

Comparison of Grade Separation Options at the Rocky Top MS Connector Trail

Criteria	Underpass at Current Crossing	Underpass to School (north of current crossing location)	Overpass at Current Crossing
Engineering Considerations			
Cost (construction/ROW)	<ul style="list-style-type: none"> Moderate (approximately \$250K) 	<ul style="list-style-type: none"> Moderate (approximately 300K) 	<ul style="list-style-type: none"> High (\$750K – 900K)
Design	<ul style="list-style-type: none"> New trail connection is offset slightly north of existing alignment so that trail access can be maintained during construction. 20-foot wide by 20-foot long culvert with ramps extending out in a nearly straight line from each end (bicycle and ADA accessible). 	<ul style="list-style-type: none"> 20-foot wide by 20-foot long culvert with ramp extending straight out from the west end and perpendicular ramps extending north and south from the east end (bicycle and ADA accessible). 	<ul style="list-style-type: none"> 25.5-foot high overpass structure with bicycle and ADA accessible ramps on the west and east approaches.
Constructability	<ul style="list-style-type: none"> Cleanest design; easy to implement 	<ul style="list-style-type: none"> More complex design elements; more time to implement 	<ul style="list-style-type: none"> Most complex design elements; most time to implement
Environmental and Community Considerations			
ROW Impacts	<ul style="list-style-type: none"> Adams County School District and Cherrywood Park (private) This option would have the least amount of ROW impact. 	<ul style="list-style-type: none"> Adams County School District and Fallbrook Farms Homeowners Association 	<ul style="list-style-type: none"> Adams County School District and Cherrywood Park (private)
Social Impacts, Community Facilities, and Neighborhoods	<ul style="list-style-type: none"> Current neighborhood connections would be maintained Ramp from west side of culvert would extend into school property with minimal impact to the athletic fields. (Note: impact to the athletic fields could be avoided by constructing the underpass on the existing trail alignment. However, this would necessitate a temporary trail closure and detour during construction). 	<ul style="list-style-type: none"> More direct access for Fall Brook Farms neighborhood. Less direct access for Cherrywood neighborhood. Ramp from west side of culvert would extend into school property with some impact to the athletic fields. 	<ul style="list-style-type: none"> Current neighborhood connections would be maintained Adjacent homeowners have expressed concern about trail owners being able to see into their homes from the overpass. Source: Gene Putman 12/16/08
Archaeological, Historic, and Paleontological Resources	<ul style="list-style-type: none"> No issues identified 	<ul style="list-style-type: none"> No issues identified 	<ul style="list-style-type: none"> Could be considered a change to the historic setting of the UP Railroad
Visual and Aesthetic Qualities	<ul style="list-style-type: none"> No issues identified 	<ul style="list-style-type: none"> No issues identified 	<ul style="list-style-type: none"> Ramps and overpass structure would be visible to surrounding residences
Parkland and Recreational Resources	<ul style="list-style-type: none"> Additional travel distance for trail users would be negligible Would maintain direct access to ball fields Trail access could be maintained during construction (if trail alignment is offset from the existing alignment) 	<ul style="list-style-type: none"> Travel distance would decrease by 100 feet for trail users accessing the school and increase 1,100 feet for trail users accessing the Larry Walker Ball Fields. All trail users would have to pass through school property. Would reduce access to ball fields Trail access could be maintained during construction 	<ul style="list-style-type: none"> Would add 1,130 feet of travel distance for trail users Would maintain direct access to ball fields Trail access could be maintained during construction
Floodplains/Drainage/Hydrology	<ul style="list-style-type: none"> Undefined floodplain issues Source: Rob Webber, Adams 12 12/16/08 No issues identified by design team (01/20/10) 	<ul style="list-style-type: none"> Undefined floodplain issues Source: Rob Webber, Adams 12 12/16/08 No issues identified by design team (01/20/10) 	<ul style="list-style-type: none"> No issues identified by design team (01/20/10)
Utilities	<ul style="list-style-type: none"> No issues identified 	<ul style="list-style-type: none"> No issues identified 	<ul style="list-style-type: none"> No issues identified
Safety and Security	<ul style="list-style-type: none"> Potential safety issues for students Source: Rob Webber, Adams 12 12/16/08 RTD implements security cameras as a standard practice for underpasses 	<ul style="list-style-type: none"> Potential safety issues for students, however this option would allow school officials to monitor the underpass from the school yard. Source: Rob Webber, Adams 12 12/16/08 	<ul style="list-style-type: none"> No issues identified
Compatibility with Related Plans	<ul style="list-style-type: none"> The Parks and Open Space Master Plan (2008) does not show a grade-separated crossing at this location. 	<ul style="list-style-type: none"> The Parks and Open Space Master Plan (2008) does not show a grade-separated crossing at this location. 	<ul style="list-style-type: none"> The Parks and Open Space Master Plan (2008) does not show a grade-separated crossing at this location.
Community/Stakeholder/Agency Support	<ul style="list-style-type: none"> Unknown 	<ul style="list-style-type: none"> This option is based on a concept presented by Gene Putman, City of Thornton, during an August 15, 2008 meeting. Paula Schulte, City of Thornton Parks Department indicated that this would be a less desirable option because it reduces access to the ball fields (12/16/08) 	<ul style="list-style-type: none"> Surrounding home owners may have concerns about privacy and visual/aesthetic issues related to overpass School district expressed support for this option in a comment on the DEIS.
Conclusions/Recommendations	<ul style="list-style-type: none"> RTD Recommended: This option is the least expensive, is the easiest to implement, would maintain the existing trail alignment for good neighborhood access to the school and the ball fields, and would avoid potential conflicts with surrounding home owners. Safety should not be an issue as the culvert would be only 20 feet in length, would be lit, and could be monitored via security camera by RTD. 		