



TRANSPORTATION MASTER PLAN

WEST POINT, UTAH

AUGUST, 2022





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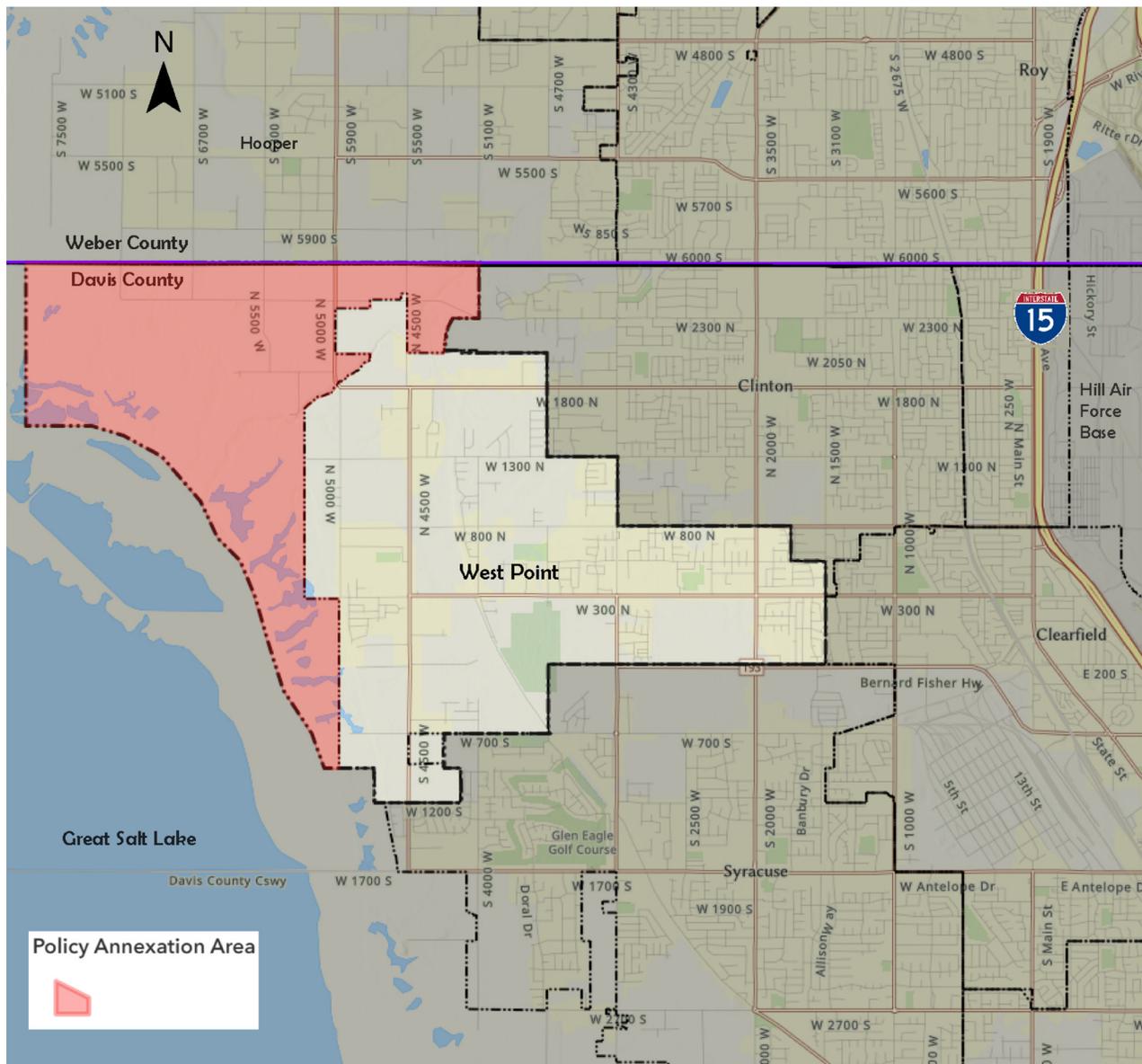
INTRODUCTION

A. OVERVIEW

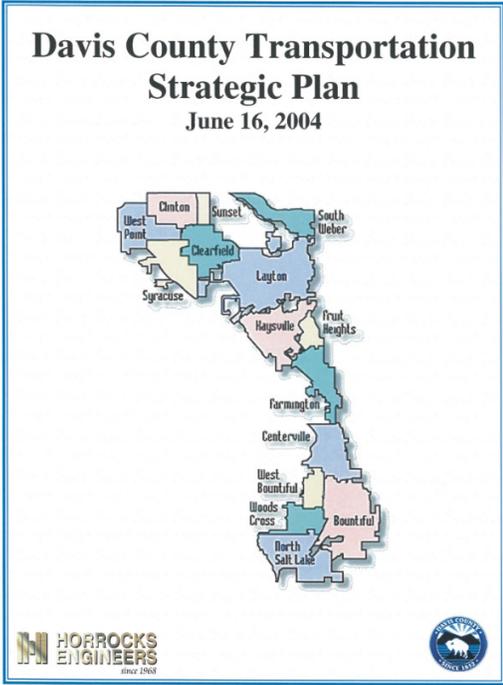
West Point City is a rapidly growing suburban community located in Davis County, Utah about 30 minutes north of Salt Lake City along the shore of the Great Salt Lake. West Point is bordered by Syracuse to the south, Hooper to the north and Clearfield and Clinton to the east. West Point is located west of I-15, a major freeway facility. West Point has experienced steady population growth over time. The most recent 2020 census shows that West Point has a population of 10,963 and has experienced a population increase of approximately 1,500 since the previous 2010 survey.

This Transportation Master Plan (TMP) guides transportation infrastructure investments for the future by addressing several goals identified by West Point City. Key to planning for West Point's transportation needs is an understanding of the roadway network's existing and future operation. Once existing conditions are established, roadway conditions are forecasted to future year 2032 and 2050 to identify deficiencies in the roadway network that may occur due to land development and the resulting population growth.

This TMP also covers City transportation management-related best practices, such as access management standards, safety analyses, identifying policy and ordinance changes, and a discussion regarding the future West Point downtown Main Street.

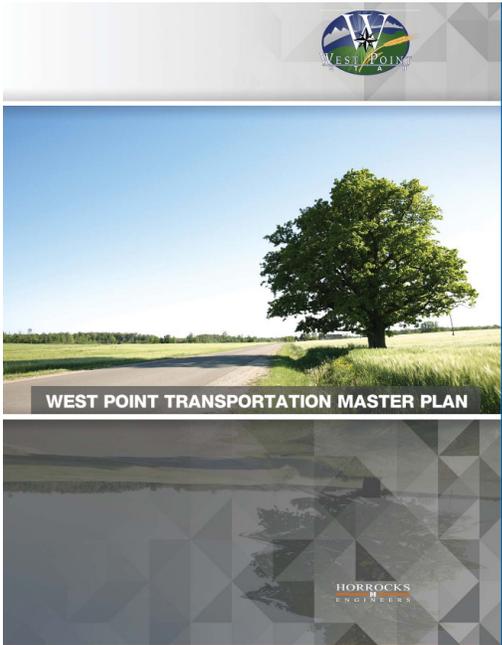


B. PREVIOUS STUDIES



Davis County Transportation

The Davis County Transportation Strategic Plan was completed in 2004. The Strategic Plan lists critical transportation projects planned in Davis County. The only project pertaining to West Point City is the West Davis Corridor. The Transportation plan also includes socioeconomic projections to future year 2030.



West Point Transportation Master Plan

A Transportation Master Plan (TMP) for West Point was completed in 2015. New population growth forecasts, transportation network changes, and city development plans have prompted the need for an updated TMP to be completed.



North Davis County Active Transportation Plan

The North Davis County Active Transportation Plan was completed in 2021. The North Davis County Active Transportation Plan lists future active transportation related projects, many of which are proposed to be built in West Point City. A completed discussion of these projects is included in the Active Transportation section of this TMP.

WEST POINT CHARACTERISTICS

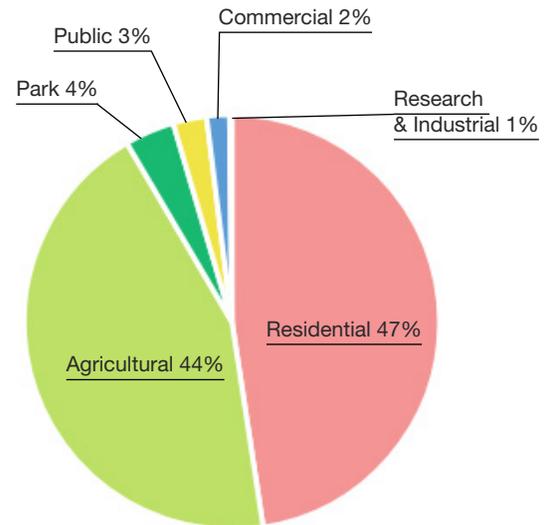
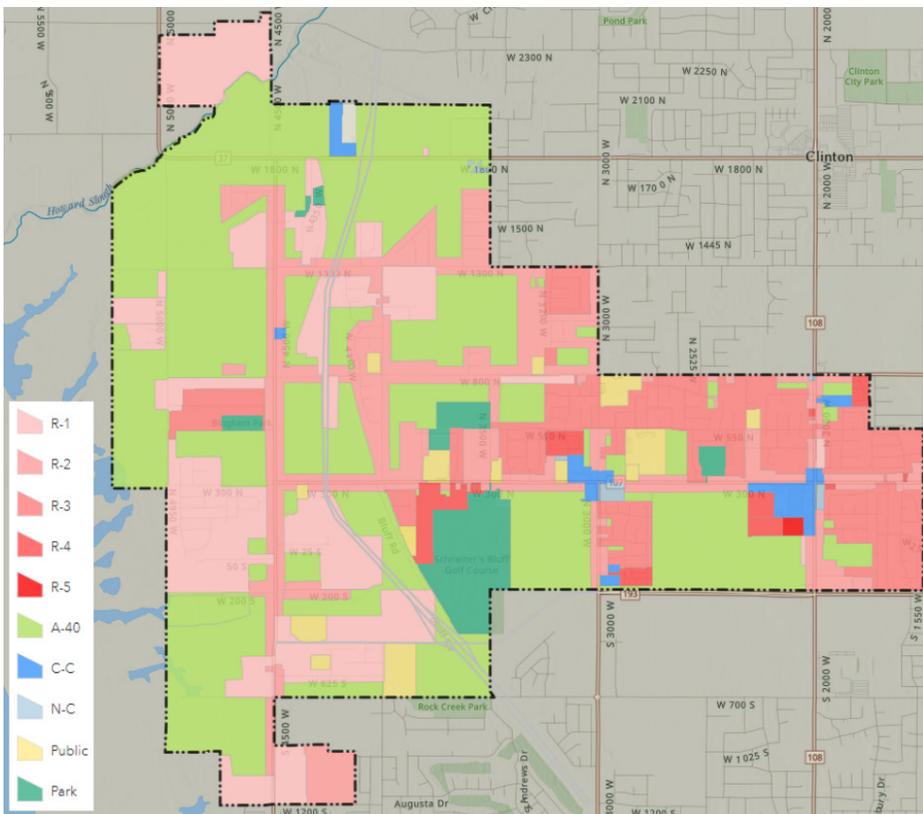
A. PURPOSE

The West Point Characteristics section discusses the existing and future land use in West Point City. Demographic data, including population forecasts, are analyzed and explained.

B. LAND USE

Land use is key to understanding the needs of the existing and future transportation system. The size of future transportation facilities is directly tied to the density and types of future land uses within West Point. If West Point were to stay mostly low-density single family residential there would likely be little demand for future roadway widening projects, however as commercial nodes and denser housing developments happen greater transportation infrastructure is needed.

Currently, West Point is mostly single family residential with a small node of commercial development at 3000 West & 300 North and a much larger commercial/apartment complex node on the southwest corner of 2000 West (SR-108) & 300 North.

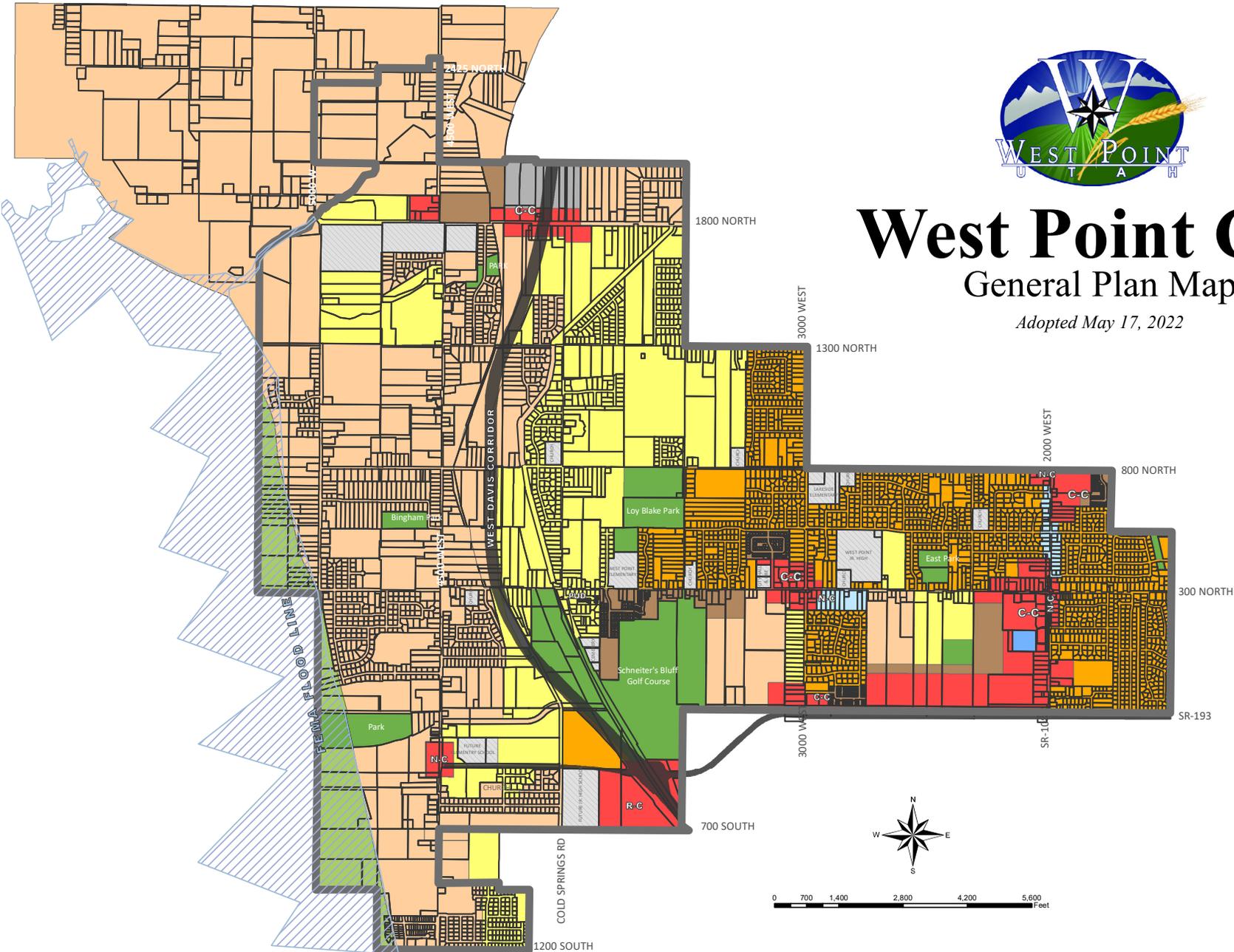


While West Point is expected to continue being mostly a residential community, there is potential for significantly greater commercial development above what exists currently. The West Point Future Land Use Plan (May 2022) is shown in the figure below. Future commercial land uses are expected to continue on the southwest corner of 2000 West (SR-108) & 300 North and move south and west. Additionally, commercial developments are expected at the two future West Davis Highway interchanges (SR-37 & and SR-193).

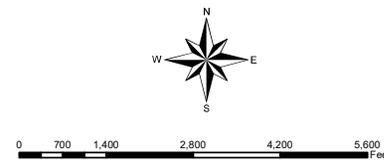


West Point City General Plan Map

Adopted May 17, 2022



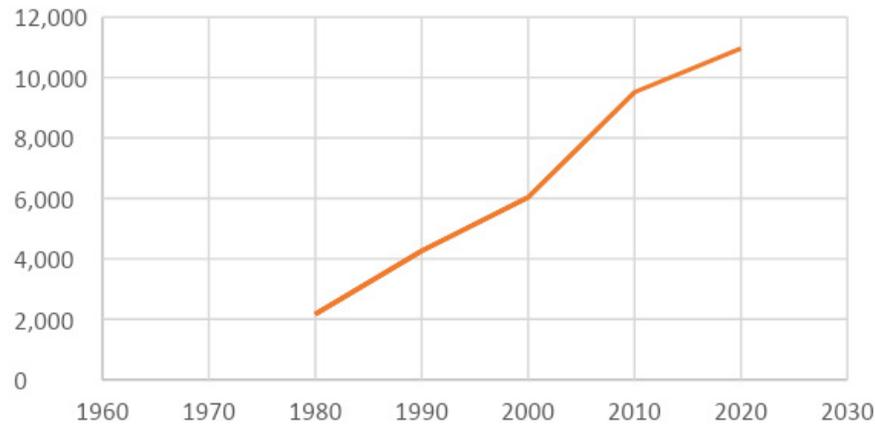
- R-1** (RESIDENTIAL 2.2 UNITS PER ACRE - 12,000 SQ. FT.)
- R-2** (RESIDENTIAL 2.7 UNITS PER ACRE - 10,000 SQ. FT.)
- R-3** (RESIDENTIAL 3.6 UNITS PER ACRE - 9,000 SQ. FT.)
- R-4** (RESIDENTIAL 8.0 UNITS PER ACRE)
- R-5** (RESIDENTIAL 20 UNITS PER ACRE)
- A-40** (AGRICULTURAL 1 UNIT PER ACRE)
- A-5** (AGRICULTURAL AND FARM INDUSTRY 1 UNIT PER 5 ACRES)
- N-C** (NEIGHBORHOOD COMMERCIAL)
- C-C** (COMMUNITY COMMERCIAL)
- R-C** (REGIONAL COMMERCIAL)
- P-O** (PROFESSIONAL OFFICE)
- R/I-P** (RESEARCH AND INDUSTRIAL PARK)
- PARKS / RECREATIONAL**
- PUBLIC / INSTITUTIONAL**





C. DEMOGRAPHICS

West Point has experienced steady population growth over the past 40 years. The most recent 2020 census shows that West Point has a population of 10,963 or an increase of approximately 1,500 since the previous 2010 survey. Historic population census data is shown below in Table 1.



The population of West Point is expected to increase by 85% by 2050. Table 2 below shows a breakdown of expected population growth between 2022 and 2050.

Year	Population
1980	2,170
1990	4,258
2000	6,033
2010	9,511
2020	10,963

Year	Population	% Change
2022	12,607	-
2025	14,104	11.9%
2030	16,047	13.8%
2035	18,069	12.6%
2040	19,996	10.7%
4045	21,756	8.8%
2050	23,280	7.0%

**Population growth
from 2010 to 2020 = 15.3%**

**Total estimated population growth
from 2022 to 2050 = 85%**

TRANSPORTATION NETWORK

A. PURPOSE

Key to planning for West Point’s transportation needs is an understanding of the roadway network’s current conditions. Once existing conditions are established, roadway conditions are forecasted to future year 2032 and 2050 to identify deficiencies in the roadway network that may occur due to land development and the resulting population growth. A capital facilities plan with a phased list of improvements is provided to address roadway network deficiencies.

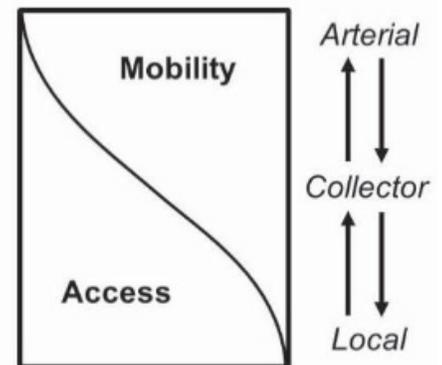
B. FUNCTIONAL CLASSIFICATION

The roadway system has a hierarchy to it based on roadway attributes such as speed and access. The higher a street classification, the more mobility it provides with limited access. Lower street classifications have less mobility, but more access.

