

PRODUCT HIGHLIGHTS

Metal Deck Products

CANAM STEEL CORPORATION

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Canam Steel Corporation, one of North America's largest joist suppliers, also produces steel deck profiles. Canam is a member of the Steel Deck Institute, and offers deck profiles, including roof, floor and composite. All deck profiles are available in G6, G10 or painted. Call to locate the nearest Canam office, and visit the web site to download a deck catalog.

CURVELINE, INC.

1745 E. Monticello Court
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Curveline@curveline.com
www.met-tile.com/curveline



Curveline's service center provides custom crimp-curving of "B"-deck and "N"-deck profiles into the desired radii and angles of curvature. Crimp-curving increases panel strength—making it possible to achieve multiple-span panel designs that use lighter gauge material. Applications include standard, perforated and acoustical decking panels. For acoustical applications, the panels provide "two-in-one" performance, functioning both as roof deck and acoustical ceiling. The company curves roofing and siding panels (exposed and concealed fastener profiles) to form curved walls, fascias, roofs, canopies, walkway covers and more.

DACS, INC.

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Portsmouth, VA 23704
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dattanucci@dacsinc.com
www.dacsinc.com

Manufacturer of steel roof and floor decks since 1987. Products include Types B, F, A, N, J, H, B-cellular, N-cellular, J-cellular and H-cellular roof decks, 1-1/2", 2" and 3" composite floor decks, and 9/16", 7/8" and 1-1/2" form decks. DACS also offers full detailing services and manufactures accessories. Call for questions and pricing.



D-MAC INDUSTRIES, INC.

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sales@d-macindustries.com
www.d-macindustries.com



D-MAC manufactures steel bridge form and accessories, and is a steel-deck service center. In bridge form, D-MAC produces 1.5", 2.0", 2.5", and 3.0" corrugated sections from 16 gauge to 22 gauge, and accessories. The D-MAC steel-deck service center offers nationwide shipment of all standard sections of roof deck, form deck, and composite floor deck in any length, gauge, and finish. All material cut to size (length or width) is supplied with mill-quality edges. D-MAC manufactures deck accessories in standard and custom shapes, and supplies rubber closures, fasteners, and related items.

HILTI, INC.

5400 S. 122nd East Avenue
Tulsa, OK 74146
Ph: 800.879.8000
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www.us.hilti.com



The Hilti ST 1800/SDT 25 Stand-Up System fastens deck-side laps and deck to thin bar-joist applications. It includes the ST 1800 Adjustable Torque Screwdriver, SDT 25 Stand Up Tool, and collated screws matched to application needs. A magazine allows the user to fasten 50 screws before reloading for time saving. With its two-handle design and low vibration grip, it provides operator comfort. Hilti offers customer service, including submittal packages and job-site training.

MBI PRODUCTS COMPANY, INC.

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www.mbiproducs.com

MBI manufactures acoustical products of all types and provides insulation for perforated acoustical metal-deck flutes. Insulation is available in different thicknesses and densities, and comes in rolls or pieces.

NEW MILLENNIUM BUILDING SYSTEMS

6115 County Road 42
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doug.lang@joist-deck.com
www.joist-deck.com



New Millennium offers metal roof and floor deck. The deck is designed and produced per Steel Deck Institute specifications. The following profiles are available: 1.5B, 1.5BA, 3N, 3NA, .6FD, 1.0FD, 1.5FD and 2.0FD. (A: Acoustical, FD: Form Deck). Also available are the 1.5 and 2.0 composite profiles. Finishes can be prime-painted or galvanized. The standard prime-painted finish is gray on both the top and bottom side. The galvanized finish is available in G40, G60, & G90 coatings.

NICHOLAS J. BOURAS

25 DeForest Avenue,
Summit, NJ 07901-2154
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Nicholas J. Bouras, Inc. is the sales, engineering and detailing subsidiary of Bouras Industries Inc. United Steel Deck, Inc., a cold-formed products subsidiary, manufactures standard and specialty Steel Deck Institute-specified decking products. Cellular and non-cellular floor and roof decking (1.5", 2", 3", 4.5", 6" and 7.5"-deep, standard and acoustic), and many specialty profiles are available. All deck accessories are manufactured "in house" so the deck system is furnished as required. A full line of metal siding and roofing products also is manufactured.

