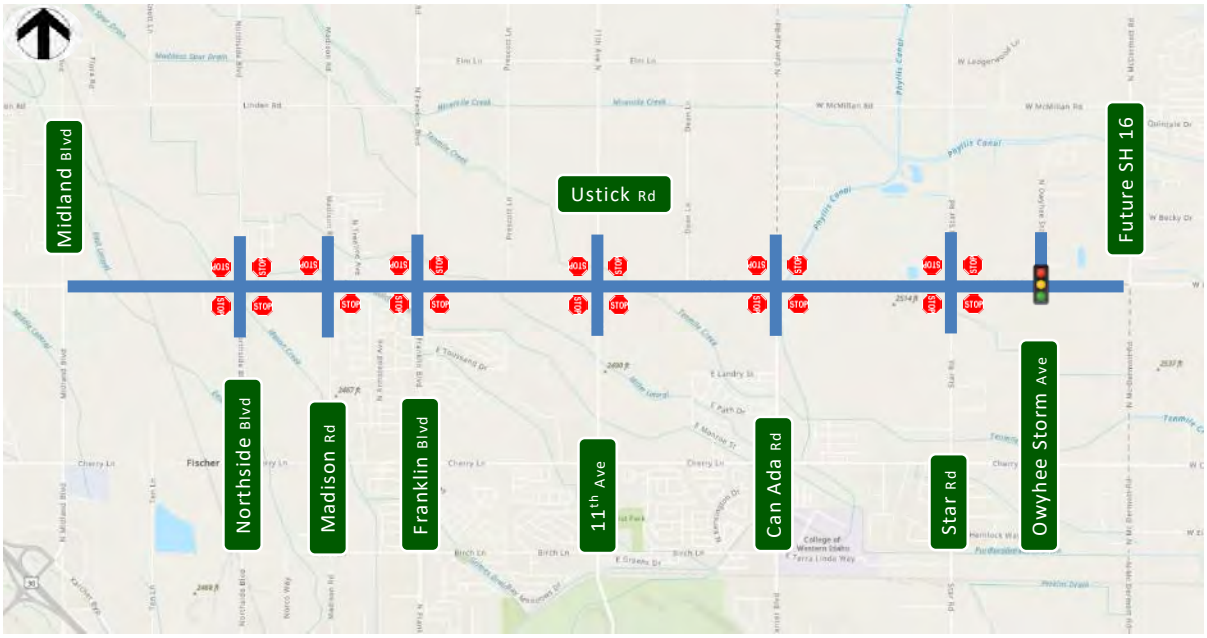
FINAL REPORT

Ustick Road Corridor Study



November 29, 2022
Ustick Road Corridor Study
Task Order No. PW80022006

Prepared for:

City of Nampa

Canyon Highway District No. 4

Nampa Highway District No. 1

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Chapter 1 Introduction

The City of Nampa (City), Canyon Highway District No. 4 (CHD4) and Nampa Highway District No. 1 (NHD1) partnered to develop a corridor plan for Ustick Road from its intersection with Midland Boulevard east to the future SH-16 interchange (shown in Figure 1-1).

The purpose of this study is to recommend roadway and intersection improvements needed to accommodate the forecasted year 2045 traffic demand, propose facilities to accommodate pedestrians and bicyclists, and identify access management strategies on the future five-lane corridor to improve safety and operations. This long-term plan for the corridor provides the agencies with a resource to address questions and resolve issues that may arise as traffic volumes increase, high crash locations emerge, or development occurs along the corridor and in the vicinity. This corridor plan identifies the following:

- Roadway cross-section
- Intersection improvements
- Pedestrian and bicycle facilities
- Drainage collection and disposal strategy
- Irrigation crossings for replacement or extension
- Access management objectives and strategies to balance mobility and safety

Figure 1-1 shows the study area and intersections.

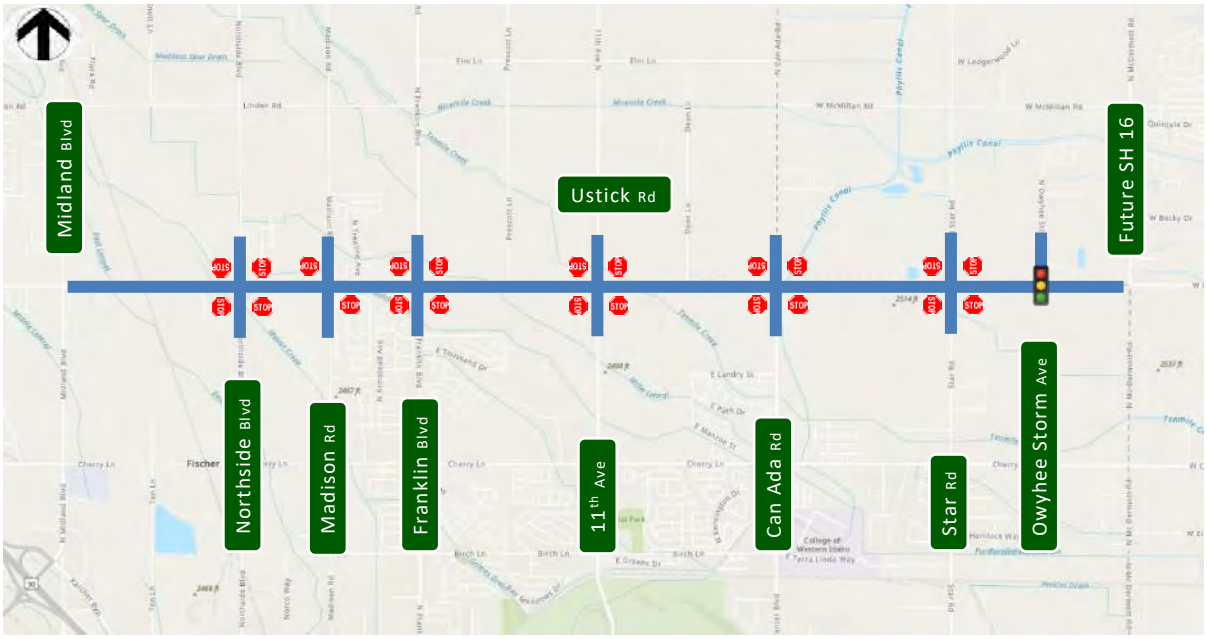


Figure 1-1. Ustick Road corridor study area and intersections

1.1 Study Approach

The corridor study utilized a combination of agency policy and standards, agency feedback, and engineering best practices to complete a corridor plan that meets the needs of future planned growth and development in the area.

