

APPENDIX C

ALTERNATIVE 2 CALCULATIONS

APPENDIX C-1

LIVE LOAD DISTRIBUTION FACTORS

HNTB	Made by	CAM	Date	9/10/2013	Job Number
	Checked by		Date		Sheet Number
	Backchecked by		Date		

Span 11 - Proposed Girders

Live Load Distribution Factors

L=	121.17	ft	Span Length
t _s =	8.00	in	Deck Slab Thickness
S=	13.11	ft	Beam Spacing
S ₂ =	13.11	ft	Beam Spacing (between Existing and Widening)
	4.75	ft	Deck Overhang
	1.54	ft	Curb Width
d _e =	3.21	ft	(LRFD 4.6.2.2.1)
h _{buildup} =	1.00	in	
f' _{c,beam} =	7.50	ksi	Beam Concrete Strength
f' _{c,deck} =	5.50	ksi	Deck Concrete Strength
E _{c,beam} =	4490.96	ksi	Beam Elastic Modulus
E _{c,deck} =	3845.83	ksi	Deck Elastic Modulus
n=	1.17		

Note:
Since skew < 30°, no skew adjustment is required.

FIB-78

A _{beam} =	1100.58	in ²	
I _{beam} =	903861.00	in ⁴	
y _i =	43.37	in	
e _g =	48.37	in	
d =	78.00	in	
K _y =	4062410.59	in ⁴	(LRFD eq. 4.6.2.2.1-1)

S_{avg}= 13.11 ft Average Beam Spacing

Distribution of Live Loads for Moment in Interior Beams: LRFD Table 4.6.2.2b-1

	1 design lane loaded:	2 design lane loaded:	g _{interior,mom}
N _b >3 =>	0.65	1.00	0.997

Distribution of Live Loads for Moment in Exterior Beams: LRFD Table 4.6.2.2d-1

	1 design lane loaded:	2 design lane loaded:	g _{exterior,mom}
N _b >3 =>	1.04	1.12	1.119

Distribution of Live Loads for Shear in Interior Beams: LRFD Table 4.6.2.2.3a-1

	1 design lane loaded:	2 design lane loaded:	g _{interior,shear}
N _b >3 =>	0.88	1.15	1.152

Distribution of Live Loads for Shear in Exterior Beams: LRFD Table 4.6.2.2.3b-1

	1 design lane loaded:	2 design lane loaded:	g _{exterior,shear}
N _b >3 =>	1.04	1.06	1.061

HNTB	Made by	CAM	Date	9/10/2013	Job Number
	Checked by		Date		Sheet Number
	Backchecked by		Date		

Span 12 - Proposed Girders

Live Load Distribution Factors

L=	142.25	ft	Span Length
t _s =	8.00	in	Deck Slab Thickness
S=	13.11	ft	Beam Spacing
S ₂ =	13.11	ft	Beam Spacing (between Existing and Widening)
	4.75	ft	Deck Overhang
	1.54	ft	Curb Width
d _e =	3.21	ft	(LRFD 4.6.2.2.1)
h _{buildup} =	1.00	in	
f' _{c,beam} =	7.50	ksi	Beam Concrete Strength
f' _{c,deck} =	5.50	ksi	Deck Concrete Strength
E _{c,beam} =	4490.96	ksi	Beam Elastic Modulus
E _{c,deck} =	3845.83	ksi	Deck Elastic Modulus
n=	1.17		

FIB-78

A _{beam} =	1100.58	in ²	
I _{beam} =	903861.00	in ⁴	
y _i =	43.37	in	
e _g =	48.37	in	
d =	78.00	in	
K _y =	4062410.59	in ⁴	(LRFD eq. 4.6.2.2.1-1)

S_{avg}= 13.11 ft Average Beam Spacing

Distribution of Live Loads for Moment in Interior Beams: LRFD Table 4.6.2.2b-1

	1 design lane loaded:	2 design lane loaded:	g _{interior,mom}
N _b >3 =>	0.62	0.95	0.953

Distribution of Live Loads for Moment in Exterior Beams: LRFD Table 4.6.2.2d-1

	1 design lane loaded:	2 design lane loaded:	g _{exterior,mom}
N _b >3 =>	1.04	1.07	1.070

Distribution of Live Loads for Shear in Interior Beams: LRFD Table 4.6.2.2.3a-1

	1 design lane loaded:	2 design lane loaded:	g _{interior,shear}
N _b >3 =>	0.88	1.15	1.152

Distribution of Live Loads for Shear in Exterior Beams: LRFD Table 4.6.2.2.3b-1

	1 design lane loaded:	2 design lane loaded:	g _{exterior,shear}
N _b >3 =>	1.04	1.06	1.061

APPENDIX C-2

MISC. CALCULATIONS FOR ANALYSIS INPUT

Misc. Calculations for CONSPAN Input: Span 11 - Reversible Lanes

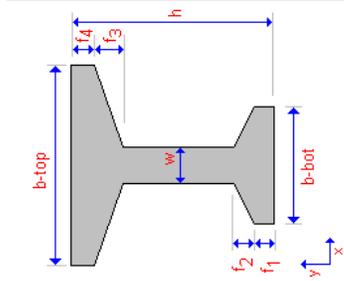
Concrete Modulus of Elasticity FIB-78

$f'_c := 7.5 \text{ ksi}$	...Class VI (Special) Concrete (Final)
$f'_{ci} := \min(0.8 \cdot f'_c, 6.0 \text{ ksi})$	...Class VI (Special) Concrete (Release) <i>(LRFD 5.4.2.3, SDG 4.3.1C.4)</i>
$f'_{c_deck} := 5.5 \text{ ksi}$	...Class IV Bridge Deck
$\gamma_c := 0.150 \cdot kcf$	...unit weight of concrete used for load calculation
$E_c := 0.9 \cdot 33000 \cdot 0.145^{1.5} \cdot \sqrt{f'_c} \text{ ksi}$	...Class VI (Special) Concrete (Final)
$E_{ci} := 0.9 \cdot 33000 \cdot 0.145^{1.5} \cdot \sqrt{f'_{ci}} \text{ ksi}$	...Class VI (Special) Concrete (Release)
$E_{c_deck} := 0.9 \cdot 33000 \cdot 0.145^{1.5} \cdot \sqrt{f'_{c_deck}} \text{ ksi}$	...Class IV Bridge Deck

$n := \frac{E_c}{E_{c_deck}}$
n = 1168
...modular ratio

Section Geometry

$t_{slab} := 8.5 \text{ in}$	
$t_{sacr} := 0.5 \text{ in}$	
$h := 6 \text{ ft} + 6 \text{ in}$	
$w := 7 \text{ in}$	
$b_t := 4 \text{ ft} + 0 \text{ in}$	
$b_b := 3 \text{ ft} + 2 \text{ in}$	
$f_4 := 3.5 \text{ in}$	
$f_3 := 1.5 \text{ in}$	...Ignore additional chamfer at top flange
$f_2 := 7.5 \text{ in}$	...Ignore fillet at bottom flange
$f_1 := 7 \text{ in}$	



Span Geometry (Typical)

$N_{beamsW} := 6$	...Number of beams (Widening)
$overhang_left := 4.75 \text{ ft}$	
$overhang_right := 4.75 \text{ ft}$	
$Width_Barrier_left := 1 \text{ ft} + 6 \cdot \frac{1}{2} \text{ in}$	
$Width_Barrier_right := 1 \text{ ft} + 6 \cdot \frac{1}{2} \text{ in}$	
$S_w := 13 \text{ ft} + 1.375 \text{ in}$	...Beam Spacing (Widening)
$Width_{total} := (N_{beamsW} - 1) \cdot S_w + overhang_left + overhang_right$	
$Width_{total} = 75.073 \text{ ft}$	...Edge to edge width of deck
$Offset := 37 \text{ ft} + 6.5 \text{ in}$	...Offset from CL I4 to original edge of ultimate section
$Skew := \left[90 - \left(75 + \frac{50}{60} + \frac{47}{60} \right) \right] \cdot \text{deg}$	...Skew Angle
$L := 12 \text{ ft} + 2 \text{ in}$	...Span CL Pier - CL Pier (along CL I4)
$L_{s1} := L + \left(\frac{Width_{total}}{2} \right) \cdot \tan(Skew)$	...Span CL Pier - CL Pier (along CL bridge)
$beg_cl_brg := 1 \text{ ft} + 2.5 \text{ in}$	...Beam cl bearing Length Span
$end_cl_brg := 1 \text{ ft} + 2.5 \text{ in}$	...Beam cl bearing Length Span
$L_{design_1} := L_{s1} - \frac{beg_cl_brg - end_cl_brg}{\cos(Skew)}$	...Beam design Span Length
$J := 10 \text{ in}$	...Beam overhang past CL bearing
$L_b := L_{design_1} + J + \frac{J}{\cos(Skew)}$	...Beam length Span 1
$d_{e_left} := overhang_left - Width_Barrier_left$	$d_{e_left} = 3.208 \text{ ft}$
$d_{e_right} := overhang_right - Width_Barrier_right$	$d_{e_right} = 3.208 \text{ ft}$

Dead Load Calculation - Area Loads

Build-up on beam

Assume 3" build-up (CONSPAN will include 1" of build-up)

$h_{bu} := 2in$...Build-up height

$A_{bu} := h_{bu} \cdot b_t$...Cross-sectional area of build-up

$w_{bu} := A_{bu} \cdot \gamma_c$...Build-up line load

SJP Forms

Load on existing exterior

$P_{sfp} := 0.02 \cdot ksf$

Load on widening interior

$w_{sfp_w_in} := (S_w - b_t) \cdot P_{sfp}$

$w_{sfp_w_in} = 0.182 \cdot klf$

Load on widening exterior

$w_{sfp_w_in} := \left(\frac{S_w - b_t}{2} \right) \cdot P_{sfp}$

$w_{sfp_w_in} = 0.091 \cdot klf$

Light pole pedestal weight (FDOT index 21200)

No roadway lighting along SR-400 (I-4) Over St. Johns River Bridge.

$w_{lpp} := 0 \frac{kip}{ft}$

$w_{lpp} = 0 \frac{kip}{ft}$

Thickened end slab

No thickened end slabs on SR400 (I-4) Over St. Johns River Bridge.

Sacrificial Deck

Load due to sacrificial deck thickness is computed with thin CONSPAN analysis

Dead Load Calculation - Diaphragm Loads

Intermediate Diaphragms

No intermediate diaphragms on SR-400 (I-4) Over St. Johns River Bridge.

End Diaphragms

No End diaphragms loads are computed for separate FIB cross section.

Dead Load Calculation - Drainage Conduit

Assume load due to drainage conduit is negligible.

Misc. Calculations for CONSPAN Input: Span 12 - Reversible Lanes

Concrete Modulus of Elasticity FIB-28

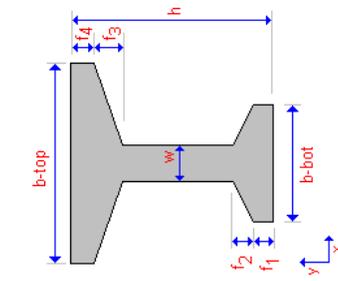
$f'_c := 7.5 \text{ ksi}$...Class VI (Special) Concrete (f' final)
 $f'_{ci} := \min(0.8 \cdot f'_c, 6.0 \text{ ksi})$ [LRFD 5.4.2.3, SDG 4.3.1C.4]
 $f'_{c_deck} := 5.5 \text{ ksi}$...Class VI (Special) Concrete (Release)
 $\gamma_c := 0.150 \cdot kcf$...Class IV Bridge Deck
 ...unit weight of concrete used for load calculation
 $E_c := 0.9 \cdot 33000 \cdot 0.145^{1.5} \cdot \sqrt{f'_c} \text{ ksi}$...Class VI (Special) Concrete (f' final)
 $E_{ci} := 0.9 \cdot 33000 \cdot 0.145^{1.5} \cdot \sqrt{f'_{ci}} \text{ ksi}$...Class VI (Special) Concrete (Release)
 $E_{c_deck} := 0.9 \cdot 33000 \cdot 0.145^{1.5} \cdot \sqrt{f'_{c_deck}} \text{ ksi}$...Class IV Bridge Deck

$n := \frac{E_c}{E_{c_deck}}$...modular ratio
 $n = 1168$

Section Geometry

$t_{slab} := 8.5 \text{ in}$
 $t_{sacr} := 0.5 \text{ in}$
 $h := 6 \text{ ft} + 6 \text{ in}$
 $w := 7 \text{ in}$
 $b_t := 4 \text{ ft} + 0 \text{ in}$
 $b_b := 3 \text{ ft} + 2 \text{ in}$
 $f_4 := 3.5 \text{ in}$
 $f_3 := 1.5 \text{ in}$
 $f_2 := 7.5 \text{ in}$
 $f_1 := 7 \text{ in}$

...Ignore additional chamfer at top flange
 ...Ignore fillet at bottom flange



Span Geometry (Typical)

$N_{beamsW} := 6$...Number of beams (Widening)
 $overhang_left := 4.75 \text{ ft}$
 $overhang_right := 4.75 \text{ ft}$
 $Width_Barrier_left := 1 \text{ ft} + 6 \frac{1}{2} \text{ in}$
 $Width_Barrier_right := 1 \text{ ft} + 6 \frac{1}{2} \text{ in}$
 $S_w := 13.15 \text{ ft}$...Beam Spacing (Widening)
 $Width_{total} := (N_{beamsW} - 1) \cdot S_w + overhang_left + overhang_right$
 $Width_{total} = 75.073 \text{ ft}$...Edge to edge width of deck
 $Offset := 37 \text{ ft} + 6.5 \text{ in}$...Offset from CL I4 to edge of ultimate section
 $Skew := \left[90 - \left(75 + \frac{50}{60} + \frac{47}{60 \cdot 60} \right) \right] \cdot deg$...Skew Angle
 $L := 142 \text{ ft} + 4 \text{ in}$...Span CL Pier - CL Pier (along CL I4)
 $L_{s1} := L$...Span CL Pier - CL Pier (along CL bridge)
 $beg_cl_brg := 1 \text{ ft} + 2.5 \text{ in}$...Beam cl bearing Length Span
 $end_cl_brg := 1 \text{ ft} + 2.5 \text{ in}$...Beam cl bearing Length Span
 $L_{design_1} := L_{s1} \cdot \frac{beg_cl_brg + end_cl_brg}{\cos(Skew)}$...Beam design Span Length
 $J := 10 \text{ in}$...Beam overhang past CL bearing
 $L_b := L_{design_1} + 2 \cdot \frac{J}{\cos(Skew)}$...Beam length Span 1

$d_{e_left} := overhang_left - Width_Barrier_left$ $d_{e_left} = 3.208 \text{ ft}$
 $d_{e_right} := overhang_right - Width_Barrier_right$ $d_{e_right} = 3.208 \text{ ft}$

Dead Load Calculation - Area Loads

Build-up on beam

Assume 3" build-up (CONSPAN will include 1" of build-up)

$h_{bu} := 2in$ $h_{bu} = 0.167ft$...Build-up height
 $A_{bu} := h_{bu} \cdot b_t$ $A_{bu} = 0.667ft^2$...Cross-sectional area of build-up
 $w_{bu} := A_{bu} \cdot \gamma_c$ $w_{bu} = 0.1kif$...Build-up line load

SJP Forms

Load on existing exterior

$P_{sjp} := 0.02ksf$

Load on widening interior

$w_{sjp_w_in} := (S_w - b_t) \cdot P_{sjp}$

$w_{sjp_w_in} = 0.182kif$

Load on widening exterior

$w_{sjp_w_in} := \left(\frac{S_w - b_t}{2} \right) \cdot P_{sjp}$

$w_{sjp_w_in} = 0.091kif$

Light pole pedestal weight (FDOT index 21200)

No roadway lighting along SR400 (1-4) Over St. John's River Bridge.

$w_{lpp} := 0 \frac{kip}{ft}$

$w_{lpp} = 0 \frac{kip}{ft}$

Thickened end slab

No thickened end slabs on SR400 (1-4) Over St. John's River Bridge.

Sacrificial Deck

Load due to sacrificial deck thickness is computed within CONSPAN analysis

Dead Load Calculation - Diaphragm Loads

Intermediate Diaphragms

No intermediate diaphragms on SR 400 (1-4) Over St. John's River Bridge.

End Diaphragms

End diaphragm loads are computed within CONSPAN analysis

Dead Load Calculation - Drainage Conduit

Assume load due to drainage conduit is negligible.

APPENDIX C-3

SUPERSTRUCTURE ANALYSIS



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Sheet # 1
 Job #
 Designed KSM
 Date Sept/9/2013
 Checked
 Date

PROJECT DATA

Project: I4 Over St. John's River Bridge
 Designer: KSM
 Date: Sept/9/2013
 Checked By:
 Date Checked:
 User job number:
 State: FL, State Job #:
 State: Florida
 Specification: AASHTO LRFD - 6th Edition, 2012
 Design Code: US
 Units: Simple Span
 Span Type: Yes
 Flared Girder: ILLKmw001PM\WORK3\Jobs\59219 - I4 SAMRTECH\PROD43210012201\Segment 4(structeng_data)\I-4 Over St. John's River\I02 Alternative 2 - Reversible Lanes\1. Superstructure\Update_140910_74.08\Roadway\Span 11 Rev\Span11EB_Modified Spacing.csl
 File Name:



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 Designed KSM
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GEOMETRY DATA

ALIGNMENT DATA
 Bridge Alignment: ALG01
 Beginning Station: 0+0.00,0000 ft

Seg	Shape	Start Direction	End Station	Radius	Sense
1	Tangent	N 90 00 00.00 E	2+00.0000	ft	-

BRIDGE LAYOUT

Overall Width (ft)	75.083
Left curb (ft)	1.542
Right curb (ft)	1.542
Curb-to-curb width (ft)	72.000
Number of spans	1
Number of lanes	4
Lane width (ft)	12.000
Eff Deck thick (in)	8.500
Sacrificial thick (in)	0.000
Haunch thickness (in)	1.000
Haunch width (in)	48.000
Bridge c/s, M(ftxx) (in4)	13348360.00

Component	RefName	Station	Bearing	Deck Width	Deck Offset
Begin Bridge		0+00.0000	N 0 00 00.00 W	75.0830	0.0000
Abutment	AB01	0+00.0000	N 0 00 00.00 W	75.0830	0.0000
Abutment	AB02	1+21.1670	N 14 09 12.96 W	75.0830	0.0000
End Bridge		1+21.1670	N 14 09 12.96 W	75.0830	0.0000

BEAM DATA

No	ID	Length	Loc-start	Loc-end	Area	M(1xx)	Height	Yb	B-topg	B-trib
1	FIB-78	112.902	11.333	11.689	1100.6	904567.0	78.00	34.60	48.00	11.759
2	FIB-78	116.209	13.115	13.525	1100.6	904567.0	78.00	34.60	48.00	13.101
3	FIB-78	119.516	13.115	13.525	1100.6	904567.0	78.00	34.60	48.00	13.101
4	FIB-78	122.823	13.115	13.525	1100.6	904567.0	78.00	34.60	48.00	13.102
5	FIB-78	126.130	13.115	13.525	1100.6	904567.0	78.00	34.60	48.00	13.102
6	FIB-78	129.437	13.115	13.525	1100.6	904567.0	78.00	34.60	48.00	10.852

MATERIAL DATA - Project Level

As defined in Material Tab. For beam level properties look at Beam Specific output.

CONCRETE PROPERTIES

	Precast Release	Precast Final	C.I.P



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	Precast Release	Precast Final	C.I.P
f'c (ksi)	6,000	7,500	5,500
Wc (pcf)	150,000	150,000	150,000
Ec (ksi)	4016,840	4490,960	3845,830
K1	0.900	0.900	0.900
Thermal coeff. (1/F)	0.000006600		

STRAND AND REBAR PROPERTIES

PRESTRESSED STEEL:
 6/10-270K-L, Low relaxation strands
 Depressed at 0.40L
 Strand Diameter = 0.600 in
 Tensile Strength(fpu) = 270.0 ksi
 Use transformed strand and rebar: Strand Only

REINFORCING STEEL:
 Tension/Shear steel: fy = 60.0 ksi Es = 29000 ksi fs = 24.0 ksi

Sheet # 3
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	Precast Release	Precast Final	C.I.P
f'c (ksi)	6,000	7,500	5,500
Wc (pcf)	150,000	150,000	150,000
Ec (ksi)	4016,840	4490,960	3845,830
K1	0.900	0.900	0.900
Thermal coeff. (1/F)	0.000006600		

LOADS DATA

Loads generated using Permanent Load Wizard: YES

Left Barrier Weight, klf	0.000
Right Barrier Weight, klf	0.000
Left Curb Weight, klf	0.420
Right Curb Weight, klf	0.420
Left Sidewalk, klf	0.000
Right Sidewalk, klf	0.000
Future Wearing Surface, ksf	0.000
Sacrificial Wearing Surface, in	0.000
Slay in Place Deck Forms, klf	0.000

DEAD LOADS ON PRECAST
 UNITS: (Point: kips, Location: ft, Line: klf, Trapez: klf)

Span	Beam	DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
1	1	DC	Line	0.125	0.000	0.125	112.902	Addl Build-Up
1	1	DC	Line	0.091	0.000	0.091	112.902	SIP
1	2	DC	Line	0.125	0.000	0.125	116.209	Addl Build-Up
1	2	DC	Line	0.182	0.000	0.182	116.209	SIP
1	3	DC	Line	0.125	0.000	0.125	119.516	Addl Build-Up
1	3	DC	Line	0.182	0.000	0.182	119.516	SIP
1	4	DC	Line	0.125	0.000	0.125	122.823	Addl Build-Up
1	4	DC	Line	0.182	0.000	0.182	122.823	SIP
1	5	DC	Line	0.125	0.000	0.125	126.130	Addl Build-Up
1	5	DC	Line	0.182	0.000	0.182	126.130	SIP
1	6	DC	Point	0.125	0.000	-	-	Addl Build-Up
1	6	DC	Point	0.091	0.000	-	-	SIP

DIAPHRAGM LOADS - NONE

DEAD LOADS ON COMPOSITE

UNITS: (Point: kips, Location: ft, Line: klf, Trapez: klf, Area: ksf, Width: ft)

Span	DC/DW	Type	Mag.1	Loc.1/Width	Mag.2	Loc.2	Description
1	DC	Line	0.420	0.000	0.420	112.902	Left Curb Weight
1	DC	Line	0.420	0.000	0.420	112.902	Right Curb Weight
1	DC	Line	0.485	0.000	0.485	112.902	Median Barrier

TEMPERATURE LOADS - NONE



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Sheet # 5
 Job #
 Designed KSM
 Date Sept/9/2013
 Checked
 Date

ANALYSIS DATA

ANALYSIS PARAMETERS DATA

Truck Impact:	1.330
Lane Impact:	1.000
Strength II Impact:	1.330
Fatigue Impact:	1.150

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Is Span Post-tensioned:	NO
Include Rigid Cross Section Assumption (Art. 4.6.2.2.d):	YES
ADTT (Average Daily Truck Traffic):	5000
Percent of the specified force effect:	1.00

NOTE: Beam specific dead and live load DFs are printed in beam level reports.

LOAD FACTORS: (Table 3.4.1-1 & 3.4.1-2)

Live	DC(max)	DC(min)	DW(max)	DW(min)
Service I:	1.00	-	1.00	-
Service II:	0.80	-	1.00	-
Strength I:	1.75	0.90	1.50	0.65
Fatigue I:	1.50	-	-	-

Ductility Factor:	1.00
Redundancy Factor:	1.00
Importance Factor:	1.00



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LIVE LOADS

Live load deflection: not included.

ID	Type
Design Lane	Design Lane
Design Tandem	Design Tandem
Design Truck	Design Truck

Pedestrian Load - NONE



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Sheet # 6
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ANALYSIS DATA

ANALYSIS PARAMETERS DATA

Truck Impact:	1.330
Lane Impact:	1.000
Strength II Impact:	1.330
Fatigue Impact:	1.150

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Is Span Post-tensioned:	NO
Include Rigid Cross Section Assumption (Art. 4.6.2.2.d):	YES
ADTT (Average Daily Truck Traffic):	5000
Percent of the specified force effect:	1.00

NOTE: Beam specific dead and live load DFs are printed in beam level reports.

LOAD FACTORS: (Table 3.4.1-1 & 3.4.1-2)

Live	DC(max)	DC(min)	DW(max)	DW(min)
Service I:	1.00	-	1.00	-
Service II:	0.80	-	1.00	-
Strength I:	1.75	0.90	1.50	0.65
Fatigue I:	1.50	-	-	-

Ductility Factor:	1.00
Redundancy Factor:	1.00
Importance Factor:	1.00



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PROJECT DESIGN PARAMETERS

Trans len mult:	Bonded	1.00
	Debonded	1.00
Dev len mult:	Bonded	1.60
	Debonded	2.00

Camber & Deflection Multiplier (PCI ref.)

	Erection	Final
Prestress:	1.80	2.20
Self Wt:	1.85	2.40
Deck + Haunch:	2.30	2.30
Diaphragm:	3.00	3.00
DL-Prec.:	3.00	3.00
DL-Comp.:	3.00	3.00

MOMENT AND SHEAR PROVISIONS:

Ultimate Moment Capacity, Mr-prvd computed: AASHTO equations
Horizontal Shear, Beam and Slab effects in Vut: INCLUDED

STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	6.00	PRECAST
Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00 %	ksi
Max tens	-0.23	ksi
Center	-0.93	w/reinf
Max tens	70.00 %	ksi
Max tens	-0.23	ksi
Max tens	-0.59	w/reinf

STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	7.50	PRECAST
Elasticity	4490.96	ksi
	5.50	DECK
	3845.83	ksi

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	4.50	PRECAST
	3.30	DECK

STRESS LIMITS AT FINAL 2 (P/S + DL):



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Max comp	3.38	PRECAST
	2.47	DECK

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

Max comp	3.00	PRECAST
	-	DECK

SERVICE III (Tension):

Max tens	-0.52	PRECAST
	-0.45	DECK

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	0.75
Compression controlled sections	0.90
Tension controlled sections	0.75
Flexure Prestressed	0.75
Compression controlled sections	1.00
Tension controlled sections	0.90
Shear	0.90

PRESTRESS LOSSES:

Time Dependent Losses, Approximate Method (Art.5.9.5.3)
Days to release = 0.75
Rel. Humid. (RH) = 75.0 %



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PROPERTIES

Span:1, Beam:1

PRECAST DATA:

Section Id	FIB-78		
Type	I-Girder		
Fing width	Top 48.000 in	Bot 38.000 in	
thick	Top 3.000 in	Bot 7.000 in	
Stems	No 1		
	Top 7.000 in		
	Bot 7.000 in		
Shear width			

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RL	11.33/ 13.11 ft
End LL/RL	11.69/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Exterior
Start Skew Angle	0.00 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch: Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Localion: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.125	0.000	0.125	112.902	Addl Build-Up
DC	Line	0.091	0.000	0.091	112.902	SJP

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:



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Overall length	112.902 ft
Release length	112.902 ft
Design length	112.902 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2d): YES

Location	+ve		Moment		Shear	
	2+ Lane	1 Lane	2+ Lane	1 Lane	2+ Lane	1 Lane
0.0L	1.119	1.036(¶)	1.084	1.036(¶)	1.084	1.036(¶)
0.1L	1.128	1.044(¶)	1.095	1.044(¶)	1.095	1.044(¶)
0.2L	1.138	1.053(¶)	1.106	1.053(¶)	1.106	1.053(¶)
0.3L	1.148	1.061(¶)	1.116	1.061(¶)	1.116	1.061(¶)
0.4L	1.158	1.070(¶)	1.127	1.070(¶)	1.127	1.070(¶)
0.5L	1.168	1.078(¶)	1.138	1.078(¶)	1.138	1.078(¶)
0.6L	1.177	1.086(¶)	1.149	1.086(¶)	1.149	1.086(¶)
0.7L	1.187	1.095(¶)	1.159	1.095(¶)	1.159	1.095(¶)
0.8L	1.197	1.103(¶)	1.170	1.103(¶)	1.170	1.103(¶)
0.9L	1.207	1.111(¶)	1.181	1.111(¶)	1.181	1.111(¶)
1.0L	1.217	1.120(¶)	1.191	1.120(¶)	1.191	1.120(¶)

(¶) Lever rule (C4.6.2.2.1)

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	0.75
Compression controlled sections	0.90
Tension controlled sections	
Flexure Prestressed	0.75
Compression controlled sections	1.00
Tension controlled sections	
Shear	0.90



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PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
Total Height	78.00 in
Mom. of Inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of Inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2397.8	2129.34	87.5	2160114	58.01	150.0	135.7
0.1L	75.08	2407.4	2137.23	87.5	2165172	58.11	150.0	136.8
0.2L	75.08	2417.0	2145.13	87.5	2170192	58.20	150.0	137.9
0.3L	75.08	2426.6	2153.02	87.5	2175177	58.29	150.0	138.9
0.4L	75.08	2436.2	2160.92	87.5	2180125	58.38	150.0	140.0
0.5L	75.08	2445.8	2168.82	87.5	2185038	58.47	150.0	141.1
0.6L	75.08	2455.4	2176.71	87.5	2189915	58.56	150.0	142.2
0.7L	75.08	2465.0	2184.61	87.5	2194758	58.65	150.0	143.3
0.8L	75.08	2474.7	2192.50	87.5	2199565	58.74	150.0	144.4
0.9L	75.08	2484.3	2200.40	87.5	2204339	58.83	150.0	145.4
1.0L	75.08	2493.9	2208.29	87.5	2209079	58.91	150.0	146.5

(#) Area, Ixx, and Ycg Of Total Section using Ec/Ec = 0.8563

Use transformed strand and rebar: Strand Only

Location	ft	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	1148.2	3.65	11.29	22.58	33.87	45.16	56.45
Area, Yb, MI(XXX)	1100.6 in ² 34.60 in 904567 in ⁴	1148.2 in 33.43 in 940604 in ⁴	1148.2 in 33.43 in 940604 in ⁴	3.65 in 33.43 in 940604 in ⁴	11.29 in 33.42 in 941790 in ⁴	22.58 in 33.39 in 943438 in ⁴	33.87 in 33.36 in 945120 in ⁴	45.16 in 33.34 in 946839 in ⁴	56.45 in 33.34 in 946839 in ⁴
Composite: (At Final, using Ec = 4491.0ksi)	2129.3 in ² 58.01 in 2160114 in ⁴	2171.1 in 57.02 in 2268800 in ⁴	2171.1 in 57.02 in 2268800 in ⁴	2171.1 in 57.02 in 2268800 in ⁴	2179.0 in 57.11 in 2276208 in ⁴	2186.9 in 57.19 in 2284319 in ⁴	2194.8 in 57.27 in 2292433 in ⁴	2202.7 in 57.35 in 2300550 in ⁴	2210.6 in 57.45 in 2305873 in ⁴

Span:1, Beam:1

STRESS LIMITS (Art. 5.9.4):

STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):



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	PRECAST	DECK
Strength	6.00 ksi	5.50 ksi
Elasticity	4016.8 ksi	3845.83 ksi
Max comp	3.60 ksi	-
Outer	15.00 %	-
Max tens	w/relf -0.23 ksi	-
Center	w/relf -0.93 ksi	-
Max tens	70.00 %	-
Max tens	w/relf -0.23 ksi	-
Max tens	w/relf -0.59 ksi	-

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * Fc or 6.0 ksi.

STRESS LIMITS AT FINAL AFTER LOSSES:

	PRECAST	DECK
Strength	7.50 ksi	5.50 ksi
Elasticity	4490.96 ksi	3845.83 ksi

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

	PRECAST	DECK
Max comp	4.50 ksi	3.30 ksi

STRESS LIMITS AT FINAL 2 (P/S + DL):

	PRECAST	DECK
Max comp	3.38 ksi	2.47 ksi

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

	PRECAST	DECK
Max comp	3.00 ksi	- ksi

SERVICE III (Tension):

	PRECAST	DECK
Max tens	-0.52 ksi	0.45 ksi

Span:1, Beam:1

PRESTRESSED STEEL:

36 strands, 6/10-270K-LL, Low relaxation strands
Depressed at 0.40L (45.16 ft from member end)

END PATTERN (Ycg = 6.67 ft):

	1 @ 3.000 in	1 @ 5.000 in	1 @ 7.000 in	5 @ 13.000 in
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3 @ 15.000 in | 1 @ 17.000 in

MID PATTERN (Ycg = 4.17 in):
(A) Draped:

5 @ 3.000 in | 3 @ 5.000 in | 1 @ 7.000 in

(B) Straight:

12 @ 3.000 in | 14 @ 5.000 in | 1 @ 7.000 in

Strand Diameter	0.600	in
Strand Area	0.217	in ²
Total Strand Area	7.812	in ²
Trans. Len. bonded	3.000	ft
Trans. Len. debonded	3.000	ft
Dev. Len. bonded	11.579	ft
Dev. Len. debonded	14.473	ft
Holddown Force	7.296	kips
Tensile Strength(fpu)	270.0	ksi
Initial Prestress = 0.75fpu	202.5	ksi
Initial Pull	1581.9	kips
Beam Shrink (PL/AE)	0.465	in

Span:1, Beam:1
ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
4064.594	740	3007.800	31,960	1,29437,188	628,229
					0.000

Span:1, Beam:1
REINFORCING STEEL:

Tension steel:	
fy	60.0 ksi
Es	29000 ksi
fs	24.0 ksi

Stirrups:

# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	1.9915	No
2	US#4(M13)	60.0	0.40	12.00	1.9915	3.3990	No
2	US#4(M13)	60.0	0.40	15.00	3.3990	9.1732	No
2	US#4(M13)	60.0	0.40	18.00	9.1732	37.7421	No
2	US#4(M13)	60.0	0.40	21.00	37.7421	41.0820	No
2	US#4(M13)	60.0	0.40	24.00	41.0820	71.8196	No



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# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	21.00	71.8196	75.1594	No
2	US#4(M13)	60.0	0.40	18.00	75.1594	103.7283	No
2	US#4(M13)	60.0	0.40	15.00	103.7283	109.5026	No
2	US#4(M13)	60.0	0.40	12.00	109.5026	110.9101	No
2	US#4(M13)	60.0	0.40	6.00	110.9101	112.9016	No

LOSSES
Note: Values are calculated at Midspan

Str. area	7.8120	in ²
Ycg	4.17	in
P_init	1581.9	kips
Ecc	30.43	in
Days to release	0.75	%
Rel. Humid (RH)	75.0	%
Es	28500.0	ksi
Ecd	4017	ksi

AASHTO LOSSES

Elastic Shortening ** 13.72 ksi (Eq 5.9.5.2.3a-1), (fcgp= 1.934 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		5.65 ksi	0.00 ksi
due to Composite Loads		-0.71 ksi	0.00 ksi
due to Live Loads		-6.07 ksi	0.00 ksi

Time Dependent Losses (Approximate Method (Art.5.9.5.3))

	Initial	Final
Steel relaxation	0.00 ksi	2.40 ksi (Eq 5.9.5.3-1)
Concrete shrinkage	0.00 ksi	8.14 ksi (Eq 5.9.5.3-1)
Concrete creep	0.00 ksi	9.75 ksi (Eq 5.9.5.3-1)
Sub-total	13.72 ksi (6.78 %)	7.87 ksi (3.89 %)
Total Prestress Losses		21.59 ksi (10.66 %)

Prestressing Stress Limit Check (Table 5.9.3.1)
initial fpi = 202.5 ksi < 0.75 fpu, OK
initial fpe = 180.9 ksi < 0.80 fpy, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.



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SHEAR AND MOMENT ENVELOPE (REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 1, SERVICE I
Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	11.29	22.58	33.87	45.16	56.45
Self wt. :	0.0	189.0	228.3	657.6	1169.1	1534.4	1753.6	1826.7
(Max)	V	64.7	61.3	60.5	51.8	38.8	25.9	12.9
DL-Prec. :	M	0.0	35.6	43.0	123.9	220.3	289.1	344.2
DC(Max)	V	12.2	11.5	11.4	9.8	7.3	4.9	2.4
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	211.0	254.9	735.2	1310.3	1724.1	1975.3
Haunch (Max)	V	72.2	68.4	67.6	58.1	43.8	29.5	15.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	41.8	50.5	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.6	12.5	10.7	8.0	5.3	2.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	444.9	537.6	1550.5	2757.9	3612.4	4139.0
LL + :	V	137.8	133.1	132.1	120.2	102.2	83.9	38.2
LL + :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	137.8	133.2	132.2	120.6	103.9	87.7	72.1
LL + :	Vmx	-0.0	439.6	530.4	1503.0	2587.4	3273.9	3584.3
Total :	M	0.0	922.3	1114.4	3212.6	5715.9	7499.1	8585.9
Total :	V	300.2	287.0	284.2	250.4	200.2	149.4	90.4
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	300.2	287.1	284.3	250.9	201.9	153.3	105.2
Total :	M	0.0	916.9	1107.2	3165.1	5545.5	7160.7	8031.3

Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	67.74	79.03	90.32	101.61	109.26	109.90	112.90
Self wt. :	M	1753.6	1534.4	1169.1	657.6	228.3	189.0
(Max)	V	12.9	25.9	38.8	51.8	60.5	61.3
DL-Prec. :	M	330.4	289.1	220.3	123.9	43.0	35.6
DC(Max)	V	2.4	4.9	7.3	9.8	11.4	11.5
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	1985.1	1741.2	1329.9	749.9	260.7	215.8
Haunch (Max)	V	14.2	29.0	43.9	58.9	69.1	70.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	50.5	41.8
DC(Max)	V	2.7	5.3	8.0	10.7	12.5	12.6
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	4209.1	3735.7	2900.2	1658.2	581.5	481.8



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File Name: Span11EB_Modified Spacing.csl

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Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	58.4	87.1	108.2	129.6	144.3	145.6	151.4
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	73.5	91.1	110.0	130.0	144.5	145.7
DC(Max)	V	3645.0	3385.6	2721.0	1607.4	573.7	475.9
DL-Prec. :	M	8665.8	7639.6	5877.9	3335.0	1164.1	964.0
DW(Max)	V	90.7	152.2	206.2	260.7	297.8	301.0
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	105.8	156.2	208.0	261.1	298.0	301.1
DC(Max)	V	8101.7	7289.5	5698.6	3284.1	1156.3	958.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	Vmx	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	0.0	0.0	0.0	0.0	0.0	0.0

REACTIONS (kips), SERVICE I

Lead Type	Left Support	Right Support
Self Wt.	64.7	64.7
Deck+Haunch	72.2	74.0
Diaphragm	0.0	0.0
DL-Prec.(DC)	12.2	12.2
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	80.1	80.1
DL-Comp.(DW)	0.0	0.0
Live	115.6	105.1
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 1, SERVICE III
Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	11.29	22.58	33.87	45.16	56.45
Self wt. :	M	0.0	189.0	228.3	657.6	1169.1	1534.4	1753.6
(Max)	V	64.7	61.3	60.5	51.8	38.8	25.9	12.9
DL-Prec. :	M	0.0	35.6	43.0	123.9	220.3	289.1	344.2
DC(Max)	V	12.2	11.5	11.4	9.8	7.3	4.9	2.4
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	211.0	254.9	735.2	1310.3	1724.1	1975.3
Haunch (Max)	V	72.2	68.4	67.6	58.1	43.8	29.5	15.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
(Min)	11.6	23.3	34.9	46.6	54.5	55.2	58.2
DL-Prec :	413.0	361.4	275.3	154.9	53.8	44.5	-0.0
DC(Max) :	3.0	6.1	9.1	12.2	14.3	14.4	15.2
DL-Prec :	297.4	260.2	198.2	111.5	38.7	32.0	-0.0
DC(Min) :	2.2	4.4	6.6	8.8	10.3	10.4	11.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	2481.4	2176.6	1662.4	937.4	325.9	269.8	0.0
Haunch (Max) :	17.8	36.2	54.8	73.6	86.4	87.5	92.5
Deck + :	1786.6	1567.1	1196.9	674.9	234.7	194.3	0.0
Haunch (Min) :	12.8	26.1	39.5	53.0	62.2	63.0	66.6
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	484.5	423.9	323.0	181.7	63.1	52.2	-0.0
DC(Max) :	3.3	6.7	10.0	13.4	15.6	15.8	16.7
DL-Comp :	348.8	305.2	232.5	130.8	45.4	37.6	-0.0
DC(Min) :	2.4	4.8	7.2	9.6	11.2	11.4	12.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	7365.9	6537.4	5075.4	2901.9	1017.7	843.1	-0.0
LL + I :	102.2	152.4	189.3	226.8	252.6	254.7	264.9
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	128.6	159.5	192.4	227.6	252.8	255.0	264.9
M	6378.7	5924.8	4761.7	2812.9	1004.0	832.9	-0.0
Total :	12936.7	11417.3	8797.5	4997.8	1745.9	1445.8	0.0
Total :	142.6	233.8	311.8	390.6	444.5	449.0	470.2
Total :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	169.0	240.8	315.0	391.4	444.7	449.2	470.2
Total :	11949.6	10804.7	8483.8	4908.9	1732.2	1435.6	0.0

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	80.9	80.9
Deck+Haunch	90.2	92.5
Diaphragm	0.0	0.0
DL-Prec (DC)	15.2	15.2
DL-Prec (DW)	0.0	0.0
DL-Comp (DC)	100.1	100.1
DL-Comp (DW)	0.0	0.0
Live	202.2	184.0



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Load Type	Left Support	Right Support
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 1, FATIGUE I
Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location:	0.00	3.00	3.65	11.29	22.58	33.87	45.16	56.45
Self wt. :	0.0	189.0	228.3	657.6	1169.1	1534.4	1753.6	1826.7
(Max) :	64.7	61.3	60.5	51.8	38.8	25.9	12.9	0.0
Self wt. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	0.0	35.6	43.0	123.9	220.3	289.1	330.4	344.2
DC(Max) :	12.2	11.5	11.4	9.8	7.3	4.9	2.4	0.0
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	0.0	211.0	254.9	735.2	1310.3	1724.1	1975.3	2062.7
Haunch (Max) :	72.2	68.4	67.6	58.1	43.8	29.5	15.0	0.5
Deck + :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	41.8	50.5	145.3	258.4	339.1	387.6	403.7
DC(Max) :	13.4	12.6	12.5	10.7	8.0	5.3	2.7	0.0
DL-Comp :	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	284.1	343.0	979.6	1711.3	2230.3	2519.2	2542.4
LL + I :	91.1	88.4	87.8	81.0	70.8	54.0	43.3	32.5
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	91.1	88.4	87.8	81.0	70.8	60.3	49.7	39.0
LL + I :	0.0	284.1	343.0	979.6	1711.3	2188.8	2406.0	2356.5



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Total :	M+	0.0	761.5	919.8	2641.6	4669.3	6117.1	6966.1
	V	253.5	242.3	239.9	211.3	168.7	119.6	76.4
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	253.5	242.3	239.9	211.3	168.7	125.9	82.8
	M	0.0	761.5	919.8	2641.6	4669.3	6075.6	6993.8

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	67.74	79.03	90.32	101.61	109.26	109.90
Self wt. :	M	1753.6	1534.4	1169.1	657.6	228.3	189.0
(Max)	V	12.9	25.9	38.8	51.8	60.5	61.3
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	330.4	289.1	220.3	123.9	43.0	35.6
DC(Max)	V	2.4	4.9	7.3	9.8	11.4	11.5
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	1985.1	1741.2	1329.9	749.9	260.7	215.8
Haunch (Max)	V	14.2	29.0	43.9	58.9	69.1	70.0
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	50.5	41.8
DC(Max)	V	2.7	5.3	8.0	10.7	12.5	12.6
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	2558.6	2300.8	1793.0	1042.4	368.9	305.8
LL + :	V	44.0	55.7	74.1	86.2	94.5	95.2
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	Vmx	50.5	62.2	74.1	86.2	94.5	95.2
Total :	M	2443.7	2258.0	1793.0	1042.4	368.9	305.8
Total :	M+	7015.3	6204.7	4770.6	2719.2	951.5	788.0
Total :	M-	76.3	120.8	172.2	217.3	248.0	250.6
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	82.8	127.3	172.2	217.3	248.0	250.6
Total :	M	6900.4	6161.9	4770.6	2719.2	951.5	788.0

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DESIGN SUMMARY

Span: 1, Beam: 1, Exterior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	112.90
Release Length,	ft	112.90
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es,	ksi	28500.0
No. of strands:	36	
	Draped:	9
	Straight:	27
Concrete Strength:	f'cd:	6.0 ksi
	f'c:	7.5 ksi
	f'ct:	5.5 ksi
Initial losses:		6.78 %
Final losses:		10.66 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)				
Precast Bot (compression)	3.600	2.812	Trans	OK
Outer	15.00 %	-0.534	Trans	
Precast Top w/ no reinf. (tension)	-0.232			
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	-0.051	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	14156.40	13342.17	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	0.00 %		OK
Max. Debond Total	25.00 %	0.00 %		OK

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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow	Final 1 Comp	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	Stresses Only	3.300	0.632	Midspan	2.475	0.054	Midspan		
Topping Top		4.500	2.182	Midspan	3.375	1.721	Midspan		
Precast Top		4.500	2.257	Transfer	3.375	2.402	Transfer		
Precast Bot									
Service III Limit State - Tensile	Stresses Only	-0.446	-0.000	Bearing					
Topping Top		-0.520	-0.279	Transfer					
Precast Top		-0.520	-0.239	Midspan					
Precast Bot									
Fatigue I Limit State - Compressive	Stresses Only								
Precast Top					3.000	1.132	Midspan		
Precast Bot					3.000	1.109	Transfer		

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 56.45 ft

	Release	Multi	Erection	Multi	Final
Prestress	2.730	1.80	4.914	2.20	6.006
Self Wt.	-1.102	1.85	-2.039	2.40	-2.645
Deck + Haunch			-1.113	2.30	-2.560
DL-Prec. (DC)			0.000	3.00	0.000
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.252	3.00	-0.757
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	1.628		1.324		-0.513

Positive values indicate upward deflection.



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 Designed KSM
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 Checked
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PROPERTIES

Span:1, Beam:2
 PRECAST DATA:

Section Id	FIB-78			
Type	I-Girder			
Fling width	Top 48.000 in	Bot 38.000 in		
thick	Top 3.000 in	Bot 7.000 in		
Stems	No 1			
	Top 7.000 in			
Shear width	Bot 7.000 in			

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RI	13.11/ 13.11 ft
End LL/RI	13.52/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	0.00 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Location: ft., Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.125	0.000	0.125	116.209	Addl Build-Up
DC	Line	0.182	0.000	0.182	116.209	SIP

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:

Area	1100.6	in ²
------	--------	-----------------



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Overall length	116.209 ft
Release length	116.209 ft
Design length	116.209 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2.2d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.991	0.650	1.171	0.886
0.1L	0.991	0.650	1.171	0.886
0.2L	0.991	0.650	1.170	0.886
0.3L	0.991	0.650	1.170	0.886
0.4L	0.991	0.650	1.170	0.886
0.5L	0.991	0.650	1.170	0.885
0.6L	0.991	0.650	1.170	0.885
0.7L	0.990	0.650	1.170	0.885
0.8L	0.990	0.650	1.169	0.885
0.9L	0.990	0.650	1.169	0.885
1.0L	0.990	0.649	1.169	0.885

Pedestrian	0.167	(Calculated)
Comp. DC	0.167	(Calculated)
Comp. DW	0.167	(Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6	in ²
------	--------	-----------------



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2589.9	2287.23	87.5	2254690	59.75	150.0	157.4
0.1L	75.08	2589.6	2287.00	87.5	2254558	59.75	150.0	157.3
0.2L	75.08	2589.3	2286.76	87.5	2254426	59.75	150.0	157.3
0.3L	75.08	2589.0	2286.52	87.5	2254294	59.75	150.0	157.3
0.4L	75.08	2588.7	2286.29	87.5	2254162	59.74	150.0	157.2
0.5L	75.08	2588.4	2286.05	87.5	2254030	59.74	150.0	157.2
0.6L	75.08	2588.2	2285.81	87.5	2253898	59.74	150.0	157.2
0.7L	75.08	2587.9	2285.58	87.5	2253766	59.74	150.0	157.1
0.8L	75.08	2587.6	2285.34	87.5	2253634	59.74	150.0	157.1
0.9L	75.08	2587.3	2285.10	87.5	2253502	59.73	150.0	157.1
1.0L	75.08	2587.0	2284.87	87.5	2253370	59.73	150.0	157.1

(#) Area, Ixx, and Ycg Of Total Section using EffEc = 0.9563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	ft	ft	ft	ft	ft	ft	ft
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
Area, in ²	1100.6	1148.2	1148.2	1148.2	1148.2	1148.2	1148.2	1148.2
Yb, in	34.60	33.43	33.43	33.42	33.39	33.36	33.34	33.34
Mi(Ixx), in ⁴	904567	940592	940681	941790	943438	945120	946839	946839
Composite: (At Final, using Ec = 4491.0ksi)								
Area, in ²	2287.2	2329.0	2329.0	2328.0	2328.5	2328.3	2328.1	2327.8
Yb, in	59.75	58.80	58.80	58.79	58.78	58.76	58.75	58.75
Mi(Ixx), in ⁴	2254690	2370986	2371138	2372878	2375504	2378163	2380853	2380710

Span:1, Beam:2
 STRESS LIMITS (Art. 5.9.4):
 STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00	



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Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00	%
Max tens	-0.23	ksi
Max tens, Center	-0.93	ksi
Max tens, w/reinf	70.00	%
Max tens, w/reinf	-0.23	ksi
Max tens, w/reinf	-0.59	ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	7.50	ksi
Elasticity	4490.96	ksi
PRECAST	DECK	ksi
	5.50	
	38.45.83	

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	4.50	ksi
PRECAST	DECK	ksi
	3.30	

STRESS LIMITS AT FINAL 2 (P/S + DL):

Max comp	3.38	ksi
PRECAST	DECK	ksi
	2.47	

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

Max comp	3.00	ksi
PRECAST	DECK	ksi

SERVICE III (Tension):

Max tens	-0.52	ksi
PRECAST	DECK	ksi
	-0.45	

Span:1, Beam:2
 PRESTRESSED STEEL:
 36 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (46.48 ft from member end)

END PATTERN (Ycg = 6.67 in):

12 @ 3.000 in	1 @ 7.000 in
3 @ 15.000 in	5 @ 13.000 in



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MID PATTERN (Ycg = 4.17 in).

(A) Draped:

5 @ 3.000 in | 3 @ 5.000 in | 1 @ 7.000 in

(B) Straight:

12 @ 3.000 in | 14 @ 5.000 in | 1 @ 7.000 in

Strand Diameter	0.600	in
Strand Area	0.217	in ²
Total Strand Area	7.812	in ²
Trans. Len. bonded	3.000	ft
Trans. Len. debonded	11.620	ft
Dev. Len. bonded	14.525	ft
Dev. Len. debonded	7.089	ft
Holddown Force	270.0	kips
Tensile Strength (fpu)	202.5	ksi
Initial Prestress = 0.75fpu	151.9	ksi
Initial Pull	1581.9	kips
Beam Shifting (PL/AE)	0.478	in

Span:1, Beam:2

ESTIMATED QUANTITIES

Prestressing (linear ft)	4183.644	740	3095.897	32.896	133228.609	645.926	0.000
Strands (LB/1000ft)							
Stirrups (LB)							
Concrete Wt(LB)							
Beam Vol(C.Y.)							
Stirrups							
Longitudinal Bars (LB)							

Span:1, Beam:2
 REINFORCING STEEL:

Tension steel:		
fy	60.0	ksi
E _s	29000	ksi
f _s	24.0	ksi

Stirrups:

# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	0.5873	No
2	US#4(M13)	60.0	0.40	9.00	0.5873	2.3885	No
2	US#4(M13)	60.0	0.40	12.00	2.3885	6.0531	No
2	US#4(M13)	60.0	0.40	15.00	6.0531	14.0810	No
2	US#4(M13)	60.0	0.40	18.00	14.0810	39.2612	No
2	US#4(M13)	60.0	0.40	21.00	39.2612	42.7290	No
2	US#4(M13)	60.0	0.40	24.00	42.7290	73.4797	No
2	US#4(M13)	60.0	0.40	21.00	73.4797	76.9475	No
2	US#4(M13)	60.0	0.40	18.00	76.9475	102.1276	No



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# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	15.00	102.1276	110.1555	No
2	US#4(M13)	60.0	0.40	12.00	110.1555	113.8202	No
2	US#4(M13)	60.0	0.40	9.00	113.8202	115.6214	No
2	US#4(M13)	60.0	0.40	6.00	115.6214	116.2087	No

LOSSES

Note: Values are calculated at Midspan

Str. area	7.8120	in ²
Ycg	4.17	in
P. Init	1581.9	kips
Ecc	30.43	in
Days to release	0.75	%
Rel. Humid (RH)	75.0	%
E _s	28500.0	ksi
E _{ci}	4017	ksi

AASHTO LOSSES

Elastic Shortening ** 13.46 ksi (Eq 5.9.5.2.3a-1), (fcgp = 1.897 ksi)

due to	Elastic Gains	Gains	Adjustment
due to Precast Loads		-6.93	ksi
due to Composite Loads		-0.70	ksi
due to Live Loads		-5.11	ksi

Time Dependent Losses (Approximate Method (Art.5.9.5.3))

	Initial	Final
Steel relaxation	0.00	ksi
Concrete shrinkage	0.00	ksi
Concrete creep	0.00	ksi
Sub-total	13.46	ksi (6.65 %)
Total Prestress Losses		7.55 ksi (3.73 %)
		21.01 ksi (10.38 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial fpi = 202.5 ksi < 0.75 fpu, OK
 initial fpe = 181.5 ksi < 0.80 fpy, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.