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Metal Deck Products

NUCOR VULCRAFT GROUP

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Nucor's Vulcraft Group is the nation's largest producer of steel joists, joist girders and steel deck. Vulcraft also works with highly engineered products like composite floor joist. Vulcraft supplies product for a wide range of structures. Vulcraft products are made from more than 90% recycled materials, and have been essential elements in green buildings.

PNEUTEK, INC.

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The Pneutek Air/Safe Fastening System is a pneumatically actuated drive system for mechanically attaching steel roof and floor deck to a building's structural frame. The all-weather tool drives the one-piece fastener into any thickness of steel above 1/8" minimum substrate in all commercially specified grades of steel. It has a tool capability of one actuation every three seconds. The design shear capacity of Pneutek fasteners allows one-for-one direct replacement of puddle welds in all the typical roof-deck attachment patterns and deck gages.

STEEL DECK INSTITUTE

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The Steel Deck Institute is the trade association for manufacturers of steel floor and roof decks, and related products. The SDI provides industry guidelines for engineering design, manufacture and field use of steel decks. SDI also prepares, reviews, and distributes literature, and liaisons with construction-industry associations on matters of common interest.

PRODUCT CASE STUDY Atlanta Center

Atlanta Center is a 25-story multi-use residential and retail structure in Brooklyn, NY that will top out at more than 275'. To speed construction, the Metro Steel division of AISC-member fabricator Interstate Iron Works, in Whitehouse, NJ, used two Favelle Favco M760D-II cranes.

When completed, the new structure will occupy a full city block surrounded on three sides by heavily traveled commercial streets. On the fourth side, a narrow street has light traffic, but goes up an incline. It was a great place to spot the crane, but only tower cranes with luffing booms were suitable. The boom of an under-capacity hammerhead would trespass on the air rights of the shopping mall on the opposite side of the street, and the tail swing of a crawler or truck-mounted crane would block all lanes of traffic every time it turned to face the building.

Another impediment to the use of a mobile crane was the street's incline. Metro would have had to either level a portion of the street or build a special heavy-duty platform. In both cases it would have been a major expense. With tower cranes, excavating and pouring the foundation for the bases was a comparatively simple job; and assembly could be done in day.

"With the Favco tower cranes you can go right to work," said Jimmy Upton of New York Crane, a company that rents Favco cranes to erection crews. "There's no messing around with fitting the parts together. There are other features that make them good machines. The controls are simplified so operators from the

union hall can start using them right away without wasting time learning how to use new equipment. And, because they're operated from up in the air, the cranes provide a good overall view of a project, unlike mobile tower cranes where they're in a ground-based cab. It just makes work simpler when the operator can see where his load is going rather than depend solely on radio communication."

The power source on the Favco luffing boom crane also can make an operational difference. The cranes feature Caterpillar diesel engines

that are less costly to operate and maintain in the New York area than electric-powered tower cranes. They also can be more dependable since they don't have to be tied into local electric lines.

Occasional repairs can be fixed by diesel mechanics familiar with Caterpillar engines. In contrast, qualified electricians for electric-powered cranes are hard to find, especially those willing to climb 100' or more for repairs.

Three Favco M760D-IIs are being used by Pegno Construction for the upgrade of the Newtown Creek Wastewater Treatment Plant in Brooklyn. The project is expected to take up to four years to complete. Besides the heavy lifting for new pumps, electrical gear, and a new surge tower, the job is complicated further by its location. The site measures 200' by 100', and is bounded on three sides by a public housing project. The three Favco cranes are the only machines that have the lifting capability and short tail-swing to work in such a confined area. ★



PRODUCT HIGHLIGHTS

Metal Deck Products

VERCO MANUFACTURING CO.

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The Verco PunchLok® system achieves high shear values through economical, high-quality side-seam attachments. The PunchLok® system was tested on all Verco™ interlocking products. Testing included 1½" deck pinned to supports. With a variety of attachment and finish options, Verco offers flexibility to combine systems, minimize construction time and maximize savings.



