

Civil Engineering for the Mining Industry

CEC has the experience to assist the mining industry with the development of cost-effective, construction phase-oriented site designs for mines, quarries, refuse/tailings disposal areas, preparation and processing plants, and transportation facilities.



CEC integrates all of the design elements and civil engineering aspects required to complete a successful mining development project. We have experience managing the design, approval and onsite construction processes associated with mining projects.

SITE GRADING ANALYSES

CEC develops and evaluates grading plans to produce “balanced” earthwork conditions when feasible – from small sites involving minimal earthwork to large sites involving several million cubic yards of earthmoving. Our site grading consulting services incorporate GPS/CADD technology and integrate important aspects of site development, such as slope stability, site grading, stormwater management, and geotechnical requirements.

EROSION AND SEDIMENTATION (E&S) CONTROL PLAN DEVELOPMENT

CEC’s knowledge of various state and federal E&S and National Pollutant Discharge Elimination System (NPDES) regulations and requirements has led to our track record of success in obtaining local, state, and federal regulatory approvals. CEC integrates E&S controls with post-development stormwater management to achieve the primary objective of reducing overall site development construction costs while complying with agency requirements.

STORMWATER MANAGEMENT

CEC’s comprehensive stormwater management consulting services include flood routing studies, stream relocations and enclosures, hydrologic and hydraulic analyses and design, stormwater detention design, and design of water-quality best management practices (BMP) facilities. State-of-the-art software enables CEC to analyze alternative stormwater detention measures and methodologies to satisfy site-specific regulatory requirements. We specialize in the design and permitting of stormwater detention facilities for difficult sites with unique stormwater-related challenges.

PREDEVELOPMENT SITE INVESTIGATIONS

CEC provides predevelopment investigation services to evaluate a site’s potential to be developed for a specific use. Issues addressed for these studies include site layout, site access, wetlands and other environmental considerations, geotechnical concerns, grading/earthwork, and utility availability and capacity. Our staff also effectively coordinates with all utility companies to provide service to mine development locations.

MINE RECLAMATION

CEC engineers assist clients with developing site grading and backfilling plans, revegetation, and post-mining land-use plans. CEC also helps mining companies address post-closure hydrology concerns.