



# MOD CLEARSPAN STRUCTURES

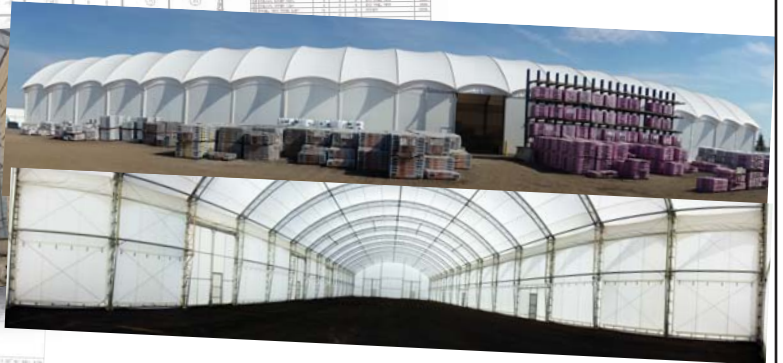


# CLEARSPAN MOD STRUCTURES by WSSL

The **WSSL Clearspan Modular** structures are designed, engineered, and manufactured in our CWB certified plant. The open web truss galvanized steel frames are assembled to satisfy the applicable building code. As with all WSSL tents and structures, the component parts are designed for ease of transportation, assembly, erection. WSSL has temporary or semi-permanent **Clearspan Modular** structures to fit your needs, 39' through 130' width and bay length from 10' – 20'.



**Clearspan Modular**  
MOD5FX9 - Special (146'X140')  
The Railway Children, Toronto ON  
All Shelter Sales & Rentals



**Clearspan Modular**  
MOD4X19 on 20' sides  
70' X 280' Storage Warehouse  
Calgary, Alberta



**Clearspan Modular Structures**  
Tradeshow events



# WHY CHOOSE A FABRIC CLAD STRUCTURE

**Clear span interior**

**Naturally lighter for daytime work**

**Re-locatable**

**Quick installation**

**Lower project costs**

**Low maintenance**



Since 1970 the excitement was INTENSE



Toll-free 1-800-661-6155  
www.wssl.com  
warner@wssl.com



1971 — **Hurritent**  
(Telephone & construction)



1976 Montreal Summer Olympics

Peak Pole Tent 90' X 360'

1973 — **Armadillo**  
(Pulp and paper industry)

1976 — **C-Series Dome Tent**  
(Montreal Olympics)

1977 — **Arabesque Tents**  
(Stagecovers & theatres)

1980 — **Hypup Tent**  
(For German telepost)

1983 — **Centipede Tent**

1984 — **Marquee and Arabesque**  
(Tents for hajj in Saudi Arabia)

1985 — **Hex Marquee Tents**  
(For Niagara falls festival)

1988 Calgary Winter Olympics

1988 — **WSSL ClearMod Series**  
Structures & special teepee (150' High)

1991 — **WSSL ClearMod Series**  
(For 50,000sqft. factory on 10 acres)

1992 — **WSSL ClearMod Series**  
(Insulated for dinosaur museum)

1994 — **WSSL Peak Pole Tent**

1998 — **Hex Marquee Tents**  
(For Yukon quest dogsled races)

2000 — **WSSL ClearMod Series**  
(For Korea supermarket)

2002 — **WSSL ClearMod Series**  
(Corporate and security)

2004 — **WSSL Giga - Span**  
(Series 43, 160'x330')

2006 — **Arabesque S-56 Array**  
(Monterrey, Mexico)

2007 — **WSSL Giga - Span**  
(Series 43, 160'x285')

2008 — **WSSL ClearMod Series**  
(Series 37, 127'x400')

2009 — **WSSL Tent - C - Can**  
(Over surplus sea containers)

2010 — **WSSL Tent - X - Span**  
(For events needing clearspan)

2011 — **WSSL ClearMod Series**  
(130'x225')

2012 — **WSSL Giga - Span**  
(Series 43, 160'x330' & 80'x40')

2014 — **Arabesque S-80 Array**  
(Santa Monica, California)

2016 — **Car Lot Canopy**  
(Alberta Canada)

*Tents for all Reasons...  
Tents for all Seasons.*



CEMEX 100th Anniversary Events 2006 Mexico



Arabesque Stagecovers 56



Super Bowl 2012  
Victory Field, Indianapolis



Nike Training Club Tour,  
Santa Monica 2014



Stoney Trail Mazda,  
Calgary Alberta

50 Years Celebration of  
the Aga Khan Leadership

WSSL 40th Year  
Anniversary

Roundhouse Theatre  
Installed by All Shelter  
Sales & Rentals

Super Bowl 2012 Installed by  
All Shelter Sales & Rentals

Nike Training Club Tour

Weather and Hail Car  
Protect Canopy

Series 37, 127'x400'

The excitement is still in TENTS

## Warner Shelter Systems Limited

Founded in 1970 by Kurt Warner, P.Eng., Warner Shelter Systems Limited, WSSL, has been designing, engineering, manufacturing, and installing award-winning quality tents and fabric-clad portable and semi-permanent structures for over 40 years. WSSL structures are constructed of simple but strong and durable frames with smooth, graceful fire retardant covers. WSSL Structures range in size from 10 to 5,000 sqm. (100 to 50,000 sqft.)



