

Identification

Title : STEEL

Material Properties

Young's Modulus (E) : 1.99947e+08 kN/m²

Poisson's Ratio (nu) : 0.3

Density : 76.8191 kN/m³

Thermal Coeff(a) : 6.5e-06 /°F

Critical Damping : 0.03

Shear Modulus (G) : 7.7221e+07 kN/m²

Type of Material : STEEL

Design Properties

Yield Stress (Fy) : 0 kN/m²

Tensile Strength (Fu) : 0 kN/m²

Yield Strength Ratio (Ry) : 1.5

Tensile Strength Ratio (Rt) : 1.2

Compressive strength (Fc) : 0 kN/m²

OK

Cancel

Isotropic Material

X

Other Supports

Section Wizard Database

Tools

Supports

Loading

Analysis

Design

CABLE STAYED BRIDGE...

Name	E N/m ²	Poisson's Ratio
Material - - Whole Structure		

Isotropic

Orthotropic 2D

Title

STEEL

CONCRETE

ALUMINUM

STAINLESSSTEEL

STEEL_36_KSI

STEEL_50_KSI

STEEL_275_NMM2

Highlight Assigned Geometry

Create

Edit...

Delete...

Assignment Method

Assign To Selected Beams

Assign To View

Use Cursor To Assign

Assign To Edit List

89 To 139 224 To 274

Assign

Close

Load 10

- + [C] 117 : COMB - 0.9 Dead + 1.5 Wind (2)
- + [C] 118 : COMB - 0.9 Dead + 1.5 Wind (3)
- + [C] 119 : COMB - 0.9 Dead + 1.5 Wind (4)
- + [C] 120 : COMB - 0.9 Dead + -1.5 Wind (1)
- + [C] 121 : COMB - 0.9 Dead + -1.5 Wind (2)
- + [C] 122 : COMB - 0.9 Dead + -1.5 Wind (3)
- + [C] 123 : COMB - 0.9 Dead + -1.5 Wind (4)
- + [C] 124 : COMB - 0.9 Dead + 1.5 Seismic-H (1)
- + [C] 125 : COMB - 0.9 Dead + 1.5 Seismic-H (2)
- + [C] 126 : COMB - 0.9 Dead + 1.5 Seismic-H (3)
- + [C] 127 : COMB - 0.9 Dead + 1.5 Seismic-H (4)
- + [C] 128 : COMB - 0.9 Dead + -1.5 Seismic-H (1)

 Toggle Load**Assignment Method**

- Assign To Selected Entities
- Assign To View
- Use Cursor To Assign
- Assign To Edit List

Load & Definition

- + 105 : COMB - 1.5 Dead + -1.5 Wind (2)
- + 106 : COMB - 1.5 Dead + -1.5 Wind (3)
- + 107 : COMB - 1.5 Dead + -1.5 Wind (4)
- + 108 : COMB - 1.5 Dead + 1.5 Seismic-H (1)
- + 109 : COMB - 1.5 Dead + 1.5 Seismic-H (2)
- + 110 : COMB - 1.5 Dead + 1.5 Seismic-H (3)
- + 111 : COMB - 1.5 Dead + 1.5 Seismic-H (4)
- + 112 : COMB - 1.5 Dead + -1.5 Seismic-H (1)
- + 113 : COMB - 1.5 Dead + -1.5 Seismic-H (2)
- + 114 : COMB - 1.5 Dead + -1.5 Seismic-H (3)
- + 115 : COMB - 1.5 Dead + -1.5 Seismic-H (4)
- + 116 : COMB - 0.9 Dead + 1.5 Wind (1)

 Toggle Load

Assignment Method

- Assign To Selected Entities
- Assign To View
- Use Cursor To Assign
- Assign To Edit List

