SH-44, I-84 TO STAR ROAD

A PLANNING AND ENVIRONMENTAL LINKAGES (PEL) STUDY

FINAL PLANNING AND ENVIRONMENTAL LINKAGES (PEL) REPORT

April 2026

SH-44, I-84 TO STAR ROAD

Planning and Environmental Linkages (PEL) Report

April 2026

U.S. Department of Transportation
Federal Highway Administration

Idaho Division

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April 27, 2026

Aaron Scheff, Environmental Services Manager
Idaho Transportation Department
P. O. Box 7129
Boise, ID 83707

RE: SH-44, I-84 to Star Rd Planning and Environmental Linkage

Dear Mr. Scheff:

This letter acknowledges the receipt of the SH-44, I-84 to Star Rd Planning and Environmental Linkages (PEL) study and PEL Questionnaire received on April 24, 2026. The PEL effort was undertaken by the Idaho Transportation Department (ITD) to evaluate needs and identify transportation improvements along SH-44 between I-84 and Star Road.

This PEL was undertaken in a manner consistent with the Federal Highway Administration (FHWA) PEL guidance. As ITD initiates the NEPA process, it will be necessary for ITD to coordinate with FHWA on the NEPA class of action determination and the extent to which the PEL can be used to supplement the NEPA effort.

The completed PEL Questionnaire provides a good summary of the work completed in the PEL study and the information that will be needed once the project enters the NEPA process. The PEL evaluation process was limited to a high/conceptual level of design and review of potential impacts. The PEL also identified controversy with the City of Middleton over impacts caused by the alternatives which warrant further detailed analysis. As such, FWHA recommends carrying alternatives 1, 2, 3, and 4 into the NEPA process.

FHWA looks forward to future coordination associated with the SH-44, I-84 to Star Rd Project. If you have any questions regarding this letter, please feel free to contact me at (208) 617-2135 or kyle.holman@dot.gov.

Sincerely yours,

Kyle P. Holman

Kyle P. Holman, P.E.
Field Operations Engineer

cc: FHWA: Lucia Olivera, Carlos Herrera
ITD: Michael Johnson, Ester Ceja, Mark Wasdahl, Greg Vitley

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April 28, 2026

Mark Wasdahl
Idaho Transportation Department, District 3
8150 W. Chinden Blvd
Boise, Idaho 83714

Subject: KN23630; SH-44, I-84 to Star Road Planning and Environmental Linkages (PEL) Study

Dear Mark Wasdahl,

This letter acknowledges the KN23630; SH-44, I-84 to Star Road PEL Study undertaken by District 3. The Idaho Transportation Department Headquarters (HQ) Environmental Services is grateful for the opportunity to participate in this process as a member of the Technical Advisory Committee and commends the efforts of everyone involved in conducting this study in a manner consistent with Federal Highway Administration (FHWA) and the ITD PEL Procedures guidance. The benefits of this streamlining effort will undoubtedly be realized in terms of time and costs savings on future National Environmental Policy Act (NEPA) studies conducted with the study limits.

The completed PEL Questionnaire submitted to ITD HQ in April 2026 provides a good summary of the work completed in the PEL study and the information that will be needed once projects enter into the NEPA process. As individual projects are initiated and funding becomes available, it will be necessary for the District to engage the District Environmental Planners on a project by project basis to determine the scope of the NEPA analysis and the extent to which the PEL can be used to supplement the NEPA effort. Further coordination with HQ Environmental Planners may be needed.

The PEL Study, PEL Questionnaire, and appendices are in accordance with FHWA Coordination Points as part of the PEL process. We look forward to future coordination associated with the SH-44, I-84 to Star Road PEL Study. If you have any questions regarding this letter, please feel free to contact me at (208) 334-8629 or Aaron.Scheff@itd.idaho.gov.

Sincerely,

Aaron Scheff
ITD Environmental Services Manager

Cc: Jason Brinkman, ITD District 3 (Jason.Brinkman@itd.idaho.gov)
Greg Vitley, ITD District 3 (Greg.Vitley@itd.idaho.gov)
Kyle Holman, FHWA Idaho Division (Kyle.Holman@dot.gov)
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Introduction

This report documents the results of a Planning and Environmental Linkages (PEL) study conducted for the Idaho Transportation Department (ITD) project Key No. 23630; SH-44, I-84 to Star Rd PEL and NEPA Study. The 10.4-mile corridor study limits are east of the I-84 east ramps through the Star Road intersection in the City of Star.

ITD initiated this SH-44 PEL Study to evaluate needs and identify transportation improvements along the SH-44 corridor in Canyon and Ada Counties between I-84 and Star Road. The study identified and screened a reasonable range of alternatives for transportation improvements to meet the operational, safety, and capacity needs along the corridor.

The study was conducted following Federal Highway Administration (FHWA) PEL guidance regarding the integration of transportation planning and the National Environmental Policy Act (NEPA) process, as outlined in the ITD *PEL Procedures Manual* (2024). The PEL process encourages the use of planning studies to provide information for incorporation into future NEPA documents (23 Code of Federal Regulations [CFR] 450). The goal of these early integrated planning efforts is to streamline subsequent alternative analysis during the NEPA processes.

The following NEPA process principles were followed for this PEL study:

- Preparation of a project Purpose and Need statement with goals
- Screening of alternatives utilizing NEPA-appropriate process to identify a range of feasible alternatives
- Coordination with federal, state, and local agencies at key decision points to align with those of the NEPA process
- Screening using evaluation criteria based on the project Purpose and Need and goals developed in coordination with agency stakeholders
- Identification of Recommended Alternatives

A project Purpose and Need, screening of alternatives, and other planning decisions and analyses were developed in accordance with PEL Authorities established in federal statute 23 USC 168. The alternatives development and screening were conducted in accordance with 23 USC 139(f). Reasonable alternatives include those that are practical or reasonable from the technical and economic standpoint.

Initial improvement concepts were screened to eliminate those that did not meet the project Purpose and Need. The alternatives evaluation process determined

impacts and feasibility by considering traffic operations, safety, multimodal accommodations, community impacts, environmental impacts, constructability, and cost.

This PEL Report summarizes the findings and recommendations for the SH-44, I-84 to Star Road corridor improvements. The *SH-44, I-84 to Star Road Final Existing Corridor Conditions Report* (January 2024) completed for the study is available from ITD and provides additional information and details regarding the analyses.

What is a PEL Study?

A PEL study is a relatively new type of planning study that identifies issues and concerns that are addressed in the NEPA environmental review process. The PEL study process identifies transportation issues and environmental concerns in a corridor, or a specific location. PEL studies can lead to timely permit decisions, better project delivery, and mutually beneficial outcomes because the study data can be incorporated by reference into the NEPA process. Potential benefits of using the PEL process include:

- Improved sharing of information
- Elimination of duplicative efforts in planning and NEPA processes
- Improved communication and stronger relationships with stakeholders and agencies
- Early identification of potential impacts
- Better environmental outcomes

At completion, a PEL study links planning to environmental issues and results in planning products and analyses that can be carried forward into the NEPA process.

Background

For over 20 years, ITD has been planning improvements to SH-44 between I-84 and the City of Eagle, in conjunction with the Community Planning Association of Southwest Idaho (COMPASS) and local agency stakeholders. The highway was identified as one of five high-priority corridors in the *COMPASS Communities in Motion (CIM) 2050* transportation plan. In 2011, an environmental assessment (EA) was initiated and the Draft EA identified the Preferred Alternative to widen SH-44 to five lanes between I-84 and Linder Road and a new highway alignment south of the City of Middleton between Canyon Lane and Duff Lane. However, in 2021 the Middleton City Council removed the proposed highway alignment from the City's 2019 Comprehensive Plan, which no longer reserved the preferred alternative alignment for future right-of-way acquisition for the SH-44 corridor west of Star Road. The SH-44 project from Star Road to West State Street in Eagle was determined to have independent utility and logical termini and moved forward as a separate environmental review process.

Congestion on this key east-west corridor continues to increase and in 2023 ITD elected to use the PEL process to re-analyze the SH-44 corridor from I-84 to Star Road for improvements to reduce congestion and enhance safety before moving into the NEPA process.

Study Area

The study corridor is located in Canyon and Ada Counties. The county line is approximately along Can-Ada Road. SH-44 passes through the City of Middleton and the City of Star within the study area. Beyond the study corridor, the study evaluated potential alternate alignments for the SH-44 highway within a broader area generally bordered by Goodson Road to the north and the Boise River to the south. The study corridor and broader area of evaluation are illustrated in **Figure 1**.

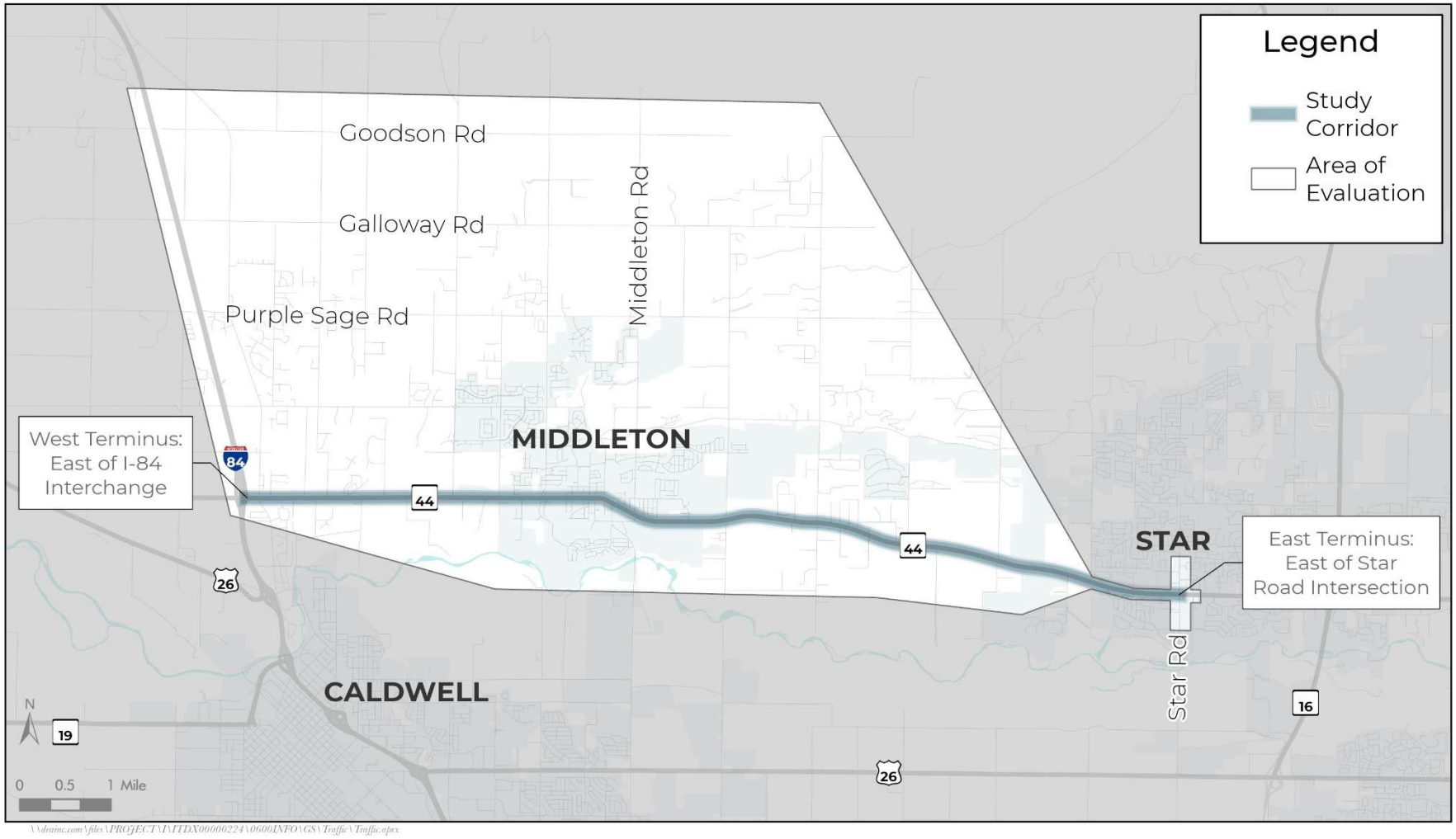
SH-44 is a two-lane highway at the western end of the study corridor. It continues as a two-lane highway heading east until Emmett Road where it becomes a three-lane road (one travel lane in each direction with a center turn lane). Approximately halfway between North Middleton Road and Duff Lane, the road returns to a two-lane cross section. From Can Ada Road to Star Road, the road widens to a five-lane cross section (two travel lanes in each direction with a center turn lane). There are left-turn and right-turn lanes at various intersections along the study corridor.

The posted speed limit along the SH-44 study corridor is generally 55 miles per hour (mph) in the two-lane sections of the highway. It gradually transitions to 25 mph in the City of Middleton and the City of Star. At the western end of the study corridor, the posted speed limit is 45 mph approaching I-84.

The study area is a mixture of rural, urban, and emerging suburban with a mix of residential neighborhood and commercial land uses. The area surrounding the SH-44 corridor is rapidly developing with more residential neighborhood and commercial land uses, plus planned community recreation areas.

Shoulder widths on SH-44 in the rural section east of I-84 range from six to ten feet wide. Approaching the west side of Middleton, the shoulders narrow to between two and four feet. The curbed section of SH-44 in the urban area of Middleton (between the Willow Creek bridge at Picadilly Park and Skyline Drive east of South Middleton Road) has shoulders of about four feet or on-street parking. In the developing area between Middleton and Star, shoulder widths are variable, ranging from two to ten feet. In the urban area of Star (east of Center Street to Star Road), the highway is curbed with no shoulder.

Figure 1. Study Area



Travel Patterns

An origin-destination analysis was conducted using the Streetlight Insight platform to understand traffic flow along the SH-44 study corridor. Streetlight Insight is a "big data" web platform that measures traffic volumes and travel patterns using data from connected devices. The origin-destination analysis in Streetlight Insight allows users to understand the travel routes and patterns between areas and locations.

The origin-destination analyses of the corridor showed that most of the traffic along the SH-44 study corridor is local, turning on or off the highway somewhere between I-84 and Star Road. Less than 10% of traffic in the morning and evening peak periods in both directions travels the entire distance of the study corridor.

Regional and Long-Range Planning

Previous and on-going studies and planning efforts within the study area have helped set the stage for this PEL study and frame its planning context. Their identified goals, issues, and needs helped confirm the needs for this study and were incorporated in the PEL study analyses. The studies that informed the PEL study are listed below.

- COMPASS CIM 2050 (adopted December 2022)
- SH-44, I-84 to Eagle, Corridor Study Traffic Analysis and Access Management (February 8, 2019)
- SH-44, Corridor Study, Junction I-84 to Eagle EA – Logical Termini and Independent Utility Memorandum (May 12, 2022)
- City of Middleton Comprehensive Plan (2025)
- City of Middleton Transportation Plan (2016)
- City of Middleton Connects City Vision Map (2015)
- Ada County Highway District (ACHD) Roadways to Bikeways (2018)
- ACHD 2022-2026 Integrated Five-Year Work Plan (2022)
- ACHD Strategic Plan 2035 (2016)
- ACHD Bicycle Facilities Inventory Report (2021)
- ACHD ADA Self-Evaluation and Transition Plan (2019)
- City of Star Bicycle and Pedestrian Plan
- City of Star Pathway Master Plan (2022)
- City of Star Comprehensive Plan (2022)
- Valley Regional Transit 2023-2027 Transportation Development Plan (2022)
- Highway District No. 4 Mid-Star Service Area Capital Improvements Plan (2021)

Study Process

The purpose of the PEL study was to evaluate needs and identify transportation improvements along SH-44 between I-84 and Star Road. The PEL process was initiated to streamline future NEPA processes and facilitate the transition to NEPA by completing work that is NEPA compliant. The desired results of the PEL process were to:

- Identify alternatives to advance into NEPA
- Understand community support and concerns for alternatives identified and screened
- Conduct a collaborative and transparent evaluation to achieve high-level stakeholder acceptance for the project decision-making process

An agency Project Development Team (PDT) was created to collaborate and provide input to the SH-44 PEL process. The PDT included representatives from ITD, FHWA, ACHD, Canyon County, Highway District No. 4, City of Middleton, City of Star, COMPASS, Middleton School District, and Valley Regional Transit. The major steps in the process and the points of input from the PDT and public at each step are outlined below.

- Project visioning
    - The vision was developed by community stakeholders in a visioning session on September 6, 2023 with ITD and technical and executive staff from the local agencies along the corridor.
    - The outcomes of the visioning session and the initial purpose, needs, and goals were presented and discussed with the PDT at a meeting held on October 30, 2023.
- Data collection and technical analysis of land use, transportation, and environmental resources
    - Corridor conditions study results for transportation related to the development of the corridor needs were discussed with the PDT at a meeting held on November 30, 2023 and presented at public meetings held in January 2024.
- Development of the project Purpose and Need and goals
    - The draft Purpose and Need and goals statement was presented and discussed with the PDT at a meeting held on November 30, 2023. With review, comments, and additional data received in December 2023, the PDT aligned on the draft Purpose and Need and goals, understanding that they will be used to evaluate and screen alternatives.
    - The draft Purpose and Need and goals were shared at public meetings held in January 2024.

