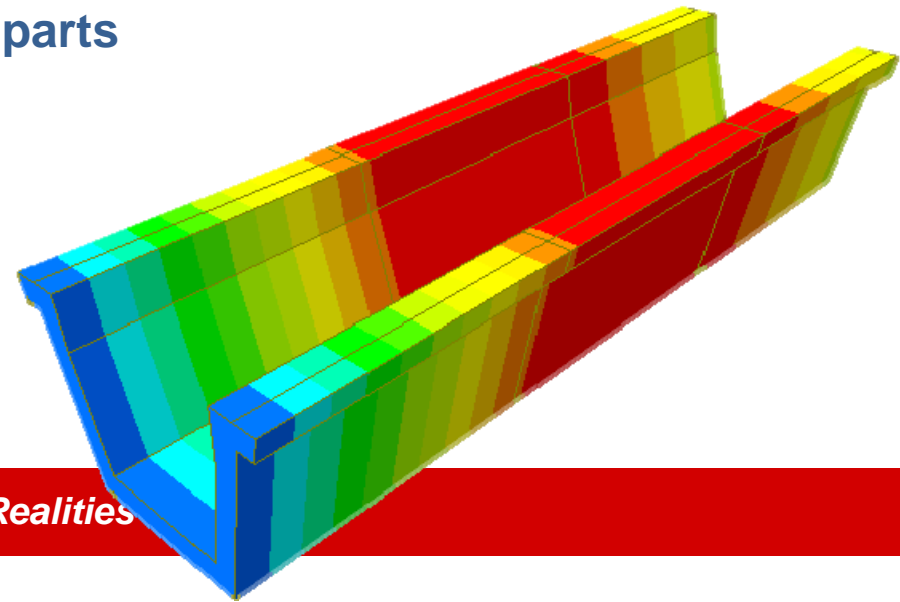


Spliced U girder bridge project

Session 1: Section definition with 3 parts



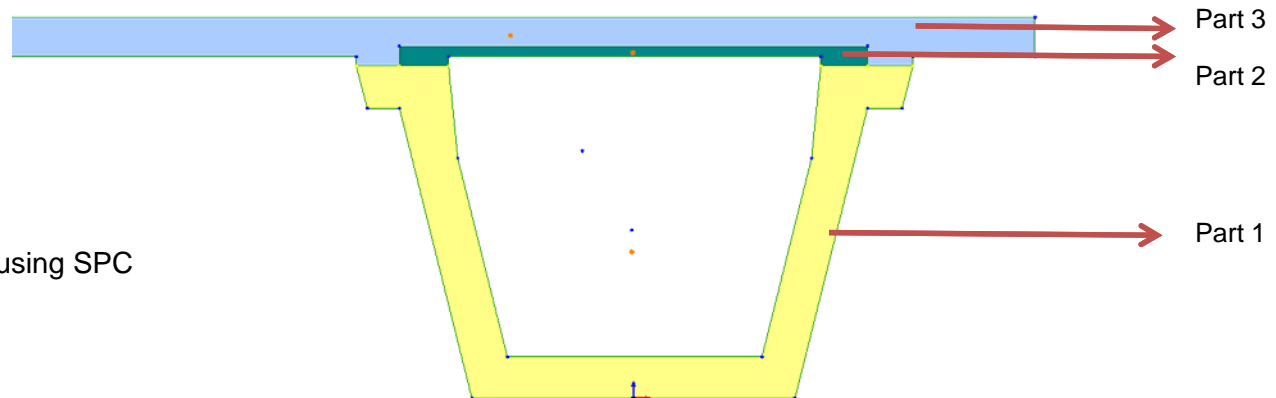
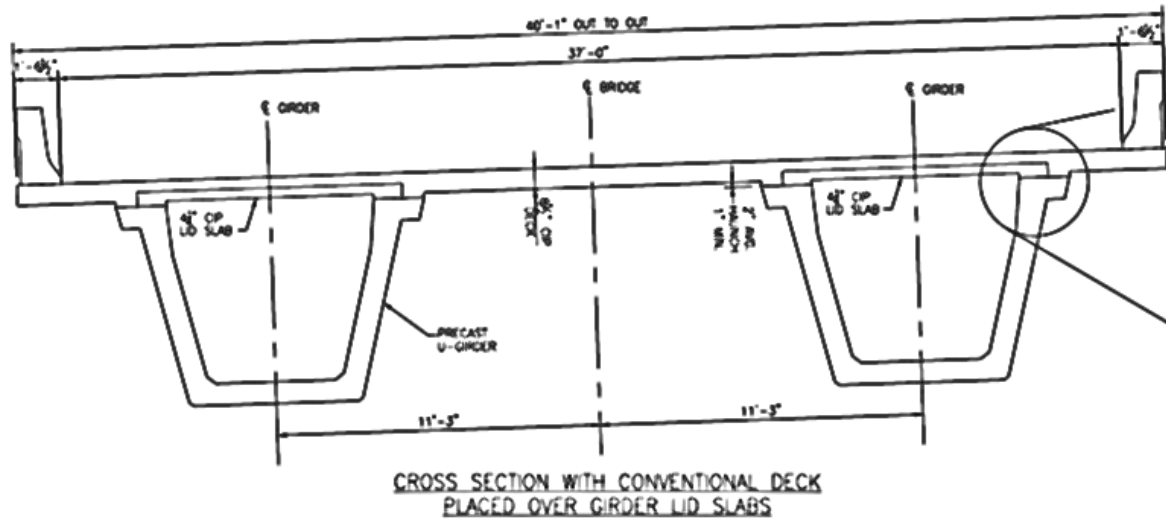
• *Bridging Your Innovations to Realities*



We will cover...

