STAGELINE®

RENTAL DIVISION - DIVISION LOCATION

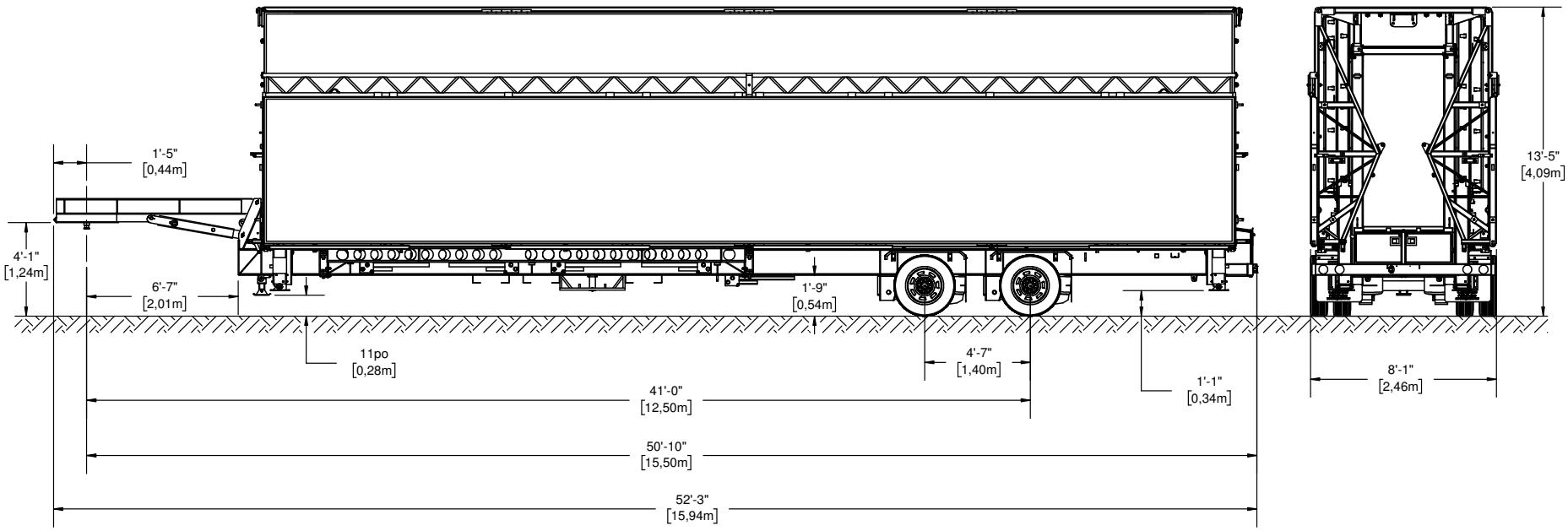
SL320

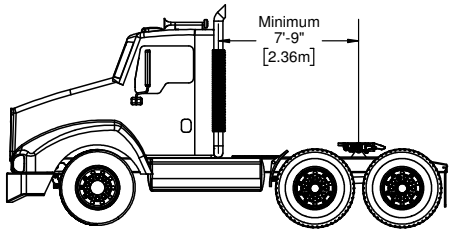
TECHNICAL DRAWINGS

2020

SL320

MASS & DIMENSIONS





Mass SL320	Unladen		Standard Equipment		Maximum Capacity	
	Lbs	Kg	Lbs	Kg	Lbs	Kg
Total Mass	38890	17640	44864	20350	50000	22680
Mass on Axles	28418	12890	32805	14880	34000	15422
Mass on Hitch	10472	4750	12059	5470	-	-

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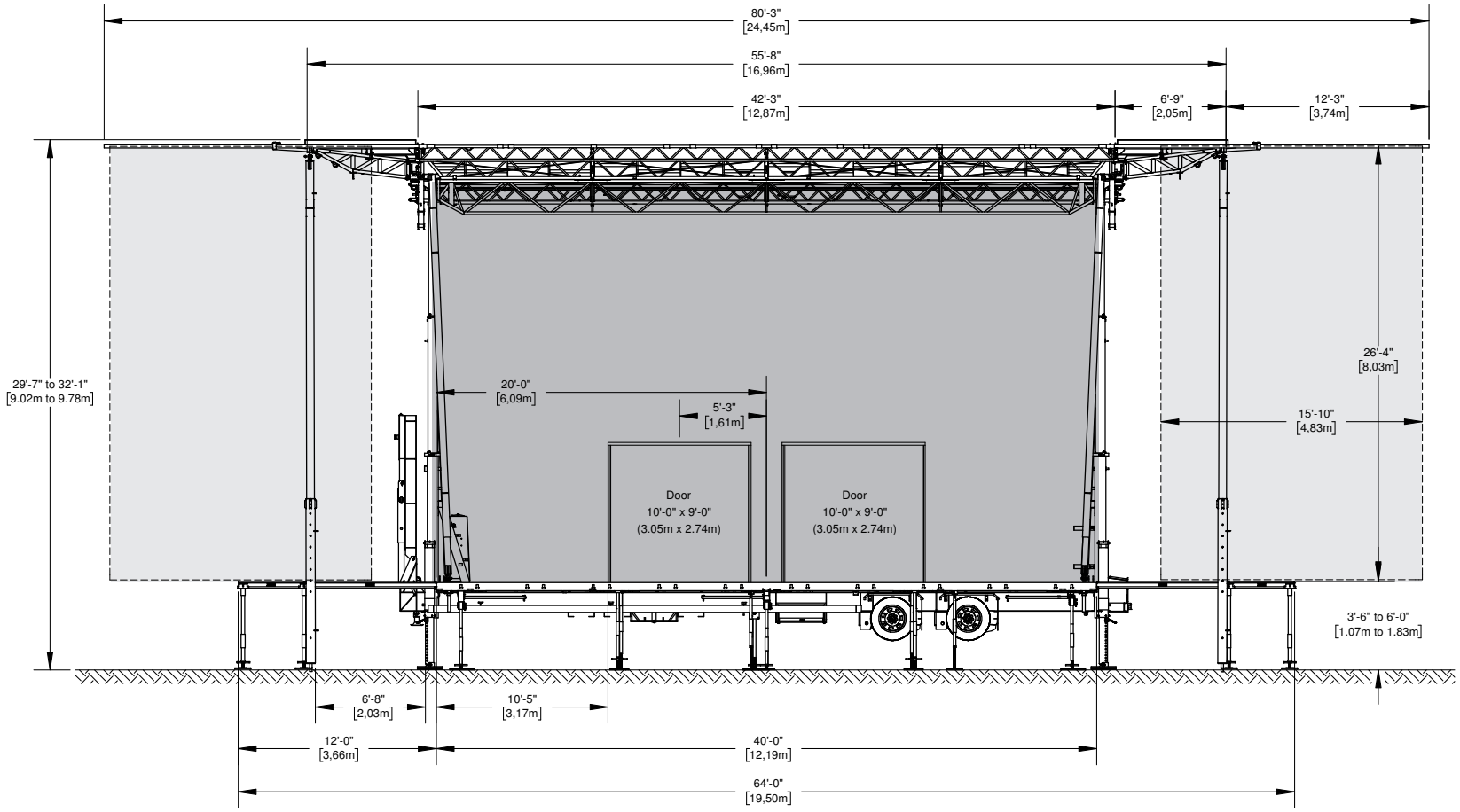
SL320