***WSSL has become the supplier of choice for the rental, oil, and gas***

### Clearspan Modular Structures

WSSL Clearspan Modular Structures are built with simple-to-erect interchangeable parts, reducing complexity of inventory, transportation, and setup in the rental, construction, and other industries requiring semi-permanent structures.

### Clearspan Modular (choosing which one)

The process of choosing a structure usually begins with developing an understanding of what is required; of where, how, when, for what, and by whom the structure is to be used. From this knowledge one can determine;

- The size and overall dimensions,
- The environmental issues: wind, rain, snow, temperature
- The internal loads to be supported
- The foundation and ground conditions
- The egress sizes and locations
- The translucency or opacity of the cladding
- The need for insulation and/or heating
- The ventilation whether natural or forced
- The portability of the structure, assembly, disassembly
- The transportation and other issues

With the above site and use specific information, WSSL will determine if an existing structure design will satisfy or if a special design is needed.



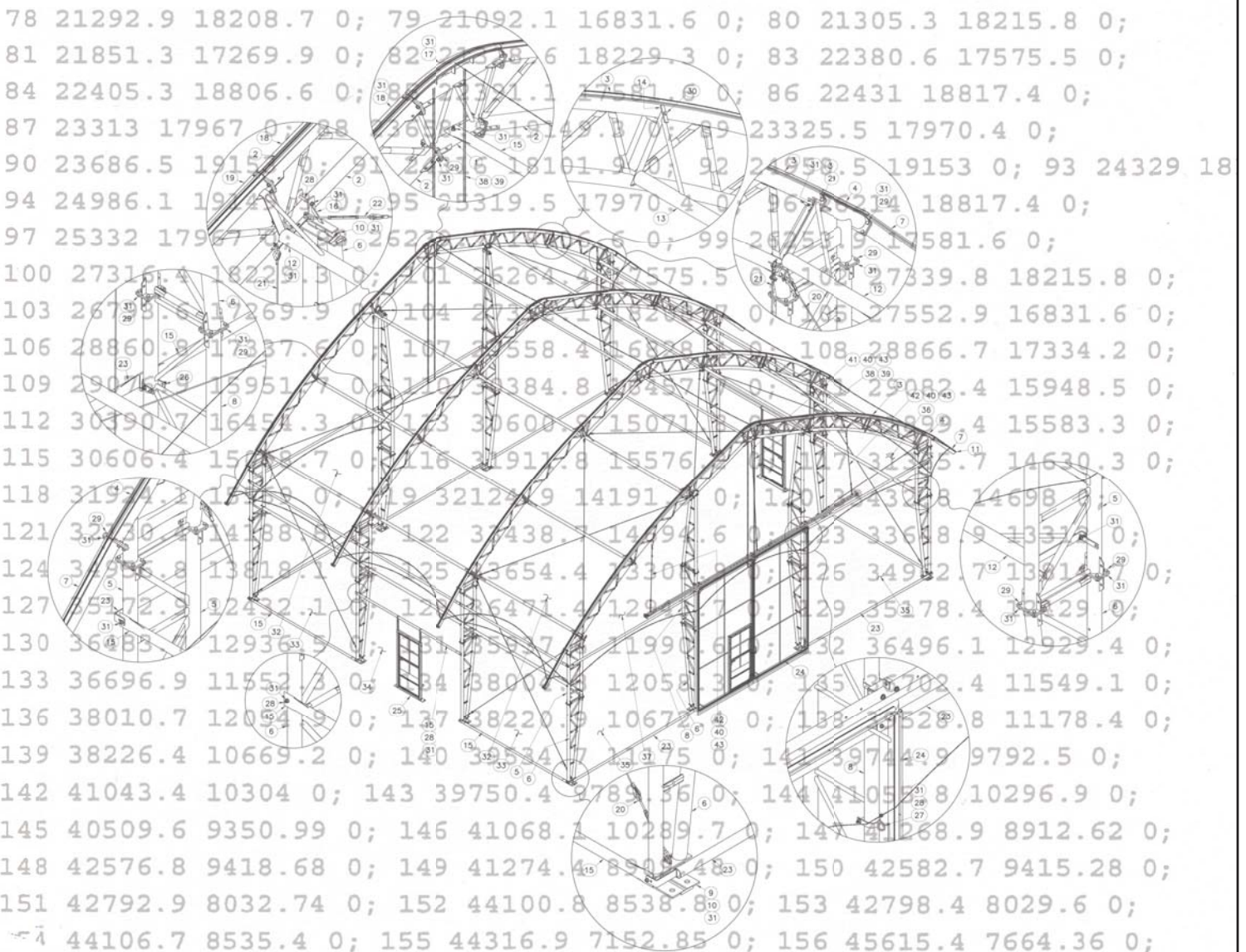
# Engineering of Clearspan Modular Structures

Of course, design must involve engineering at various stages, for macro and micro analyses. WSSL has commissioned **AP Dynamics Inc.** to conduct structural analyses of WSSL Clearspan Modular Structures . Each analysis is performed using **Finite-Element Analysis (FEA)** method, and the loading conditions used are those specified by the **2010 Edition of the National Building Code of Canada, latest international building code, or other code applicable.**

## Site Specific:

The loading conditions on the structure are site specific. Analyses are performed using **STAAD Pro v8i**, an industry standard structural finite analysis program with Code checking capabilities.

