



# COVER SYSTEMS FOR WATER & WASTEWATER



Since 1978

## ABOUT HMT

HMT has been providing quality products and services for liquid storage to the global market for over 30 years. Our success is attributed to our exceptional quality products and superior service. HMT's success is backed by our solid understanding of the changing industry and environmental needs of our customers.

HMT specializes in the design, manufacture and construction of clear-span aluminum covers. Our experienced engineering personnel have the technical expertise required to meet your needs today, as well as advance the technology to meet future challenges.

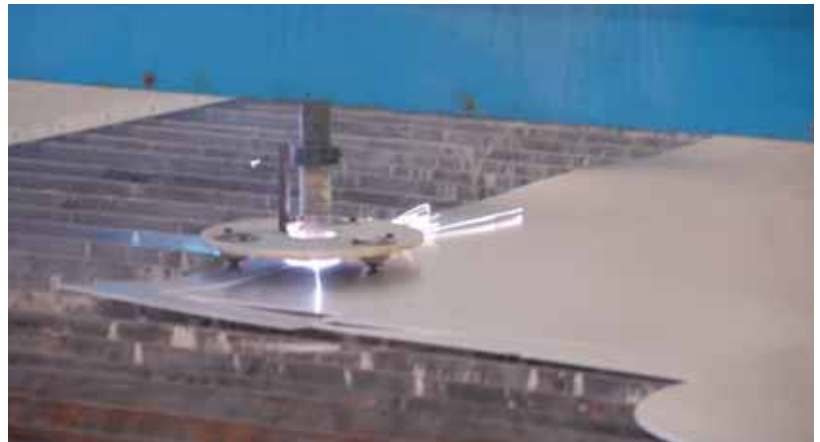
### Applications:

- Water storage tanks
- Primary and secondary clarifiers
- Gravity thickeners
- Trickling filters
- Sludge storage tanks
- Aerobic digesters
- Anaerobic digesters
- Effluent channels
- Aeration basins
- Custom applications

### Key functions:

- Odor control
- UV control / algae prevention
- Debris control / potable water protection
- Splash control
- Temperature control / thermal insulation
- Emissions mitigation
- Lightweight and easily removable

HMT is continuously developing new and innovative products and services to meet the ever-expanding requirements of our customers around the globe.



*Our experienced engineering personnel have the technical expertise required to meet your needs today, as well as advance the technology to meet future challenges.*

## ALUMINUM COMPARED WITH OTHER COVER MATERIALS

Aluminum is quickly becoming the material of choice for covers as it has many distinct advantages versus the use of other materials such as steel or concrete. Aluminum is light weight, corrosion resistant, easy to install, low maintenance, and has a long service life in just about any possible environment. Typical applications require no coatings of the aluminum surface to protect against corrosion (contrary to what is seen in steel cover applications). Aluminum is capable of being easily formed into many shapes and sizes. The diversity of aluminum alloys is very broad and offers a wide range of compositions, properties and uses. The strength-to-weight ratio of aluminum versus other construction materials makes it not only *the* cost effective advantage in cover applications itself but in the working conditions and handling of the removable covers.

	HMT Aluminum	FRP	Steel	Concrete
Corrosion Resistant	E	E	P	F
Easy Installation	E	E	P	P
Lightweight	E	G	F	P
Clear Span	E	G	F	G
Low Maintenance	E	G	P	F
Design Versatility	E	G	G	P
UV & Ozone Resistant	E	F	G	P
Durable (Withstands Adverse Service Conditions)	E	G	P	F

