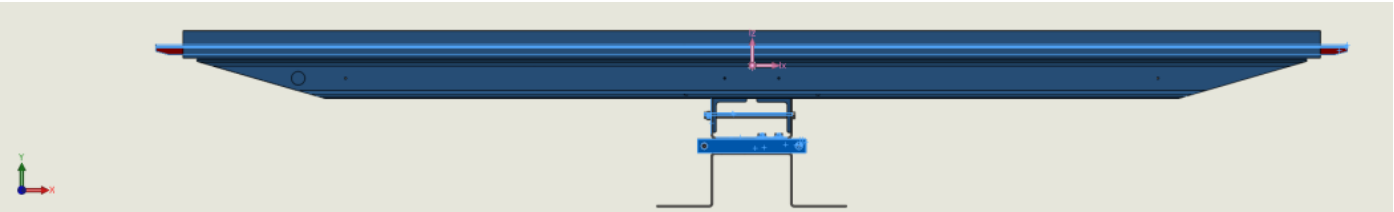
***Bridge Mass Properties in Neutral Position – Left Tip (Large Links Move)***



This is the CG location for the moving parts when the bridge is tipped in the direction that forces the long links to move.  In this picture, it would be a left tip of the bridge.

Mass Properties

Print... | Copy | Close | Options... | Recalculate

Output coordinate system: -- default --

Selected items:
ge-12017-01-1@ge-12022-moving part
ge-12017-02-1@ge-12022-moving part
ge-12018-1@ge-12022-moving part
ge-12019-1@ge-12022-moving part

☑ Include hidden bodies/components

☑ Show output coordinate system in corner of window

☐ Assigned mass properties

Mass properties of selected components

Output coordinate System: -- default --

The center of mass and the moments of inertia are output in the coordinate system of ge-12022-moving part
Mass = 175.25 pounds

Volume = 3377.08 cubic inches

Surface area = 26030.21 square inches

Center of mass: ( inches )
X = 0.04
Y = 10.44
Z = 0.00

Principal axes of inertia and principal moments of inertia: ( pounds * square inches )
Taken at the center of mass.
Ix = (1.00, -0.00, 0.00) Px = 45877.84
Iy = (0.00, 0.00, -1.00) Py = 92683.32
Iz = (0.00, 1.00, 0.00) Pz = 137225.67

Moments of inertia: ( pounds * square inches )
Taken at the center of mass and aligned with the output coordinate system.
Lxx = 45877.88 Lxy = -35.98 Lxz = 38.04
Lyx = -35.98 Lyy = 137225.65 Lyz = 0.00
Lzx = 38.04 Lzy = 0.00 Lzz = 92683.29

Moments of inertia: ( pounds * square inches )
Taken at the output coordinate system.
Ixx = 64994.48 Ixy = 36.38 Ixz = 38.04
Iyx = 36.38 Iyy = 137225.93 Iyz = -0.00
Izx = 38.04 Izy = -0.00 Izz = 111800.16

