



front cover photo: Hardanger Bridge - Hardangerfjord, Norway

page opposite photo: Cableguard is an integral part of the dehumidification system on Norway's new Hardanger Bridge.

ENGINEERED CONSTRUCTION PROJECTS for Landmark Structures and Critical Applications

D.S. Brown stands alone as the leading manufacturer of engineered products in use on the world's most significant infrastructure projects. Our advanced construction materials are specified for landmark bridge structures and critical airfield repairs worldwide.

We create solutions for the most challenging structural applications. The D.S. Brown team can match an engineer's vision with the quality products necessary to bring a project to life. Engineers and contractors throughout the world partner with D.S. Brown for safety-critical products and design assistance.

Millions of travelers rely on D.S. Brown each day for the reliable transportation solutions that will bridge our lives for generations to come.



Bridge the World with Leading Infrastructure Solutions

TACOMA NARROWS BRIDGE

Owner: Washington State Department of Transportation

Products: Maurer System[™] Swivel Expansion Joint Assemblies (DS-1520, 143 LF)

Structure Information

Today, the Tacoma Narrows Bridge is a twin span connecting the city of Tacoma, Washington with the Kitsap Peninsula. The original 1940 single span was infamous for its swaying deck and the entire structure collapsed during a wind storm after only a few months of service. The current westbound suspension bridge replaced the collapsed crossing with a technically advanced span. The eastbound bridge was completed in 2007 and expanded capacity from 60,000 to 90,000 vehicles per day.

Swivel Expansion Joint Assemblies

D.S. Brown worked closely with project engineers to design and manufacture a pair of Maurer System Swivel Expansion Joint Assemblies with unique application-specific requirements. These extremely large joints are designed to allow movements of the eastbound span of the Tacoma Narrows Bridge during dramatic wind and seismic activity with up to 56 inches of structural swaying.

Conventional large movement expansion joint devices are limited to primarily longitudinal movements and/or less than +/- 0.8 inches(20mm) transverse displacement. D.S. Brown's Maurer System Swivel Expansion Joint Assembly is ideal for long span structures with demanding differential longitudinal movements caused by wind, thermal and seismic conditions.





SAN FRANCISCO OAKLAND BAY BRIDGE EAST SPAN

Owner: California Department of Transportation

Products: Maurer System[™] Swivel Expansion Joint Assemblies (1042 LF)

Structure Information

The San Francisco - Oakland Bay Bridge is one of the busiest spans in the world with nearly 300,000 vehicles crossing it each day. Construction began in 2002 on the replacement of the east span of the "Bay Bridge" in response to its partial collapse during the 1989 Loma Prieta earthquake. The new structure is a single-tower self-anchored suspension bridge at Yerba Buena Island.

Swivel Expansion Joint Assemblies

D.S. Brown manufactured high performance Maurer System Swivel Expansion Joint Assemblies for installation on sections of the new east span of the San Francisco - Oakland Bay Bridge. This critical seismic application required expansion joints that will accommodate the potential movement caused by an 8.5 magnitude earthquake.

The innovative design of the Maurer System Swivel Expansion Joint Assembly utilizes a swiveling support bar to accommodate large longitudinal, transverse and vertical displacements, as well as vertical rotations of up to 10 degrees. The centerbeams are free to slide on swiveling support bars that provide equidistant control for centerbeams without the limitations of typical mechanical control devices.

Dynamic tests have subjected this joint assembly design to high-velocity displacements of more than 40 inches per second (1015mm/sec) in both longitudinal and transverse directions. Successful test results prove the unique capabilities of this patented device in seismic applications.





NEW JERSEY TURNPIKE WIDENING

Owner: New Jersey Turnpike Authority

Products: Steelflex[®] Strip Seal Expansion Joint Systems Versiflex[™] Elastomeric Bearing Assemblies Versiflex[™] HLMR Pot Bearing Assemblies J-Series Sealing Systems Steelflex[®] Modular Expansion Joint Systems

Project Description

The New Jersey Turnpike is one of the busiest highways in the United States, connecting to locations throughout New Jersey, New York, Pennsylvania and Delaware. This project involves widening the turnpike between Exit 6 in Mansfield Township, Burlington County and Exit 9 in East Brunswick Township, Middlesex County. Expanding the roadway to 12 lanes has required extensive modifications and new construction at interchanges.