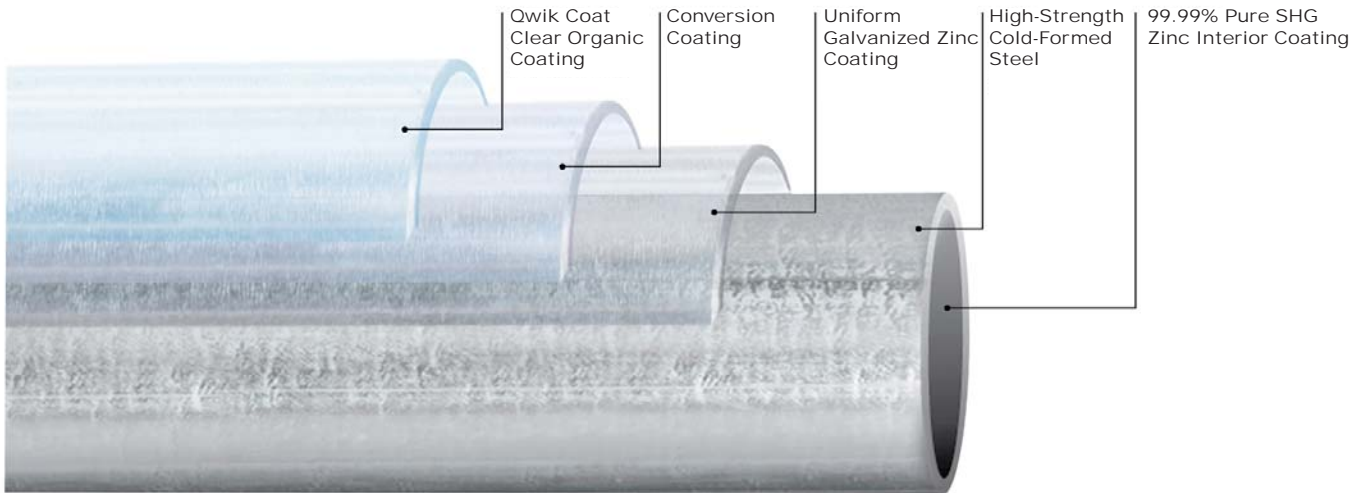
The structure for your project must meet or exceed all applicable municipal, provincial, or national codes.



# WSSL uses High-Strength Structural Steel

## Main Framing material:

Structural Steel tubing is supplied to WSSL by Allied Tubing & Conduit which has one of the most experienced teams of mechanical and application's engineers, technicians, and metallurgists assembled in the industry. With an in-line galvanizing process, the high-strength **50ksiy** tubing supplied directly to WSSL is manufactured to **ASTM A500**. Using Allied Tube patented **Gatorshield** galvanized tubing gives WSSL Giga-span framing superior strength and protection.

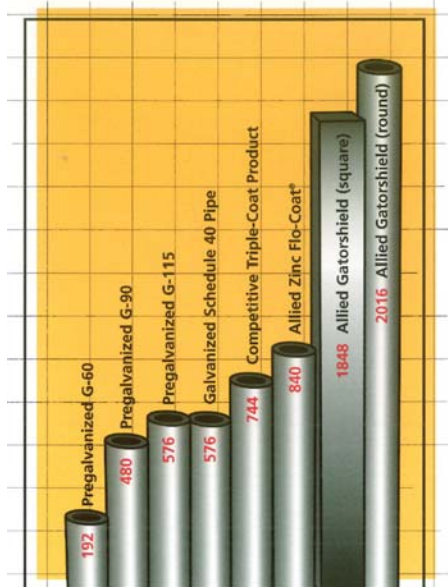


### Corrosion Resistance

Allied's galvanized steel tubing receives a triple-layer of corrosion protection—first, 99.99% pure zinc bonds to the tube, and is followed by a conversion coating. The third coating is a clear organic topcoat which "seals" the surface. The result is a smooth, shiny end product that is unmatched in terms of strength and durability. Allied's tubing resisted rust and corrosion longer than any competitive product in salt spray tests conducted by Scientific Control Labs (see above). For a copy of these test results, contact your local Allied representative.

### Salt Spray Tests - Galvanized Products

(Number of Hours Until First Sign of Red Rust)



Using Allied Tube patented Gatorshield galvanized tubing gives WSSL Clearspan Modular framing superior strength and protection.

### ISO 9002 REGISTRATION

The UL's ISO 9000 Registration Program is designed to evaluate and register facilities to the International Organization for Standardization standards for quality.

The objective of this program is to provide independent assurance of our facilities' capability to consistently provide products, which conform to given specifications. To date, Allied two major manufacturing facilities have been evaluated to these quality standards and registered to ISO 9002.



### RESEARCH & DEVELOPMENT

Allied is committed to continuously improving products and processes. Between six manufacturing facilities, Allied has over 50 engineers and technicians on staff. With numerous new-product introductions and continuous product refinement, the technical development group is a vital part of Allied's success.