FRONT VIEW



WINDWALL

BANNER (For dimensions, please refer to Banner Book)

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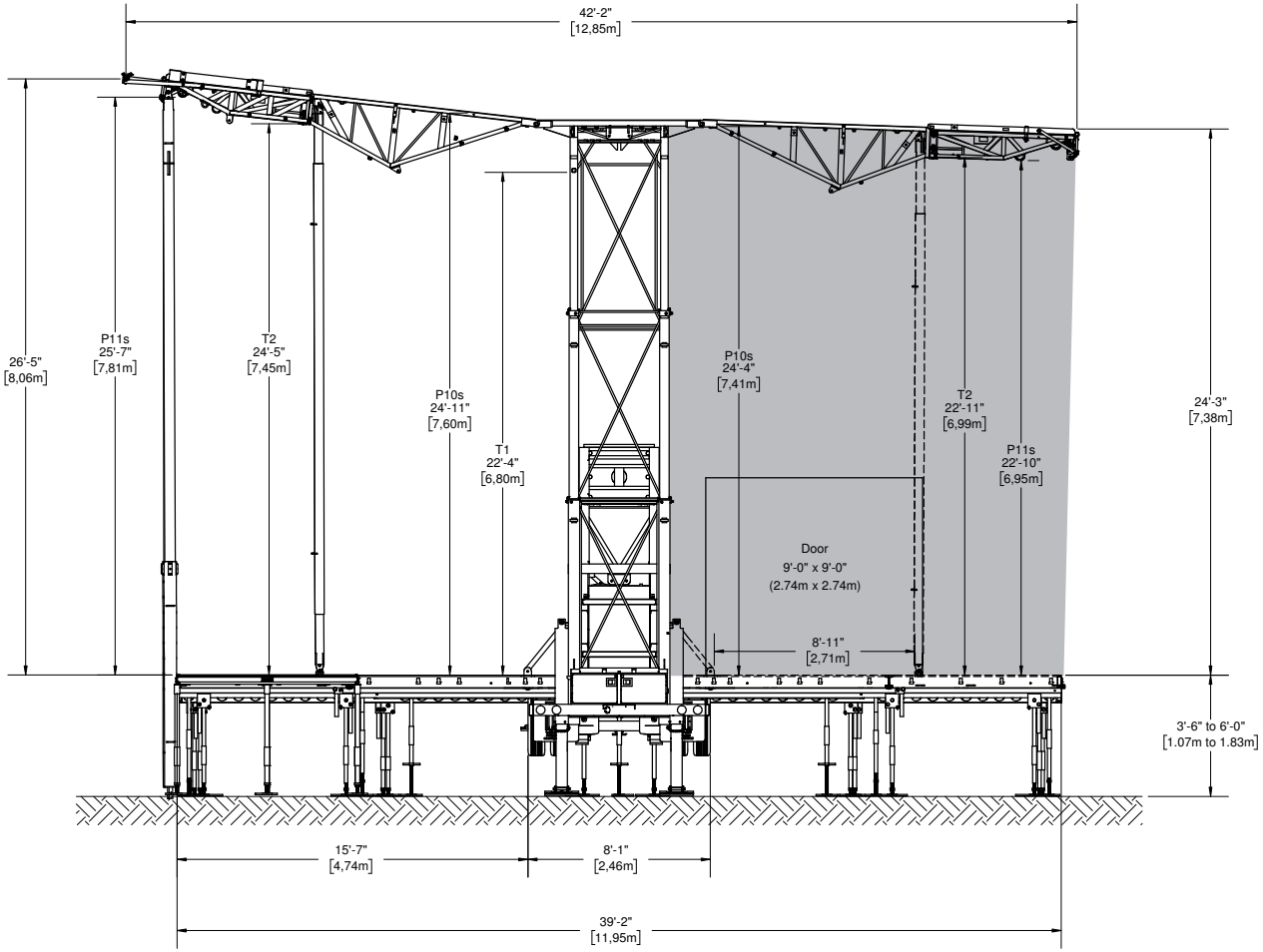
SIDE VIEW



WINDWALL

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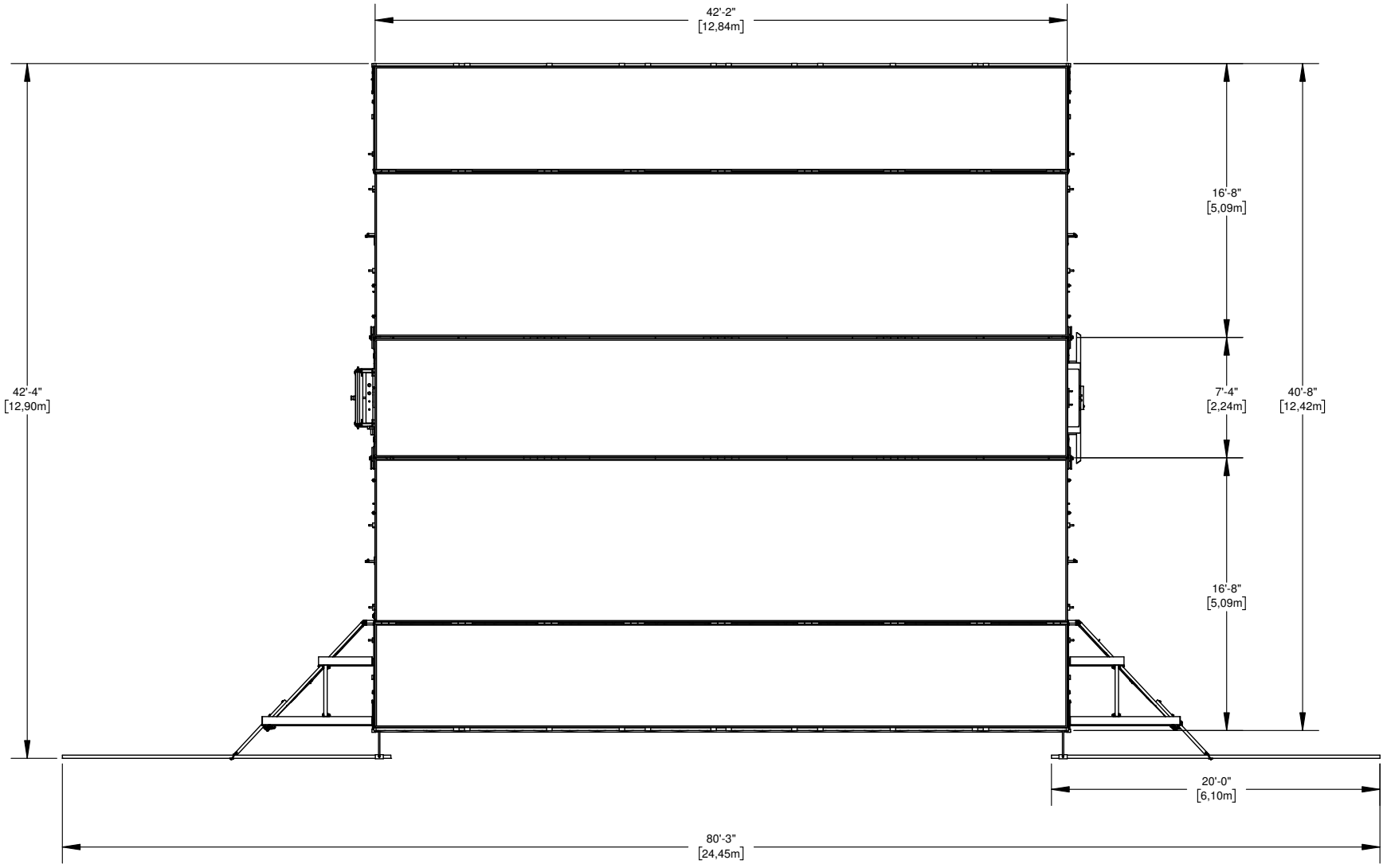
ROOF VIEW



