AASHTOWare Prestress Design Tool

AASHTOWare Design and Rating Bridge
User Group Meeting
Kansas City, KS – August 2017

Prestress Design Tool

- Capabilities
- Features
- Creating Templates
- Live Demo
- Future Enhancements
- Questions

Capabilities

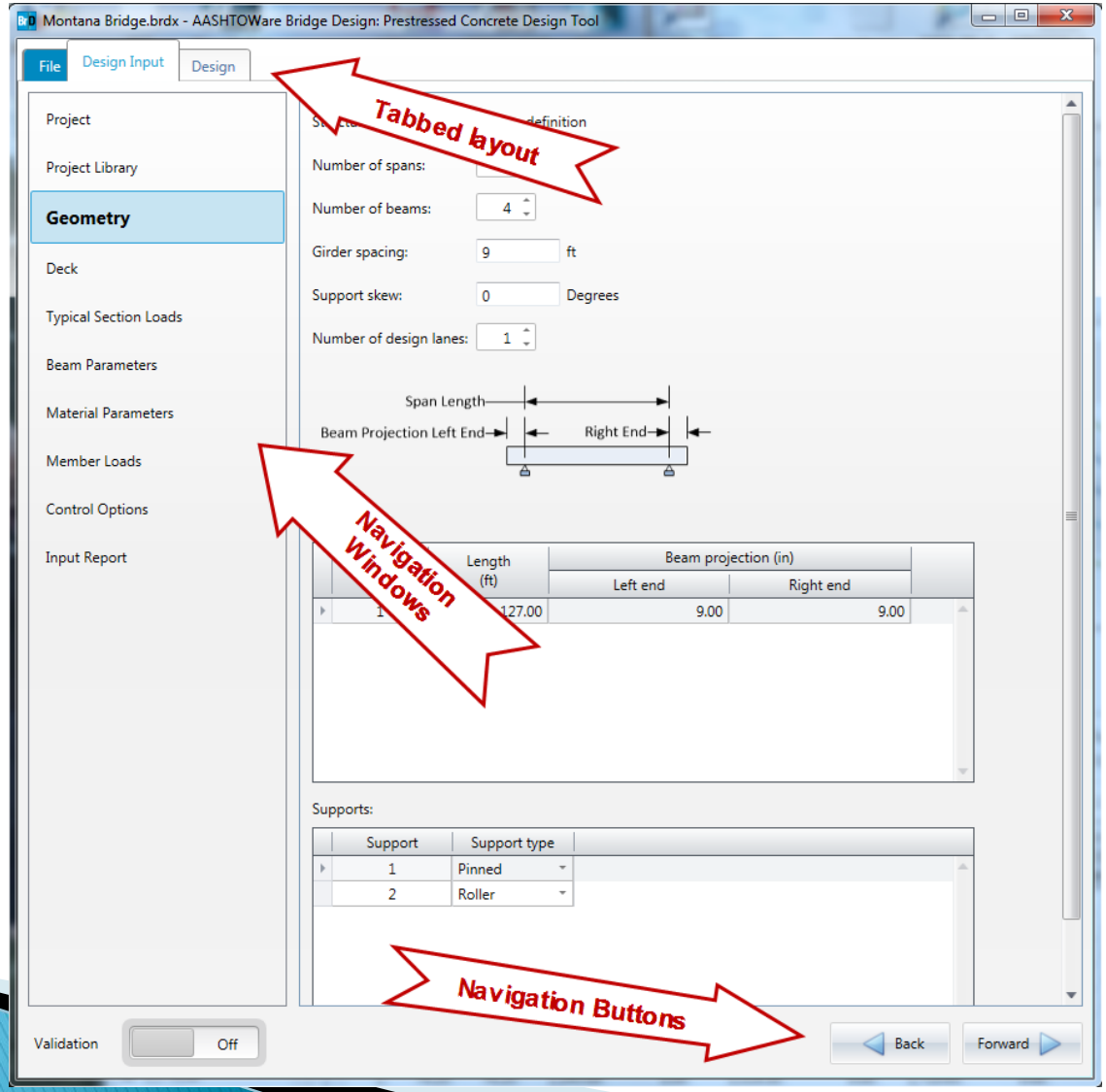
- I Beams
- Box Beams
- Double Stem T Beams
- Simple Span or Continuous for Live
- Harped or Straight/Debonded Strands

Capabilities

- Uses Modernized Finite Element Engine
- Stand Alone (no database required)
- Can Import Models into BrDR database

