



The travel time data (INRIX) over the two-year period presented that travel time reliability on the weekends worsens to moderately reliable and unreliable along Dry Creek Road and Healdsburg Avenue during the Off-Peak Season with Industry-Wide Events. During the Peak (summer) season, segments of Dry Creek Road experience moderately reliable and unreliable travel times. With the addition of Industry-Wide Event traffic, travel time reliability along Dry Creek Road, Canyon Road, and Healdsburg Avenue worsens.

### ***Collision Data Findings***

Collision data was analyzed for the study area between 2011 and 2015. The frequency of injury-related or fatal collisions within the Dry Creek area is historically higher during the Peak Season, and bicycle-related collisions are also significantly higher during the Peak Season. Based on the collision analysis, Dry Creek Road had the highest frequency of collisions, however most were property-damage only collisions. There were 2 fatal collisions, which both occurred on Westside Road. More than half of the collisions which occurred on Westside Road resulted in some level of injury. 18% of the collisions which occurred on West Dry Creek Road involved bicycles; Westside Road had 13% involving bicycles, and Dry Creek Road had 7% involving bicycles. Collision rates along Dry Creek Road, West Dry Creek Road, and Westside Road were all higher than the statewide basic average rate.

### ***Traditional Traffic Count Findings***

Four separate counts were collected on specific weekends throughout the year to supplement the speed and travel time data, and to “spot-check” travel conditions and roadway operations with and without events. Traditional traffic counts were taken in January 2016 during the Winter Wineland event, in July 2016, in February 2017, and in April 2017 during the Passport to Dry Creek Valley event. The traffic counts varied substantially depending on season, Industry-Wide Events, and weather conditions. The April (Off-Peak Season) Industry-Wide Event traffic volumes are significantly higher than the July (Peak Season) Non-Industry-Wide Event traffic volumes on most of the roadways near wineries. However, travel conditions and level of service analysis show that Dry Creek Road currently operates below acceptable service thresholds (LOS D/E) during Off-Peak Season weekends, with fair weather, with or without events.

## **Recommendations**

**Recommendation #1:** From a transportation design and engineering perspective, improving the primary Dry Creek Valley roadway system to current Sonoma County design standards would address most of the transportation capacity, operations and safety deficiencies identified. However, factors including high improvement costs, increased travel speeds, potential for environmental impacts, and effects on the rural character of the valley and community values are all considerations that make substantial improvements to the roadways a challenge.

**Recommendation #2:** Continue to use the approved Highway Capacity Manual (HCM) methodologies for two-lane highways to calculate roadway capacities and traffic operational conditions (Level of Service) based on HCM roadway classifications and corresponding measures of effectiveness. The HCM methodologies account for the effects of geometric, traffic, and environmental factors including travel lane width, shoulder width, travel speed, segment length,



travel interruptions such as driveways and intersections, roadway horizontal and vertical curves, and delay due to passing restrictions. The Highway Capacity Software (HCS) implements HCM methodologies and can be utilized to calculate this measure of effectiveness.

**Recommendation #3:** For any new development or permit application that would potentially increase traffic levels in the Dry Creek Valley, a transportation study is recommended to be required and performed to identify potential transportation impacts, following the Sonoma County Transportation Impact Study Guidelines and the measure of effectiveness included in Recommendation #2.

**Recommendation #4:** It is recommended that a driveway access evaluation be required for new winery or tasting room applications, particularly if the application includes allowing wine tasting and participation in events. Driveway access should be evaluated to ensure the design is adequate to provide safe access, including provision of turn channelization and/or lengthening of left and right turn pockets. If safe driveway access cannot be provided, or would affect the capacity or safety of the adjacent roadway, such uses should be limited. The determination of the need for a driveway access evaluation, as well as the requirement for further driveway access improvements, should fall under the purview of the County Engineer.

**Recommendation #5:** Permanent traffic counting stations should be installed on Dry Creek Road and Westside Road to monitor and evaluate seasonal, event, and weather-related travel fluctuations. Identify historical 'peak months' for winery tourism in Dry Creek Valley based on desired traffic levels, and develop adjustment factors for traffic analyses to consider event and seasonal impacts.

**Recommendation #6:** Given the congested/unreliable travel conditions during Off-Peak Season, Industry-Wide Event weekends, limit Industry-Wide Wine Events from occurring during the 'peak months' as identified under recommendation #5. Allow rescheduling of these events to 'non-peak months' based on the seasonal fluctuation data obtained from the permanent traffic counting station.

**Recommendation #7:** For Industry-Wide Events, require an event sponsor or participants to coordinate timing with other concurrent events. Require the event sponsor or participants to provide a shuttle bus plan to support each day of the event and minimize traffic. The shuttle bus plan should be approved by the County Transit Coordinator. To be effective, it is recommended that the shuttle bus plan include the following:

- Require the top 7 to 10 busiest wineries in the Dry Creek Road and West Dry Creek Road corridor to provide shuttle bus (up to 24 seats) service to their wineries.
- Shuttle bus costs should be included in the event tickets. Event ticket sales should clearly indicate which wineries have shuttle bus service, and indicate that private parking at wineries is limited, except handicapped parking.
- Event sponsor should locate a convenient and secure 'park and ride' area on Dry Creek Road near Lytton Springs Road from which the shuttle bus system connects with wine patrons. A circular shuttle bus route on Dry Creek Road and West Dry Creek Road would be about 10 miles long between Yoakim Bridge Road and Lytton Springs Road. At minimum, 20-minute headways should be provided in order to maximize convenience.



- Event sponsor should provide support for wine purchases with the shuttle system such that winery sales are not negatively impacted during events when patrons choose the shuttle service. For example, event patrons could make purchases from wineries, have purchases loaded onto shuttles, and pick up purchases at the secure 'park and ride' facility.

**Recommendation #8:** Consistent with current policies, require that wineries meet on-site parking requirements and prohibit on-street parking where appropriate. The winery should be held responsible for enforcing on-street parking restrictions.

**Recommendation #9:** For all Industry-Wide winery and large cycling events requiring a County Special Event/Cultural Event permit, it is recommended that cycling events be scheduled early in the morning as to not overlap with the Industry-Wide Wine Event. Additionally, event permits should require a traffic management plan and parking attendants on event days with over 100 participants.