- Development and screening of Level 1 concept alternatives
    - Level 1 concept alternatives were reviewed by the PDT in February and March 2024 and shared at public meetings held in April 2024.
- Development and screening of Level 2 alternatives, providing more detailed concept design and evaluation than Level 1.
    - Level 2 alternatives and screening were reviewed by the PDT in May and August 2024 and shared at public meetings held in September 2024.
- Determination of the Recommended Alternatives to advance to the NEPA process with the No Action alternative.
    - The Recommended Alternatives were discussed and shared with the PDT in May and July 2025 and shared at public meetings held in August 2025.
- PEL report and questionnaire preparation

Purpose and Need Statement

Purpose and Need Development

ITD developed the main elements of the project Purpose and Need and goals using current compiled data and analysis on existing traffic, safety, and multimodal conditions documented in the *SH-44, I-84 to Star Road Final Existing Corridor Conditions Report* (January 2024), with review and input from corridor agency stakeholders and the general public.

What is a Purpose and Need?

A Purpose and Need defines the direct transportation-related needs to be addressed by the Project. It identifies the core issues and defines the extent of the deficiencies.

The Purpose and Need provides the framework for the development and evaluation of the alternative improvements.

Agency Visioning Workshop

In support of the PEL process, the project team conducted a visioning session on September 6, 2023 with ITD and technical and executive staff from the local agencies along the corridor. The key elements from the visioning workshop related to the SH-44 project corridor were integral to the development of the initial draft SH-44 Purpose and Need and goals.

Input received at the visioning session relevant to the Purpose and Need and goals was:

- Transportation issues along the SH-44 project corridor:
  - Congestion through the Middleton core area caused by
    - Commuter/regional traffic
    - Middleton Schools traffic
    - Population growth and development
  - Long queues for traffic accessing SH-44 at unsignalized intersections
  - Poor traffic flow caused by poor speed limit transitions
  - Safety issues at SH-44 intersections
  - Safety concerns for drivers and pedestrians/bicyclists
  - Lack of multimodal connections and facilities with existing and future adjacent/crossing multimodal facilities

- Additional concerns and community goals
  - Consistency with local land use plans
  - On-going need for direct access to SH-44 for residential and commercial properties
  - Environmental impacts of highway improvements and new roadway
  - Property impacts with construction along SH-44 and/or offline improvements
  - Limited budget available and concern about timeline for improvements

Additional issues and needs related to the broader area surrounding the SH-44 corridor between I-84 and Star Road were also discussed with the most prevalent conversations about recent and future development and growth creating need for new roadway connections, particularly more east-west routes between I-84 and east of Star Road, as well as additional Boise River crossings.

Public Input

The draft Purpose and Need and goals were shared at the SH-44, I-84 to Star Road PEL Study public meetings held in Middleton on January 11 and in Star on January 17, 2024. The comment form questions focused on asking about agreement with the presented draft purpose, needs, and goals with space for additional comments or suggestions.

Comments received show that the public engaged with the project generally agreed with the Purpose and Need and goals with over 70% stating they “agree” or “strongly agree” with the Purpose and Need and 64% stating they “agree” or “strongly agree” with the presented project goals. When not stating agreement with the Purpose and Need and goals, comments remained consistent with the issues and needs in the draft statement (e.g., the importance of addressing congestion and safety). There were a few comments leading to minor clarifications and the purpose, needs, and goals were updated.

Purpose and Need Statement

Purpose

The purpose of the transportation projects recommended by this study is to improve travel safety and operations along the SH-44 highway corridor and accommodate all corridor users by enhancing pedestrian and bicyclist connectivity along, adjacent to, and across SH-44 in Canyon and Ada Counties from east of the I-84 interchange through the Star Road intersection.

Needs

The regional long-range transportation plan *CIM 2050* was adopted by the Boise area metropolitan planning organization COMPASS Board in December 2022. The plan includes a study to define the future roadway project for widening or realigning the highway between I-84 and Star Road.

Transportation improvements are needed along SH-44 due to:

- **Recurring congestion along the SH-44 corridor and on side roads accessing or crossing the highway**
  - According to *CIM 2050*, traffic congestion is an excess of vehicles on a portion of roadway at a particular time, resulting in speeds that are slower than normal or "free flow" speeds and traffic backups and delays. Recurring congestion is caused by predictable day-to-day traffic patterns and is usually the result of insufficient capacity and high demand on the transportation system.
  - COMPASS congestion management data summarizing the region's overall roadway congestion performance for the last two years available (2021 and 2022) shows eastbound SH-44 in Middleton, between Emmett Road and North Middleton Road, with a medium level of congestion in 2022 and a high level of congestion in 2021, while westbound SH-44 with a medium level of congestion in 2022 and 2021. Eastbound SH-44 in Star, between Can Ada Road and Star Road, had a high level of congestion in 2022 and 2021.
  - Travel time reliability tells how consistent travel time is from one day to the next. COMPASS congestion management data shows travel time reliability as unreliable in 2022 for a short segment of eastbound SH-44 approaching North Middleton Road and for eastbound SH-44 in Star between Can Ada Road and Star Road.
  - Of the 20 intersections analyzed along the SH-44 corridor between I-84 and Star Road, 12 intersections operate at Level of Service (LOS) D or worse with eight intersections operating at LOS F during the morning and evening peak hours. There are long queues on the side roads of unsignalized intersections, particularly for southbound left turns. In the morning peak hour, drivers waiting to turn onto SH-44 can currently experience delays of over six minutes.
  - Based on the traffic counts collected at corridor intersections in September 2023, relatively high mid-day traffic volumes in the urban areas of Middleton and Star also contribute to congestion outside the typical peak morning and evening commuting hours. Mid-day traffic volumes at the South Middleton Road intersection are higher than during the morning and evening peak hours and mid-day traffic

volumes at the Star Road intersection are higher than the morning peak hour.

- Based on the traffic counts collected at corridor intersections in September 2023 and input from school district representatives and the public, peak drop off and pick up times for Middleton schools with vehicular traffic and students walking and bicycling across SH-44 extend the period of congestion along SH-44 beyond the typical commuting hours, with travel delays in Middleton experienced earlier in the afternoon during the school year.

- **Existing and future travel demands along the SH-44 corridor**
  - An origin-destination analysis of vehicular travel patterns using data collected in 2021 from connected devices shows that more than 70% of the traffic along the SH-44 study corridor is traffic turning on or off the highway somewhere between I-84 and Star Road. Less than 10% of traffic in the morning and evening peak periods travels the entire distance of the study corridor.
  - Data from the 2021 COMPASS travel survey show that the average trip length on SH-44 in the Middleton area is about ten miles for all trip types and the longest trip type is the work-related trip with an average distance of about 22 miles. Only 16% of the trips on SH-44 start and end in the Middleton area, indicating that most trips on the SH-44 study corridor start or end outside the area.
  - Forecasted travel demand from *CIM 2050* shows traffic volumes along SH-44 are expected to almost double by 2050, despite the completion of other area highway improvements (e.g., SH-44 east of Star Road, SH-16, and US-20/26).

- **Safety concerns for motorist and multimodal travel along the SH-44 corridor**
  - In the five-year period from 2018 – 2022, the most prominent crash type was rear-end as 33% of the total crashes along the corridor, indicating drivers not noticing or expecting the vehicle in front of them as stopped or slowing in time to avoid a collision.
  - In the five-year period, intersection-related crashes accounted for over 60% of all crashes along the SH-44 corridor, which is high compared to nationally intersection-related crashes were 45% of all crashes in 2019 according to the National Highway Traffic Safety Administration Motor Vehicle Crash Data Querying and Reporting. Increasing traffic along SH-44 has reduced the number of gaps available for side street and driveway traffic attempting to enter the highway. This causes drivers to

make turning movements outside of their comfort zone, which contributes to crashes at side street and driveway intersections.

- The total number of crashes per year doubled from 2018 to 2022, while traffic volumes increased between 3% and 35%, meaning the crash rates along the highway (number of crashes in relation to traffic volume) have increased more than volumes. As traffic volumes increase along the corridor, safety issues will get worse, particularly at unsignalized intersections and accesses as the number of gaps available for side street and driveway traffic is reduced further.
- Segment crash rates for the study corridor segments ranged from 11.49 to 238.47 crashes per 100 million vehicle miles traveled (VMT). According to Idaho Traffic Crashes 2022 published by ITD Office of Highway Safety, the Idaho statewide average segment crash rate in 2022 was 146.3. for U.S. and State Highways and 147.03 for SH-44. SH-44 segments with crash rates higher than the statewide average are between Channel Road and Canyon Lane, between Hawthorne Drive and North Middleton Road (in Middleton), and just west of Star Road (in Star).
- The *2021-2025 Idaho Strategic Highway Safety Plan* identifies an emphasis on reducing crashes involving vulnerable road users, including people who walk or bicycle. Between 2018 and 2022, there were three crashes involving bicyclists and no crashes involving pedestrians on the SH-44 corridor. Two of the bicyclist-related crashes occurred in Middleton (at Eaton and 3rd Avenue intersections) and one occurred in Star (at Star Road intersection). All three bicyclist-related crashes occurred at intersections during the evening peak commuting hours with turning drivers failing to yield, indicating that intersections on the corridor are high-risk areas for bicyclist visibility.

- **Lack of multimodal connectivity along and across the SH-44 corridor**
  - Sidewalks, crosswalks, and multiuse paths along the SH-44 study corridor are generally clustered in the areas within and immediately adjacent to the urban areas of Middleton and Star.
  - While there is no official bicycle facility along SH-44 outside the urban areas, there is a paved shoulder of varying widths in the rural and transitioning area between I-84 and Middleton, as well as between Middleton and Star. Shoulders have been eliminated or reduced to unusable width to accommodate turn lanes at intersections. Bicyclists and pedestrians are forced onto the gravel shoulder or into the travel lane at those locations.
  - Data from the Strava application heatmap shows a relatively high intensity of pedestrians and bicyclists traveling along and adjacent to

SH-44 within Middleton and Star, where multimodal facilities exist. The data also shows people are currently bicycling along the SH-44 study corridor.

- There are multimodal facilities identified within the area of the SH-44 study corridor in local and regional plans. The addition of transit, pedestrian, and bicyclist facilities along SH-44 and local crossing streets is a goal as areas urbanize and funding is obtained.
- Currently, no fixed bus transit services are provided along or across the SH-44 study corridor, although there has been past service along the corridor. Data from the 2021 COMPASS travel survey show that in the Middleton and Star area work-related trips make up about 20% of all trip purposes, which is higher than regional, county, and national statistics. Future Valley Regional Transit improvements may include park-n-ride facilities and/or transit routes within the SH-44 corridor area as the area urbanizes and funding allows.

Goals

Additional goals of the recommended transportation projects for the SH-44 corridor:

- Provide consistency with local and regional transportation and land use plans
- Avoid or minimize environmental impacts
- Complement local community surroundings and context
- Balance local access needs and regional travel flow through access management
- Facilitate project delivery with realistic funding and phasing opportunities

Alternatives Development and Screening

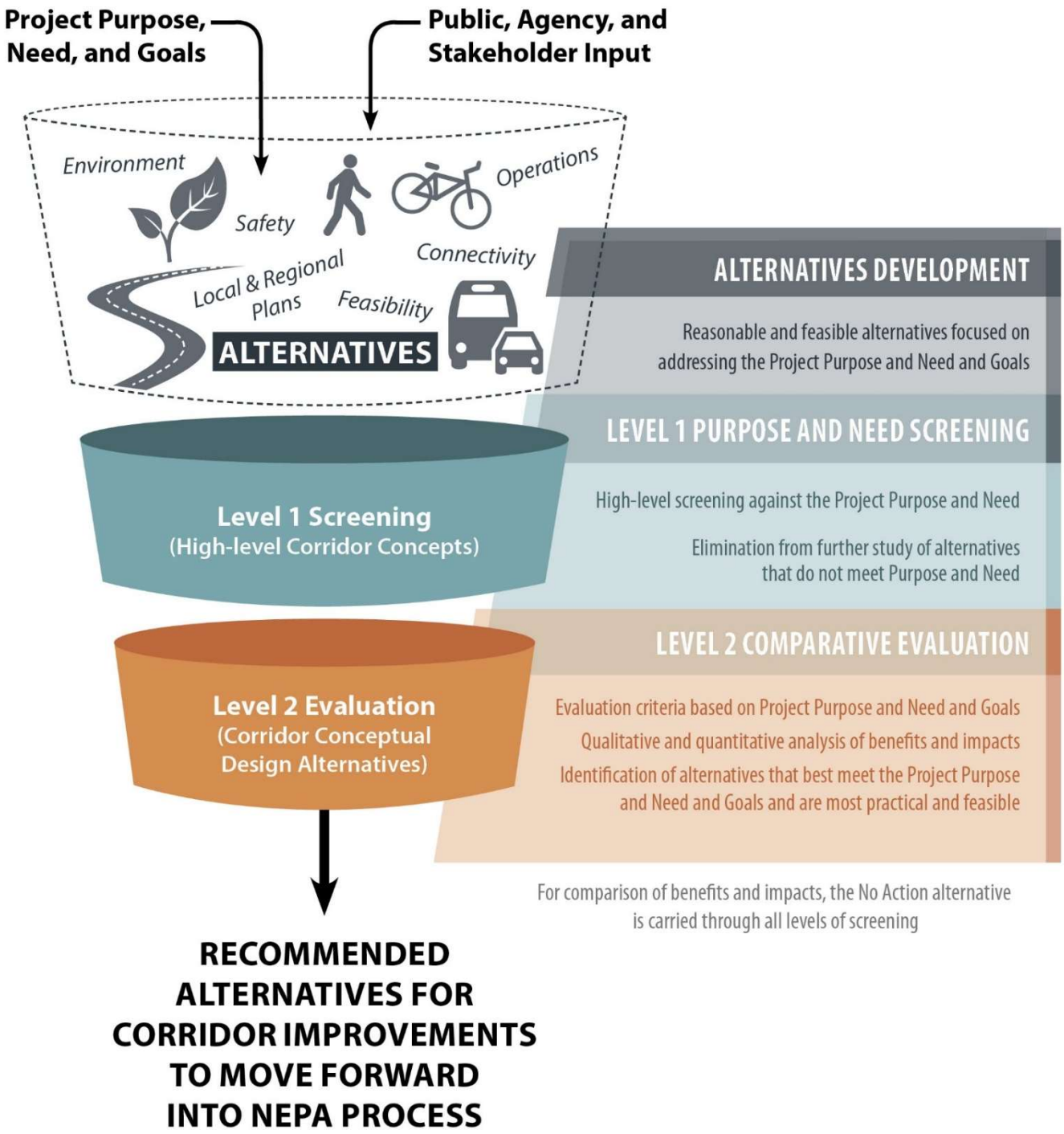
The alternatives development and evaluation process included developing evaluation criteria based on the Purpose and Need and goals for the project, developing a range of reasonable and feasible corridor alternative concepts, and evaluating alternatives through a multi-tiered screening process to be considered during subsequent NEPA documentation.

The intent of the alternatives development and evaluation process was to identify and screen a range of reasonable and feasible improvement alternatives for the SH-44 study corridor from I-84 to Star Road that recognize the transportation problems, operational context, and surrounding environment. Reasonable alternatives mean a reasonable range of alternatives that are technically and economically feasible and meet the project Purpose and Need. The alternatives evaluation process identified Recommended Alternatives with improvements that will be more fully evaluated through NEPA documentation during further project development.

The overall alternatives evaluation process is illustrated in **Figure 2**. Two levels of alternatives development and screening took place. At each level of screening, the alternatives were reviewed and evaluated against evaluation criteria that became more detailed and quantitative through the process. The criteria used at each level of screening are outlined in the following sections.

The alternatives evaluation process and initial evaluation criteria were presented to the PDT in February 2024, with review and input gathered prior to the development of alternatives. After each round of screening, the evaluation results were vetted through the PDT and at public meetings to provide refinement to the results.