The functional classification of a roadway indicates the road’s role within the transportation system, which in turn helps determine when increased travel demand or change in the road’s use could lead to negative impacts on its intended function in terms of speed, capacity, and relationship to existing and future land use (FHWA, 2013).

The four major classifications of West Point roadways used in this TMP are arterials, major collectors, minor collectors, and local streets:

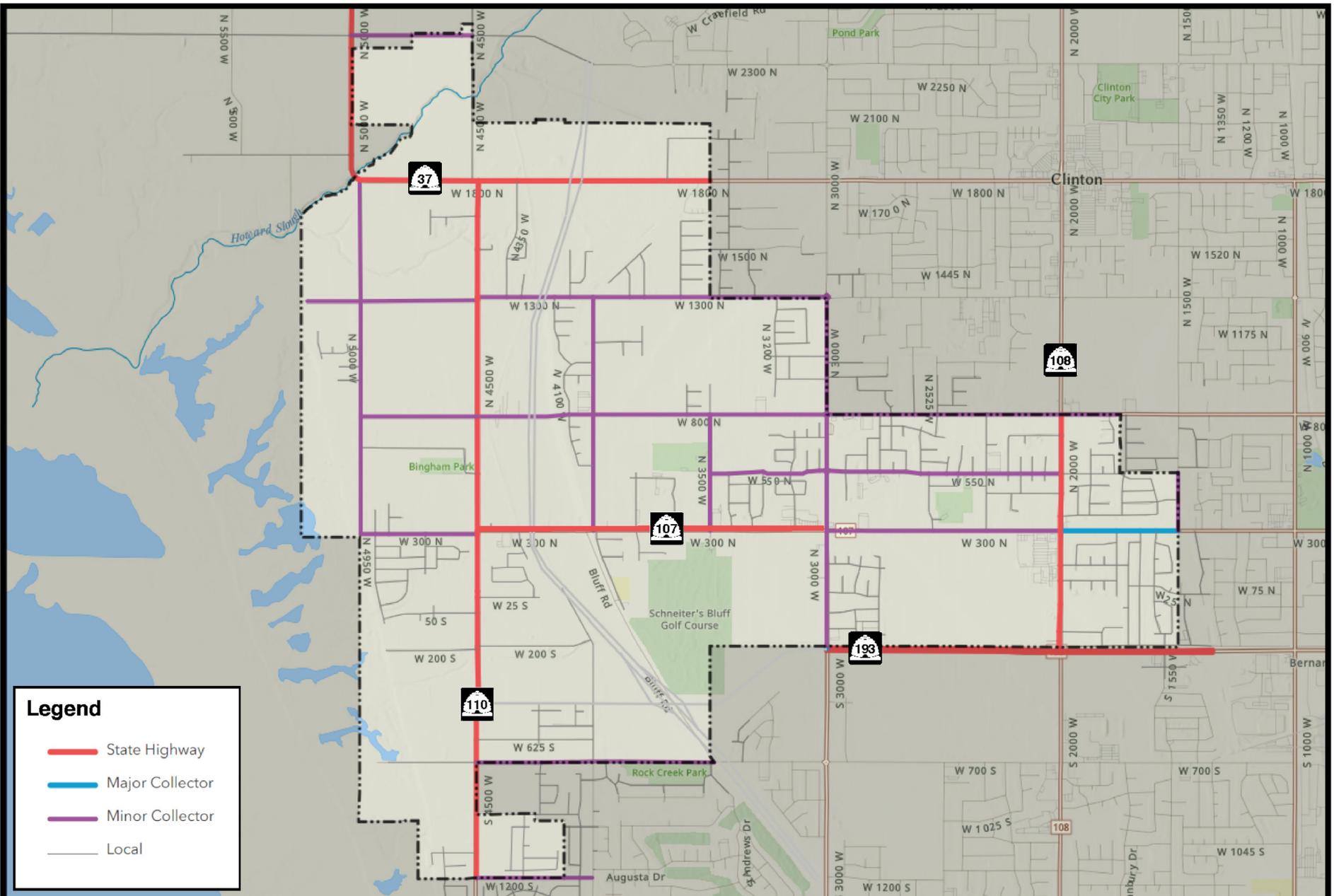
- **Arterial (State Highway)** — An arterial roadway has high mobility and little access. Arterials have typical ROW widths between 80 and 100 feet and typically have between five to seven travel lanes. All arterial roadways in West Point are state owned highways.
- **Major Collector** — A collector roadway provides both mobility and access. Collectors connect local and arterial roadways. Major Collectors have typical ROW widths of 66 feet and typically have a three-lane cross section.
- **Minor Collector** — A collector roadway provides both mobility and access. Collectors connect local and arterial roadways. Major Collectors have typical ROW widths of 66 feet and typically have a two-lane cross section.
- **Local** — A local roadway provides full access to adjacent land uses but allows for little mobility. Local roads have typical ROW widths between 60 and 50 feet and have two travel lanes. The local roads classification includes minor local and private roadways.



The current functional classification map for West Point is shown below in Figure 1. The cross sections for each functional classification are shown below in Figure 2 through Figure 6 and are summarized in Table 3. Cross sections for arterials are not provided, as all arterials in West Point are owned and operated by UDOT.

Table 3: West Point Typical Cross Sections

Functional Classification	Number of Lanes	ROW Width (ft)
Major Collector	3	66
Minor Collector	2	66
Local	2	60
Minor Local	2	58
Private	2	50



Legend

- State Highway
- Major Collector
- Minor Collector
- Local



Existing (2022) Roadway Functional Classification
 ←—————→
 West Point City Transportation Master Plan



DATE:	4/21/2022
PROJECT:	21-255
Figure 1	

FIGURE 2

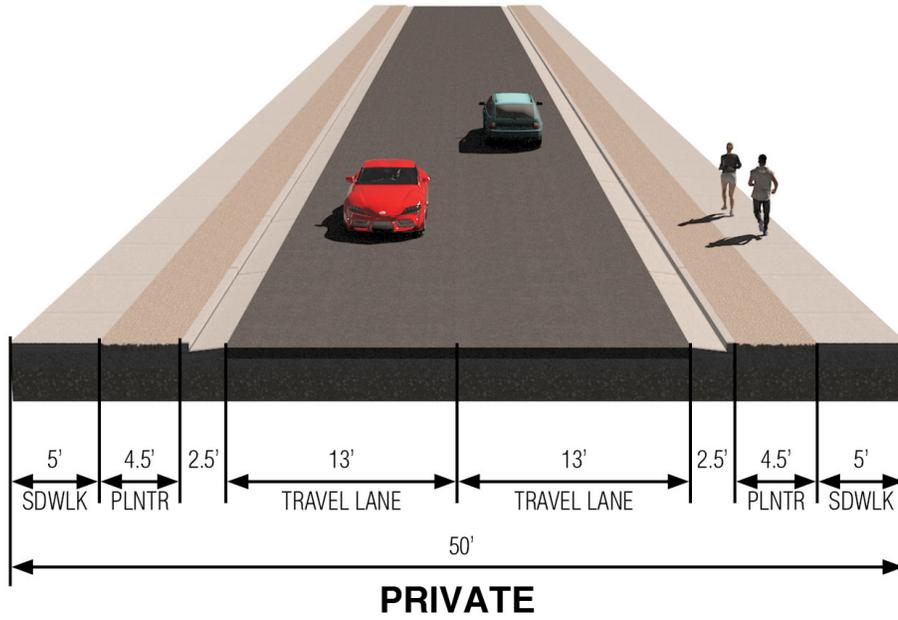


FIGURE 3

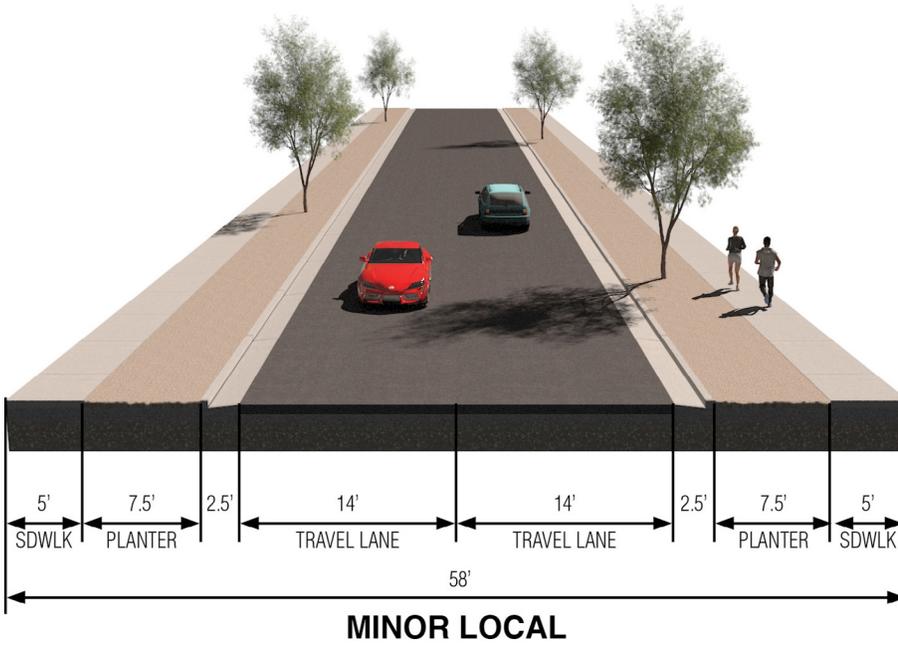


FIGURE 4

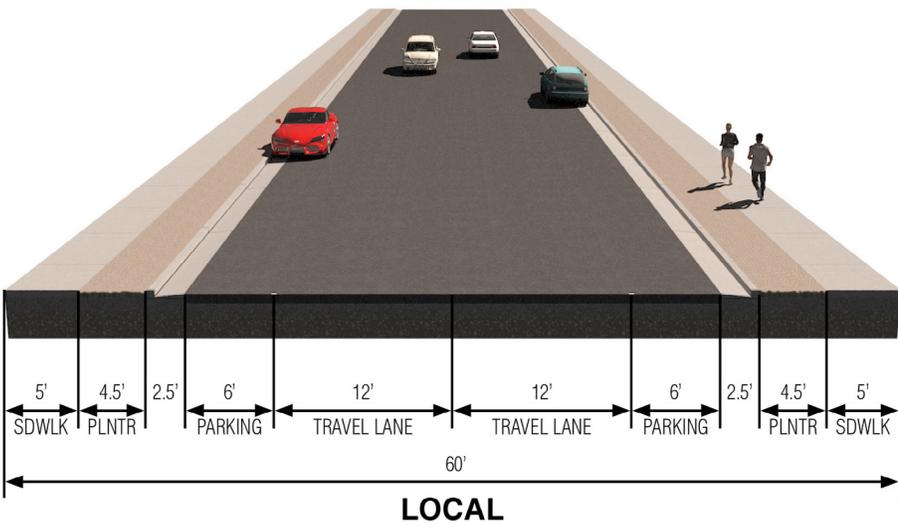


FIGURE 5

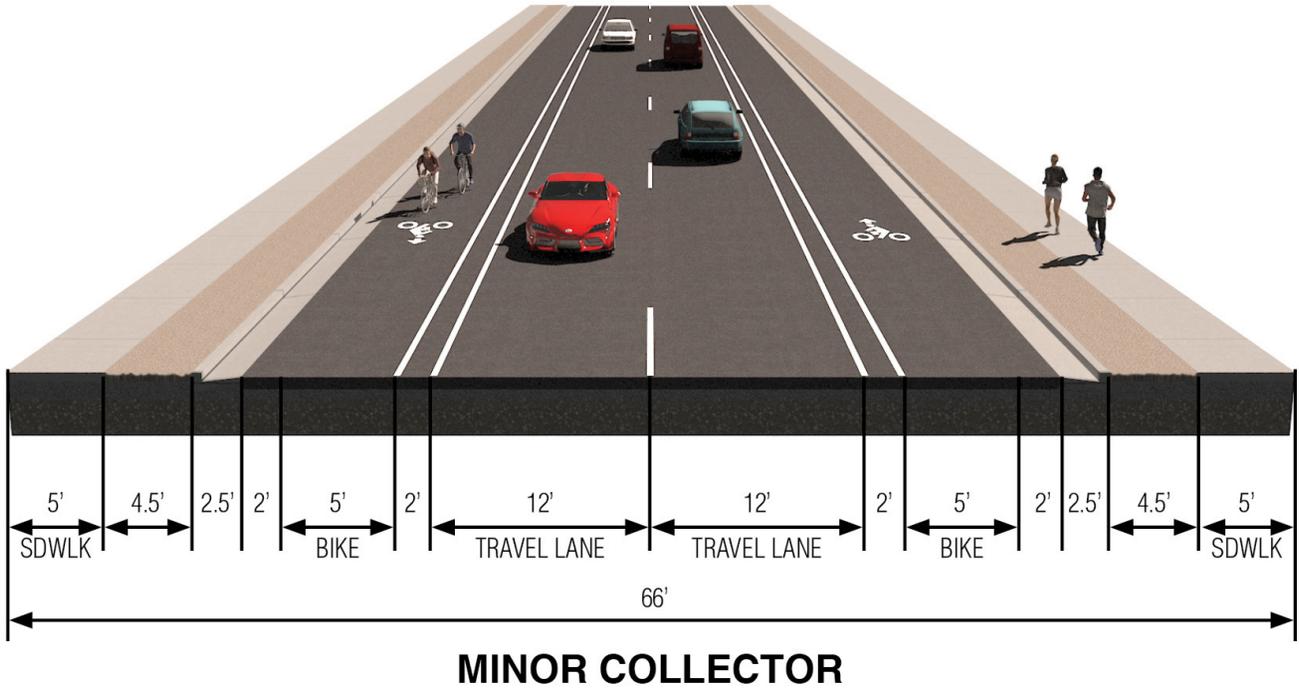
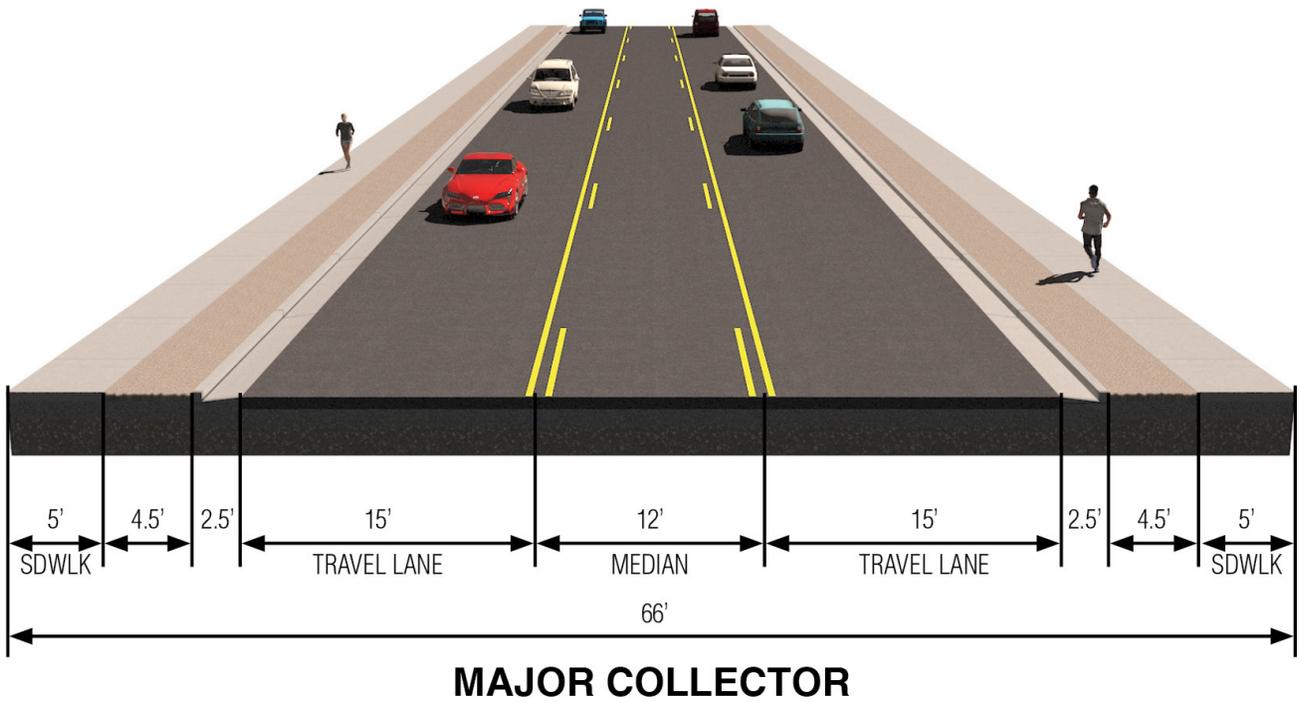


FIGURE 6





C. LEVEL OF SERVICE ANALYSIS

Roadway traffic flow is measured based on the Level of Service (LOS). LOS is a planning term that describes the roadways operating performance. LOS is measured quantitatively and reported on a scale from A to F, with A representing free-flow conditions and F representing traffic congestion. Calculating a LOS for a roadway segment is based on volume-to-capacity ratios. The volume is the Average Daily Traffic (ADT) for the given roadway segment and the capacity is based on factors such as lane count, functional classification, and signal spacing. Level of service descriptions for each LOS letter designation and the accompanying range of volume-to-capacity ratios is shown below in Table 4 and 5.

Table 4: Suburban Arterial LOS Capacity Criteria (veh per day)

Lanes	LOS A-C	LOS D	LOS E	LOS F
3	≤ 11,500	11,500 - 13,400	13,400 - 16,500	≥ 16,500
5	≤ 26,500	26,500 - 30,500	30,500 - 39,000	≥ 39,000
7	≤ 40,000	40,000 - 46,000	46,000 - 59,000	≥ 59,000

Table 5: Suburban Collector LOS Capacity Criteria (veh per day)

Lanes	LOS A-C	LOS D	LOS E	LOS F
2	≤ 9,700	9,700 - 12,100	12,100 - 14,500	≥ 14,500
3	≤ 10,800	10,800 - 13,000	13,000 - 16,100	≥ 16,100

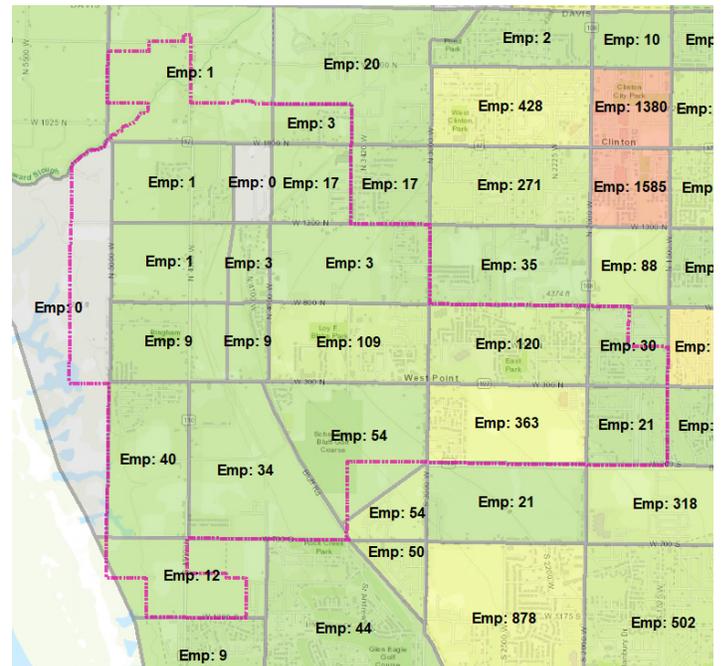
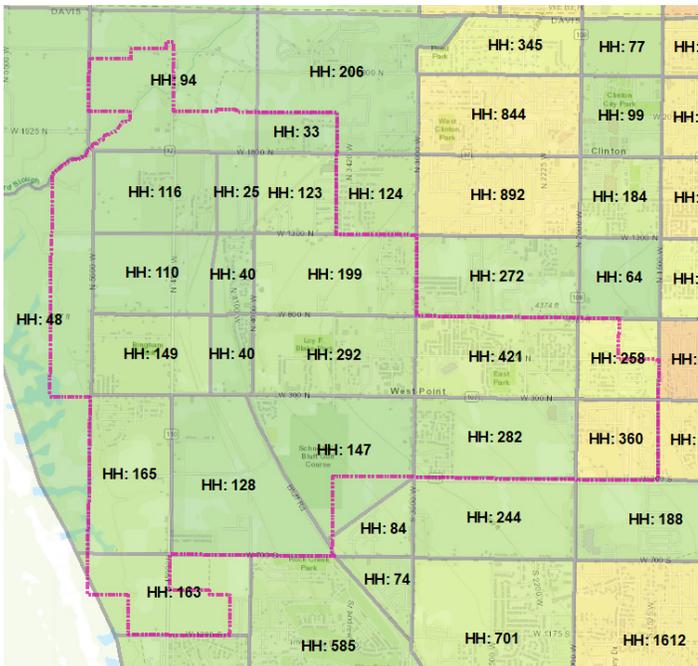
For the purposes of this study, a minimum overall roadway performance of LOS C is considered acceptable. If LOS D, E or F for a roadway is calculated, explanations and/or mitigation measures are presented.