DOWNSTAGE

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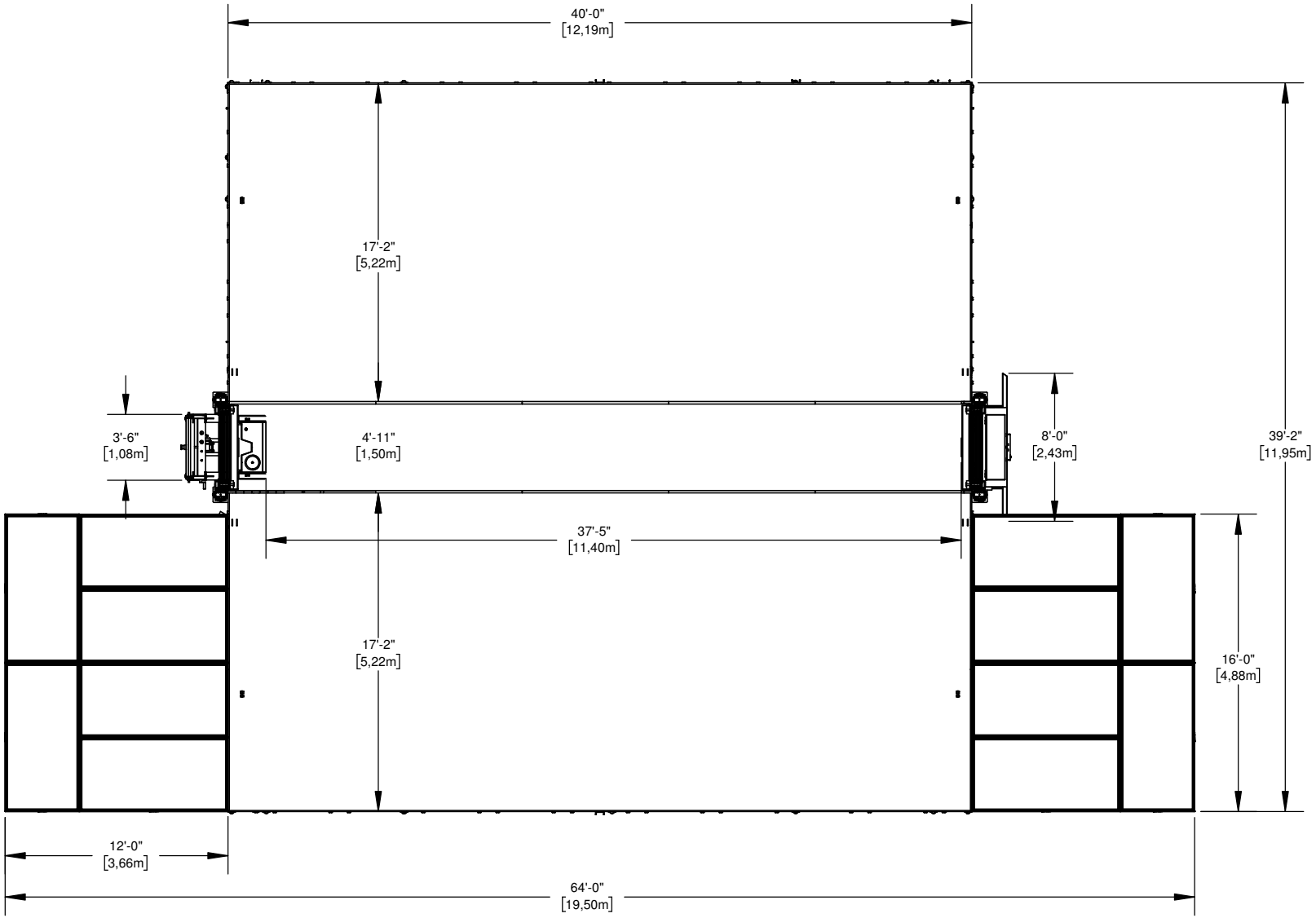
FLOOR VIEW



DOWNSTAGE

CAPACITY: 100lbs/ft² (490kg/m²)