Figure 2. Alternatives Development and Evaluation Process

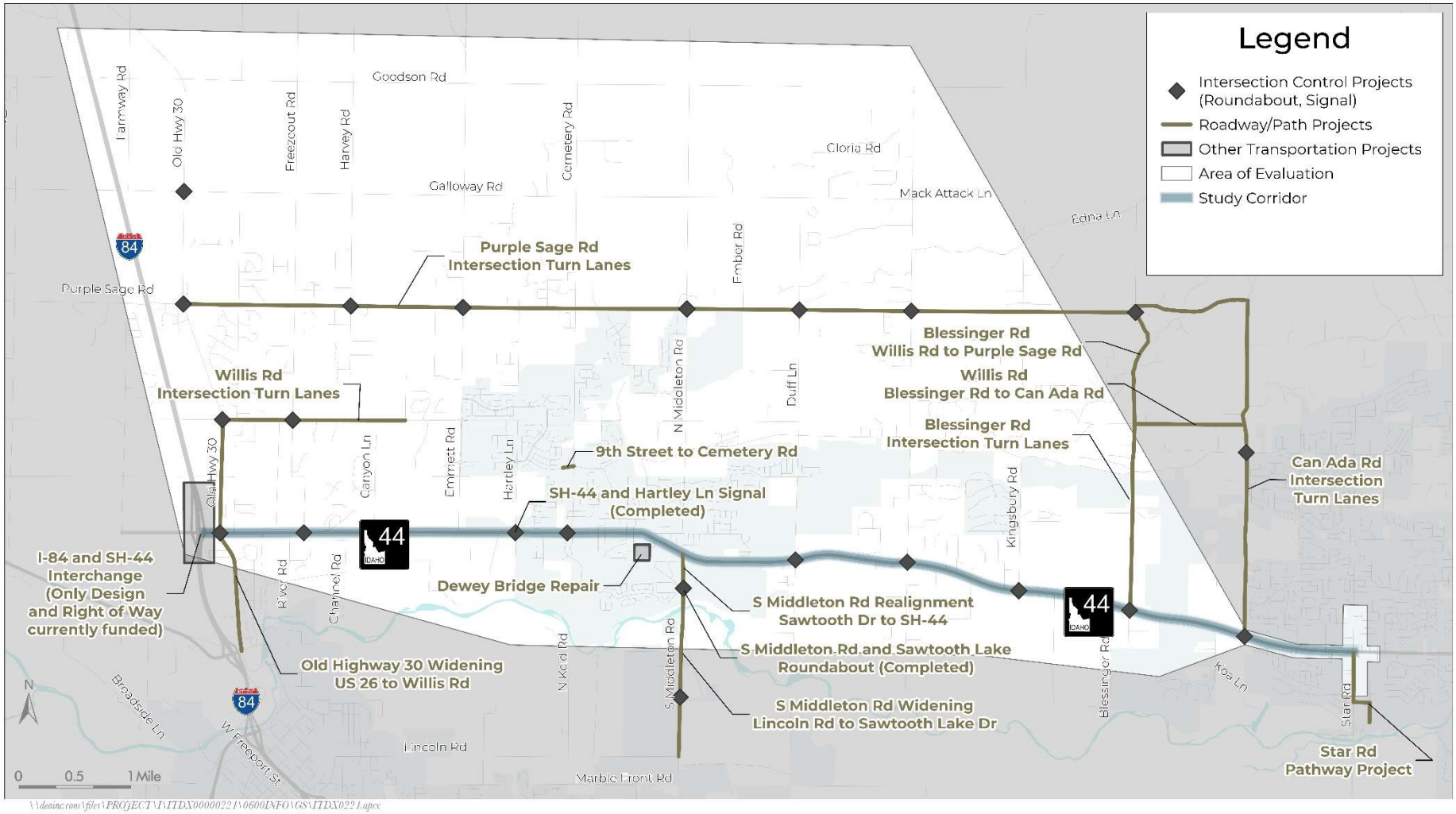


No Action Alternative

The No Action alternative does not meet the Purpose and Need. The No Action alternative is included for comparison to the operational and safety benefits that would result from potential improvements. Under the No Action condition, all programmed improvements included in the COMPASS *CIM 2050* would be completed with the exception of improvements along the SH-44 study corridor.

Programmed transportation projects in the study area are shown in **Figure 3**. These projects were identified early in the study process and some may have been completed.

Figure 3. Area Funded Transportation Projects



Level 1 Purpose and Need Screening

The purpose of the Level 1 screening was to eliminate fatally flawed alternatives or alternatives that do not meet the project Purpose and Need. Level 1 screening was supported by the baseline data collected for the study. During the Level 1 screening, concepts were evaluated qualitatively, primarily using professional judgment by the project engineering and planning staff.

Level 1 Evaluation Criteria

Level 1 criteria were developed to address the main components of the project Purpose and Need, as shown in **Table 1**. Corridor alternative concepts were evaluated with a "Yes" or "No" answer to the Level 1 criteria questions shown in the table to demonstrate each alternative's ability to meet the project Purpose and Need.

Table 1 Level 1 Screening Criteria

PURPOSE AND NEED COMPONENT	FACTORS TO CONSIDER	LEVEL 1 CRITERIA
Recurring **congestion** along the SH-44 corridor and on side roads accessing or crossing the highway	▪ Congestion during peak morning and evening commuting hours with long queues and delays on the side roads of unsignalized intersections ▪ Relatively high volume-to-capacity (v/c) ratio adjacent to Middleton schools during peak drop off and pick up times	▪ Does the alternative reduce current and future delays and queuing on SH-44 and side street approaches? ▪ Does the alternative reduce volume-to-capacity (v/c) ratio on roadway adjacent to Middleton schools?
Existing and future **travel demands** along the SH-44 corridor	▪ Forecasted travel demand are expected to double the traffic volume along SH-44	▪ Does the alternative provide the capacity on SH-44 to accommodate anticipated 2050 travel demand?
Safety concerns for motorist and multimodal travel along SH-44 corridor	▪ Rear-end crashes resulting from motorist reaction time to stopped or slowing vehicles ahead; Intersection-related crashes with turning and angle-turning crashes; Injury and fatal crashes outside urbanized areas of Middleton and Star ▪ Crashes involving bicyclists at intersections with turning drivers failing to yield	▪ Could the alternative reduce crashes along SH-44? ▪ Could the alternative improve safety for pedestrians and bicyclists traveling along and across SH-44?
Lack of **multimodal connectivity** along and across the SH-44 corridor	▪ Data from the Strava application heatmap shows a relatively high intensity of pedestrians and bicyclists traveling along and adjacent to SH-44 in Middleton and Star where facilities exist ▪ Addition of transit, pedestrian, and bicyclist facilities along SH-44 and crossing streets is a goal as areas urbanize	▪ Does the alternative support/incorporate new pedestrian, bicyclist, and transit facility options along and crossing SH-44?

Level 1 Concepts

Project concepts were developed to address the project's Purpose and Need and issues identified in the evaluation of existing conditions with input from the PDT and general public. The concepts were developed considering the 2050 traffic volumes reports from project travel demand forecasting, utilizing the latest approved COMPASS 2050 travel demand model with the land use and travel demand forecasting data from the latest adopted Regional Long-Range Transportation Plan, *CIM 2050*. The methodology used to develop forecast travel demand volumes and resulting forecast volumes are described in the *SH-44, I-84 to Star Road Final Existing Corridor Conditions Report* (January 2024).

Projects programmed in the COMPASS *CIM 2050*, and by ITD and the local agencies were considered in the development of Action concepts. The No Action concept was carried forward through the analysis as a baseline for comparison, even though it does not address the project Purpose and Need.

The Level 1 concepts are illustrated and described in **Figures 4 through 10**.

Level 1 Screening Results

If a concept could not meet any of the criteria (that is, any "No" responses to any of the Level 1 criteria questions), it was eliminated from further consideration. A concept that has a "No" answer to one or more of the Level 1 criteria questions is considered to not fully meet the project Purpose and Need. If a concept should be evaluated quantitatively and with more criteria to make an informed decision for recommendation, it was carried forward to Level 2 for further evaluation. To identify the best solution possible, favorable attributes of a concept eliminated as a stand-alone concept may be included as elements of alternatives considered in Level 2 evaluation, which is noted as "Carried Forward as an Element". The elements that may be carried forward are noted in the Level 1 matrix.

The Level 1 screening is shown in **Table 2**. The screening matrix summarizes the evaluation for each concept as follows:

- **Carried Forward** – Meets all of the primary elements of the Purpose and Need and carried forward for further evaluation in Level 2 screening
- **Carried Forward as an Element** – Does not fully meet the Purpose and Need, but elements may be evaluated as part of alternatives with further screening levels
- **Eliminated** – Does not meet Purpose and Need, has a fatal flaw, and/or is considered unreasonable

Figure 4. Concept 1 - SH-44 Widening and Improvements on Existing Alignment

KEY COMPONENTS
Stays on existing alignment I-84 to Star Rd through downtown Middleton
Widened to 4 lanes (2 through lanes in each direction) on existing highway alignment
Intersection improvements at major SH-44 intersections
Added pedestrian and bicyclist facilities where they do not exist along SH-44
Requires right of way acquisition

Figure 5. Concept 2 - SH-44 Original South Alternate Route around Middleton

KEY COMPONENTS
Stays on existing alignment from I-84 to west of Ballard Ln and from west of Duff Ln to Star Rd, with SH-44 as a new highway to the south through Middleton, from Ballard Ln to west of Duff Ln
Widened to 4 lanes (2 through lanes in each direction) on existing alignment and a new 4-lane highway south of downtown Middleton
Existing SH-44 through Middleton (Ballard Ln to west of Duff Ln) converted to local Main St (no longer a state highway)
Intersection improvements at major SH-44 intersections on improved existing alignment and new highway
Added pedestrian and bicycle facilities along SH-44 and new highway
Requires right of way acquisition

Figure 6. Concept 3 - SH-44 Modified South Alternate Route around Middleton (Options A & B)

KEY COMPONENTS
Stays on existing alignment from I-84 to Ballard Ln or Cemetery Rd and from east of N Middleton Rd to Star Rd, with SH-44 as a new highway to the south through Middleton along one of two potential alignments: **A)** Ballard Ln to east of N Middleton Rd OR **B)** West of Cemetery Rd to east of N Middleton Rd
Widened to 4 lanes (2 through lanes in each direction) on existing alignment and a new 4-lane highway with raised median south of downtown Middleton
Existing SH-44 through Middleton (Ballard Ln / Cemetery Rd to east of N Middleton Rd) converted to local Main St
Intersection improvements at major SH-44 intersections on improved existing alignment and new highway
Added pedestrian and bicycle facilities along SH-44 and the new highway
Requires right of way acquisition

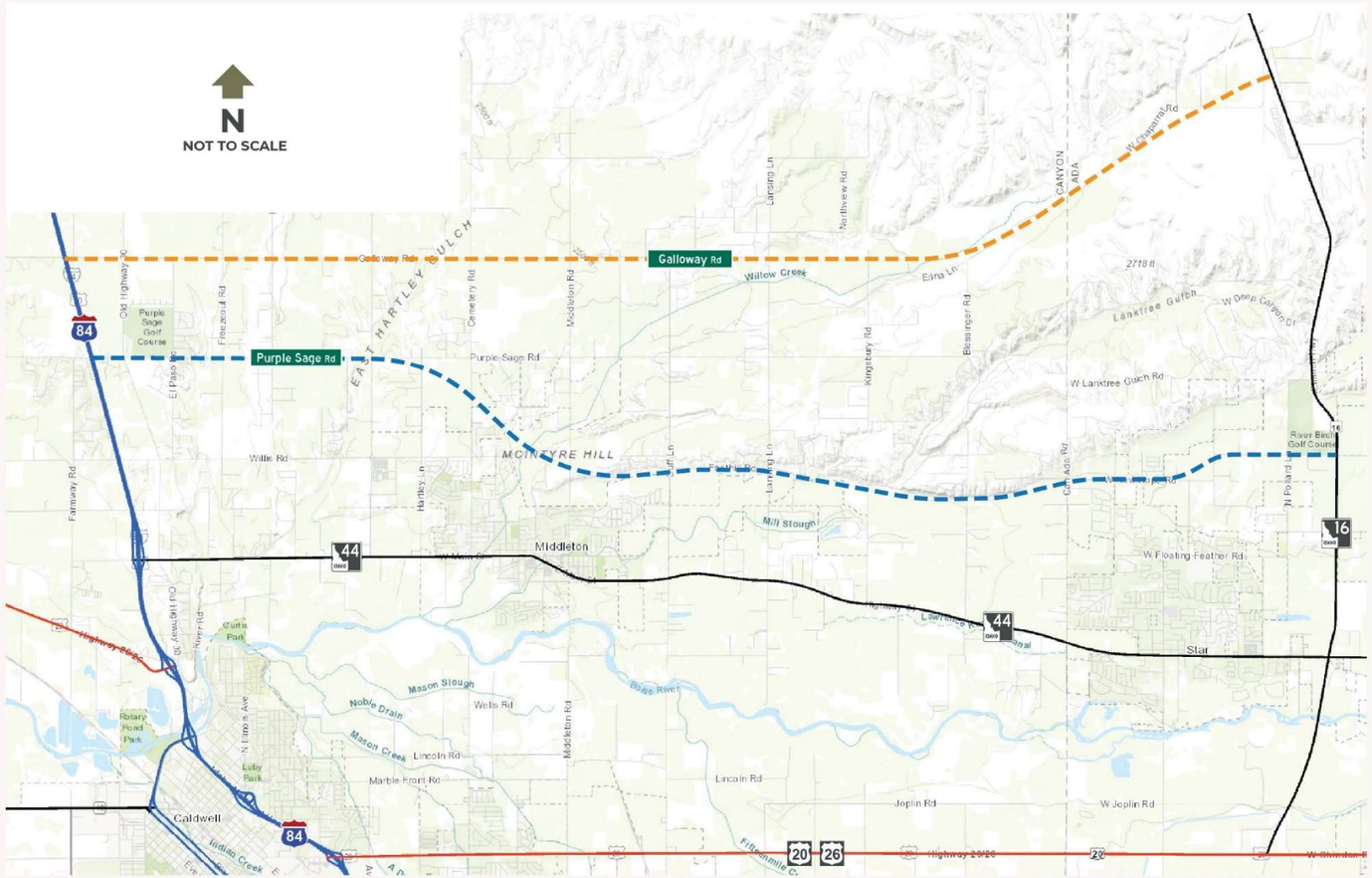
Figure 7. Concept 4 - SH-44 One-Way Couplet through Middleton

KEY COMPONENTS
Stays on existing alignment from I-84 to Cemetery Rd and from east of N Middleton Rd to Star Rd, with SH-44 as a one-way couplet through downtown Middleton, Cemetery Rd to east of N Middleton Rd
Widened to 4 lanes (2 through lanes in each direction) on existing alignment and a one-way couplet with 2 through lanes in each direction through downtown Middleton, with WB SH-44 using the existing alignment and EB SH-44 on a new highway south of downtown Middleton
Intersection improvements at major SH-44 intersections on improved existing alignment and new one-way couplet
Added pedestrian and bicycle facilities along existing alignment and new one-way couplet
Requires right of way acquisition

Figure 8. Concept 5 - SH-44 North Alternate Route around Middleton (Options A & B)

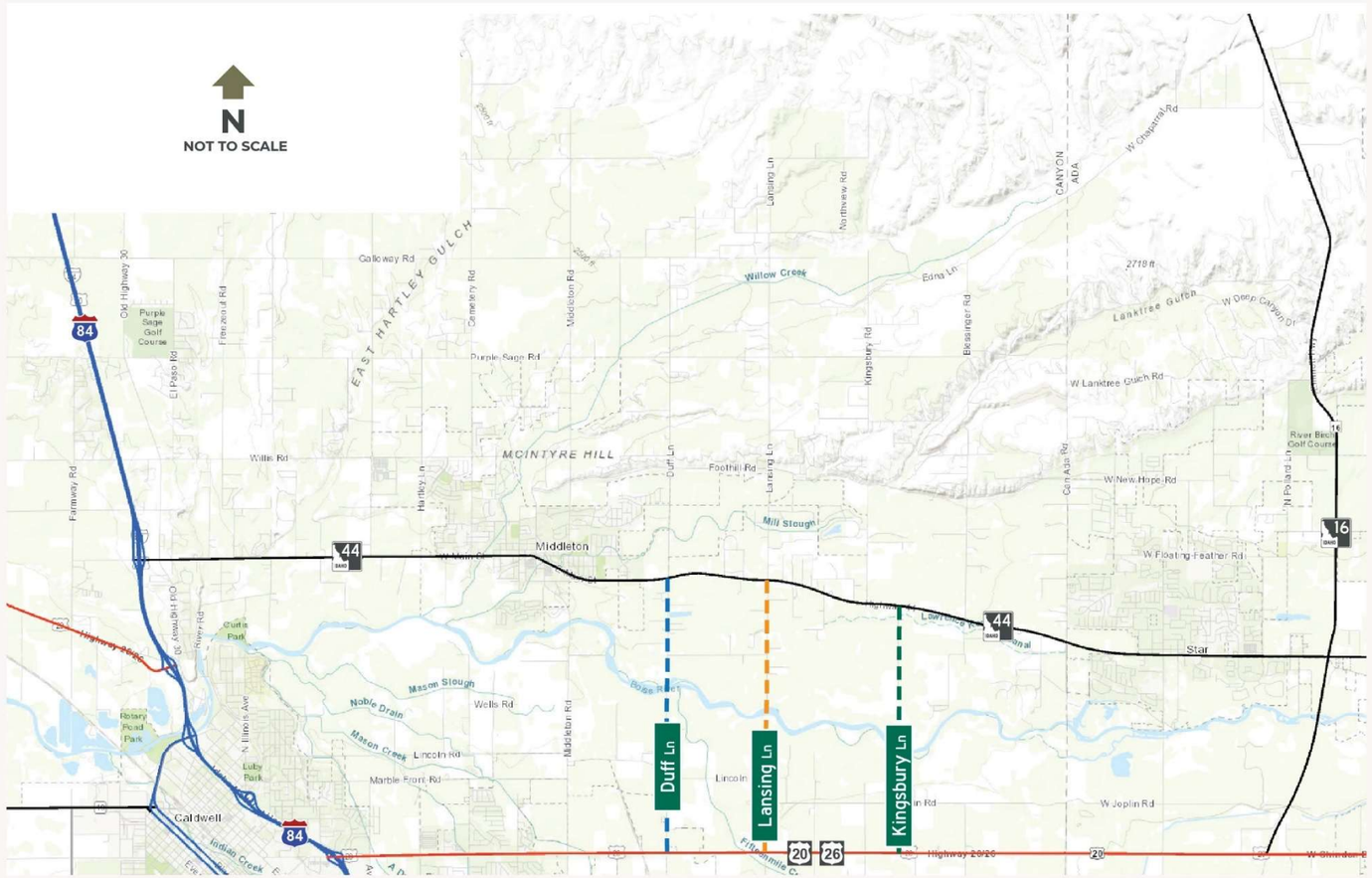
KEY COMPONENTS
Stays on existing alignment from I-84 to Ballard Ln and from west of Blessinger Rd to Star Rd, with SH-44 as a new highway to the north through Middleton along one of two potential alignments: **A)** Ballard Ln to Lansing Ln OR **B)** Ballard Ln to west of Blessinger Rd
Widened to 4 lanes (2 through lanes in each direction) on existing alignment and a new 4-lane highway north of downtown Middleton
Existing SH-44 through Middleton (Ballard Ln to Lansing Ln or west of Blessinger Rd) converted to local Main St (no longer a state highway)
Intersection improvements at major SH-44 intersections on improved existing alignment and new highway
Added pedestrian and bicycle facilities along existing alignment and new highway north of downtown
Requires right of way acquistion