- **Section definition**
 - Using dxf files for user defined sections in SPC
 - Generating Composite sections with multiple parts
 - Importing in midas Civil
 - Simple model
 - Setting up construction stages
 - Construction stage analysis
 - Results

→ Section

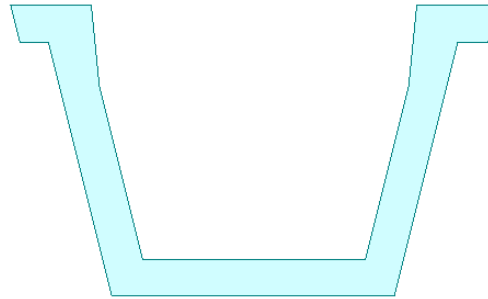


Section created using SPC



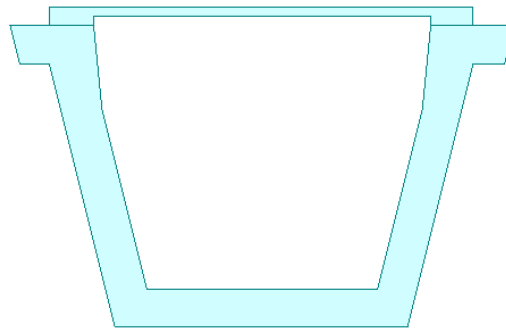
Construction Staging

CS 1



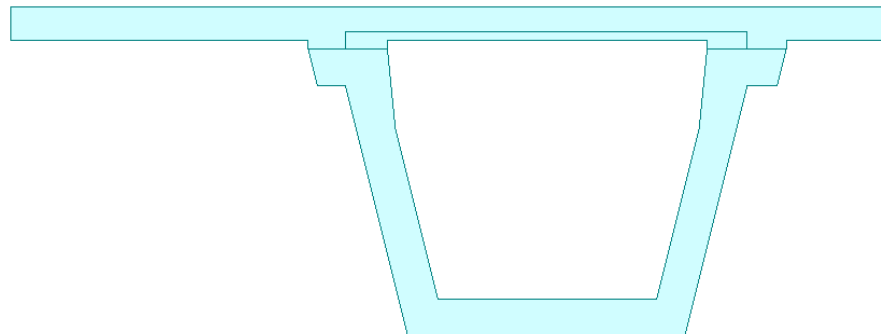
Part 1

CS 2



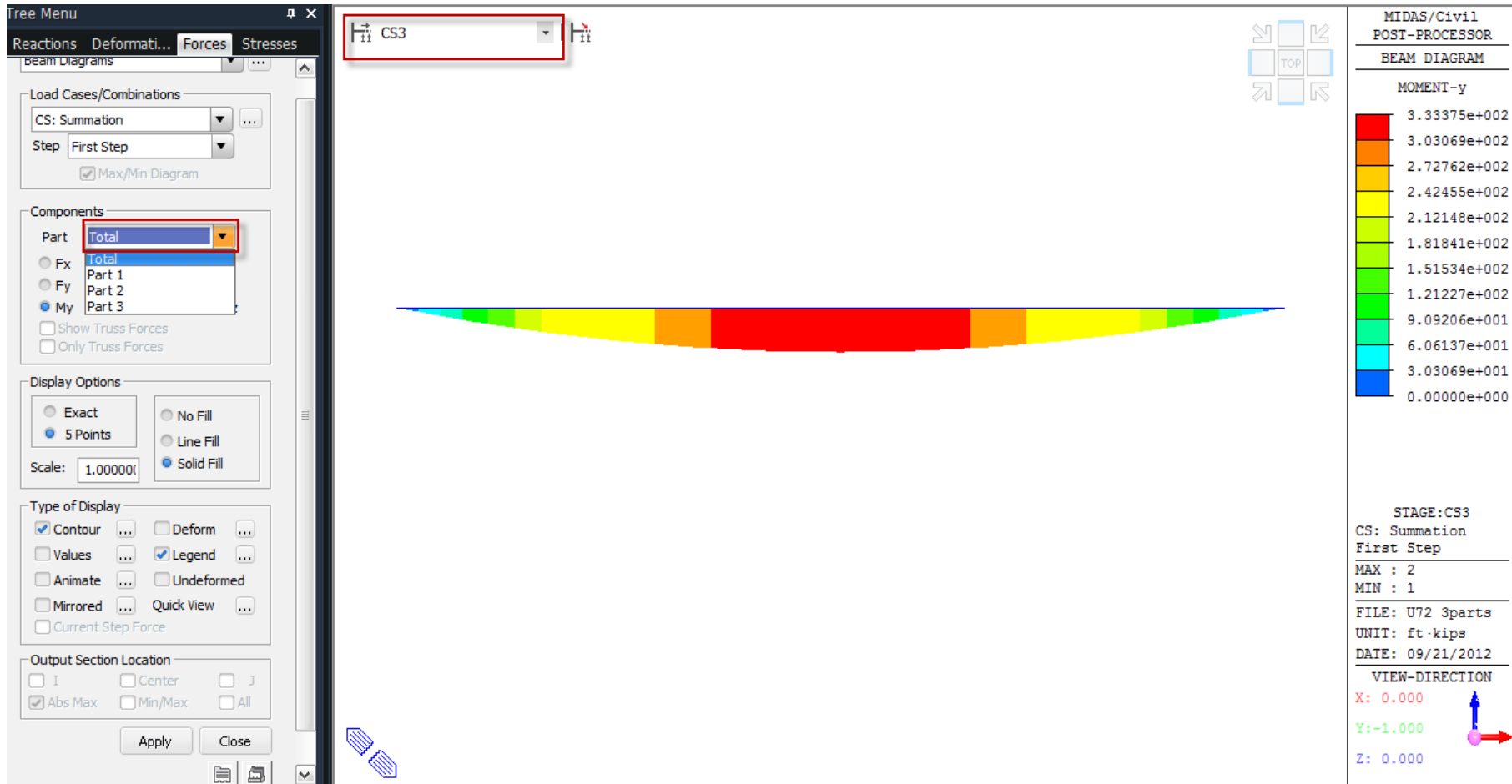
Part 1 + Part 2

CS 3

