

AASHTOWare BrDR 7.5.0

Feature Tutorial

Capacity Override at Points of Interest

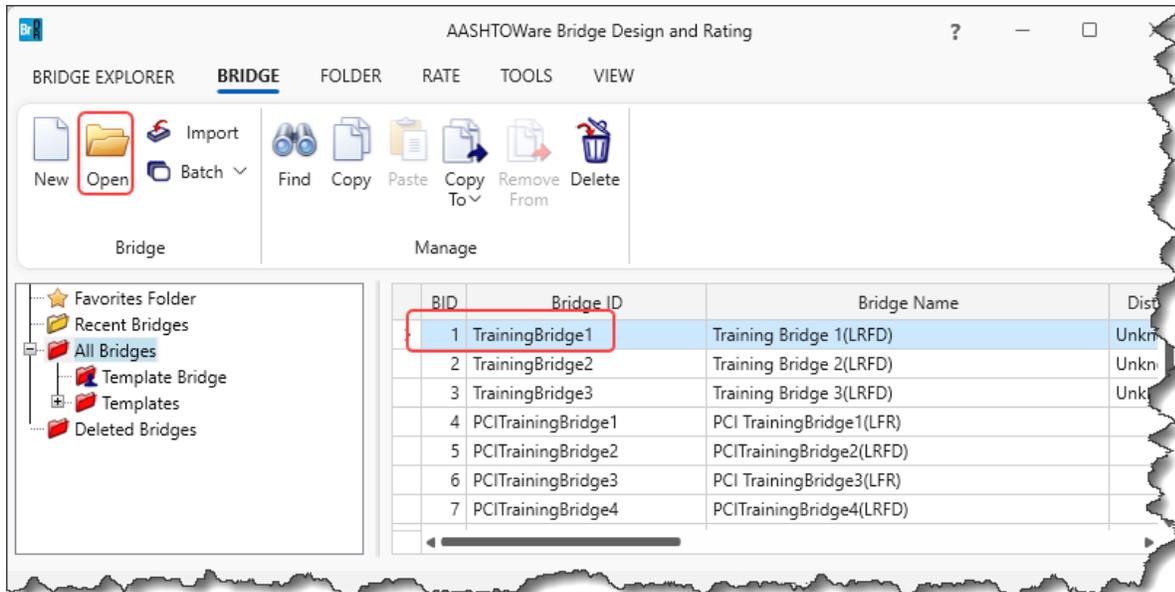
Capacity Override at Points of Interest

Topics Covered

- Capacity Override LRFR
- Capacity Override LRFD

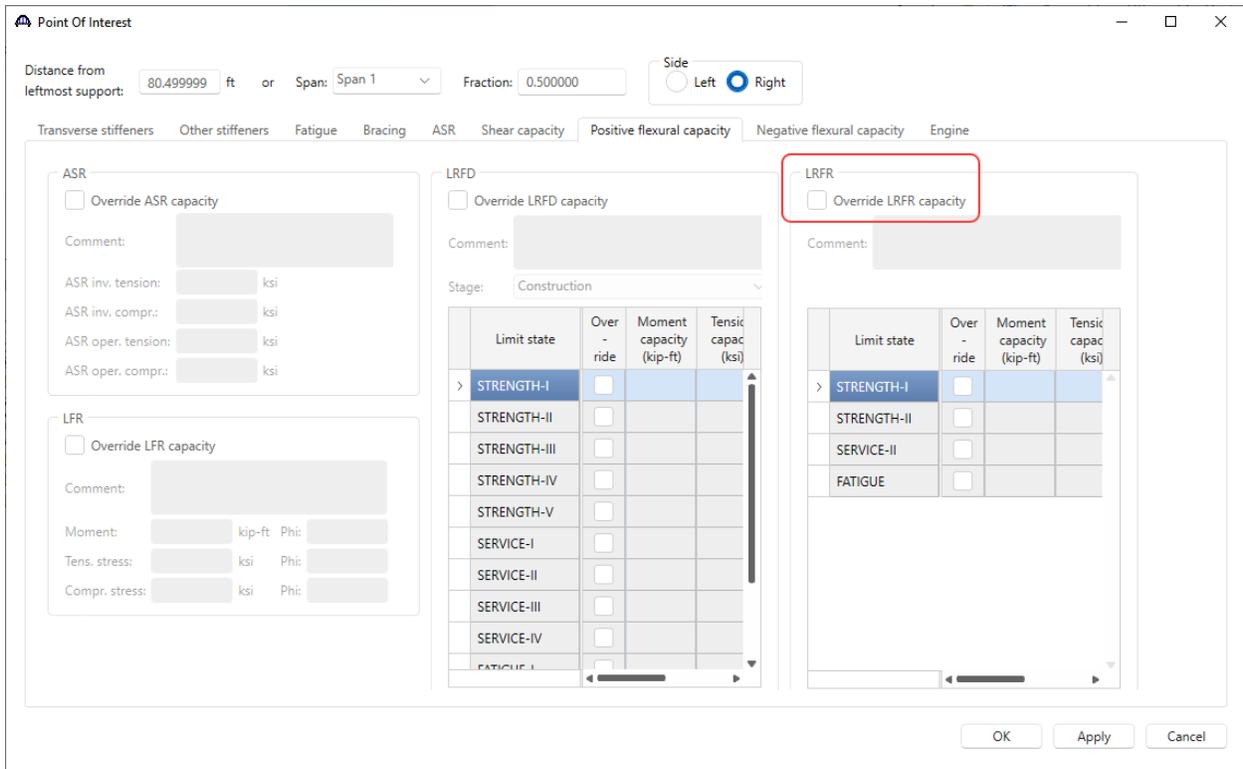
Capacity Override LRFR

From the **Bridge Explorer**, double click on **BID1 - TrainingBridge1** (or select and click **Open** from the **Bridge** group of the **BRIDGE** ribbon) to open the bridge.

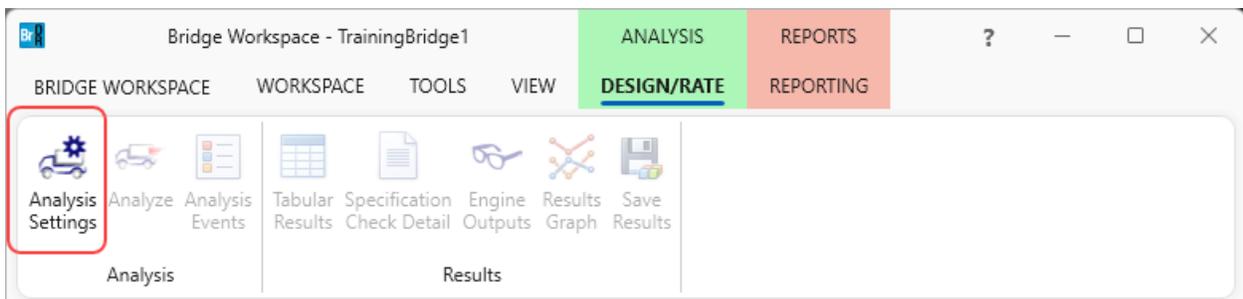


Capacity Override at Points of Interest

Navigate to the **Positive flexural capacity** tab of this window. As seen from the window below, the option for **Override LRFR capacity** is not checked. Hence, the beam capacities at 80.5 ft will be computed by the AASHTO LRFR Engine.



