



Archuleta School District 50JT School Site Due Diligence Review Civil Engineering Evaluation Executive Summary

TO: Archuleta School District Board Members & Stakeholders

FROM: Diana Rooney, PE
Owen Parker, PE
Derek Sawyer, PE
Andy Antipas, Senior Scientist
Alex Nees, Senior Scientist
Dan Cokley, PE, PTOE

DATE: 10 November 2025

Dear Archuleta School District Board Members & Stakeholders:

The purpose of this memorandum is to summarize findings of the Feasibility Study prepared by SGM in October 2025 and provide complementary information to the work that the School District, Master Plan Advisory Committee and RTA Architects have completed prior to this study. The School Board seeks to evaluate the feasibility of two locations that could house a new K-8 campus: the Vista Site and the High School Site.

Both sites have the potential to become a campus for a new K-8 school, but each site has its benefits and disadvantages. This memorandum provides a side-by-side comparison of these properties and the most important development considerations. It is the goal of this effort to support the School Board with this information to make a well-informed decision in site selection for the school.

The following site elements were compared as part of this memo:

1. Site Considerations
2. Transportation Considerations
3. Drainage Considerations
4. Foundation Considerations
5. Utility Considerations

Vista & High School Site Development Comparison Items

1. Site Considerations

Vista Site				High School Site		
	Area	Findings	Cost	Area	Findings	Cost
1.A Lot Size	36.7 ac		N/A	40+ ac		N/A
1.B Property Slopes & Earthwork	20.5 ac < 5% Slope	Mostly Gentle (5%) slopes.	\$250K - \$750K	5 ac < 5% Slope	Gentle (0-5%) and very steep (10%-30%). Locations over 33% should not be built on. Much of the undeveloped property has steep slopes that may be built upon; however, this will require significant cut or fill. A site plan would be required to understand the full impact of earthwork costs on the site	\$500K - \$2M
1.C Developable Area	17 ac	This area is large enough for a school building, school bus and parent loading and unloading, parking areas, play areas, storm detention areas, and a large track and field area.	N/A	8 ac	This area is more difficult to fit all the required and desired school facilities without significant site excavation, and removal of existing baseball or softball fields.	N/A
1.D Relocation of Existing Facilities	0 ac	None	\$0	2 ac - 4 ac	Yes One or two softball fields	\$850K - \$2M
1.E Wetlands on the Property*	6.4 ac	A large wetland and drainage basin is located on the property. Future development as advised to avoid impacts to Wetlands over 0.1 acres. Assume 0.5-acre impact Mitigation is \$360k/acre lost	\$180K	0.5 ac	Wetlands are in the drainage south of the high school and west of the bus barn. This wetland runs through the best area identified for school development. Impacts to this wetland will require mitigation. The stream and drainage will need to be included in the design. Assume 1 acre impact	\$360k

* Action Item: Formal wetland delineation must be performed in the spring or summer months.

2. Transportation Considerations

	Vista Site		High School Site	
	Findings	Cost	Findings	Cost
2.A Intersection Signaling	Possible signal at Hwy 160 & Vista Blvd.*	\$400K	Change 8th St. signal timing from 60 sec. to 90 sec.	\$30k
2.B Roadway Improvements	1. Acceleration & deceleration lanes at Hwy 160 2. Four turning lanes on Vista Blvd. & Park Ave.	\$2.5M	1. Turning lane @ 8 th . & Apache 2. 800' of School loop road widening & sidewalk Improvements	\$1.6M
2.C Pedestrian Access	Pedestrian infrastructure to the site in a ½ - 1 mile radius of the site is lacking.	N/A	Pedestrian infrastructure within a ½ to 1 mile radius of the site is sufficient when the school loop road is widened and sidewalks on it are built.	N/A

* Action Item: More evaluation is required to determine if a traffic signal is warranted. A preliminary signal warrant review was performed. The analysis found that the projected delay at the southbound approach and volumes may meet the criteria to warrant a signal. Additional traffic data collection & analysis at this intersection is required.