# WSSL

## Material Specifications, Fabrics

**Application:** \_\_\_\_\_ for Part # \_\_\_\_\_ Raw Material # 2087

**Description:** Fabric Manufacturer: Herculite

Manufacturer model: Showtime S-83-18

Colour: top: White bottom: White

Fabric Opacity: Opaque ~ 100%

Top coating: .004 White "tent grade" polished

Top vinyl: .0034 Grey opaque weight of  coating or  laminate

Weft scrim material: Polyester Denier: 1000

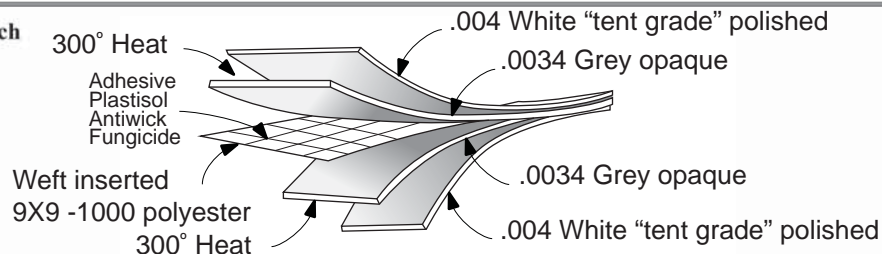
Warp scrim material: Polyester Denier: 1000

Scrim weave: Weft inserted 9X9

.0034 Grey opaque

Bottom vinyl: .004 White weight of  coating or  laminate

**Fabric construction sketch**



### Minimum Specifications:

		Metric /		Imperial
Finished Dimensions:	Width:	1.55 meters	/	61 inches
	Roll length:	91.44 meters	/	100 yds
	Weight:	612 g / sqm	/	18 oz/sqyd ±5%
Strength: (New material)	Tensile	Wrap	204	225
	Fed method #5100.1	Weft/fill	186 daN/5cm /	205 pli ±5%
	Tear	Wrap	24 daN /	54 lbf
	Fed method #5134	Weft/fill	26	58
Flame resistance:	After flame	0 seconds		
	Will meet:	NFPA 701, Small Scale test	Large Scale test	
		ULC S-109-M Cal. State Fire Marshall		
Cold crack: FS191 method 5874 (1/8" Mandrel) passed -40°F				



**Warner Shelter Systems Limited is CSA A660-10 certified to manufacture steel building systems.**



## WSSL Fabrication

### Framing fabrication:

All cutting, bending forming, metal working, welding, finishing and partial assembly proceed in our **CWB Certified** fabrication shop. WSSL is certified to **CSA Standard W47.1** in Division 2. Bases and miscellaneous frame parts are hot dip galvanized or electroplated depending upon the requirement.

Post-fabrication of the pre-galvanized tube trussing, the weld areas are cleaned, zinc rich coating is applied meeting performance required of **ASTM A-780/A780-9** and followed by a clear topcoat to seal the surface.

### Fabric Cladding panel fabrication

All cutting, heat-sealing, sewing, and other processes used in fabricating the fabric clad panels are completed on our unique sheet metal floor. Sample welding seams are tested daily with adjustments made for optimum welding of the fabric seams.

### Insulation and liners:

Bubble foil R5 fiberglass Batt R20 insulation packages available.

### Hardware:

All fasteners, bolts, nuts, turnbuckles, cables, and other hardware are galvanized or otherwise finished to prevent corrosion.

### Doors & Accessories:

Vehicle doors, personnel doors, vents and other accessories can be added to the building.

#### Personnel Doors:



Door double 72" X 80" 11660  
 Double door w/panic bar 72" X 80" 8270

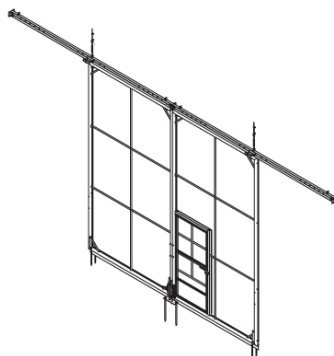


Door single 36" X 80" 9448  
 Door single w/panic bar 36" X 80" 8264



Door steel 3' X 7' w/frame assembly 13106

#### Vehicle Doors:



Vehicle sliding door with mandoor available in 14' X 12', 14' X 14', 14' X 16', & 20' X 20'

#### Door Canopies:



Door Canopy 10'W X 10' L W/mandoor Assembly (14922)

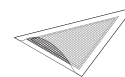


Door canopy 10'W X 5' L (14965)

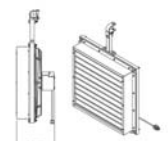
#### Ventilation:



End vents



Roof vent



Fan 24" 5400cfm exhaust End wall power vent

## Testing / Quality Control

All new designs and processes are scrutinized and tested for dimensional tolerances, strength, and frame/cladding assembly issues. WSSL conducts full scale assembly tests on our two acre prototype area. The importance of Quality control is continually emphasized and all are encouraged to suggest improvements.

## Shipping and Logistics

WSSL works through a network of cost-effective and dependable freight companies to ensure timely delivery, whether to Panama, Germany, Taiwan, or Fort McMurray.



## Construction; assembly and erection





The **Mod Clearspan** structures are spacious and strongly built, ideal as either temporary or semi-permanent structures. They are available with 10', 12', 14', 16', 18', or 20' walls with or without windows.