From the **Analysis** group of the **DESIGN/RATE** ribbon, click on the **Analysis Settings** button as shown below.



Capacity Override at Points of Interest

Click on the **Open template** button in the **Analysis Settings** window. Select the **LRFR Design Load Rating template**. The updated **Analysis Settings** window is shown below.

Analysis Settings

Design review Rating

Rating method: LFR

Analysis type: Line Girder

Analysis option: DL, LL and Spec-Checking

Lane / Impact loading type: As Requested

Apply preference setting: None

Vehicles Output Engine Description

Traffic direction: Both directions

Refresh Temporary vehicles Advanced

Vehicle selection

Rating vehicles

Inventory

Operating

Legal operating

Permit inventory

Permit operating

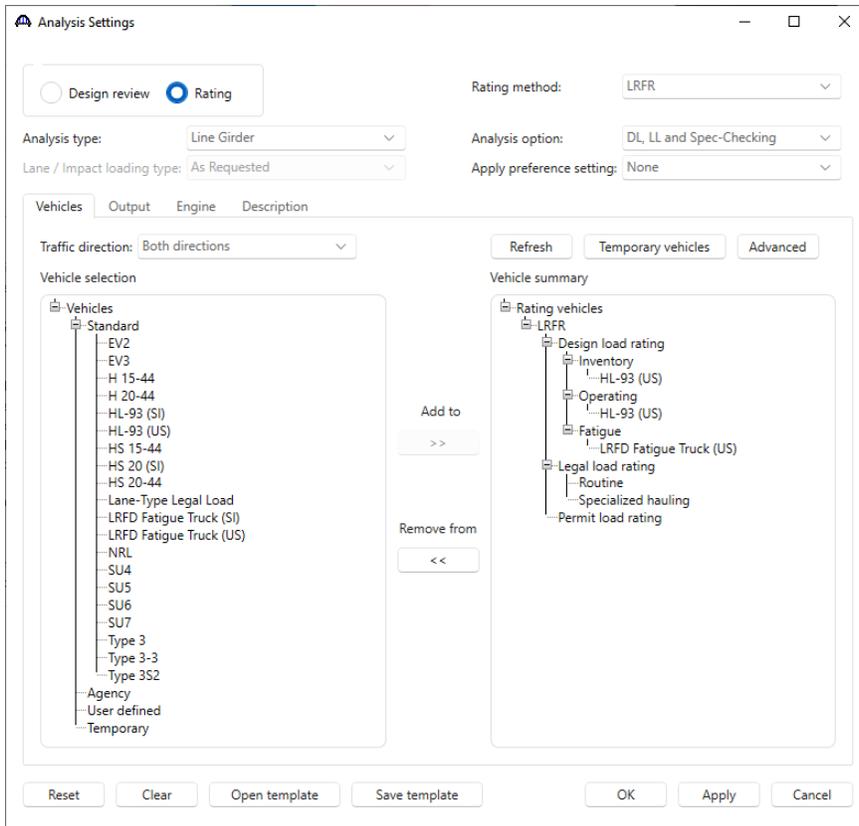
Reset Clear **Open template** Save template OK Apply Cancel

Open Template

Templates	Description	Analysis	Owner	Public / Private
HL 93 Design Review	HL 93 Design Review	LRFD		Public
HS 20 LFR Rating	HS 20 LFR Rating	LFR		Public
> LRFR Design Load Rating	LRFR Design Load Rating	LRFR		Public
LRFR Legal Load Rating	LRFR Legal Load Rating	LRFR		Public

