



TOWN BOARD WORK SESSION

February 22, 2021 - 5:30 PM

Town Board Chambers, 301 Walnut Street, Windsor, CO 80550

Please click this URL to join. <https://windsorgov.zoom.us/j/99653965077>

OR join by telephone at (888) 788-0099 or (877) 853-5247

Webinar ID:996 5396 5077

GOAL of this Work Session is to have the Town Board receive information on topics of Town business from the Town Manager, Town Attorney and Town staff in order to exchange ideas and opinions regarding these topics.

Members of the Public in attendance virtually are asked to be recognized by the Mayor before participating in any discussions of the Town Board

AGENDA

1. Eastman Park Drive Corridor Plan - Kickoff and Introduction - D. Eisenbraun, Senior Planner
2. 7th Street Bridge Crossing Update - O. Herrera, Engineering Manager
3. Future Meetings Agenda

The Town of Windsor will make reasonable accommodations for access to Town services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call (970) 674-2400 by noon on the Thursday prior to the meeting to make arrangements.



MEMORANDUM

Date: February 22, 2021
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: David Eisenbraun, Senior Planner
Re: Eastman Park Drive Corridor Plan
Item #: 1.

Background / Discussion:

Building on the recently completed Transportation Master Plan (TMP) and Master Plan for the Diamond Valley Sports Park, the Town has partnered with Olsson to prepare a comprehensive corridor plan. This corridor plan will provide a holistic long-term vision for the Town of Windsor and the adjacent property owners and serve as a guiding document for improvements regarding future land uses and transportation networks. The Town's goals for the Eastman Park Drive Corridor Plan are to be more strategic with existing and future investments regarding the streetscape and adjacent architecture, transportation network and mobility, access and utilization into adjacent properties and an overall brand.

The section of Eastman Park Drive that is being focused on is approximately 1.5 miles long, aligned generally west to east from State Highway 257 to Howard Smith Drive. The roadway changes character several times throughout the project area and is bordered by a variety of land uses along its length, with the predominant features being Diamond Valley Sports Park and light industrial development. The western portion of Eastman Park Drive is characterized by smaller-scale commercial uses, many built near the street; a wide variety of industrial uses, and agricultural fields/undeveloped land. The rural road profile in this area is three lanes, with two travel lanes and a continuous turn lane. Sidewalks are on both sides of the street, but are not continuous. The central portion of Eastman Park Drive is dominated by the Diamond Valley Sports Park, long standing farm lands and the Consolidated Law Ditch Crossing. The eastern portion of the study area begins east of the park and is bookended by Great Western Industrial Park (GWIP). This area is largely filled with vacant parcels and oil and gas facilities.

Study Goals

The Town of Windsor is working with consultants to create a plan for the corridor. Feedback on this project will help staff accomplish several project goals.

1. The corridor plan will help address the challenges of facilitating mobility, access, economic development and corridor branding in a strategic manner, within the reasonable fiscal constraints of the Town's budget and limited state and federal funding, and in a way that is responsive to anticipated demographic and land use changes.
2. With the introduction of the sports park to this previously industrial area, the character of the area will be changing and the corridor will need to reflect a change to a gateway that welcomes visitors to the sports park.
3. Additionally, the corridor plan will be coordinated with regional plans and investments, and will provide equitability and support for all segments of the community.
4. With influence from the Town's comprehensive plan and TMP and Diamond Valley Sports Park Master Plan, the Eastman Park Drive Corridor Plan will outline the Town's vision for its ultimate build out, the policies to support that system, and capital projects that are prioritized with consideration of funding constraints.

Financial Impact:

To be determined. The new access control plan will be the primary tool driving any future capital planning projects.

Relationship to Strategic Plan:

The Eastman Park Drive Corridor Plan realizes these principles as it will revitalize a key gateway, create a consensus-built plan for future development, and enhance the roadway to be a multimodal destination.

Recommendation:

Discussion only.

ATTACHMENTS:

- ▢ Eastman Deliverable I
- ▢ Eastman Deliverable II
- ▢ Eastman Deliverable III
- ▢ Planning Boundary
- ▢ Informational Flyer

EASTMAN PARK DRIVE

CORRIDOR PLAN

DRAFT - FEBRUARY 16, 2021

A MESSAGE FROM OUR TOWN MANAGER



SHANE HALE

Windsor Town Manager

It is certainly an exciting time to live in Windsor. It seems like nearly daily, we see changes as our community, as we have grown into the vibrant gem that we live in today. In the end, it's incumbent upon Town leadership, key stakeholders and interested community members to ensure that we continue to grow in a way that reflects our values. Like all communities, we can either define what that growth will be, or we can allow the growth to define us.

As Abraham Lincoln used to say "the best way to predict the future is to create it yourself." It only emphasizes our responsibility to ensure responsible, sustainable long-range planning for our growing population, so we are creating our own future. The Eastman Park Drive corridor is one such area that is deserving of a "deep dive."

The recently completed Transportation Master Plan and developing plans for Future Legends Sports Park and Windsor Village are driving growth along the corridor – emphasizing the need for a unified vision for the future. Residential development around our town is further proof that Windsor is being noticed. With all the excitement, it is crucial to pause and consider responsible next steps for maintaining and celebrating what makes Windsor great. This is where this Plan comes into play.

This Plan is all about creating corridor destinations, connections, and character along an important roadway with regional connectivity. Careful consideration has been taken with the Eastman Park Drive corridor to ensure that Windsor is well-prepared for the future without compromising its current needs.

It is with great honor and anticipation that I present the Eastman Park Drive Corridor Plan.

A handwritten signature in blue ink, appearing to read 'Shane Hale'. The signature is stylized with a large 'S' and a prominent vertical line.

A BIG THANK YOU TO

... all participants in the planning process. Your time, technical expertise, and guidance was critical to the development of the Eastman Park Drive Corridor Plan.

TOWN BOARD

- | | |
|---|-----------------------------|
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| David Eisenbraun, Town Project Manager | Omar Herrera, Engineer Manager |
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| Scott Ballstadt, Planning Director | Scott Tometich, Geographic Information Systems Supervisor |
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| Kenneth Breneman, Construction Inspector | |
| Scott Pearson, Civil Engineer | |

STAKEHOLDER COMMITTEE

Names to be added in future deliverable



THIS PLAN IS



a **guidebook for future decisions** within the planning area related to land use, development, transportation improvements, and more

a way to protect the town's identified **mid- and long-term priorities** from short-term development decisions

proactive in addressing future development pressures

flexible to changing priorities and market/economic conditions

based on **stakeholder and town resident priorities**

on a **10+ year** timeframe

TABLE OF CONTENTS

This Plan contains six sections that paint the desired future vision for the Eastman Park Drive corridor. Four appendices provide a deeper dive into the analysis of the corridor as it exists today.

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INTRODUCTION

Section 1 - Introduction sets the stage for the Plan, detailing the Eastman Park Drive corridor's local setting. This section answers why this Plan was necessary, what key issues needed to be addressed, how the Plan was developed, and what the planning process looked like.

WHAT'S IN THIS SECTION?

- — Plan Overview
- — Planning Area
- — Planning Process and Timeline
- — Document Organization

PLAN OVERVIEW

Building on the recently completed Windsor Transportation Master Plan, Future Legends Sports Park Master Plan, and the growing Great Western Industrial Park (GWIP), the Town of Windsor realized the need for a comprehensive vision for the Eastman Park Drive corridor (corridor). With the introduction of the Future Legends Sports Park to this previously industrial-focused area, the corridor's character is and will continue to change over the coming years.

To prepare for the coming changes, the Town of Windsor created a plan to guide the corridor's future. The Eastman Park Drive Corridor Plan (Plan) – this document – contains the: (1) record and result of the planning process; (2) description and illustration of the vision for the corridor's ultimate build out; (3) policies to support the build-out; and (4) the prioritized capital projects.

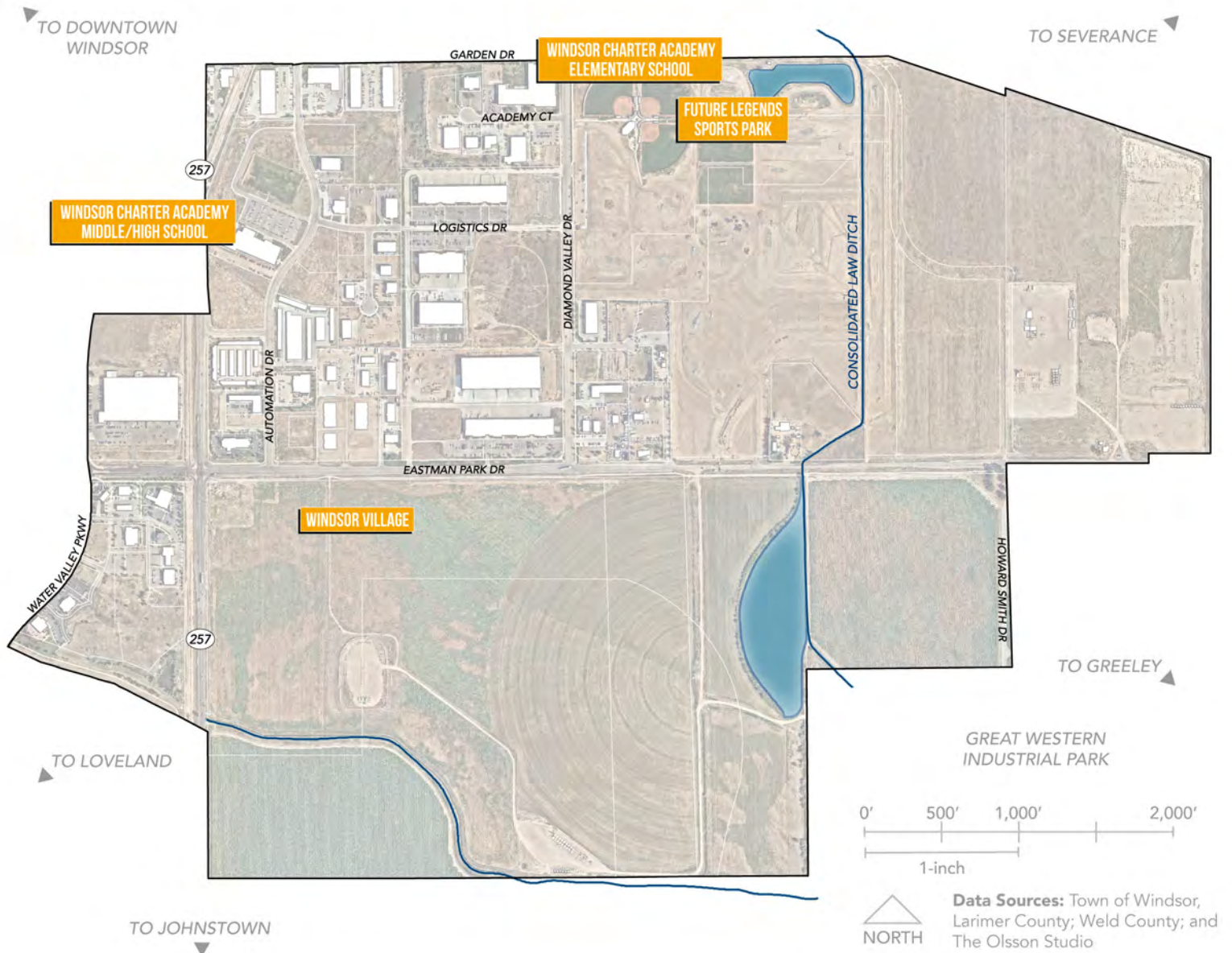
This Plan describes the holistic long-term vision for the corridor and serves as a guiding document for improvements regarding future land uses and transportation networks. The land and roadway sections included in the corridor is defined in **Planning Area** and **Figure 1.1**. With this document in hand, the Town of Windsor will be more strategic with existing and future investments regarding the streetscape, adjacent architecture, transportation and mobility, access and utilization into adjacent properties, and overall corridor brand.

What is a corridor plan?

A corridor plan is a type of long-range plan that is developed for a specific geographic area within a municipality or a larger regional area. This geographic area is typically focused on a major roadway, such as an arterial. In general, a corridor plan is consistent with a community's comprehensive plan but provides a deeper level of detail in the analysis of existing conditions and recommendations. The planning process results in recommendations that direct future growth and investment within the corridor.

A corridor plan studies a roadway holistically, considering all modes of transportation, adjacent land uses, existing infrastructure, the surrounding physical environment, and the demographic trends and market forces at play. Despite this holistic study, it is critical to talk to those people that live, drive, work, and play along the corridor every day. Therefore, public engagement was critical to the creation of this Plan, as well. Reference **Appendix B - Public Engagement Summary** for more information.

FIGURE 1.1 PLANNING AREA



PLANNING AREA

The corridor is in Windsor, Colorado. The Town of Windsor is in northern Colorado, approximately 60 miles north of Denver, Colorado. The town is divided by State Highways 257 (SH 257) and 392 (SH 392) (the town's Main Street), and positioned in between Timnath to the northwest, Fort Collins (Larimer County seat) to the west, Loveland to the southwest, Johnstown to the south, Greeley to the east, and Severance to the northeast.

This Plan focuses on the portion of Eastman Park Drive generally aligned west to east from SH 257 to Howard Smith Drive, which is approximately 1.5 miles in length. The roadway changes character several times over its length and is bordered by a variety of land uses with the predominant features being Future Legends Sports Park and light industrial development. The rural road profile along the corridor is three lanes, including two travel lanes and a continuous turn lane.

Figure 1.1 illustrates the planning area, stretching north to Garden Drive and south to capture the adjacent large, southern parcels. The eastern boundary was chosen to align with town limits.

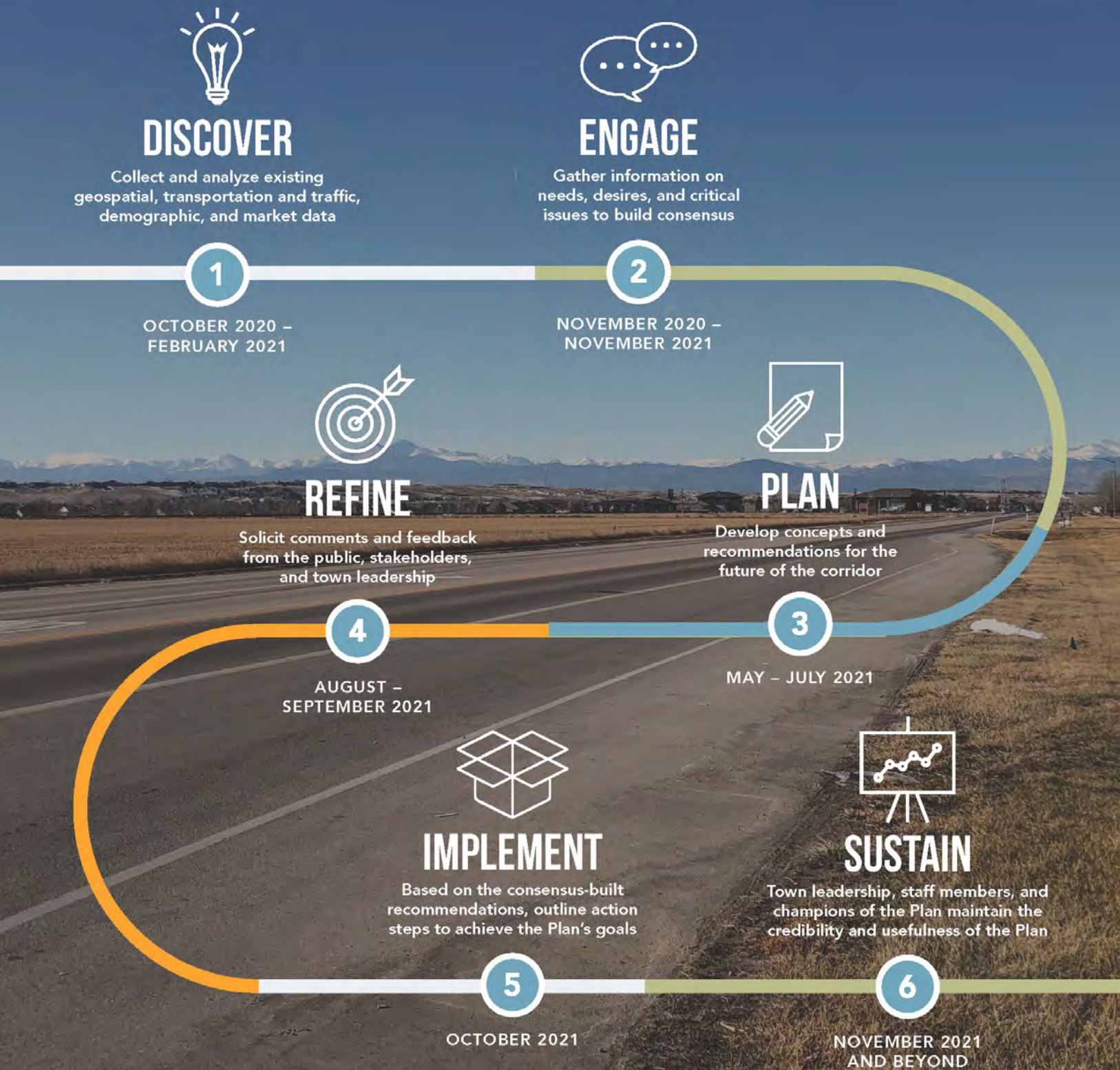


Figure 1.2 illustrates the flow of this planning process. While the figure generally shows a step-by-step process, it must be noted that public engagement plays a role in each planning phase. This planning process values public opinion and found consensus; this is Windsor's plan. The full public engagement process is detailed in **Appendix B - Public Engagement Summary**.

DOCUMENT ORGANIZATION

THE PLAN

Section 1 - Introduction

This section presents an introduction to the Plan, including the Plan's purpose, background, timeline, and process.

Section 2 - The Future Corridor

This section narrates and illustrates the desired future state of the corridor.

Section 3 - Creating Destinations

This section identifies the preferred and appropriate land uses and development areas along the corridor, with a keen eye to regional destination and recreation development.

Section 4 - Creating Connections

This section describes the preferred transportation routes and types for vehicular and active transportation modes, as well as appropriate corridor access locations and types.

Section 5 - Creating Character

This section presents the streetscape plan and addresses the urban design, built form, wayfinding, and street life look, feel, and function for the corridor.

Section 6 - Strategic Implementation

This section sets forth specific actions (tasks) to achieve the goals and strategies of the previous sections.

BACKGROUND AND SUPPORTING DETAIL

Appendix A - The Current Corridor

This section describes the current state of the corridor, including details on existing plans and studies, current and forecast demographic factors, market potential, and physical, natural, and regulatory conditions.

Appendix B - Public Engagement

This section summarizes the input received from the community, stakeholders, and town leadership through a variety of engagement tools, methods, and events, both in-person and online.

Appendix C - Traffic Analysis Report and Access Control Plan

This section is the full traffic analysis report that takes a deep dive into existing traffic flow along the corridor and is paired with access control recommendations.

Appendix D - Highest and Best Use Analysis

This section is the full economic and market analysis for the corridor that evaluates long-term market potential and development opportunities, based on economic and demographic factors and market forces.

INTERCONNECTED PLANS

HOW DID WE GET HERE? HOW DOES IT ALL RELATE?

TOWN OF WINDSOR TRANSPORTATION MASTER PLAN (2020)

The Transportation Master Plan assessed transportation town-wide, but included specific recommendations for the corridor, including to improve noted access and mobility concerns at the SH 257 intersection, and to improve the multi-use trail on the south side of the corridor.

TOWN OF WINDSOR TRAILS SYSTEM MASTER PLAN (2019)

The Trail System Master Plan speaks to the non-vehicular components of the corridor. The corridor has existing multi-use paths and sidewalks; however, the Trail System Master Plan would both enhance these existing features and promote the investment in more bicycle and pedestrian facilities along the corridor, ultimately driving toward a regional network of trails.

TOWN OF WINDSOR COMPREHENSIVE PLAN (2016)

Several properties along the corridor were identified as primary growth areas for the Town of Windsor. The Comprehensive Plan calls for specific land uses along the corridor, including retail, restaurant, neighborhood services, office, and business parks.

TOWN OF WINDSOR CAPITAL IMPROVEMENT PLAN (CIP) (2021)

The Eastman Park Drive Corridor Plan is included in the town's CIP, which is how the plan received its funding. The CIP is the reason this Plan is possible.

TOWN OF WINDSOR STRATEGIC PLAN (2020)

The town's strategic vision has three guiding principles: Strategic Growth, Vibrant and Healthy Economy, and Sustainable Infrastructure. The Eastman Park Drive Corridor Plan realizes these principles as it will revitalize a key gateway, create a consensus-built plan for future development, and enhance the roadway to be a multimodal destination.

TOWN OF WINDSOR, COLORADO PARKS, RECREATION, AND CULTURE MASTER PLAN (2016)

The Parks, Recreation, and Culture Master Plan focus on efforts that influence future development, programming, and services for recreational and cultural opportunities within the town. These recommendations focus on walkability to and from recreation opportunities, trail connectivity, the addition of new parks and athletic fields, and preservation of natural areas.



EASTMAN PARK DRIVE CORRIDOR PLAN

This Plan embodies the elements of these other planning efforts and brings all of these relevant recommendations together into one coordinated vision for the corridor.

2

THE FUTURE CORRIDOR

Section 2 - The Future Corridor ...

WHAT'S IN THIS SECTION?

- XXX
- XXX
- XXX
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XXX

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XXX

XXX

3

CREATING DESTINATIONS

Section 3 - Creating Destinations ...

WHAT'S IN THIS SECTION?

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4

CREATING CONNECTIONS

Section 4 - Creating Connections ...

WHAT'S IN THIS SECTION?

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5

CREATING CHARACTER

Section 5 - Creating Character ...

WHAT'S IN THIS SECTION?

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6

STRATEGIC IMPLEMENTATION

Section 6 - Strategic Implementation ...

WHAT'S IN THIS SECTION?

- XXX
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XXX

XXX



THE CURRENT CORRIDOR

Appendix A - The Current Corridor acknowledges that long-range planning must be founded on an understanding of a corridor's existing conditions. This appendix presents a summary of the analysis of the current state of the corridor. This section recognizes the importance of well-informed recommendations and strategies that properly respond to present-day realities.

Appendix A provides an overview of the corridor's place and role within the region, other regulating and guiding plans, demographic and economic trends, and physical and natural environment.

EXISTING PLANS AND STUDIES

Town of Windsor Capital Improvement Plan (2021)

Plan Overview. Each year, the Town of Windsor determines a list of capital improvement projects to prioritize and budget for the fiscal year as part of a Capital Improvement Plan. Planned major capital projects for 2021 are broken into three categories: Sustainable Infrastructure, Strategic Growth, and Vibrant and Healthy Economy.

Relationship to this Plan. This Plan is included in the Capital Improvement Plan, which is anticipated to provide recommendations for future capital improvement projects within the corridor. SH 257 and Eastman Park Drive intersection improvements are identified as 2021 Capital Improvement Projects and are currently budgeted at \$2,278,000. This is the only listed engineering project located along the corridor and was funded through a Colorado Department of Transportation (CDOT) grant. Design plans have been completed, however based on feedback from CDOT, the design is currently being revisited. The dates to begin construction and the completion schedule have not yet been determined.

Town of Windsor Transportation Master Plan (2020)

Plan Overview. The completion of the Town of Windsor's first Transportation Master Plan (TMP) serves as a milestone to assess where the community is today and a guide for the community as it continues to look forward. This plan documents the existing pedestrian and bicyclist facilities, existing roadway classification and volumes, crash trends, and provides recommendations for implementable improvements for the transportation network and all modes of travel. The plan integrates the 2017 Roadway Improvement Plan to identify a layered transportation network that plans for a connected, efficient, and comfortable network for bicycling, walking, taking transit, and driving.

Relationship to this Plan. The following plan recommendations are relevant to the corridor:

- Prioritize infrastructure, programs, and transportation service connections around transit.
- Invest in significant, high-quality bus stop amenities and infrastructure including benches, shelters, pedestrian-scale lighting, and bike parking.
- Implement bicycle/pedestrian cut-throughs to connect dead ends and cul-de-sacs. Strive to connect neighboring properties, both residential and commercial land uses.
- Enhance the current pavement maintenance and sidewalk concrete replacement program to include standards and upkeep for bicycle facilities and preventative maintenance on high-use facilities and those with vulnerable users.
- Continue to work with CDOT, regional partners, and neighboring jurisdictions to create truck routes to minimize maintenance needs, by focusing impact on specified corridors.
- Implement and build upon the 2019 complete streets standards updates.

The highest crash area along the corridor was identified at the intersection with SH 257, including automobile collisions with pedestrians and bicyclists. The public outreach efforts indicated that there are access and mobility concerns at this intersection and that it was difficult to bike safely along the eastern portion of the corridor. The plan highlighted the need to improve the multi-use trail on the south side of the corridor as a priority project. According to current sidewalk design standards by street classification, Eastman Park Drive is classified as a rural minor arterial and recommended to have a five-foot-wide buffered sidewalk along the corridor. **Please note that this Plan is studying the appropriate cross-section and street classification for Eastman Park Drive, which may change sidewalk and trail width and location recommendations.**

In January 2020, the Greeley Evans Transit (GET) launched the Poudre Express Regional Transit Route, which connects Fort Collins to Greeley. One of the three stops in Windsor is located on the corridor at Eastman Park Drive and Cornerstone Drive. The plan recommends improving bus stop amenities at the three existing bus stops and expanding transit service as demand is expected to increase. Additionally, the plan recommends exploring the feasibility and support of piloting an on-demand transportation service.