Analytical Modeling: Geometry Properties Materials

Load & Definition

- + [] 93 : COMB - 1.2 Dead + 1.2 Seismic-H (2)
- + [] 94 : COMB - 1.2 Dead + 1.2 Seismic-H (3)
- + [] 95 : COMB - 1.2 Dead + 1.2 Seismic-H (4)
- + [] 96 : COMB - 1.2 Dead + -1.2 Seismic-H (1)
- + [] 97 : COMB - 1.2 Dead + -1.2 Seismic-H (2)
- + [] 98 : COMB - 1.2 Dead + -1.2 Seismic-H (3)
- + [] 99 : COMB - 1.2 Dead + -1.2 Seismic-H (4)
- + [] 100 : COMB - 1.5 Dead + 1.5 Wind (1)
- + [] 101 : COMB - 1.5 Dead + 1.5 Wind (2)
- + [] 102 : COMB - 1.5 Dead + 1.5 Wind (3)
- + [] 103 : COMB - 1.5 Dead + 1.5 Wind (4)
- + [] 104 : COMB - 1.5 Dead + -1.5 Wind (1)

New... Add... Edit... Delete...

Toggle Load

Assignment Method

Assign To Selected Entities

Assign To View

Use Cursor To Assign

Assign To Edit List

Assign Close Help

Load & Definition

- [C] 10 - 82 : GENERATE LOAD, ADD LOAD 1
 - [C] TYPE 1 - 4 0 1.8 XINC 1
 - [C] 83 : COMB - 1.5 Dead
 - [C] 84 : COMB - 1.2 Dead + 1.2 Wind (1)
 - [C] 85 : COMB - 1.2 Dead + 1.2 Wind (2)
 - [C] 86 : COMB - 1.2 Dead + 1.2 Wind (3)
 - [C] 87 : COMB - 1.2 Dead + 1.2 Wind (4)
 - [C] 88 : COMB - 1.2 Dead +-1.2 Wind (1)
 - [C] 89 : COMB - 1.2 Dead +-1.2 Wind (2)
 - [C] 90 : COMB - 1.2 Dead +-1.2 Wind (3)
 - [C] 91 : COMB - 1.2 Dead +-1.2 Wind (4)
 - [C] 92 : COMB - 1.2 Dead + 1.2 Seismic-H (1)

 Toggle Load

Assignment Method

- Assign To Selected Entities
- Assign To View
- Use Cursor To Assign
- Assign To Edit List

Analytical Modeling: Geometry Properties Materials -F-

Load & Definition

- + 121 : COMB - 0.9 Dead + -1.5 Wind (2)
- + 122 : COMB - 0.9 Dead + -1.5 Wind (3)
- + 123 : COMB - 0.9 Dead + -1.5 Wind (4)
- + 124 : COMB - 0.9 Dead + 1.5 Seismic-H (1)
- + 125 : COMB - 0.9 Dead + 1.5 Seismic-H (2)
- + 126 : COMB - 0.9 Dead + 1.5 Seismic-H (3)
- + 127 : COMB - 0.9 Dead + 1.5 Seismic-H (4)
- + 128 : COMB - 0.9 Dead + -1.5 Seismic-H (1)
- + 129 : COMB - 0.9 Dead + -1.5 Seismic-H (2)
- + 130 : COMB - 0.9 Dead + -1.5 Seismic-H (3)
- + 131 : COMB - 0.9 Dead + -1.5 Seismic-H (4)

L Load Envelopes

New... Add... Edit... Delete...

Toggle Load

Assignment Method

Assign To Selected Entities

Assign To View

Use Cursor To Assign

Assign To Edit List

Assign Close Help

Analytical Modeling: Geometry Properties Help

Load & Definition

- D Time History Definitions**
- D Wind Definitions**
 - D TYPE 1: WIND 1
- D Snow Definition
- D Reference Load Definitions
- D Seismic Definition (IS 1893 - 2016)
- D ZONE 0.24 RF 511 SS 1 ST 1 DM 0.05
 - D ZONE 0.24 RF 511 SS 1 ST 1 DM 0.05
- D Pushover Definitions
- D Direct Analysis Definition
- D Starting Load Definition

- L Load Cases Details**
 - L 2 : EQX+

New... Add... Edit ... Delete...