Length can be varied by adding or removing 15' or 20' modules providing a large clearspan interior.

## Features

**PORTABLE** Clearspan Modular Buildings are easy to set up, take down, and relocate.

**CLEARSPAN** Clearspan truss framing provides an unobstructed **INTERIOR** for circumstances that require as much free space as possible.

**EXPANDABLE** Our **Mod Clearspan** structures are expandable by standard 4.5 m (14' - 9") bay spacing. Other bay spacing is available/necessary for different snow/wind loading.

**EFFICIENT** The high ceiling and obstruction-free interior allows you to make efficient use of the space. Straight walls are removable to allow for natural ventilation.

## STRONG AND RENTAL TOUGH

### Specifications

**ROOF** Shaped for cover stability.  
Mildew and rot resistant.  
Roof panels easy to install or remove after frame is erected.  
White or colours, translucent or opaque.  
Fire retardant; satisfies ULC-S109 for National Building Code, also NFPA 701 large scale, California Fire Marshal.  
Constructed of 19 oz., (290 pli) vinyl polyester.

**SIDEWALLS** Plain or with vinyl windows.  
Sidewall heights of 10', 12', 14', 16', 18', and 20'.  
Same fabric material as roof.  
Wall panels easy to install and remove.

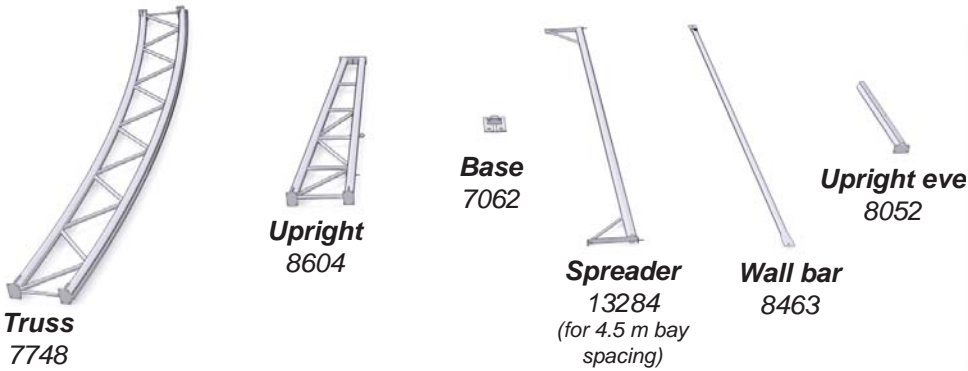
**CARRY BAGS** Supplied with each cover with convenient handles for lifting.

**FRAME** Structural steel tube truss, 55000 psi yield.  
 Aluminum track for attaching fabric roof panels.  
 Galvanized or otherwise rust resistant.

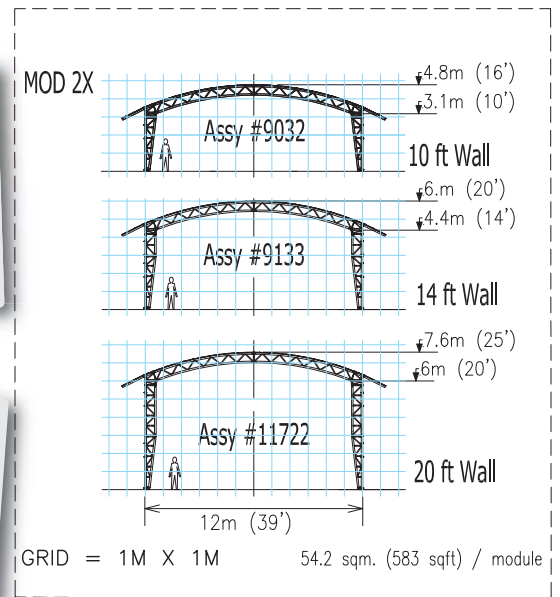
**ASSEMBLY** Frame arches assembled and tipped up.  
 Bases can be positioned and bolted in place beforehand.  
 Arches secured with fixed length spreaders.  
 Roof panels installed after frame is complete.  
 Wall panels installed/removed separately from roof panels.

**HARDWARE** All galvanized or otherwise rust resistant.  
 Grade 8 bolts.

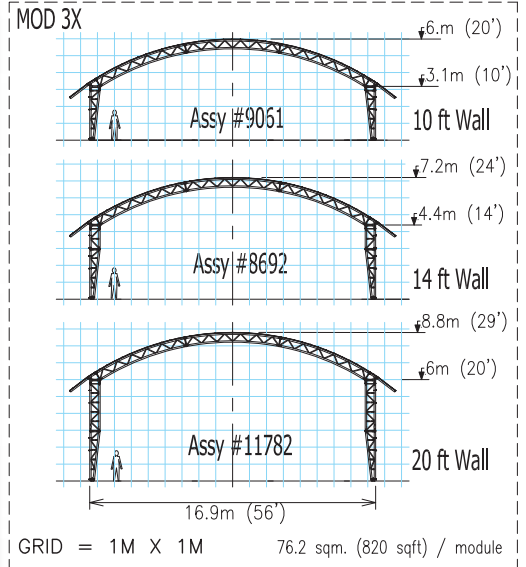
**INTERCHANGEABLE PARTS** Our **Mod Clearspan Structures** share trusses, uprights, bases, spreaders, wall bars, and upright eave to reduce parts inventory.



