ms consultants, inc.
engineers, architects, planners

ALLEGHENY COUNTY AIRPORT AUTHORITY

CHALLENGE

THE ALLEGHENY COUNTY AIRPORT AUTHORITY WANTED TO RECLAIM ABANDONED MINE LANDS TO NEUTRALIZE THEIR ENVIRONMENTAL THREAT AND MAKE THEM VIABLE TO SUPPORT FUTURE ABOVE GROUND FACILITIES.

SERVICES

- Urban Planning + Design

ALLEGHENY COUNTY AIRPORT AUTHORITY

The Allegheny County Airport Authority (ACAA) requested a conceptual site design and design build specifications for Phase 1 of an abandoned mine land reclamation project, located on site number 10 of the authority's property. Required services include the preparation of a conceptual site grading plan, site access plan, completion of design build specifications and cost estimation.

The goal of this design project was to develop a set of design build plans and specifications for the authority to use to obtain bids for reclaiming abandon mine lands. Further, the authority will be provided with an understanding of the construction costs associated with the reclamation of the mined lands.

As part of the site construction, the ACAA planned on remediating property that was previously deep and strip mined. On portions of the site, deep mines still existed with remnant coal from the Pittsburgh Coal seam still intact. To develop the property and provide adequate support for above ground facilities, the abandon mine shafts needed to be removed.

On other portions of the site, existing highwalls were still present while in other areas, unvegetated mine spoil from the past mining activities still existed. As part of the site development, the Authority excavated below the deep mine in an effort to remove the existing coal seam, backfilled against the highwall as a remediation step, and capped the mine spoil with topsoil and vegetation to prevent surface runoff from becoming polluted.

ms consultants and the authority have been working with the Pennsylvania Department of Environmental Protection Greensburg District Mining Office to properly remediate the past coal mining activities. The work will be completed under a Government Financed Construction Contract, which is the method encouraged by the DEP for projects involving incidental and necessary coal extractions, coal refuse removal and high wall remediation.

To evaluate existing water quality and the effect the mining operation will have on it, water monitoring and water sample locations will be established on the site. These samples generally include pH (field and laboratory), total alkalinity (mg/l), total acidity (mg/l), total iron (Fe) (mg/l), total manganese (Mn) (mg/l), sulfates (S04) (mg/l), total suspended solids (mg/l) (all surface water samples and discharges), specific conductance, and field temperature of sample source. Testing will occur prior to, during and after construction. With this methodology, it can be verified that water quality is not being harmed during the mining operation.