Toggle Load

Assignment Method

Assign To Selected Entities

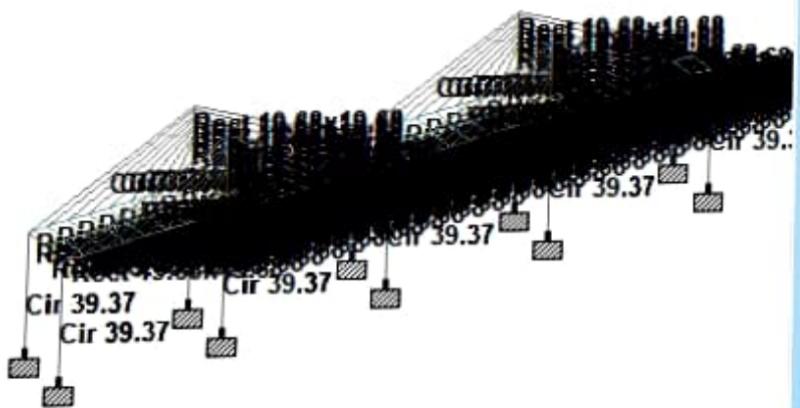
Assign To View

Use Cursor To Assign

Assign To Edit List

Assign Close Help

CABLE STAYED BRIDGE - Whole Structure



Load 7

Load & Definition

- + L 3 : EQX-
- + L 4 : EQZ+
- + L 5 : EQZ-
- + L 1 : DL
- + L 6 : WLX+
- + L 7 : WLX **(selected)**
- + L 8 : WLZ+
- + L 9 : WLZ-
- C 10-82 : GENERATE LOAD, ADD LOAD 1
 - + TYPE 1 4 0 1.8 XINC 1
- C 83 : COMB - 1.5 Dead
- C 84 : COMB - 1.2 Dead + 1.2 Wind (1)

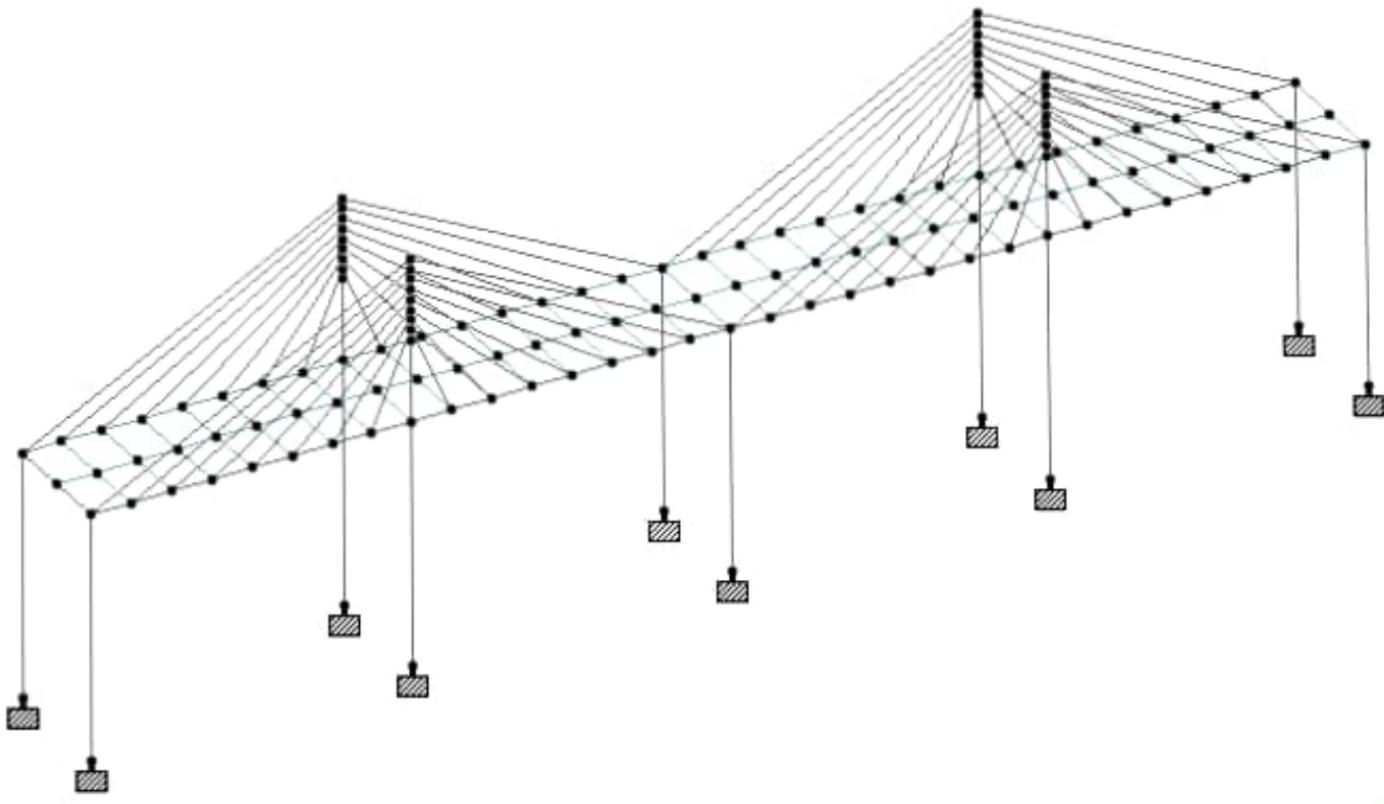
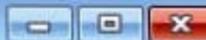
 Toggle Load