D. EXISTING (2022) CONDITIONS

An existing conditions level of service analysis, based on existing land use, has been performed using various data sources explained below to produce existing Average Daily Traffic (ADT) estimates.

a. Existing Land Use

Base year (2020) household and employment estimates were developed for the West Davis Highway EIS and then refined for this transportation master plan. Estimates were adjusted to match 2020 census populations. As shown in the figures below household and employment densities are fairly low in most of West Point, with the exception of the eastern edge.



b. Existing (2022) Volumes

Tube count data were collected at 9 locations in West Point on Tuesday, February 1st, 2022:

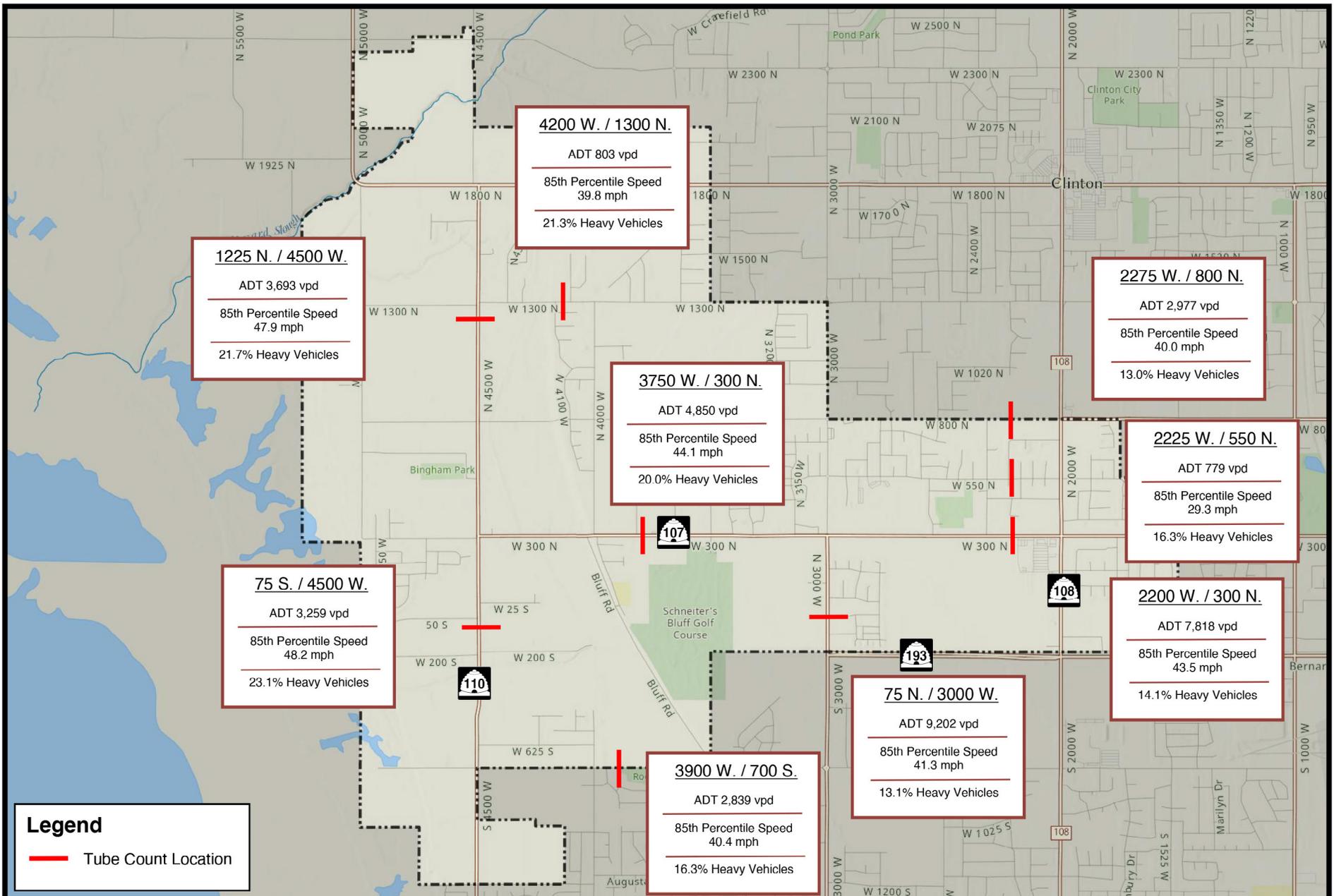
- 75 N / 3000 W
- 75 S / 4500 W
- 1225 N / 4500 W
- 2200 W / 300 N
- 2225 W / 550 N
- 2275 W / 800 N
- 3750 W / 300 N
- 3900 W / 700 S
- 4200 W / 1300 N

Weather was good for the duration of the tube counts. Results from the tube counts are displayed in Figure 7.

c. Existing (2022) LOS

Existing ADT provided by the travel demand model from Utah's Unified Transportation Plan provide estimates for ADT on the regionally significant roadways in West Point City. ADT data from Automated Traffic Signal Performance Metrics (ATSPM) was used to verify the accuracy of estimates provided by Utah's Unified Transportation Plan. In addition, the ADT values have been balanced to reflect the volume data collected from the tube counts. The resulting balanced ADT volumes are shown below in Figure 8.

The existing (2022) LOS has been calculated using criteria from Table 4 and 5, results are shown below in Figure 8. As shown in Figure 8, all roadways in West Point are currently operating at an acceptable LOS C or higher.



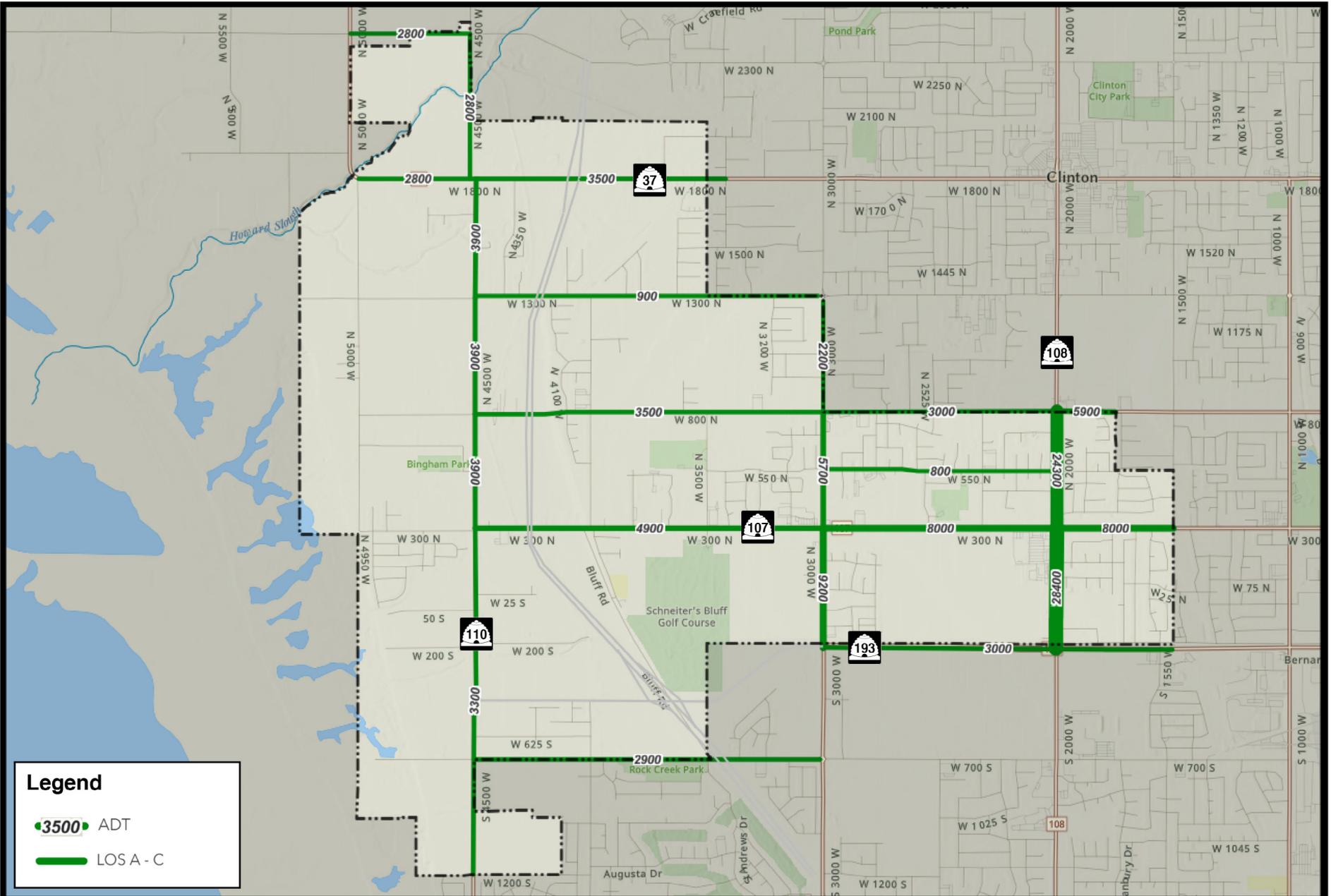
Legend
 Tube Count Location



Tube Count Data (February 1st, 2022)
 West Point City Transportation Master Plan



DATE:	4/22/2022
PROJECT:	21-255
Figure 7	



Existing (2022) ADT and LOS
 West Point City Transportation Master Plan



DATE:	4/22/2022
PROJECT:	21-255
Figure 8	



E. PUBLIC TRANSIT

Existing Transit Service

Public transit typically includes buses, light rail, and shuttle routes. Currently UTA bus Route 626 is the only bus route that services West Point City. Route 626 runs from the Clearfield FrontRunner Station, passes through West Point City on 2000 West, and ends at 5500 South and 3500 West in Hooper. There are no other transit services offered at the City.

Future Transit Service

West Point City should be actively involved in working with UTA, UDOT and the WFRC to support transit as a viable and efficient transportation mode in the City. Planning and lobbying efforts will help procure funds to support the development and maintenance of a sustainable transit system.

The Wasatch Front Regional Council (WFRC) regional transportation plan has transit improvements for the City's bus route along 2000 West currently listed in their long-range plan. Improvements aren't expected to occur until between 2041 and 2050. Figure 9 below shows the WFRC transit projects planned in West Point city boundaries.

With the construction of new major transportation corridors such as the West Davis Corridor and SR-193 extension, there may be opportunities for new transit services such as a Bus Rapid Transit (BRT) or Express Bus system. Additional transit routes may also serve the mixed-use development planned along the new city center boulevard.

F. ACTIVE TRANSPORTATION

Existing Active Transportation

Active transportation includes human-powered mobility such as biking and walking. Providing safe and convenient alternative transportation facilities is essential in providing active and equitable multimodal transportation. Existing active transportation facilities include:

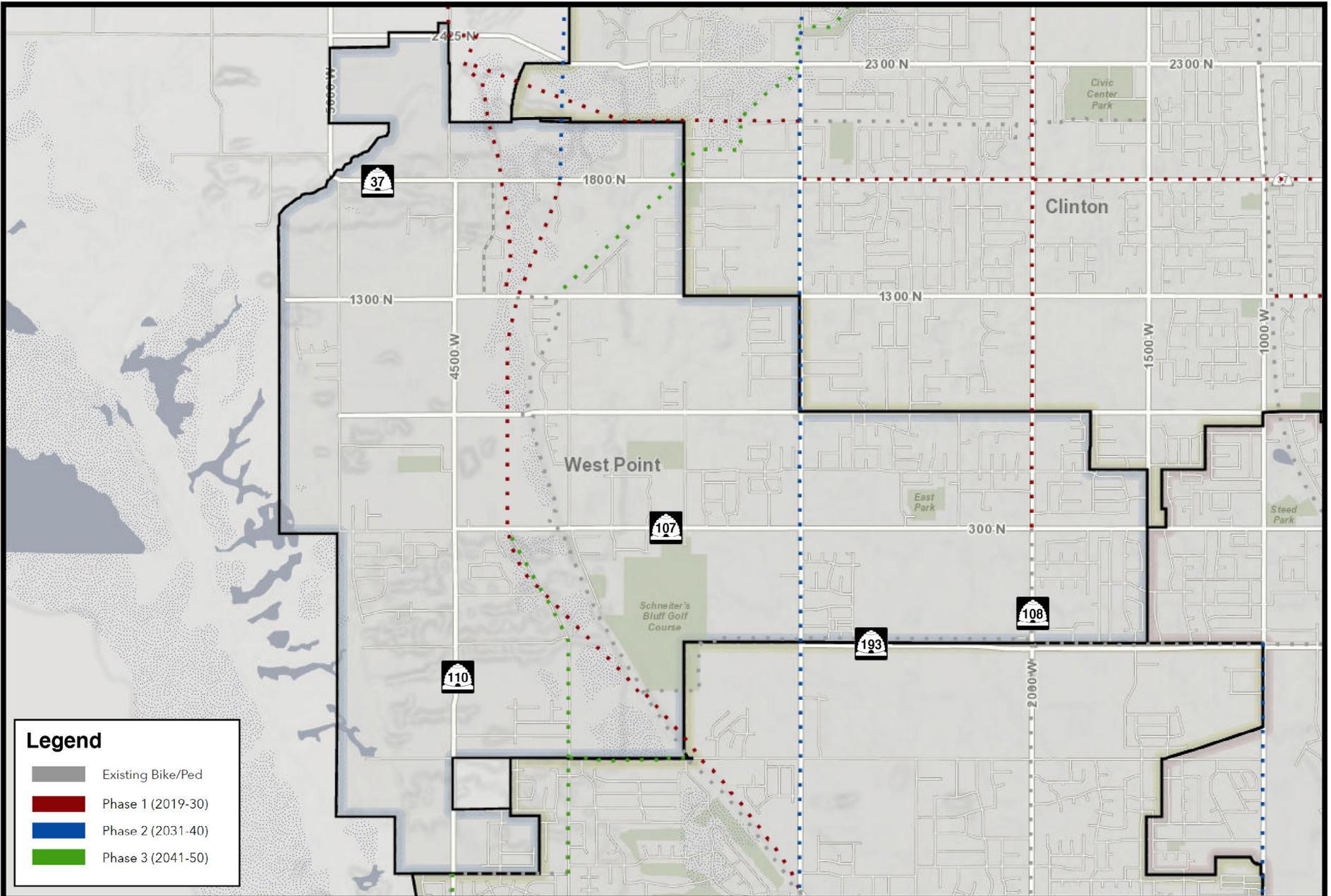
- Emigration Trail - Emigration Trail is a north/south running shared use path that begins in Syracuse and ends at 1300 N in West Point.
- SR-193 Trail – The SR-193 trail is a shared use path that runs from the Emigration Trail to the Denver & Rio Grande Western Rail Trail.
- 2000 West Bike Lane – The 2-mile bike lane runs along 2000 West from 300 N to Antelope Dr. in Syracuse.

Future Active Transportation

The WFRC regional transportation plan lists the following active transportation projects in the long-range plan for West Point City:

- Emigrant Trail – Improvements to the shared use pathway following the alignment of the West Davis Corridor to 1800 N, construction expected to begin between 2022 and 2030.
- Emigrant Trail Extension – A shared use pathway from 1300 N to 4500 W, construction expected to begin between 2022 and 2030.
- Emigrant Trail Extension – A shared use pathway from 1800 N to the Weber County line, planned to be built between 2031 and 2040.
- 4000 West – A shared lane project along 4000 West from 300 N to 1200 S, planned to be built between 2041 and 2050.
- Layton Canal – A shared use path to be built from 1300 N to Midland Drive in Roy, planned to be built between 2041 and 2050.

The proposed Minor Collector cross section allow for the addition of bicycle lanes. Bicycle facilities are an essential part of a connected transportation network and should be implemented when feasible. Incomplete roadway segments (i.e. missing shoulders) pose a serious hazard to bicyclists, therefore roadways should be complete along the entire length of the bicycle lane. Figure 10 below shows the WFRC active transportation projects planned in West Point city boundaries.



Legend

- Existing Bike/Ped
- Phase 1 (2019-30)
- Phase 2 (2031-40)
- Phase 3 (2041-50)



WFRC Regional Plan - Active Transportation Projects
 West Point City Transportation Master Plan



DATE:	4/22/2022
PROJECT:	21-255
Figure 10	

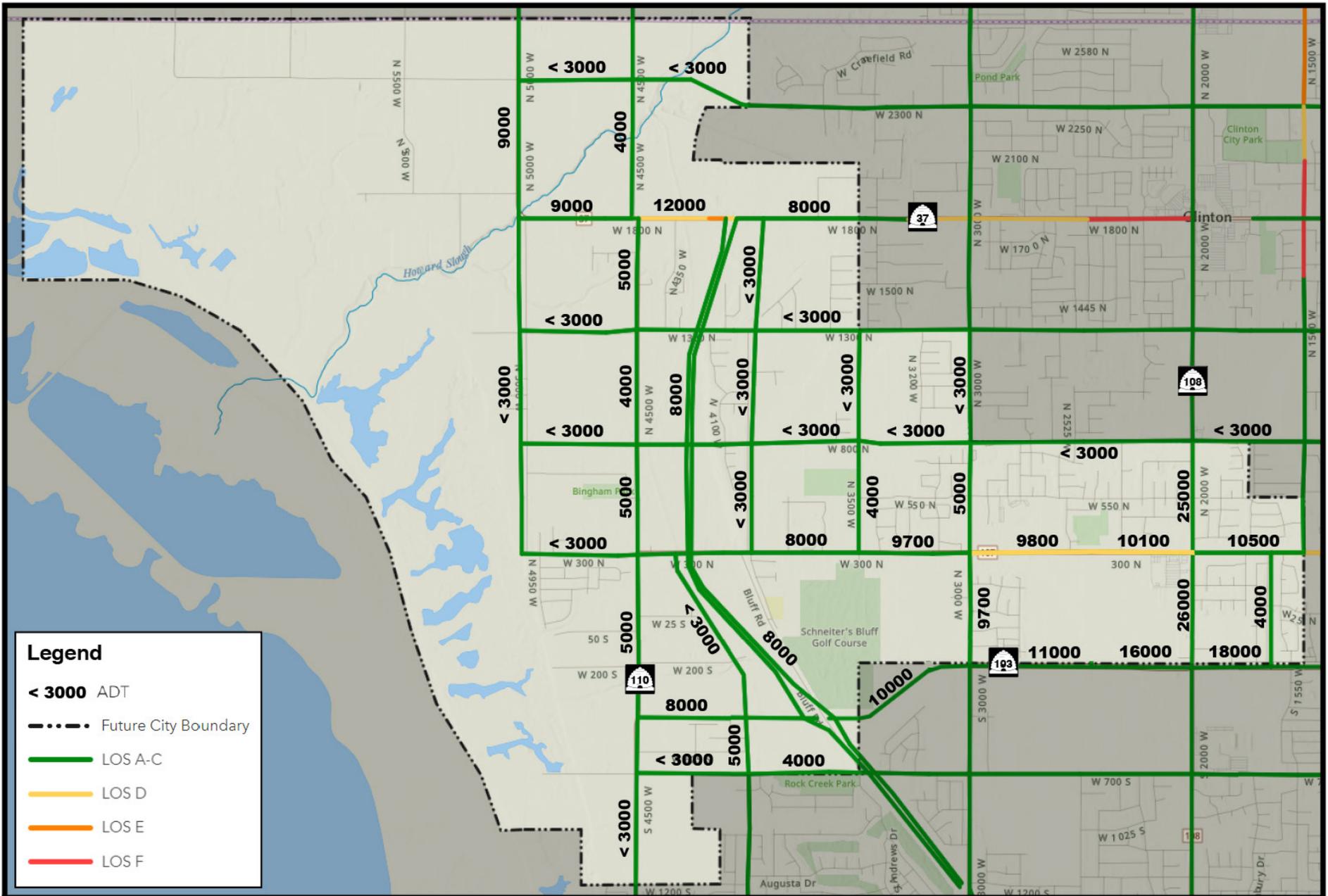


G. TRAVEL DEMAND MODEL

The travel demand modeling was performed using the latest version (v8.3.2, dated November 10, 2021) of the Wasatch Front Regional Council (WFRC) model. This model was then merged with the roadway network, transportation analysis zones (TAZs), and socio-economic data from the model developed for the West Davis Highway Environmental Impact Statement. Finally, additional edits were made to this merged model to include all relevant details within West Point. Travel demand modeling was performed in Bentley Cube version 6.5.0.