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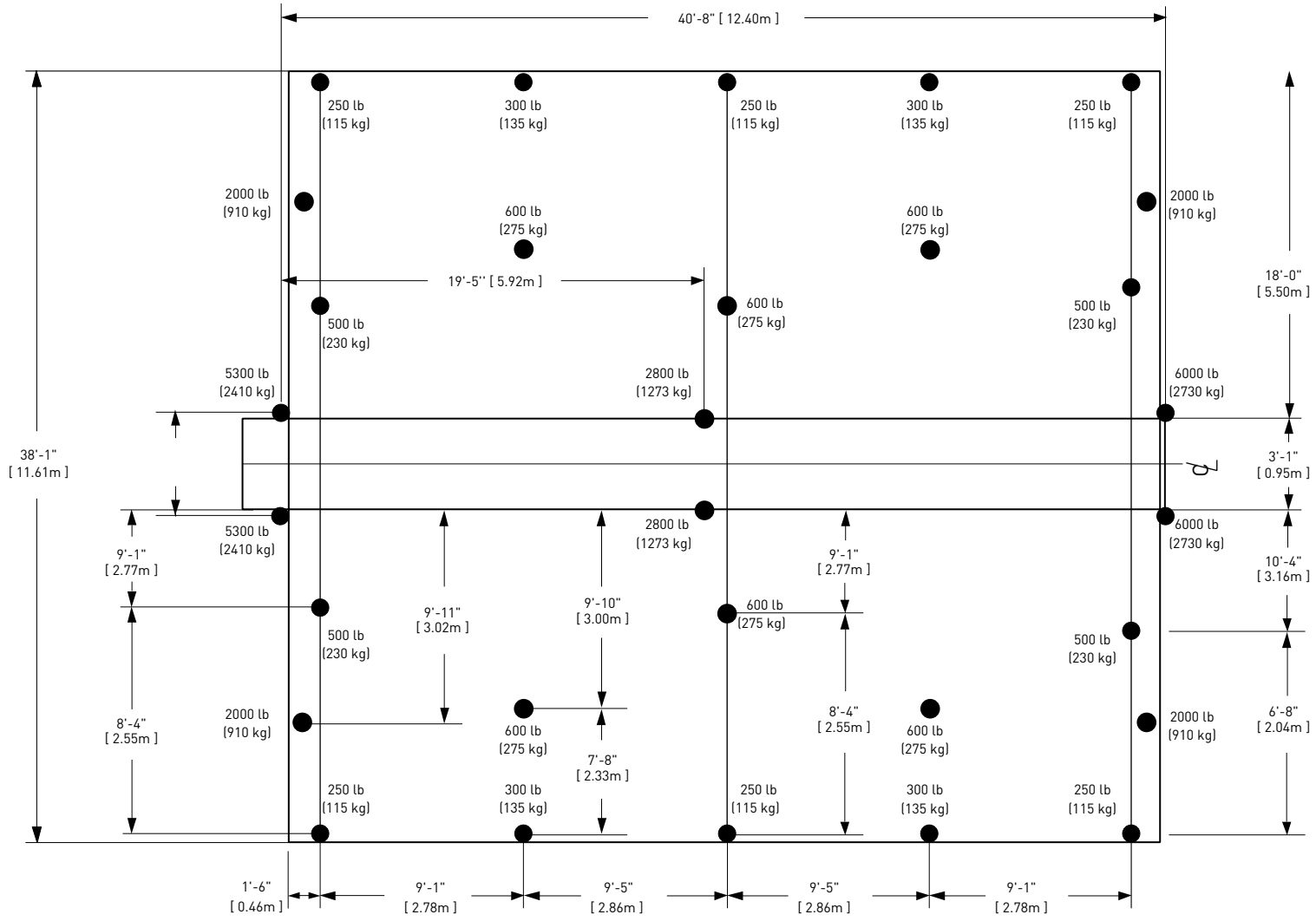

DOWNSTAGE

● FLOOR STABILIZERS, EXTENSIONS AND LEVELLING JACKS

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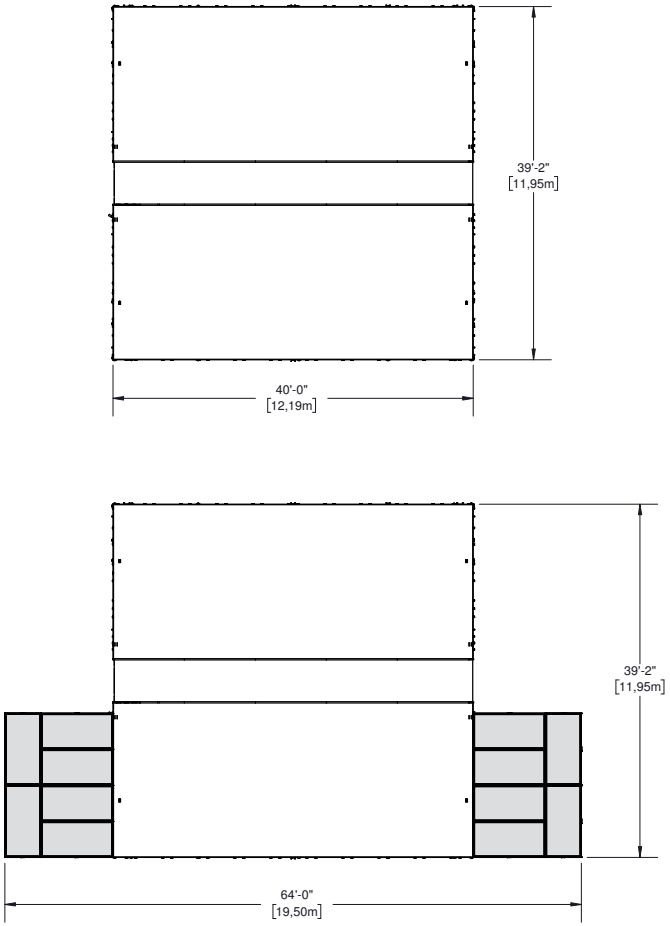
STANDARD CONFIGURATIONS



PLATFORM

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A THOROUGH UNDERSTANDING OF THE INTER-RELATED LOADINGS SHOWN IN THIS RIGGING PLAN IS NEEDED IN ORDER TO SAFELY USE THIS MOBILE STAGE ROOF AND TAKE FULL ADVANTAGE OF THE MANY RIGGING OPPORTUNITIES IT OFFERS.

This mobile stage roof offers a variety of rigging options with regard to load capacity, placement and type.

There are rigging pipes, trusses, roof rigging points and side overhang rigging beams.

This rigging plan locates and defines these rigging features, includes load capacity for each and describes maximum combinations of loads amongst features.

Take note of exclusions, maximum sub-totals in a group, load balance requirements, maximum lifting capacity of roof and maximum rigging load on roof.

