

Section 5 **Key Corridors**



SECTION 5. KEY CORRIDORS

As part of this update, some key corridors were identified as having unique characteristics that require additional background and discussion. This section includes a more detailed discussion of these corridors.

EAGLE ROAD

SH 44 to Beacon Light Road

The traffic demand on Eagle Road north of SH 44 is identified to require five lanes from Plaza Drive to Beacon Light Road. There are two distinct areas within this section of Eagle Road. Figure 7 and Figure 8 show pictures for this section. The first is between Plaza Drive and State Street where the need for five lanes is consistent with the 2008 NWFTS and the 2012 ACHD CIP. Significant concern over widening this section of Eagle Road was expressed by many stakeholders and the public. As a result of this concern, the City of Eagle and ACHD have initiated a study of the Eagle Road/State Street intersection to determine the ultimate configuration of this section of Eagle Road and the intersection at State Street because the intersection configuration affects the roadway sizes.



Figure 7: Eagle Road - North of Plaza Drive



Figure 8: Eagle Road - South of Beacon Light Road

Between State Street and Beacon Light Road, the additional growth in the NW foothills triggers the need for five lanes. Based on a review of the ability to widen to five lanes it was recommended that the impact would be too extensive to justify the widening, especially given the concerns expressed as part of the stakeholder and public involvement process. The impacts of widening would be extensive, ranging from businesses in downtown, to Eagle Elementary School, to residential homes, and creek and canal crossings. Therefore, the existing three-lane facility is recommended between State Street and Floating Feather and widening to three lanes is

recommended between Floating Feather and Beacon Light Road to better accommodate pedestrians, bicycles, and turning vehicles.

Chinden Blvd (US 20/26) to SH 44

Eagle Road, south of SH 44 is owned and maintained by the ITD and designated SH 55. ITD currently does not have plans for widening beyond the current five lanes. Based on the projected 2035 traffic projections, a seven-lane access-controlled cross section is needed to accommodate the projected travel demand at LOS

“E” or better on Eagle Road between Chinden Boulevard and SH 44. The 2008 NWFTS recommended five lanes, however, with the increase in demand due to the 2035 horizon year, and the decision to not fund the Three Cities River Crossing, the projected volume in 2035 is approximately 23 percent greater than the 2030 projection in the 2008 NWFTS. While there is significant uncertainty in the likelihood of widening Eagle Road, it is recommended that ROW be preserved and widening be planned given the Three Cities River Crossing is no longer planned.

WILLOW CREEK ROAD

The existing Willow Creek Road is constrained due to the topography and existing residential development. The steep topography limits the ability to function at more than local road speeds, and the direct lot access and proximity to homes limits the ability to accommodate high levels of traffic. Figure 9 shows a picture along a typical section of Willow Creek. For these reasons, a new alignment is required if a connection north of Eagle Road is to be made to the future arterial portion of Willow Creek as identified in the NWFTS roadway network. The most likely location for a new connection is across the vacant land to the east which can be characterized by large-parcel ownership (40+ acres). Topography will remain a factor in determining the alignment for a new connection as well as future land-use proposals by the property owners. Therefore, planning for the new connection to bypass the southern portion of Willow Creek should consider the following:



Figure 9: Willow Creek Road - Near Stillwell Drive

- Collaboration with the adjacent property owners to develop an alignment that minimizes negative property impacts and supports future land-use plans.
- Design of the roadway to minimize the grade and curvature in order to emphasize the route over the existing Willow Creek Road.
- Review the need to modify the south portion of Willow Creek Road to discourage through traffic.

BEACON LIGHT ROAD

The recommendation of this Study with the most varied opinions among those that offered input is widening of Beacon Light Road to five lanes. As shown in Figure 10, Beacon Light Road is considered by many residents to have a rural character today. The 2008 NWFTS recommended widening to five lanes between Linder Road and SH 44 and three lanes between Linder Road and SH 55. The increase in traffic demand due to the additional five years of regional population and employment result in the need for five lanes between Linder Road and SH 55. The need for five lanes was originally identified in the adopted 2012 CIP.