Town of Windsor Strategic Plan (2020)

Plan Overview. The purpose of the current Strategic Plan is to guide the town's growth and development through 2023. The following text describes the mission and vision of the Strategic Plan:

- **Strategic Plan Mission.** The Town of Windsor promotes community and hometown pride through sustainable, excellent, and equitable delivery of services in a fiscally responsible manner.
- **Strategic Plan Vision.** Windsor is the hub of northern Colorado; a safe, unique, and special town that offers diverse culture and recreation opportunities. Windsor is recognized as a regional leader that demonstrates fiscal responsibility, environmental stewardship, and strategic excellence. Windsor is a town that thinks big and embraces its hometown pride.

Relationship to this Plan. The guiding principles of the Strategic Plan are: Community Safety, Fiscal Responsibility, Quality of Life, Small Town Feel, and Inclusion. With these guiding principles in mind, the town is committed to growing strategically, providing for a vibrant and healthy economy, and investing in sustainable infrastructure, described in more detail as follows.

- Establish community separators and preserve open space to maintain Windsor's identity and quality of life.
- Facilitate discussions around growth impacts with special districts and other government agencies, governing boards, and elected officials.
- Enhance and expand the community and downtown's vitality.
- Attract balanced commercial development that will sustain the future of Windsor.
- Make Windsor a tourist destination.
- Design and implement a well-connected, efficient, multimodal transportation network.
- Establish pedestrian and bicycle connectivity throughout Windsor.
- Increase public transportation opportunities for Windsor residents.
- Adequately maintain and ensure that infrastructure (streets, trails, water, and sewer) aligns with growth.
- Ensure equitable parks, trails, open space, and cultural infrastructure in all neighborhoods and areas throughout Windsor.
- Invest in the improvement of public space and facilities outside of the downtown area creating additional cultural destination amenities.

Town of Windsor Street Design Criteria and Construction Specifications (2019)

Plan Overview. This document provides guidance for the design, review, and construction of public improvements in or under the public right-of-way and public easements. These standards shall be required for all development projects within the town and its GMA.

Relationship to this Plan. This design manual does not specifically discuss the corridor, however the street design criteria and construction specifications it contains would apply to improvements along the corridor. More specifically, the specifications provide the required minimum roadway design standards, street lighting standards, preferred intersection spacing, minimum auxiliary lane lengths by speed limit and volume, specific intersection design parameters, and minimum design criteria for multimodal accommodations. Recommended roadway and access design is discussed in **Section 4 - Creating Connections**. **Note that access spacing along the corridor, per the access control recommendations in this Plan, is not expected to meet all town design criteria due to site constraints, but other criteria consistent with sound transportation engineering was used in the access control layout recommendations.**

Town of Windsor Trails System Master Plan (2019)

Plan Overview. Windsor currently maintains over 40 miles of trails. The most recent Trail System Master Plan identifies current and proposed on-street, off-street, and soft surface trails, along with current parks, open space, and wildlife areas.

Relationship to this Plan. The corridor has a detached 10-foot multi-use path on the south side of the roadway that extends beyond the corridor study area. Along the north side of the corridor, between SH 257 and Diamond Valley Drive, there are segments of buffered sidewalks associated with more recent developments; however, these sidewalks are not well-connected from development to development.

The Trail System Master Plan calls for the maintenance of these existing multi-use paths and connecting the sidewalks as development continues. The plan also proposes a regional off-street trail that travels north-south connecting the Poudre Trail to the Great Western Trail. This new trail is anticipated to cross the corridor on the east side of the Future Legends Sports Park and multi-use development. As part of the planned master drainage channel, the town plans to attempt to create a grade-separated trail crossing of Eastman Park Drive just east of where the Law Ditch crosses Eastman Park Drive.



EXISTING TRAIL ALONG EASTMAN PARK DRIVE

Town of Windsor Pedestrian Crossing Guidelines (2018)

Plan Overview. The Pedestrian Crossing Guidelines provide criteria for the evaluation and installation of pedestrian crossings for the purpose of pedestrian safety and compliance. The guidelines provide a consistent procedure for considering the installation of crossing treatments. The document summarizes criteria for pedestrian crossings, procedures for evaluating the need for crossing treatments, and types of crossing treatments that may be applicable for a particular set of pedestrian and vehicular volumes.

Relationship to this Plan. Although the corridor is not specifically mentioned, the recommendations provided in the Pedestrian Crossing Guidelines would apply to pedestrian improvements along the corridor. Depending on recommendations and implementation strategies from this Plan, these guidelines should be followed to determine the appropriate location and crossing type along the corridor.

Town of Windsor Complete Streets Guide (2017)

Plan Overview. Complete streets are streets that are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and public transit riders of all ages and abilities. The guidelines encourage safe, reliable, integrated, and connected transportation facilities for all modes of travel on existing and new roadways.

Relationship to this Plan. The Complete Streets Guide states that the Town of Windsor shall support movement along and across arterial, collector, and local streets within a highly interconnected and integrated network. The scope of applicability affecting the corridor includes:

- Town-owned transportation facilities in the public right-of-way including, but not limited to, streets, bridges and all other connecting pathways;
- Privately constructed streets, drives, and parking lots;
- Businesses and school districts;
- All transportation improvements including, but not limited to, planning, programming, design, right-of-way acquisition, construction, construction engineering, reconstruction, operation, and maintenance; and
- Other changes to transportation facilities on streets and rights-of-way, including capital improvements, re-channelization projects, and major maintenance.

Design standards include existing complete street design guidance from the American Association of State Highway Officials (AASHTO), state departments of transportation, the Institute of Transportation Engineers (ITE), the National Association of City Transportation Officials (NACTO), the Americans with Disabilities Act (ADA), and the Public Right-of-Way Accessibility Guidelines (PROWAG).

Implementation measures relevant to this Plan include:

- Incorporation of complete streets in existing and future plans, policies, and standards;
- Recommended improvements from town staff members to support complete streets projects in transportation projects; and
- Inclusion of an educational component to ensure that all users understand and can safely utilize the complete street.

Town of Windsor Roadway Improvement Plan (2017)

Plan Overview. This plan evaluates the entire roadway network in the Town of Windsor to determine future infrastructure needs based on 2040 volumes. The Roadway Improvement Plan was updated following the adoption of the Comprehensive Plan update in 2016 and therefore aligns with the goals set for growth and development. The Roadway Improvement Plan also responded to the ongoing increase in traffic volumes because of population growth. The GMA is identified in this plan and includes areas within town limits and unincorporated areas of Weld and Larimer Counties that are designated by the Comprehensive Plan as areas with infrastructure to support future development, areas where future development should be directed, and areas for future annexation.

Relationship to this Plan. The corridor is predicted by this plan to remain a rural minor arterial. The daily traffic capacity threshold for a rural minor arterial was set to 11,000 vehicles per day (VPD) for a two-lane facility and 22,000 VPD for a four-lane facility. The traffic models forecast the existing volumes to increase to 9,500 VPD by 2040, which supported the Roadway Improvement Plan’s recommendation to maintain a two-lane cross-section on Eastman Park Drive.

PLEASE NOTE

Please note that this Plan is studying the appropriate cross-section for Eastman Park Drive, once more, as the Town of Windsor Roadway Improvement Plan did not anticipate the development of the Future Legends Sports Park or Windsor Village.



Town of Windsor Comprehensive Plan (2016)

Plan Overview. The Comprehensive Plan defines the long-range vision of the Town of Windsor as a response to current and projected population growth. The 2016 update promotes Windsor’s unique assets to preserve its small-town charm and character and create sustainable balance between the built and natural environment. It is meant to guide land use and development for the next 15 to 20 years. The plan includes land both within the Town of Windsor municipal boundaries and areas that fall within the Growth Management Area (GMA), which the plan defines as land that will likely experience development pressure and has the infrastructure improvements to support future development. The plan emphasizes that future development should be directed and contained within the GMA. The corridor falls within municipal boundaries and the GMA boundary line lies about two miles east of the GWIP.

Relationship to this Plan. The properties along the corridor, including the GWIP, were identified as a primary growth area where future development or redevelopment should be prioritized to utilize existing infrastructure and services. The existing available infrastructure within and directly adjacent to the corridor includes Eastman Park Drive, the roadway network through the Diamond Valley Center, the multi-use path along the south side of the road, several utilities such as water and electric and communications, and the Great Western Railroad. The Comprehensive Plan states that the real estate in closest proximity to the intersection of Eastman Park Drive with SH 257 should be prioritized for retail, restaurant, and neighborhood service uses and leverage the highway frontage, and as the district expands east it can transition into office and business park type uses. The Comprehensive Plan identified that improvements need to be made at the intersection with SH 257 to enhance pedestrian connectivity and provide a safe crossing.

The Comprehensive Plan recommends emphasizing the corridor as a business district with a complete street design. The corridor was listed to be improved and remain a two-lane rural minor arterial with a 130-foot right-of-way. **Please note that this Plan is studying the appropriate cross-section for Eastman Park Drive, once more, as the Town of Windsor Roadway Improvement Plan did not anticipate the development of the Future Legends Sports Park or Windsor Village.** The GWIP is discussed as a major center of employment and manufacturing that serves the entire Front Range. The Comprehensive Plan highlights the need to balance the potential of the employment opportunities with the need for residential and commercial uses.

Town of Windsor, Colorado Parks, Recreation, and Culture Master Plan (2016)

Plan Overview. This plan provides direction for future decisions regarding development, programming, and services of the Parks, Recreation, and Culture Department for the next five to 10 years. The document provides broad-based visioning to guide operations and potential expansion of services as Windsor continues to build out, responds to the changing pulses of the community, and sets forth a plan of sustainability. The plan identifies opportunities for sustainable growth and prioritizes projects within five categories: outdoor facilities, indoor facilities, operations, programming, and marketing.

Relationship to this Plan. The plan provides a categorized list of recommendations, which includes continued actions from the previous plan and current issues. The following recommendations under the outdoor facilities category are relevant to the corridor:

- Continue to develop walkable access to recreation to include new on-street and off-street trail segments and street crossings, with an emphasis on connectivity within subdivisions to locations, such as parks, schools, and commercial opportunities.
- Continue to develop on-street trail connectivity, which can involve coordination with public works and other town departments or outside public and private entities.
- Consider opportunities to add new park components in existing parks to boost the value of these facilities, such as the Diamond Valley athletic fields.
- Preserve floodplains, wetlands, and natural areas.
- Design future assets with conservation in mind.



EXISTING DIAMOND VALLEY SPORTS COMPLEX (THE COLORADOAN)

DEMOGRAPHICS AND ECONOMIC CONDITIONS

This section explores the demographic and economic conditions of the corridor and the geographic areas that influence and interact with it. The full write-up is available in **Appendix D - Highest and Best Use Analysis**.

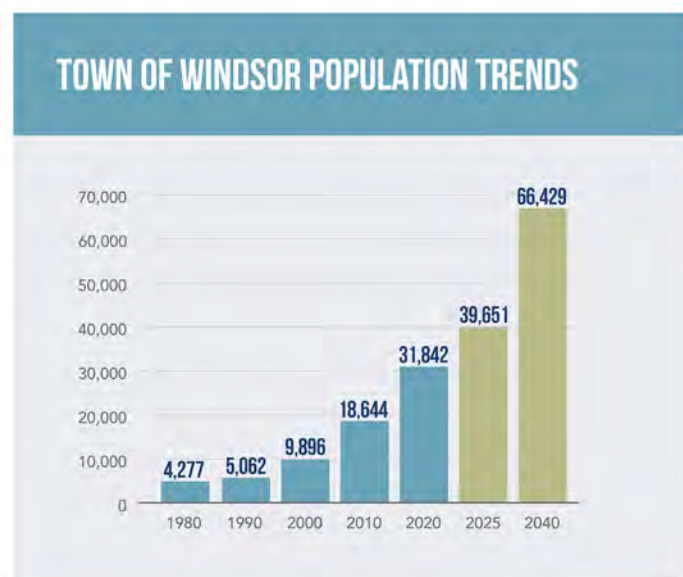
Demographic and Economic Activity

Select demographic and economic trends are illustrated on the following pages to provide a comparison of population and employment characteristics in the Town of Windsor with that of the Northern Colorado region, comprised of both Larimer and Weld Counties. These datasets explore how Windsor's population and employment growth, as well as the town's high level of education and household income, influence the demand for real estate market and development patterns.

Population Growth Trends. According to the U.S. Census, from a population of just 4,277 residents in 1980, Windsor's population reached 31,842 by 2020, adding 27,565 new residents. By comparison, the Northern Colorado region's population increased from 272,622 residents in 1980 to 699,144 residents by 2020. By 2040, Windsor's population is forecast to grow an additional 34,587 new residents.

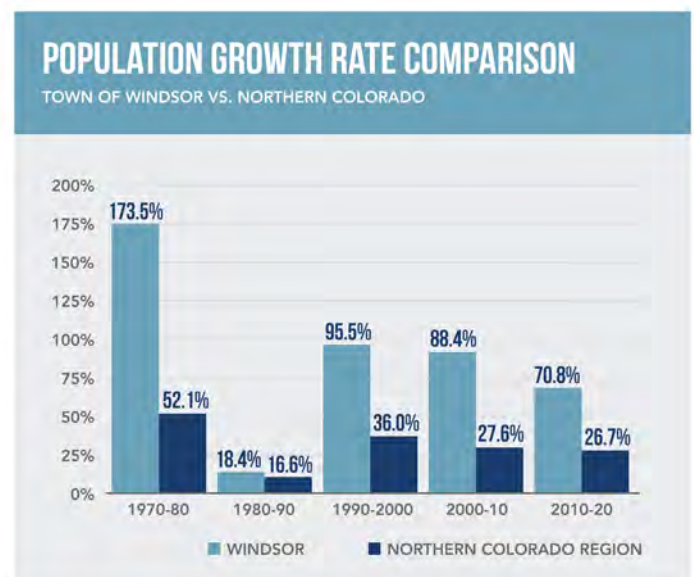
Since 1980, Windsor's population growth rate outpaced that of the Northern Colorado region, increasing by 644 percent compared to 156 percent. See **Figures A.1** and **A.2** for more detail.

FIGURE A.1



Data Source: U.S. Census Bureau and ESRI Business Analyst

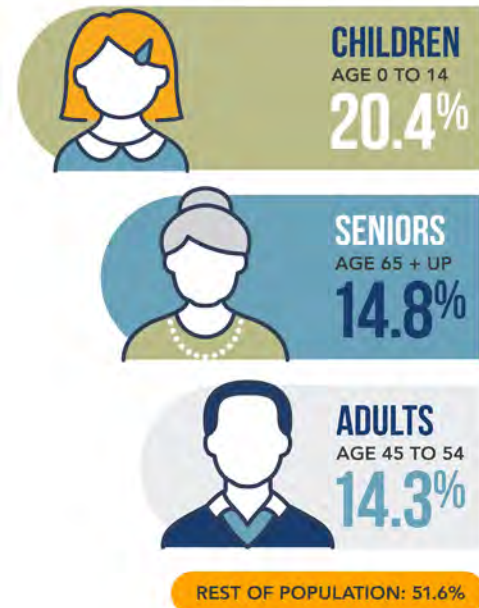
FIGURE A.2



Data Source: U.S. Census Bureau and ESRI Business Analyst

FIGURE A.3

WINDSOR POPULATION BY AGE (2020)



Data Source: ESRI Business Analyst

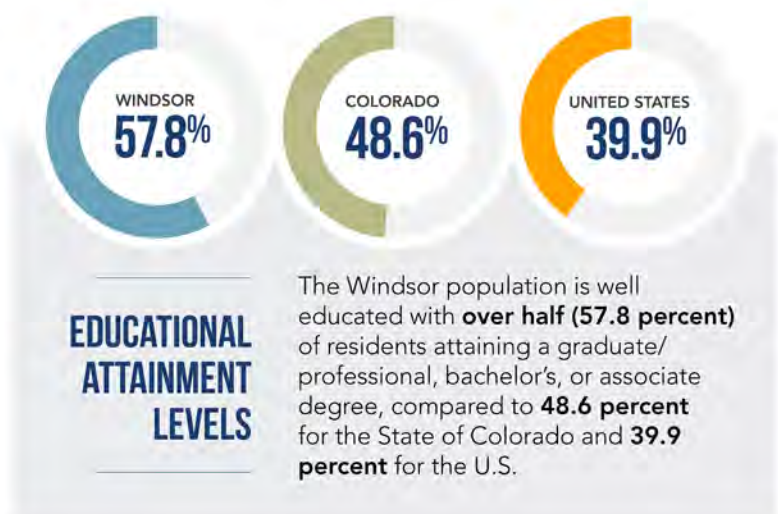
Educational Attainment. Windsor’s population is well educated with over half (57.8 percent) of residents attaining a graduate/professional, bachelor’s, or associate degree, compared to 48.6 percent for the State of Colorado and 39.9 percent for the U.S., as seen in **Figure A.4**.

Above average educational attainment levels offer the opportunity to generate higher income levels, retail expenditures, housing values, and demand for retail and professional office space.

Population Age Distribution. Windsor’s population is young, with children ages 0 to 14 making up the largest age group (20.4 percent of the total population). This demographic is followed by seniors (65 years old and up) at 14.8 percent, and adults ages 45 to 54 years at 14.3 percent, as seen in **Figure A.3**.

According to Esri Business Analyst, from 2020 through 2025, the Windsor population is forecast to grow by nearly 8,000 new residents. The age groups forecast to experience the strongest growth include seniors, children, and young adults (ages 25 to 34 years). These shifts in the age of the market area population will impact the future demand for retail goods, personal services, and housing.

FIGURE A.4



Data Source: ESRI Business Analyst

FIGURE A.5

Household Income Distribution. Per **Figure A.5**, according to Esri Business Analyst, Windsor's 2020 median household income of \$99,131 exceeds the Northern Colorado region's median of \$74,588. Windsor's higher income levels offer the potential to support above average per capita retail expenditures, housing values, and rents.

Further, high-income households with incomes of \$100,000 or more account for nearly half of all Windsor households compared to 35.5 percent for the Northern Colorado region.



Data Source: ESRI Business Analyst

LEADING JOB GROWTH SECTORS

Leading sectors for job growth since 2010 included:

- Mining and construction - 14,400 jobs
- Trade, transportation, and utilities - 12,100 jobs
- Government - 9,400 jobs
- Manufacturing - 7,800 jobs

Data Source: ESRI Business Analyst



Employment Growth Trends. From 2010 to 2019, the Northern Colorado region's employment base increased 35.5 percent compared to 26.1 percent for all of Colorado. During that 10-year period, Northern Colorado added 75,300 jobs with positive job growth reported for every year. Business interruptions due to the COVID-19 pandemic resulted in the loss of 16,900 jobs throughout 2020.

These employment trends support the need for manufacturing, warehouse/distribution, and professional office space.

Competitive Real Estate Market Conditions

The following charts and graphics provide insight into the current and future market realities of the corridor. Multiple market sectors are explored, including retail, office, industrial, and residential, to understand prospective urban development patterns. These topics focus both on the corridor itself, as well as the areas surrounding the corridor that influence market realities.

Residential Building Permit Trends. According to the Town of Windsor, over the past 10 years, single-family residential construction in Windsor peaked from 2018 through October 2020 when building permits were issued for a total of 1,917 dwelling units.

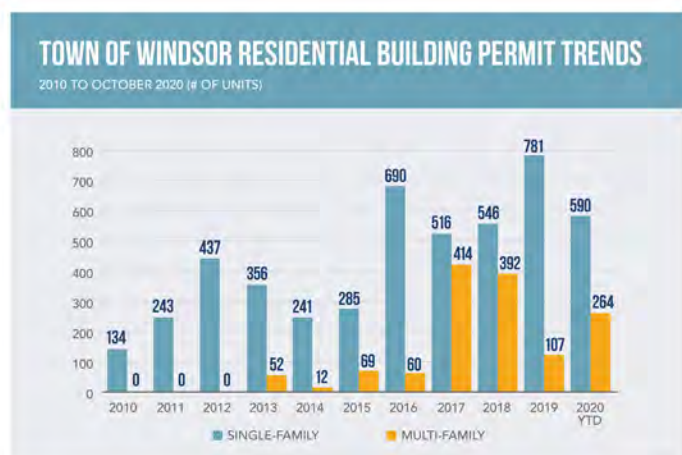
From 2010 through 2016, just 193 multi-family housing units were permitted for construction. Since 2017, multi-family construction has accelerated, totaling 1,177 dwelling units.

Despite the negative economic impacts stemming from the COVID-19 pandemic, through October 2020, a total of 590 single-family homes were permitted for construction, down just 16.2 percent from the same 10-month period in 2019. Through October 2020, a total of 264 multi-family units were issued building permits, compared to 107 units for all of 2019. See **Figure A.6** for more detail.

Competitive Retail Market Trends. Despite a growing population and well above average household income levels, Windsor supports a modest inventory of retail space. According to CoStar, the existing 503,375 square feet of shopping center space is operating at a healthy occupancy rate of 98.0 percent.

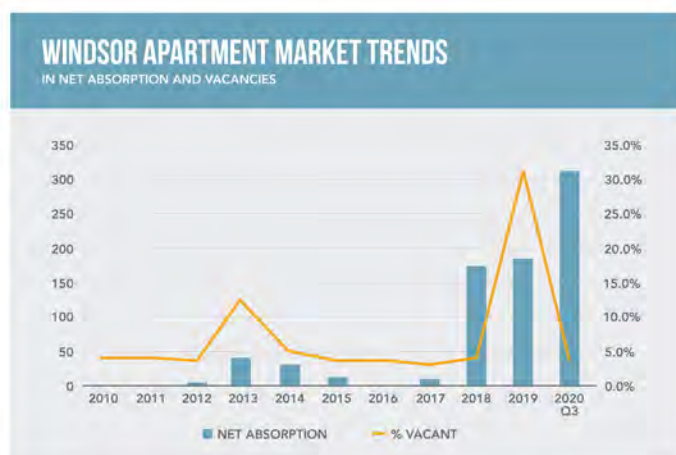
Windsor suffers from considerable retail sales leakage, capturing just 77.5 percent of the statewide average. Windsor residents are shopping outside of the community in neighboring Loveland and Fort Collins that both possess larger and more diverse retail markets. Over the past decade, the Windsor shopping center market has gradually improved, marked by positive net absorption of space, a gradual decline in the overall vacancy rate, and escalating average rents. Current vacancies well below market equilibrium would suggest near-term additions to supply could be supported.

FIGURE A.6



Data Source: CoStar

FIGURE A.7



Data Source: CoStar

Competitive Apartment Market Trends. According to CoStar, Windsor’s apartment inventory totals 1,145 units, operating at a healthy overall vacancy rate of 4.2 percent (see **Figure A.7**) and an average rent of \$1,178 per month. This inventory includes six market-rate properties totaling 1,060 units and two income-based properties totaling 85 units.

Apartment construction has accelerated over the past three years with the completion of the 196-unit Pelican Bluff in 2017 and 518-unit Fossil Ridge in 2019. Both apartment properties have experienced strong lease-up and above average rents. A senior apartment complex is also in the development pipeline. The Windsor apartment market is forecast to remain healthy into 2021.

Competitive Office Market Trends. The communities of Fort Collins and Loveland serve as the region’s principal office markets totaling over 11.3 million square feet of space, as shown in **Figure A.8**. Comparatively, Windsor supports a modest inventory of professional office space despite the highly educated population and high levels of office-related employment among its residents. According to CoStar, the Windsor office market currently totals just 263,575 square feet of building area operating at a vacancy rate of just 0.6 percent and an average rent of \$23.31 per square foot. Windsor maintains 276 professional services businesses supporting 1,506 jobs. No professional office space is currently under construction.

Competitive Industrial Market Trends. According to Esri Business Analyst, a total of 72 industrial-based businesses operate in Windsor with an employment base of 2,519 jobs. Throughout the past decade, Windsor’s industrial market operated at vacancies well below market equilibrium with net space absorption outpacing new additions to supply. Strong tenant demand and the modest inventory of space currently available for lease suggests near-term additions to supply are supportable. According to CoStar, the Windsor industrial market maintains 4.3 million square feet of space, consisting of:

- 3.0 million square feet of manufacturing space;
- 1.1 million square feet of logistics space; and
- 221,699 square feet of flex space.

DIFFERENCE BETWEEN MARKET-RATE AND INCOME-BASED HOUSING

Market-rate housing is for-sale or rental housing that has no sales price or rent restrictions. In other words, the term applies to conventional for-sale or rental housing that is not restricted by affordable housing laws.

Income-based housing is defined as rental housing that provides government rental assistance to low- and moderate-income households that is governed by income limits. Income-based rental housing programs were established to ensure that low-income families and individuals, the elderly, and people with disabilities can find decent, safe housing, the cost of which is keyed to their ability to pay.



SITES AND BUILDINGS CONDITIONS AND CHARACTER

A site assessment was conducted in January 2021 to study the condition and character of the sites and buildings within the corridor. The following section details the findings, broken down by general geographic area.