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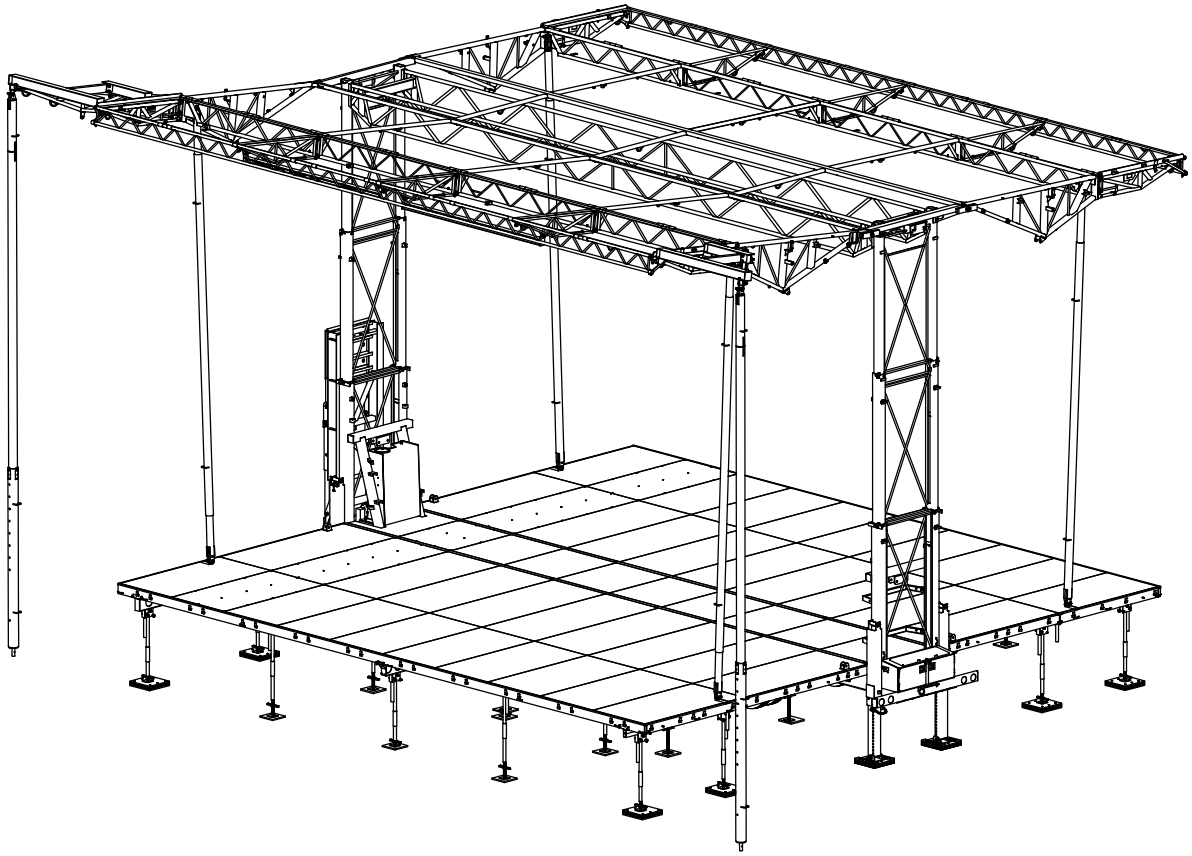

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RIGGING RESTRICTIONS:

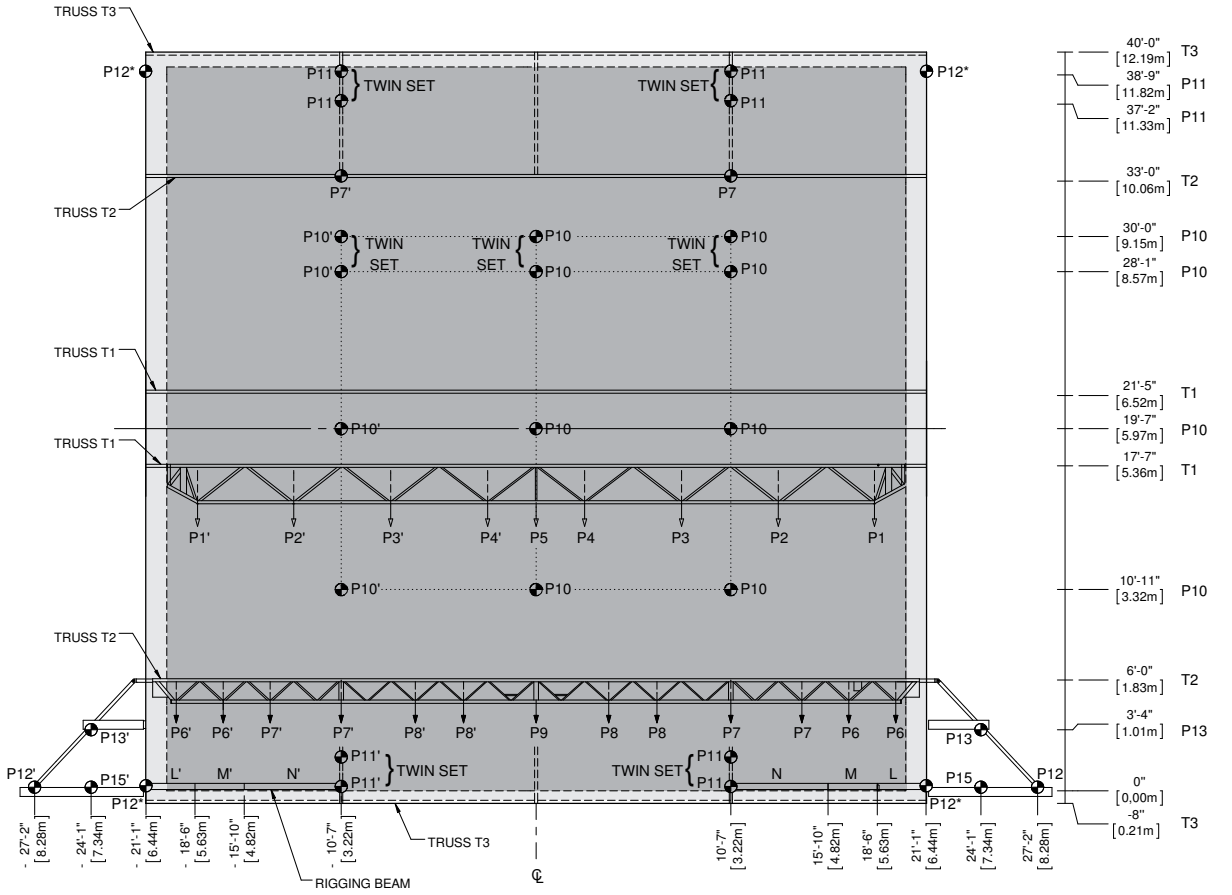
- MAXIMUM LOAD BEARING CAPACITY: 16 000 lb (7 257 kg). All corner posts must be installed and pinned, and telescopic columns pinned and secured.
- Once corner posts and sound wing posts are installed, total load of P12s to P15 and zones L, M and N must not exceed 3000 lb (1360 kg) when banners are installed. Capacity can be increased to 4000 lb (1814 kg) when banners are not installed.
- Do not rig on T3 trusses.
- Capacity of downstage P12* must take into account loads of points P13 to P15 and zones L, M and N.
- Capacity of T1 and T2 trusses must take into account loads on rigging beams.
- Do not load more than 1000 lb (454 kg) on each twin set of P10 in upstage roof panel.
- Do not load more than 500 lb (227 kg) on each twin set of P11.
- Do not load P11s when upstage windwalls are installed.
- On any given beam, only one rigging point may be used at a time, i.e. it is not allowed to rig multiple points simultaneously.
- Upstage P12*s cannot exceed 1000 lb (454 kg) when windwalls are installed.

