

W. G. E.

AGENDA COVER MEMO

DATE: April 14, 2004

TO: Lane County Board of Commissioners

DEPT.: Public Works

PRESENTED BY: Sonny Chickering, County Engineer

AGENDA ITEM TITLE: In the Matter of Acquiring Fee or Other Interests in Certain Real Properties or Portions Thereof for the Reconstruction and Improvement of Royal Avenue (County Road No. 28) at Fisher Road (County Road No. 668) Intersection.

I. MOTION

THAT THE RESOLUTION AND ORDER BE ADOPTED AUTHORIZING ACQUISITION OF FEE OR OTHER INTERESTS IN PORTIONS OF CERTAIN REAL PROPERTIES FOR RECONSTRUCTION OF THE ROYAL AVENUE AND FISHER ROAD INTERSECTION AS LISTED IN EXHIBIT "A," BY CONDEMNATION, IF NECESSARY.

II. ISSUE OR PROBLEM

On February 11, 2004, the Board denied a motion to authorize acquisition of right-of-way for a project modifying the Royal Avenue and Fisher Road intersection from a "T" configuration to a 35 MPH curve. The Board expressed the need for more information on design alternatives for the intersection. County staff continues to recommend construction of a 35 MPH curve as the appropriate safety and operational solution, but this memo provides additional background information and analysis of other design alternatives to show why the curve is the best design choice. Board approval of the Motion will authorize staff to pursue right-of-way acquisition related to construction of a curve at the Royal Avenue and Fisher Road intersection, as scheduled for Spring 2004.

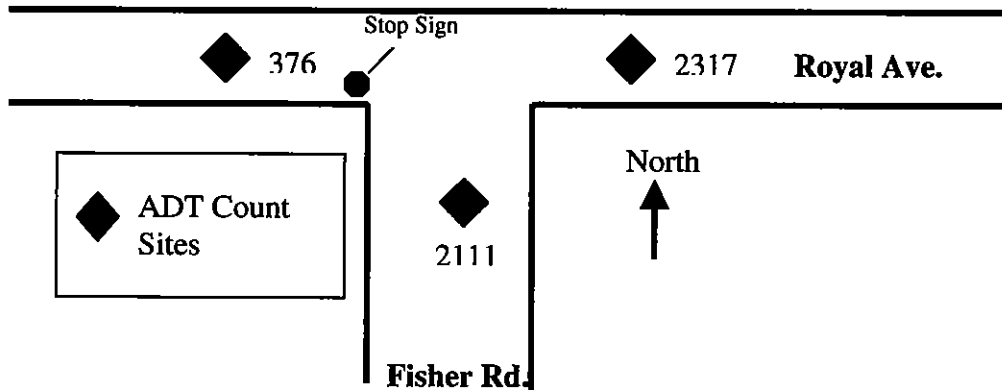
III. DISCUSSION

A. Background

Fisher is a north-south road connecting at a right angle to east-west oriented Royal Avenue. Westbound Royal traffic typically turns south on Fisher Road to connect to

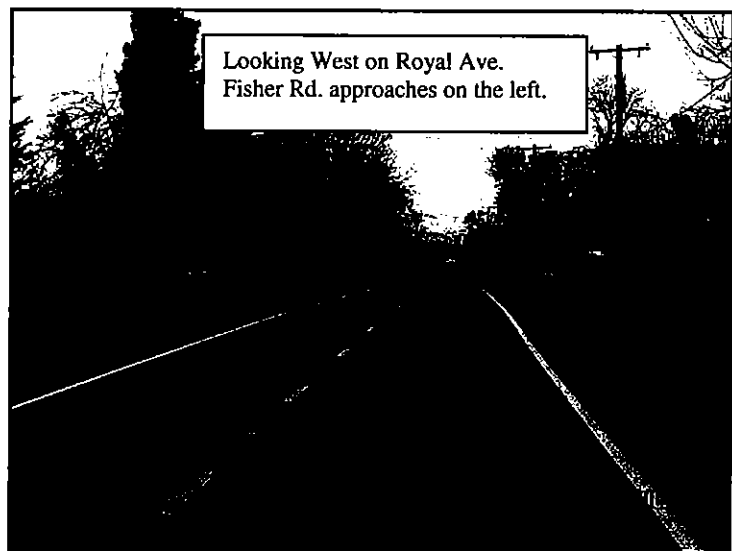
Highway 126, just over a mile south of the intersection. Royal, west of Fisher, is a dead end. Vehicles heading north on Fisher typically turn east on Royal to get to Eugene, which is about 2.5 miles from the intersection. In both cases, vehicles making the through movement turn have the right-of-way. Vehicles must stop at the intersection on eastbound Royal. In effect, the intersection functions as a 90-degree curve, and the ADT data reflect this flow of traffic (See Figure 1).