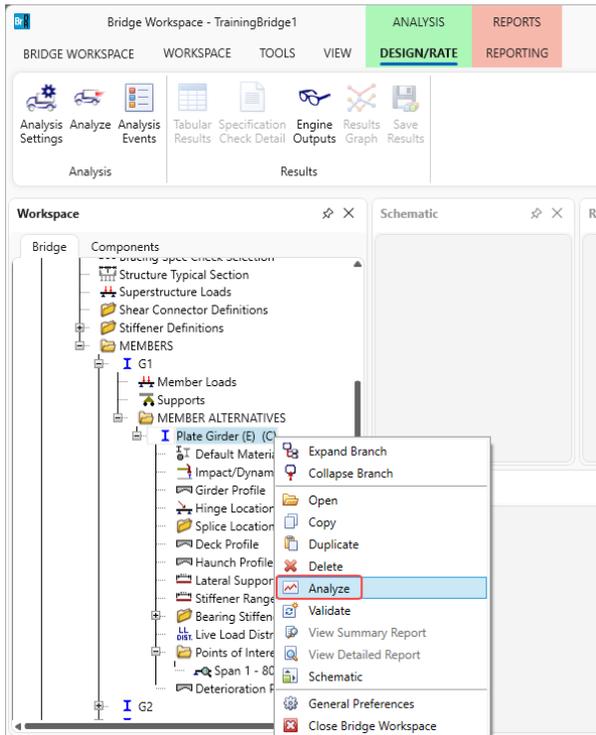
Delete **Open** Cancel

Capacity Override at Points of Interest



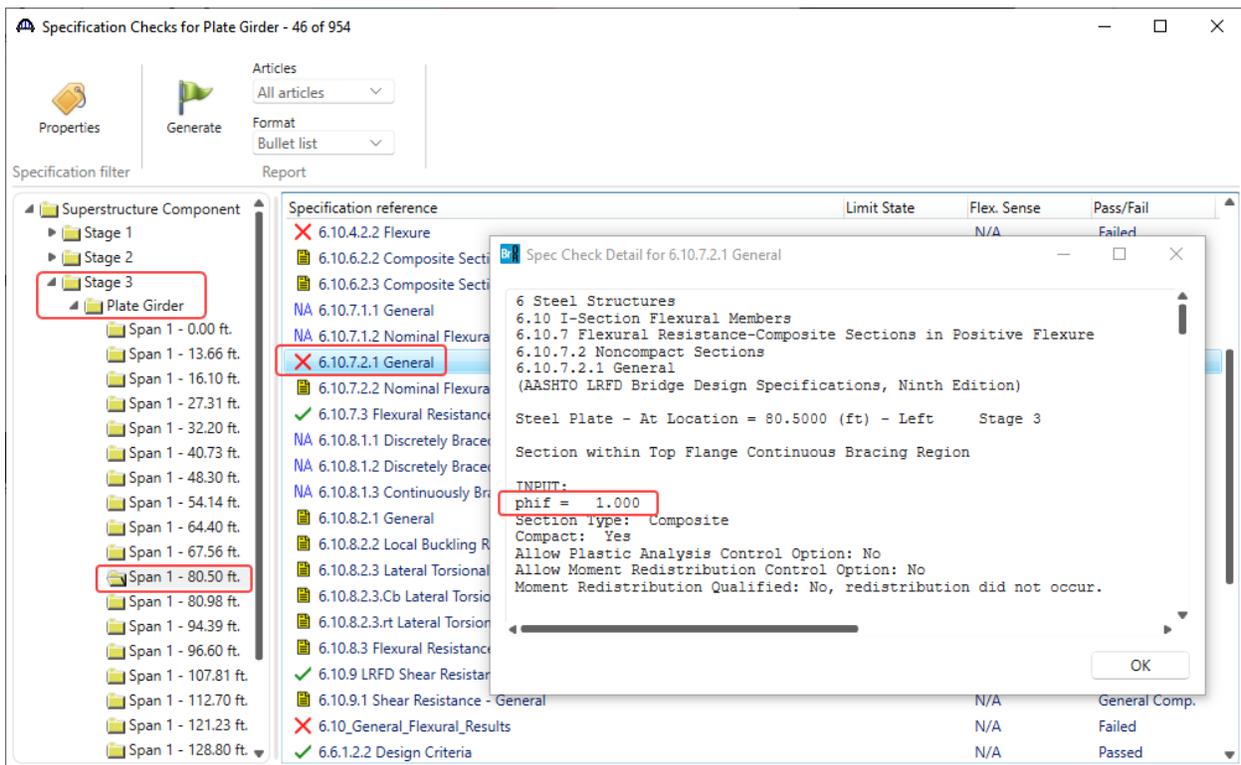
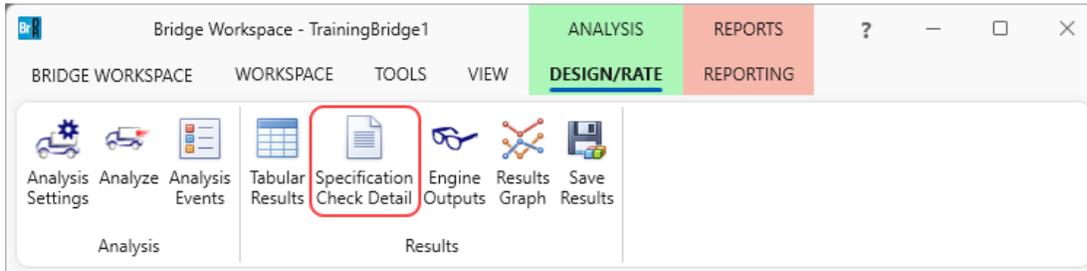
Click **OK** to apply the settings and close the window.

To analyze girder **G1**, right click on **Plate Girder** and select **Analyze** as shown below.



Capacity Override at Points of Interest

After the LRFR analysis is completed click on the **Specification Check Detail** button from the **Results** group of the **DESIGN/RATE** ribbon and navigate to **Stage 3->Plate Girder->Span 1 80.5 ft. -> Article 6.10.7.2.1**.



The resistance factor **phif** value is **1.0** as shown above.

Capacity Override at Points of Interest

Spec Check Detail for 6.10.7.2.1 General

--- Compression Flange ---

fc = stress in the slab
 f'c = 4.5000 (ksi)
 Stress = fbu
 Resist = phi * Fnc
 Design Ratio = Resist/Stress

Note: If the capacity has been overridden, the Resistance is computed as override phi*override capacity. Otherwise the Resistance is computed as per the Specification.

Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	frd (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
						Fnc (ksi)	Phi				
STR-I	1, DesInv	Pos	Top Flange	-48.00	0.00	50.00		-48.00	-50.00	1.042	Pass
STR-I	1, DesInv	Pos	Top Flange	-41.35	0.00	50.00		-41.35	-50.00	1.209	Pass
STR-I	1, DesOp	Pos	Top Flange	-46.48	0.00	50.00		-46.48	-50.00	1.076	Pass
STR-I	1, DesOp	Pos	Top Flange	-41.35	0.00	50.00		-41.35	-50.00	1.209	Pass
STR-I	2, DesInv	Pos	Top Flange	-46.95	0.00	50.00		-46.95	-50.00	1.065	Pass
STR-I	2, DesInv	Pos	Top Flange	-41.35	0.00	50.00		-41.35	-50.00	1.209	Pass
STR-I	2, DesOp	Pos	Top Flange	-45.67	0.00	50.00		-45.67	-50.00	1.095	Pass
STR-I	2, DesOp	Pos	Top Flange	-41.35	0.00	50.00		-41.35	-50.00	1.209	Pass

OK

Spec Check Detail for 6.10.7.2.1 General

--- Tension Flange ---

Stress = fbu + fl/3
 Resist = phi * Fnt
 Design Ratio = Resist/Stress

Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	fl (ksi)	frd (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
							Fnt (ksi)	Phi				
STR-I	1, DesInv	Pos	Bot Flange	62.68	0.00	0.00	50.00		62.68	50.00	0.798	Fail
STR-I	1, DesInv	Pos	Bot Flange	35.10	0.00	0.00	50.00		35.10	50.00	1.425	Pass
STR-I	1, DesOp	Pos	Bot Flange	56.37	0.00	0.00	50.00		56.37	50.00	0.887	Fail
STR-I	1, DesOp	Pos	Bot Flange	35.10	0.00	0.00	50.00		35.10	50.00	1.425	Pass
STR-I	2, DesInv	Pos	Bot Flange	58.35	0.00	0.00	50.00		58.35	50.00	0.857	Fail
STR-I	2, DesInv	Pos	Bot Flange	35.10	0.00	0.00	50.00		35.10	50.00	1.425	Pass
STR-I	2, DesOp	Pos	Bot Flange	53.03	0.00	0.00	50.00		53.03	50.00	0.943	Fail
STR-I	2, DesOp	Pos	Bot Flange	35.10	0.00	0.00	50.00		35.10	50.00	1.425	Pass

Load Combination Legend:

OK

The above two figures show the computed resistances for the compression and the tension flanges at location 80.5 ft as F_{nc} and F_{nt} respectively .

Close the article and the **Specification Checks** window.

Capacity Override at Points of Interest

Again, navigate to **SUPERSTRUCTURE DEFINITIONS->Simple Span Structure->Members->G1->Member Alternative->Plate Girder-> Point of Interests->Span 1 80.5**.

Check the **Override LRFR capacity** for **Positive Flexural Capacity** and input the values as shown below.