LIFTING RESTRICTIONS

- MAXIMUM LIFTING CAPACITY IS 2000 lb (907 kg).
- Maximum asymmetric load difference between front and rear of stage is 1200 lb (544 kg). This includes loads on T1 trusses.
- Load must be symmetrically distributed between right and left side of stage.

NOTES:

Outside square tube rigging bar for lower chord of all trusses is 2'' (5 cm).



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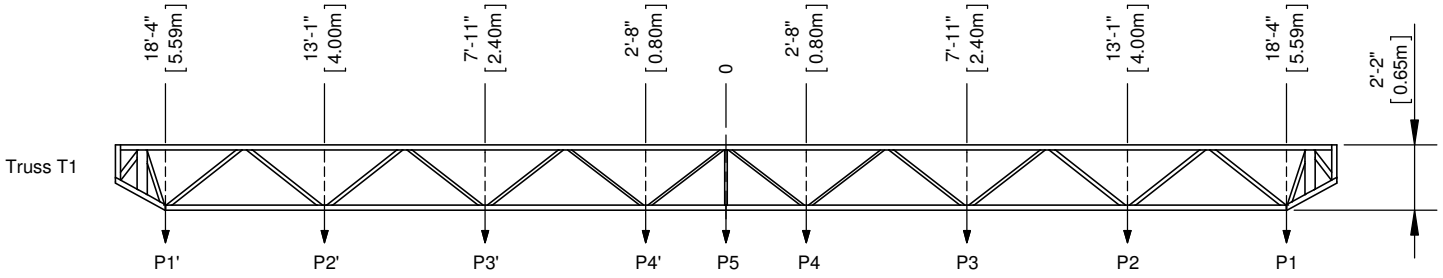
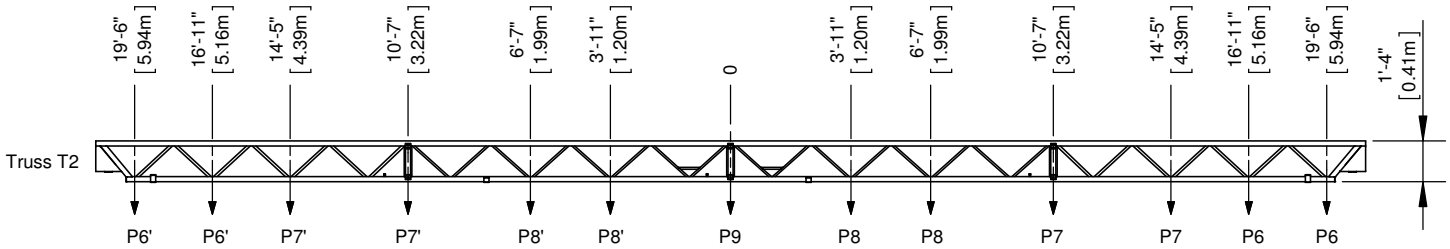


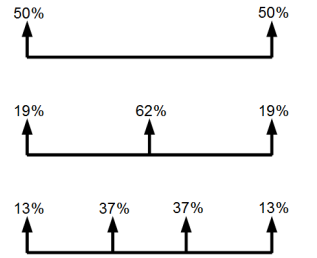
$$\textit{Truss T1}^{**}: \frac{\text{Load } \textbf{P1}}{\text{Capacity } \textbf{P1}} + \frac{\text{Load } \textbf{P2}}{\text{Capacity } \textbf{P2}} + \frac{\text{Load } \textbf{P3}}{\text{Capacity } \textbf{P3}} + \frac{\text{Load } \textbf{P4}}{\text{Capacity } \textbf{P4}} + \frac{\text{Load } \textbf{P5}}{\text{Capacity } \textbf{P5}} \leq 1.00$$



$$\textit{Truss T2}^{**}: \frac{\text{Load } \textbf{P6}}{\text{Capacity } \textbf{P6}} + \frac{\text{Load } \textbf{P7}}{\text{Capacity } \textbf{P7}} + \frac{\text{Load } \textbf{P8}}{\text{Capacity } \textbf{P8}} + \frac{\text{Load } \textbf{P9}}{\text{Capacity } \textbf{P9}} \leq 1.00$$

MAXIMUM LOAD CAPACITY					
Point No.	Lbs	Kg	Point No.	Lbs	Kg
P1, P2	1500	680	P11	500	227
P3	1200	544	P12, P12 *	2000	907
P4, P5	700	318	P13	1000	454
P6	1000	454	P15	4000	1815
P7	650	295	Zone L	2000	907
P8, P9	400	182	Zone M	1000	454
P10	1000	454	Zone N	500	227

UDL CHART



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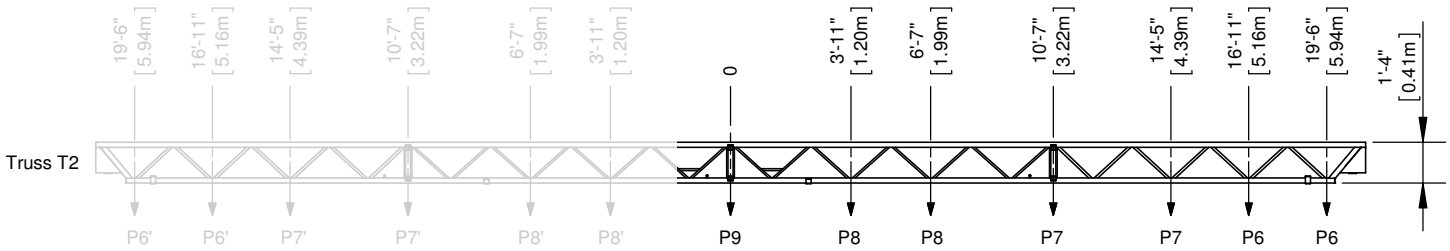
WHEN CALCULATING THE LOAD ON A SL320 TRUSS, USE FOLLOWING METHOD.

Each truss in the roof must be visualized as 2 trusses put together that share a center point.

Example: T2 on a SL320.
Points from left to right are P6', P7', P8', P9, P8, P7, P6. We will only verify loads on 1 side of the truss, Meaning P6 thru P9.



CALCULATION EXAMPLE #1:

1 lighting truss on 2 motors, total uniformly distributed weight of the truss is 1500lbs.
Each motor will be hung from the P6 points.

- 0.50 x 1500 (50% of weight, see UDL chart) / 1000 (the capacity of the P6 on the T2 truss) = 0.75
- 0.75 = 75 %, as 1.00 would equal 100 %.

So the T2 truss is at 75 % of its total capacity.

CALCULATION EXAMPLE #2:

1 lighting truss on 3 motors, total uniformly distributed weight of the truss is 1500lbs.
The motors will be hung from P6', P9, P6.