D.S. Brown Products

D.S. Brown has provided various highway and bridge products to the New Jersey Turnpike for 15 separate projects to facilitate the widening of the New Jersey Turnpike from Exit 6 to Exit 9. D.S. Brown strip seal expansion joints, elastomeric bearings, modular joints and high load bearings have been required for use in this ambitious highway construction project.

EGGNER'S FERRY BRIDGE

Owner: Kentucky Transportation Cabinet

Products: Versiflex[™] HLMR Pot Bearing Assemblies (4 EA)

Project Information

Eggner's Ferry Bridge was originally constructed across the Tennessee River in 1932 and the span was further elevated ten years later to accommodate the creation of Kentucky Lake. It served the surrounding counties for decades, but plans were developed to replace the bridge as traffic continued to increase. The new structure was to be a tied-arch bridge with four lanes of roadway, a walkway and bike path.

These plans changed in 2012 when the cargo vessel Delta Mariner crashed into the bridge, causing the collapse of its main span. An emergency operation was guickly started to install a truss span to replace the collapsed bridge. D.S Brown provided four Versiflex HLMR Pot Bearings for this critical project and helped restore the US 68/Kentucky Route 80 commuter corridor ahead of schedule.

Versiflex HLMR Pot Bearing Assemblies

Versiflex HLMR Pot Bearings are ideal in applications where low-profile, high-load bearing devices are required. These are especially suited for complex structures like the Eggner's Ferry Bridge, allowing for horizontal movements in a single direction and the capability to resist externally-applied horizontal forces in the orthogonal direction. Fixed bearing assemblies transmit horizontal forces in any direction through contact between the piston and the inside of the pot wall. Horizontal movement is restricted in all directions while accommodating rotational movement of the bridge superstructure.







ALCOA STREET BRIDGE

Owner: St. Lawrence County

Products: Deckguard[™] Spray Membrane System (30,163 SQ FT)

Project Description

In 2012, the St. Lawrence County Department of Public Works began a critical bridge maintenance project in Massena, New York. The Alcoa Street Bridge was sprayed with D.S. Brown's Deckguard waterproofing membrane, protecting it from water penetration and corrosion prior to application of a new asphalt overlay.

Deckguard Spray Membrane System

Deckguard provides a watertight barrier on both steel and concrete substrates against freeze-thaw degradation and the corrosive effects of winter salt spray ensuring extended service life of bridge structures. This innovative waterproofing material has been tested to meet or exceed the most stringent DOT and AREMA standards.

D.S. Brown is the only manufacturer of waterproofing membranes who evaluates each product batch and offers a spectrograph analysis to assure installed product quality. D.S. Brown also provides onsite Quality Assurance inspections for the duration of each project.

DOLPHIN - PALMETTO INTERCHANGE

Owner: Florida Department of Transportation

Products: Versiflex[™] HLMR Pot Bearings Assemblies (81 EA) Finger Expansion Joints (352 LF)

Project Description

The Dolphin - Palmetto Interchange Project is the twelfth and final section of the new 16-mile Palmetto Expressway. This section was one of the largest and most complex highway projects in Florida. Located at the center of Miami - Dade County near the Miami International Airport, the four-level interchange is traveled by more than 430,000 vehicles each day.

D.S. Brown Products

Versifiex HLMR Pot Bearing Assemblies are especially suited for curved or skewed bridges and other complex structures where the direction of rotation varies or cannot be precisely determined. The new interchange at Palmetto and Dolphin Expressways required fixed, guided, and multi-directional pot bearings.

Because of their proven long-term structural performance, finger expansion joints were specified by the owner for this project and D.S. Brown's segmental joints were utilized for larger movements on all bridges.