3. Drainage Considerations

	Vista Site			High School Site	
	Findings	Cost		Findings	Cost
Stream Mitigation	No stream / drainage mitigation is anticipated. Proposed site can avoid wetlands and stream channels on property.	\$0 - \$100k		A stream / drainage exists south of the high school and west of the bus barn. Current conceptual plans show a building near this channel. This stream would require mitigation or avoidance in the design. Bridges or total undergrounding of the stream may be required to create room for the building.	\$3M - \$5M

4. Foundation Considerations

	Vista Site		High School Site	
	Findings	Cost	Findings	Cost
Foundation Considerations*	Shallow Foundations and Slab on Grade may be possible.	\$ 2M - \$2.8M	Deep Foundations and Grade Beams are probable.	\$2.8M - \$5.6M

* Note: A higher-level conceptual site plan & more geotechnical investigation would be required prior to final determination of the foundation systems required for each site.

5. Utility Considerations

	Vista Site		High School Site	
	Improvements	Cost	Improvements	Cost
5.A Sewer Improvements	Two connection options exist:		1500' Sewer Service Extension	\$300K
	1. 600 feet of sewer and upgrade Pump Station #21 to handle added capacity.	\$800K - \$1.5M		
	2. New on-site pump station and 800 feet of sewer.	\$1.5M		
5.B Water Improvements	Domestic supply adequate	\$200k	Domestic supply adequate	\$120K
	Fire Flow demands may require water main upgrades	\$240K	Fire Flow demands are likely adequate.	\$0
5.C Other Utilities	Available	N/A	Available	N/A

Conclusion/Summary

The Vista property is generally a good fit for a K-8 school but will require significant road and access improvements. The High School site has some usable undeveloped areas that could be used in the development of a K-8 school building. However, development of this property has a lot of challenges.

The undeveloped region of the High School property lacks space for all needed facilities. Development in the area may require extensive excavation, have site grading challenges, and may need retaining walls. To accommodate all necessary school facilities, school development on this property will probably require the demolition of existing recreational fields. Lastly, the High School property may require the re-routing of a large drainage. All these challenges will come with higher development costs and potentially the loss of existing school & community facilities.

Not all development items can be quantified for exact comparison, or with much precision. More detailed concept plans and other action items, as noted in the memo, would be needed for more precise comparisons of the two properties. However, given the current understanding of the comparable items, as identified in the report and discussed in the memo, we view the Vista site as a more favorable location for the development of a new K-8 School. The location overall has more buildable area and would be expected to cost millions of dollars less than the development of the High School property.

SGM Firm and Team Profile

 **SGM**, a multidisciplinary engineering, surveying, and consulting firm, was founded in 1986. For more than three decades, SGM employees have lived and raised families in the Western Slope communities they have helped build. SGM's services are delivered with unparalleled authenticity and pride with attention to quality and detail. As a result of SGM's **commitment to quality service and long-term relationships**, SGM has grown to more than 125 employees – the largest full-service engineering, consulting, and surveying firm in Western Colorado. In addition to our headquarters in Glenwood Springs, SGM has branch offices in Gunnison, Grand Junction, **Durango**, Salida, Aspen, and Meeker to provide local and timely service to our clients.



We provide innovative, practical solutions to make our clients successful while ensuring the health, safety, and welfare of our neighbors. We develop and maintain lasting client relationships and are committed to our local communities.

With a long history of client and project success, **SGM** offers complete in-house engineering services, including municipal consulting, wastewater engineering, water engineering, structural engineering, electrical and mechanical engineering, water rights, water resources, survey, and subsurface utility engineering (SUE). This breadth of capabilities and expertise allows SGM to deliver projects effectively and efficiently.

SGM is rooted in western Colorado – we understand the nuances of engineering and construction in mountain communities.



Diana Rooney, PE / PROJECT MANAGER

Office: Grand Junction | Experience: 18 years | License: CO PE 52927
Education: BS Civil Engineering, Stevens Institute of Technology, Hoboken, NJ

Why Diana?