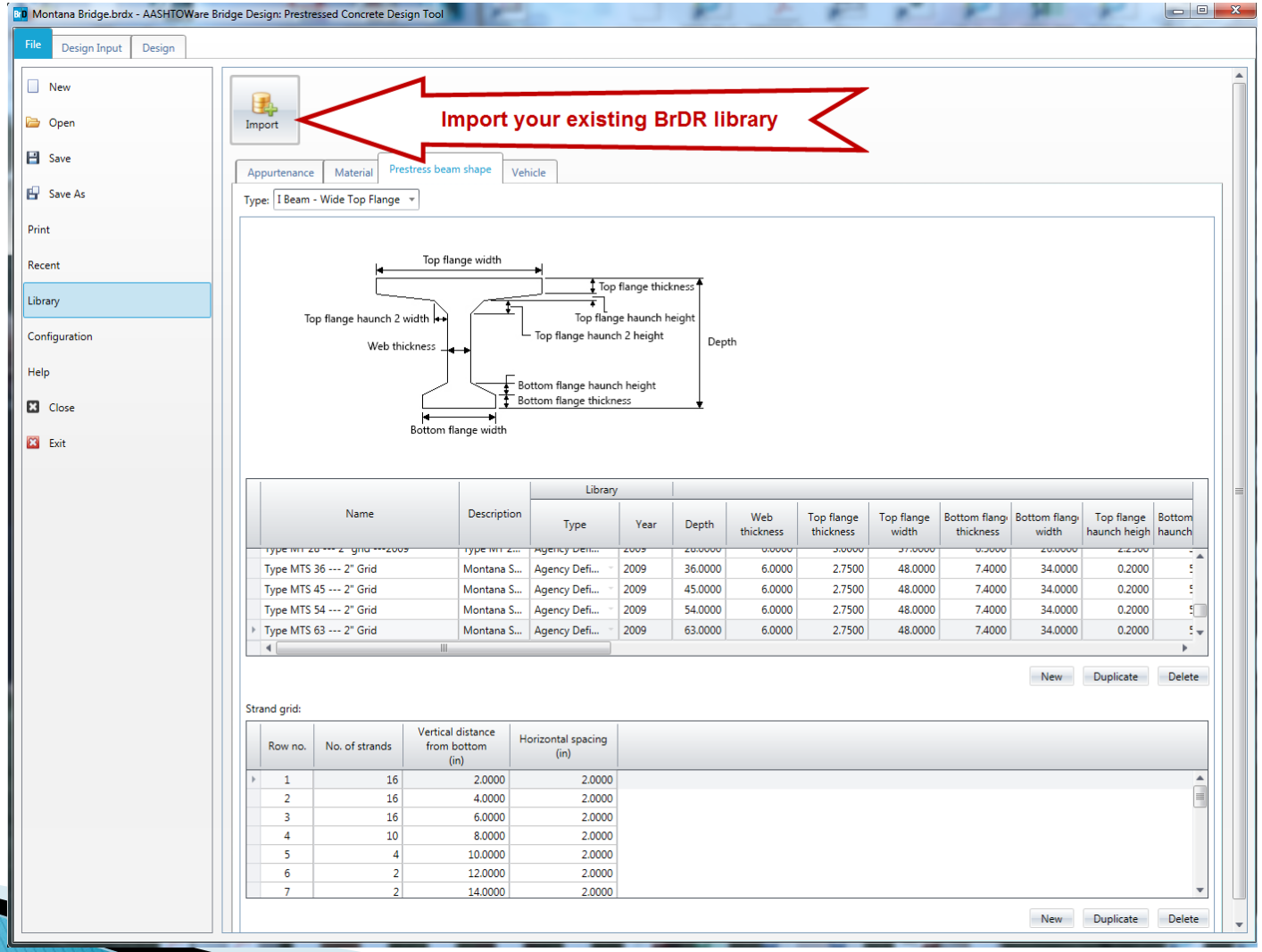
Features

- User friendly input



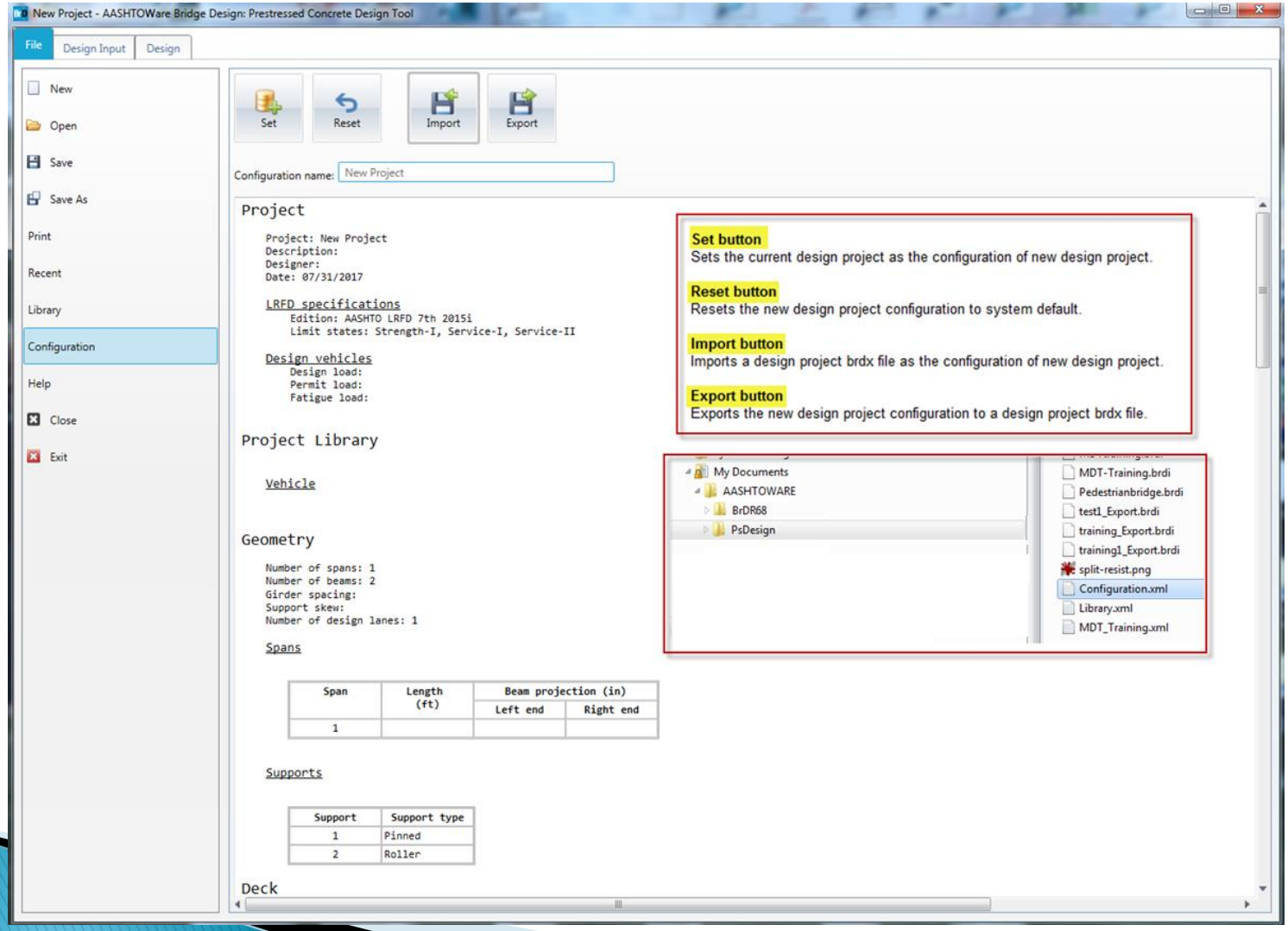
Features

- Import existing BrDR libraries



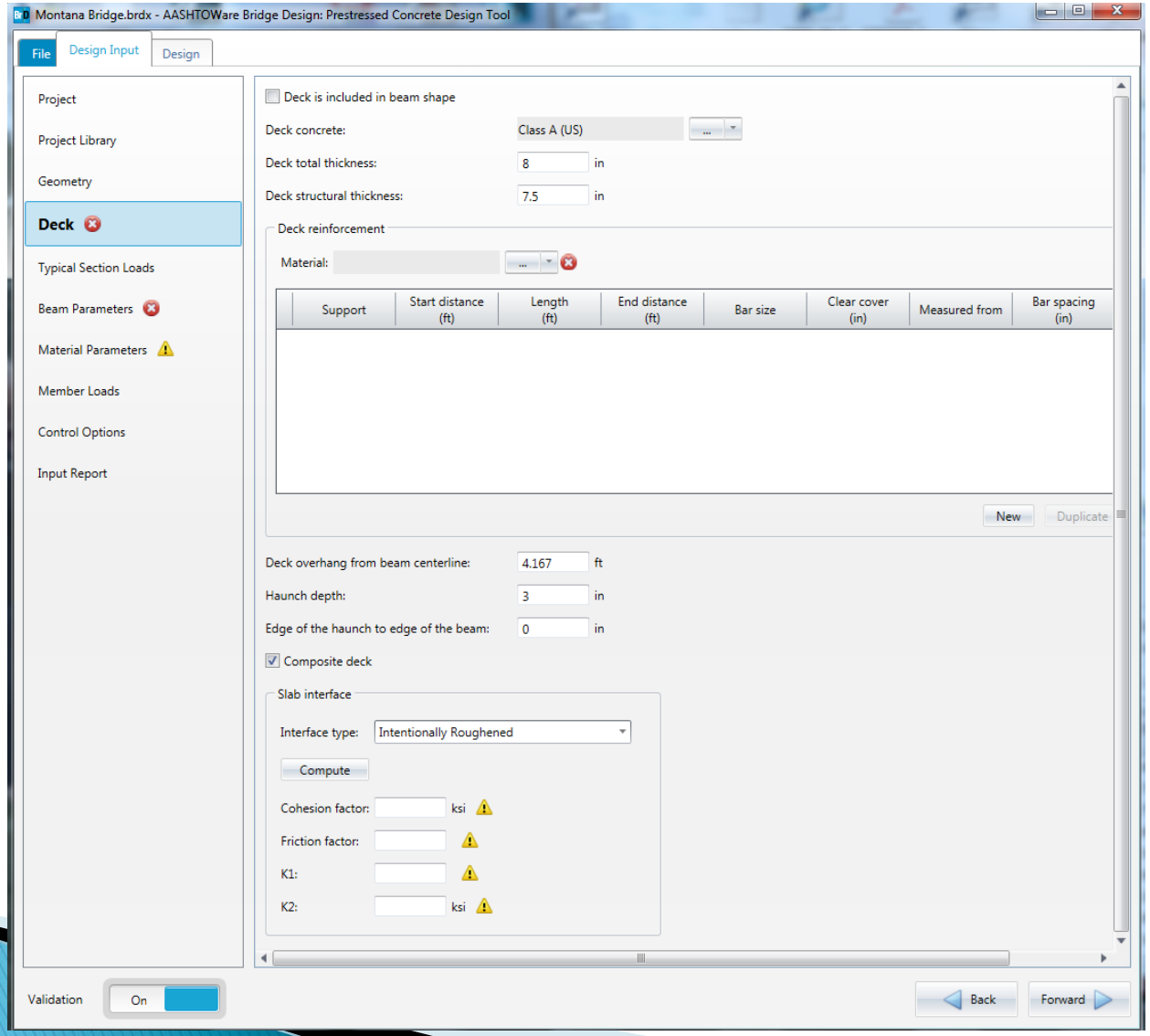
Features

- Create your own templates



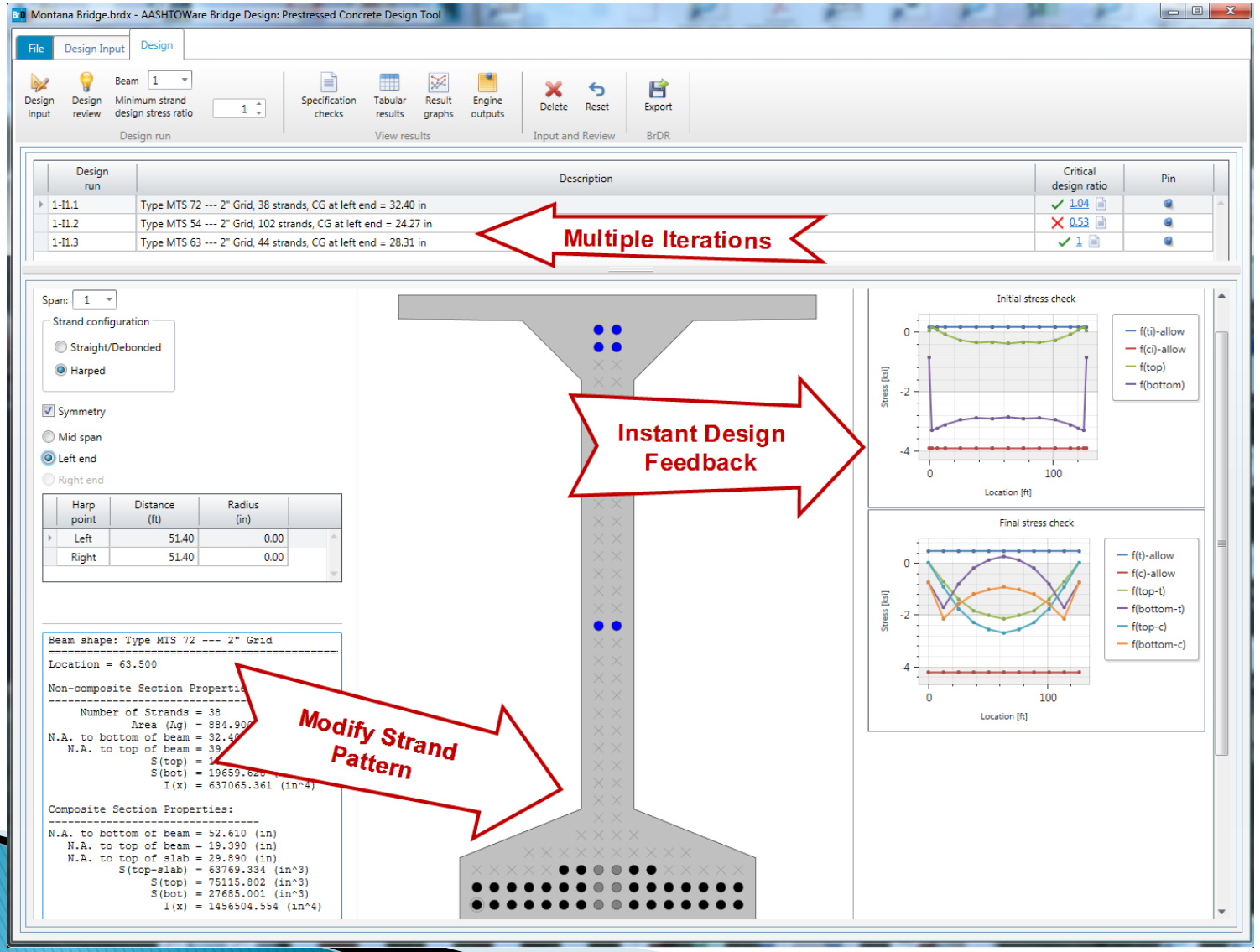