CTA PURPLE LINE BRIDGES

Owner: Chicago Transit Authority

Products: Deckguard[™] Spray Membrane System (200,000 SQ FT)

Project Description

In the summer of 2012, three bridges on the Chicago Transit Authority's Purple Line were found to have deteriorated from age and excessive use. The damage was determined to be irreparable and the structures were torn down. Replacement bridges were constructed offsite and D.S. Brown's Deckguard waterproofing membrane was applied to the steel deck surface.

Rigorous safety requirements and high temperature conditions made the utilization of spray-on membrane challenging, but the product and its application process proved successful. The use of Deckguard on the bridge decks ensures their protection from water corrosion for 50 years.

D.S. Brown Deckguard Spray Membrane

Deckguard Spray Membrane is a 100% solids two-component, elastomeric coating used to waterproof both steel and concrete bridge decks in highway and rail structures. Applied using plural spray equipment, Deckguard provides a seamless, flexible and extremely durable barrier against water penetration and stray current.

D.S. Brown's Deckguard Spray Membrane is specifically engineered for use on highway and railroad bridge decks, bridge abutments, pier caps, tunnels and pedestrian walkways. This effective waterproofing membrane can be used on intermodal and LRT rail bridges with or without protection board.

CHESAPEAKE BAY BRIDGE

Owner: Maryland Transportation Authority

Products: Cableguard[™] Elastomeric Cable Wrap System (209,000 LF)

Project Description

The Chesapeake Bay Bridges link the Baltimore - Washington Metropolitan Area to Ocean City, Maryland and other coastal destinations. In 2012, the Maryland Transportation Authority announced a preservation project for both the eastbound and westbound structures that included re-wrapping the span's suspension cables and installing a dehumidification system.

Dehumidification of enclosed steel cables on suspension bridges is accepted and employed as an active corrosion protection method on many new and rehabilitated suspension bridges around the world.

Cableguard Elastomeric Cable Wrap System

D.S. Brown's Cableguard creates a flexible, watertight seal that is ideal for use with cable dehumidification systems. This effective sealing wrap is applied to a bridge's main suspension cable and a dehumidification system forces air through the enclosed cable. A control and monitoring system provides ongoing and automatic adjustments to the system to correct real-time conditions and maintain optimum humidity. This innovative protective wrap is easily installed and accommodates future cable inspection. Cableguard is also available in many colors for new bridge construction and rehabilitation projects.







MANHATTAN BRIDGE

Owner: New York City Department of Transportation

Products: Cableguard[™] Elastomeric Cable Wrap System (185,000 LF)

Project Description

The Manhattan Bridge connects Lower Manhattan and Brooklyn, carrying vehicular traffic, transit trains, pedestrians and bicycles across the East River. This prominent suspension bridge has undergone numerous maintenance and rehabilitation projects since its opening in 1909.

The latest reconstruction program included re-wrapping the main cables and replacing the suspender ropes. To ensure additional decades of continued use, D.S. Brown's Cableguard Elastomeric Cable Wrap System was specified to protect the main cables against future corrosion.

Cableguard Elastomeric Cable Wrap System

Cableguard Elastomeric Cable Wrap System was specified for the Manhattan Bridge because it provides long-term protection for the bridge's main suspension cables. This environmentally safe, longlife elastomeric wrap protects suspension and stayed bridge cables from corrosion and considerably reduces future maintenance costs.

The unique Cableguard protective wrap completely encapsulates existing surface coatings without scraping, grinding or painting before installation. The material also provides excellent UV and ozone resistance and is in use on installations worldwide.





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DETROIT METRO AIRPORT

Owner: Wayne County, Michigan

Products: E-816 Delastic[®] Preformed Pavement Seal (Over 445,000 LF)

Project Description

Detroit Metropolitan Wayne County Airport is one of the largest and most heavily trafficked airfields in the United States. In 2012 new construction began on Runway 4R-22L, where the original pavement had been installed for more than 30 years. D.S. Brown's field-proven Delastic Preformed Pavement Seal was specified for use in the concrete joints of the new 12,000-ft runway and associated taxiways.