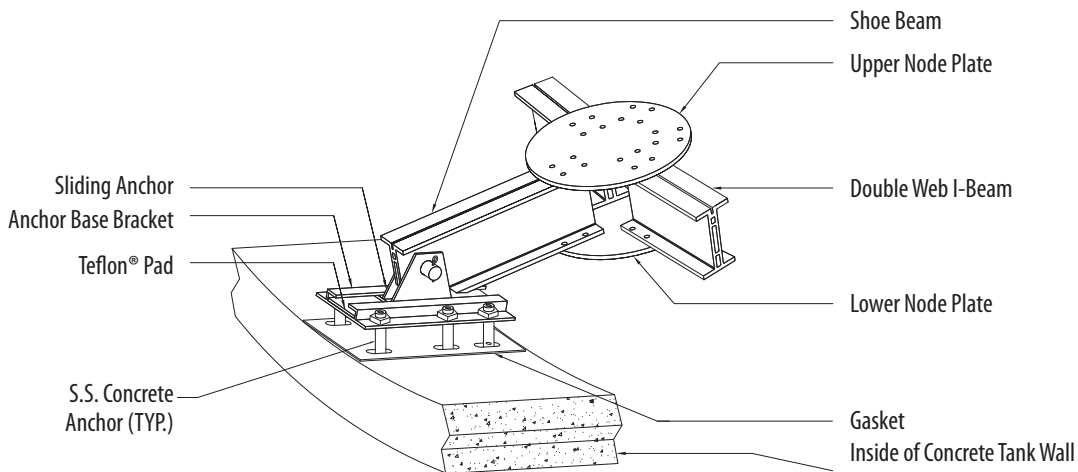
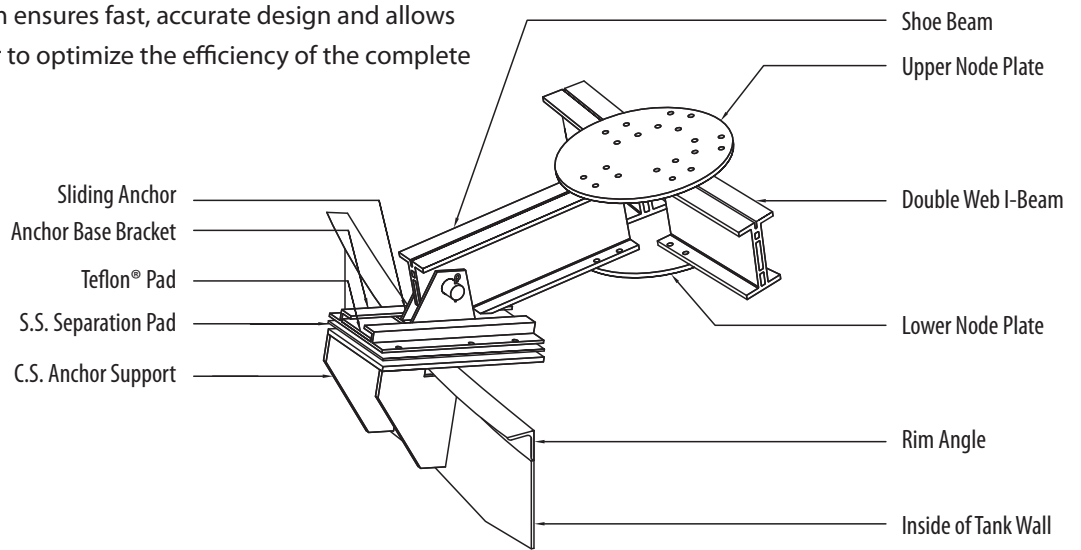
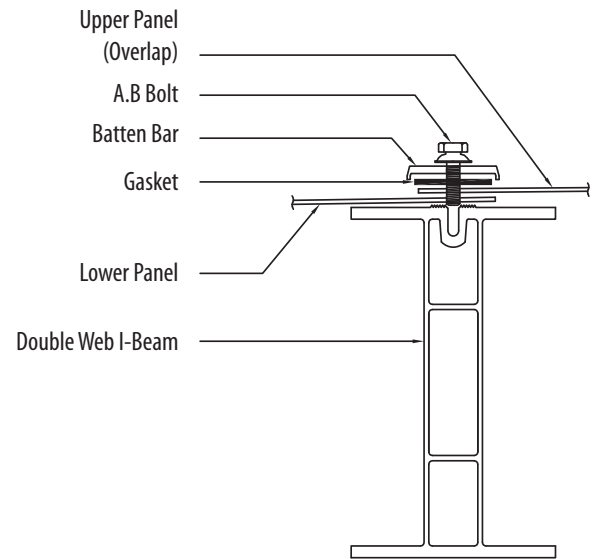
E = Excellent    G = Good    F = Fair    P = Poor

# HMT GEODESIC DOME ROOF

HMT's Geodesic Dome Roofs are custom-engineered to accommodate a wide range of shapes, spans and operating service conditions. They are designed with guidance from the latest revision of AWWA D108 or API 650, Appendix G.