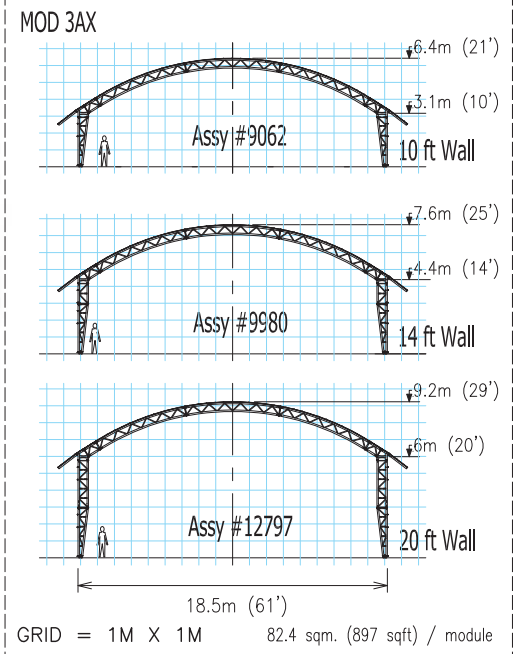
## MOD 2X



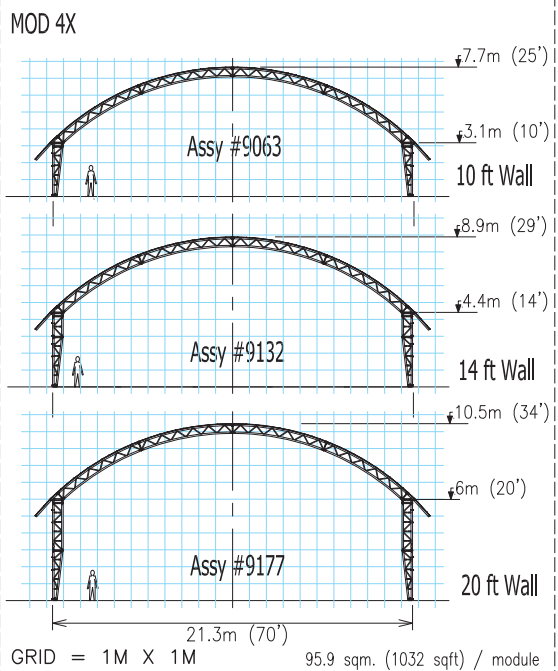
# MOD 3X



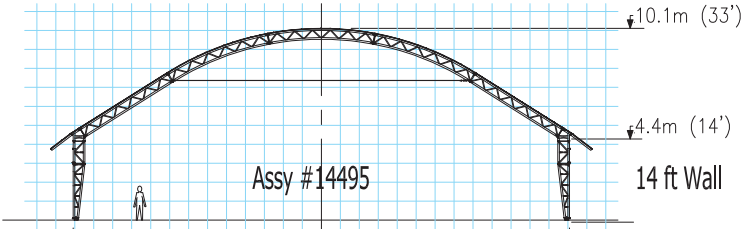
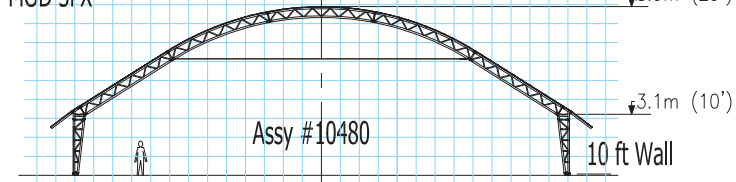
# MOD 3AX



# MOD 4X



MOD 3FX

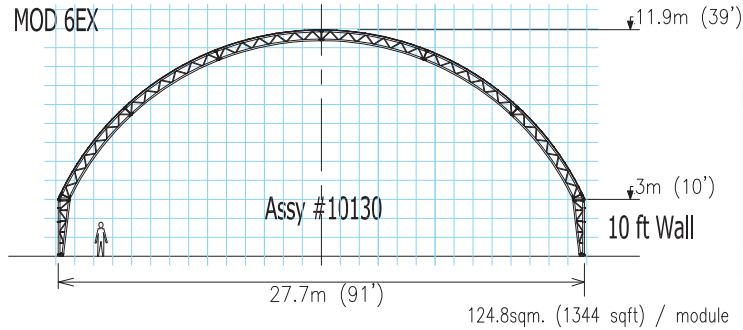
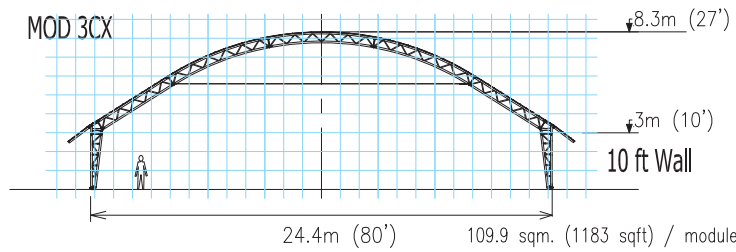