Figure 9. Concept 6 - New North Road Connection (I-84 to SH-16)



KEY COMPONENTS
New 4-lane road connection between I-84 (with new interchange) and SH-16 north of SH-44 (not a state highway) along an existing corridor such as Purple Sage Rd or Galloway Rd
SH-44 stays on existing alignment from I-84 to Star Rd with existing lanes and existing pedestrian and bicycle facilities

Figure 10. Concept 7 - Added North-South Boise River Crossing



KEY COMPONENTS
New 4-lane north-south road connection between SH-44 and Highway 20/26 located somewhere between Middleton and Star, crossing the Boise River at an existing roadway such as Duff Ln, Lansing Ln, or Kingsbury Rd
SH-44 stays on existing alignment from I-84 to Star Rd with existing lanes and existing pedestrian and bicycle facilities

Table 2 Level 1 Purpose and Need Screening Matrix

CONCEPT	DOES THE ALTERNATIVE REDUCE CURRENT AND FUTURE DELAYS AND QUEUING ON SH-44 AND SIDE STREET APPROACHES?	DOES THE ALTERNATIVE REDUCE VOLUME-TO-CAPACITY (V/C) RATIO ON ROADWAY ADJACENT TO MIDDLETON SCHOOLS?	DOES THE ALTERNATIVE PROVIDE THE CAPACITY ON SH-44 TO ACCOMMODATE ANTICIPATED 2050 TRAVEL DEMAND?	COULD THE ALTERNATIVE REDUCE CRASHES ALONG SH-44?	COULD THE ALTERNATIVE IMPROVE SAFETY FOR PEDESTRIANS AND BICYCLISTS TRAVELING ALONG AND ACROSS SH-44?	DOES THE ALTERNATIVE SUPPORT/INCORPORATE NEW PEDESTRIAN, BICYCLIST, AND TRANSIT FACILITY OPTIONS ALONG AND CROSSING SH-44?	RESULT	NOTES
No Action	No	No	No	No	No	No	Carried Forward	Carried forward to evaluate as baseline condition for comparison
1 – SH-44 Widening and Improvements on Existing Alignment	Yes	Yes	Yes	Yes	Yes	Yes	Carried Forward	Meets Purpose and Need
2 – SH-44 Original South Alternate Route around Middleton	Yes	Yes	Yes	Yes	Yes	Yes	Carried Forward as an Element	Concept considered infeasible on east end with significant impacts to current approved local development plans, but other portions of alternate route may be considered.
3 – SH-44 Modified South Alternate Route around Middleton (Options A & B)	Yes	Yes	Yes	Yes	Yes	Yes	Carried Forward	Meets Purpose and Need (both Options A & B)
4 - SH-44 One-Way Couplet through Middleton	Yes	Yes	Yes	Yes	Yes	Yes	Carried Forward	Meets Purpose and Need
5 – SH-44 North Alternate Route around Middleton (Options A & B)	Yes	No	Yes	Yes	No	No	Eliminated	With distance north of Middleton Middle School campus, concept would not provide opportunities for added access to reduce v/c ratio on roadway adjacent to school. New highway adjacent to Middleton Heights Elementary School would greatly increase traffic adjacent to that school and degrade pedestrian and bicyclist safety accessing the school. An alignment north of downtown Middleton would not support effective connections to existing and planned multimodal facilities south of town. Concept also would not improve travel time on full length of SH-44 route due to increase in overall route length (Option A or B) to fit through existing development north of Middleton.
6 – New North Road Connection (I-84 to SH-16)	No	No	No	No	No	No	Eliminated	With less than 10% of traffic on SH-44 traveling between I-84 and Star Road in peak periods, new road would not draw enough traffic from SH-44 to improve safety or reduce congestion on the SH-44 corridor and also does not improve multimodal connections along SH-44.
7 - Added North-South Boise River Crossing	No	No	No	No	No	No	Eliminated	Traffic circulation to access new river crossing would still require travel on long portions of SH-44, so the new road would not draw enough traffic from SH-44 to improve safety or reduce congestion on the SH-44 corridor and does not improve multimodal connections along SH-44.

The following three concepts were eliminated from further consideration because they do not meet the project Purpose and Need, as described below:

- Concept 5 – SH-44 North Alternate Route around Middleton (Options A & B)

  With distance north of Middleton Middle School campus, concept would not provide opportunities for added access to reduce v/c ratio on roadway adjacent to school. New highway adjacent to Middleton Heights Elementary School would greatly increase traffic adjacent to that school and degrade pedestrian and bicyclist safety accessing the school. An alignment north of downtown Middleton would not support effective connections to existing and planned multimodal facilities south of town.

  Concept also would not improve travel time on full length of SH-44 route (I-84 to Star Road) due to increase in overall route length (Option A or B) to fit through existing development north of Middleton. Therefore, the concept does not meet the project Purpose and Need.

- Concept 6 – New North Road Connection (I-84 to SH-16)

  The origin-destination analyses conducted for the PEL study show that most of the traffic along the SH-44 study corridor is local, turning on and/or off the highway somewhere between I-84 and Star Road, and less than 10% of traffic on SH-44 travels between I-84 and Star Road in the morning and evening peak periods in both directions. With types of trips on the SH-44 study corridor, a new road would not draw enough traffic from SH-44 to improve safety or reduce congestion on the SH-44 corridor in peak periods and does not improve multimodal connections along SH-44. Therefore, the concept does not meet the project Purpose and Need.

- Concept 7 – Added North-South Boise River Crossing

  With a new road connection across the Boise River, traffic circulation around Middleton and Star would still require travel on long portions of SH-44, so the new road would not draw enough traffic from SH-44 to improve safety or reduce congestion on the SH-44 corridor and does not improve multimodal connections along SH-44. Therefore, the concept does not meet the project Purpose and Need.

The No Action and action concepts carried forward from Level 1 screening were further evaluated as Level 2 alternatives.

Level 2 Comparative Evaluation

The Level 2 evaluation was intended to establish a means for estimating and comparing how well alternatives perform in meeting the project Purpose and Need and goals in a cost-effective and least environmentally harmful manner. The Level 2 evaluation criteria evolved from the Level 1 criteria and provided additional criteria based on the project goals.

Level 2 Evaluation Criteria

The evaluation criteria and performance measures to compare alternatives were developed with review and input from the PDT prior to the Level 2 evaluation. The PDT reviewed the draft Level 2 evaluation criteria and specific performance measures were modified and added to provide more information to facilitate decision-making. Based on public input and FHWA review, the Level 2 evaluation criteria and performance measures were further refined.

Project Goals

Additional goals of the recommended transportation projects for the SH-44 corridor:

- Provide consistency with local and regional transportation and land use plans
- Avoid or minimize environmental impacts
- Complement local community surroundings and context
- Balance local access needs and regional travel flow through access management
- Facilitate project delivery with realistic funding and phasing opportunities

For the Level 2 comparative evaluation, the criteria focus on elements responding to the project Purpose and Need and goals. The Level 2 evaluation expands measures for each screening criterion from Level 1 screening and provides additional screening criteria based on project goals. In Level 2 screening, the alternatives are evaluated to identify fatal flaws related to infeasibility or unacceptable community or environmental impacts, and to compare how well each concept meets the project Purpose and Need and goals.

The Level 2 evaluation criteria and performance measures for the SH-44 PEL Study are shown in **Table 3**. Performance measures were developed to compare each alternative against the evaluation criteria. These measures are a mix of qualitative and quantitative assessments and were chosen based on the availability of data and the high-level conceptual level of design and analysis at this stage of development. Unless noted, all criteria/performance measures are measured for the future horizon year of 2050. Consistent with the conceptual level of design and PEL guidance, the evaluation is based on the availability of data at this stage of development and analyses.

Table 3 Level 2 Evaluation Criteria

PURPOSE AND NEED AND GOALS CATEGORY	CRITERIA	PERFORMANCE MEASURE
Traffic Operations	Corridor congestion	Planning Time Index (PTI) between I-84 and Star Rd (AM/PM) *PTI represents how much total time a driver should allow to ensure on-time travel. For example, PTI of 1.6 means for a trip that takes 15 minutes in light traffic a driver would need to allow 60% more time for a total of 24 minutes (15 x 1.6) to make sure they will arrive on time.* *A lower PTI represents lower congestion and better travel time reliability for the corridor.*
	Intersection congestion	Intersection level of service (LOS) during morning and evening commute peak hours (AM/PM) *LOS is a qualitative measure used to relate the quality of vehicular service at an intersection with calculation of delay, using letters A through F with A being the best and F being the worst.*
	Peak volume-to-capacity (v/c) ratio on roadway adjacent to Middleton Middle School	Volume-to-capacity (v/c) ratio on Main Street adjacent to schools during school peak time afternoon pick up
	Daily volume-to-capacity (v/c) ratio on SH-44	Daily volume-to-capacity (v/c) ratio on SH-44 (on new alignment, when applicable) *Daily v/c ratio higher than 1.0 indicates the roadway is congested during peak hours of the day*
Safety	Motorist safety	Qualitative assessment of potential crash reduction for identified predominant crash patterns
	Pedestrian and bicyclist safety	Qualitative assessment of potential crash reduction for crashes involving pedestrians and bicyclists
Multimodal	Pedestrian and bicyclist comfort	Level of Traffic Stress (LTS) for bicyclists and pedestrians with qualitative description of facilities, including adjacent traffic volumes *LTS is reported on a scale of 1-4, with 1 being the best score and 4 being the worst score*
	Support/incorporation of new pedestrian and bicyclist options along and across SH-44	Qualitative description of pedestrian and bicyclist options for overall connectivity along and across SH-44 (new alignment, when applicable)

PURPOSE AND NEED AND GOALS CATEGORY	CRITERIA	PERFORMANCE MEASURE
Community	Property impacts	Number and types of properties with potential partial and full acquisition *Property types include agricultural, business/other, residential, and residential within disadvantaged community census blocks*
	Potential property access modifications	Qualitative description of access changes along SH-44 (on new alignment, when applicable)
	Consistency with documented local and regional planning efforts	Assessment of inclusion of alternative improvements in approved plans
	Consistency with adjacent setting	Qualitative description of SH-44 design features, traffic volumes, and multimodal circulation in relation to existing and future planned land use adjacent to SH-44 (new alignment when applicable)
Environmental Resources	Potential impacts on resources within the built environment	Assessment of potential impacts to cultural resource sites, 4(f)/6(f) sites, noise, hazardous materials, environmental justice populations[1]
	Potential impacts on resources within the natural environment	Assessment of potential impacts to floodplains, irrigation canal, wetlands, recreation sites/parks, farmlands
Implementation	Conceptual construction costs	Magnitude of cost estimated for construction and right-of-way and relative assessment of low, moderate, high
	Ease of implementation	Description of construction complexity (relative assessment of low, moderate, high) and comparative duration for project construction
	Phased implementation	Description of ability to construct useful portions of improvements as separate projects

[1] Environmental justice populations were considered in the PEL, but as of April 2025 environmental justice was removed from further analysis

Level 2 Alternatives

The Level 2 evaluation was a more detailed evaluation of the concepts that passed the first level of screening, i.e. more details of the concepts were added, as appropriate, to understand the projected travel demand, operations, multimodal circulation, and physical footprint.

The alternatives evaluated in the Level 2 screening were:

- No Action Alternative
- Alternative 1: SH-44 Widening and Improvements on Existing Alignment
  - Carried forward from Level 1 Concept 1
- Alternative 2: SH-44 South Alternate Route around Middleton at Ballard Lane
  - Carried forward from Level 1 Concept 3A and includes portions of alternate route from Level 1 Concept 2
- Alternative 3: SH-44 South Alternate Route around Middleton at Cemetery Road
  - Carried forward from Level 1 Concept 3B
- Alternative 4: SH-44 One-Way Couplet through Middleton to South
  - Carried forward from Level 1 Concept 4

The Level 2 alternatives are illustrated in exhibits in **Appendix A**.

Level 2 Evaluation

The Level 2 evaluation matrix with criteria and performance measures is shown in **Table 4**. The matrix shows how each alternative compares across each criterion. The results for criteria are a mix of qualitative and quantitative assessments. Each criterion has a comparative rating across the alternatives as a visual indication of the comparative performance of each alternative in relation to that criterion:

- Good – Comparatively positive, moderate or major benefits and/or minor impacts
- Fair or Neutral – Comparatively neutral, minor benefits and/or impacts
- Poor – Comparatively negative and/or moderate or major impacts

The evaluation matrix provides the results of the Level 2 evaluation for each alternative as follows:

- **Recommended** –Considered reasonable and feasible and recommended for consideration as the Preferred Alternative during subsequent NEPA and project development
- **Carried Forward** – Considered reasonable and feasible and may be considered for further evaluation in this study or subsequent NEPA and project development
- **Not Recommended** – While alternative meets purpose and need, it will not be evaluated further in this study due to comparatively negligible benefits and higher impacts than other alternatives, but may be studied further with subsequent NEPA and project development

Technical Data and Analysis

For the Level 2 evaluation, each of the alternatives was evaluated for benefits and impacts based on a conceptual level of design. For qualitative criteria, such as the consistency with adjacent settings, descriptions are included in the Level 2 evaluation matrix. The methodology and key assumptions for the quantitative criteria are summarized in separate reports, as described below.

Traffic Operations, Safety, and Multimodal Analysis

Operational analysis on the Level 2 alternatives was performed for the quantitative Traffic Operations and Multimodal evaluation criteria and performance measures. This analysis was completed at a high level with the understanding that some individual intersection designs will be further refined in future NEPA and design phases, which will require additional analysis. The Level 2 Evaluation Traffic Operations and Multimodal Analysis is included as **Appendix B**.

The 2050 travel demand volumes for the No Action and four action alternatives were developed using future travel demand model plots provided by COMPASS. The methodology used to develop forecast travel demand volumes and resulting forecast volumes are described in the *SH-44, I-84 to Star Road Final Existing Corridor Conditions Report* (January 2024). The methodology and key assumptions used for the traffic analysis is shown in **Appendix C**.

Environmental Scan

An environmental scan of the corridor was completed for the PEL study in 2024 to identify existing environmental conditions in the study area for the built and natural environment. These environmental conditions, along with the conceptual design of each alternative as shown in **Appendix A**, were utilized to assess the potential impacts for each alternative shown in the Level 2 evaluation matrix. The Environmental Scan is included as **Appendix D**.

Property Impacts and Construction Costs

Existing infrastructure within the study area was evaluated to identify existing conditions in the study area. Infrastructure related to utilities, drainage, irrigation, hydraulics, geological conditions, and structures were evaluated and considered in the Level 2 evaluation, along with the conceptual design of each alternative as shown in **Appendix A**, to assess property impacts and magnitude of construction costs. The Infrastructure Assessment Summary Report is included as **Appendix E**.