The HMT Geodesic Dome Roof is made of Aluminum and offers multiple advantages over concrete, fiberglass, or steel cover alternatives. HMT's Geodesic Dome roof can be designed to accommodate various special loading and design conditions, specifications and requirements. Applications include water storage, wastewater treatment, clarifiers, thickeners, basins, reservoirs and other cover considerations.

HMT's state of the art design program fully integrates three dimensional design with finite element analysis. In real-time, this program generates customer drawings, CNC fabrication drawings, structural analysis reports and a bill of materials; this cutting-edge system ensures fast, accurate design and allows the design engineer to optimize the efficiency of the complete structure.



The HMT Geodesic Dome Roof is ideal for both new tank construction and tank retrofit projects. HMT Domes are fabricated from high strength, corrosion resistant aluminum alloy materials that resist chemical, UV and ozone degradation. The structure is designed to be clear span and self-supporting from the tank shell, eliminating the need for internal supports.

The unique HMT design prevents the intrusion of rainwater, eliminating the possibility of stored product contamination. Noxious odors are significantly reduced, as wind-induced vapor is eliminated. All gasketing is completely protected from UV and ozone attack and all seams are protected by primary and secondary seals.

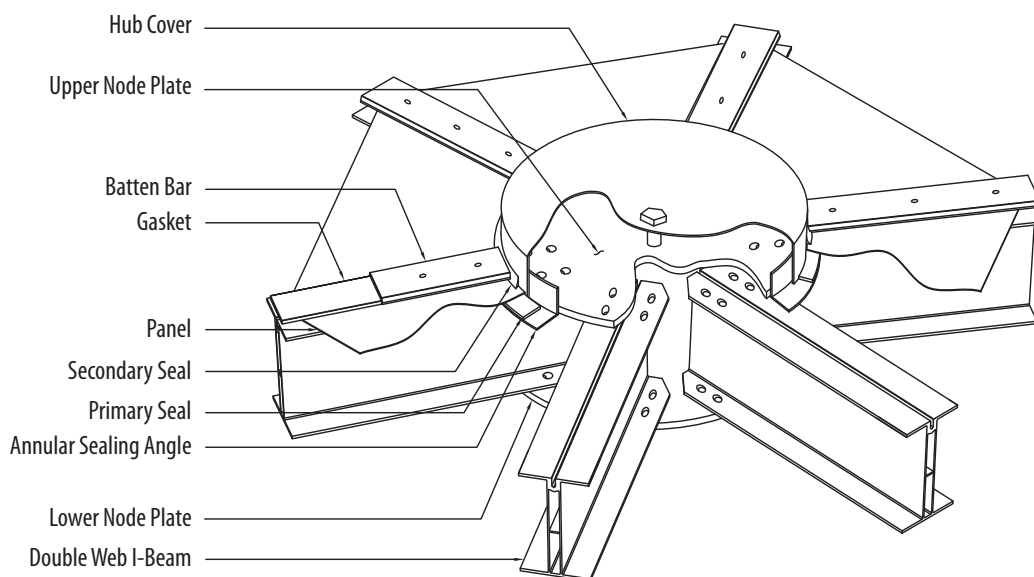
As with all HMT products and services, experienced HMT field crews are available for fast, efficient installation. The HMT design allows for installation to be performed in-service, out-of-service or on new tanks.

#### Key benefits

- Cost effective choice
- Easy, fast installation
- Custom-designed to your tank (for fit and loading)
- Excellent odor-control capabilities
- Prevents potable water contamination
- Prevents UV and ozone attack
- Corrosion resistant
- Needs no painting or coating
- Clear-span; doesn't interfere with process equipment
- Prevents algae growth
- Prevents freezing
- Variety of appurtenances available



*All seams are designed with primary and secondary seal mechanisms.*



## GEODESIC DOME APPURTENANCES

- Skylights
- Access hatches
- Matte finish
- Sidewalls
- Nozzles
- Vents
- Custom design modifications
- Dampers
- Louvers
- Dormers
- Walkways
- Platforms
- Removable equipment hatches