- ✓ Diana has 18 years of experience designing, constructing, and managing complex transportation, water/utility, and public/private development projects.
- ✓ Diana's career experience includes over thirty-six new school buildings and major additions in two states. Diana's recent projects include the Grand Junction Housing Authority's (GJHA) 400-unit affordable housing Confluence Subdivision, and the Cinnamon Heights Affordable housing project in Bayfield.

Diana's depth of technical expertise, experience, and skill in scheduling a team can bring projects with tight site constraints or project deadlines to fruition on time.



Owen Parker, PE / CIVIL ENGINEER

Office: Durango | Experience: 8 years | License: CO PE 63585
Education: BS Engineering, Fort Lewis College, Durango, CO

Why Owen?

- ✓ Owen's experience includes civil engineering & survey, site planning, roadway development, drainage planning & modeling, grading, and utility designs.
- ✓ Owen has many years of experience with large development projects in Southwest Colorado.

Owen brings experience in civil site development, planning, & project fulfillment.



Derek Sawyer, PE / BUILDINGS STRUCTURAL ENGINEER

Office: Durango | Experience: 7 years | License: CO PE 0060668
Education: BS, Mechanical Engineering, University of Colorado, Boulder

Why Derek?

- ✓ Derek has extensive experience in designing, constructing, and managing complex residential and commercial buildings.
- ✓ Derek is skilled in structural analysis and design of buildings for vertical and lateral forces, designing shallow and deep foundation systems, and project management.

Derek has designed numerous commercial and municipal building structural systems in Durango and La Plata County, including the new Miller Middle School addition and remodel in Durango.



Andy Antipas, MS / ENVIRONMENTAL / WETLANDS PERMITTING

Office: Durango | Experience: 34 years | License: N/A
Education: Master of Arts, Biology/ Ecology, Binghamton University

Why Andy?

- ✓ Andy specializes in wetland delineations, NEPA compliance, and surveys for threatened and endangered species. A certified USACE Wetland Delineator, he has extensive permitting experience across the Rocky Mountain states and holds a US Fish & Wildlife permit for Endangered Species surveys. Andy worked on the Army Corps of Engineers (USACE) Nationwide Permits for the East Troublesome Fire EWP project alongside Angie, Jordan, Alex, and Scot.
- ✓ Andy's expertise includes NEPA assessments, CDOT environmental clearances, Endangered Species Act compliance, Clean Water Act permitting, and federal land right-of-way acquisition.

Andy is a Senior Ecologist and is a certified USACE Wetland Delineator. Andy will support any NEPA and ACOE Permitting for the Program in Divisions 4 & 7.



Alex Nees, MS / ENVIRONMENTAL / WETLANDS / PERMITTING

Office: Grand Junction | Experience: 16 years | License: N/A
Education: MS Biology, Stanford University

Why Alex?

- ✓ Alex is a Senior Ecologist with over a decade of experience in Western Colorado, working on multi-agency federal projects, grant-funded projects, and the private sector.
- ✓ Alex's key expertise includes NEPA assessment and permitting, CDOT environmental review, Endangered Species Act compliance, and Clean Water Act permitting. Alex holds US Fish & Wildlife permits for Endangered Species survey work, certifications in wetland delineation, and scientific permits for the collection and analysis of state-sensitive species.

Alex previously served as an embedded consultant with the CDOT Region 3 Environmental Team and is a certified USACE Wetland Delineator.



Dan Cokley, PE, PTOE / ROADWAY / TRAFFIC

Office: Remote | Experience: 35 years | License: CO PE 29799
Education: BS Civil Engineering, University of Minnesota

Why Dan?

- ✓ Dan is an SGM Principal and a Senior Traffic Engineer with 35 years of experience finding unique solutions to the challenges of transportation design and traffic engineering in Western Colorado.
- ✓ Dan has conducted traffic study reviews on behalf of numerous public agencies, evaluating submissions prepared by developers.

Dan is one of the few engineers on the Western Slope with dual registration as a Professional Engineer and Professional Traffic Operations Engineer.