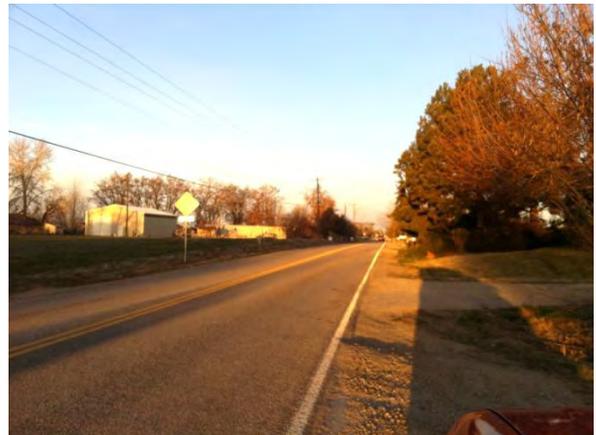


Figure 10: Beacon Light Road - North of Eagle Road

The public, SC, PMT, and Eagle City Council all identified the need to maintain the rural character of the Beacon Light Corridor. They also identified the need to ensure that Beacon Light Road is not widened solely due to ITD funding shortfalls for widening SH 44 beyond five lanes. These are all valid concerns given the very low traffic volumes (approximately 2,700 vehicles per day) on Beacon Light today.

The challenge with determining the most appropriate improvements on Beacon Light Road in the long term is that a balance needs to be made between maintaining the rural character of Beacon Light Road, supporting the land-use planning goals of the City, and supporting and land uses along Beacon Light Road and the future growth projected in the northwest foothills and the region.

Beacon Light Road is the only east-west arterial north of SH 44 that will have long-term full-access connections to SH 16 and SH 55. Traffic is projected to significantly increase over the next 20 years. Figure 11 illustrates the general traffic growth projected on Beacon Light Road. As shown in Figure 11, the traffic growth on Beacon Light Road is projected to require widening beyond two or three lane capacity by approximately 2030. The growth rate in traffic demand is expected to be high for the following reasons:

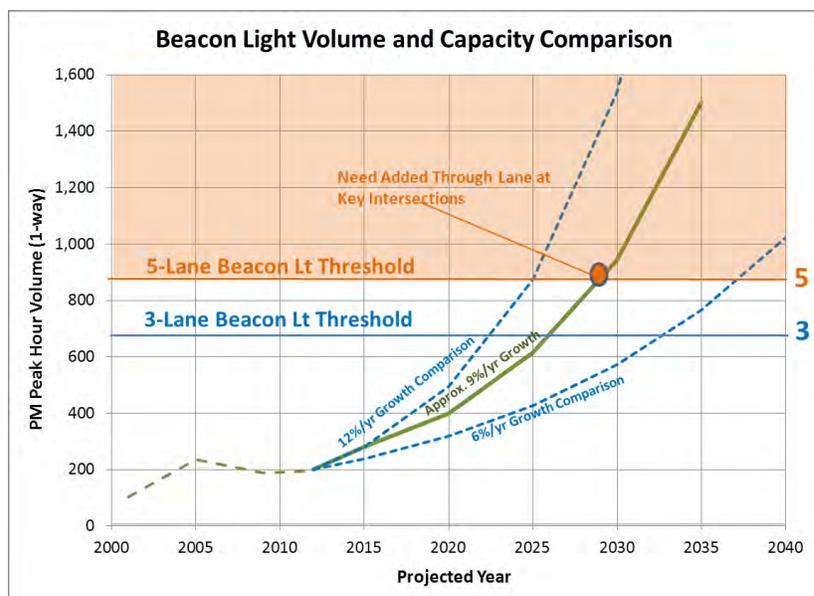


Figure 11: Beacon Light Volume and Capacity Comparison

- Beacon Light Road provides the most direct route for northwest Eagle and Foothills Traffic to SH 55 and toward Boise.

- Much of the future residential growth in Eagle is in the rural areas of the City such as between Floating Feather and the foothills which is served by Beacon Light Road.
- Growth in Star and Emmett results in increased demand on Beacon Light Road for local trips to and from Eagle as well projected regional trips between SH 16 and SH 55.
- Avoidance of SH 44 due to future traffic congestion.

If a lower traffic growth rate was assumed, widening Beacon Light Road may not be needed until Year 2040, or further, but it is still shown as being needed at some point in the future. Therefore a balance needs to be maintained between impacting the land uses and livability along the corridor and preserving the ability to widen the corridor in the long term.