Inside view of sidewalls



Hatch



Nozzle



Sidewalls



Skylight



Underside view of skylights



Large hatch for equipment removal



*Dampers and louvers*



*Walkways*



*Baked-on finish*



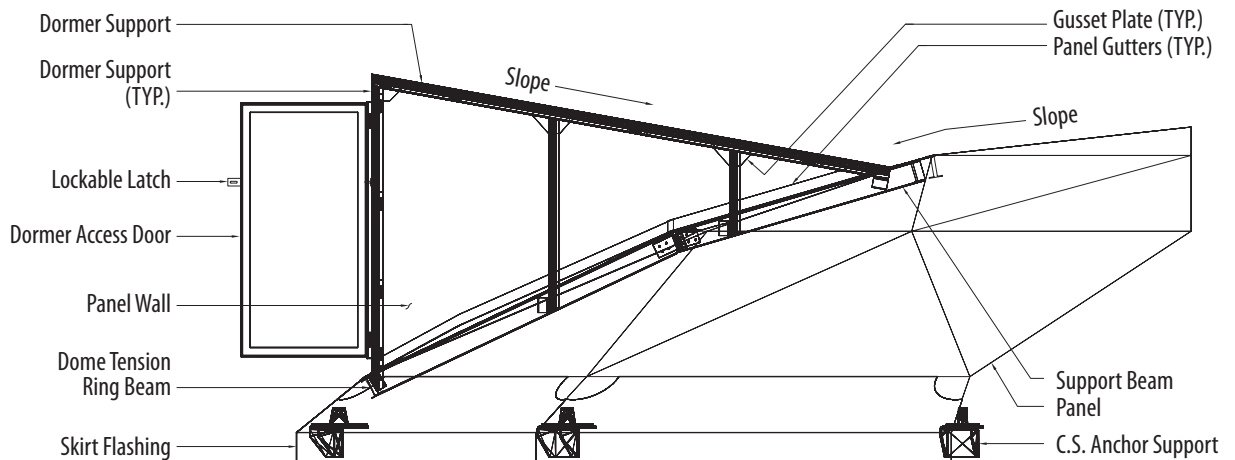
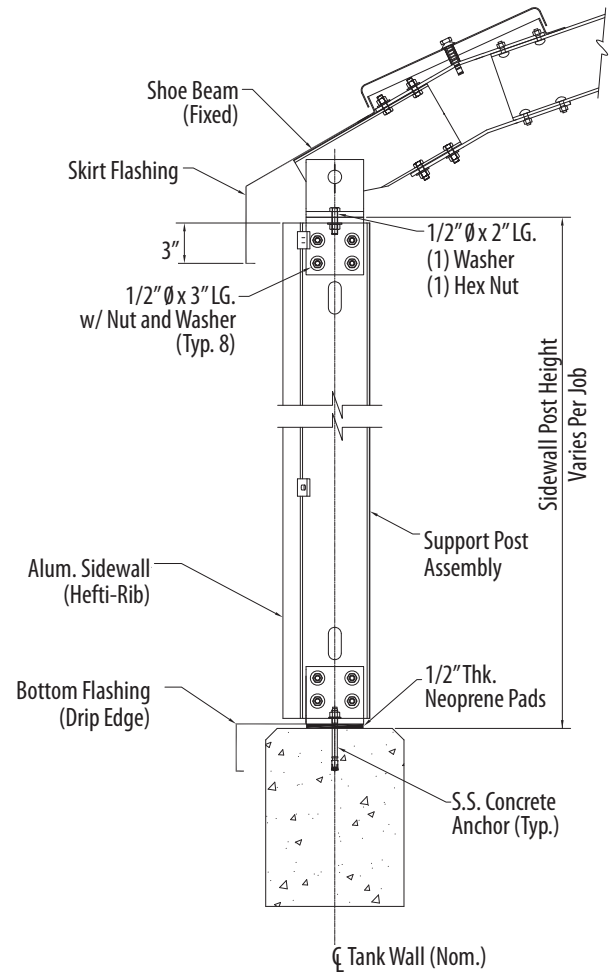
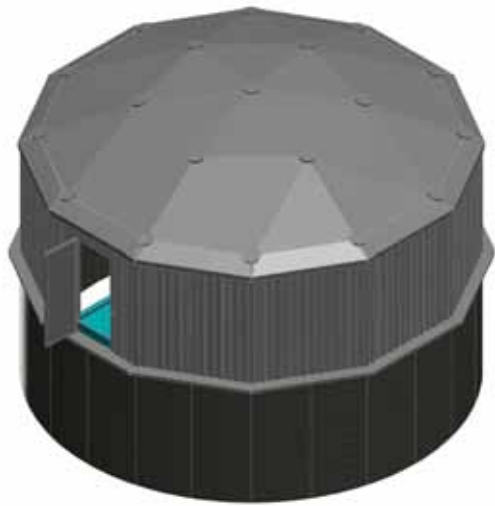
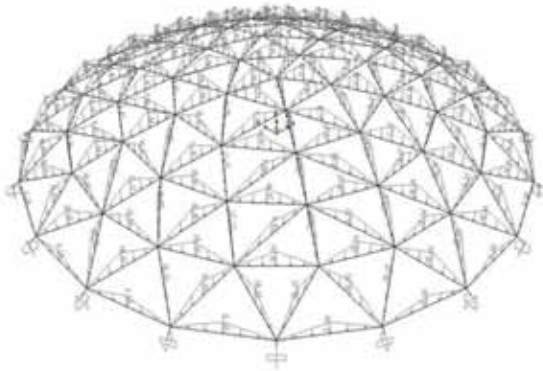
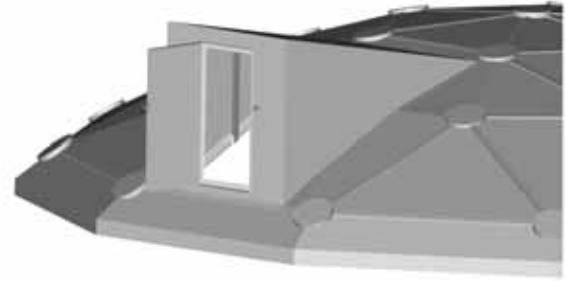
*Mini sidewalls*



