



SUMMARY OF SAFETY ISSUES, SUGGESTIONS, AND AGENCY RESPONSE

Issue	Location	Risk Class	Suggestion	Agency Response
East-west connectivity north of Dell Range Boulevard	Entire Dell Range Boulevard Corridor	Cat. III	Provide additional east-west collector roadway connections within ½ mile north of Dell Range Boulevard, from Powderhouse Road to Converse Avenue.	
Existing median two-way left-turn lane	Entire Dell Range Boulevard Corridor	Cat. III	Consider changing the existing two-way left turn lane to provide raised median access control. Consider strategically located u-turn bulb outs at full or directional intersections.	
East-west left-turn crashes	Dell Range Boulevard/Converse Avenue	Cat. III	Consider making the EB and WB left turn signalized movements protected only.	
Angle crashes at intersection	Dell Range Boulevard/Converse Avenue	Cat. III	Consider increasing the all-red clearance interval to 2 seconds for all movements.	
Travel speed	Entire Dell Range Boulevard Corridor	Cat. II	Conduct a speed study to document existing 85 <sup>th</sup> percentile travel speed. Reduce posted speed limit to 35 mph, if supported by speed study.	
Red light running	Entire Dell Range Boulevard Corridor	Cat. II	Check yellow clearance intervals as compared to the WYDOT procedure. Enhance the ability for law enforcement to enforce red-light running. This could include white or blue lights directly wired into the red signal lens illuminating at the same time as the red signal.	
Signalized left-turn phase sequences	Entire Dell Range Boulevard Corridor	Cat. II	Consider providing leading protected left-turn phasing to promote consistency along the corridor, minimize potential for driver error, and minimize potential conflicts with pedestrians.	
Accessible pedestrian facilities	Entire Dell Range Boulevard Corridor	Cat. II	As part of other improvements to the overall corridor, pedestrian facilities can be updated to meet ADA requirements.	
No crosswalk provided on west leg of intersection	Dell Range Boulevard/Stillwater Avenue (W)	Cat. II	Stripe crosswalk on west leg and provide pedestrian signal equipment in NW and SW corners of intersection.	
Offset intersection	Dell Range Boulevard/Rue Terre	Cat. II	Mount sign "KEEP RIGHT" on signal pole in north approach median facing northbound through lane approach.	
No crosswalk provided on east leg of intersection	Dell Range Boulevard/Rue Terre	Cat. II	Stripe crosswalk on east leg and provide pedestrian signal equipment in NE and SE corners of intersection.	
Left-turn crashes	Dell Range Boulevard/Mountain Road	Cat. II	Consider restricting access to right-in and right-out only.	
Dry Creek box culvert needs rail	Dell Range Boulevard: Darnell Place to Ridge Road	Cat. II	Consider adding a pedestrian rail or guardrail on the top of the box culvert.	
Northbound left-turn capacity	Dell Range Boulevard/College Way	Cat. II	Provide more green time for northbound left-turn or construct dual left-turn lanes.	
Excess pavement width	Entire Prairie Avenue Corridor	Cat. II	Restripe corridor to include buffered bike lanes, as part of a corridor-wide bike connectivity plan. If feasible, implement road diet to reduce curb-to-curb width in widest segments. Provide striping channelization in open areas of shoulder to direct vehicles into travel lane.	