Table 4 Level 2 Evaluation Matrix

CATEGORY	CRITERIA/MEASURE	NO ACTION	ALT 1 – SH-44 WIDENING AND IMPROVEMENTS ON EXISTING ALIGNMENT	ALT 2 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT BALLARD LN	ALT 3 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT CEMETARY RD	ALT 4 – SH-44 ONE-WAY COUPLET THROUGH MIDDLETON TO SOUTH
Traffic Operations	Corridor congestion - Planning Time Index (PTI) between I-84 and Star Rd (AM/PM) *PTI represents how much total time a driver should allow to ensure on-time travel. A lower PTI represents lower congestion and better travel time reliability*	Average bidirectional PTI: 2.4 / 5.5 PTI is over 2.0 for the AM and PM peak hours, so a driver would need to allow more than 3 times as much time to drive the corridor	Average bidirectional PTI: 1.3 / 1.3 Reduced PTI from No Action conditions with similar PTI to other action alternatives in the AM and PM peak hours	Average bidirectional PTI: 1.2 / 1.4 Reduced PTI from No Action conditions with similar PTI to other action alternatives in the AM and PM peak hours	Average bidirectional PTI: 1.2 / 1.3 Reduced PTI from No Action conditions with similar PTI to other action alternatives in the AM and PM peak hours	Average bidirectional PTI: 1.3 / 1.2 Reduced PTI from No Action conditions with similar PTI to other action alternatives in the AM and PM peak hours
	Changes in travel circulation around Middleton – Off peak (uncongested) travel time between community origins and destinations in Middleton *Travel time calculated with distance, speed limit, and intersection turn movements*	• No change to traffic circulation within downtown Middletown to SH-44 west and east of town or to the grocery store and school • No change in emergency response travel routes and uncongested travel time from downtown Middleton fire station	• No change to traffic circulation within downtown Middletown to SH-44 west and east of town or to the grocery store and school • No change in emergency response travel routes and uncongested travel time from downtown Middleton fire station	• Minor changes to travel routes to SH-44 east of Middleton with less than one minute increase in uncongested travel time from existing north and south neighborhoods to SH-44 west and east of town or to the grocery store and school • Minor changes in emergency response travel routes with up to one minute increase in uncongested travel time from downtown Middleton fire station	• Minor changes to travel routes to SH-44 east of Middleton with less than one minute increase in uncongested travel time from existing north and south neighborhoods to SH-44 west and east of town or to the grocery store and school • Minor changes in emergency response travel routes with up to one minute increase in uncongested travel time from downtown Middleton fire station	• Major changes to traffic circulation within downtown Middleton to SH-44 west and east of town and the grocery store and school with up to more than two-minute increases in uncongested travel times • Major changes in emergency response travel routes with more than three-minute increases in uncongested travel time from downtown Middleton fire station
	Intersection congestion - Intersection level of service (LOS) during morning and evening commute peak hours (AM/PM) *LOS is a measure used to relate quality of motorist service at an intersection with calculation of delay, using letters A through F with A being best and F being worst.*	Old Highway 30: LOS F/F Cemetery Road: LOS F/F Middleton Road: LOS D/F Star Road: LOS F/F Corridor operates with unacceptable intersection operations with LOS F at major intersections with high delays and long queues	Old Highway 30: LOS D/C Cemetery Road: LOS B/C Middleton Road: LOS D/D Star Road: LOS C/D Improved operations at major intersections with LOS D or better	Old Highway 30: LOS D/C SH-44 (new) & Cemetery Road: LOS D/C SH-44 (new) & Middleton Road: LOS D/D Star Road: LOS C/D Improved operations at major intersections with LOS D or better	Old Highway 30: LOS D/D SH-44 (new) & Cemetery Road: unsignalized LOS C/D SH-44 (new) & Middleton Road: LOS D/D Star Road: LOS C/D Improved operations at major intersections with LOS D or better	Old Highway 30: LOS D/C EB SH-44 & Cemetery Road: LOS B/C WB SH-44 & Middleton Road: LOS C/C EB SH-44 & Middleton Road: LOS C/B Star Road: LOS C/D Best operations at intersections in Middleton than other alternatives
	Peak volume-to-capacity (v/c) ratio on roadway adjacent to Middleton Middle School during school peak time afternoon pick up – traffic volumes on Main Street adjacent to schools	Main Street (SH-44) = 0.6 High traffic volumes adjacent to school continue	Main Street (SH-44) = 0.7 Traffic volumes adjacent to school are over three times higher than other alternatives with higher capacity of four lanes	Main Street = 0.4 Traffic volumes adjacent to school are over 40% less than No Action conditions with traffic on Main Street reduced	Main Street = 0.4 Traffic volumes adjacent to school are over 45% less than No Action conditions with traffic on Main Street reduced	Main Street (WB SH-44) = 0.4 Traffic volumes adjacent to school are 38% less than No Action conditions with traffic on Main Street reduced
	Daily volume-to-capacity (v/c) ratio on SH-44 (on new alignment, when applicable) *Daily v/c ratio higher than 1.0 indicates the roadway is congested during peak hours of the day*	West of Old Highway 30 = 2.6 Old Highway 30 – Ballard Ln = 1.8 Ballard Ln - Cemetery Rd = 1.3 Cemetery Rd – Marjorie Ave = 1.0 Marjorie Ave - Can Ada Rd = 2.0 Can Ada Rd - Star Rd = 1.1 With v/c ratios in segments over 2.0, corridor experiences severe congestion	West of Old Highway 30 = 1.0 Old Highway 30 – Ballard Ln = 0.8 Ballard Ln - Cemetery Rd = 1.0 Cemetery Rd – Marjorie Ave = 0.8 Marjorie Ave - Can Ada Rd = 0.9 Can Ada Rd - Star Rd = 1.2 Reduced congestion from No Action conditions, but entire corridor with v/c ratio at or over 0.8 with congested flows	West of Old Highway 30 = 1.1 Old Highway 30 – Ballard Ln = 0.8 Ballard Ln - Cemetery Rd = 0.4 Cemetery Rd – Marjorie Ave = 0.5 Marjorie Ave - Can Ada Rd = 1.0 Can Ada Rd - Star Rd = 1.2 Reduced congestion from No Action conditions and least congested of other alternatives through Middleton areas	West of Old Highway 30 = 1.1 Old Highway 30 – Ballard Ln = 0.9 Ballard Ln - Cemetery Rd = 0.7 Cemetery Rd – Marjorie Ave = 0.7 Marjorie Ave - Can Ada Rd = 1.0 Can Ada Rd - Star Rd = 1.2 Reduced congestion from No Action conditions, but with segments through Middleton areas approaching congested flows	West of Old Highway 30 = 1.0 Old Highway 30 – Ballard Ln = 0.8 Ballard Ln - Cemetery Rd = 1.0 Cemetery Rd – Marjorie Ave = 1.0 (WB) / 1.0 (EB) Majorie Ave – Can Ada Rd = 0.9 Can Ada Rd to Star Rd = 1.2 Reduced congestion from No Action conditions in rural areas, but v/c remains at 1.0 through Middleton areas

CATEGORY	CRITERIA/MEASURE	NO ACTION	ALT 1 – SH-44 WIDENING AND IMPROVEMENTS ON EXISTING ALIGNMENT	ALT 2 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT BALLARD LN	ALT 3 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT CEMETARY RD	ALT 4 – SH-44 ONE-WAY COUPLET THROUGH MIDDLETON TO SOUTH
Safety	Motorist safety – Assessment of potential crash reduction for identified predominant crash patterns	No change to roadway and intersection infrastructure with increases in crashes with future volume growth	New traffic signals decrease occurrence of angled crashes, but increase occurrence of rear-end crashes Rural Option A: 55MPH Median reduces conflicts at driveways and head-on crashes, in addition to turn lanes reducing rear-end and sideswipe crashes Rural Option B: 45MPH Two-way left turn lane reduces rear-end and sideswipe crashes at driveways Ballard to Marjorie Intersection/driveway spacing through downtown Middleton remains with increases in crashes with about 45% higher volumes than No Action and more lanes	New traffic signals decrease occurrence of angled crashes, but increase occurrence of rear-end crashes Rural Option A: 55MPH Median reduces conflicts at driveways and head-on crashes, in addition to turn lanes reducing rear-end and sideswipe crashes Rural Option B: 45MPH Two-way left turn lane reduces rear-end and sideswipe crashes at driveways Whiffin to Marjorie Increased intersection spacing and access control with 40 mph speed limit minimize potential crashes on new SH-44 alignment Intersection/driveway spacing on Main St through Middleton remains, but crashes substantially reduced with traffic volumes 65% less than No Action and 75% less than Alternative 1	New traffic signals decrease occurrence of angled crashes, but increase occurrence of rear-end crashes Rural Option A: 55MPH Median reduces conflicts at driveways and head-on crashes, in addition to turn lanes reducing rear-end and sideswipe crashes Rural Option B: 45MPH Two-way left turn lane reduces rear-end and sideswipe crashes at driveways Hartley to Marjorie Increased intersection spacing and access control with 40 mph speed limit minimize potential crashes on new SH-44 alignment Intersection/driveway spacing on Main St through Middleton remains, but crashes substantially reduced with traffic volumes 70% less than No Action and 80% less than Alternative 1	New traffic signals decrease occurrence of angled crashes, but increase occurrence of rear-end crashes Rural Option A: 55MPH Median reduces conflicts at driveways and head-on crashes, in addition to turn lanes reducing rear-end and sideswipe crashes Rural Option B: 45MPH Two-way left turn lane reduces rear-end and sideswipe crashes at driveways Cemetery to Marjorie Couplet through downtown reduces turning conflicts at SH-44 intersections but increases crashes with higher volumes on residential streets between one-way roads Intersection/driveway spacing on WB SH-44 through Middleton remains, but crashes reduced with traffic volumes 20% less than No Action and 45% less than Alternative 1
	Pedestrian and bicyclist safety – Assessment of potential crash reduction for crashes involving pedestrians and bicyclists	New crossings at signals provided as new development warrants new traffic signals, but no overall change to roadway and intersection infrastructure with increases in conflicts with turning traffic at intersections with future volume growth No new separated path along length of SH-44, so walking and biking would remain on shoulder in rural areas with increases in conflicts with future volume growth	New traffic signals provide more controlled pedestrian/bicyclist crossings and safety improvements for conflicts with turning traffic at intersections Future volume growth and more lanes to cross through downtown area with businesses, parks, and schools may degrade pedestrian/bicyclist safety at intersections New separated path along the length of SH-44 in rural areas and path and sidewalk in urban areas would reduce conflicts with highway traffic A grade-separated crossing at Middleton Middle School/park area would improve pedestrian/bicyclist safety	New traffic signals provide more controlled pedestrian/bicyclist crossings and safety improvements for conflicts with turning traffic at intersections Main St through Middleton would have improved pedestrian/bicyclist safety with substantially reduced traffic volume New separated path along the length of SH-44 in rural areas and separated path on both sides of new SH-44 alignment would reduce conflicts with highway traffic Three grade-separated crossings of new SH-44 alignment at planned trails mitigates pedestrian and bicyclist crossing safety	New traffic signals provide more controlled pedestrian/bicyclist crossings and safety improvements for conflicts with turning traffic at intersections Main St through Middleton would have improved pedestrian/bicyclist safety with substantially reduced traffic volume New separated path along the length of SH-44 in rural areas and separated path on both sides of new SH-44 alignment would reduce conflicts with highway traffic Three grade-separated crossings of new SH-44 alignment at planned trails mitigates pedestrian and bicyclist crossing safety	New traffic signals provide more controlled pedestrian/bicyclist crossings and safety improvements for conflicts with turning traffic at intersections Main St through Middleton would have improved pedestrian/bicyclist safety in downtown Middleton with reduced traffic volume along each directional roadway New separated path along the length of SH-44 in rural areas and path and sidewalk in urban areas would reduce conflicts with highway traffic A grade-separated crossing at Middleton Middle School/park area would improve pedestrian/bicyclist safety Pedestrian/bicyclist safety degraded with higher traffic volumes on residential streets between one-way roads

CATEGORY	CRITERIA/MEASURE	NO ACTION	ALT 1 – SH-44 WIDENING AND IMPROVEMENTS ON EXISTING ALIGNMENT	ALT 2 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT BALLARD LN	ALT 3 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT CEMETARY RD	ALT 4 – SH-44 ONE-WAY COUPLET THROUGH MIDDLETON TO SOUTH
Multimodal	Pedestrian and bicyclist comfort along SH-44 – Level of Traffic Stress (LTS) for bicyclists and pedestrians with qualitative description of facilities, including adjacent traffic volumes *LTS is reported on a scale of 1-4, with 1 being the best score and 4 being the worst score*	Close proximity to high traffic volumes without consistent sidewalk in urban areas No new separated path along length of SH-44, so walking and biking would remain on shoulder in rural areas for large distances Bikes: LTS 3 Peds: LTS 4	New separated path along the length of SH-44 in rural areas New path and sidewalk in urban areas, but improvements made through downtown Middleton would remain adjacent to traffic volumes of more than 20k Bikes: LTS 1 Peds: LTS 2	New separated path along the length of SH-44 in rural areas Substantial reduction of traffic volumes and new path and sidewalk improve comfort along Main St in Middleton New separated path on both sides of new SH-44 alignment adjacent to traffic volumes of 15-20k with connections to planned trails provide additional comfort Bikes: LTS 1 Peds: LTS 2	New separated path along the length of SH-44 in rural areas Substantial reduction of traffic volumes and new path and sidewalk improve comfort along Main St in Middleton New separated path on both sides of new SH-44 alignment adjacent to traffic volumes of more than 20k with connections to planned trails provide additional comfort Bikes: LTS 1 Peds: LTS 2	New separated path along the length of SH-44 in rural areas Reduction of traffic volumes on each one-way road to 10-15k and new path and sidewalk improve comfort through Middleton Added traffic volumes on residential streets decrease comfort for bicyclists and pedestrians Bikes: LTS 1 Peds: LTS 2
	Support/incorporate new pedestrian and bicyclist options along and across SH-44 (on new alignment, when applicable) *Description on pedestrian and bicyclist options for overall connectivity*	Total crossing opportunities across SH-44: 8 (at existing signalized intersections - New crossings may be provided as new development warrants new traffic signals) Path adjacent to SH-44 may be constructed with new development, but not consistent east-west connection	Total crossing opportunities across SH-44: 16 (signalized intersections and 1 grade separated crossing option near Middleton Middle School) Path adjacent to SH-44 provides consistent east-west connection Does not provide connections to planned River Walk or Crane Creek park areas and/or trails	Total crossing opportunities across SH-44: 15 (signalized intersections and 3 grade separated crossings) Path adjacent to SH-44 provides consistent east-west connection Paths along new SH-44 alignment provide connections to planned River Walk and Crane Creek park areas and/or trails	Total crossing opportunities across SH-44: 16 (signalized intersections and 3 grade separated crossings) Path adjacent to SH-44 provides consistent east-west connection Paths along new SH-44 alignment provide connections to planned River Walk and Crane Creek park areas and/or trails	Total crossing opportunities across SH-44: 15 (signalized intersections and 1 grade separated crossing option near Middleton Middle School) Path adjacent to SH-44 provides consistent east-west connection Does not provide connections to planned River Walk or Crane Creek park areas and/or trails
Community	Property impacts – Number and types of properties with potential partial and full acquisition *Business/Other parcels include commercial, industrial, education, assembly, and government* *Unclassified parcels are properties that require more detailed analysis in future studies to determine whether parcel is commercial or residential*	No property impacts	Agricultural: • Partial = 8 parcels Business/Other: • Partial = 28 parcels • Full = 19 parcels Residential: • Partial = 151 parcels • Full = 61 parcels Unclassified: • Partial = 79 parcels • Full = 19 parcels Total: • Partial = 266 parcels • Full = 99 parcels Full residential acquisitions within low-income and elderly communities as identified by census data = 16 parcels Highest number of Business/Other parcels impacted	Agricultural: • Partial = 11 parcels • Full = 1 parcel Business/Other: • Partial = 14 parcels • Full = 5 parcels Residential: • Partial = 132 parcels • Full = 58 parcels Unclassified: • Partial = 72 parcels • Full = 21 parcels Total: • Partial = 229 parcels • Full = 85 parcels Full residential acquisitions within low-income and elderly communities as identified by census data = 13 parcels	Agricultural: • Partial = 9 parcels Business/Other: • Partial = 16 parcels • Full = 9 parcels Residential: • Partial = 139 parcels • Full = 60 parcels Unclassified: • Partial = 80 parcels • Full = 20 parcels Total: • Partial = 244 parcels • Full = 89 parcels Full residential acquisitions within low-income and elderly communities as identified by census data = 14 parcels	Agricultural: • Partial = 11 parcels Business/Other: • Partial = 21 parcels • Full = 15 parcels Residential: • Partial = 155 parcels • Full = 76 parcels Unclassified: • Partial = 90 parcels • Full = 20 parcels Total: • Partial = 277 parcels • Full = 111 parcels Full residential acquisitions within low-income and elderly communities as identified by census data = 31 parcels Highest number of Residential and Total parcels impacted and substantially more full residential acquisitions within low-income and elderly communities

CATEGORY	CRITERIA/MEASURE	NO ACTION	ALT 1 – SH-44 WIDENING AND IMPROVEMENTS ON EXISTING ALIGNMENT	ALT 2 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT BALLARD LN	ALT 3 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT CEMETARY RD	ALT 4 – SH-44 ONE-WAY COUPLET THROUGH MIDDLETON TO SOUTH
	Potential property access modifications	No property access changes	Option A: 55MPH Median limits access at driveways to right-in/right-out Option B: 45MPH Minor property access changes expected Ballard to Marjorie Intersection/driveway spacing through Middleton remains	Option A: 55MPH Median limits access at driveways to right-in/right-out Option B: 45MPH Minor property access changes expected Whiffin to Marjorie Main St intersection/driveway spacing through Middleton remains Limited access to new SH-44 alignment may have minor property access changes	Option A: 55MPH Median limits access at driveways to right-in/right-out Option B: 45MPH Minor property access changes expected Hartley to Marjorie Main St intersection/driveway spacing through Middleton remains Limited access to new SH-44 alignment may have minor property access changes	Option A: 55MPH Median limits access at driveways to right-in/right-out Option B: 45MPH Minor property access changes expected Cemetery to Marjorie WB SH-44 intersection/driveway spacing through Middleton remains Limited access to new EB SH-44 corridor will have property access changes
	Consistency with documented local and regional planning efforts	Without SH-44 improvement projects, inconsistent with previous corridor planning, COMPASS regional transportation plan, other local planning efforts, and the Middleton Comprehensive Plan	Improved SH-44 capacity and safety consistent with COMPASS regional transportation plan and local planning Alignment through Middleton inconsistent with Middleton Comprehensive Plan	Improved SH-44 capacity and safety consistent with COMPASS regional transportation plan and local planning Alignment through Middleton inconsistent with Middleton Comprehensive Plan	Improved SH-44 capacity and safety consistent with COMPASS regional transportation plan and local planning Alignment through Middleton inconsistent with Middleton Comprehensive Plan	Improved SH-44 capacity and safety consistent with COMPASS regional transportation plan and local planning Alignment through Middleton consistent with Middleton Comprehensive Plan
	Consistency with adjacent setting	• Traffic volumes and congestion through downtown Middleton and Star inconsistent with business and multimodal setting • No impacts or benefits to River Walk or Crane Creek developments • No impacts to City wastewater land application parcels south of downtown Middleton • Frequent driveway/intersection movements inconsistent with rural setting	• Traffic volumes and four-lane highway through Middleton main street inconsistent with business and multimodal setting, although congestion reduced through Middleton and Star • No impacts or benefits to River Walk or Crane Creek developments • No impacts to City wastewater land application parcels south of downtown Middleton • Turn lanes, median, and access control consistent with rural setting	• Traffic volumes 65% less than No Action along Main St and congestion eliminated through Middleton, plus congestion reduced through Star, consistent with business, residential, and multimodal settings • New road would impact edge of Crane Creek development, but would provide new motorist access opportunities for River Walk and Crane Creek developments • Approx. 14 AC of impact to City wastewater land application parcels south of downtown Middleton • Turn lanes, median, and access control consistent with rural setting	• Traffic volumes 70% less than No Action along Main St and congestion eliminated through Middleton, plus congestion reduced through Star, consistent with business, residential, and multimodal settings • New road would impact edge of Crane Creek development, but would provide new motorist access opportunities for River Walk and Crane Creek developments • Approx. 7 AC of impact to City wastewater land application parcels south of downtown Middleton • Turn lanes, median, and access control consistent with rural setting	• Traffic volumes on each one-way road reduced, but one-way traffic circulation creates out-of-direction patterns through downtown Middleton inconsistent with business and residential settings; congestion reduced through Star • New road does not impact Crane Creek development and would provide new motorist access opportunities. for River Walk and Crane Creek developments • Approx. 7 AC of impact to City wastewater land application parcels south of downtown Middleton • Turn lanes, median, and access control consistent with rural setting