Details regarding modeling specifics such as roadway network, demographics, and scenario testing are described in later sections of the report.





Legend

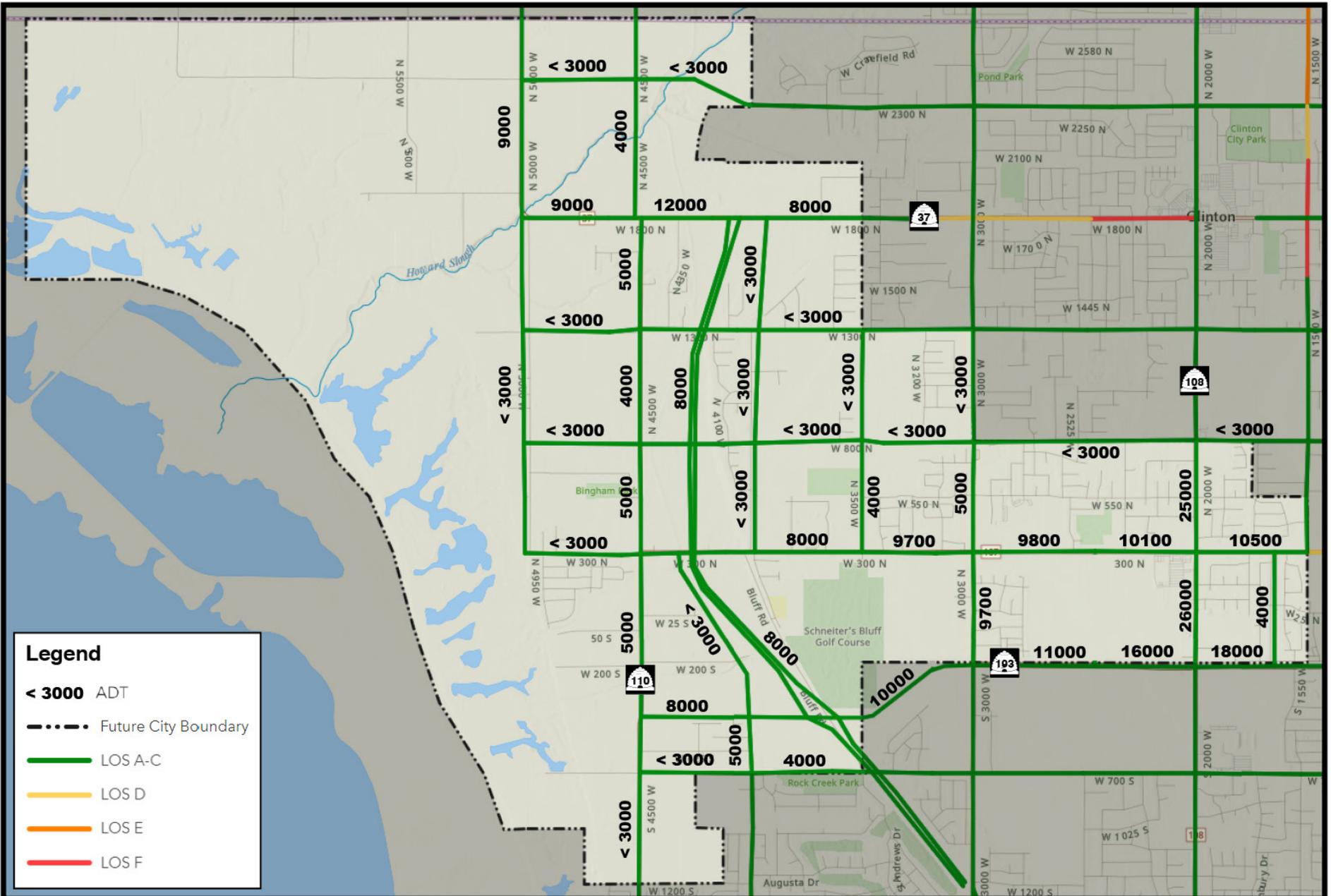
- < 3000 ADT
- Future City Boundary
- LOS A-C
- LOS D
- LOS E
- LOS F



Future (2032) ADT and LOS - No Build
 West Point City Transportation Master Plan



DATE:	4/22/2022
PROJECT:	21-255
Figure 11	



Legend

- < 3000 ADT
- Future City Boundary
- LOS A-C
- LOS D
- LOS E
- LOS F



Future (2032) ADT and LOS - Build
 West Point City Transportation Master Plan



DATE:	4/22/2022
PROJECT:	21-255
Figure 12	

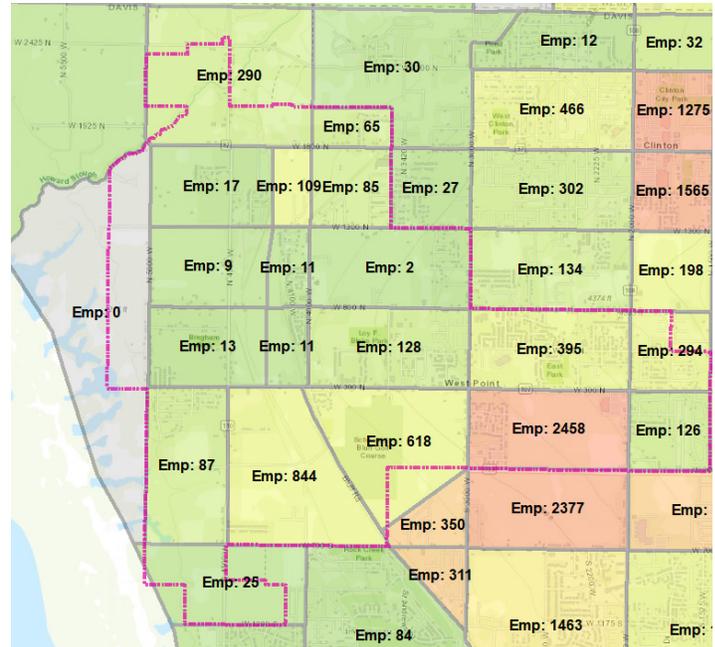
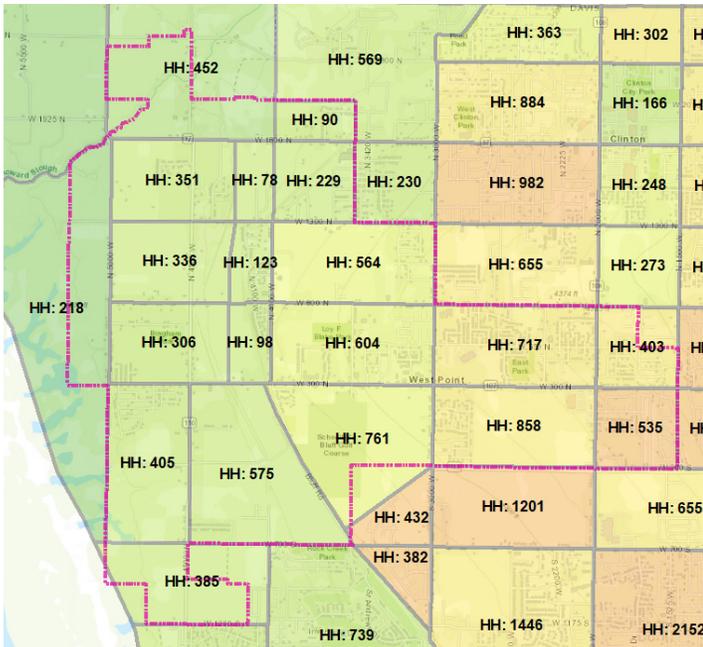
I. FUTURE (2050) CONDITIONS

a. West Davis corridor

By 2050 the RTP indicates that West Davis Corridor will be 2 lanes in each direction up to SR-37 (1800 North) with a grade separated interchange at SR-193.

b. Future land use

West Point's population is projected to be 23,280 by 2050. Household projections were adjusted to match this population. Household distribution across TAZs were projected based on developable land and projected residential densities provided in the future land use plan. Commercial area densities were determined based on likely number of jobs that could be served by West Point and surrounding city populations and input from West Point city staff.



c. Future 2050 Volumes and No-Build LOS

Traffic volumes from the 2050 no-build travel demand model have been compared to the LOS thresholds in Tables 4 and 5. LOS results from the analysis are shown below in Figure 13.

As shown in Figure 13, the following roadway segments are expected to operate at unacceptable levels of service (LOS D or worse):

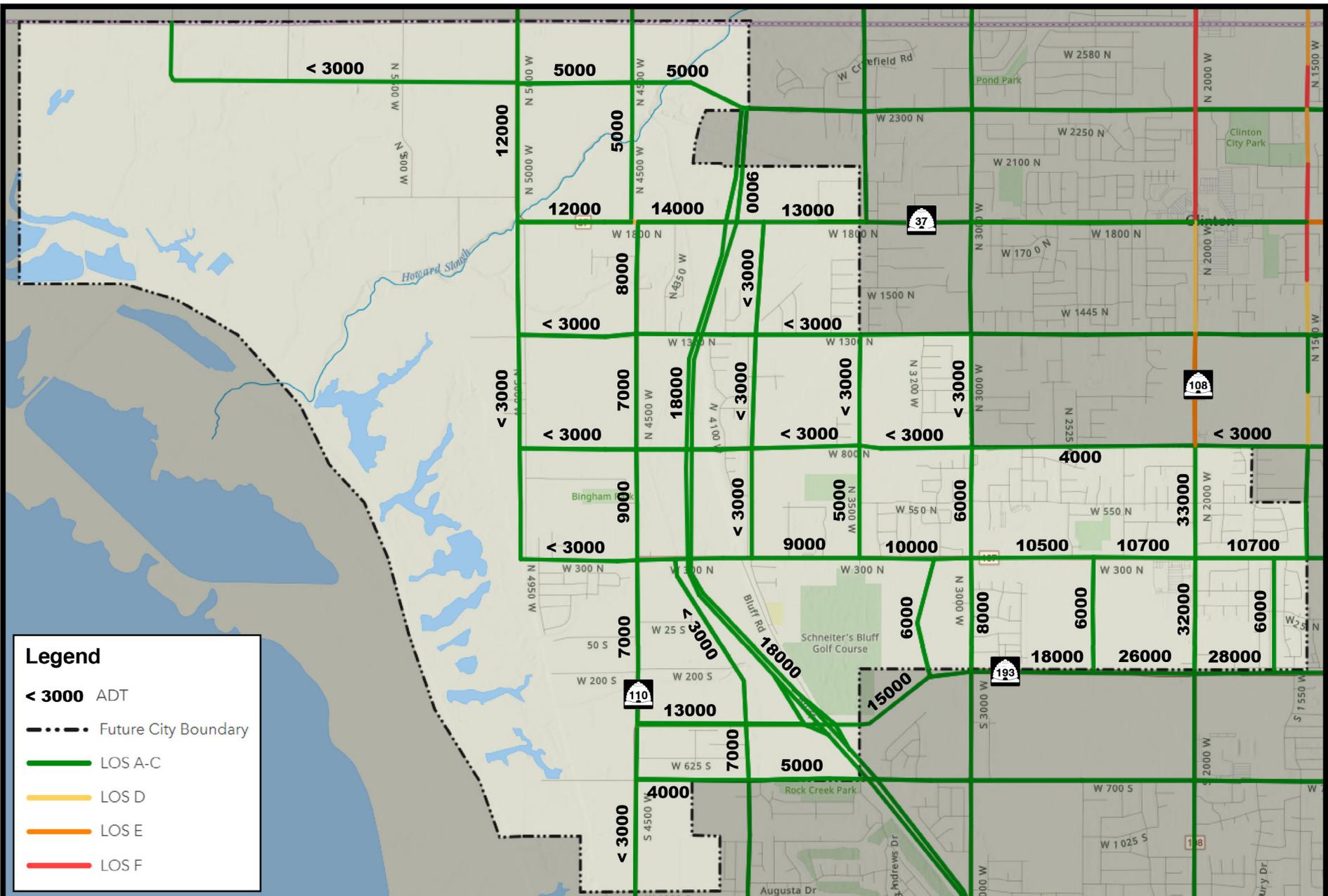
- 1800 N (SR-37) from 5000 W to MVC
- 300 N from 2000 W to 3500 W
- 2000 W (SR-108) from SR-193 to 800 N
- 5000 W from 1800 N to City Boundary

d. Future 2050 Build LOS

Due to the unacceptable LOS expected to occur in the 2050 no-build scenario on select roadways, the following projects are recommended before 2050:

- 300 North; 2000 West to 4000 West – Widen from 2 lanes to 3 lanes. (Project #1)
- 1800 North; 5000 West to 4100 West (West Davis Corridor) - Widen from 2 lanes to 3 or 5 lanes, depending on if West Davis Corridor is extended to the North. (Project #13)
- 5000 West; 1800 North to 2500 North – Widen from 2 lanes to 3 or 5 lanes, depending on if West Davis Corridor is extended to the North. (Project #14)
- 2000 West; 800 North to SR-193 – Widen from 5 to 7 lanes, may not be necessary if West Davis Corridor is extended to the North (Project #15)

These projects and their associated project numbers are summarized in Figure 16 and Table 6 in the West Point TMP Roadway Projects section of the report. The 2050 build scenario LOS is shown below in Figure 14.



Legend

- < 3000 ADT
- Future City Boundary
- LOS A-C
- LOS D
- LOS E
- LOS F



Future (2050) ADT and LOS - Build
 West Point City Transportation Master Plan



DATE:	4/22/2022
PROJECT:	21-255
Figure 14	

J. FUTURE PROJECTS

West Davis Corridor

The Wasatch Front Regional Council lists West Davis Corridor as a new project to be constructed in West Point. The West Davis Corridor is a new construction project of a UDOT freeway from I-15 / US-89 / Legacy Parkway to 1800 North in West Point will have between 2 and 4 lanes and is expected to be built between 2022 and 2030. The construction of West Davis Corridor is broken up into 3 phases, described below.

PHASE 1

It is expected that the initial phase of West Davis Corridor will be completed by 2024. This consists of a new grade separate facility from I-15 in Farmington to SR-193 in West Point. Initially, West Davis Corridor will end at an at-grade intersection with SR-193. Although the figure below indicates that only SR-193 east of West Davis Corridor will be completed by opening day, it is likely that the SR-193 west of West Davis Corridor will also be completed for opening day.

PHASE 2

By 2030 the RTP indicates that West Davis Corridor will be built up to SR-37 (1800 North). The SR-193 intersection is planned to be an at-grade intersection and only one lane north of SR-193.

PHASE 3

By 2050 the RTP indicates that West Davis Corridor will be 2 lanes in each direction up to SR-37 (1800 North) with a grade separated interchange at SR-193.

LONG TERM

The RTP long term (Unfunded Needs) includes a principal arterial continuing north from SR-37 (1800 North) to I-15 at the Box Elder / Weber County line.

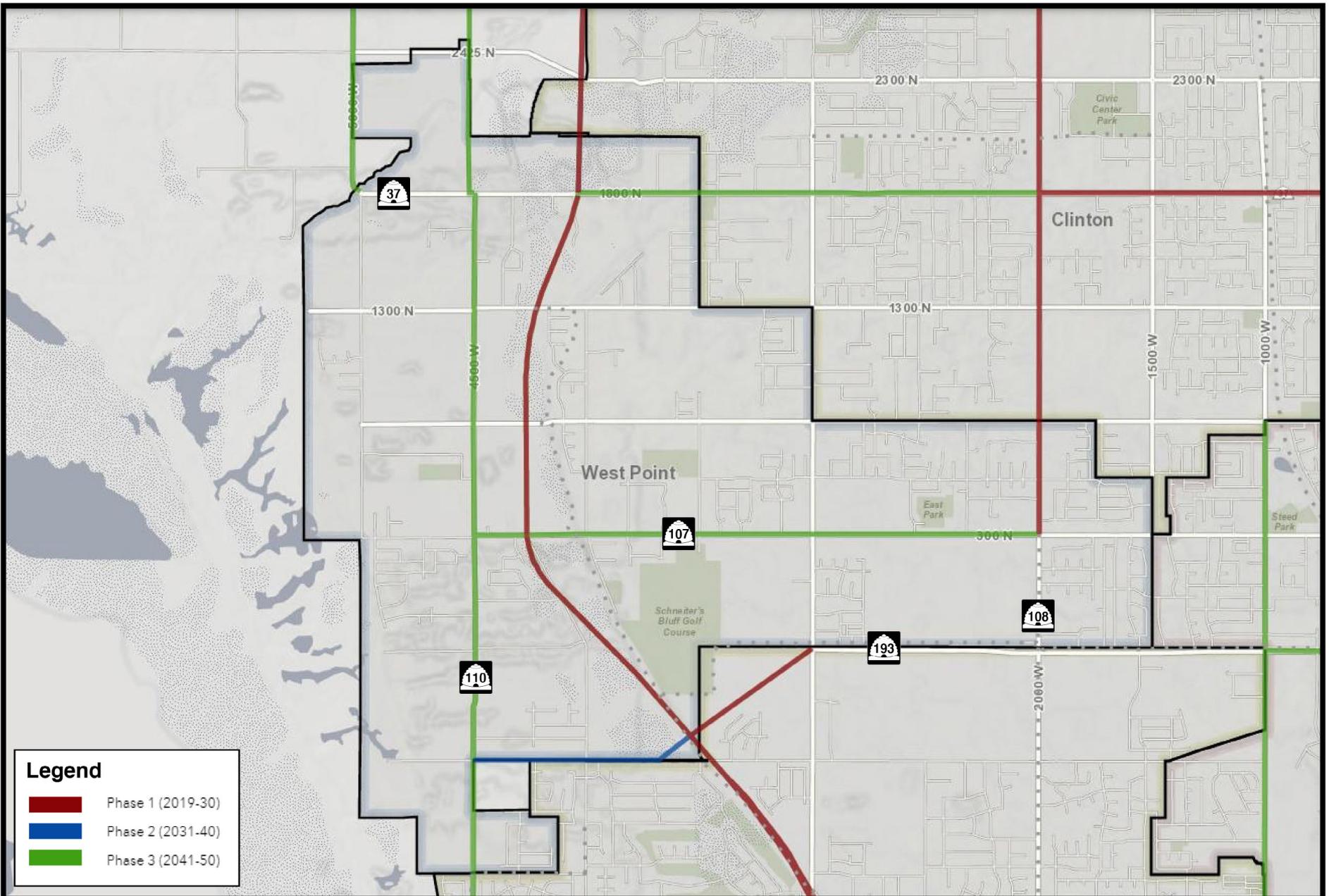


WFRC Roadway Projects

The 2019 WFRC regional transportation plan lists the following roadway projects in their long-range plan for West Point City:

- West Davis Corridor Extension – A new construction project of a UDOT expressway from 1800 North in West Point to the County Line is expected to be constructed between 2031 and 2040.
- SR-193 3000 W Extension – A new construction project from the West Davis Corridor to 3000 West, to be constructed between 2022 and 2030.
- SR-193 4500 W Extension – A new construction project from the West Davis Corridor to 4500 West, to be constructed between 2031 and 2040.
- 4500 West – An operational improvement project from the Weber County line to Antelope Drive / 1700 South, to be constructed between 2041 and 2050.
- 300 North – An operational improvement project from 4500 West to 2000 West to be constructed between 2041 and 2050. (Although this is on the WFRC long range plan as a Phase 3 project, WFRC and Davis County recently funded an improvement project for this corridor that will happen in the next couple of years. Therefore – this project may be removed or recategorized to a Phase 1 project).
- 1800 North – A widening project (2 lanes to 5 lanes) from the West Davis Corridor to 2000 West to be constructed between 2041 and 2050.
- 5000 West – An operational improvement project from 1800 North to the Weber County line.