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Lane channelization	Prairie Avenue/ Frontier Mall Drive	Cat. II	Short-term: realign eastbound approach to provide short tangent section that aligns drivers into their respective lanes on the downstream side of intersection. Long-term: reconstruct median and curb to improve channelization and provide consistent cross-section on east and west legs.	
Intersection skew	Prairie Avenue/ Frontier Mall Drive	Cat. II	Re-align Frontier Mall Drive approaches to intersect Prairie Avenue closer to 90-degrees (reduce skew).	
Countdown pedestrian signals	Entire Dell Range Boulevard Corridor	Cat. I	Upgrade the other signalized intersections with countdown pedestrian signals and upgrade the pedestrian push button detectors and pedestrian actuation signs for all signalized crosswalks as part of the overall corridor improvement project.	
Pedestrian walk times	Entire Dell Range Boulevard Corridor	Cat. I	Consider increasing the Flashing Do Not Walk time for the Dell Range Boulevard crosswalks to provide for walking speed at 3.5 feet per second and a minimum of 7 second walk interval. This could be done as part of an overall corridor retiming project done with the previous speed limit reduction consideration.	
Southbound channelization sign – poor retro-reflectivity	Dell Range Boulevard/ Powderhouse Road	Cat. I	Replace sign.	
SB right turn lane	Dell Range Boulevard/ Powderhouse Road	Cat. I	Consider combining the right turn and through movements to make the right turn movement to be under signal control and eliminate the merge.	
Narrow sidewalk width in SE corner	Powderhouse Road to Stillwater Avenue (W)	Cat. I	Widen sidewalk to provide minimum clear width of 4 feet.	
Signal pole located in pedestrian path	Powderhouse Road to Stillwater Avenue (W)	Cat. I	Realign concrete curb to provide minimum clear width of 4 feet.	
Inaccessible pedestrian push button	Powderhouse Road to Stillwater Avenue (W)	Cat. I	Provide hard surface access to the pedestrian push buttons, extend the push button off the existing pole or relocate the push buttons to a separate pole having hard surface access.	
Cracked sidewalk in SW corner	Powderhouse Road to Stillwater Avenue (W)	Cat. I	Replace section of concrete sidewalk.	
Cracked sidewalk in south	Stillwater Avenue (W) to Driftwood Drive	Cat. I	Replace section of concrete sidewalk.	
Intersection volumes may not warrant signal	Dell Range Boulevard/ Driftwood Drive	Cat. I	Conduct signal warrant study to determine if the signal should be removed.	
No overhead signal for NB approach	Dell Range Boulevard/ Driftwood Drive	Cat. I	Add an overhead signal face for the NB approach.	
Inaccessible pedestrian push button	Dell Range Boulevard/ Driftwood Drive	Cat. I	Provide hard surface access to the pedestrian push buttons, extend the push button off the existing pole or relocate the push buttons to a separate pole having hard surface access.	
Sidewalk width in SW corner	Dell Range Boulevard/ Driftwood Drive	Cat. I	Widen sidewalk	



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Sidewalk width in SW corner – near signal pole	Dell Range Boulevard/ Frontier Mall Drive	Cat. I	When intersection is reconstructed, relocate signal pole to provide proper sidewalk width.	
Dirt blocks sidewalk	Dell Range Boulevard/ Frontier Mall Drive	Cat. I	Have maintenance crews remove the dirt.	
Pedestrian ramp slope	Dell Range Boulevard/ Frontier Mall Drive	Cat. I	Upgrade ramp to provide slopes less than 8.3% and detectable warning devices/truncated domes.	
Narrow westbound right-turn lane	Dell Range Boulevard/ Frontier Mall Drive	Cat. I	Short-term: consider striping diagonal markings in the narrow turn lane to indicate that the lane is not adequate to accommodate all sizes of turning vehicles. Long-term: when redevelopment of adjacent parcel occurs, widen the turn lane to accommodate truck widths and turning paths, consistent with City design standards. See Section 3B.24 of the Manual on Uniform Traffic Control Devices for reference to the striping suggestion.	
Sidewalk width and slope – SW corner	Dell Range Boulevard/ Frontier Mall Drive	Cat. I	Upgrade ramp to provide slopes less than 8.3%, a minimum of 4-ft width and detectable warning devices/truncated domes.	
Accessible pedestrian ramp sloped toward ROW line	Dell Range Boulevard/ Frontier Mall Drive	Cat. I	Upgrade ramp to provide appropriate slopes and detectable warning devices/truncated domes.	
Water ponding on asphalt sidewalk	Stillwater Avenue (E) to Prairie Avenue/ Bluegrass Circle (W)	Cat. I	Repair sidewalk to remove depression and drain to street.	
Low reflectivity on southbound approach signage	Dell Range Boulevard/Prairie Avenue/ Bluegrass Circle (W)	Cat. I	Replace the sign with a ground mounted sign in advance of the intersection.	
Inaccessible pedestrian push button	Dell Range Boulevard/Prairie Avenue/ Bluegrass Circle (W)	Cat. I	Provide hard surface access to the pedestrian push buttons, extend the push button off the existing pole or relocate the push buttons to a separate pole having hard surface access.	
South approach crosswalk	Dell Range Boulevard/Prairie Avenue/ Bluegrass Circle (W)	Cat. I	Add pedestrian crosswalk pavement markings.	
Bend Railing on sidewalk	Dell Range Boulevard/ Rue Terre	Cat. I	Replace or repair railing.	
Inaccessible pedestrian push button	Dell Range Boulevard/ Rue Terre	Cat. I	Provide hard surface access to the pedestrian push buttons, extend the push button off the existing pole or relocate the push buttons to a separate pole having hard surface access.	
Low reflectivity on southbound approach signage	Dell Range Boulevard/ Rue Terre	Cat. I	Replace channelization sign on southbound approach.	
Enbankment narrows sidewalk	Rue Terre to Bluegrass Circle (E)/Fire Station	Cat. I	Have maintenance crews remove grass and dirt from the sidewalk. Consider toe wall or curbing at the back of sidewalk to prevent continual maintenance.	
Sidewalk/driveway surface condition	Rue Terre to Bluegrass Circle (E)/Fire Station	Cat. I	Repair cracked concrete driveway/sidewalk. Consider extending driveway paving to the north to minimize the dirt getting onto the sidewalk.	