Eastman Park Drive

Site Conditions and Character. Eastman Park Drive is a two-lane road in fair condition. To the west, Eastman Park Drive runs through residential developments until it reaches the Poudre River Trailhead at Eastman Park. To the east, Eastman Park Drive turns into County Road 64 $\frac{3}{4}$ east of County Road 23. There is a sidewalk that runs on the south side of the road from the Water Valley Parkway roundabout, across SH 257, and ending at Litho Plate Drive. In most places, the sidewalk is in good condition with some areas in need of repair. There are railroad crossings in fair condition at SH 257 and Litho Plate Drive.

Building Conditions and Character. East of SH 257, there are two existing houses that face Eastman Park Drive. Both are located directly south of Diamond Valley Community Park.

Development West of SH 257

Site Conditions and Character. Overall site conditions for the sites west of SH 257 and SH 257 are desirable. Residential developments begin directly west of the project boundary at Water Valley Parkway and south of Kids Haven Preschool. Street conditions seem newer than other parts of the site. Sidewalk conditions are quality and consistent throughout. Development is largely denser on this side of SH 257, compared to the rest of the corridor.

Building Conditions and Character. Buildings west of SH 257 are less industrial than buildings within the rest of the corridor and blend with the residential developments extending to the west. The largest building in this area of the corridor is the Tolmar office building at the northeast corner of the roundabout. Cornerstone Baptist Church is at the northwest corner of the roundabout. Both buildings are in great condition and have their own parking lots. On the south side of Eastman Park Drive is a Loaf N Jug gas station and a Points West Community Bank building, both also in great condition. Directly south is a development containing a multi-tenant office building, a car wash, a small commercial strip development, and Sol De Jalisco restaurant. Buildings in this development are in good condition. Further south on Water Valley Parkway is Dickey's Barbecue Pit and Kids Haven Preschool, both in great condition.

Development East of SH 257

Site Conditions and Character. The site on the northeast corner of Eastman Park Drive extending north to Garden Drive and east to Diamond Valley Community Park contains a mixture of commercial, office, and industrial uses. While the area has an industrial feel, the buildings are spaced out enough to have greenspace throughout. The roads are in good condition, making the area easily navigable. Many streets have adjacent sidewalks in good condition as well. The active area is utilized by people of all ages working in offices or at industrial sites, going to school or daycare, patronizing places of service, or visiting businesses.

Building Conditions and Character. Generally, buildings in this area are in good condition. The newest building is a retail development at Eastman Park Drive and Automation Drive where tenants are beginning to open businesses. Directly south of this development is a Community Bank of Colorado branch. These structures are both in great condition and have less of an industrial feel than the other buildings on the site, as most of those structures have metal, concrete, or cinderblock exteriors.

Other smaller commercial uses include the Garden Valley Veterinary Hospital at the southeast corner of SH 257 and Garden Drive, a strip retail development at Garden Drive and Automation Drive, a commercial space development at Garden Drive and Innovation Circle, and businesses located on Academy Court, including Windsor Gymnastics Academy, Joyful Oasis Day Spa, FusionFIT Windsor, and an office supply store. These developments are all in good condition and have aesthetic similarities, creating cohesion throughout the site.

The larger office and industrial buildings directly east of Diamond Valley Drive and south of Academy Court contain Tatman Industrial Park, three other large office buildings and four smaller office buildings. These buildings are in good condition and support an active array of businesses and employees. South of Logistics Drive contains a cluster of industrial uses, including storage facilities and auto-oriented businesses. These buildings are smaller, as most only contain one business tenant but are also in good condition.

This area is also home to institutional uses. The Windmill Child Enrichment Center is located on Automation Drive, just north of Eastman Park Drive. The building is in good condition and contains a fenced-in play area and street-facing parking lot. The Windsor Charter Academy has two campuses on the site. The middle and high school is located at Automation Drive and Logistics Drive and has a full-size soccer field and parking area for students and teachers. The elementary school is located on Academy Court and has a parking lot, large playground, and playing field. The academy was founded in 2001 and both campuses are in good condition, with ample greenspace balancing the industrial feel of the buildings.

Windsor Baptist Church is located next to the elementary school campus on Academy Court. Like the elementary school, it is a metal-sided building in good condition with green space and a parking lot facing Academy Court.

Future Windsor Village Site

Site Conditions and Character. Located at the southeast corner of Eastman Park Drive and SH 257, the future Windsor Village Site is an ideal development site with high street visibility and accessibility from the intersection. Currently, the site is flat with minimal vegetation and dotted with black-tailed prairie dog tunnels.

Building Conditions and Character. While the current site has no buildings, development plans are under review by the Town of Windsor. Windsor Village is expected to be a mixed use development with housing and retail.

Great Western Industrial Park

Site Conditions and Character. The Great Western Industrial Park site was previously the site of the Kodak Colorado Facility, which was developed in the 1970s and noted for having a significant impact on economic development and population growth for Windsor. Plans for expansion and redevelopment are currently under review. There is road access to Eastman Park Drive and direct rail access onsite, making development especially attractive to both commercial and industrial tenants.

Building Conditions and Character. The current site has three large buildings and a handful of smaller commercial and industrial buildings. Observed building conditions were dated, but fair. While there is a significant vacancy rate, the site is currently home to tenants including Carestream Health, High Plains Steel Services, Halliburton Oilfield Services, and Front Range Energy.

Diamond Valley Sports Complex/Future Legends Sports Park Site

Site Conditions and Character. This site at the southeast corner of Diamond Valley Drive and Garden Drive is currently being redeveloped into the Future Legends Sports Park. Presently, the site contains three baseball fields. Future Legends Sports Park will extend onto Diamond Valley Community Park, which is currently open field space. Further south is a commercial strip development, two auto-oriented service businesses, and a landscape business.

Overall site conditions are fair. Diamond Valley Drive is in good condition and has a continuous sidewalk on the east side of the street. Land between the service sites is in poor condition as some of the buildings do not have dedicated parking and people park off-road.

Building Conditions and Character. The commercial strip development containing a Jiu Jitsu academy and Brickhouse Functional Fitness is in quality shape with sufficient parking and maintained landscaping. The service center on the corner of Eastman Park Drive and Diamond Valley Drive is in great condition as well and has a contained yard for supply storage. The small buildings between the two developments are in fair to poor condition, appearing run-down or vacant in some cases.

ZONING, LAND USE, AND PROPOSED DEVELOPMENTS

How the land along the corridor is currently being used, as well as what is planned for its future, is a critical piece of the corridor planning puzzle. The way in which land is organized dictates what types of development or redevelopment are possible, as well as what parcels should remain in their native state. This section considers the following:

- How the corridor is currently zoned, which defines what is or is not allowed on a given piece of land;
- How the land is currently being used, which paints a picture of its current state of operation; and
- How some pieces of the corridor are already spoken for, which describes what to expect soon from a development perspective.

Zoning and Land Use

The corridor is comprised of approximately 661 acres of land, abutting existing urban development and infrastructure, which makes it targeted for growth. It has sufficient land area, existing transportation networks, access to labor, and infrastructure to support master planned developments with a mixture of logistics, light manufacturing, professional office, retail, mixed use, and high-density residential uses. There are existing natural features in the corridor – namely undeveloped green/open space – that are ideal for passive and active recreational activities.

The primary existing development in the corridor is the Great Western Industrial Park and surrounding industrial and commercial developments. The Future Legends Sport Park is currently under construction and will soon contribute a larger sports and entertainment district to the corridor.

The Town of Windsor uses an official zoning map and subdivision regulations to control land use, the intensity of those uses, and the interactions between various land uses. These zoning regulations are in place to protect and enhance the health, safety, prosperity, and general welfare of Windsor residents. The zoning requirements also control specific development requirements. The Town of Windsor also maintains a Growth Management Area (GMA), which includes both rural and urban areas around the existing town boundary.

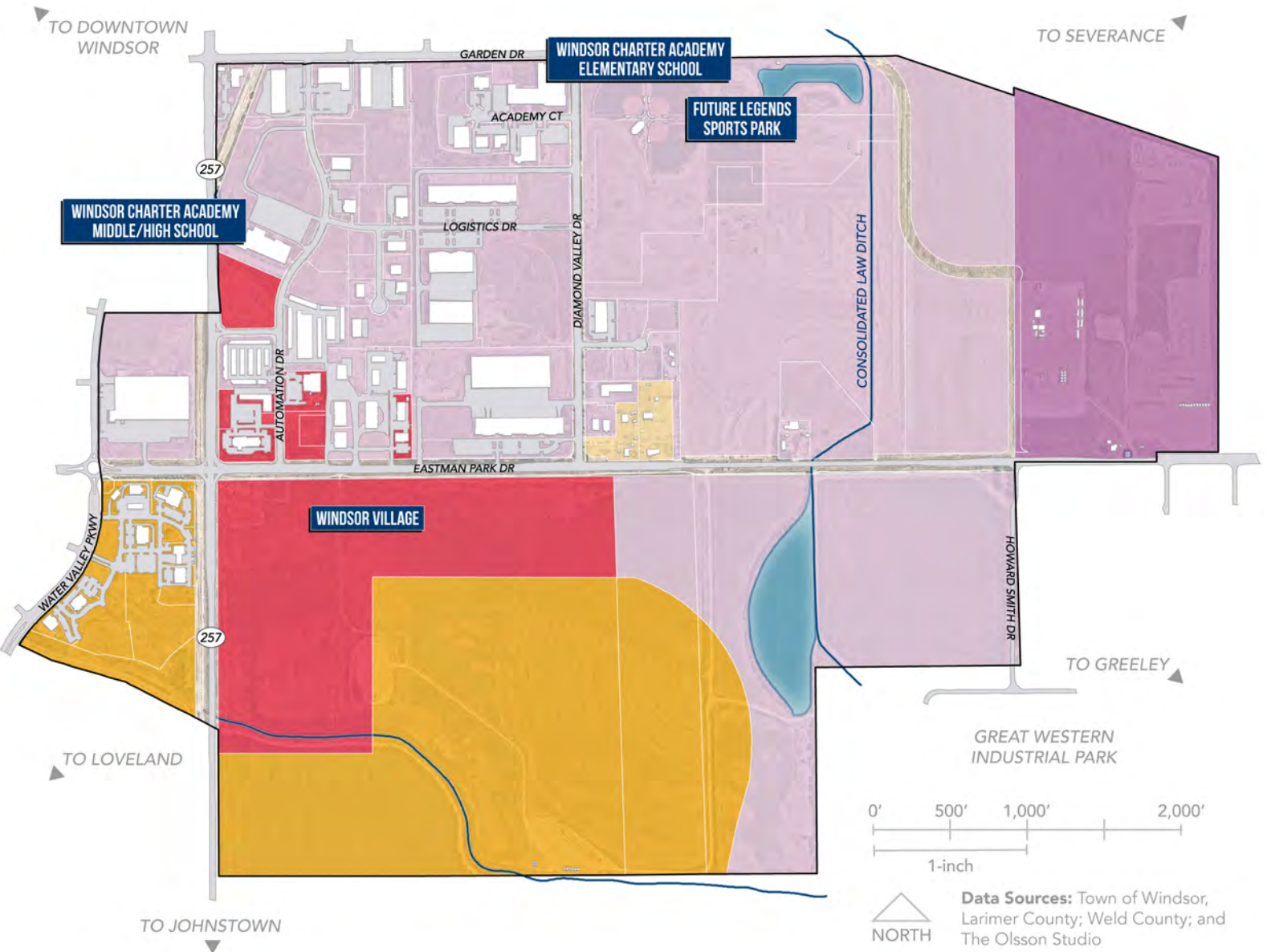
DIFFERENCE BETWEEN ZONING AND LAND USE

Zoning districts specifically define and regulate what kinds of uses are allowed on specific parcels and outline town design and development requirements.

Land use reflects the current or desired development pattern in a given area.



FIGURE A.9 EXISTING ZONING

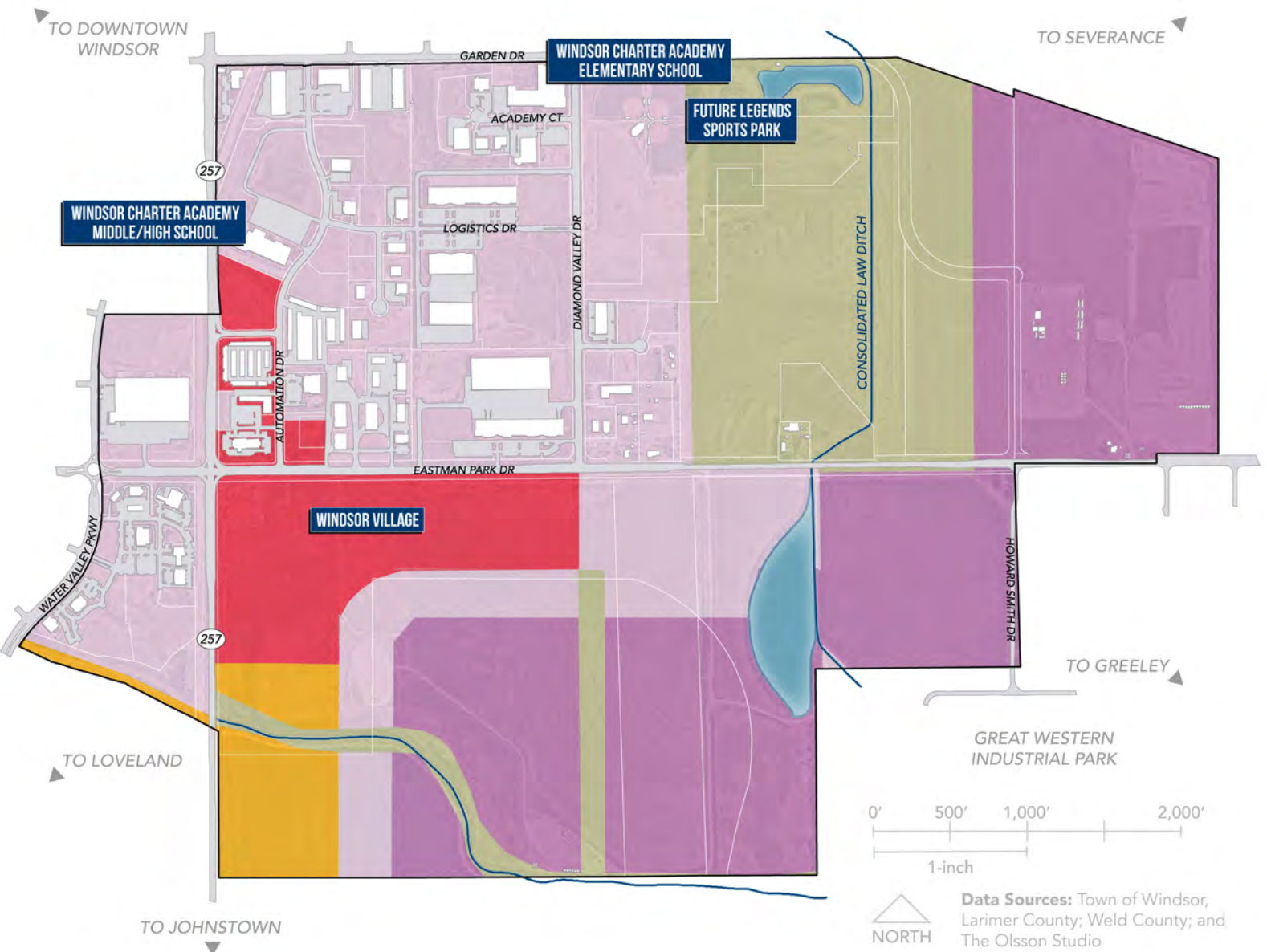


As shown on **Figure A.9**, the corridor is zoned for six different zoning districts. The following describes the zoning designations within the corridor:

- **Estate Residential (E-1)** provides for large lot residential subdivisions and the maximum usage of topographic features to promote a balance of residential zoning by creating a semi-rural environment.
- **Residential Mixed Use (RMU)** provides for the development of mixed land uses with a residential focus. This district encourages a desirable mixture of residential types that are compatible with, complimentary to, and located on the same parcel as common recreational uses, open spaces, and commercial and light industrial uses.
- **General Commercial (GC)** allows drive-in restaurants; grocery stores; gas stations; car washes; lodging; dining establishments; outdoor sales areas; automobile sales and service establishments; lumber and building supply yards; group outdoor recreational facilities; bowling alleys; business and professional offices; large and small places of assembly; and other similar uses.

- **E-1: Low Density Estate Single Family Residential**
- **RMU: Residential Mixed Use**
- **GC: General Commercial**
- **I-L: Limited Industrial**
- **I-H: Heavy Industrial**

FIGURE A.10 EXISTING LAND USE



- **Heavy Industrial (I-H)** identifies and preserves land suitable for heavy industrial use and provides for the orderly grouping of such uses in an appropriate setting to promote a harmonious relationship between heavy industrial uses and the community at large.
- **Limited Industrial (I-L)** identifies and preserves land suitable for limited industrial use and provides for the orderly grouping of such uses in an appropriate setting to promote a harmonious relationship between limited industrial uses and the community at large.

- POSF: Parks, Open Space, Mineral Extraction, and Floodplain
- RMU: Residential Mixed Use
- NGC: Neighborhood and General Commercial
- LI: Limited Industrial
- HI: Heavy Industrial

Proposed Developments

There are several areas within the corridor that are already spoken for, including Windsor Village (the commercial element of GWIP), the Future Legends Sports Park, and GWIP, described as follows.

Windsor Village. This 49.5-acre retail development at the southeast corner of Highway 257 and Eastman Park Drive is proposed to anchor a portion of the GWIP. Windsor Village will be a walkable subarea of the corridor that features ground floor retail, a hotel, ample green space, and an accompanying pavilion for planned and casual events.



The illustration is a three-dimensional representation of the development concept for Windsor Village. This view is from the intersection of SH 257 and Eastman Park Drive.

Future Legends Sports Park. This mixed use development will provide a sizable community benefit with a mixture of indoor and outdoor recreational offerings. The amenities will allow for year-round events to be hosted in the heart of a new residential growth area. Future Legend Sports Park will include:

- Eight natural grass diamond fields;
- Ten synthetic multipurpose turf fields;
- One miracle field;
- One indoor multipurpose dome that has volleyball courts, diamond fields, and a bar and lounge overlooking the action;
- Sand volleyball courts;
- One professional multipurpose synthetic stadium;
- Onsite 64-room team dorms;
- Three onsite hotels; and
- Eighty-thousand square feet of retail, restaurants, and more.



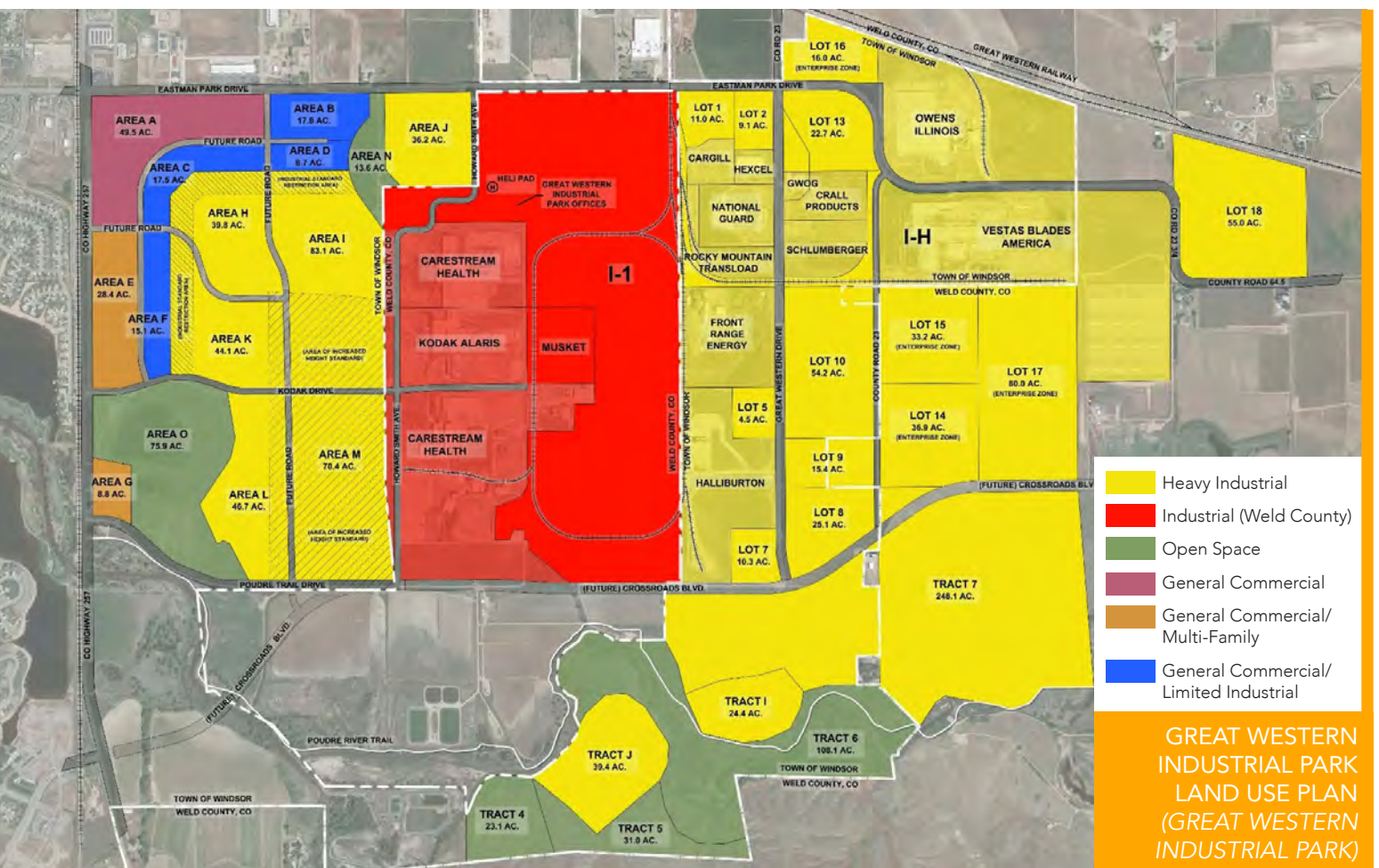
FUTURE LEGENDS SPORTS PARK RENDERING (GALLOWAY AND COMPANY)

The illustration is a three-dimensional representation of the development concept for Future Legends Sports Park. This view is from the south, looking slightly northeast.

Great Western Industrial Park (GWIP). This development represents northern Colorado's most dynamic industrial and logistics hub. The 3,000-acre master planned development will offer space for a multitude of private industries thanks to its existing and accessible transportation infrastructure. The GWIP will offer site sizes ranging from two to 200 acres for industrial zoned properties. It is already home to many established tenants, including Vestas, Halliburton, Owens Illinois, Hexcel, Carestream, and Schlumberger.

The GWIP offers the following notable features:

- Access to major interstates and state highways;
- Various site configurations, lot sizes, and build-to-suit options with cross dock, front park/front load, and front park/rear load designs;
- Transload services with material handling capabilities, such as sand, aggregate, lumber, etc.;
- Proximity to the Niobrara Shale;
- It is a designated Foreign-Trade Zone;
- State tax breaks are available through the Weld County Enterprise Zone;
- Site planning, engineering, and track design services are offered; and
- Forty acres of outside storage and customized indoor storage solutions are available.



The image is the future land use plan for Great Western Industrial Park, showing a mixture of industrial, commercial, multi-family residential, and open space.

VEHICULAR TRANSPORTATION

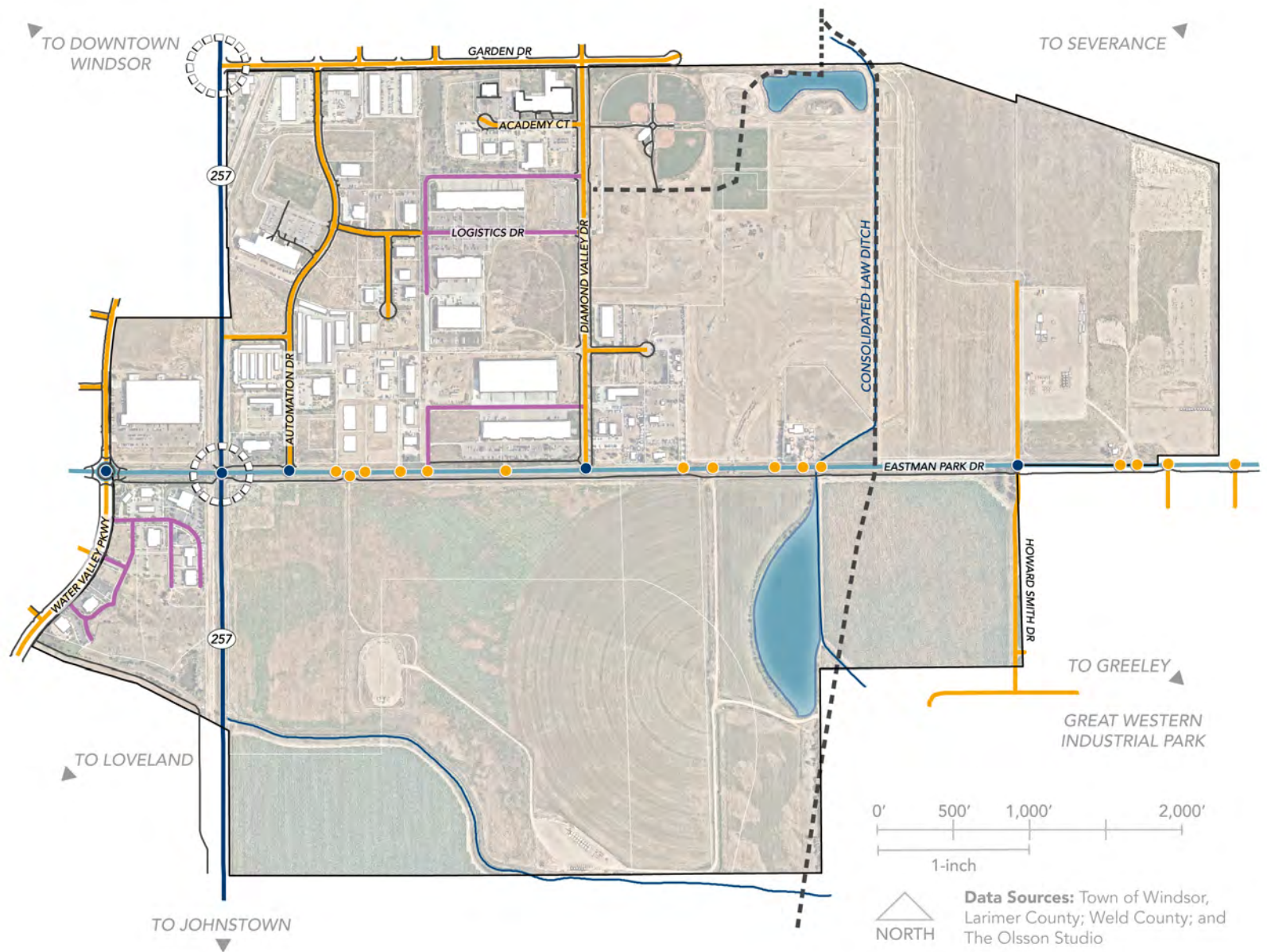
How vehicular users of the corridor and its adjacent amenities are able to travel along it is critical to its success. If those traveling along it experience less than ideal operating conditions, such as frequent congestion, long wait times, or safety concerns, the features of the corridor will be underutilized. This section explores the transportation network in its existing state – both for motorists and non-motorists alike. Further, the operating conditions of the corridor are summarized based on the capacity analysis and level of service analysis that was conducted.