Point Of Interest

Distance from leftmost support: 80.499999 ft or Span: Span 1 Fraction: 0.500000 Side: Left Right

Transverse stiffeners Other stiffeners Fatigue Bracing ASR Shear capacity **Positive flexural capacity** Negative flexural capacity Engine

ASR

Override ASR capacity

Comment:

ASR inv. tension: ksi

ASR inv. compr.: ksi

ASR oper. tension: ksi

ASR oper. compr.: ksi

LRFR

Override LRFR capacity

Comment:

Stage: Construction

Limit state	Over-ride	Moment capacity (kip-ft)	Tensic capac (ksi)
> STRENGTH-I	<input checked="" type="checkbox"/>		
STRENGTH-II	<input type="checkbox"/>		
STRENGTH-III	<input type="checkbox"/>		
STRENGTH-IV	<input type="checkbox"/>		
STRENGTH-V	<input type="checkbox"/>		

LRFR

Override LRFR capacity

Comment:

Limit state	Over-ride	Moment capacity (kip-ft)	Tensic capac (ksi)
> STRENGTH-I	<input checked="" type="checkbox"/>		
STRENGTH-II	<input type="checkbox"/>		
SERVICE-II	<input type="checkbox"/>		
FATIGUE	<input type="checkbox"/>		

Point Of Interest

Distance from leftmost support: 80.499999 ft or Span: Span 1 Fraction: 0.500000 Side: Left Right

Transverse stiffeners Other stiffeners Fatigue Bracing ASR Shear capacity **Positive flexural capacity** Negative flexural capacity Engine

ASR

Override ASR capacity

Comment:

ASR inv. tension: ksi

ASR inv. compr.: ksi

ASR oper. tension: ksi

ASR oper. compr.: ksi

LRFR

Override LRFR capacity

Comment:

Stage: Construction

Limit state	Over-ride	Moment capacity (kip-ft)	Tensic capac (ksi)
> STRENGTH-I	<input checked="" type="checkbox"/>		
STRENGTH-II	<input type="checkbox"/>		
STRENGTH-III	<input type="checkbox"/>		
STRENGTH-IV	<input type="checkbox"/>		
STRENGTH-V	<input type="checkbox"/>		

LRFR

Override LRFR capacity

Comment:

Limit state	Tension capacity (ksi)	Compr. capacity (ksi)	Phi
> STRENGTH-I	100	90	0.6
STRENGTH...			
SERVICE-II			
FATIGUE			

Click **OK** to save the data and right click on **Plate Girder** and select **Analyze**.

Capacity Override at Points of Interest

After the LRFR analysis is completed, click on the **Specification Check Detail** button from the **Results** group of the **DESIGN/RATE** ribbon and navigate to **Stage 3->Plate Girder->Span 1 80.5 ft. -> Article 6.10.7.2.1**.

The **phi** value has been overridden to 0.60 for a specific limit state case (mentioned in the POI 80.5 ft. window) as can be seen from the figures below. The **Resist** field reflects the implementation of the capacity override. The value in the **Resist** column is $\Phi * F_{nc}$ (from the **Override** columns) in cases where there are values in the **Override** columns.

Spec Check Detail for 6.10.7.2.1 General

--- Compression Flange ---

fc = stress in the slab
 f'c = 4.5000 (ksi)
 Stress = fbu
 Resist = phi * Fnc
 Design Ratio = Resist/Stress

Note: If the capacity has been overridden, the Resistance is computed as override phi*override capacity.
 Otherwise the Resistance is computed as per the Specification.

Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	frd (ksi)	Fnc (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
							Phi	Fnc (ksi)				
STR-I	1, DesInv	Pos	Top Flange	-48.00	0.00	50.00	0.60	90.00	-48.00	-54.00	1.125	Pass
STR-I	1, DesInv	Pos	Top Flange	-41.35	0.00	50.00	0.60	90.00	-41.35	-54.00	1.306	Pass
STR-I	1, DesOp	Pos	Top Flange	-46.48	0.00	50.00	0.60	90.00	-46.48	-54.00	1.162	Pass
STR-I	1, DesOp	Pos	Top Flange	-41.35	0.00	50.00	0.60	90.00	-41.35	-54.00	1.306	Pass
STR-I	2, DesInv	Pos	Top Flange	-46.95	0.00	50.00	0.60	90.00	-46.95	-54.00	1.150	Pass
STR-I	2, DesInv	Pos	Top Flange	-41.35	0.00	50.00	0.60	90.00	-41.35	-54.00	1.306	Pass
STR-I	2, DesOp	Pos	Top Flange	-45.67	0.00	50.00	0.60	90.00	-45.67	-54.00	1.182	Pass
STR-I	2, DesOp	Pos	Top Flange	-41.35	0.00	50.00	0.60	90.00	-41.35	-54.00	1.306	Pass