The forecasted year 2045 traffic demand was analyzed on the 5.75-mile-long corridor comparing vehicle delay and queues for two intersection improvement options: a roundabout and a traffic signal.

1.2 Assumptions and Limitations

This study effort was conducted with the following assumptions and limitations:

- The analysis year and design year is 2045.
- Operational performance for stop-controlled and signalized intersections is based on the *Highway Capacity Manual 6th Edition* (HCM6) capacity methodologies using Synchro 11 (version 11.1.1.6).
- Operational performance for roundabouts is based on the *2019 Washington State Department of Transportation Sidra Policy Settings* (WSDOT Method) using SIDRA 9.0. Refer to Appendix B, Traffic and Safety Analysis Report, for more information on the WSDOT Method and parameters used in the analysis.
- The January 2022 edition of the *Highway Standards & Development Procedures for the Association of Canyon County Highway Districts*, specifies a minimum design Level of Service (LOS) of C for rural roadways and intersections and LOS D for suburban roadways and intersections. For this study, the intersections are considered suburban and the minimum design LOS is D for the intersections.
- At roundabouts, the maximum allowable volume-to-capacity ratio for an approach was established at 0.85 for the critical/worst lane, which is the operational standard for the neighboring Ada County Highway District (ACHD).
- The existing property lines and section lines shown in the exhibits are approximate and based on data from the 2020 Canyon County GIS.
- The planning-level intersection and corridor designs are centered on GIS section lines unless otherwise noted.

Chapter 2 Existing Corridor

2.1 Study Corridor

According to the *2019 Nampa Citywide Transportation Plan*, Ustick Road is functionally classified as a minor arterial within the study area and is located within the City of Nampa's impact area. The roadway creates the county boundary line between Canyon County and Ada County east of Can Ada Road, with Can Ada Road being the north-south cross-street dividing boundary between the two counties (see Figure 2-1).

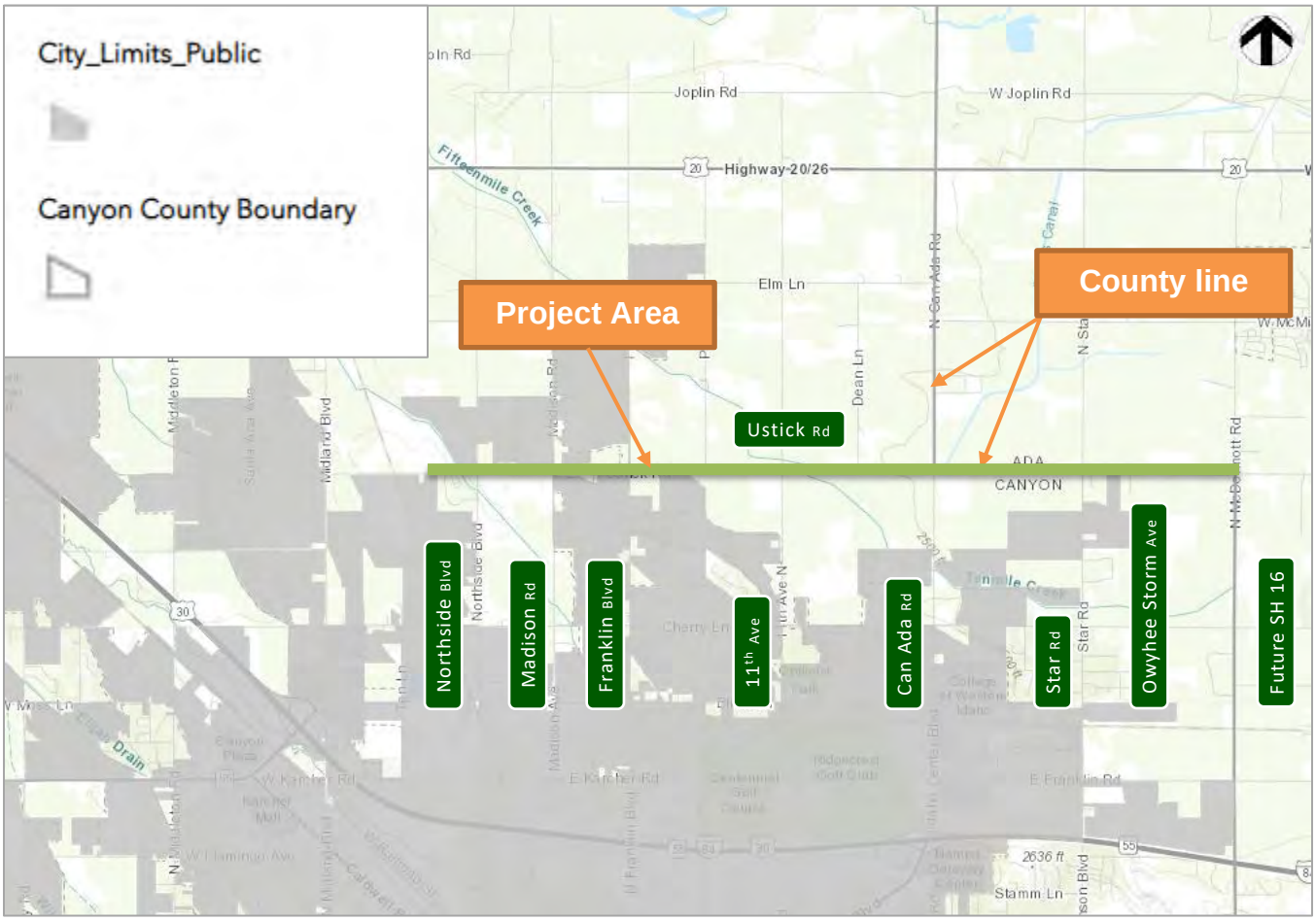


Figure 2-1. Project area map

The roadway currently has a rural cross-section, with one lane in each direction, limited sections of curb, gutter, and sidewalk (see Chapter 2.6) and no access restrictions. The posted speed limit is 50 miles per hour (mph) west of Star Road and 45 mph east of Star Road. The study segment of Ustick Road extends 5.75 miles in length, between its intersection with Midland Boulevard and Owyhee Storm Avenue. The land surrounding the roadway is currently agricultural and

residential with light industrial development on the west end of the corridor near Midland Boulevard.