Features

- Input validation



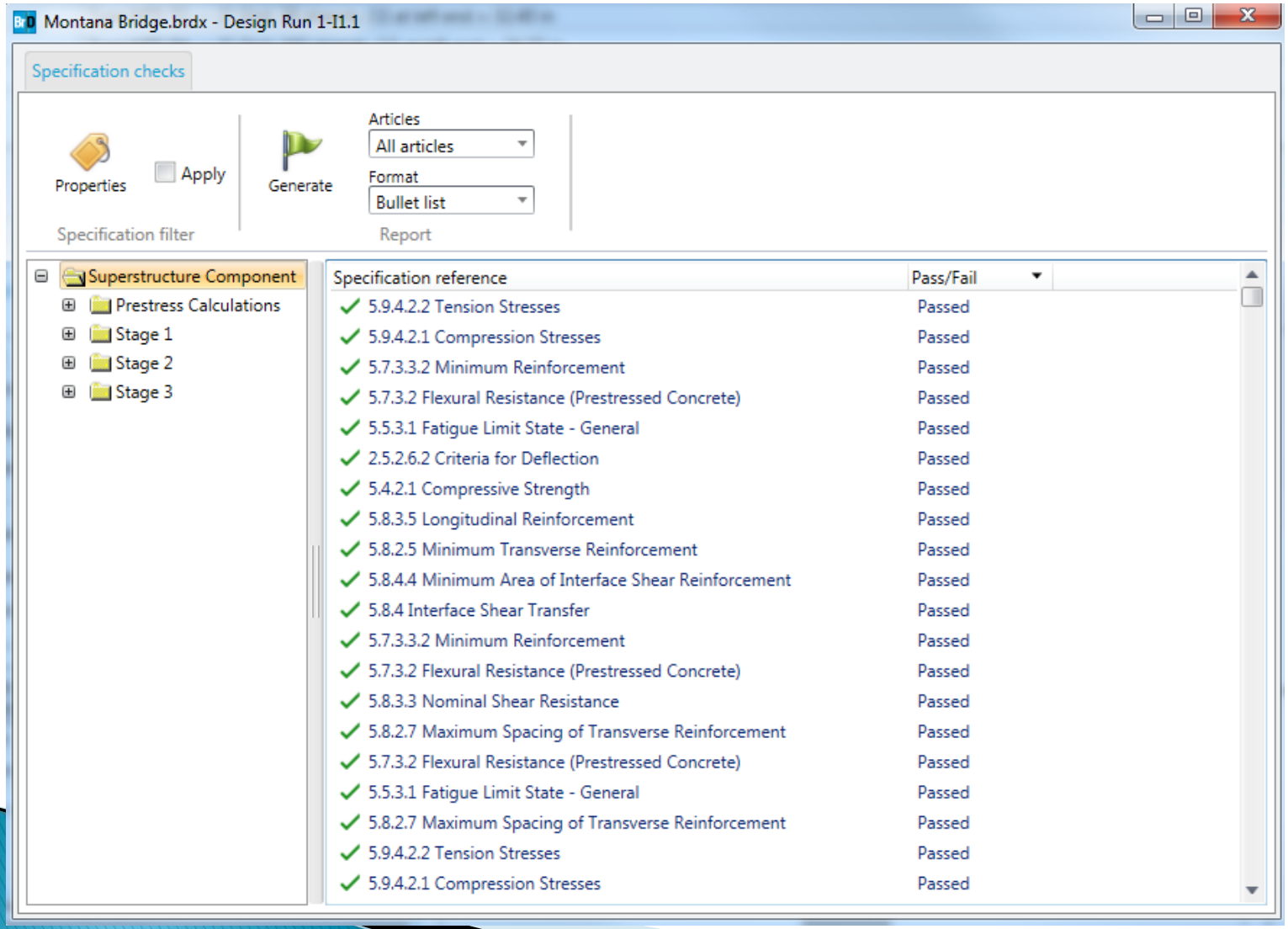
Features

- Design flexibility



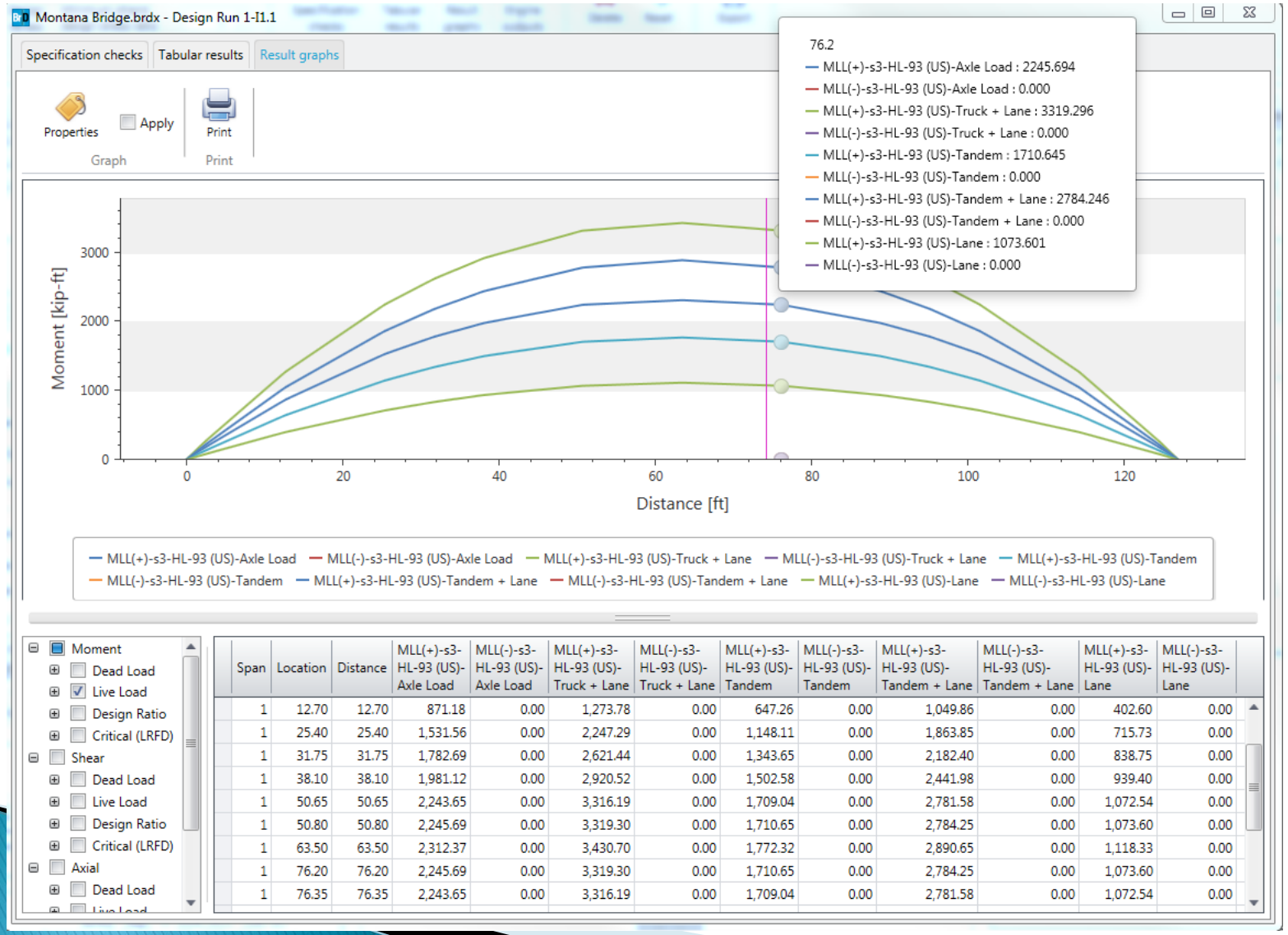
Features

- Same LRFD Spec Checker as BrDR



Features

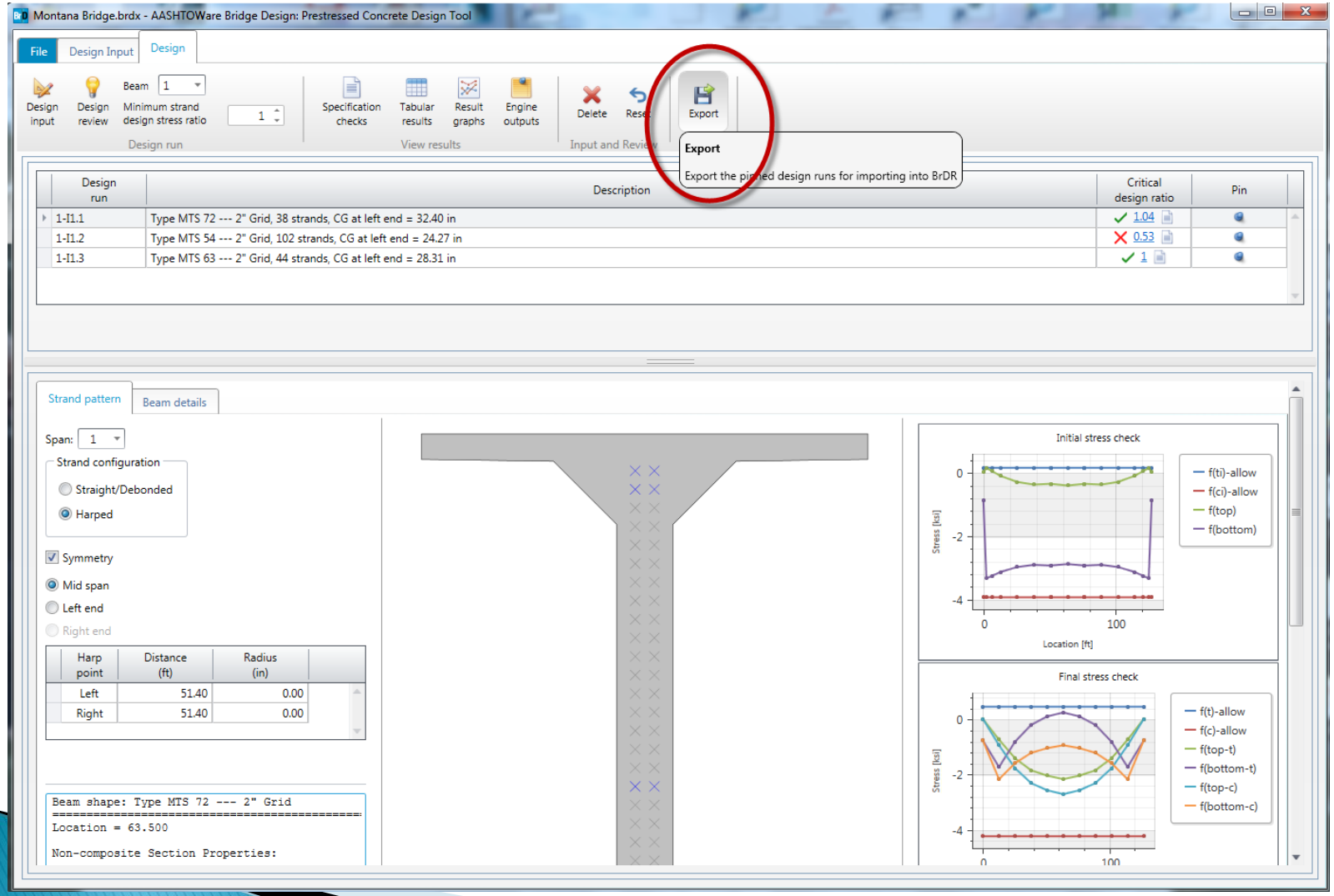
