



Teeland Middle School

Wasilla, Alaska

DOWL provided civil engineering design and master planning services for the construction of the Teeland Middle School in the Matanuska-Susitna Borough. Civil engineering services included a topographic survey, site grading, water, septic system, and storm drain design, and permitting. Master planning services included participation in development workshops, background research, evaluation of existing conditions, and preparation of a master plan document. The master planning effort identified the proposed location of the Teeland Middle School. The civil engineering design services were split into two phases.

The first phase was a site preparation phase and included preparation of design and construction documents for clearing, excavation, and backfill. DOWL also provided bidding and construction services during the site preparation phase. Topographic survey services included a winter-time, ground-based survey of the 40-acre site, and preparation of a survey base map for design. Construction documents for the site preparation phase identified the site grading, drainage, and earthwork design requirements. The site was designed to utilize all materials on-site. Gravel excavation was used to construct the building pad and parking lots, and excavated silty soils were used to construct softball and soccer fields.

“This project was large and located in an area that was not serviced by public water, sanitary sewer, or storm drains. Today, it’s a beautiful school.”

Kurt R. Hulteen, P.E.
Manager, Civil Engineering
Department



DOWL services during the finish design of the school site included an as-built topographic survey of the constructed site preparation, design of paving, sidewalks, curbing, water, sewer, storm drain, and trails. The as-built survey allowed DOWL to complete the final grading of the site and to provide an accurate picture of existing conditions for contractors bidding on the final building construction package. Paved parking was designed for over 220 cars and 15 buses.

DOWL designed a 900-foot roadway with a right turn lane to provide access to the site from existing Borough roadway. DOWL's utility design included a water system with a well pump (the well casing was existing), water distribution lines, and underground water storage tank, a septic system with a 13,000-square foot septic system drainfield, gravity pressure distribution system with alternating dosing siphons and a dosing chamber, and 4,000 and 8,000-gallon septic tanks, and a storm drain system with two 1,100-square foot retention basins, over 4,000 feet of grass lined swales, 5 roof drain drywells, and associated piping. DOWL designed a 1,150-foot paved trail that connects the new Teeland Middle School to a proposed residential development nearby. DOWL participated in a value engineering process and provided bidding and construction services for the final building construction phase of the project.

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