In 2021, between 3,300 and 4,900 vehicles per day traveled on Ustick Road in the study area.

The seven major cross-streets within the Ustick Road study area are:

- Northside Boulevard – minor arterial, with two lanes and a posted speed limit of 45 mph
- Madison Road – collector, with two lanes and a posted speed limit of 50 mph
- Franklin Boulevard – principal arterial, with two lanes and a posted speed limit of 45 mph south of Ustick Road and 50 mph north of Ustick Road
- 11th Avenue – collector, with two lanes and a posted speed limit of 35 mph south of Ustick Road and 50 mph north of Ustick Road
- Can Ada Road – principal arterial, with two lanes and a posted speed limit of 50 mph
- Star Road – minor arterial, with two lanes and a posted speed limit of 50 mph
- Owyhee Storm Avenue – collector, with two lanes and a posted speed limit of 30 mph

The major cross-streets listed above form the study area intersections analyzed with this study.

2.2 Intersection Operations

Existing (year 2021) traffic operations at the seven study intersections were evaluated using HCM6 methodology. The intersection evaluation reports are included in Appendix B, *Traffic and Safety Analysis Report*. The intersection control and level of service (LOS) for the existing operations are:

- Northside Boulevard and Ustick Road intersection (all-way stop-control, AWSC)
    - The intersection operates at LOS C or better during the peak hours, with a maximum volume-to-capacity (v/c) ratio of 0.70 for the shared northbound left, through, and right-turn in the AM peak.
- Madison Road and Ustick Road intersection (two-way stop-control, TWSC)
    - The northbound and southbound approaches are stop-controlled and operate at LOS D or better during the peak hours. The maximum v/c ratio is 0.42 for the shared northbound left, through, and right-turn in the AM peak.

- Franklin Boulevard and Ustick Road intersection (AWSC)
    - The intersection operates at LOS D or better during the peak hours, with a maximum v/c ratio of 0.85 for the shared northbound left, through, and right-turn in the AM peak.
- 11th Avenue and Ustick Road intersection (AWSC)
    - The intersection operates at LOS B during the peak hours, with a maximum v/c ratio of 0.53 for the shared westbound left, through, and right-turn in the PM peak.
- Can Ada Road and Ustick Road intersection (AWSC)
    - The intersection operates at LOS B during the peak hours, with a maximum v/c ratio of 0.54 for the shared eastbound left, through, and right-turn in the AM peak.
- Star Road and Ustick Road intersection (AWSC)
    - The intersection operates at LOS D or better during the peak hours, with a maximum v/c ratio of 0.80 for the shared northbound left, through, and right-turn in the PM peak.
- Owyhee Storm Avenue and Ustick Road intersection (traffic signal)
    - The intersection operates at LOS B or better during the peak hours, with a maximum v/c ratio of 0.88 for the westbound right-turn lane in the AM peak.

2.3 Crash History

Crash data for the study intersections and Ustick Road segment were provided by ITD for the five-year period from January 1, 2016, through December 31, 2020. The data was analyzed as intersection related and non-intersection related (segment crashes) to identify crash patterns that could potentially be mitigated with countermeasure improvements. Refer to the *Traffic and Safety Analysis Report* in Appendix B for a detailed discussion of the crash data and countermeasures.

A total of 111 crashes were reported in the project limits within the most recent five-year period from 2016 to 2020. The majority of crashes were property damage only (PDO) crashes (62 percent), followed by C injury (18 percent), B injury crashes (14 percent), A injury crashes (4 percent) and two fatal crashes (2 percent). One of the fatal crashes was an intersection-related crash at 11th Avenue and Ustick Road where a southbound through driver failed to stop and collided with the westbound driver. The second fatality was a segment crash that occurred near Prescott Lane, between an ATV trying to turn left and a pickup truck trying to pass the ATV. There were no crashes reported at the Owyhee Storm Avenue and Ustick Road intersection between 2016 and 2020. Figure 2-2 on page 6 illustrates the severity of crashes at the study intersections and on the Ustick Road segment.

