

Woodmoor Area Traffic Study

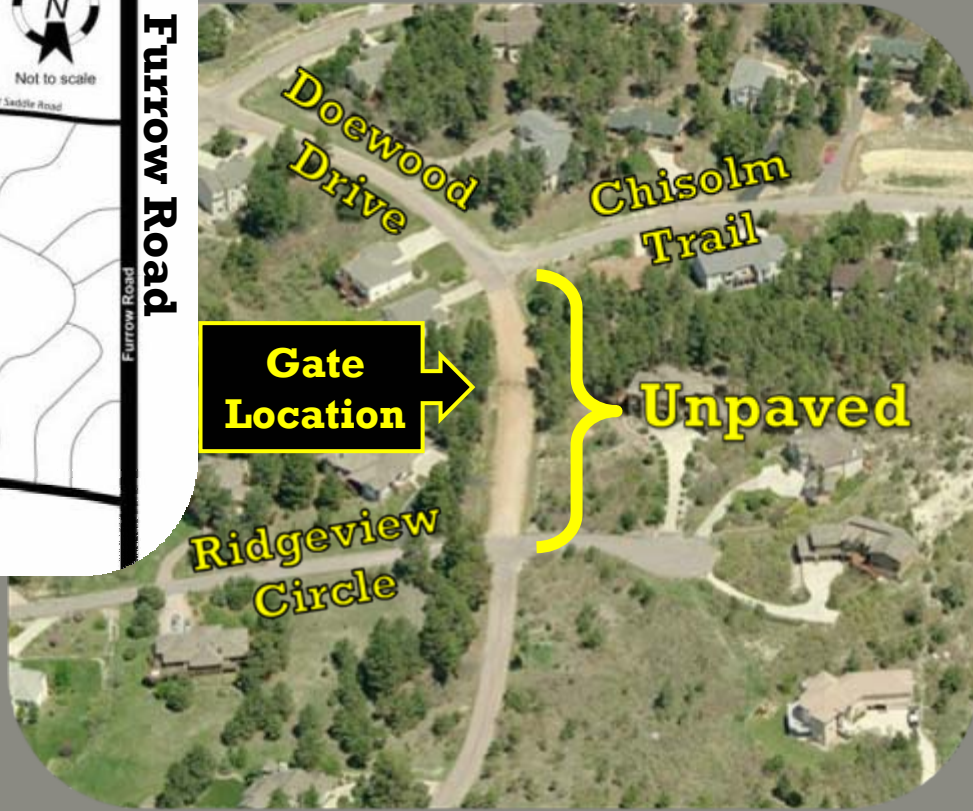
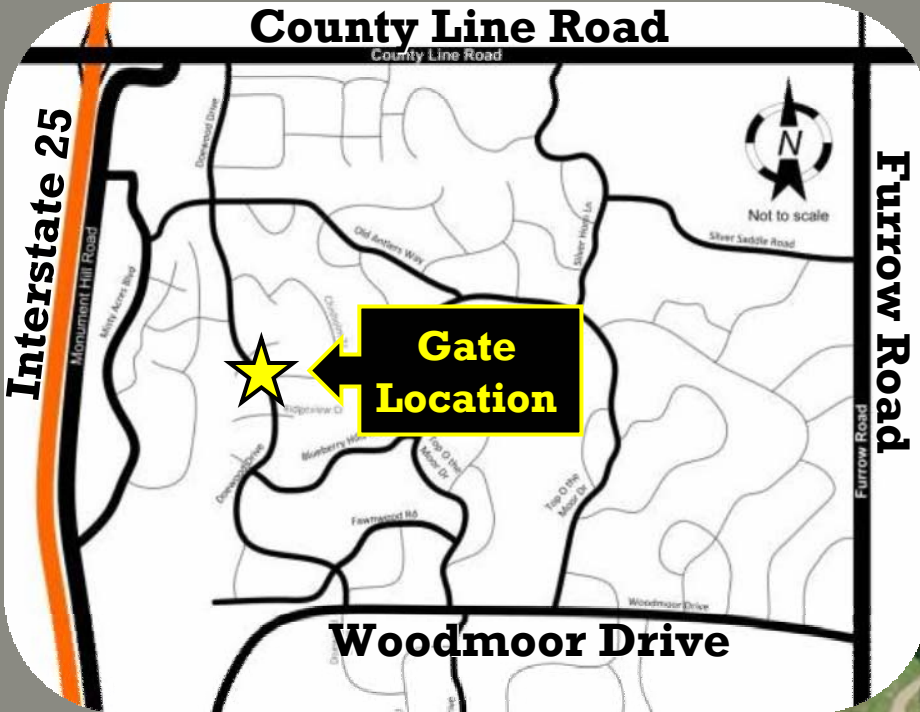
March 14, 2011