CATEGORY	CRITERIA/MEASURE	NO ACTION	ALT 1 – SH-44 WIDENING AND IMPROVEMENTS ON EXISTING ALIGNMENT	ALT 2 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT BALLARD LN	ALT 3 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT CEMETARY RD	ALT 4 – SH-44 ONE-WAY COUPLET THROUGH MIDDLETON TO SOUTH
Environmental Resources	Potential impacts on resources within the built environment *LWCF Site = Outdoor recreation area funded with Land and Water Conservation funds*	No impacts	• 29 known eligible or unevaluated cultural resource sites • 1 Section 6(f) LWCF Sites • 267 receptors potentially impacted by noise • 25 hazardous waste sites. • Moderate impact to residential properties within low-income and elderly communities as identified by census data. Alternative with more potentially impacted noise receptors than Alternative 2 and 3, most hazardous materials sites, and only 6(f) LWCF site impact	• 29 known eligible or unevaluated cultural resource sites • 201 receptors potentially impacted by noise • 17 hazardous waste sites. • Moderate impact to residential properties within low-income and elderly communities as identified by census data.	• 27 known eligible or unevaluated cultural resource sites • 225 receptors potentially impacted by noise • 17 hazardous waste sites. • Moderate impact to residential properties within low-income and elderly communities as identified by census data.	• 37 known eligible or unevaluated cultural resource sites • 287 receptors potentially impacted by noise • 25 hazardous waste sites. • High impact to residential properties within low-income and elderly communities as identified by census data. Alternative with most potentially impacted cultural resource sites, noise receptors, and hazardous material sites, and high impact to residential properties within low-income and elderly communities
	Potential impacts on resources within the natural environment	No impacts	• Approx. 11,600 LF of irrigation canal • Approx. 730 LF of natural streams • Approx. 40 AC of flood zone impacts • Less than 1 acre of freshwater emergent wetlands • 3 recreation sites/parks • Approx. 262 AC of Prime Farmland and Farmland of Statewide Importance	• Approx. 15,740 LF of irrigation canal • Approx. 820 LF of natural streams • Approx. 50 AC of flood zone impacts • Approx. 2 acres of freshwater emergent wetlands • 2 recreation site/park • Approx. 278 AC of Prime Farmland and Farmland of Statewide Importance Alternative with most irrigation canal, flood zone, wetlands, and farmland impacts	• Approx. 13,040 LF of irrigation canals • Approx. 790 LF of natural streams • Approx. 40 AC of flood zone impacts • Less than 1 acre of freshwater emergent wetlands • 2 recreation sites/parks • Approx. 270 AC of Prime Farmland and Farmland of Statewide Importance	• Approx. 12,630 LF of irrigation canals • Approx. 920 LF of natural streams • Approx. 45 AC of flood zone impacts • Less than 1 acre of freshwater emergent wetlands • 5 recreation sites/parks • Approx. 279 AC of Prime Farmland and Farmland of Statewide Importance Alternative with most natural streams and recreation sites/parks impacts and more flood zone and farmland impact than Alternatives 1 and 3
Implementation	Conceptual construction/ROW costs	None (no construction)	Construction = Approx. $235M ROW = Approx. $108M Total = Approx. $343M Limited irrigation crossings and shortest roadway length, but highest number of new signals	Construction = Approx. $240M ROW = Approx. $130M Total = Approx. $370M Limited intersections, signals, and side street connections, although moderate new roadway length	Construction = Approx. $265M ROW = Approx. $118M Total = Approx. $383M Limited intersections and signals, but additional roadway construction and new bridges along Cemetery	Construction = Approx. $280M ROW = Approx. $123M Total = Approx. $403M Most roadway reconstruction with couplet and side streets, plus highest number of intersections, irrigation crossings, and estimated construction cost

CATEGORY	CRITERIA/MEASURE	NO ACTION	ALT 1 – SH-44 WIDENING AND IMPROVEMENTS ON EXISTING ALIGNMENT	ALT 2 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT BALLARD LN	ALT 3 – SH-44 SOUTH ALTERNATE ROUTE AROUND MIDDLETON AT CEMETARY RD	ALT 4 – SH-44 ONE-WAY COUPLET THROUGH MIDDLETON TO SOUTH
	Ease of implementation - Construction complexity, approvals required, and duration for project implementation	N/A (no project implementation)	Moderate to high complexity with reconstruction on existing highway with major impacts to traffic and business. Longest construction duration	Low to moderate complexity with new SH-44 alignment built with minimal impact to traffic and business. Moderate construction duration	Low to moderate complexity with new SH-44 alignment built with minimal impact to traffic and business. Moderate construction duration	Moderate to high complexity with moderate impacts to traffic and added street reconstruction, although new EB SH-44 provides temporary detour route. Moderate construction duration
	Phased implementation - assessment of ability to construct useful portions of improvements as separate projects	N/A (no project implementation)	Intersection improvements and sections of corridor widening can be constructed as separate projects with full operational and safety benefits.	Intersection improvements, sections of corridor widening, and new alignment can be constructed as separate projects with full operational and safety benefits.	Intersection improvements, sections of corridor widening, and new alignment can be constructed as separate projects with full operational and safety benefits.	Intersection improvements and sections of corridor widening can be constructed as separate projects with operational and safety benefits, but couplet needs full construction with side street connections for benefits.
RESULTS		**CARRIED FORWARD**	**NOT RECOMMENDED**	**RECOMMENDED**	**RECOMMENDED**	**NOT RECOMMENDED**
NOTES		Further analysis required as the No Action Alternative in NEPA for comparison to action alternative(s).	Alternative does not improve SH-44 operations, safety, and multimodal connectivity as well as other action alternatives, no change to travel circulation in Middleton. This alternative has higher property and potential built environmental impacts than Alternatives 2 and 3. This alternative is the lowest cost action alternative, but would have moderate to high construction complexity with widening existing highway through downtown Middleton.	Alternative improves SH-44 operations, safety, and multimodal connectivity, and benefits downtown Middleton with reduced traffic volumes on Main St and improved v/c ratio adjacent to Middleton Middle School. Alternative has minor impacts to travel circulation in Middleton and has higher potential natural environmental impacts than Alternatives 1 and 3. Alternative impacts the lowest number of properties with the least congestion (lowest v/c ratio) along new SH-44 alignment through Middleton and construction costs are lower than Alternatives 3 and 4.	Alternative improves SH-44 operations, safety, and multimodal connectivity, and benefits downtown Middleton with reduced traffic volumes on Main St and improved v/c ratio adjacent to Middleton Middle School. Alternative has minor impacts to travel circulation in Middleton and moderate environmental impacts. This alternative has more congestion (higher v/c ratio) along new SH-44 alignment through Middleton, impacts more properties, and has higher construction cost compared to Alternative 2.	Alternative improves SH-44 operations and v/c ratio adjacent to Middleton Middle School. However, alternative does not improve safety and multimodal connectivity as well as other alternatives and would have major impact to travel circulation and emergency response time in Middleton. This alternative is less effective in meeting the capacity needs with a v/c ratio of 1.0 along the EB and WB one-way roads through Middleton. It has the highest number of property impacts and potential built and natural environmental impacts, as well as the highest construction cost and moderate to high construction complexity with additional side street reconstruction.

A table of the color ratings for each criterion is provided in **Table 5**. To help summarize the overall evaluation, a score (-1, 0, or +1) is associated with each color rating with a total score for each alternative. Criteria are not weighted in the scoring.

Table 5 Level 2 Evaluation – Scoring

CATEGORY	CRITERIA	NO ACTION	ALT 1	ALT 2	ALT 3	ALT 4
Traffic Operations	Corridor congestion					
		-1	0	0	0	0
	Change in travel circulation around Middleton					
		+1	+1	0	0	-1
	Intersection congestion					
		-1	0	0	0	+1
	Peak volume-to-capacity ratio adjacent to Middleton Middle schools					
		0	0	+1	+1	+1
	Daily volume-to-capacity ratio					
		-1	0	1	0	-1
Safety	Motorist safety					
		-1	0	1	1	0
	Pedestrian and bicyclist safety					
		-1	0	1	1	-1
Multimodal	Pedestrian and bicyclist comfort					
		-1	0	1	1	0
	Support/incorporate new pedestrian and bicyclist options					
		-1	0	1	1	0
Community	Property impacts					
		+1	-1	0	0	-1
	Potential property access modifications					
		+1	0	0	0	0
	Consistency with local and regional planning efforts					
		-1	0	0	0	+1
	Consistency with adjacent setting					
		-1	0	0	0	0
Environmental Resources	Potential impacts on built environment					
		+1	-1	0	0	-1
	Potential impacts on natural environment					
		+1	0	-1	0	-1
Implementation	Conceptual construction/ROW costs					
		+1	+1	0	0	-1
	Ease of implementation					
		+1	-1	0	0	-1
	Phased implementation					
		+1	0	0	0	0
	RESULT	**Carried Forward**	**Not Rec**	**Rec**	**Rec**	**Not Rec**
	Score	-1	-1	+5	+5	-5

Recommended Alternatives

Based on the alternatives evaluation, Alternatives 2 and 3 are the Recommended Alternatives from the PEL study for consideration as the Preferred Alternative during subsequent NEPA. Although Alternatives 2 and 3 scored overall the same, Alternative 2 rated higher in meeting the traffic operations and capacity needs of the corridor while Alternative 3 had less potential impacts to the natural environment. Alternative 2 impacts the lowest number of properties with the least congestion (lowest v/c ratio) along SH-44 through Middleton and a lower cost estimate than Alternative 3. When the Level 2 alternatives were presented to the public for input, more comments were favorable to Alternative 2 over Alternative 3.

The following two action alternatives are Not Recommended for further evaluation in this study due to comparatively negligible benefits and higher impacts than other alternatives as described below:

- Alternative 1: SH-44 Widening and Improvements on Existing Alignment
  - Less effective in meeting the traffic operations, safety, and multimodal needs of the corridor in comparison to Alternatives 2 and 3
  - More property impacts than Alternatives 2 and 3
  - Greater potential built environmental impacts than Alternatives 2 and 3
  - Greater construction complexity and impacts than Alternatives 2 and 3 with widening existing highway through downtown Middleton
- Alternative 4: SH-44 One-Way Couplet through Middleton to South
  - Major impacts to travel circulation in downtown Middleton and emergency response from downtown Middleton fire station
  - Less effective in meeting the safety and multimodal needs of the corridor in comparison to Alternatives 2 and 3 due to higher volumes on local residential streets between one-way roads
  - Less effective in meeting the capacity needs of the corridor with a v/c ratio of 1.0 through Middleton
  - Highest number of property impacts of action alternatives
  - Greatest potential built environmental impacts of action alternatives, as well as greater potential natural environmental impacts than Alternatives 1 and 3
  - Highest construction/total cost
  - Greatest construction complexity and impacts of action alternatives with construction on existing highway through downtown Middleton and additional side street reconstruction.

Alternatives 1 and 4 may be studied further with subsequent NEPA and project development.

Environmental Analysis of Recommended Alternatives

This section summarizes existing conditions in the environmental study area, discusses potential impacts for the alternatives recommended to move into a NEPA study, and identifies next steps for each resource through the NEPA process. Potential impacts discussed are based on conceptual-level designs and are subject to change as designs are refined through the NEPA process.

This section summarizes the potential impacts for the Recommended Alternatives, Alternatives 2 and 3. The environmental scan covering the study area for all evaluated alternatives is included in **Appendix D**.

The scan reviewed the following environmental resources, which are discussed in the following sections:

- Physical Environment
  - Land Cover
  - Soils Resources and Prime Farmlands
  - Air Quality
- Hydrology
  - Surface Waters
  - Floodplains
  - Wetlands
  - Groundwater/Sole Source Aquifer
- Hazardous Materials
- Biological Resources
- Human Environment
  - Demographic Information
  - Cultural Resources
  - Section 4(f) Resources
  - Section 6(f) Resources
  - Land Use and Zoning
  - Traffic Noise
  - Federal Aviation Administration Airspace Intrusion

Land Cover

Existing Conditions, Potential Impacts and Mitigation

The U.S. Department of Agriculture (USDA) 2023 Idaho Cropland Geographic Information System (GIS) data layer was used to identify the land cover types in the study area. The study area is 607 acres in total size. The highest land cover/cropland type includes grassland/pasture, shrubland, developed/open space, and alfalfa.

Next Steps

ITD will coordinate with the USDA to determine the level of land cover analysis, if any, that will be required for the Recommended Alternatives.

Soils Resources and Prime Farmland

Existing Conditions

Review of the Natural Resources Conservation Service (NRCS) soil surveys for Canyon and Ada Counties identified twenty-five (25) soil complexes as being prime farmlands within the study area.

Much of the project area is mapped as Prime Farmland or Farmland of Statewide Importance. Some of the area is currently used for agricultural purposes. It should be noted that, according to the Farmlands Protection Policy Act (FPPA) requirements, areas within urban and built-up lands, such as the City of Middleton and Star, are not subject to the FPPA requirements.

Potential Impacts and Mitigation

Alternative 2 would involve the conversion of approximately 278 acres of designated prime farmland and Alternative 3 would involve the conversion of approximately 270 acres of designated prime farmland. Coordination with the NRCS will be initiated to evaluate the potential impacts of this conversion and to determine appropriate avoidance, minimization, or mitigation measures, as necessary.

Next Steps

In accordance with the FPPA, the NRCS Prime Farmland Conversion Impact Rating Form (Form AD-1006) will be completed in coordination with NRCS.

Air Quality

Existing Conditions, Potential Impacts, and Mitigation

The study area is within Ada and Canyon Counties, the two most urbanized counties in the state, as a part of the Greater Boise area. Both Ada and Canyon Counties are in attainment with all National Ambient Air Quality Standards criteria for pollutants

established by the Clean Air Act. Therefore, the Recommended Alternatives have a minimal likelihood of exceeding air quality standards.

Next Steps

ITD will coordinate with the Idaho Department of Environmental Quality (DEQ) to determine the level of air quality analysis, if any, that will be required for the Recommended Alternatives.

Surface Waters

Existing Conditions

Topographic maps, aerial photographs, and Idaho DEQ stream layer geographic data were reviewed for the location of natural streams and rivers, as well as irrigation related canals, ditches and laterals along the study area.

Most surface waters identified along the study area are irrigation-related with some natural drainages. The following named streams were identified along and/or crossing the project: West Hartley Gulch, East Harley Gulch, Willow Creek and Mill Slough. Irrigation-related drainages include the Canyon Hill Canal, Middleton Drainage Ditch, Lawrence Kennedy Canal, Watkins Ditch, Canyon Canal, South Middleton Drain, Front Ditch, Grade Ditch, and numerous additional unnamed ditches and /or laterals.

Of these drainages, the following are listed by DEQ as being water quality impaired: East Hartley Gulch, Willow Creek, and Mill Slough.

Potential Impacts and Mitigation

The Recommended Alternatives have the potential to impact surface waters, including irrigation canals and natural streams. Alternative 2 would affect approximately 15,740 linear feet of irrigation canals and 820 linear feet of natural streams, while Alternative 3 would impact approximately 13,000 linear feet of irrigation canals and 790 linear feet of natural streams.

Mitigation measures will include avoiding impacts where feasible through design adjustments and implementing best management practices (BMP's) during construction. Coordination with the U.S. Army Corps of Engineers (USACE), Idaho Department of Water Resources, and irrigation districts will occur to ensure compliance with applicable permitting requirements.

Next Steps

An Idaho Pollutant Discharge Elimination System (IPDES) permit and a Stormwater Pollution Prevention Plan (SWPPP) will be prepared for the project. Additionally, an Aquatic Resource Delineation will be conducted during the NEPA phase to determine the extent of aquatic resources within the study. This information will

support permitting and coordination with regulatory agencies and irrigation districts.