One of the key concerns by citizens, the Eagle City Council, and ACHD Commission was Beacon Light Road being expanded to accommodate regional traffic that could be accommodated by the expansion of SH 44. To

a driver, getting to their destination is the purpose of their trip and there is little difference between the state highway system owned and maintained by ITD and the regional roadway system owned and maintained by ACHD. Therefore, if congestion occurs on SH 44, a driver may decide to use Beacon Light Road. Figure 12 shows a comparison of the traffic projections on Beacon Light Road at a location east of Linder Road assuming two sizes for SH 44. The first bar shows the projected traffic volume with SH 44 widened to five lanes (four lanes with a median/left-turn lane) per this plan and the TTOP. The second bar shows the result of widening SH 44 to seven lanes (6 lanes with a center median/left-turn lane). As shown in Figure 12, even with widening SH 44 to seven lanes, the projected volume on Beacon Light Road is still above what can be accommodated by only two or three lanes.

In addition, the travel demand modeling identified that approximately thirty percent of the trips along Beacon Light Road traverse all or most of the corridor between SH 16 and SH 55. This indicates that Beacon Light Road is partially used by regional trips that could also be served by SH 44, but a majority of the trips (approximately 70 percent) utilize Beacon Light Road for only part of their trip.

As a result of the concerns regarding widening Beacon Light Road, many comments were received regarding the need for ITD to widen the state highways in the area. ACHD and ITD coordinate regularly and both agencies have limited funding for construction and maintenance. Therefore, both agencies weigh the costs and impacts associated with meeting the future capacity needs with the goal of creating a system that meets the travel needs for the drivers. In the case of Beacon Light Road, ITD is planning for the expansion of SH 44 and SH 16 to five lanes (four lanes with a median in some locations). ACHD is planning for expansion



Figure 12: 2035 Beacon Light Volume Projection vs. SH 44 Lanes

of Beacon Light Road to five lanes (four lanes with a two-way left turn lane) through preservation of right-of-way. If SH 44 is widened by ITD to seven lanes, the need for widening of Beacon Light Road may be delayed, but would still be needed at some point in the very long-term future after 2035.

In summary, the traffic forecasts on Beacon Light Road identify the need for five lanes in the long-term, irrespective of how much ITD widens SH 44. The need is primarily due to regional growth and development within the City of Eagle. Even though the widening is projected to be needed, improvements and widening at key intersections can extend the timeframe for widening between intersections. It is also likely that the need for five lanes between intersections could be beyond 2035, due to the variability that could occur with the projected growth. Therefore, a phased improvement approach is recommended on Beacon Light Road which is described below:

Near Term: Monitor the key intersections at Linder Road, Eagle Road, SH 55, and SH16 to determine when a change in traffic control to a traffic signal or roundabout is needed. Continue preserving right-of way for five lanes.

Medium Term: Based on the near-term monitoring, install traffic signals at SH 16 and SH 55 and signals or roundabouts at Linder Road and potentially Eagle Road.

Long Term: Widen Beacon Light Road to five lanes between SH 16 and Linder Road and widen Beacon Light Road adjacent to key intersections to increase capacity at the intersections. Install signals or roundabouts at other public street intersections as warranted.

Very Long Term: Widen the remainder of Beacon Light Road between Linder Road and SH 55 to five lanes.

The purpose of this approach is to ensure corridor preservation for five lanes occurs but widening is not done until other options, such as expansion at key intersections, have been exhausted.

SH 16

The section of SH 16 from SH 44 to Chaparral Road is two lanes with turn lanes at key intersections. The SH 16 Corridor Improvement Study Environmental Assessment completed by ITD in 2004 identified widening SH 16 to four/five lanes with access management, some frontage roads, and traffic signals at key intersections. ITD has also completed the environmental study for SH 16 between I-84 and SH 44 which plans for traffic signals at key intersections in the near term when they meet warrants. The signals would ultimately be replaced by grade-separated interchanges in the long term. While grade separations are not currently planned north of SH 44, the vision for the corridor by ITD and projected traffic demands require grade separations at key intersections in the long-term. Therefore, signals are recommended at Floating Feather Road, Beacon Light Road, Aerie Way and Chaparral Road. In the long term, grade-separated interchanges are recommended at SH 44, Beacon Light Road, and Aerie Way. At that time Floating Feather Road is recommended as an overpass.

Equest Lane was not envisioned in the roadway network to have full access to SH16, but has recently been proposed as an interim full-movement access to the M3 Spring Valley development. An interim signal may also be installed at the Equest Lane/Pollard Lane intersection, depending on the ultimate ITD permit conditions, but the signal will eventually be removed with the extension of Aerie Way to SH 16 and the widening of SH 16 to five lanes. At the time Aerie Way is extended to SH 16, or SH 16 is widened to five lanes, the signal would be removed and the intersection should be converted to right-in only or right-in, right-out only.

LINDER ROAD

There are two sections of Linder Road that received comments during the public involvement process.