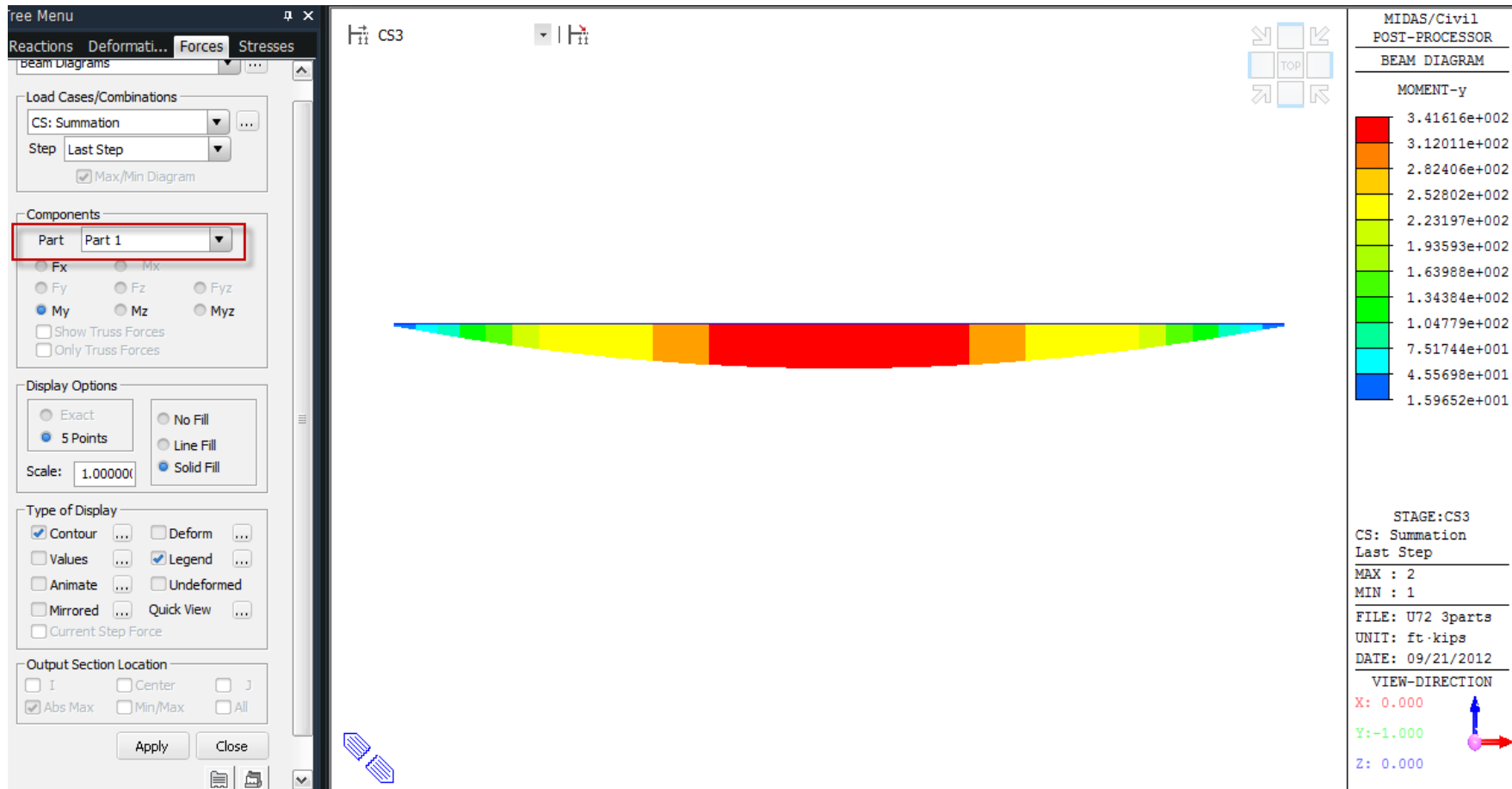


Part + Part 2 + Part 3

Construction Staging



→ Construction Staging



Construction Staging

Tree Menu

Reactions Deformati... Forces Stresses

Beam Diagrams

Load Cases/Combinations

CS: Summation

Step: Last Step

Max/Min Diagram

Components

Part: Part 2

Fx My
 Fy Mz Fz Myz

Show Truss Forces
 Only Truss Forces

Display Options

Exact No Fill
 5 Points Line Fill
 Solid Fill

Scale: 1.00000

Type of Display

Contour Deform
 Values Legend
 Animate Undeformed
 Mirrored Quick View
 Current Step Force