Assignment Method

- Assign To Selected Entities
- Assign To View
- Use Cursor To Assign
- Assign To Edit List

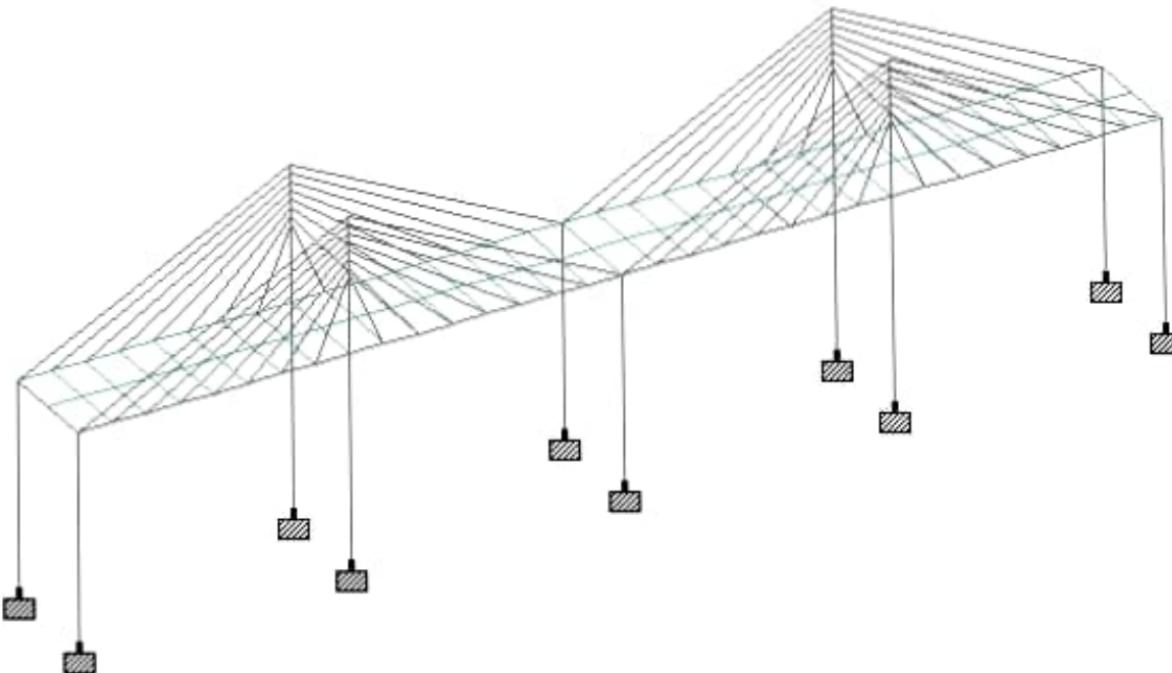


CABLE STAYED BRIDGE - Whole Structure



Load 83

CABLE STAYED BRIDGE - Whole Structure



X
Y
Z

Load 83

AutoRecovery Off | CABLE STAYED BRIDGE.std - STAAD.Pro CONNECT Edition

File Geometry View Select Specification Loading Analysis and Design Utilities Search

