

ABS SERVICES, INC.



DESIGN/BUILD ABS SERVICES, INC. NATIONWIDE

ABSSERVICESINC.COM | 866-640-1992

Over our 33 year history,

ABS Services, Inc. has been honored to serve mine operators and industrial mining companies alike. As a result of our successful history working with mining clients like you, we've learned that what is valued most is a complete design/build package of services and products.

ABS's complete design/build approach includes initial conceptual drawings, geotechnical, civil and structural engineering analysis, all materials, and construction services required for your new or retrofitted dump structure.

Our complete design/build approach ensures that you will experience decades of safe, maintenance-free, and uninterrupted use of your MSE dump structure.

MINING APPLICATIONS of every SIZE and scale



FOUNDATION IMPROVEMENT: ABS's engineering team designed a subsoil improvement plan that involved over-excavation of the underlying weak foundation soils and backfill with large rip/rap rock. The subsoil improvement was required to achieve acceptable long-term design parameters for both foundation bearing capacity and global stability of the MSE dump structure.



FOUNDATION IMPROVEMENT COMPLETION



To learn more, please call:
866-640-1992

or email:
tony@absservicesinc.com

website:
www.absservicesinc.com

Our design/build services ensure that no details will be overlooked, however small they may be. Our approach is critically important to achieving the planned service life of your new or retrofitted dump structure. Also, our design/build approach makes certain that avoidable shut-down costs related to design, engineering, and construction mistakes do not occur.

As with all mining operations, new or established, there are always challenges to overcome. When working through those challenges there is no substitute for experience. ABS's design, engineering, and construction management team brings hundreds of years of combined, thoughtful experience to your mine project.

Whether your project is still in the preliminary planning phase or is fully funded and scheduled for construction, we look forward to the opportunity of meeting with you about your upcoming project.



Aggregates Mine, Cement Manufacturing Facility - Mitchell, Indiana
11,000 s.f. MSE dump structure and lead-up ramp, 50' tall
Permanent fall-protection system and *SafTcurb™* engineered dump curb system





MINING APPLICATIONS of every SIZE and scale

Aggregates Mine, Cement Manufacturing Facility -
Ragland, Alabama

9,000 s.f. MSE dump structure and lead-up ramp, 46' tall

Permanent fall-protection system and **Saftcurb™**
engineered dump curb system



Safety: Job #1

ABS's safety goal has been and remains: at the end of each work day ***every employee will leave the job site safely.***

For decades ABS has successfully achieved its stated safety goal. An accident-free work place doesn't happen by accident. ABS has developed a culture of safety through an unwavering commitment towards promoting safe practices at our manufacturing facilities and on the construction site, as well as an open and honest dialogue amongst all ABS team members regarding safe off-site behavior.



ABS is committed to its employees, other work forces, and the public's safety through the use of a proven fall-protection and prevention plan. ABS also employs a thorough safety policy; weekly safety and training meetings, utilization of appropriate personal protective equipment, highly maintained construction equipment and vehicles, safety monitors, and permanent fall-protection rail system.

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Continental Cement Mine & Manufacturing Facility - Hannibal, Missouri
8,000 s.f. galvanized welded wire MSE retaining wall dump structure and lead-up ramp , 44' tall

MINING APPLICATIONS
of every
SIZE and scale

Every project has a timeline - some more demanding than others. Contractual deadlines, seasonal demands, road closures, natural disasters - for over three decades ABS has demonstrated its ability to meet the most demanding construction timeline constraints, and safely complete projects nationwide.

Shown above, Continental Cement Company had a 10-day work window to construct a new access ramp for its primary crusher.

The challenge:
Who could safely construct a 44-foot-tall MSE dump structure and place 14,000 tons of backfill in 10 days... with only 2 weeks notice? ABS accepted the challenge and completed the project - utilizing only one of its crews - in only 6 days.

Similarly, Hanson Aggregates entrusted ABS to construct its lead-up ramp and MSE dump structure for their primary crusher in Chico, Texas.

ABS provides the same level of focused effort to the specific challenges of every project it designs and constructs, regardless of size or location.

From choosing the correct MSE dump structure system, engineering, logistics planning, workforce and equipment deployment, ABS delivers the same level of expertise to each of its clients.



Hanson Aggregates Mine - Chico, Texas
13,000 s.f. MSE dump structure and lead-up ramp, 50' tall



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CAT 777 haul truck
Loaded capacity: 400,000 lbs.
C.I.P. approach slab and dump curb



Dump structure lead-up ramp

MINING APPLICATIONS of every SIZE and scale

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Aggregates Mine - Hondo, Texas
10,000 s.f. MSE dump structure and 900' lead-up ramp, 50' tall

The MSE dump structure and the lead-up ramp
were constructed simultaneously over a 6-week period.