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REAR/MOMENT ENVELOPE (&REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, SERVICE I
Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location, ft	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
Self wt. : M	0.0	194.7	235.2	696.7	1238.6	1625.6	1857.9	1935.3
(Max) V	66.6	63.2	62.4	53.3	40.0	26.6	13.3	0.0
DL-Prec. : M	-0.0	52.1	63.0	186.6	331.7	435.3	497.5	518.2
DC(Max) V	17.8	16.9	16.7	14.3	10.7	7.1	3.6	0.0
DL-Prec. : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + : M	0.0	245.0	296.0	876.6	1558.3	2045.2	2337.2	2434.4
Haunch (Max) V	83.8	79.5	78.6	67.0	50.3	33.5	16.7	0.0
Diaphragm : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp. : M	-0.0	40.6	49.1	145.3	258.4	339.1	387.6	403.7
DC(Max) V	13.4	12.7	12.5	10.7	8.0	5.3	2.7	0.0
DL-Prec. : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + : M	-0.0	382.6	462.1	1362.2	2401.6	3118.4	3542.3	3658.5
LL + I : V	148.8	143.5	142.4	128.5	108.2	87.9	59.5	39.2
LL + I : M	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	148.8	143.7	142.5	128.9	110.0	92.0	74.9	58.7
M	-0.0	378.0	456.0	1320.4	2253.2	2826.2	3067.5	3005.2
Total : M	0.0	915.0	1105.4	3267.4	5788.6	7563.6	8622.4	8950.2
LL + I : V	330.4	315.8	312.6	273.8	217.2	160.5	95.8	39.3
LL + I : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	330.4	315.9	312.8	274.2	219.0	164.6	111.2	58.7
Total : M	-0.0	910.4	1099.3	3225.6	5640.1	7271.4	8147.7	8296.8

Location, ft	0.60L	0.70L	0.80L	0.90L	H/2	0.20L	0.30L	0.40L	Midspan
V	59.5	87.9	108.1	128.3	142.2	143.3	143.3	148.6	148.6
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	74.9	91.9	109.9	128.8	142.4	143.5	148.6	148.6	148.6
M	3066.6	2824.5	2251.1	1318.8	455.4	377.5	-0.0	-0.0	-0.0
M+	8621.0	7561.2	5785.7	3265.3	1104.6	914.3	0.0	0.0	0.0
V	95.8	160.5	217.1	273.6	312.4	315.5	330.1	330.1	330.1
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	111.2	164.6	218.9	274.0	312.5	315.7	330.1	330.1	330.1
M	8146.4	7269.2	5637.4	3223.6	1098.5	909.7	0.0	0.0	0.0

REACTIONS (kips), SERVICE I

Lead Type	Left Support	Right Support
Self Wt.	66.6	66.6
Deck+Haunch	83.8	83.8
Diaphragm	0.0	0.0
DL-Prec.(DC)	17.8	17.8
DL-Comp.(DW)	0.0	0.0
DL-Comp.(DC)	80.1	80.1
DL-Comp.(DW)	0.0	0.0
Live	105.1	105.3
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, SERVICE III

Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location, ft	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
Self wt. : M	0.0	194.7	235.2	696.7	1238.6	1625.6	1857.9	1935.3
(Max) V	66.6	63.2	62.4	53.3	40.0	26.6	13.3	0.0
DL-Prec. : M	-0.0	52.1	63.0	186.6	331.7	435.3	497.5	518.2
DC(Max) V	17.8	16.9	16.7	14.3	10.7	7.1	3.6	0.0
DL-Prec. : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + : M	0.0	245.0	296.0	876.6	1558.3	2045.2	2337.2	2434.4
Haunch (Max) V	83.8	79.5	78.6	67.0	50.3	33.5	16.7	0.0
Diaphragm : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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SHEAR AND MOMENT ENVELOPE (&REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, SERVICE I
Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location, ft	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
Self wt. : M	0.0	194.7	235.2	696.7	1238.6	1625.6	1857.9	1935.3
(Max) V	66.6	63.2	62.4	53.3	40.0	26.6	13.3	0.0
DL-Prec. : M	-0.0	52.1	63.0	186.6	331.7	435.3	497.5	518.2
DC(Max) V	17.8	16.9	16.7	14.3	10.7	7.1	3.6	0.0
DL-Prec. : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + : M	0.0	245.0	296.0	876.6	1558.3	2045.2	2337.2	2434.4
Haunch (Max) V	83.8	79.5	78.6	67.0	50.3	33.5	16.7	0.0
Diaphragm : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp. : M	-0.0	40.6	49.1	145.3	258.4	339.1	387.6	403.7
DC(Max) V	13.4	12.7	12.5	10.7	8.0	5.3	2.7	0.0
DL-Prec. : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + : M	-0.0	382.6	462.1	1362.2	2401.6	3118.4	3542.3	3658.5
LL + I : V	148.8	143.5	142.4	128.5	108.2	87.9	59.5	39.2
LL + I : M	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	148.8	143.7	142.5	128.9	110.0	92.0	74.9	58.7
M	-0.0	378.0	456.0	1320.4	2253.2	2826.2	3067.5	3005.2
Total : M	0.0	915.0	1105.4	3267.4	5788.6	7563.6	8622.4	8950.2
LL + I : V	330.4	315.8	312.6	273.8	217.2	160.5	95.8	39.3
LL + I : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	330.4	315.9	312.8	274.2	219.0	164.6	111.2	58.7
Total : M	-0.0	910.4	1099.3	3225.6	5640.1	7271.4	8147.7	8296.8

Location, ft	0.60L	0.70L	0.80L	0.90L	H/2	0.20L	0.30L	0.40L	Midspan
V	69.73	81.35	92.97	104.59	112.56	113.21	116.21	116.21	116.21
M	1857.9	1625.6	1238.6	696.7	235.2	194.7	0.0	0.0	0.0
V	13.3	26.6	40.0	53.3	62.4	63.2	66.6	66.6	66.6
M	497.5	435.3	331.7	186.6	63.0	52.1	-0.0	-0.0	-0.0
V	3.6	7.1	10.7	14.3	16.7	16.9	17.8	17.8	17.8
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M	2336.9	2044.6	1557.7	876.2	295.8	244.8	0.0	0.0	0.0
V	16.8	33.5	50.3	67.0	78.5	79.4	83.8	83.8	83.8
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M	387.6	339.1	258.4	145.3	49.1	40.6	-0.0	-0.0	-0.0
V	2.7	5.3	8.0	10.7	12.5	12.7	13.4	13.4	13.4
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M+	3541.2	3116.5	2399.4	1360.5	461.5	382.0	0.0	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, SERVICE III

Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location, ft	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
Self wt. : M	0.0	194.7	235.2	696.7	1238.6	1625.6	1857.9	1935.3
(Max) V	66.6	63.2	62.4	53.3	40.0	26.6	13.3	0.0
DL-Prec. : M	-0.0	52.1	63.0	186.6	331.7	435.3	497.5	518.2
DC(Max) V	17.8	16.9	16.7	14.3	10.7	7.1	3.6	0.0
DL-Prec. : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + : M	0.0	245.0	296.0	876.6	1558.3	2045.2	2337.2	2434.4
Haunch (Max) V	83.8	79.5	78.6	67.0	50.3	33.5	16.7	0.0
Diaphragm : M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, STRENGTH I
 Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location:	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
Self wt.:	M	0.00	243.4	294.1	870.9	1548.2	2032.0	2322.3
(Max)	V	83.3	79.0	78.0	66.6	50.0	33.3	16.7
Self wt.:	M	0.00	175.2	211.7	627.0	1114.7	1463.1	1741.8
(Min)	V	60.0	56.9	56.2	48.0	36.0	24.0	12.0
DL-Prec.:	M	-0.0	65.2	78.7	233.2	414.6	544.1	621.9
DC(Max)	V	22.3	21.1	20.9	17.8	13.4	8.9	4.5
DL-Prec.:	M	-0.0	46.9	56.7	167.9	298.5	391.8	447.8
DC(Min)	V	16.1	15.2	15.0	12.8	9.6	6.4	3.2
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	M	0.0	306.2	370.0	1095.8	1947.9	2556.5	2921.5
Haunch (Max)	V	104.8	99.4	98.2	83.8	62.8	41.9	20.9
Deck +:	M	0.0	220.5	266.4	789.0	1402.5	1840.6	2103.5
Haunch (Min)	V	75.4	71.5	70.7	60.3	45.2	30.2	15.1
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	-0.0	50.8	61.3	181.7	323.0	423.9	484.5
DC(Max)	V	16.7	15.8	15.6	13.4	10.0	6.7	3.3
DL-Comp:	M	-0.0	36.6	44.2	130.8	232.5	305.2	348.8
DC(Min)	V	12.0	11.4	11.3	9.6	7.2	4.8	2.4
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	260.4	251.2	249.2	224.8	189.3	153.8	104.1
LL + I:	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + I:	Vmx	260.4	251.4	249.5	225.6	192.5	161.0	131.0
LL + I:	M	-0.0	661.5	798.0	2310.7	3943.0	4945.9	5368.2
Total:	M+	0.0	1335.0	1612.8	4765.3	8436.5	11013.8	12549.1
Total:	V	487.4	466.5	462.0	406.5	325.5	244.6	149.5
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total:	V	487.4	466.7	462.2	407.2	328.7	251.8	176.4
Total:	M	-0.0	1327.0	1602.2	4692.3	8176.7	10502.4	11873.6

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location:	69.73	81.35	92.97	104.59	112.56	113.21	116.21
Self wt.:	M	2322.3	2032.0	1548.2	870.9	294.1	243.4
(Max)	V	16.7	33.3	50.0	66.6	78.0	79.0
Self wt.:	M	1672.1	1463.1	1114.7	627.0	211.7	175.2



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp:	M	-0.0	40.6	145.3	258.4	339.1	387.6	403.7
DC(Max)	V	13.4	12.7	12.5	10.7	8.0	5.3	2.7
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	-0.0	306.1	369.7	1089.7	1921.3	2494.7	2833.8
LL + I:	M-	0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + I:	Vmx	119.0	114.9	114.0	103.1	88.0	73.6	59.9
LL + I:	M	-0.0	302.4	364.8	1056.3	1802.5	2261.0	2454.0
Total:	M+	0.0	838.5	1013.0	2995.0	5308.2	6940.0	7913.9
Total:	V	300.6	287.1	284.2	248.1	195.5	143.0	83.9
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total:	V	300.6	287.2	284.3	248.4	197.0	146.2	83.9
Total:	M	-0.0	834.8	1008.1	2961.6	5189.5	6706.2	7695.8

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location:	69.73	81.35	92.97	104.59	112.56	113.21	116.21
Self wt.:	M	1857.9	1625.6	1238.6	696.7	235.2	194.7
(Max)	V	13.3	26.6	40.0	53.3	62.4	66.6
DL-Prec.:	M	497.5	435.3	331.7	186.6	63.0	52.1
DC(Max)	V	3.6	7.1	10.7	14.3	16.7	16.9
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	M	2336.9	2044.6	1557.7	876.2	295.8	244.8
Haunch (Max)	V	16.8	33.5	50.3	67.0	78.5	79.4
Deck +:	M	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	387.6	339.1	258.4	145.3	49.1	40.6
DC(Max)	V	2.7	5.3	8.0	10.7	12.5	12.7
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	2832.9	2493.2	1919.5	1088.4	369.2	305.6
LL + I:	M-	47.6	70.3	86.5	102.7	113.8	114.7
LL + I:	Vmx	47.6	70.3	86.5	102.7	113.8	114.7
LL + I:	M	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M	59.9	73.5	87.9	103.0	113.9	114.8
LL + I:	M	2453.3	2259.6	1800.9	1055.1	364.3	302.0
Total:	M+	7912.8	6937.9	5305.9	2993.2	1012.3	837.9
Total:	V	83.9	142.9	195.4	247.9	284.0	286.9
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total:	V	96.2	146.2	196.9	248.3	284.1	287.0
Total:	M	7533.1	6704.3	5187.2	2959.8	1007.4	834.2



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Load Type	Left Support	Right Support
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1. Beam : 2. FATIGUE I
Shears: kips, Moments: kft

Location,	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Self wt.:	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
(Max)	0.00	194.7	235.2	696.7	1238.6	1625.6	1857.9	1935.3
Self wt.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec.:	0.00	52.1	63.0	186.6	331.7	435.3	497.5	518.2
DC(Max)	17.8	16.9	16.7	14.3	10.7	7.1	3.6	0.0
DL-Prec.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deck +:	0.00	245.0	296.0	876.6	1558.3	2045.2	2337.2	2434.4
Haunch (Max)	83.8	79.5	78.6	67.0	50.3	33.5	16.7	0.0
Deck +:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haunch (Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp:	0.00	40.6	49.1	145.3	258.4	339.1	387.6	403.7
DC(Max)	13.4	12.7	12.5	10.7	8.0	5.3	2.7	0.0
DL-Comp:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I:	0.00	173.0	208.9	609.8	1056.8	1366.3	1530.9	1532.8
V	77.9	75.5	75.0	68.7	59.5	45.1	35.9	26.7
M-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V	77.9	75.5	75.0	68.7	59.5	50.4	41.2	32.0
Vmx	0.00	173.0	208.9	609.8	1056.8	1340.9	1462.2	1420.7
M								

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	83.3	83.3
Deck+Haunch	104.8	104.7
Diaphragm	0.0	0.0
DL-Prec(DC)	22.3	22.3
DL-Prec(DW)	0.0	0.0
DL-Comp(DC)	100.1	100.1
DL-Comp(DW)	0.0	0.0
Live	184.0	184.3



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Load Type	Left Support	Right Support
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1. Beam : 2. FATIGUE I
Shears: kips, Moments: kft

Location,	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Self wt.:	0.00	3.00	3.65	11.62	23.24	34.86	46.48	58.10
(Max)	0.00	194.7	235.2	696.7	1238.6	1625.6	1857.9	1935.3
Self wt.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec.:	0.00	52.1	63.0	186.6	331.7	435.3	497.5	518.2
DC(Max)	17.8	16.9	16.7	14.3	10.7	7.1	3.6	0.0
DL-Prec.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec.:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deck +:	0.00	245.0	296.0	876.6	1558.3	2045.2	2337.2	2434.4
Haunch (Max)	83.8	79.5	78.6	67.0	50.3	33.5	16.7	0.0
Deck +:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haunch (Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp:	0.00	40.6	49.1	145.3	258.4	339.1	387.6	403.7
DC(Max)	13.4	12.7	12.5	10.7	8.0	5.3	2.7	0.0
DL-Comp:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I:	0.00	173.0	208.9	609.8	1056.8	1366.3	1530.9	1532.8
V	77.9	75.5	75.0	68.7	59.5	45.1	35.9	26.7
M-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V	77.9	75.5	75.0	68.7	59.5	50.4	41.2	32.0
Vmx	0.00	173.0	208.9	609.8	1056.8	1340.9	1462.2	1420.7
M								

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	83.3	83.3
Deck+Haunch	104.8	104.7
Diaphragm	0.0	0.0
DL-Prec(DC)	22.3	22.3
DL-Prec(DW)	0.0	0.0
DL-Comp(DC)	100.1	100.1
DL-Comp(DW)	0.0	0.0
Live	184.0	184.3



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Total :	M+	0.0	705.4	852.2	2515.1	4443.7	5811.5	6611.1
	V	259.5	247.8	245.2	214.0	168.5	117.7	72.2
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	259.5	247.8	245.2	214.0	168.5	123.0	77.5
	M	0.0	705.4	852.2	2515.1	4443.7	5786.1	6542.3
	M							6712.4

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	69.73	81.35	92.97	104.59	112.56	113.21
Self wt. :	M	1857.9	1625.6	1238.6	696.7	235.2	194.7
(Max)	V	13.3	26.6	40.0	53.3	62.4	63.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	497.5	435.3	331.7	186.6	63.0	52.1
DC(Max)	V	3.6	7.1	10.7	14.3	16.7	16.9
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2336.9	2044.6	1557.7	876.2	295.8	244.8
Haunch (Max)	V	16.8	33.5	50.3	67.0	78.5	79.4
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	49.1	40.6
DC(Max)	V	2.7	5.3	8.0	10.7	12.5	12.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	1530.5	1365.6	1055.9	609.2	208.6	172.8
LL + :	V	35.9	45.0	59.5	68.6	74.9	75.4
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	Vmx	41.2	50.3	59.5	68.6	74.9	75.4
Total :	M	1461.8	1340.2	1055.9	609.2	208.6	172.8
Total :	M+	6610.3	5810.3	4442.3	2514.0	851.8	705.1
Total :	V	72.2	117.7	168.4	213.9	245.1	247.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	77.5	123.0	168.4	213.9	245.1	247.6
Total :	M	6541.6	5784.9	4442.3	2514.0	851.8	705.1



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DESIGN SUMMARY

Span: 1, Beam: 2, Interior beam

Beam type:	FIB-78
I-Girder,	
Precast Length,	116.21
Release Length,	116.21
Strand Pattern:	Straight/Draped Depr. Point: 0.40 L
Strand:	6/10-270K-LL
Strand Es,	ksi: 28500.0
No. of strands:	36
	Draped: 9
	Straight: 27
Concrete Strength:	f'c: 6.0 ksi
	f'c: 7.5 ksi
	f'c: 5.5 ksi
Initial losses:	6.65 %
Final losses:	10.38 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)				
Precast Bot (compression)	3.600	2.809	Trans	OK
Outer	15.00 %	-0.530	Trans	
Precast Top w/ no reinf. (tension)	-0.232			
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	-0.012	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	14222.79	13017.00	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	0.00 %		OK
Max. Debond Total	25.00 %	0.00 %		OK



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DESIGN SUMMARY

Span: 1, Beam: 2, Interior beam

Specification	Allow	Loc.	Final 1 Comp	Final 1 Loc.	Final 2 Allow	Final 2 Comp	Final 2 Loc.	Final 3 Allow	Final 3 Comp	Final 3 Loc.
Service I Limit State - Compressive Stresses Only	3.300	Midspan	0.504	0.050	2.475	0.050	Midspan			
Topping Top	4.500	Midspan	2.442	2.087	3.375	2.087	Midspan			
Precast Top	4.500	Transfer	2.266	2.380	3.375	2.380	Transfer			
Precast Bot	4.500	Transfer	2.266	2.380	3.375	2.380	Transfer			
Service III Limit State - Tensile Stresses Only	-0.446	Bearing	-0.000							
Topping Top	-0.520	Transfer	-0.263							
Precast Top	-0.520	Midspan	-0.350							
Precast Bot	-0.520	Midspan	-0.350							
Fatigue I Limit State - Compressive Stresses Only								3.000	1.192	Midspan
Precast Top								3.000	1.139	Transfer
Precast Bot								3.000	1.139	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 58.10 ft

	Release	Mult	Erection	Mult	Final
Prestress	2.892	1.80	5.206	2.20	6.363
Self Wt.	-1.237	1.85	-2.288	2.40	-2.969
Deck + Haunch			-1.392	2.30	-3.201
DL-Prec. (DC)			0.000	3.00	0.000
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.244	3.00	-0.733
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	1.655		0.986		-1.428

Positive values indicate upward deflection.



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PROPERTIES

Span:1, Beam:3

PRECAST DATA:

Section Id	FIB-78		
Type	I-Girder		
Fling width	Top 48.000 in	Bot 38.000 in	
thick	Top 3.000 in	Bot 7.000 in	
Stems	No 1		
	Top 7.000 in		
Shear width	Bot 7.000 in		

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac.	Start LL/RI 13.11/ 13.11 ft
	End LL/RI 13.52/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	0.00 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch:	
Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Local: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.125	0.000	0.125	119.516	Addl Build-Up
DC	Line	0.182	0.000	0.182	119.516	SIP

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:

Area	1100.6	in ²
------	--------	-----------------



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Overall length	119.516 ft
Release length	119.516 ft
Design length	119.516 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.984	0.644	1.171	0.886
0.1L	0.984	0.644	1.171	0.886
0.2L	0.983	0.644	1.170	0.886
0.3L	0.983	0.643	1.170	0.886
0.4L	0.983	0.643	1.170	0.885
0.5L	0.983	0.643	1.170	0.885
0.6L	0.983	0.643	1.170	0.885
0.7L	0.983	0.643	1.169	0.885
0.8L	0.982	0.643	1.169	0.885
0.9L	0.982	0.643	1.169	0.885
1.0L	0.982	0.643	1.169	0.885

Pedestrian	0.167	(Calculated)
Comp. DC	0.167	(Calculated)
Comp. DW	0.167	(Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6	in ²
------	--------	-----------------



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2589.9	2287.23	87.5	2254691	59.75	150.0	157.4
0.1L	75.08	2589.6	2287.00	87.5	2254563	59.75	150.0	157.3
0.2L	75.08	2589.3	2286.77	87.5	2254435	59.75	150.0	157.3
0.3L	75.08	2589.0	2286.54	87.5	2254306	59.75	150.0	157.3
0.4L	75.08	2588.8	2286.32	87.5	2254178	59.75	150.0	157.2
0.5L	75.08	2588.5	2286.09	87.5	2254050	59.74	150.0	157.2
0.6L	75.08	2588.2	2285.86	87.5	2253922	59.74	150.0	157.2
0.7L	75.08	2587.9	2285.63	87.5	2253793	59.74	150.0	157.2
0.8L	75.08	2587.6	2285.40	87.5	2253665	59.74	150.0	157.1
0.9L	75.08	2587.4	2285.17	87.5	2253537	59.73	150.0	157.1
1.0L	75.08	2587.1	2284.94	87.5	2253408	59.73	150.0	157.1

(#) Area, Ixx, and Ycg Of Total Section using EcfEc = 0.8563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	in	in	in	in	in	in	in
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	11.95	23.90	35.85	47.81	59.76
Area, in ²	1100.6	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2
Yb, in	34.60	33.34	33.34	33.32	33.30	33.27	33.25	33.25
Mi(Ixx), in ⁴	904567	943343	943429	944546	946182	947851	949552	949552
Composite: (At Final, using Ec = 4491.0ksi)								
Area, in ²	2287.2	2332.5	2332.5	2332.0	2332.0	2331.8	2331.6	2331.3
Yb, in	59.75	58.72	58.72	58.71	58.70	58.68	58.67	58.67
Mi(Ixx), in ⁴	2254691	2380439	2380439	2382201	2384822	2387471	2390150	2390011

Span:1, Beam:3
 STRESS LIMITS (Art. 5.9.4):
 STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00	



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PRECAST	
Elasticity	4016.8 ksi
Max comp	3.60 ksi
Outer	15.00 %
Max tens	-0.23 ksi
Center	w/relnf -0.93 ksi
Max tens	70.00 %
Max tens	-0.23 ksi
Max tens	w/relnf -0.59 ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * fc or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

PRECAST		DECK	
Strength	7.50 ksi	5.50 ksi	
Elasticity	4490.96 ksi	3845.83 ksi	

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

PRECAST		DECK	
Max comp	4.50 ksi	3.30 ksi	

STRESS LIMITS AT FINAL 2 (P/S + DL):

PRECAST		DECK	
Max comp	3.38 ksi	2.47 ksi	

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

PRECAST		DECK	
Max comp	3.00 ksi		

SERVICE III (Tension):

PRECAST		DECK	
Max tens	-0.52 ksi	-0.45 ksi	

Span:1, Beam:3
 PRESTRESSED STEEL:
 39 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (47.81 ft from member end)

END PATTERN (Ycg = 6.69 in):

12 @ 3.000 in	14 @ 5.000 in	4 @ 7.000 in	5 @ 13.000 in
3 @ 15.000 in	1 @ 17.000 in		



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MID PATTERN (Ycg = 4.38 in):

(A) Draped: 5 @ 3.000 in | 3 @ 5.000 in | 1 @ 7.000 in

(B) Straight:

12 @ 3.000 in | 14 @ 5.000 in | 4 @ 7.000 in

Strand Diameter	0.600	in
Strand Area	0.217	in ²
Total Strand Area	8.463	in ²
Trans. Len. bonded	3.000	ft
Trans. Len. debonded	11.641	ft
Dev. Len. bonded	14.551	ft
Dev. Len. debonded	6.893	ft
Holddown Force	270.0	kips
Tensile Strength (fpu)	202.5	ksi
Initial Prestress = 0.75fpu	1713.8	kips
Initial Pull	0.531	in
Beam Shifting (PL/AE)		

Span:1, Beam:3
 ESTIMATED QUANTITIES

Prestressing (linear ft)	4661.241	740	3449.319	33.832	137020.031	601.684	0.000
Strands (LB/1000ft)							
Stirrups (LB)							
Concrete (LB)							
Longitudinal Bars (LB)							

Span:1, Beam:3
 REINFORCING STEEL:

Tension steel:	
fy	60.0 ksi
Es	29000 ksi
fs	24.0 ksi

Stirrups:

# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	0.7021	No
2	US#4(M13)	60.0	0.40	9.00	0.7021	2.4573	No
2	US#4(M13)	60.0	0.40	12.00	2.4573	6.4764	No
2	US#4(M13)	60.0	0.40	15.00	6.4764	13.3232	No
2	US#4(M13)	60.0	0.40	18.00	13.3232	17.8048	No
2	US#4(M13)	60.0	0.40	21.00	17.8048	21.1709	No
2	US#4(M13)	60.0	0.40	24.00	21.1709	29.8583	No
2	US#4(M13)	60.0	0.40	21.00	29.8583	39.1037	No
2	US#4(M13)	60.0	0.40	24.00	39.1037	80.4121	No



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# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	21.00	80.4121	89.6572	No
2	US#4(M13)	60.0	0.40	24.00	89.6572	98.3448	No
2	US#4(M13)	60.0	0.40	21.00	98.3448	101.7110	No
2	US#4(M13)	60.0	0.40	18.00	101.7110	106.1923	No
2	US#4(M13)	60.0	0.40	15.00	106.1923	113.0394	No
2	US#4(M13)	60.0	0.40	12.00	113.0394	117.0584	No
2	US#4(M13)	60.0	0.40	9.00	117.0584	118.8136	No
2	US#4(M13)	60.0	0.40	6.00	118.8136	119.5157	No

LOSSES

Note: Values are calculated at Midspan

Str. area	8.4630	in ²
Ycg	4.38	in
P. Init	1713.8	kips
Ecc	30.22	in
Days to release	0.75	%
Rel. Humid (RH)	75.0	%
Es	28500.0	ksi
Eci	4017	ksi

AASHTO LOSSES

Elastic Shortening ** 14.41 ksi (Eq 5.9.5.2.3a-1), (fcgp = 2.031 ksi)

due to	Gains	Adjustment
Precast Loads	-7.23	0.00
Composite Loads	-0.70	0.00
Live Loads	-5.02	0.00

Time Dependent Losses (Approximate Method (Art.5.9.5.3))

	Initial	Final
Steel relaxation	0.00	2.40
Concrete shrinkage	0.00	8.14
Concrete creep	0.00	10.57
Sub-total	14.41	8.16
Total Prestress Losses		22.57
		(4.03 %)
		(11.14 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial fpi = 202.5 ksi < 0.75 fpu, OK
 initial fpe = 179.9 ksi < 0.80 fpy, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.



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SHEAR AND MOMENT ENVELOPE (& REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 3, SERVICE I
Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	11.95	23.90	35.85	47.81	59.76
M	0.0	200.4	242.2	736.9	1310.1	1719.5	1965.1	2047.0
(Max)	V	68.5	65.1	64.3	54.8	41.1	27.4	13.7
DL-Prec.:	M	-0.0	53.7	64.8	197.3	350.8	460.4	526.2
DC(Max)	V	18.3	17.4	17.2	14.7	11.0	7.3	3.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	252.1	304.7	927.2	1648.3	2163.3	2472.2
Haunch (Max)	V	86.2	81.9	80.9	69.0	51.7	34.5	17.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	39.5	47.8	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.5	10.7	8.0	5.3	2.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	369.4	446.3	1351.6	2383.0	3094.3	3514.9
LL + :	V	148.8	143.7	142.6	128.5	108.2	87.9	59.5
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	148.8	143.8	142.7	128.9	110.0	92.0	74.9
LL + :	Vmx	-0.0	365.0	440.5	1310.2	2235.7	2804.3	3043.8
Total :	M	-0.0	915.1	1105.7	3358.5	5950.6	7716.6	8865.9
Total :	V	335.2	320.7	317.6	277.6	220.0	162.5	96.8
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	335.2	320.8	317.8	278.1	221.8	166.5	112.2
Total :	M	0.0	910.7	1099.9	3317.0	5803.3	7486.7	8394.9

Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	71.71	83.66	95.61	107.56	115.87	116.52	119.52
M	1965.1	1719.5	1310.1	736.9	242.2	200.4	0.0
(Max)	V	13.7	27.4	41.1	54.8	64.3	65.1
DL-Prec.:	M	526.2	460.4	350.8	197.3	64.8	53.7
DC(Max)	V	3.7	7.3	11.0	14.7	17.2	17.4
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2471.8	2162.7	1647.7	926.8	304.5	252.0
Haunch (Max)	V	17.2	34.5	51.7	68.9	80.9	81.8
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	47.8	39.5
DC(Max)	V	2.7	5.3	8.0	10.7	12.5	12.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	3513.8	3092.4	2380.9	1350.0	445.7	368.9
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0



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SHEAR AND MOMENT ENVELOPE (& REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 3, SERVICE III
Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	11.95	23.90	35.85	47.81	59.76
M	0.0	200.4	242.2	736.9	1310.1	1719.5	1965.1	2047.0
(Max)	V	68.5	65.1	64.3	54.8	41.1	27.4	13.7
DL-Prec.:	M	-0.0	53.7	64.8	197.3	350.8	460.4	526.2
DC(Max)	V	18.3	17.4	17.2	14.7	11.0	7.3	3.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	252.1	304.7	927.2	1648.3	2163.3	2472.2
Haunch (Max)	V	86.2	81.9	80.9	69.0	51.7	34.5	17.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	39.5	47.8	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.5	10.7	8.0	5.3	2.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	369.4	446.3	1351.6	2383.0	3094.3	3514.9
LL + :	V	148.8	143.7	142.6	128.5	108.2	87.9	59.5
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	148.8	143.8	142.7	128.9	110.0	92.0	74.9
LL + :	Vmx	-0.0	365.0	440.5	1310.2	2235.7	2804.3	3043.8
Total :	M	-0.0	915.1	1105.7	3358.5	5950.6	7716.6	8865.9
Total :	V	335.2	320.7	317.6	277.6	220.0	162.5	96.8
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	335.2	320.8	317.8	278.1	221.8	166.5	112.2
Total :	M	0.0	910.7	1099.9	3317.0	5803.3	7486.7	8394.9

Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	71.71	83.66	95.61	107.56	115.87	116.52	119.52
M	1965.1	1719.5	1310.1	736.9	242.2	200.4	0.0
(Max)	V	13.7	27.4	41.1	54.8	64.3	65.1
DL-Prec.:	M	526.2	460.4	350.8	197.3	64.8	53.7
DC(Max)	V	3.7	7.3	11.0	14.7	17.2	17.4
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2471.8	2162.7	1647.7	926.8	304.5	252.0
Haunch (Max)	V	17.2	34.5	51.7	68.9	80.9	81.8
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	47.8	39.5
DC(Max)	V	2.7	5.3	8.0	10.7	12.5	12.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	3513.8	3092.4	2380.9	1350.0	445.7	368.9
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0



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SHEAR AND MOMENT ENVELOPE (& REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 3, SERVICE III
Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	11.95	23.90	35.85	47.81	59.76
M	0.0	200.4	242.2	736.9	1310.1	1719.5	1965.1	2047.0
(Max)	V	68.5	65.1	64.3	54.8	41.1	27.4	13.7
DL-Prec.:	M	-0.0	53.7	64.8	197.3	350.8	460.4	526.2
DC(Max)	V	18.3	17.4	17.2	14.7	11.0	7.3	3.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	252.1	304.7	927.2	1648.3	2163.3	2472.2
Haunch (Max)	V	86.2	81.9	80.9	69.0	51.7	34.5	17.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	39.5	47.8	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.5	10.7	8.0	5.3	2.7
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	369.4	446.3	1351.6	2383.0	3094.3	3514.9
LL + :	V	148.8	143.7	142.6	128.5	108.2	87.9	59.5
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	148.8	143.8	142.7	128.9	110.0	92.0	74.9
LL + :	Vmx	-0.0	365.0	440.5	1310.2	2235.7	2804.3	3043.8
Total :	M	-0.0	915.1	1105.7	3358.5	5950.6	7716.6	8865.9
Total :	V	335.2	320.7	317.6	277.6	220.0	162.5	96.8
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	335.2	320.8	317.8	278.1	221.8	166.5	112.2
Total :	M	0.0	910.7	1099.9	3317.0	5803.3	7486.7	8394.9

Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	71.71	83.66	95.61	107.56	115.87	116.52	119.52
M	1965.1	1719.5	1310.1	736.9	242.2	200.4	0.0
(Max)	V	13.7	27.4	41.1	54.8	64.3	65.1
DL-Prec.:	M	526.2	460.4	350.8	197.3	64.8	53.7
DC(Max)	V	3.7	7.3	11.0	14.7	17.2	17.4
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2471.8	2162.7	1647.7	926.8	304.5	252.0
Haunch (Max)	V	17.2	34.5	51.7	68.9	80.9	81.8



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Location	Self wt.	(Max)	(Min)	DL-Prec.	DC(Max)	DL-Prec.	DC(Min)	DL-Prec.	DW(Max)	DW(Min)	Deck + :	Haunch (Max)	Deck + :	Diaphragm (Min)	(Max)	Diaphragm (Min)	(Max)	DL-Comp	DL-Comp	DL-Comp	DL-Comp	LL + I :	Total :	Total :	Total :	Total :																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
ft	0.00	3.65	11.95	23.90	35.85	47.81	59.76	71.71	83.66	95.61	107.56	119.52	131.47	143.42	155.37	167.32	179.27	191.22	203.17	215.12	227.07	239.02	250.97	262.92	274.87	286.82	298.77	310.72	322.67	334.62	346.57	358.52	370.47	382.42	394.37	406.32	418.27	430.22	442.17	454.12	466.07	478.02	489.97	501.92	513.87	525.82	537.77	549.72	561.67	573.62	585.57	597.52	609.47	621.42	633.37	645.32	657.27	669.22	681.17	693.12	705.07	717.02	728.97	740.92	752.87	764.82	776.77	788.72	800.67	812.62	824.57	836.52	848.47	860.42	872.37	884.32	896.27	908.22	920.17	932.12	944.07	956.02	967.97	979.92	991.87	1003.82	1015.77	1027.72	1039.67	1051.62	1063.57	1075.52	1087.47	1099.42	1111.37	1123.32	1135.27	1147.22	1159.17	1171.12	1183.07	1195.02	1206.97	1218.92	1230.87	1242.82	1254.77	1266.72	1278.67	1290.62	1302.57	1314.52	1326.47	1338.42	1350.37	1362.32	1374.27	1386.22	1398.17	1410.12	1422.07	1434.02	1445.97	1457.92	1469.87	1481.82	1493.77	1505.72	1517.67	1529.62	1541.57	1553.52	1565.47	1577.42	1589.37	1601.32	1613.27	1625.22	1637.17	1649.12	1661.07	1673.02	1684.97	1696.92	1708.87	1720.82	1732.77	1744.72	1756.67	1768.62	1780.57	1792.52	1804.47	1816.42	1828.37	1840.32	1852.27	1864.22	1876.17	1888.12	1900.07	1912.02	1923.97	1935.92	1947.87	1959.82	1971.77	1983.72	1995.67	2007.62	2019.57	2031.52	2043.47	2055.42	2067.37	2079.32	2091.27	2103.22	2115.17	2127.12	2139.07	2151.02	2162.97	2174.92	2186.87	2198.82	2210.77	2222.72	2234.67	2246.62	2258.57	2270.52	2282.47	2294.42	2306.37	2318.32	2330.27	2342.22	2354.17	2366.12	2378.07	2390.02	2401.97	2413.92	2425.87	2437.82	2449.77	2461.72	2473.67	2485.62	2497.57	2509.52	2521.47	2533.42	2545.37	2557.32	2569.27	2581.22	2593.17	2605.12	2617.07	2629.02	2640.97	2652.92	2664.87	2676.82	2688.77	2700.72	2712.67	2724.62	2736.57	2748.52	2760.47	2772.42	2784.37	2796.32	2808.27	2820.22	2832.17	2844.12	2856.07	2868.02	2879.97	2891.92	2903.87	2915.82	2927.77	2939.72	2951.67	2963.62	2975.57	2987.52	2999.47	3011.42	3023.37	3035.32	3047.27	3059.22	3071.17	3083.12	3095.07	3107.02	3118.97	3130.92	3142.87	3154.82	3166.77	3178.72	3190.67	3202.62	3214.57	3226.52	3238.47	3250.42	3262.37	3274.32	3286.27	3298.22	3310.17	3322.12	3334.07	3346.02	3357.97	3369.92	3381.87	3393.82	3405.77	3417.72	3429.67	3441.62	3453.57	3465.52	3477.47	3489.42	3501.37	3513.32	3525.27	3537.22	3549.17	3561.12	3573.07	3585.02	3596.97	3608.92	3620.87	3632.82	3644.77	3656.72	3668.67	3680.62	3692.57	3704.52	3716.47	3728.42	3740.37	3752.32	3764.27	3776.22	3788.17	3800.12	3812.07	3824.02	3835.97	3847.92	3859.87	3871.82	3883.77	3895.72	3907.67	3919.62	3931.57	3943.52	3955.47	3967.42	3979.37	3991.32	4003.27	4015.22	4027.17	4039.12	4051.07	4063.02	4074.97	4086.92	4098.87	4110.82	4122.77	4134.72	4146.67	4158.62	4170.57	4182.52	4194.47	4206.42	4218.37	4230.32	4242.27	4254.22	4266.17	4278.12	4290.07	4302.02	4313.97	4325.92	4337.87	4349.82	4361.77	4373.72	4385.67	4397.62	4409.57	4421.52	4433.47	4445.42	4457.37	4469.32	4481.27	4493.22	4505.17	4517.12	4529.07	4541.02	4552.97	4564.92	4576.87	4588.82	4600.77	4612.72	4624.67	4636.62	4648.57	4660.52	4672.47	4684.42	4696.37	4708.32	4720.27	4732.22	4744.17	4756.12	4768.07	4780.02	4791.97	4803.92	4815.87	4827.82	4839.77	4851.72	4863.67	4875.62	4887.57	4899.52	4911.47	4923.42	4935.37	4947.32	4959.27	4971.22	4983.17	4995.12	5007.07	5019.02	5030.97	5042.92	5054.87	5066.82	5078.77	5090.72	5102.67	5114.62	5126.57	5138.52	5150.47	5162.42	5174.37	5186.32	5198.27	5210.22	5222.17	5234.12	5246.07	5258.02	5269.97	5281.92	5293.87	5305.82	5317.77	5329.72	5341.67	5353.62	5365.57	5377.52	5389.47	5401.42	5413.37	5425.32	5437.27	5449.22	5461.17	5473.12	5485.07	5497.02	5508.97	5520.92	5532.87	5544.82	5556.77	5568.72	5580.67	5592.62	5604.57	5616.52	5628.47	5640.42	5652.37	5664.32	5676.27	5688.22	5700.17	5712.12	5724.07	5736.02	5747.97	5759.92	5771.87	5783.82	5795.77	5807.72	5819.67	5831.62	5843.57	5855.52	5867.47	5879.42	5891.37	5903.32	5915.27	5927.22	5939.17	5951.12	5963.07	5975.02	5986.97	5998.92	6010.87	6022.82	6034.77	6046.72	6058.67	6070.62	6082.57	6094.52	6106.47	6118.42	6130.37	6142.32	6154.27	6166.22	6178.17	6190.12	6202.07	6214.02	6225.97	6237.92	6249.87	6261.82	6273.77	6285.72	6297.67	6309.62	6321.57	6333.52	6345.47	6357.42	6369.37	6381.32	6393.27	6405.22	6417.17	6429.12	6441.07	6453.02	6464.97	6476.92	6488.87	6500.82	6512.77	6524.72	6536.67	6548.62	6560.57	6572.52	6584.47	6596.42	6608.37	6620.32	6632.27	6644.22	6656.17	6668.12	6680.07	6692.02	6703.97	6715.92	6727.87	6739.82	6751.77	6763.72	6775.67	6787.62	6799.57	6811.52	6823.47	6835.42	6847.37	6859.32	6871.27	6883.22	6895.17	6907.12	6919.07	6931.02	6942.97	6954.92	6966.87	6978.82	6990.77	7002.72	7014.67	7026.62	7038.57	7050.52	7062.47	7074.42	7086.37	7098.32	7110.27	7122.22	7134.17	7146.12	7158.07	7170.02	7181.97	7193.92	7205.87	7217.82	7229.77	7241.72	7253.67	7265.62	7277.57	7289.52	7301.47	7313.42	7325.37	7337.32	7349.27	7361.22	7373.17	7385.12	7397.07	7409.02	7420.97	7432.92	7444.87	7456.82	7468.77	7480.72	7492.67	7504.62	7516.57	7528.52	7540.47	7552.42	7564.37	7576.32	7588.27	7600.22	7612.17	7624.12	7636.07	7648.02	7659.97	7671.92	7683.87	7695.82	7707.77	7719.72	7731.67	7743.62	7755.57	7767.52	7779.47	7791.42	7803.37	7815.32	7827.27	7839.22	7851.17	7863.12	7875.07	7887.02	7898.97	7910.92	7922.87	7934.82	7946.77	7958.72	7970.67	7982.62	7994.57	8006.52	8018.47	8030.42	8042.37	8054.32	8066.27	8078.22	8090.17	8102.12	8114.07	8126.02	8137.97	8149.92	8161.87	8173.82	8185.77	8197.72	8209.67	8221.62	8233.57	8245.52	8257.47	8269.42	8281.37	8293.32	8305.27	8317.22	8329.17	8341.12	8353.07	8365.02	8376.97	8388.92	8400.87	8412.82	8424.77	8436.72	8448.67	8460.62	8472.57	8484.52	8496.47	8508.42	8520.37	8532.32	8544.27	8556.22	8568.17	8580.12	8592.07	8604.02	8615.97	8627.92	8639.87	8651.82	8663.77	8675.72	8687.67	8699.62	8711.57	8723.52	8735.47	8747.42	8759.37	8771.32	8783.27	8795.22	8807.17	8819.12	8831.07	8843.02	8854.97	8866.92	8878.87	8890.82	8902.77	8914.72	8926.67	8938.62	8950.57	8962.52	8974.47	8986.42	8998.37	9010.32	9022.27	9034.22	9046.17	9058.12	9070.07	9082.02	9093.97	9105.92	9117.87	9129.82	9141.77	9153.72	9165.67	9177.62	9189.57	9201.52	9213.47	9225.42	9237.37	9249.32	9261.27	9273.22	9285.17	9297.12	9309.07	9321.02	9332.97	9344.92	9356.87	9368.82	9380.77	9392.72	9404.67	9416.62	9428.57	9440.52	9452.47	9464.42	9476.37	9488.32	9500.27	9512.22	9524.17	9536.12	9548.07	9560.02	9571.97	9583.92	9595.87	9607.82	9619.77	9631.72	9643.67	9655.62	9667.57	9679.52	9691.47	9703.42	9715.37	9727.32	9739.27	9751.22	9763.17	9775.12	9787.07	9799.02	9810.97	9822.92	9834.87	9846.82	9858.77	9870.72	9882.67	9894.62	9906.57	9918.52	9930.47	9942.42	9954.37	9966.32	9978.27	9990.22	10021.17	10033.12	10045.07	10057.02	10068.97	10080.92	10092.87	10104.82	10116.77	10128.72	10140.67	10152.62	10164.57	10176.52	10188.47	10200.42	10212.37	10224.32	10236.27	10248.22	10260.17	10272.12	10284.07	10296.02	10307.97	10319.92	10331.87	10343.82	10355.77	10367.72	10379.67	10391.62	10403.57	10415.52	10427.47	10439.42	10451.37	10463.32	10475.27	10487.22	10499.17	10511.12	10523.07	10535.02	10546.97	10558.92	10570.87	10582.82	10594.77	10606.72	10618.67	10630.62	10642.57	10654.52	10666.47	10678.42	10690.37	10702.32	10714.27	10726.22	10738.17	10750.12	10762.07	10774.02	10785.97	10797.92	10809.87	10821.82	10833.77	10845.72	10857.67	10869.62	10881.57	10893.52	10905.47	10917.42	10929.37	10941.32	10953.27



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 Version: 12.01.00.57
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File Name: Span11EB_Modified Spacing.csl

Sheet # 11
 Job #
 Designed KSM
 Date Sept/9/2013
 Checked
 Date

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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
(Min)	12.3	24.7	37.0	49.3	57.9	58.6	61.7
DL-Prec :	657.8	575.6	438.5	246.7	81.1	67.1	-0.0
DC(Max)	4.6	9.2	13.8	18.3	21.5	21.8	22.9
DL-Prec :	473.6	414.4	315.7	177.6	58.4	48.3	-0.0
DC(Min)	3.3	6.6	9.9	13.2	15.5	15.7	16.5
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	3089.8	2703.4	2059.6	1158.4	380.7	315.0	0.0
Haunch (Max)	21.6	43.1	64.6	86.2	101.1	102.3	107.7
Deck + :	2224.6	1946.4	1482.9	834.1	274.1	226.8	0.0
Haunch (Min)	15.5	31.0	46.5	62.0	72.8	73.6	77.5
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	484.5	423.9	323.0	181.7	59.7	49.4	-0.0
DC(Max)	3.3	6.7	10.0	13.4	15.7	15.9	16.7
DL-Comp :	348.8	305.2	232.5	130.8	43.0	35.6	-0.0
DC(Min)	2.4	4.8	7.2	9.6	11.3	11.4	12.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	6149.2	5411.8	4166.6	2362.6	779.9	645.5	-0.0
LL + I :	104.1	153.8	189.2	224.6	249.2	251.1	260.0
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	131.0	160.9	192.3	225.4	249.4	251.3	260.0
Total :	5325.1	4904.7	3909.0	2290.1	769.7	637.9	-0.0
Total :	12837.6	11264.0	8625.3	4870.5	1604.0	1327.4	0.0
Total :	150.7	247.0	329.0	411.0	467.9	472.4	492.9
Total :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	177.6	254.1	332.1	411.8	468.2	472.6	492.9
Total :	12013.6	10756.9	8367.7	4798.1	1593.8	1319.8	-0.0

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	85.6	85.6
Deck+Haunch	107.8	107.7
Diaphragm	0.0	0.0
DL-Prec (DC)	22.9	22.9
DL-Prec (DW)	0.0	0.0
DL-Comp (DC)	100.1	100.1
DL-Comp (DW)	0.0	0.0
Live	184.0	184.3



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Sheet # 12
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Load Type	Left Support	Right Support
Pedestrian	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 3, FATIGUE I
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	ft							
Self wt. :	0.00	3.00	3.65	11.95	23.90	35.85	47.81	59.76
(Max)	0.00	200.4	242.2	736.9	1310.1	1719.5	1965.1	2047.0
Self wt. :	0.00	65.1	64.3	54.8	41.1	27.4	13.7	0.0
(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec. :	-0.00	53.7	64.8	197.3	350.8	460.4	526.2	548.1
DC(Max)	18.3	17.4	17.2	14.7	11.0	7.3	3.7	0.0
DL-Prec. :	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec. :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec. :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deck + :	0.00	252.1	304.7	927.2	1648.3	2163.3	2472.2	2575.0
Haunch (Max)	86.2	81.9	80.9	69.0	51.7	34.5	17.2	0.0
Deck + :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haunch (Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	-0.00	39.5	47.8	145.3	258.4	339.1	387.6	403.7
DC(Max)	13.4	12.7	12.5	10.7	8.0	5.3	2.7	0.0
DL-Comp :	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DC(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	0.00	166.7	201.2	603.7	1046.1	1352.4	1515.4	1517.3
LL + I :	77.9	75.6	75.1	68.7	59.5	45.1	35.9	26.7
LL + I :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	77.9	75.6	75.1	68.7	59.5	50.4	41.2	32.0
LL + I :	0.00	166.7	201.2	603.7	1046.1	1327.3	1447.4	1406.4



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Sheet # 13

Job #

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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Total:	M+	0.0	712.4	860.7	2610.5	4613.7	6034.8	6866.5
	V	264.3	252.6	250.1	217.8	171.4	119.6	73.1
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total:	Vmx	264.3	252.6	250.1	217.8	171.4	124.9	78.4
	M	0.0	712.4	860.7	2610.5	4613.7	6009.6	6798.4
	M							6980.2

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location:	ft	71.71	83.66	95.61	107.56	115.87	116.52
Self wt.:	M	1965.1	1719.5	1310.1	736.9	242.2	200.4
(Max)	V	13.7	27.4	41.1	54.8	64.3	65.1
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	526.2	460.4	350.8	197.3	64.8	53.7
DC(Max)	V	3.7	7.3	11.0	14.7	17.2	17.4
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	M	2471.8	2162.7	1647.7	926.8	304.5	252.0
Haunch (Max)	V	17.2	34.5	51.7	68.9	80.9	81.8
Deck +:	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	387.6	339.1	258.4	145.3	47.8	39.5
DC(Max)	V	2.7	5.3	8.0	10.7	12.5	12.7
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL +:	M+	1515.1	1351.8	1045.3	603.0	201.0	166.5
LL +:	V	35.9	45.0	59.5	68.6	75.0	75.5
LL +:	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL +:	V	0.0	0.0	0.0	0.0	0.0	0.0
LL +:	Vmx	41.2	50.3	59.5	68.6	75.0	75.5
	M	1447.0	1326.6	1045.3	603.0	201.0	166.5
Total:	M+	6865.8	6033.5	4612.2	2609.4	860.3	712.0
Total:	V	73.2	119.6	171.3	217.7	250.0	252.5
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total:	V	0.0	0.0	0.0	0.0	0.0	0.0
Total:	Vmx	78.5	124.9	171.3	217.7	250.0	252.5
	M	6797.8	6008.4	4612.2	2609.4	860.3	712.0



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DESIGN SUMMARY

Span: 1, Beam: 3, Interior beam

Beam type:	I-Girder, FIB-78
Precast Length,	ft 119.52
Release Length,	ft 119.52
Strand Pattern:	Straight/Draped Depr. Point: 0.40 L
Strand:	6/10-270K-LL
Strand Es,	ksi: 28500.0
No. of strands:	39
	Draped: 9
	Straight: 30
Concrete Strength:	f'c: 6.0 ksi
	f'c: 7.5 ksi
	f'c: 5.5 ksi
Initial losses:	7.11 %
Final losses:	11.14 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)				
Precast Bot (compression)	3.600	3.026	Trans	OK
Outer	15.00 %	-0.573	Trans	
Precast Top w/ no reinf. (tension)	-0.232			
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	-0.017	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	15329.00	13320.32	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	0.00 %		OK
Max. Debond Total	25.00 %	0.00 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow	Final 1 Comp	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	Stresses Only	0.500	Midspan	2.475	0.050	Midspan			
Topping Top	3.300	2.560	Midspan	3.375	2.207	Midspan			
Precast Top	4.500	2.451	Transfer	3.375	2.560	Transfer			
Precast Bot	4.500								
Service III Limit State - Tensile	Stresses Only								
Topping Top	-0.446	-0.000	Bearing						
Precast Top	-0.520	-0.295	Transfer						
Precast Bot	-0.520	-0.263	Midspan						
Fatigue I Limit State - Compressive	Stresses Only								
Precast Top							3.000	1.251	Midspan
Precast Bot							3.000	1.231	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 59.76 ft

	Release	Multi	Erection	Multi	Final
Prestress	3.274	1.80	5.893	2.20	7.203
Self Wt.	-1.360	1.85	-2.553	2.40	-3.312
Deck + Haunch			-1.553	2.30	-3.571
DL-Prec. (DC)			0.000	3.00	-0.991
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.244	3.00	-0.731
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	1.894		1.214		-1.402

Positive values indicate upward deflection.



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PROPERTIES

Span:1, Beam:4
PRECAST DATA:

Section Id	FIB-78
Type	I-Girder
Flng width	48.000 in
thick	3.000 in
Stems	No 1
Top	7.000 in
Bot	7.000 in
Shear width	7.000 in

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac.	Start LL/RI 13.11/ 13.11 ft
	End LL/RI 13.52/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	0.00 degrees
End Skew Angle	-14.15 degrees

* Average bridge width
TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Location: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.125	0.000	0.125	122.823	Addl Build-Up
DC	Line	0.182	0.000	0.182	122.823	SIP

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:

Area	1100.6 in ²
------	------------------------



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Overall length 122.823 ft
Release length 122.823 ft
Design length 122.823 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.976	0.637	1.171	0.886
0.1L	0.976	0.637	1.171	0.886
0.2L	0.976	0.637	1.170	0.886
0.3L	0.976	0.637	1.170	0.886
0.4L	0.976	0.637	1.170	0.886
0.5L	0.976	0.637	1.170	0.885
0.6L	0.975	0.637	1.170	0.885
0.7L	0.975	0.637	1.170	0.885
0.8L	0.975	0.637	1.170	0.885
0.9L	0.975	0.637	1.169	0.885
1.0L	0.975	0.637	1.169	0.885

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
------	------------------------



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2589.9	2287.24	87.5	2254692	59.75	150.0	157.4
0.1L	75.08	2589.6	2287.01	87.5	2254567	59.75	150.0	157.3
0.2L	75.08	2589.3	2286.79	87.5	2254443	59.75	150.0	157.3
0.3L	75.08	2589.1	2286.57	87.5	2254318	59.75	150.0	157.3
0.4L	75.08	2588.8	2286.34	87.5	2254193	59.75	150.0	157.3
0.5L	75.08	2588.5	2286.12	87.5	2254068	59.74	150.0	157.2
0.6L	75.08	2588.3	2285.90	87.5	2253944	59.74	150.0	157.2
0.7L	75.08	2588.0	2285.67	87.5	2253819	59.74	150.0	157.2
0.8L	75.08	2587.7	2285.45	87.5	2253694	59.74	150.0	157.1
0.9L	75.08	2587.4	2285.22	87.5	2253569	59.73	150.0	157.1
1.0L	75.08	2587.2	2285.00	87.5	2253444	59.73	150.0	157.1

(#) Area, Ixx, and Ycg Of Total Section using EcfEc = 0.8563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	in	in	in	in	in	in	in
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	12.28	24.56	36.85	49.13	61.41
Area, in ²	1100.6	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2	1152.2
Yb, in	34.60	33.34	33.34	33.32	33.30	33.27	33.25	33.25
Ml(Ixx), in ⁴	904567	943332	943416	944546	946182	947851	949552	949552
Composite: (At Final, using Ec = 4491.0ksi)								
Area, in ²	2287.2	2332.5	2332.5	2332.0	2331.8	2331.6	2331.4	2331.4
Yb, in	59.75	58.72	58.72	58.71	58.70	58.68	58.67	58.67
Ml(Ixx), in ⁴	2254692	2380275	2380418	2382206	2384830	2387484	2390167	2390031

Span:1, Beam:4
 STRESS LIMITS (Art. 5.9.4):
 STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00	



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Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00	%
Max tens	-0.23	ksi
Max tens, w/reinf	-0.93	ksi
Center	70.00	%
Max tens	-0.23	ksi
Max tens, w/reinf	-0.59	ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * fc or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	7.50	ksi
Elasticity	4490.96	ksi
PRECAST	DECK	ksi
	5.50	
	38.45.83	

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	4.50	ksi
PRECAST	DECK	ksi
	3.30	

STRESS LIMITS AT FINAL 2 (P/S + DL):

Max comp	3.38	ksi
PRECAST	DECK	ksi
	2.47	

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

Max comp	3.00	ksi
PRECAST	DECK	ksi
	3.00	

SERVICE III (Tension):

Max tens	-0.52	ksi
PRECAST	DECK	ksi
	-0.45	

Span:1, Beam:4
 PRESTRESSED STEEL:
 39 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (49.13 ft from member end)

END PATTERN (Ycg = 6.69 in):

12 @ 3.000 in	14 @ 5.000 in	4 @ 7.000 in	5 @ 13.000 in
3 @ 15.000 in	1 @ 17.000 in		



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MID PATTERN (Ycg = 4.38 in):

(A) Draped:

5 @ 3.000 in | 3 @ 5.000 in | 1 @ 7.000 in

(B) Straight:

12 @ 3.000 in | 14 @ 5.000 in | 4 @ 7.000 in

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	8.463 in ²
Trans. Len. debonded	3.000 ft
Dev. Len. debonded	11.641 ft
Holddown Force	14.551 ft
Tensile Strength (fpu)	6.707 kips
Initial Prestress = 0.75 fpu	270.0 ksi
Initial Pull	202.5 ksi
Beam Shirting (PL/AE)	1713.8 kips
	0.546 in

Span:1, Beam:4
ESTIMATED QUANTITIES

Prestressing (linear ft)	740	Strands (LB/1000ft)	3544.758	Beam Vol(C.V.)	34.768	Concrete Wt(LB)	140811.438	Stirrups (LB)	654.774	Longitudinal Bars (LB)	0.000
--------------------------	-----	---------------------	----------	----------------	--------	-----------------	------------	---------------	---------	------------------------	-------

Span:1, Beam:4
REINFORCING STEEL:

Tension steel:	
fy	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:

# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	0.8333	No
2	US#4(M13)	60.0	0.40	9.00	0.8333	2.5951	No
2	US#4(M13)	60.0	0.40	12.00	2.5951	7.8642	No
2	US#4(M13)	60.0	0.40	15.00	7.8642	14.9898	No
2	US#4(M13)	60.0	0.40	18.00	14.9898	20.0292	No
2	US#4(M13)	60.0	0.40	21.00	20.0292	23.8120	No
2	US#4(M13)	60.0	0.40	24.00	23.8120	25.8593	No
2	US#4(M13)	60.0	0.40	21.00	25.8593	32.3517	No
2	US#4(M13)	60.0	0.40	18.00	32.3517	39.4678	No



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# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	21.00	39.4678	43.2572	No
2	US#4(M13)	60.0	0.40	24.00	43.2572	79.5656	No
2	US#4(M13)	60.0	0.40	21.00	79.5656	83.3550	No
2	US#4(M13)	60.0	0.40	18.00	83.3550	90.4708	No
2	US#4(M13)	60.0	0.40	21.00	90.4708	96.9636	No
2	US#4(M13)	60.0	0.40	24.00	96.9636	99.0108	No
2	US#4(M13)	60.0	0.40	21.00	99.0108	102.7936	No
2	US#4(M13)	60.0	0.40	18.00	102.7936	107.8327	No
2	US#4(M13)	60.0	0.40	15.00	107.8327	114.9587	No
2	US#4(M13)	60.0	0.40	12.00	114.9587	120.2277	No
2	US#4(M13)	60.0	0.40	9.00	120.2277	121.9895	No
2	US#4(M13)	60.0	0.40	6.00	121.9895	122.8228	No

LOSSES

Note: Values are calculated at Midspan

Str. area	8.4630 in ²
Ycg	4.38 in
P. Init	1713.8 kips
Ecc	30.22 in
Days to release	0.75
Rel. Humid (RH)	75.0 %
E _s	28500.0 ksi
E _{ci}	4017 ksi

AASHTO LOSSES

Elastic Shortening ** 14.14 ksi (Eq 5.9.5.2.3a-1), (fcgp = 1.993 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		-7.64 ksi	0.00 ksi
due to Composite Loads		-0.70 ksi	0.00 ksi
due to Live Loads		-4.99 ksi	0.00 ksi

Time Dependent Losses (Approximate Method (Art.5.9.5.3))

	Initial	Final
Steel relaxation	0.00 ksi	2.40 ksi (Eq 5.9.5.3-1)
Concrete shrinkage	0.00 ksi	8.14 ksi (Eq 5.9.5.3-1)
Concrete creep	0.00 ksi	10.57 ksi (Eq 5.9.5.3-1)
Sub-total	14.14 ksi	7.79 ksi (3.85 %)
Total Prestress Losses		21.93 ksi (10.83 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial f_{pi} = 202.5 ksi < 0.75 f_{pu}, OK
 initial f_{pe} = 180.6 ksi < 0.80 f_{pu}, OK



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** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.



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Sheet # 8
 Job #
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SHEARMOMENT ENVELOPE (&REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 4, SERVICE I
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	ft	0.00	3.00	12.28	24.56	36.85	49.13	61.41
Self wt. :	M	0.0	206.1	249.1	778.3	1383.6	1816.0	2075.4
(Max)	V	70.4	67.0	66.2	56.3	42.2	28.2	14.1
DL-Prec. :	M	0.0	55.2	66.7	208.4	370.5	486.3	555.7
DC(Max)	V	18.9	17.9	17.7	15.1	11.3	7.5	3.8
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	259.3	313.4	979.3	1740.8	2284.7	2610.9
Haunch (Max)	V	88.6	84.3	83.3	70.9	53.1	35.4	17.7
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	38.5	46.5	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.6	10.7	8.0	5.3	2.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	357.0	431.4	1341.5	2365.1	3071.0	3488.5
LL + I :	M-	148.8	143.8	142.7	128.5	108.2	87.9	59.5
LL + I :	V	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + I :	Vmx	148.8	143.9	142.9	128.9	110.0	92.0	74.9
LL + I :	M	-0.0	352.9	425.8	1300.3	2218.9	2783.3	3021.0
Total :	M+	0.0	916.0	1107.1	3452.7	6118.4	7997.1	9118.1
Total :	M-	340.0	325.7	322.6	281.4	222.9	164.4	97.7
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	340.0	325.8	322.7	281.9	224.7	168.5	113.1
Total :	M	0.0	911.9	1101.5	3411.6	5972.2	7709.3	8650.6

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	73.69	85.98	98.26	110.54	119.18	119.82
Self wt. :	M	2075.4	1816.0	1383.6	778.3	249.1	206.1
(Max)	V	14.1	28.2	42.2	56.3	66.2	67.0
DL-Prec. :	M	555.7	486.3	370.5	208.4	66.7	55.2
DC(Max)	V	3.8	7.5	11.3	15.1	17.7	17.9
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2610.6	2284.1	1740.2	978.8	313.2	259.1
Haunch (Max)	V	17.7	35.4	53.1	70.8	83.3	84.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	46.5	38.5
DC(Max)	V	2.7	5.3	8.0	10.7	12.6	12.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	3487.5	3069.2	2363.0	1339.9	430.8	356.5
LL + I :	M-						



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	38.5	46.5	145.3	258.4	339.1	387.6	403.7
DC(Max)	13.4	12.7	12.6	10.7	8.0	5.3	2.7	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	-0.0	285.6	345.1	1073.2	1892.1	2456.8	2790.8	2882.4
LL + I :	119.0	115.1	114.2	102.8	86.6	70.3	47.6	31.4
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	119.0	115.1	114.3	103.1	88.0	73.6	59.9	47.0
M	-0.0	282.3	340.7	1040.3	1775.1	2226.6	2416.8	2367.6
Total :	0.0	844.6	1020.8	3184.5	5645.4	7382.9	8420.4	8746.4
Total :	310.2	296.9	294.1	255.7	201.3	146.8	85.8	31.4
Total :	310.2	297.0	294.2	256.1	202.7	150.1	98.1	47.0
Total :	0.0	841.3	1016.4	3151.6	5528.4	7152.7	8046.4	8231.7



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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	74.9	91.9	109.9	128.8	142.7	143.7	148.6
M	3020.1	2781.7	2217.0	1298.8	425.3	352.4	0.0
Total :	917.7	164.3	222.8	281.3	322.4	325.4	339.7
Total :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	113.1	168.4	224.6	281.7	322.5	325.6	339.7
Total :	8649.4	7707.1	5969.6	3409.6	1100.8	911.2	0.0

REACTIONS (kips), SERVICE I

Load Type	Left Support	Right Support
Self Wt.	70.4	70.4
Deck+Haunch	88.6	88.5
Diaphragm	0.0	0.0
DL-Prec.(DC)	18.9	18.9
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	80.1	80.1
DL-Comp.(DW)	0.0	0.0
Live	105.3	105.3
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 4, SERVICE III
Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	0.0	3.00	3.65	12.28	24.56	36.85	49.13	61.41
Self wt. :	0.0	206.1	249.1	778.3	1383.6	1816.0	2075.4	2161.9
(Max)	70.4	67.0	66.2	56.3	42.2	28.2	14.1	0.0
DC(Max)	18.9	17.9	17.7	15.1	11.3	7.5	3.8	0.0
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	0.0	259.3	313.4	979.3	1740.8	2284.7	2610.9	2719.5
Haunch (Max)	88.6	84.3	83.3	70.9	53.1	35.4	17.7	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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Load Type	Left Support	Right Support	Midspace
Pedestrian	0.0	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 4, FATIGUE I
 Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Location,	ft	0.00	3.00	3.65	12.28	24.56	36.85	49.13
Self wt.:	M	0.0	206.1	249.1	778.3	1383.6	1816.0	2075.4
(Max)	V	70.4	67.0	66.2	56.3	42.2	28.2	14.1
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec:	M	0.0	55.2	66.7	208.4	370.5	486.3	555.7
DC(Max)	V	18.9	17.9	17.7	15.1	11.3	7.5	3.8
DL-Prec:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	259.3	313.4	979.3	1740.8	2284.7	2610.9
Haunch (Max)	V	88.6	84.3	83.3	70.9	53.1	35.4	17.7
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	-0.0	38.5	46.5	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.6	10.7	8.0	5.3	2.7
DL-Comp:	M	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	0.0	160.7	194.1	597.7	1035.8	1339.1	1500.5
LL + I:	V	77.9	75.6	75.2	68.7	59.5	45.1	35.9
LL + I:	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M	0.0	160.7	194.1	597.7	1035.8	1314.2	1433.1
LL + I:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Total:	M+	0.0	719.7	869.8	2709.0	4789.1	6265.2	7130.2
Total:	V	269.1	257.5	255.0	221.7	174.2	121.5	74.1
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total:	Vmx	269.1	257.5	255.0	221.7	174.2	126.8	79.4
Total:	M	0.0	719.7	869.8	2709.0	4789.1	6240.3	7062.8

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	73.69	85.98	98.26	119.18	119.82	122.82
Self wt.:	M	2075.4	1816.0	1383.6	778.3	249.1	206.1
(Max)	V	14.1	28.2	42.2	56.3	66.2	67.0
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec:	M	555.7	486.3	370.5	208.4	66.7	55.2
DC(Max)	V	3.8	7.5	11.3	15.1	17.7	17.9
DL-Prec:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2610.9	2284.1	1740.2	978.8	313.2	259.1
Haunch (Max)	V	17.7	35.4	53.1	70.8	83.3	84.2
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	387.6	339.1	258.4	145.3	46.5	38.5
DC(Max)	V	2.7	5.3	8.0	10.7	12.6	12.7
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	1500.2	1338.5	1035.0	597.1	193.9	160.5
LL + I:	V	35.9	45.0	59.5	68.6	75.1	75.6
LL + I:	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M	1432.8	1313.6	1035.0	597.1	193.9	160.5
Total:	M+	7129.5	6264.0	4787.7	2707.9	869.4	719.4
Total:	V	74.1	121.5	174.2	221.6	254.9	257.4
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total:	Vmx	79.4	126.8	174.2	221.6	254.9	257.4
Total:	M	7062.1	6239.1	4787.7	2707.9	869.4	719.4



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Sheet # 16
 Job #
 Designed KSM
 Date Sept/9/2013
 Checked
 Date

DESIGN SUMMARY

Span: 1, Beam: 4, Interior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	122.82
Release Length,	ft	122.82
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es.,	ksi	28500.0
No. of strands:	39	
	Draped:	9
	Straight:	30
Concrete Strength:	ftci	6.0* ksi
	ftc:	7.5 ksi
	ftct:	5.5 ksi
Initial losses:		6.98 %
Final losses:		10.83 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * fc or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)				
Precast Bot (compression)	3.600	3.023	Trans	OK
Outer	15.00 %			
Precast Top w/ no reinf. (tension)	-0.232	-0.569	Trans	
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	0.024	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	15329.01	13635.29	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	0.00 %		OK
Max. Debond Total	25.00 %	0.00 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow Stresses	Final 1 Comp Only	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	3.300	0.497	Midspan	2.475	0.050	Midspan			
Topping Top	4.500	2.721	Midspan	3.375	2.371	Midspan			
Precast Top	4.500	2.448	Transfer	3.375	2.554	Transfer			
Precast Bot									
Service III Limit State - Tensile									
Topping Top	-0.446	-0.000	Bearing						
Precast Top	-0.520	-0.287	Transfer						
Precast Bot	-0.520	-0.378	Midspan						
Fatigue I Limit State - Compressive									
Precast Top				3.000			1.332		Midspan
Precast Bot				3.000			1.229		Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 61.41 ft

	Release	Multi	Erection	Multi	Final
Prestress	3.458	1.80	6.224	2.20	7.607
Self Wt.	-1.539	1.85	-2.847	2.40	-3.694
Deck + Haunch			-1.732	2.30	-3.983
DL-Prec. (DC)			0.000	3.00	-1.106
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.244	3.00	-0.731
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	1.919		1.033		-1.906

Positive values indicate upward deflection.