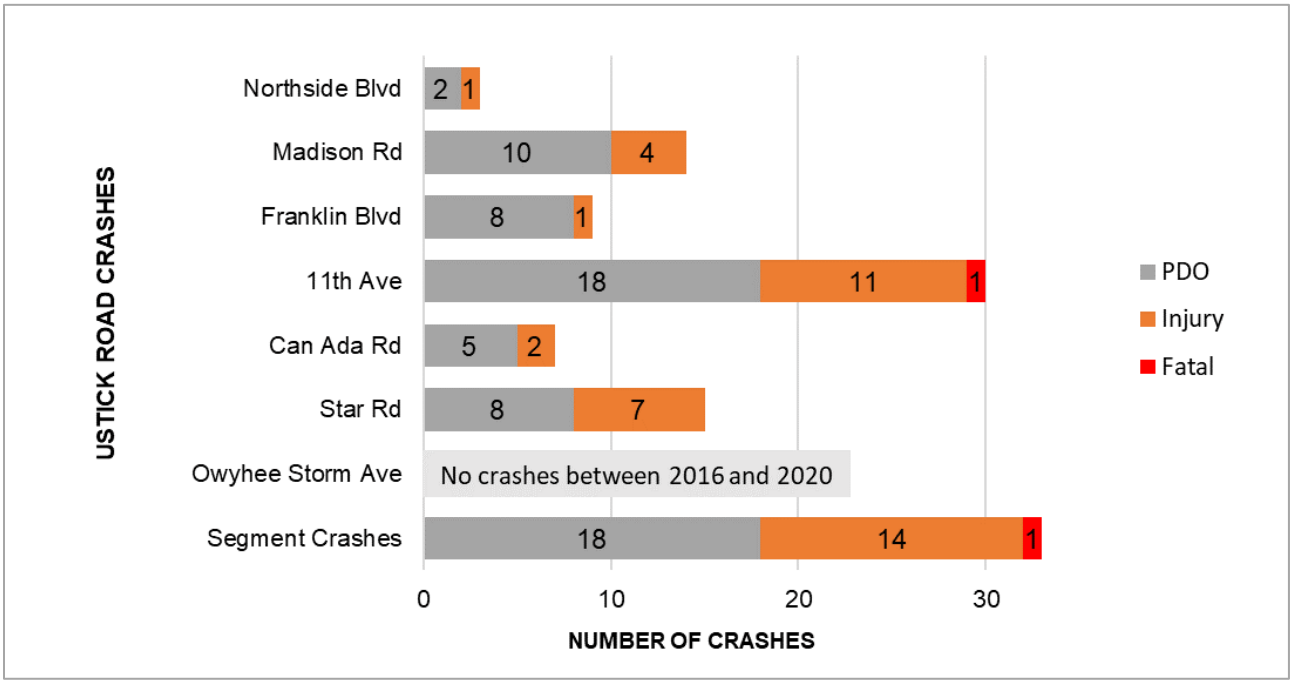


Figure 2-2. 2016-2020 crash frequency and severity – project vicinity

2.4 Freight

Ustick Road has low (less than 100 trucks per day) freight traffic according to the Community Planning Association of Southwest Idaho (COMPASS) *2018 Freight Study*. The roadway is not classified as a freight corridor. Cherry Lane, which is one mile south of Ustick Road, as well as Franklin Boulevard and Midland Boulevard are classified as an 'other' freight connector roadway, meaning they have sufficient truck volumes and include agricultural and detour routes for truck traffic.

2.5 Pedestrian and Bicycle Facilities

There are currently no dedicated bicycle facilities along Ustick Road or on any of the major cross-street approaches in the study area. There is detached sidewalk on the southeast and northeast legs of Madison Road and Ustick Road, and along the northeast corner at Owyhee Storm Avenue and Ustick Road bordering the school. No other pedestrian facilities exist along Ustick Road or on any of the major cross-street approaches in the study area.

2.6 Drainage Facilities

Ustick Road generally drains east to west from its intersection with Owyhee Storm Avenue to the Midland Boulevard intersection, with localized low points along the corridor. There are limited

segments of curb and gutter present within the study limits listed below. In all other areas, existing roadway runoff sheds off the edge of the pavement to the existing gravel shoulder. Curb and gutter are located:

- Along the north side of Ustick Road approximately 300 feet east of Madison Road for approximately 725 feet
    - Runoff discharges to roadside swales behind the curb and gutter
- Along the south side of Ustick Road for approximately 1,200 feet west of Franklin Boulevard
    - Runoff discharges to roadside swales behind the curb and gutter

Chapter 3 Corridor Plan Development

3.1 2045 Planning Year Traffic Conditions

The COMPASS regional travel demand forecast model predicts traffic volumes on Ustick Road will increase from 4,900 vehicle per day (vpd) in 2021 to 31,000 vpd in 2045, assuming that Ustick Road is widened to five lanes by 2045 from Farmway Road to SH-16. Refer to Appendix B, *Traffic and Safety Analysis Report*, for a detailed discussion of traffic analysis.

Two improvement options were analyzed at each intersection: a roundabout and a traffic signal. The lane configurations were based on the roadway classification, arterial or collector, and additional turn lanes were added as needed to meet level of service (LOS) or volume-to-capacity (v/c) requirements.

The minimum lane configuration for the roundabouts consisted of:

- Arterial roadways: one shared left-turn and through lane and one shared through and right-turn lane
- Collector roadways: one shared left-turn, through, and right-turn lane

The minimum lane configuration for the traffic signals consisted of:

- Arterial roadways: one left-turn lane, one through lane and one shared through and right-turn lane
- Collector roadways: one left-turn lane, and one shared through and right-turn lane

Table 3-1 beginning on page 9 summarizes the 2045 AM and PM peak hour volumes, lane configurations, and control for both options. Table 3-2 on page 11 summarizes the traffic operations for the two intersection options.

