

COCONINO COUNTY PUBLIC WORKS CINDER BARNS



Concrete slab thickness was calculated to meet both budget requirements and long-term durability issues relative to the equipment and cinders' weight.



Cinder barn openings were calculated based on loading equipment specifications, reducing the number of required maneuvers by equipment operators.



Based on the public works pre-winter preparation requirements, project delivery deadlines were inflexible. As a result, this project was delivered early, enabling an extended transition period to the new facility.

Location: Flagstaff, AZ | Williams, AZ

Markets: Government & Municipal

Coconino County Public Works (CCPW) maintains County roads during snow operations with “rock cinders” using trucks equipped with cinder spreaders. The mechanical performance of these spreaders is severely hampered when the cinders are frozen. To maximize the efficient application of cinders and to fulfill this critical life/safety operation, CCPW partnered with Loven Contracting and APMI to construct (2) cinder barns — one in Flagstaff (12,000SF) and one in Williams, AZ (6,400SF) — for dry cinder storage away from inclement weather.

The client’s criteria for success included stakeholder consultation regarding ideal structure design for the most efficient circulation patterns by the cinder loading crews and a design that anticipates the wear and tear of heavy equipment operations within the structure and offers durability relative to potential accidental equipment/building impacts. Design solutions to meet these requirements included increasing the concrete slab thickness to support the cinder piles and equipment weight and 10” CIP concrete walls for the PEMB structure. These projects were delivered ahead of schedule, well in advance of the winter road maintenance season, with contingency funds returned to the client.