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Sheet #	1
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Date	

PROPERTIES

Span:1, Beam:5
PRECAST DATA:

Section Id	FIB-78
Type	I-Girder
Flng width	48.000 in
thick	3.000 in
Stems	No 1
Top	7.000 in
Bot	7.000 in
Shear width	7.000 in

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac.	Start LL/RI 13.11/ 13.11 ft
	End LL/RI 13.52/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	0.00 degrees
End Skew Angle	-14.15 degrees

* Average bridge width
TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Location: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.125	0.000	0.125	126.130	Addl Build-Up
DC	Line	0.182	0.000	0.182	126.130	SIP

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:

Area	1100.6 in ²
------	------------------------



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Checked	
Date	

PROPERTIES

Span:1, Beam:5
PRECAST DATA:

Overall length	126.130 ft
Release length	126.130 ft
Design length	126.130 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2.d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.969	0.631	1.171	0.886
0.1L	0.969	0.631	1.171	0.886
0.2L	0.969	0.631	1.170	0.886
0.3L	0.969	0.631	1.170	0.886
0.4L	0.969	0.631	1.170	0.886
0.5L	0.969	0.631	1.170	0.885
0.6L	0.968	0.631	1.170	0.885
0.7L	0.968	0.631	1.170	0.885
0.8L	0.968	0.631	1.170	0.885
0.9L	0.968	0.631	1.169	0.885
1.0L	0.968	0.631	1.169	0.885

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
------	------------------------



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
		plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2589.9	2287.24	87.5	2254693	59.75	150.0	157.4
0.1L	75.08	2589.6	2287.02	87.5	2254572	59.75	150.0	157.3
0.2L	75.08	2589.4	2286.80	87.5	2254450	59.75	150.0	157.3
0.3L	75.08	2589.1	2286.59	87.5	2254329	59.75	150.0	157.3
0.4L	75.08	2588.8	2286.37	87.5	2254208	59.75	150.0	157.3
0.5L	75.08	2588.6	2286.15	87.5	2254086	59.74	150.0	157.2
0.6L	75.08	2588.3	2285.93	87.5	2253964	59.74	150.0	157.2
0.7L	75.08	2588.0	2285.72	87.5	2253843	59.74	150.0	157.2
0.8L	75.08	2587.8	2285.50	87.5	2253722	59.74	150.0	157.1
0.9L	75.08	2587.5	2285.28	87.5	2253600	59.73	150.0	157.1
1.0L	75.08	2587.2	2285.06	87.5	2253478	59.73	150.0	157.1

(#) Area, Ixx, and Ycg Of Total Section using Ecf/Ec = 0.9563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	in	in	in	in	in	in	in
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	12.61	25.23	37.94	50.45	63.06
Area, in ²	1100.6	1154.8	1154.8	1154.8	1154.8	1154.8	1154.8	1154.8
Yb, in	34.60	33.33	33.33	33.30	33.27	33.19	33.19	33.19
Mi(Ixx), in ⁴	904567	942394	942506	944075	946338	948663	951050	951050
Composite: (At Final, using Ec = 4491.0ksi)								
Area, in ²	2287.2	2334.8	2334.8	2334.4	2334.4	2334.1	2333.9	2333.7
Yb, in	59.75	58.69	58.69	58.68	58.66	58.64	58.62	58.62
Mi(Ixx), in ⁴	2254693	2381699	2381894	2384471	2388213	2392006	2395854	2395721

Span:1, Beam:5
 STRESS LIMITS (Art. 5.9.4):
 STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00*	



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Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00	%
Max tens	-0.23	ksi
Max tens, Center	-0.93	ksi
Max tens, w/reinf	70.00	%
Max tens, w/reinf	-0.23	ksi
Max tens, w/reinf	-0.59	ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	7.50	ksi
Elasticity	4490.96	ksi
PRECAST	DECK	ksi
	5.50	
	38.45.83	

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	4.50	ksi
PRECAST	DECK	ksi
	3.30	

STRESS LIMITS AT FINAL 2 (P/S + DL):

Max comp	3.38	ksi
PRECAST	DECK	ksi
	2.47	

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL)(Art. 5.5.3.1):

Max comp	3.00	ksi
PRECAST	DECK	ksi

SERVICE III (Tension):

Max tens	-0.52	ksi
PRECAST	DECK	ksi
	-0.45	

Span:1, Beam:5
 PRESTRESSED STEEL:
 41 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (50.45 ft from member end)

END PATTERN (Ycg = 7.73 in):

10 @ 3.000 in	12 @ 5.000 in	2 @ 7.000 in	1 @ 9.000 in
7 @ 11.000 in	5 @ 13.000 in	3 @ 15.000 in	1 @ 17.000 in



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MID PATTERN (Ycg = 4.61 in):

(A) Draped:

7 @ 3.000 in | 5 @ 5.000 in | 3 @ 7.000 in | 1 @ 9.000 in

(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 2 @ 7.000 in | 1 @ 9.000 in

Strand Diameter	0.600	in
Strand Area	0.217	in ²
Total Strand Area	8.897	in ²
Trans. Len. bonded	3.000	ft
Trans. Len. debonded	3.000	ft
Dev. Len. bonded	11.655	ft
Dev. Len. debonded	14.569	ft
Holddown Force	9.290	kips
Tensile Strength (fpu)	270.0	ksi
Initial Prestress = 0.75fpu	202.5	ksi
Initial Pull	1801.6	kips
Beam Shifting (PL/AE)	0.588	in

Span: 1, Beam: 5

ESTIMATED QUANTITIES

Prestressing (linear ft)	5171.462	Strands (LB/1000ft)	740	Beam Vol(C.V.)	35.704	Concrete Wt(LB)	144602.859	Stirrups (LB)	654.774	Longitudinal Bars (LB)	0.000
--------------------------	----------	---------------------	-----	----------------	--------	-----------------	------------	---------------	---------	------------------------	-------

Span: 1, Beam: 5
 REINFORCING STEEL:

Tension steel:		
f _y	60.0	ksi
E _s	29000	ksi
f _s	24.0	ksi

Stirrups:

# legs	Size	f _y (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	0.9678	No
2	US#4(M13)	60.0	0.40	9.00	0.9678	2.7395	No
2	US#4(M13)	60.0	0.40	12.00	2.7395	9.3438	No
2	US#4(M13)	60.0	0.40	15.00	9.3438	16.0364	No
2	US#4(M13)	60.0	0.40	18.00	16.0364	20.5541	No
2	US#4(M13)	60.0	0.40	21.00	20.5541	23.9432	No
2	US#4(M13)	60.0	0.40	24.00	23.9432	28.4905	No
2	US#4(M13)	60.0	0.40	21.00	28.4905	37.1188	No

Units: U.S. Units

Design Code: AASHTO LRFD

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# legs	Size	f _y (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	18.00	37.1188	42.3091	No
2	US#4(M13)	60.0	0.40	24.00	42.3091	83.8209	No
2	US#4(M13)	60.0	0.40	18.00	83.8209	89.0108	No
2	US#4(M13)	60.0	0.40	21.00	89.0108	97.6394	No
2	US#4(M13)	60.0	0.40	24.00	97.6394	102.1867	No
2	US#4(M13)	60.0	0.40	21.00	102.1867	105.5758	No
2	US#4(M13)	60.0	0.40	18.00	105.5758	110.0932	No
2	US#4(M13)	60.0	0.40	15.00	110.0932	116.7861	No
2	US#4(M13)	60.0	0.40	12.00	116.7861	123.3904	No
2	US#4(M13)	60.0	0.40	9.00	123.3904	125.1621	No
2	US#4(M13)	60.0	0.40	6.00	125.1621	126.1299	No

LOSSES

Note: Values are calculated at Midspan

Str. area	8.8970	in ²
Ycg	4.61	in
P_init	1801.6	kips
Ecc	29.99	in
Days to release	0.75	%
Rel. Humid. (RH)	75.0	%
E _s	28500.0	ksi
E _{cl}	4017	ksi

AASHTO LOSSES

Elastic Shortening ** 14.62 ksi (Eq 5.9.5.2.3a-1), (fcgp= 2.060 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		-7.96	ksi
due to Composite Loads		-0.69	ksi
due to Live Loads		-4.91	ksi

Time Dependent Losses (Approximate Method (Art.5.9.5.3))

	Initial	Final	
Steel relaxation	0.00	ksi	
Concrete shrinkage	0.00	ksi	
Concrete creep	0.00	ksi	
Sub-total	14.62	ksi	
Total Prestress Losses		(7.22 %)	
		2.40	ksi
		8.14	ksi
		11.11	ksi
		8.08	ksi
		22.70	ksi
			(Eq 5.9.5.3-1)
			(Eq 5.9.5.3-1)
			(3.99 %)
			(11.21 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial f_p = 202.5 ksi < 0.75 f_{pu} OK
 initial f_{pe} = 179.8 ksi < 0.80 f_{py} OK

Units: U.S. Units

Design Code: AASHTO LRFD

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** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.

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Shear and Moment Envelope (& Reactions)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 5, SERVICE I

Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	12.61	25.23	37.84	50.45	63.06
Self wt. :	M	0.0	211.7	256.0	820.7	1459.1	1915.1	2188.6
(Max)	V	72.3	68.9	68.1	57.8	43.4	28.9	14.5
DL-Prec. :	M	0.0	56.7	68.5	219.8	390.7	512.8	586.1
DC(Max)	V	19.4	18.4	18.2	15.5	11.6	7.7	3.9
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	266.4	322.1	1032.7	1835.9	2409.4	2753.5
Haunch (Max)	V	91.0	86.7	85.7	72.8	54.6	36.4	18.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	37.5	45.3	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.6	10.7	8.0	5.3	2.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	345.3	417.3	1331.6	2347.8	3048.5	3576.7
LL + I :	V	148.8	143.9	142.9	128.5	108.2	87.9	59.5
LL + I :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	148.8	144.1	143.0	128.9	110.0	92.0	74.9
LL + I :	M	-0.0	341.4	412.1	1290.8	2202.7	2762.9	2937.9
Total :	M+	0.0	917.7	1109.3	3550.2	6291.8	8225.0	9378.7
Total :	V	344.8	330.6	327.6	285.3	225.8	166.3	98.7
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	344.8	330.7	327.7	285.7	227.6	170.4	114.1
Total :	M	-0.0	913.8	1104.0	3509.4	6146.7	7939.3	8914.6

Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	75.68	88.29	100.90	113.52	122.48	123.13	126.13
Self wt. :	M	2188.6	1915.1	1459.1	820.7	256.0	211.7
(Max)	V	14.5	28.9	43.4	57.8	68.1	68.9
DL-Prec. :	M	586.1	512.8	390.7	219.8	68.5	56.7
DC(Max)	V	3.9	7.7	11.6	15.5	18.2	18.4
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2753.1	2408.8	1835.2	1032.2	321.9	266.3
Haunch (Max)	V	18.2	36.4	54.6	72.8	85.7	86.6
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	45.3	37.5
DC(Max)	V	2.7	5.3	8.0	10.7	12.6	12.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	3462.0	3046.8	2345.8	1330.1	416.8	344.9
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	37.5	45.3	145.3	258.4	339.1	387.6	403.7
DC(Max)	V	13.4	12.7	12.6	10.7	8.0	5.3	2.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	276.3	333.9	1065.3	1878.2	2438.8	2770.4
LL + I :	V	119.0	115.2	114.3	102.8	86.6	70.3	47.6
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	119.0	115.2	114.4	103.1	88.0	73.6	59.9
LL + I :	M	-0.0	273.1	329.7	1032.7	1762.1	2210.3	2399.1
Total :	M+	0.0	848.7	1025.8	3283.9	5822.3	7615.3	8686.1
Total :	V	315.0	301.8	299.0	259.6	204.1	148.7	86.8
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	315.0	301.9	299.1	259.9	205.6	152.0	99.1
Total :	M	-0.0	845.5	1021.6	3251.3	5706.2	7386.8	8314.9



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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
LL + I :	V	59.5	87.9	108.1	128.3	142.7	148.6
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	74.9	91.9	109.9	128.8	142.9	148.6
Total :	M	2998.0	2761.3	2200.8	1289.4	411.5	340.9
Total :	M+	9377.4	8222.7	6289.2	3548.2	1108.6	917.1
Total :	V	98.7	166.3	225.7	285.1	327.3	344.5
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	114.1	170.3	227.5	285.6	327.5	344.5
Total :	M	8913.5	7937.2	6144.2	3507.5	1103.3	913.2

REACTIONS (kips), SERVICE I

Load Type	Left Support	Right Support
Self Wt.	72.3	72.3
Deck+Haunch	91.0	90.9
Diaphragm	0.0	0.0
DL-Prec.(DC)	19.4	19.4
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	80.1	80.1
DL-Comp.(DW)	0.0	0.0
Live	105.3	105.3
Pedestrian	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 5, SERVICE III
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	ft	0.0	3.00	3.65	12.61	25.23	37.84	63.06
Self wt. :	M	0.0	211.7	256.0	820.7	1459.1	1915.1	2188.6
(Max)	V	72.3	68.9	68.1	57.8	43.4	28.9	14.5
DL-Comp :	M	0.0	56.7	68.5	219.8	390.7	512.8	610.5
DC(Max)	V	19.4	18.4	18.2	15.5	11.6	7.7	3.9
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	266.4	322.1	1032.7	1835.9	2409.4	2753.5
Haunch (Max)	V	91.0	86.7	85.7	72.8	54.6	36.4	18.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 5, STRENGTH I
 Shears: Kips, Moments: kt

Location, Self wt.:	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	12.61	25.23	37.84	50.45	63.06
M	0.0	264.7	320.0	1025.9	1823.9	2393.8	2735.8	2949.8
V	90.4	86.1	85.2	72.3	54.2	36.2	18.1	0.0
Self wt.:	0.0	190.6	230.4	738.7	1313.2	1723.6	1969.8	2051.9
(Min)	65.1	62.0	61.3	52.1	39.0	26.0	13.0	0.0
DL-Prec.:	0.0	70.9	85.7	274.7	488.4	641.0	732.6	763.1
DC(Max)	24.2	23.0	22.8	19.4	14.5	9.7	4.8	0.0
DL-Prec.:	0.0	51.0	61.7	197.8	351.6	461.5	527.5	549.4
DC(Min)	17.4	16.6	16.4	13.9	10.5	7.0	3.5	0.0
DL-Prec.:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	113.7	108.3	107.1	91.0	68.2	45.5	22.7	0.0
Haunch (Max)	0.0	239.8	289.9	929.5	1652.3	2168.5	2478.1	2581.2
Deck +:	81.9	76.0	77.1	65.5	49.1	32.7	16.4	0.0
Haunch (Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp.:	0.0	46.9	56.7	181.7	323.0	423.9	484.5	504.7
DC(Max)	16.7	15.9	15.7	13.4	10.0	6.7	3.3	0.0
DL-Comp.:	0.0	33.7	40.8	130.8	232.5	305.2	348.8	363.4
DC(Min)	12.0	11.4	11.3	9.6	7.2	4.8	2.4	0.0
DL-Comp.:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp.:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	260.4	251.9	250.1	224.8	189.3	153.9	104.2	68.7
LL + I:	-0.0	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0
Vmx	260.4	252.1	250.3	225.6	192.5	161.0	131.1	102.7
LL + I:	0.0	597.4	721.1	2258.9	3854.6	4835.1	5248.0	5141.4
Total:	0.0	1319.8	1595.3	5103.6	9038.7	11805.5	13454.9	13961.8
Total:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total:	505.4	485.2	480.9	420.8	336.3	251.8	153.1	68.7
Total:	505.4	485.4	481.1	421.6	339.5	259.0	180.0	102.7
Live	-0.0	1312.9	1586.1	5032.2	8784.7	11305.6	12642.7	12844.0

Location, Self wt.:	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	75.68	88.29	100.90	113.52	122.48	123.13	126.13
M	2735.8	2393.8	1823.9	1025.9	320.0	264.7	0.0
V	18.1	36.2	54.2	72.3	85.2	86.1	90.4
Self wt.:	1969.8	1723.6	1313.2	738.7	230.4	190.6	0.0



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(Min)	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
DL-Prec.:	13.0	26.0	39.0	52.1	61.3	62.0	65.1
DC(Max)	732.6	641.0	488.4	274.7	85.7	70.9	0.0
DL-Prec.:	4.8	9.7	14.5	19.4	22.8	23.0	24.2
DC(Min)	527.5	461.5	351.6	197.8	61.7	51.0	0.0
DL-Prec.:	3.5	7.0	10.5	13.9	16.4	16.6	17.4
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	3441.4	3011.1	2294.0	1290.3	402.4	332.9	0.0
Haunch (Max)	22.8	45.5	68.2	90.9	107.1	108.3	113.7
Deck +:	2477.8	2168.0	1651.7	929.0	289.7	239.7	0.0
Haunch (Min)	16.4	32.8	49.1	65.5	77.1	77.9	81.8
Diaphragm:	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp.:	484.5	423.9	323.0	181.7	56.7	46.9	0.0
DC(Max)	3.3	6.7	10.0	13.4	15.7	15.9	16.7
DL-Comp.:	348.8	305.2	232.5	130.8	40.8	33.7	0.0
DC(Min)	2.4	4.8	7.2	9.6	11.3	11.4	12.0
DL-Comp.:	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp.:	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	6058.5	5332.0	4105.1	2327.7	729.4	603.5	-0.0
LL + I:	104.1	153.8	189.2	224.6	249.8	251.6	260.0
Vmx	131.0	160.9	192.4	225.4	250.0	251.8	260.0
LL + I:	5246.5	4832.3	3851.4	2256.4	720.2	596.6	-0.0
Total:	13452.8	11801.8	9034.4	5100.4	1594.1	1318.8	0.0
Total:	153.1	251.8	336.2	420.6	480.5	484.9	504.9
Total:	180.0	258.9	339.3	421.3	480.8	485.1	504.9
Total:	12640.8	11302.2	8780.7	5029.0	1584.9	1311.9	0.0

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	90.4	90.4
Deck+Haunch	113.7	113.7
Diaphragm	0.0	0.0
DL-Prec.(DC)	24.2	24.2
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	100.1	100.1
DL-Comp.(DW)	0.0	0.0
Live	184.0	184.2



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Load Type	Left Support	Right Support	Midspace
Pedestrian	0.0	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 5, FATIGUE I
 Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Location,	ft	0.00	3.00	3.65	12.61	25.23	37.84	50.45
Self wt.:	M	0.0	211.7	256.0	820.7	1459.1	1915.1	2188.6
(Max)	V	72.3	68.9	68.1	57.8	43.4	28.9	14.5
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	56.7	68.5	219.8	390.7	512.8	586.1
DC(Max)	V	19.4	18.4	18.2	15.5	11.6	7.7	3.9
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	266.4	322.1	1032.7	1835.9	2409.4	2753.5
Haunch (Max)	V	91.0	86.7	85.7	72.8	54.6	36.4	18.2
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	37.5	45.3	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.6	10.7	8.0	5.3	2.7
DL-Comp :	M	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	0.0	155.1	187.4	592.0	1025.9	1326.3	1486.2
LL + I :	V	77.9	75.7	75.2	68.7	59.5	45.1	35.9
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M	0.0	155.1	187.4	592.0	1025.9	1301.7	1419.4
Total :	M	0.0	155.1	187.4	592.0	1025.9	1301.7	1419.4



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Location,	ft	0.00	3.00	3.65	12.61	25.23	37.84	50.45
Self wt.:	M	0.0	211.7	256.0	820.7	1459.1	1915.1	2188.6
(Max)	V	72.3	68.9	68.1	57.8	43.4	28.9	14.5
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	56.7	68.5	219.8	390.7	512.8	586.1
DC(Max)	V	19.4	18.4	18.2	15.5	11.6	7.7	3.9
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	266.4	322.1	1032.7	1835.2	2409.4	2753.5
Haunch (Max)	V	18.2	36.4	36.4	30.7	22.8	15.5	7.7
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	80.7	45.3	37.5
DC(Max)	V	2.7	5.3	5.3	4.5	3.4	2.6	1.3
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	1485.8	1325.7	1025.1	591.4	325.1	187.2	155.0
LL + I :	V	35.9	45.0	45.0	38.6	30.7	22.8	11.8
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M	1419.1	1301.0	1025.1	591.4	325.1	187.2	155.0
Total :	M+	7401.3	6501.6	4968.5	2809.5	1550.0	878.9	727.2
Total :	V	75.1	123.4	123.4	102.5	77.1	59.5	45.1
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	7334.5	6476.9	4968.5	2809.5	1550.0	878.9	727.2



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DESIGN SUMMARY

Span: 1, Beam: 5, Interior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	126.13
Release Length,	ft	126.13
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es.,	ksi:	28500.0
No. of strands:	41	
	Draped:	16
	Straight:	25
Concrete Strength:	f'c:	6.0* ksi
	f'c:	7.5 ksi
	f'c:	5.5 ksi
Initial losses:		7.22 %
Final losses:		11.21 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)				
Precast Bot (compression)	3.600	3.113	Trans	OK
Outer	15.00 %			
Precast Top w/ no reinf. (tension)	-0.232	-0.521	Trans	
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	0.080	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	16043.84	13961.79	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	0.00 %		OK
Max. Debond Total	25.00 %	0.00 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow Stresses	Final 1 Comp Only	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	3.300	0.493	Midspan	2.475	0.050	Midspan			
Topping Top	4.500	2.869	Midspan	3.375	2.521	Midspan			
Precast Top	4.500	2.520	Transfer	3.375	2.622	Transfer			
Precast Bot									
Service III Limit State - Tensile									
Topping Top	-0.446	-0.000	Bearing						
Precast Top	-0.520	-0.238	Transfer						
Precast Bot	-0.520	-0.372	Midspan						
Fatigue I Limit State - Compressive									
Precast Top				3.000				1.405	Midspan
Precast Bot				3.000				1.265	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 63.06 ft

	Release	Multi	Erection	Multi	Final
Prestress	3.766	1.80	6.779	2.20	8.286
Self Wt.	-1.709	1.85	-3.162	2.40	-4.101
Deck + Haunch			-1.923	2.30	-4.423
DL-Prec. (DC)			-0.409	3.00	-1.228
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.243	3.00	-0.729
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	2.057		1.043		-2.195

Positive values indicate upward deflection.



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PROPERTIES

Span:1, Beam:6
 PRECAST DATA:

Section Id	FIB-78			
Type	I-Girder			
Fing width	Top 48.000 in	Bot 38.000 in		
thick	Top 3.000 in	Bot 7.000 in		
Stems	No 1			
	Top 7.000 in			
Shear width	Bot 7.000 in			

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RI	13.11/ 11.34 ft
End LL/RI	13.52/ 11.70 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Exterior
Start Skew Angle	0.00 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch:	
Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Local: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Point	0.125	0.000	.	.	Addl Build-Up
DC	Point	0.091	0.000	.	.	SJP

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:



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Overall length 129.437 ft
 Release length 129.437 ft
 Design length 129.437 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2.d): YES

Location	+ve		Moment		Shear	
	2+ Lane	1 Lane	2+ Lane	1 Lane	2+ Lane	1 Lane
0.0L	1.078	1.037 (#)	1.085	1.037 (#)	1.085	1.037 (#)
0.1L	1.068	1.028 (#)	1.074	1.028 (#)	1.074	1.028 (#)
0.2L	1.059	1.020 (#)	1.063	1.020 (#)	1.063	1.020 (#)
0.3L	1.049	1.012 (#)	1.052	1.012 (#)	1.052	1.012 (#)
0.4L	1.039	1.003 (#)	1.041	1.003 (#)	1.041	1.003 (#)
0.5L	1.029	0.995 (#)	1.030	0.995 (#)	1.030	0.995 (#)
0.6L	1.020	0.986 (#)	1.019	0.986 (#)	1.019	0.986 (#)
0.7L	1.010	0.978 (#)	1.008	0.978 (#)	1.008	0.978 (#)
0.8L	1.000	0.970 (#)	0.997	0.970 (#)	0.997	0.970 (#)
0.9L	0.990	0.961 (#)	0.986	0.961 (#)	0.986	0.961 (#)
1.0L	0.981	0.953 (#)	0.975	0.953 (#)	0.975	0.953 (#)

(#) Lever rule (C4.6.2.2.1)

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	0.75
Compression controlled sections	0.90
Tension controlled sections	
Flexure Prestressed	0.75
Compression controlled sections	1.00
Tension controlled sections	
Shear	0.90



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PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
Total Height	78.00 in
Mom. of Inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of Inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2398.8	2130.13	87.5	2160620	58.02	150.0	135.8
0.1L	75.08	2388.9	2122.03	87.5	2155397	57.93	150.0	134.7
0.2L	75.08	2379.1	2113.93	87.5	2150135	57.83	150.0	133.6
0.3L	75.08	2369.2	2105.83	87.5	2144833	57.73	150.0	132.5
0.4L	75.08	2359.4	2097.74	87.5	2139491	57.63	150.0	131.3
0.5L	75.08	2349.5	2089.64	87.5	2134107	57.53	150.0	130.2
0.6L	75.08	2339.7	2081.54	87.5	2128683	57.43	150.0	129.1
0.7L	75.08	2329.8	2073.44	87.5	2123216	57.33	150.0	128.0
0.8L	75.08	2320.0	2065.35	87.5	2117706	57.23	150.0	126.9
0.9L	75.08	2310.1	2057.25	87.5	2112154	57.13	150.0	125.8
1.0L	75.08	2300.3	2049.15	87.5	2106558	57.02	150.0	124.7

(#) Area, Ixx, and Ycg Of Total Section using Ec/fEc = 0.8563

Use transformed strand and rebar: Strand Only

Location	ft	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
			3.00	3.65	12.94	25.89	38.83	51.77	64.72
Precast: (At Release, using Ec = 4016.8ksi)	in ²	1100.6	1149.5	1149.5	1149.5	1149.5	1149.5	1149.5	1149.5
Area, Yb, Ml(XX), Composite: (At Final, using Ec = 4491.0ksi)	in	34.60	33.41	33.40	33.39	33.36	33.33	33.31	33.31
	in ⁴	904567	941472	941552	942711	944354	946032	947745	947745
Area, Yb, Ml(XX)	in ²	2130.1	2173.0	2173.0	2165.0	2156.9	2148.8	2140.7	2132.6
	in	58.02	57.00	57.00	56.90	56.79	56.67	56.56	56.46
	in ⁴	2160620	2272159	2272290	2268540	2265511	2262460	2259387	2255348

Span:1, Beam:6

STRESS LIMITS (Art. 5.9.4):

STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

12 @ 3.000 in	14 @ 5.000 in	2 @ 7.000 in	5 @ 13.000 in
---------------	---------------	--------------	---------------

END PATTERN (Ycg = 6.68 in):

Span:1, Beam:6
 PRESTRESSED STEEL:
 37 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (51.77 ft from member end)

SERVICE III (Tension):

Max comp	3.00 ksi	DECK	-
Max tens	-0.52 ksi	DECK	0.45 ksi

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

Max comp	3.38 ksi	DECK	2.47 ksi
Max tens	7.50 ksi	DECK	5.50 ksi

STRESS LIMITS AT FINAL 2 (P/S + DL):

Max comp	4.50 ksi	DECK	3.30 ksi
Max tens	7.50 ksi	DECK	5.50 ksi

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	7.50 ksi	DECK	5.50 ksi
Max tens	4490.96 ksi	DECK	3845.83 ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * Fc or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	6.00 ksi	PRECAST	
Elasticity	4016.8 ksi		
Max comp	3.60 ksi		
Outer	15.00 %		
Max tens	-0.23 ksi	w/relief	
Center	-0.93 ksi		
Max tens	70.00 %	w/relief	
Max tens	-0.23 ksi		
Max tens	-0.59 ksi		



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3 @ 15.000 in | 1 @ 17.000 in

MID PATTERN (Ycg = 4.24 in):

(A) Draped:

5 @ 3.000 in | 3 @ 5.000 in | 1 @ 7.000 in

(B) Straight:

12 @ 3.000 in | 14 @ 5.000 in | 2 @ 7.000 in

Strand Diameter	0.600	in
Strand Area	0.217	in ²
Total Strand Area	8.029	in ²
Trans. Len.bonded	3.000	ft
Trans. Len.debonded	3.000	ft
Dev. Len. bonded	11.585	ft
Dev. Len. debonded	14.481	ft
Holddown Force	6.365	kips
Tensile Strength(fpu)	270.0	ksi
Initial Prestress = 0.75fpu	202.5	ksi
Initial Pull	1625.9	kips
Beam Shrtng. (PL/AE)	0.547	in

Span:1, Beam:6
 ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
4789.285	740	3544.071	36.640	148394.3713	610.533	0.000

Span:1, Beam:6
 REINFORCING STEEL:

Tension steel:	
fy	60.0 ksi
Es	29000 ksi
fs	24.0 ksi

Stirrups:

# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	9.00	0.0000	1.5814	No
2	US#4(M13)	60.0	0.40	12.00	1.5814	2.6673	No
2	US#4(M13)	60.0	0.40	15.00	2.6673	5.9678	No
2	US#4(M13)	60.0	0.40	18.00	5.9678	11.9321	No
2	US#4(M13)	60.0	0.40	21.00	11.9321	19.0449	No
2	US#4(M13)	60.0	0.40	24.00	19.0449	33.8346	No



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3 @ 15.000 in | 1 @ 17.000 in

# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	21.00	33.8346	41.1903	No
2	US#4(M13)	60.0	0.40	24.00	41.1903	88.2467	No
2	US#4(M13)	60.0	0.40	21.00	88.2467	95.6020	No
2	US#4(M13)	60.0	0.40	24.00	95.6020	110.3921	No
2	US#4(M13)	60.0	0.40	21.00	110.3921	117.5046	No
2	US#4(M13)	60.0	0.40	18.00	117.5046	123.4692	No
2	US#4(M13)	60.0	0.40	15.00	123.4692	126.7697	No
2	US#4(M13)	60.0	0.40	12.00	126.7697	127.8556	No
2	US#4(M13)	60.0	0.40	9.00	127.8556	129.4370	No

LOSSES

Note: Values are calculated at Midspan

Str. area	8.0290	in ²
Ycg	4.24	in
P_init	1625.9	kips
Ecc	30.36	in
Days to release	0.75	%
Rel. Humid (RH)	75.0	%
Es	28500.0	ksi
Ecd	4017	ksi

AASHTO LOSSES

Elastic Shortening ** 12.76 ksi (Eq.5.9.5.2.3a-1), (fcgp= 1.798 ksi)

due to	Elastic Gains	Gains	Adjustment
due to Precast Loads		-5.91 ksi	0.00 ksi
due to Composite Loads		-0.71 ksi	0.00 ksi
due to Live Loads		-5.37 ksi	0.00 ksi

Time Dependent Losses (Approximate Method (Art.5.9.5.3))

	Initial	Final
Steel relaxation	0.00 ksi	2.40 ksi (Eq.5.9.5.3-1)
Concrete shrinkage	0.00 ksi	8.14 ksi (Eq.5.9.5.3-1)
Concrete creep	0.00 ksi	10.02 ksi (Eq.5.9.5.3-1)
Sub-total	12.76 ksi	8.58 ksi (4.24 %)
Total Prestress Losses		21.34 ksi (10.54 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial fpi = 202.5 ksi < 0.75 fpu, OK

initial fpe = 181.2 ksi < 0.80 fpy, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations.



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Please see theory section for complete explanation.



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SHEARMOMENT ENVELOPE (& REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, SERVICE I
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	ft	0.00	3.00	12.94	25.89	38.83	51.77	64.72
Self wt. :	M	0.0	217.4	262.9	1536.6	2016.8	2304.9	2401.0
(Max)	V	74.2	70.8	70.0	59.4	44.5	29.7	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	0.2	0.2	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	232.0	280.5	920.6	1632.3	2136.6	2529.8
Haunch (Max)	V	79.2	75.5	74.7	63.0	46.9	31.0	15.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	36.6	44.2	145.3	258.4	339.1	387.6
DC(Max)	V	13.4	12.7	12.6	10.7	8.0	5.3	2.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	373.7	451.5	1467.9	2564.8	3300.2	3714.5
LL + I :	V	137.9	133.2	132.2	117.9	98.3	79.0	52.9
LL + I :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
V	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	M	137.9	133.3	132.3	118.3	99.9	82.7	66.6
LL + I :	M	-0.0	369.5	445.9	1422.9	2406.2	2990.9	3216.7
Total :	M+	0.0	859.7	1039.1	3398.2	5992.0	7792.7	8842.3
Total :	V	304.9	292.4	289.7	251.0	197.7	145.0	85.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	304.9	292.4	289.8	251.4	199.4	148.7	99.3
Total :	M	-0.0	855.5	1033.5	3353.2	5683.5	7483.5	8344.5

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	77.66	90.61	103.55	116.49	125.79	126.44
Self wt. :	M	2304.9	2016.8	1536.6	864.3	262.9	217.4
(Max)	V	14.8	29.7	44.5	59.4	70.0	70.8
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	2422.0	2113.5	1605.9	900.8	273.5	226.2
Haunch (Max)	V	16.1	31.6	46.9	62.1	72.9	73.6
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	387.6	339.1	258.4	145.3	44.2	36.6
DC(Max)	V	2.7	5.3	8.0	10.7	12.6	12.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	3645.1	3177.8	2423.5	1361.0	413.0	341.5
LL + I :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp	-0.0	36.6	44.2	145.3	258.4	339.1	387.6	403.7
DL-Comp (Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp (Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp (Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I	-0.0	299.0	361.2	1174.3	2051.8	2640.1	2971.6	3040.9
LL + I (Max)	110.3	106.6	105.8	94.3	78.6	63.2	42.4	27.6
LL + I (Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I (Max)	110.3	106.7	105.9	94.6	79.9	66.2	53.3	41.3
LL + I (Min)	-0.0	295.6	356.7	1138.3	1925.0	2392.7	2573.4	2497.9
Total	0.0	785.0	948.8	3104.6	5479.1	7132.7	8099.4	8375.5
Total	277.3	265.7	263.2	227.4	178.1	129.2	75.0	28.2
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	277.3	265.8	263.3	227.7	179.4	132.2	86.0	41.9
Total	-0.0	781.6	944.3	3068.6	5352.3	6885.3	7701.1	7832.4



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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
LL + I	51.8	75.7	92.2	108.2	119.5	120.3	123.9
LL + I (Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I (Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I (Max)	65.2	79.2	93.7	108.6	119.6	120.4	123.9
Total	3156.6	2880.1	2273.7	1319.3	407.9	337.7	-0.0
Total	8759.6	7647.3	5824.4	3271.6	993.7	821.8	0.0
Total	85.5	142.3	191.6	240.3	275.0	277.4	288.6
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	98.8	145.8	193.1	240.7	275.1	277.5	288.6
Total	8271.1	7349.5	5674.6	3229.8	988.5	817.9	-0.0

REACTIONS (kips), SERVICE I

Load Type	Left Support	Right Support
Self Wt.	74.2	74.2
Deck+Haunch	79.2	77.1
Diaphragm	0.0	0.0
DL-Prec.(DC)	0.2	0.0
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	80.1	80.1
DL-Comp.(DW)	0.0	0.0
Live	105.1	117.0
Pedestrian	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, SERVICE III
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location	ft	0.0	3.00	3.65	12.94	25.89	38.83	51.77
Self wt.	M	0.0	217.4	262.9	864.3	1536.6	2016.8	2304.9
(Max)	V	74.2	70.8	70.0	59.4	44.5	29.7	14.8
DL-Prec.	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp	V	0.2	0.2	0.2	0.0	0.0	0.0	0.0
DL-Prec.	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	232.0	280.5	920.6	1632.3	2136.6	2435.2
Haunch (Max)	V	79.2	75.5	74.7	63.0	46.9	31.0	15.2
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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DESIGN SUMMARY

Span: 1, Beam: 6, Exterior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	129.44
Release Length,	ft	129.44
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es.,	ksi	28500.0
No. of strands:	37	9
	Draped:	28
	Straight:	
Concrete Strength:	ftci	6.0* ksi
	ftc:	7.5 ksi
	ftct:	5.5 ksi
Initial losses:		6.30 %
Final losses:		10.54 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f_c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)				
Precast Bot (compression)	3.600	2.872	Trans	OK
Outer	15.00 %			
Precast Top w/ no reinf. (tension)	-0.232	-0.531	Trans	
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	0.142	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	14522.52	13320.20	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	0.00 %		OK
Max. Debond Total	25.00 %	0.00 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow Stresses	Final 1 Comp Only	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	3.300	0.595	Midspan	2.475	0.057	Midspan			
Topping Top	4.500	2.541	Midspan	3.375	2.105	Midspan			
Precast Top	4.500	2.349	Transfer	3.375	2.461	Transfer			
Precast Bot									
Service III Limit State - Tensile									
Topping Top	-0.446	-0.000	Bearing						
Precast Top	-0.520	-0.296	Transfer						
Precast Bot	-0.520	-0.352	Midspan						
Fatigue I Limit State - Compressive									
Precast Top				3.000				1.322	Midspan
Precast Bot				3.000				1.156	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 64.72 ft

	Release	Multi	Erection	Multi	Final
Prestress	3.673	1.80	6.612	2.20	8.081
Self Wt.	-1.902	1.85	-3.519	2.40	-4.565
Deck + Haunch			-1.792	2.30	-4.123
DL-Prec. (DC)			0.000	3.00	0.000
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.258	3.00	-0.775
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	1.771		1.043		-1.381

Positive values indicate upward deflection.

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 File Name: \\lknw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 4\struct\eng_data\I-4 Over St. Johns River\02 Alternative 2 - Reversible Lanes\1. Superstructure\Update_140910_74.08\Roadway\Span 11 Rev\Span11EB_Modified Spacng.csl
 Code: AASHTO LRFD
 Units: US Units, (KIPS, ft)
 Number of Spans: 1
 Left Curb Width: 1.5417
 Right Curb Width: 1.5417

Span #	Span Length	Number Of beams	Bridge Width
1	120.9358	6	88.2500 91.0130

Abutment #: 1

Self Weight
 Line 1 Girder 1 : 64.7185
 Line 1 Girder 2 : 66.6142
 Line 1 Girder 3 : 68.5099
 Line 1 Girder 4 : 70.4056
 Line 1 Girder 5 : 72.3013
 Line 1 Girder 6 : 74.1970
 Self + Deck
 Line 1 Girder 1 : 72.1855
 Line 1 Girder 2 : 83.8215
 Line 1 Girder 3 : 86.2085
 Line 1 Girder 4 : 88.5954
 Line 1 Girder 5 : 90.9823
 Line 1 Girder 6 : 79.2314
 Dead Load DC on Precast
 Line 1 Girder 1 : 12.1934
 Line 1 Girder 2 : 17.8380
 Line 1 Girder 3 : 18.3457
 Line 1 Girder 4 : 18.8533
 Line 1 Girder 5 : 19.3609
 Line 1 Girder 6 : 0.2160
 Dead Load DW on Precast
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Line 1 Girder 6 : 0.0000
 Dead Load DC on Composite
 Line 1 Girder 1 : 13.3533
 Line 1 Girder 2 : 13.3533
 Line 1 Girder 3 : 13.3533
 Line 1 Girder 4 : 13.3533
 Line 1 Girder 5 : 13.3533
 Line 1 Girder 6 : 13.3533
 Dead Load DW on Composite
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Line 1 Girder 6 : 0.0000
 Live Load
 Live Load Max +ve, Truck : 73.0243
 Live Load Max +ve, Lane : 42.5327

Abutment #: 2

Self Weight
 Line 1 Girder 1 : 64.7185
 Line 1 Girder 2 : 66.6142
 Line 1 Girder 3 : 68.5099
 Line 1 Girder 4 : 70.4056
 Line 1 Girder 5 : 72.3013
 Line 1 Girder 6 : 74.1970
 Self + Deck
 Line 1 Girder 1 : 73.9746
 Line 1 Girder 2 : 83.7664
 Line 1 Girder 3 : 86.1534
 Line 1 Girder 4 : 88.5403
 Line 1 Girder 5 : 90.9272
 Line 1 Girder 6 : 77.1278
 Dead Load DC on Precast
 Line 1 Girder 1 : 12.1934
 Line 1 Girder 2 : 17.8380
 Line 1 Girder 3 : 18.3457
 Line 1 Girder 4 : 18.8533
 Line 1 Girder 5 : 19.3609
 Line 1 Girder 6 : 0.0000
 Dead Load DW on Precast
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Line 1 Girder 6 : 0.0000
 Dead Load DC on Composite
 Line 1 Girder 1 : 13.3533
 Line 1 Girder 2 : 13.3533
 Line 1 Girder 3 : 13.3533
 Line 1 Girder 4 : 13.3533
 Line 1 Girder 5 : 13.3533
 Line 1 Girder 6 : 13.3533
 Dead Load DW on Composite
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Line 1 Girder 6 : 0.0000
 Live Load
 Live Load Max +ve, Truck : 76.8575
 Live Load Max +ve, Lane : 42.5327



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PROJECT DATA

Project: I4 Widening Over St. John's
 Designer: KSM
 Date: Sept/9/2013
 Checked By:
 Date Checked:
 User job number:
 State: FL, State Job #:
 State: Florida
 Specification: AASHTO LRFDF - 6th Edition, 2012
 Design Code: AASHTO LRFDF - 6th Edition, 2012
 Units: US
 Span Type: Simple Span
 Flared Girder: Yes
 Comments: Span 12 - Modified Spacing
 \\lknw001pmw003\Jobs\59219 - I4 SAMRTECHPROD\43210012201\Segment 4\structleng_data\I-4 Over St. John's River\02 Alternative 2 - Reversible Lanes\1_Superstructure\Update_140910_74.08_Roadway\Span 12_Rev\Span12EB_ModifiedSpacing.csl
 File Name: 12_Rev\Span12EB_ModifiedSpacing.csl



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PROJECT DATA

Project: I4 Widening Over St. John's
 Designer: KSM
 Date: Sept/9/2013
 Checked By:
 Date Checked:
 User job number:
 State: FL, State Job #:
 State: Florida
 Specification: AASHTO LRFDF - 6th Edition, 2012
 Design Code: AASHTO LRFDF - 6th Edition, 2012
 Units: US
 Span Type: Simple Span
 Flared Girder: Yes
 Comments: Span 12 - Modified Spacing
 \\lknw001pmw003\Jobs\59219 - I4 SAMRTECHPROD\43210012201\Segment 4\structleng_data\I-4 Over St. John's River\02 Alternative 2 - Reversible Lanes\1_Superstructure\Update_140910_74.08_Roadway\Span 12_Rev\Span12EB_ModifiedSpacing.csl
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GEOMETRY DATA

ALIGNMENT DATA
 Bridge Alignment: ALG01
 Beginning Station: 0+0.000000 ft

Seg	Shape	Start Direction	End Station	Radius	Sense
1	Tangent	N 90.00.00.00 E	2+00.00000	ft	-

BRIDGE LAYOUT

Overall Width (ft)	75.0830
Left curb (ft)	1.5420
Right curb (ft)	1.5420
Curb-to-curb width (ft)	72.0000
Number of spans	1
Number of lanes	4
Lane width (ft)	12.0000
Eff Deck thick (in)	8.5000
Sacrificial thick (in)	0.0000
Haunch thickness (in)	1.0000
Haunch width (in)	48.0000
Bridge c/s, M(ftxx) (in4)	13348360.00

Component	RefName	Station	Bearing	Deck Width	Deck Offset
Begin Bridge		0+00.00000	N 14 09 12.96 W	75.0830	0.0000
Abutment	AB01	0+00.00000	N 14 09 12.96 W	75.0830	0.0000
Abutment	AB02	1+42.33300	N 14 09 12.96 W	75.0830	0.0000
End Bridge		1+42.33300	N 14 09 12.96 W	75.0830	0.0000

BEAM DATA

No	ID	Length	Loc-start	Loc-end	Area	M(1xx)	Height	Yb	B-topg	B-trib
1	FIB-78	142.333	12.512	12.512	1100.6	904567.0	78.00	34.60	48.00	11.312
2	FIB-78	142.333	13.525	13.525	1100.6	904567.0	78.00	34.60	48.00	13.114
3	FIB-78	142.333	13.525	13.525	1100.6	904567.0	78.00	34.60	48.00	13.114
4	FIB-78	142.333	13.525	13.525	1100.6	904567.0	78.00	34.60	48.00	13.114
5	FIB-78	142.333	13.525	13.525	1100.6	904567.0	78.00	34.60	48.00	13.114
6	FIB-78	142.333	13.525	13.525	1100.6	904567.0	78.00	34.60	48.00	11.312

MATERIAL DATA - Project Level

As defined in Material Tab. For beam level properties look at Beam Specific output.

CONCRETE PROPERTIES

	Precast Release	Precast Final	C.I.P



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LOADS DATA

Loads generated using Permanent Load Wizard: YES

Left Barrier Weight, klf	0.000
Right Barrier Weight, klf	0.000
Left Curb Weight, klf	0.420
Right Curb Weight, klf	0.420
Left Sidewalk, klf	0.000
Right Sidewalk, klf	0.000
Future Wearing Surface, ksf	0.000
Sacrificial Wearing Surface, in	0.000
Slay in Place Deck Forms, klf	0.000

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Location: ft, Line: klf, Trapez: klf)

Span	Beam	DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
1	1	DC	Line	0.182	0.000	0.182	142.333	SIP
1	1	DC	Line	0.125	0.000	0.125	142.333	Haunch
1	2	DC	Line	0.091	0.000	0.091	142.333	SIP
1	2	DC	Line	0.125	0.000	0.125	142.333	Haunch
1	3	DC	Line	0.091	0.000	0.091	142.333	SIP
1	3	DC	Line	0.125	0.000	0.125	142.333	Haunch
1	4	DC	Line	0.091	0.000	0.091	142.333	SIP
1	4	DC	Line	0.125	0.000	0.125	142.333	Haunch
1	5	DC	Line	0.091	0.000	0.091	142.333	SIP
1	5	DC	Line	0.125	0.000	0.125	142.333	Haunch
1	6	DC	Point	0.182	0.000	-	-	SIP
1	6	DC	Point	0.125	0.000	-	-	Haunch

DIAPHRAGM LOADS - NONE

DEAD LOADS ON COMPOSITE

UNITS: (Point: kips, Location: ft, Line: klf, Trapez: klf, Area: ksf, Width: ft)

Span	DC/DW	Type	Mag.1	Loc.1/Width	Mag.2	Loc.2	Description
1	DC	Line	0.420	0.000	0.420	142.333	Left Curb Weight
1	DC	Line	0.420	0.000	0.420	142.333	Right Curb Weight
1	DC	Line	0.485	0.000	0.485	142.333	Median Barrier

TEMPERATURE LOADS - NONE



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	Precast Release	Precast Final	C.I.P
f'c (ksi)	6,000	7,500	5,500
Wc (pcf)	150,000	150,000	150,000
Ec (ksi)	4016,840	4490,960	3845,830
K1	0.900	0.900	0.900
Thermal coeff. (1/F)	0.000006600		

STRAND AND REBAR PROPERTIES

PRESTRESSED STEEL:

6/10-270K-L, Low relaxation strands
 Depressed at 0.40L
 Strand Diameter = 0.600 in
 Tensile Strength(fpu) = 270.0 ksi
 Use transformed strand and rebar: Strand Only

REINFORCING STEEL:

Tension/Shear steel: fy = 60.0 ksi Es = 29000 ksi fs = 24.0 ksi



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ANALYSIS DATA

ANALYSIS PARAMETERS DATA

Truck Impact:	1.330
Lane Impact:	1.000
Strength II Impact:	1.330
Fatigue Impact:	1.150

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Is Span Post-tensioned:	NO
Include Rigid Cross Section Assumption (Art. 4.6.2.2.d):	YES
ADTT (Average Daily Truck Traffic):	5000
Percent of the specified force effect:	1.00

NOTE: Beam specific dead and live load DFs are printed in beam level reports.

LOAD FACTORS: (Table 3.4.1-1 & 3.4.1-2)

Live	DC(max)	DC(min)	DW(max)	DW(min)
Service I:	1.00	-	1.00	-
Service II:	0.80	-	1.00	-
Strength I:	1.75	0.90	1.50	0.65
Fatigue I:	1.50	-	-	-

Ductility Factor:	1.00
Redundancy Factor:	1.00
Importance Factor:	1.00



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LIVE LOADS

Live load deflection: not included.

ID	Type
Design Lane	Design Lane
Design Tandem	Design Tandem
Design Truck	Design Truck

Pedestrian Load - NONE



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PROJECT DESIGN PARAMETERS

Trans len mult:	Bonded	1.00
	Debonded	1.00
Dev len mult:	Bonded	1.60
	Debonded	2.00

Camber & Deflection Multiplier (PCI ref.)

	Erection	Final
Prestress:	1.80	2.20
Self Wt:	1.85	2.40
Deck + Haunch:		2.30
Diaphragm:		3.00
DL-Prec.:		3.00
DL-Comp.:		3.00

MOMENT AND SHEAR PROVISIONS:

Ultimate Moment Capacity, Mr-prvd computed: **AASHTO** equations
 Horizontal Shear, Beam and Slab effects in Vut: **INCLUDED**

STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

	PRECAST	DECK
Strength	6.00	ksi
Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00 %	ksi
Max tens	-0.23	ksi
Center	w/reinf	-0.93
Max tens	70.00 %	ksi
Max tens	w/reinf	-0.23
Max tens	w/reinf	-0.59

STRESS LIMITS AT FINAL AFTER LOSSES:

	PRECAST	DECK
Strength	7.50	ksi
Elasticity	4490.96	ksi
		3845.83

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

	PRECAST	DECK
Max comp	4.50	ksi
		3.30

STRESS LIMITS AT FINAL 2 (P/S + DL):



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	PRECAST	DECK
Max comp	3.38	ksi
		2.47

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

	PRECAST	DECK
Max comp	3.00	ksi
		-

SERVICE III (Tension):

	PRECAST	DECK
Max tens	-0.52	ksi
		-0.45

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	0.75
Compression controlled sections	0.90
Tension controlled sections	0.90
Flexure Prestressed	0.75
Compression controlled sections	1.00
Tension controlled sections	1.00
Shear	0.90

PRESTRESS LOSSES:

Time Dependent Losses, Approximate Method (Art.5.9.5.3)
 Days to release = 0.75
 Rel. Humid. (RH) = 75.0 %



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PROPERTIES

Span:1, Beam:1

PRECAST DATA:

Section Id	FIB-78		
Type	I-Girder		
Fing width	Top 48.000 in	Bot 38.000 in	
thick	Top 3.000 in	Bot 7.000 in	
Stems	No 1		
	Top 7.000 in		
Shear width	Bot 7.000 in		

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RL	12.51/13.52 ft
End LL/RL	12.51/13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Exterior
Start Skew Angle	-14.15 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch: Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Local: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.182	0.000	0.182	142.333	SJP
DC	Line	0.125	0.000	0.125	142.333	Haunch

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:



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Overall length	142.333 ft
Release length	142.333 ft
Design length	142.333 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2.d): YES

Location	+ve		Moment		Shear	
	2+ Lane	1 Lane	2+ Lane	1 Lane	2+ Lane	1 Lane
0.0L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.1L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.2L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.3L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.4L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.5L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.6L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.7L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.8L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
0.9L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)
1.0L	1.050	1.036(¶)	1.121	1.071(¶)	1.121	1.071(¶)

(¶) Lever rule (C4.6.2.2.1)

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	0.75
Compression controlled sections	0.90
Tension controlled sections	
Flexure Prestressed	0.75
Compression controlled sections	1.00
Tension controlled sections	
Shear	0.90



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PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
Total Height	78.00 in
Mom. of Inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of Inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.1L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.2L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.3L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.4L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.5L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.6L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.7L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.8L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.9L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
1.0L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7

(#) Area, Ixx, and Ycg Of Total Section using Ec/fEc = 0.8563
Use transformed strand and rebar: Strand Only

Location	ft	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Precast: (At Release, using Ec = 4016.8ksi)	in2	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Area, Yb, MI(XXX)	in	1100.6	1164.1	1164.1	1169.4	1169.4	1169.4	1169.4	1169.4
	in4	34.60	33.15	33.14	32.98	32.95	32.91	32.87	32.87
		904567	947221	947317	953603	955820	958087	960402	960402
Composite: (At Final, using Ec = 4491.0ksi)	in2	2129.8	2185.4	2185.4	2190.1	2190.1	2190.1	2190.1	2190.1
Area, Yb, MI(XXX)	in	58.02	56.74	56.74	56.61	56.60	56.58	56.56	56.56
	in4	2160387	2296622	2296622	2312616	2316316	2320060	2323850	2323850

Span:1, Beam:1
STRESS LIMITS (Art. 5.9.4):
STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):



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PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
Total Height	78.00 in
Mom. of Inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of Inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.1L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.2L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.3L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.4L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.5L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.6L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.7L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.8L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
0.9L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7
1.0L	75.08	2398.3	2129.76	87.5	2160387	58.02	150.0	135.7

(#) Area, Ixx, and Ycg Of Total Section using Ec/fEc = 0.8563
Use transformed strand and rebar: Strand Only

Location	ft	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Precast: (At Release, using Ec = 4016.8ksi)	in2	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Area, Yb, MI(XXX)	in	1100.6	1164.1	1164.1	1169.4	1169.4	1169.4	1169.4	1169.4
	in4	34.60	33.15	33.14	32.98	32.95	32.91	32.87	32.87
		904567	947221	947317	953603	955820	958087	960402	960402
Composite: (At Final, using Ec = 4491.0ksi)	in2	2129.8	2185.4	2185.4	2190.1	2190.1	2190.1	2190.1	2190.1
Area, Yb, MI(XXX)	in	58.02	56.74	56.74	56.61	56.60	56.58	56.56	56.56
	in4	2160387	2296622	2296622	2312616	2316316	2320060	2323850	2323850

Span:1, Beam:1
STRESS LIMITS (Art. 5.9.4):
STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

	PRECAST	DECK
Strength	6.00 ksi	5.50 ksi
Elasticity	4016.8 ksi	3845.83 ksi
Max comp	3.60 ksi	-
Outer	15.00 %	-
Max tens	w/relf -0.23 ksi	-
Center	w/relf -0.93 ksi	-
Max tens	70.00 %	-
Max tens	w/relf -0.23 ksi	-
Max tens	w/relf -0.59 ksi	-

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.
STRESS LIMITS AT FINAL AFTER LOSSES:

	PRECAST	DECK
Strength	7.50 ksi	5.50 ksi
Elasticity	4490.96 ksi	3845.83 ksi

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

	PRECAST	DECK
Max comp	4.50 ksi	3.30 ksi

STRESS LIMITS AT FINAL 2 (P/S + DL):

	PRECAST	DECK
Max comp	3.38 ksi	2.47 ksi

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

	PRECAST	DECK
Max comp	3.00 ksi	- ksi

SERVICE III (Tension):

	PRECAST	DECK
Max tens	-0.52 ksi	0.45 ksi

Span:1, Beam:1
PRESTRESSED STEEL:
52 strands, 6/10-270K-LL, Low relaxation strands
Depressed at 0.40L (36.93 ft from member end)

END PATTERN (Ycg = 7.69 in):

10 @ 3.000 in	12 @ 5.000 in	10 @ 7.000 in	4 @ 9.000 in
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7 @ 11,000 in | 5 @ 13,000 in | 3 @ 15,000 in | 1 @ 17,000 in

MID PATTERN (Ycg = 5.23 in):

(A) Draped:

7 @ 3,000 in | 5 @ 5,000 in | 3 @ 7,000 in | 1 @ 9,000 in

(B) Straight:

10 @ 3,000 in | 12 @ 5,000 in | 10 @ 7,000 in | 4 @ 9,000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3,000 in	3,000 in	3,000 in	4,000 in		0,000 in	10,000 in	75.0 %	43.9 kips
28	2	3,000 in	3,000 in	3,000 in	4,000 in		0,000 in	18,000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11,284 in ²
Trans. Len bonded	3,000 ft
Trans. Len debonded	3,000 ft
Dev. Len bonded	11,673 ft
Dev. Len debonded	14,592 ft
Holddown Force	8,232 kips
Tensile Strength(fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shiring (PL/AE)	0.835 in

Span:1, Beam:1

ESTIMATED QUANTITIES

Prestressing (linear ft)	7401.441	Strands (LB/1000ft)	740	Beam Vol(C.V.)	40.291	Concrete Wt(LB)	163179.203	Stirrups (LB)	929.071	Longitudinal Bars (LB)	0.000
--------------------------	----------	---------------------	-----	----------------	--------	-----------------	------------	---------------	---------	------------------------	-------

Span:1, Beam:1
REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

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Stirrups:

# legs	Size	f _y (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	3.0971	No
2	US#4(M13)	60.0	0.40	12.00	3.0971	20.7510	No
2	US#4(M13)	60.0	0.40	18.00	20.7510	49.3921	No
2	US#4(M13)	60.0	0.40	24.00	49.3921	92.9409	No
2	US#4(M13)	60.0	0.40	18.00	92.9409	121.5820	No
2	US#4(M13)	60.0	0.40	12.00	121.5820	139.2359	No
2	US#4(M13)	60.0	0.40	6.00	139.2359	142.3330	No

LOSSES

Note: Values are calculated at Midspan

Str. area	11,2840 in ²
Ycg	5.23 in
P _{init}	2285.0 kips
Ecc	29.37 in
Days to release	0.75
Rel. Humid.(RH)	75.0 %
E _s	285000.0 ksi
E _{cl}	40177 ksi

AASHTO LOSSES

Elastic Shortening ** 17.35 ksi (Eq 5.9.5.2.3a-1). (fcgp= 2.445 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		-8.65 ksi	0.00 ksi
due to Composite Loads		-0.94 ksi	0.00 ksi
due to Live Loads		-6.58 ksi	0.00 ksi

Time Dependent Losses (Approximate Method (Art.5.9.5.3))

	Initial	Final
Steel relaxation	0.00 ksi	2.40 ksi
Concrete shrinkage	0.00 ksi	8.14 ksi
Concrete creep	0.00 ksi	14.09 ksi
Sub-total	17.35 ksi	8.46 ksi
Total Prestress Losses		25.81 ksi
		(8.57 %)
		(4.18 %)
		(12.74 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial f_{pe} = 202.5 ksi < 0.75 f_{pu}, OK

initial f_{pe} = 176.7 ksi < 0.80 f_{py}, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations.