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Crosswalk on south leg	Dell Range Boulevard/ Bluegrass Circle (E)	Cat. I	Stripe crosswalk for east-west crossing of the south leg of intersection (Bluegrass Circle).	
Sidewalk curb lip to fire station driveway	Dell Range Boulevard/ Bluegrass Circle (E)	Cat. I	Remove the lip in the curb between the sidewalk and the driveway.	
Inaccessible pedestrian ramp	Dell Range Boulevard/ Walmart Access	Cat. I	Upgrade ramp to remove the lip between the ramp and curb, provide slopes not exceeding the 8.3% maximum and provide detectable warning devices/truncated domes.	
STOP pavement markings SB approach	Dell Range Boulevard/ Walmart Access	Cat. I	Remove STOP pavement markings.	
Crosswalk on south leg	Dell Range Boulevard/ Walmart Access	Cat. I	Stripe crosswalk for east-west crossing of the south leg of intersection.	
Wal-Mart Westbound Queue Blocks Intersection	Dell Range Boulevard/ Grandview Avenue	Cat. I	Limit access at this intersection to right-in and right-out.	
North Side Sidewalk Drop-Off	Grandview Avenue to Converse Avenue	Cat. I	Extend the limits of the fence and repair fence.	
North approach crosswalk	Dell Range Boulevard/ Converse Avenue	Cat. I	Restripe crosswalk.	
Pedestrian signal not operative	Dell Range Boulevard/ Converse Avenue	Cat. I	Repair inoperative pedestrian signal in NE corner.	
Corner turn radii – NE and NW corners	Dell Range Boulevard/ Converse Avenue	Cat. I	Enhance the turn radius of the NE corner.	
Northwest corner pedestrian ramp slopes	Dell Range Boulevard/ Converse Avenue	Cat. I	Upgrade pedestrian ramp to provide slopes of 8.3% or less and provide detectable warning Category I devices/truncated domes for all users.	
Signal pole located in pedestrian path	Dell Range Boulevard/ Windmill Road	Cat. I	When the intersection is reconstructed, relocate the signal pole to provide a minimum of 4-ft clearance from the back curb.	
Pedestrian push button inoperative	Dell Range Boulevard/ Windmill Road	Cat. I	Replace or repair.	
No crosswalk striping on north leg	Dell Range Boulevard/ Windmill Road	Cat. I	Stripe crosswalk.	
Curb higher than sidewalk	Windmill Road to Moran Avenue	Cat. I	Repair sidewalk to match back of curb.	
Inaccessible push button	Dell Range Boulevard/ Moran Avenue	Cat. I	Relocate pedestrian push button to a location within 10 feet of the pedestrian ramp and mount in a location accessible to all users.	
Sidewalk width limited to 3 feet	Dell Range Boulevard/ Moran Avenue	Cat. I	Relocate fire hydrant or construct sidewalk around the back side of the hydrant to provide a pathway with 4-foot clear width.	
Cross slope of moran avenue	Dell Range Boulevard/ Moran Avenue	Cat. I	Reconstruct Moran Avenue approach to provide 2 percent or less cross-slope within pedestrian crossing.	
Cross slope at public streets	Moran Avenue to Hilltop Avenue/Friendship Circle	Cat. I	Reconstruct sidewalk to reduce cross slope to less than 2 percent.	