Output Section Location

I Center J
 Abs Max Min/Max All

Apply Close

CS3

MIDAS/Civil
POST-PROCESSOR

BEAM DIAGRAM

MOMENT-y

2.16331e-002
1.99390e-002
1.82449e-002
1.65508e-002
1.48567e-002
1.31626e-002
1.14686e-002
9.77446e-003
8.08036e-003
6.38627e-003
4.69217e-003
2.99808e-003

STAGE:CS3

CS: Summation

Last Step

MAX : 2

MIN : 1

FILE: U72 3parts

UNIT: ft.kips

DATE: 09/21/2012

VIEW-DIRECTION

X: 0.000

Y: -1.000

Z: 0.000



Construction Staging

Free Menu

Reactions Deformati... Forces Stresses

Beam Diagrams

Load Cases/Combinations

CS: Summation

Step Last Step

Max/Min Diagram

Components

Part Part 3

Fx Mx
 Fy Fz Fyz
 My Mz Myz

Show Truss Forces
 Only Truss Forces

Display Options

Exact No Fill
 5 Points Line Fill
 Solid Fill

Scale: 1.00000

Type of Display

Contour Deform
 Values Legend
 Animate Undeformed
 Mirrored Quick View
 Current Step Force

Output Section Location

I Center J
 Abs Max Min/Max All

Apply Close

CS3

MIDAS/Civil
POST-PROCESSOR

BEAM DIAGRAM

MOMENT-y

7.66894e-001
7.09032e-001
6.51171e-001
5.93310e-001
5.35449e-001
4.77587e-001
4.19726e-001
3.61865e-001
3.04004e-001
2.46142e-001
1.88281e-001
1.30420e-001