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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing	Midspan
LL + I :	592	88.5	109.5	130.4	146.0	147.0	151.4	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	75.8	93.1	111.5	130.9	146.1	147.1	151.4	0.0
Total :	4038.1	3723.1	2972.3	1744.9	496.2	410.8	-0.0	0.0
M+	11836.2	10376.2	7932.5	4473.7	1242.6	1027.4	0.0	0.0
V	100.8	171.8	234.4	297.0	343.6	346.4	359.6	0.0
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	117.4	176.4	236.5	297.5	343.7	346.5	359.6	0.0
Total :	11151.7	9947.5	7714.7	4412.5	1236.0	1022.4	0.0	0.0

REACTIONS (kips), SERVICE I

Load Type	Left Support	Right Support
Self Wt.	81.6	81.6
Deck+Haunch	89.1	89.1
Diaphragm	0.0	0.0
DL-Prec.(DC)	21.8	21.8
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	94.3	94.3
DL-Comp.(DW)	0.0	0.0
Live	112.8	112.8
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 1, SERVICE III
Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Self wt. :	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	81.6	78.2	71.4	65.3	49.0	32.6	16.3	0.0
DL-Comp :	0.0	64.2	77.6	279.9	497.6	653.0	746.3	777.4
DL-Prec. :	21.8	20.9	20.7	17.5	13.1	8.7	4.4	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	0.0	261.6	316.5	1141.3	2028.9	2663.0	3043.4	3170.2
Haunch (Max) :	89.1	85.3	84.5	71.3	53.5	35.6	17.8	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	46.2	55.8	201.3	357.9	469.7	536.9	559.2
DL-Comp :	15.7	15.1	14.9	12.6	9.4	6.3	3.1	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	-0.0	332.6	402.3	1444.9	2552.0	3321.4	3778.0	3909.4
V	121.1	117.6	116.8	104.3	87.6	70.8	47.3	30.6
M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
Vmx	121.1	117.6	116.9	104.7	89.2	74.5	60.6	47.5
Total :	-0.0	328.7	397.0	1395.9	2377.9	2978.5	3230.4	3166.4
M+	0.0	94.2	114.2	411.2	729.5	954.5	1089.1	11319.4
V	329.3	317.0	314.4	270.9	212.5	154.1	89.0	30.6
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	329.3	317.1	314.5	271.3	214.2	157.8	102.2	47.5
Total :	0.0	940.2	1136.8	4063.5	7120.3	9202.9	10344.1	10576.5

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	85.40	99.63	113.87	128.10	138.69	139.33	142.33
Self wt. :	2787.1	2438.7	1858.1	1045.2	289.8	239.6	0.0
(Max)	16.3	32.6	49.0	65.3	71.4	78.2	81.6
DL-Prec. :	746.3	653.0	497.6	279.9	71.6	64.2	0.0
DC(Max) :	4.4	8.7	13.1	17.5	20.7	20.9	21.8
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	3043.4	2663.0	2028.9	1141.3	316.5	261.6	0.0
Haunch (Max) :	17.8	35.6	53.5	71.3	84.5	85.3	89.1
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	536.9	469.7	357.9	201.3	55.8	46.2	0.0
DC(Max) :	3.1	6.3	9.4	12.6	14.9	15.1	15.7
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max) :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	3778.0	3321.4	2552.0	1444.9	402.3	332.6	-0.0
V	47.3	70.8	87.6	104.3	116.8	117.6	121.1
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	60.6	74.5	89.2	104.7	116.9	117.6	121.1
Total :	3230.4	2978.5	2377.9	1395.9	397.0	328.7	-0.0
M+	10891.7	9545.9	7294.5	4112.5	1142.1	944.2	0.0
V	89.0	154.1	212.5	270.9	314.4	317.0	329.3
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	102.2	157.8	214.2	271.3	314.5	317.1	329.3
Total :	10344.1	9202.9	7120.3	4063.5	1136.8	940.2	0.0



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SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 1, STRENGTH
 Shears: Kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Self wt.:	M	0.00	299.5	362.3	1306.4	2322.6	3048.4	3483.9
(Max)	V	102.0	97.7	96.8	81.6	61.2	40.8	20.4
Self wt.:	M	0.00	215.6	260.9	940.6	1672.3	2194.8	2612.9
(Min)	V	73.4	70.3	69.7	58.7	44.1	29.4	14.7
DL-Prec.:	M	0.00	80.2	97.0	349.8	621.9	816.3	932.9
DC(Max)	V	27.3	26.2	25.9	21.8	16.4	10.9	5.5
DL-Prec.:	M	0.00	57.7	69.9	251.9	447.8	587.7	699.7
DC(Min)	V	19.7	18.8	18.7	15.7	11.8	7.9	3.9
DL-Prec.:	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Prec.:	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deck + :	M	111.4	106.7	105.7	89.1	66.8	44.5	22.3
Deck + :	M	0.00	235.5	284.8	1027.1	1826.0	2396.7	2739.0
Haunch (Min)	V	80.2	76.8	76.1	64.1	32.1	16.0	0.00
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	327.1	395.6	1426.6	2536.1	3328.7	3804.2
DC(Max)	V	11.4	10.6	10.7	8.9	6.6	4.4	2.2
DL-Comp :	M	0.00	235.5	284.8	1027.1	1826.0	2396.7	2739.0
Haunch (Min)	V	80.2	76.8	76.1	64.1	32.1	16.0	0.00
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	-0.00	57.7	69.8	251.7	447.4	587.2	671.1
DC(Max)	V	19.6	18.8	18.6	15.7	11.8	7.9	3.9
DL-Comp :	M	-0.00	41.5	50.2	181.2	322.1	422.8	503.3
Haunch (Min)	V	14.1	13.5	13.4	11.3	8.5	5.7	2.8
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	-0.00	727.7	880.0	3160.7	5582.6	7265.6	8264.5
DC(Max)	V	264.9	257.2	255.5	228.2	191.6	154.9	103.6
DL-Comp :	M	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
LL + I :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	184.6
LL + I :	M	0.00	1483.4	1793.2	6388.1	11296.0	15958.7	16189.1
LL + I :	Vmx	264.9	257.4	255.7	229.1	195.2	163.0	103.9
DL-Comp :	M	-0.00	718.9	868.4	3053.6	5201.6	6515.4	7066.6
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	1492.1	1804.7	6495.3	11510.6	15046.2	17156.5
DC(Min)	V	525.2	506.5	502.5	436.5	347.8	259.0	155.6
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	V	525.2	506.7	502.7	437.4	351.3	267.1	



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Sheet # 13

Job #

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File Name: Span12EB_ModifiedSpacing.csl

Load Type	Left Support	Right Support	Midspace
Pedestrian	0.0	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 1, FATIGUE I
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Location:	ft	0.00	3.00	14.23	28.47	42.70	56.93	71.17
Self wt.:	M	0.0	239.6	289.8	1858.1	2438.7	2787.1	2903.2
(Max)	V	81.6	78.2	71.4	65.3	49.0	32.6	16.3
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	64.2	77.6	279.9	497.6	653.0	777.4
DC(Max)	V	21.8	20.9	20.7	17.5	13.1	8.7	4.4
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	261.6	316.5	1141.3	2028.9	2663.0	3043.4
Haunch (Max)	V	89.1	85.3	84.5	71.3	53.5	35.6	17.8
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	0.0	273.8	331.0	1178.7	2052.1	2660.5	2992.3
LL + I :	V	96.7	94.3	93.8	85.6	74.5	56.1	45.0
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	96.7	94.3	93.8	85.6	74.5	56.1	45.0
LL + I :	M	0.0	273.8	331.0	1178.7	2052.1	2620.0	2882.6
Total :								
Total :								
Total :								



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Sheet # 14

Job #

Designed KSM

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Date

File Name: Span12EB_ModifiedSpacing.csl

Load Type	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Total :	M+	0.0	885.4	1070.8	3846.3	6794.5	8885.0	10105.9
Total :	V	304.9	293.8	291.4	252.2	199.4	139.4	86.7
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	304.9	293.8	291.4	252.2	199.4	146.7	94.0
Total :	M	0.0	885.4	1070.8	3846.3	6794.5	8844.5	9996.2

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location:	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt.:	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	746.3	653.0	497.6	279.9	77.6	64.2
DC(Max)	V	4.4	8.7	13.1	17.5	20.7	21.8
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3043.4	2663.0	2028.9	1141.3	316.5	261.6
Haunch (Max)	V	17.8	35.6	53.5	71.3	84.5	85.3
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	2992.3	2660.5	2052.1	1178.7	331.0	273.8
LL + I :	V	45.0	56.1	74.5	85.6	93.8	94.3
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	45.0	56.1	74.5	85.6	93.8	94.3
LL + I :	M	2882.6	2620.0	2052.1	1178.7	331.0	273.8
Total :	M+	10105.9	8885.0	6794.5	3846.3	1070.8	885.4
Total :	V	86.7	139.4	199.4	252.2	291.4	293.8
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	94.0	146.7	199.4	252.2	291.4	293.8
Total :	M	9996.2	8844.5	6794.5	3846.3	1070.8	885.4



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Sheet # 16
 Job #
 Designed KSM
 Date Sept/9/2013
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 Date

DESIGN SUMMARY

Span: 1, Beam: 1, Exterior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	142.33
Release Length,	ft	142.33
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es.,	ksi	28500.0
No. of strands:	52	
	Draped:	16
	Straight:	36
Concrete Strength:	ftci	6.0* ksi
	ftc:	7.5 ksi
	ftct:	5.5 ksi
Initial losses:		8.57 %
Final losses:		12.74 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * fc or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)				
Precast Bot (compression)	3.600	3.572	Trans	OK
Outer	15.00 %			
Precast Top w/ no reinf. (tension)	-0.232	-0.569	Trans	
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	0.153	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	19873.61	17814.37	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	40.00 %		OK
Max. Debond Total	25.00 %	7.69 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow Stresses	Final 1 Comp Only	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	3.300	0.745	Midspan	2.475	0.077	Midspan			
Topping Top	4.500	3.575	Midspan	3.375	3.034	Midspan			
Precast Top	4.500	2.851	Transfer	3.375	2.974	Transfer			
Precast Bot									
Service III Limit State - Tensile									
Topping Top		-0.446	Bearing						
Precast Top		-0.520	Transfer						
Precast Bot		-0.520	Midspan						
Fatigue I Limit State - Compressive									
Precast Top							3.000	1.851	Midspan
Precast Bot							3.000	1.406	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 71.17 ft

	Release	Multi	Erection	Multi	Final
Prestress	5.849	1.80	10.528	2.20	12.868
Self Wt.	-2.744	1.85	-5.077	2.40	-6.586
Deck + Haunch			-2.680	2.30	-6.165
DL-Prec. (DC)			-0.657	3.00	-1.972
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.195	3.00	-0.586
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	3.105		1.919		-2.441

Positive values indicate upward deflection.



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PROPERTIES

Span:1, Beam:2
PRECAST DATA:

Section Id	FIB-78		
Type	I-Girder		
Fling width	Top 48.000 in	Bot 38.000 in	
thick	Top 3.000 in	Bot 7.000 in	
Stems	No 1		
	Top 7.000 in		
Shear width	Bot 7.000 in		

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RI	13.52/ 13.52 ft
End LL/RI	13.52/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	-14.15 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Location: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.091	0.000	0.091	142.333	SP
DC	Line	0.125	0.000	0.125	142.333	Haunch

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:

Area	1100.6	in ²
------	--------	-----------------



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Overall length	142.333 ft
Release length	142.333 ft
Design length	142.333 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2.2d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.937	0.604	1.210	0.916
0.1L	0.937	0.604	1.210	0.916
0.2L	0.937	0.604	1.210	0.916
0.3L	0.937	0.604	1.210	0.916
0.4L	0.937	0.604	1.210	0.916
0.5L	0.937	0.604	1.210	0.916
0.6L	0.937	0.604	1.210	0.916
0.7L	0.937	0.604	1.210	0.916
0.8L	0.937	0.604	1.210	0.916
0.9L	0.937	0.604	1.210	0.916
1.0L	0.937	0.604	1.210	0.916

Pedestrian	0.167	(Calculated)
Comp. DC	0.167	(Calculated)
Comp. DW	0.167	(Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6	in ²
------	--------	-----------------



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.1L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.2L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.3L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.4L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.5L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.6L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.7L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.8L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.9L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
1.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4

(#) Area, Ixx, and Ycg Of Total Section using EcfEc = 0.9563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	ft	ft	ft	ft	ft	ft	ft
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Area, in ²	1100.6	1164.1	1164.1	1169.4	1169.4	1169.4	1169.4	1169.4
Yb, in	34.60	33.15	33.14	32.98	32.95	32.87	32.87	32.87
Iy (Ixx), in ⁴	904567	947221	947317	953603	955820	958087	960402	960402
Composite: (At Final, using Ec = 4491.0ksi)		2342.9	2342.9	2347.5	2347.5	2347.5	2347.5	2347.5
Area, in ²	59.75	58.52	58.52	58.40	58.38	58.37	58.35	58.35
Yb, in	2254683	2400613	2400783	2417779	24271612	2425489	2429411	2429411
Iy (Ixx), in ⁴								

Span:1, Beam:2
 STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00*	



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PRECAST	
Elasticity	4016.8 ksi
Max comp	3.60 ksi
Outer	15.00 %
Max tens	-0.23 ksi
Max tens, Center	w/relmf -0.93 ksi
Max tens	70.00 %
Max tens, w/relmf	-0.23 ksi
Max tens, w/relmf	-0.59 ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

PRECAST	DECK
Strength	7.50 ksi / 5.50 ksi
Elasticity	4490.96 ksi / 3845.83 ksi

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

PRECAST	DECK
Max comp	4.50 ksi / 3.30 ksi

STRESS LIMITS AT FINAL 2 (P/S + DL):

PRECAST	DECK
Max comp	3.38 ksi / 2.47 ksi

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

PRECAST	DECK
Max comp	3.00 ksi / -

SERVICE III (Tension):

PRECAST	DECK
Max tens	-0.52 ksi / -0.45 ksi

Span:1, Beam:2
 PRESTRESSED STEEL:
 52 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (56.93 ft from member end)

END PATTERN (Ycg = 7.69 in):

10 @ 3.000 in	12 @ 5.000 in	10 @ 7.000 in	4 @ 9.000 in
7 @ 11.000 in	5 @ 13.000 in	3 @ 15.000 in	1 @ 17.000 in



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MID PATTERN (Ycg = 5.23 in):

(A) Draped: 7 @ 3.000 in | 5 @ 5.000 in | 3 @ 7.000 in | 1 @ 9.000 in

(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips
2B	2	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11.284 in ²
Trans. Len bonded	3.000 ft
Trans. Len debonded	3.000 ft
Dev. Len bonded	11.733 ft
Dev. Len debonded	14.666 ft
Holddown Force	8.232 kips
Tensile Strength (fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 2

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol (C.Y.)	Concrete Wt (LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 2
 REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:



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# legs	Size	f _y (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	6.5486	No
2	US#4(M13)	60.0	0.40	12.00	6.5486	25.1535	No
2	US#4(M13)	60.0	0.40	18.00	25.1535	49.7726	No
2	US#4(M13)	60.0	0.40	24.00	49.7726	92.5604	No
2	US#4(M13)	60.0	0.40	18.00	92.5604	117.1795	No
2	US#4(M13)	60.0	0.40	12.00	117.1795	135.7844	No
2	US#4(M13)	60.0	0.40	6.00	135.7844	142.3330	No

LOSSES

Note: Values are calculated at Midspan

Str. area	11.2840 in ²
Ycg	5.23 in
P_init	2285.0 kips
Ecc	29.37 in
Days to release	0.75
Rel. Humid. (RH)	75.0 %
E _s	28500.0 ksi
E _{c1}	4017 ksi

AASHTO LOSSES

Elastic Shortening ** 17.35 ksi (Eq 5.9.5.2.3a-1). (fcgp = 2.445 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		-9.21 ksi	0.00 ksi
due to Composite Loads		-0.93 ksi	0.00 ksi
due to Live Loads		-5.81 ksi	0.00 ksi

Time Dependent Losses (Approximate Method (Art. 5.9.5.3))

	Initial	Final
Steel relaxation	0.00 ksi	2.40 ksi (Eq 5.9.5.3-1)
Concrete shrinkage	0.00 ksi	8.14 ksi (Eq 5.9.5.3-1)
Concrete creep	0.00 ksi	14.09 ksi (Eq 5.9.5.3-1)
Sub-total	17.35 ksi	8.68 ksi (4.28 %)
Total Prestress Losses		26.02 ksi (12.85 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial f_{pi} = 202.5 ksi < 0.75 f_{pu}, OK

initial f_{pe} = 176.5 ksi < 0.80 f_{pu}, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.



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Location	ft	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Self wt.:	M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	V	81.6	78.2	77.4	65.3	49.0	32.6	16.3	0.0
DL-Prec.:	M	0.0	45.1	54.6	196.9	350.1	459.5	525.1	547.0
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1	0.0
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + :	V	163.4	158.6	157.6	140.8	118.2	95.6	63.9	41.3
LL + :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	163.4	158.7	157.7	141.3	120.4	100.5	81.8	64.1
LL + :	Vmx	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
Total :	M	0.0	366.9	443.2	1558.3	2654.5	3324.9	3606.2	3534.7
Total :	M+	0.0	1003.9	1214.3	4372.2	7754.3	10146.1	11575.5	12028.8
Total :	V	378.8	364.9	362.0	313.1	247.4	181.7	107.0	41.3
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	378.8	365.1	362.1	313.6	249.6	186.7	124.8	64.1
Total :	M	0.0	999.5	1208.4	4317.6	7559.8	9763.2	10964.3	11199.4

SHEAR AND MOMENT ENVELOPE (REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, SERVICE I

Shears: kips, Moments: kft

Location	ft	0.60L	0.70L	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Self wt.:	M	0.0	3.00	3.65	14.23	28.47	42.70	56.93	71.17	
(Max)	V	81.6	78.2	77.4	65.3	49.0	32.6	16.3	0.0	
DL-Prec.:	M	0.0	45.1	54.6	196.9	350.1	459.5	525.1	547.0	
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1	0.0	
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Deck + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5	0.0	
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DL-Comp :	M	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1	0.0	
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LL + :	M+	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	
LL + :	V	163.4	158.6	157.6	140.8	118.2	95.6	63.9	41.3	
LL + :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LL + :	M	163.4	158.7	157.7	141.3	120.4	100.5	81.8	64.1	
LL + :	Vmx	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	
Total :	M	0.0	366.9	443.2	1558.3	2654.5	3324.9	3606.2	3534.7	
Total :	M+	0.0	1003.9	1214.3	4372.2	7754.3	10146.1	11575.5	12028.8	
Total :	V	378.8	364.9	362.0	313.1	247.4	181.7	107.0	41.3	
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total :	Vmx	378.8	365.1	362.1	313.6	249.6	186.7	124.8	64.1	
Total :	M	0.0	999.5	1208.4	4317.6	7559.8	9763.2	10964.3	11199.4	

Location	ft	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Self wt.:	M	85.40	99.63	113.87	128.10	138.69	139.33	142.33
(Max)	V	2787.1	2438.7	1858.1	1045.2	289.8	239.6	0.0
DL-Prec.:	M	16.3	32.6	49.0	65.3	77.4	78.2	81.6
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7	15.4
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Max)	V	3509.0	3070.4	2339.3	1315.9	364.9	301.7	0.0
Diaphragm :	M	20.5	41.1	61.6	82.2	97.5	98.4	102.7
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1	15.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	4217.5	3707.8	2848.9	1613.0	449.1	371.3	-0.0



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Span 12EB_ModifiedSpacing.csl

Sheet #	8
Job #	
Designed	KSM
Date	Sept/9/2013
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Date	

Location	ft	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Self wt.:	M	63.9	95.6	118.2	140.8	157.6	158.6	163.4
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	81.8	100.5	120.4	141.3	157.7	158.7	163.4
DW(Max)	M	3606.2	3324.9	2654.5	1558.3	443.2	366.9	-0.0
Deck + :	V	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	0.0
Haunch (Max)	V	107.0	181.7	247.4	313.1	362.0	364.9	378.8
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	124.8	186.7	249.6	313.6	362.1	365.1	378.8
DC(Max)	V	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + :	V	163.4	158.6	157.6	140.8	118.2	95.6	63.9
LL + :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	163.4	158.7	157.7	141.3	120.4	100.5	81.8
LL + :	Vmx	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
Total :	M	0.0	366.9	443.2	1558.3	2654.5	3324.9	3606.2
Total :	M+	0.0	1003.9	1214.3	4372.2	7754.3	10146.1	11575.5
Total :	V	378.8	364.9	362.0	313.1	247.4	181.7	107.0
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	378.8	365.1	362.1	313.6	249.6	186.7	124.8
Total :	M	0.0	999.5	1208.4	4317.6	7559.8	9763.2	10964.3

REACTIONS (kips), SERVICE I

Upward reactions are positive.

Live Load reactions are per lane with no distribution factor and no impact.

Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).

Non-composite load types are per beam.

Composite and Pedestrian load types are per total bridge width.

Lead Type	Self Wt.	Deck+Haunch	Diaphragm	DL-Prec.(DC)	DL-Comp.(DW)	DL-Comp.(DC)	DL-Comp.(DW)	Live	Pedestrian
Left Support	81.6	102.7	15.4	0.0	94.3	0.0	112.8	0.0	
Right Support	81.6	102.7	15.4	0.0	94.3	0.0	112.8	0.0	

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, SERVICE III
 Shears: kips, Moments: kft

Location	ft	0.60L	0.70L	0.80L	0.90L	H/2	0.20L	0.30L	0.40L	Midspan
Self wt.:	M	0.0	3.00	3.65	14.23	28.47	42.70	56.93	71.17	
(Max)	V	81.6	78.2	77.4	65.3	49.0	32.6	16.3	0.0	
DL-Prec.:	M	0.0	45.1	54.6	196.9	350.1	459.5	525.1	547.0	
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1	0.0	
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5	0.0	
Diaphragm :</										



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	46.2	55.8	201.3	357.9	469.7	536.9	559.2
DC(Max)	M	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	297.1	359.3	1290.4	2279.1	2966.2	3374.0
LL + I :	M-	-0.0	130.7	126.9	112.6	94.5	76.4	51.1
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	130.7	127.0	126.2	113.1	96.3	80.4	65.4
LL + I :	M	-0.0	293.5	354.5	1246.6	2123.6	2660.0	2827.8
Total :	M+	0.0	929.6	1124.5	4049.7	7184.5	9404.5	11155.9
Total :	V	346.1	333.2	330.4	284.9	223.8	162.6	94.2
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	346.1	333.3	330.6	285.4	225.5	166.6	108.5
Total :	M	0.0	926.2	1119.7	4005.9	7028.9	9098.2	10492.4

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location	ft	85.40	99.63	113.87	128.10	138.69	139.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Comp :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
LL + I :	M	20.5	41.1	61.6	82.2	97.5	102.7
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	536.9	469.7	357.9	201.3	55.8	46.2
LL + I :	M	3.1	6.3	9.4	12.6	14.9	15.1
LL + I :	M	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	3374.0	2966.2	2279.1	1290.4	359.3	297.1
LL + I :	M-	51.1	76.4	94.5	112.6	126.1	130.7
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	65.4	80.4	96.3	113.1	126.2	130.7
LL + I :	M	2885.0	2660.0	2123.6	1246.6	354.5	293.5
Total :	M+	10732.0	9404.5	7184.5	4049.6	1124.5	929.6
Total :	V	94.2	162.6	223.8	284.9	330.4	333.2
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	108.5	166.6	202.5	285.4	330.6	333.3
Total :	M	10243.0	9098.2	7028.9	4005.9	1119.7	926.1



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Sheet # 10
Job #

SEAR AND MOMENT ENVELOPE : Span : 1, Beam : 2, STRENGTH I
Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Location	ft	0.00	3.00	14.23	28.47	42.70	56.93	71.17
Self wt. :	M	0.00	299.5	362.3	1306.4	2322.6	3048.4	3483.9
(Max)	V	102.0	97.7	96.8	81.6	61.2	40.8	20.4
DL-Comp :	M	0.00	215.6	260.9	940.6	1672.3	2194.8	2612.9
DC(Max)	V	73.4	70.3	69.7	58.7	44.1	29.4	14.7
DL-Comp :	M	0.00	56.4	68.3	246.1	437.6	574.3	663.7
DC(Max)	V	19.2	18.4	18.2	15.4	11.5	7.7	3.8
DL-Comp :	M	0.00	40.6	49.1	177.2	315.1	413.5	472.6
DL-Comp :	V	13.8	13.3	13.1	11.1	8.3	5.5	2.8
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	V	0.00	0.00					



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Sheet # 11

Job #

Designed KSM
Date Sept/9/2013

Checked
Date

File Name: Span12EB_ModifiedSpacing.csl

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
(Min)	14.7	29.4	44.1	58.7	69.7	70.3	73.4
DL-Prec :	656.4	574.3	437.6	246.1	68.3	56.4	-0.0
DC(Max)	3.8	7.7	11.5	15.4	18.2	18.4	19.2
DL-Prec :	472.6	413.5	315.1	177.2	49.1	40.6	-0.0
DC(Min)	2.8	5.5	8.3	11.1	13.1	13.3	13.8
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	4386.2	3838.0	2924.2	1644.8	456.1	377.1	0.0
Haunch (Max)	25.7	51.4	77.0	102.7	121.8	123.0	128.4
Deck + :	3158.1	2763.3	2105.4	1184.3	328.4	271.5	0.0
Haunch (Min)	18.5	37.0	55.5	74.0	87.7	88.6	92.5
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	671.1	587.2	447.4	251.7	69.8	57.7	0.0
DC(Max)	3.9	7.9	11.8	15.7	18.6	18.8	19.6
DL-Comp :	483.2	422.8	322.1	181.2	50.2	41.5	0.0
DC(Min)	2.8	5.7	8.5	11.3	13.4	13.5	14.1
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	7380.7	6488.6	4985.6	2822.7	785.9	649.8	-0.0
LL + I :	111.8	167.2	206.8	246.4	275.8	277.6	285.9
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	143.1	175.9	210.7	247.3	276.0	277.8	285.9
Total :	6310.9	5818.7	4645.3	2727.0	775.6	642.0	-0.0
Total :	16578.2	14536.5	11117.3	6271.8	1742.4	1440.6	0.0
Total :	165.6	274.9	368.3	461.8	531.2	535.5	555.2
Total :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	196.9	283.6	372.2	462.7	531.5	535.7	555.2
Total :	15508.4	13866.5	10777.0	6176.1	1732.1	1432.8	0.0

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	102.0	102.0
Deck+Haunch	128.4	128.4
Diaphragm	0.0	0.0
DL-Prec (DC)	19.2	19.2
DL-Prec (DW)	0.0	0.0
DL-Comp (DC)	117.9	117.9
DL-Comp (DW)	197.4	197.4
Live		



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Load Type	Left Support	Right Support
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1. Beam : 2. FATIGUE I
Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	ft	0.00	3.00	14.23	28.47	42.70	56.93	71.17
Self wt. :	M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2903.2
(Max)	V	81.6	78.2	77.4	65.3	49.0	32.6	16.3
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	M	0.0	45.1	54.6	196.9	350.1	459.5	525.1
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1
DL-Prec :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	301.7	364.9	1315.9	2339.3	3070.4	3509.0
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	0.0	159.7	193.0	687.2	1196.4	1551.2	1744.6
LL + I :	V	82.6	80.6	80.2	73.2	63.7	48.0	29.0
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	V	82.6	80.6	80.2	73.2	63.7	48.0	29.0
LL + I :	Mmx	0.0	159.7	193.0	687.2	1196.4	1527.5	1680.6
LL + I :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Total :	M+	0.0	792.2	958.2	3446.5	6101.8	7989.5	9102.6
	V	298.0	287.0	284.6	245.5	192.9	134.1	81.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	29.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	298.0	287.0	284.6	245.5	192.9	140.4	87.8
	M	0.0	792.2	958.2	3446.5	6101.8	7965.8	9320.3

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(ft)Max	V	16.3	32.6	49.0	65.3	77.4	78.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Min	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	98.4
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Max	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Min	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	1744.6	1551.2	1196.4	687.2	193.0	159.7
LL + :	V	38.5	48.0	63.7	73.2	80.2	80.6
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	Vmx	44.7	54.2	63.7	73.2	80.2	80.6
Total :	M	1680.6	1527.5	1196.4	687.2	193.0	159.7
Total :	V	9102.6	7989.5	6101.8	3446.5	958.2	792.2
Total :	M-	81.6	134.1	192.9	245.5	284.6	287.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	87.8	140.4	192.9	245.5	284.6	287.0
Total :	M	9038.7	7965.8	6101.8	3446.5	958.2	792.2



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DESIGN SUMMARY

Span: 1, Beam: 2, Interior beam

Beam type:	FIB-78
I-Girder,	
Precast Length,	142.33
Release Length,	142.33
Strand Pattern:	Straight/Draped
Strand:	6/10-270K-LL
Strand Es,	ksi: 28500.0
No. of strands:	52
	Draped: 16
	Straight: 36
Concrete Strength:	f'cd: 6.0 ksi
	f'c: 7.5 ksi
	f'ct: 5.5 ksi
Initial losses:	8.57 %
Final losses:	12.85 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)	3.600	3.572	Trans	OK
Precast Bot (compression)	15.00 %	-0.232	Trans	
Precast Top w/ no reinf. (tension)	-0.929	70.00 %		
Precast Top w/ reinf. (tension)	-0.232	0.153	0.2L/0.8L	
Center	-0.588			
Precast Top w/ no reinf. (tension)	20009.05	Required	Location	Status
Precast Top w/ reinf. (tension)	Provided	17218.05	Midspan	OK
Strength I (Art. 3.4.1, 5.7.3.1)	detailed report.			
Ult. Moment (k.ft)	Allowable	Computed		Status
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.2) in Ultimate Moment	40.00 %	40.00 %		OK
Debonding Limits (Art. 5.11.4.3)	25.00 %	7.69 %		OK
Max. Debond per Row				
Max. Debond Total				



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DESIGN SUMMARY

Span: 1, Beam: 2, Interior beam

Specification	Allow	Comp	Loc	Stat
Service I Limit State - Compressive Stresses Only	3.300	0.607	Midspan	
Topping Top	4.500	3.594	Midspan	
Precast Top	4.500	2.857	Transfer	
Precast Bot	4.500	2.857	Transfer	
Service III Limit State - Tensile Stresses Only	-0.446	-0.000	Bearing	
Topping Top	-0.520	-0.253	Transfer	
Precast Top	-0.520	-0.471	Midspan	
Precast Bot	-0.520	-0.471	Midspan	
Fatigue I Limit State - Compressive Stresses Only				
Precast Top				
Precast Bot				

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 71.17 ft

Release	Multi	Erection	Multi	Final
Prestress	5.849	1.80	10.528	2.20
Self Wt.	-2.744	1.85	-5.077	2.40
Deck + Haunch			-3.090	2.30
DL-Prec. (DC)			-0.462	3.00
Diaphragm			0.000	3.00
DL-Prec. (DW)			0.000	3.00
DL-Comp. (DC)			-0.187	3.00
DL-Comp. (DW)			0.000	3.00
Live Load				
Total	3.105		1.712	-2.774

Positive values indicate upward deflection.



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Overall length	142.333 ft
Release length	142.333 ft
Design length	142.333 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):
Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.937	0.604	1.210	0.916
0.1L	0.937	0.604	1.210	0.916
0.2L	0.937	0.604	1.210	0.916
0.3L	0.937	0.604	1.210	0.916
0.4L	0.937	0.604	1.210	0.916
0.5L	0.937	0.604	1.210	0.916
0.6L	0.937	0.604	1.210	0.916
0.7L	0.937	0.604	1.210	0.916
0.8L	0.937	0.604	1.210	0.916
0.9L	0.937	0.604	1.210	0.916
1.0L	0.937	0.604	1.210	0.916

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)
RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
------	------------------------



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PROPERTIES

Span:1, Beam:3
PRECAST DATA:

Section Id	FIB-78
Type	I-Girder
Flng width	48.000 in
thick	3.000 in
Stems	No 1
Top	7.000 in
Bot	7.000 in
Shear width	7.000 in

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RI	13.52/13.52 ft
End LL/RI	13.52/13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	-14.15 degrees
End Skew Angle	-14.15 degrees

* Average bridge width
TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Local: ft, Line: klf, Trapez: klf)

DC/DW Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC Line	0.091	0.000	0.091	142.333	S/P
DC Line	0.125	0.000	0.125	142.333	Haunch

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in4
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in4
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
		plf	in2	in	in4	in	pcf	in
0.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.1L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.2L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.3L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.4L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.5L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.6L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.7L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.8L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.9L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
1.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4

(#) Area, Ixx, and Ycg Of Total Section using EcfEc = 0.9563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	in	in	in	in	in	in	in
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Area, in2	1100.6	1164.1	1164.1	1169.4	1169.4	1169.4	1169.4	1169.4
Yb, in	34.60	33.15	33.14	32.98	32.95	32.87	32.87	32.87
Iy (Ixx), in4	904567	947221	947317	953603	955820	958087	960402	960402
Composite: (At Final, using Ec = 4491.0ksi)								
Area, in2	2287.2	2342.9	2342.9	2347.5	2347.5	2347.5	2347.5	2347.5
Yb, in	59.75	58.52	58.52	58.40	58.38	58.37	58.35	58.35
Iy (Ixx), in4	2254683	2400613	2400783	2417779	24271612	2425489	2429411	2429411

Span:1, Beam:3
 STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00	



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Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00	%
Max tens	-0.23	ksi
Center	-0.93	ksi
Max tens	70.00	%
Max tens	-0.23	ksi
Max tens	-0.59	ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * fc or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	7.50	ksi
Elasticity	4490.96	ksi

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	4.50	ksi	
PRECAST	DECK	3.30	ksi

STRESS LIMITS AT FINAL 2 (P/S + DL):

Max comp	3.38	ksi	
PRECAST	DECK	2.47	ksi

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

Max comp	3.00	ksi	
PRECAST	DECK		ksi

SERVICE III (Tension):

Max tens	-0.52	ksi	
PRECAST	DECK	-0.45	ksi

Span:1, Beam:3
 PRESTRESSED STEEL:
 52 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (56.93 ft from member end)

END PATTERN (Ycg = 7.69 in):

10 @ 3.000 in	12 @ 5.000 in	10 @ 7.000 in	4 @ 9.000 in
7 @ 11.000 in	5 @ 13.000 in	3 @ 15.000 in	1 @ 17.000 in



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# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	6.5486	No
2	US#4(M13)	60.0	0.40	12.00	6.5486	25.1535	No
2	US#4(M13)	60.0	0.40	18.00	25.1535	49.7726	No
2	US#4(M13)	60.0	0.40	24.00	49.7726	92.5604	No
2	US#4(M13)	60.0	0.40	18.00	92.5604	117.1795	No
2	US#4(M13)	60.0	0.40	12.00	117.1795	135.7844	No
2	US#4(M13)	60.0	0.40	6.00	135.7844	142.3330	No

LOSSES

Note: Values are calculated at Midspan

Str. area	11.2840	in ²
Ycg	5.23	in
P_init	2285.0	kips
Ecc	29.37	in
Days to release	0.75	
Rel. Humid. (RH)	75.0	%
Es	285000.0	ksi
Eci	4017	ksi

AASHTO LOSSES

Elastic Shortening ** 17.35 ksi (Eq 5.9.5.2.3a-1). (fcgp= 2.445 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		-9.21	ksi
due to Composite Loads		-0.93	ksi
due to Live Loads		-5.81	ksi

Time Dependent Losses (Approximate Method (Art 5.9.5.3))

	Initial	Final
Steel relaxation	0.00	ksi
Concrete shrinkage	0.00	ksi
Concrete creep	0.00	ksi
Sub-total	17.35	ksi
Total Prestress Losses		(8.57 %)
		(4.28 %)
		(12.85 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial fpi = 202.5 ksi < 0.75 fpu, OK
 initial fpe = 176.5 ksi < 0.80 fpy, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.



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MID PATTERN (Ycg = 5.23 in):

(A) Draped:

7 @ 3.000 in | 5 @ 5.000 in | 3 @ 7.000 in | 1 @ 9.000 in

(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Initial Pull	Pull/Str
1	2	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips	43.9 kips
2B	2	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600	in
Strand Area	0.217	in ²
Total Strand Area	11.284	in ²
Trans. Len bonded	3.000	ft
Trans. Len debonded	3.000	ft
Dev. Len bonded	11.733	ft
Dev. Len debonded	14.666	ft
Holddown Force	8.232	kips
Tensile Strength (fpu)	270.0	ksi
Initial Prestress = 0.75fpu	202.5	ksi
Initial Pull	2285.0	kips
Beam Shring (PL/AE)	0.835	in

Span: 1, Beam: 3

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol (C.Y.)	Concrete Wt (LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 3
REINFORCING STEEL:

Tension steel:		
fy	60.0	ksi
Es	29000	ksi
f's	24.0	ksi

Stirrups:



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SHEAR/MOMENT ENVELOPE (&REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 3, SERVICE I
 Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	V	81.6	77.4	65.3	49.0	32.6	16.3	0.0
DL-Prec.	M	0.0	45.1	54.6	196.9	350.1	459.5	547.0
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	371.3	449.1	1613.0	2848.9	3707.8	4364.2
LL + :	V	163.4	158.6	157.6	140.8	118.2	95.6	63.9
LL + :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	163.4	158.7	157.7	141.3	120.4	100.5	81.8
LL + :	Vmx	-0.0	366.9	443.2	1558.3	2654.5	3324.9	3606.2
Total :	M+	0.0	1003.9	1214.3	4372.2	7754.3	10146.1	11575.5
Total :	V	378.8	364.9	362.0	313.1	247.4	181.7	107.0
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	378.8	365.1	362.1	313.6	249.6	186.7	124.8
Total :	M	0.0	999.5	1208.4	4317.6	7559.8	9763.2	10964.3

Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	85.40	99.63	113.87	128.10	138.69	139.33	142.33
M	2787.1	2438.7	1858.1	1045.2	289.8	239.6	0.0
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Prec.	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	V	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Max)	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Diaphragm :	M	20.5	41.1	61.6	82.2	97.5	98.4
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	4217.5	3707.8	2848.9	1613.0	449.1	371.3



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Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	63.9	95.6	118.2	140.8	157.6	158.6	163.4
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.	M	81.8	100.5	120.4	141.3	157.7	163.4
DC(Max)	V	3606.2	3324.9	2654.5	1558.3	443.2	366.9
DW(Max)	M	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9
Deck + :	V	107.0	181.7	247.4	313.1	362.0	364.9
Haunch (Max)	M	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	V	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	M	124.8	186.7	249.6	313.6	362.1	365.1
DL-Comp :	M	10964.3	9763.2	7559.8	4317.6	1208.4	999.5
DC(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	0.0	0.0	0.0	0.0	0.0	0.0

REACTIONS (kips), SERVICE I

Lead Type	Left Support	Right Support
Self Wt.	81.6	81.6
Deck+Haunch	102.7	102.7
Diaphragm	0.0	0.0
DL-Prec.(DC)	15.4	15.4
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	94.3	94.3
DL-Comp.(DW)	0.0	0.0
Live	112.8	112.8
Pedestrian	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 3, SERVICE III
 Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	V	81.6	78.2	77.4	65.3	49.0	32.6	16.3
DL-Prec.	M	0.0	45.1	54.6	196.9	350.1	459.5	547.0
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1
DL-Prec.	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Max)	M	102.7	98.4	97.5	82.2	61.6	41.1	20.5
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Total :	M+	0.0	792.2	958.2	3446.5	6101.8	7989.5	9102.6
	V	298.0	287.0	284.6	245.5	192.9	134.1	81.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	29.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	298.0	287.0	284.6	245.5	192.9	140.4	87.8
	M	0.0	792.2	958.2	3446.5	6101.8	7965.8	9038.7
	M							9320.3

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(ft/Max)	V	16.3	32.6	49.0	65.3	77.4	78.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft/Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	98.4
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft/Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft/Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	1744.6	1551.2	1196.4	687.2	193.0	159.7
LL + :	V	38.5	48.0	63.7	73.2	80.2	80.6
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	44.7	54.2	63.7	73.2	80.2	80.6
Total :	Vmx	1680.6	1527.5	1196.4	687.2	193.0	159.7
Total :	M+	9102.6	7989.5	6101.8	3446.5	958.2	792.2
Total :	M-	81.6	134.1	192.9	245.5	284.6	287.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	87.8	140.4	192.9	245.5	284.6	287.0
Total :	M	9038.7	7965.8	6101.8	3446.5	958.2	792.2



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DESIGN SUMMARY

Span: 1, Beam: 3, Interior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	142.33
Release Length,	ft	142.33
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es,	ksi	28500.0
No. of strands:	52	
	Draped:	16
	Straight:	36
Concrete Strength:	f'cd:	6.0* ksi
	f'c:	7.5 ksi
	f'ct:	5.5 ksi
Initial losses:		8.57 %
Final losses:		12.85 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)	3.600	3.572	Trans	OK
Precast Bot (compression)	15.00 %	-0.569	Trans	
Precast Top w/ no reinf. (tension)	-0.232			
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	0.153	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	20009.05	17218.05	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	40.00 %		OK
Max. Debond Total	25.00 %	7.69 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow	Final 1 Comp	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	Stresses Only	3.300	0.607	Midspan	2.475	0.069	Midspan		
Topping Top		4.500	3.594	Midspan	3.375	3.170	Midspan		
Precast Top		4.500	2.857	Transfer	3.375	2.966	Transfer		
Precast Bot									
Service III Limit State - Tensile	Stresses Only	-0.446	-0.000	Bearing					
Topping Top		-0.520	-0.253	Transfer					
Precast Top		-0.520	-0.471	Midspan					
Precast Bot									
Fatigue I Limit State - Compressive	Stresses Only								
Precast Top							3.000	1.756	Midspan
Precast Bot							3.000	1.436	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
 0.5 x L = 71.17 ft

	Release	Multi	Erection	Multi	Final
Prestress	5.849	1.80	10.528	2.20	12.868
Self Wt.	-2.744	1.85	-5.077	2.40	-6.586
Deck + Haunch			-3.090	2.30	-7.108
DL-Prec. (DC)			-0.462	3.00	-1.387
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.187	3.00	-0.561
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	3.105		1.712		-2.774

Positive values indicate upward deflection.



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Date	

PROPERTIES

Span:1, Beam:4
 PRECAST DATA:

Section Id	FIB-78
Type	I-Girder
Flng width	48.000 in
thick	3.000 in
Stems	No 1
Top	7.000 in
Bot	7.000 in
Shear width	7.000 in

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RI	13.52/ 13.52 ft
End LL/RI	13.52/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	-14.15 degrees
End Skew Angle	-14.15 degrees

* Average bridge width
 TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Locallon: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.091	0.000	0.091	142.333	SJP
DC	Line	0.125	0.000	0.125	142.333	Haunch

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:

Area	1100.6 in ²
------	------------------------



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Overall length 142.333 ft
 Release length 142.333 ft
 Design length 142.333 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2.2d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.937	0.604	1.210	0.916
0.1L	0.937	0.604	1.210	0.916
0.2L	0.937	0.604	1.210	0.916
0.3L	0.937	0.604	1.210	0.916
0.4L	0.937	0.604	1.210	0.916
0.5L	0.937	0.604	1.210	0.916
0.6L	0.937	0.604	1.210	0.916
0.7L	0.937	0.604	1.210	0.916
0.8L	0.937	0.604	1.210	0.916
0.9L	0.937	0.604	1.210	0.916
1.0L	0.937	0.604	1.210	0.916

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
------	------------------------



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
		plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.1L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.2L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.3L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.4L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.5L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.6L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.7L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.8L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.9L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
1.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4

(#) Area, Ixx, and Ycg Of Total Section using EcfEc = 0.9563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	in	in	in	in	in	in	in
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Area, in ²	1100.6	1164.1	1164.1	1169.4	1169.4	1169.4	1169.4	1169.4
Yb, in	34.60	33.15	33.14	32.98	32.95	32.87	32.87	32.87
Iy (Ixx), in ⁴	904567	947221	947317	953603	955820	958087	960402	960402
Composite: (At Final, using Ec = 4491.0ksi)								
Area, in ²	2287.2	2342.9	2342.9	2347.5	2347.5	2347.5	2347.5	2347.5
Yb, in	59.75	58.52	58.52	58.40	58.38	58.37	58.35	58.35
Iy (Ixx), in ⁴	2254683	2400613	2400783	2417779	24271612	2425489	2429411	2429411

Span:1, Beam:4
STRESS LIMITS (Art. 5.9.4):
STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00*	



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Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00	%
Max tens	-0.23	ksi
Max tens, Center	-0.93	ksi
Max tens, w/reinf	70.00	%
Max tens, w/reinf	-0.23	ksi
Max tens, w/reinf	-0.59	ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.
STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	7.50	ksi
Elasticity	4490.96	ksi
PRECAST	DECK	ksi
	5.50	
	38.45.83	

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	4.50	ksi
PRECAST	DECK	ksi
	3.30	

STRESS LIMITS AT FINAL 2 (P/S + DL):

Max comp	3.38	ksi
PRECAST	DECK	ksi
	2.47	

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

Max comp	3.00	ksi
PRECAST	DECK	ksi
	3.00	

SERVICE III (Tension):

Max tens	-0.52	ksi
PRECAST	DECK	ksi
	-0.45	

Span:1, Beam:4
PRESTRESSED STEEL:
 52 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (56.93 ft from member end)

END PATTERN (Ycg = 7.69 in):

10 @ 3.000 in	12 @ 5.000 in	10 @ 7.000 in	4 @ 9.000 in
7 @ 11.000 in	5 @ 13.000 in	3 @ 15.000 in	1 @ 17.000 in



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MID PATTERN (Ycg = 5.23 in):

(A) Draped: 7 @ 3,000 in | 5 @ 5,000 in | 3 @ 7,000 in | 1 @ 9,000 in

(B) Straight: 10 @ 3,000 in | 12 @ 5,000 in | 10 @ 7,000 in | 4 @ 9,000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3,000 in	3,000 in	3,000 in	4,000 in		0.00 in	10,000 in	75.0 %	43.9 kips
2B	2	3,000 in	3,000 in	3,000 in	4,000 in		0.00 in	18,000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11,284 in ²
Trans. Len bonded	3,000 ft
Trans. Len debonded	3,000 ft
Dev. Len bonded	11,733 ft
Dev. Len debonded	14,666 ft
Holddown Force	8,232 kips
Tensile Strength (fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 4

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 4
 REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:



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# legs	Size	f _y (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	6.5486	No
2	US#4(M13)	60.0	0.40	12.00	6.5486	25.1535	No
2	US#4(M13)	60.0	0.40	18.00	25.1535	49.7726	No
2	US#4(M13)	60.0	0.40	24.00	49.7726	92.5604	No
2	US#4(M13)	60.0	0.40	18.00	92.5604	117.1795	No
2	US#4(M13)	60.0	0.40	12.00	117.1795	135.7844	No
2	US#4(M13)	60.0	0.40	6.00	135.7844	142.3330	No

LOSSES

Note: Values are calculated at Midspan

Str. area	11,284.0 in ²
Ycg	5.23 in
P_init	2285.0 kips
Ecc	29.37 in
Days to release	0.75
Rel. Humid. (RH)	75.0 %
E _s	28500.0 ksi
E _c	4017 ksi

AASHTO LOSSES

Elastic Shortening ** 17.35 ksi (Eq 5.9.5.2.3a-1). (fcgp = 2.445 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		-9.21 ksi	0.00 ksi
due to Composite Loads		-0.93 ksi	0.00 ksi
due to Live Loads		-5.81 ksi	0.00 ksi

Time Dependent Losses (Approximate Method (Art. 5.9.5.3))

	Initial	Final
Steel relaxation	0.00 ksi	2.40 ksi (Eq 5.9.5.3-1)
Concrete shrinkage	0.00 ksi	8.14 ksi (Eq 5.9.5.3-1)
Concrete creep	0.00 ksi	14.09 ksi (Eq 5.9.5.3-1)
Sub-total	17.35 ksi	8.68 ksi (4.28 %)
Total Prestress Losses		26.02 ksi (12.85 %)

Prestressing Stress Limit Check (Table 5.9.3.1)

initial f_{pi} = 202.5 ksi < 0.75 f_{pu}, OK

initial f_{pe} = 176.5 ksi < 0.80 f_{pu}, OK

** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.



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SHEAR AND MOMENT ENVELOPE (REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 4, SERVICE I

Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	V	81.6	77.4	65.3	49.0	32.6	16.3	0.0
DL-Prec.	M	0.0	45.1	54.6	196.9	350.1	459.5	525.1
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1
DL-Prec.	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	301.7	364.9	1315.9	2339.3	3070.4	3509.0
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	-0.0	371.3	449.1	1613.0	2848.9	3707.8	4217.5
LL + :	V	163.4	158.6	157.6	140.8	118.2	95.6	63.9
LL + :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	163.4	158.7	157.7	141.3	120.4	100.5	81.8
LL + :	Vmx	-0.0	366.9	443.2	1558.3	2654.5	3324.9	3606.2
Total :	M+	0.0	1003.9	1214.3	4372.2	7754.3	10146.1	11575.6
Total :	V	378.8	364.9	362.0	313.1	247.4	181.7	107.0
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	378.8	365.1	362.1	313.6	249.6	186.7	124.8
Total :	M	0.0	999.5	1208.4	4317.6	7559.8	9763.2	10964.3

Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	85.40	99.63	113.87	128.10	138.69	139.33	142.33
M	2787.1	2438.7	1858.1	1045.2	289.8	239.6	0.0
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Prec.	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Prec.	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	98.4
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	4217.5	3707.8	2848.9	1613.0	449.1	371.3



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Location	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
ft	63.9	95.6	118.2	140.8	157.6	158.6	163.4
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.	M	81.8	100.5	120.4	141.3	157.7	163.4
DC(Max)	V	3606.2	3324.9	2654.5	1558.3	443.2	366.9
DL-Prec.	M	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9
DW(Max)	V	107.0	181.7	247.4	313.1	362.0	364.9
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	124.8	186.7	249.6	313.6	362.1	365.1
DC(Max)	V	10964.3	9763.2	7559.8	4317.6	1208.4	999.5
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	0.0	0.0	0.0	0.0	0.0	0.0

REACTIONS (kips), SERVICE I

Lead Type	Left Support	Right Support
Self Wt.	81.6	81.6
Deck+Haunch	102.7	102.7
Diaphragm	0.0	0.0
DL-Prec.(DC)	15.4	15.4
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	94.3	94.3
DL-Comp.(DW)	0.0	0.0
Live	112.8	112.8
Pedestrian	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 4, SERVICE III
 Shears: kips, Moments: kft

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
ft	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	V	81.6	78.2	71.4	65.3	49.0	32.6	16.3
DL-Prec.	M	0.0	45.1	54.6	196.9	350.1	459.5	525.1
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1
DL-Prec.	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	301.7	364.9	1315.9	2339.3	3070.4	3509.0
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspar
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	46.2	55.8	201.3	357.9	469.7	536.9	559.2
DC(Max)	M	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	297.1	359.3	1290.4	2279.1	2966.2	3374.0
LL + I :	M-	130.7	126.9	126.1	112.6	94.5	76.4	51.1
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	130.7	127.0	126.2	113.1	96.3	80.4	65.4
Total :	M	-0.0	293.5	354.5	1246.6	2123.6	2660.0	2827.8
Total :	M+	0.0	929.6	1124.5	4049.7	7184.5	9404.5	11155.9
Total :	V	346.1	333.2	330.4	284.9	223.8	162.6	94.2
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	346.1	333.3	330.6	285.4	225.5	166.6	108.5
Total :	M	0.0	926.2	1119.7	4005.9	7028.9	9098.2	10492.4

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspar
Location,	ft	0.00	3.00	3.65	14.23	28.47	42.70	71.17
Self wt. :	M	0.00	299.5	362.3	1306.4	2322.6	3048.4	3483.9
(Max)	V	102.0	97.7	96.8	81.6	61.2	40.8	20.4
Self wt. :	M	0.00	215.6	260.9	940.6	1672.3	2194.8	2612.9
(Min)	V	73.4	70.3	69.7	58.7	44.1	29.4	14.7
DL-Comp :	M	0.00	56.4	68.3	246.1	437.6	574.3	663.7
DC(Max)	V	19.2	18.4	18.2	15.4	11.5	7.7	3.8
DL-Comp :	M	0.00	40.6	49.1	177.2	315.1	413.5	472.6
DC(Min)	V	13.8	13.3	13.1	11.1	8.3	5.5	2.8
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deck + :	M	0.00	377.1	456.1	1644.8	2924.2	3838.0	4386.2
Haunch (Max)	V	128.4	123.0	121.8	102.7	77.0	51.4	25.7
Deck + :	M	0.00	271.5	328.4	1184.3	2105.4	2763.3	3158.1
Haunch (Min)	V	92.5	88.6	87.7	74.0	55.5	37.0	18.5
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	-0.00	57.7	69.8	251.7	447.4	587.2	671.1
DC(Max)	V	19.6	18.8	18.6	15.7	11.8	7.9	3.9
DL-Comp :	M	-0.00	41.5	50.2	181.2	322.1	422.8	483.2
DC(Min)	V	14.1	13.5	13.4	11.3	8.5	5.7	2.8
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DW(Min)	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	M+	285.9	277.6	275.8	246.4	206.8	167.2	111.8
LL + I :	M-	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
LL + I :	V	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	Vmx	285.9	277.8	276.0	247.3	210.7	175.9	143.1
LL + I :	M	-0.00	642.0	775.6	2727.0	4645.3	5818.7	6310.9
Total :	M+	0.00	1440.6	1742.4	6271.8	11117.3	14536.5	16578.2
Total :	V	555.2	535.5	531.2	461.8	368.3	274.9	165.6
Total :	M-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total :	Vmx	555.2	535.7	531.5	462.7	372.2	283.6	196.9
Total :	M	0.00	1432.8	1732.1	6176.1	10777.0	13866.5	15508.4

SEARS AND MOMENT ENVELOPE : Span : 1, Beam : 4, STRENGTH I
 Shears: kips, Moments: kt

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	139.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Comp :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	102.7
Deck + :	M	0.00	0.00	0.00	0.00	0.00	0.00
Diaphragm :	M	0.00	0.00	0.00	0.00	0.00	0.00
(Max)	V	536.9	469.7	357.9	201.3	55.8	46.2
DL-Comp :	M	3.1	6.3	9.4	12.6	14.9	15.1
DC(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00
DL-Comp :	M	0.00	0.00	0.00	0.00	0.00	0.00
DW(Max)	V	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	M+	3374.0	2966.2	2279.1	1290.4	359.3	297.1
LL + I :	V	51.1	76.4	94.5	112.6	126.1	130.7
LL + I :	M-	0.00	0.00	0.00	0.00	0.00	0.00
LL + I :	Vmx	51.1	76.4	94.5	112.6	126.1	130.7
LL + I :	M	65.4	80.4	96.3	113.1	126.2	127.0
Total :	M	2885.0	2660.0	2123.6	1246.6	354.5	293.5
Total :	M+	10732.0	9404.5	7184.5	4049.6	1124.5	929.6
Total :	V	94.2	162.6	223.8	284.9	330.4	333.2
Total :	M-	0.00	0.00	0.00	0.00	0.00	0.00
Total :	Vmx	108.5	166.6	225.5	285.4	330.6	333.3
Total :	M	10243.0	9098.2	7028.9	4005.9	1119.7	926.1

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	139.33
Self wt. :	M	3483.9	3048.4	2322.6	1306.4	362.3	299.5
(Max)	V	20.4	40.8	61.2	81.6	96.8	102.0
Self wt. :	M	2508.4	2194.8	1672.3	940.6	260.9	215.6

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	139.33
Self wt. :	M	3483.9	3048.4	2322.6	1306.4	362.3	299.5
(Max)	V	20.4	40.8	61.2	81.6	96.8	102.0
Self wt. :	M	2508.4	2194.8	1672.3	940.6	260.9	215.6

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	139.33
Self wt. :	M	3483.9	3048.4	2322.6	1306.4	362.3	299.5
(Max)	V	20.4	40.8	61.2	81.6	96.8	102.0
Self wt. :	M	2508.4	2194.8	1672.3	940.6	260.9	215.6



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Load Type	Left Support	Right Support
Pedestrian	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 4, FATIGUE I
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	ft							
Self wt. :	M	0.0	3.00	14.23	28.47	42.70	56.93	71.17
(Max)	V	81.6	239.6	289.8	1045.2	1858.1	2438.7	2903.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	45.1	54.6	196.9	350.1	459.5	525.1
DC(Max)	V	15.4	14.7	14.6	12.3	9.2	6.1	3.1
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	301.7	364.9	1315.9	2339.3	3070.4	3509.0
Haunch (Max)	V	102.7	98.4	97.5	82.2	61.6	41.1	20.5
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DC(Min)	V	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	0.0	159.7	193.0	687.2	1196.4	1551.2	1744.6
LL + I :	M-	82.6	80.6	80.2	73.2	63.7	48.0	38.5
LL + I :	Vmx	82.6	80.6	80.2	73.2	63.7	54.2	44.7
LL + I :	M	0.0	159.7	193.0	687.2	1196.4	1527.5	1680.6

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	102.0	102.0
Deck+Haunch	128.4	128.4
Diaphragm	0.0	0.0
DL-Prec(DC)	19.2	19.2
DL-Prec(DW)	0.0	0.0
DL-Comp(DC)	117.9	117.9
DL-Comp(DW)	0.0	0.0
Live	197.4	197.4



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Total :	M+	0.0	792.2	958.2	3446.5	6101.8	7989.5	9102.6
	V	298.0	287.0	284.6	245.5	192.9	134.1	81.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	298.0	287.0	284.6	245.5	192.9	140.4	87.8
	M	0.0	792.2	958.2	3446.5	6101.8	7965.8	9038.7
	M							9320.3

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	78.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	98.4
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	1744.6	1551.2	1196.4	687.2	193.0	159.7
LL + :	V	38.5	48.0	63.7	73.2	80.2	80.6
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	Vmx	44.7	54.2	63.7	73.2	80.2	80.6
Total :	M	1680.6	1527.5	1196.4	687.2	193.0	159.7
Total :	M+	9102.6	7989.5	6101.8	3446.5	958.2	792.2
Total :	M-	81.6	134.1	192.9	245.5	284.6	287.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	87.8	140.4	192.9	245.5	284.6	287.0
Total :	M	9038.7	7965.8	6101.8	3446.5	958.2	792.2



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Total :	M+	0.0	792.2	958.2	3446.5	6101.8	7989.5	9102.6
	V	298.0	287.0	284.6	245.5	192.9	134.1	81.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	298.0	287.0	284.6	245.5	192.9	140.4	87.8
	M	0.0	792.2	958.2	3446.5	6101.8	7965.8	9038.7
	M							9320.3

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	78.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	98.4
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	1744.6	1551.2	1196.4	687.2	193.0	159.7
LL + :	V	38.5	48.0	63.7	73.2	80.2	80.6
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	Vmx	44.7	54.2	63.7	73.2	80.2	80.6
Total :	M	1680.6	1527.5	1196.4	687.2	193.0	159.7
Total :	M+	9102.6	7989.5	6101.8	3446.5	958.2	792.2
Total :	M-	81.6	134.1	192.9	245.5	284.6	287.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	87.8	140.4	192.9	245.5	284.6	287.0
Total :	M	9038.7	7965.8	6101.8	3446.5	958.2	792.2

Units: U.S. Units

Design Code: AASHTO LRFD

Printed on: September 10, 2014 @ 5:08 P.M.

Units: U.S. Units

Design Code: AASHTO LRFD

Printed on: September 10, 2014 @ 5:08 P.M.



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DESIGN SUMMARY

Span: 1, Beam: 4, Interior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	142.33
Release Length,	ft	142.33
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es,	ksi:	28500.0
No. of strands:	52	
	Draped:	16
	Straight:	36
Concrete Strength:	f'cd:	6.0* ksi
	f'c:	7.5 ksi
	f'ct:	5.5 ksi
Initial losses:		8.57 %
Final losses:		12.85 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)	3.600	3.572	Trans	OK
Precast Bot (compression)	15.00 %	-0.232		
Precast Top w/ no reinf. (tension)	-0.929	-0.569	Trans	
Precast Top w/ reinf. (tension)	70.00 %			
Center	-0.232	0.153	0.2L/0.8L	
Precast Top w/ no reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	20009.05	17218.05	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	40.00 %		OK
Max. Debond Total	25.00 %	7.69 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow	Final 1 Comp	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	Stresses Only	3.300	0.607	Midspan	2.475	0.069	Midspan		
Topping Top		4.500	3.594	Midspan	3.375	3.170	Midspan		
Precast Top		4.500	2.857	Transfer	3.375	2.966	Transfer		
Precast Bot									
Service III Limit State - Tensile	Stresses Only	-0.446	0.000	Bearing					
Topping Top		-0.520	-0.253	Transfer					
Precast Top		-0.520	-0.471	Midspan					
Precast Bot									
Fatigue I Limit State - Compressive	Stresses Only								
Precast Top							3.000	1.756	Midspan
Precast Bot							3.000	1.436	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
 0.5 x L = 71.17 ft

	Release	Multi	Erection	Multi	Final
Prestress	5.849	1.80	10.528	2.20	12.868
Self Wt.	-2.744	1.85	-5.077	2.40	-6.586
Deck + Haunch			-3.090	2.30	-7.108
DL-Prec. (DC)			-0.462	3.00	-1.387
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.187	3.00	-0.561
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	3.105		1.712		-2.774

Positive values indicate upward deflection.