WHEELING CORRUGATING COMPANY

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Wheeling Corrugating produces roll-formed steel products in 14 manufacturing locations. Wheeling's composite floor deck comes in three types. Form deck consists of Tensiform and Tensivent. Wheeling rolls premium steel decking to specific project needs. SoftTite sheet and coil for HVAC, painted coil, and metal roofing and siding are also available.

PRODUCT CASE STUDY

San Diego-based architects Martinez & Cutri Corp. set out to plan a series of athletic facilities for the Sweetwater Unified High School District (SUHSD). The architects needed to create a prototype design to combine athletic usage with auxiliary usage, aesthetics with function, and budget constraints with fast-track construction. In designing the focal point of each facility—a multi-purpose gymnasium—the architects found an innovative way to meet all these criteria: They specified curved acoustical decking panels that provide economical “two-in-one” performance, functioning both as roof deck and an acoustical ceiling.

“Our original design called for the use of acoustical wall and ceiling panels, but that approach would have added significant cost since it would have required an additional metal deck,” Architect Lisa Castagnola said. “We had used acoustical steel decking panels previously on an outdoor dining pavilion with good results and thought about trying the same approach here. However, on this project we wanted to use a curved roof and deck to add to the aesthetic value of the space. Upon contacting the decking manufacturer, Verco Manufacturing Co., we learned that they offered an acoustical product that could be crimp-curved using Curveline, Inc.'s proprietary curving process. It appeared to be an attractive and cost-effective solution.”

Martinez & Cutri specified Verco acoustical “B” deck for the four gyms, which are located at



Close up view of a curved acoustical panel

San Ysidro High School, San Ysidro, CA; Sweetwater High School, National City, CA; Mar Vista High School, Imperial Beach, CA; and High School #11 Otay Ranch, Chula Vista, CA. Each facility required just over 20,600 sq. ft. of the 20-gauge, 1-½"-deep panels in varying lengths up to 24'9", all shaped by Curveline into a 164'6" radius. The decking panels were installed to span from beam to beam and were topped with rigid insulation and standing-seam metal roofing.

The acoustical decks were left exposed on the underside and then painted in “school colors” appropriate to each location. Each of the four projects has a total size of 46,110 sq. ft. and consists of a gymnasium flanked by a wrestling room, weight room, dance room, lobby, rest rooms and locker rooms. General contractor for the projects was Rudolph & Sletten (San Diego) and the acoustical decking installer was The McIntyre Company (Pomona, CA). Since two of the facilities were built on existing campuses, rapid construction with minimal disruption was important.

Four Gymnasiums

Construction took about 18 months and all facilities were complete by December 2002.

Castagnola says the curved-decking installation went smoothly, and adds that this type of design can be a good solution for gyms, dining pavilions, shopping malls, airports and similar projects.

Curveline President Terry Holman says that Curveline's Ontario, CA service center can curve perforated steel decking panels in 22 gauge to 18 gauge, and depths of 1-½" to 3", without fracturing the panel surface or altering the acoustical performance of the panel. In fact, curved ceiling designs (such as a series of arches) could even enhance the sound-absorbing qualities of the space.

“In addition to their acoustical benefits, the curved metal panels form a self-supporting deck that is extremely strong and brings construction economies,” he said. “By using crimp-curved decking installed ‘against the grain’ instead of straight panels applied ‘with the grain’, you can often achieve 15 percent to 20 percent longer spans for reduced framing costs. And because curving increases the strength of the panel, it's often possible to go with a lighter and more economical panel—for example, 20-gauge instead of 18-gauge.” The Curveline process creates a subtle crimp that is aesthetically pleasing to most designers. The perforations that give the panel its acoustical performance, however, are too small to be visible from below. ★



Gymnasiums at (From left to right, above) San Ysidro High School, San Ysidro, CA; Sweetwater High School, National City, CA; and Mar Vista High School, Imperial Beach, CA. All three used Curveline, Inc. to crimp-curve Verco acoustical “B” deck.