Transportation Network

Eastman Park Drive is a two-lane, minor arterial that orients east west and provides direct access to SH 257. West of Diamond Valley Drive and east of SH 257, Eastman Park Drive has a dedicated left-turn median with roadside ditches, a south sidewalk, and a portion of north sidewalks. Eastman Park Drive has a posted speed of 45 miles per hour (mph) and an average daily traffic (ADT) of 8,600. The following roadways are in or near the study network and shown on **Figure A.10**:

- **SH 257** is a two-lane highway that is oriented north south in the study area. It connects to SH 392 on the north and Highway 34 on the south. North and south of Eastman Park Drive have posted speed limits of 45 and 55 mph, respectively. South of Garden Drive, SH 257 consists of roadside ditches with no sidewalks. North of Garden Drive, SH 257 consists of curb and gutter and sidewalks on the west. A west railroad track runs parallel to SH 257 and crosses north of Commons Drive. Adjacent land use consists of residential, commercial, and industrial. There is a project underway to reconstruct the intersection with Eastman Park Drive to widen it for better truck turning.
- **Automation Drive** is a two-lane public street that connects Eastman Park Drive and Garden Drive and provides access to Logistics Drive and Commons Drive. Automation Drive consists of curb and gutter with attached sidewalks and left-turn lane median. It is one of the primary streets that provide access to the Windsor Charter Academy Middle and High School and various businesses within the industrial park north of Eastman Park Drive.
- **Diamond Valley Drive** is another two-lane public street that connects Eastman Park Drive and Garden Drive to provide access to Windsor Charter Academy Elementary School and Future Legends Sports Park. Diamond Valley Drive has a posted speed of 30 mph and includes curb and gutter with a detached sidewalk. This street is classified as a Minor Collector.
- **Logistics Drive** is a two-lane street that orients east west and connects Automation Drive and Diamond Valley Drive. Portions of this street directly west of Diamond Valley Drive are privately-owned.
- **Garden Drive** is a two-lane minor collector that orients east west. Garden Drive has a posted speed limit of 30 mph. East Garden Drive has curb and gutter with an attached sidewalk. A railroad crossing exists near the intersection of East Garden Drive and SH 257.
- **Highway 392 (CR-68)** is an arterial street and a Colorado State Highway. It is a regionally significant highway in northern Colorado, connecting US Highway 287, I-25, and Highway 14. Highway 392 has a posted speed limit of 45 mph near the study area.

FIGURE A.10 EXISTING TRANSPORTATION NETWORK



Public and Private Access

A total of 18 unsignalized access points exist along the corridor. This includes three public roads, five business driveways, two residential driveways, six gravel accesses for utilities or agriculture, and two abandoned accesses for the Kodak Campus. A primary goal of this Plan is to provide clear, corridor-specific access control recommendations. While the preferred access spacing of 660-feet will be difficult to achieve as the current spacing is approximately half that distance, several recommendations are included in **Section 4 - Creating Connections** and **Appendix C - Traffic Analysis Report and Access Control Plan** that incrementally modify access to meet the ideal spacing as closely as possible. This includes some combinations of restricting turning movements, consolidating drives, or relocating drives to minor streets.

- Sidewalk
- Proposed Trail
- Signalized Intersection
- Public Intersection (Eastman Park Drive Access Point)
- Driveway (Eastman Park Drive Access Point)
- Private Street
- Local Street
- Arterial Street
- Highway

FIGURE A.11 EXISTING PEAK HOUR INTERSECTION LOS AND 95TH PERCENTILE QUEUE

INTERSECTION AND CRITICAL LANE GROUPS	LEVEL OF SERVICE				EX. STORAGE LENGTH	QUEUE			
	AM PEAK		PM PEAK			AM PEAK		PM PEAK	
	DELAY	LOS	DELAY	LOS		AVG	95TH	AVG	95TH
STOP SIGN CONTROL									
Eastman Park Drive at Automation Drive	3	A	2	A					
Eastbound Left	10	B	8	A	165'	-	30'	-	3'
Eastbound Through	0	A	0	A	-	-	0'	-	0'
Westbound Through+Right	0	A	0	A	-	-	0'	-	0'
Southbound Left	45	E	16	C	100'	-	8'	-	5'
Southbound Right	12	B	10	B	-	-	18'	-	13'
Eastman Park Drive at Diamond Valley Drive	5	A	3	A					
Eastbound Left	8	A	8	A	145'	-	13'	-	3'
Eastbound Through	0	A	0	A	-	-	0'	-	0'
Westbound Through+Right	0	A	0	A	-	-	0'	-	0'
Southbound Left	16	C	13	B	100'	-	20'	-	10'
Southbound Right	11	B	10	A	-	-	25'	-	8'
SIGNAL CONTROL									
Eastman Park Drive at SH 257	46	D	37	D					
Eastbound Left	44	D	44	D	180'	60'	99'	43'	80'
Eastbound Through	68	E	46	D	-	215'	282'	72'	121'
Eastbound Right	0	A	0	A	180'	28'	82'	0'	58'
Westbound Left	66	E	65	E	150'	186'	217'	140'	214'
Westbound Through	60	E	55	D	-	179'	210'	124'	192'
Westbound Right	0	A	0	A	380'	0'	0'	0'	17'
Northbound Left	35	D	28	D	130'	146'	239'	121'	222'
Northbound Through	33	C	27	C	-	288'	396'	303'	426'
Northbound Right	0	A	0	A	630'	0'	62'	0'	41'
Southbound Left	23	C	19	B	330'	35'	65'	13'	29'
Southbound Through	37	D	34	C	-	296'	428'	305'	407'
Southbound Right	0	A	0	A	330'	0'	1'	0'	12'
Note: Delay represented in average sections per vehicle.									

Capacity Analysis

A capacity analysis was conducted to understand the existing performance of the intersections along the corridor. The analysis is based on Level of Service (LOS) which is a grading system defined by the Highway Capacity Manual commonly used by engineers and planners to measure and describe the operational status of intersections. LOS characterizes intersections ranging from LOS A, indicating free flow operations, to LOS F, indicating congested and sometimes oversaturated conditions. Typically, LOS A through C is acceptable for the overall intersection operations and LOS D is acceptable during peak traffic hours.

Three intersections along the corridor were analyzed and graded, as detailed further in **Figure A.11**.

- **Eastman Park Drive at SH 257:** This signalized intersection operates overall at LOS D in both peak hours (morning [AM] and afternoon/evening [PM]). The eastbound and westbound through movements operate at LOS E in the AM peak hour. The westbound left-turn operates at LOS E in both AM and PM peak hours.
- **Eastman Park Drive at Automation Drive:** This side-street, stop-controlled intersection operates overall at LOS A in both peak hours. The southbound left-turn lane operates at LOS E during the AM peak hour and LOS C during the PM peak hour.
- **Eastman Park Drive at Diamond Valley Drive:** This side-street, stop-controlled intersection operates overall at LOS A in both peak hours with all movements performing at LOS C or better.

Crash Data

Text to be added in future deliverable (waiting on requested data from town)

MULTIMODAL TRANSPORTATION

Although surface roads providing service to motorists are often the most utilized and discussed transportation method – especially along this corridor – there are other forms of transportation that are pertinent to consider. These additional transportation modes include bicycling, walking, and using transit. Although these options along the corridor are limited, they do exist. Further, there is a desire to enhance these non-vehicular options in the future in alignment with Windsor’s goals in the TMP and complete streets policy.

Pedestrian and Bicycle Network and Infrastructure

The corridor has a recreational trail on the south side that is detached from the street, providing a facility for riders and walkers. Generally, Windsor offers a robust trail network for bicyclists and walkers that connects to regional networks. This trail is no exception as it ultimately connects to the Poudre River Trail, which provides regional access to cyclists. The corridor also has paved shoulders that are sometimes used by more confident riders.

Pedestrian generators include the residential network to the west, which could be a source of pedestrians as more destinations, such as the Future Legends Sports Park and the Windsor Charter Schools are further developed. The intersection with SH 257 and the corridor is signalized, which provides a protected crossing for pedestrians to reach the land uses adjacent to the corridor.

Regional Transit Network

The Town of Windsor does not operate its own transit service, limiting in-town transit options; however, the Poudre Express – a regional service running between Fort Collins to Greeley, with three stops in Windsor – provides transit options for destinations outside the town. It also is an integral link to the greater transit network with stops at the Fort Collins Harmony Transfer Center, which provides connections to Bustang and Transfort.

This popular service runs along the west edge of the corridor area along Eastman Park Drive and then turns south along SH 257 with stops on the west leg of the corridor. With new regionally significant development along the corridor, access to this transportation option will provide great benefit to the community and development alike.

NATURAL FEATURES

The natural features present along the corridor are illustrated in Figure A.12, the most prominent of which is the 100-year floodplain stretching north and south across the eastern portion of the corridor. The following subsections detail the current state of each environmental feature present and how they interact with and influence the corridor, including water features, vegetation, the topography, and wildlife.

Water Features

Two water bodies existing within the corridor area – one just west of the GWIP along the Consolidated Law Ditch, and the other just to the east of the ballfields. The corridor area is impacted by floodplain and wetland areas, as seen in **Figure A.12**.

Floodplain. The eastern portion of the corridor area is covered by the John Law 100-year floodplain, or the land area covered by the floodwaters of the 100-year flood. This floodplain encompasses the entirety of the GWIP south of the corridor and the entire land area north of it.

Wetlands. Wetlands are areas that are inundated or saturated by surface or groundwater at a duration or frequently enough to support vegetation that has adapted to survive in wet soil conditions. Wetlands provide many benefits, including the following:

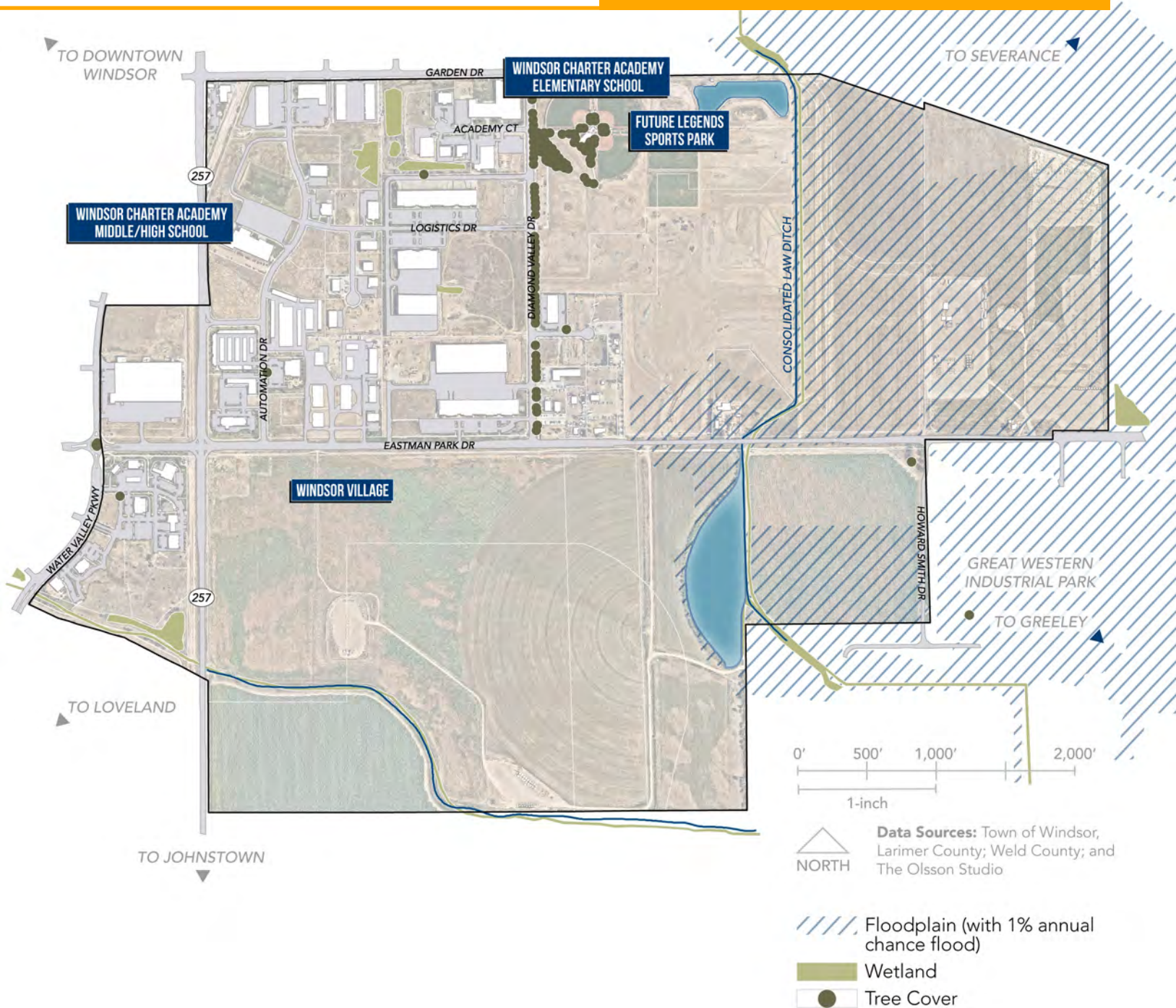
- Habitat for plants, fish, and wildlife species;
- Groundwater recharge;
- Storage for storm and flood waters;
- Natural stormwater and runoff filtration; and
- Mitigation of storm damage and erosion caused by flooding or other natural events.

Wetlands are present along Whitney Ditch at the southern project boundary, in the Consolidated Law Ditch adjacent to the GWIP, and directly east of the Future Legends Sports Park, all of which are formally classified by the U.S. Fish and Wildlife Service (USFWS).

The wetlands along Whitney Ditch are classified by the USFWS as a freshwater emergent wetland habitat, meaning it is in a nontidal area, characterized by standing aquatic plants present for most of the year, and floods seasonally. USFWS also notes that the wetland was created by excavation activities instead of occurring naturally.

The wetlands along the Consolidated Law Ditch by the GWIP and the Future Legends Sports Park site are technically classified by USFWS as freshwater ponds since water covers the substrate for most of the year. Other characteristics defining these wetlands are nontidal locations with plants growing on or below the water surface for most of the year. These wetlands were also created by excavation activities and are not naturally occurring.

FIGURE A.12 EXISTING NATURAL FEATURES



UNDERSTANDING THE FLOODPLAIN

Land with a one percent chance of flood occurrence at any time is the standard for requiring the purchase of flood insurance and regulating development in flood prone areas. The Federal Emergency Management Agency (FEMA) designates such areas as Zone A or Zone AE, which are Special Flood Hazard Areas.



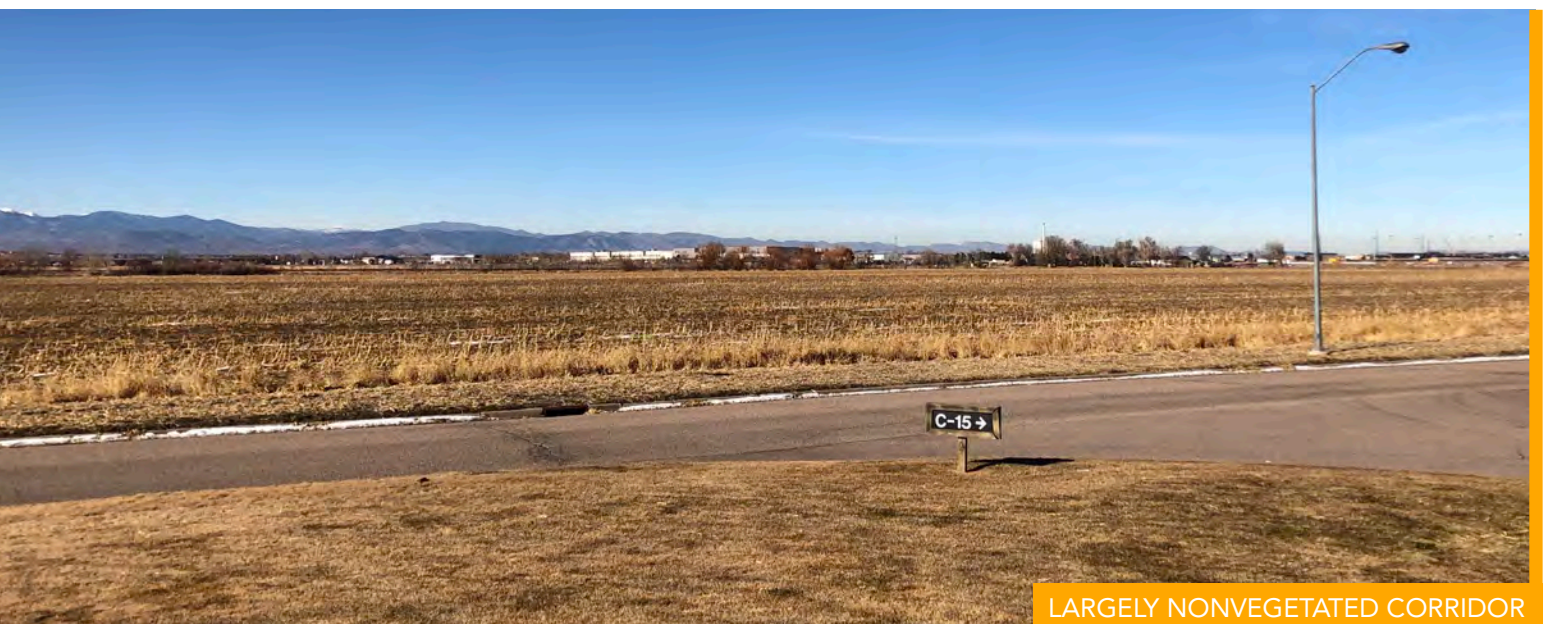
Vegetation. Existing tree coverage along the corridor is limited. There are some mature trees at the GWIP and at the Future Legends Sports Park site, but most of the trees on site are young and were planted during site development. Open space within the corridor, like most other natural areas within and around Windsor, generally consists of grassland and shrubland.

Examining its native roots, the corridor area is on a plain and does not have many naturally occurring trees. Additionally, the corridor area has a history of industrial and agricultural uses that would have removed existing trees.

Topography. The corridor area lies on a flat plain near the base of the Rocky Mountains. Along the corridor, the elevation ranges from 4,750 to 4,745 feet above sea level. Despite the lack of elevation change along the corridor, topography gradually increases to the west before dramatically rising toward the mountains.

Wildlife. Black-tailed prairie dogs were observed along the corridor during the site assessment. Prairie dogs are listed as a species of special concern within the State of Colorado, which is not a statutory category. However, prairie dog holes provide habitat for burrowing owls, which are listed as a State of Colorado threatened species. Colorado Parks and Wildlife (CPW) recommends no human encroachment for industrial activities within one-quarter mile of active burrowing owl nests between March 15 and October 31. Additionally, CPW recommends avoiding prairie dog eradication during this time frame. If construction or prairie dog eradication is expected to occur during this time frame, burrowing owl surveys are recommended to determine the presence of nesting burrowing owls before construction or prairie dog eradication ensues.

The corridor is home to several other species of birds, some of which require special consideration for any development projects. CPW has recommended buffer zones and seasonal restrictions for raptor and eagle nests in Colorado that are provided as supplementary guidelines for compliance with the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA). Bird surveys may be necessary prior to construction activities within the corridor.



UTILITY INFRASTRUCTURE

To ensure the proper infrastructure for future development or redevelopment, it is necessary to review the existing utility infrastructure along the corridor, as shown in **Figures A.13** and **A.14**. The utility infrastructure section explores water lines; stormwater pipes, channels, and detention basins; and sanitary sewer lines.

Utilities within the corridor area are entirely underground with a combination of town-owned water and sanitary sewer, communications lines, gas, and electric. These are generally confined to the area near the street right-of-way and out of the footprint of the paved surface except for crossings. As plans are developed, these layouts should be considered to avoid conflicts with future underground improvements or roadway grading. For example, storm sewer or water quality features will need to be located away from these underground facilities to avoid major relocations.

Water

The Town of Windsor owns a 16-inch watermain that runs along the right-of-way line of Eastman Park Drive west of Diamond Valley Drive and along the south side east of Diamond Valley Drive. This line is part of the system that serves the industrial park north of the corridor. Additionally, the City of Greeley has a few water transmission lines crossing the corridor; a 60-inch water main crosses the street on the west side of Automation Drive. Also, one 20-inch and one 30-inch water transmission line cross the corridor south of the Future Legends Sports Park.

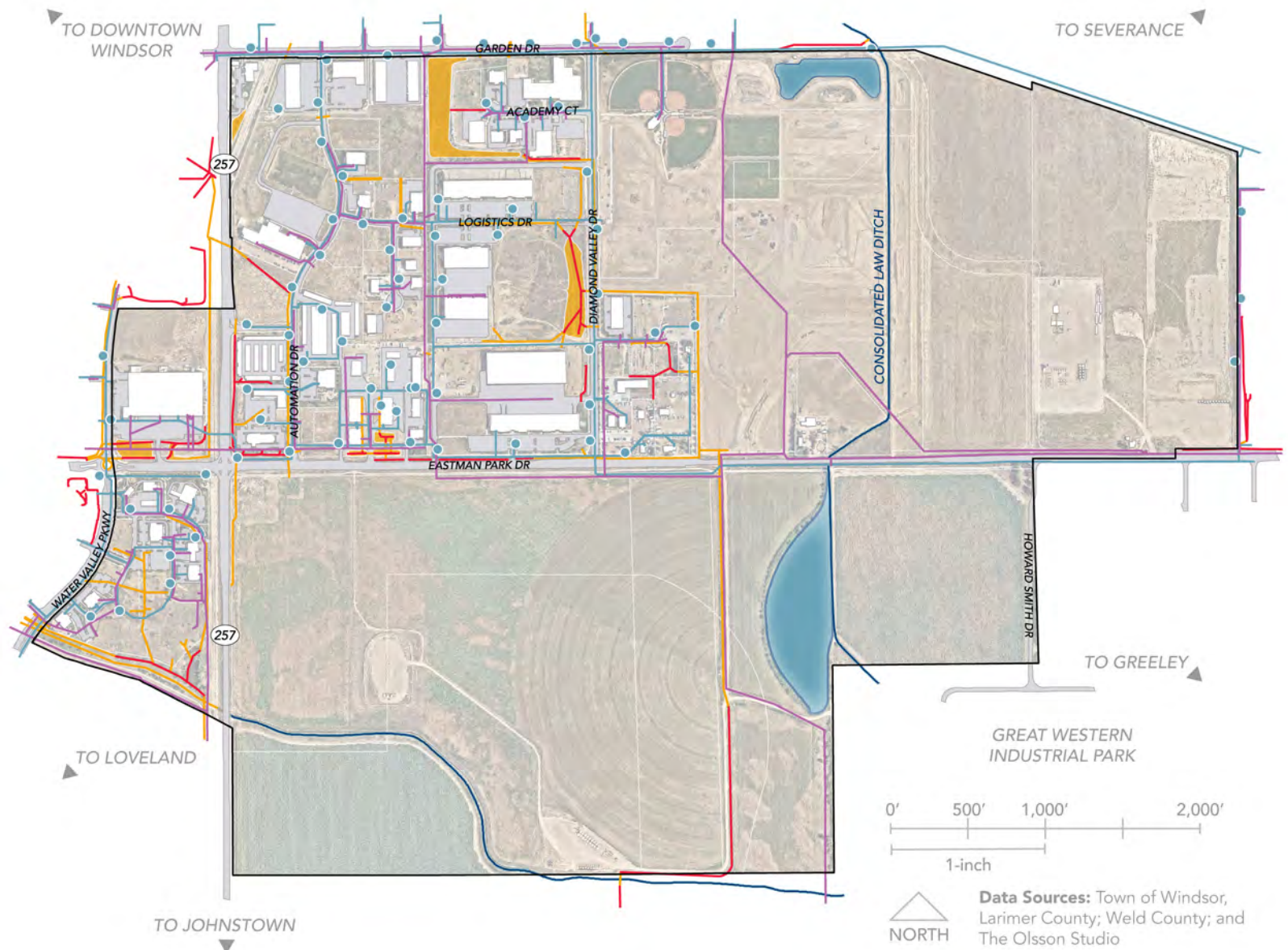
Sanitary Sewer

Sanitary sewer is also owned by the Town of Windsor. Sanitary sewer follows a similar route as water infrastructure as it runs east-west along Eastman Park Drive. To the west end of the corridor, it is along the north side, crosses halfway between Automation Drive and Diamond Valley Drive, and continues on the south side of the corridor out of the corridor area. Various sewer lines run north from Eastman Park Drive along intersecting streets.