Delastic Preformed Pavement Seal

Since 1960, Delastic Preformed Pavement Seals have met the critical challenges posed each day on the highways and airport runways that carry our commerce and families. D.S. Brown's pavement seals protect Detroit's Runway 4R-22L by keeping moisture, debris and incompressible material out of its concrete joint openings

Delastic Seals are easy to install and always accessible for inspection. They minimize the opportunities for pavement cracking, chipping, buckling and premature deterioration. Delastic Preformed Pavement Seals are the longest lasting joint sealant available and are preferred at DTW because they have the lowest lifecycle cost compared with other types of FAA-approved sealants.



I-93 FAST BRIDGE REPLACEMENT

Owner: Massachusetts Department of Transportation

Products: Steelflex[®] Strip Seal Expansion Joint Systems (1100 LF) Delcrete[®] Elastomeric Concrete (200 CU FT) Versiflex[™] Elastomeric Bearing Assemblies (672 EA)

Project Description:

The Massachusetts Department of Transportation replaced 14 aging bridges in only 10 weekends during the summer of 2011. The deteriorating highway spans on Interstate 93 in the city of Medford were built approximately sixty years ago. Superstructures were replaced and substructures were repaired using accelerated bridge construction methods, minimizing traffic delays and allowing completion a full three years ahead of traditional construction schedules.

D.S. Brown Products

D.S. Brown's Steelflex Strip Seal Expansion Joint System was specified for the Mass DOT Fast 14 highway bridges because of its ease of installation. The prefabricated rails were quickly cast-in-place on each of the Interstate 93 spans with D.S. Brown's fast-setting Delcrete Elastomeric Concrete.

Delcrete is a pour-in-place, free-flowing, two-part polyurethane-based elastomeric concrete that offers excellent bond strength to concrete and steel and accepts traffic in as little as two hours. The field-proven Delcrete Elastomeric Concrete/Strip Seal Expansion Joint System is widely accepted as an economical time-saving standard and is specified by engineers worldwide.

D.S. Brown also custom molded Versiflex elastomeric bearing assemblies for the Fast 14 project.



BLENNERHASSETT BRIDGE

Owner: West Virginia Department of Transportation

Products: Versiflex[™] HLMR Pot Bearing Assemblies Versiflex[™] Elastomeric Bearing Assemblies

Project Description

The Blennerhassett Bridge spans the Ohio River, linking U.S. Route 50 from Belpre, Ohio to Parkersburg, West Virginia. The bridge's opening in 2008 was preceded by two decades of debate about the impact on the environment around the Blennerhassett Island Historical State Park. The final Blennerhassett Bridge design minimized effects on surrounding wetlands and the park. D.S. Brown's Versiflex HLMR Pot Bearings and Elastomeric Bearings were specified for use on the unique tied arch span.

D.S. Brown Products

The loads, rotations and movements of the Blennerhassett structure required custom-designed Versiflex pot bearing assemblies. Versiflex HLMR Pot Bearing Assemblies are ideal components for use in the construction of a long span tied arch bridge. The Blennerhassett Bridge required both uni-directional and mutli-directional pot bearings to accommodate the potential for varied directions of rotation.

Laminated Versiflex Elastomeric Bearing Assemblies with and without sliding surfaces were also specified for the approach spans of this river crossing. Molded neoprene elastomeric bearings have a long and proven history of maintenance-free performance.

PEARL HARBOR MEMORIAL BRIDGE

Owner: Connecticut Department of Transportion

Products: Steelflex[®] Modular Expansion Joint Systems Finger Expansion Joint Systems Shear Lock Assemblies Versiflex[™] Elastomeric Bearing Assemblies Steelflex[®] Strip Seal Expansion Joint Systems Delcrete[®] Elastomeric Concrete

Project Description

The new Pearl Harbor Memorial Bridge carries Interstate 95 across the Quinnipiac River at New Haven, Connecticut. The signature span in this project is a unique extradosed structure found nowhere else in the United States. D.S. Brown supplied many critical fabricated products for this project, including Steelflex Strip Seal and Modular Expansion Joints, Versiflex Elastomeric Bearings and Delcrete Elastomeric Concrete.