- **P6**
  0.19 x 1500 (19% of weight, see UDL chart) / 1000 (capacity P6) = 0.29, so this one point will use 29 % of the truss capacity.
- **P9**
  0.62 x 1500 (62% of weight, see UDL chart) / 400 (capacity P9) = 2.33, 233 % of truss capacity.

Now that we have the loads for both points, we add them together to determine the total load on the truss.

0.29 + 2.33 = 2.62
So the T2 truss is at 262 % of its total capacity.

CALCULATION EXAMPLE #3:

1 lighting truss on 2 motors, total uniformly distributed weight of the truss is 1200lbs. The motors will be hung from L' and L on the downstage rigging beam. Also, a 3000lbs line array will be rigged at each P15 point.

- **L**
  0.50 x 1200 (50% of truss weight on right side) = 600lbs.
  0.75 x 600 (75% of weight on stage right P12*) = 450lbs.
  0.25 x 600 (25% of weight on stage right P11) = 150lbs.
- **P15**
  0.50 x 3000 (50% of weight on stage right P12*) = 1500lbs

Now that we have the loads for both points, we add them together to determine total load on P12*.

(450 + 1500)/2000 (P12* capacity) = 0.98
So the P12* point is at 98 % of its total capacity.

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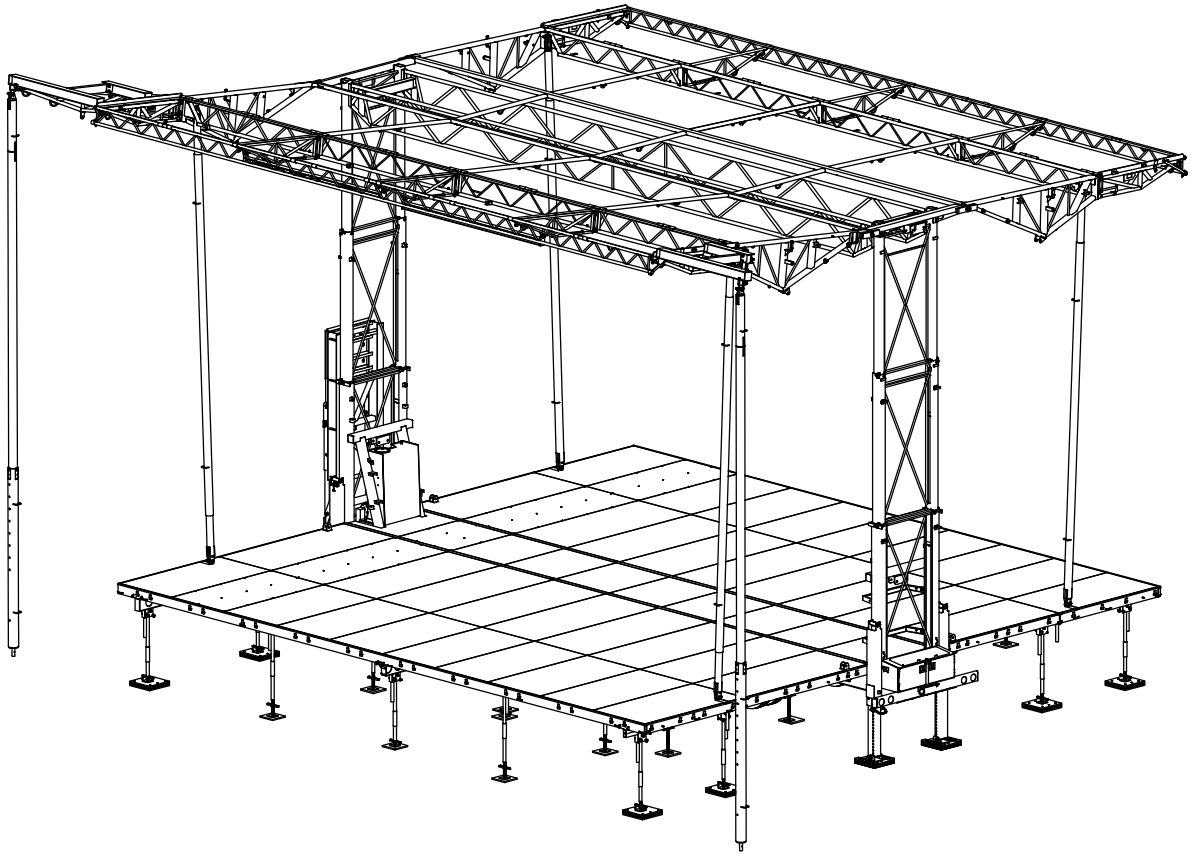

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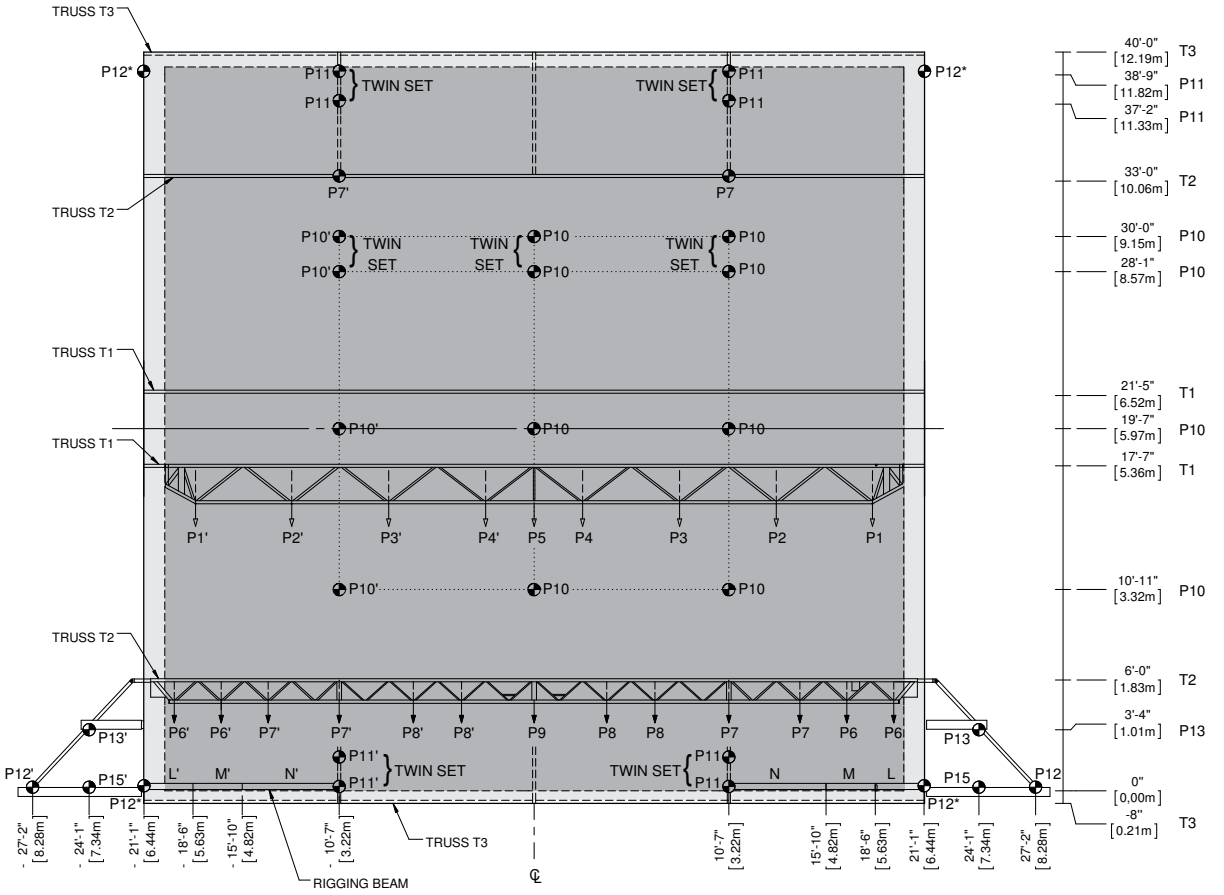