Figure 15 below shows the WFRC roadway projects planned in West Point city boundaries.



Legend

- █ Phase 1 (2019-30)
- █ Phase 2 (2031-40)
- █ Phase 3 (2041-50)



◀ WFR Regional Plan - Roadway Projects ▶
 West Point City Transportation Master Plan



DATE:	4/22/2022
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Figure 15	



West Point TMP Roadway Projects

As part of the West Point capital facilities plan, it is recommended the City begin planning for the proposed roadway improvements shown below in Table 6. Figure 16 depicts the locations of the proposed roadway improvements. Figure 17 shows the future roadway network functional classification, including the future roadway projects listed in Table 6. Projects are not numbered in order of importance.

Table 6: Future Roadway Projects

Project Number	Description	Responsibility	Estimated Future Project Year	Cause for Improvement	Improvement Scope	# of Lanes		Estimated Cost
						2022	Proposed	
1	300 North; 2000 West to 4000 West*	WP / WFRC	2022 - 2031	Capacity	Widening	2	3	\$9,000,000
2	Cold Springs Road; 200 South to 200 North*	WP	2022 - 2031	New Development Connectivity	New Roadway	-	2	\$5,153,000
3	Cold Springs Road; 450 South to 200 South*	WP	2022 - 2031	New Development Connectivity	New Roadway	-	2	\$1,895,000
4	200 South; 4500 West to Cold Springs Road*	WP	2022 - 2031	New Development Connectivity	New Roadway	-	2	\$5,740,000
5	3200 W; SR-193 to 300 N (Main St.)	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$6,227,000
6	100 North; 3100 West to 3250 West	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$1,837,000
7	4000 West; 1300 North to 1800 North	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$8,010,000
8	1000 North; 4000 West to 3200 West	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$8,395,000
9	3500 W; 800 N to 1300 N	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$5,772,000
10	2550 W; SR-193 to 300 N	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$5,857,400
11	100 N; 2550 W to 2000 W	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$6,108,000
12	50 N; 2775 W to 2550 W	WP	2032 - 2040	New Development Connectivity	New Roadway	-	2	\$2,651,500
13	1800 North; 5000 West to 4100 West**	UDOT	2032 - 2040	Capacity	Widening	2	3 or 5	N/A
14	5000 West; 1800 North to 2500 N**	UDOT	2040 - 2050	Capacity	Widening	2	3 or 5	N/A
15	2000 West; 800 North to SR-193**	UDOT	2040 - 2050	Capacity	Widening	5	7	N/A

* Impact Fee Eligible Project

** Project may not be necessary if West Davis Corridor is extended to the North

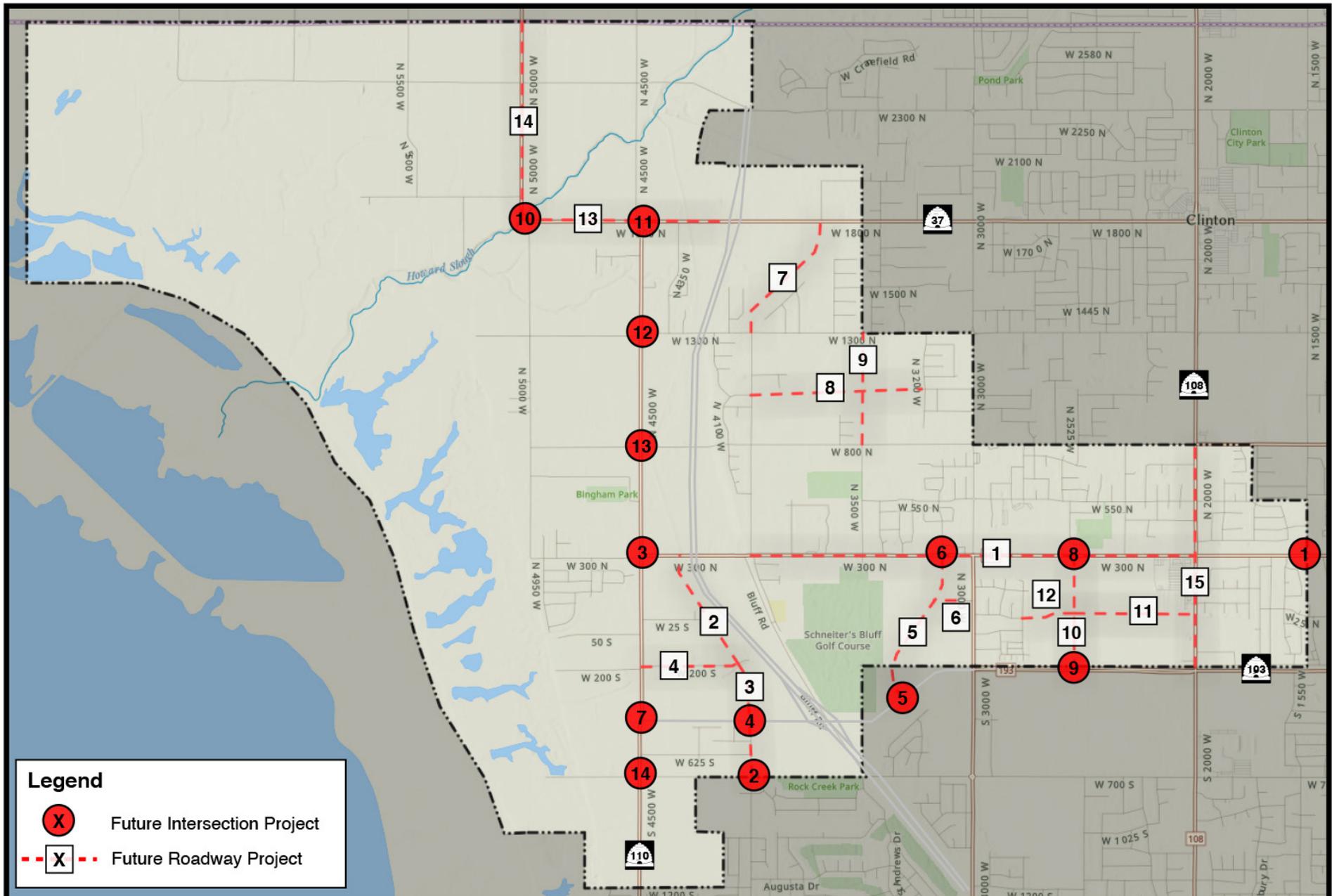
West Point TMP Intersection Projects

As part of the West Point capital facilities plan, it is recommended the City begin planning for the proposed intersection improvements shown below in Table 7. Figure 16 depicts the locations of the proposed intersection improvements.

Table 7: Future Intersection Projects

Project Number	Description	Responsibility	Estimated Future Project Year	Cause for Improvement	Improvement Scope	Estimated Cost
1	300 North / 1500 West*	WP	2022 - 2031	Capacity	Striping / Turn Lane	\$3,380
2	700 South / 4000 West*	WP / Syracuse	2022 - 2031	Capacity	Roundabout	\$1,028,000
3	SR-110 (4500 West) / 300 North*	UDOT / WP	2022 - 2031	Capacity	Roundabout	\$1,200,000
4	400 South / 4000 West	UDOT	2022 - 2031	Capacity	Signal / Roundabout	To be built by WDC project
5	SR-193 / 3200 West (Main St)	UDOT	2032 - 2040	Capacity	Signal	N/A
6	300 North / 3150 West (Main Street)	WP	2032 - 2040	Capacity	Signal / Roundabout	\$482,500
7	SR-110 (4500 West) / 400 South	UDOT	2022 - 2030	Capacity	Signal / Roundabout	N/A
8	300 North / 2550 West	WP	2032 - 2040	Capacity	Signal	\$440,400
9	2550 West / SR-193	UDOT	2031 - 2040	Capacity	Signal	N/A
10	SR-37 (1800 North) / 5000 West	UDOT	2031 - 2040	Safety	Geometric Alignment	N/A
11	SR-110 (4500 West) / SR-37 (1800 North)	UDOT	2031 - 2040	Capacity	Signal / Roundabout	N/A
12	SR-110 (4500 West) / 1300 North	UDOT / WP	2041 - 2050	Capacity	Roundabout	\$1,797,400
13	SR-110 (4500 West) / 800 North	UDOT / WP	2041 - 2050	Capacity	Roundabout	\$1,120,000
14	SR-110 (4500 West) / 700 South	UDOT / WP	2041 - 2050	Capacity	Roundabout	\$1,140,700

* Impact Fee Eligible Project



Legend

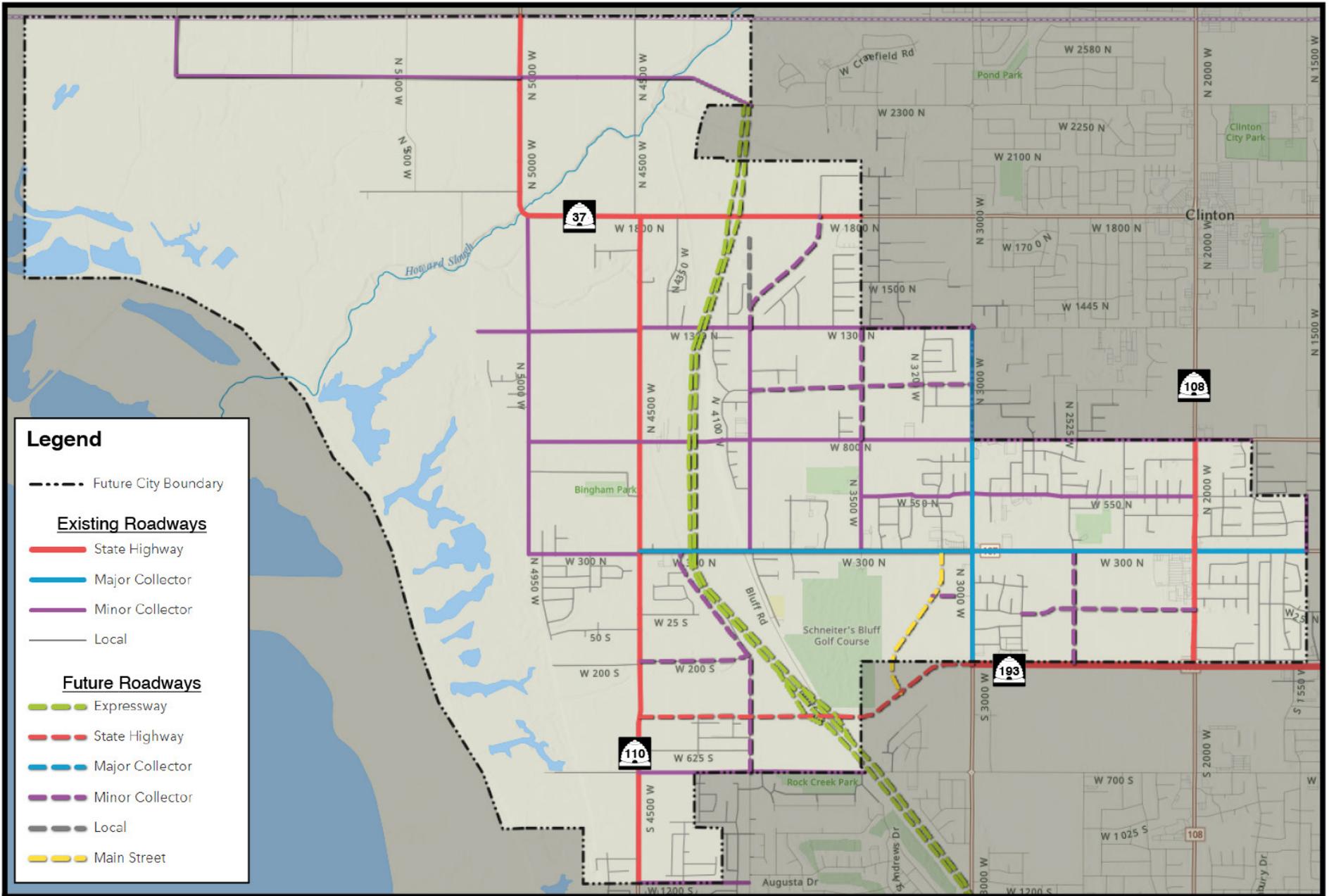
- X Future Intersection Project
- X Future Roadway Project



←————— Future Projects —————→
West Point City Transportation Master Plan



DATE:	4/22/2022
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Figure 16	



Future (2050) Roadway Functional Classification
 West Point City Transportation Master Plan



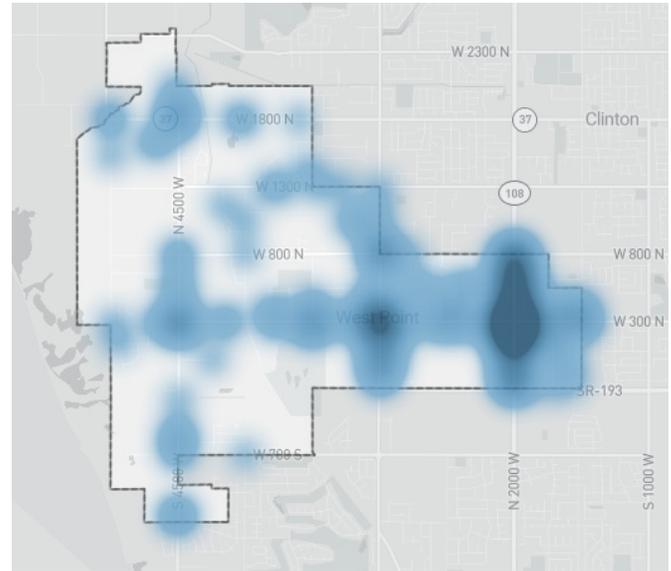
DATE:	4/22/2022
PROJECT:	21-255
Figure 17	

CITY TRANSPORTATION MANAGEMENT

A. PURPOSE

The City Transportation Management section discusses best practices to ensure the City develop a safe and efficient transportation network. This section includes the following:

- Safety analysis using crash data from 2017 to 2022
- Future safety project recommendations
- Best practices for access management and how this applies to West Point City
- Traffic calming resources
- Electric vehicle parking ordinances
- Maintenance policy recommendations
- Future Main Street boulevard concepts
- Recommendations for future traffic impact studies



B. TRANSPORTATION SAFETY

Crash data was reviewed for the latest 5 years of complete data (2017 – 2021). As expected, a higher number of crashes occurred on roadways with higher daily volumes on the east side of West Point. A heat map of all crashes within West Point from 2017 – 2021 is shown in the Figure below.

While higher volume roadways usually have more crashes than lower volume roadways, often lower volume roadways which have potentially higher speeds, have a higher percentage of severe crashes (serious injury and fatalities). Thus, severe crashes were also reviewed. The Figure below presents severe crashes within West Point between 2017 and 2021. In this 5-year period there were 3 suspected serious injury crashes and no fatal crashes.

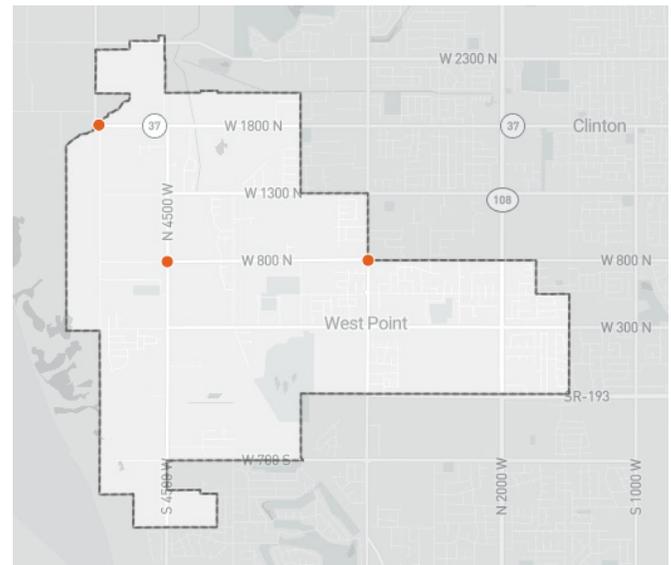
Crash narratives for these three crashes were reviewed and are summarized below:

- 800 N & 3000 W: A crash occurred in October 2017 at the roundabout where a vehicle failed to yield, causing a motorcyclist circulating the roundabout to attempt to avoid a collision and crash.
- 800 N & 4500 W: A vehicle traveling westbound failed to stop at the stop sign and collided with a vehicle traveling southbound.
- 1800 N & 5000 W: A crash occurred in May 2021 in which a vehicle traveling westbound failed to negotiate a turn and departed the roadway. The driver was charged with a DUI.

Safety countermeasures for reducing the chances of similar crashes occurring were investigated. Potential countermeasures are provided below:

- 800 N & 3000 W: No potential countermeasures
- 800 N & 4500 W: Improve side-street stop sign visibility (stop bars, curbing, enlarged sign, etc.)
- 1800 N & 5000 W: Tighten up access or install roundabout

As severe crashes are sporadic and random in nature on low volume roadways, similar intersections should also be investigated for similar improvements. Further details of these improvements are discussed in the intersection improvement projects section of the report.



C. SPEED LIMITS

Roadway speeds are established based on a traffic engineering study that evaluates the speed distribution of vehicles along a roadway segment. Speed limits are displayed in multiples of 5 mph. The Utah Manual on Uniform Traffic Control Devices (MUTCD) states that "When a speed limit within a speed zone is posted, it should be within 5 mph of the 85th-percentile speed of free-flowing traffic". The Utah MUTCD also states that other factors that may be considered when establishing or evaluating speed limits include:

- A. Road characteristics, shoulder condition, grade, alignment, and sight distance;
- B. The pace;
- C. Roadside development and environment;
- D. Parking practices and pedestrian activity; and
- E. Reported crash experience for at least a 12-month period.

The existing posted speed limits in West Point are shown in Figure 18. Figure 18 also shows locations where 85th-percentile speed data has been collected.

As shown in Figure 18, there are several locations where the 85th-percentile speed is greater than 5 mph above the posted speed limit. These locations include 4500 West, 3000 West, and 700 South. It is not, however, recommended that the speed limits on these roadways be increased to be within 5 mph of the 85th-percentile speed due to the pace, parking practices, and pedestrian activity on these roadways.

It is recommended the posted speed limits on 1300 N from 4500 W to 3000 W be made a consistent 35 mph.

D. TRAFFIC CALMING

Traffic calming is the use of physical design and other measures to improve safety for motorists, pedestrians and cyclists by reducing vehicle traffic and/or vehicle speeds. In general, traffic and speed management techniques should match the design characteristics of the specific corridor. Arterials, major collectors, and emergency response routes, for instance, prioritize through traffic volumes and higher travel speeds, and traffic calming and speed management techniques may not be appropriate. However, traffic calming may be important in areas of the City with a high presence of people walking and bicycling where a lower speed environment should be encouraged, such as near parks and trails, along local roads in residential neighborhoods, in city centers, or school vicinities.

For more information regarding traffic calming measures view the [UDOT Speed Management Information Sheets](#) which explain traffic calming treatments, advantages and disadvantages, typical costs, example locations, and other potentially useful information.

Tucson, Arizona operates a neighborhood traffic management program that emphasizes neighborhood participation to implement traffic calming measures. The City could consider a similar program in the future.

