. I alsohave a text to that affect from him.
Sept. 5	Lori Amber	Facebook	Range Rioad 240A is horrible. Washboard most of the year cause vehicle damage. Pavement or maintenance is needed as it is a busy road with the new subdivision.
Sept. 6	Jan Firth	Facebook	Most of the roads are in dire need of repair, doesn't matter where you drive, in or out of Leduc County.
Sept. 5	Darrell Morawski	Facebook	Leduc country needs new people running itthey should not make new plans and waste timenew mayor pleasepleaseplease
Sept. 10	Edith Kossey	Facebook	REPLY TO WESLEY DANIELS that the country for you
Sept. 10	Edith Kossey	Facebook	REPLY TO WESLEY DANIELS Wesley Daniels yes I agree
Sept. 9	Kim Ilkiw	Facebook	REPLY TO TROY N MONICA Leduc County you full well know how dangerous Hwy 21 is. Finances and authority dictate the lack of direction 20 years ago we were told it would be twinned, NOT done yet. Talking gets ratepayers no where!!!
Sept. 9	Karen Roggeveen	Facebook	REPLY TO LEDUC COUNTY FROM A REPLY TO STEPHANE MOCHON Leduc County why cant you amswer it here so we all can know??
Sept. 7	Dean Gerber	Facebook	Alvina Young-Gerber
Sept. 9	Gilles Roy	Facebook	The merge ramp from 2A going onto QE2 south of Leduc definitely needs a sound barrier. Every morning have to listen to loud vehicles racing full throttle getting on QE2 north. Ridiculous behavior by a residential community.
Sept. 9	Jeffrey Craddock	Facebook	Good to see as I had told this was dead. Thank you.
Sept. 8	Gilles Roy	Facebook	REPLY TO NORM WILSON Norm Wilson What sound barrier is that Norm? I know that living by the Highway south side of Leduc definitely needs a sound barrier. Driver's merging onto QE2 from 2A going north is absolutely ridiculous. Loud vehicles racing full throttle while going by Corinthia Park subdivision.
Sept. 9	Norm Wilson	Facebook	REPLY TO GILLES ROY Norm Wilson We in the willow calla sac have sound guns the the people ho do the testing get readings of 90+ db. At work I need double hearing protection at 55 db only place with this much traffic without a barrier, and it's bullsht

Leduc County TMP September, 2021 Annex -B7-7-

Sept. 9	Glen Mcneilly	Facebook	Just stop playing games with the residents of twp 503 and wild land meadows, and just pave the road already The handling of this situation by Leduc county is absolutely pathetic
Sept. 8	Gilles Roy	Facebook	Can you please tell the Alberta government to re do QE2 going north to Edmonton? It's been 21years since they last paved it. It's absolutely horrible and embarrassing. And brutal.

Leduc County TMP September, 2021 Annex -B7-8-