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Overall length	142.333 ft
Release length	142.333 ft
Design length	142.333 ft

KERN POINTS:

Upper	58.35 in
Lower	15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2d): YES

Location	+ve Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane
0.0L	0.937	0.604	1.210	0.916
0.1L	0.937	0.604	1.210	0.916
0.2L	0.937	0.604	1.210	0.916
0.3L	0.937	0.604	1.210	0.916
0.4L	0.937	0.604	1.210	0.916
0.5L	0.937	0.604	1.210	0.916
0.6L	0.937	0.604	1.210	0.916
0.7L	0.937	0.604	1.210	0.916
0.8L	0.937	0.604	1.210	0.916
0.9L	0.937	0.604	1.210	0.916
1.0L	0.937	0.604	1.210	0.916

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	
Compression controlled sections	0.75
Tension controlled sections	0.90
Flexure Prestressed	
Compression controlled sections	0.75
Tension controlled sections	1.00
Shear	0.90

PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
------	------------------------



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PROPERTIES

Span:1, Beam:5

PRECAST DATA:

Section Id	FIB-78
Type	I-Girder
Flng width	48.000 in
thick	3.000 in
Stems	No 1
Top	7.000 in
Bot	7.000 in
Shear width	7.000 in

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RI	13.52/ 13.52 ft
End LL/RI	13.52/ 13.52 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Interior
Start Skew Angle	-14.15 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1.000 in
Width	48.000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Local: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Line	0.091	0.000	0.091	142.333	SJP
DC	Line	0.125	0.000	0.125	142.333	Haunch

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:



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Total Height	78.00 in
Mom. of inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
		plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.1L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.2L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.3L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.4L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.5L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.6L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.7L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.8L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
0.9L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4
1.0L	75.08	2589.9	2287.22	87.5	2254683	59.75	150.0	157.4

(#) Area, Ixx, and Ycg Of Total Section using EcfEc = 0.9563
 Use transformed strand and rebar: Strand Only

Location	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
	ft	in	in	in	in	in	in	in
Precast: (At Release, using Ec = 4016.8ksi)	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Area, in ²	1100.6	1164.1	1164.1	1169.4	1169.4	1169.4	1169.4	1169.4
Yb, in	34.60	33.15	33.14	32.98	32.95	32.87	32.87	32.87
Iy (Ixx), in ⁴	904567	947221	947317	953603	955820	958087	960402	960402
Composite: (At Final, using Ec = 4491.0ksi)								
Area, in ²	2287.2	2342.9	2342.9	2347.5	2347.5	2347.5	2347.5	2347.5
Yb, in	59.75	58.52	58.52	58.40	58.38	58.37	58.35	58.35
Iy (Ixx), in ⁴	2254683	2400613	2400783	2417779	24271612	2425489	2429411	2429411

Span:1, Beam:5
 STRESS LIMITS (Art. 5.9.4):
 STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):

Strength	PRECAST	ksi
	6.00*	



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Elasticity	4016.8	ksi
Max comp	3.60	ksi
Outer	15.00	%
Max tens	-0.23	ksi
Max tens, Center	-0.93	ksi
Max tens, w/reinf	70.00	%
Max tens, w/reinf	-0.23	ksi
Max tens, w/reinf	-0.59	ksi

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.
 STRESS LIMITS AT FINAL AFTER LOSSES:

Strength	7.50	ksi
Elasticity	4490.96	ksi
PRECAST	DECK	ksi
	38.45.83	

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

Max comp	4.50	ksi
PRECAST	DECK	ksi
	3.30	

STRESS LIMITS AT FINAL 2 (P/S + DL):

Max comp	3.38	ksi
PRECAST	DECK	ksi
	2.47	

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

Max comp	3.00	ksi
PRECAST	DECK	ksi

SERVICE III (Tension):

Max tens	-0.52	ksi
PRECAST	DECK	ksi
	-0.45	

Span:1, Beam:5
 PRESTRESSED STEEL:
 52 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (56.93 ft from member end)

END PATTERN (Ycg = 7.69 in):

10 @ 3.000 in	12 @ 5.000 in	10 @ 7.000 in	4 @ 9.000 in
7 @ 11.000 in	5 @ 13.000 in	3 @ 15.000 in	1 @ 17.000 in



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MID PATTERN (Ycg = 5.23 in):
 (A) Draped:

7 @ 3.000 in | 5 @ 5.000 in | 3 @ 7.000 in | 1 @ 9.000 in

(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Mid	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips
28	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11.284 in ²
Trans. Len bonded	3.000 ft
Trans. Len debonded	3.000 ft
Dev. Len bonded	11.733 ft
Dev. Len debonded	14.666 ft
Holddown Force	8.232 kips
Tensile Strength (fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 5

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 5
 REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:



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MID PATTERN (Ycg = 5.23 in):
 (A) Draped:

7 @ 3.000 in | 5 @ 5.000 in | 3 @ 7.000 in | 1 @ 9.000 in

(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Mid	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips
28	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11.284 in ²
Trans. Len bonded	3.000 ft
Trans. Len debonded	3.000 ft
Dev. Len bonded	11.733 ft
Dev. Len debonded	14.666 ft
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Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 5

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 5
 REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:



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MID PATTERN (Ycg = 5.23 in):
 (A) Draped:

7 @ 3.000 in | 5 @ 5.000 in | 3 @ 7.000 in | 1 @ 9.000 in

(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Mid	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips
28	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11.284 in ²
Trans. Len bonded	3.000 ft
Trans. Len debonded	3.000 ft
Dev. Len bonded	11.733 ft
Dev. Len debonded	14.666 ft
Holddown Force	8.232 kips
Tensile Strength (fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 5

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 5
 REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:



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MID PATTERN (Ycg = 5.23 in):
 (A) Draped:

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(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Mid	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips
28	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11.284 in ²
Trans. Len bonded	3.000 ft
Trans. Len debonded	3.000 ft
Dev. Len bonded	11.733 ft
Dev. Len debonded	14.666 ft
Holddown Force	8.232 kips
Tensile Strength (fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 5

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 5
 REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:



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MID PATTERN (Ycg = 5.23 in):
 (A) Draped:

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(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Mid	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips
28	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11.284 in ²
Trans. Len bonded	3.000 ft
Trans. Len debonded	3.000 ft
Dev. Len bonded	11.733 ft
Dev. Len debonded	14.666 ft
Holddown Force	8.232 kips
Tensile Strength (fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 5

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.441	740	5477.066	40.291	163179.203	1017.554	0.000

Span: 1, Beam: 5
 REINFORCING STEEL:

Tension steel:	
f _y	60.0 ksi
E _s	29000 ksi
f _s	24.0 ksi

Stirrups:



Program: LEAP® CONSPAN® V8i (SELECTseries 5)
 Version: 12.01.00.57
 File Name: Span12EB_ModifiedSpacing.csl

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Designed KSM
 Date Sept/9/2013
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Sheet # 6
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MID PATTERN (Ycg = 5.23 in):
 (A) Draped:

7 @ 3.000 in | 5 @ 5.000 in | 3 @ 7.000 in | 1 @ 9.000 in

(B) Straight:

10 @ 3.000 in | 12 @ 5.000 in | 10 @ 7.000 in | 4 @ 9.000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Mid	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull
1	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	10.000 in	75.0 %	43.9 kips
28	2	3.000 in	3.000 in	3.000 in	3.000 in	4.00 ft		0.00 ft	18.000 in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600 in
Strand Area	0.217 in ²
Total Strand Area	11.284 in ²
Trans. Len bonded	3.000 ft
Trans. Len debonded	3.000 ft
Dev. Len bonded	11.733 ft
Dev. Len debonded	14.666 ft
Holddown Force	8.232 kips
Tensile Strength (fpu)	270.0 ksi
Initial Prestress = 0.75fpu	202.5 ksi
Initial Pull	2285.0 kips
Beam Shring (PL/AE)	0.835 in

Span: 1, Beam: 5

ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	(LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
7401.						



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Sheet #	7
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Span 12EB - Modified Spacing

Location	0.60L	0.70L	0.80L	0.90L	1.0L	0.20L	0.30L	0.40L	Midspan
LL + I:	63.9	95.6	118.2	140.8	157.6	158.6	158.6	158.6	163.4
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	81.8	100.5	120.4	141.3	157.7	158.7	158.7	158.7	163.4
Total:	3606.2	3324.9	2654.5	1558.3	443.2	366.9	366.9	366.9	-0.0
M+	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	1003.9	1003.9	0.0
V:	107.0	181.7	247.4	313.1	362.0	364.9	364.9	364.9	378.8
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	124.8	186.7	249.6	313.6	362.1	365.1	365.1	365.1	378.8
Total:	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	999.5	999.5	0.0

REACTIONS (kips), SERVICE I

Lead Type	Left Support	Right Support
Self Wt.	81.6	81.6
Deck+Haunch	102.7	102.7
Diaphragm	0.0	0.0
DL-Prec.(DC)	15.4	15.4
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	94.3	94.3
DL-Comp.(DW)	0.0	0.0
Live	112.8	112.8
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

REACTIONS (kips), SERVICE II

Lead Type	Left Support	Right Support
Self Wt.	81.6	81.6
Deck+Haunch	102.7	102.7
Diaphragm	0.0	0.0
DL-Prec.(DC)	15.4	15.4
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	94.3	94.3
DL-Comp.(DW)	0.0	0.0
Live	112.8	112.8
Pedestrian	0.0	0.0

REACTIONS (kips), SERVICE III

Location	0.60L	0.70L	0.80L	0.90L	1.0L	0.20L	0.30L	0.40L	Midspan
LL + I:	63.9	95.6	118.2	140.8	157.6	158.6	158.6	158.6	163.4
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	81.8	100.5	120.4	141.3	157.7	158.7	158.7	158.7	163.4
Total:	3606.2	3324.9	2654.5	1558.3	443.2	366.9	366.9	366.9	-0.0
M+	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	1003.9	1003.9	0.0
V:	107.0	181.7	247.4	313.1	362.0	364.9	364.9	364.9	378.8
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	124.8	186.7	249.6	313.6	362.1	365.1	365.1	365.1	378.8
Total:	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	999.5	999.5	0.0

REACTIONS (kips), SERVICE IV

Location	0.60L	0.70L	0.80L	0.90L	1.0L	0.20L	0.30L	0.40L	Midspan
LL + I:	63.9	95.6	118.2	140.8	157.6	158.6	158.6	158.6	163.4
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	81.8	100.5	120.4	141.3	157.7	158.7	158.7	158.7	163.4
Total:	3606.2	3324.9	2654.5	1558.3	443.2	366.9	366.9	366.9	-0.0
M+	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	1003.9	1003.9	0.0
V:	107.0	181.7	247.4	313.1	362.0	364.9	364.9	364.9	378.8
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	124.8	186.7	249.6	313.6	362.1	365.1	365.1	365.1	378.8
Total:	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	999.5	999.5	0.0

REACTIONS (kips), SERVICE V

Location	0.60L	0.70L	0.80L	0.90L	1.0L	0.20L	0.30L	0.40L	Midspan
LL + I:	63.9	95.6	118.2	140.8	157.6	158.6	158.6	158.6	163.4
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	81.8	100.5	120.4	141.3	157.7	158.7	158.7	158.7	163.4
Total:	3606.2	3324.9	2654.5	1558.3	443.2	366.9	366.9	366.9	-0.0
M+	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	1003.9	1003.9	0.0
V:	107.0	181.7	247.4	313.1	362.0	364.9	364.9	364.9	378.8
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	124.8	186.7	249.6	313.6	362.1	365.1	365.1	365.1	378.8
Total:	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	999.5	999.5	0.0



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Span 12EB - Modified Spacing

REACTIONS (kips), SERVICE I

Lead Type	Left Support	Right Support
Self Wt.	81.6	81.6
Deck+Haunch	102.7	102.7
Diaphragm	0.0	0.0
DL-Prec.(DC)	15.4	15.4
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	94.3	94.3
DL-Comp.(DW)	0.0	0.0
Live	112.8	112.8
Pedestrian	0.0	0.0

Upward reactions are positive.
Live Load reactions are per lane with no distribution factor and no impact.
Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
Non-composite load types are per beam.
Composite and Pedestrian load types are per total bridge width.

REACTIONS (kips), SERVICE II

Location	0.60L	0.70L	0.80L	0.90L	1.0L	0.20L	0.30L	0.40L	Midspan
LL + I:	63.9	95.6	118.2	140.8	157.6	158.6	158.6	158.6	163.4
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	81.8	100.5	120.4	141.3	157.7	158.7	158.7	158.7	163.4
Total:	3606.2	3324.9	2654.5	1558.3	443.2	366.9	366.9	366.9	-0.0
M+	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	1003.9	1003.9	0.0
V:	107.0	181.7	247.4	313.1	362.0	364.9	364.9	364.9	378.8
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	124.8	186.7	249.6	313.6	362.1	365.1	365.1	365.1	378.8
Total:	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	999.5	999.5	0.0

REACTIONS (kips), SERVICE III

Location	0.60L	0.70L	0.80L	0.90L	1.0L	0.20L	0.30L	0.40L	Midspan
LL + I:	63.9	95.6	118.2	140.8	157.6	158.6	158.6	158.6	163.4
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	81.8	100.5	120.4	141.3	157.7	158.7	158.7	158.7	163.4
Total:	3606.2	3324.9	2654.5	1558.3	443.2	366.9	366.9	366.9	-0.0
M+	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	1003.9	1003.9	0.0
V:	107.0	181.7	247.4	313.1	362.0	364.9	364.9	364.9	378.8
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	124.8	186.7	249.6	313.6	362.1	365.1	365.1	365.1	378.8
Total:	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	999.5	999.5	0.0

REACTIONS (kips), SERVICE IV

Location	0.60L	0.70L	0.80L	0.90L	1.0L	0.20L	0.30L	0.40L	Midspan
LL + I:	63.9	95.6	118.2	140.8	157.6	158.6	158.6	158.6	163.4
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	81.8	100.5	120.4	141.3	157.7	158.7	158.7	158.7	163.4
Total:	3606.2	3324.9	2654.5	1558.3	443.2	366.9	366.9	366.9	-0.0
M+	11575.5	10146.1	7754.3	4372.2	1214.3	1003.9	1003.9	1003.9	0.0
V:	107.0	181.7	247.4	313.1	362.0	364.9	364.9	364.9	378.8
M:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	124.8	186.7	249.6	313.6	362.1	365.1	365.1	365.1	378.8
Total:	10964.3	9763.2	7559.8	4317.6	1208.4	999.5	999.5	999.5	0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	46.2	55.8	201.3	357.9	469.7	536.9	559.2
DC(Max)	M	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	297.1	359.3	1290.4	2279.1	2966.2	3374.0
LL + I :	M-	130.7	126.9	126.1	112.6	94.5	76.4	51.1
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	130.7	127.0	126.2	113.1	96.3	80.4	65.4
Total :	M	-0.0	293.5	354.5	1246.6	2123.6	2660.0	2885.0
Total :	M+	0.0	929.6	1124.5	4049.7	7184.5	9404.5	11155.9
Total :	V	346.1	333.2	330.4	284.9	223.8	162.6	94.2
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	346.1	333.3	330.6	285.4	225.5	166.6	108.5
Total :	M	0.0	926.2	1119.7	4005.9	7028.9	9098.2	10492.4

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location :	85.40	99.63	113.87	128.10	138.69	139.33	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	102.7
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	536.9	469.7	357.9	201.3	55.8	46.2
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	3374.0	2966.2	2279.1	1290.4	359.3	297.1
LL + I :	V	51.1	76.4	94.5	112.6	126.1	130.7
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	65.4	80.4	96.3	113.1	126.2	130.7
Total :	M	2885.0	2660.0	2123.6	1246.6	354.5	293.5
Total :	M+	10732.0	9404.5	7184.5	4049.6	1124.5	929.6
Total :	V	94.2	162.6	223.8	284.9	330.4	336.1
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	108.5	166.6	202.5	285.4	330.6	333.3
Total :	M	10243.0	9098.2	7028.9	4005.9	1119.7	926.1

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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	46.2	55.8	201.3	357.9	469.7	536.9	559.2
DC(Max)	M	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	297.1	359.3	1290.4	2279.1	2966.2	3374.0
LL + I :	M-	130.7	126.9	126.1	112.6	94.5	76.4	51.1
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	130.7	127.0	126.2	113.1	96.3	80.4	65.4
Total :	M	-0.0	293.5	354.5	1246.6	2123.6	2660.0	2885.0
Total :	M+	0.0	929.6	1124.5	4049.7	7184.5	9404.5	11155.9
Total :	V	346.1	333.2	330.4	284.9	223.8	162.6	94.2
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	346.1	333.3	330.6	285.4	225.5	166.6	108.5
Total :	M	0.0	926.2	1119.7	4005.9	7028.9	9098.2	10492.4

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location :	85.40	99.63	113.87	128.10	138.69	139.33	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	102.7
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	536.9	469.7	357.9	201.3	55.8	46.2
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	3374.0	2966.2	2279.1	1290.4	359.3	297.1
LL + I :	V	51.1	76.4	94.5	112.6	126.1	130.7
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	65.4	80.4	96.3	113.1	126.2	130.7
Total :	M	2885.0	2660.0	2123.6	1246.6	354.5	293.5
Total :	M+	10732.0	9404.5	7184.5	4049.6	1124.5	929.6
Total :	V	94.2	162.6	223.8	284.9	330.4	336.1
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	108.5	166.6	202.5	285.4	330.6	333.3
Total :	M	10243.0	9098.2	7028.9	4005.9	1119.7	926.1

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Sheet # 10
 Job #
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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	46.2	55.8	201.3	357.9	469.7	536.9	559.2
DC(Max)	M	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	297.1	359.3	1290.4	2279.1	2966.2	3374.0
LL + I :	M-	130.7	126.9	126.1	112.6	94.5	76.4	51.1
LL + I :	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	130.7	127.0	126.2	113.1	96.3	80.4	65.4
Total :	M	-0.0	293.5	354.5	1246.6	2123.6	2660.0	2885.0
Total :	M+	0.0	929.6	1124.5	4049.7	7184.5	9404.5	11155.9
Total :	V	346.1	333.2	330.4	284.9	223.8	162.6	94.2
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	346.1	333.3	330.6	285.4	225.5	166.6	108.5
Total :	M	0.0	926.2	1119.7	4005.9	7028.9	9098.2	10492.4

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location :	85.40	99.63	113.87	128.10	138.69	139.33	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	102.7
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	536.9	469.7	357.9	201.3	55.8	46.2
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	3374.0	2966.2	2279.1	1290.4	359.3	297.1
LL + I :	V	51.1	76.4	94.5	112.6	126.1	130.7
LL + I :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	Vmx	65.4	80.4	96.3	113.1	126.2	130.7
Total :	M	2885.0	2660.0	2123.6	1246.6	354.5	293.5
Total :	M+	10732.0	9404.5	7184.5	4049.6	1124.5	929.6
Total :	V	94.2	162.6	223.8	284.9	330.4	336.1
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	108.5	166.6	202.5	285.4	330.6	333.3
Total :	M	10243.0	9098.2	7028.9	4005.9	1119.7	926.1

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File Name: Span12EB_ModifiedSpacing.csl

Span 12EB

Modified Spacing

cs1

Left Support

Right Support

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Sheet # 11

Job #

Designed KSM

Date Sept/9/2013

Checked

Date



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File Name: Span12EB_ModifiedSpacing.csl

Span 12EB

Modified Spacing

cs1

Left Support

Right Support

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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
(Min)	14.7	29.4	44.1	58.7	69.7	70.3	73.4
DL-Prec :	656.4	574.3	437.6	246.1	68.3	56.4	-0.0
DC(Max)	3.8	7.7	11.5	15.4	18.2	18.4	19.2
DL-Prec :	472.6	413.5	315.1	177.2	49.1	40.6	-0.0
DC(Min)	2.8	5.5	8.3	11.1	13.1	13.3	13.8
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	4386.2	3838.0	2924.2	1644.8	456.1	377.1	0.0
Haunch (Max)	25.7	51.4	77.0	102.7	121.8	123.0	128.4
Deck + :	3158.1	2763.3	2105.4	1184.3	328.4	271.5	0.0
Haunch (Min)	18.5	37.0	55.5	74.0	87.7	88.6	92.5
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	671.1	587.2	447.4	251.7	69.8	57.7	0.0
DC(Max)	3.9	7.9	11.8	15.7	18.6	18.8	19.6
DL-Comp :	483.2	422.8	322.1	181.2	50.2	41.5	0.0
DC(Min)	2.8	5.7	8.5	11.3	13.4	13.5	14.1
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	7380.7	6488.6	4985.6	2822.7	785.9	649.8	-0.0
LL + I :	111.8	167.2	206.8	246.4	275.8	277.6	285.9
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	143.1	175.9	210.7	247.3	276.0	277.8	285.9
M	6310.9	5818.7	4645.3	2727.0	775.6	642.0	-0.0
Total :	16578.2	14536.5	11117.3	6271.8	1742.4	1440.6	0.0
Total :	165.6	274.9	368.3	461.8	531.2	535.5	555.2
Total :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	196.9	283.6	372.2	462.7	531.5	535.7	555.2
Total :	15508.4	13866.5	10777.0	6176.1	1732.1	1432.8	0.0

REACTIONS (kips), STRENGTH I

Load Type	Left Support	Right Support
Self Wt.	102.0	102.0
Deck+Haunch	128.4	128.4
Diaphragm	0.0	0.0
DL-Prec (DC)	19.2	19.2
DL-Prec (DW)	0.0	0.0
DL-Comp (DC)	117.9	117.9
DL-Comp (DW)	0.0	0.0
Live	197.4	197.4

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 5, FATIGUE I
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Self wt. :	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	81.6	78.2	77.4	65.3	49.0	32.6	16.3	0.0
Self wt. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	45.1	54.6	196.9	350.1	459.5	525.1	547.0
DC(Max)	15.4	14.7	14.6	12.3	9.2	6.1	3.1	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	0.0	301.7	364.9	1315.9	2339.3	3070.4	3509.0	3655.2
Haunch (Max)	102.7	98.4	97.5	82.2	61.6	41.1	20.5	0.0
Deck + :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	-0.0	46.2	55.8	201.3	357.9	469.7	536.9	559.2
DC(Max)	15.7	15.1	14.9	12.6	9.4	6.3	3.1	0.0
DL-Comp :	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	0.0	159.7	193.0	687.2	1196.4	1551.2	1744.6	1759.9
LL + I :	82.6	80.6	80.2	73.2	63.7	48.0	38.5</	



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Sheet # 13

Job #

Designed KSM

Date Sept/9/2013

Checked

Date

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Total :	M+	0.0	792.2	958.2	3446.5	6101.8	7989.5	9102.6
	V	298.0	287.0	284.6	245.5	192.9	134.1	81.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	298.0	287.0	284.6	245.5	192.9	140.4	87.8
	M	0.0	792.2	958.2	3446.5	6101.8	7965.8	9038.7
	M							9320.3

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(ft)Max	V	16.3	32.6	49.0	65.3	77.4	78.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Min	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	98.4
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Max	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Min	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	1744.6	1551.2	1196.4	687.2	193.0	159.7
LL + :	V	38.5	48.0	63.7	73.2	80.2	80.6
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	44.7	54.2	63.7	73.2	80.2	80.6
Vmx	V	1680.6	1527.5	1196.4	687.2	193.0	159.7
Total :	M+	9102.6	7989.5	6101.8	3446.5	958.2	792.2
Total :	V	81.6	134.1	192.9	245.5	284.6	287.0
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	87.8	140.4	192.9	245.5	284.6	287.0
	M	9038.7	7965.8	6101.8	3446.5	958.2	792.2
	M						0.0



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Sheet # 14

Job #

Designed KSM

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Date

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Total :	M+	0.0	792.2	958.2	3446.5	6101.8	7989.5	9102.6
	V	298.0	287.0	284.6	245.5	192.9	134.1	81.6
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	298.0	287.0	284.6	245.5	192.9	140.4	87.8
	M	0.0	792.2	958.2	3446.5	6101.8	7965.8	9038.7
	M							9320.3

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt. :	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(ft)Max	V	16.3	32.6	49.0	65.3	77.4	78.2
Self wt. :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Min	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	525.1	459.5	350.1	196.9	54.6	45.1
DC(Max)	V	3.1	6.1	9.2	12.3	14.6	14.7
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3509.0	3070.4	2339.3	1315.9	364.9	301.7
Haunch (Max)	V	20.5	41.1	61.6	82.2	97.5	98.4
Deck + :	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Max	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(ft)Min	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M+	1744.6	1551.2	1196.4	687.2	193.0	159.7
LL + :	V	38.5	48.0	63.7	73.2	80.2	80.6
LL + :	M-	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + :	M	44.7	54.2	63.7	73.2	80.2	80.6
Vmx	V	1680.6	1527.5	1196.4	687.2	193.0	159.7
Total :	M+	9102.6	7989.5	6101.8	3446.5	958.2	792.2
Total :	V	81.6	134.1	192.9	245.5	284.6	287.0
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0
Total :	V	0.0	0.0	0.0	0.0	0.0	0.0
Total :	M	87.8	140.4	192.9	245.5	284.6	287.0
	M	9038.7	7965.8	6101.8	3446.5	958.2	792.2
	M						0.0



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DESIGN SUMMARY

Span: 1, Beam: 5, Interior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	142.33
Release Length,	ft	142.33
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es,	ksi:	28500.0
No. of strands:	52	
	Draped:	16
	Straight:	36
Concrete Strength:	f'cd:	6.0* ksi
	f'c:	7.5 ksi
	f'ct:	5.5 ksi
Initial losses:		8.57 %
Final losses:		12.85 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)	3.600	3.572	Trans	OK
Precast Bot (compression)	15.00 %	-0.232		
Precast Top w/ no reinf. (tension)	-0.929	-0.569	Trans	
Precast Top w/ reinf. (tension)	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	0.153	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	20009.05	17218.05	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	40.00 %		OK
Max. Debond Total	25.00 %	7.69 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow	Final 1 Comp	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	Stresses Only	3.300	0.607	Midspan	2.475	0.069	Midspan		
Topping Top		4.500	3.594	Midspan	3.375	3.170	Midspan		
Precast Top		4.500	2.857	Transfer	3.375	2.966	Transfer		
Precast Bot									
Service III Limit State - Tensile	Stresses Only	-0.446	0.000	Bearing					
Topping Top		-0.520	-0.253	Transfer					
Precast Top		-0.520	-0.471	Midspan					
Precast Bot									
Fatigue I Limit State - Compressive	Stresses Only								
Precast Top							3.000	1.756	Midspan
Precast Bot							3.000	1.436	Transfer

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
 0.5 x L = 71.17 ft

	Release	Multi	Erection	Multi	Final
Prestress	5.849	1.80	10.528	2.20	12.868
Self Wt.	-2.744	1.85	-5.077	2.40	-6.586
Deck + Haunch			-3.090	2.30	-7.108
DL-Prec. (DC)			-0.462	3.00	-1.387
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.187	3.00	-0.561
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	3.105		1.712		-2.774

Positive values indicate upward deflection.



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PROPERTIES

Span:1, Beam:6

PRECAST DATA:

Section Id	FIB-78	Top	48,000 in	Bot	38,000 in
Type	I-Girder	Top	3,000 in	Bot	7,000 in
Fling width		thick			
Stems	No	1			
	Top	7,000 in			
	Bot	7,000 in			
Shear width					

Minimum Thickness Criteria, Article 5.14.1.2.2 checked: OK.

GENERAL BRIDGE DATA:

Bridge Width*	75.08 ft
Curb-to-curb*	72.00 ft
Beam Spac. Start LL/RI	13.52/ 12.51 ft
End LL/RI	13.52/ 12.51 ft
Lane width	12.00 ft
Number of lanes	4
Interior/Exterior	Exterior
Start Skew Angle	-14.15 degrees
End Skew Angle	-14.15 degrees

* Average bridge width

TOPPING DATA:

Deck Thickness	8.500 in
Haunch Thickness	1,000 in
Width	48,000 in

GENERAL LOAD DATA:

DEAD LOADS ON PRECAST

UNITS: (Point: kips, Localion: ft, Line: klf, Trapez: klf)

DC/DW	Type	Mag.1	Loc.1	Mag.2	Loc.2	Description
DC	Point	0.182	0.000	.	.	SJP
DC	Point	0.125	0.000	.	.	Haunch

Dead loads on composite: See Project Info for composite loads

GENERAL SPAN DATA:



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Overall length 142.333 ft

Release length 142.333 ft

Design length 142.333 ft

KERN POINTS:

Upper 58.35 in

Lower 15.66 in

DISTRIBUTION FACTORS (Art. 4.6.2.2):

Type k, with deck

Include Rigid Cross Section Assumption (Art. 4.6.2.2.d): YES

Location	+ve		Moment		Shear	
	2+Lane	1Lane	2+Lane	1Lane	2+Lane	1Lane
0.0L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.1L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.2L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.3L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.4L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.5L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.6L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.7L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.8L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
0.9L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)
1.0L	1.050	1.037(#)	1.121	1.071(#)	1.121	1.071(#)

(#) Lever rule (C4.6.2.2.1)

Pedestrian	0.167 (Calculated)
Comp. DC	0.167 (Calculated)
Comp. DW	0.167 (Calculated)

Dead Loads and Pedestrian Load distributed equally to all beams (Art. 4.6.2.2.1)

RESISTANCE FACTORS (Art. 5.5.4.2):

Flexure Reinforced	0.75
Compression controlled sections	0.90
Tension controlled sections	
Flexure Prestressed	0.75
Compression controlled sections	1.00
Tension controlled sections	
Shear	0.90



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PRECAST SECTION PROPERTIES:

Area	1100.6 in ²
Total Height	78.00 in
Mom. of Inertia (Ixx)	904567 in ⁴
Ht. of c.g.	34.60 in
Density	150.00 pcf
Self-weight	1146.5 plf
Mom. of Inertia (Iyy)	82367.0 in ⁴
Poisson's Ratio	0.2
Thermal Coeff.	0.000006000 1/F

COMPOSITE SECTION PROPERTIES:

Location	Bridge Width	Self-Weight	Area	Height	Ixx	Ycg	Density	Eff. Width
	ft	plf	in ²	in	in ⁴	in	pcf	in
0.0L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.1L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.2L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.3L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.4L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.5L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.6L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.7L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.8L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
0.9L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8
1.0L	75.08	2398.5	2129.91	87.5	2160480	58.02	150.0	135.8

(#) Area, Ixx, and Ycg Of Total Section using Ec/fEc = 0.8563

Use transformed strand and rebar: Strand Only

Location	ft	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Precast: (At Release, using Ec = 4016.8ksi)	in2	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Area, Yb, MI(Ixx), Composite: (At Final, using Ec = 4491.0ksi)	in ²	1100.6	1163.6	1164.2	1165.4	1165.4	1165.4	1165.4	1165.4
	in	34.60	33.14	33.12	33.06	33.03	32.99	32.95	32.95
	in ⁴	904567	948038	948641	951329	953565	955853	958193	958193
	in ²	2129.9	2185.2	2185.7	2186.8	2186.8	2186.8	2186.8	2186.8
	in	58.02	56.74	56.73	56.69	56.67	56.66	56.64	56.64
	in ⁴	2160480	2297497	2299094	2304829	2308545	2312309	2316119	2316119

Span:1, Beam:6

STRESS LIMITS (Art. 5.9.4):

STRESS LIMITS AT RELEASE BEFORE LOSSES (Using Advanced Settings):



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	PRECAST	DECK
Strength	6.00 ksi	5.50 ksi
Elasticity	4016.8 ksi	3845.83 ksi
Max comp	3.60 ksi	-
Outer	15.00 %	-
Max tens	w/relief -0.23 ksi	-
Center	w/relief -0.93 ksi	-
Max tens	70.00 %	-
Max tens	w/relief -0.23 ksi	-
Max tens	w/relief -0.59 ksi	-

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f'c or 6.0 ksi.

STRESS LIMITS AT FINAL AFTER LOSSES:

	PRECAST	DECK
Strength	7.50 ksi	5.50 ksi
Elasticity	4490.96 ksi	3845.83 ksi

STRESS LIMITS AT FINAL 1 (P/S + DL + LL):

	PRECAST	DECK
Max comp	4.50 ksi	3.30 ksi

STRESS LIMITS AT FINAL 2 (P/S + DL):

	PRECAST	DECK
Max comp	3.38 ksi	2.47 ksi

FATIGUE I STRESS LIMITS AT FINAL 3 (50% P/S + 50% DL + F_LL) (Art. 5.5.3.1):

	PRECAST	DECK
Max comp	3.00 ksi	- ksi

SERVICE III (Tension):

	PRECAST	DECK
Max tens	-0.52 ksi	0.45 ksi

Span:1, Beam:6
 PRESTRESSED STEEL:
 49 strands, 6/10-270K-LL, Low relaxation strands
 Depressed at 0.40L (36.93 ft from member end)

END PATTERN (Ycg = 7.61 in):

	10 @ 3.000 in	12 @ 5.000 in	10 @ 7.000 in	1 @ 9.000 in
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# legs	Size	fy (ksi)	Area (in ²)	Spacing (in)	Start (ft)	End (ft)	Extends into Deck
2	US#4(M13)	60.0	0.40	6.00	0.0000	2.3950	No
2	US#4(M13)	60.0	0.40	12.00	2.3950	16.1939	No
2	US#4(M13)	60.0	0.40	18.00	16.1939	26.2493	No
2	US#4(M13)	60.0	0.40	24.00	26.2493	34.7041	No
2	US#4(M13)	60.0	0.40	18.00	34.7041	46.1079	No
2	US#4(M13)	60.0	0.40	24.00	46.1079	96.2251	No
2	US#4(M13)	60.0	0.40	24.00	107.6289	116.0837	No
2	US#4(M13)	60.0	0.40	18.00	116.0837	126.1391	No
2	US#4(M13)	60.0	0.40	12.00	126.1391	139.9380	No
2	US#4(M13)	60.0	0.40	6.00	139.9380	142.3330	No

LOSSES
 Note: Values are calculated at Midspan

Str. area	10.6330	in ²
Ycg	5.00	in
P_init	2153.2	kips
Ecc	29.60	in
Days to release	0.75	%
Rel. Humid. (RH)	75.0	%
Es	285000.0	ksi
Ecl	4017	ksi

AASHTO LOSSES

Elastic Shortening ** 16.29 ksi (Eq 5.9.5.2.3a-1) (fcgp= 2.296 ksi)

	Elastic Gains	Gains	Adjustment
due to Precast Loads		-7.04	ksi
due to Composite Loads		-0.95	ksi
due to Live Loads		-6.64	ksi

Time Dependent Losses (Approximate Method (Art 5.9.5.3))

	Initial	Final	
Steel relaxation	0.00	ksi	
Concrete shrinkage	0.00	ksi	
Concrete creep	0.00	ksi	
Sub-total	16.29	ksi	
Total Prestress Losses		(8.04 %)	
		9.19	ksi
		25.48	ksi
			(4.54 %)
			(12.58 %)

Prestressing Stress Limit Check (Table 5.9.3.1)
 initial fpi = 202.5 ksi < 0.75 fpu, OK
 initial fpe = 177.0 ksi < 0.80 fpy, OK



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7 @ 11,000 in | 5 @ 13,000 in | 3 @ 15,000 in | 1 @ 17,000 in

MID PATTERN (Ycg = 5.00 in):
 (A) Draped:
 7 @ 3,000 in | 5 @ 5,000 in | 3 @ 7,000 in | 1 @ 9,000 in

(B) Straight:
 10 @ 3,000 in | 12 @ 5,000 in | 10 @ 7,000 in | 1 @ 9,000 in

SHIELDING AND REDUCED INITIAL PULLS:

Group	Strands	End	Heights	Mid	End	Shielding	Mid	Distance to center	Initial Frac	Pull	
1	2	3,000	in	3,000	in	2,000	ft	10,000	in	75.0 %	43.9 kips

Check for Art. 5.11.4.3 (debond termination distances): OK

Strand Diameter	0.600	in
Strand Area	0.217	in ²
Total Strand Area	10.633	in ²
Trans. Len. bonded	3,000	ft
Trans. Len. debonded	3,000	ft
Dev. Len. bonded	11.656	ft
Dev. Len. debonded	14.570	ft
Holddown Force	8,232	kips
Tensile Strength(fpu)	270.0	ksi
Initial Prestress = 0.75fpu	202.5	ksi
Initial Pull	2153.2	kips
Beam Shiring (PL/AE)	0.786	in

Span:1, Beam:6 ESTIMATED QUANTITIES

Prestressing (linear ft)	Strands (LB/1000ft)	Strands (LB)	Beam Vol(C.Y.)	Concrete Wt(LB)	Stirrups (LB)	Longitudinal Bars (LB)
6974.441	740	5161.087	40.291	1,637,79,203	822,892	0,000

Span:1, Beam:6 REINFORCING STEEL:

Tension steel:		
fy	60.0	ksi
Es	29000	ksi
fs	24.0	ksi

Stirrups:



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** Since the transformed section properties option has been selected, even though ES losses have been calculated explicitly here, they are not included as a part of stress calculations. Please see theory section for complete explanation.

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Shear AND MOMENT ENVELOPE (& REACTIONS)

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, SERVICE I

Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location:	ft	0.00	3.65	14.23	28.47	42.70	56.93	71.17
Self wt.:	M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2903.2
(Max)	V	81.6	78.2	71.4	65.3	49.0	32.6	16.3
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	0.3	0.2	0.2	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	0.0	261.7	316.5	1141.4	2029.2	2663.3	3043.8
Haunch (Max)	V	89.1	85.3	84.5	71.3	53.5	35.6	17.8
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	-0.0	415.9	502.9	1806.4	3190.6	4152.4	4723.3
LL + I :	V	151.4	147.0	146.0	130.4	109.5	88.5	59.2
LL + I :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0
Vmx	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M	151.4	147.1	146.2	131.0	111.5	93.1	75.8
Total :	M+	-0.0	410.9	496.3	1745.2	2972.8	3723.7	4038.7
Total :	V	338.1	325.8	323.1	279.6	221.3	163.1	96.5
Total :	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	Vmx	338.1	325.9	323.2	280.1	223.4	167.7	113.0
Total :	M	0.0	958.3	1158.5	4133.1	7218.0	9295.5	10406.4

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location:	ft	85.40	99.63	113.87	128.10	138.69	142.33
Self wt.:	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	81.6
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	M	3043.8	2663.3	2029.2	1141.4	316.5	261.7
Haunch (Max)	V	17.8	35.6	53.5	71.3	84.5	85.3
Diaphragm :	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp :	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	M+	4723.3	4152.4	3190.6	1806.4	502.9	415.9
LL + I :	M-	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0



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	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
LL + I :	59.2	88.5	109.5	130.4	146.0	147.0	151.4
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	75.8	93.1	111.5	131.0	146.2	147.1	151.4
M	4038.7	3723.7	2972.8	1745.2	496.3	410.9	-0.0
M+	11091.1	9724.2	7435.7	4194.3	1165.2	963.3	0.0
V	96.5	163.1	221.3	279.6	322.9	325.5	337.8
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	113.0	167.7	223.4	280.1	323.0	325.6	337.8
M	10406.4	9295.5	7218.0	4133.1	1158.5	958.3	0.0

REACTIONS (kips), SERVICE I

Load Type	Left Support	Right Support
Self Wt.	81.6	81.6
Deck+Haunch	89.1	89.1
Diaphragm	0.0	0.0
DL-Prec.(DC)	0.3	0.0
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	94.3	94.3
DL-Comp.(DW)	0.0	0.0
Live	112.8	112.8
Pedestrian	0.0	0.0

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, SERVICE III
 Shears: kips, Moments: kft

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Self wt. :	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1	2903.2
(Max)	81.6	78.2	77.4	65.3	49.0	32.6	16.3	0.0
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	0.0	261.7	316.5	1141.4	2029.2	2663.3	3043.8	3170.6
Haunch (Max)	89.1	85.3	84.5	71.3	53.5	35.6	17.8	0.0
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	15.7	15.1	14.9	12.6	9.4	6.3	3.1	0.0
DL-Comp. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	-0.0	332.7	402.4	1445.1	2552.5	3322.0	3778.6	3910.0
V	121.1	117.6	116.8	104.4	87.6	70.8	47.3	30.6
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	121.1	117.7	116.9	104.8	89.2	74.5	60.6	47.5
M	-0.0	328.7	397.1	1396.1	2378.2	2979.0	3231.0	3166.9
M+	0.0	880.1	1064.6	3833.0	6797.6	8893.7	10146.4	10543.1
Total :	307.8	296.4	293.9	253.5	199.4	145.4	84.6	30.6
Total :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	307.8	296.5	294.0	253.9	201.1	149.1	97.9	47.5
Total :	0.0	876.1	1059.3	3784.0	6623.4	8550.7	9598.7	9800.0

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	85.40	99.63	113.87	128.10	138.69	139.33	142.33
Self wt. :	2787.1	2438.7	1858.1	1045.2	289.8	239.6	0.0
(Max)	16.3	32.6	49.0	65.3	77.4	78.2	81.6
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck + :	3043.8	2663.3	2029.2	1141.4	316.5	261.7	0.0
Haunch (Max)	17.8	35.6	53.5	71.3	84.5	85.3	89.1
Diaphragm :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp. :	536.9	469.7	357.9	201.3	55.8	46.2	0.0
DC(Max)	3.1	6.3	9.4	12.6	14.9	15.1	15.7
DL-Comp. :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I :	3778.6	3322.0	2552.5	1445.1	402.4	332.7	-0.0
V	47.3	70.8	87.6	104.4	116.8	117.6	121.1
M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vmx	60.6	74.5	89.2	104.8	116.9	117.7	121.1
M	3231.0	2979.0	2378.2	1396.1	397.1	328.7	-0.0
M+	10146.4	8893.7	6797.6	3833.0	1064.6	880.1	0.0
Total :	84.6	145.4	199.4	253.5	293.7	296.1	307.5
Total :	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total :	97.9	149.1	201.1	253.9	293.8	296.2	307.5
Total :	9598.7	8550.7	6623.4	3784.0	1059.3	876.1	0.0



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SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, STRENGTH
Shears: Kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspan
Location,	0.00	3.00	3.65	14.23	28.47	42.70	56.93	71.17
Self wt.:	M 0.0	M 299.5	M 362.3	M 1306.4	M 2322.6	M 3048.4	M 3483.9	M 3629.0
(Max)	V 102.0	V 97.7	V 96.8	V 81.6	V 61.2	V 40.8	V 20.4	V 0.0
Self wt.:	M 0.0	M 215.6	M 260.9	M 940.6	M 1672.3	M 2194.8	M 2508.4	M 2612.9
(Min)	V 73.4	V 70.3	V 69.7	V 58.7	V 44.1	V 29.4	V 14.7	V 0.0
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DC(Max)	V 0.4	V 0.3	V 0.3	V 0.2	V 0.2	V 0.2	V 0.2	V 0.2
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DC(Min)	V 0.3	V 0.2	V 0.2	V 0.2	V 0.2	V 0.2	V 0.2	V 0.2
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Deck +:	M 111.4	M 106.7	M 105.7	M 89.1	M 66.8	M 44.6	M 22.3	M 0.0
Haunch (Max)	V 80.2	V 76.8	V 76.1	V 64.2	V 48.1	V 32.1	V 16.0	V 0.0
Deck +:	M 235.5	M 284.9	M 1027.3	M 1826.3	M 2397.0	M 2739.4	M 2853.6	M 2853.6
Haunch (Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Diaphragm:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Diaphragm:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Comp:	M 0.0	M 327.1	M 395.7	M 1426.8	M 2536.5	M 3329.2	M 3804.7	M 3963.3
DC(Max)	V 11.4	V 10.7	V 10.7	V 8.9	V 6.6	V 4.4	V 2.2	V 0.0
DL-Comp:	M 0.0	M 235.5	M 284.9	M 1027.3	M 1826.3	M 2397.0	M 2739.4	M 2853.6
Haunch (Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Diaphragm:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Diaphragm:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
LL + I:	M -0.0	M 57.7	M 69.8	M 251.7	M 447.4	M 587.2	M 671.1	M 699.0
DC(Max)	V 19.6	V 18.8	V 18.6	V 15.7	V 11.8	V 7.9	V 3.9	V 0.0
DL-Comp:	M -0.0	M 41.5	M 50.2	M 181.2	M 322.1	M 422.8	M 483.2	M 503.3
DC(Min)	V 14.1	V 13.5	V 13.4	V 11.3	V 8.5	V 5.7	V 2.8	V 0.0
DL-Comp:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Comp:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
LL + I:	M -0.0	M 727.8	M 880.1	M 3161.2	M 5583.5	M 7266.8	M 8265.8	M 8553.2
LL + I:	V 264.9	V 257.2	V 255.5	V 228.3	V 191.6	V 155.0	V 103.6	V 66.9
LL + I:	M -0.0	M -0.0	M -0.0	M -0.0	M -0.0	M -0.0	M -0.0	M -0.0
LL + I:	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
LL + I:	M 264.9	M 257.4	M 255.8	M 229.2	M 195.2	M 163.0	M 132.6	M 104.0
LL + I:	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
LL + I:	M -0.0	M 719.0	M 868.6	M 3054.1	M 5202.4	M 6516.5	M 7067.7	M 6927.6
Total:	V 0.0	V 1412.1	V 1707.9	V 6146.1	V 10890.0	V 14231.5	V 16225.5	V 16844.5
Total:	M 498.3	M 480.7	M 476.9	M 414.7	M 331.4	M 248.2	M 150.2	M 66.9
Total:	V 498.3	V 480.9	V 477.1	V 415.6	V 335.0	V 256.2	V 179.2	V 104.0
Total:	M 0.0	M 1403.3	M 1696.3	M 6038.9	M 10508.8	M 13481.2	M 15027.4	M 15219.0

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	85.40	99.63	113.87	128.10	138.69	139.33	142.33
Self wt.:	M 3483.9	M 3048.4	M 2322.6	M 1306.4	M 362.3	M 299.5	M 0.0
(Max)	V 20.4	V 40.8	V 61.2	V 81.6	V 96.8	V 97.7	V 102.0
Self wt.:	M 2508.4	M 2194.8	M 1672.3	M 940.6	M 260.9	M 215.6	M 0.0

REACTIONS (kips), STRENGTH

Load Type	Left Support	Right Support
Self Wt.	102.0	102.0
Deck+Haunch	111.4	111.4
Diaphragm	0.0	0.0
DL-Prec.(DC)	0.4	0.0
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	117.9	117.9
DL-Comp.(DW)	0.0	0.0
Live	197.4	197.4

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SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, STRENGTH
Shears: Kips, Moments: kt

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location,	14.7	29.4	44.1	58.7	69.7	70.3	73.4
Self wt.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Self wt.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DC(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DC(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Prec.:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Deck +:	M 3804.7	M 3329.2	M 2536.5	M 1426.8	M 395.7	M 327.1	M 22.3
Haunch (Max)	V 22.3	V 44.6	V 66.8	V 89.1	V 105.7	V 106.7	V 111.4
Deck +:	M 2739.4	M 2397.0	M 1826.3	M 1027.3	M 481.2	M 321.1	M 16.0
Haunch (Min)	V 16.0	V 32.1	V 48.1	V 64.2	V 81.2	V 85.7	V 88.0
Diaphragm:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
Diaphragm:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Comp:	M 671.1	M 587.2	M 447.4	M 251.7	M 69.8	M 57.7	M 0.0
DC(Max)	V 3.9	V 7.9	V 11.8	V 15.7	V 18.6	V 18.8	V 19.6
DL-Comp:	M 483.2	M 422.8	M 322.1	M 181.2	M 50.2	M 41.5	M 0.0
DC(Min)	V 2.8	V 5.7	V 8.5	V 11.3	V 13.4	V 13.5	V 14.1
DL-Comp:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Max)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
DL-Comp:	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0	M 0.0
DW(Min)	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
LL + I:	M 8265.8	M 7266.8	M 5583.5	M 3161.2	M 880.1	M 727.8	M 0.0
LL + I:	V 103.6	V 155.0	V 191.6	V 228.3	V 255.5	V 257.2	V 264.9
LL + I:	M -0.0	M -0.0	M -0.0	M -0.0	M -0.0	M -0.0	M -0.0
LL + I:	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
LL + I:	M 132.6	M 163.0	M 195.2	M 229.2	M 255.8	M 257.4	M 264.9
LL + I:	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0	V 0.0
LL + I:	M 7067.7	M 6516.5	M 5202.4	M 3054.1	M 868.6	M 719.0	M 0.0
Total:	V 16225.5	V 14231.5	V 10890.0	V 6146.1	V 1707.9	V 1412.1	V 0.0
Total:	M 150.2	M 248.2	M 331.4	M 414.7	M 476.9	M 480.4	M 498.0
Total:	V 179.2	V 256.2	V 335.0	V 415.6	V 476.9	V 480.6	V 498.0
Total:	M 15027.4	M 13481.2	M 10508.8	M 6038.9	M 1696.3	M 1403.3	M 0.0

REACTIONS (kips), STRENGTH

Load Type	Left Support	Right Support
Self Wt.	102.0	102.0
Deck+Haunch	111.4	111.4
Diaphragm	0.0	0.0
DL-Prec.(DC)	0.4	0.0
DL-Prec.(DW)	0.0	0.0
DL-Comp.(DC)	117.9	117.9
DL-Comp.(DW)	0.0	0.0
Live	197.4	197.4



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Load Type	Left Support	Right Support	Midspace
Pedestrian	0.0	0.0	0.0

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Total:	M+	0.0	821.3	993.3	3566.8	6297.5	8232.7	9360.4
	V	283.4	273.1	270.9	234.7	186.4	130.7	82.3
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	283.4	273.1	270.9	234.7	186.4	130.7	82.3
Total:	Vmx	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	M	0.0	821.3	993.3	3566.8	6297.5	8192.2	9250.8
	M	0.0	821.3	993.3	3566.8	6297.5	8192.2	9250.8

	0.60L	0.70L	0.80L	0.90L	H/2	Trans	Bearing
Location:	ft	85.40	99.63	113.87	128.10	138.69	139.33
Self wt.:	M	2787.1	2438.7	1858.1	1045.2	289.8	239.6
(Max)	V	16.3	32.6	49.0	65.3	77.4	78.2
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	M	3043.8	2663.3	2029.2	1141.4	316.5	261.7
Haunch (Max)	V	17.8	35.6	53.5	71.3	84.5	85.3
Deck +:	M	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	536.9	469.7	357.9	201.3	55.8	46.2
DC(Max)	V	3.1	6.3	9.4	12.6	14.9	15.1
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	2992.7	2660.9	2052.3	1178.9	331.1	273.9
LL + I:	M-	45.0	56.1	74.5	85.6	93.8	94.4
LL + I:	M	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	Vmx	52.3	63.4	74.5	85.6	93.8	94.4
LL + I:	M	2883.0	2620.4	2052.3	1178.9	331.1	273.9
Total:	M+	9360.4	8232.7	6297.5	3566.8	993.3	821.3
Total:	M-	82.3	130.7	186.4	234.7	270.9	272.9
Total:	Vmx	89.6	138.0	186.4	234.7	270.9	272.9
Total:	M	9250.8	8192.2	6297.5	3566.8	993.3	821.3

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, FATIGUE I
 Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Location:	ft	0.0	3.00	3.65	14.23	28.47	42.70	56.93
Self wt.:	M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1
(Max)	V	81.6	78.2	77.4	65.3	49.0	32.6	16.3
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	0.3	0.2	0.2	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	M	0.0	261.7	316.5	1141.4	2029.2	2663.3	3043.8
Haunch (Max)	V	89.1	85.3	84.5	71.3	53.5	35.6	17.8
Deck +:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp:	M	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	0.0	273.9	331.1	1178.9	2052.4	2660.9	2992.7
LL + I:	M-	96.7	94.4	93.8	85.6	74.5	56.1	45.0
LL + I:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	Vmx	96.7	94.4	93.8	85.6	74.5	63.4	52.3
LL + I:	M	0.0	273.9	331.1	1178.9	2052.4	2620.4	2883.0



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Load Type	Left Support	Right Support	Midspace
Pedestrian	0.0	0.0	0.0

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Total:	M+	0.0	821.3	993.3	3566.8	6297.5	8232.7	9360.4
	V	283.4	273.1	270.9	234.7	186.4	130.7	82.3
Total:	M-	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	V	283.4	273.1	270.9	234.7	186.4	130.7	82.3
Total:	Vmx	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	M	0.0	821.3	993.3	3566.8	6297.5	8192.2	9250.8
	M	0.0	821.3	993.3	3566.8	6297.5	8192.2	9250.8

Upward reactions are positive.
 Live Load reactions are per lane with no distribution factor and no impact.
 Reactions are not multiplied by Load Modifiers (ductility, redundancy and operational importance).
 Non-composite load types are per beam.
 Composite and Pedestrian load types are per total bridge width.

SHEAR AND MOMENT ENVELOPE : Span : 1, Beam : 6, FATIGUE I
 Shears: kips, Moments: kt

	Bearing	Trans	H/2	0.10L	0.20L	0.30L	0.40L	Midspace
Location:	ft	0.0	3.00	3.65	14.23	28.47	42.70	56.93
Self wt.:	M	0.0	239.6	289.8	1045.2	1858.1	2438.7	2787.1
(Max)	V	81.6	78.2	77.4	65.3	49.0	32.6	16.3
Self wt.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Max)	V	0.3	0.2	0.2	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Prec.:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deck +:	M	0.0	261.7	316.5	1141.4	2029.2	2663.3	3043.8
Haunch (Max)	V	89.1	85.3	84.5	71.3	53.5	35.6	17.8
Deck +:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Haunch (Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Max)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Diaphragm:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	-0.0	46.2	55.8	201.3	357.9	469.7	536.9
DC(Max)	V	15.7	15.1	14.9	12.6	9.4	6.3	3.1
DL-Comp:	M	-0.0	0.0	0.0	0.0	0.0	0.0	0.0
DC(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Max)	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DL-Comp:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DW(Min)	V	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	M+	0.0	273.9	331.1	1178.9	2052.4	2660.9	2992.7
LL + I:	M-	96.7	94.4	93.8	85.6	74.5	56.1	45.0
LL + I:	M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL + I:	Vmx	96.7	94.4	93.8	85.6	74.5	63.4	52.3
LL + I:	M	0.0	273.9	331.1	1178.9	2052.4	2620.4	2883.0



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DESIGN SUMMARY

Span: 1, Beam: 6, Exterior beam

Beam type:	I-Girder,	FIB-78
Precast Length,	ft	142.33
Release Length,	ft	142.33
Strand Pattern:	Straight/Draped	Depr. Point: 0.40 L
Strand:	6/10-270K-LL	
Strand Es.,	ksi	28500.0
No. of strands:	49	
	Draped:	16
	Straight:	33
Concrete Strength:	ftci	6.0* ksi
	ftc:	7.5 ksi
	ftct:	5.5 ksi
Initial losses:		8.04 %
Final losses:		12.58 %

* FDOT section 4.3.1, C4 requires that concrete strength at release be lesser than 0.8 * f_c or 6.0 ksi.

Specification	Allowable	Computed	Location	Status
Release Stresses (ksi) (Art. 5.9.4.1) (Using Advanced Settings)	3.600	3.569	Trans	OK
Precast Bot (compression)	15.00 %	-0.595	Trans	
Precast Top w/ no reinf. (tension)	-0.232			
Precast Top w/ reinf. (tension)	-0.929			
Center	70.00 %			
Precast Top w/ no reinf. (tension)	-0.232	0.186	0.2L/0.8L	
Precast Top w/ reinf. (tension)	-0.588			
Strength I (Art. 3.4.1, 5.7.3.1.1)	Provided	Required	Location	Status
Ult. Moment (k.ft)	18835.75	16844.52	Midspan	OK
Note: Check minimum reinforcement criteria (LRFD Art. 5.7.3.3.2) in Ultimate Moment	detailed report.			
Debonding Limits (Art. 5.11.4.3)	Allowable	Computed		Status
Max. Debond per Row	40.00 %	20.00 %		OK
Max. Debond Total	25.00 %	4.08 %		OK



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Positive Moment Envelope Stresses (ksi) (Art. 3.4.1 and 5.9.4.2)

Specification	Allow Stresses	Final 1 Comp Only	Loc.	Allow	Final 2 Comp	Loc.	Allow	Final 3 Comp	Loc.
Service I Limit State - Compressive	3.300	0.746	Midspan	2.475	0.077	Midspan			
Topping Top	4.500	3.163	Midspan	3.375	2.622	Midspan			
Precast Top	4.500	2.891	Transfer	3.375	3.014	Transfer			
Precast Bot									
Service III Limit State - Tensile									
Topping Top		-0.446	Bearing						
Precast Top		-0.520	Transfer						
Precast Bot		-0.520	Midspan						
Fatigue I Limit State - Compressive									
Precast Top				3.000			1.645		
Precast Bot				3.000			1.426		

CAMBER / DEFLECTION: (PCI Design Handbook - 4th Ed. - Table 4.6.2)
0.5 x L = 71.17 ft

	Release	Multi	Erection	Multi	Final
Prestress	5.584	1.80	10.051	2.20	12.284
Self Wt.	-2.751	1.85	-5.089	2.40	-6.601
Deck + Haunch			-2.687	2.30	-6.180
DL-Prec. (DC)			0.000	3.00	0.000
Diaphragm			0.000	3.00	0.000
DL-Prec. (DW)			0.000	3.00	0.000
DL-Comp. (DC)			-0.196	3.00	-0.588
DL-Comp. (DW)			0.000	3.00	0.000
Live Load					
Total	2.833		2.079		-1.085

Positive values indicate upward deflection.