Chinden – SH 44

Linder Road is currently two lanes for most of the section between Chinden Boulevard and SH 44. Figure 13 illustrates the existing configuration. Linder Road currently widens to five lanes at Chinden Boulevard and will soon widen to five lanes at SH 44 as part of an on-going ACHD/ITD improvement project. The 2012 CIP and this update identified the need for a seven-lane access-controlled cross section to accommodate the projected travel demand. This is greater than the five lanes recommended in the 2008 NWFTS. This difference is primarily due to an increase in demand resulting from the 2035 horizon year, and the removal of the Three Cities River



Figure 13: Linder Road - North of Chinden Blvd (US 20/26)

Crossing from the 2035 roadway network. The result of these differences is that the projected volume in 2035 is approximately 24 percent greater than the 2030 projection in the 2008 NWFTS. These thresholds do not account for the lack of signalized intersections between Chinden Boulevard and SH 44 which are the primary factor in determining the capacity. Therefore, the need for seven lanes is predominantly at the major intersections, which currently are Chinden Boulevard and SH 44. Since intersection improvements are identified at SH 44 and Chinden Boulevard, it is likely that seven lanes on the rural section of Linder Road will not be required unless significant development occurs between Chinden Boulevard and SH 44. But it is difficult to forecast where and how development will occur along the corridor. Given this uncertainty in land-use along this section of Linder Road, preservation for seven lanes is recommended, although interim widening to five lanes could be considered given the uncertainty of the need for widening between major intersections.

Beacon Light – Aerie Way

The extension of Linder Road, shown in Figure 14, from its current terminus at W. Homer Road into the M3 Spring Valley development was recommended in the 2008 NWFTS to be three lanes between Linder Road and Homer Road and two lanes north into the Spring Valley development. With the removal of the parallel connection to Palmer Road and the 2035 demographic revisions, the 2035 traffic projections show the need for a five-lane (four travel lanes with turn lanes at intersections) roadway section. Because a majority of the proposed alignment traverses BLM property and will not have intersections with other public streets, the capacity for accommodating through traffic is adequate with a single travel lane in each direction with turn lanes at minor intersections. At major intersections, five lanes will be needed.

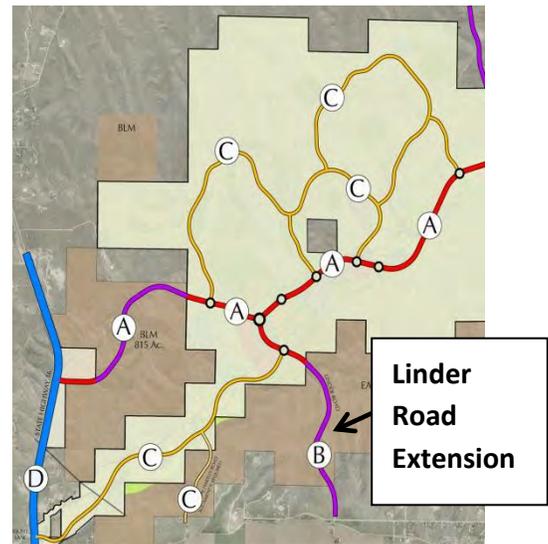


Figure 14: Linder Road Extension into M3 Spring Valley Development

Based on the analysis, preservation for seven lanes on Linder Road between Chinden Boulevard and SH 44 and five lanes on Linder Road north of SH 44 is recommended.

SH 55 – BEACON LIGHT ROAD TO AVIMOR

SH 55 between Beacon Light Road and Avimor was recommended in the 2008 NWFTS to be a five-lane highway (four lanes with a median) with grade separated intersections at Brookside Lane, Avimor Drive, and the future northern access to Avimor. Currently, SH 55 has two lanes with turn lanes at key intersections and driveways as illustrated in Figure 15. The need for grade separated intersections was due to the large amount of development proposed for the Dry Creek Ranch planned community and build-out of the Avimor planned community.



Figure 15: SH 55 - North of Beacon Light Road

Neither of these developments is expected to be fully built-out by 2035, resulting in less traffic demand SH 55. With the lower traffic demand, grade separations are not required through 2035 although ITD may require grade separations at an earlier date based on permitting requirements for specific developments. Beyond 2035, build-out of Avimor, Dry Creek Ranch, and other properties to the west, SH 55 may still require grade separations beyond 2035. Therefore, future community planning should plan for the potential need for grade separations, and right-of-way should be preserved at the intersection locations.