Aggregates Mine - Millsap, Texas
8,000 s.f. MSE dump structure
and lead-up ramp, 43' tall



MINING APPLICATIONS
of every
SIZE and **scale**

Uninterrupted operation of your mine is critical to achieving your company's annual production goals. As a result, many domestic and international mine operators have trusted ABS with their new or retrofitted MSE dump structures.

For over three decades ABS has been working with aggregate and energy producers to design, engineer, and construct their MSE dump structures and lead-up ramps.



Dump curb and reinforced concrete approach slab installation



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Steel H-piles installed with 100 ton high-frequency vibro hammer

MINING

APPLICATIONS

of every

SIZE and scale



Safety: Job #1

ABS applies the same dedication to safe construction practices at every job site. A great safety record does not happen by chance; it is the result of decades of safe construction practices and training, as well as an understanding of the unique safety demands posed by large dump structure construction. Not only has ABS continually met MSHA and OSHA safety requirements over its history, but also strives to exceed them.

ABS is committed to its employees, other onsite crews, and the safety of the public through the use of: 1) a proven fall-protection and prevention plan, 2) thorough safety policies and practices, 3) weekly safety meetings and training, 4) appropriate personal protective equipment, 5) highly maintained construction equipment and vehicles, 6) safety monitors, and 7) permanent fall-protection rail system. ***ABS applies all of these safety practices on a consistent basis.***



Aggregates Mine and Manufacturing facility - Roosevelt, Oklahoma
5,000 s.f. MSE dump structure, 38' tall
Permanent fall-protection and dump curb system
Simultaneous installation; MSE dump structure and primary crusher

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TEMPORARY AND PERMANENT FALL PROTECTION



As illustrated above and right, as part of ABS's fall-protection and prevention plan, ABS installs its temporary fall-protection rail system at the beginning of construction. Our permanent fall-protection rail system is then installed as construction progresses. In doing so, at no time are ABS's employees or the mine operator's employees exposed to an unnecessary fall hazard.

Safety: Job #1

Injury as a result of a fall is one of the greatest dangers ABS's employees face every day on the job site. In addition, the large dump structures ABS constructs create a significant long-term fall hazard for the employees of the mine operator.

To insure the highest quality, ABS manufactures all of its temporary and permanent fall-protection rail systems in-house. The fabrication, sand blasting, priming and painting are all completed in our Florence, MS facility.

ABS's permanent fall-protection rail system includes vertical posts positioned every 5' on center and horizontal rails positioned at 21" and 42" above the top elevation of the dump structure. Additionally, 4" toe boards are installed where required.