OK

Spec Check Detail for 6.10.7.2.1 General

--- Tension Flange ---

Stress = fbu + fl/3
 Resist = phi * Fnt
 Design Ratio = Resist/Stress

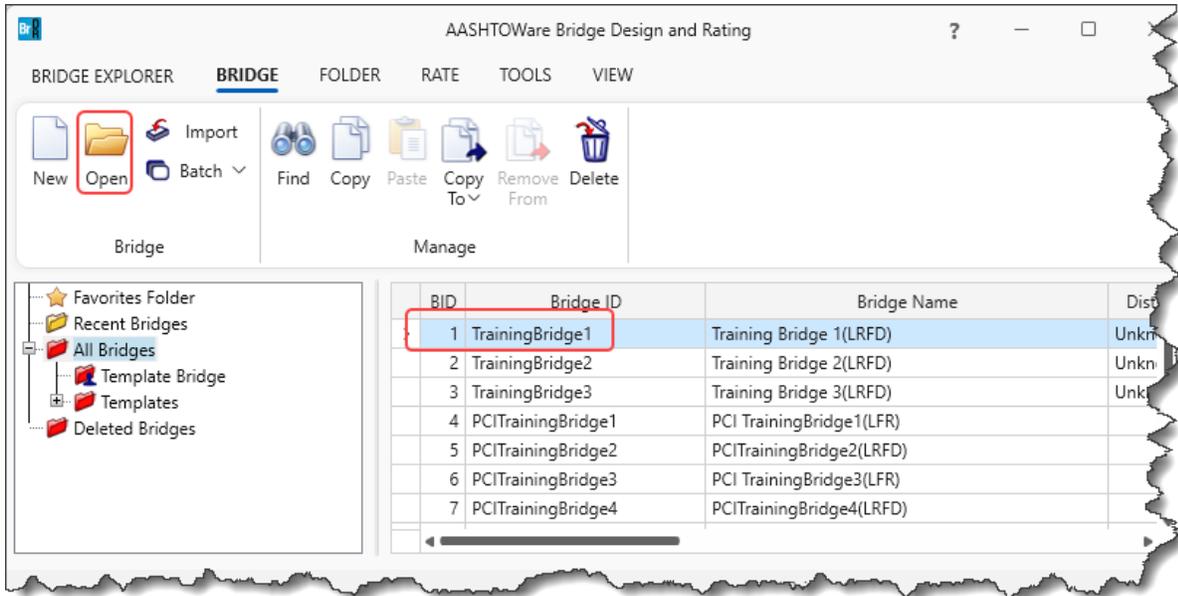
Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	fl (ksi)	frd (ksi)	Fnt (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
								Phi	Fnt (ksi)				
STR-I	1, DesInv	Pos	Bot Flange	62.68	0.00	0.00	50.00	0.60	100.00	62.68	60.00	0.957	Fail
STR-I	1, DesInv	Pos	Bot Flange	35.10	0.00	0.00	50.00	0.60	100.00	35.10	60.00	1.710	Pass
STR-I	1, DesOp	Pos	Bot Flange	56.37	0.00	0.00	50.00	0.60	100.00	56.37	60.00	1.064	Pass
STR-I	1, DesOp	Pos	Bot Flange	35.10	0.00	0.00	50.00	0.60	100.00	35.10	60.00	1.710	Pass
STR-I	2, DesInv	Pos	Bot Flange	58.35	0.00	0.00	50.00	0.60	100.00	58.35	60.00	1.028	Pass
STR-I	2, DesInv	Pos	Bot Flange	35.10	0.00	0.00	50.00	0.60	100.00	35.10	60.00	1.710	Pass
STR-I	2, DesOp	Pos	Bot Flange	53.03	0.00	0.00	50.00	0.60	100.00	53.03	60.00	1.131	Pass
STR-I	2, DesOp	Pos	Bot Flange	35.10	0.00	0.00	50.00	0.60	100.00	35.10	60.00	1.710	Pass

OK

Capacity Override at Points of Interest

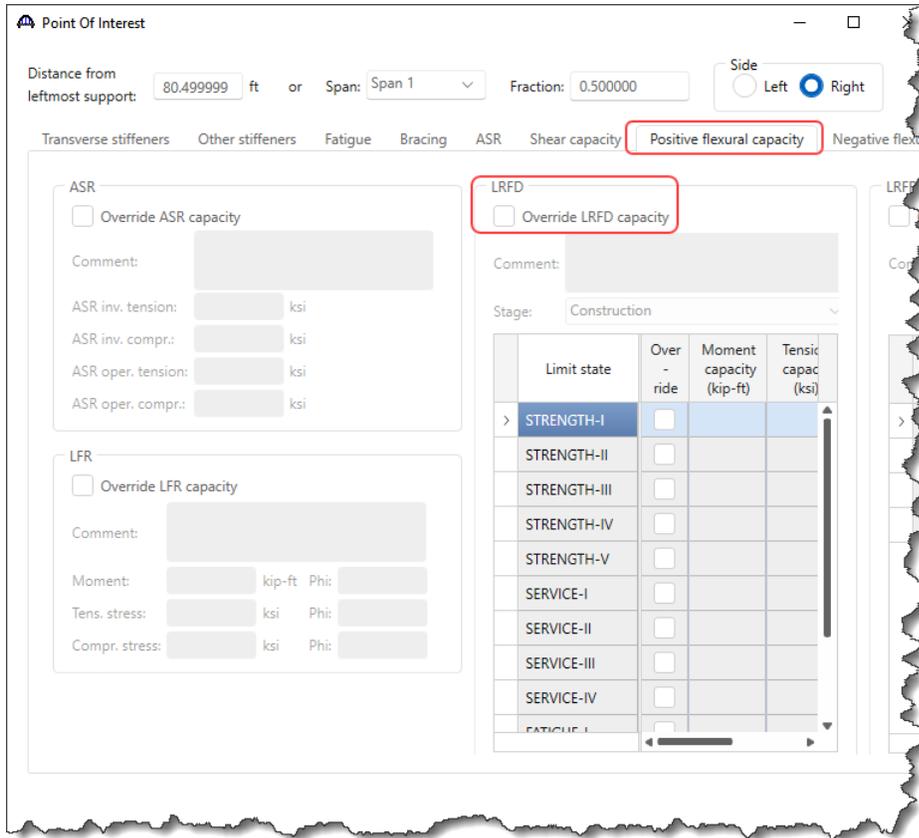
Capacity Override LRFD

From the **Bridge Explorer**, double click on **BID1 - TrainingBridge1** (or select and click **Open** from the **Bridge** group of the **BRIDGE** ribbon) to open the bridge.



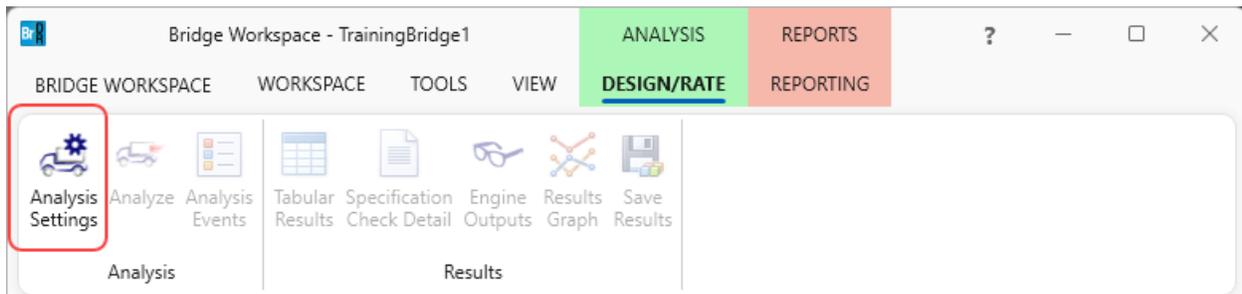
Capacity Override at Points of Interest

Navigate to the **Positive flexural capacity** tab of this window. As seen from the window below, the option for **Override LRFD capacity** is not checked. Hence, the beam capacities at 80.5 ft will be computed by the AASHTO LRFD Engine.



Click **OK** to apply the data and close the window.

From the **Analysis** group of the **DESIGN/RATE** ribbon, click on the **Analysis Settings** button as shown below.



Capacity Override at Points of Interest

Click on the **Open template** button in the **Analysis Settings** window. Select the **HL 93 Design Review** template. The updated **Analysis Settings** window is shown below.