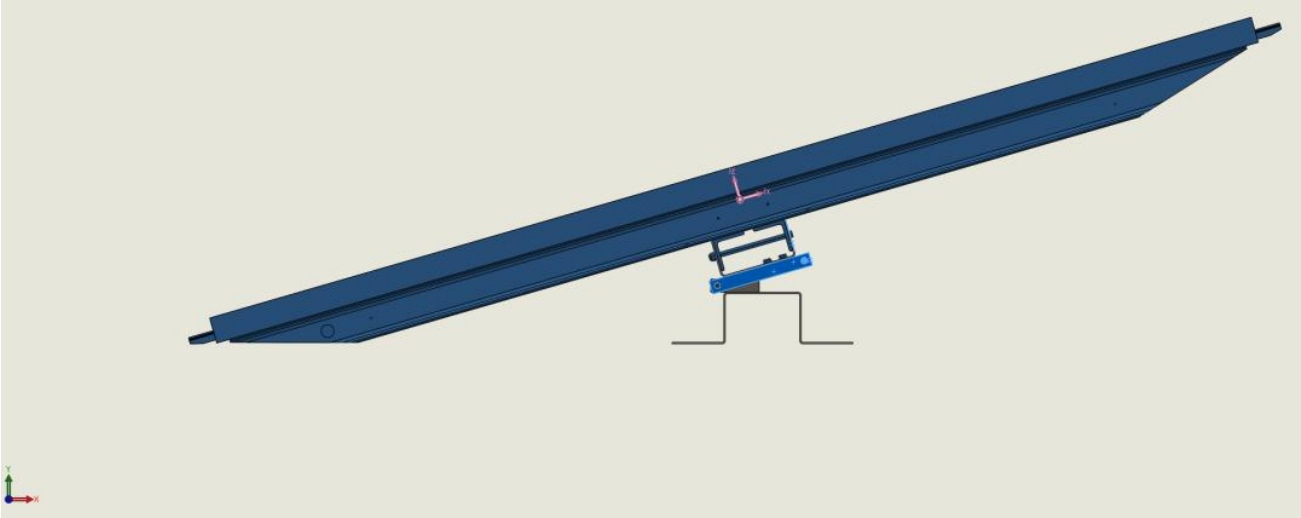
Moving mass

CG Distance to the right of the CL

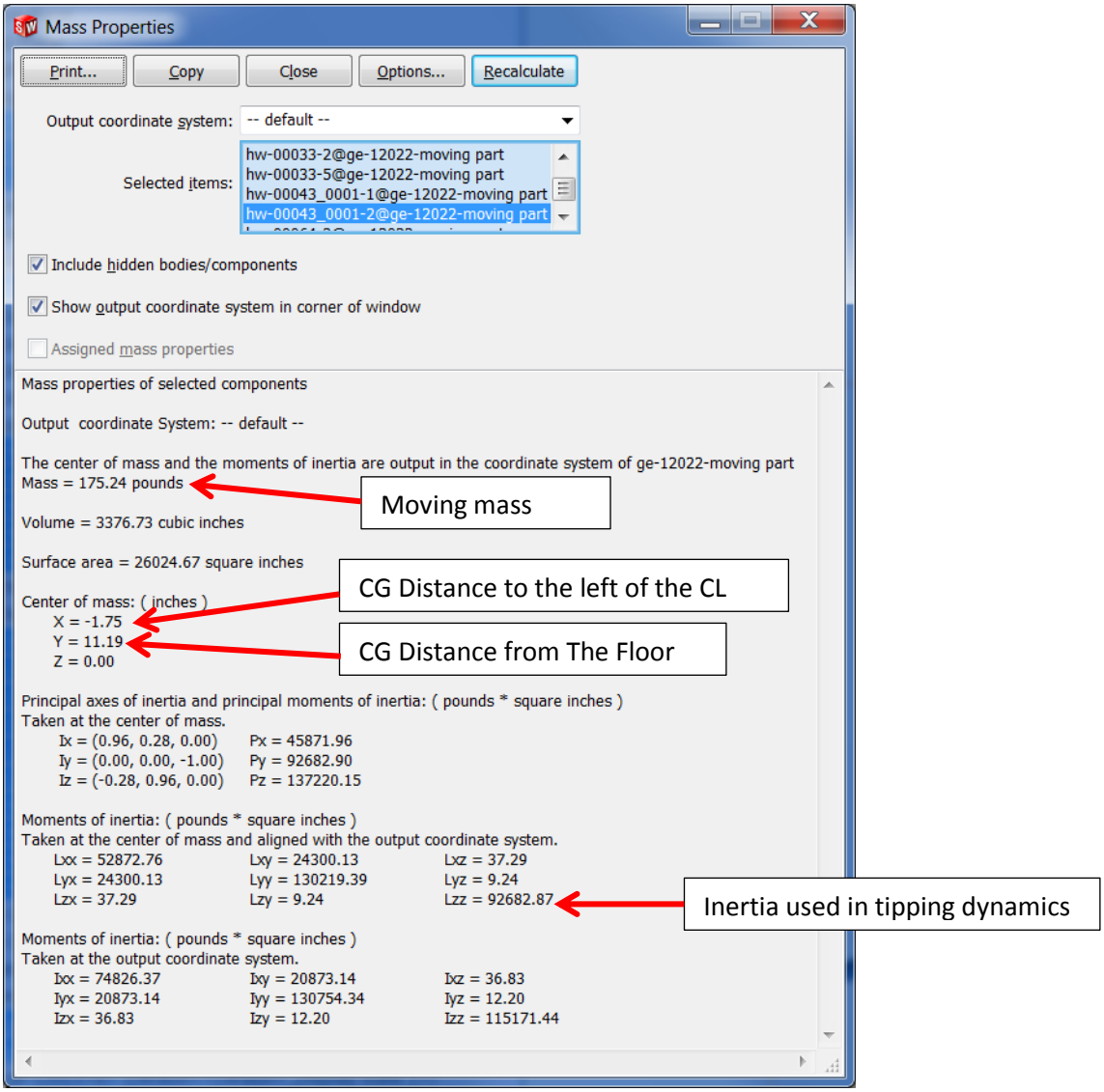
CG Distance from The Floor

Inertia used in tipping dynamics

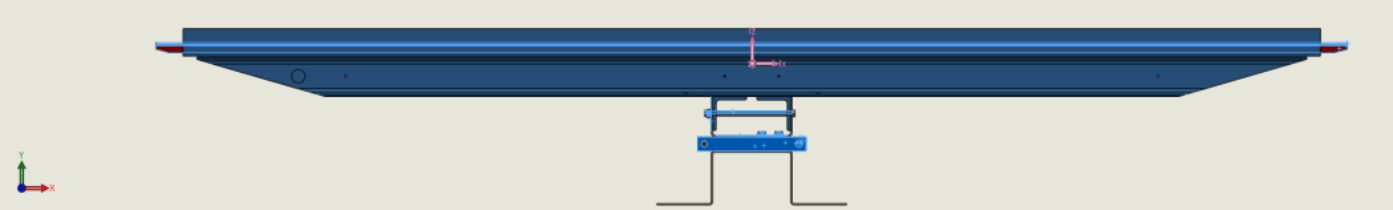
***Bridge Mass Properties in Left Tilt Position (Large Links Move)***



This is the CG location for the moving parts when the bridge is actually tipped in the direction that forces the long links to move. In this picture, it is a left tip of the bridge.



***Bridge Mass Properties in Neutral Position – Right Tip (Large Links Static)***



This is the CG location for the moving parts when the bridge is tipped in the direction that forces the long links to stay static. In this picture, it would be a right tip of the bridge.

Mass Properties

Print... | Copy | Close | Options... | Recalculate

Output coordinate system: -- default --

Selected items:
ge-12017-01-1@ge-12022-moving part
ge-12017-02-1@ge-12022-moving part
ge-12018-1@ge-12022-moving part
ge-12019-1@ge-12022-moving part

☑ Include hidden bodies/components

☑ Show output coordinate system in corner of window

☐ Assigned mass properties

Mass properties of selected components

Output coordinate System: -- default --

The center of mass and the moments of inertia are output in the coordinate system of ge-12022-moving part

Mass = 171.96 pounds ← Moving mass

Volume = 3364.67 cubic inches

Surface area = 25926.26 square inches

Center of mass: ( inches )
X = 0.04 ← CG Distance to the right of the CL
Y = 10.56 ← CG Distance from The Floor
Z = 0.00

Principal axes of inertia and principal moments of inertia: ( pounds * square inches )
Taken at the center of mass.
Ix = (1.00, -0.00, 0.00) Px = 44339.43
Iy = (0.00, 0.00, -1.00) Py = 92548.02
Iz = (0.00, 1.00, 0.00) Pz = 135789.39