Storm Sewer

Storm sewer, which is owned by the Town of Windsor, runs north-south along the west side of SH 257 north of Eastman Park Drive and along the south side south of Eastman Park Drive. Additionally, there is a stormwater pipe that crosses SH 257 to a channel that connects a line routed on the west side of Automation Drive south of Logistics Drive. Portions of stormwater lines run east-west along the north side of Eastman Park Drive that are connected by channels. A network of stormwater lines run along Logistics Drive and Diamond Valley Drive that are directed north and then east around Jackson Court. Segments of stormwater lines cross Garden Drive, Automation Drive, SH 257, Eastman Park Drive, Diamond Valley Drive, and Diamond Valley Drive. There are additional smaller portions of lines that direct stormwater towards networks previously stated.

FIGURE A.13 EXISTING UTILITIES

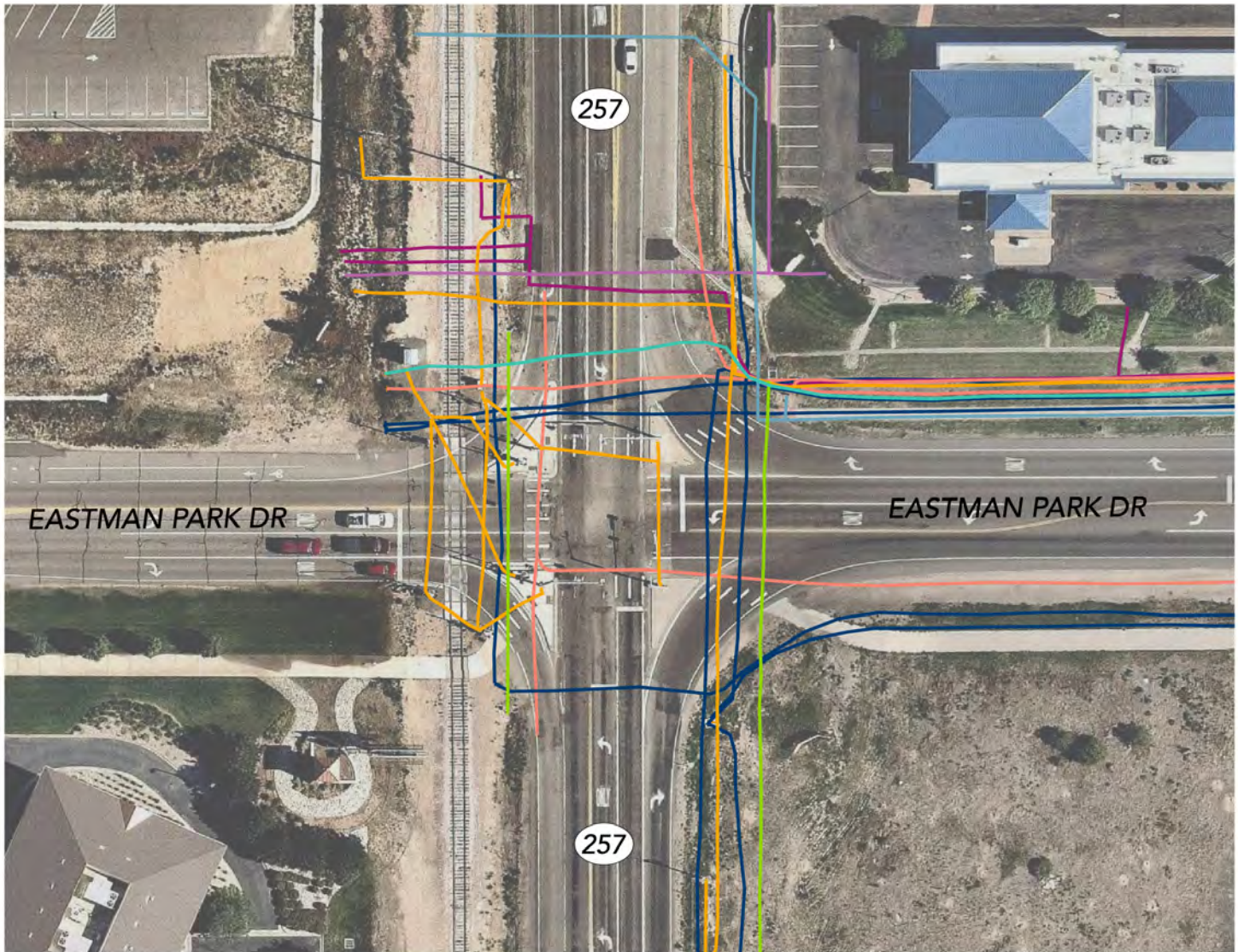


Private Utilities

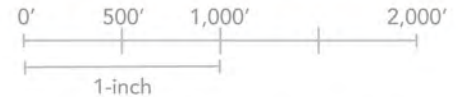
Various private utilities are within the corridor that do not freely publish the location of their facilities. However, the Town of Windsor is currently engaged in a design and construction project at SH 257 that includes a utility investigation effort. The following utilities were identified in that effort, indicating a high likelihood that they are present in at least the western portions of the corridor and could be present throughout.

- Gas service is supplied by Xcel Energy supplies by way of a gas main running along the north side of the corridor between town water lines and the right-of-way.
- Electric service is provided by two companies, including:
 - Xcel Energy supplies electrical service that runs parallel to the town water main on the north side of the corridor.
 - PVREA also has underground power running north-south along the east side of SH 257. No facilities were identified along Eastman Park Drive.

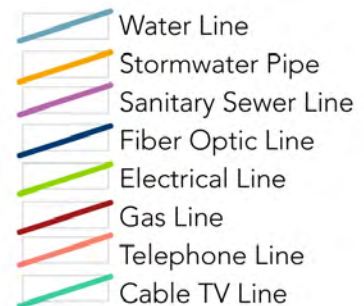
FIGURE A.14 EXISTING UTILITIES (BLOW-UP OF EASTMAN PARK DRIVE AND SH 257)



TO JOHNSTOWN



Data Sources: Town of Windsor,
Larimer County; Weld County; and
The Olsson Studio



- Communications services include the following:
 - CenturyLink has both copper telephone and fiber optic (FO) lines departing the intersection to the east. Both run along the south side of Eastman Park Drive east of SH 257. Additionally, it is assumed a line is routed north-south along the west side of SH 257 south of Eastman Park Drive and along the east side of SH 257 north of Eastman Park Drive.
 - Comcast supplies a cable TV line that was located from a survey of SH 257 and Eastman Park Drive intersection. From the survey, it is assumed a line runs east-west along the north side of Eastman Park Drive. There is also a Comcast FO running along the north side of Eastman Park Drive.
 - Dark Comm supplies a dark FO line running east-west along the north side of Eastman Park Drive.

B PUBLIC ENGAGEMENT SUMMARY

Appendix B - Public Engagement Summary ...

APPENDIX B TEXT TO BE INSERTED
IN A FUTURE DELIVERABLE



TRAFFIC ANALYSIS REPORT AND ACCESS CONTROL PLAN

Appendix C - Traffic Analysis Report and Access Control Plan was prepared by Fox Tuttle Transportation Group. The Town of Windsor continues to grow at a rapid pace, including two large development projects and several smaller projects within the corridor. The estimated traffic associated with the upcoming developments will significantly increase the corridor's traffic volumes, which may result in higher levels of congestion, higher delays, and an increase in crashes on Eastman Park Drive. This Access Control Plan (ACP) was prepared to minimize traffic impacts, increase safety, accommodate all modes of travel, and improve the experience along the corridor.

1.0 Introduction

The Fox Tuttle Transportation Group has prepared this Access Control Plan for the revisioning and transportation planning of Eastman Park Drive. The Town of Windsor continues to grow at a rapid pace, including a significant number of properties along Eastman Park Drive, east of State Highway 257. There are two large development projects and several smaller projects within the corridor that have been working with Town staff to begin construction. The estimated traffic associated with the upcoming developments will significantly increase the traffic volumes which may result in higher levels of congestion, higher delays, and an increase in crashes on Eastman Park Drive. The Town of Windsor has identified the need for an Access Control Plan for Eastman Park Drive to minimize the traffic impacts, increase safety, accommodate all modes of travel, and improve the experience along the corridor. This is an opportunity to manage access to begin to facilitate the vision for the Eastman Park Drive corridor that serves the present and future of this expanding community, while attracting new visitors and encouraging a mix of travel modes.

This Access Control Plan focuses on Eastman Park Drive from State Highway 257 to just west of Metal Container Court, as shown on the right. This segment of the east-west roadway is approximately 1.25 miles in length with 18 existing accesses (six on the south side and 12 on the north side) that connect the Town of Windsor to the City of Greeley. Eastman Park Drive is currently a two-lane minor arterial with a center two-way left-turn lane up to Diamond Valley Drive. This roadway currently serves approximately 8,600 vehicles per day (vpd) just east of State Highway 257 and approximately 4,900 vpd just west of Great Western Drive. Eastman Park Drive has varying roadway widths within the study limits, from 24-feet to 60-feet to account for through lanes, auxiliary lanes, and shoulders. The posted speed limit is 45 miles per hour (mph). There are currently portions of detached sidewalk on the north side of the street and a continuous detached multi-use path on the south side of the street.



The purpose of the Access Control Plan is to identify the location, traffic control, and permitted movements of existing access points and determine appropriate changes to provide reasonable access to adjacent properties while maintaining safe and efficient traffic flow on Eastman Park Drive.

2.0 Existing Conditions

Intersection turning movement volumes were collected at three intersections within the corridor limits during the weekday AM and PM peak hours, including pedestrians and bicyclists. Data for the intersection of Eastman Park Drive at State Highway 257 was collected in March 2019 and November 2020. Data for the intersection at Diamond Valley Drive was gathered from the *Future Legends Multi-Use Development Master Traffic Impact Study (2020)* which collected volumes in February 2020. Data for the intersection at Automation Drive was collected in March 2020 and adjusted to reflect pre-pandemic conditions.

The two counts at the intersection of Eastman Park Drive and State Highway 257 were compared to understand any reductions in travel related to the current restrictions. It was noted that the Windsor Charter Academy schools were in-person learning at the time of the recent counts and many businesses continued to have a portion of employees working on-site. The comparison indicated that the AM peak hour volume on Eastman Park Drive is 20.6% lower than the data in Year 2019 and the PM peak hour volume is 10.9% lower. The counts at Automation Drive were increased by these percentages. The existing volumes are shown on **Figure 1a** and **Figure 1b**. The existing lane configuration, traffic control, and distance between accesses are illustrated on these figures.

2.1 Public and Private Access

Within the study limits for the Eastman Park Drive Corridor Plan there is a total of 18 unsignalized access points including three (3) public roads, five (5) business driveways, two (2) residential driveways, six (6) gravel accesses for irrigation, agricultural, or oil and gas, and two (2) abandoned accesses for the Kodak Campus.

The Town's preferred minimum spacing on a rural minor arterial is 660 feet or 1,320 feet with a signal¹, as set forth in the Town's *Design Criteria and Construction Specifications*. Between the highway and Diamond Valley Drive (East), the average spacing between accesses is approximately 340 feet. East of the intersection with Diamond Valley Drive (East), the average spacing between accesses is approximately 425 feet. Automation Drive, a public street, is approximately 420 feet east of the signalized intersection with State Highway 257, which severely limits the stacking capacity for turning vehicles at both intersections and presents potential for intersection blocking as through lane queues increase with future growth. Diamond Valley Drive (East), a public street, is approximately 1,810 feet (1/3 mile) east of Automation Drive and Howard Smith Avenue, a public street, is approximately 2,830 feet (1/2 mile) east of Diamond Valley Drive (East).

¹ If Eastman Park Drive is reclassified as Urban, then the access spacing standards would be 660 feet with a raised median, 1,320 feet without a median, and 2,640 feet with a signal.

Table 1 lists each of the existing accesses within the study limits including the side of street, type of access, traffic control, available auxiliary lanes, and purpose for access, which are also mapped on **Figure 1a** and **Figure 1b**.

Table 1. Existing Accesses on Eastman Park Drive

Access No.	Side of Street	Type	Traffic Control	Auxiliary Lanes	Purpose
1. Automation Drive (Public Rd)	North	Full Mvmt T-Intersection	Side-Street Stop	EB Left SB Left	Community Banks of Colo.; Budget Blinds; Commons Self Storage; Windmill Child Enrichment Ctr; U-Haul; Windsor Charter Academy MS/HS; Snaptron; Ron Jones Garage; Moltz Construction Inc.;
2. Business Access	North	Full Mvmt T-Intersection	Side-Street Stop	EB Left	Agrifab Colorado and Valley Center 4 th Filing
3. Agricultural / Oil & Gas Access	South	Full Mvmt T-Intersection	Side-Street Stop	N/A	Fields and Oil & Gas Wells
4. Business Access	North	Full Mvmt T-Intersection	Side-Street Stop	EB Left	Agrifab Colorado and Valley Center 4 th Filing
5. Valley Center Access	North	Full Mvmt T-Intersection	Side-Street Stop	EB Left	Digi Pix Signs; Overture; Marks Funeral Service; Service Team Professionals
6. Diamond Valley Drive West	North	Full Mvmt T-Intersection	Side-Street Stop	EB Left	Overture; Marks Funeral Service; Tolmar
7. Business Access	North	Full Mvmt T-Intersection	Side-Street Stop	EB Left	Tolmar
8. Diamond Valley Drive (Public Rd)	North	Full Mvmt T-Intersection	Side-Street Stop	EB Left SB Left	Tolmar; Silverline Services; Brickhouse Fitness; Jiu Jitsu Academy; Southern Exposure Landscape; Snaptron; Ron Jones Garage; Diamond Valley Comm. Park
9. Private Access (9535)	North	Full Mvmt T-Intersection	Side-Street Stop	N/A	Residential Home and Property
10. Ditch and Oil & Gas Access	South	Full Mvmt T-Intersection	Side-Street Stop	N/A	Law Ditch, Fields and Oil & Gas Wells
11. Agricultural Access	North	Full Mvmt T-Intersection	Side-Street Stop	N/A	Fields and Oil & Gas Wells
12. Private Access (9596)	North	Full Mvmt T-Intersection	Side-Street Stop	N/A	Residential Home and Property
13. Ditch Access	South	Full Mvmt T-Intersection	Side-Street Stop	N/A	Law Ditch and Pond
14. Howard Smith Ave. (Public Rd)	South	Full Mvmt T-Intersection	Side-Street Stop (prev. Signal)	EB Right WB Left	Eastman Kodak; Great Western Oil & Gas; Carestream Health; High Plains Steel Services
15. Private Access (10119)	North	Full Mvmt T-Intersection	Side-Street Stop	N/A	Extraction Business Office
16. Oil & Gas Access	North	Full Mvmt T-Intersection	Side-Street Stop	N/A	Extraction Oil Wells and Yard
17. Old Kodak Access W.	South	Full Mvmt T-Intersection	Side-Street Stop	N/A	Kodak Property
18. Old Kodak Access E.	South	Full Mvmt T-Intersection	Side-Street Stop	WB Left	Kodak Property

2.2 Capacity Analysis

A Level of Service analysis was conducted to determine the existing performance of the study area intersections where counts were available to determine the current operations and identify any deficiencies. The traffic operations analysis utilized the procedures and methodologies set forth by the *Highway Capacity Manual (HCM)*².

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a grading system referred to as “Level of Service” (LOS) that is defined by the *HCM*. LOS characterizes the operational conditions of an intersections traffic flow, ranging from LOS A (indicating very good, free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with traveling through the intersections. The intersection LOS is represented as a delay in seconds per vehicle for the intersection as a whole and for each turning movement.

Typically, LOS A through C is considered to be acceptable for the overall intersection operations and LOS D overall during peak hours is acceptable. Individual movements may be allowed to fall to LOS E at signalized intersections or side-street movements at unsignalized intersections. Criteria contained in the *HCM* was applied for this analysis in order to determine peak hour LOS for each scenario. A more detailed discussion of LOS methodology is contained in the **Appendix** for reference.

The results of the LOS calculations and the 95th percentile queues³ are summarized in **Table A.1** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**. The current operations of the three (3) study intersections are discussed below:

- ***Eastman Park Drive at State Highway 257:*** This signalized intersection currently operates overall at LOS D in both peak hours; however, some of the side-street movements operate at LOS E in one or both peak hours. The eastbound and westbound through movements operate at LOS E in the AM peak hour with 95th percentile queues estimated at approximately 280 feet and 210 feet, respectively. The westbound left-turn operates at LOS E in both peak hours with the 95th percentile queue estimated at approximately 220 feet or less. The existing storage on the westbound left-turn is 150 feet which will not contain the estimated existing 95th percentile queue. The westbound left-turn storage cannot be extended due back-to-back left-turn with the adjacent intersection of Eastman Park Drive and Automation Drive.

² *Highway Capacity Manual*, Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 6th Edition (2016).

³ It should be noted that the 95th percentile queue length is a theoretical queue that is 1.65 standard deviations above the average queue length. In theory, the 95th percentile queue would be exceeded 5% of the time based on the average queue length, but it is also possible that a queue this long may not occur.

- **Eastman Park Drive at Automation Drive:** This side-street stop-controlled intersection currently operates overall at LOS A in both peak hours. During the AM peak hour, the southbound left-turn lane operates at LOS E and in the PM peak hour the same movement operates at LOS C. Although there is delay to turn left onto Eastman Park Drive in the morning, the 95th percentile queue indicates there is only one vehicle queuing. The southbound right-turn lane was estimated to operate at LOS B in both peak hours with one vehicle in the 95th percentile queue.
- **Eastman Park Drive at Diamond Valley Drive:** According to the *Future Legends Multi-Use Development Master Traffic Impact Study*, this side-street stop-controlled intersection operates overall at LOS A in both peak hour with all movements performing at LOS C or better. The 95th percentile queues for the eastbound left-turn and the southbound left-turn were estimated to be less than 25 feet (one vehicle).

2.3 Crash History

The Town of Windsor provided four years of traffic crash data that occurred along Eastman Park Drive from east of State Highway 257 to Metal Container Court between January 1, 2017 and December 31, 2020. A total of 13 crashes were reported in this 1.25-mile segment of Eastman Park Drive (3.25 crashes per year on average), 85 percent of the crashes occurred at intersections and 15 percent occurred along roadway segments. Further, 92 percent of the crashes were property damage only (PDO) and 8 percent included an injury. There were no fatalities on Eastman Park Drive within the study area. The predominant crash type was rear ends (46 percent). **Table 2** and **Figure 2** summarizes the crashes by severity, location, year, and predominant crash types.

Table 2. Summary of Crashes on Eastman Park Drive (2017 – 2020)

No.	Location	Total Crashes	By Severity			By Year				Predominant Crash Type
			PDO	Injury	Fatal	2017	2018	2019	2020	
1	Westbound at State Highway 257	4	3	1	0	1	2	1	0	Rear-End
2	At Automation Drive	1	1	0	0	0	1	0	0	Rear-End
3	East of Automation Drive	1	1	0	0	0	1	0	0	Rear-End
4	At 9695 Eastman Park Drive	3	3	0	0	2	1	0	0	Roadway Departure, Opposite Direction Side-Swipe
5	At Howard Smith Avenue	2	2	0	0	1	0	0	1	Roadway Departure
6	East of Howard Smith Avenue	1	1	0	0	1	0	0	0	Rear-End
7	At Metal Container Drive	1	1	0	0	1	0	0	0	Same Direction Side-Swipe
Total		13	12	1	0	6	5	1	1	Rear-End (6); Roadway Departure (5); Side-Swipe (2)

3.0 Literature Review

A review of the Town of Windsor's plans and guidelines indicates significant work has been completed by the Town to ensure growth is managed, infrastructure needs for existing and future demand are identified, and guidelines are set for designs to upgrade existing conditions or for new construction. Each of these plans have been reviewed to understand how to meet the goals and vision of the Town through this Access Control Plan for Eastman Park Drive. A summary of the literature review is as follows:

- Capital Improvement Plan. This planning-level Corridor Plan is included in the Capital Improvement Plan, which is anticipated to provide recommendations for future capital improvement projects within the study area. The only listed engineering project located within the study area is for intersection improvements for Eastman Park Drive at State Highway 257 that were funded through a CDOT grant and design plans have been completed. However, due to some feedback from CDOT the design is currently being redone. The Town plans to bid the project in mid-2021 and complete construction by Spring 2022.
- Complete Streets Guide (2017). As defined in this document. *"Complete Streets' means streets that are designed and operated to enable safe access for all users, in that pedestrians, bicyclists, motorists and public transportation users of all ages and abilities are able to safely move along and across a street."* The guidelines encourage safe, reliable, integrated, and connected transportation facilities for all modes of travel on existing and new roadways. The Eastman Park Drive Corridor Plan will incorporate the vision set forth by this document to be inclusive of vehicular and non-vehicular modes.

Comprehensive Plan (2016). This plan defined the long-range vision of the Town of Windsor since recent and future growth is significant. The properties along Eastman Park Drive, including Great Western Industrial Park, were identified as a 'primary growth area' where future development or redevelopment should be prioritized to utilize existing infrastructure and services. The existing available infrastructure within the study area includes Eastman Park Drive, the roadway network through the Diamond Valley Center, the multi-use path along the south side of the road, several utilities such as water and electric and communications, and the Great Western Railroad (Class 1). The plan states *"the real estate in closest proximity to the intersection with SH 257 should be prioritized for retail, restaurant, and neighborhood service uses and leverage the highway frontage, and as the district expands east it can transition into office and business park type uses. The recent development along Diamond Valley Drive can serve as a model for the continued expansion of this business district."* The plan identified that improvements need to be made at the intersection with the highway to enhance pedestrian connectivity and provide a safe crossing. The Comprehensive Plan recommends emphasizing the Eastman Park Drive corridor as a business district with a complete street design. Eastman

Park Drive was listed to be improved and remain a two-lane Rural Minor Arterial with 130-foot right-of-way. Great Western Industrial Park is discussed as a major center of employment and manufacturing that serves the entire Front Range. The plan highlights the need to balance the potential of the employment opportunities with the need for residential and commercial uses.

- Pedestrian Crossing Guidelines (2018). This guiding document provides the Town of Windsor's criteria to evaluate and install pedestrian crossings for the purpose of pedestrian safety and compliance. There are no specific discussions for Eastman Park Drive; however, there may be locations within this corridor that will benefit from a designated pedestrian crossing and these guidelines will be followed to determine the appropriate location and crossing type.
- Roadway Improvement Plan (2017). This plan evaluated the entire roadway network in the Town of Windsor to determine future infrastructure needs based on 2040 forecasted volumes. The study limits of this Access Control Plan are located within the Town's Growth Management Area and Eastman Park Drive was predicted to remain a Rural Minor Arterial. The daily traffic capacity threshold for a Rural Minor Arterial was set to 11,000 vpd for a two-lane facility and 22,000 vpd for a four-lane facility. The traffic models forecast the existing volumes to increase to 9,500 vpd by Year 2040, which supported the plan's recommendation to maintain a two-lane cross-section on Eastman Park Drive. The Year 2040 traffic model did not account for the Future Legends Sports Complex and utilized the then current site plan of the Great Western Industrial Park that has recently been adjusted with land use and density.
- Strategic Plan (2020). The purpose of the current Strategic Plan is to guide the Town's growth and development into Year 2025. The guiding principles of the latest Strategic Plan are Community Safety, Fiscal Responsibility, Quality of Life, Small Town Feel, and Inclusion. The Town has committed to strategic growth, a vibrant and healthy economy, and sustainable infrastructure. These principles and commitments will be applied to Eastman Park Drive.
- Street Design Criteria and Construction Specifications (2019). This design manual does not specifically discuss Eastman Park Drive. It does provide the required minimum roadway design standards, preferred intersection spacing, minimum auxiliary lane lengths by speed limit and

STRATEGIC PLAN MISSION

The Town of Windsor promotes community and hometown pride through sustainable, excellent and equitable delivery of services in a fiscally responsible manner.

STRATEGIC PLAN VISION

Windsor is the hub of Northern Colorado-a safe, unique and special town that offers diverse culture and recreation opportunities. Windsor is recognized as a regional leader that demonstrates fiscal responsibility, environmental stewardship and strategic excellence. Windsor is a Town that thinks big and embraces its hometown pride.

volume, specific intersection design parameters, and minimum design criteria for multi-modal accommodations. This document should be applicable to the Eastman Park Drive Corridor with minor modifications as defined in **Section 5.3**.