Analysis Settings

Design review
 Rating

Rating method: LFR

Analysis type: Line Girder

Analysis option: DL, LL and Spec-Checking

Lane / Impact loading type: As Requested

Apply preference setting: None

Vehicles | Output | Engine | Description

Traffic direction: Both directions

Refresh Temporary vehicles Advanced

Vehicle selection

- Vehicles
 - Standard
 - Alternate Military Loading
 - EV2
 - EV3
 - H 15-44
 - H 20-44
 - HS 15-44
 - HS 20 (SI)
 - HS 20-44
 - NRL
 - SU4
 - SU5
 - SU6
 - SU7
 - Type 3
 - Type 3-3
 - Type 3S2
 - Agency
 - User defined
 - Temporary

Add to >>

Remove from <<

Vehicle summary

- Rating vehicles
 - Inventory
 - Operating
 - Legal operating
 - Permit inventory
 - Permit operating

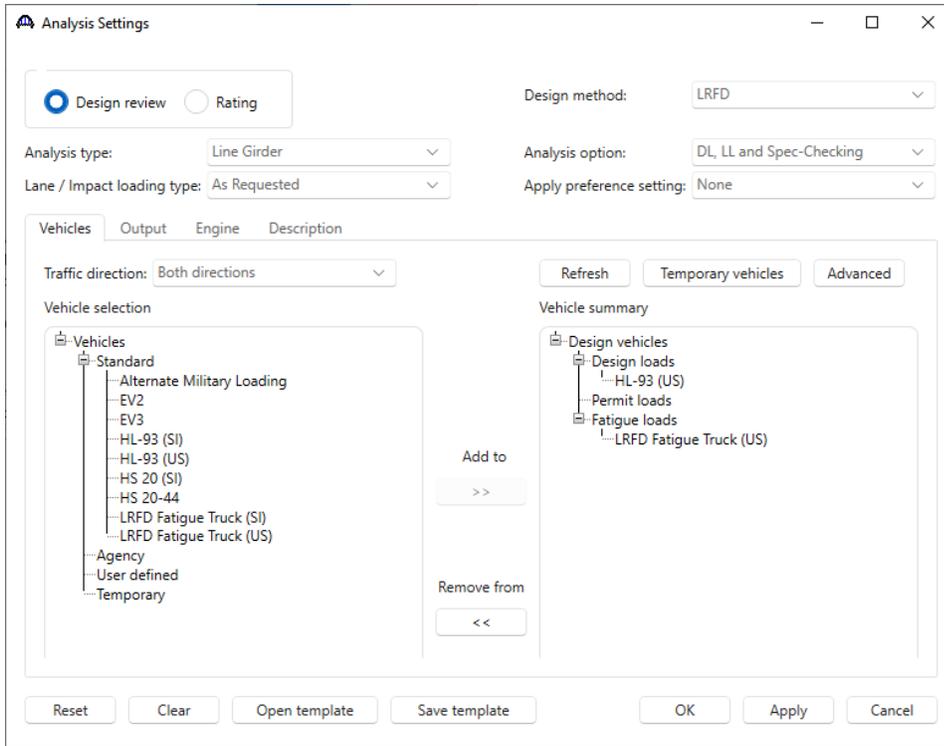
Reset Clear **Open template** Save template OK Apply Cancel

Open Template

Templates	Description	Analysis	Owner	Public / Private
> HL 93 Design Review	HL 93 Design Review	LRFD		Public
HS 20 LFR Rating	HS 20 LFR Rating	LFR		Public
LRFR Design Load Rating	LRFR Design Load Rating	LRFR		Public
LRFR Legal Load Rating	LRFR Legal Load Rating	LRFR		Public