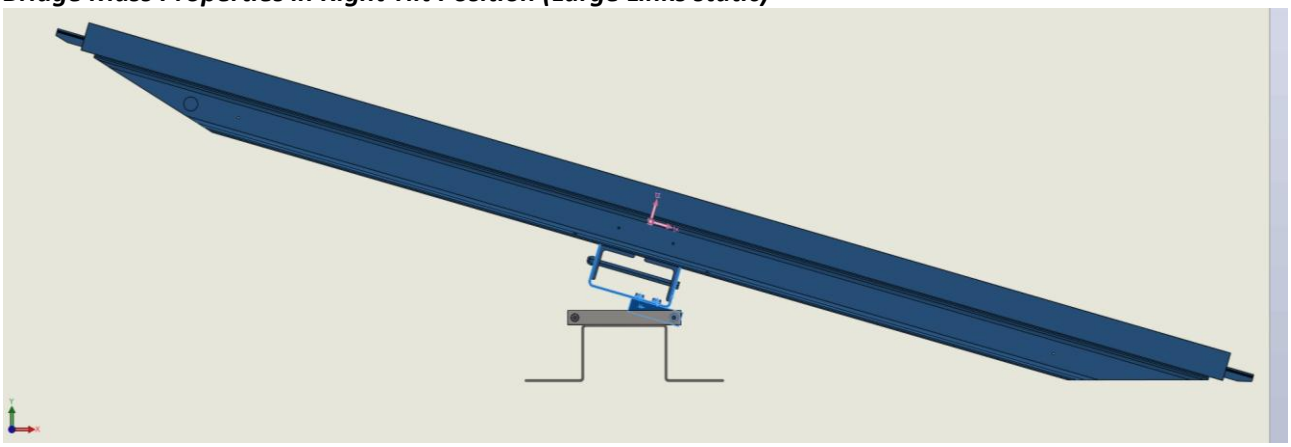
Moments of inertia: ( pounds * square inches )
Taken at the center of mass and aligned with the output coordinate system.

| | | |
|---|---|---|
| Lxx = 44339.48 | Lxy = -36.13 | Lxz = 38.04 |
| Lyx = -36.13 | Lyy = 135789.38 | Lyz = 0.00 |
| Lzx = 38.04 | Lzy = 0.00 | Lzz = 92547.99 ← Inertia used in tipping dynamics |

Moments of inertia: ( pounds * square inches )
Taken at the output coordinate system.

| | | |
|---|---|---|
| Ixx = 63507.91 | Ixy = 35.90 | Ixz = 38.04 |
| Iyx = 35.90 | Iyy = 135789.65 | Iyz = -0.00 |
| Izx = 38.04 | Izy = -0.00 | Izz = 111716.70 |

***Bridge Mass Properties in Right Tilt Position (Large Links static)***



This is the CG location for the moving parts when the bridge is actually tipped in the direction that forces the long links to move. In this picture, it is a left tip of the bridge.

Mass Properties

Print... | Copy | Close | Options... | Recalculate

Output coordinate system: -- default --

Selected items:
ge-12017-01-1@ge-12022-moving part
ge-12017-02-1@ge-12022-moving part
ge-12018-1@ge-12022-moving part
ge-12019-1@ge-12022-moving part

☑ Include hidden bodies/components

☑ Show output coordinate system in corner of window

☐ Assigned mass properties

Mass properties of selected components

Output coordinate System: -- default --

The center of mass and the moments of inertia are output in the coordinate system of ge-12022-moving part
Mass = 171.96 pounds ← Moving mass

Volume = 3364.67 cubic inches

Surface area = 25926.26 square inches

Center of mass: ( inches ) ← CG Distance to the left of the CL
X = 1.85
Y = 11.28 ← CG Distance from The Floor
Z = 0.00

Principal axes of inertia and principal moments of inertia: ( pounds * square inches )
Taken at the center of mass.
Ix = (0.96, -0.28, 0.00) Px = 44339.43
Iy = (0.00, -0.00, -1.00) Py = 92548.02
Iz = (0.28, 0.96, 0.00) Pz = 135789.39

Moments of inertia: ( pounds * square inches )
Taken at the center of mass and aligned with the output coordinate system.

| | | |
|---|---|---|
| Lxx = 51382.84 | Lxy = -24382.52 | Lxz = 36.55 |
| Lyx = -24382.52 | Lyy = 128746.02 | Lyz = -10.54 |
| Lzx = 36.55 | Lzy = -10.54 | Lzz = 92547.99 ← Inertia used in tipping dynamics |

Moments of inertia: ( pounds * square inches )
Taken at the output coordinate system.

| | | |
|---|---|---|
| Ixx = 73261.44 | Ixy = -20786.14 | Ixz = 36.55 |
| Iyx = -20786.14 | Iyy = 129337.19 | Iyz = -10.54 |
| Izx = 36.55 | Izy = -10.54 | Izz = 115017.75 |