Floodplains

Existing Conditions

Federal Emergency Management Agency (FEMA) floodplain and floodway mapping data were reviewed for the project corridor. Mapped floodplains were identified along the Boise River, West Harley Gulch, East Hartley Gulch, Willow Creek, and Mill Slough. The mapped floodplains include both Zone A (100-year floodplain or 1% annual chance flood hazard) and Zone X (500-year floodplain or 0.2% annual chance flood hazard). In addition, mapped floodways were identified along Willow Creek and Mill Slough.

Potential Impacts and Mitigation

The Recommended Alternatives will impact floodplains as a result of the construction of the new alignment, as well as the addition and expansion of existing bridges.

Floodplain impacts will be minimized through design measures such as avoiding encroachment, maintaining natural flow, and providing compensatory storage if needed. Coordination with FEMA and other agencies will ensure compliance with all applicable regulations.

Next Steps

Detailed floodplain analysis will be conducted during the subsequent NEPA phase, including hydraulic modeling to confirm potential impacts. Coordination with resource agencies and local floodplain administrators will be initiated, and applicable permits and approvals will be obtained.

Wetlands

Existing Conditions

U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping data was reviewed for the project corridor. NWI maps revealed 20 riverine, four freshwater emergent wetlands, and three freshwater ponds within the study area. All of these polygons were field verified as being present during a windshield survey of the project corridor, except portions of three freshwater wetlands and five riverine polygons that were not present. Many of the polygons identified were associated with existing drainages and irrigation canals and ditches. In addition to the USFWS NWI mapping, a windshield survey did identify numerous additional riverine and wetland areas not identified through existing data sources.

Potential Impacts and Mitigation

The Recommended Alternatives may impact up to one acre of wetlands. Impacts will be minimized through design adjustments and BMPs, and compensatory mitigation will be provided as required under Section 404 of the Clean Water Act in coordination with the USACE.

Next Steps

An Aquatic Resource Delineation will be conducted during the NEPA phase to determine the extent of wetlands within the study area. This information will support permitting and coordination with regulatory agencies.

Groundwater/Sole Source Aquifers

Existing Conditions, Potential Impacts and Mitigation

There are no designated Sole Source Aquifers located in the vicinity of the project corridor.

Next Steps

ITD will coordinate with the Idaho DEQ to determine the level of groundwater analysis, if any, that will be required for the alternatives evaluated.

Hazardous Materials

Existing Conditions

Throughout the study area, some businesses/operations raise the risk of encountering hazardous materials. Examples include residential underground storage tanks, gas stations, wrecking yards, dry cleaners, auto body shops and auto repair, guard railing, bridges, and dump sites. Leaking Underground Storage Tanks (LUSTs) and soil staining, lead and asbestos are the most typical concerns.

A search of hazardous material sites was conducted through the Idaho DEQ Terradex Mapper, as well as the EPA's Envirofacts Program. Thirteen (13) underground storage records were identified, of which seven are still in use and seven have had one or more leaking underground storage tanks (LUST) events. All LUST event locations have been designated as "cleanup complete". Six sites are listed hazardous waste generators, seven sites are listed as general remediation, one site is listed as municipal solid waste landfill, and one is listed as other (gravel pit).

Potential Impacts and Mitigation

The Recommended Alternatives have the potential to impact the identified hazardous materials sites. However, additional detail on the alternatives and analysis of the impact for each hazardous material site needs to be conducted to determine the level of impacts for the alternatives.

Next Steps

As part of the subsequent NEPA phase, an Administrative Review will be conducted to examine federal, state, and local agency databases for relevant environmental records and resource concerns. Coordination with appropriate resource agencies will also occur to identify any areas of potential concern. A windshield survey will supplement the review to identify observable site conditions. Findings from this review will determine whether further environmental analysis is warranted.

Biological Resources

Existing Conditions

An official species list was obtained from the USFWS Information for Planning and Consultation (IPAC) tool for the project on January 27, 2025 (USFWS 2025; Consultation Code 2024-0108630). The IPAC list identified one threatened *(slickspot peppergrass)* and two species for proposed *(Monarch butterfly and Suckley's cuckoo bumble bee)* listing under the Endangered Species Act that may occur or be affected by the Recommended Alternatives. No species protected under the National Oceanic and Atmospheric Administration were listed within the study area.

In addition, the IPAC resource list identified several migratory birds that may nest or forage in the study area. These birds are protected by the Migratory Bird Treaty Act and/or the Bald and Golden Eagle Protection Act.

A review of Idaho Fish and Game Idaho Conservation Planner for Species of Greatest Conservation Need on January 29, 2025 identified 45 species within the study area. No field investigations were made to determine the presence or absence of these species or suitable habitat.

Potential Impacts and Mitigation

The Recommended Alternatives may impact proposed federally listed and proposed species, migratory birds, and Species of Greatest Conservation Need through habitat disturbance or construction-related activities. Avoidance and minimization measures, such as seasonal restrictions, habitat avoidance, and BMP's, will be implemented. If impacts to species cannot be avoided, coordination with resource agencies will occur to develop appropriate mitigation.

Next Steps

If needed, a Biological Assessment will be prepared, followed by coordination with USFWS under Section 7 of the Endangered Species Act. Coordination with the Idaho Department of Fish and Game on SGCN may be conducted as needed, with mitigation measures finalized in the subsequent NEPA phase.

Socioeconomics

Existing Conditions

Demographic data from the U.S. Census and 2017-2021 American Community Survey were reviewed. The data provides information by block group in comparison to state percentages for social characteristics, including low-income, elderly, race and ethnicity, and limited English proficiency. Block group percentages that are higher than statewide percentages indicate a potential for a minority and/or low-income population.

Multiple block groups within the study area indicated a higher percentage in low-income, elderly, race and ethnicity (including Black, Native American, and Hispanic communities), and limited English proficiency. This indicates that there is a higher potential for a minority and/or low-income population.

Potential Impacts and Mitigation

The Recommended Alternatives have the potential to have community impacts, including potential displacements and relocations due to right-of-way needs.

Next Steps

A socioeconomics analysis will be conducted during the NEPA phase to determine the extent of impacts associated. Continued public involvement efforts will be implemented to ensure meaningful community engagement.

Cultural Resources

Existing Conditions

A record search was conducted with the Idaho State Historic Preservation Office (SHPO) through the Idaho Cultural Resources Information System database in April 2024. The database was reviewed to identify previously evaluated National Register of Historic Places eligible resources, as well as unevaluated resources. Following the desktop review, a windshield survey was conducted to verify the presence of eligible and unevaluated resources identified in the desktop review.

Thirty-one (31) eligible or unevaluated resources were identified through the SHPO database. Of the 31 resources, six are no longer present, three haven't been evaluated, and 22 are eligible for the National Register of Historic Places.

Potential Impacts and Mitigation

The Recommended Alternatives have the potential to impact known cultural resources. Avoidance and minimization measures will be considered in coordination with the SHPO and other consulting parties.

Next Steps

An Archaeological and Historic Survey Report will be prepared in compliance with Section 106 to identify and evaluate cultural resources within the Area of Potential Effects. Findings will inform further coordination with SHPO and determine the need for additional studies or mitigation.

Section 4(f) Resources

Existing Conditions

The city and county comprehensive plans, as well as park and recreation information, were reviewed to identify potential Section 4(f) resources. The National Register of Historic Places was also reviewed to identify known listed historic sites. Section 4(f) resources will be identified as potential until a Section 4(f) evaluation is completed. Thirty-one (31) potential Section 4(f) resources were identified, of which 22 are historic sites, five are public parks, and four are recreation sites.

Potential Impacts and Mitigation

The Recommended Alternatives may impact two recreation sites and potential historic sites. Avoidance and minimization measures will be considered during design, and coordination with the SHPO and applicable recreation agencies will be conducted to identify and address potential impacts.

Next Steps

Additional evaluation will be conducted to determine Section 4(f) applicability of the affected recreation and historic sites. Coordination with SHPO and officials with jurisdiction will continue to assess impacts and identify potential mitigation.

Section 6(f) Resources

Existing Conditions

Three projects (Piccadilly Park, Middleton Roadside Park, and Middleton Place Park) in the City of Middleton were funded through the Land and Water Conservation Fund (LWCF) program within the study area. Piccadilly Park received funds to develop a splash pad within the park. Middleton Roadside Park and Middleton Place Park both received funds for the acquisition and development.

Potential Impacts, Mitigation, and Next Steps

Neither Recommended Alternative will impact the identified Section (6)f resources. Coordination with Idaho Parks and Recreation will be conducted during the subsequent NEPA.

Land Use and Zoning

Existing Conditions, Potential Impacts and Mitigation

Current zoning and future land use data was obtained for the cities of Caldwell, Middleton and Star, and Ada and Canyon Counties. Land use along the study area is a mix of residential, agricultural, mixed use, commercial, and light industrial.

Next Steps

ITD will coordinate with the cities and counties to determine the level of land use and zoning analysis, if any, that will be required for the alternatives evaluated.

Traffic Noise

Existing Conditions

Numerous sensitive traffic noise receptors are located along the project which includes residential areas, schools, churches, day care centers, medical facilities, parks, offices, and restaurants.

Potential Impacts and Mitigation

A TNM ten-point transect screening analysis was conducted for alternatives to identify potential traffic noise impacts to sensitive receptors. The analysis determined potential impacts may occur at distances ranging from approximately 75 to 100 feet from the centerline. The screening identified approximately 201 and 225 potentially impacted receptors for Alternatives 2 and 3, respectively. This screening analysis is preliminary and intended solely for early planning-level evaluation. A detailed noise analysis, consistent with FHWA and ITD regulations, will be conducted in the subsequent NEPA phase. Traffic noise abatement measures will be evaluated and considered for all impacted receptors.

Next Steps

The Recommended Alternatives would be considered a Type 1 project under ITD noise policy; therefore, a traffic noise analysis will be required during the NEPA process.

Federal Aviation Administration Airspace Intrusion

Existing Conditions, Potential Impacts and Mitigation

No public aviation facilities were identified within 20,000 feet of the study area.

Next Steps

ITD will coordinate with the Federal Aviation Administration (FAA) to determine the level of airspace intrusion analysis, if any, that will be required.

Agency Coordination and Public Involvement

Stakeholder and public involvement is a key component of the PEL process that encourages stakeholder participation in the decision-making process throughout the study. Agency stakeholder involvement was emphasized throughout the PEL process and feedback was solicited from the agency stakeholders and general public at key decision points to foster acceptance for recommendations.

Agency Coordination

The study included the formation of a PDT comprised of stakeholder agency representatives. The PDT met frequently with ITD and consultant representatives to provide technical input as the PEL study progressed. The PDT included staff from:

- ITD
- ACHD
- Canyon County
- Highway District No. 4
- City of Middleton
- City of Star
- COMPASS
- Middleton School District
- Valley Regional Transit

The PDT was heavily involved in shaping the alternatives that were considered, alternatives evaluation criteria and performance measures, as well as study recommendations. Separate meetings were held with FHWA throughout the study.

At the start of the PEL study, prior to holding PDT meetings, ITD conducted a PEL Training Workshop in July 2023 to outline the PEL process for participating ITD and local agency staff and elected officials. The PDT met eight times during the PEL study process. The PDT members provided input on decisions at the key milestones outlined in **Table 6**.

In addition, a Project Executive Committee (PEC) was formed to present information and gather input from executive-level representatives from the same agencies on the PDT to facilitate decision-making at major milestones. The agency executives participated in the corridor visioning workshop held at the start of the study. A PEC meeting was held in June 2024 with discussion and input on the project Purpose and Need and goals and alternatives evaluation process, including evaluation criteria. A joint PDT/PEC meeting was held in May 2025 to present and gather input on the refined Level 2 alternatives screening and next steps for the project to move forward into the NEPA process.

Table 6 Project Development Team (PDT) Meetings

KEY MILESTONES	SCHEDULE	STATUS
Visioning Workshop	September 2023	Gathered vision and potential Purpose and Need elements
PDT Charter Study Goals & Objectives	PDT Meeting #1 October 2023	Consensus with team member signatures on PDT Charter
Purpose and Need Statement Including Purpose, Needs, and Goals	PDT Meeting #2 November 2023	Reviewed with input and consensus
Evaluation Criteria Initial Alternatives Developed	PDT Meeting #3 February 2024	Reviewed with input and consensus
Level 1 Alternatives Draft Screening Results	PDT Meeting #4 March 2024	Reviewed with input and consensus
Level 2 Alternatives Level 2 Evaluation Criteria	PDT Meeting #5 May 2024	Reviewed with input and consensus
Level 2 Alternatives Draft Screening Results	PDT Meeting #6 August 2024	Reviewed with input and comments for information to present to public
Level 2 Alternatives Screening Refinements	PDT Meeting #7 October 2024	Reviewed with input
Level 2 Alternatives Screening Refinements	PDT Meeting #8 May 2025	Reviewed with input

Resource Agencies

The following environmental resource agencies were notified of the SH-44 PEL Study and coordinated with for input on the environmental scan information utilized in the alternatives evaluation process:

- Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife
- Idaho Department of Environmental Quality
- Idaho Department of Water Resources
- Idaho Fish and Game
- Bureau of Reclamation
- Natural Resources Conservation Service
- Idaho Department of Lands
- Southwest District Health
- Caldwell Executive Airport
- Federal Aviation Administration
- Idaho Department of Parks and Recreation

Information was distributed to representatives at these resource agencies at three points during the study. Early in the study, a letter was mailed as an introduction to the PEL study and confirmation of preferred contact information was requested. A second letter requested review of the *Environmental Scan Report* related to their specific resource(s). The final letter provided a memorandum summarizing the

alternatives evaluation results and Recommended Alternative recommendations for review of the potential resource impacts and requested information on the next steps required for the NEPA process. The letters and responses from resource agencies are included in **Appendix H**.

Public Outreach Activities

In an effort to gain as much community input as possible, public participation was emphasized throughout the SH-44, I-84 to Star Road PEL Study. The public engagement included presentation of materials with opportunities to review and provide input on the Purpose and Need, alternatives development and screening (Level 1 and Level 2), and the Recommended Alternatives. For all public-facing materials, notice was given that the PEL outcomes may be adopted during environmental review process per 23 U.S.C. 168.

Table 7 outlines the types of public engagement and input gathered associated with the key milestones of the study.

Table 7 Summary of Public Outreach Activities

PUBLIC ENGAGEMENT POINT	OUTREACH TACTICS	INPUT GATHERED
Public Meetings – Round #1 Middleton and Star In-person January 11 and 17, 2024 Online open January 11 – 31, 2024	Open Houses (2 locations) Online Open House Marketing: ▪ Project Website ▪ News Release ▪ Print Ads ▪ Social Media ▪ Direct Mail Postcards	Content: ▪ About the Project ▪ PEL Process ▪ Project Timeline ▪ Draft Purpose, Needs, and Goals ▪ Existing and Future Conditions Input Considerations: ▪ Language edits to Purpose and Needs for clarification and public understanding ▪ Emphasized highway congestion related to school traffic as a need
Public Meetings – Round #2 Star and Middleton In-person April 3 and 4, 2024 Online open April 3 – 17, 2024	Open Houses (2 locations) Online Open House Marketing: ▪ Project Website ▪ News Release ▪ Print Ads ▪ Social Media ▪ Direct Mail Postcards	Content: ▪ About the Project ▪ PEL Process ▪ Project Timeline ▪ Purpose, Needs, and Goals ▪ Alternatives Evaluation Process ▪ Level 1 Concepts ▪ Draft Level 1 Screening Matrix Input Considerations: ▪ Concerns with right-of-way impacts and property owner/business impacts of all concepts (included in Level 2 criteria) ▪ Concerns with impacts to downtown Middleton (Level 2 alternatives considered to reduce downtown Middleton impacts)

PUBLIC ENGAGEMENT POINT	OUTREACH TACTICS	INPUT GATHERED
Public Meetings – Round #3 Middleton and Star In-person September 10 and 11, 2024 Online open September 10 – October 9, 2024	Open Houses (2 locations) Online Open House Middleton Canvassing ▪ Visited 108 residences that may be directly impacted by alternatives Marketing: ▪ Project Website ▪ News Release ▪ Print Ads ▪ Social Media ▪ Direct Mail Postcards	Content: ▪ About the Project ▪ PEL Process ▪ Project Timeline ▪ Purpose, Needs, and Goals ▪ Alternatives Evaluation Process ▪ Level 2 Concepts ▪ Draft Level 2 Screening Matrix Input Considerations: ▪ General agreement on draft Level 2 screening ▪ Concerns for property and access impacts for alternatives south of Middleton (additional data analysis of impacts added to Level 2 screening) ▪ Polarizing opinions on one-way alternative with interest in keeping SH-44 closer to downtown Middleton, but concerns about impacts (additional data analysis of impacts added to Level 2 screening) ▪ Concerns with impacts to downtown Middleton (Level 2 alternatives considered to reduce downtown Middleton impacts)
Public Meetings – Round #4 Middleton and Star In-person August 26 and 27, 2025 Online open August 26 – September 10, 2025	Open Houses (2 locations) Online Open House Middleton Canvassing ▪ Visited 114 residences that may be directly impacted by alternatives Marketing: ▪ Project Website ▪ News Release ▪ Print Ads ▪ Social Media ▪ Direct Mail Postcards	Content: ▪ About the Project ▪ PEL Process ▪ Project Timeline ▪ Purpose, Needs, and Goals ▪ Alternatives Evaluation Process ▪ Level 1 Overview ▪ Level 2 Overview ▪ Study Recommendations Moving Forward Input Considerations: ▪ General agreement on Recommended Alternatives to move forward into NEPA and the alternatives not recommended for further study ▪ Concerns for property and access impacts along SH-44 for the on-alignment and new alignment sections ▪ Overall sentiment that improvements are needed for corridor and to move forward as quickly as possible with project

Public Meetings

The project team planned and executed four public feedback opportunities during the SH-44, I-84 to Star Road PEL Study. Each was centered around a pair of open

houses on either side of the project corridor, one in Middleton and one in Star, to allow residents and interested parties multiple attendance options. The open houses were accompanied by an online open house that presented identical information. A survey at each public involvement opportunity was provided on paper at the open houses and online, again with identical questions to maintain data integrity. A summary of public involvement opportunities and participation in each is below.