*Matte finish*

# UNPARALLELED DOME DESIGN TECHNOLOGY

HMT's state of the art design program fully integrates three dimensional design with finite element analysis. In real-time, this program generates customer drawings, CNC fabrication drawings, structural analysis reports and a bill of materials; this cutting-edge system ensures fast, accurate design and allows the design engineer to optimize the efficiency of the complete structure.





## HMT'S ALUMINATOR™ FPC FLAT PANEL COVER

HMT's ALUMINATOR™ FPC Flat Panel Cover offers the same maintenance-free materials that are offered with the HMT Geodesic Dome Roof, but in a flat panel cover. HMT's aluminum cover is economical, with low initial cost and reduced installation time.

These strong, fixed, durable, all-aluminum panels provide the owner with an extended, low-maintenance service life.

Traditional concrete and steel covers are heavy and difficult to remove. The all-aluminum flat cover from HMT is lightweight and easily removed. In addition, the lighter weight takes stress off concrete bearing structures and basin floors, eliminating a common cause of age-related cracking failures.

The HMT Flat Panel Covers offer excellent odor-control and algae growth prevention features. They can also be sealed for an additional level of odor abatement.

All panels are custom-designed to fit your tank and shop-assembled for ease of installation.

Skylights, vents and hatches are easily installed.

### Key benefits

- Cost effective choice
- Fast and easy installation
- Excellent odor control capabilities
- Prevents freezing
- Helps prevent algae growth
- Walkable
- Superior corrosion resistance
- Low-maintenance and long-life system
- Excellent strength-to-weight ratio
- Light weight reduces stress on bearing structure
- Custom-fit to the dimensions of your tank
- Variety of appurtenances available