Table 3-1. 2045 volumes, lane configuration, and control

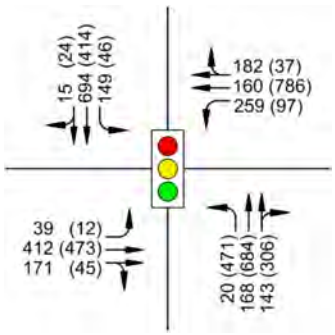
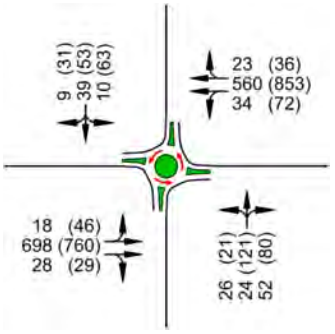
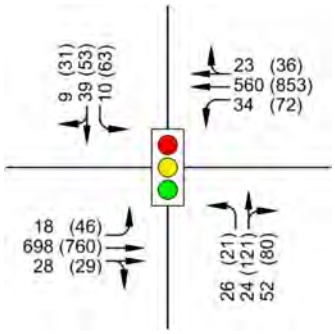
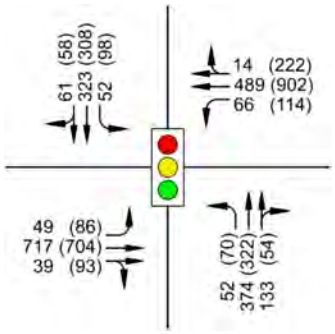
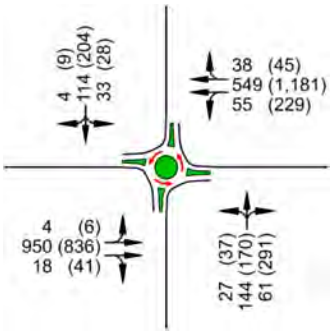
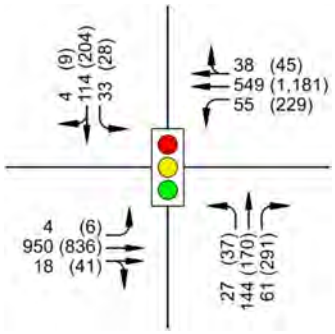
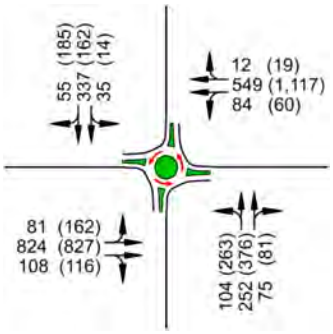
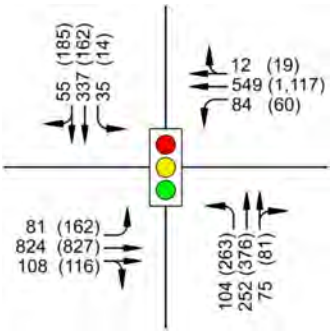
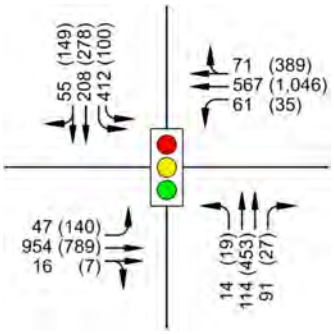
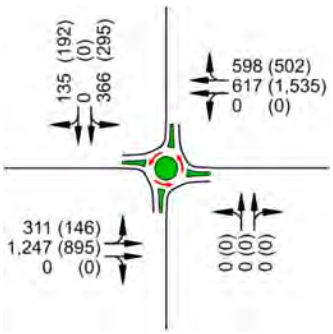
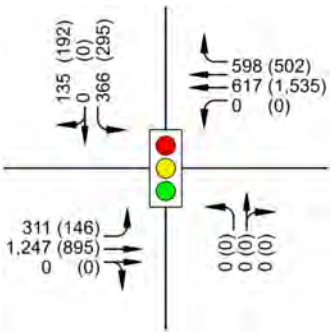
Intersection	Peak Hour Volumes [AM (PM)], Control and Channelization	
	Roundabout	Traffic Signal
Ustick Road and Northside Boulevard		
Ustick Road and Madison Road		
Ustick Road and Franklin Boulevard		
Ustick Road and 11th Avenue*		

Table 3-1 continued. 2045 volumes, lane configuration, and control

Intersection	Peak Hour Volumes [AM (PM)], Control and Channelization	
	Roundabout	Traffic Signal
Ustick Road and Can Ada Road		
Ustick Road and Star Road*		
Ustick Road and Owyhee Storm Avenue*		

* Additional lanes needed to meet LOS requirements for traffic signal option.

Table 3-2. Comparison of 2045 intersection operations

Intersection	MOE	Roundabout		Traffic Signal	
		AM Peak	PM Peak	AM Peak	PM Peak
Ustick Road and Northside Boulevard	Intersection LOS	A	A	C	D
	Intersection Delay (sec)	7	9	34	36
Ustick Road and Madison Road	Intersection LOS	A	A	C	C
	Intersection Delay (sec)	5	6	21	28
Ustick Road and Franklin Boulevard	Intersection LOS	A	A	C	C
	Intersection Delay (sec)	6	7	29	31
Ustick Road and 11th Avenue	Intersection LOS	A	A	C	C
	Intersection Delay (sec)	5	7	27	32
Ustick Road and Can Ada Road	Intersection LOS	A	A	C	D
	Intersection Delay (sec)	7	8	31	36
Ustick Road and Star Road	Intersection LOS	A	A	C	D
	Intersection Delay (sec)	7	8	28	41
Ustick Road and Owyhee Storm Avenue	Intersection LOS	A	A	B	C
	Intersection Delay (sec)	8	7	15	20

The roundabout intersections operate with less vehicle delay and have more reserved capacity than the signalized intersections during the AM and PM peak hours. Traffic operations during off-peak hours, although not analyzed for this study, are expected to show that the roundabouts operate with less delay than the signalized intersections.

3.2 Freight Considerations

According to the COMPASS's *2018 Freight Study*, Ustick Road experiences low truck volumes (less than 100 trucks a day) compared to other roadways in the area. While Ustick Road is not classified as a freight corridor, Franklin Boulevard, Midland Boulevard, and Cherry Lane are each classified as 'other' freight connector roadways.

To maintain Ustick Road as a viable freight route in the future, the concept design incorporated the following design considerations suggested in COMPASS's *2018 Freight Study* for freight corridor preservation:

- Context sensitive design and multimodal integration – With freight passing through an area with current and future residential development, bike lanes are not proposed on Ustick Road. Instead, a shared use path located on both sides of the road a minimum of 10 feet from the nearest vehicle travel lane is proposed to provide a physical separation from vehicles to pedestrians and bicyclists (see Chapter 3.3, Pedestrian and Bicycle Facilities).
- Intersection design – The major cross-street intersections on Ustick Road are designed for WB-67 truck traffic. A WB-67 truck is an interstate truck with sleeper and a 53 feet long trailer with a 67 feet long wheelbase. The WB-67 trucks can make all movements at the roundabouts and signalized intersections without entering opposing traffic lanes.
- Roadway design – The lane widths proposed for Ustick Road are 12 feet and 14 feet (center turn lane or median) in width to accommodate truck traffic (see Figure 3-1. Ustick Road cross-section).