Additional traffic calming resources include:

[Seattle Traffic Calming](#)

[Salt Lake City Traffic Calming](#)

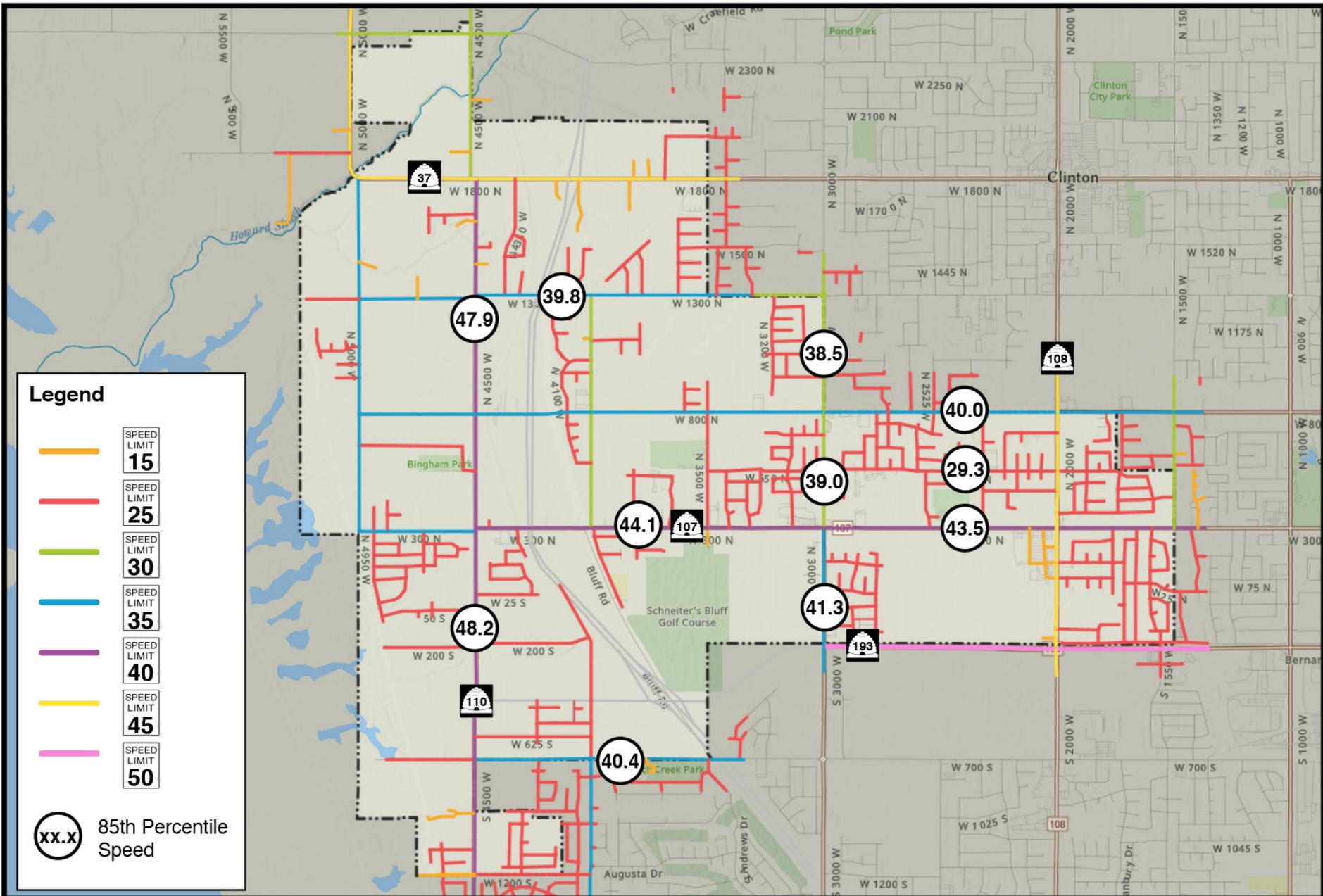
[FHWA](#)

[ITE](#)

[NACTO](#)

Most traffic calming appropriate on local / minor local roads; some traffic calming appropriate on minor collectors; traffic calming generally not appropriate on major collectors.

The image displays two pages from the UDOT Speed Management Information Sheets. The left page is titled 'RADAR SPEED SIGN' and features a green sign graphic that reads: '2-10 REDUCES SPEEDS FROM 2 TO 10 MILES PER HOUR', '\$10,000 AVERAGE ANNUAL COSTS PER MILE', and '5% REDUCES CRASHES UP TO 5%'. Below the sign is a photograph of a road with a radar speed sign. The right page is titled 'SPEED MANAGEMENT STUDIES' and includes sections for 'ADVANTAGES', 'DISADVANTAGES', 'TYPICAL LOCATIONS', 'EXAMPLE LOCATIONS', 'WHAT ARE SPEED MANAGEMENT STUDIES?', 'HOW DO I REQUEST A SPEED MANAGEMENT STUDY?', 'WHERE TO UTILIZE SPEED MANAGEMENT STUDIES?', 'SPEED MANAGEMENT = ARTIFICIALLY LOWERING SPEED LIMITS', and 'SPEED MANAGEMENT MAY MEAN "ENGINEERING UP"'. The bottom of the pages shows the UDOT logo and the text 'SPEED MANAGEMENT INFO SHEETS | JUNE 2021'.



Speed Limits
 West Point City Transportation Master Plan



DATE:	7/28/2022
PROJECT:	21-255
Figure 18	

E. ACCESS MANAGEMENT

The [Federal Highway Administration \(FHWA\)](#) defines access management as “proactive management of vehicular access points to land parcels adjacent to all manner of roadways”. It is proven that proper access management will increase roadway capacity, reduce crashes, and create a more efficient roadway network for motorists. In areas where there is a large potential for land development, such as West Point City, it is essential for the City to balance property access and the functional integrity of the roadway facility. Examples of access management techniques from the FHWA include:

- Intersection spacing: Increasing the distance between traffic signals, roundabouts, and other controlled intersections improves the flow of traffic.
- Driveway spacing: Fewer driveways spaced further apart allows for orderly merging of traffic and presents fewer points of conflict between drivers.
- Safe turning lanes: Dedicated left and right-turn lanes keep through-traffic flowing.
- Median treatments: Two-way left-turn lanes (TWLTL) and raised medians are effective means to regulate access and reduce crashes.
- Right-of-way management: ROW is required to allow for roadway widening along a corridor or at intersections, improves sight distance, and other access-related issues.

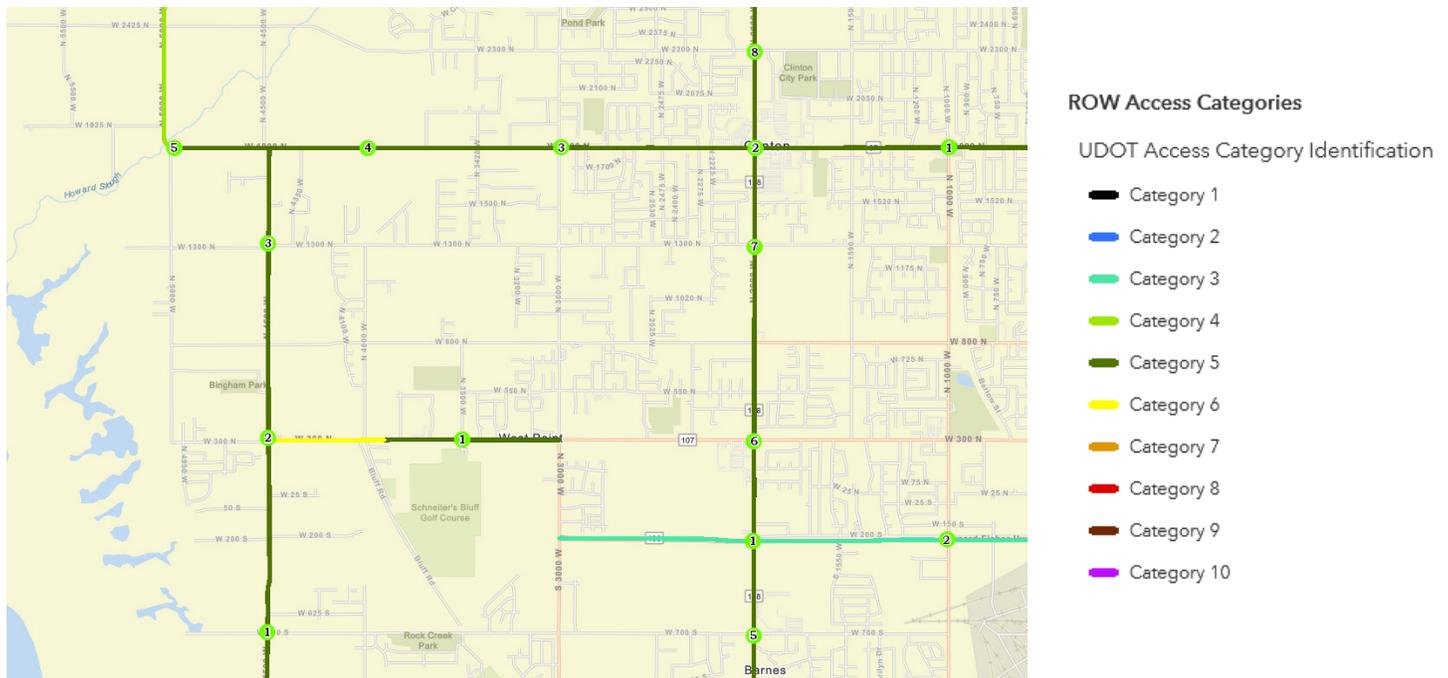


Arterial Roadways

The primary function of arterial roadways is to provide mobility throughout the network, therefore accesses and traffic interruptions along arterials should be minimized to maintain the roadway capacity.

All arterial roadways within West Point are owned, maintained, and managed by UDOT and include 2000 W (SR-108, Category 5), 4500 W (SR-110, Category 5), 5000 W / 1800 N (SR-37, Category 4/5), SR-193 and the future SR-193 extension (Category 3), and the West Davis Highway (Category 1). Access along these arterial roadways must meet UDOT's access management requirements. Under Administration Rule R930-6 all state highways are assigned an access category between 1 and 10, with each access category requiring varying spacing requirements¹.

(Need better map of UDOT Access Categories in West Point, with future Access Categories (Ext SR-193 and WDH))



Major and Minor Collectors

Major and minor collector roadways provides both mobility and access. With lower speeds, lower traffic volumes, and a greater demand for property access, access management standards are generally less restrictive along collectors than arterials. Between the major and minor designations, major collectors typically serve higher volume and speed corridors with a greater emphasis on mobility, typically within commercial and high-density residential areas and near emergency service providers. Access standards are more restrictive on major collectors, and traffic calming is generally inappropriate along major collectors.

Most collectors within West Point are locally owned, maintained, and managed². It is the responsibility of the City staff to ensure that accesses along collectors are properly managed by making changes to the existing roadway to address existing management issues and practicing good access management as new development occurs. Creating established corridor agreements and access management standards before new development occurs is critical to ensure the roadway network is efficient and safe. Corridor agreements assist developers in knowing ahead of time where and what type of accesses will be permitted.

Local and Minor Local Streets

Local and minor local streets serve primarily local residential traffic demands, with low traffic volumes, low speeds, and frequent driveway accesses. Emphasis should be placed on designing local residential streets to encourage low speeds and livable pedestrian scale environments and discourage through traffic.

¹ Utah Admin. Code 930-6-7

² 300 N (SR-107) is the notable exception. As SR-193 is constructed, UDOT will jurisdictionally transfer ownership of the highway to the City of West Point.

Private Roads, Lanes, and Alleys

Private roads, lanes, and alleys are roads not open or intended for use by the general public. As defined in the West Point City Code:

- “Private road” means a private street with a minimum of 50-foot right-of-way that includes curb, gutter, and sidewalk on both sides and meets the requirements found in the public works standard drawings. Private roads may terminate at a dead end but will be provided with a dedicated turnaround and will be no longer than 600 feet in length. Private roads do not provide access to more than 30 units or lots.
- “Private lane” means a private street with curb and gutter on both sides that provides access to the front of residential or commercial buildings with a minimum width of 25 feet measured from the back of curb to back of curb. Private lanes do not provide access to more than 15 units or lots.
- “Alley” means a private street with curb and gutter on both sides that provides access to the rear of residential or commercial buildings with a minimum width of 25 feet measured from the back of curb to the back of curb. Alleys do not provide access to more than 15 lots or units. Units or lots that have rear access from an alley also have frontage on a public road or a private road.

Typically, private roads occur in planned residential unit developments (PRUDs). Private roads should not be intended to serve through traffic. Geometric and structural design standards for private roads are the same as those used for public roads.

The private road property and deed ROW shall be surveyed and recorded with the county. The private road should be owned, maintained, and managed by a private entity such as a homeowner’s association. A means of perpetual maintenance should be demonstrated to the satisfaction of the planning and zoning commission before a private road may be approved. The managing entity should prepare and follow a maintenance plan that identifies, schedules and performs regular maintenance duties, as well as a time horizon for eventual roadway reconstruction. The cost of maintenance and reconstruction will be annualized and collected into an escrow account to ensure the roadway is maintained into perpetuity.

The requisite maintenance plan should identify a schedule of activities required to maintain a safe and well-functioning roadway, including but not limited to:

- Annual maintenance (every year), such as pothole patching, street sweeping, line striping, trash removal, landscape pruning, and other activities
- Semi-annual activities (every 2-5 years), such as crack sealing, catch basin sediment removal, culvert inspections, and other activities
- Medium-term activities (5-15 years), such as asphalt overlays, chip sealing, and surface milling and reconstruction
- Long-term activities (15+ years), including full depth reconstruction of roadway, concrete curb, gutter, and sidewalk reconstruction

The maintenance plan should include escalated costs associated with each activity and develop an amortized escrow saving plan to ensure roadway maintenance is funded through the expected roadway life cycle.

Access Management Standards

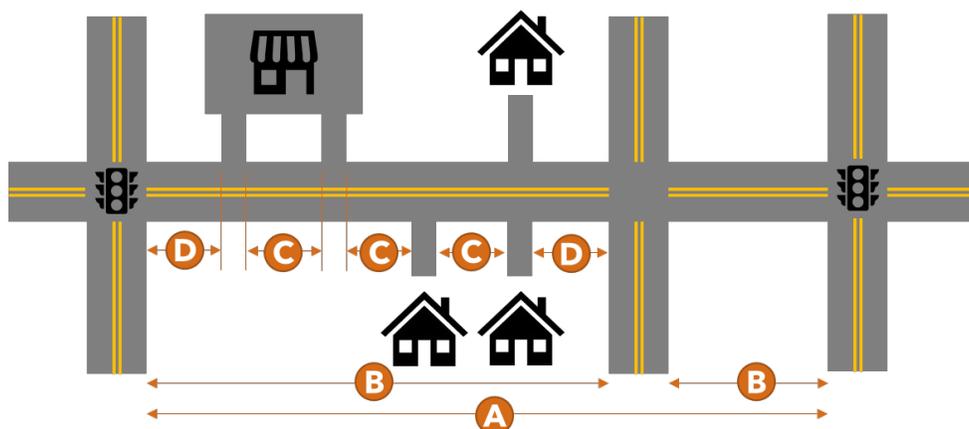


Table 8: Access Management Standards

Classification	Signal Spacing (A)	Street Spacing (B)	Driveway Spacing (C)	Driveway Spacing from Corner (D)
Major Collector	1320 feet	660 feet	300 feet	300 feet
Minor Collector	1320 feet	330 feet	150 feet	150 feet
Local / Minor Local / Private	N/A	250 feet	10 feet	50 feet

Driveway Standards

Minimum standards for driveways should include:

- Commercial / multifamily drive width (100+ trips per day): 24 feet minimum, 40 feet maximum
- Residential drive width (<100 trips per day): 12 feet minimum, 24 feet maximum
- Driveway access may be restricted to right-in / right-out movements only to address safety or congestion concerns associated with the access. Concerns may include:
 - Documented crash history
 - Poor / limited sight distance
 - Congestion: LOS D or worse exiting the driveway
 - Congestion: left turn 95th percentile queuing from mainline interferes with through traffic progression on mainline or blocks other roadways / driveways

F. ELECTRIC VEHICLE PARKING ORDINANCE

Electric Vehicle Parking and Charging Stations

The following standards shall only apply to multi-family developments regardless of the total parking space requirement; and to commercial developments requiring one hundred (100) parking spaces or more. At least one (1) parking space dedicated to electric vehicles shall be provided for every twenty five (25) parking spaces provided in multifamily or commercial applications. Electric vehicle parking spaces shall count toward the required number of parking spaces. The electric vehicle parking space shall be:

- Located in the same lot as the principal use;
- Located as close to a primary building entrance as possible, with priority given to handicap / accessible parking spaces;
- Signed in a clear and conspicuous manner, such as special pavement marking or signage, indicating exclusive availability to electric vehicles; and
- Outfitted with a standard Level 2 208/240 volt electric vehicle charging station.





Electric Vehicle Ready Parking

In addition to Electric Vehicle Parking requirements, each multi-family development and commercial development requiring one hundred (100) parking spaces or more shall provide a minimum of twenty percent (20%) electric vehicle ready (EV-ready) parking spaces of required parking spaces provided on-site. EV-ready parking spaces shall have electrical conduit and sufficient electrical capacity for the future use of a 208/240 volt electric vehicle charging station. The location of proposed EV-ready parking spaces shall be indicated on submitted site plans.

- EV-ready parking requirements shall count toward the minimum required and maximum allowed number of parking spaces.
- Parking areas with four (4) or fewer vehicle parking spaces are not required to identify an EV-ready parking space.
- Where no minimum parking is required, EV-ready parking spaces will be based on provided parking.
- For new multi-family uses, a minimum of twenty percent (20%) of required Accessible (ADA) parking spaces shall be constructed as EV-ready.

G. CONNECTIVITY POLICY

New development should recognize the importance of transportation network connectivity in improving mobility, creating transportation choice, improving emergency service response time, improving safety, and activating the economy. Developments should follow best practices outlined in WFRC's Utah Street Connectivity Guide³ to maximize connectivity indices, minimizing block lengths, reducing cul-de-sacs, providing street, sidewalk, and path stubs for future connections, and other techniques.

H. LEVEL OF SERVICE / DELAY / QUEUEING POLICY

LOS C is considered acceptable on roadway segments; LOS D is acceptable on driveway approaches; 95th percentile queues should not interfere with nearest adjacent road / driveway

I. UNCONTROLLED CROSSWALK POLICY

Uncontrolled Crosswalk Policy – mid-block or other uncontrolled crosswalks are only appropriate where significant generators may attract pedestrian crossings at uncontrolled locations, such as a school, park, or trail crossing. Uncontrolled crosswalks on roads with an AADT of 2,000 vehicles per day or less and a speed limit of 25 mph or less may not require additional crosswalk enhancement beyond standard crosswalk signs and stripes; with more than 2,000 vpd or a speed greater than 25 mph, crosswalk enhancements, such as in-street signs, median refuge, rectangular rapid flashing beacons, pedestrian hybrid beacons, or other enhancements may be necessary.

J. ROADWAY MAINTENANCE

Maintenance describes work that is performed to maintain the condition of the transportation system or to respond to specific conditions or events that restore the highway system to a functional state of operation. West Point City is committed to maintaining their roadways by creating a maintenance plan that ensures the longevity and safety of the roadways in the City. It is the responsibility of the public works superintendent to develop and apply this plan, as well as supervise the maintenance of the city streets and sidewalks.



K. TRAFFIC IMPACT STUDIES

As West Point City continues to grow, traffic-related impacts due to development will need to be addressed by requiring future developments to complete a Traffic Impact Study (TIS) prior to being given approval to build. A TIS details how a development will impact traffic flow in the project area by assessing internal site circulation, access performance, impacts to adjacent roads and intersections, and mitigation measures. The scope of the TIS depends on the size and land use of the development, which in turn determines the quantity of trips that will be generated by the project. The size and scope of a TIS should be determined by the City Engineer on a case by case basis.

Each TIS will be conducted by a qualified Traffic Engineer chosen by the developer at their cost and approved by the City. A TIS should identify improvements to existing traffic issues that could be made by the City and by the developers due to poor levels of service caused by the addition of project traffic. West Point Traffic Impact Study Requirements are included in the Appendix of this report.

L. FUTURE DOWNTOWN BOULEVARD

West Point City is experiencing a lot of new growth, and this will only be heightened by the transportation improvements planned in the area, such as the West Davis Corridor. There are several areas, or districts, in the City that will likely see growth pressure due to these planned improvements. A significant district that will likely see growth is the West Davis Corridor / SR-193 interchange area. This area is being studied separately to determine the demand for commercial, residential, and other land uses in the immediate vicinity.