D.S. Brown Products

D.S. Brown successfully met a multitude of product requirements for the Pearl Harbor Memorial Bridge project. Our contribution to this landmark span is a lasting example of the engineering and fabrication resources our company can apply to the construction of such an innovative structure.





BOSTON I-93 CENTRAL ARTERY 'BIG DIG'

Owner: Massachusetts Department of Transportation

Products: Steelflex[®] Modular Expansion Joint Systems (D-160, D-240, D-320, D-400) SSPA Steelflex[®] Strip Seal Expansion Joint Systems Versiflex[™] Elastomeric Bearing Assemblies Versiflex[™] HLMR Pot Bearing Assemblies

Project Description

Boston's Big Dig is much more than just the tunnel beneath Boston Harbor. It also includes a total of 14 traffic lanes on distinctive twin spans crossing the Charles River. This massive project required challenging engineering advancements in tunnel and bridge construction to meet commuter needs and reduce Boston's ever-present traffic congestion. D.S. Brown was chosen to provide quality fabricated products for this monumental roadway's bridges and elevated approaches.

D.S. Brown Products

D.S. Brown has the engineering experience and extensive catalog of bridge products necessary to meet the timely requirements of a landmark project as large as the Central Artery / Tunnel. Our professionals have the manufacturing expertise required to provide quality fabricated materials for the bridges and approaches of such an ambitious structure. D.S. Brown stands alone as the manufacturer capable of producing quality engineered structural bearings and expansion joints for critical applications like Boston's Big Dig bridges.







FORT LAUDERDALE HOLLYWOOD INTERNATIONAL AIRPORT

Owner: Broward County, Florida

Products: Versiflex[™] Elastomeric Bearing Assemblies (1700 EA)

Project Description

An expansion project at the Fort Lauderdale-Hollywood International Airport was designed to extend the boundaries of the airport by lengthening and raising one of the runways and taxiways over US Highway 1 and the Florida East Coast Railway. The improved airport infrastructure will be supported over the highway and railroad by two concrete bridge structures that are 848 ft and 486 ft long and 584 ft and 723 ft wide, respectively. Both structures consist of prestressed, 6-ft-deep concrete beams and post-tensioned deck slabs; the runway segment will be supported by solid walls, while the taxiway portion will be built on piers.

Versiflex Elastomeric Bearing Assemblies

More than 1700 Versiflex Elastomeric Bearings were used in the construction of these new south runway and taxiway bridges.

Our Versiflex sliding bearing design was specified for the Fort Lauderdale-Hollywood International Airport project as an economical solution where horizontal displacements exceed +/-2 inches (50mm). The addition of a low-friction sliding surface allows this laminated elastomeric bearing to accommodate horizontal displacement without increasing the height of the bearing assembly



KLAMATH FALLS AIRPORT

Owner: City of Klamath Falls

Products: Delpatch[™] Elastomeric Concrete (75 CU FT)

Project Information

Oregon's Klamath Falls Airport has now fully replaced the pavement of the airfield's Taxiway C. In earlier repairs, portions of the old concrete had been renovated with D.S. Brown's Delpatch Elastomeric Concrete to extend the taxiway's functionality until the larger replacement project was funded.

The new construction began with the removal of the taxiway's old pavement and a six-ton hammer was employed to address this task. While the rest of the concrete crumbled and broke under the hammer's force, the earlier Delpatch repairs refused to yield and retained their structure. They remained unbroken and were eventually removed whole.