Project Purpose

- Estimate current and future Woodmoor traffic volumes.
- Discuss gate opening concerns.
- Perform field review and assess spot and roadway enhancements.
- Provide conclusions and recommend either to open or close the gate.

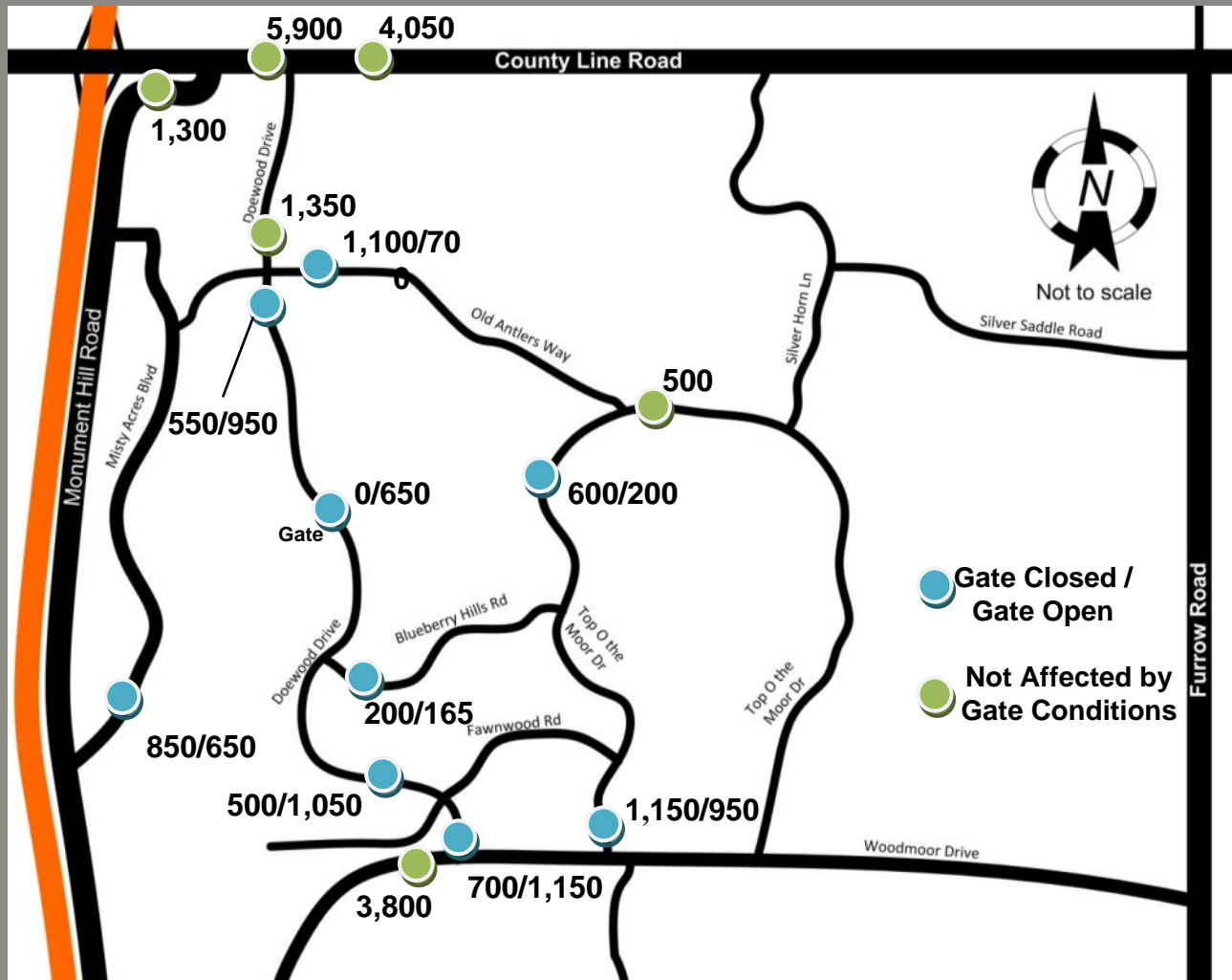
Gate Location



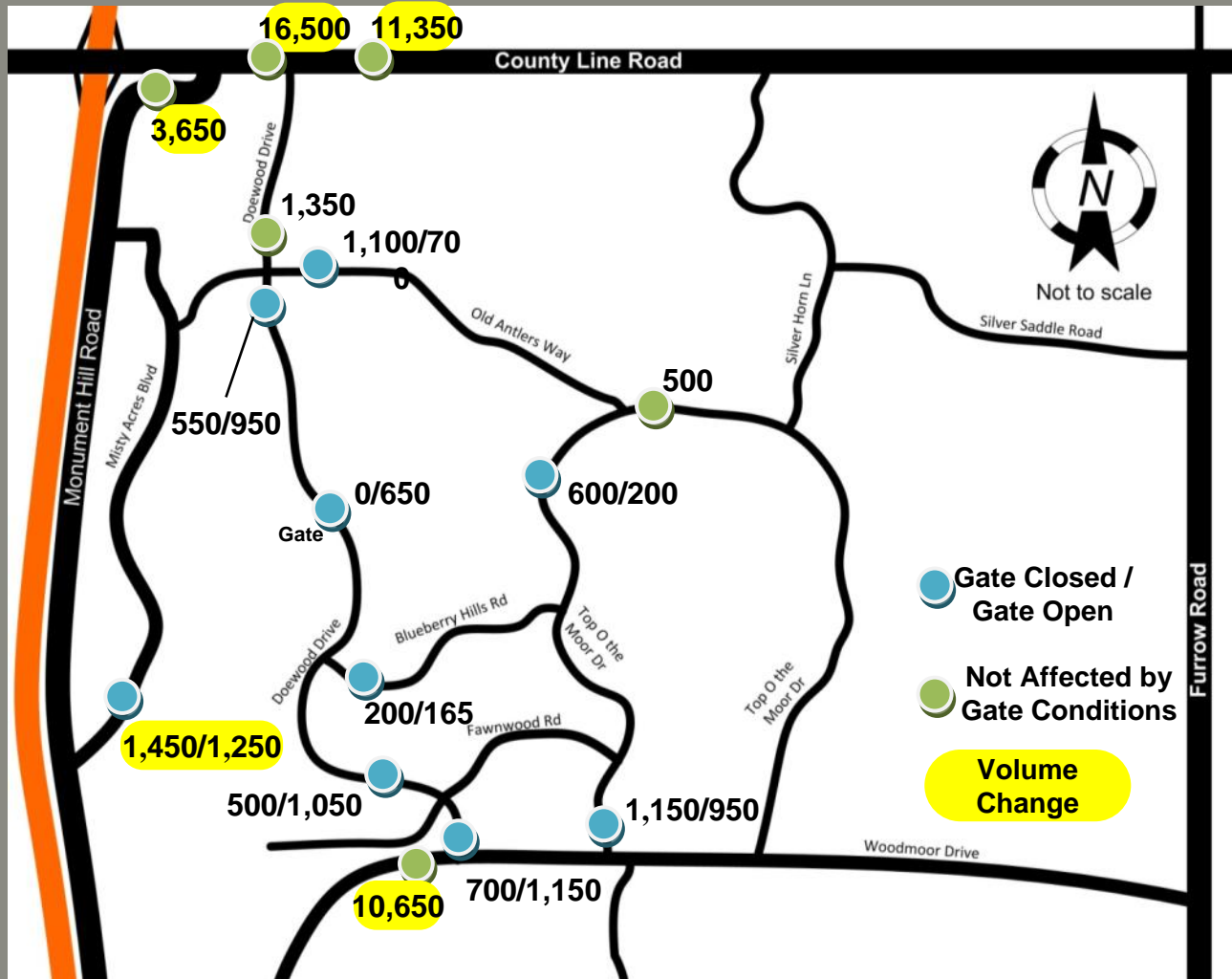
Project Tasks

- Identify field conditions and traffic control.
- Collect 48 hour traffic counts.