Figure 1: Average Daily Traffic (ADT)



This project was identified through the Capital Improvement Program (CIP) annual adoption process for safety reasons. The location has experienced numerous vehicle crashes that are related to the right-angle intersection geometry and predominant movements at the intersection.

The most significant risk factor is westbound drivers continuing straight past the turn at Fisher Road to an Army Corps of Engineers gate at the western terminus of Royal Avenue. The gate is 0.6 miles from the intersection, and it is an entrance to the Fern Ridge Wildlife Area. There have been 3 crashes recorded at the gate since the late 1980s, with one fatality occurring in 1989. All westbound through traffic must make the turn on southbound Fisher Road. However, westbound drivers see the visual corridor as a straight line and unintentionally continue on the dead end leg of Royal.

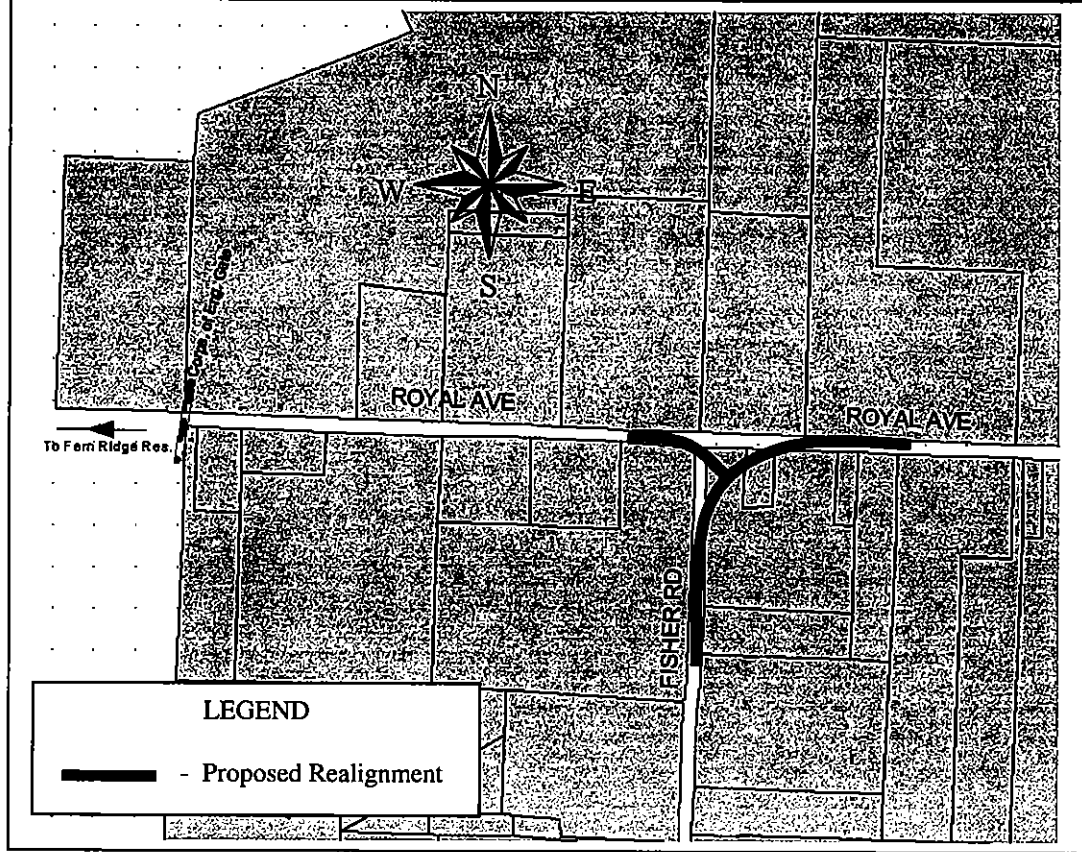


However, westbound drivers see the visual corridor as a straight line and unintentionally continue on the dead end leg of Royal.