STAGE:CS3
CS: Summation
Last Step

MAX : 2
MIN : 1

FILE: U72 3parts
UNIT: ft·kips
DATE: 09/21/2012

VIEW-DIRECTION

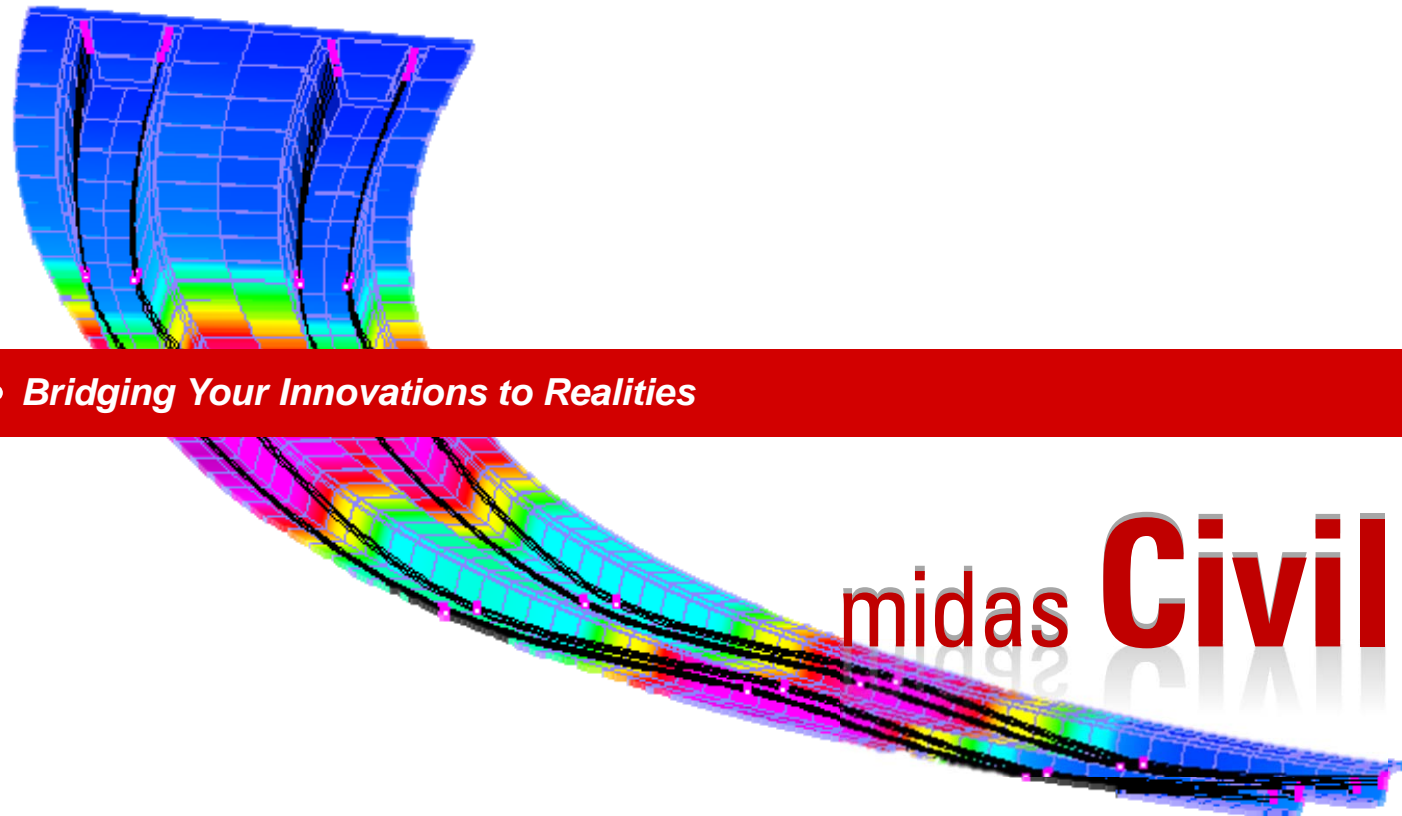
X: 0.000

Y: -1.000

Z: 0.000

Spliced U girder bridge project

Session 2: Tendons & Construction Stages



• *Bridging Your Innovations to Realities*

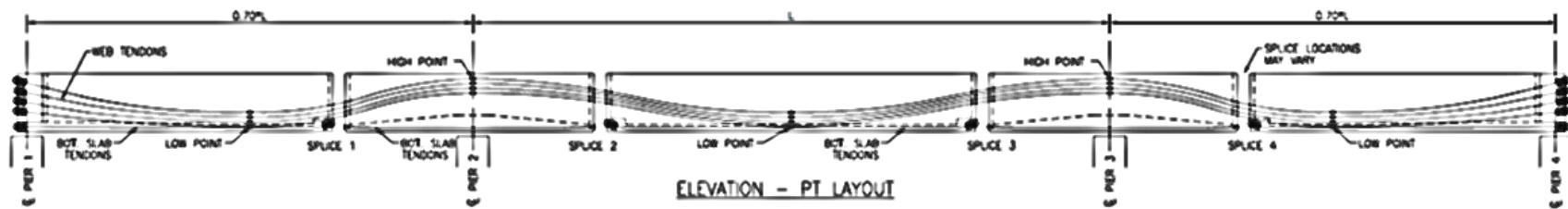
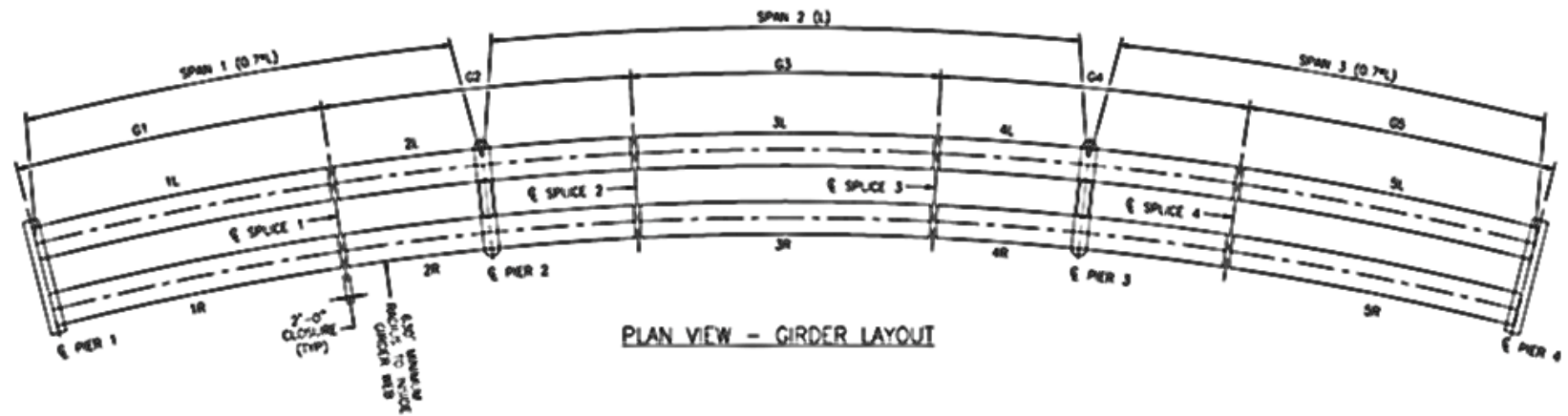
midas **Civil**