- Transportation Master Plan (2020). This recent plan documents the existing pedestrian and bicyclist facilities, existing roadway classification and volumes, crash trends, and provides recommendations for implementable improvements for the transportation network and all modes of travel. Within the study limits on Eastman Park Drive, the highest crash area was identified to be at the intersection with State Highway 257 including pedestrian and bicyclist crashes. The public outreach efforts indicated that there are access and mobility concerns at this intersection and that it was difficult to bike safely along the eastern portion of Eastman Park Drive. The plan highlighted the need to improve the multi-use trail on the south side of the street as a priority project.
- Trails System Master Plan (2019). Eastman Park Drive currently has a detached 10-foot multi-use path on the south side of the street through and beyond the study area. Along the north side of the street, between State Highway 257 and Diamond Valley Drive, there are segments of detached sidewalk associated with more recent developments that are not currently connected. The trail master plan anticipates maintaining the multi-use path and connecting the sidewalk as development occurs. The plan also proposes to have a regional off-street trail that travels north-south connecting the Poudre Trail to the Great Western Trail. This new trail is anticipated to cross Eastman Park Drive on the east side of the future Legends Sports Complex and Multi-Use Development.

4.0 Future Conditions

The Town of Windsor's Roadway Improvement Plan estimated that the traffic on Eastman Park Drive would growth to 9,500 vehicles per day in the next 20-years and be able to remain two-lanes (one per direction). However, the existing volumes on Eastman Park Drive are near those 20-year horizon predictions. With the anticipated development of the Great Western Industrial Park (updated site plan for the master plan) and the relocation of Legends Sports Complex to this corridor, analyses indicate there is potential that Eastman Park Drive could serve up to 25,000 vehicles per day triggering the need to widen to four (4) through lanes (two per direction) as identified in the Great Western Industrial Park Master Traffic Study (Fox Tuttle, September 2020). The most recent forecasts for Eastman Park Drive estimate the daily volumes will significantly decrease east of Legends Sports Complex and east of Howard Smith Avenue since majority of the future traffic generators will be located closer to the highway and Diamond Valley Center.

The following upcoming developments have either been approved, are being reviewed, or in the planned stages with the Town of Windsor staff and have requested access on Eastman Park Drive:

- **Valley Center 4th Filing:** Construction has begun on this commercial/industrial development and the existing three (3) accesses on Eastman Park Drive were approved with full movement. These are Access #2, Access #4, and Access #5 on the figures.
- **Legends Sports Complex and Mixed-Use Development:** This project proposes to construct up to 19 ball fields, hotels, commercial businesses, and a semi-professional baseball arena. Site preparations have begun but the project team is still working with Town staff to finalize access location and control type to support typical daily traffic and event traffic. The project proposes to have the primary access on Eastman Park Drive, located approximately 950 feet east of the intersection with Diamond Valley Drive (East), which is shown on **Figure 3a**. The new full movement, side-street stop-controlled access is shown on design plans to provide one eastbound left-turn lane, one westbound right-turn lane, and one south-to-west right acceleration lane. Secondary access is proposed on Diamond Valley Drive (East) that will lead to Garden Drive and Eastman Park Drive.
- **Great Western Industrial Park:** This large development project proposes to construct a mix of residential, commercial, light industrial and heavy industrial land uses. There are several smaller, specific industrial sites on the east end of the property that are currently being constructed or planned. The primary commercial area is proposed to be in the recently named 'Windsor Village' that is located in the southeast corner of Eastman Park Drive and State Highway 257. This portion of the project is currently proposing to have multiple accesses (up to five) along Eastman Park Drive between State Highway 257 and Howard Smith Avenue. The current plan shows these new accesses aligning with existing accesses on the north side and are shown on **Figure 3a**. Plans show two full movement accesses and two $\frac{3}{4}$ movement accesses with the potential for a signal at Diamond Valley Drive (East). On the east end of the study area, the project plans to utilize Howard Smith Avenue and Great Western Drive to access other portions of the property as development occurs. Several gravel accesses that are currently used for oil and gas, agricultural, Law Ditch, or utility easements will be closed when internal access with future development can be provided or when access is no longer needed.

5.0 Access Control Plan

Access management is a proactive approach to provide that right balance between property access and traffic safety and efficiency. Every driveway represents potential conflict points between people walking, biking, or driving. The number and interactions of conflict points relate to the safety and performance of a roadway. Therefore, thoughtful consideration and evaluation should be conducted to manage access and find the appropriate balance between the safety and efficiency of the roadway and effective ingress/egress to adjacent properties.

The objective of this Access Control Plan for Eastman Park Drive is to strategically modify the existing accesses and to prepare for future accesses with upcoming developments. The vision for Eastman

Park Drive is to provide a welcoming complete street that instills Windsor's community character and accommodate all modes of transportation. This arterial street will be the key to success for the upcoming Great Western Industrial Park development and the Legends Sports Park Complex. With access management on Eastman Park Drive, there needs to be a support network of collector and/or local streets/alleys to provide adequate connectivity for effective circulation and secondary property access options. Proper control of the frequency, number, and location of access points on Eastman Park Drive can lead to:

- Reduction in the number and severity of accidents
- Reduction of delay experienced by people turning from or onto the roadway
- Increased storage within the center left-turn lane
- Increased options to accommodate future access and traffic volumes
- Improved experience for people driving, walking, or biking along the corridor

There are several options to manage the accesses along Eastman Park Drive, including (1) maintaining existing functionality, (2) eliminate, (3) restrict specific movements, (4) relocate, or (5) consolidate. Eliminating an access is typically applied to properties that have more than one access point or adequate access on a secondary roadway. Some accesses may need to be maintained but certain movements need to be prohibited for safety purposes; this may include converting to a $\frac{3}{4}$ movement access (no left-turn out) or right-in, right-out. Access relocation is an option to align an access to remove an off-set or move to another roadway. Where possible, accesses that have inadequate spacing should be consolidated to a single location and shared amongst property owners. Each existing access, as listed in **Table 1**, was reviewed by the following parameters to determine the recommended access control along the corridor:

- Proximity to major intersection(s) and/or signalized intersection(s)
- Spacing to adjacent access(es)
- Number of accesses per property
- Number of businesses/residences serviced
- Auxiliary lane availability or need
- Posted speed limit and sight distance
- Crash history
- Feasibility of alternate route or shared/consolidated access

5.1 Recommendations

Based on the review of the existing and future accesses, recommendations were made to reduce the number of full-movement intersections, consolidate and share accesses where possible, and identify alternative routing options. It is anticipated these access changes will be implemented with development and as Eastman Park Drive is widened. **Table 3** lists the proposed recommendations for access management which are also illustrated on **Figure 3a** and **Figure 3b**. The access number in table matches the numbers in the figures.

Table 3. Proposed Access Control Plan on Eastman Park Drive

Access No.	Maintain with Full Mvmt	Restrict Movements	Consolidate / Close Access	Proposed New Access
1. Automation Drive (Public Rd)	-	✓ RIRO	-	-
2. Business Access	-	✓ RIRO	-	✓ GWIP - ¾
3. Agricultural / Oil & Gas Access	-	-	✓	-
4. Business Access	✓	-	-	-
5. Valley Center Access	✓ until direct access on Diamond Valley Drive West	✓ RIRO when #6 is signalized or extended south	-	-
6. Diamond Valley Drive West	✓	-	-	✓ GWIP - Full
7. Business Access	-	✓ ¾	-	✓ GWIP - ¾
8. Diamond Valley Drive East (Public Rd)	✓	-	-	✓ GWIP - Full
9. Private Access (9535)	✓ Revisit if redeveloped	✓ RIRO when #8 or #19 signalized	-	-
10. Ditch and Oil & Gas Access	✓	-	✓ If another option in GWIP	-
11. Agricultural Access	-	-	✓	-
12. Private Access (9596)	✓ Revisit if redeveloped	-	✓ when residence is vacant	-
13. Ditch Access	✓	-	✓ If another option in GWIP	-
14. Howard Smith Ave. (Public Rd)	✓	-	-	-
15. Private Access (10119)	-	-	✓ when residence is vacant	-
16. Oil & Gas Access	✓	-	✓ coordinate with #17/18	-
17. Old Kodak Access W.	-	-	✓ coordinate with N. access #16	-
18. Old Kodak Access E.	-	-	✓	-
19. Legends Sports Complex Access	-	-	-	✓ Full

The proposed restricted movements at Automation Drive (Access #1) presents the need for alternative connections internal to the Diamond Valley Industrial Park to continue to serve the existing businesses and charter school. It is understood that Logistics Drive is a private street and not available

for the public to travel on. **Figure 4** provides conceptual options for new connectivity between Automation Drive and the Diamond Valley Drive (West) to accommodate eastbound left-turns and southbound left-turns from businesses and charter school that currently utilize Automation Drive. If the Town prefers the use of Logistics Drive or cannot provide a secondary east-west connection, then it would be beneficial to change Logistics Drive from a private road to a Town road. This proposed change will permit additional stacking distance for the intersection of Eastman Park Drive at State Highway 257 and minimize delays for people turning left to or from Eastman Park Drive. Moving the primary access away from the existing signalized intersection allows easier and safer access for drivers during times of peak congestion.

For the historic accesses for Valley Center 4th Filing (#2, #4, and #5), it is recommended that the allowance of full movement at three closely spaced accesses be adjusted as necessary for optimal Eastman Park Drive functionality and safety. It would be beneficial for these driveways to be consolidated or find an opportunity to share access with a neighboring property.

At the proposed new access for the Legends Sports Complex and Mixed-Use Development (Access #19), it is recommended that the development consider two outbound lanes that extend to the first internal intersection to stack event traffic and separate left-turns from right-turns. Consider performing a signal progression analysis on Eastman Park Drive to understand the feasibility of a signal at this access that is located within 950 feet of another future signal at Diamond Valley Drive (East) (#8). It is easier to manage and direct sports event traffic with a signal than without.

With development of the Great Western Industrial Park and the Legends Sports Complex and Mixed Use, several of the existing accesses (#2, #6, #7, #8, and #14) may require new auxiliary lanes to support the project trips. Refer to the traffic impact studies for these developments to understand the anticipated turning volumes at each access intersection.

Figure 4 illustrates the potential opportunities for the Town to achieve a grid roadway network to serve the existing and future Diamond Valley Business Center and alleviate the need for access on Eastman Park Drive. It is understood that the Town is currently not adding lane miles to the roadway network, however, additional connectivity within the study area would benefit the traffic flow and safety on Eastman Park Drive and provide alternative access to several businesses and the schools.

Figure 5 illustrates the roadway network and connectivity proposed by the Great Western Industrial Park and how it interacts with the recommended Access Control Plan. These roadways will provide opportunities for traffic to redirect from Eastman Park Drive to get to/from a driver's destination.

5.2 Implementation Schedule

The key priority segment on Eastman Park Drive is between State Highway 257 and the proposed Legends Sports Complex access. With development beginning on various projects within the study limits, the timeline to implement the Access Control Plan recommendations is critical to ensure the Town's vision is realized.

The following timeline is proposed for implementation of the recommended Access Control Plan:

- **Short-Term 5-Year**
 - Connect segments of Diamond Valley Drive (West) and provide defined access to Valley Center Businesses on the west side of the street
 - Implement access closures at locations #3 and #11
 - Implement access restrictions at locations #2
- **Mid-Term 10-Year**
 - Restrict movements on Automation Drive (#1)
 - Internal connectivity between Automation Drive and Diamond Valley Drive (West)
 - Internal connectivity throughout Diamond Valley Business Center
 - Implement access restrictions at location #15
- **Long-Term 15+ Year**
 - Implement access consolidation or closure of locations #17 and #18
- **Timeline Triggered by Other Development or Connectivity**
 - Implement access restriction at locations #5 when Diamond Valley Drive West is signalized or extended south.
 - Implement access restrictions at location #7 when Great Western Industrial Park constructs fourth leg to the intersection.
 - Implement access restrictions at location #9 when signals are installed at #8 or #19.
 - Implement access closure at location #10 when Great Western Industrial Park developments adjacent property.
 - If redevelopment or parcel consolidation is proposed, revisit the access needs and connectivity for locations #9, #12, #16

Figures 6a and 6b provide the property boundaries, ownership, and parcel number based on the Weld County assessor's database. The purpose of these figures is to connect the Town staff with property owners throughout this process.

5.3 Impacts to Roadway Network

The access management plan has potential to change the existing travel patterns for drivers where movements are restricted. Changing Automation Drive to Right-In, Right-Out may increase traffic volume on Commons Drive, Garden Drive, Diamond Valley Drive East, and Logistics Drive. It is expected that the development of the Legends Sports Complex will increase the traffic volumes on Eastman Park Drive and Garden Drive. During an event, it is anticipated local traffic will utilize the local roadways, connections, and parallel roadways to circumvent the increased congestion. Garden Drive will be evaluated for opportunities to consolidate, close, or realign access to improve traffic volume and safety.

5.4 Policies and Design Standards for Future Access

The existing accesses on Eastman Park Drive present a challenging circumstance to approving future accesses that will serve near-term or long-term development projects. The following policies should be utilized as guidelines to approve changes to an existing access or approve a proposed new access:

Minimum Access Spacing:

The spacing of new accesses will greatly depend on the existing access locations, the permitted movements, and ability to provide access on a secondary roadway. There may be situations where new access will not meet minimum spacing standards due to the limitations formed by the existing accesses or other conditions. The Town will need to work with the developer on a case-by-case basis to determine the best accommodation for access on Eastman Park Drive or a secondary street/alley. Regardless, a new access shall align with an existing access where possible and when minimum spacing standards cannot be met due to existing conditions.

The minimum access spacing should comply with the Town's current version of the Street Design Criteria and Construction Specifications with minor modifications as presented below in this Access Control Plan. Depending on the decided roadway classification for all or portions of Eastman Park Drive, the following spacing criteria will apply when not restricted by existing accesses or conditions:

- **Rural Minor Arterial 3-Lane (existing configuration):** 660 feet for unsignalized full movement or restricted movement; 1,320 feet for signalized full movement.
- **Rural Minor Arterial 5-Lane (possible future configuration):** 660 feet for unsignalized restricted movement; 1,320 feet for unsignalized or signalized full movement; 2,640 feet between major arterial/arterial intersections.
- **Urban Minor Arterial 5-Lane (possible future configuration):** 660 feet for unsignalized restricted movement; 1,320 feet for unsignalized or signalized full movement; 2,640 feet between major arterial/arterial intersections.

Alignment and Design:

New accesses shall align with an existing access, where possible, and especially when minimum spacing standards cannot be met due to existing conditions.

The geometric design of the access road and the intersection with Eastman Park Drive should be consistent with the standards provided in the Town's current version of the Street Design Criteria and Construction Specifications and the

COMPLETE STREETS GUIDE

Design a safe, efficient, and connected transportation network for all modes of travel including people that walk, bike, drive, and use transit. Public and private streets, existing or new, are expected to be designed or upgraded to complete streets.

Town's *Complete Streets Guide*. The design of Eastman Park Drive and accesses will have to also be balanced with the high percentage of large trucks that serve the Great Western Industrial Park. The access design must include accommodations for pedestrians and bicyclists that are either crossing or traveling along the one of the intersecting roadways.

Refer to the National Association of City Transportation Officials (NACTO) set of design guides that address options to upgrade existing facilities or design new facilities to accommodate non-auto modes. Ensure designs are compliant with requirements set forth by the Americans with Disabilities Act (ADA).

Shared Access:

Existing new accesses should be consolidated and shared amongst adjacent properties, where possible. Development plans should consider where existing access is available on Eastman Park Drive or a secondary roadway. Site plans should evaluate the internal site circulation to utilize existing access and minimize or eliminate the need for a new access. Properly designed accesses shared by multiple businesses potentially allow more site area for the building(s), parking, and landscaping or amenities.

As presented in **Figure 4**, the Town should work with properties owners and the Diamond Valley Business Center to identify opportunities to provide a parallel roadway or alley to Eastman Park Drive for access to existing and future businesses, schools, and recreational areas. Service roads allow employees and visitors to enter and exit the properties conveniently and safely, away from faster moving traffic on Eastman Park Drive. If an additional east-west connection is not feasible, then the Town should consider converting Logistics Drive from a private street to a Town street to get to/from Automation Drive.

Restricted Movements:

The following access management options are available for changing an existing access or designing a new access to restrict movements:

- **¾ Movement Access:** Three of the four possible movements in and out of the access are permitted. This access type allows left-in, right-in, and right-out. Prohibited movements are left-out and through movements on the side-street/driveway.
- **Right-in, Right-Out:** This access type allows right-in and right-out and prohibits all left-turns and through movement on the side-street/driveway.
- **Right-in OR Right-Out:** This access type is a one-way drive for either inbound traffic or exiting traffic, but not both directions.

As listed in **Table 3** and illustrated on **Figure 3a** and **Figure 3b**, several of the existing accesses should be adjusted to restrict full movement to minimize conflicts and improve safety for people walking, biking, and driving. To enforce the restriction of certain movements, physical barriers (curb, island, delineators, etc.) need to be designed, installed and maintained properly. The Town prefers a median be designed to enforce restrictions which will be included within the cross-section created for Eastman Park Drive and will be required with redevelopment along the corridor.

New access should mirror the permitted movements of the existing access that it will be aligned with, where possible. For example, if an existing access is $\frac{3}{4}$ movement then the new access will also need to be $\frac{3}{4}$ movement.

Auxiliary Lane Requirements:

The following auxiliary lane criteria should be applied to proposed access on Eastman Park Drive:

- A **left-turn deceleration lane** is required when the turning volume is greater than 25 vehicles per hour.
- A **right-turn deceleration lane** is required when the turning volume is greater than 100 vehicles per hour on a two-lane roadway or greater than 250 vehicles per hour on a four-lane roadway.
- **Acceleration lanes** shall not be considered on Eastman Park Drive.
- Where truck volumes in the subject turning movement are above 5% of the traffic composition, convert the truck volume to passenger car equivalents.

The implementation and operational benefit of a deceleration lane should be reviewed against the capacity analysis and balanced with the intersection design that is inclusive of all travel modes. If the opposing or advancing volumes are low, then a deceleration lane may not be needed even when the turning volume is above the set threshold. The reverse may also be true if the turning volumes is less than the threshold volume, but the opposing or advanced volumes are large enough to warrant the need to separate the movement. In these situations, engineering judgement should be used to determine the need for the subject auxiliary lane.

Auxiliary Lane Lengths:

The auxiliary lane lengths should comply with the guidelines set forth by the Town of Windsor's Street Design Criteria and Construction Specifications with suggested minor modifications as presented in **Table 4**. The Town historically required auxiliary lanes to be designed to meet standards set forth by the State Highway Access Code (March 2002), which provides design guidelines focused on highways and not arterials within a community. The Town's specifications include more detailed design guidelines for "speed change lane lengths" that are recommended to be applicable to Eastman Park Drive since the design criteria is based on the posted speed limited and turning volume. **Table 4** is a simplified version of Table 1.25.1 in the Town's standards (page 94) for the purpose of implementing on Eastman Park Drive with minor adjustments as noted.

Table 4. Auxiliary Lane Lengths on Eastman Park Drive

Posted Speed (mph)	Left-Turn and Right-Turn Total Deceleration Lane Length (min.)				Taper Length Ratio (included in decel. length)
	Turning Vehicle Volume (per hour)				
	<100	100-200	200-300	>300	
25	140'	190'	290'	390'	7.5:1
30	150'	200'	300'	400'	8:1
35	170'	220'	320'	420'	10:1
40	195'	245'	345'	430'	12:1
45*	285'	350'	435'	470'	13.5:1
* Modified lengths to match the pattern of the other speeds that have shorter lengths with less volume.					

In all cases, the minimum storage of the deceleration length should accommodate two passenger cars (minimum of 50 feet). If the turning volumes have 10% or more trucks, then the minimum length should accommodate one passenger car and one truck (minimum of 70 feet).

A capacity analysis should be performed to determine if the proposed auxiliary lane lengths are able to accommodate the estimated queues for buildout conditions.

Accommodation for Pedestrians, Bicyclists, or Future Transit:

As development occurs within the study area, roadway and intersection designs should include sidewalks or multi-use paths to connect the existing sidewalks and increase non-auto facilities, as well as on side streets and into properties to encourage non-auto travel. The cross-section for Eastman Park Drive should include on-street and/or off-street facilities for bicyclists that can be balanced with available right-of-way, accommodation for a range of bicyclists, and interaction with other modes of travel (vehicles on the road and pedestrians on the sidewalk/path). Providing safe, connected, accessible and direct facilities for people walking and biking promotes a healthier community and can reduce the vehicle travel. It is anticipated that the volume of non-auto travel will significantly increase with the development of Great Western Industrial Park and the Legends Sports Complex.

The following standards should be implemented on Eastman Park Drive for pedestrian facilities:

- Minimum width of 6-foot detached sidewalks on the north side of Eastman Park Drive. Preferred width is 8-foot.
- Minimum width of 10-foot detached multi-use path on the south side of Eastman Park Drive. Preferred width is 12-foot.
- Sidewalk design specifications (cross slope, depth, material, drainage, etc.) should meet the requirements of the Town's Street Design Criteria and Construction Specifications.

- Pedestrian crossing design should follow the Town of Windsor's *Pedestrian Crossing Guidelines* to identify where the appropriate location and applicable crossing type.
- Ensure designs are compliant with requirements set forth by the ADA.

The following standards should be implemented on Eastman Park Drive for bicyclist facilities:

- Options for on-street bike lane design:
 - Minimum of 6-foot bike lane.
 - Minimum of 5-foot bike lane with a 2-foot buffer.
- Options for off-street bike path design:
 - Minimum of 10-foot detached multi-use path. Preferred width is 12-foot.
- Bike lane design specifications should meet the requirements in the Town's *Street Design Criteria and Construction Specifications*.
- Refer to the NACTO's Bikeway Design Guide to design bike facilities properly.

6.0 Next Steps

The listed steps are anticipated to be needed to update this draft Access Control Plan to a final version:

- Review the plan for feasibility and ability to implement from the Town's perspective.
- Develop an educational program to reduce the fears and push back from property owners on changes to their existing or future access on Eastman Park Drive.
- Engage the public and stakeholders. Public and business community involvement is essential and needed before the Access Control Plan can be accepted.
- Determine the roadway classification and anticipated cross-section of Eastman Park Drive with the new vision and development.
- Develop the gap analysis and identify future locations that may need a pedestrian crossing or enhanced facility.
- Review access on Garden Drive and determine if there are recommendations for access control.

7.0 Appendix with Tables, Figures, and Analysis Worksheets

Eastman Park Drive
Access Control Plan for Corridor Plan
Windsor, CO



Table A.1 - Existing Peak Hour Intersection Level of Service and 95th Percentile Queue

Intersection and Critical Lane Groups	Level of Service				Ex. Storage Length	Queue			
	AM Peak		PM Peak			AM Peak		PM Peak	
	Delay	LOS	Delay	LOS		Avg.	95th	Avg.	95th
STOP SIGN CONTROL									
Eastman Park Drive at Automation Drive	3	A	2	A					
Eastbound Left	10	B	8	A	165'	-	30'	-	3'
Eastbound Through	0	A	0	A	-	-	0'	-	0'
Westbound Through+Right	0	A	0	A	-	-	0'	-	0'
Southbound Left	45	E	16	C	100'	-	8'	-	5'
Southbound Right	12	B	10	B	-	-	18'	-	13'
Eastman Park Drive at Diamond Valley Drive	5	A	3	A					
Eastbound Left	8	A	8	A	145'	-	13'	-	3'
Eastbound Through	0	A	0	A	-	-	0'	-	0'
Westbound Through+Right	0	A	0	A	-	-	0'	-	0'
Southbound Left	16	C	13	B	100'	-	20'	-	10'
Southbound Right	11	B	10	A	-	-	25'	-	8'
SIGNAL CONTROL									
Eastman Park Drive at SH 257	46	D	37	D					
Eastbound Left	44	D	44	D	180'	60'	99'	43'	80'
Eastbound Through	68	E	46	D	-	215'	282'	72'	121'
Eastbound Right	0	A	0	A	180'	28'	82'	0'	58'
Westbound Left	66	E	65	E	150'	186'	217'	140'	214'
Westbound Through	60	E	55	D	-	179'	210'	124'	192'
Westbound Right	0	A	0	A	380'	0'	0'	0'	17'
Northbound Left	35	D	28	C	130'	146'	239'	121'	222'
Northbound Through	33	C	27	C	-	288'	396'	303'	426'
Northbound Right	0	A	0	A	630'	0'	62'	0'	41'
Southbound Left	23	C	19	B	330'	35'	65'	13'	29'
Southbound Through	37	D	34	C	-	296'	428'	305'	407'
Southbound Right	0	A	0	A	330'	0'	1'	0'	12'

Note: Delay represented in average seconds per vehicle.