Another district that will likely see future growth demand is the area north of the SR-193 extension east of the Schneiter's Bluff Golf Course. As part of the transportation master planning process, a sub-area concept plan was developed for this area, called the West Point "Main Street" area.



a. Future West Point “Main Street”

The West Point “Main Street” area is located north of the SR-193 extension, between the golf course and 3000 West, and south of 300 North. This area will have a new signal on SR-193 at Thurgood Lane. The “Main Street” roadway will extend north into West Point and align with 3150 West adjacent to the West Point City Hall. West Point staff indicated that this area would provide an ideal location to create a “Main Street” district within the city, with a unique opportunity to develop this area with a blank canvas. To begin the process, it was determined that a Steering Committee, made up of key individuals in the West Point community, would be important to brainstorm ideas for this area. Members of the steering committee are outlined below:

WEST POINT “MAIN STREET” STEERING COMMITTEE MEMBERS

- Boyd Davis, West Point City Engineer
- Bryn MacDonald, West Point City Community Development Director
- Brian Vincent, West Point Mayor
- Gary Petersen, West Point City Councilmember
- Kyle Laws, West Point City Manager
- Jeremy Strong, West Point Planning Commissioner
- PJ Roubinet, West Point Planning Commissioner
- A representative from Property Reserve, Inc. (PRI) (final stakeholder meeting)

The steering committee met on three separate occasions to brainstorm ideas for what this area could become. The purpose of each meeting is summarized below:

STAKEHOLDER MEETING #1

This meeting was used to create a vision for what this area could become. The committee discussed elements that were important to implement into the concept plan. The group discussed a variety of different “Main Street” districts, along with pros and cons of each. Through this brainstorming session, the following critical elements were identified:

- Main Street retail component
- Walkable and pedestrian friendly
- Community space
- Slow vehicle speeds
- Some on-street parking, with most parking behind the retail
- Unique sense of place

STAKEHOLDER MEETING #2

The second meeting was used to build on the brainstorming session and vision to identify how that would fit in the area. It was determined that the new road connection between SR-193 and 300 North would serve as a “Main Street” with a block system around it to provide access to parking and adjacent land uses. The group discussed roundabouts, one-way couplets, trails, wide sidewalks, bike lanes, etc. from a transportation perspective. Representatives from Zions Bank and DownTown Redevelopment were there to discuss the financial feasibility of retail, and what that may look like. It was agreed that the retail along the corridor would likely be niche type retail or services, such as a bookstore, ice cream parlor, or other unique market. The group discussed community spaces, such as the opportunity for a linear park, or town square, community buildings like a future town hall, gathering places, food truck locations, etc. These discussions helped develop several possible layout alternatives that were discussed with the group.

STAKEHOLDER MEETING #3

The final stakeholder meeting was used to refine the concept layout and proposed cross section. The draft layouts and cross sections were evaluated and discussed to find an agreeable solution for the community. The proposed layout for the area is shown here.

As shown in the figure, the proposed concept includes a long linear park through the “Main Street” area. The linear park would include trees, landscaping, benches, a trail, tables, and other aspects that would encourage walkability and a unique sense of place. At the center is a roundabout, with a town square on one corner. The town square could be used for a variety of community functions, as well as a place for future City buildings. Two-story retail buildings would line “Main Street, with a grid system providing access to parking in the back. High density residential would fit on the outsides of the “Main Street” corridor, providing population to help support the retail and community uses. On the north end of the property, transitional residential land uses are proposed to move from the higher density residential areas (such as apartments), to the lower single family homes that surround the area. Transitional residential would include uses like townhomes or twin home developments.



A proposed cross section for the “Main Street” corridor was also developed.



As shown in the cross section, there is a long linear park with a trail and other features. There is a single lane in each direction, which is narrow (9') to encourage slow speeds in the area. On street parking is provided along the corridor, with bulb-outs at intersections to provide safe pedestrian access. Wide sidewalks that can accommodate street trees, benches, and other street furniture are provided. The buildings shown in the cross section are a generic placeholder – it is recommended that these be developed as two-story retail buildings with a variety of setbacks and organic design to create a unique space.

The final steering committee meeting also included a representative from PRI, who is the major property owner of the “Main Street” district. The representative learned more about the plans and discussed different elements of the plan. In general, the representative was positive about the direction of the concept plan.

It should be noted that the concepts presented in the Transportation Master Plan are just concepts to get the conversation started. West Point City plans to complete an update to the General Plan within the next year. This update will better inform the overall vision and land uses planned for this area. It is recommended that this area continue to be studied and refined as more information on how this area could be developed in the future.

A good example of the type of place that West Point is envisioning for this area is Crocker Park in Westlake, Ohio. This Downtown district has many of the same elements that were identified by the Steering Committee. Some images from google street view of Crocker Park are shown here.



RECOMMENDATIONS

It is recommended that the “Main Street” district be further evaluated in the upcoming West Point General Plan update, as well as additional studies to determine the feasibility and breakdown of commercial, residential, and community land uses. This evaluation is meant as a starting concept and is expected to be updated as more information becomes available.

CAPITAL FACILITIES PLAN

As shown in section 3 of this report, future growth due to new development requires West Point to make improvements to their transportation network to provide residents with a safe and efficient transportation network and maintain an acceptable Level of Service. Impact fee eligible intersection and roadway improvements are listed below in Table 9 and are shown in Figure 19. Each project cost estimate represents 2022 cost and is not adjusted for inflation, therefore estimates will need to be regularly updated by the City as project scopes may change as development occurs in the City. Only roadway improvements to arterials and collectors are identified, as local roads are typically built by future development. Details for each project cost estimate can be found in the Appendix.

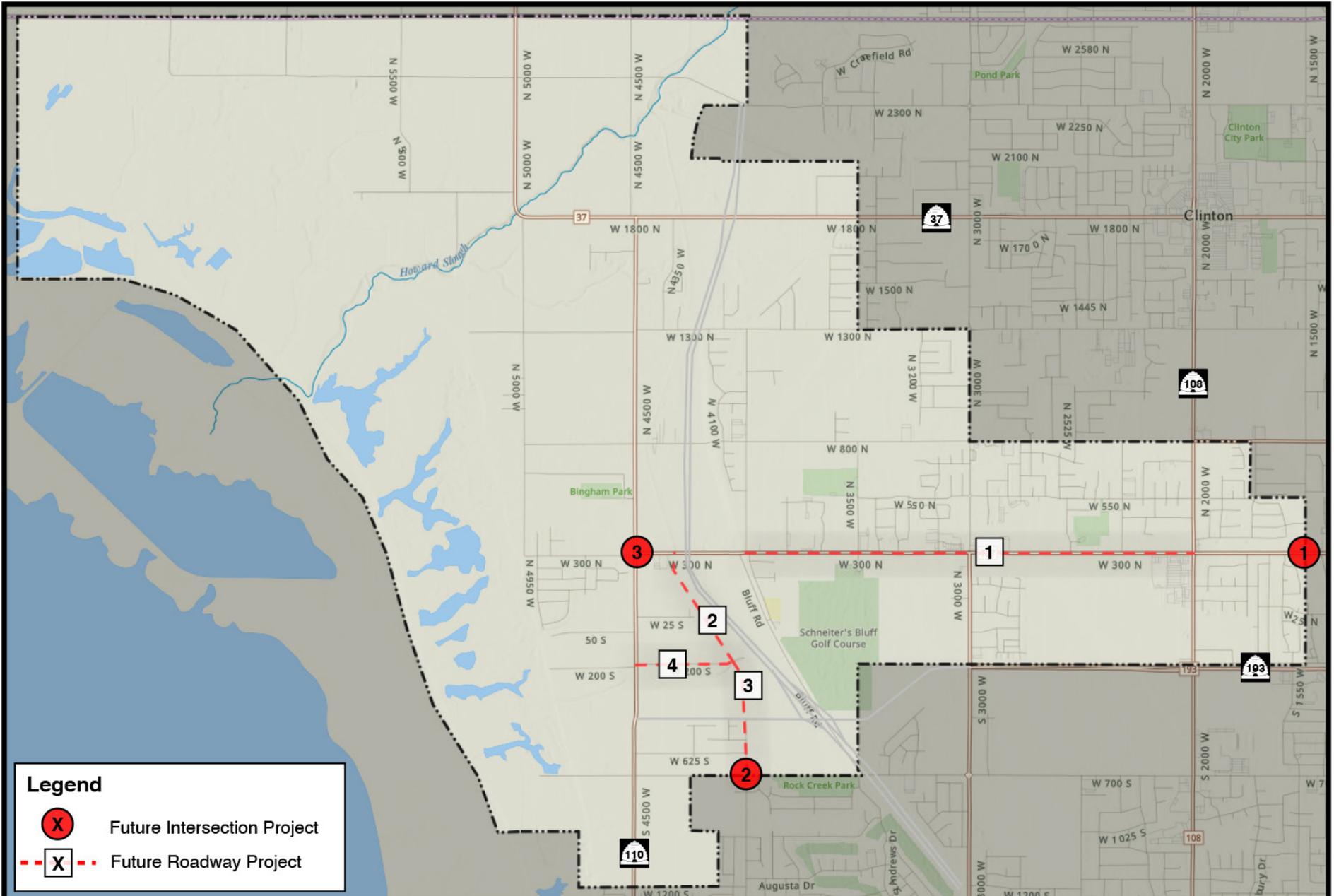
Table 9: Project List - Roadway Projects

Project number	Location	Project	Cost	Outside Funding	Outside Funding Sources ¹	2022 ADT	2032 ADT	2020 Capacity	2030 Capacity	32 ADT in Excess of '22 Capacity	% Pass-through	New Capacity	% Impact Fee Eligible	Impact Fee Eligible Cost
1	300 North; 2000 West to 4000 West	Re-Construct to 3-lane collector	\$9,000,000	\$9,000,000	WFRC & Davis County	8,000	10,100	9,700	10,800	400	2%	1,100	35.7%	\$0
2	Cold Springs Road; 200 South to 200 North	New 2-lane collector	\$5,153,316	\$0	n/a	0	3,000	0	9,700	3,000	0%	9,700	31.0%	\$1,597,528
3	Cold Springs Road; 450 South to 200 South	New 2-lane collector	\$1,894,858	\$0	n/a	0	5,000	0	9,700	5,000	0%	9,700	51.6%	\$977,747
4	200 South; 4500 West to Cold Springs Road	New 3-lane road	\$5,739,938	\$0	n/a	0	2,000	0	9,700	2,000	0%	9,700	20.7%	\$1,188,168
Intersection 1	300 North / 1500 West	Striping Improvements	\$3,380	\$0	n/a	Intersection Improvement due to New Development						100.0%	\$3,380	
Intersection 2	700 South / 4000 West	Roundabout	\$1,027,928	\$513,964	Syracuse	Intersection Improvement due to New Development						100.0%	\$513,964	
Intersection 3	SR-110 (4500 West) / 300 North	Roundabout	\$1,200,000	\$1,200,000	WFRC CMAQ Funding	Intersection Improvement due to New Development						100.0%	\$0	
TOTAL			\$24,019,420	\$10,713,964									\$4,280,787	

1. WFRC STIP (State Transportation Improvement Program), UDOT, adjacent cities, or other external funding sources

Source: West Point Transportation Master Plan, WCG





Legend

- X Future Intersection Project
- - - X - - - Future Roadway Project



← Future Projects - Capital Facilities Plan →
 West Point City Transportation Master Plan



DATE:	4/22/2022
PROJECT:	21-255
Figure 19	



CONCLUSION

A. OVERVIEW

The purpose of the West Point TMP is to plan the future transportation needs of West Point City. The following tasks were completed as part of this TMP:

- Traffic data was collected, including daily traffic volumes, vehicle classification, and speed, to help establish existing conditions in the City.
- Future traffic volumes were developed to future planning years 2032 and 2050.
- A travel demand analysis based on existing and future land use was performed.
- An Impact Fee Facilities Plan has been created to address roadway and intersection deficiencies.
- City street functional classifications and cross sections were updated.
- A safety analysis was performed.
- Access management standards were developed.
- Recommendations for future active transportation and transit facilities were provided.
- Future Downtown Boulevard concepts created – Transportation policies and ordinance recommendations have been provided.





APPENDIX

ENGINEER'S ESTIMATE (2022 COSTS)				
SR-110 (4500 West) / 800 North				
BID ITEMS				
GENERAL				
Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$45,400.00
Public Information Services	1	lump	1.00%	\$4,800.00
Traffic Control	1	lump	8.00%	\$38,200.00
Survey	1	lump	5.00%	\$23,900.00
				\$112,300.00
ROADWAY				
Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	194	cu yd	\$ 24.00	\$4,644.41
Granular Borrow (Plan Quantity)		cu yd	\$ 35.00	\$0.00
Untreated Base Course	316	Ton	\$ 40.00	\$12,626.99
Remove Concrete Driveway	75	sq yd	\$ 28.00	\$2,100.00
HMA - 1/2 inch	439	Ton	\$ 150.00	\$65,885.47
Pavement Marking Paint	60	gal	\$ 80.00	\$4,800.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	800	ft	\$ 35.00	\$28,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	4,000	sq ft	\$ 9.00	\$36,000.00
Concrete Curb and Gutter Type M1	436.32	ft	\$ 25.00	\$10,908.00
Concrete Flatwork, 6 inch Thick	3,000.00	ft	\$ 10.00	\$30,000.00
				\$229,964.87
DRAINAGE & IRRIGATION				
Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	300	ft	\$ 125.00	\$37,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	\$ 5,000.00	\$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	\$ 2,000.00	\$16,000.00
				\$93,500.00
SIGNAL SYSTEM				
Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00
UTILITIES				
Description	Quantity	Unit	Unit Price	Amount
Power Pole relocations	3	lump	\$20,000.00	\$60,000.00
Lighting at roundabout (assume 8 lights)	8	Each	\$8,000.00	\$64,000.00
Misc utility relocate	1	lump	\$15,000.00	\$15,000.00
				\$139,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
700 South / 4000 West*

BID ITEMS				
GENERAL				
Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$42,200.00
Public Information Services	1	lump	1.00%	\$4,500.00
Traffic Control	1	lump	8.00%	\$35,500.00
Survey	1	lump	5.00%	\$22,200.00
				\$104,400.00

ROADWAY				
Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	800	ft	\$ 12.00	\$9,600.00
Remove Concrete Sidewalk	44	sq yd	\$ 28.00	\$1,244.44
Roadway Excavation (Plan Quantity)	194	cu yd	\$ 24.00	\$4,644.41
Granular Borrow (Plan Quantity)		cu yd	\$ 35.00	\$0.00
Untreated Base Course	316	Ton	\$ 40.00	\$12,626.99
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	439	Ton	\$ 150.00	\$65,885.47
Pavement Marking Paint	60	gal	\$ 80.00	\$4,800.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	800	ft	\$ 35.00	\$28,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	4,000	sq ft	\$ 9.00	\$36,000.00
Concrete Curb and Gutter Type M1	436.32	ft	\$ 25.00	\$10,908.00
Concrete Flatwork, 6 inch Thick	3,000.00	ft	\$ 10.00	\$30,000.00
				\$238,709.31

DRAINAGE & IRRIGATION				
Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	200	ft	\$ 125.00	\$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	\$ 5,000.00	\$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	\$ 2,000.00	\$16,000.00
				\$81,000.00

SIGNAL SYSTEM				
Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES				
Description	Quantity	Unit	Unit Price	Amount
Power Pole relocations	1	lump	\$25,000.00	\$25,000.00
Lighting at roundabout (assume 8 lights)	8	Each	\$8,000.00	\$64,000.00
Relocate irrigation box	1	lump	\$10,000.00	\$10,000.00
Misc utility relocate	1	lump	\$10,000.00	\$10,000.00
				\$109,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
SR-110 (4500 West) / 300 North*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$52,600.00
Public Information Services	1	lump	1.00%	\$5,600.00
Traffic Control	1	lump	8.00%	\$44,300.00
Survey	1	lump	5.00%	\$27,700.00
				\$130,200.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	150	ft	\$ 12.00	\$1,800.00
Remove Concrete Sidewalk	222	sq yd	\$ 28.00	\$6,222.22
Roadway Excavation (Plan Quantity)	194	cu yd	\$ 24.00	\$4,644.41
Granular Borrow (Plan Quantity)		cu yd	\$ 35.00	\$0.00
Untreated Base Course	316	Ton	\$ 40.00	\$12,626.99
Remove Concrete Driveway	75	sq yd	\$ 28.00	\$2,100.00
HMA - 1/2 inch	592	Ton	\$ 150.00	\$88,835.47
Pavement Marking Paint	60	gal	\$ 80.00	\$4,800.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	1,200	ft	\$ 35.00	\$42,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	6,000	sq ft	\$ 9.00	\$54,000.00
Concrete Curb and Gutter Type M1	436.32	ft	\$ 25.00	\$10,908.00
Concrete Flatwork, 6 inch Thick	3,000.00	ft	\$ 10.00	\$30,000.00
				\$292,937.09

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	400	ft	\$ 125.00	\$50,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	\$ 5,000.00	\$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	\$ 2,000.00	\$16,000.00
				\$106,000.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Power Pole relocations	1	lump	\$50,000.00	\$50,000.00
Lighting at roundabout (assume 8 lights)	8	Each	\$8,000.00	\$64,000.00
Relocate centurylink/comm. lines	1	lump	\$15,000.00	\$15,000.00
Misc utility relocate	1	lump	\$10,000.00	\$10,000.00
				\$139,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
300 North / 2550 West

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	5.00%	\$15,500.00
Public Information Services	1	lump	1.00%	\$3,100.00
Traffic Control	1	lump	2.00%	\$6,200.00
Survey	1	lump	2.00%	\$6,200.00
				\$31,000.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter		ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk		sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)		cu yd	\$ 24.00	\$0.00
Granular Borrow (Plan Quantity)		cu yd	\$ 35.00	\$0.00
Untreated Base Course		Ton	\$ 40.00	\$0.00
Remove Concrete Driveway		sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch		Ton	\$ 110.00	\$0.00
Pavement Marking Paint	30	gal	\$ 80.00	\$2,400.00
Pavement Message (Preformed Thermoplastic)	16	Each	\$ 250.00	\$4,000.00
Concrete Curb and Gutter Type B1		ft	\$ 35.00	\$0.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	\$ 4,000.00	\$8,000.00
Concrete Sidewalk		sq ft	\$ 9.00	\$0.00
				\$14,400.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe		ft	\$ 125.00	\$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	\$ 5,000.00	\$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	\$ 2,000.00	\$0.00
				\$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
New Signal	1	lump	\$275,000.00	\$275,000.00
				\$275,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (potential need to relocate utilities for signa foundations)	1	lump	\$5,000.00	\$5,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
SR-110 (4500 West) / 1300 North

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$51,000.00
Public Information Services	1	lump	1.00%	\$5,400.00
Traffic Control	1	lump	8.00%	\$42,900.00
Survey	1	lump	5.00%	\$26,900.00
				\$126,200.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter		ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	222	sq yd	\$ 28.00	\$6,222.22
Roadway Excavation (Plan Quantity)	194	cu yd	\$ 24.00	\$4,644.41
Granular Borrow (Plan Quantity)		cu yd	\$ 35.00	\$0.00
Untreated Base Course	316	Ton	\$ 40.00	\$12,626.99
Remove Concrete Driveway	75	sq yd	\$ 28.00	\$2,100.00
HMA - 1/2 inch	592	Ton	\$ 150.00	\$88,835.47
Pavement Marking Paint	60	gal	\$ 80.00	\$4,800.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	1,200	ft	\$ 35.00	\$42,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	6,000	sq ft	\$ 9.00	\$54,000.00
Concrete Curb and Gutter Type M1	436.32	ft	\$ 25.00	\$10,908.00
Concrete Flatwork, 6 inch Thick	3,000.00	ft	\$ 10.00	\$30,000.00
				\$291,137.09

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	400	ft	\$ 125.00	\$50,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	\$ 5,000.00	\$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	\$ 2,000.00	\$16,000.00
				\$106,000.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Power Pole relocations	1	lump	\$50,000.00	\$50,000.00
Lighting at roundabout (assume 8 lights)	8	Each	\$8,000.00	\$64,000.00
Misc utility relocate	1	lump	\$10,000.00	\$10,000.00
				\$124,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
SR-110 (4500 West) / 800 North

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$45,400.00
Public Information Services	1	lump	1.00%	\$4,800.00
Traffic Control	1	lump	8.00%	\$38,200.00
Survey	1	lump	5.00%	\$23,900.00
				\$112,300.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	194	cu yd	\$ 24.00	\$4,644.41
Granular Borrow (Plan Quantity)		cu yd	\$ 35.00	\$0.00
Untreated Base Course	316	Ton	\$ 40.00	\$12,626.99
Remove Concrete Driveway	75	sq yd	\$ 28.00	\$2,100.00
HMA - 1/2 inch	439	Ton	\$ 150.00	\$65,885.47
Pavement Marking Paint	60	gal	\$ 80.00	\$4,800.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	800	ft	\$ 35.00	\$28,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	4,000	sq ft	\$ 9.00	\$36,000.00
Concrete Curb and Gutter Type M1	436.32	ft	\$ 25.00	\$10,908.00
Concrete Flatwork, 6 inch Thick	3,000.00	ft	\$ 10.00	\$30,000.00
				\$229,964.87