3.3 Pedestrian and Bicycle Facilities

The City's *2019 Bike and Pedestrian Master Plan* provides a facility selection table to help identify the preferred facility type based on street classification, average annual daily traffic, and the posted/85th percentile travel speed. Based on the speed limit and high daily traffic volume, a shared use path, also known has a sidepath, is recommended for Ustick Road. The Ustick Road cross-section is shown in Figure 3-1 below. Mountable/rolled curb and gutter is proposed for posted speeds of 45 mph or higher.

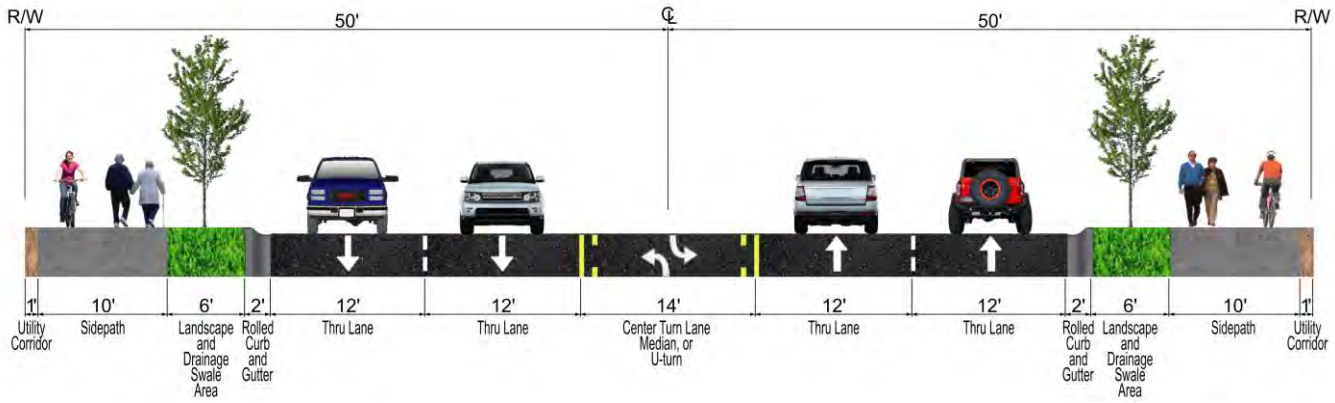


Figure 3-1. Ustick Road cross-section

Opportunities for pedestrians and bicyclists to cross Ustick Road would be provided at the major intersections by traffic signals or roundabouts. RRFBs at the crosswalks would be provided at the roundabouts on approaches with two through lanes.

3.4 Drainage Collection and Disposal

The proposed cross-section for Ustick Road includes four travel lanes (two in each direction), a raised median, curb and gutter, landscape area, and a sidepath on both sides of the roadway. The drainage collection and disposal strategy for the corridor consists of installing catch basins and piping to seepage beds that will be located behind the back of the sidepath but within permanent easements for access by the City or Highway District forces for maintenance. Seepage beds should be designed to limit impact to developable parcels along Ustick Road.

Existing development may make seepage beds unfeasible in some areas. In these locations, larger areas of runoff can be collected into piped systems and discharged to a drainage basin or basins to be sized and located during design.

The estimated construction costs for drainage collection and disposal will vary throughout the corridor depending on the disposal option chosen, field conditions including soil types and depth to groundwater, and available right-of-way.

3.5 Irrigation Crossings

As part of the data collection efforts for this planning study, a review of existing irrigation crossings was conducted using the aerial imagery provided by the County and Google Earth. The following is a list of crossings that will need to be extended or replaced as part of the ultimate roadway widening:

- Noble Drain – existing concrete pipe
    - Extend 60 feet and rebuild headwalls
- East Lateral – existing concrete box culvert
    - Extend 70 feet and rebuild structures
- Pipe crossing east of railroad – existing pipe (material unknown)
    - Replace pipe and structure
- Mason Creek – existing corrugated metal pipe (CMP)
    - Replace with bridge

- Purdam Gulch Drain
    - East of Northside Boulevard – existing CMP
        - Replace pipe and rebuild headwalls
    - At Madison Road – existing CMP
        - Replace pipe and rebuild headwalls
- Miller Lateral – existing concrete box culvert
    - Extend 80 feet and rebuild structures
- Pipe crossing east of Miller Lateral – existing CMP
    - Replace pipe
- Tenmile Creek – existing CMP
    - Replace with bridge
- Phyllis Canal – existing bridge
    - Replace or widen bridge
- Safford Sublateral
    - 1,300' west of Star Road – existing CMP
        - Replace pipe
    - North side of Ustick Road – existing concrete pipe
        - Relocate ditch, rebuild structures and replace concrete pipe crossing approaches
    - West side of Star Road – existing CMP
        - Replace pipe crossing Ustick Road
        - Relocate ditch and rebuild structures
    - East side of Star Road – existing CMP
        - Replace pipe

The locations will need further evaluation with surveys and field observations during the design stage of the project.

3.6 Access Management

Access management is a set of strategies implemented in roadway design and land development to control roadway access to reduce crashes and improve traffic flow. Primary access management techniques are:

- Access spacing, including spacing between roundabout and signalized intersections and distance between private driveways
- Turning lanes, including dedicated left- and right-turn lanes and U-turn lanes, as well as indirect left turns, U-turns, and roundabouts
- Median treatments, including raised medians that limit turn movements across a roadway

The access management approach proposed for Ustick Road establishes full access for all approaches at the major public street intersections and limits future signalized intersection or roundabout spacing to one-half mile between full access intersections.

A raised median will be installed along the corridor to limit access at driveways and public streets to right-in and right-out movements between the one-half mile public street intersections. Driveway access will be limited to 660 feet minimum spacing to be implemented as re-development occurs. Openings in the raised median will be constructed to provide U-turn opportunities downstream of access-limited driveways. The U-turns will limit out-of-direction travel to one-quarter mile for left-turn and through movements from the driveways or minor public/private streets (see Figure 3-2).