PORTLAND INTERNATIONAL AIRPORT

Owner: Port of Portland

Products: E-816 Delastic® Preformed Pavement Seal (185,000 LF)

Project Description

In 2011, the Portland International Airport (PDX) initiated a project to rehabilitate and expand its North Runway to ensure service during a runway closure or difficult weather at the joint civil-military airport. Damaged pavement was removed and new concrete installed. Delastic Preformed Pavement Seals were specified by PDX because Delastic seals have continually exceeded the airport's expectations on previous projects.

Delastic Preformed Pavement Seal

Building airport pavements to last is a challenging engineering assignment, especially when the pavement must withstand heavy traffic, weather extremes, debilitating fuels and de-icing chemicals. Delastic Seal is recognized by the FHWA, U.S. Army Corps of Engineers, U.S. Air Force, consulting engineers and other agencies as an effective, long-lasting concrete pavement joint seal solution. It meets or exceeds current ASTM standard specifications and has been field-proven to remain durable and effective through years of use.

Delastic Preformed Pavement Seal is extruded from specially formulated neoprene (polychloroprene) compounds. Field-proven Delastic seals are easily installed. It is compressed and remains in contact with the joint's walls while allowing the concrete pavement to expand and contract during temperature changes.



WALT WHITMAN BRIDGE

Owner: Delaware River Port Authority

Products: Versiflex[™] Elastomeric Bearing Assemblies (3100 EA)

Project Description

The Walt Whitman Bridge is a seven-lane suspension bridge spanning the Delaware River between Philadelphia and Gloucester City, New Jersey. After more than fifty years of operation, the bridge deck was recently rehabilitated on this heavily travelled structure. To minimize traffic disruption, the project was completed in seven stages.

D.S. Brown Products

More than 3100 elastomeric bearings were specifically designed and manufactured to support the new "floating deck" on existing floor beams. The "floating deck" allowed the deck to function independently from the truss structure and eliminated all deck relief joints.



SEA-TAC INTERNATIONAL AIRPORT

Owner: Port of Seattle

Products: E-816 and E-3000 Delastic[®] Preformed Pavement Seals (218,000 LF)

Project Description

Busy Seattle-Tacoma International Airport added a third runway in 2008 to increase traffic capacity. D.S. Brown's Delastic Preformed Pavement Seal was specified for this new 8500-ft runway and its accompanying taxiways. Sea-Tac chose Delastic seals because of their unique ability to perform long-term under heavy traffic in a wet weather environment.

MEMPHIS INTERNATIONAL AIRPORT

Owner: Memphis International Airport

Products: Delpatch[™] Elastomeric Concrete (Over 2500 CU FT)

Project Information

Memphis International Airport (MEM) has been using Delpatch Elastomeric Concrete for more than 15 years. Delpatch is this facility's preferred partial depth spall repair material. In 2013, D.S. Brown worked closely with the MEM to instruct its local contractors about the application of Delpatch Elastomeric Concrete. Delpatch is routinely specified for joint spall repair on the airport's 5000 acres of concrete runways, taxiways and aprons.

Delpatch Elastomeric Concrete

The maintenance of airport pavement requires specialized materials capable of providing long-term performance and minimal shutdowns during construction repairs. Delpatch is specified worldwide for filling conduit trenches and repairing spalls on airport runways and taxiways. This rugged concrete patch can weather severe climates, high traffic, heavy impact and chemical interaction.







I-35 W ST. ANTHONY FALLS BRIDGE

Owner: Minnesota Department of Transportation

Products: Steelflex® Modular Expansion Joint Systems (D-400, 190 LF)

Project Description

The collapse of the old I-35W Mississippi River Bridge and the loss of so many lives was a devastating tragedy that resounded throughout the United States. The old span had served as an essential artery in Minneapolis, carrying more than 140,000 vehicles daily. The efficiency and innovation applied to the construction of its replacement became more than a swift and adept response to the crisis, but also a remarkable symbol for the future of civil engineering in this country.

Planning began immediately after the catastrophe and the new bridge was opened only 11 months later—3 months ahead of an already impressive schedule. This great momentum was made possible with a design-build process led by extensive communication and collaboration between the engineering, material/component suppliers and construction teams.