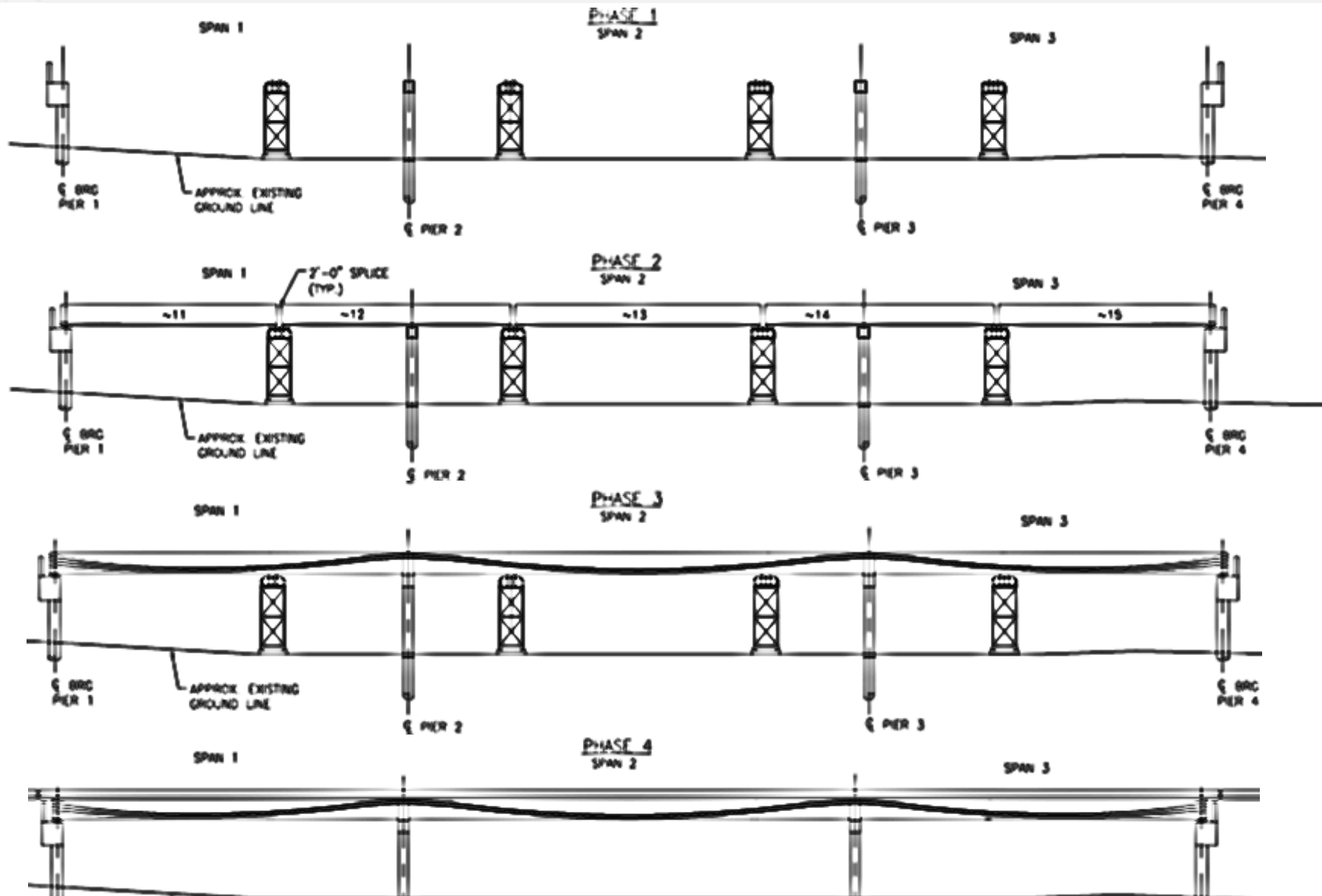
We will cover...

- **Tendons & Construction Stages**
 - Geometry generation from Dxf
 - Sections assignment
 - Boundary
 - Tendon layout
 - Setting up construction stages
 - Construction stage analysis
 - Results