*Support structures custom-designed for your tank*



*Long-span trusses*



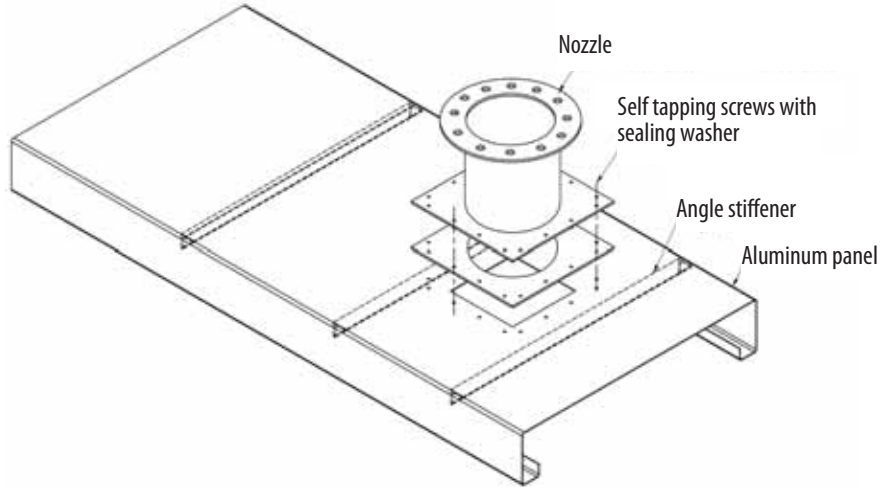
*Non-skid surface*

# ALUMINATOR™ FPC FLAT PANEL COVER DESIGN

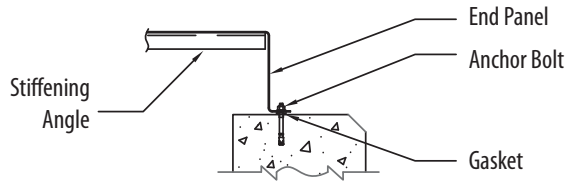
Welded End Cap Option



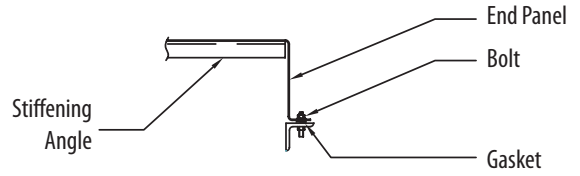
Nozzle Option



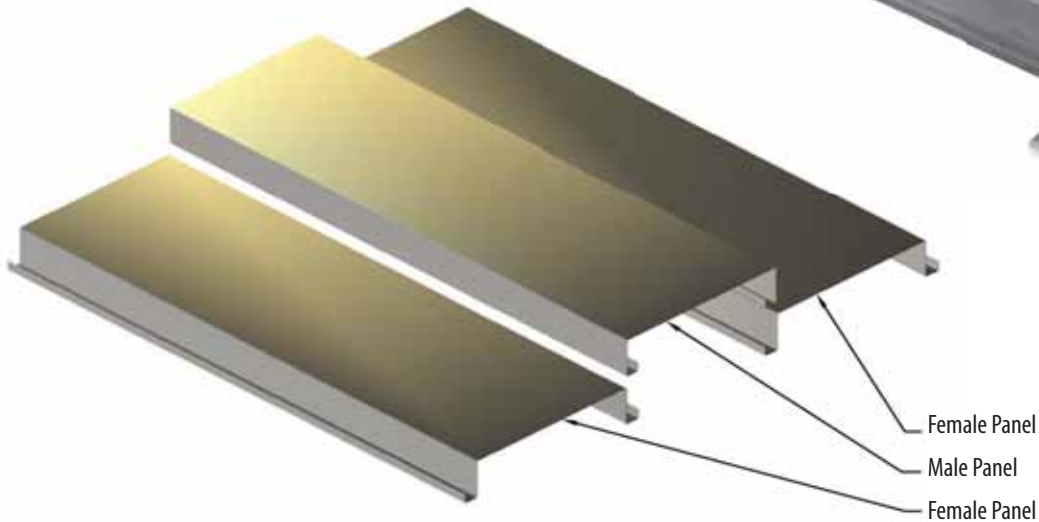
Concrete Tank / Basin Attachment



Steel Tank / Basin Attachment



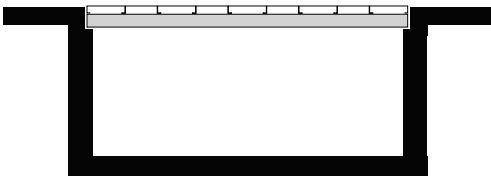
Male/Female Connection



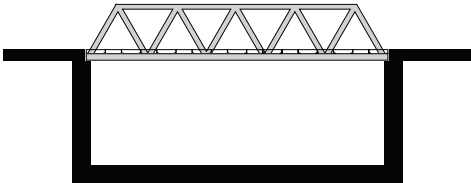
### Flat Panel Cover System Configuration Options



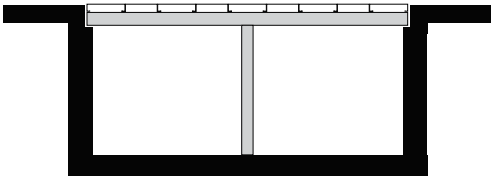
Self-supported clear span



Beam-supported clear span



Truss-supported clear span



Beam and column system supported





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