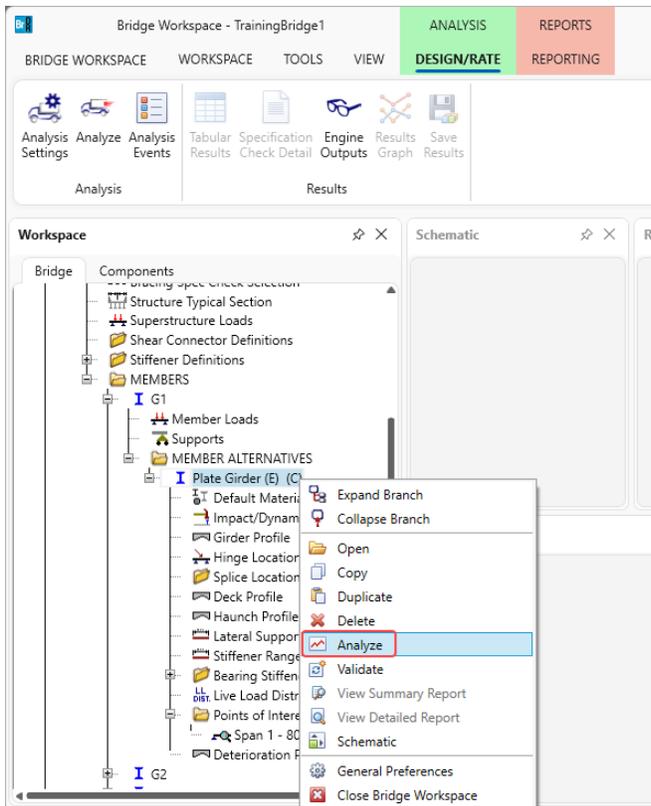
Delete **Open** Cancel

Capacity Override at Points of Interest



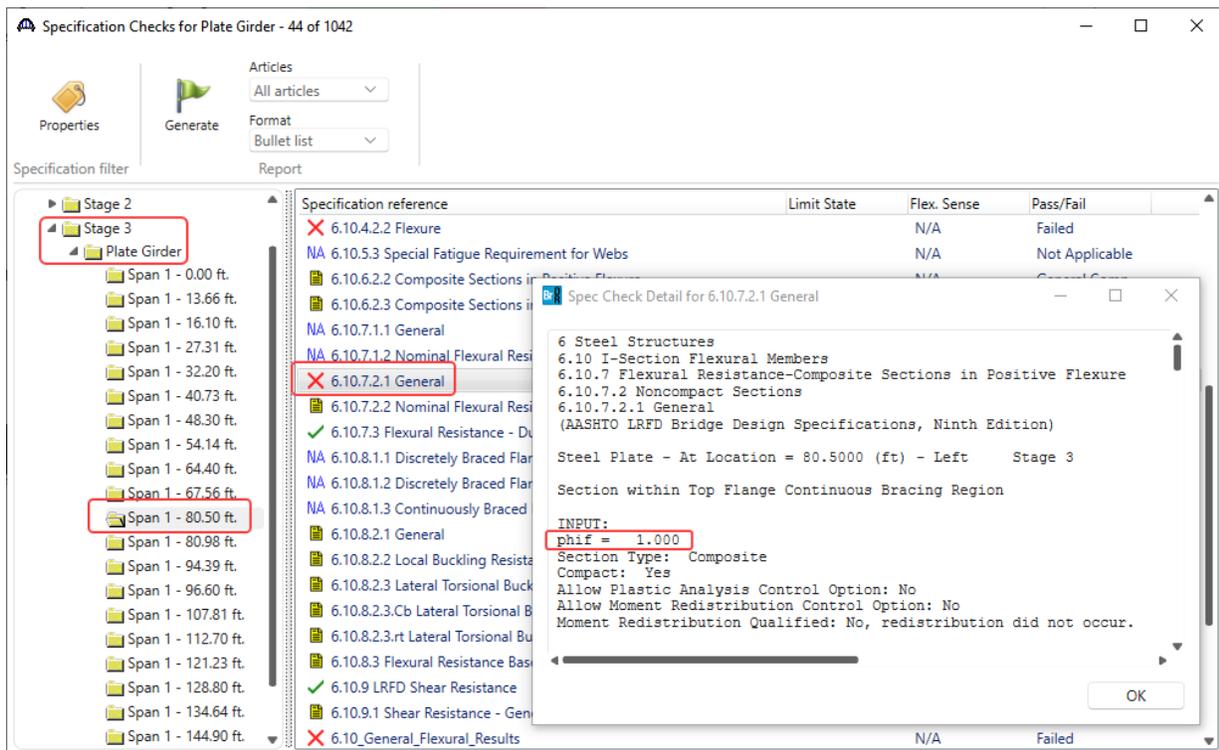
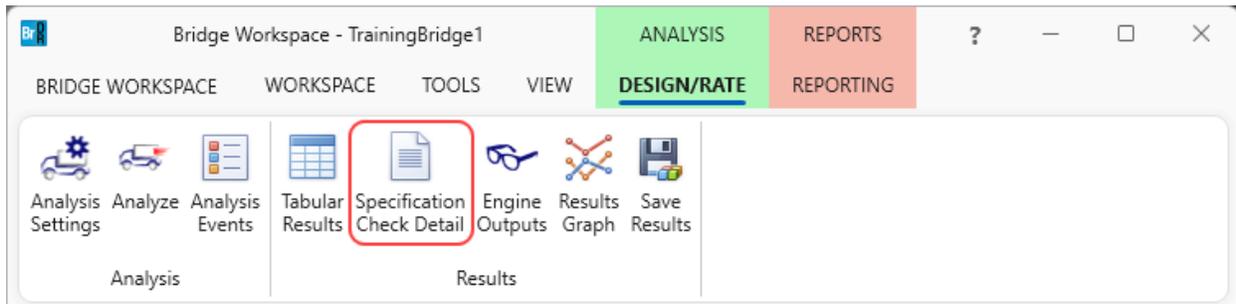
Click **OK** to apply the settings and close the window.

To analyze, right click on **Plate Girder** and select **Analyze**.



Capacity Override at Points of Interest

After the LRFD analysis is completed click on the **Specification Check Detail** button from the **Results** group of the **DESIGN/RATE** ribbon and navigate to **Stage 3->Plate Girder->Span 1 80.5 ft. -> Article 6.10.7.2.1**.



The resistance factor **phif** value is 1.0 as shown above.

Capacity Override at Points of Interest

Spec Check Detail for 6.10.7.2.1 General

--- Compression Flange ---

fc = stress in the slab
 f'c = 4.5000 (ksi)
 Stress = fbu
 Resist = phi * Fnc
 Design Ratio = Resist/Stress

Note: If the capacity has been overridden, the Resistance is computed as override phi*override capacity.
 Otherwise the Resistance is computed as per the Specification.

Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	frd (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
						Fnc (ksi)	Fnc (ksi)				
STR-I	1	Pos	Top Flange	-48.00	0.00	50.00		-48.00	-50.00	1.042	Pass
STR-I	1	Pos	Top Flange	-29.07	0.00	50.00		-29.07	-50.00	1.720	Pass
STR-I	2	Pos	Top Flange	-46.95	0.00	50.00		-46.95	-50.00	1.065	Pass
STR-I	2	Pos	Top Flange	-29.07	0.00	50.00		-29.07	-50.00	1.720	Pass
STR-III	1	Pos	Top Flange	-41.35	0.00	50.00		-41.35	-50.00	1.209	Pass
STR-III	1	Pos	Top Flange	-29.07	0.00	50.00		-29.07	-50.00	1.720	Pass
STR-III	2	Pos	Top Flange	-41.35	0.00	50.00		-41.35	-50.00	1.209	Pass
STR-III	2	Pos	Top Flange	-29.07	0.00	50.00		-29.07	-50.00	1.720	Pass
STR-V	1	Pos	Top Flange	-46.48	0.00	50.00		-46.48	-50.00	1.076	Pass
STR-V	1	Pos	Top Flange	-29.07	0.00	50.00		-29.07	-50.00	1.720	Pass
STR-V	2	Pos	Top Flange	-45.67	0.00	50.00		-45.67	-50.00	1.095	Pass
STR-V	2	Pos	Top Flange	-29.07	0.00	50.00		-29.07	-50.00	1.720	Pass

OK

Spec Check Detail for 6.10.7.2.1 General

--- Tension Flange ---

Stress = fbu + f1/3
 Resist = phi * Fnt
 Design Ratio = Resist/Stress

Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	f1 (ksi)	frd (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
							Fnt (ksi)	Fnt (ksi)				
STR-I	1	Pos	Bot Flange	62.68	0.00	0.00	50.00		62.68	50.00	0.798	Fail
STR-I	1	Pos	Bot Flange	24.06	0.00	0.00	50.00		24.06	50.00	2.078	Pass
STR-I	2	Pos	Bot Flange	58.35	0.00	0.00	50.00		58.35	50.00	0.857	Fail
STR-I	2	Pos	Bot Flange	24.06	0.00	0.00	50.00		24.06	50.00	2.078	Pass
STR-III	1	Pos	Bot Flange	35.10	0.00	0.00	50.00		35.10	50.00	1.425	Pass
STR-III	1	Pos	Bot Flange	24.06	0.00	0.00	50.00		24.06	50.00	2.078	Pass
STR-III	2	Pos	Bot Flange	35.10	0.00	0.00	50.00		35.10	50.00	1.425	Pass
STR-III	2	Pos	Bot Flange	24.06	0.00	0.00	50.00		24.06	50.00	2.078	Pass
STR-V	1	Pos	Bot Flange	56.37	0.00	0.00	50.00		56.37	50.00	0.887	Fail
STR-V	1	Pos	Bot Flange	24.06	0.00	0.00	50.00		24.06	50.00	2.078	Pass
STR-V	2	Pos	Bot Flange	53.03	0.00	0.00	50.00		53.03	50.00	0.943	Fail
STR-V	2	Pos	Bot Flange	24.06	0.00	0.00	50.00		24.06	50.00	2.078	Pass

OK

The above two figures show the computed resistances for the compression and the tension flanges at location 80.5 ft. as F_{nc} and F_{nt} respectively .