→ Layout



Construction Staging



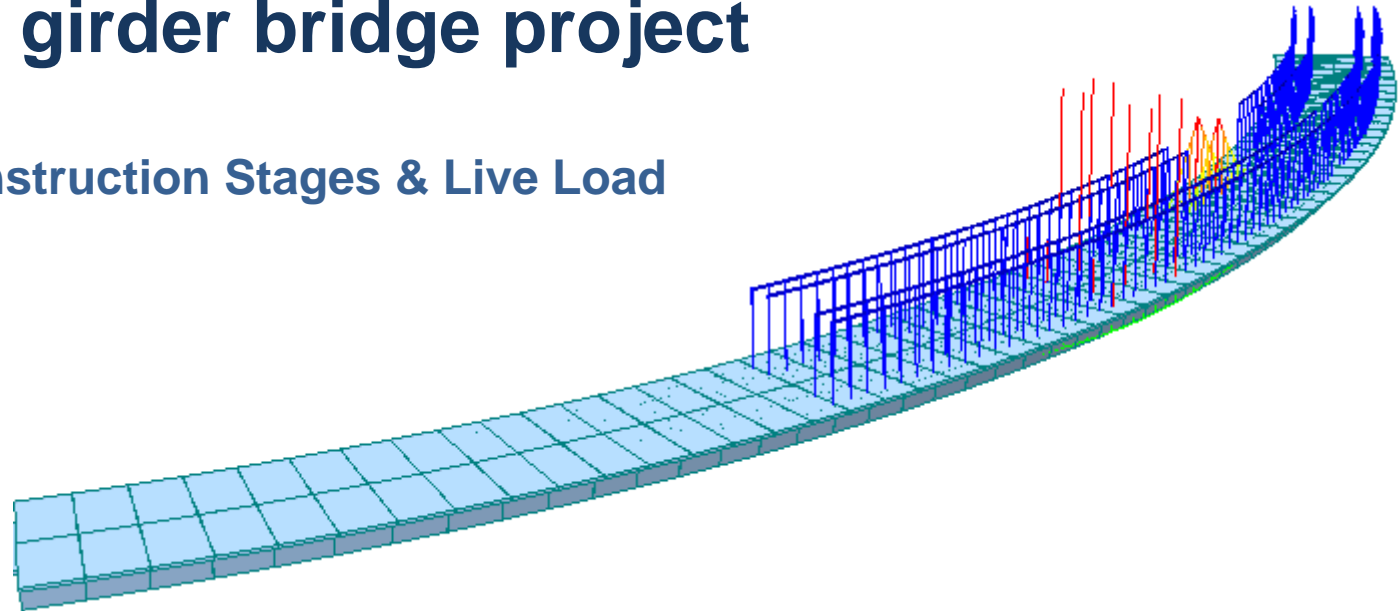


Construction Staging

Stage	Element	Boundary		Load	Remarks
CS1 (14)	Girder (14)	Abutment Links Beam end release Temp.		Self Weight	
CS2 (1)					Lid Activated (14)
CS3 (14)				PT	
CS4 (1)	Dummy Deck (14)	Bearings	Beam end Release Temp.		Slab activated (14)
CS5 (10000)				SDL	

Spliced U girder bridge project

Session 3: Construction Stages & Live Load



• *Bridging Your Innovations to Realities*

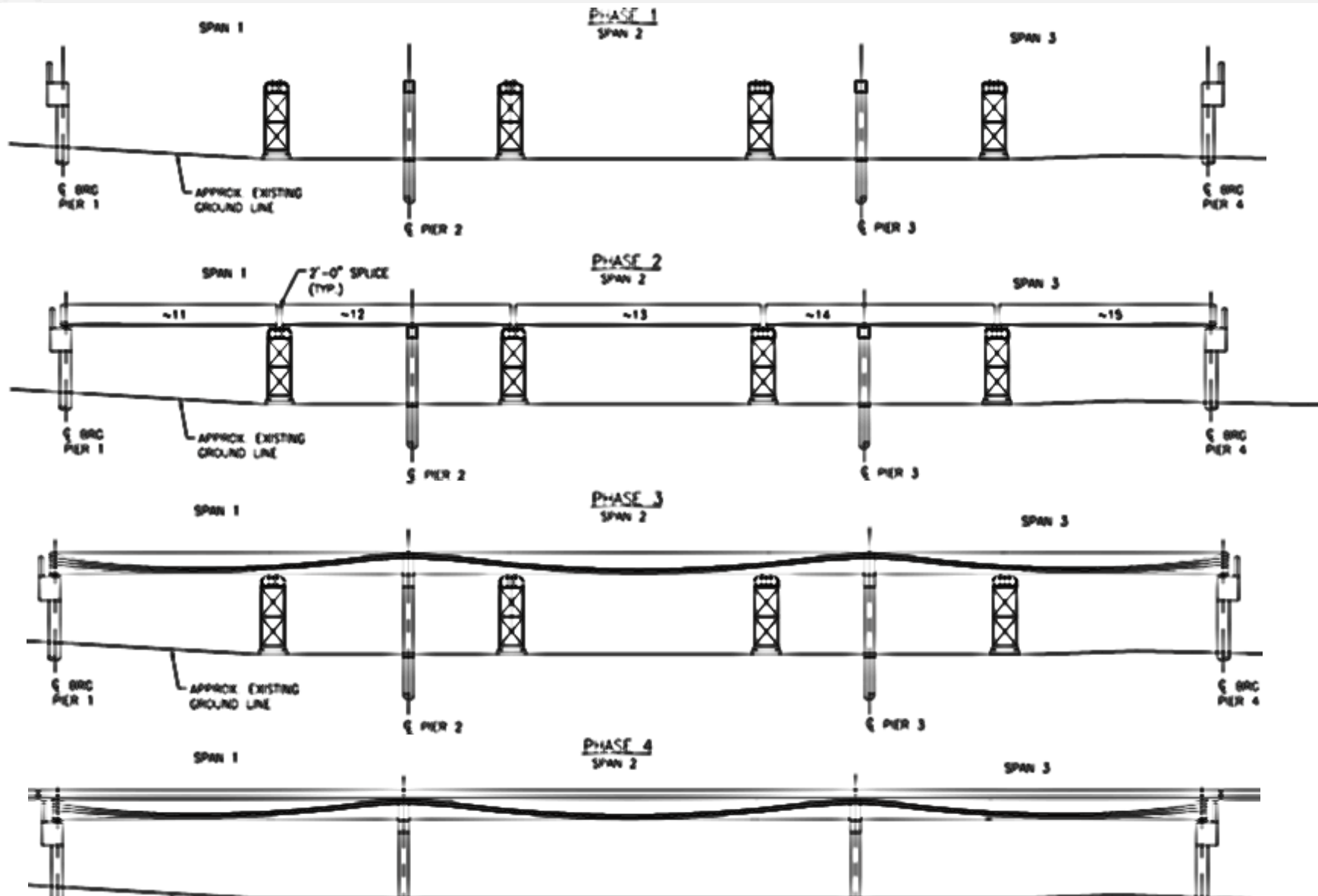


We will cover...