Although it is easier to see the intersection when traveling north on Fisher Road, 3 crashes have occurred when drivers missed the turn onto Royal Avenue and continued into an open field on the north side of the intersection.

The intent of the project is to improve safety and traffic movement at the intersection. The recommended project design does this by facilitating the predominant traffic movement as a “free” movement. That is, the traffic will be able to proceed around a 35 MPH curve without stopping at a traffic control device, thus reducing the number of turning conflicts and greatly increasing driver expectancy (See Figure 2).

Figure 2: Curve Alignment at the Intersection



The Royal Avenue at Fisher Road improvement project is being developed as part of the FY 03-04 to FY 07-08 Capital Improvement Program as adopted by Board Order 03-5-7-11, which includes funds for safety improvements on the localized road network.

B. Analysis

A basic principle in traffic engineering is favoring the major flow of traffic and making improvements that enhance those movements. This can reduce crashes, automotive wear and tear, delay, and confusion or frustration, which in turn make the roads safer for all users. With this in mind, the construction of a curve is the preferred choice from a traffic engineering perspective. Following is analysis of this and other potential traffic control alternatives for the intersection.

Curve Construction

The proposed engineering design is shown in Attachment 1. This is the preferred option to facilitate movement from Royal to Fisher (and vice versa) and to give the driver a much clearer visual message in terms of the directional path of through traffic. A crash at the Army Corp of Engineer gate occurred as recently as 2002, despite efforts from the County to warn drivers with signage and a tactile “rumble strip” on the roadway before the western terminus of Royal Avenue. The risk of unintentional continuation to the Royal dead end is removed with the construction of a well-delineated 35 MPH curve. It will also enhance driver expectations traveling north on Fisher and through the intersection. Reflective signing will be installed to clearly delineate the curve for approaching drivers, especially at night. Staff also recommends putting in a streetlight for nighttime illumination. The less-traveled dead end section of Royal Avenue will be aligned into the curve at a right angle, and traffic here will be controlled by a stop sign.

Installation of a curve would essentially mimic the current operation of the intersection, favoring the predominant traffic movement as reflected by the ADT data and the functional classification of the roadways. Fisher and Royal east of Fisher are minor collectors, while Royal Avenue west of Fisher is a rural local road. As shown in Figure 1, recent ADT counts of over 2000 were recorded on the south and east legs of the intersection, while the west dead end leg drops to 376 ADT. Traffic traveling through the intersection is estimated to increase at an annual growth rate of 3 percent.

Through traffic movement at the intersection is an alternative to continuation on Highway 126 into Eugene or the southern portion of Beltline Highway. Should these arterial roads be closed for any reason (e.g. Beltline south of Royal Avenue), the Royal and Fisher connection would serve as an important east-west detour route. With completion of the West Eugene Parkway (WEP), the intersection would continue to provide a viable detour in the event of an emergency. It is not anticipated that drivers will utilize this as a regular route, but a curve at the intersection will facilitate current traffic movement as well as potential higher traffic volumes if circumstances dictated the need.

In the project area, the number of driveway approaches to adjacent properties would remain the same, but their location may be altered to meet spacing standards for sight distance and safety reasons. For example, existing driveway access to the Tait property, on the west side of Fisher Road, would be moved south and outside of the project limits.

The curve design requires removal of the rental manufactured home at the southeast corner of the intersection. In preliminary discussions, both the rental tenant and the property owner are not opposed to this action. The tenant will be granted relocation costs in accordance with the guidelines of the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Right-of-way acquisition will be negotiated for properties shown in Exhibit A. Construction costs are estimated at \$240,000, with additional right-of-way costs estimated at \$80,000.

Roundabout

Installation of a roundabout would give the driver a visual indicator of the intersection, allow mostly continuous movement, and establish greater traffic control. As such, staff analyzed a roundabout option. It is staff's opinion that this design is inappropriate given the dominant traffic patterns. The County Engineer does not recommend a roundabout due to the direction of the through use (from Royal to Fisher and Fisher to eastbound Royal) and unbalanced traffic volumes at each leg of the intersection. Since westbound Royal terminates at a dead end, the traffic volumes will always be very unbalanced with a large ADT drop off on the dead end leg. Moreover, roundabouts are primarily installed to eliminate conflicting left turns, which do not exist for the dominant traffic movement at the intersection. Roundabouts are usually utilized under heavier traffic conditions as well. In this case, a roundabout is not the appropriate treatment to assign vehicular right-of-way through the intersection.