- Calculate trip generation rate.
- Conduct general accident data review.
- Determine travel times and trip routing.
- Estimate trip distribution and areas of influence.
- Evaluate vehicle miles traveled.
- Prepare positive outcomes decision-making table.

2010 Daily Traffic Volumes



2035 Daily Traffic Volumes



Concerns with Opening the Gate

- Will Doewood Dr traffic levels remain residential?
- Will the majority of traffic be cut-through?
- Will volumes increase over time?
- Will drivers from non-adjacent areas use Doewood Dr?
- Will costly spot and roadway enhancements be needed?

Spot and Roadway Enhancements Assessment

Gate Closed or Open

A Spot Enhancements

- Hazard markers \$500
- Vegetation trimming \$2,500

B Roadway Enhancements

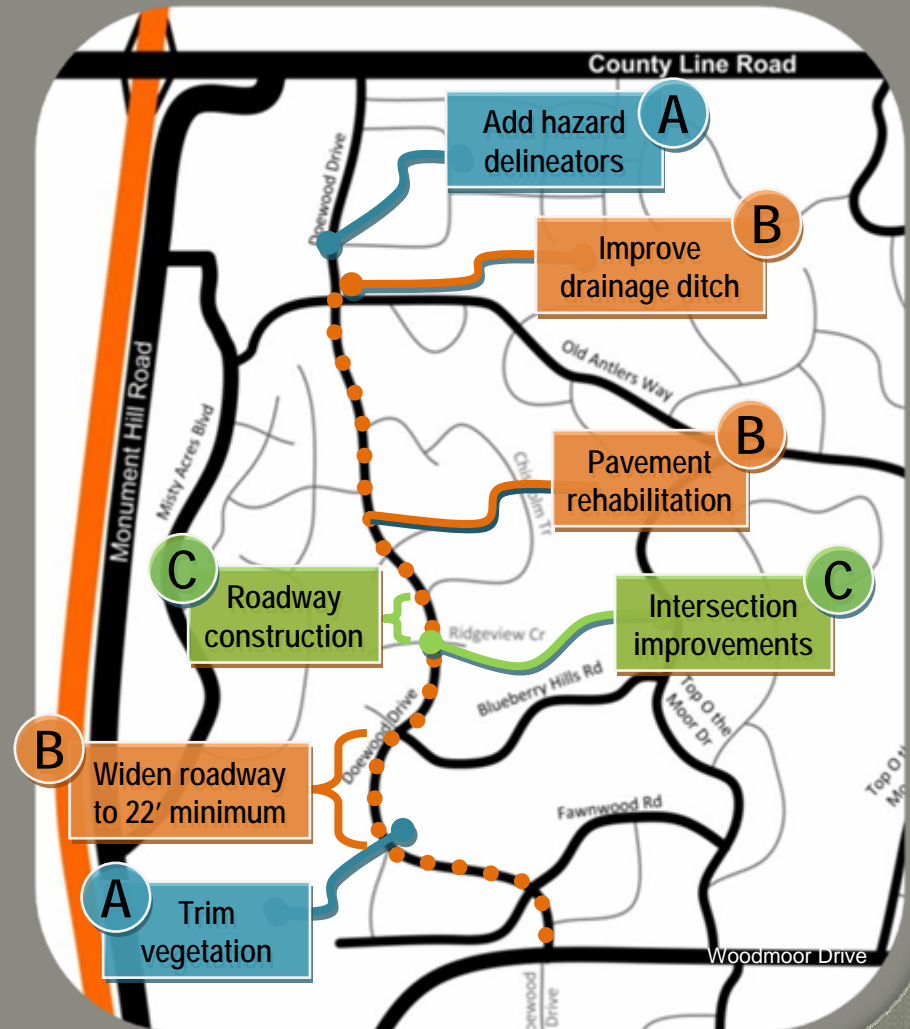
- Improve drainage ditch \$22,500
 - Roadway widening \$19,500
 - Pavement rehabilitation \$459,000
- SUBTOTAL \$504,000**