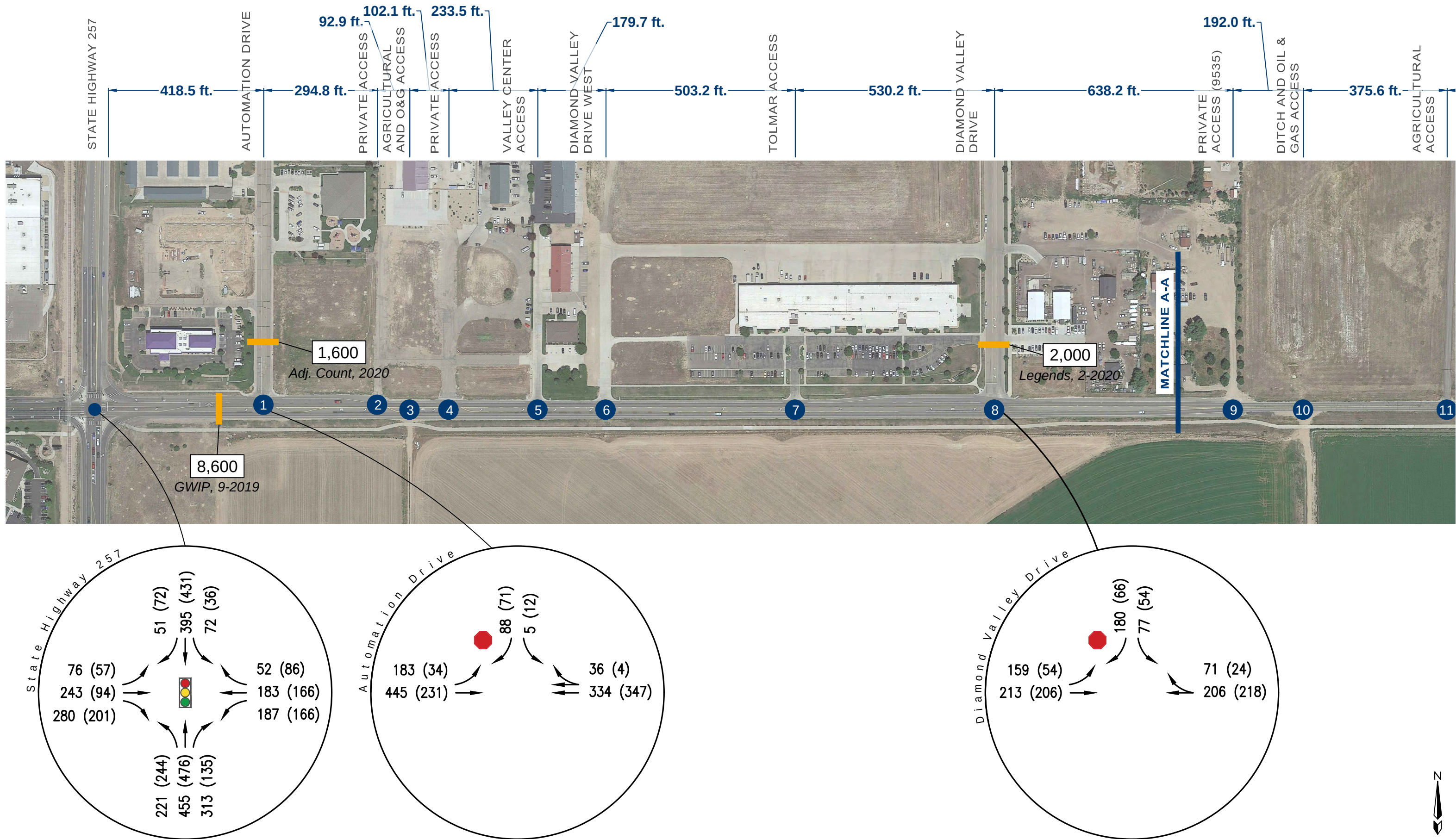


Figure 1a - Existing Access and Traffic Volumes

Town of Windsor - Eastman Park Drive Corridor Plan (FT#20074)



Figure 1b - Existing Access and Traffic Volumes

Town of Windsor - Eastman Park Drive Corridor Plan (FT#20074)

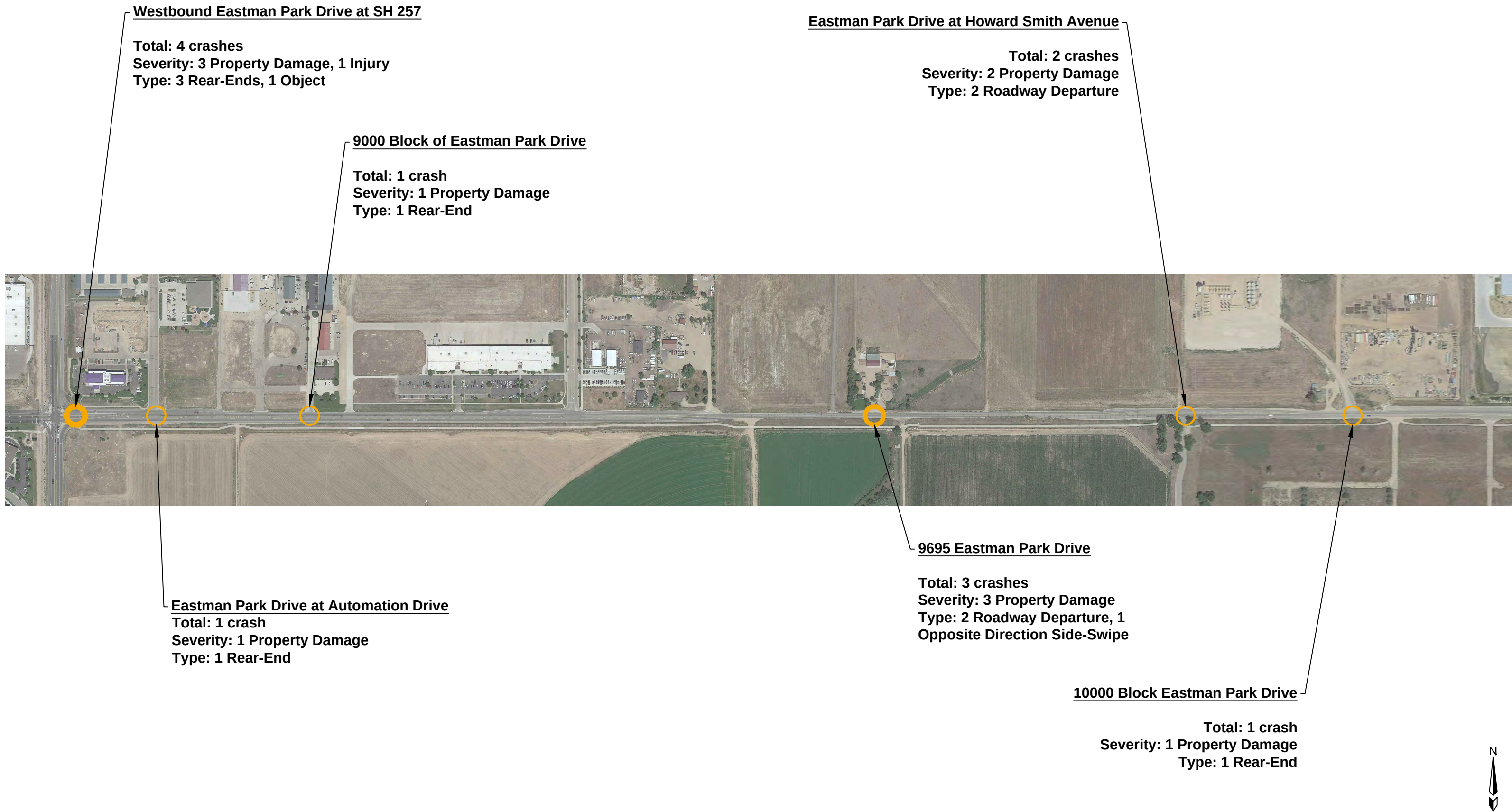


Figure 2 - Historic Crash Data (2017-2020)

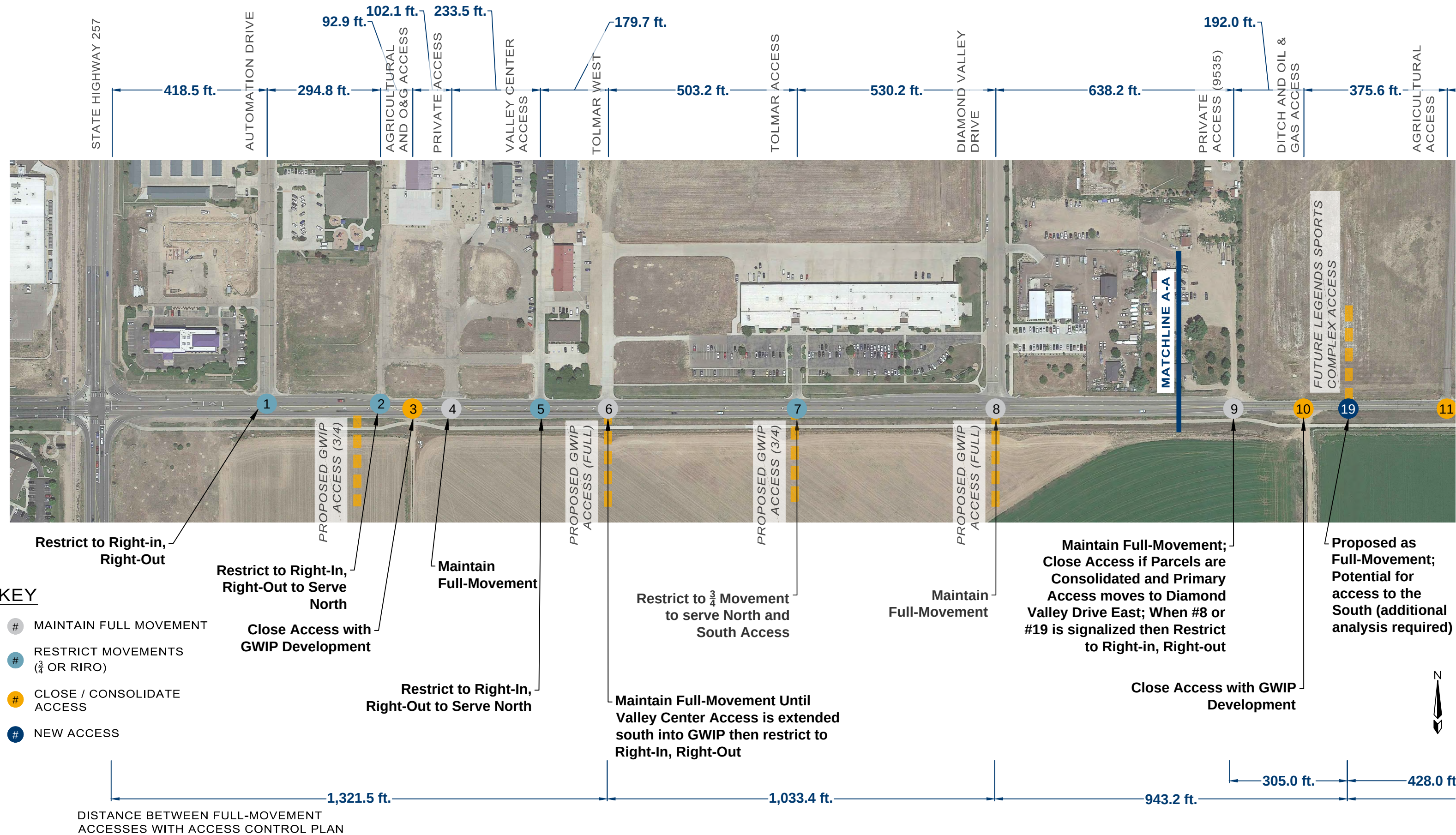


Figure 3a - Access Control Plan

Town of Windsor - Eastman Park Drive Corridor Plan (FT#20074)

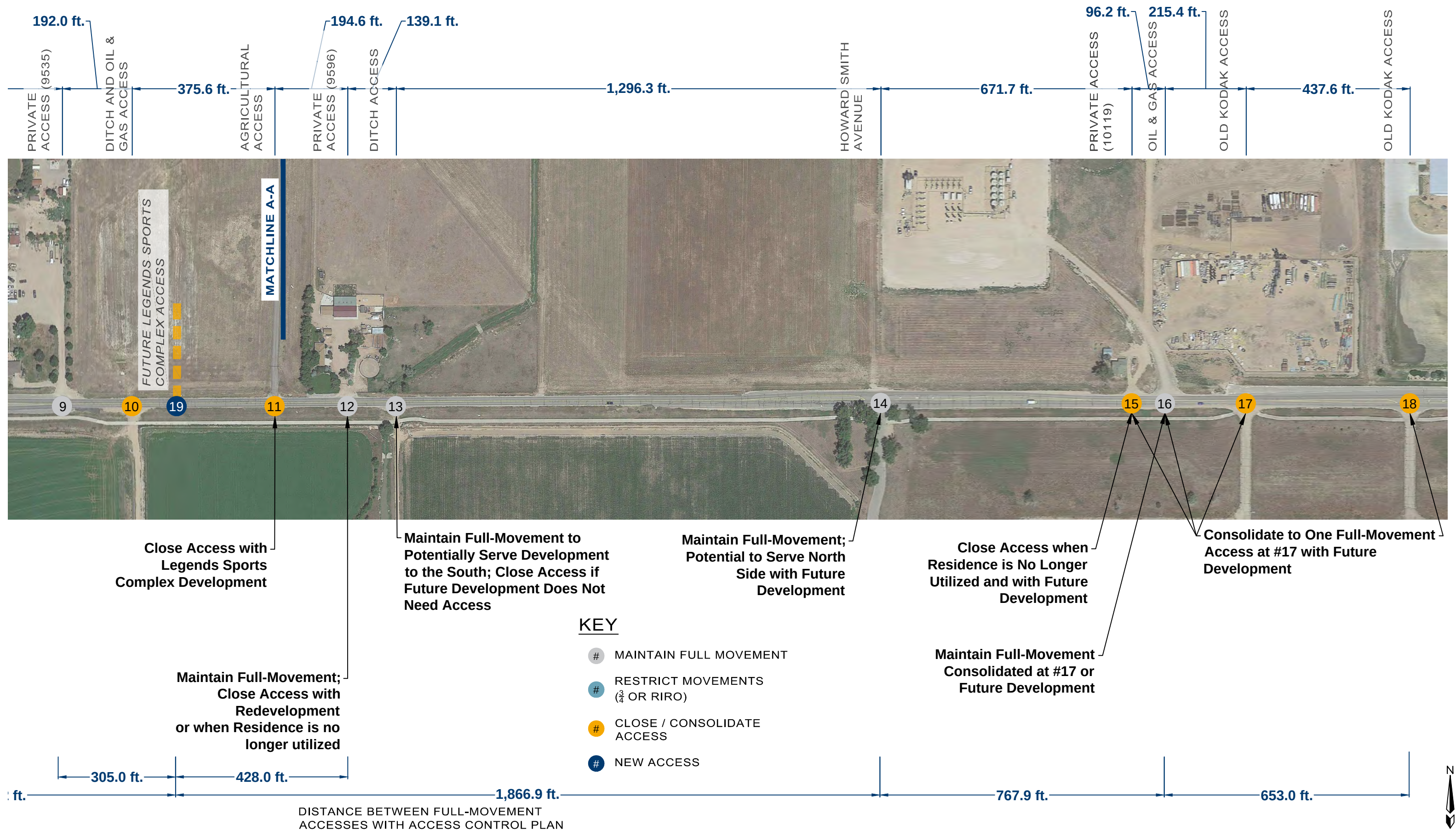


Figure 3b - Access Control Plan

Town of Windsor - Eastman Park Drive Corridor Plan (FT#20074)

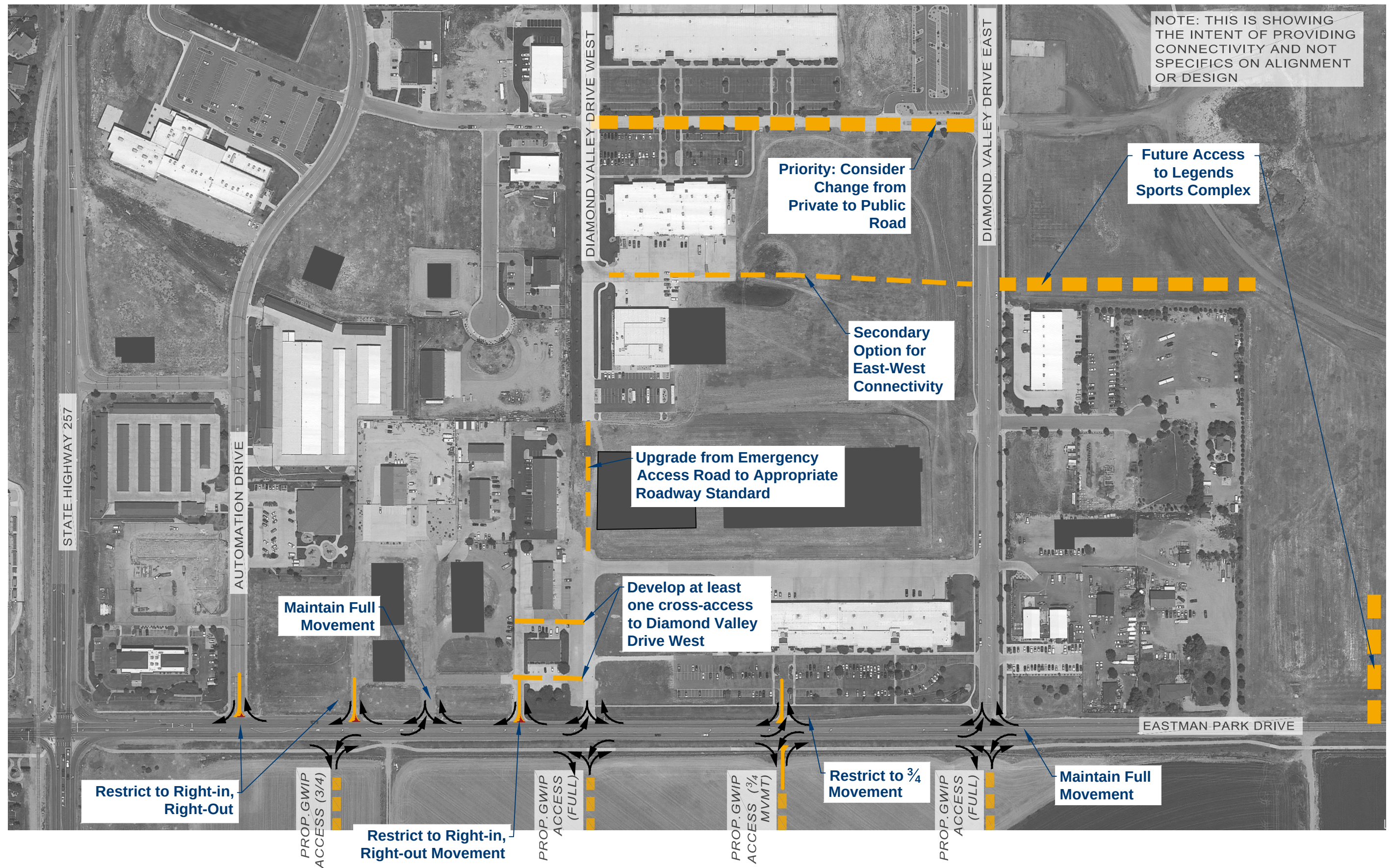


Figure 4 - Recommended Connectivity

Town of Windsor - Eastman Park Drive Corridor Plan (FT#20074)

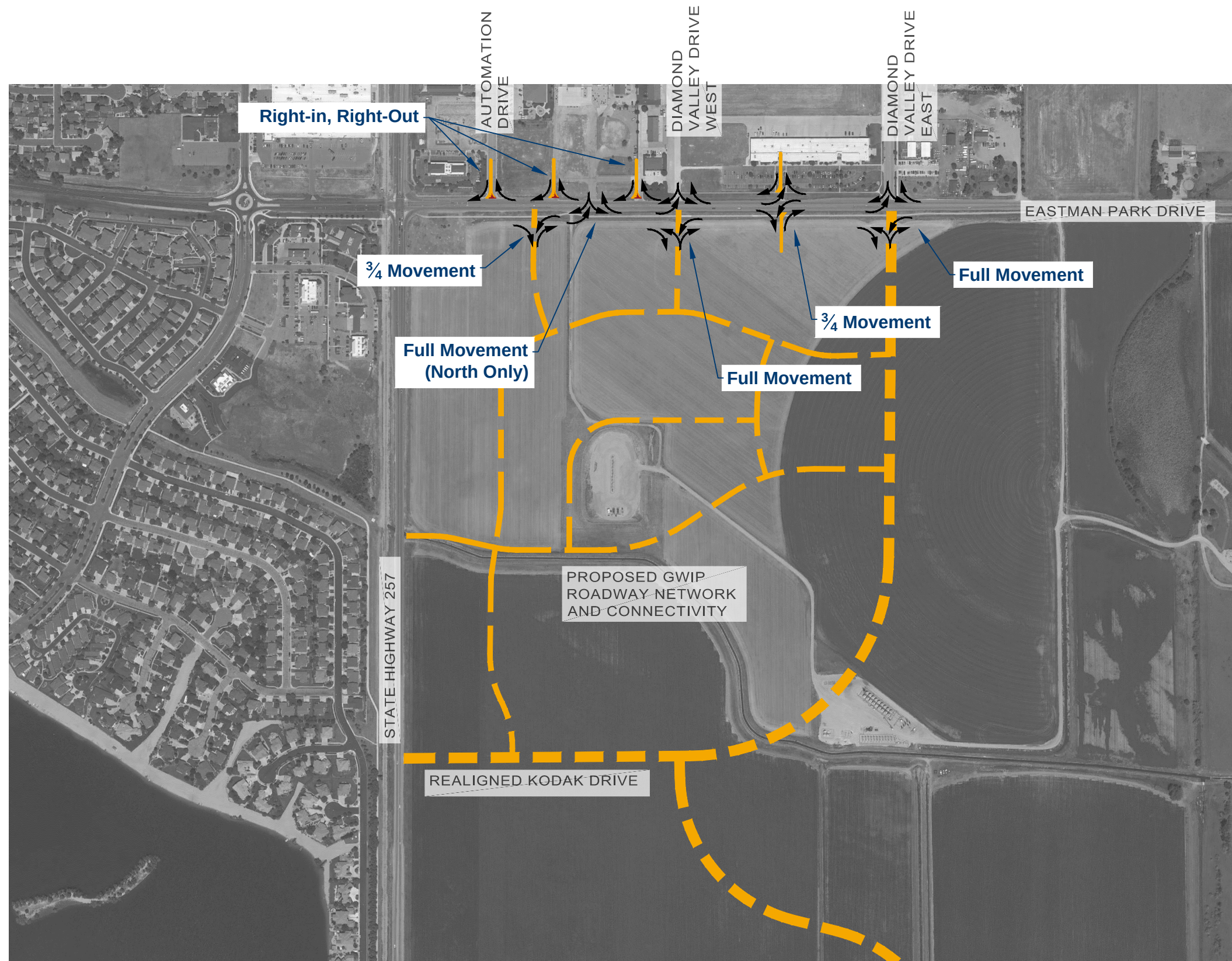


Figure 5 - Proposed GWIP Connectivity

Town of Windsor - Eastman Park Drive Corridor Plan (FT#20074)

DRAFT February, 2020





Figure 6b - Existing Property Lines and Owners

Town of Windsor - Eastman Park Drive Corridor Plan (FT#20074)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	93	296	341	256	251	71	292	422	414	79	419	56
v/c Ratio	0.25	0.77	0.61	0.76	0.69	0.18	0.87	0.64	0.50	0.24	0.73	0.10
Control Delay	41.3	58.7	12.4	60.3	55.2	1.3	51.0	38.8	5.2	21.0	45.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	58.7	12.4	60.3	55.2	1.3	51.0	38.8	5.2	21.0	45.6	0.3
Queue Length 50th (ft)	60	215	28	186	179	0	146	288	0	35	296	0
Queue Length 95th (ft)	99	282	82	217	210	0	#239	396	62	65	#428	1
Internal Link Dist (ft)		625			2300			999			587	
Turn Bay Length (ft)	180		180	150		380	130		630	330		330
Base Capacity (vph)	383	403	575	361	388	419	334	661	823	330	577	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.73	0.59	0.71	0.65	0.17	0.87	0.64	0.50	0.24	0.73	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
03/30/2020

2: SH 257 & Eastman Park Drive
2019 Existing - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	243	280	187	183	52	257	371	364	72	381	51
Future Volume (veh/h)	76	243	280	187	183	52	257	371	364	72	381	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1811	1811	1811	1811	1870
Adj Flow Rate, veh/h	93	296	0	256	251	0	292	422	0	79	419	0
Peak Hour Factor	0.82	0.82	0.82	0.73	0.73	0.73	0.88	0.88	0.88	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	2	4	2	6	6	6	6	2
Cap, veh/h	330	347		312	333		387	709		360	655	
Arrive On Green	0.19	0.19	0.00	0.18	0.18	0.00	0.09	0.39	0.00	0.06	0.36	0.00
Sat Flow, veh/h	1781	1870	1585	1753	1870	1560	1781	1811	1535	1725	1811	1585
Grp Volume(v), veh/h	93	296	0	256	251	0	292	422	0	79	419	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1753	1870	1560	1781	1811	1535	1725	1811	1585
Q Serve(g_s), s	5.4	18.4	0.0	16.9	15.3	0.0	11.0	22.2	0.0	3.3	23.1	0.0
Cycle Q Clear(g_c), s	5.4	18.4	0.0	16.9	15.3	0.0	11.0	22.2	0.0	3.3	23.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	347		312	333		387	709		360	655	
V/C Ratio(X)	0.28	0.85		0.82	0.75		0.75	0.60		0.22	0.64	
Avail Cap(c_a), veh/h	386	405		365	390		387	709		368	655	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.0	47.3	0.0	47.5	46.8	0.0	27.0	29.0	0.0	22.5	31.8	0.0
Incr Delay (d2), s/veh	1.7	20.4	0.0	18.7	12.6	0.0	8.1	3.7	0.0	0.3	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	10.3	0.0	8.8	8.1	0.0	5.8	9.7	0.0	1.3	10.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	67.7	0.0	66.2	59.5	0.0	35.1	32.6	0.0	22.8	36.5	0.0
LnGrp LOS	D	E		E	E		D	C		C	D	
Approach Vol, veh/h		389	A		507	A		714	A		498	A
Approach Delay, s/veh		62.0			62.9			33.7			34.4	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	54.0		27.3	16.0	50.4		26.3				
Change Period (Y+Rc), s	5.0	7.0		5.0	5.0	7.0		5.0				
Max Green Setting (Gmax), s	8.0	39.0		26.0	11.0	36.0		25.0				
Max Q Clear Time (g_c+I1), s	5.3	24.2		20.4	13.0	25.1		18.9				
Green Ext Time (p_c), s	0.0	1.9		1.9	0.0	1.6		2.5				