▪ **Construction Stages & Live Loads**

- Setting up construction stages
- Construction stage analysis
- Defining two lanes with HL 93 vehicles
- Results

Construction Staging



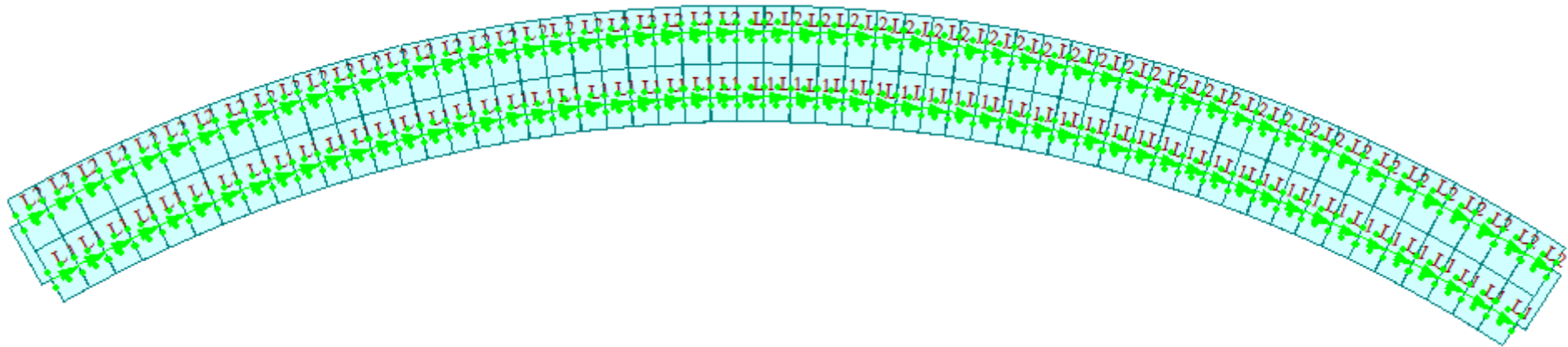


Construction Staging

Stage	Element	Boundary		Load	Remarks
CS1 (14)	Girder (14)	Abutment Links Beam end release Temp.		Self Weight	
CS2 (1)					Lid Activated (14)
CS3 (14)		Bearings	Beam end Release Temp.	PT	
CS4 (1)	Dummy Deck (14)				Slab activated (14)
CS5 (10000)				SDL	



Live Load

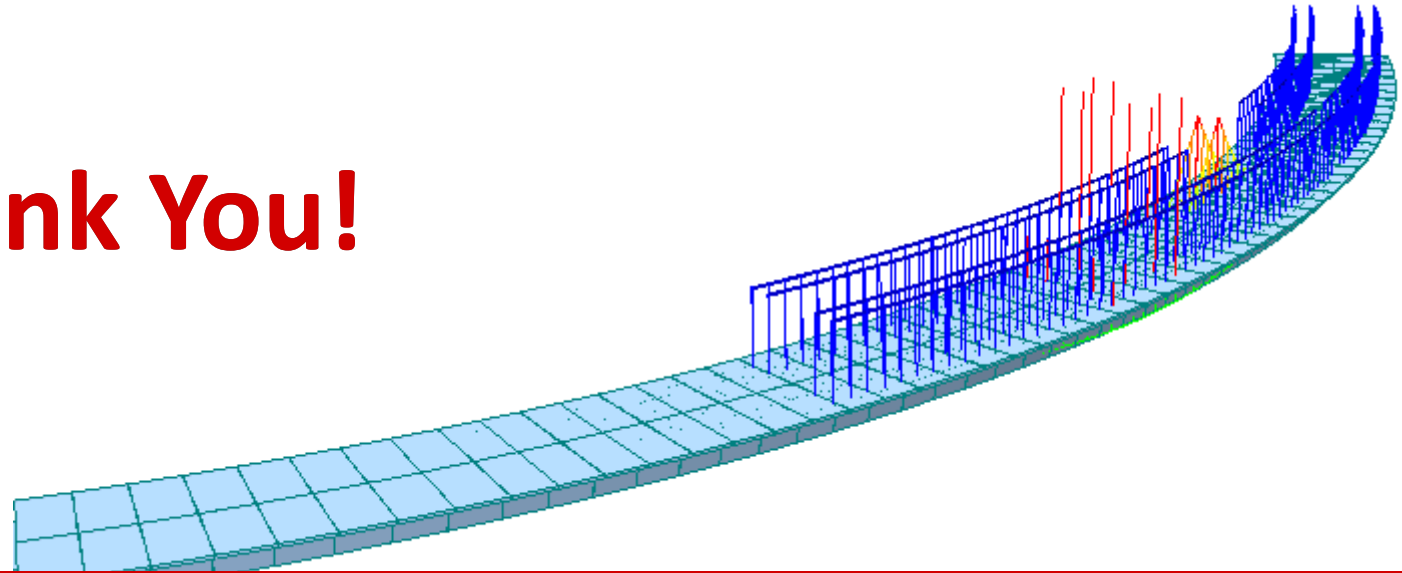


Code: AASHTO LRFD

Lanes: 2

Vehicle type: HL93 (TRK & TDM)

Thank You!



• *Bridging Your Innovations to Realities*