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No pavement markings on southbound approach	Dell Range Boulevard/Hilltop Avenue/Friendship Circle	Cat. I	Provide pavement markings for the north approach.	
No left turn sign not effective	Dell Range Boulevard/Hilltop Avenue/Friendship Circle	Cat. I	Consider a raised median or increase law enforcement of the turn restriction.	
Low reflectivity speed limit signs	Hilltop Avenue to Darnell Place	Cat. I	Replace signs.	
Sidewalk cross-slope	Darnell Place to Ridge Road	Cat. I	Reconstruct sidewalk through driveways.	
No crosswalks on north and south approaches	Dell Range Boulevard/Ridge Road	Cat. I	Stripe Crosswalk.	
Short clearance intervals	Dell Range Boulevard/Ridge Road	Cat. I	Consider extending yellow time for all movements.	
Southbound right turn only sign	Dell Range Boulevard/Ridge Road	Cat. I	Replace sign.	
Sidewalk cross-slope	Ridge Road to Marble Avenue	Cat. I	Reconstruct sidewalk through driveways.	
Extended RT lane from King Soopers entrance to McDonalds entrance	Dell Range Boulevard/Marble Avenue	Cat. I	Provide pavement markings and signage indicating a right-turn only lane for westbound traffic.	
Queue conflicts at Boysen Avenue	Marble Avenue to College Drive	Cat. I	Consider changing the access to Boysen Avenue to be right-in and right-out.	
Pedestrian signal push button inoperative	Dell Range Boulevard/College Drive	Cat. I	Repair or replace pedestrian signal pushbuttons in SW and NW corners of intersection.	
Curb radius too small	Dell Range Boulevard/College Drive	Cat. I	Reconstruct SE corner curb and increase curb radius.	
Westbound lane striping missing	Dell Range Boulevard/College Drive	Cat. I	Restripe lane lines on east approach.	
Curb higher than sidewalk	Prairie Avenue – Entire Corridor	Cat. I	As part of other improvements along the corridor, raise the sidewalk to the elevation to match the back of curb.	
Missing sidewalk segment	Powderhouse Road to Lowes Access	Cat. I	As these vacant parcels north and east of Prairie Avenue develop, construct sidewalk on north side of Prairie Avenue from Lowes access west to the Point Frontier development.	
Pedestrian access to transit stop	Powderhouse Road to Lowes Access	Cat. I	Provide accessible pedestrian ramps with hard surface connections at the sidewalk and across the median. Provide accessible pedestrian ramps with hard surface connections at the sidewalk and across the median.	
Street name sign missing	Prairie Avenue/Lowes Access	Cat. I	Install street name signs on south and north approach signal mast arms, consistent with those provided at adjacent signalized intersections on Prairie Avenue.	
Painted crosswalk into median	Prairie Avenue/Lowes Access	Cat. I	Provide accessible ramps with a connecting hard surface extending the crosswalk through the median.	



Issue	Location	Risk Class	Suggestion	Agency Response
Access Management	Frontier Mall Drive to Dell Range Boulevard	Cat. I	To address the issues identified above, consider one or more of the following: 1) providing additional cross-parcel connections; 2) closing or restricting turning movements at existing access points on west side of Prairie Avenue between Kmart access and Dell Range Boulevard; 3) restricting Wendy's access to right-in-right-out, if new connection can be made to Kmart parking lot; and, 4) if driveway access to PETCO is kept, consider not allowing parking immediately east of the store and north of the driveway (this involves six parking spaces).	