Intersection Summary

HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	183	445	334	36	5	88
Future Vol, veh/h	183	445	334	36	5	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	165	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	68	68	60	60	64	64
Heavy Vehicles, %	2	4	7	2	0	0
Mvmt Flow	269	654	557	60	8	138

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	617	0	0 1779 309
Stage 1	-	-	- 587 -
Stage 2	-	-	- 1192 -
Critical Hdwy	4.13	-	- 6.6 6.9
Critical Hdwy Stg 1	-	-	- 5.8 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	2.219	-	- 3.5 3.3
Pot Cap-1 Maneuver	961	-	- 135 693
Stage 1	-	-	- 524 -
Stage 2	-	-	- 512 -
Platoon blocked, %		-	- 1
Mov Cap-1 Maneuver	961	-	- 97 693
Mov Cap-2 Maneuver	-	-	- 97 -
Stage 1	-	-	- 377 -
Stage 2	-	-	- 512 -

Approach	EB	WB	SB
HCM Control Delay, s	3	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	961	-	-	-	97	693
HCM Lane V/C Ratio	0.28	-	-	-	0.081	0.198
HCM Control Delay (s)	10.2	-	-	-	45.3	11.5
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	1.2	-	-	-	0.3	0.7

HCM 6th TWSC

3: Eastman Park Drive & Diamond Valley Drive

Recent AM

Intersection

Int Delay, s/veh 5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
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Lane Configurations						
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Traffic Vol, veh/h	159	213	206	71	77	180
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Future Vol, veh/h	159	213	206	71	77	180
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Free	Free	Free	Free	Stop	Stop
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RT Channelized	-	None	-	None	-	None
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Storage Length	200	-	-	-	250	0
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Veh in Median Storage, #	-	0	0	-	1	-
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Grade, %	-	0	0	-	0	-
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Peak Hour Factor	92	92	92	92	92	92
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Heavy Vehicles, %	2	2	2	2	2	2
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Mvmt Flow	173	232	224	77	84	196
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Major/Minor	Major1	Major2	Minor2
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Conflicting Flow All	301	0	0	841	263
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Stage 1	-	-	-	263	-
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Stage 2	-	-	-	578	-
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Critical Hdwy	4.12	-	-	6.42	6.22
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Critical Hdwy Stg 1	-	-	-	5.42	-
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Critical Hdwy Stg 2	-	-	-	5.42	-
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Follow-up Hdwy	2.218	-	-	3.518	3.318
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Pot Cap-1 Maneuver	1260	-	-	335	776
--------------------	------	---	---	-----	-----

Stage 1	-	-	-	781	-
---------	---	---	---	-----	---

Stage 2	-	-	-	561	-
---------	---	---	---	-----	---

Platoon blocked, %	-	-	-	-	-
--------------------	---	---	---	---	---

Mov Cap-1 Maneuver	1260	-	-	289	776
--------------------	------	---	---	-----	-----

Mov Cap-2 Maneuver	-	-	-	409	-
--------------------	---	---	---	-----	---

Stage 1	-	-	-	674	-
---------	---	---	---	-----	---

Stage 2	-	-	-	561	-
---------	---	---	---	-----	---

Approach	EB	WB	SB
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HCM Control Delay, s	3.6	0	12.7
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HCM LOS			B
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Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
-----------------------	-----	-----	-----	-----	-------	-------

Capacity (veh/h)	1260	-	-	-	409	776
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HCM Lane V/C Ratio	0.137	-	-	-	0.205	0.252
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HCM Control Delay (s)	8.3	-	-	-	16.1	11.2
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HCM Lane LOS	A	-	-	-	C	B
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HCM 95th %tile Q(veh)	0.5	-	-	-	0.8	1
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	67	111	261	211	191	99	317	517	175	42	490	84
v/c Ratio	0.26	0.41	0.58	0.70	0.59	0.26	0.82	0.63	0.23	0.11	0.75	0.13
Control Delay	44.8	47.9	10.8	56.0	49.9	4.1	34.0	29.1	4.0	13.4	39.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	47.9	10.8	56.0	49.9	4.1	34.0	29.1	4.0	13.4	39.7	2.2
Queue Length 50th (ft)	43	72	0	140	124	0	121	303	0	13	305	0
Queue Length 95th (ft)	80	121	58	214	192	17	#222	426	41	29	407	12
Internal Link Dist (ft)		625			692			999			587	
Turn Bay Length (ft)	180		180	150		380	130		630	330		330
Base Capacity (vph)	257	270	453	315	338	396	386	816	760	366	652	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.41	0.58	0.67	0.57	0.25	0.82	0.63	0.23	0.11	0.75	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
03/30/2020

2: SH 257 & Eastman Park Drive
2019 Existing - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	94	222	184	166	86	282	460	156	36	421	72
Future Volume (veh/h)	57	94	222	184	166	86	282	460	156	36	421	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1870	1841	1870	1811	1811	1811	1811	1870
Adj Flow Rate, veh/h	67	111	0	211	191	0	317	517	0	42	490	0
Peak Hour Factor	0.85	0.85	0.85	0.87	0.87	0.87	0.89	0.89	0.89	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	4	2	4	2	6	6	6	6	2
Cap, veh/h	258	271		263	280		421	820		357	701	
Arrive On Green	0.14	0.14	0.00	0.15	0.15	0.00	0.12	0.45	0.00	0.05	0.39	0.00
Sat Flow, veh/h	1781	1870	1585	1753	1870	1560	1781	1811	1535	1725	1811	1585
Grp Volume(v), veh/h	67	111	0	211	191	0	317	517	0	42	490	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1753	1870	1560	1781	1811	1535	1725	1811	1585
Q Serve(g_s), s	3.7	5.9	0.0	12.8	10.6	0.0	11.3	24.1	0.0	1.5	25.0	0.0
Cycle Q Clear(g_c), s	3.7	5.9	0.0	12.8	10.6	0.0	11.3	24.1	0.0	1.5	25.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	271		263	280		421	820		357	701	
V/C Ratio(X)	0.26	0.41		0.80	0.68		0.75	0.63		0.12	0.70	
Avail Cap(c_a), veh/h	259	272		319	340		421	820		391	701	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.8	42.8	0.0	45.2	44.3	0.0	20.3	23.1	0.0	19.1	28.3	0.0
Incr Delay (d2), s/veh	1.9	3.6	0.0	19.6	10.4	0.0	7.5	3.7	0.0	0.1	5.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.9	0.0	6.8	5.6	0.0	4.9	10.0	0.0	0.6	11.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	46.3	0.0	64.8	54.7	0.0	27.8	26.7	0.0	19.2	34.0	0.0
LnGrp LOS	D	D		E	D		C	C		B	C	
Approach Vol, veh/h		178	A		402	A		834	A		532	A
Approach Delay, s/veh		45.4			60.0			27.1			32.9	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	56.8		20.9	18.0	49.6		21.5				
Change Period (Y+Rc), s	5.0	7.0		5.0	5.0	7.0		5.0				
Max Green Setting (Gmax), s	8.0	44.0		16.0	13.0	39.0		20.0				
Max Q Clear Time (g_c+I1), s	3.5	26.1		7.9	13.3	27.0		14.8				
Green Ext Time (p_c), s	0.0	2.6		0.9	0.0	2.2		1.7				

Intersection Summary

HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	231	347	4	12	71
Future Vol, veh/h	34	231	347	4	12	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	165	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	91	91	65	65
Heavy Vehicles, %	2	4	6	2	0	0
Mvmt Flow	40	272	381	4	18	109

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	385	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.219	-	-
Pot Cap-1 Maneuver	1172	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1172	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1172	-	-	-	361	822
HCM Lane V/C Ratio	0.034	-	-	-	0.051	0.133
HCM Control Delay (s)	8.2	-	-	-	15.5	10.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	0.5

HCM 6th TWSC

3: Eastman Park Drive & Diamond Valley Drive

Recent PM

Intersection

Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	54	206	218	24	54	66
Future Vol, veh/h	54	206	218	24	54	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	250	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	224	237	26	59	72

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	263	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1301	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1301	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	11.1
HCM LOS			B

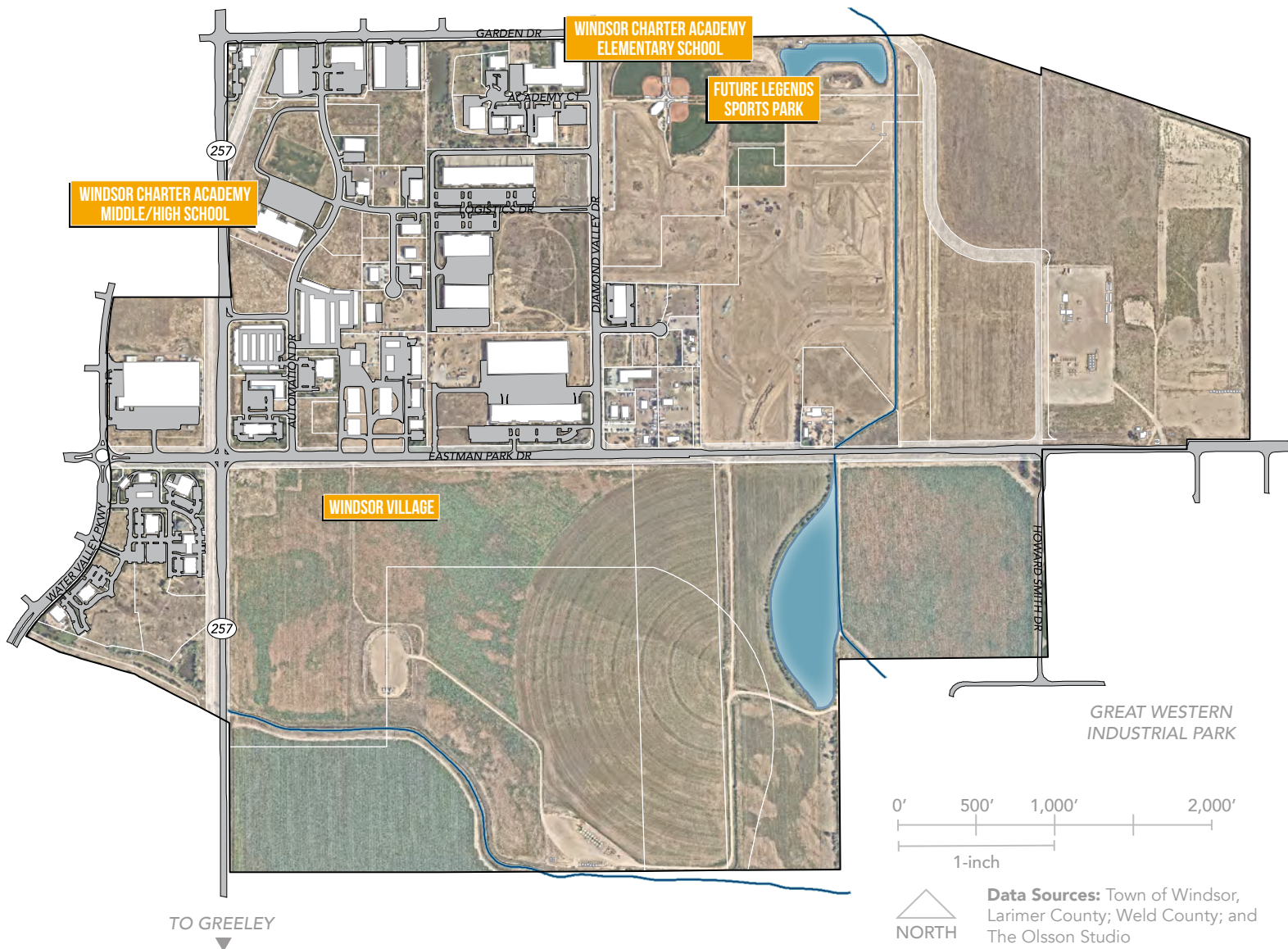
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1301	-	-	-	541	789
HCM Lane V/C Ratio	0.045	-	-	-	0.108	0.091
HCM Control Delay (s)	7.9	-	-	-	12.5	10
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	0.3

D HIGHEST AND BEST USE ANALYSIS

Appendix D - Highest and Best Use Analysis ...

APPENDIX D TEXT TO BE INSERTED
IN A FUTURE DELIVERABLE

PLANNING AREA





EASTMAN PARK DRIVE'S FUTURE IS BRIGHT...
WHAT'S AROUND THE CORNER?

WINDSOR VILLAGE

WINDSOR VILLAGE RENDERINGS COURTESY OF BROE REAL ESTATE | BROEREAL ESTATE.COM



EASTMAN PARK DRIVE CORRIDOR PLAN

The corridor is soon to be home to exciting mixed use and recreational uses, but what does that mean for the corridor as a whole? The Town of Windsor is about to embark on a planning process to answer just that. Learn more and stay engaged in the process by visiting windsorprojectconnect.com/eastman-park-drive-corridor-plan.



WINDSOR VILLAGE

BROE REAL ESTATE

- 49.5 acres of retail and mixed use
- Features a Great Green Lawn for gathering
- Energetic plazas with water features and fire elements
- Event spaces for markets, festivals, and concerts
- Outdoor dining and bicycle/pedestrian paths



FUTURE LEGENDS SPORTS PARK

GALLOWAY

- Eight natural grass diamond fields
- Ten synthetic multipurpose turf fields
- One professional multipurpose synthetic stadium
- Three onsite hotels with 325 rooms
- 80,000 square feet of retail, restaurants, and more



FINAL DEVELOPMENT SUBJECT TO CHANGE



MEMORANDUM

Date: February 22, 2021
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: Omar R. Herrera, Deputy Director of Engineering
Re: 7th Street Bridge Crossing Update
Item #: 2.

Background / Discussion:

Engineering and Local Metro District staff will give a brief update on the 7th St. bridge crossing design.

ATTACHMENTS:

- ▣ 7th Street Bridge Rendering

WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE

SITUATE IN SECTION 34, TOWNSHIP 10 NORTH, RANGE 67 WEST, OF THE 6TH PM, TOWN OF WINDSOR, COUNTY OF WELD, STATE OF COLORADO



NORRIS DESIGN
www.norris-design.com

1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
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DRAWN	DD
CHECKED	BR
DESIGNED	BR
FILE NAME	

WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE	ILLUSTRATIVE LANDSCAPE PLAN
---	-----------------------------

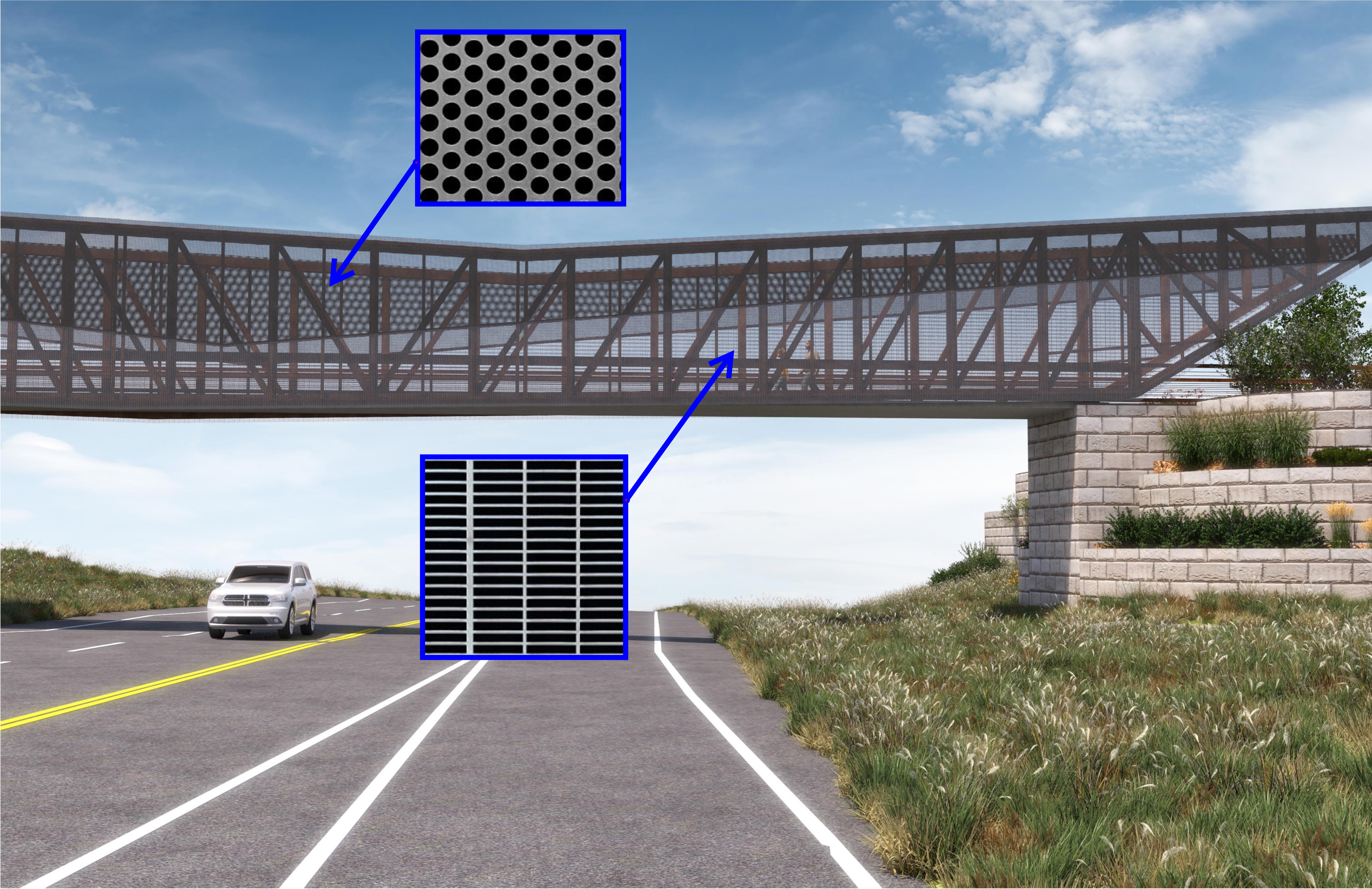
TST
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Phone: 970.226.0557

JOB NO.	803.0045.00
SCALE	1" = 50'
DATE	2021
SHEET	

3 OF 3

WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE

SITUATE IN SECTION 36, TOWNSHIP 10 NORTH, RANGE 65 WEST, OF THE 6TH PRINCIPAL TOWN OF WINDSOR, COUNTY OF WELD, STATE OF COLORADO



NORRIS DESIGN
www.norris-design.com

1101 Bannock Street
Denver, Colorado 80204
P 303.892.1166
F 303.892.1166



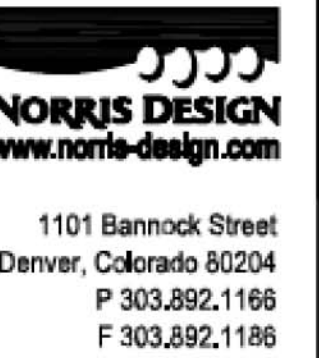
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DESIGNED BR
FILENAME

WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE
ILLUSTRATIVE LANDSCAPE PLAN



TST, INC.
CONSULTING ENGINEERS
745 Whalers Way
Suite 200 Fort Collins
Colorado 80525
Phone: 970.226.0557

JOB NO. 803.0045.00
SCALE 1" = 50'
DATE 2021
SHEET 3 OF 3



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WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE

ILLUSTRATIVE LANDSCAPE PLAN



TST, INC.
CONSULTING ENGINEERS
748 Whalers Way
Suite 200 Fort Collins
Colorado 80525
Phone: 970.226.0557

OB NO. 803.0045.00

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DATE 2021

SHEET

WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE

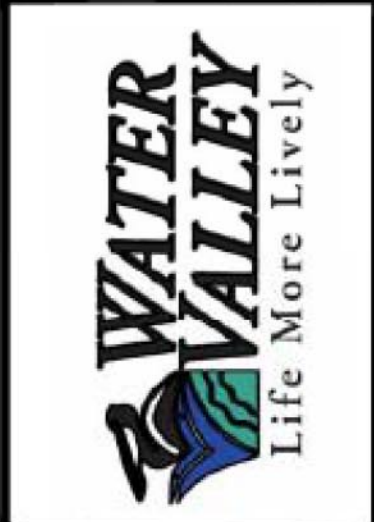
SITUATE IN SECTION 34, TOWNSHIP 6 NORTH, RANGE 67 WEST, OF THE 6TH PM, TOWN OF WINDSOR, COUNTY OF WELD, STATE OF COLORADO





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WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE	ILLUSTRATIVE LANDSCAPE PLAN
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CONSULTING ENGINEERS
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Phone: 970.226.0557

JOB NO.	803.0045.00
SCALE	1" = 50'
DATE	2021
SHEET	3 OF 3

WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE

SITUATE IN SECTION 34, TOWNSHIP 37 N, RANGE 101 W, WEST 1/4 OF THE 34TH PM, TOWN OF WINDSOR, COUNTY OF WELD, STATE OF COLORADO



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WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE	ILLUSTRATIVE LANDSCAPE PLAN
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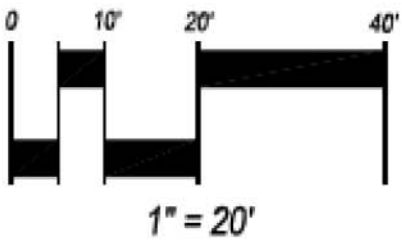
JOB NO.	803.0045.00
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DATE	2021
SHEET	3 OF 3

WATER VALLEY 7TH STREET PEDESTRIAN BRIDGE

SITUATE IN THE TOWN OF
WINDSOR, COUNTY OF WELD, STATE OF COLORADO



ILLUSTRATIVE LANDSCAPE PLAN



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DATE 2021
SHEET

3 of 3



MEMORANDUM

Date: February 22, 2021
To: Mayor and Town Board
Via: Shane Hale, Town Manager
From: Karen Frawley, Town Clerk
Re: Future Meeting Agenda
Item #: 3.

ATTACHMENTS:

- ▢ Future Meetings Agenda



FUTURE TOWN BOARD MEETINGS

March 1, 2021 6:00 p.m.	Town Board Work Session COGCC Rule Making Update Jacoby Farm Halfway House Grant Update
March 8, 2021 5:30 p.m.	Town Board Work Session Board-Manager-Attorney Monthly Meeting Public Art Commission Proposal
March 8, 2021 7:00 p.m.	Town Board Regular Meeting
March 15, 2021 6:00 p.m.	Town Board Work Session Windsor Water Resources Overview
March 22, 2021 6:00 p.m.	Town Board Work Session Broadband and Allo
March 22, 2021 7:00 p.m.	Town Board Regular Meeting
April 5, 2021 6:00 p.m.	Town Board Work Session Wastewater Treatment Plant Expansion Discussion Financing Options
April 12, 2021 5:30 p.m.	Town Board Work Session Board-Manager-Attorney Monthly Meeting Code Amendments for Reimbursements
April 12, 2021 7:00 p.m.	Town Board Regular Meeting
April 19, 2021 6:00 p.m.	Town Board Work Session Wastewater Treatment Plant Site Visit and Bio Solid Project Update
April 26, 2021 6:00 p.m.	Town Board Work Session Comprehensive Plan Review
April 26, 2021 7:00 p.m.	Town Board Regular Meeting
May 3, 2021 6:00 p.m.	Town Board Work Session
May 10, 2021 5:30 p.m.	Town Board Work Session Board-Manager-Attorney Monthly Meeting

May 10, 2021
7:00 p.m.

Town Board Regular Meeting

May 17, 2021
6:00 p.m.

Town Board Work Session

May 24, 2021
6:00 p.m.

Town Board Work Session

May 24, 2021
7:00 p.m.

Town Board Regular Meeting

Future Work Session Topics

- Joint Meeting with Town of Windsor, Town of Severance, Fire District and School District – Tentative for Spring of 2021
- PBB
- Urban3 Analysis Preview Presentation (May)
- Telecom Code (Pending FCC Rules)
- Regional Water Treatment Plant Site
- Park Fee Study
- Proportional services and amenities for planned population
- Economic development/retail needs based on population levels (following retail assessment)
- Walnut Bikeway Back-in Parking Pilot Program at Town Hall
- Poudre Express bus stop pads budget