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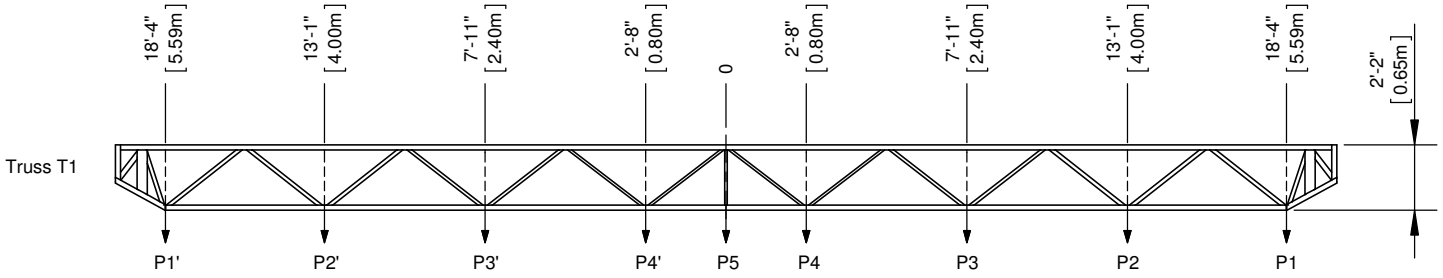

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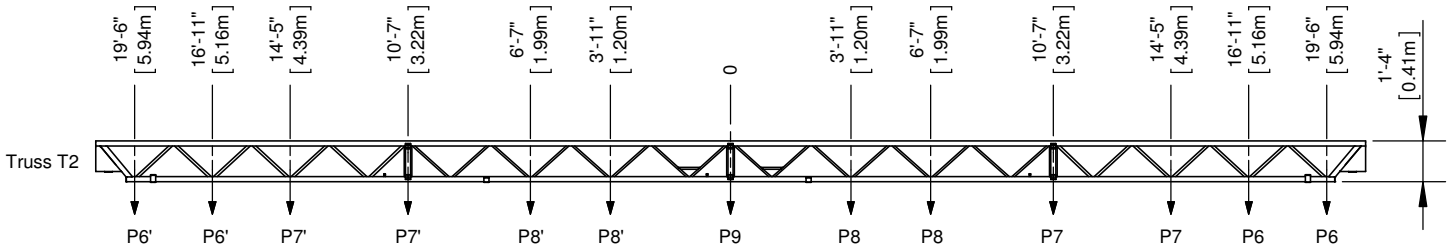

Truss T2**: $\frac{\text{Load } \mathbf{P6}}{\text{Capacity } \mathbf{P6}} + \frac{\text{Load } \mathbf{P7}}{\text{Capacity } \mathbf{P7}} + \frac{\text{Load } \mathbf{P8}}{\text{Capacity } \mathbf{P8}} + \frac{\text{Load } \mathbf{P9}}{\text{Capacity } \mathbf{P9}} \leq 1.00$

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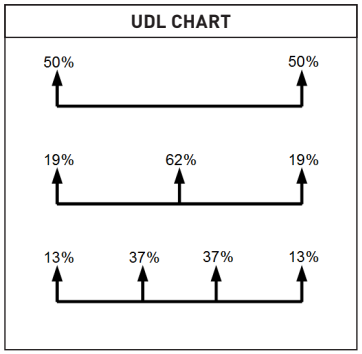

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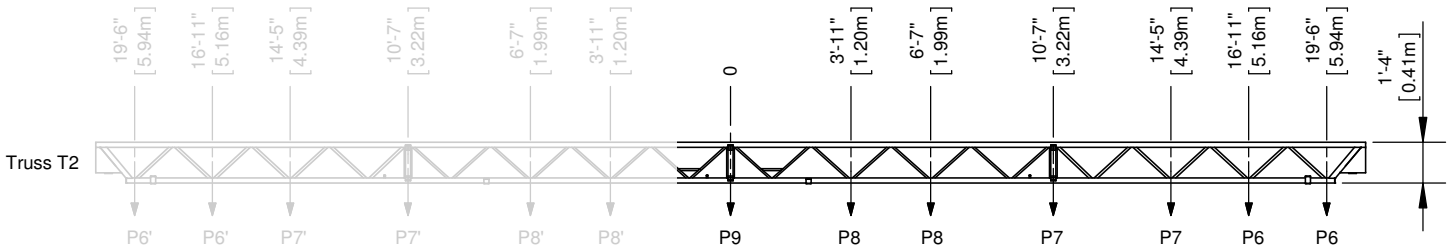

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CALCULATION EXAMPLE #2:

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So the T2 truss is at 262 % of its total capacity.

CALCULATION EXAMPLE #3:

1 lighting truss on 2 motors, total uniformly distributed weight of the truss is 1200lbs. The motors will be hung from L' and L on the downstage rigging beam. Also, a 3000lbs line array will be rigged at each P15 point.

- **L**
  0.50 x 1200 (50% of truss weight on right side) = 600lbs.
  0.75 x 600 (75% of weight on stage right P12*) = 450lbs.
  0.25 x 600 (25% of weight on stage right P11) = 150lbs.
- **P15**
  0.50 x 3000 (50% of weight on stage right P12*) = 1500lbs

Now that we have the loads for both points, we add them together to determine total load on P12*.

(450 + 1500)/2000 (P12* capacity) = 0.98
So the P12* point is at 98 % of its total capacity.

Drawings may show stage equipped with optional accessories. May be sold separately.

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