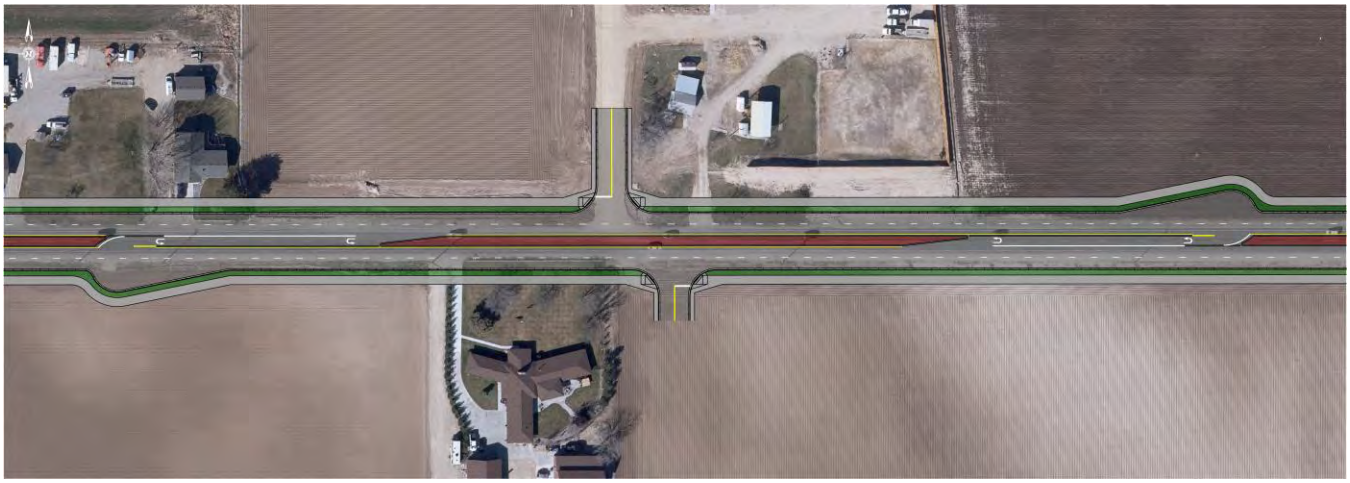


Figure 3-2. U-turn opportunities for access-limited driveways

Refer to Appendix A, *Proposed Improvements Exhibits*, for the Ustick Road Corridor Study improvement exhibits which identify the future access points on the corridor.

3.7 Public Outreach

Appendix C, *Public Outreach Summary,* summarizes the public involvement effort for this study. The agencies communicated news of the corridor plan and solicited public feedback through an online webpage that displayed a slideshow with supporting exhibits that described the study effort and collected public feedback using SurveyMonkey. The survey was open for three weeks and four days, between August 3rd and August 28th, and received 119 responses. The online slideshow and SurveyMonkey responses can be found in Appendix C.

In general, the respondents were in favor of the proposed cross-section and when asked to choose between a roundabout corridor or traffic signal corridor, 77 percent (91 respondents) were in favor of the roundabout corridor.

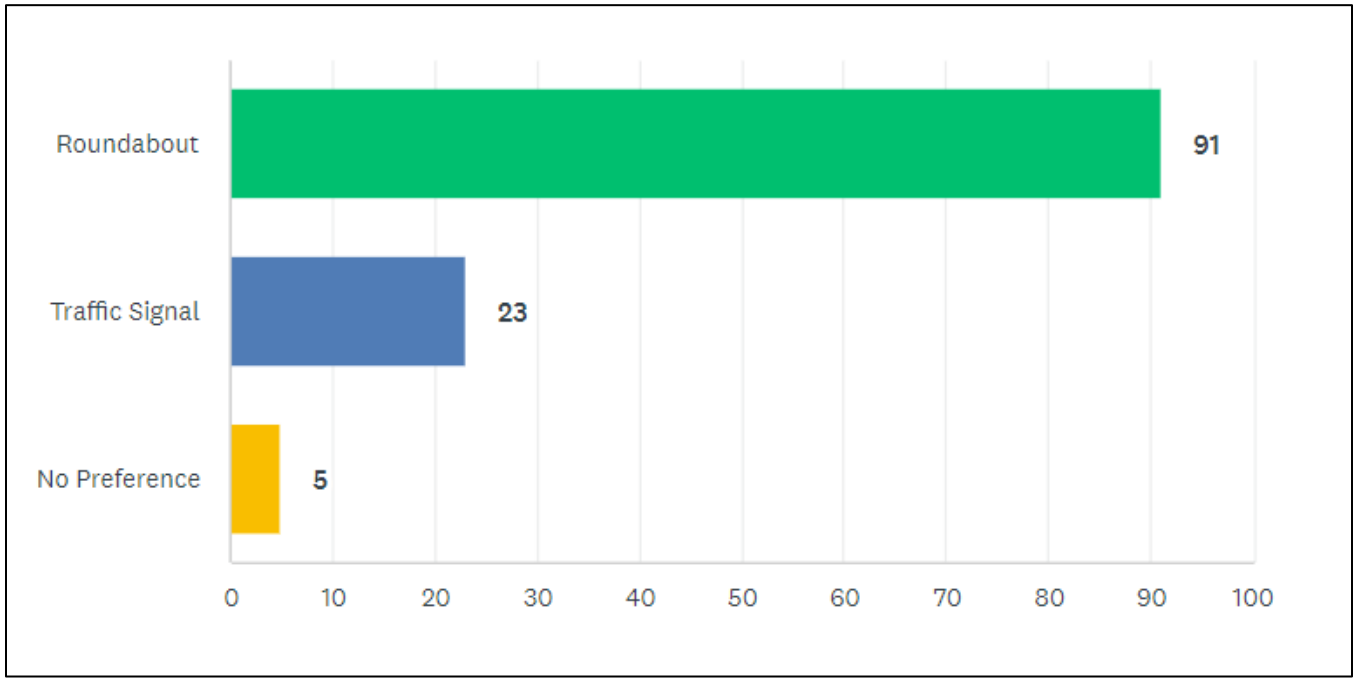


Figure 3-3. PIM Question 1 results

Those not in favor of the roundabout corridor expressed their concern with other drivers' ability to navigate the roundabout and stated more driver training may be needed. Another common concern from the public was property impact issues, with some respondents stating they chose the traffic signal option because it has less of a right-of-way impact to the surrounding properties.