- **Public Involvement Opportunity #1 – January 2024**
  - **Content Focus:** Purpose, Needs and Goals
  - **Open Houses:** Middleton Middle School (January 11, 2024), Star Fire Protection District (January 17, 2024), Online (January 11 - January 31, 2024)
  - **Participation:** 163 in-person attendees, 522 online visits. 59 survey responses.
- **Public Involvement Opportunity #2 – April 2024**
  - **Content Focus:** Level 1 Screening
  - **Open Houses:** Star Fire Protection District (April 3, 2024), Middleton Middle School (April 4, 2024), Online (April 3 - 17, 2024)
  - **Participation:** 98 in-person attendees, 545 online visits. 62 survey responses.
- **Public Involvement Opportunity #3 – September 2024**
  - **Content Focus:** Level 2 Screening
  - **Open Houses:** Middleton Middle School (September 10, 2024), Star Fire Protection District (September 11, 2024), Online (September 10 - October 9, 2024)
  - **Participation:** 167 in-person attendees, 1,420 online visits. 129 survey responses.
- **Public Involvement Opportunity #4 – August 2025**
  - **Content Focus:** Recommended Alternatives
  - **Open Houses:** Middleton Middle School (August 26, 2025), Star Fire Protection District (August 27, 2025), Online (August 26 – September 10)
  - **Participation:** 260 in-person attendees, 712 online visits. 165 survey responses.

Public meeting summaries are included in **Appendix F**.

Information Distribution

The study utilized many methods of advertising and outreach, as summarized in **Table 7**. Each public meeting was preceded by a news release, along with social

media posts on ITD Facebook and X accounts. A postcard mailer was sent to property owners prior to each public meeting, and an email was sent to the electronic mailing list. Some public meetings were covered by local news media, further increasing awareness. Public meeting graphics were subsequently posted on the project web page.

Middleton Canvassing

The public involvement team reviewed the addresses of those who provided their information during the sign-in process for the first two in-person and online open houses and identified a gap in attendees from areas near downtown Middleton that may be directly impacted by several alternatives under consideration in the Level 2 evaluation.

To make sure these residents received the information provided at the open houses and had the chance to submit their feedback, the public involvement team canvassed over 100 homes prior to the third and fourth rounds of public meetings, speaking directly with residents. A packet was left at every home, regardless of whether the team spoke with a resident or not. The packet included a paper copy of the open house displays and a paper comment form, which could be mailed or emailed back to the project team. For packets that were left without a direct interaction, a note was also included that explained the reason for the visit and a request to review the information and submit feedback.

Public Comments

Input was solicited at the in-person and online public meetings. Comments received were shared with ITD and the project team. Comments received are included in **Appendix F**.

Several topics consistently emerged as central themes in the public feedback throughout the current study's public involvement process. The list below represents common concerns heard by the project team.

- Traffic operations near Middleton Middle School, particularly around drop-off and pick-up times
- Impact on businesses in downtown Middleton
- Impact to residences and personal property
- Increased traffic on cross streets in Middleton
- Right-of-way requirements (farmland, businesses, residences)
- A bypass would "split the town" of Middleton
- Impact on highway access/driveways
- Need for safety improvements at highway intersections
- Impacts to the City of Middleton wastewater treatment properties

Public Feedback on Study Recommendations

The last round of public meetings focused on the study recommendations for alternatives to be considered in the NEPA process. Members of the public were invited to provide feedback on written comment forms that could be submitted during the open houses or sent to ITD via email or mail. The public could also provide their comments via an online survey.

A survey question for each alternative asked whether the respondent believes the alternative should advance to the next phase of the project, with 'Yes,' 'No,' and 'Unsure' choices. Graphs showing the responses for each alternative about moving to the next phase are shown in **Figures 11 through 14**.

Alternative 1 drew the strongest percentage in agreement among respondents, with 91% of all respondents indicating that they do not believe Alternative 1 should advance to the next phase. This is consistent with the study result of Not Recommended for this alternative.

Alternative 2 also had a strong majority of respondents agreeing with the recommendation, with 77% of respondents signaling their belief that Alternative 2 should advance to the next phase, consistent with the study result identifying this as a Recommended Alternative.

Alternative 3 had the most evenly divided level of agreement, with respondents in a 44% 'Yes,' 44% 'No,' and 12% 'Unsure' tally about the alternative advancing to the next phase.

For Alternative 4, a strong percentage of 75% of respondents indicated their belief that Alternative 4 should not advance to the next phase, which is consistent with the study result of Not Recommended for this alternative.

These survey responses are consistent with the feedback received on each alternative during the third round of public meetings.

As the differences between the alternatives primarily affect the Middleton area with the on-alignment and bypass alternatives, the project team considered both the overall dataset and data from those that identified themselves as Middleton residents. Responses from only Middleton residents closely aligned with the overall group responses, with less than a 3% difference between the highest percentages of the two datasets, except for Alternative 3. Middleton residents had a stronger response (54%) that Alternative 3 should not advance to the next phase.

Figure 11. Alternative 1 Public Feedback

Question: Do you believe that Alternative 1 should advance to the next phase of the project for further analysis?

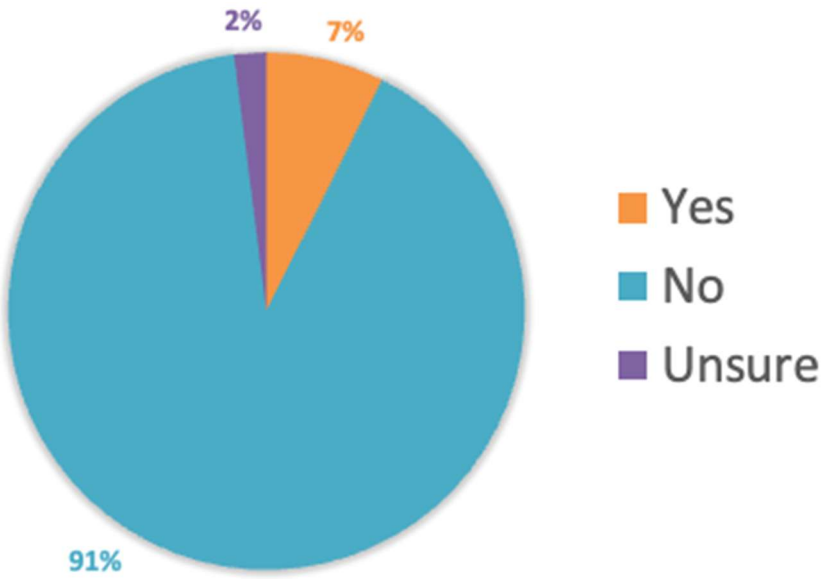


Figure 12. Alternative 2 Public Feedback

Question: Do you believe that Alternative 2 should advance to the next phase of the project for further analysis?

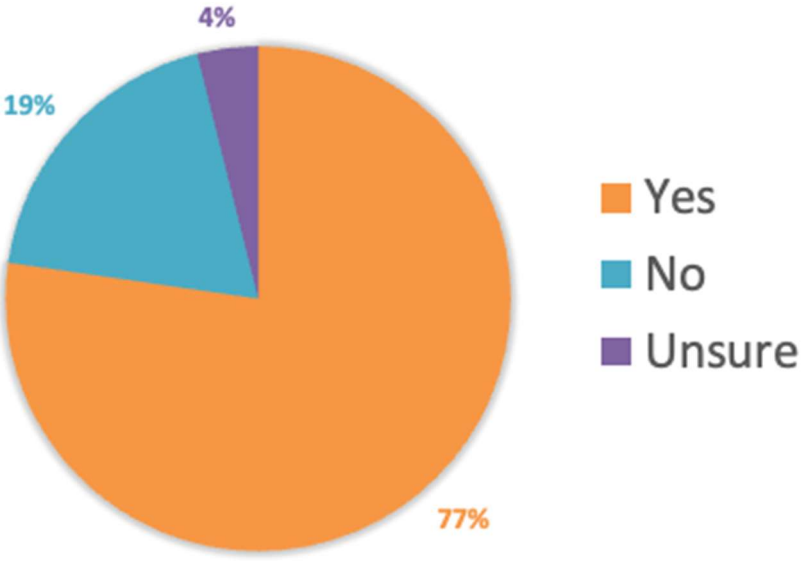


Figure 13. Alternative 3 Public Feedback

Question: Do you believe that Alternative 3 should advance to the next phase of the project for further analysis?

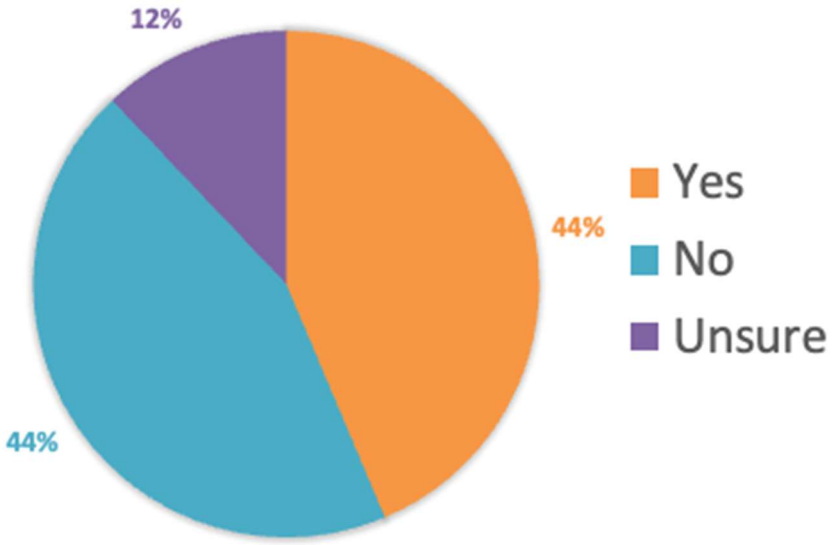
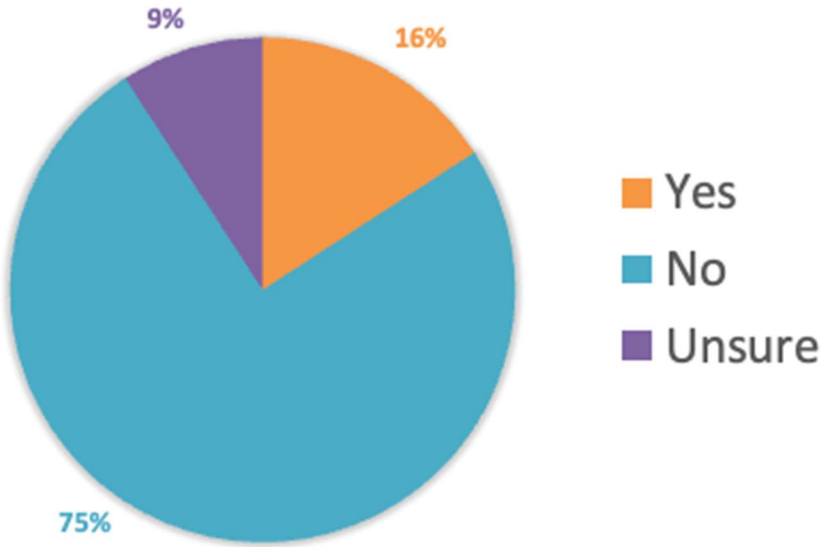


Figure 14. Alternative 4 Public Feedback

Question: Do you believe that Alternative 4 should advance to the next phase of the project for further analysis?



Next Steps

The SH-44, I-84 to Star Road PEL Study has been carefully completed with the intent that certain planning products and analyses would be used in future NEPA processes. This has been done by closely adhering to the specific conditions listed in 23 USC 168, including:

- Verifying the study was conducted in accordance with federal law
- Consulting with federal and state resource agencies
- Consideration of multidisciplinary systems-level and corridor-wide planning efforts
- Inclusion of public notices and public participation
- Making decisions that are based on reliable and reasonably current data and scientific methodologies
- Documentation in sufficient detail to support the decision and results of the analysis and to meet requirements for use in the environmental process
- Documenting the study in a manner so it can be adopted and used in a subsequent NEPA process
- Approval of the study no later than five years prior to the date on which information is planned to be adopted in a future NEPA process.

The last specific condition relates to actions completed during the NEPA process; that condition has not yet been met.

The PEL study has been completed in close coordination with FHWA, who will be the lead federal agency for future NEPA review. FHWA reviewed the planning analyses and products and determined they have been appropriately prepared at the following coordination points, consistent with the ITD *PEL Procedures Manual* (April 2024).

- Coordination Point 1 – Determine reason for PEL Study and Desired Outcomes
  - FHWA coordination meeting held on July 6, 2023
- Coordination Point 2 – Purpose and Need and Operations Analysis Methodology
  - *Purpose and Need Memorandum* – April 8, 2024
  - *Operations Analysis Methods and Assumptions Memorandum*– February 10, 2025

- Coordination Point 3 – Alternatives Development and Screening
  - *PEL Study Alternatives Evaluation Process Memorandum* – February 20, 2025
  - *PEL Study Alternatives Evaluation Results Memorandum* – July 8,2025
- Coordination Point 4 – PEL Document
  - In process with this report

Planning Products from PEL Study for NEPA Process

As required in 23 USC 168 and 23 CFR 450.212, this PEL study process identified the following planning products and analyses that were developed during the PEL study to be incorporated into a subsequent NEPA process:

- Purpose and Need
- Transportation Analyses
- Screening of Alternatives
- Identification of two Recommended Alternatives
- Environmental setting
- Input from public and agency coordination processes

Outstanding Concerns to be Addressed in NEPA

The Recommended Alternatives and associated impacts are based on a conceptual level of design. As the project moves forward with preliminary design during NEPA, additional issues related to utilities, right-of-way, and property impacts may surface.

The Recommended Alternatives will require additional design information and analysis to respond to public comments related to:

- Traffic operations near Middleton Middle School, particularly around drop-off and pick-up times
- Impact to residences and personal property
- Right-of-way requirements (farmland, businesses, residences)
- A bypass would “split the town” of Middleton
- Impact on highway access/driveways
- Need for safety improvements at highway intersections
- Impacts to the City of Middleton wastewater treatment properties

A letter from the City of Middleton project PEC representative and City Councilman in September 2025 and an additional letter in January 2026 stated objections to the

recommendations from the PEL study for Alternatives 2 and 3 as the Recommended Alternatives. The letter (included in **Appendix G** with the ITD response) outlined the following concerns:

- Impacts to the City of Middleton wastewater treatment properties and area available for effluent land application
- Impacts to the Crane Creek Urban Redevelopment Area
- Reimbursement for city investment in constructing the roundabout at Sawtooth Parkway and Middleton Road
- Future ownership and maintenance of the existing SH-44 highway through Middleton with SH-44 realignment
- Design and impacts of a Viking Street extension to add access to/from Middleton Middle School to a SH-44 alignment south of downtown Middleton, as well as future ownership and maintenance of the new roadway connection
- Construction phasing for the SH-44 section through Middleton to precede increasing the capacity of adjacent sections
- Impacts to the floodway boundary in the City of Middleton
- Impacts to stormwater treatment associated with the additional asphalt roadway in the project
- Location and design of pedestrian/bicyclist facilities and grade-separated highway crossings
- Design for individual property accesses along the corridor, specifically the City maintenance facility, Wastewater Treatment Plant, private residence on Wiffen Lane, and areas currently planned for effluent land application
- Coordination with developers and property owners to minimize project impacts to planned development
- Design for intersections at connections between a new SH-44 alignment and the existing highway/Main Street to provide full access
- Reserved utility corridors along SH-44 for the City's domestic water and wastewater utilities

As the project moves forward into further project development and NEPA, continued coordination with the SH-44 PDT, including City of Middleton staff and elected officials, will be conducted as a pre-NEPA phase to refine and evaluate further Alternatives 1, 2, 3, and 4 between Canyon Lane and Marjorie Avenue (generally through the City of Middleton) with more detail using survey and technical data. The project team will conduct PDT workshops and additional stakeholder coordination meetings to review and refine alternatives to minimize impacts and address concerns. Based on this additional pre-NEPA analysis, all four alternatives may not continue throughout the NEPA process.

Summary

The next steps in the project development are:

- Conduct refined alternatives evaluation to confirm alternatives that will move forward into NEPA
- Complete NEPA analysis for the entire SH-44 corridor between I-84 and Star Road
- Complete final design
- Obtain right-of-way
- Complete construction

These steps will be coordinated with FHWA and the appropriate agency stakeholders for consistency with the NEPA process.