Label Settings Labels Tools Views Options Windows

Zoom Window Whole Structure

Open View New View Selected Objects View Management

Display Options Set Structure Colors Structural Tooltip Options

Workflow Analytical Modeling: Geometry Properties Materials Specifications Supports Loading Analysis Design

Analytical Modeling

Physical Modeling

Building Planner

Piping

Postprocessing

Foundation Design

Steel AutoDrafter

Chinese Steel Design

Connection Design

Advanced Concrete D...

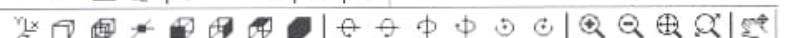
Y Z

For Help, press F1 | Analytical Modeling Work | Load : 1: DL | Input Units : kN-m

12:24 PM Wednesday 11/12/2025

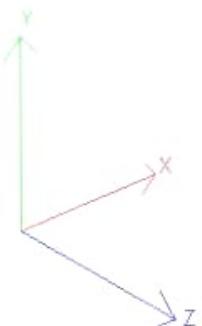
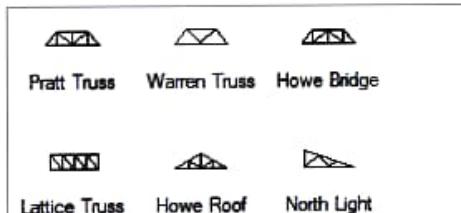


File Edit View Help



Prototype Models Saved User Models

Model Type: Truss Models



	posite Deck
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Loading Analysis Design

STAYED BRIDG...

X m	Y m	Z m
0.000	0.000	0.000
32.000	0.000	0.000
0.000	0.000	6.000
32.000	0.000	6.000
0.000	0.000	3.000
32.000	0.000	3.000
2.000	0.000	0.000
2.000	0.000	6.000
2.000	0.000	3.000
4.000	0.000	0.000
4.000	0.000	6.000

STAYED BRIDG...

ode A	Node B	Property Refn.
3	8	3
1	7	3
1	5	3
2	6	3
5	3	3
6	4	3
7	10	3
8	11	3
5	9	3
7	6	3

Input Unit: ft

AutoRecovery Off | CABLE STAYED BRIDGE.std - STAAD.Pro CONNECT Edition

File Geometry View Select Specification Loading Analysis and Design Utilities Search

Label Settings Labels Tools Views Options Windows

Zoom Window Whole Structure

Open View New View Selected Objects View Management

Display Options Set Structure Colors Structural Tooltip Options

Workflow Analytical Modeling: Geometry Properties Materials Specifications Supports Loading Analysis Design

Analytical Modeling

Physical Modeling

Building Planner

Piping

Postprocessing

Foundation Design

Steel AutoDrafter

Chinese Steel Design

Connection Design

Advanced Concrete D...

For Help, press F1 | Analytical Modeling Work | Load : 1: DL | Input Units : kN-m

The screenshot shows the STAAD.Pro CONNECT Edition software interface. The main window displays a 3D model of a cable-stayed bridge. The bridge consists of a long horizontal girder supported by multiple piers, with cables extending from the top of the piers to the girder. The model is color-coded, with the girder and piers in blue and the cables in red. A coordinate system (X, Y, Z) is shown at the base of the bridge. On the left, a vertical toolbar titled 'Workflow' lists various modeling tools: Analytical Modeling (selected), Physical Modeling, Building Planner, Piping, Postprocessing, Foundation Design, Steel AutoDrafter, Chinese Steel Design, Connection Design, and Advanced Concrete D...'. The 'Analytical Modeling' tool is highlighted with a yellow background. At the bottom, a taskbar includes icons for Microsoft Edge, File Explorer, Windows Start, Google Chrome, Microsoft Word, Microsoft Excel, and Microsoft Powerpoint. The status bar at the bottom right shows the date and time: Wednesday, 11/12/2025, 12:23 PM.