Gate Open

C Roadway Enhancements

- Roadway / intersection construction \$96,000

Note: cost estimates only (does not include maintenance, engineering, or right-of-way costs).



Gate Opening Concerns

Conclusions

- Will Doewood Dr traffic levels remain residential?
 - 600-800 vpd consistent for local residential road.
- Will the majority of traffic be cut-through?
 - Adjacent residential cut-through traffic is minimal and should not increase.
- Will volumes increase over time?
 - Volumes should remain stable since Woodmoor is built out.

Gate Opening Concerns

Conclusions (continued)

- Will drivers from non-adjacent areas use Doewood Dr?
 - Traffic count, trip generation, and travel time data reveals that these trips should not occur.
- Will costly spot and roadway enhancements be needed?
 - Gate opening costs are significantly less costly (16% of total costs).
 - A majority of the costs (84% of total costs) are independent of the gate being closed or open.

Additional Project Conclusions

Benefits of Opening the Gate

● Improved Emergency Response

- Response times improve 15-20%.

● Improved Trip Routing for Residents

- More efficient travel for residents.
- More evenly distributed trips in the neighborhood.
- Reduced vehicle miles traveled resulting in less fuel consumption and emissions.

Recommendation Process

- Utilized Positive Outcomes Decision-Making Process to Analyze Project Issues:
 - Neighborhood Traffic
 - Accessibility
 - Capital and Maintenance Costs
 - User Costs
 - Emergency Access
 - Cut Through Traffic
 - Accident Potential
 - Travel Time

Positive Outcomes Table

Issue	Positive Outcome	Favors
Neighborhood Traffic	Neighborhood volume is more evenly distributed.	Gate Open
Accessibility	Drivers have additional neighborhood access options.	Gate Open
Capital and Maintenance Costs*	<ul style="list-style-type: none"> • Cost of safety improvements for gate closed or open = \$504,000. • Gate Open = \$96,000 for roadway and intersection improvements. • Gate Open = Maintenance costs for new roadway offset by reduced out-of-direction vehicle travel. 	<p>Neither</p> <p>Gate Closed</p> <p>Neither</p>
<p>*Estimate does not include maintenance, engineering, or right-of-way costs.</p>		

Positive Outcomes Table (continued)

Issue	Positive Outcome	Favors
User Costs	Drivers will travel shorter distances in less time.	Gate Open
Emergency Access	Emergency vehicle response times are reduced.	Gate Open
Cut-Through Traffic	Adjacent residential cut-through traffic is minimal and should not increase.	Neither
Accident Potential	Accident data reveals accidents are infrequent within the neighborhood and not related to geometric or operational influences.	Neither
Travel Time	Drivers will spend less time driving throughout the neighborhood.	Gate Open

Recommendation

Since the gate open alternative yields the most positive outcomes, the recommendation of the study is to open the gate.