Close the article and the **Specification Checks** window.

Capacity Override at Points of Interest

Again, navigate to **SUPERSTRUCTURE DEFINITIONS->Simple Span Structure->Members->G1->Member Alternative->Plate Girder-> Point of Interests->Span 1 80.5**.

Check the **Override LRFD capacity** for **Positive Flexural Capacity** and input the values as shown below. The **Stage** field indicates that during which stage of design, the capacity values must be overridden.

Point Of Interest

Distance from leftmost support: 80.499999 ft or Span: Span 1 Fraction: 0.500000 Side: Left Right

Transverse stiffeners Other stiffeners Fatigue Bracing ASR Shear capacity **Positive flexural capacity** Negative flexural capacity

ASR

Override ASR capacity

Comment:

ASR inv. tension: ksi

ASR inv. compr.: ksi

ASR oper. tension: ksi

ASR oper. compr.: ksi

LRF

Override LRF capacity

Comment:

LRFD

Override LRFD capacity

Comment:

Stage: Final

Limit state	Over-ride	Moment capacity (kip-ft)	Tensile capacity (ksi)
> STRENGTH-I	<input checked="" type="checkbox"/>		
STRENGTH-II	<input type="checkbox"/>		
STRENGTH-III	<input type="checkbox"/>		
STRENGTH-IV	<input type="checkbox"/>		

Point Of Interest

Distance from leftmost support: 80.499999 ft or Span: Span 1 Fraction: 0.500000 Side: Left Right

Transverse stiffeners Other stiffeners Fatigue Bracing ASR Shear capacity **Positive flexural capacity** Negative flexural capacity

ASR

Override ASR capacity

Comment:

ASR inv. tension: ksi

ASR inv. compr.: ksi

ASR oper. tension: ksi

ASR oper. compr.: ksi

LRF

Override LRF capacity

Comment:

LRFD

Override LRFD capacity

Comment:

Stage: Final

Limit state	Tension capacity (ksi)	Compr. capacity (ksi)	Phi
> STRENGTH-I	120	90	0.6
STRENGTH-II			
STRENGTH...			
STRENGTH...			

Click **OK** to save the data and right click on **Plate Girder** and select **Analyze**.

Capacity Override at Points of Interest

After the LRFD analysis is completed click on the **Specification Check Detail** button from the **Results** group of the **DESIGN/RATE** ribbon and navigate to **Stage 3->Plate Girder->Span 1 80.5 ft. -> Article 6.10.7.2.1**.

The **phif** value has been overridden to 0.60 for a specific limit state case (mentioned in the POI 80.5 ft. window) as can be seen from the figures below. The **Resist** field reflects the implementation of the capacity override. The value in the **Resist** column is $\Phi * F_{nc}$ (from the **Override** columns) in cases where there are values in the **Override** columns.

Spec Check Detail for 6.10.7.2.1 General

--- Compression Flange ---

fc = stress in the slab
 f'c = 4.5000 (ksi)
 Stress = fbu
 Resist = phif * Fnc
 Design Ratio = Resist/Stress

Note: If the capacity has been overridden, the Resistance is computed as override phi*override capacity. Otherwise the Resistance is computed as per the Specification.

Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	frd (ksi)	Fnc (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
							Phi	Fnc (ksi)				
STR-I	1	Pos	Top Flange	-48.00	0.00	50.00	0.60	90.00	-48.00	-54.00	1.125	Pass
STR-I	1	Pos	Top Flange	-29.07	0.00	50.00	0.60	90.00	-29.07	-54.00	1.857	Pass
STR-I	2	Pos	Top Flange	-46.95	0.00	50.00	0.60	90.00	-46.95	-54.00	1.150	Pass
STR-I	2	Pos	Top Flange	-29.07	0.00	50.00	0.60	90.00	-29.07	-54.00	1.857	Pass
STR-III	1	Pos	Top Flange	-41.35	0.00	50.00			-41.35	-50.00	1.209	Pass
STR-III	1	Pos	Top Flange	-29.07	0.00	50.00			-29.07	-50.00	1.720	Pass
STR-III	2	Pos	Top Flange	-41.35	0.00	50.00			-41.35	-50.00	1.209	Pass
STR-III	2	Pos	Top Flange	-29.07	0.00	50.00			-29.07	-50.00	1.720	Pass
STR-V	1	Pos	Top Flange	-46.48	0.00	50.00			-46.48	-50.00	1.076	Pass
STR-V	1	Pos	Top Flange	-29.07	0.00	50.00			-29.07	-50.00	1.720	Pass
STR-V	2	Pos	Top Flange	-45.67	0.00	50.00			-45.67	-50.00	1.095	Pass
STR-V	2	Pos	Top Flange	-29.07	0.00	50.00			-29.07	-50.00	1.720	Pass

OK

Spec Check Detail for 6.10.7.2.1 General

--- Tension Flange ---

Stress = fbu + fl/3
 Resist = phif * Fnt
 Design Ratio = Resist/Stress

Limit State	Load Comb	Flexure Type	Component	fbu (ksi)	fl (ksi)	frd (ksi)	Fnt (ksi)	--- Override ---		Stress (ksi)	Resist (ksi)	Design Ratio	Status
								Phi	Fnt (ksi)				
STR-I	1	Pos	Bot Flange	62.68	0.00	0.00	50.00	0.60	120.00	62.68	72.00	1.149	Pass
STR-I	1	Pos	Bot Flange	24.06	0.00	0.00	50.00	0.60	120.00	24.06	72.00	2.993	Pass
STR-I	2	Pos	Bot Flange	58.35	0.00	0.00	50.00	0.60	120.00	58.35	72.00	1.234	Pass
STR-I	2	Pos	Bot Flange	24.06	0.00	0.00	50.00	0.60	120.00	24.06	72.00	2.993	Pass
STR-III	1	Pos	Bot Flange	35.10	0.00	0.00	50.00			35.10	50.00	1.425	Pass
STR-III	1	Pos	Bot Flange	24.06	0.00	0.00	50.00			24.06	50.00	2.078	Pass
STR-III	2	Pos	Bot Flange	35.10	0.00	0.00	50.00			35.10	50.00	1.425	Pass
STR-III	2	Pos	Bot Flange	24.06	0.00	0.00	50.00			24.06	50.00	2.078	Pass
STR-V	1	Pos	Bot Flange	56.37	0.00	0.00	50.00			56.37	50.00	0.887	Fail
STR-V	1	Pos	Bot Flange	24.06	0.00	0.00	50.00			24.06	50.00	2.078	Pass
STR-V	2	Pos	Bot Flange	53.03	0.00	0.00	50.00			53.03	50.00	0.943	Fail
STR-V	2	Pos	Bot Flange	24.06	0.00	0.00	50.00			24.06	50.00	2.078	Pass

OK