D.S. Brown is proud to have supplied the modular expansion joints for the new I-35W Saint Anthony Falls Bridge, the construction of which focused nationwide attention on the welfare of this country's infrastructure.

Steelflex Modular Expansion Joint Systems

The D.S. Brown Steelflex Modular Expansion Joint System has gained worldwide acceptance for accommodating and sealing large joint movements on bridge structures. Our fatigue-resistant expansion joint is designed to provide watertight, long-term and maintenance-free performance.

Modular expansion joint assemblies are subjected to millions of high-impact stress cycles caused by passing vehicle loads. D.S. Brown recognized the significance of these dynamic loads on the long-term performance of expansion joint systems and introduced fatigue-resistant design principles for these assemblies in the 1990's.

Each Steelflex Modular Expansion Joint System not only bridges the joint gap, but also protects the structure from premature corrosion. The strip seal element incorporates a compressed neoprene seal lug in the gland recess of the centerbeams and edge beams. This mechanically-locked neoprene seal provides excellent watertight characteristics and achieves high pullout resistance.





CHAMPLAIN BRIDGE

Owner: New York State Department of Transportation Vermont Agency of Transportation

Products: Versiflex[™] HLMR Disc Bearing Assemblies Versiflex[™] Elastomeric Bearing Assemblies

Project Description

The closure of the old Lake Champlain Bridge due to the unsafe condition of its piers had an immediate and negative impact on the area's commuters. In response to this crisis, NYSDOT instituted a dynamic design-bid-build (D2B2) process to expedite new construction of a modified network tied arch span.

Operating within the D2B2 system, D.S. Brown worked closely with the engineer and contractor to help ensure an early construction completion and minimize commuter inconvenience. The new Lake Champlain Bridge was completed in 2011 and this crossing is once again the primary connection between New York and Vermont.

Versiflex HLMR Disc Bearing Assemblies

D.S. Brown's HLMR Disc Bearing Assemblies consist of an elastomeric disc made of unconfined polyetherurethane polymer to accommodate rotation of the bridge superstructure. The vertical loads are also transferred by the elastomeric disc. Horizontal shear forces are transmitted between upper and lower plates by a shear pin mechanism in the center of the bearing.

GARDEN STATE PARKWAY

Owner: New Jersey Turnpike Authority

Products: Steelflex[®] Strip Seal Expansion Joint Systems Versiflex[™] Elastomeric Bearing Assemblies **High-Load Bearing Assemblies** Deckguard[™] Spray Membrane System

Project Description

In 2012, the New Jersey Turnpike Authority began a project to improve safety on the Garden State Parkway, a toll road stretching the entire length of the state. This involved construction on sixteen miles of the road passing through Ocean and Monmouth Counties.

This project included the rehabilitation of bridges, and the construction of new interchange ramps and service roads. D.S. Brown provided a wide variety of products, including strip seal expansion joints, high load bearings, elastomeric bearings and Deckguard waterproofing membrane.

D.S. Brown Products

D.S. Brown's team of professionals manufacture innovative and reliable solutions for challenging infrastructure applications like the New Jersey Turnpike. Our in-house engineering and manufacturing staff manages the production of critical bridge and highway products from design through fabrication.









OUR COMPANY PROFILE

Founded in 1890, the D.S. Brown Company is a leading designer, manufacturer and supplier of engineered products for international transportation infrastructure projects. The company's corporate offices and manufacturing facilities are located in North Baltimore, Ohio.

Markets

D.S. Brown's field-proven products are primarily used in the construction and repair of bridges, highways, airfields and parking structures.

Operations

D.S. Brown is fully integrated, performing and controlling all manufacturing processes internally, including product R&D, project engineering, material extruding and steel fabrication. Core competencies include: synthetic rubber processing, steel fabrication and CNC machining.

Engineering

The company maintains a highly skilled engineering staff that has professional experience working with landmark projects worldwide. The team's engineering capabilities exceed industry standards and enable the company to tackle innovative construction projects with solutions to meet project-specific requirements.

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