Compared to the curve design, a roundabout would not require removal of the southeast rental home, but there would be additional impact on the two northern farm properties. While the estimated construction cost is a little more than the curve option at \$250,000, right-of-way acquisition would be less at approximately \$10,000.

Traffic Signal

A traffic control signal, much like a roundabout, is a traffic control measure primarily used to regulate conflicting vehicular movements at locations with greater traffic volumes. Currently, there are no conflicts for the dominant movements at the intersection. A traffic signal requires satisfaction of warrants, most of which are related to traffic volumes, and the volume of traffic entering this intersection does not meet the required minimum to warrant a traffic control signal. Staff therefore feels it is inappropriate for this location.

Stop Sign on Westbound Royal Ave.

Installation of a stop sign establishes too much control given that most traffic movement is a turning movement. The intersection is currently signed in accordance with traffic control devices consistent with national and state policy and guidelines. Like a traffic signal, it is important to note that a stop sign is a traffic control device that has warrants for its use. Its primary purpose is to assign right-of-way when traffic volumes reach a threshold where drivers need additional guidance in determining who has the right-of-way. It is inappropriate to use this important traffic device to control speed or unnecessarily impede the major flow of traffic and to do so may increase drivers' disrespect for the device, increase delay and confusion, and lead to an increase in crashes.

Flashing Yellow

Studies conducted by the Oregon Department of Transportation suggest that flashing amber lights have little influence on the speed of motorists, and the results were inconclusive whether drivers approaching them were more alert. Without demonstrable

**IN THE BOARD OF COUNTY COMMISSIONERS OF LANE COUNTY
STATE OF OREGON**

**RESOLUTION AND
ORDER NO.**

**(IN THE MATTER OF ACQUIRING FEE
(OR OTHER INTERESTS IN CERTAIN
(REAL PROPERTIES OR PORTIONS
(THEREOF FOR THE RECONSTRUCTION
(AND IMPROVEMENT OF ROYAL
(AVENUE (COUNTY ROAD NO. 28) AT
(FISHER ROAD (COUNTY ROAD NO. 668)
(INTERSECTION.**

THIS MATTER now coming before the Board of County Commissioners of Lane County, and the Board determining it is necessary and in the public's interest to acquire fee or other interests in certain properties or portions thereof as listed in Exhibit "A", attached hereto and made a part hereof, from owners and others as their interests may appear of record to serve the needs of Lane County, and that the public welfare will be benefited by the improvement of said public road and the Board being fully advised; and

WHEREAS, the Board of County Commissioners has adopted a FY 03/04 – FY 07/08 Public Works five-year Capital Improvement Program by Board Order No. 03-5-7-11, which includes funds for safety improvements on the localized road network. The intersection of Royal Avenue and Fisher Road, which consists of a right angle intersection, has had multiple accidents indicating a safety hazard to the traveling public; and

WHEREAS, the improvements are being done to improve safety and include constructing a 35 MPH curve beginning along Royal Avenue East connecting to Fisher Road and connecting Royal Avenue West by a right angle intersection. The project is compatible with the greatest public good and the least private injury; **NOW THEREFORE**,

IT IS HEREBY RESOLVED that under the authority granted in ORS Chapter 35 and consistent with ORS Chapter 281, that there exists a necessity to acquire and immediately occupy the real property in order to improve the public road to serve the needs of Lane County for the general use and benefit of Lane County citizens; and

IT IS FURTHER RESOLVED AND ORDERED that if Lane County is unable by negotiations to reach an agreement for the acquisition of necessary real property, the Office of Legal Counsel of Lane County is hereby authorized to commence and prosecute in the Circuit Court of Lane County, in the name of Lane County, any necessary proceedings for the condemnation and immediate possession of necessary real property rights and for the assessment of damages for the taking thereof.

DATED this _____ day of _____, 2004.

Chair
Lane County Board of Commissioners