GRID = 1M X 1M    26.2m (86')    117.7 sqm. (1286 sqft) / module

MOD 3FX



MOD 3CX

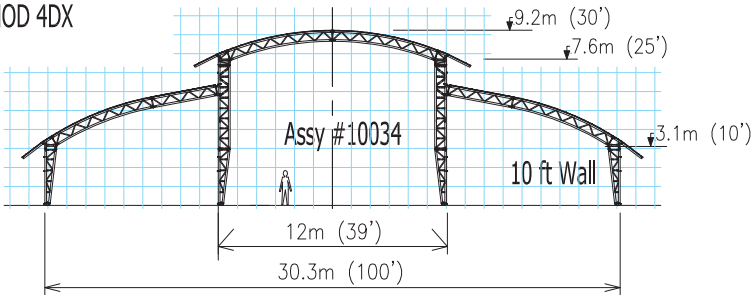


24.4m (80')    109.9 sqm. (1183 sqft) / module  
27.7m (91')    124.8sqm. (1344 sqft) / module

MOD 3CX  
MOD 6EX

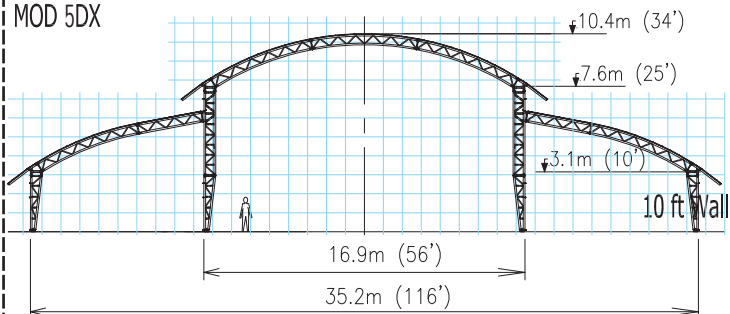


MOD 4DX



GRID = 1M X 1M    136.5 sqm. (1469 sqft) / module

MOD 5DX

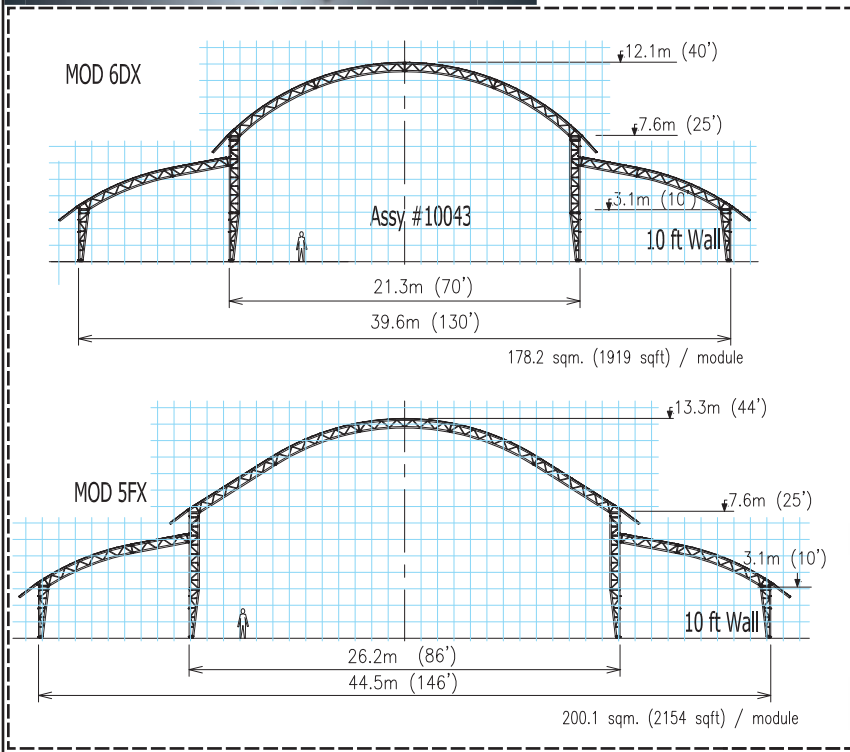


16.9m (56')    35.2m (116')  
158.25 sqm. (1706 sqft) / module

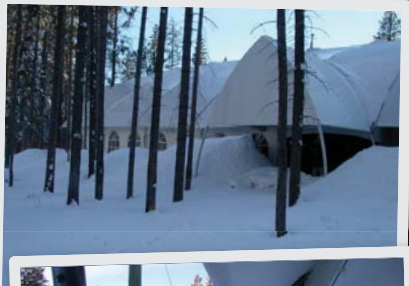
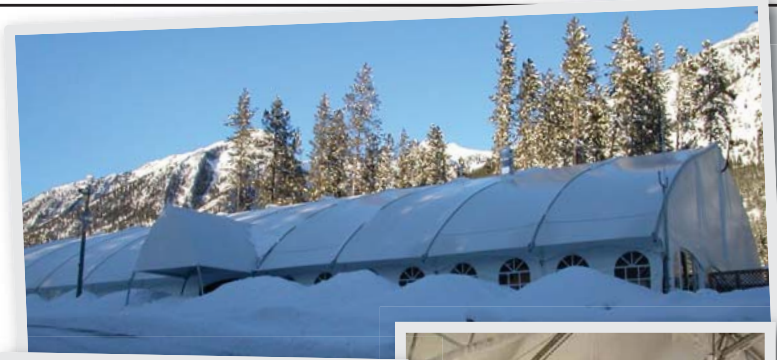
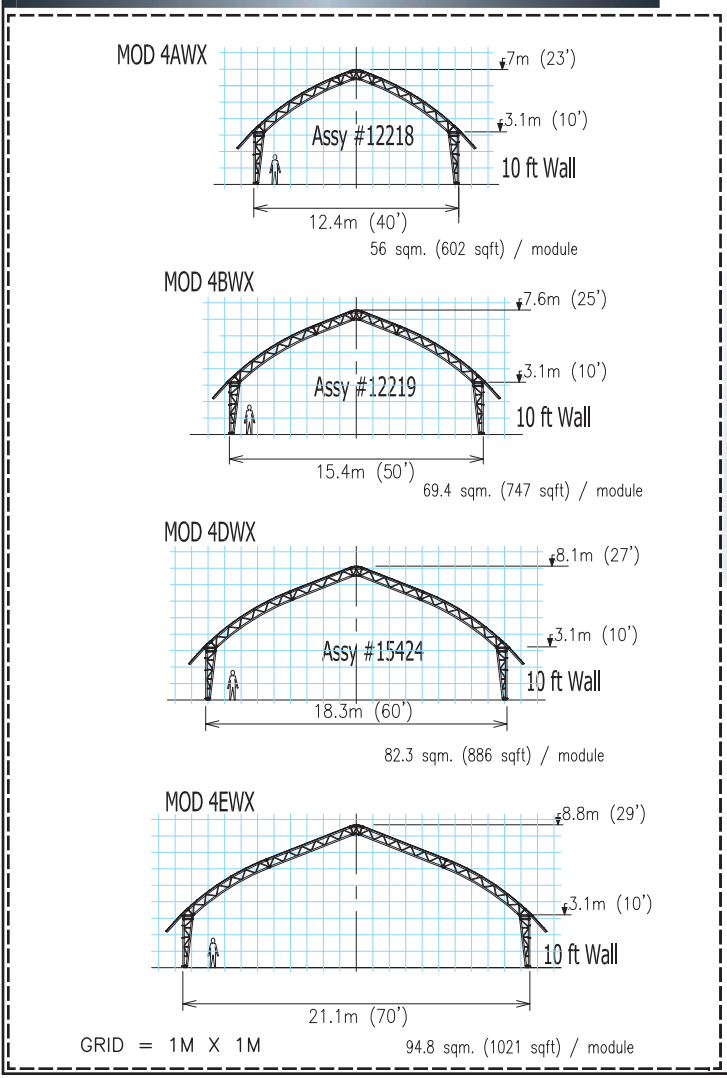
MOD 4DX, 5DX,

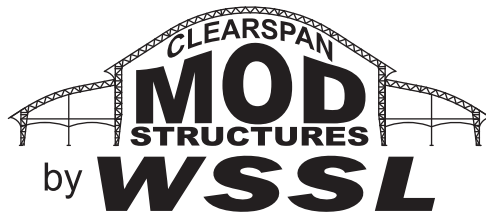


# MOD 6DX, 5FX



# MOD WINTER STYLE





The Head Office for Warner Shelter Systems Limited is located in Calgary, Alberta, Canada - home of the Calgary Stampede and host city for the 1988 Winter Olympics. Here, in the foothills of the Rocky Mountains, some of the most dramatic weather conditions exist, making it an ideal location for research and development of our fabric-clad structures.

Founded in 1970 by Kurt Warner, P.Eng., WSSL has designed and manufactured quality award winning tents and fabric clad portable and semi-permanent structures for over 42 years. Warner Shelter Systems Structures are constructed of simple but durable frames with smooth, graceful fire retardant covers.

The Warner structures range from 100 to 100,000 sq. ft.