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PATENT PENDING

PERMANENT MOBILE AND NON-MOBILE MACHINERY PROTECTION



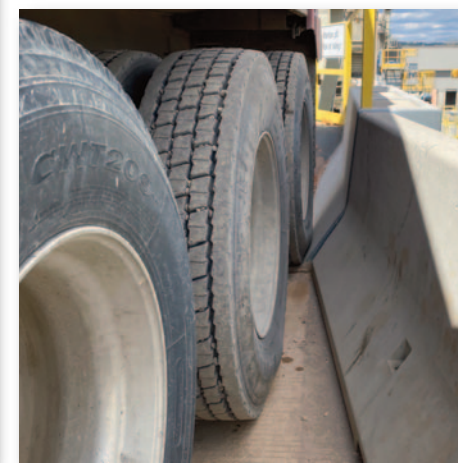
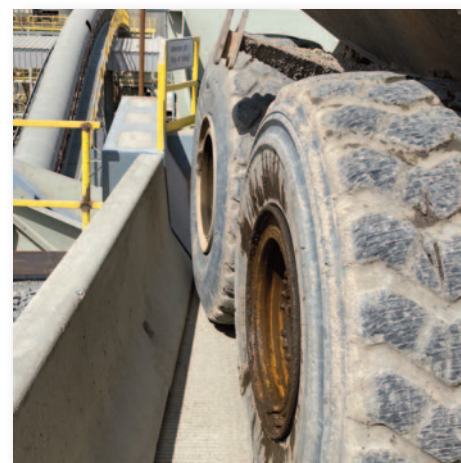
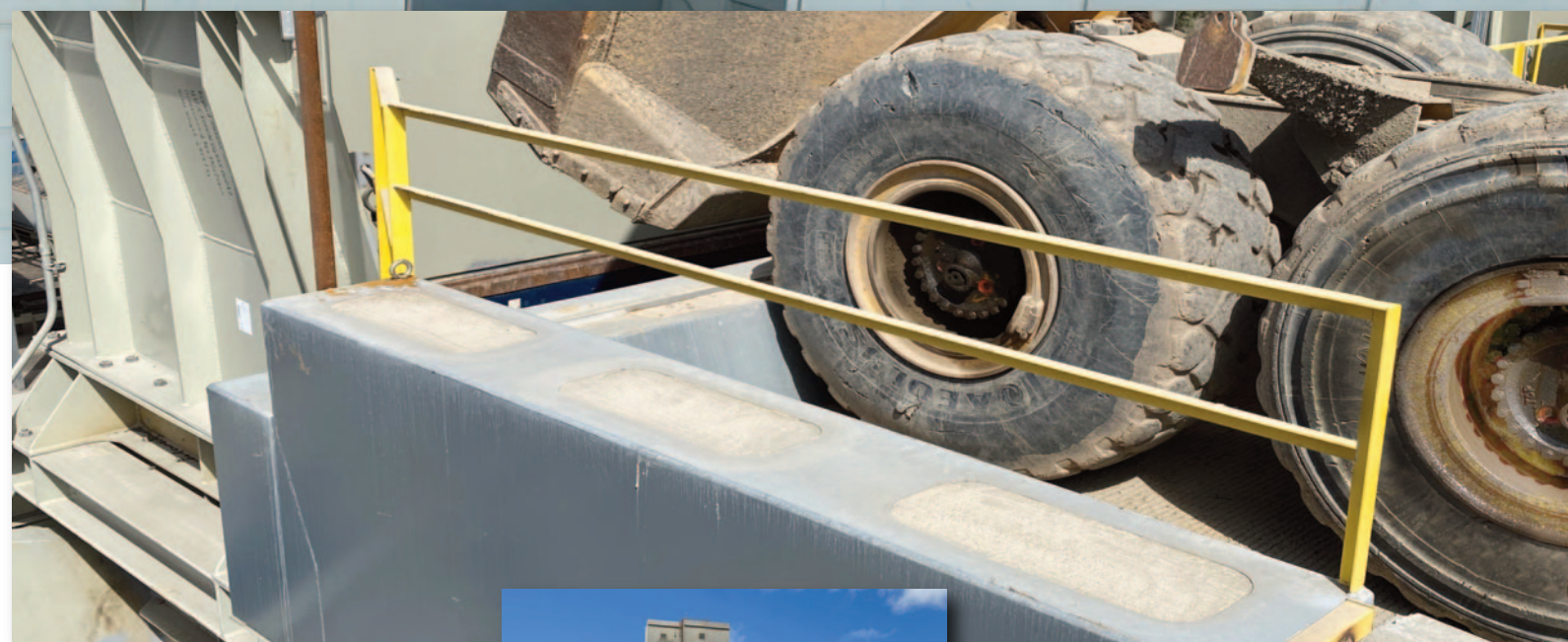
SafTcurb™ Spanner Plate - available in mild or hardened steel.



With decades of experience designing and installing MSE dump structures it became clear to ABS that a better solution was needed atop our dump structures at the dump curb - primary crusher/hopper interface.

Our new **SafTcurb™** engineered dump curb system ensures that the material haul vehicle is positioned safely and correctly each and every time by the equipment operator prior to reaching the dump curb.

Each SafTcurb™ dump curb system is engineered and designed around your specific mobile machinery and materials hopper.



Avoid costly shutdowns and repair bills with SafTcurb™ by ensuring that your mobile machinery is always positioned correctly at the materials hopper.

SafTcurb™ significantly aids in protecting the following from damage:

- Haul vehicle tires and wheels
- Non-mobile machinery from out of alignment impacts
- Mobile machinery from inadvertently driving off of the dump structure
- Protects the equipment operator from injury or death as a result of driving off of the dump structure
- Protects the underlying dump structure from long-term lateral movement

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PERMANENT MOBILE AND NON-MOBILE MACHINERY PROTECTION



SafTcurb™ engineered dump curb system will provide decades of maintenance-free service. Unlike cast-in-place dump curbs, **SafTcurb™** steel casing and integrated 90 deg. turn-back barrier rail sections are able to withstand the impact abuse that is unique to the mining industry.

After just a few years of services, most cast-in-place dump curbs are almost unrecognizable (see upper right picture), due to damage from repeated equipment impacts.

SafTcurb™ solves that problem through the use of a heavy steel casing at the dump curb and at both 90 deg. barrier rail turn-back sections. In addition, the dump curb and the 90 deg. barrier rail turn-back sections are monolithic to the C.I.P. approach slab, which make it virtually impossible for your mobile machinery and operator to inadvertently drive off the dump structure.

SafTcurb™ Patent Pending.



The modular components of **SafTcurb™** were developed around the ability to utilize low cost standard flat bed trucking for transport to your project location.

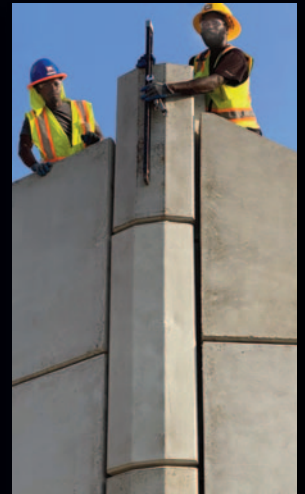


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Due to SafTcurb's unique design it can be cantilevered over the face of your dump structure.



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