- Tabular and Graphical Reports



Span	Location	Distance	MLL(+)-s3-HL-93 (US)-Axle Load	MLL(-)-s3-HL-93 (US)-Axle Load	MLL(+)-s3-HL-93 (US)-Truck + Lane	MLL(-)-s3-HL-93 (US)-Truck + Lane	MLL(+)-s3-HL-93 (US)-Tandem	MLL(-)-s3-HL-93 (US)-Tandem	MLL(+)-s3-HL-93 (US)-Tandem + Lane	MLL(-)-s3-HL-93 (US)-Tandem + Lane	MLL(+)-s3-HL-93 (US)-Lane	MLL(-)-s3-HL-93 (US)-Lane
1	12.70	12.70	871.18	0.00	1,273.78	0.00	647.26	0.00	1,049.86	0.00	402.60	0.00
1	25.40	25.40	1,531.56	0.00	2,247.29	0.00	1,148.11	0.00	1,863.85	0.00	715.73	0.00
1	31.75	31.75	1,782.69	0.00	2,621.44	0.00	1,343.65	0.00	2,182.40	0.00	838.75	0.00
1	38.10	38.10	1,981.12	0.00	2,920.52	0.00	1,502.58	0.00	2,441.98	0.00	939.40	0.00
1	50.65	50.65	2,243.65	0.00	3,316.19	0.00	1,709.04	0.00	2,781.58	0.00	1,072.54	0.00
1	50.80	50.80	2,245.69	0.00	3,319.30	0.00	1,710.65	0.00	2,784.25	0.00	1,073.60	0.00
1	63.50	63.50	2,312.37	0.00	3,430.70	0.00	1,772.32	0.00	2,890.65	0.00	1,118.33	0.00
1	76.20	76.20	2,245.69	0.00	3,319.30	0.00	1,710.65	0.00	2,784.25	0.00	1,073.60	0.00
1	76.35	76.35	2,243.65	0.00	3,316.19	0.00	1,709.04	0.00	2,781.58	0.00	1,072.54	0.00