**STRUCTURES GUARANTEE**




The architectural membrane, structural steel, and/or aluminum framing materials used in WSSL Structures have been selected for their proven strength, durability, and longevity. To show sincere confidence in our products, WSSL is pleased to issue the following guarantee:

**MEMBRANE FABRIC COMPONENTS**  
 All WSSL Structure fabrics are fire retardant: our suppliers warrantee that their fabrics satisfy and meets the requirements of CPA1 84, ULC-S-109, NFPA-701, and California State Fire Marshal. The fabrics contain inhibitors to resist mildew and ultraviolet degradation. Other additives help with stand extreme climatic variations. WSSL, on a pro-rata basis at current price, will replace fabric components which have deteriorated from any of the aforementioned factors within **SEVEN YEARS** or regular from date of delivery of the structure(s). Due diligence during setup, takedown, and cleaning will extend the anticipated fabric life.

**STRUCTURAL STEEL AND ALUMINUM COMPONENTS**  
 All structural steel and aluminum used in WSSL structure components are of the highest structural quality. The frame components are designed and engineered for their intended use.

This guarantee applies to the original purchaser of the structure.

  
**Kurt E. Warner, President**





## Other WSSL tents & structures



## Warner Shelter Systems Limited

*Tents and Fabric-Clad Structures*  
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