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	300	ft	\$ 125.00	\$37,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	\$ 5,000.00	\$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	\$ 2,000.00	\$16,000.00
				\$93,500.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Power Pole relocations	3	lump	\$20,000.00	\$60,000.00
Lighting at roundabout (assume 8 lights)	8	Each	\$8,000.00	\$64,000.00
Misc utility relocate	1	lump	\$15,000.00	\$15,000.00
				\$139,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
SR-110 (4500 West) / 700 South

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$46,400.00
Public Information Services	1	lump	1.00%	\$4,900.00
Traffic Control	1	lump	8.00%	\$39,000.00
Survey	1	lump	5.00%	\$24,400.00
				\$114,700.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	194	cu yd	\$ 24.00	\$4,644.41
Granular Borrow (Plan Quantity)		cu yd	\$ 35.00	\$0.00
Untreated Base Course	316	Ton	\$ 40.00	\$12,626.99
Remove Concrete Driveway	75	sq yd	\$ 28.00	\$2,100.00
HMA - 1/2 inch	439	Ton	\$ 150.00	\$65,885.47
Pavement Marking Paint	60	gal	\$ 80.00	\$4,800.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	800	ft	\$ 35.00	\$28,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	4,000	sq ft	\$ 9.00	\$36,000.00
Concrete Curb and Gutter Type M1	436.32	ft	\$ 25.00	\$10,908.00
Concrete Flatwork, 6 inch Thick	3,000.00	ft	\$ 10.00	\$30,000.00
				\$229,964.87

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	300	ft	\$ 125.00	\$37,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	\$ 5,000.00	\$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	\$ 2,000.00	\$16,000.00
				\$93,500.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Power Pole relocations	1	Lump	\$20,000.00	\$20,000.00
Lighting at roundabout (assume 8 lights)	8	Each	\$8,000.00	\$64,000.00
Misc utility relocate	1	Lump	\$15,000.00	\$15,000.00
Pipe or relocate irrigation ditch	1	Lump	\$50,000.00	\$50,000.00
				\$149,000.00



2022 City Improvements		
Project Number	Description	Total Project Cost
1	300 North / 1500 West*	\$3,380
2	700 South / 4000 West*	\$1,027,928
3	300 North / 3150 West (Main St)*	\$482,458
6	SR-110 (4500 West) / 300 North*	\$1,277,502
8	300 North / 2550 West	\$440,350
12	SR-110 (4500 West) / 1300 North	\$1,797,350
13	SR-110 (4500 West) / 800 North	\$1,119,703
14	SR-110 (4500 West) / 700 South	\$1,140,659
TOTAL:		\$7,289,330
2028 City Improvements		
Project Number	Description	Total Project Cost
1	300 North / 1500 West*	\$3,918
2	700 South / 4000 West*	\$1,191,651
3	300 North / 3150 West (Main St)*	\$559,302
6	SR-110 (4500 West) / 300 North*	\$1,480,975
8	300 North / 2550 West	\$510,487
12	SR-110 (4500 West) / 1300 North	\$2,083,621
13	SR-110 (4500 West) / 800 North	\$1,298,042
14	SR-110 (4500 West) / 700 South	\$1,322,336
TOTAL:		\$8,450,331



ENGINEER'S ESTIMATE (2022 COSTS)
300 North; 2000 West to 4000 West*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$670,100.00
Public Information Services	1	lump	2.00%	\$141,100.00
Traffic Control	1	lump	7.00%	\$493,800.00
Survey	1	lump	5.00%	\$352,700.00
				\$1,657,700.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	1,500	ft	\$ 12.00	\$18,000.00
Remove Concrete Sidewalk	3,483	sq yd	\$ 28.00	\$97,528.48
Roadway Excavation (Plan Quantity)	14,183	cu yd	\$ 24.00	\$340,391.07
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	10,235	Ton	\$ 40.00	\$409,402.67
Remove Concrete Driveway	1,161	sq yd	\$ 28.00	\$32,496.52
HMA - 1/2 inch	8,060	Ton	\$ 110.00	\$886,616.63
Pavement Marking Paint	251	gal	\$ 80.00	\$20,062.40
Pavement Message (Preformed Thermoplastic)	57	Each	\$ 250.00	\$14,250.00
Concrete Curb and Gutter Type B1	16,941	ft	\$ 35.00	\$592,945.50
Perpendicular/Parallel Pedestrian Access Ramp	13	Each	\$ 4,000.00	\$52,000.00
Concrete Sidewalk	85,552	sq ft	\$ 9.00	\$769,963.50
Remove Asphalt Pavement	285	sq yd	\$ 20.00	\$5,698.00
Remove Fence	1,548	ft	\$ 5.00	\$7,739.75
Concrete Driveway Flared, 6 inch Thick	62	Each	\$ 6,000.00	\$372,000.00
Remove Tree	30	Each	\$ 2,000.00	\$60,000.00
Remove Concrete Curb	61	ft	\$ 10.00	\$605.00
				\$3,679,699.52

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe	11347	ft	\$ 125.00	\$1,418,375.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	36	Each	\$ 5,000.00	\$180,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	36	Each	\$ 2,000.00	\$72,000.00
				\$1,670,375.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Signal modification at 3000 West	1	Lump	\$100,000.00	\$100,000.00
				\$100,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility pole relocations	54	Each	\$15,000.00	\$810,000.00
Misc. relocations (fire hydrants, Manhole Reconstructs, third party relocations)	1	lump	\$150,000.00	\$150,000.00
Street Lighting (spaced every 150')	71	Each	\$8,000.00	\$568,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
3200 W; SR-193 to 300 N (Main St.)*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$173,900.00
Public Information Services	1	lump	1.00%	\$18,300.00
Traffic Control	1	lump	2.00%	\$36,600.00
Survey	1	lump	2.00%	\$36,600.00
				\$265,400.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	4,060	cu yd	\$ 24.00	\$97,430.67
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	7,224	Ton	\$ 40.00	\$288,970.50
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	3,049	Ton	\$ 110.00	\$335,405.07
Pavement Marking Paint	150	gal	\$ 80.00	\$12,000.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	5,694	ft	\$ 35.00	\$199,290.00
Perpendicular/Parallel Pedestrian Access Ramp	6	Each	\$ 4,000.00	\$24,000.00
Concrete Sidewalk	28,470	sq ft	\$ 9.00	\$256,230.00
				\$1,216,326.24

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	3052	ft	\$ 125.00	\$381,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	10	Each	\$ 5,000.00	\$50,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	10	Each	\$ 2,000.00	\$20,000.00
				\$451,500.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	19	Each	\$8,000.00	\$152,000.00
				\$157,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
100 North; 3100 West to 3250 West*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$51,800.00
Public Information Services	1	lump	1.00%	\$5,500.00
Traffic Control	1	lump	2.00%	\$11,000.00
Survey	1	lump	2.00%	\$11,000.00
				\$79,300.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	1,184	cu yd	\$ 24.00	\$28,404.44
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	2,106	Ton	\$ 40.00	\$84,245.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	889	Ton	\$ 110.00	\$97,782.30
Pavement Marking Paint	22	gal	\$ 80.00	\$1,748.00
Pavement Message (Preformed Thermoplastic)	8	Each	\$ 250.00	\$2,000.00
Concrete Curb and Gutter Type B1	1,660	ft	\$ 35.00	\$58,100.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	\$ 4,000.00	\$8,000.00
Concrete Sidewalk	8,300	sq ft	\$ 9.00	\$74,700.00
				\$354,979.74

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	890	ft	\$ 125.00	\$111,250.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	3	Each	\$ 5,000.00	\$15,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	3	Each	\$ 2,000.00	\$6,000.00
				\$132,250.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	6	Each	\$8,000.00	\$48,000.00
				\$53,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
4000 West; 1300 North to 1800 North*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$232,200.00
Public Information Services	1	lump	1.00%	\$24,500.00
Traffic Control	1	lump	2.00%	\$48,900.00
Survey	1	lump	2.00%	\$48,900.00
				\$354,500.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	4,992	cu yd	\$ 24.00	\$119,812.00
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	8,884	Ton	\$ 40.00	\$355,351.50
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	3,750	Ton	\$ 110.00	\$412,452.81
Pavement Marking Paint	92	gal	\$ 80.00	\$7,372.00
Pavement Message (Preformed Thermoplastic)	8	Each	\$ 250.00	\$2,000.00
Concrete Curb and Gutter Type B1	7,002	ft	\$ 35.00	\$245,070.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	35,010	sq ft	\$ 9.00	\$315,090.00
				\$1,489,148.31

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	3752	ft	\$ 125.00	\$469,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	12	Each	\$ 5,000.00	\$60,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	12	Each	\$ 2,000.00	\$24,000.00
				\$553,000.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	24	Each	\$8,000.00	\$192,000.00
				\$197,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
Cold Springs Road; 200 South to 200 North*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$188,000.00
Public Information Services	1	lump	1.00%	\$19,800.00
Traffic Control	1	lump	2.00%	\$39,600.00
Survey	1	lump	2.00%	\$39,600.00
				\$287,000.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	4,365	cu yd	\$ 24.00	\$104,754.22
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	7,767	Ton	\$ 40.00	\$310,691.50
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	3,278	Ton	\$ 110.00	\$360,616.41
Pavement Marking Paint	150	gal	\$ 80.00	\$12,000.00
Pavement Message (Preformed Thermoplastic)	12	Each	\$ 250.00	\$3,000.00
Concrete Curb and Gutter Type B1	6,122	ft	\$ 35.00	\$214,270.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	30,610	sq ft	\$ 9.00	\$275,490.00
				\$1,312,822.13

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	3281	ft	\$ 125.00	\$410,125.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	11	Each	\$ 5,000.00	\$55,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	11	Each	\$ 2,000.00	\$22,000.00
				\$487,125.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	21	Each	\$8,000.00	\$168,000.00
				\$173,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
Cold Springs Road; 450 South to 200 South*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$99,200.00
Public Information Services	1	lump	1.00%	\$10,500.00
Traffic Control	1	lump	2.00%	\$20,900.00
Survey	1	lump	2.00%	\$20,900.00
				\$151,500.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	1,859	cu yd	\$ 24.00	\$44,625.78
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	3,309	Ton	\$ 40.00	\$132,356.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	1,397	Ton	\$ 110.00	\$153,624.24
Pavement Marking Paint	34	gal	\$ 80.00	\$2,744.00
Pavement Message (Preformed Thermoplastic)	6	Each	\$ 250.00	\$1,500.00
Concrete Curb and Gutter Type B1	2,608	ft	\$ 35.00	\$91,280.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	\$ 4,000.00	\$8,000.00
Concrete Sidewalk	13,040	sq ft	\$ 9.00	\$117,360.00
				\$551,490.02

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	1398	ft	\$ 125.00	\$174,750.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	5	Each	\$ 5,000.00	\$25,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	5	Each	\$ 2,000.00	\$10,000.00
				\$209,750.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	9	Each	\$8,000.00	\$72,000.00
				\$77,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
200 South; 4500 West to Cold Springs Road*

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$164,600.00
Public Information Services	1	lump	1.00%	\$17,400.00
Traffic Control	1	lump	2.00%	\$34,700.00
Survey	1	lump	2.00%	\$34,700.00
				\$251,400.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	3,696	cu yd	\$ 24.00	\$88,704.00
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	6,577	Ton	\$ 40.00	\$263,088.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	2,776	Ton	\$ 110.00	\$305,363.52
Pavement Marking Paint	100	gal	\$ 80.00	\$8,000.00
Pavement Message (Preformed Thermoplastic)	6	Each	\$ 250.00	\$1,500.00
Concrete Curb and Gutter Type B1	5,184	ft	\$ 35.00	\$181,440.00
Perpendicular/Parallel Pedestrian Access Ramp	4	Each	\$ 4,000.00	\$16,000.00
Concrete Sidewalk	25,920	sq ft	\$ 9.00	\$233,280.00
				\$1,097,375.52

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	2778	ft	\$ 125.00	\$347,250.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	9	Each	\$ 5,000.00	\$45,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	9	Each	\$ 2,000.00	\$18,000.00
				\$410,250.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$15,000.00	\$15,000.00
Street Lighting (spaced every 150')	18	Each	\$8,000.00	\$144,000.00
Relocate power poles	4	Each	\$15,000.00	\$60,000.00
				\$219,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
1000 North; 4000 West to 3200 West

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$243,200.00
Public Information Services	1	lump	1.00%	\$25,600.00
Traffic Control	1	lump	2.00%	\$51,200.00
Survey	1	lump	2.00%	\$51,200.00
				\$371,200.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	5,727	cu yd	\$ 24.00	\$137,436.44
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	10,191	Ton	\$ 40.00	\$407,624.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	4,301	Ton	\$ 110.00	\$473,124.96
Pavement Marking Paint	106	gal	\$ 80.00	\$8,456.00
Pavement Message (Preformed Thermoplastic)	16	Each	\$ 250.00	\$4,000.00
Concrete Curb and Gutter Type B1	8,032	ft	\$ 35.00	\$281,120.00
Perpendicular/Parallel Pedestrian Access Ramp	6	Each	\$ 4,000.00	\$24,000.00
Concrete Sidewalk	40,160	sq ft	\$ 9.00	\$361,440.00
				\$1,697,201.40

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	4304	ft	\$ 125.00	\$538,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	14	Each	\$ 5,000.00	\$70,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	14	Each	\$ 2,000.00	\$28,000.00
				\$636,000.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	27	Each	\$8,000.00	\$216,000.00
				\$221,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
3500 W; 800 N to 1300 N

BID ITEMS				
GENERAL				
Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$160,700.00
Public Information Services	1	lump	2.50%	\$42,300.00
Traffic Control	1	lump	7.50%	\$126,900.00
Survey	1	lump	2.00%	\$33,900.00
				\$363,800.00

ROADWAY				
Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	3,773	cu yd	\$ 24.00	\$90,552.00
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	6,714	Ton	\$ 40.00	\$268,569.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	2,834	Ton	\$ 110.00	\$311,725.26
Pavement Marking Paint	70	gal	\$ 80.00	\$5,572.00
Pavement Message (Preformed Thermoplastic)	16	Each	\$ 250.00	\$4,000.00
Concrete Curb and Gutter Type B1	5,292	ft	\$ 35.00	\$185,220.00
Perpendicular/Parallel Pedestrian Access Ramp	4	Each	\$ 4,000.00	\$16,000.00
Concrete Sidewalk	26,460	sq ft	\$ 9.00	\$238,140.00
				\$1,119,778.26

DRAINAGE & IRRIGATION				
Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	2836	ft	\$ 125.00	\$354,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	9	Each	\$ 5,000.00	\$45,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	9	Each	\$ 2,000.00	\$18,000.00
				\$417,500.00

SIGNAL SYSTEM				
Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES				
Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	18	Each	\$8,000.00	\$144,000.00
				\$149,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
2550 W; SR-193 to 300 N

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$163,700.00
Public Information Services	1	lump	2.50%	\$43,100.00
Traffic Control	1	lump	7.50%	\$129,200.00
Survey	1	lump	2.00%	\$34,500.00
				\$370,500.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	3,813	cu yd	\$ 24.00	\$91,510.22
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	6,785	Ton	\$ 40.00	\$271,411.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	2,864	Ton	\$ 110.00	\$315,023.94
Pavement Marking Paint	70	gal	\$ 80.00	\$5,628.00
Pavement Message (Preformed Thermoplastic)	14	Each	\$ 250.00	\$3,500.00
Concrete Curb and Gutter Type B1	5,348	ft	\$ 35.00	\$187,180.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	\$ 4,000.00	\$32,000.00
Concrete Sidewalk	26,740	sq ft	\$ 9.00	\$240,660.00
				\$1,146,913.16

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	2866	ft	\$ 125.00	\$358,250.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	9	Each	\$ 5,000.00	\$45,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	9	Each	\$ 2,000.00	\$18,000.00
				\$421,250.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	18	Each	\$8,000.00	\$144,000.00
				\$149,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
100 N; 2550 W to 2000 W

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$169,700.00
Public Information Services	1	lump	2.50%	\$44,700.00
Traffic Control	1	lump	7.50%	\$134,000.00
Survey	1	lump	2.00%	\$35,800.00
				\$384,200.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	4,004	cu yd	\$ 24.00	\$96,096.00
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	7,125	Ton	\$ 40.00	\$285,012.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	3,007	Ton	\$ 110.00	\$330,810.48
Pavement Marking Paint	74	gal	\$ 80.00	\$5,912.00
Pavement Message (Preformed Thermoplastic)	8	Each	\$ 250.00	\$2,000.00
Concrete Curb and Gutter Type B1	5,616	ft	\$ 35.00	\$196,560.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	\$ 4,000.00	\$8,000.00
Concrete Sidewalk	28,080	sq ft	\$ 9.00	\$252,720.00
				\$1,177,110.48

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	3010	ft	\$ 125.00	\$376,250.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	10	Each	\$ 5,000.00	\$50,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	10	Each	\$ 2,000.00	\$20,000.00
				\$446,250.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	19	Each	\$8,000.00	\$152,000.00
				\$157,000.00



ENGINEER'S ESTIMATE (2022 COSTS)
50 N; 2775 W to 2550 W

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	\$74,300.00
Public Information Services	1	lump	2.50%	\$19,600.00
Traffic Control	1	lump	7.50%	\$58,700.00
Survey	1	lump	2.00%	\$15,700.00
				\$168,300.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	0	ft	\$ 12.00	\$0.00
Remove Concrete Sidewalk	0	sq yd	\$ 28.00	\$0.00
Roadway Excavation (Plan Quantity)	1,720	cu yd	\$ 24.00	\$41,272.00
Granular Borrow (Plan Quantity)	0	cu yd	\$ 35.00	\$0.00
Untreated Base Course	3,060	Ton	\$ 40.00	\$122,409.00
Remove Concrete Driveway	0	sq yd	\$ 28.00	\$0.00
HMA - 1/2 inch	1,292	Ton	\$ 110.00	\$142,078.86
Pavement Marking Paint	32	gal	\$ 80.00	\$2,540.00
Pavement Message (Preformed Thermoplastic)	8	Each	\$ 250.00	\$2,000.00
Concrete Curb and Gutter Type B1	2,412	ft	\$ 35.00	\$84,420.00
Perpendicular/Parallel Pedestrian Access Ramp	0	Each	\$ 4,000.00	\$0.00
Concrete Sidewalk	12,060	sq ft	\$ 9.00	\$108,540.00
				\$503,259.86

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	1293	ft	\$ 125.00	\$161,625.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	5	Each	\$ 5,000.00	\$25,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	5	Each	\$ 2,000.00	\$10,000.00
				\$196,625.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		\$0.00
				\$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency (assume minimal utilities since it is a green field road)	1	lump	\$5,000.00	\$5,000.00
Street Lighting (spaced every 150')	9	Each	\$8,000.00	\$72,000.00
				\$77,000.00



2022 City Improvements		
Project Number	Description	Total Project Cost
1	300 North; 2000 West to 4000 West*	\$15,739,409
2	3200 W; SR-193 to 300 N (Main St.)*	\$6,226,969
3	100 North; 3100 West to 3250 West*	\$1,837,104
4	4000 West; 1300 North to 1800 North*	\$8,009,676
5	Cold Springs Road; 200 South to 200 North*	\$5,153,316
6	Cold Springs Road; 450 South to 200 South*	\$1,894,858
7	200 South; 4500 West to Cold Springs Road*	\$5,739,938
8	1000 North; 4000 West to 3200 West	\$8,394,885
9	3500 W; 800 N to 1300 N	\$5,772,030
10	2550 W; SR-193 to 300 N	\$5,857,405
11	100 N; 2550 W to 2000 W	\$6,108,026
12	50 N; 2775 W to 2550 W	\$2,651,524
	TOTAL:	\$41,571,982
2028 City Improvements		
Project Number	Description	Total Project Cost
1	300 North; 2000 West to 4000 West*	\$18,246,288
2	3200 W; SR-193 to 300 N (Main St.)*	\$7,218,764
3	100 North; 3100 West to 3250 West*	\$2,129,707
4	4000 West; 1300 North to 1800 North*	\$9,285,410
5	Cold Springs Road; 200 South to 200 North*	\$5,974,106
6	Cold Springs Road; 450 South to 200 South*	\$2,196,659
7	200 South; 4500 West to Cold Springs Road*	\$6,654,161
8	1000 North; 4000 West to 3200 West	\$9,731,973
9	3500 W; 800 N to 1300 N	\$6,691,365
10	2550 W; SR-193 to 300 N	\$6,790,338
11	100 N; 2550 W to 2000 W	\$7,080,876
12	50 N; 2775 W to 2550 W	\$3,073,843
	TOTAL:	\$48,193,320