The *Public Outreach Summary* identifies themes from the survey responses and can be found in Appendix C.

3.8 Corridor Evaluation

Two intersection types were developed for the major intersections on Ustick Road: a roundabout and a traffic signal. To optimize traffic operations and driver expectations, two corridor plans were developed that maintained a consistent intersection type. Appendix A contains exhibits of the two corridor plans and reduced scale intersection exhibits. The two corridor plan options were evaluated for the following criteria:

- Traffic Operations – Intersection vehicle delay.
- Freight – Accommodate large trucks, reduce stops and provide consistent speed.
- Access – Allow increased left-turns and provide for pedestrian/bicycle traffic.
- Safety – Roadway segment and intersection safety (fewer crashes).
- Property Impacts – Impact on properties fronting Ustick Road and side streets.
- Cost – Life cycle cost consisting of estimated capital costs, operation and maintenance costs, vehicle delay, and expected crash costs over 20-year service life.

A rating matrix was developed to summarize differences between the roundabout and traffic signal corridors for the evaluation factors above (shown in Table 3-3 on page 20). The two options were compared to the No-Build, which served as the baseline. A narrative summary of the findings follows.

Traffic operations – intersection vehicle delay: The average vehicle delay experienced at the seven study intersections in year 2045 for the roundabouts is expected to be less than the delay experienced with traffic signals during the peak commute and the off-peak travel times.

Freight – large vehicle design: Both options were designed for WB-67 trucks to make all movements at the roundabouts and signalized intersections without entering opposing traffic lanes.

Freight – speed consistency and reduced stops: Roundabouts have yield control and provide better speed consistency and reduced stops compared to traffic signal operations.

Access – left-turn access: Both options provide full access at the intersections for left-turns but limit left-turns between the one-mile intersections with the access management strategy described in Chapter 3.6.

Access – pedestrians and bicycles: The two options have identical 10-foot wide sidepaths for pedestrians and bicyclists. At the intersections, roundabouts have historically resulted in fewer pedestrian and bicycle crashes than traffic signals. Roundabouts have fewer pedestrian/bicycle conflict points compared to traffic signals, lower operating speeds, and directional traffic. A study presented in NCHRP 672, *Roundabouts, an Informational Guide,* found that a conventional roundabout had 0.45 pedestrian crashes per million trips compared to 0.67 for traffic signals. Roundabouts have lower operating speeds which play a significant role in whether a vehicle-pedestrian or vehicle-bicycle crash will be a fatality. Per NCHRP 672, a 10 MPH vehicle speed difference decreases the chances of a pedestrian fatality by 35 percent. In addition to lower speeds and fewer crashes, pedestrians and bicyclists using the roundabout crosswalks only have to be concerned about one direction of traffic at a time when using the crosswalks.

Safety – roadway segment: Both options implement the access management strategy described in Chapter 3.6, utilizing raised medians and U-turns to reduce left-turns and reduce vehicle conflict points.

Safety – intersection: Historically, roundabouts have proven to have fewer crashes, especially injury and fatality, than traffic signals. According the NCHRP 672, roundabouts have:

- 48% fewer crashes than signalized intersections
- 78% fewer injury crashes than signalized intersections
- 75% fewer vehicle conflict points, eliminating the most severe intersection crashes: head-on and T-bone collisions

Property Impacts – Ustick Road properties: With a proposed right-of-way width of 100 feet, implementing the five-lane roadway between will measurably impact properties fronting Ustick Road.

Property Impacts – side street properties: The roadways on all side streets are proposed to be widened to meet the City's street and right-of-way width corresponding to their functional classification.

Property Impacts – intersections: The right-of-way needed averages 4,500 square feet more for the roundabout option compared to the traffic signal option at the seven intersections on the corridor.

Cost – estimated life-cycle costs: Life-cycle cost consists of the total cost for the improvement over the 20-year service life including the year 2045 estimated costs for design, construction of the proposed improvements, right-of-way costs, costs of vehicle delay over the service life, safety costs based on predictive crash methodologies and annual maintenance costs for the service life. The life-cycle cost for the roundabout corridor is approximately $141,000,000 less than the traffic signal corridor over the 20-year service life. The life-cycle cost difference comes from the vehicle delay ($102.5M), followed by the safety cost difference ($30M), the capital cost difference ($8M), and the operations and maintenance cost difference ($0.5M). If no improvements are made to the intersections, the expected life-cycle cost is approximately $796,000,000. The majority of the No-Build costs come from the vehicle delay over the service life ($753M), followed by the safety cost ($43M). See Appendix B, *Traffic and Safety Analysis Report*, for detailed descriptions of estimated costs and the calculation methodology.

Table 3-3. Corridor rating matrix

Corridor Rating Criteria	No-Build	Roundabout Corridor	Traffic Signal Corridor
Traffic Operations: Intersection Vehicle Delay			
Freight: Large Vehicle Design (WB-67)			
Freight: Speed Consistency and Reduce Stops			
Access: Left-turn Access			
Access: Pedestrians and Bicycles			
Safety: Roadway Segment			
Safety: Intersection			
Property Impacts: Ustick Road Properties			
Property Impacts: Side Street Properties			
Property Impacts: Intersections			
Cost: Estimated Life-cycle Costs	**$796M**	**$121M**	**$262M**

Bad	Poor	Neutral	Fair	Good
				

3.9 Selected Corridor Plan

Following the online PIM, the project team, including technical staff from the City, CHD4 and NHD1, selected the **roundabout corridor for Ustick Road**, citing the benefits roundabout provide for safety, life-cycle costs and traffic operations.