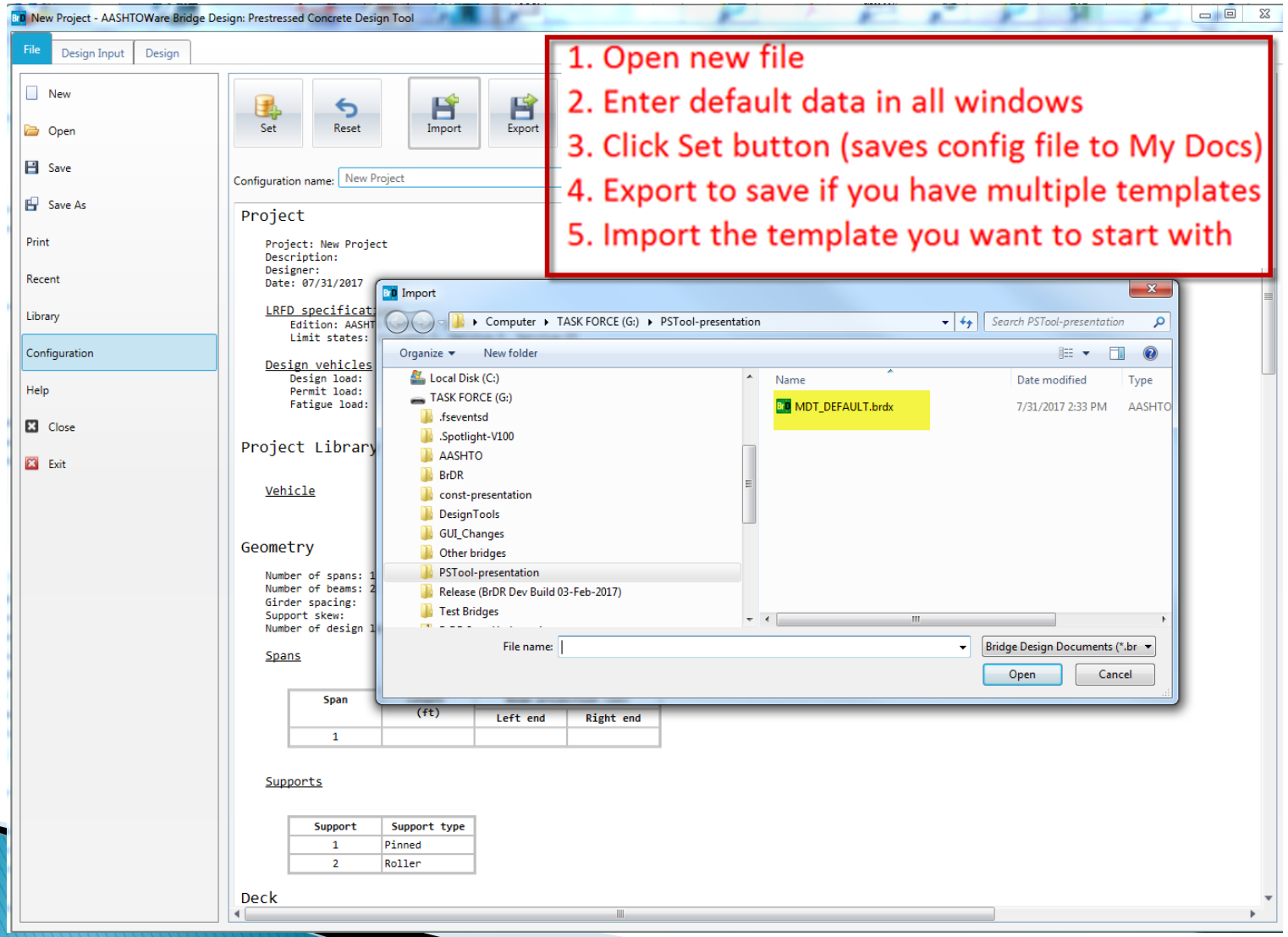
Features

- Export model and Import into BrDR



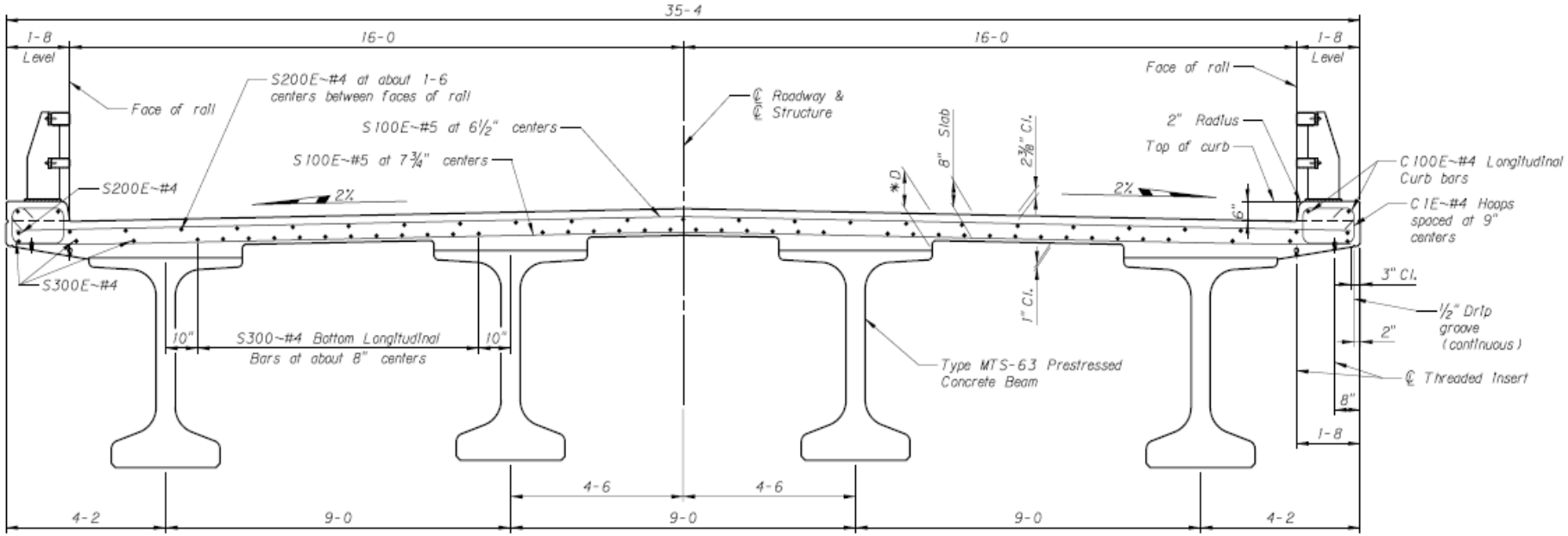
Customizing

- Templates minimize input



Live Demo

- Span length = 130 ft
- Bridge Width = 32 ft
- Deck Thickness = 8 in
- Rail Type = W830



*NOTE: Dimension D = 11" at ℄ Brg. (Varies at tenth points) See Dead Load Deflection Table this sheet and Camber Diagram Dwg. No. 21326).

TRANSVERSE SECTION

Scale ~ ½" = 1'-0"

Sheep Load

Future Enhancements (Phase 2)

- Line Girder Entry
- Design Entire Cross Section
- Add Schematics
- Save Individual Iterations
- User Control for Simple vs Continuous for Live
- Stability and Transport Checks
- Camber Table

Questions?