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 File Name: \\lkmw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 4\struct\eng_data\1-4 Over St. Johns River\Alternative 2 - Reversible Lanes\1. Superstructure\Span 12
 Rev\Span12EB_ModifiedSpacing.csl
 Code: AASHTO LRFD
 Units: US Units, (KIPS, ft)
 Number of Spans: 1
 Left Curb Width: 1.5417
 Right Curb Width: 1.5417

Span #	Span Length	Number Of beams	Bridge Width
1	142.3330	5	92.6507
			92.6507

Abutment #: 1

Self Weight
 Line 1 Girder 1 : 81.5894
 Line 1 Girder 2 : 81.5894
 Line 1 Girder 3 : 81.5894
 Line 1 Girder 4 : 81.5894
 Line 1 Girder 5 : 81.5894
 Self + Deck
 Line 1 Girder 1 : 88.2366
 Line 1 Girder 2 : 101.0697
 Line 1 Girder 3 : 101.0697
 Line 1 Girder 4 : 101.0697
 Line 1 Girder 5 : 88.2215
 Dead Load DC on Precast
 Line 1 Girder 1 : 12.8100
 Line 1 Girder 2 : 16.7241
 Line 1 Girder 3 : 16.7241
 Line 1 Girder 4 : 16.7241
 Line 1 Girder 5 : 16.5818
 Dead Load DW on Precast
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Dead Load DC on Composite
 Line 1 Girder 1 : 18.8591
 Line 1 Girder 2 : 18.8591
 Line 1 Girder 3 : 18.8591
 Line 1 Girder 4 : 18.8591
 Line 1 Girder 5 : 18.8591
 Dead Load DW on Composite
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Live Load
 Live Load Max +ve, Truck : 67.2785
 Live Load Max +ve, Lane : 45.5466

Abutment #: 2

Self Weight
 Line 1 Girder 1 : 81.5894
 Line 1 Girder 2 : 81.5894
 Line 1 Girder 3 : 81.5894
 Line 1 Girder 4 : 81.5894
 Line 1 Girder 5 : 81.5894
 Self + Deck
 Line 1 Girder 1 : 88.2366
 Line 1 Girder 2 : 101.0697
 Line 1 Girder 3 : 101.0697
 Line 1 Girder 4 : 101.0697
 Line 1 Girder 5 : 88.2215
 Dead Load DC on Precast
 Line 1 Girder 1 : 12.8100
 Line 1 Girder 2 : 16.7241
 Line 1 Girder 3 : 16.7241
 Line 1 Girder 4 : 16.7241
 Line 1 Girder 5 : 16.5818
 Dead Load DW on Precast
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Dead Load DC on Composite
 Line 1 Girder 1 : 18.8591
 Line 1 Girder 2 : 18.8591
 Line 1 Girder 3 : 18.8591
 Line 1 Girder 4 : 18.8591
 Line 1 Girder 5 : 18.8591
 Dead Load DW on Composite
 Line 1 Girder 1 : 0.0000
 Line 1 Girder 2 : 0.0000
 Line 1 Girder 3 : 0.0000
 Line 1 Girder 4 : 0.0000
 Line 1 Girder 5 : 0.0000
 Live Load
 Live Load Max +ve, Truck : 67.2785
 Live Load Max +ve, Lane : 45.5466

APPENDIX C-4

SUBSTRUCTURE ANALYSIS

EOR:	I-4 PD&E	JOB NO.:	59219
	St. Johns River Veterans Memorial Bridge	SHEET NO.:	
MADE BY:	CAM	CHECKED BY:	BACKCHECKED BY:
DATE:	9/20/2013	DATE:	DATE:



Pier 12 Reversible Lanes Dead Load Bearing Reactions

Bearing Line	Girder	Reaction (kips)	
1	1	-162.45	-370.70
1	2	-181.63	-397.03
1	3	-186.42	-401.82
1	4	-191.21	-406.61
1	5	-196.00	-411.40
1	6	-167.00	-353.71
2	1	-208.25	
2	2	-215.40	
2	3	-215.40	
2	4	-215.40	
2	5	-215.40	
2	6	-186.72	

Notes:
Reaction sign convention taken as positive upwards



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File Name: **Pier12EB_Existing.rcp**

PROJECT DATA

Project: I4 Over St. John's River
 User Job No.:
 Designer: KSM
 Date: Sep/10/2013
 Checker:
 Checked date:
 State: FL
 State Job No.:
 Pier:
 Structure type:
 Pier View: AASHTO LRFD (6th Edition, 2012)
 Code:
 Comments: I4 Over St. John's River Bridge - Pier 12R (EB)



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File Name: **Pier12EB_Existing.rcp**

PIER GEOMETRY

Pier Info:
 Pier View: Upstation.
 Pier Type: Multi Column

Cap Shape
 Cap Shape: Variable
 Top Elevations: Start = 47.28 ft end = 47.28 ft
 Depth(Z) = 54.00 in Skew angle = 14.15 Reduction of I = 1.000

Variable Cap Properties	
Distance(X)	Height(Y)
ft	in
0.00	0.01
1.25	72.00
55.50	72.00
1.25	0.01

Column Shape: Rectangular Chamfered
 Number of columns: 2

Column number 1
 Location from the left edge of the cap(X): 11.92 ft
 Elevations: bottom = 4.25 ft top = 47.28 ft Reduction of I = 1.000
 Column Bottom is Fixed

Column Section Dimensions					
Dist from last(Y)	Width(X)	Depth(Z)	Chamfer(X)	Chamfer(Z)	Variation
ft	in	in	in	in	
0.00	72.00	48.00	12.00	12.00	.....
43.03	72.00	48.00	12.00	12.00	Linear

Column number 2
 Location from the left edge of the cap(X): 46.08 ft
 Elevations: bottom = 4.25 ft top = 47.28 ft Reduction of I = 1.000
 Column Bottom is Fixed

Column Section Dimensions



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File Name: Pier12EB_Existing.rcp

Sheet # 3

Job #

Designed KSM

Date Sep/10/2013

Checked

Date

Dist from last(Y)	Width(X)	Depth(Z)	Chamfer(X)	Chamfer(Z)	Variation
0.00	72.00	48.00	12.00	12.00	.....
43.03	72.00	48.00	12.00	12.00	Linear

Struts

Strut Shape : Rectangular
Number of struts: 1

Struts properties

Strut number 1
Elevations: start = 10.25 ft end = 10.25 ft
Depth(Z) = 24.00 in Height(Y) = 62.00 in Reduction of I = 1.000



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Superstructure info:	Total number of spans:	Span number rear to current pier:	Number of traffic lanes:	Barrier height:	Depth of slab:	Curb to curb distance:
	2	1	8	32.00 in	8.50 in	99.990 ft

Beam info:

Height	Section area	Inertia	Inertia	Inertia	Beam CG
in	in ²	(Ixx)	(Iyy)	in ⁴	in
78.00	1100.58	903861.00	82270.00		34.63

Span #	Span length	Bridge Width
	ft	ft
1	141.844	103.070
2	142.333	103.070



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Date			Date	

BEARING POINTS

Number of bearing lines: 2

Point	Distance ft	Eccentricity = 1.21 ft
1	2.09	
2	11.63	
3	21.17	
4	30.71	
5	40.25	
6	47.77	
7	55.29	

Point	Distance ft	Eccentricity = -1.21 ft
1	2.70	
2	13.34	
3	23.98	
4	34.62	
5	45.26	
6	55.90	



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MATERIAL PROPERTIES

	Cap	Column	Footing
Concrete Type	normal	normal	normal
Concrete Strength (psi)	5500.00	5500.00	5500.00
Concrete Strength (lb/in ²)	150.00	150.00	150.00
Concrete Modulus Ec (ksi)	3845.80	3845.80	3845.80
Steel Strength Fy (ksi)	60.00	60.00	60.00



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DESIGN PARAMETERS

Resistance factors for reinf. concrete

Flexure and tension	0.90
Shear and torsion (normal)	0.90
Shear and torsion (lightweight)	0.70
Axial compression (ties)	0.75
Axial compression (spiral)	0.75
Compression in STM	0.70

Multi presence factors for live load

1 Lane	1.20
2 Lanes	1.00
3 Lanes	0.85
more than 3 Lanes	0.65

Dynamic load allowance IM

Truck Lane Fatigue			
Cap	0.33	0.00	0.15
Column	0.33	0.00	0.15
Footing	0.00	0.00	0.00

Exposure factors	Clear cover	Clear side cover
Cap	1.00	in
Column	1.00	2.00
Footing	1.00	3.00

Degree of fixity in foundations for Moment Magnify Method: Ga = 5.00

SEISMIC DESIGN PARAMETERS

Strength Reduction factors for reinf. Concrete Seismic Design

Seismic Overstrength

Flexure and tension	1.30
Axial compression (ties)	1.30
Axial compression (spiral)	1.30

Response Modification Factor 15.00

Use core area for plastic hinging calculations.

Design Factors

Cap Design Factor 1.20



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Plastic Hinge Moment

Use actual computed Plastic Hinging Moment for each column in all combinations.



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File Name: **Pier12EB_Existing.rcp**

LOADS

Pier Info:

Pier View: **Upstation**

Load Cases: **103**

Loadcase ID: DC1 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-318.84
1	2	Y	-153.67
1	3	Y	-153.67
1	4	Y	-153.67
1	5	Y	-146.01
1	6	Y	-138.35
1	7	Y	-311.26
2	1	Y	-324.13
2	2	Y	-162.58
2	3	Y	-162.58
2	4	Y	-162.58
2	5	Y	-162.58
2	6	Y	-324.18

Auto generation details:

Generated Dead Load

Slab weight = 150.00 pcf
 Girder weight = 150.00 pcf
 Wearing weight = Not included

Units: US (English)

Design Code: AASHTO LRFD



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File Name: **Pier12EB_Existing.rcp**

Bentley load = 418.00 ptf

Loadcase ID: LL1 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.71
1	3	Y	-21.65
1	4	Y	-30.16
1	5	Y	-25.64
1	6	Y	107.33
1	7	Y	-221.42
2	1	Y	0.00
2	2	Y	-4.06
2	3	Y	-23.37
2	4	Y	-27.48
2	5	Y	46.86
2	6	Y	-151.90
1	1	Y	0.00
1	2	Y	-0.93
1	3	Y	-19.83
1	4	Y	-27.29
1	5	Y	-24.40
1	6	Y	99.97
1	7	Y	-204.53
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-26.70
2	4	Y	-30.55
2	5	Y	51.46
2	6	Y	-168.06

Auto generation details:

Units: US (English)

Design Code: AASHTO LRFD



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Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL2 Name:

Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
1	1	Y	-175.28
1	2	Y	63.82
1	3	Y	-27.29
1	4	Y	-27.16
1	5	Y	-11.11
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-340.37
1	2	Y	125.28
1	3	Y	-53.65
1	4	Y	-53.82
1	5	Y	-20.70
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL2 Name:

Multiplier = 1.000



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Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL2 Name:

Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
1	1	Y	-175.28
1	2	Y	63.82
1	3	Y	-27.29
1	4	Y	-27.16
1	5	Y	-11.11
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-340.37
1	2	Y	125.28
1	3	Y	-53.65
1	4	Y	-53.82
1	5	Y	-20.70
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL2 Name:

Multiplier = 1.000



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Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL3 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-188.64
1	2	Y	92.51
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	125.29
1	7	Y	-221.42
2	1	Y	-153.57
2	2	Y	73.59
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	69.05
2	6	Y	-149.03
2	7	Y	-173.70
1	1	Y	85.19
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	115.37
1	7	Y	-203.88
2	1	Y	-170.54
2	2	Y	81.72
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	76.68
2	6	Y	-165.50

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution
Selected Vehicles:

Units: US (English)
Design Code: AASHTO LRFD



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Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL4 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-246.68
1	2	Y	120.98
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-200.82
2	2	Y	96.23
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-227.14
1	2	Y	111.40
1	3	Y	0.00
1	4	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution
Selected Vehicles:

Units: US (English)
Design Code: AASHTO LRFD



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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-337.50
2	2	Y	108.72
2	3	Y	-59.00
2	4	Y	-48.56
2	5	Y	-7.08
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-173.86
2	2	Y	55.53
2	3	Y	-30.55
2	4	Y	-25.78
2	5	Y	-2.97
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LLL5 Name:
Multiplier = 1.000



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Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL6 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-1.10
1	3	Y	-33.31
1	4	Y	-46.40
1	5	Y	-17.79
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-6.24
2	3	Y	-35.96
2	4	Y	-34.78
2	5	Y	-5.06
2	6	Y	0.00
2	7	Y	0.00
1	1	Y	-1.43
1	2	Y	-30.52
1	3	Y	-41.78
1	4	Y	-17.06
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-5.83
2	3	Y	-41.07

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
2	4	Y	-39.63
2	5	Y	-4.56
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load
 Two Design Trucks + Lane Load
 Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL7 Name:
 Multiplier = 1.000

Bearing loads

Units: US (English)

Design Code: AASHTO LRFD

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Job #

Designed KSM

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Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-8.71
2	3	Y	-50.18
2	4	Y	-59.00
2	5	Y	100.60
2	6	Y	-326.13
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-26.70
2	4	Y	-30.55
2	5	Y	51.46
2	6	Y	-168.06

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft



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Center to Center Spacing = 10.00 ft
 Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected
 Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL8 Name:
 Multiplier = 1.000

Bearing loads	Line #	Bearing #	Dir	Load kips
	1	1	Y	0.00
	1	2	Y	-1.28
	1	3	Y	-38.66
	1	4	Y	-53.85
	1	5	Y	-45.78
	1	6	Y	191.64
	1	7	Y	-395.34
	2	1	Y	0.00
	2	2	Y	0.00
	2	3	Y	0.00
	2	4	Y	0.00
	2	5	Y	0.00
	2	6	Y	0.00
	1	1	Y	0.00
	1	2	Y	-0.93
	1	3	Y	-19.83
	1	4	Y	-27.29
	1	5	Y	-24.40
	1	6	Y	99.97
	1	7	Y	-204.53
	2	1	Y	0.00
	2	2	Y	0.00
	2	3	Y	0.00
	2	4	Y	0.00
	2	5	Y	0.00
	2	6	Y	0.00



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Sheet # 121

Job #

Designed KSM

Date Sep/10/2013

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Date

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL9 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-1.07
1	3	Y	-33.31
1	4	Y	-46.37
1	5	Y	-17.84

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-6.22
2	3	Y	-35.94
2	4	Y	-34.80
2	5	Y	-5.08
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-1.42
1	3	Y	-30.48
1	4	Y	-41.79
1	5	Y	-17.10
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-5.81
2	3	Y	-41.05
2	4	Y	-39.66
2	5	Y	-4.58
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 23

Job #

Program: LEAP® RC-PIER® V8i (SELECTseries 5)

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Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL10 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-190.64
1	2	Y	70.17
1	3	Y	-30.05
1	4	Y	-30.14
1	5	Y	-11.60
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-157.20
2	2	Y	50.64
2	3	Y	-27.48
2	4	Y	-22.62
2	5	Y	-3.30
2	6	Y	0.00
1	1	Y	-175.28
1	2	Y	63.82
1	3	Y	-27.29
1	4	Y	-27.16
1	5	Y	-11.11
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-173.86
2	2	Y	55.53
2	3	Y	-30.55
2	4	Y	-25.78
2	5	Y	-2.97
2	6	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 24

Job #

Program: LEAP® RC-PIER® V8i (SELECTseries 5)

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Designed KSM

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Date

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

- Design Truck
- Design Truck + Lane Load
- Design Tandem + Lane Load
- Two Design Trucks + Lane Load
- Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected

Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36

Total number of Possible Combination = 401576

Loadcase ID: LL11 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	163.85
1	7	Y	-289.55
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 25
Job #
Designed KSM
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File Name: Pier12EB_Existing.rcp

Loadcase ID: LL12 Name:
Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
2	4	Y	0.00
2	5	Y	90.30
2	6	Y	-194.88
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	150.87
1	7	Y	-266.61
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	100.28
2	6	Y	-216.42

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576



Sheet # 26
Job #
Designed KSM
Date Sep/10/2013
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Date

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File Name: Pier12EB_Existing.rcp

Loadcase ID: LL12 Name:
Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.59
1	3	Y	-18.00
1	4	Y	-8.05
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-4.87
2	3	Y	-32.31
2	4	Y	-55.51
2	5	Y	100.60
2	6	Y	-326.13
1	1	Y	0.00
1	2	Y	-0.93
1	3	Y	-19.39
1	4	Y	-9.18
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-26.70
2	4	Y	-30.55
2	5	Y	51.46
2	6	Y	-168.06

Auto generation details:

Generated Live Load



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Sheet # 127

Job #

Designed KSM

Date Sep/10/2013

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Date

File Name: Pier12EB_Existing.rcp

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

- Design Truck
- Design Truck + Lane Load
- Design Tandem + Lane Load
- Two Design Trucks + Lane Load
- Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL13 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	-17.00
1	5	Y	-9.64
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-337.50
2	2	Y	108.72
2	3	Y	-54.79
2	4	Y	-30.69
2	5	Y	-3.97
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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Sheet # 128

Job #

Designed KSM

Date Sep/10/2013

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Date

File Name: Pier12EB_Existing.rcp

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

- Design Truck
- Design Truck + Lane Load
- Design Tandem + Lane Load
- Two Design Trucks + Lane Load
- Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL14 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	3	Y	-0.44
1	4	Y	-17.96
1	5	Y	-11.11
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-173.86
2	2	Y	55.53
2	3	Y	-30.55
2	4	Y	-25.78
2	5	Y	-2.97
2	6	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD

Auto generation details:

Generated Live Load



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Version: 12.01.00.57
File Name: Pier12EB_Existing.rcp

Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL15 Name:
Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	193.86
2	6	Y	-418.41
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	100.28
2	6	Y	-216.42

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution
Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Units: US (English)

Design Code: AASHTO LRFD

Sheet # 29
Job #
Designed KSM
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Version: 12.01.00.57
File Name: Pier12EB_Existing.rcp

Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL15 Name:
Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	350.15
2	6	Y	-526.18
2	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	180.58
1	7	Y	-271.36

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution
Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Units: US (English)

Design Code: AASHTO LRFD

Sheet # 30
Job #
Designed KSM
Date Sep/10/2013
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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier12EB_Existing.rcp

Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL15 Name:
Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1		



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57

File Name: Pier12EB_Existing.rcp

Sheet # 31
Job #
Designed KSM
Date Sep/10/2013
Checked
Date

Line #	Bearing #	Dir	Load kips
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load
	Two Design Trucks + Lane Load
	Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL16 Name:

Multiplier = 1.000



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57

File Name: Pier12EB_Existing.rcp

Sheet # 32
Job #
Designed KSM
Date Sep/10/2013
Checked
Date

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	196.11
1	7	Y	-294.70
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	110.57
2	6	Y	-192.60
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	180.58
1	7	Y	-271.36
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	122.79
2	6	Y	-213.88

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load
	Two Design Trucks + Lane Load
	Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing



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Version:	12.01.00.57	Copyright © Bentley Systems, Inc. 2012	Date Sep/10/2013	Job #
File Name:	Pier12EB_Existing.rcp			
	Minimum Distance from Curb = 2.00 ft		Checked	Date
	Center to Center Spacing = 10.00 ft		Checked	Date

Auto generation details:
Generated Live Load

Longitudinal Reaction: Simple Span Distribution
Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL17 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	292.54
1	7	Y	-516.98
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	150.87
1	7	Y	-266.61
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00



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Version:	12.01.00.57	Copyright © Bentley Systems, Inc. 2012	Date Sep/10/2013	Job #
File Name:	Pier12EB_Existing.rcp			
	Minimum Distance from Curb = 2.00 ft		Checked	Date
	Center to Center Spacing = 10.00 ft		Checked	Date

Auto generation details:
Generated Live Load

Longitudinal Reaction: Simple Span Distribution
Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL18 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	150.87
1	7	Y	-266.61
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00



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File Name:	Pier12EB_Existing.rcp			
	www.bentley.com	Phone: 1-800-778-4277	Checked	Date

Line #	Bearing #	Dir	Load kips
1	6	Y	43.04
1	7	Y	-112.71
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	168.91
2	6	Y	-327.56
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	47.67
1	7	Y	-124.83
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	100.28
2	6	Y	-216.42

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load
	Two Design Trucks + Lane Load
	Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected



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File Name:	Pier12EB_Existing.rcp			
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Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL19 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.71
1	3	Y	-21.65
1	4	Y	-30.16
1	5	Y	-25.64
1	6	Y	207.46
1	7	Y	-371.88
2	1	Y	0.00
2	2	Y	-4.06
2	3	Y	-23.37
2	4	Y	-27.48
2	5	Y	-25.02
2	6	Y	-26.71
1	1	Y	0.00
1	2	Y	-0.93
1	3	Y	-19.83
1	4	Y	-27.29
1	5	Y	-24.40
1	6	Y	99.97
1	7	Y	-204.53
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-26.70
2	4	Y	-30.55
2	5	Y	-28.35
2	6	Y	-29.03



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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL20 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-172.26
2	2	Y	0.66
2	3	Y	-59.00



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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL20 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
2	4	Y	-59.00
2	5	Y	-47.65
2	6	Y	-6.17
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	-30.55
2	5	Y	-25.22
2	6	Y	-2.56

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576



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File Name:	Pier12EB_Existing.rcp			
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Loadcase ID: LL21 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-174.38
1	2	Y	104.71
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-201.53
2	2	Y	117.72
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	137.16
2	6	Y	-212.01
1	1	Y	-193.14
1	2	Y	115.97
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-186.20
2	2	Y	108.77
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	70.95
2	6	Y	-109.66

Auto generation details:

Generated Live Load

Units: US (English)

Design Code: AASHTO LRFD



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File Name:	Pier12EB_Existing.rcp			
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		Phone: 1-800-778-4277		

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL22 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	237.40
2	6	Y	-413.51
1	1	Y	0.00
1	2	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	122.79
2	6	Y	-213.88

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL23 Name:

Multiplier = 1.000

Units: US (English)

Design Code: AASHTO LRFD



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Job #

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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-246.77
1	2	Y	148.18
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-197.25
2	2	Y	115.23
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
2	7	Y	-227.22
1	1	Y	136.44
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-219.05
2	2	Y	127.96
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
2	7	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Units: US (English)

Design Code: AASHTO LRFD



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Two Design Trucks + Lane Load
 Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL24 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.71
1	3	Y	-21.65
1	4	Y	-30.16
1	5	Y	-36.70
1	6	Y	93.22
1	7	Y	-221.42
2	1	Y	0.00
2	2	Y	-4.06
2	3	Y	-23.37
2	4	Y	-22.60
2	5	Y	65.76
2	6	Y	-149.03
1	1	Y	0.00
1	2	Y	-0.93
1	3	Y	-19.83
1	4	Y	-27.29
1	5	Y	-24.40
1	6	Y	99.97
1	7	Y	-204.53



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Line #	Bearing #	Dir	Load kips
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-26.70
2	4	Y	-25.76
2	5	Y	73.72
2	6	Y	-165.50

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load
 Two Design Trucks + Lane Load
 Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL25 Name:
 Multiplier = 1.000



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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-188.64
1	2	Y	91.80
1	3	Y	-21.65
1	4	Y	-30.16
1	5	Y	-36.70
1	6	Y	-32.07
1	7	Y	0.00
2	1	Y	-153.57
2	2	Y	69.53
2	3	Y	-23.37
2	4	Y	-22.60
2	5	Y	-3.29
2	6	Y	0.00
1	1	Y	-173.70
1	2	Y	84.26
1	3	Y	-19.83
1	4	Y	-27.29
1	5	Y	-24.40
1	6	Y	-15.40
1	7	Y	-0.65
2	1	Y	-170.54
2	2	Y	77.93
2	3	Y	-26.70
2	4	Y	-25.76
2	5	Y	-2.96
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing



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Minimum Distance from Curb = 2.00 ft

Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected

Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36

Total number of Possible Combination = 401576

Loadcase ID: LL26 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.59
1	3	Y	-18.00
1	4	Y	-25.07
1	5	Y	-9.61
1	6	Y	104.17
1	7	Y	-184.08
2	1	Y	0.00
2	2	Y	-4.87
2	3	Y	-28.09
2	4	Y	-37.64
2	5	Y	38.45
2	6	Y	-185.30
1	1	Y	0.00
1	2	Y	-0.93
1	3	Y	-19.83
1	4	Y	-27.16
1	5	Y	-11.09
1	6	Y	115.37
1	7	Y	-203.88
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-26.70
2	4	Y	-30.55
2	5	Y	51.46
2	6	Y	-168.06



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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL27 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.89
1	3	Y	-27.69
1	4	Y	-38.55
1	5	Y	-14.83

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-7.47
2	3	Y	-43.20
2	4	Y	-41.82
2	5	Y	-6.10
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-1.42
1	3	Y	-30.48
1	4	Y	-41.79
1	5	Y	-17.10
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-5.81
2	3	Y	-41.05
2	4	Y	-39.66
2	5	Y	-4.58
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Units: US (English)

Design Code: AASHTO LRFD



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			Checked
			Date

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL28 Name:
 Multiplier = 1.000

Bearing loads			Load
Line #	Bearing #	Dir	kips
1	1	Y	-2.01
1	2	Y	-22.36
1	3	Y	-30.03
1	4	Y	-46.25
1	5	Y	-20.64
1	6	Y	125.29
1	7	Y	-221.42
2	1	Y	-3.64
2	2	Y	-22.96
2	3	Y	-23.01
2	4	Y	-3.70
2	5	Y	69.05
2	6	Y	-149.03
1	1	Y	-1.59
1	2	Y	-21.38
1	3	Y	-27.29
1	4	Y	-27.16
1	5	Y	-11.09
1	6	Y	115.37
1	7	Y	-203.88
2	1	Y	-3.33
2	2	Y	-26.21
2	3	Y	-26.21
2	4	Y	-3.39
2	5	Y	76.68
2	6	Y	-165.50

Units: US (English)

Design Code: AASHTO LRFD



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File Name:	Pier12EB_Existing.rcp	www.bentley.com	Designed KSM
		Phone: 1-800-778-4277	Date Sep/10/2013
			Checked
			Date

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load
 Two Design Trucks + Lane Load
 Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL29 Name:
 Multiplier = 1.000

Bearing loads			Load
Line #	Bearing #	Dir	kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	71.26
1	7	Y	-97.90
2	1	Y	-337.50
2	2	Y	108.72
2	3	Y	-49.44

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Loadcase ID: LL30 Name:
Multiplier = 1.000

Line #	Bearing #	Dir	Load kips
1	1	Y	-340.37
1	2	Y	125.28
1	3	Y	-53.65
1	4	Y	-37.76
1	5	Y	-11.60
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-4.45
2	4	Y	-18.91
2	5	Y	-3.30
2	6	Y	0.00
1	1	Y	-175.28
1	2	Y	63.82
1	3	Y	-27.29
1	4	Y	-27.16
1	5	Y	-11.11
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-4.26
2	4	Y	-22.37
2	5	Y	-2.97
2	6	Y	0.00

Auto generation details:

Generated Live Load

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 52
Job #
Designed KSM
Date Sep/10/2013
Checked
Date

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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
2	4	Y	-7.96
2	5	Y	58.72
2	6	Y	-90.77
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	78.92
1	7	Y	-108.42
2	1	Y	-173.86
2	2	Y	55.53
2	3	Y	-26.29
2	4	Y	-3.40
2	5	Y	54.25
2	6	Y	-83.86

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load
	Two Design Trucks + Lane Load
	Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Units: US (English)

Design Code: AASHTO LRFD



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File Name:	Pier12EB_Existing.rcp	www.bentley.com
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Longitudinal Reaction: Simple Span Distribution

Line #	Bearing #	Dir	Load kips
1	3	Y	-19.83
1	4	Y	-27.29
1	5	Y	-24.40
1	6	Y	99.97
1	7	Y	-204.53
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-22.43
2	4	Y	-3.39
2	5	Y	0.00
2	6	Y	0.00

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load
 Two Design Trucks + Lane Load
 Two Design Tandem + Lane Load

Transverse Positioning
 Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL31 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.71
1	3	Y	-21.65
1	4	Y	-46.25
1	5	Y	-45.78
1	6	Y	191.64
1	7	Y	-395.34
2	1	Y	0.00
2	2	Y	-4.06
2	3	Y	-18.91
2	4	Y	-3.70
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-0.93

Units: US (English)
 Design Code: AASHTO LRFD



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Longitudinal Reaction: Simple Span Distribution

Line #	Bearing #	Dir	Load kips
1	3	Y	-19.83
1	4	Y	-27.29
1	5	Y	-24.40
1	6	Y	99.97
1	7	Y	-204.53
2	1	Y	0.00
2	2	Y	-3.79
2	3	Y	-22.43
2	4	Y	-3.39
2	5	Y	0.00
2	6	Y	0.00

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load
 Two Design Trucks + Lane Load
 Two Design Tandem + Lane Load

Transverse Positioning
 Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL32 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.71
1	3	Y	-21.65
1	4	Y	-46.25
1	5	Y	-45.78
1	6	Y	191.64
1	7	Y	-395.34
2	1	Y	0.00
2	2	Y	-4.06
2	3	Y	-18.91
2	4	Y	-3.70
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-0.93

Units: US (English)
 Design Code: AASHTO LRFD



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Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL33 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-209.75
1	2	Y	125.95
1	3	Y	0.00
1	4	Y	-26.78
1	5	Y	-15.12
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-167.67
2	2	Y	97.94
2	3	Y	-5.84
2	4	Y	-24.73
2	5	Y	-4.30
2	6	Y	0.00
1	1	Y	-193.14
1	2	Y	115.97
1	3	Y	-0.98
1	4	Y	-23.51
1	5	Y	-14.50
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-186.20
2	2	Y	108.77
2	3	Y	-5.59
2	4	Y	-29.26
2	5	Y	-3.87
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

- Design Truck
- Design Truck + Lane Load
- Design Tandem + Lane Load



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Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL33 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-81.08
1	2	Y	54.44
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-92.58
2	2	Y	60.54
2	3	Y	-9.59
2	4	Y	-51.06
2	5	Y	100.60
2	6	Y	-326.13
1	1	Y	-89.79
1	2	Y	60.29
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00



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Line #	Bearing #	Dir	Load kips
2	1	Y	-85.54
2	2	Y	55.93
2	3	Y	-4.27
2	4	Y	-27.16
2	5	Y	51.46
2	6	Y	-168.06

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load
	Two Design Trucks + Lane Load
	Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL34 Name:

Multiplier = 1.000



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Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-0.91
1	3	Y	-27.69
1	4	Y	-38.57
1	5	Y	-14.79
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-7.50
2	3	Y	-43.22
2	4	Y	-41.80
2	5	Y	-6.08
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-1.43
1	3	Y	-30.52
1	4	Y	-41.78
1	5	Y	-17.06
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-5.83
2	3	Y	-41.07
2	4	Y	-39.63
2	5	Y	-4.56
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load
	Two Design Trucks + Lane Load
	Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing



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File Name: Pier12EB_Existing.rcp

Minimum Distance from Curb = 2.00 ft

Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected

Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36

Total number of Possible Combination = 401576

Loadcase ID: LL35 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-28.24
1	2	Y	-3.80
1	3	Y	0.00
1	4	Y	-36.57
1	5	Y	-45.78
1	6	Y	191.64
1	7	Y	-395.34
2	1	Y	-25.35
2	2	Y	-1.31
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-26.00
1	2	Y	-3.50
1	3	Y	-0.44
1	4	Y	-18.11
1	5	Y	-24.40
1	6	Y	99.97
1	7	Y	-204.53
2	1	Y	-28.15
2	2	Y	-1.45
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected

Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36

Total number of Possible Combination = 401576

Loadcase ID: LL36 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-156.83
1	2	Y	76.91
1	3	Y	0.00
1	4	Y	-17.00
1	5	Y	-9.64

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-192.38
2	2	Y	39.18
2	3	Y	-54.79
2	4	Y	-30.69
2	5	Y	-3.97
2	6	Y	0.00
1	1	Y	-173.70
1	2	Y	85.19
1	3	Y	-0.44
1	4	Y	-17.96
1	5	Y	-11.11
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-173.86
2	2	Y	55.53
2	3	Y	-30.55
2	4	Y	-25.78
2	5	Y	-2.97
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected



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Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL37 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-192.20
1	2	Y	53.16
1	3	Y	-36.64
1	4	Y	-30.14
1	5	Y	-11.60
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-153.57
2	2	Y	69.55
2	3	Y	-23.36
2	4	Y	-22.62
2	5	Y	-3.30
2	6	Y	0.00
2	7	Y	-175.28
1	1	Y	63.82
1	2	Y	-27.29
1	3	Y	-27.16
1	4	Y	-11.11
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-170.54
2	2	Y	77.95
2	3	Y	-26.68
2	4	Y	-25.78
2	5	Y	-2.97
2	6	Y	0.00



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Job #
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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL38 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	138.59
1	7	Y	-208.26
2	1	Y	-216.26
2	2	Y	141.41
2	3	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL38 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
2	4	Y	0.00
2	5	Y	112.97
2	6	Y	-196.77
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	153.49
1	7	Y	-230.65
2	1	Y	-111.86
2	2	Y	73.14
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	104.37
2	6	Y	-181.80

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Loadcase ID: LL39 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-423.50
2	2	Y	247.39
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
2	7	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-219.05
2	2	Y	127.96
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
2	7	Y	0.00

Auto generation details:

Generated Live Load

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Loadcase ID: LL40 Name:
Multiplier = 1.000

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

- Design Truck
- Design Truck + Lane Load
- Design Tandem + Lane Load
- Two Design Trucks + Lane Load
- Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Combinations = 36
Total number of Possible Combination = 401576

Loadcase ID: LL40 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-316.62
1	2	Y	145.82
1	3	Y	-30.05
1	4	Y	-30.14
1	5	Y	-11.60
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-28.98
2	2	Y	-24.26
2	3	Y	-27.48
2	4	Y	-22.62
2	5	Y	-3.30
2	6	Y	0.00
2	7	Y	-175.28
1	1	Y	63.82
1	2	Y	63.82

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	3	Y	-27.29
1	4	Y	-27.16
1	5	Y	-11.11
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-31.47
2	2	Y	-27.65
2	3	Y	-30.55
2	4	Y	-25.78
2	5	Y	-2.97
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
 Total number of Possible Combination = 401576

Loadcase ID: LL41 Name:

Multiplier = 1.000

Units: US (English)

Design Code: AASHTO LRFD



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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
2	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-7.80
2	2	Y	-49.27
2	3	Y	-59.00
2	4	Y	-59.00
2	5	Y	-4.21
2	6	Y	-164.14
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	-3.32
2	3	Y	-26.20
2	4	Y	-30.55
2	5	Y	-30.55
2	6	Y	-2.75
2	7	Y	-84.27

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Units: US (English)

Design Code: AASHTO LRFD



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Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL42 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-99.06
1	2	Y	29.39
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-336.56
2	2	Y	177.91
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-109.72
1	2	Y	32.55
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00



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Auto generation details:
Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning
Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Loadcase ID: LL43 Name:
Multiplier = 1.000

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576



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File Name: Pier12EB_Existing.rcp

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-431.15
2	2	Y	206.61
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
2	7	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	-223.01
2	2	Y	106.87
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing



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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-440.44
1	2	Y	216.01
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-227.14
1	2	Y	111.40
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Loadcase ID: LL44 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-440.44
1	2	Y	216.01
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-227.14
1	2	Y	111.40
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD

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Minimum Distance from Curb = 2.00 ft

Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected

Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36

Total number of Possible Combination = 401576



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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: LL45 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	440.60
1	2	Y	264.57
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-227.22
1	2	Y	136.44
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
1	7	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load
Two Design Trucks + Lane Load
Two Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: BR1 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X	ft	-1618.34	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load	kips
1	1	X	2.21	2.21
1	1	Z	-8.75	-8.75
1	1	Y	3.84	3.84
1	2	X	2.21	2.21
1	2	Z	-8.75	-8.75
1	3	X	2.21	2.21
1	3	Z	-8.75	-8.75
1	4	X	2.21	2.21
1	4	Z	-8.75	-8.75
1	5	X	2.21	2.21
1	5	Z	-8.75	-8.75
1	6	X	2.21	2.21
1	6	Z	-8.75	-8.75
1	7	X	2.21	2.21
1	7	Z	-8.75	-8.75
1	7	Y	-3.84	-3.84
2	1	X	2.57	2.57
2	1	Z	-10.21	-10.21
2	1	Y	3.84	3.84
2	2	X	2.57	2.57
2	2	Z	-10.21	-10.21
2	3	X	2.57	2.57
2	3	Z	-10.21	-10.21
2	4	X	2.57	2.57
2	4	Z	-10.21	-10.21
2	5	X	2.57	2.57
2	5	Z	-10.21	-10.21
2	6	X	2.57	2.57

Units: US (English)

Design Code: AASHTO LRFD



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Total number of Considered Truck Positions = 36
Total number of Possible Combination = 401576

Loadcase ID: BR2 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X	ft	-1618.34	k-ft	0.50	

Bearing loads

Auto generation details:
Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Line #	Bearing #	Dir	Load	kips
2	6	Z	-10.21	-10.21
2	6	Y	-3.84	-3.84

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR3 Name:

Multiplier = 1.000

Cap loads



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Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	10.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
2	2	X	2.21
2	2	Z	-8.75
2	3	X	2.21
2	3	Z	-8.75
2	4	X	2.21
2	4	Z	-8.75
2	5	X	2.21
2	5	Z	-8.75
2	6	X	2.21
2	6	Z	-8.75
2	7	X	2.21
2	7	Z	-8.75
2	1	Y	-3.84
2	1	X	2.57
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Units: US (English)

Design Code: AASHTO LRFD

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File Name: Pier12EB_Existing.rcp

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR4 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68
2	1	Z	-6.68
2	1	Y	2.51
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68

Units: US (English)

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Line #	Bearing #	Dir	Load kips
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR5 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75

Units: US (English)

Design Code: AASHTO LRFD

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Load

Line #

Bearing #

Dir

kips

Y

3.84

1

X

2.21

2

Z

-8.75

1

X

2.21

3

Z

-8.75

1

X

2.21

4

Z

-8.75

1

X

2.21

5

Z

-8.75

1

X

2.21

6

Z

-8.75

1

X

2.21

7

Z

-8.75

1

Y

-3.84

2

X

2.57

1

Z

-10.21

2

Y

3.84

2

X

2.57

1

Z

-10.21

2

X

2.57

2

Z

-10.21

2

Y

-10.21

2

Y

-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck

Load: Design Truck + Lane Load

Load: Design Tandem + Lane Load

Load: Two Design Trucks + Lane Load

Load: Two Design Tandem + Lane Load

Number of loaded lanes = 6

Contributing longitudinal length = 142.09 ft



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File Name: Pier12EB_Existing.rcp

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Version: 12.01.00.57

Loadcase ID: BR6

Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2 k2/L
Moment	X		829.92 k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	-1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

Units: US (English)

Design Code: AASHTO LRFD

Design Code: AASHTO LRFD



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File Name:	Pier12EB_Existing.rcp	www.bentley.com	Checked	Date
		Phone: 1-800-778-4277		

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR7 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57



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		Phone: 1-800-778-4277		

Line #	Bearing #	Dir	Load kips
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR8 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

Bearing loads



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File Name: Pier12EB_Existing.rcp

Loadcase ID: BR9 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	2	Y	1.13
1	3	X	1.13
1	3	Z	-4.49
1	3	Y	1.13
1	4	X	1.13
1	4	Z	-4.49
1	4	Y	1.13
1	5	X	1.13
1	5	Z	-4.49
1	5	Y	1.13
1	6	X	1.13
1	6	Z	-4.49
1	6	Y	1.13
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	2	Y	1.32
2	3	X	1.32
2	3	Z	-5.24
2	3	Y	1.32
2	4	X	1.32
2	4	Z	-5.24
2	4	Y	1.32
2	5	X	1.32
2	5	Z	-5.24
2	5	Y	1.32
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	1.97

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Units: US (English)
 Design Code: AASHTO LRFD

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File Name: Pier12EB_Existing.rcp

Loadcase ID: BR9 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	2	Y	1.13
1	3	X	1.13
1	3	Z	-4.49
1	3	Y	1.13
1	4	X	1.13
1	4	Z	-4.49
1	4	Y	1.13
1	5	X	1.13
1	5	Z	-4.49
1	5	Y	1.13
1	6	X	1.13
1	6	Z	-4.49
1	6	Y	1.13
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	2	Y	1.32
2	3	X	1.32
2	3	Z	-5.24
2	3	Y	1.32
2	4	X	1.32
2	4	Z	-5.24
2	4	Y	1.32
2	5	X	1.32
2	5	Z	-5.24
2	5	Y	1.32
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	1.97

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Units: US (English)
 Design Code: AASHTO LRFD



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Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR10 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X	ft	-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR11 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X	ft	-1058.15 k-ft	0.50		

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Loadcase ID: BR12 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X	ft	-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	2	Y	2.21
1	3	X	-8.75
1	3	Z	2.21
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft



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File Name: Pier12EB_Existing.rcp

Loadcase ID: BR12 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X	ft	-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	2	Y	1.44
1	3	X	-5.72
1	3	Z	1.44
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68
2	1	Z	-6.68
2	1	Y	2.51
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft



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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR14 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Units: US (English)

Design Code: AASHTO LRFD



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Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR13 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21

Units: US (English)

Design Code: AASHTO LRFD



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Contributing longitudinal length = 142.09 ft

Loadcase ID: BR15 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68
2	1	Z	-6.68
2	1	Y	2.51
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation

- Load: Design Truck
- Load: Design Truck + Lane Load
- Load: Design Tandem + Lane Load
- Load: Two Design Trucks + Lane Load
- Load: Two Design Tandem + Lane Load
- Number of loaded lanes = 3



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File Name: Pier12EB_Existing.rcp

Contributing longitudinal length = 142.09 ft

Loadcase ID: BR15 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	1.97
2	1	X	1.32
2	1	Z	-5.24
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-5.24

Units: US (English)

Design Code: AASHTO LRFD

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	-1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR16 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49



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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
2	6	Y	-1.97

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR16 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49

Cap loads						
Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L

Loadcase ID: BR17 Name:
 Multiplier = 1.000

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft



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File Name: Pier12EB_Existing.rcp

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
2	1	X	1.68
2	1	Z	-6.68
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:



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File Name: Pier12EB_Existing.rcp

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

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Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR18 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
2	1	X	1.68
2	1	Z	-6.68
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68

Units: US (English)

Design Code: AASHTO LRFD

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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR19 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75

Units: US (English)

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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Units: US (English)

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Loadcase ID: BR20 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR21 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68

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Loadcase ID: BR20 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR21 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68

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Loadcase ID: BR21 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	-1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load
2	1	Z	-6.68
2	1	Y	2.51
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR22 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X	ft	-829.92 k-ft	0.50		

Bearing loads

Units: US (English)

Design Code: AASHTO LRFD



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File Name: |Pier12EB_Existing.rcp

Loadcase ID: BR23 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

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File Name: |Pier12EB_Existing.rcp

Auto generation details:

Selected Live Load for BR generation

- Load: Design Truck
- Load: Design Truck + Lane Load
- Load: Design Tandem + Lane Load
- Load: Two Design Trucks + Lane Load
- Load: Two Design Tandem + Lane Load
- Number of loaded lanes = 2
- Contributing longitudinal length = 142.09 ft

Loadcase ID: BR24 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75

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Line #	Bearing #	Dir	Load kips
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR25 Name:
 Multiplier = 1.000

Cap loads	Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X			-1618.34	k-ft	0.50	



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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
2	2	X	2.21
2	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft



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Loadcase ID: BR26 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Units: US (English)

Design Code: AASHTO LRFD



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File Name:	Pier12EB_Existing.rcp	www.bentley.com	Checked	Phone: 1-800-778-4277	
			Date		

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR27 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	6	Y	1.13
1	7	X	1.13

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Line #	Bearing #	Dir	Load kips
1	7	Z	-4.49
1	7	Y	-1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR28 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR28 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

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File Name: Pier12EB_Existing.rcp

Contributing longitudinal length = 142.09 ft

Loadcase ID: BR29 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21

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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR30 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75

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Line #	Bearing #	Dir	Load kips
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

- Load: Design Truck
- Load: Design Truck + Lane Load
- Load: Design Tandem + Lane Load
- Load: Two Design Trucks + Lane Load
- Load: Two Design Tandem + Lane Load
- Number of loaded lanes = 6
- Contributing longitudinal length = 142.09 ft

Loadcase ID: BR31

Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L

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Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	10.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
2	2	X	2.21
2	2	Z	-8.75
2	2	Y	2.21
3	3	X	2.21
3	3	Z	-8.75
3	3	Y	2.21
4	4	X	2.21
4	4	Z	-8.75
4	4	Y	2.21
5	5	X	2.21
5	5	Z	-8.75
5	5	Y	2.21
6	6	X	2.21
6	6	Z	-8.75
6	6	Y	2.21
7	7	X	2.21
7	7	Z	-8.75
7	7	Y	-3.84
1	1	X	2.57
1	1	Z	-10.21
2	2	X	2.57
2	2	Z	-10.21
2	2	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	2	Y	2.57
3	3	X	2.57
3	3	Z	-10.21
3	3	Y	2.57
4	4	X	2.57
4	4	Z	-10.21
4	4	Y	2.57
5	5	X	2.57
5	5	Z	-10.21
5	5	Y	2.57
6	6	X	2.57
6	6	Z	-10.21
6	6	Y	-3.84

Auto generation details:

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File Name: Pier12EB_Existing.rcp

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR32 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2 x2/L
Moment	X		-1058.15 k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68
2	1	Z	-6.68
2	1	Y	2.51
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68

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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR33 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2 x2/L
Moment	X		-1618.34 k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75

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Program: LEAP® RC-PIER® V8i (SELECTseries 5)

Version: 12.01.00.57

Loadcase ID: BR34 Name:

Multiplier = 1.000

Cap loads

Type Dir Arm Mag1 x1/L Mag2 x2/L

Moment X 829.92 k-ft 0.50

Line #	Bearing #	Dir	Load kips
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
2	1	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	2	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	Y	2.57
2	3	X	-10.21
2	4	Y	2.57
2	4	X	-10.21
2	5	Y	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck

Load: Design Truck + Lane Load

Load: Design Tandem + Lane Load

Load: Two Design Trucks + Lane Load

Load: Two Design Tandem + Lane Load

Number of loaded lanes = 6

Contributing longitudinal length = 142.09 ft



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)

Version: 12.01.00.57

Loadcase ID: BR34 Name:

Multiplier = 1.000

Cap loads

Type Dir Arm Mag1 x1/L Mag2 x2/L

Moment X 829.92 k-ft 0.50

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	-1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

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Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 2
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR35 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57



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Phone: 1-800-778-4277

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR36 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84



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Loadcase ID: BR37 Name:
Multiplier = 1.000

Cap loads			
Type	Dir	Arm ft	Mag1 Mag2 x2/L
Moment	X		-1618.34 k-ft | 0.50

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	2	Y	3.84
1	3	X	2.21
1	3	Z	-8.75
1	3	Y	3.84
1	4	X	2.21
1	4	Z	-8.75
1	4	Y	3.84
1	5	X	2.21
1	5	Z	-8.75
1	5	Y	3.84
1	6	X	2.21
1	6	Z	-8.75
1	6	Y	3.84
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	2	Y	3.84
2	3	X	2.57
2	3	Z	-10.21
2	3	Y	3.84
2	4	X	2.57
2	4	Z	-10.21
2	4	Y	3.84
2	5	X	2.57
2	5	Z	-10.21
2	5	Y	3.84
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft



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File Name: Pier12EB_Existing.rcp

Loadcase ID: BR37 Name:
Multiplier = 1.000

Cap loads			
Type	Dir	Arm ft	Mag1 Mag2 x2/L
Moment	X		-1618.34 k-ft | 0.50

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	2	Y	3.84
1	3	X	2.21
1	3	Z	-8.75
1	3	Y	3.84
1	4	X	2.21
1	4	Z	-8.75
1	4	Y	3.84
1	5	X	2.21
1	5	Z	-8.75
1	5	Y	3.84
1	6	X	2.21
1	6	Z	-8.75
1	6	Y	3.84
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	2	Y	3.84
2	3	X	2.57
2	3	Z	-10.21
2	3	Y	3.84
2	4	X	2.57
2	4	Z	-10.21
2	4	Y	3.84
2	5	X	2.57
2	5	Z	-10.21
2	5	Y	3.84
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft



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Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 6
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR38 Name:

Multiplier = 1.000

Cap loads

Table with 6 columns: Type, Dir, Arm, Mag1, x1/L, Mag2 x2/L. Row 1: Moment, X, ft, -1058.15 k-ft, 0.50

Bearing loads

Table with 6 columns: Line #, Bearing #, Dir, Load kips. Rows 1-7 showing various load values and directions.

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

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Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 142.09 ft

Loadcase ID: BR39 Name:

Multiplier = 1.000

Cap loads

Table with 6 columns: Type, Dir, Arm, Mag1, x1/L, Mag2 x2/L. Row 1: Moment, X, ft, -829.92 k-ft, 0.50

Units: US (English)

Design Code: AASHTO LRFD



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Loadcase ID: BR40 Name:
Multiplier = 1.000

Cap loads
Type Dir Arm Mag1 x1/L Mag2 x2/L
Moment X -1618.34 k-ft 0.50

Line #	Bearing #	Dir	Load kips
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
1	7	Y	-1.97
2	1	X	1.32
2	1	Z	-5.24
2	1	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

Bearing loads

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 2
Contributing longitudinal length = 142.09 ft



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Loadcase ID: BR40 Name:
Multiplier = 1.000

Cap loads
Type Dir Arm Mag1 x1/L Mag2 x2/L
Moment X -1618.34 k-ft 0.50

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Bearing loads

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Load: Two Design Trucks + Lane Load
Load: Two Design Tandem + Lane Load
Number of loaded lanes = 2
Contributing longitudinal length = 142.09 ft



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Line #	Bearing #	Dir	Load kips
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR41 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1618.34 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	2.21
1	1	Z	-8.75
1	1	Y	3.84
1	2	X	2.21
1	2	Z	-8.75
1	3	X	2.21
1	3	Z	-8.75
1	4	X	2.21
1	4	Z	-8.75
1	5	X	2.21
1	5	Z	-8.75
1	6	X	2.21
1	6	Z	-8.75
1	7	X	2.21

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	7	Z	-8.75
1	7	Y	-3.84
2	1	X	2.57
2	1	Z	-10.21
2	1	Y	3.84
2	2	X	2.57
2	2	Z	-10.21
2	3	X	2.57
2	3	Z	-10.21
2	4	X	2.57
2	4	Z	-10.21
2	5	X	2.57
2	5	Z	-10.21
2	6	X	2.57
2	6	Z	-10.21
2	6	Y	-3.84

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 6
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR42 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Units: US (English)

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Contributing longitudinal length = 142.09 ft

Loadcase ID: BR43 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	2.51
2	1	X	1.68
2	1	Z	-6.68
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3

Units: US (English)

Design Code: AASHTO LRFD



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Contributing longitudinal length = 142.09 ft

Loadcase ID: BR43 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	2.51
2	1	X	1.68
2	1	Z	-6.68
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Units: US (English)

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Line #	Bearing #	Dir	Load kips
2	6	Y	-2.51

Line #	Bearing #	Dir	Load kips
1	5	X	1.44
1	5	Z	-5.72
1	6	X	1.44
1	6	Z	-5.72
1	7	X	1.44
1	7	Z	-5.72
1	7	Y	-2.51
2	1	X	1.68
2	1	Z	-6.68
2	2	X	1.68
2	2	Z	-6.68
2	3	X	1.68
2	3	Z	-6.68
2	4	X	1.68
2	4	Z	-6.68
2	5	X	1.68
2	5	Z	-6.68
2	6	X	1.68
2	6	Z	-6.68
2	6	Y	-2.51

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR44 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-1058.15 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	1.44
1	1	Z	-5.72
1	1	Y	2.51
1	2	X	1.44
1	2	Z	-5.72
1	3	X	1.44
1	3	Z	-5.72
1	4	X	1.44
1	4	Z	-5.72

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 142.09 ft

Loadcase ID: BR45 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L



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Type	Dir	Arm	Mag1	x1/L	Mag2	k2/L
Moment	X	ft	-829.92 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	1.13
1	1	Z	-4.49
1	1	Y	1.97
1	2	X	1.13
1	2	Z	-4.49
1	3	X	1.13
1	3	Z	-4.49
1	4	X	1.13
1	4	Z	-4.49
1	5	X	1.13
1	5	Z	-4.49
1	6	X	1.13
1	6	Z	-4.49
1	7	X	1.13
1	7	Z	-4.49
2	1	Y	-1.97
2	1	X	1.32
2	1	Z	-5.24
2	2	Y	1.97
2	2	X	1.32
2	2	Z	-5.24
2	3	X	1.32
2	3	Z	-5.24
2	4	X	1.32
2	4	Z	-5.24
2	5	X	1.32
2	5	Z	-5.24
2	6	X	1.32
2	6	Z	-5.24
2	6	Y	-1.97

Auto generation details:



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Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Load: Two Design Trucks + Lane Load
 Load: Two Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 142.09 ft

Loadcase ID: WS1 Name: Angle: 0

Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Force	X	ft	-4.95 kips	0.50		
UDL	Z		-0.02 klf	0.00		1.00

Column loads

Col#	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.238 klf	0.00		1.00
2	UDL	Z	-0.060 klf	0.00		1.00
1	UDL	X	-0.238 klf	0.00		0.85
1	UDL	Z	-0.060 klf	0.00		0.85
3	UDL	X	0.238 klf	0.00		1.00
3	UDL	Z	0.060 klf	0.00		1.00
4	UDL	X	0.238 klf	0.00		0.85
4	UDL	Z	0.060 klf	0.00		0.85

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	-6.03
1	1	Y	-53.84
1	1	Z	-1.52
1	2	X	-6.03
1	2	Y	20.89
1	2	Z	-1.52
1	3	X	-6.03
1	3	Y	20.89

Units: US (English)

Design Code: AASHTO LRFD

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Line #	Bearing #	Dir	Load kips
1	3	Z	-1.52
1	4	X	-6.03
1	4	Y	20.89
1	4	Z	-1.52
1	5	X	-6.03
1	5	Y	20.89
1	5	Z	-1.52
1	6	X	-6.03
1	6	Y	20.89
1	6	Z	-1.52
1	7	X	-6.03
1	7	Y	95.61
1	7	Z	-1.52
2	1	X	-7.06
2	1	Y	-50.53
2	1	Z	-1.78
2	2	X	-7.06
2	2	Y	24.45
2	2	Z	-1.78
2	3	X	-7.06
2	3	Y	24.45
2	3	Z	-1.78
2	4	X	-7.06
2	4	Y	24.45
2	4	Z	-1.78
2	5	X	-7.06
2	5	Y	24.45
2	5	Z	-1.78
2	6	X	-7.06
2	6	Y	99.43
2	6	Z	-1.78

Auto generation details:

Generated Wind Load on Structure

Angle of wind = 0.00 deg Elevation above which wind load acts = 0.00 ft
 Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
 Transverse 62.141 psf Cap 46.007 psf
 Longitudinal 0.000 psf Column 46.007 psf
 Overturning 20.000 psf



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Loadcase ID: WS2 Name: Angle: 15
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-1.48 kips	0.50		
UDL	Z		0.00 klf	0.00		1.00

Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.188 klf	0.00		1.00
2	UDL	Z	0.003 klf	0.00		1.00
1	UDL	X	-0.188 klf	0.00		0.85
1	UDL	Z	0.003 klf	0.00		0.85
3	UDL	X	0.188 klf	0.00		1.00
3	UDL	Z	-0.003 klf	0.00		1.00
4	UDL	X	0.188 klf	0.00		0.85
4	UDL	Z	-0.003 klf	0.00		0.85

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-5.49
1	1	Y	-3.57
1	1	Z	-0.61
1	2	X	-5.49
1	2	Y	-0.00
1	2	Z	-0.61
1	3	X	-5.49
1	3	Y	-0.00
1	3	Z	-0.61
1	4	X	-5.49
1	4	Y	-0.00
1	4	Z	-0.61
1	5	X	-5.49
1	5	Y	-0.00
1	5	Z	-0.61
1	6	X	-5.49
1	6	Y	-0.00



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Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-5.34 kips	0.50		
UDL	Z		0.03 klf	0.00		1.00

Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.243 klf	0.00		1.00
2	UDL	Z	0.069 klf	0.00		1.00
1	UDL	X	-0.243 klf	0.00		0.85
1	UDL	Z	0.069 klf	0.00		0.85
3	UDL	X	0.243 klf	0.00		1.00
3	UDL	Z	-0.069 klf	0.00		1.00
4	UDL	X	0.243 klf	0.00		0.85
4	UDL	Z	-0.069 klf	0.00		0.85

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	-5.31
1	1	Y	-3.45
1	1	Z	0.20
1	2	X	-5.31
1	2	Y	-0.00
1	2	Z	0.20
1	3	X	-5.31
1	3	Y	-0.00
1	3	Z	0.20
1	4	X	-5.31
1	4	Y	-0.00
1	4	Z	0.20
1	5	X	-5.31
1	5	Y	-0.00
1	5	Z	0.20
1	6	X	-5.31
1	6	Y	-0.00
1	6	Z	0.20
1	7	X	-5.31
1	7	Y	3.45
1	7	Z	0.20
2	1	X	-6.21
2	1	Y	-3.46
2	1	Z	0.23
2	2	X	-6.21



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Line #	Bearing #	Dir	Load
1	6	Z	-0.61
1	7	X	-5.49
1	7	Y	3.57
1	7	Z	-0.61
2	1	X	-6.42
2	1	Y	-3.58
2	1	Z	-0.72
2	2	X	-6.42
2	2	Y	-0.00
2	2	Z	-0.72
2	3	X	-6.42
2	3	Y	-0.00
2	3	Z	-0.72
2	4	X	-6.42
2	4	Y	-0.00
2	4	Z	-0.72
2	5	X	-6.42
2	5	Y	-0.00
2	5	Z	-0.72
2	6	X	-6.42
2	6	Y	3.58
2	6	Z	-0.72

Auto generation details:

Generated Wind Load on Structure

Angle of wind = 15.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
Transverse 54.684 psf Cap 46.007 psf
Longitudinal 7.457 psf Column 46.007 psf
Overturning not considered

Loadcase ID: WS3 Name: Angle: 30
Multiplier = 1.000

Cap loads

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-5.34 kips	0.50		
UDL	Z		0.03 klf	0.00		1.00

Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.243 klf	0.00		1.00
2	UDL	Z	0.069 klf	0.00		1.00
1	UDL	X	-0.243 klf	0.00		0.85
1	UDL	Z	0.069 klf	0.00		0.85
3	UDL	X	0.243 klf	0.00		1.00
3	UDL	Z	-0.069 klf	0.00		1.00
4	UDL	X	0.243 klf	0.00		0.85
4	UDL	Z	-0.069 klf	0.00		0.85

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	-5.31
1	1	Y	-3.45
1	1	Z	0.20
1	2	X	-5.31
1	2	Y	-0.00
1	2	Z	0.20
1	3	X	-5.31
1	3	Y	-0.00
1	3	Z	0.20
1	4	X	-5.31
1	4	Y	-0.00
1	4	Z	0.20
1	5	X	-5.31
1	5	Y	-0.00
1	5	Z	0.20
1	6	X	-5.31
1	6	Y	-0.00
1	6	Z	0.20
1	7	X	-5.31
1	7	Y	3.45
1	7	Z	0.20
2	1	X	-6.21
2	1	Y	-3.46
2	1	Z	0.23
2	2	X	-6.21

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Program: LEAP® RC-PIER® V8i (SELECTseries 5)

Version: 12.01.00.57

Line #	Bearing #	Dir	Load kips
2	2	Y	-0.00
2	2	Z	0.23
2	3	X	-6.21
2	3	Y	-0.00
2	3	Z	0.23
2	4	X	-6.21
2	4	Y	-0.00
2	4	Z	0.23
2	5	X	-6.21
2	5	Y	-0.00
2	5	Z	0.23
2	6	X	-6.21
2	6	Y	3.46
2	6	Z	0.23

Auto generation details:

Generated Wind Load on Structure

Angle of wind = 30.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
Transverse 50.956 psf Cap 46.007 psf
Longitudinal 14.914 psf Column 46.007 psf
Overturning not considered

Loadcase ID: WS4 Name: Angle: 45

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1 kips	x1/L	Mag2 klf	x2/L
Force	X	0.00	-7.93	0.50		
UDL	Z		0.08	0.00		1.00

Column loads

Units: US (English)

Design Code: AASHTO LRFD



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Col #	Type	Dir	Mag1 klf	x1/L	Mag2 klf	x2/L
2	UDL	X	-0.257	0.00		1.00
2	UDL	Z	0.154	0.00		1.00
1	UDL	X	-0.257	0.00		0.85
1	UDL	Z	0.154	0.00		0.85
3	UDL	X	0.257	0.00		1.00
3	UDL	Z	-0.154	0.00		1.00
4	UDL	X	0.257	0.00		0.85
4	UDL	Z	-0.154	0.00		0.85

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-4.47
1	1	Y	-2.90
1	1	Z	0.93
1	2	X	-4.47
1	2	Y	-0.00
1	2	Z	0.93
1	3	X	-4.47
1	3	Y	-0.00
1	3	Z	0.93
1	4	X	-4.47
1	4	Y	-0.00
1	4	Z	0.93
1	5	X	-4.47
1	5	Y	-0.00
1	5	Z	0.93
1	6	X	-4.47
1	6	Y	-0.00
1	6	Z	0.93
1	7	X	-4.47
1	7	Y	2.90
1	7	Z	0.93
2	1	X	-5.23
2	1	Y	-2.91
2	1	Z	1.08
2	2	X	-5.23
2	2	Y	-0.00
2	2	Z	1.08
2	3	X	-5.23
2	3	Y	-0.00
2	3	Z	1.08
2	4	X	-5.23
2	4	Y	-0.00
2	4	Z	1.08
2	5	X	-5.23
2	5	Y	-0.00

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
2	5	Z	1.08
2	6	X	-5.23
2	6	Y	2.91
2	6	Z	1.08

Auto generation details:

Generated Wind Load on Structure

Angle of wind = 45.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:

Transverse 41.013 psf Cap 46.007 psf

Longitudinal 19.885 psf Column 46.007 psf

Overturning not considered

Loadcase ID: WSS Name: Angle: 60

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-8.57 kips	0.50		
UDL	Z		0.15 klf	0.00		1.00

Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.227 klf	0.00		1.00
2	UDL	Z	0.234 klf	0.00		1.00
1	UDL	X	-0.227 klf	0.00		0.85
1	UDL	Z	0.234 klf	0.00		0.85
3	UDL	X	0.227 klf	0.00		1.00
3	UDL	Z	-0.234 klf	0.00		1.00
4	UDL	X	0.227 klf	0.00		0.85
4	UDL	Z	-0.234 klf	0.00		0.85

Units: US (English)

Design Code: AASHTO LRFD



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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-2.63
1	1	Y	-1.71
1	1	Z	1.77
1	2	X	-2.63
1	2	Y	-0.00
1	2	Z	1.77
1	3	X	-2.63
1	3	Y	-0.00
1	3	Z	1.77
1	4	X	-2.63
1	4	Y	-0.00
1	4	Z	1.77
1	5	X	-2.63
1	5	Y	-0.00
1	5	Z	1.77
1	6	X	-2.63
1	6	Y	-0.00
1	6	Z	1.77
1	7	X	-2.63
1	7	Y	1.71
1	7	Z	1.77
2	1	X	-3.08
2	1	Y	-1.71
2	1	Z	2.08
2	2	X	-3.08
2	2	Y	-0.00
2	2	Z	2.08
2	3	X	-3.08
2	3	Y	-0.00
2	3	Z	2.08
2	4	X	-3.08
2	4	Y	-0.00
2	4	Z	2.08
2	5	X	-3.08
2	5	Y	-0.00
2	5	Z	2.08
2	6	X	-3.08
2	6	Y	1.71
2	6	Z	2.08

Units: US (English)

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File Name: Pier12EB_Existing.rcp Phone: 1-800-778-4277

Auto generation details:

Generated Wind Load on Structure

Angle of wind = 60.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:

Transverse 21.128 psf Cap 46.007 psf

Longitudinal 23.614 psf Column 46.007 psf

Overturning not considered

Loadcase ID: WS6 Name: Angle: 75

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-7.08 kips	0.50		
UDL	Z		0.22 klf	0.00		1.00

Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.161 klf	0.00		1.00
2	UDL	Z	0.289 klf	0.00		1.00
1	UDL	X	-0.161 klf	0.00		0.85
1	UDL	Z	0.289 klf	0.00		0.85
3	UDL	X	0.161 klf	0.00		1.00
3	UDL	Z	-0.289 klf	0.00		1.00
4	UDL	X	0.161 klf	0.00		0.85
4	UDL	Z	-0.289 klf	0.00		0.85

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-2.00
1	1	Y	-1.30
1	1	Z	2.32
1	2	X	-2.00
1	2	Y	-0.00
1	2	Z	2.32

Units: US (English)

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Auto generation details:

Line #	Bearing #	Dir	Load kips
1	3	X	-2.00
1	3	Y	-0.00
1	3	Z	2.32
1	4	X	-2.00
1	4	Y	-0.00
1	4	Z	2.32
1	5	X	-2.00
1	5	Y	-0.00
1	5	Z	2.32
1	6	X	-2.00
1	6	Y	-0.00
1	6	Z	2.32
1	7	X	-2.00
1	7	Y	1.30
1	7	Z	2.32
2	1	X	-2.34
2	1	Y	-1.30
2	1	Z	2.71
2	2	X	-2.34
2	2	Y	-0.00
2	2	Z	2.71
2	3	X	-2.34
2	3	Y	-0.00
2	3	Z	2.71
2	4	X	-2.34
2	4	Y	-0.00
2	4	Z	2.71
2	5	X	-2.34
2	5	Y	-0.00
2	5	Z	2.71
2	6	X	-2.34
2	6	Y	1.30
2	6	Z	2.71

Auto generation details:

Generated Wind Load on Structure

Angle of wind = 75.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:

Transverse 13.671 psf Cap 46.007 psf

Longitudinal 27.342 psf Column 46.007 psf

Units: US (English)

Design Code: AASHTO LRFD



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Overturning not considered

Loadcase ID: WL1 Name: Angle: 0
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.98
1	1	Y	-1.71
1	1	Z	-0.25
1	2	X	-0.98
1	2	Y	-0.00
1	2	Z	-0.25
1	3	X	-0.98
1	3	Y	-0.00
1	3	Z	-0.25
1	4	X	-0.98
1	4	Y	-0.00
1	4	Z	-0.25
1	5	X	-0.98
1	5	Y	-0.00
1	5	Z	-0.25
1	6	X	-0.98
1	6	Y	-0.00
1	6	Z	-0.25
1	7	X	-0.98
1	7	Y	1.71
1	7	Z	-0.25
2	1	X	-1.15
2	1	Y	-1.71
2	1	Z	-0.29
2	2	X	-1.15
2	2	Y	-0.00
2	2	Z	-0.29
2	3	X	-1.15
2	3	Y	-0.00
2	3	Z	-0.29
2	4	X	-1.15
2	4	Y	-0.00
2	4	Z	-0.29
2	5	X	-1.15
2	5	Y	-0.00
2	5	Z	-0.29
2	6	X	-1.15
2	6	Y	-0.00
2	6	Z	-0.29
2	7	X	-1.15
2	7	Y	-0.00
2	7	Z	-0.29

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Overturning not considered

Loadcase ID: WL2 Name: Angle: 15
Multiplier = 1.000

Auto generation details:

Generated Wind Load on Live Load
Angle of wind = 0.00 deg Live load length = 142.09 ft

Loadcase ID: WL2 Name: Angle: 15
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.89
1	1	Y	-1.55
1	1	Z	-0.10
1	2	X	-0.89
1	2	Y	-0.00
1	2	Z	-0.10
1	3	X	-0.89
1	3	Y	-0.00
1	3	Z	-0.10
1	4	X	-0.89
1	4	Y	-0.00
1	4	Z	-0.10
1	5	X	-0.89
1	5	Y	-0.00
1	5	Z	-0.10
1	6	X	-0.89
1	6	Y	-0.00
1	6	Z	-0.10
1	7	X	-0.89
1	7	Y	-0.00
1	7	Z	-0.10

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	6	Z	-0.10
1	7	X	-0.89
1	7	Y	1.55
1	7	Z	-0.10
2	1	X	-1.05
2	1	Y	-1.56
2	1	Z	-0.12
2	2	X	-1.05
2	2	Y	-0.00
2	2	Z	-0.12
2	3	X	-1.05
2	3	Y	-0.00
2	3	Z	-0.12
2	4	X	-1.05
2	4	Y	-0.00
2	4	Z	-0.12
2	5	X	-1.05
2	5	Y	-0.00
2	5	Z	-0.12
2	6	X	-1.05
2	6	Y	1.56
2	6	Z	-0.12

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = 15.00 deg Live load length = 142.09 ft

Loadcase ID: WL3 Name: Angle: 30

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	6	Z	-0.10
1	7	X	-0.89
1	7	Y	1.55
1	7	Z	-0.10
2	1	X	-1.05
2	1	Y	-1.56
2	1	Z	-0.12
2	2	X	-1.05
2	2	Y	-0.00
2	2	Z	-0.12
2	3	X	-1.05
2	3	Y	-0.00
2	3	Z	-0.12
2	4	X	-1.05
2	4	Y	-0.00
2	4	Z	-0.12
2	5	X	-1.05
2	5	Y	-0.00
2	5	Z	-0.12
2	6	X	-1.05
2	6	Y	1.56
2	6	Z	-0.12

Units: US (English)

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Line #	Bearing #	Dir	Load kips
1	1	X	-0.87
1	1	Y	-1.50
1	1	Z	0.03
1	2	X	-0.87
1	2	Y	-0.00
1	2	Z	0.03
1	3	X	-0.87
1	3	Y	-0.00
1	3	Z	0.03
1	4	X	-0.87
1	4	Y	-0.00
1	4	Z	0.03
1	5	X	-0.87
1	5	Y	-0.00
1	5	Z	0.03
1	6	X	-0.87
1	6	Y	-0.00
1	6	Z	0.03
1	7	X	-0.87
1	7	Y	1.50
1	7	Z	0.03
2	1	X	-1.01
2	1	Y	-1.51
2	1	Z	0.04
2	2	X	-1.01
2	2	Y	-0.00
2	2	Z	0.04
2	3	X	-1.01
2	3	Y	-0.00
2	3	Z	0.04
2	4	X	-1.01
2	4	Y	-0.00
2	4	Z	0.04
2	5	X	-1.01
2	5	Y	-0.00
2	5	Z	0.04
2	6	X	-1.01
2	6	Y	1.51
2	6	Z	0.04

Auto generation details:

Generated Wind Load on Live Load

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Angle of wind = 30.00 deg Live load length = 142.09 ft

Loadcase ID: WL4 Name: Angle: 45
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.73
1	1	Y	-1.26
1	1	Z	0.15
1	2	X	-0.73
1	2	Y	0.15
1	2	Z	-0.73
1	3	X	-0.73
1	3	Y	-0.00
1	3	Z	0.15
1	4	X	-0.73
1	4	Y	-0.00
1	4	Z	0.15
1	5	X	-0.73
1	5	Y	-0.00
1	5	Z	0.15
1	6	X	-0.73
1	6	Y	-0.00
1	6	Z	0.15
1	7	X	-0.73
1	7	Y	1.26
1	7	Z	0.15
2	1	X	-0.85
2	1	Y	-1.27
2	1	Z	0.18
2	2	X	-0.85
2	2	Y	-0.00
2	2	Z	0.18
2	3	X	-0.85
2	3	Y	-0.00
2	3	Z	0.18
2	4	X	-0.85
2	4	Y	-0.00
2	4	Z	0.18
2	5	X	-0.85
2	5	Y	-0.00
2	5	Z	0.18

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Angle of wind = 45.00 deg Live load length = 142.09 ft

Loadcase ID: WL5 Name: Angle: 60
Multiplier = 1.000

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = 45.00 deg Live load length = 142.09 ft

Loadcase ID: WL5 Name: Angle: 60
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.43
1	1	Y	-0.74
1	1	Z	0.29
1	2	X	-0.43
1	2	Y	-0.00
1	2	Z	0.29
1	3	X	-0.43
1	3	Y	-0.00
1	3	Z	0.29
1	4	X	-0.43
1	4	Y	-0.00
1	4	Z	0.29
1	5	X	-0.43
1	5	Y	-0.00
1	5	Z	0.29
1	6	X	-0.43
1	6	Y	-0.00
1	6	Z	0.29

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 153
Job #
Designed KSM
Date Sep/10/2013
Checked
Date

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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
1	6	Z	0.29
1	7	X	-0.43
1	7	Y	0.74
1	7	Z	0.29
2	1	X	-0.50
2	1	Y	-0.75
2	1	Z	0.34
2	2	X	-0.50
2	2	Y	-0.00
2	2	Z	0.34
2	3	X	-0.50
2	3	Y	-0.00
2	3	Z	0.34
2	4	X	-0.50
2	4	Y	-0.00
2	4	Z	0.34
2	5	X	-0.50
2	5	Y	-0.00
2	5	Z	0.34
2	6	X	-0.50
2	6	Y	0.75
2	6	Z	0.34

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = 60.00 deg Live load length = 142.09 ft

Loadcase ID: WL6 Name: Angle: 75

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	6	Z	0.29
1	7	X	-0.43
1	7	Y	0.74
1	7	Z	0.29
2	1	X	-0.50
2	1	Y	-0.75
2	1	Z	0.34
2	2	X	-0.50
2	2	Y	-0.00
2	2	Z	0.34
2	3	X	-0.50
2	3	Y	-0.00
2	3	Z	0.34
2	4	X	-0.50
2	4	Y	-0.00
2	4	Z	0.34
2	5	X	-0.50
2	5	Y	-0.00
2	5	Z	0.34
2	6	X	-0.50
2	6	Y	0.75
2	6	Z	0.34

Units: US (English)

Design Code: AASHTO LRFD



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Job #
Designed KSM
Date Sep/10/2013
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File Name: Pier12EB_Existing.rcp

Line #	Bearing #	Dir	Load kips
1	1	X	-0.24
1	1	Y	-0.42
1	1	Z	0.38
1	2	X	-0.24
1	2	Y	-0.00
1	2	Z	0.38
1	3	X	-0.24
1	3	Y	-0.00
1	3	Z	0.38
1	4	X	-0.24
1	4	Y	-0.00
1	4	Z	0.38
1	5	X	-0.24
1	5	Y	-0.00
1	5	Z	0.38
1	6	X	-0.24
1	6	Y	-0.00
1	6	Z	0.38
1	7	X	-0.24
1	7	Y	0.42
1	7	Z	0.38
2	1	X	-0.28
2	1	Y	-0.42
2	1	Z	0.44
2	2	X	-0.28
2	2	Y	-0.00
2	2	Z	0.44
2	3	X	-0.28
2	3	Y	-0.00
2	3	Z	0.44
2	4	X	-0.28
2	4	Y	-0.00
2	4	Z	0.44
2	5	X	-0.28
2	5	Y	-0.00
2	5	Z	0.44
2	6	X	-0.28
2	6	Y	0.42
2	6	Z	0.44

Auto generation details:

Generated Wind Load on Live Load

Units: US (English)

Design Code: AASHTO LRFD



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File Name:	Pier12EB_Existing.rcp	www.bentley.com	Checked	
		Phone: 1-800-778-4277	Date	

Angle of wind = 75.00 deg Live load length = 142.09 ft

Selected load groups

- STRENGTH GROUP I
- STRENGTH GROUP III
- STRENGTH GROUP V
- SERVICE GROUP I
- SERVICE GROUP II
- SERVICE GROUP III
- SERVICE GROUP IV
- EXTREME EVENT GROUP II

Sheet # 155

Job #

Designed KSM

Date Sep/10/2013

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Date



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File Name: | Pier12EB_Existing.rcp

ANALYSIS RESULTS

Global Coordinate System, Units: kip kft

LOAD CASES RESULTS FROM FRAME ANALYSIS:

Loadcase ID: SELF Name: Self Load of Structure

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	7.70	263.59	0.00	-0.00	0.00	59.24
3	4	-7.70	263.59	0.00	-0.00	0.00	-59.24

Loadcase ID: DC1 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.77	1318.99	-0.03	-46.58	0.49	704.72
3	4	19.77	1355.12	0.03	-46.40	0.49	-696.58

Loadcase ID: LL1 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-14.93	-56.00	-0.06	-19.34	0.97	822.77
3	4	14.93	762.85	0.06	-19.00	0.97	-235.36

Loadcase ID: LL1 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL2 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.96	561.48	1.44	-310.37	-24.64	171.89
3	4	10.96	-41.20	-1.44	-319.17	-24.64	-604.93

Loadcase ID: LL2 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL3 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-40.55	353.47	-0.03	-19.25	0.44	1437.75
3	4	40.55	353.39	0.03	-19.09	0.44	-1436.47

Loadcase ID: LL3 Name:

No impact factor is included in the individual live load.



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File Name: | Pier12EB_Existing.rcp

ANALYSIS RESULTS

Global Coordinate System, Units: kip kft

Loadcase ID: LL4 Name:
 No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-11.07	562.37	-1.52	310.59	26.00	176.56
3	4	11.07	-41.32	1.52	319.88	26.00	-607.98

Loadcase ID: LL5 Name:
 No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	7.66	181.32	-0.00	-9.83	0.00	-271.23
3	4	-7.66	181.17	0.00	-9.83	0.00	271.83

Loadcase ID: LL6 Name:
 No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-11.10	-41.26	1.49	319.77	-25.39	610.27
3	4	11.10	562.31	-1.49	310.70	-25.39	-176.80

Loadcase ID: LL7 Name:
 No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.91	-41.22	-1.44	-319.15	24.56	602.63
3	4	10.91	561.50	1.44	-310.38	24.56	-170.54

Loadcase ID: LL8 Name:
 No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.91	-41.22	-1.44	-319.15	24.56	602.63
3	4	10.91	561.50	1.44	-310.38	24.56	-170.54



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File Name: Pier12EB_Existing.rcp

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	7.66	181.21	-0.00	-9.83	0.00	-271.24
3	4	-7.66	181.28	0.00	-9.83	0.00	271.83

Loadcase ID: LL9 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL10 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-14.94	762.88	0.04	-19.06	-0.64	236.11
3	4	14.94	-56.02	-0.04	-19.28	-0.64	-822.82

Loadcase ID: LL10 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL11 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-26.52	-235.15	-0.05	-12.69	0.85	1315.29
3	4	26.52	697.33	0.05	-12.38	0.85	-564.89

Loadcase ID: LL11 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL12 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-10.42	-21.02	1.59	270.88	-27.20	587.60
3	4	10.42	573.02	-1.59	261.17	-27.20	-151.02

Loadcase ID: LL12 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL13 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-10.38	573.10	-1.63	261.06	27.81	150.89
3	4	10.38	-21.10	1.63	270.99	27.81	-584.95

Loadcase ID: LL13 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL14 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-19.54	-173.36	1.53	210.78	-26.13	968.92

Units: US (English)

Design Code: AASHTO LRFD



Program: LEAP® RC-PIER® V8i (SELECTseries 5)

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File Name: Pier12EB_Existing.rcp

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
3	4	19.54	514.04	-1.53	201.45	-26.13	-416.39

Loadcase ID: LL14 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL15 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-19.47	-172.86	-1.15	-164.93	19.65	960.76
3	4	19.47	439.67	1.15	-157.91	19.65	-417.71

Loadcase ID: LL15 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL16 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-26.44	-234.88	-0.02	-9.90	0.37	1304.34
3	4	26.44	597.37	0.02	-9.76	0.37	-570.20

Loadcase ID: LL16 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL17 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-19.53	-173.07	-1.47	-210.28	25.05	968.70
3	4	19.53	513.25	1.47	-201.34	25.05	-415.80

Loadcase ID: LL17 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL18 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-22.93	-203.27	0.61	79.27	-10.37	1138.54
3	4	22.93	624.90	-0.61	75.57	-10.37	-486.94

Loadcase ID: LL18 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL19 Name:

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	-10.40	-15.69	-0.79	-120.11	13.50	599.45
3	4	10.40	660.35	0.79	-115.29	13.50	-137.54

Units: US (English)

Design Code: AASHTO LRFD



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Loadcase ID: LL19 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-3.17	411.69	-0.77	312.88	13.19	6.63
3	4	3.17	109.36	0.77	317.59	13.19	-218.05

Loadcase ID: LL20 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-32.49	418.34	0.39	78.60	-6.65	978.16
3	4	32.49	3.29	-0.39	76.23	-6.65	-1324.98

Loadcase ID: LL21 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.48	-173.16	1.23	165.40	-20.95	960.69
3	4	19.48	440.37	-1.23	157.92	-20.95	-420.30

Loadcase ID: LL22 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-26.41	597.43	-0.02	-9.88	0.30	570.15
3	4	26.41	-234.94	0.02	-9.78	0.30	-1302.29

Loadcase ID: LL23 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.00	439.52	-1.59	261.19	27.12	755.55
3	4	15.00	733.37	1.59	-67.35	6.06	-240.18

Loadcase ID: LL24 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.33	572.27	1.55	-260.78	27.12	755.55
3	4	10.33	-260.78	-1.55	271.16	27.12	-895.53



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Loadcase ID: LL25 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-14.98	655.50	-0.30	-69.36	5.20	249.09
3	4	14.98	20.26	0.30	-67.51	5.20	-812.70

Loadcase ID: LL26 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.07	-57.52	0.42	70.48	-7.20	826.58
3	4	15.07	733.32	-0.42	67.91	-7.20	-241.46

Loadcase ID: LL27 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	7.64	181.18	-0.00	10.25	0.00	-270.66
3	4	-7.64	181.26	0.00	10.25	0.00	271.16

Loadcase ID: LL28 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.59	39.07	-0.12	-68.80	2.04	833.23
3	4	15.59	636.70	0.12	-68.07	2.04	-271.74

Loadcase ID: LL29 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-23.29	439.52	-1.59	261.19	27.12	755.55
3	4	23.29	112.48	1.59	270.87	27.12	-895.53

Loadcase ID: LL30 Name: [No impact factor is included in the individual live load.]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.33	572.27	1.55	-260.78	27.12	755.55
3	4	10.33	-260.78	-1.55	271.16	27.12	-895.53



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File Name: Pier12EB_Existing.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	10.33	-20.90	-1.55	-270.22	-26.45	-583.64

Loadcase ID: LL30 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL31 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.28	-20.93	-1.54	-270.21	26.37	581.08
3	4	10.28	572.31	1.54	-260.79	26.37	-147.47

Loadcase ID: LL31 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL32 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.19	561.30	-0.02	-12.61	0.41	363.62
3	4	19.19	-99.12	0.02	-12.46	0.41	-996.85

Loadcase ID: LL32 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL33 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-23.31	112.57	1.53	270.71	-26.20	897.82
3	4	23.31	439.43	-1.53	261.35	26.20	-754.71

Loadcase ID: LL33 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL34 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	7.64	181.29	-0.00	10.25	0.00	-270.65
3	4	-7.64	181.15	0.00	10.25	0.00	271.17

Loadcase ID: LL34 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL35 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.86	47.07	-1.53	-270.16	26.08	726.19
3	4	15.86	504.31	1.53	-260.85	26.08	-397.97

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.72	713.16	-0.55	116.72	9.41	264.39
3	4	15.72	-68.31	0.55	120.08	9.41	-850.20

Loadcase ID: LL35 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL36 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.03	733.36	0.33	-67.42	-5.70	241.15
3	4	15.03	-57.60	-0.33	-69.45	-5.70	-824.29

Loadcase ID: LL36 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL37 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.03	733.36	0.33	-67.42	-5.70	241.15
3	4	15.03	-57.60	-0.33	-69.45	-5.70	-824.29

Loadcase ID: LL37 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL38 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-32.49	3.40	-0.46	76.02	7.85	1326.84
3	4	32.49	418.24	0.46	78.82	7.85	-976.41

Loadcase ID: LL38 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL39 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.44	440.46	-1.29	157.74	21.98	420.21
3	4	19.44	-173.25	1.29	165.58	21.98	-957.53

Loadcase ID: LL39 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL40 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.43	660.33	0.80	-115.28	-13.60	138.32
3	4	10.43	-15.67	-0.80	-120.13	-13.60	-600.83

Loadcase ID: LL40 Name:

No impact factor is included in the individual live load.

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-3.18	109.39	0.77	317.57	-13.10	218.93
3	4	3.18	411.66	-0.77	312.90	-13.10	-6.44

Loadcase ID: LL41 Name: No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-22.89	624.97	-0.65	75.42	111.17	486.87
3	4	22.89	-203.34	0.65	79.41	111.17	-1136.12

Loadcase ID: LL42 Name: No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.50	514.12	-1.58	201.29	27.01	416.32
3	4	19.50	-173.43	1.58	210.94	27.01	-966.25

Loadcase ID: LL43 Name: No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.53	513.25	1.47	-201.34	-25.05	415.80
3	4	19.53	-173.07	-1.47	-210.28	-25.05	-968.70

Loadcase ID: LL44 Name: No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.47	439.67	1.15	-157.91	-19.65	419.71
3	4	19.47	-172.86	-1.15	-164.93	-19.65	-960.76

Loadcase ID: LL45 Name: No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	32.73	60.17	3420.61	-13.77	309.61
3	4	15.45	-32.73	-60.17	3469.82	-13.77	-309.61

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	15.45	32.73	-60.17	3469.82	-13.77	-309.61

Loadcase ID: BR2 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	15.45	32.73	-60.17	3469.82	-13.77	-309.61

Loadcase ID: BR3 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	15.45	32.73	-60.17	3469.82	-13.77	-309.61

Loadcase ID: BR4 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	10.10	21.40	-39.34	2268.73	-9.00	-202.44

Loadcase ID: BR5 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	15.45	32.73	-60.17	3469.82	-13.77	-309.61

Loadcase ID: BR6 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	7.92	16.79	-30.86	1779.40	-7.06	-158.81

Loadcase ID: BR7 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	15.45	32.73	-60.17	3469.82	-13.77	-309.61

Loadcase ID: BR8 Name:



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR9 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	9.80	158.81

Loadcase ID: BR10 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	3420.61	-13.77	309.61
3	4	-10.10	21.40	40.77	3469.82	-19.10	309.68

Loadcase ID: BR11 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR12 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR13 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR14 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR15 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR9 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	9.80	158.81

Loadcase ID: BR10 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR11 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	3420.61	-13.77	309.61
3	4	-10.10	21.40	40.77	3469.82	-19.10	309.68

Loadcase ID: BR12 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR13 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR14 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR15 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	9.80	158.81

Loadcase ID: BR16 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR17 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR18 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR19 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR20 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR21 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR22 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR30 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR31 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR32 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR33 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR34 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	-9.80	158.81

Loadcase ID: BR35 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR36 Name:

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	-9.80	158.81

Loadcase ID: BR23 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	-9.80	158.81

Loadcase ID: BR24 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR25 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR26 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR27 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	-9.80	158.81

Loadcase ID: BR28 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR29 Name:



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR37 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR38 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR39 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	-9.80	158.81

Loadcase ID: BR40 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR41 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-15.45	-32.73	60.17	3420.61	-13.77	309.61
3	4	-15.45	32.73	62.35	3469.82	-19.10	309.68

Loadcase ID: BR42 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR43 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR44 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.10	-21.40	39.34	2236.55	-9.00	202.44
3	4	-10.10	21.40	40.77	2268.73	-12.49	202.49

Loadcase ID: BR45 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.92	-16.79	30.86	1754.16	-7.06	158.78
3	4	-7.92	16.79	31.98	1779.40	-9.80	158.81

Loadcase ID: WS1 Name: Angle: 0

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	49.25	145.97	13.21	510.57	4.96	-1068.31
3	4	41.55	-438.87	9.68	474.19	4.29	-980.82

Loadcase ID: WS2 Name: Angle: 15

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	42.64	65.21	4.13	181.86	-1.32	-815.77
3	4	36.83	-65.21	4.45	187.33	-1.69	-756.00

Loadcase ID: WS3 Name: Angle: 30

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	44.30	65.98	-4.54	-126.33	-8.45	-840.60
3	4	36.81	-65.98	-0.16	-76.07	-8.64	-763.38

Loadcase ID: WS4 Name: Angle: 45

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	39.95	58.06	-14.11	-454.16	-17.93	-752.32
3	4	32.01	-58.06	-4.45	-344.88	-18.34	-670.50

Loadcase ID: WS5 Name: Angle: 60

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	39.95	58.06	-14.11	-454.16	-17.93	-752.32
3	4	32.01	-58.06	-4.45	-344.88	-18.34	-670.50



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	1.69	3.59	-2.60	-112.97	0.60	-33.95
3	4	1.69	-3.59	-2.70	-115.09	0.83	-33.96

Loadcase ID: WS6 Name: Angle: 75

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	20.46	28.53	-32.40	-1107.91	-32.41	-380.77
3	4	15.48	-28.53	-14.38	-905.63	-33.63	-329.49

Loadcase ID: WL1 Name: Angle: 0

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.89	14.60	1.71	74.05	-0.39	-138.06
3	4	6.89	-14.60	1.77	75.45	-0.54	-138.09

Loadcase ID: WL2 Name: Angle: 15

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.27	13.29	0.69	29.93	-0.16	-125.67
3	4	6.27	-13.29	0.71	30.49	-0.22	-125.70

Loadcase ID: WL3 Name: Angle: 30

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.07	12.85	-0.22	-9.75	0.05	-121.56
3	4	6.07	-12.85	-0.23	-9.94	0.07	-121.59

Loadcase ID: WL4 Name: Angle: 45

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	5.10	10.81	-1.04	-45.09	0.24	-102.26
3	4	5.10	-10.81	-1.08	-45.94	0.33	-102.28

Loadcase ID: WL5 Name: Angle: 60

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	3.00	6.36	-1.99	-86.41	0.46	-60.17
3	4	3.00	-6.36	-2.06	-88.04	0.63	-60.18

Loadcase ID: WL6 Name: Angle: 75



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	1.69	3.59	-2.60	-112.97	0.60	-33.95
3	4	1.69	-3.59	-2.70	-115.09	0.83	-33.96

Loadcase ID: WS6 Name: Angle: 75

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	20.46	28.53	-32.40	-1107.91	-32.41	-380.77
3	4	15.48	-28.53	-14.38	-905.63	-33.63	-329.49

Loadcase ID: WL1 Name: Angle: 0

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.89	14.60	1.71	74.05	-0.39	-138.06
3	4	6.89	-14.60	1.77	75.45	-0.54	-138.09

Loadcase ID: WL2 Name: Angle: 15

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.27	13.29	0.69	29.93	-0.16	-125.67
3	4	6.27	-13.29	0.71	30.49	-0.22	-125.70

Loadcase ID: WL3 Name: Angle: 30

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.07	12.85	-0.22	-9.75	0.05	-121.56
3	4	6.07	-12.85	-0.23	-9.94	0.07	-121.59

Loadcase ID: WL4 Name: Angle: 45

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	5.10	10.81	-1.04	-45.09	0.24	-102.26
3	4	5.10	-10.81	-1.08	-45.94	0.33	-102.28

Loadcase ID: WL5 Name: Angle: 60

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	3.00	6.36	-1.99	-86.41	0.46	-60.17
3	4	3.00	-6.36	-2.06	-88.04	0.63	-60.18

Loadcase ID: WL6 Name: Angle: 75



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	1.69	3.59	-2.60	-112.97	0.60	-33.95
3	4	1.69	-3.59	-2.70	-115.09	0.83	-33.96

Loadcase ID: WS6 Name: Angle: 75

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	20.46	28.53	-32.40	-1107.91	-32.41	-380.77
3	4	15.48	-28.53	-14.38	-905.63	-33.63	-329.49

Loadcase ID: WL1 Name: Angle: 0

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.89	14.60	1.71	74.05	-0.39	-138.06
3	4	6.89	-14.60	1.77	75.45	-0.54	-138.09

Loadcase ID: WL2 Name: Angle: 15

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.27	13.29	0.69	29.93	-0.16	-125.67
3	4	6.27	-13.29	0.71	30.49	-0.22	-125.70

Loadcase ID: WL3 Name: Angle: 30

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.07	12.85	-0.22	-9.75	0.05	-121.56
3	4	6.07	-12.85	-0.23	-9.94	0.07	-121.59

Loadcase ID: WL4 Name: Angle: 45

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	5.10	10.81	-1.04	-45.09	0.24	-102.26
3	4	5.10	-10.81	-1.08	-45.94	0.33	-102.28

Loadcase ID: WL5 Name: Angle: 60

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	3.00	6.36	-1.99	-86.41	0.46	-60.17
3	4	3.00	-6.36	-2.06	-88.04	0.63	-60.18

Loadcase ID: WL6 Name: Angle: 75

COMBINATION OF LOADS FROM FRAME ANALYSIS (only controlling ones):

Combination No. 1
 Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-72.55	1806.84	105.12	5882.58	-21.05	3173.54
3	4	18.47	3635.18	109.30	5969.79	-30.38	-882.53

Combination No. 4
 Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-86.76	3361.85	68.87	3826.62	-16.19	2460.23
3	4	51.41	1581.57	71.32	3882.77	-22.29	-3267.18

Combination No. 5
 Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-65.72	3119.15	102.02	6589.61	31.89	1873.37
3	4	11.65	1992.64	112.40	6695.72	22.56	-1698.80

Combination No. 7
 Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-65.79	1833.03	108.43	6609.15	-77.58	2797.58
3	4	11.72	3278.75	105.99	6676.18	-86.91	-779.91



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Combination No. 10

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-72.57	3475.49	105.36	5883.33	-25.25	1978.06
3	4	18.50	1966.53	109.05	5969.04	-34.58	-2079.83

Combination No. 11

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-86.81	1461.60	68.68	3826.04	-12.94	3989.47
3	4	51.46	3481.83	71.51	3883.35	-19.04	-1741.53

Combination No. 14

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-74.40	1571.42	72.07	4304.84	-70.81	3373.61
3	4	39.05	3156.08	68.13	4341.49	-76.91	-1477.59

Combination No. 16

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-82.84	1470.23	53.90	2988.36	-10.62	3890.73
3	4	55.11	3270.06	56.06	3033.15	-15.40	-1828.78

Combination No. 24

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-72.66	1803.97	104.49	5776.33	-10.26	3173.21
3	4	18.59	3582.78	109.93	5867.39	-19.59	-890.93

Combination No. 26

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-11.40	3232.02	-102.26	-6705.70	27.79	779.28

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File Name: Pier12EB_Existing.rcp
Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 10

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-72.81	1804.16	106.17	6081.14	-38.99	3181.21
3	4	18.74	3582.61	108.25	6161.95	-48.32	-893.77

Combination No. 28

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-73.72	2003.35	105.00	5777.88	-18.94	3188.20
3	4	19.65	3383.39	109.42	5865.84	-28.27	-950.88

Combination No. 31

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-64.26	1869.16	101.97	5351.36	32.70	2742.73
3	4	10.18	3296.47	112.44	5457.76	23.37	-725.69

Combination No. 36

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-73.99	3387.06	104.08	6179.00	-3.32	2028.84
3	4	19.91	1944.71	110.34	6272.54	-12.65	-2129.27

Combination No. 46

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-18.47	1921.40	-105.48	-6089.56	27.15	2089.90
3	4	72.54	3520.62	-108.94	-6174.59	36.48	-1966.42

Combination No. 47

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-11.40	3232.02	-102.26	-6705.70	27.79	779.28

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Combination No. 10

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-72.81	1804.16	106.17	6081.14	-38.99	3181.21
3	4	18.74	3582.61	108.25	6161.95	-48.32	-893.77

Combination No. 28

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-73.72	2003.35	105.00	5777.88	-18.94	3188.20
3	4	19.65	3383.39	109.42	5865.84	-28.27	-950.88

Combination No. 31

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-64.26	1869.16	101.97	5351.36	32.70	2742.73
3	4	10.18	3296.47	112.44	5457.76	23.37	-725.69

Combination No. 36

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-73.99	3387.06	104.08	6179.00	-3.32	2028.84
3	4	19.91	1944.71	110.34	6272.54	-12.65	-2129.27

Combination No. 46

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-18.47	1921.40	-105.48	-6089.56	27.15	2089.90
3	4	72.54	3520.62	-108.94	-6174.59	36.48	-1966.42

Combination No. 47

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-11.40	3232.02	-102.26	-6705.70	27.79	779.28

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	65.47	1878.33	-112.16	-6810.34	-18.46	-2775.71

Combination No. 49

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-51.41	3436.76	-68.82	-4001.32	15.32	1751.69
3	4	86.76	1506.67	-71.37	-4057.78	21.42	-3975.88

Combination No. 51

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	14.38	2377.08	-54.03	-3150.99	12.97	124.61
3	4	13.35	2363.21	-55.92	-3194.94	17.76	-668.91

Combination No. 53

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-11.29	1947.66	-108.40	-6724.42	77.06	1697.11
3	4	65.36	3162.69	-106.02	-6791.63	86.39	-1849.96

Combination No. 55

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-18.50	3590.05	-105.23	-6088.81	22.95	894.42
3	4	72.57	1851.97	-109.19	-6175.34	32.28	-3163.73

Combination No. 75

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.30	3251.22	-102.04	-6600.69	-31.62	738.76
3	4	64.37	1914.41	-112.38	-6706.70	22.29	-2738.28

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Combination No. 76
 Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.18	1983.72	-108.62	-6620.78	80.89	1659.09
3	4	64.26	3181.91	-105.80	-6686.62	90.22	-1809.59

Combination No. 77

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-36.52	3159.46	-68.92	-4001.60	16.92	1341.74
3	4	71.88	1783.96	-71.28	-4057.50	23.02	-3330.50

Combination No. 81

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-19.91	3501.62	-106.51	-5793.14	44.87	945.20
3	4	73.98	1830.15	-107.90	-5871.84	54.20	-3213.17

Combination No. 82

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-18.66	3537.58	-104.60	-6191.22	12.22	903.32
3	4	72.73	1849.17	-109.82	-6281.58	21.55	-3166.25

Combination No. 89

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-39.03	3109.42	-65.76	-4401.25	-37.01	1486.75
3	4	74.39	1617.14	-74.44	-4476.40	-30.91	-3363.43

Combination No. 91

Group Id: STR GP 1 Name: STRENGTH GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-18.57	1855.34	55.99	3095.93	-16.70	149.92

Combination No. 136

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 136

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-14.25	1367.50	-105.47	-6073.26	26.98	1822.51
3	4	68.32	2954.07	-108.95	-6158.35	36.31	-1701.89

Combination No. 137

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 137

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.18	2678.11	-102.25	-6689.40	-27.96	511.90
3	4	61.25	1311.78	-112.17	-6794.10	-18.63	-2511.17

Combination No. 138

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 138

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-66.45	2201.88	-105.38	-6072.98	25.42	3075.53
3	4	120.52	2119.69	-109.04	-6158.63	34.75	-4149.38

Combination No. 143

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 143

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-7.06	1393.75	-108.39	-6708.11	76.89	1429.73
3	4	61.14	2596.14	-106.03	-6775.39	86.22	-1585.42

Combination No. 146

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 146

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-47.23	982.60	-69.00	-3985.60	18.40	3013.55
3	4	82.59	2840.37	-71.19	-4040.96	24.50	-2185.70

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-68.32	1252.94	105.13	5898.88	-21.22	2906.15
3	4	14.25	3068.63	109.29	5986.03	-30.55	-617.99

Combination No. 93

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 93

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-120.52	2087.32	105.22	5899.16	-22.77	4159.18
3	4	66.45	2234.25	109.20	5985.75	-32.10	-3065.48

Combination No. 95

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 95

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-61.49	2565.25	102.03	6605.91	31.72	1605.99
3	4	7.42	1426.09	112.39	6711.96	22.39	-1434.26

Combination No. 97

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 97

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-61.57	1279.13	108.44	6625.45	-77.75	2530.19
3	4	7.50	2712.20	105.98	6692.42	-87.08	-515.38

Combination No. 116

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 116

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-68.59	1250.25	106.18	6097.45	-39.16	2913.82
3	4	14.52	3016.06	108.24	6178.19	-48.49	-629.23

Combination No. 124

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 124

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-9.16	1764.36	53.97	3051.60	-11.91	414.28

Units: US (English)

Design Code: AASHTO LRFD



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Job #

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Combination No. 150

Group id: STR GP 1 Name: STRENGTH GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-38.50	1085.33	-56.48	-3463.16	54.66	2457.10
3	4	66.23	2364.42	-53.48	-3492.22	59.45	-1852.56

Combination No. 159

Group id: STR GP 1 Name: STRENGTH GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-14.36	1364.62	-106.10	-6179.51	37.76	1822.18
3	4	68.43	2901.67	-108.32	-6260.75	47.09	-1710.29

Combination No. 162

Group id: STR GP 1 Name: STRENGTH GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	18.57	1822.88	-54.02	-3087.95	12.80	-141.46
3	4	9.16	1796.82	-55.93	-3131.96	17.59	-405.94

Combination No. 180

Group id: STR GP 1 Name: STRENGTH GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-38.50	2390.64	-51.57	-3448.22	-29.07	1304.11
3	4	66.23	1059.10	-58.38	-3507.17	-24.28	-3005.55

Combination No. 181

Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	53.86	2182.58	18.46	656.58	7.56	-540.69
3	4	73.26	1408.98	13.59	605.86	6.62	-2317.92

Combination No. 187

Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	13.05	2572.24	174.75	4498.01	28.91	95.33

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp Phone: 1-800-778-4277

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Combination No. 193

Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-84.03	1773.87	-18.53	-773.02	-6.34	2450.59
3	4	-43.09	2637.82	-13.52	-721.87	-5.40	428.37

Combination No. 193

Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	58.08	1628.68	18.47	672.88	7.39	-808.07
3	4	69.04	842.43	13.58	622.10	6.45	-2053.38

Combination No. 1289

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-23.33	2377.45	85.69	5364.69	26.17	830.68
3	4	31.72	1242.97	92.35	5433.37	18.55	-1792.33

Combination No. 1556

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	18.57	2464.52	-71.89	-4891.69	-19.87	-13.33
3	4	73.24	1154.79	80.88	-4985.59	13.09	-2623.09

Combination No. 1558

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-12.29	2622.46	-46.10	-2805.46	13.39	736.81
3	4	89.67	868.08	-49.42	-2862.18	17.67	-3548.94

Combination No. 1579

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	13.05	2572.24	174.75	4498.01	28.91	95.33

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
3	4	178.76	1260.29	-78.03	-4574.49	35.69	-2905.27

Combination No. 1830

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-36.11	1613.71	34.64	2030.18	-10.69	1041.09
3	4	-35.38	1954.45	37.55	2077.56	-13.96	491.78

Combination No. 2365

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-23.24	1543.03	65.73	3575.39	-10.79	1573.17
3	4	33.36	2393.48	67.14	3615.75	-16.47	-1152.58

Combination No. 2369

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-19.34	2292.92	63.96	3979.41	19.46	830.22
3	4	29.46	1454.89	68.91	4030.57	13.78	-1619.02

Combination No. 2635

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	7.66	1608.49	-54.61	-3265.83	16.75	953.95
3	4	64.26	2328.02	-57.57	-3323.89	21.73	-1771.95

Combination No. 2636

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	11.70	2357.42	-52.77	-3617.91	-14.64	205.03
3	4	60.22	1389.57	-59.41	-3687.18	-9.60	-2234.40

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-2.07	1577.26	-74.27	-4301.17	35.05	1039.87
3	4	47.14	2257.59	-67.59	-4280.97	40.24	-1405.87

Combination No. 2867

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-66.57	1426.26	54.39	3120.94	-12.99	2490.28
3	4	-5.35	2685.99	57.79	3180.35	-17.97	-287.91

Combination No. 2905

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-32.74	1718.54	25.16	1467.22	-7.67	1065.58
3	4	-24.12	1992.72	27.33	1502.15	-10.05	151.78

Combination No. 3445

Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-54.75	1455.27	78.09	4366.59	-15.60	2412.05
3	4	14.59	2816.04	81.20	4431.39	-22.53	-709.58

Combination No. 3445

Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	-93.53	2075.09	78.15	4366.79	-16.75	3342.87
3	4	53.36	2196.22	81.13	4431.18	-23.68	-2527.71

Units: US (English)

Design Code: AASHTO LRFD

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Sheet # 28

Job #

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-65.31	2610.42	51.16	2839.30	-11.99	1882.17
3	4	39.05	1290.50	52.98	2881.03	-16.52	-2481.03

Combination No. 3449
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-49.68	2430.12	75.78	4891.81	23.73	1446.22
3	4	9.52	1595.87	83.50	4970.65	16.80	-1315.95

Combination No. 3451
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-49.74	1474.72	80.54	4906.33	-57.60	2132.77
3	4	9.57	2551.27	78.74	4956.13	-64.53	-633.35

Combination No. 3454
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-54.77	2694.84	78.27	4367.15	-18.72	1523.98
3	4	14.61	1576.48	81.01	4430.83	25.65	-1599.01

Combination No. 3455
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-65.35	1198.80	51.02	2838.87	-9.58	3018.18
3	4	39.09	2702.12	53.13	2881.46	-14.11	-1347.70

Combination No. 3458
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-56.13	1280.38	53.54	3194.55	-52.57	2560.68

Units: US (English)
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-62.40	1205.21	40.04	2216.60	-7.85	2944.82
3	4	41.80	2544.81	41.65	2249.88	-11.41	-1412.51

Combination No. 3460
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-54.95	1453.27	78.87	4514.09	-28.93	2417.75
3	4	14.78	2776.99	80.41	4574.13	-35.86	-717.93

Combination No. 3470
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-10.81	1835.18	40.08	2251.47	-8.69	560.95
3	4	-9.79	1914.75	41.60	2284.45	-12.24	-139.13

Combination No. 3478
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-55.82	2629.15	77.32	4586.79	-2.43	1561.71
3	4	15.66	1560.26	81.97	4656.28	-9.36	-1635.73

Combination No. 3480
Group Id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-14.59	1540.37	-78.36	-4527.00	20.20	1607.06
3	4	54.75	2730.94	-80.93	-4590.15	27.13	-1514.76

Combination No. 3490
Group Id: SER GP 2 Name: SERVICE GROUP II

Units: US (English)
Design Code: AASHTO LRFD



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File Name: Pier12EB_Existing.rcp

Combination No. 3491
 Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-9.33	2513.97	-75.97	-4984.70	20.61	633.47
3	4	49.50	1510.95	83.31	-5062.43	-13.68	-2115.94

Combination No. 3493

Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-39.05	2666.06	-51.13	-2975.74	11.42	1355.83
3	4	65.31	1234.86	-53.02	-3017.67	15.95	-3007.50

Combination No. 3495

Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	9.82	1878.88	-40.14	-2344.07	9.67	147.13
3	4	10.78	1871.15	-41.54	-2376.70	13.23	-550.89

Combination No. 3497

Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-9.25	1559.87	-80.53	-4998.61	57.28	1315.28
3	4	49.42	2465.05	-78.76	-5048.52	64.21	-1428.24

Combination No. 3499

Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-14.60	2779.94	-78.17	-4526.44	17.08	718.99
3	4	54.77	1491.37	-81.11	-4590.71	24.01	-2404.19

Combination No. 3500

Group id: SER GP 2 Name: SERVICE GROUP II

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Combination No. 3513
 Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-39.09	1254.44	-51.27	-2976.17	13.83	2491.83
3	4	65.35	2646.48	-52.88	-3017.24	18.36	-1874.16

Combination No. 3513

Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-14.67	1538.23	-78.82	-4605.93	28.21	1606.82
3	4	54.84	2692.01	-80.46	-4666.22	35.14	-1521.00

Combination No. 3516

Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	9.79	1878.65	-40.14	-2309.35	9.67	148.11
3	4	10.81	1871.27	-41.54	-2341.98	13.23	-552.05

Combination No. 3533

Group id: SER GP 2 Name: SERVICE GROUP II

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-29.86	2422.89	-48.85	-3272.83	-27.46	1159.01
3	4	56.12	1316.93	-55.29	-3328.64	-22.93	-2552.53

Combination No. 3625

Group id: SER GP 4 Name: SERVICE GROUP IV

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	22.40	1684.76	9.22	310.82	3.96	16.14
3	4	41.16	1311.51	6.81	285.53	3.50	-1442.39

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier 12 Straddle.rcp

Sheet # 1
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

PROJECT DATA

Project: I-4 PD&E - St. Johns River Bridge Evaluation
User Job No.: 59219
Designer: CAM
Date: 9/10/14
Checked date:
State: FL
State Job No.:
Pier View: Upstation
Structure type: AASHTO LRFD (6th Edition, 2012)
Code: Reversible Lanes Alternative
Comments: Straddle Pier Option



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Version: 12.01.00.57
File Name: Pier 12 Straddle.rcp

Sheet # 2
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

PIER GEOMETRY

Pier Info:
Pier View: Upstation.
Pier Type: Multi Column

Cap Shape

Cap Shape: Straight
Top Elevations: Start = 47.16 ft end = 47.16 ft
Depth(Z) = 54.00 in Skew angle = 14.15 Reduction of I = 1.000
Length(X) = 98.65 ft Height(Y) = 72.00 in

Column Shape : Rectangular Chamfered
Number of columns: 2

Column number 1

Location from the left edge of the cap(X): 3.00 ft
Elevations: bottom = 4.25 ft top = 44.16 ft Reduction of I = 1.000
Column Bottom is Fixed

Column Section Dimensions

Dist from last(V) ft	Width(X) in	Depth(Z) in	ChamferX in	ChamferZ in	Variation
0.00	72.00	36.00	12.00	12.00	-----
39.91	72.00	36.00	12.00	12.00	Linear

Column number 2

Location from the left edge of the cap(X): 95.65 ft
Elevations: bottom = 4.25 ft top = 44.16 ft Reduction of I = 1.000
Column Bottom is Fixed

Column Section Dimensions

Dist from last(V) ft	Width(X) in	Depth(Z) in	ChamferX in	ChamferZ in	Variation
0.00	72.00	36.00	12.00	12.00	-----
39.91	72.00	36.00	12.00	12.00	Linear

Struts

Strut Shape : Rectangular
Number of struts: 1



Sheet # 3
Job # 59219

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File Name: | Pier 12, Straddle.rcp

Stirrup properties

Stirrup number 1
Elevations: start = 8.25 ft end = 8.25 ft
Depth(Z) = 24.00 in Height(Y) = 48.00 in Reduction of l = 1.000



Sheet # 4
Job # 59219

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File Name: | Pier 12, Straddle.rcp

SUPERSTRUCTURE INFO

Superstructure info:

Total number of spans: 2
Span number rear to current pier: 1
Number of traffic lanes: 4
Barrier height: 32.00 in
Depth of slab: 8.50 in
Curb to curb distance: 0.000
58.083 ft

Beam info:

Height in	Section area in ²	Inertia (Ixx) in ⁴	Inertia (Iyy) in ⁴	Inertia Beam CG in
78.00	1105.00	903861.00	82270.00	34.63

Span #	Span length ft	Bridge Width ft
1	121.167	61.083
2	142.333	61.083



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BEARING POINTS

Number of bearing lines: 2

Point	Distance ft	Eccentricity = 1.21 ft
1	14.82	
2	28.35	
3	41.88	
4	55.41	
5	68.93	
6	82.46	

Point	Distance ft	Eccentricity = -1.21 ft
1	15.43	
2	28.96	
3	42.49	
4	56.02	
5	69.55	
6	83.07	



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MATERIAL PROPERTIES

	Cap	Column	Footing
Concrete Type	normal	normal	normal
Concrete Strength (psi)	5500.00	5500.00	5500.00
Concrete Strength (lb/in ³)	150.00	150.00	150.00
Concrete Modulus Ec (ksi)	4496.06	4496.06	4496.06
Steel Strength Fy (ksi)	60.00	60.00	60.00



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DESIGN PARAMETERS

Resistance factors for reinf. concrete

Flexure and tension	0.90
Shear and torsion (normal)	0.90
Shear and torsion (lightweight)	0.70
Axial compression (ties)	0.75
Axial compression (spiral)	0.75
Compression in STM	0.70

Multi presence factors for live load

1 Lane	1.20
2 Lanes	1.00
3 Lanes	0.85
more than 3 Lanes	0.65

Dynamic load allowance IM

Truck Lane Fatigue	
Cap	0.33
Column	0.33
Footing	0.00

Exposure factors	
Cap	1.00
Column	1.00
Footing	1.00
Clear cover	
in	2.00
in	3.00

Degree of fixity in foundations for Moment Magnify Method: $G_a = 5.00$

SEISMIC DESIGN PARAMETERS

Strength Reduction factors for reinf. Concrete Seismic Design

Seismic Overstrength

Flexure and tension	1.30
Axial compression (ties)	1.30
Axial compression (spiral)	1.30

Response Modification Factor **5.00**

Use core area for plastic hinging calculations.

Design Factors

Cap Design Factor **1.20**



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FOOTING DESIGN FACTOR 1.20

Plastic Hinge Moment

Use actual computed Plastic Hinging Moment for each column in all combinations.

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Pier Info:
Pier View: Upstation.

Load Cases: 83

Loadcase ID: DC1 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-162.45
1	2	Y	-181.63
1	3	Y	-186.42
1	4	Y	-191.21
1	5	Y	-196.00
1	6	Y	-167.00
2	1	Y	-208.25
2	2	Y	-215.40
2	3	Y	-215.40
2	4	Y	-215.40
2	5	Y	-215.40
2	6	Y	-186.72

Auto generation details:

Generated Dead Load

Slab weight = 150.00 pcf
Girder weight = 150.00 pcf
Wearing weight = Not included
Barrier load = 418.00 plf

Units: US (English)

Design Code: AASHTO LRFD



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Loadcase ID: LL1 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-6.15
1	4	Y	-38.21
1	5	Y	-42.55
1	6	Y	-12.73
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-5.19
2	4	Y	-29.88
2	5	Y	-31.44
2	6	Y	-8.44
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-5.91
1	4	Y	-38.31
1	5	Y	-42.03
1	6	Y	-12.63
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-8.20
2	4	Y	-46.04
2	5	Y	-48.77
2	6	Y	-13.13

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Units: US (English)

Design Code: AASHTO LRFD



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Sheet # 11
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File Name: **Pier 12_Straddle.rcp**

Selected Vehicles:

Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL2 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-22.46
1	3	Y	-28.73
1	4	Y	-49.69
1	5	Y	-55.33
1	6	Y	-16.56
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-13.10
1	3	Y	-16.61
1	4	Y	-29.29
1	5	Y	-32.14
1	6	Y	-9.66

Units: US (English)

Design Code: AASHTO LRFD



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Sheet # 12
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Designed CAM
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File Name: **Pier 12_Straddle.rcp**

Line #	Bearing #	Dir	Load kips
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL3 Name:
 Multiplier = 1.000

Bearing loads

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-24.72
2	3	Y	-28.10
2	4	Y	-52.30
2	5	Y	-55.03
2	6	Y	-14.78
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-16.74
2	3	Y	-19.14
2	4	Y	-35.21
2	5	Y	-37.30
2	6	Y	-10.04

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected



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Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL4 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-17.27
1	3	Y	-44.83
1	4	Y	-33.66
1	5	Y	-3.87
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-14.52
2	3	Y	-33.50
2	4	Y	-24.59
2	5	Y	-2.35
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-17.55
1	3	Y	-43.03
1	4	Y	-35.08
1	5	Y	-3.22
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-22.75
2	3	Y	-50.72
2	4	Y	-39.73
2	5	Y	-2.94
2	6	Y	0.00



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File Name:	Pier 12_Straddle.rcp			
Auto generation details:				
Generated Live Load				
Longitudinal Reaction: Simple Span Distribution				
Selected Vehicles:	Design Truck Design Truck + Lane Load Design Tandem + Lane Load			
Transverse Positioning				
Number of loaded lanes = all combinations				
Live Load Positions = Constant Spacing				
Minimum Distance from Curb = 2.00 ft				
Center to Center Spacing = 10.00 ft				
Generate Braking/Longitudinal Force = Selected				
Generate Centrifugal Force = Not Selected				
Total number of Considered Truck Positions = 20				
Total number of Possible Combination = 2032				
Loadcase ID: LL5	Name:			
Multiplier = 1.000				
Bearing loads				
Line #	Bearing #	Dir	Load kips	
1	1	Y	0.00	
1	2	Y	0.00	
1	3	Y	0.00	
1	4	Y	0.00	
1	5	Y	0.00	
1	6	Y	0.00	
2	1	Y	0.00	
2	2	Y	0.00	
2	3	Y	-11.89	
2	4	Y	-68.39	
2	5	Y	-71.96	
2	6	Y	-19.33	



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File Name:	Pier 12_Straddle.rcp			
Auto generation details:				
Generated Live Load				
Longitudinal Reaction: Simple Span Distribution				
Selected Vehicles:	Design Truck Design Truck + Lane Load Design Tandem + Lane Load			
Transverse Positioning				
Number of loaded lanes = all combinations				
Live Load Positions = Constant Spacing				
Minimum Distance from Curb = 2.00 ft				
Center to Center Spacing = 10.00 ft				
Generate Braking/Longitudinal Force = Selected				
Generate Centrifugal Force = Not Selected				
Total number of Considered Truck Positions = 20				
Total number of Possible Combination = 2032				
Loadcase ID: LL6	Name:			
Multiplier = 1.000				

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-8.20
2	4	Y	-46.04
2	5	Y	-48.77
2	6	Y	-13.13

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck Design Truck + Lane Load Design Tandem + Lane Load
--------------------	---

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL6 Name:
Multiplier = 1.000



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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-10.46
1	4	Y	-64.98
1	5	Y	-72.36
1	6	Y	-21.65
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-5.91
1	4	Y	-38.31
1	5	Y	-42.03
1	6	Y	-12.63
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning



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			Date	

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL7 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-28.89
1	4	Y	-41.40
1	5	Y	-29.35
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-0.40
2	3	Y	-22.64
2	4	Y	-31.54
2	5	Y	-20.38
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-0.42
1	3	Y	-27.21
1	4	Y	-43.23
1	5	Y	-27.54
1	6	Y	-0.48
2	1	Y	0.00
2	2	Y	-0.86
2	3	Y	-33.89
2	4	Y	-50.78
2	5	Y	-30.34
2	6	Y	-0.27



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File Name: Pier 12, Straddle.rcp	

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck Design Truck + Lane Load Design Tandem + Lane Load
--------------------	---

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL8 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-9.38
1	2	Y	-41.11
1	3	Y	-41.11
1	4	Y	-8.05
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-8.19

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
2	2	Y	-31.32
2	3	Y	-30.13
2	4	Y	-5.32
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-9.52
1	2	Y	-40.78
1	3	Y	-40.17
1	4	Y	-8.40
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-12.76
2	2	Y	-48.64
2	3	Y	-46.27
2	4	Y	-8.48
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck Design Truck + Lane Load Design Tandem + Lane Load
--------------------	---

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp
Loadcase ID: LL9 Name: Multiplier = 1.000

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Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL10 Name: Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-14.33
2	2	Y	-54.82
2	3	Y	-58.63
2	4	Y	-43.03
2	5	Y	-4.11
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-9.75
2	2	Y	-37.19
2	3	Y	-38.84

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles: Design Truck
Design Truck + Lane Load



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Loadcase ID: LL9 Name: Multiplier = 1.000

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Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL10 Name: Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-12.19
1	2	Y	-53.46
1	3	Y	-58.31
1	4	Y	-43.78
1	5	Y	-5.04
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-7.28
1	2	Y	-31.19
1	3	Y	-33.06
1	4	Y	-26.82
1	5	Y	-2.46
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles: Design Truck
Design Truck + Lane Load



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Designed CAM
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File Name: Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	4	Y	-30.39
2	5	Y	-2.25
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL11 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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Sheet # 24
 Job # 59219

Designed CAM
 Date 9/10/14
 Checked
 Date

File Name: Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-18.74
2	2	Y	-71.69
2	3	Y	-68.96
2	4	Y	-12.17
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-12.76
2	2	Y	-48.64
2	3	Y	-46.27
2	4	Y	-8.48
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Units: US (English)

Design Code: AASHTO LRFD



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Sheet #	26
Job #	59219
Designed	CAM
Date	9/10/14
Checked	
Date	

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
 Version: 12.01.00.57
 File Name: **Pier 12, Straddle.rcp**
 Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL13 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-11.03
1	2	Y	-48.36
1	3	Y	-18.76
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-9.63
2	2	Y	-36.38
2	3	Y	-12.78
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-11.20
1	2	Y	-47.49
1	3	Y	-18.86

Units: US (English)

Design Code: AASHTO LRFD



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Sheet #	25
Job #	59219
Designed	CAM
Date	9/10/14
Checked	
Date	

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
 Version: 12.01.00.57
 File Name: **Pier 12, Straddle.rcp**
 Generated Live Load

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL12 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-15.95
1	2	Y	-69.91
1	3	Y	-69.92
1	4	Y	-13.68
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-9.52
1	2	Y	-40.78
1	3	Y	-40.17
1	4	Y	-8.40
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Units: US (English)

Design Code: AASHTO LRFD



Sheet #	127
Job #	59219
Designed CAM	
Date	9/10/14
Checked	
Date	
Program:	LEAP® RC-PIER® V8i (SELECTseries 5)
Version:	12.01.00.57
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File Name:	Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-15.01
2	2	Y	-56.20
2	3	Y	-19.88
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL14 Name:
 Multiplier = 1.000



Sheet #	128
Job #	59219
Designed CAM	
Date	9/10/14
Checked	
Date	
Program:	LEAP® RC-PIER® V8i (SELECTseries 5)
Version:	12.01.00.57
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File Name:	Pier 12_Straddle.rcp

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-27.04
2	2	Y	-83.27
2	3	Y	-29.24
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-15.01
2	2	Y	-56.20
2	3	Y	-19.88
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: Pier 12_Straddle.rcp
Center to Center Spacing = 10.00 ft

Sheet # 29
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

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Version: 12.01.00.57

File Name: Pier 12_Straddle.rcp
Center to Center Spacing = 10.00 ft

Sheet # 30
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57

File Name: Pier 12_Straddle.rcp
Center to Center Spacing = 10.00 ft

Sheet # 30
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL15 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	-14.82
1	5	Y	-48.36
1	6	Y	-14.98
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	-12.48
2	5	Y	-36.38
2	6	Y	-9.93
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	-14.70
1	5	Y	-47.98
1	6	Y	-14.86
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	-19.39
2	5	Y	-56.25
2	6	Y	-15.45

Units: US (English)

Design Code: AASHTO LRFD



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Version: 12.01.00.57

File Name: Pier 12_Straddle.rcp
Center to Center Spacing = 10.00 ft

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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57

File Name: Pier 12_Straddle.rcp
Center to Center Spacing = 10.00 ft

Sheet # 30
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL16 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 31
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: Pier 12, Straddle.rcp

Loadcase ID: LL17 Name:

Multiplier = 1.000

Designed CAM
Date 9/10/14
Checked
Date

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-0.91
2	3	Y	-51.82
2	4	Y	-72.20
2	5	Y	-46.64
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-0.86
2	2	Y	-33.89
2	3	Y	-50.78
2	4	Y	-30.34
2	5	Y	-0.27
2	6	Y	

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

Design Truck
Design Truck + Lane Load

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 32
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57

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File Name: Pier 12, Straddle.rcp

Loadcase ID: LL17 Name:

Multiplier = 1.000

Designed CAM
Date 9/10/14
Checked
Date

Line #	Bearing #	Dir	Load kips
2	4	Y	-28.56
2	5	Y	-83.26
2	6	Y	-22.74
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	-19.39
2	5	Y	-56.25
2	6	Y	-15.45

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Units: US (English)

Design Code: AASHTO LRFD



Sheet #	33
Job #	59219
Designed	CAM
Date	9/10/14
Checked	
Date	
Program:	LEAP® RC-PIER® V8i (SELECTseries 5)
Version:	12.01.00.57
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Phone:	1-800-778-4277
www.bentley.com	
File Name:	Pier 12_Straddle.rcp
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL18 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-49.13
1	4	Y	-70.41
1	5	Y	-49.91
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-0.42
1	3	Y	-27.21
1	4	Y	-43.23
1	5	Y	-27.54
1	6	Y	-0.48
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



Sheet #	34
Job #	59219
Designed	CAM
Date	9/10/14
Checked	
Date	
Program:	LEAP® RC-PIER® V8i (SELECTseries 5)
Version:	12.01.00.57
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Phone:	1-800-778-4277
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File Name:	Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL19 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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Job # 59219

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File Name: **Pier 12 Straddle.rcp**

Line #	Bearing #	Dir	Load kips
1	2	Y	0.00
1	3	Y	-28.89
1	4	Y	-46.83
1	5	Y	-47.20
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-0.40
2	3	Y	-22.64
2	4	Y	-24.59
2	5	Y	-2.35
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-0.42
1	3	Y	-27.21
1	4	Y	-43.23
1	5	Y	-27.54
1	6	Y	-0.48
2	1	Y	0.00
2	2	Y	-0.86
2	3	Y	-33.89
2	4	Y	-39.73
2	5	Y	-2.94
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected



Sheet # 36
Job # 59219

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File Name: **Pier 12 Straddle.rcp**

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL20 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	-53.45
2	6	Y	-27.28
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	-0.07
2	6	Y	-36.05
2	6	Y	-18.54

Auto generation details:



Sheet # 37
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)

Version: 12.01.00.57

File Name: Pier_12_Straddle.rcp

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL21 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	-28.91
1	6	Y	-17.98
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	-23.35
2	6	Y	-11.92
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 38
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)

Version: 12.01.00.57

File Name: Pier_12_Straddle.rcp

Generated Live Load

Line #	Bearing #	Dir	Load kips
1	4	Y	0.00
1	5	Y	-28.69
1	6	Y	-17.84
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	-0.07
2	5	Y	-36.05
2	6	Y	-18.54

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL22 Name:
Multiplier = 1.000

Units: US (English)

Design Code: AASHTO LRFD



Program:	LEAP® RC-PIER® V8i (SELECTseries 5)	SE Client Licenses	Sheet #	39
Version:	12.01.00.57	Copyright © Bentley Systems, Inc. 2012	Job #	59219
File Name:	Pier 12_Straddle.rcp	www.bentley.com	Designed CAM	
		Phone: 1-800-778-4277	Date	9/10/14
			Checked	
			Date	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-17.27
1	3	Y	-47.44
1	4	Y	-51.61
1	5	Y	-6.59
2	1	Y	0.00
2	2	Y	-14.52
2	3	Y	-30.13
2	4	Y	-5.32
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-17.55
1	3	Y	-43.03
1	4	Y	-35.08
1	5	Y	-3.22
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-22.75
2	3	Y	-46.20
2	4	Y	-8.48
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft



Program:	LEAP® RC-PIER® V8i (SELECTseries 5)	SE Client Licenses	Sheet #	40
Version:	12.01.00.57	Copyright © Bentley Systems, Inc. 2012	Job #	59219
File Name:	Pier 12_Straddle.rcp	www.bentley.com	Designed CAM	
		Phone: 1-800-778-4277	Date	9/10/14
			Checked	
			Date	

Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL23 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	-15.17
1	6	Y	-9.43
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-11.89
2	4	Y	-68.39
2	5	Y	-56.17
2	6	Y	-11.26
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	-20.32
1	6	Y	-12.63
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-8.20
2	4	Y	-46.04
2	5	Y	-48.77
2	6	Y	-13.13



Sheet # 41
Job # 59219
Designed CAM
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File Name: Pier 12_Straddle.rcp

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL24 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-29.37
1	3	Y	-73.64
1	4	Y	-39.30
1	5	Y	-3.87
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-3.37

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 42
Job # 59219
Designed CAM
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File Name: Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	4	Y	-19.27
2	5	Y	-2.35
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-17.55
1	3	Y	-43.03
1	4	Y	-35.08
1	5	Y	-3.22
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	-4.52
2	4	Y	-31.25
2	5	Y	-2.94
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Units: US (English)

Design Code: AASHTO LRFD



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Sheet # 45
 Job # 59219
 Designed CAM
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File Name: Pier_12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL27 Name:
 Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier_12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	2	Y	0.00
1	3	Y	-2.76
1	4	Y	-24.70
1	5	Y	-21.74
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-0.91
2	3	Y	-48.60
2	4	Y	-47.16
2	5	Y	-27.18
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-3.07
1	4	Y	-34.83
1	5	Y	-27.54
1	6	Y	-0.48
2	1	Y	0.00
2	2	Y	-0.86
2	3	Y	-33.89
2	4	Y	-50.78
2	5	Y	-30.34
2	6	Y	-0.27

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Units: US (English)

Design Code: AASHTO LRFD



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Job # 59219
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File Name: **Pier 12, Straddle.rcp**

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL28 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-13.24
1	2	Y	-33.65
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-11.56
2	2	Y	-23.72
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-13.43
1	2	Y	-32.80
1	3	Y	-0.30

Auto generation details:

Units: US (English)

Design Code: AASHTO LRFD

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File Name: **Pier 12, Straddle.rcp**

Generated Live Load

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL28 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-1.63
1	3	Y	-18.97
1	4	Y	-4.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-2.96
2	3	Y	-33.42
2	4	Y	-64.69
2	5	Y	-46.64
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-1.76
1	3	Y	-26.28
1	4	Y	-4.92
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-2.77
2	3	Y	-35.73
2	4	Y	-47.03
2	5	Y	-30.34
2	6	Y	-0.27

Units: US (English)

Design Code: AASHTO LRFD

Design Code: AASHTO LRFD



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File Name:	Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-18.01
2	2	Y	-36.54
2	3	Y	-0.10
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL30 Name:
 Multiplier = 1.000



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File Name:	Pier 12_Straddle.rcp

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-22.51
1	2	Y	-57.23
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-13.43
1	2	Y	-32.80
1	3	Y	-0.30
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft



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Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL31 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	-21.40
1	4	Y	-24.93
1	5	Y	-2.87
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-41.22
2	3	Y	-46.70
2	4	Y	-32.80
2	5	Y	-3.13
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	-0.42
1	3	Y	-27.21
1	4	Y	-35.08
1	5	Y	-3.22
1	6	Y	0.00
2	1	Y	-0.22
2	2	Y	-27.97
2	3	Y	-45.28
2	4	Y	-39.73
2	5	Y	-2.94
2	6	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp

Sheet # 52
Job # 59219
Designed CAM
Date 9/10/14
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Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
Design Truck
Design Truck + Lane Load
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: LL32 Name:
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-45.77
2	3	Y	-68.32

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp
Loadcase ID: LL33 Name:
Multiplier = 1.000

Sheet # 53
Job # 59219
Designed CAM
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Bearing loads

Line #	Bearing #	Dir	Load kips
2	4	Y	-52.10
2	5	Y	-5.37
2	6	Y	0.00
1	1	Y	0.00
1	2	Y	0.00
1	3	Y	0.00
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-29.88
2	2	Y	-47.12
2	3	Y	-35.99
2	4	Y	-2.94
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

Design Truck
Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations

Live Load Positions = Constant Spacing

Minimum Distance from Curb = 2.00 ft

Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected

Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20

Total number of Possible Combination = 2032

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp
Loadcase ID: LL33 Name:
Multiplier = 1.000

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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00
1	2	Y	-41.37
1	3	Y	-68.76
1	4	Y	-52.74
1	5	Y	-6.59
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-0.05
1	2	Y	-23.61
1	3	Y	-40.40
1	4	Y	-31.60
1	5	Y	-3.22
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	0.00
2	3	Y	0.00
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:

Design Truck
Design Truck + Lane Load

Units: US (English)

Design Code: AASHTO LRFD



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File Name:	Pier 12, Straddle.rcp

Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL34 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	-8.17
1	2	Y	-35.82
1	3	Y	-13.89
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-12.85
2	2	Y	-48.54
2	3	Y	-17.04
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00
1	1	Y	-11.20
1	2	Y	-47.49
1	3	Y	-18.86
1	4	Y	0.00
1	5	Y	0.00
1	6	Y	0.00
2	1	Y	-15.01
2	2	Y	-56.20
2	3	Y	-19.88

Units: US (English)

Design Code: AASHTO LRFD



Sheet #	56
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File Name:	Pier 12, Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	4	Y	0.00
2	5	Y	0.00
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:
 Design Truck
 Design Truck + Lane Load
 Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
 Live Load Positions = Constant Spacing
 Minimum Distance from Curb = 2.00 ft
 Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
 Generate Centrifugal Force = Not Selected

Total number of Considered Truck Positions = 20
 Total number of Possible Combination = 2032

Loadcase ID: LL35 Name:

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	Y	0.00

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp	

Line #	Bearing #	Dir	Load kips
1	2	Y	-24.32
1	3	Y	-40.43
1	4	Y	-31.01
1	5	Y	-3.87
1	6	Y	0.00
2	1	Y	0.00
2	2	Y	-20.00
2	3	Y	-29.85
2	4	Y	-22.76
2	5	Y	-2.35
2	6	Y	0.00
1	1	Y	-0.05
1	2	Y	-23.61
1	3	Y	-40.40
1	4	Y	-31.60
1	5	Y	-3.22
1	6	Y	0.00
2	1	Y	-0.22
2	2	Y	-29.88
2	3	Y	-47.12
2	4	Y	-35.99
2	5	Y	-2.94
2	6	Y	0.00

Auto generation details:

Generated Live Load

Longitudinal Reaction: Simple Span Distribution

Selected Vehicles:	Design Truck
	Design Truck + Lane Load
	Design Tandem + Lane Load

Transverse Positioning

Number of loaded lanes = all combinations
Live Load Positions = Constant Spacing
Minimum Distance from Curb = 2.00 ft
Center to Center Spacing = 10.00 ft

Generate Braking/Longitudinal Force = Selected
Generate Centrifugal Force = Not Selected

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp	

Total number of Considered Truck Positions = 20
Total number of Possible Combination = 2032

Loadcase ID: BR1 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp	

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR2 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-599.38 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.95
1	1	Z	-3.78
1	1	Y	1.12
1	2	X	0.95
1	2	Z	-3.78
1	3	X	0.95
1	3	Z	-3.78
1	4	X	0.95
1	4	Z	-3.78
1	5	X	0.95
1	5	Z	-3.78
1	6	X	0.95
1	6	Z	-3.78
2	1	Y	-1.12
2	1	X	0.95
2	1	Z	-3.78

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp	

Line #	Bearing #	Dir	Load kips
2	1	Y	1.12
2	2	X	0.95
2	2	Z	-3.78
2	3	X	0.95
2	3	Z	-3.78
2	4	X	0.95
2	4	Z	-3.78
2	5	X	0.95
2	5	Z	-3.78
2	6	X	0.95
2	6	Z	-3.78
2	6	Y	-1.12

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 4
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR3 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-599.38 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
2	1	Y	-1.12
2	1	X	0.95
2	1	Z	-3.78

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 4
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR4 Name:

Multiplier = 1.000

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR5 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71

Units: US (English)

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File Name: Pier 12 Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR6 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR7 Name:
Multiplier = 1.000

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		



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File Name: Pier 12, Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR7 Name:
Multiplier = 1.000

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		



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Loadcase ID: BR8 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Units: US (English)

Design Code: AASHTO LRFD



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File Name: | Pier 12, Straddle.rcp

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR9 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-599.38 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.95
1	1	Z	-3.78
1	1	Y	1.12
1	2	X	0.95
1	2	Z	-3.78
1	3	X	0.95
1	3	Z	-3.78
1	4	X	0.95
1	4	Z	-3.78
1	5	X	0.95
1	5	Z	-3.78
1	6	X	0.95
1	6	Z	-3.78
1	6	Y	-1.12
2	1	X	0.95
2	1	Z	-3.78
2	1	Y	1.12
2	2	X	0.95
2	2	Z	-3.78

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	2	X	0.95
1	2	Z	-3.78
1	3	X	0.95
1	3	Z	-3.78
1	4	X	0.95
1	4	Z	-3.78
1	5	X	0.95
1	5	Z	-3.78
1	6	X	0.95
1	6	Z	-3.78
2	1	X	0.95
2	1	Z	-3.78
2	2	X	0.95
2	2	Z	-3.78
2	3	X	0.95
2	3	Z	-3.78
2	4	X	0.95
2	4	Z	-3.78
2	5	X	0.95
2	5	Z	-3.78
2	6	X	0.95
2	6	Z	-3.78
2	6	Y	-1.12

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 4
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR10 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X		-599.38 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.95
1	1	Z	-3.78
1	1	Y	1.12

Units: US (English)

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File Name: Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	2	X	0.95
1	2	Z	-3.78
1	3	X	0.95
1	3	Z	-3.78
1	4	X	0.95
1	4	Z	-3.78
1	5	X	0.95
1	5	Z	-3.78
1	6	X	0.95
1	6	Z	-3.78
1	6	Y	-1.12
2	1	X	0.95
2	1	Z	-3.78
2	2	X	0.95
2	2	Z	-3.78
2	3	X	0.95
2	3	Z	-3.78
2	4	X	0.95
2	4	Z	-3.78
2	5	X	0.95
2	5	Z	-3.78
2	6	X	0.95
2	6	Z	-3.78
2	6	Y	-1.12

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 4
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR11 Name:
Multiplier = 1.000

Cap loads

Units: US (English)

Design Code: AASHTO LRFD



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Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X		-587.86 k-ft	0.50		



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File Name: PIER 12 Straddle.rcp

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR12 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-3.71



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File Name: PIER 12 Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR13 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-461.06 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.73
1	1	Z	-2.91
1	1	Y	0.86
1	2	X	0.73
1	2	Z	-2.91
1	3	X	0.73
1	3	Z	-2.91
1	4	X	0.73
1	4	Z	-2.91

Units: US (English)

Design Code: AASHTO LRFD



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File Name: PIER 12 Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	5	X	0.73
1	5	Z	-2.91
1	6	X	0.73
1	6	Z	-2.91
1	6	Y	-0.86
2	1	X	0.73
2	1	Z	-2.91
2	1	Y	0.86
2	2	X	0.73
2	2	Z	-2.91
2	3	X	0.73
2	3	Z	-2.91
2	4	X	0.73
2	4	Z	-2.91
2	5	X	0.73
2	5	Z	-2.91
2	6	X	0.73
2	6	Z	-2.91
2	6	Y	-0.86

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR14 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-461.06 k-ft	0.50		

Units: US (English)

Design Code: AASHTO LRFD



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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.73
1	1	Z	-2.91
1	1	Y	0.86
1	2	X	0.73
1	2	Z	-2.91
1	3	X	0.73
1	3	Z	-2.91
1	4	X	0.73
1	4	Z	-2.91
1	5	X	0.73
1	5	Z	-2.91
1	6	X	0.73
1	6	Z	-2.91
1	6	Y	-0.86
2	1	X	0.73
2	1	Z	-2.91
2	1	Y	0.86
2	2	X	0.73
2	2	Z	-2.91
2	3	X	0.73
2	3	Z	-2.91
2	4	X	0.73
2	4	Z	-2.91
2	5	X	0.73
2	5	Z	-2.91
2	6	X	0.73
2	6	Z	-2.91
2	6	Y	-0.86

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 131.75 ft



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File Name:	Pier 12_Straddle.rcp

Loadcase ID: BR15 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-461.06 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.73
1	1	Z	-2.91
1	1	Y	0.86
1	2	X	0.73
1	2	Z	-2.91
1	3	X	0.73
1	3	Z	-2.91
1	4	X	0.73
1	4	Z	-2.91
1	5	X	0.73
1	5	Z	-2.91
1	6	X	0.73
1	6	Z	-2.91
1	6	Y	-0.86
2	1	X	0.73
2	1	Z	-2.91
2	1	Y	0.86
2	2	X	0.73
2	2	Z	-2.91
2	3	X	0.73
2	3	Z	-2.91
2	4	X	0.73
2	4	Z	-2.91
2	5	X	0.73
2	5	Z	-2.91
2	6	X	0.73
2	6	Z	-2.91
2	6	Y	-0.86



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File Name: Pier 12, Straddle.rcp	

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR16 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-461.06 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.73
1	1	Z	-2.91
1	1	Y	0.86
1	2	X	0.73
1	2	Z	-2.91
1	3	X	0.73
1	3	Z	-2.91
1	4	X	0.73
1	4	Z	-2.91
1	5	X	0.73
1	5	Z	-2.91
1	6	X	0.73
1	6	Z	-2.91
1	6	Y	-0.86
2	1	X	0.73
2	1	Z	-2.91
2	1	Y	0.86
2	2	X	0.73
2	2	Z	-2.91

Units: US (English)

Design Code: AASHTO LRFD



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Job #	59219
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File Name: Pier 12, Straddle.rcp	

Line #	Bearing #	Dir	Load kips
2	3	X	0.73
2	3	Z	-2.91
2	4	X	0.73
2	4	Z	-2.91
2	5	X	0.73
2	5	Z	-2.91
2	6	X	0.73
2	6	Z	-2.91
2	6	Y	-0.86

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR17 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10

Units: US (English)

Design Code: AASHTO LRFD



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File Name: PIER 12 Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR18 Name:
Multiplier = 1.000

Cap loads



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File Name: PIER 12 Straddle.rcp

Type	Dir	Arm ft	Mag1	x1/L	Mag2 k2/L
Moment	X				
			-587.86 k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation



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File Name: | Pier 12, Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR19 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71

Units: US (English)

Design Code: AASHTO LRFD



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File Name: | Pier 12, Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR20 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		276.64 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.44
1	1	Z	-1.75
1	1	Y	0.52
1	2	X	0.44
1	2	Z	-1.75
1	3	X	0.44
1	3	Z	-1.75
1	4	X	0.44
1	4	Z	-1.75

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12, Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	5	X	0.44
1	5	Z	-1.75
1	6	X	0.44
1	6	Z	-1.75
1	6	Y	-0.52
2	1	X	0.44
2	1	Y	0.52
2	2	X	0.44
2	2	Z	-1.75
2	3	X	0.44
2	3	Z	-1.75
2	4	X	0.44
2	4	Z	-1.75
2	5	X	0.44
2	5	Z	-1.75
2	6	X	0.44
2	6	Z	-1.75
2	6	Y	-0.52

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 1
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR21 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-276.64	k-ft	0.50	



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File Name: Pier 12, Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	1	X	0.44
1	1	Z	-1.75
1	1	Y	0.52
2	2	X	0.44
2	2	Z	-1.75
2	3	X	0.44
2	3	Z	-1.75
2	4	X	0.44
2	4	Z	-1.75
2	5	X	0.44
2	5	Z	-1.75
2	6	X	0.44
2	6	Z	-1.75
2	6	Y	-0.52
2	1	X	0.44
2	1	Z	-1.75
2	1	Y	0.52
2	2	X	0.44
2	2	Z	-1.75
2	3	X	0.44
2	3	Z	-1.75
2	4	X	0.44
2	4	Z	-1.75
2	5	X	0.44
2	5	Z	-1.75
2	6	X	0.44
2	6	Z	-1.75
2	6	Y	-0.52

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 1
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR21 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-276.64	k-ft	0.50	



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File Name: | Pier 12, Straddle.rcp

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR22 Name:
Multiplier = 1.000

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Units: US (English)

Design Code: AASHTO LRFD



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File Name: | Pier 12, Straddle.rcp

Auto generation details:

Selected Live Load for BR generation
Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR23 Name:
Multiplier = 1.000

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Units: US (English)

Design Code: AASHTO LRFD



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File Name: PIER 12 Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR24 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10

Units: US (English)

Design Code: AASHTO LRFD



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File Name: PIER 12 Straddle.rcp

Line #	Bearing #	Dir	Load kips
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR25 Name:
Multiplier = 1.000

Cap loads

Units: US (English)

Design Code: AASHTO LRFD



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File Name: PIER 12 Straddle.rcp

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR26 Name:

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71

Auto generation details:

Selected Live Load for BR generation

Units: US (English)

Design Code: AASHTO LRFD

Design Code: AASHTO LRFD



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File Name: PIER 12 Straddle.rcp

Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Units: US (English)

Design Code: AASHTO LRFD

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File Name: Plier 12_Straddle.rcp

Line #	Bearing #	Dir	Load
2	6	X	0.94
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR27 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	-1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71

Units: US (English)

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File Name: Plier 12_Straddle.rcp

Line #	Bearing #	Dir	Load
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	-1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR28 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Units: US (English)

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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 131.75 ft



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Loadcase ID: BR29 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-276.64 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.44
1	1	Z	-1.75
1	1	Y	0.52
1	2	X	0.44
1	2	Z	-1.75
1	3	X	0.44
1	3	Z	-1.75
1	4	X	0.44
1	4	Z	-1.75
1	5	X	0.44
1	5	Z	-1.75
1	6	X	0.44
1	6	Z	-1.75
1	6	Y	-0.52
2	1	X	0.44
2	1	Z	-1.75
2	1	Y	0.52
2	2	X	0.44
2	2	Z	-1.75
2	3	X	0.44
2	3	Z	-1.75
2	4	X	0.44
2	4	Z	-1.75
2	5	X	0.44
2	5	Z	-1.75
2	6	X	0.44
2	6	Z	-1.75
2	6	Y	-0.52



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Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 1
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR30 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-276.64	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.44
1	1	Z	-1.75
1	1	Y	0.52
1	2	X	0.44
1	2	Z	-1.75
1	3	X	0.44
1	3	Z	-1.75
1	4	X	0.44
1	4	Z	-1.75
1	5	X	0.44
1	5	Z	-1.75
1	6	X	0.44
1	6	Z	-1.75
1	6	Y	-0.52
2	1	X	0.44
2	1	Z	-1.75
2	1	Y	0.52
2	2	X	0.44
2	2	Z	-1.75

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
2	3	X	0.44
2	3	Z	-1.75
2	4	X	0.44
2	4	Z	-1.75
2	5	X	0.44
2	5	Z	-1.75
2	6	X	0.44
2	6	Z	-1.75
2	6	Y	-0.52

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 1
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR31 Name:
 Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10

Units: US (English)

Design Code: AASHTO LRFD



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Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X					
			-587.86	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	2	Y	1.10
1	3	X	0.94
1	3	Z	-3.71
1	3	Y	1.10
1	4	X	0.94
1	4	Z	-3.71
1	4	Y	1.10
1	5	X	0.94
1	5	Z	-3.71
1	5	Y	1.10
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	2	Y	1.10
2	3	X	0.94
2	3	Z	-3.71
2	3	Y	1.10
2	4	X	0.94
2	4	Z	-3.71
2	4	Y	1.10
2	5	X	0.94
2	5	Z	-3.71
2	5	Y	1.10
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR32 Name:
Multiplier = 1.000

Cap loads



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Type	Dir	Arm ft	Mag1	x1/L	Mag2	k2/L
Moment	X					
			-587.86	k-ft	0.50	

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	2	Y	1.10
1	3	X	0.94
1	3	Z	-3.71
1	3	Y	1.10
1	4	X	0.94
1	4	Z	-3.71
1	4	Y	1.10
1	5	X	0.94
1	5	Z	-3.71
1	5	Y	1.10
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	2	Y	1.10
2	3	X	0.94
2	3	Z	-3.71
2	3	Y	1.10
2	4	X	0.94
2	4	Z	-3.71
2	4	Y	1.10
2	5	X	0.94
2	5	Z	-3.71
2	5	Y	1.10
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR32 Name:
Multiplier = 1.000

Cap loads



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File Name: Pier 12_Straddle.rcp

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR33 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		587.86 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12_Straddle.rcp

Line #	Bearing #	Dir	Load kips
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation

Load: Design Truck
Load: Design Truck + Lane Load
Load: Design Tandem + Lane Load
Number of loaded lanes = 3
Contributing longitudinal length = 131.75 ft

Loadcase ID: BR34 Name:
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		461.06 k-ft	0.50		

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	0.73
1	1	Z	-2.91
1	1	Y	0.86
1	2	X	0.73
1	2	Z	-2.91
1	3	X	0.73
1	3	Z	-2.91
1	4	X	0.73
1	4	Z	-2.91

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
1	5	X	0.73
1	5	Z	-2.91
1	6	X	0.73
1	6	Z	-2.91
1	6	Y	-0.86
2	1	X	0.73
2	1	Z	-2.91
2	1	Y	0.86
2	2	X	0.73
2	2	Z	-2.91
2	3	X	0.73
2	3	Z	-2.91
2	4	X	0.73
2	4	Z	-2.91
2	5	X	0.73
2	5	Z	-2.91
2	6	X	0.73
2	6	Z	-2.91
2	6	Y	-0.86

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 2
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR35 Name:
 Multiplier = 1.000

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Units: US (English)

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Line #	Bearing #	Dir	Load kips
1	1	X	0.94
1	1	Z	-3.71
1	1	Y	1.10
1	2	X	0.94
1	2	Z	-3.71
1	3	X	0.94
1	3	Z	-3.71
1	4	X	0.94
1	4	Z	-3.71
1	5	X	0.94
1	5	Z	-3.71
1	6	X	0.94
1	6	Z	-3.71
1	6	Y	-1.10
2	1	X	0.94
2	1	Z	-3.71
2	1	Y	1.10
2	2	X	0.94
2	2	Z	-3.71
2	3	X	0.94
2	3	Z	-3.71
2	4	X	0.94
2	4	Z	-3.71
2	5	X	0.94
2	5	Z	-3.71
2	6	X	0.94
2	6	Z	-3.71
2	6	Y	-1.10

Auto generation details:

Selected Live Load for BR generation
 Load: Design Truck
 Load: Design Truck + Lane Load
 Load: Design Tandem + Lane Load
 Number of loaded lanes = 3
 Contributing longitudinal length = 131.75 ft

Loadcase ID: BR35 Name:
 Multiplier = 1.000

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Moment	X		-587.86 k-ft	0.50		

Units: US (English)

Design Code: AASHTO LRFD



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Loadcase ID: WS1 Name: Angle: 0
Multiplier = 1.000

Cap loads					
Type	Dir	Arm ft	Mag1	x1/L	Mag2 x2/L
Force	X	0.00	-7.62 kips	0.50	1.00
UDL	Z		-0.02 klf	0.00	1.00

Column loads					
Col #	Type	Dir	Mag1	y1/L	Mag2 y2/L
2	UDL	X	-0.195 klf	0.00	1.00
2	UDL	Z	-0.049 klf	0.00	1.00
1	UDL	X	-0.195 klf	0.00	0.92
1	UDL	Z	-0.049 klf	0.00	0.92
3	UDL	X	0.195 klf	0.00	1.00
3	UDL	Z	0.049 klf	0.00	1.00
4	UDL	X	0.195 klf	0.00	0.92
4	UDL	Z	0.049 klf	0.00	0.92

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-6.00
1	1	Y	-7.00
1	1	Z	-1.51
1	2	X	-6.00
1	2	Y	12.34
1	2	Z	-1.51
1	3	X	-6.00
1	3	Y	12.34
1	3	Z	-1.51
1	4	X	-6.00
1	4	Y	12.34
1	4	Z	-1.51
1	5	X	-6.00
1	5	Y	12.34
1	5	Z	-1.51
1	6	X	-6.00
1	6	Y	31.67
1	6	Z	-1.51

Units: US (English)

Design Code: AASHTO LRFD



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Line #	Bearing #	Dir	Load kips
2	1	X	-7.05
2	1	Y	-8.23
2	1	Z	-1.78
2	2	X	-7.05
2	2	Y	14.49
2	2	Z	-1.78
2	3	X	-7.05
2	3	Y	14.49
2	3	Z	-1.78
2	4	X	-7.05
2	4	Y	14.49
2	4	Z	-1.78
2	5	X	-7.05
2	5	Y	14.49
2	5	Z	-1.78
2	6	X	-7.05
2	6	Y	37.21
2	6	Z	-1.78

Auto generation details:

Generated Wind Load on Structure

Angle of wind = 0.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
Transverse 62.089 psf Cap 45.958 psf
Longitudinal 0.000 psf Column 45.958 psf
Overturning 20.000 psf

Loadcase ID: WS2 Name: Angle: -15
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2 x2/L
Force	X	0.00	-12.52 kips	0.50	1.00
UDL	Z		-0.07 klf	0.00	1.00

Units: US (English)

Design Code: AASHTO LRFD



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Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.222 klf	0.00	1.00	1.00
2	UDL	Z	-0.124 klf	0.00	1.00	1.00
1	UDL	X	-0.222 klf	0.00	0.92	0.92
1	UDL	Z	-0.124 klf	0.00	0.92	0.92
3	UDL	X	0.222 klf	0.00	1.00	1.00
3	UDL	Z	0.124 klf	0.00	1.00	1.00
4	UDL	X	0.222 klf	0.00	0.92	0.92
4	UDL	Z	0.124 klf	0.00	0.92	0.92

Bearing loads

Line #	Bearing #	Dir	Load
1	1	X	-5.10
1	1	Y	-2.23
1	1	Z	-2.05
1	2	X	-5.10
1	2	Y	-0.00
1	2	Z	-2.05
1	3	X	-5.10
1	3	Y	-0.00
1	3	Z	-2.05
1	4	X	-5.10
1	4	Y	-0.00
1	4	Z	-2.05
1	5	X	-5.10
1	5	Y	-0.00
1	5	Z	-2.05
1	6	X	-5.10
1	6	Y	2.23
1	6	Z	-2.05
2	1	X	-5.99
2	1	Y	-2.62
2	1	Z	-2.41
2	2	X	-5.99
2	2	Y	-0.00
2	2	Z	-2.41
2	3	X	-5.99
2	3	Y	-0.00
2	3	Z	-2.41
2	4	X	-5.99
2	4	Y	-0.00
2	4	Z	-2.41

Units: US (English)

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Line #	Bearing #	Dir	Load
2	5	X	-5.99
2	5	Y	-0.00
2	5	Z	-2.41
2	6	X	-5.99
2	6	Y	2.62
2	6	Z	-2.41

Auto generation details:

Generated Wind Load on Structure

Angle of wind = -15.00 deg Elevation above which wind load acts = 0.00 ft
 Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
 Transverse 54.638 psf Cap 45.958 psf
 Longitudinal 7.451 psf Column 45.958 psf
 Overturning not considered

Loadcase ID: WS3 Name: Angle: -30
 Multiplier = 1.000

Cap loads

Type	Dir	Arm	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-14.23 kips	0.50		
UDL	Z		-0.14 klf	0.00		1.00

Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.209 klf	0.00	1.00	1.00
2	UDL	Z	-0.203 klf	0.00	1.00	1.00
1	UDL	X	-0.209 klf	0.00	0.92	0.92
1	UDL	Z	-0.203 klf	0.00	0.92	0.92
3	UDL	X	0.209 klf	0.00	1.00	1.00
3	UDL	Z	0.203 klf	0.00	1.00	1.00
4	UDL	X	0.209 klf	0.00	0.92	0.92

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Auto generation details:

Generated Wind Load on Structure

Angle of wind = -30.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:

Transverse 50.913 psf Cap 45.958 psf
Longitudinal 14.901 psf Column 45.958 psf
Overturning not considered

Loadcase ID: WS4 Name: Angle: 45

Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-12.30 kips	0.50		
UDL	Z		-0.21 klf	0.00		1.00

Column loads

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.158 klf	0.00		1.00
2	UDL	Z	-0.264 klf	0.00		1.00
1	UDL	X	-0.158 klf	0.00		0.92
1	UDL	Z	-0.264 klf	0.00		0.92
3	UDL	X	0.158 klf	0.00		1.00
3	UDL	Z	0.264 klf	0.00		1.00
4	UDL	X	0.158 klf	0.00		0.92
4	UDL	Z	0.264 klf	0.00		0.92

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-3.48
1	1	Y	-1.52
1	1	Z	-2.92
1	2	X	-3.48
1	2	Y	-0.00
1	2	Z	-2.92

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Auto generation details:

Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
4	UDL	Z	0.203 klf	0.00		0.92

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-4.56
1	1	Y	-2.00
1	1	Z	-2.68
1	2	X	-4.56
1	2	Y	-0.00
1	2	Z	-2.68
1	3	X	-4.56
1	3	Y	-0.00
1	3	Z	-2.68
1	4	X	-4.56
1	4	Y	-0.00
1	4	Z	-2.68
1	5	X	-4.56
1	5	Y	-0.00
1	5	Z	-2.68
1	6	X	-4.56
1	6	Y	2.00
1	6	Z	-2.68
2	1	X	-5.36
2	1	Y	-2.35
2	1	Z	-3.15
2	2	X	-5.36
2	2	Y	-0.00
2	2	Z	-3.15
2	3	X	-5.36
2	3	Y	-0.00
2	3	Z	-3.15
2	4	X	-5.36
2	4	Y	-0.00
2	4	Z	-3.15
2	5	X	-5.36
2	5	Y	-0.00
2	5	Z	-3.15
2	6	X	-5.36
2	6	Y	2.35
2	6	Z	-3.15

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Loadcase ID: W55 Name: Angle: -60
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-7.24 kips	0.50		
UDL	Z		-0.26 klf	0.00		1.00

Column loads

Col#	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.083 klf	0.00		1.00
2	UDL	Z	-0.291 klf	0.00		1.00
1	UDL	X	-0.083 klf	0.00		0.92
1	UDL	Z	-0.291 klf	0.00		0.92
3	UDL	X	0.083 klf	0.00		1.00
3	UDL	Z	0.291 klf	0.00		1.00
4	UDL	X	0.083 klf	0.00		0.92
4	UDL	Z	0.291 klf	0.00		0.92

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-1.47
1	1	Y	-0.64
1	1	Z	-2.80
1	2	X	-1.47
1	2	Y	-0.00
1	2	Z	-2.80
1	3	X	-1.47
1	3	Y	-0.00
1	3	Z	-2.80
1	4	X	-1.47
1	4	Y	-0.00
1	4	Z	-2.80
1	5	X	-1.47
1	5	Y	-0.00
1	5	Z	-2.80
1	6	X	-1.47
1	6	Y	0.64
1	6	Z	-2.80

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Line #	Bearing #	Dir	Load kips
1	3	X	-3.48
1	3	Y	-0.00
1	3	Z	-2.92
1	4	X	-3.48
1	4	Y	-0.00
1	4	Z	-2.92
1	5	X	-3.48
1	5	Y	-0.00
1	5	Z	-2.92
1	6	X	-3.48
1	6	Y	1.52
1	6	Z	-2.92
2	1	X	-4.08
2	1	Y	-1.79
2	1	Z	-3.43
2	2	X	-4.08
2	2	Y	-0.00
2	2	Z	-3.43
2	3	X	-4.08
2	3	Y	-0.00
2	3	Z	-3.43
2	4	X	-4.08
2	4	Y	-0.00
2	4	Z	-3.43
2	5	X	-4.08
2	5	Y	-0.00
2	5	Z	-3.43
2	6	X	-4.08
2	6	Y	1.79
2	6	Z	-3.43

Auto generation details:

Generated Wind Load on Structure

Angle of wind = -45.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
Transverse 40.979 psf Cap 45.958 psf
Longitudinal 19.868 psf Column 45.958 psf
Overturning not considered

Units: US (English)

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Line #	Bearing #	Dir	Load kips
2	1	X	-1.72
2	1	Y	-0.75
2	1	Z	-3.28
2	2	X	-1.72
2	2	Y	-0.00
2	2	Z	-3.28
2	3	X	-1.72
2	3	Y	-0.00
2	3	Z	-3.28
2	4	X	-1.72
2	4	Y	-0.00
2	4	Z	-3.28
2	5	X	-1.72
2	5	Y	-0.00
2	5	Z	-3.28
2	6	X	-1.72
2	6	Y	0.75
2	6	Z	-3.28

Auto generation details:

Generated Wind Load on Structure

Angle of wind = -60.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
Transverse 21.110 psf Cap 45.958 psf
Longitudinal 23.594 psf Column 45.958 psf
Overturning not considered

Loadcase ID: WS6 Name: Angle: -75
Multiplier = 1.000

Cap loads

Type	Dir	Arm ft	Mag1	x1/L	Mag2	x2/L
Force	X	0.00	-0.40 kips	0.50		
UDL	Z		-0.28 klf	0.00		1.00

Units: US (English)

Design Code: AASHTO LRFD



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Col #	Type	Dir	Mag1	y1/L	Mag2	y2/L
2	UDL	X	-0.004 klf	0.00	1.00	1.00
2	UDL	Z	-0.278 klf	0.00	1.00	1.00
1	UDL	X	-0.004 klf	0.00	0.92	0.92
1	UDL	Z	-0.278 klf	0.00	0.92	0.92
3	UDL	X	0.004 klf	0.00	1.00	1.00
3	UDL	Z	0.278 klf	0.00	1.00	1.00
4	UDL	X	0.004 klf	0.00	0.92	0.92
4	UDL	Z	0.278 klf	0.00	0.92	0.92

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.65
1	1	Y	-0.29
1	1	Z	-2.97
1	2	X	-0.65
1	2	Y	-0.00
1	2	Z	-2.97
1	3	X	-0.65
1	3	Y	-0.00
1	3	Z	-2.97
1	4	X	-0.65
1	4	Y	-0.00
1	4	Z	-2.97
1	5	X	-0.65
1	5	Y	-0.00
1	5	Z	-2.97
1	6	X	-0.65
1	6	Y	0.29
1	6	Z	-2.97
2	1	X	-0.77
2	1	Y	-0.34
2	1	Z	-3.49
2	2	X	-0.77
2	2	Y	-0.00
2	2	Z	-3.49
2	3	X	-0.77
2	3	Y	-0.00
2	3	Z	-3.49
2	4	X	-0.77
2	4	Y	-0.00
2	4	Z	-3.49

Units: US (English)

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Line #	Bearing #	Dir	Load kips
2	5	X	-0.77
2	5	Y	-0.00
2	5	Z	-3.49
2	6	X	-0.77
2	6	Y	0.34
2	6	Z	-3.49

Auto generation details:

Generated Wind Load on Structure

Angle of wind = -75.00 deg Elevation above which wind load acts = 0.00 ft
Default wind pressure:

Wind pressure for superstructure: Wind pressure for substructure:
Transverse 13,660 psf Cap 45,958 psf
Longitudinal 27,319 psf Column 45,958 psf
Overturning not considered

Loadcase ID: WL1 Name: Angle: 0
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.98
1	1	Y	-1.15
1	1	Z	-0.25
1	2	X	-0.98
1	2	Y	-0.00
1	2	Z	-0.25
1	3	X	-0.98
1	3	Y	-0.00
1	3	Z	-0.25
1	4	X	-0.98

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Line #	Bearing #	Dir	Load kips
1	4	Y	-0.00
1	4	Z	-0.25
1	5	X	-0.98
1	5	Y	-0.00
1	5	Z	-0.25
1	6	X	-0.98
1	6	Y	1.15
1	6	Z	-0.25
2	1	X	-1.15
2	1	Y	-1.35
2	1	Z	-0.29
2	2	X	-1.15
2	2	Y	-0.00
2	2	Z	-0.29
2	3	X	-1.15
2	3	Y	-0.00
2	3	Z	-0.29
2	4	X	-1.15
2	4	Y	-0.00
2	4	Z	-0.29
2	5	X	-1.15
2	5	Y	-0.00
2	5	Z	-0.29
2	6	X	-1.15
2	6	Y	1.35
2	6	Z	-0.29

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = 0.00 deg Live load length = 131.75 ft

Loadcase ID: WL2 Name: Angle: -15
Multiplier = 1.000

Units: US (English)

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Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.83
1	1	Y	-0.97
1	1	Z	-0.33
1	2	X	-0.83
1	2	Y	-0.00
1	2	Z	-0.33
1	3	X	-0.83
1	3	Y	-0.00
1	3	Z	-0.33
1	4	X	-0.83
1	4	Y	-0.00
1	4	Z	-0.33
1	5	X	-0.83
1	5	Y	-0.00
1	5	Z	-0.33
1	6	X	-0.83
1	6	Y	0.97
1	6	Z	-0.33
2	1	X	-0.98
2	1	Y	-1.15
2	1	Z	-0.39
2	2	X	-0.98
2	2	Y	-0.00
2	2	Z	-0.39
2	3	X	-0.98
2	3	Y	-0.00
2	3	Z	-0.39
2	4	X	-0.98
2	4	Y	-0.00
2	4	Z	-0.39
2	5	X	-0.98
2	5	Y	-0.00
2	5	Z	-0.39
2	6	X	-0.98
2	6	Y	1.15
2	6	Z	-0.39

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = -15.00 deg Live load length = 131.75 ft

Units: US (English)

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Loadcase ID: WL3 Name: Angle: -30
Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.74
1	1	Y	-0.87
1	1	Z	-0.44
1	2	X	-0.74
1	2	Y	-0.00
1	2	Z	-0.44
1	3	X	-0.74
1	3	Y	-0.00
1	3	Z	-0.44
1	4	X	-0.74
1	4	Y	-0.00
1	4	Z	-0.44
1	5	X	-0.74
1	5	Y	-0.00
1	5	Z	-0.44
1	6	X	-0.74
1	6	Y	0.87
1	6	Z	-0.44
2	1	X	-0.87
2	1	Y	-1.02
2	1	Z	-0.51
2	2	X	-0.87
2	2	Y	-0.00
2	2	Z	-0.51
2	3	X	-0.87
2	3	Y	-0.00
2	3	Z	-0.51
2	4	X	-0.87
2	4	Y	-0.00
2	4	Z	-0.51
2	5	X	-0.87
2	5	Y	-0.00
2	5	Z	-0.51
2	6	X	-0.87
2	6	Y	1.02
2	6	Z	-0.51

Units: US (English)

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Auto generation details:

Generated Wind Load on Live Load

Angle of wind = -30.00 deg Live load length = 131.75 ft

Loadcase ID: WL4 Name: Angle: -45

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.57
1	1	Y	-0.66
1	1	Z	-0.48
1	2	X	-0.57
1	2	Y	-0.00
1	2	Z	-0.48
1	3	X	-0.57
1	3	Y	-0.00
1	3	Z	-0.48
1	4	X	-0.57
1	4	Y	-0.00
1	4	Z	-0.48
1	5	X	-0.57
1	5	Y	-0.00
1	5	Z	-0.48
1	6	X	-0.57
1	6	Y	0.66
1	6	Z	-0.48
2	1	X	-0.67
2	1	Y	-0.78
2	1	Z	-0.56
2	2	X	-0.67
2	2	Y	-0.00
2	2	Z	-0.56
2	3	X	-0.67

Units: US (English)

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Line #	Bearing #	Dir	Load kips
2	3	Y	-0.00
2	3	Z	-0.56
2	4	X	-0.67
2	4	Y	-0.00
2	4	Z	-0.56
2	5	X	-0.67
2	5	Y	-0.00
2	5	Z	-0.56
2	6	X	-0.67
2	6	Y	0.78
2	6	Z	-0.56

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = -45.00 deg Live load length = 131.75 ft

Loadcase ID: WL5 Name: Angle: -60

Multiplier = 1.000

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.24
1	1	Y	-0.28
1	1	Z	-0.46
1	2	X	-0.24
1	2	Y	-0.00
1	2	Z	-0.46
1	3	X	-0.24
1	3	Y	-0.00
1	3	Z	-0.46
1	4	X	-0.24
1	4	Y	-0.00

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 119
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57

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Designed CAM
Date 9/10/14
Checked
Date

File Name: Pier 12 Straddle.rcp

Bearing loads

Line #	Bearing #	Dir	Load kips
1	4	Z	-0.46
1	5	X	-0.24
1	5	Y	-0.00
1	5	Z	-0.46
1	6	X	-0.24
1	6	Y	0.28
1	6	Z	-0.46
2	1	X	-0.28
2	1	Y	-0.33
2	1	Z	-0.54
2	2	X	-0.28
2	2	Y	-0.00
2	2	Z	-0.54
2	3	X	-0.28
2	3	Y	-0.00
2	3	Z	-0.54
2	4	X	-0.28
2	4	Y	-0.00
2	4	Z	-0.54
2	5	X	-0.28
2	5	Y	-0.00
2	5	Z	-0.54
2	6	X	-0.28
2	6	Y	0.33
2	6	Z	-0.54

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = -60.00 deg Live load length = 131.75 ft

Loadcase ID: WL6 Name: Angle: -75

Multiplier = 1.000



Sheet # 120
Job # 59219

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File Name: Pier 12 Straddle.rcp

Bearing loads

Line #	Bearing #	Dir	Load kips
1	1	X	-0.03
1	1	Y	-0.04
1	1	Z	-0.45
1	2	X	-0.03
1	2	Y	-0.00
1	2	Z	-0.45
1	3	X	-0.03
1	3	Y	-0.00
1	3	Z	-0.45
1	4	X	-0.03
1	4	Y	-0.00
1	4	Z	-0.45
1	5	X	-0.03
1	5	Y	-0.00
1	5	Z	-0.45
1	6	X	-0.03
1	6	Y	0.04
1	6	Z	-0.45
2	1	X	-0.04
2	1	Y	-0.05
2	1	Z	-0.52
2	2	X	-0.04
2	2	Y	-0.00
2	2	Z	-0.52
2	3	X	-0.04
2	3	Y	-0.00
2	3	Z	-0.52
2	4	X	-0.04
2	4	Y	-0.00
2	4	Z	-0.52
2	5	X	-0.04
2	5	Y	-0.00
2	5	Z	-0.52
2	6	X	-0.04
2	6	Y	0.05
2	6	Z	-0.52

Auto generation details:

Generated Wind Load on Live Load

Angle of wind = -75.00 deg Live load length = 131.75 ft



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File Name: **Pier 12_Straddle.rcp**

Sheet # 121

Job # 59219

Designed CAM

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Date

Selected load groups

STRENGTH GROUP I
STRENGTH GROUP III
STRENGTH GROUP V
SERVICE GROUP I



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File Name: Pier 12, Straddle.rcp
 ANALYSIS RESULTS

Global Coordinate System, Units: kip kft

LOAD CASES RESULTS FROM FRAME ANALYSIS:

Loadcase ID: SELF Name: Self Load of Structure

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	76.93	343.94	0.00	-0.00	0.00	-261.01
3	4	-76.93	343.94	0.00	-0.00	0.00	261.01

Loadcase ID: DC1 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	478.94	1182.46	-0.02	104.75	0.83	-6903.84
3	4	-478.94	1158.82	0.02	102.91	0.83	6921.19

Loadcase ID: LL1 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	88.98	130.48	-0.00	-4.30	0.16	-1443.43
3	4	-88.98	259.14	0.00	-4.66	0.16	1125.14

Loadcase ID: LL1 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL2 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	63.04	114.29	-0.06	-162.01	2.99	-962.16
3	4	-63.04	159.30	0.06	-168.57	2.99	857.64

Loadcase ID: LL2 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL3 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	67.62	122.54	0.07	173.70	-3.21	-1031.94
3	4	-67.62	170.81	-0.07	180.75	-3.21	919.94

Loadcase ID: LL3 Name:

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File Name: Pier 12, Straddle.rcp

ANALYSIS RESULTS

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	98.42	213.45	0.00	-4.53	-0.05	-1368.93
3	4	-98.42	176.17	-0.00	-4.43	-0.05	1472.04

Loadcase ID: LL4 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL5 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	65.72	96.35	0.14	166.91	-6.29	-1066.10
3	4	-65.72	191.36	-0.14	180.73	-6.29	830.95

Loadcase ID: LL5 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL6 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	61.27	89.86	-0.13	-155.67	5.87	-993.91
3	4	-61.27	178.47	0.13	-168.55	5.87	774.79

Loadcase ID: LL6 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL7 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	97.57	167.34	-0.00	-4.40	0.07	-1483.65
3	4	-97.57	222.28	0.00	-4.55	0.07	1332.64

Loadcase ID: LL7 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL8 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	89.02	259.15	0.00	-4.66	-0.16	-1125.39
3	4	-89.02	130.47	-0.00	-4.30	-0.16	1444.11

Loadcase ID: LL8 Name:

No impact factor is included in the individual live load.

Loadcase ID: LL9 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	89.02	259.15	0.00	-4.66	-0.16	-1125.39
3	4	-89.02	130.47	-0.00	-4.30	-0.16	1444.11



Sheet # 5
Job # 59219

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File Name: Pier 12 Straddle.rcp

Loadcase ID: LL19 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL20 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	25.26	29.68	0.11	76.23	-5.07	447.23
	3	4	-25.26	105.71	-0.11	87.36	-5.07	281.78

Loadcase ID: LL20 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL21 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	34.18	40.19	0.00	-1.96	0.13	-605.07
	3	4	-34.18	143.76	0.00	-2.25	0.13	381.43

Loadcase ID: LL21 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL22 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	87.93	196.11	-0.02	-56.19	0.76	-1208.64
	3	4	-87.93	153.08	0.02	-57.86	0.76	1329.46

Loadcase ID: LL22 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL23 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	71.99	103.74	0.07	121.07	-3.24	-1177.06
	3	4	-71.99	217.67	-0.07	128.19	-3.24	900.99

Loadcase ID: LL23 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL24 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	78.26	164.35	0.05	-112.31	-2.50	-1102.86
	3	4	-78.26	144.41	-0.05	-106.83	-2.50	1156.28

Loadcase ID: LL24 Name:
No impact factor is included in the individual live load.

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp

Loadcase ID: LL25 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL26 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	88.83	258.61	-0.02	27.30	0.95	-1123.02
	3	4	-88.83	130.20	0.02	25.22	0.95	1441.02

Loadcase ID: LL25 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL26 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	68.86	210.04	0.06	-112.43	-2.61	-859.32
	3	4	-68.86	98.72	-0.06	-106.70	-2.61	1128.35

Loadcase ID: LL26 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL27 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	88.53	148.51	-0.00	75.57	0.11	-1358.28
	3	4	-88.53	206.59	0.00	75.33	0.11	1197.33

Loadcase ID: LL27 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL28 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	80.49	145.00	0.07	121.18	-3.14	-1203.76
	3	4	-80.49	176.41	-0.07	128.08	-3.14	1119.69

Loadcase ID: LL28 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL29 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	34.24	143.17	0.00	-2.25	-0.13	-381.80
	3	4	-34.24	40.18	-0.00	-1.96	-0.13	606.55

Loadcase ID: LL29 Name:
No impact factor is included in the individual live load.

Loadcase ID: LL30 Name:	Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
	1	1	23.60	98.60	0.10	-81.48	-4.73	-263.07

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-23.60	127.67	-0.10	-71.10	-4.73	418.30

Loadcase ID: LL30 Name:

No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	89.59	192.71	-0.05	78.02	2.34	-1251.96
3	4	-89.59	162.40	0.05	72.88	2.34	1334.02

Loadcase ID: LL31 Name:

No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	71.74	161.95	-0.05	176.43	2.38	-985.92
3	4	-71.74	125.75	0.05	171.20	2.38	1084.79

Loadcase ID: LL32 Name:

No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	66.88	151.05	0.05	-164.55	-2.22	-919.21
3	4	-66.88	117.28	-0.05	-159.67	-2.22	1011.25

Loadcase ID: LL33 Name:

No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	64.56	220.65	-0.02	21.71	1.01	-768.02
3	4	-64.56	84.30	0.02	19.49	1.01	1095.63

Loadcase ID: LL34 Name:

No impact factor is included in the individual live load.

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	97.16	219.32	0.00	-4.55	-0.06	-1335.40
3	4	-97.16	170.30	-0.00	-4.41	-0.06	1469.09

Units: US (English)

Design Code: AASHTO LRFD



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Loadcase ID: LL35 Name:
No impact factor is included in the individual live load.

Loadcase ID: BR1 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	5.59	4.14	-22.10	1245.02	135.20	-123.24

Loadcase ID: BR2 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.70	-4.22	22.85	1277.09	-135.66	125.16
3	4	5.74	4.22	-22.53	1269.43	137.85	-125.65

Loadcase ID: BR3 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.70	-4.22	22.85	1277.09	-135.66	125.16
3	4	5.74	4.22	-22.53	1269.43	137.85	-125.65

Loadcase ID: BR4 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	5.63	4.14	-22.10	1245.02	135.20	-123.24

Loadcase ID: BR5 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	5.63	4.14	-22.10	1245.02	135.20	-123.24

Loadcase ID: BR6 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	5.63	4.14	-22.10	1245.02	135.20	-123.24

Loadcase ID: BR7 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	5.63	4.14	-22.10	1245.02	135.20	-123.24

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-4.39	-3.25	17.58	982.37	-104.35	96.28
3	4	-4.41	3.25	17.33	976.48	106.04	96.66

Loadcase ID: BR15 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-4.39	-3.25	17.58	982.37	-104.35	96.28
3	4	-4.41	3.25	17.33	976.48	106.04	96.66

Loadcase ID: BR16 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-4.39	-3.25	17.58	982.37	-104.35	96.28
3	4	-4.41	3.25	17.33	976.48	106.04	96.66

Loadcase ID: BR17 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR18 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR19 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR20 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-2.63	-1.95	10.55	589.42	-62.61	57.77
3	4	-2.65	1.95	10.40	585.89	63.62	57.99

Loadcase ID: BR21 Name:



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR8 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR9 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.70	-4.22	22.85	1277.09	-135.66	125.16
3	4	-5.74	4.22	22.53	1269.43	137.85	125.65

Loadcase ID: BR10 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.70	-4.22	22.85	1277.09	-135.66	125.16
3	4	-5.74	4.22	22.53	1269.43	137.85	125.65

Loadcase ID: BR11 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR12 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR13 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-4.39	-3.25	17.58	982.37	-104.35	96.28
3	4	-4.41	3.25	17.33	976.48	106.04	96.66

Loadcase ID: BR14 Name:



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Sheet # 11
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Designed CAM
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR22 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR23 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR24 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR25 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR26 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR27 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR28 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR29 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR30 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR31 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR32 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR33 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR34 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: BR35 Name:

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-4.39	-3.25	17.58	982.37	-104.35	96.28
3	4	-4.41	3.25	17.33	976.48	106.04	96.66

Units: US (English)

Design Code: AASHTO LRFD



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Version: 12.01.00.57

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	-5.59	-4.14	22.41	1252.53	-133.05	122.76
3	4	-5.63	4.14	22.10	1245.02	135.20	123.24

Loadcase ID: WS1 Name: Angle: 0

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	14.78	-30.43	12.74	482.90	-58.43	-480.85
3	4	71.71	-130.53	9.07	431.34	70.21	-1357.41

Loadcase ID: WS2 Name: Angle: -15

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	44.70	20.90	21.63	783.20	-84.81	-925.38
3	4	35.01	-20.90	12.49	658.93	111.48	-848.22

Loadcase ID: WS3 Name: Angle: -30

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	41.71	19.26	32.13	1138.99	-118.41	-863.32
3	4	32.61	-19.26	17.26	937.44	161.51	-790.85

Loadcase ID: WS4 Name: Angle: -45

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	32.50	14.96	39.38	1374.21	-138.36	-674.36
3	4	25.63	-14.96	20.07	1113.00	194.11	-619.66

Loadcase ID: WS5 Name: Angle: -60

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	15.10	6.70	42.05	1451.97	-142.96	-310.68
3	4	11.49	-6.70	20.76	1164.50	204.22	-281.88

Loadcase ID: WS6 Name: Angle: -75

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	4.56	2.44	43.57	1528.93	-155.61	-100.11
3	4	4.39	-2.44	23.25	1254.33	214.17	-98.84

Loadcase ID: WL1 Name: Angle: 0



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	6.37	4.72	1.62	69.39	-9.62	-139.74
3	4	6.41	-4.72	1.60	68.84	9.80	-140.25

Loadcase ID: WL2 Name: Angle: -15

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	5.41	4.01	2.20	94.08	-13.05	-118.74
3	4	5.44	-4.01	2.17	93.35	13.28	-119.18

Loadcase ID: WL3 Name: Angle: -30

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	4.84	3.58	2.87	122.92	-17.06	-106.13
3	4	4.86	-3.58	2.84	121.99	17.35	-106.52

Loadcase ID: WL4 Name: Angle: -45

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	3.69	2.73	3.13	133.82	-18.58	-80.95
3	4	3.71	-2.73	3.09	132.82	18.88	-81.25

Loadcase ID: WL5 Name: Angle: -60

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	1.56	1.15	2.99	128.12	-17.79	-34.12
3	4	1.56	-1.15	2.96	127.17	18.07	-34.25

Loadcase ID: WL6 Name: Angle: -75

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	0.22	0.16	2.93	125.25	-17.40	-4.76
3	4	0.22	-0.16	2.89	124.33	17.66	-4.78

COMBINATION OF LOADS FROM FRAME ANALYSIS:

Combination No. 1



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Combination No. 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.80	2162.84	39.18	2307.06	-231.19	-11640.78
3	4	-883.44	2406.27	38.70	2290.32	238.24	11453.59

Combination No. 2

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	818.18	2142.28	39.83	2023.24	-230.03	-10771.66
3	4	-838.20	2222.73	39.59	1993.66	248.61	11011.26

Combination No. 3

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	826.48	2157.24	40.11	2729.63	-243.07	-10898.32
3	4	-846.51	2243.58	39.30	2728.69	235.56	11124.35

Combination No. 4

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	882.75	2329.52	39.20	2306.22	-231.96	-11490.95
3	4	-902.39	2239.59	38.69	2291.16	237.47	12150.41

Combination No. 5

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.91	2272.97	39.78	2746.51	-227.71	-10675.45
3	4	-849.93	2127.85	39.64	2711.82	250.93	11446.14

Combination No. 6

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.71	2301.52	38.91	2701.36	-218.61	-10481.72



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Combination No. 7

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.62	2090.77	38.93	2306.68	-219.38	-10843.00
3	4	-834.26	2263.11	38.96	1950.98	250.05	10831.82

Combination No. 7

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	881.04	2236.89	39.19	2306.68	-231.54	-11721.63
3	4	-900.68	2332.22	38.70	2290.70	237.89	11870.45

Combination No. 8

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.88	2421.32	39.21	2305.75	-232.38	-11002.03
3	4	-883.52	2147.79	38.68	2291.63	237.05	12094.58

Combination No. 9

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	821.49	2251.27	40.14	2007.35	-244.50	-10562.56
3	4	-841.52	2113.74	39.27	2009.55	234.14	11316.14

Combination No. 10

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.91	2272.97	39.78	2746.51	-227.71	-10675.45
3	4	-849.93	2127.85	39.64	2711.82	250.93	11446.14

Combination No. 11

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.71	2301.52	38.91	2701.36	-218.61	-10481.72

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-842.35	2087.48	38.97	2656.99	250.82	11426.57

Combination No. 12
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.75	2278.17	39.46	1966.41	-244.20	-10380.70
3	4	-834.39	2075.71	38.42	1978.23	225.23	11297.77

Combination No. 13
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.14	2346.46	30.75	1836.49	-182.20	-10333.64
3	4	-832.54	2053.84	30.34	1825.28	185.98	11352.63

Combination No. 14
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	787.20	2244.25	30.43	2150.99	-167.56	-9977.65
3	4	-802.61	2014.79	30.65	2107.62	200.62	10844.53

Combination No. 15
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.08	2072.01	30.72	1837.88	-180.94	-10992.27
3	4	-832.49	2328.29	30.36	1823.89	187.24	10692.45

Combination No. 16
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	787.20	2032.96	31.04	2120.22	-195.58	-10485.07
3	4	-802.60	2226.08	30.05	2138.40	172.60	10336.91

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Combination No. 17
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.90	2159.54	39.32	2680.75	-237.38	-11035.00
3	4	-855.54	2229.46	38.57	2677.60	232.05	11253.92

Combination No. 18
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	827.19	2144.45	39.08	1985.82	-226.52	-10902.77
3	4	-846.83	2209.43	38.80	1958.82	242.91	11134.71

Combination No. 19
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	864.58	2214.56	39.09	2202.81	-227.06	-11447.36
3	4	-884.22	2282.81	38.79	2176.99	242.37	11669.56

Combination No. 20
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	743.13	1966.74	18.66	1322.08	-119.14	-9791.65
3	4	-752.37	2103.27	17.99	1336.92	101.77	9669.40

Combination No. 21
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	758.89	1985.32	18.42	1155.21	-108.05	-10070.43
3	4	-768.13	2169.43	18.23	1145.68	112.86	9845.45

Combination No. 22
Group Id: STR GP 1 Name: STRENGTH GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	864.13	2298.75	39.16	2199.26	-230.29	-11206.52
3	4	-883.77	2198.62	38.72	2180.54	239.14	11897.41

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	850.71	2198.03	39.34	2576.45	-238.58	-11169.61
3	4	-870.36	2250.38	38.55	2575.94	230.85	11057.20

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	759.02	2192.18	18.44	1154.16	-109.00	-9621.95
3	4	-749.40	1962.58	18.21	1146.74	111.90	10297.80

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	866.85	2293.43	39.09	2486.31	-226.89	-11278.36
3	4	-886.49	2214.39	38.80	2460.12	242.54	11904.04

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.27	2239.94	39.09	2692.37	-226.80	-10805.82
3	4	-854.92	2149.07	38.80	2665.98	242.63	11465.13

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	843.44	2242.39	39.31	2083.07	-237.03	-11018.84
3	4	-866.62	2183.24	38.58	2079.15	232.40	11590.09

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.44	2420.06	39.15	2380.14	-229.80	-10996.52
3	4	-883.08	2147.16	38.73	2360.33	239.64	12087.39

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.11	2334.18	39.32	2082.40	-237.46	-10529.91
3	4	-847.75	2091.44	38.57	2079.62	231.98	11534.26

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	865.00	2203.51	39.19	2481.18	-231.50	-11498.83

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	826.46	2220.16	39.50	1974.87	-236.49	-10684.84
3	4	-846.10	2133.72	38.59	1969.77	232.94	11331.69

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.82	2345.39	30.69	1895.63	-179.45	-10329.87
3	4	-832.22	2053.43	30.40	1878.37	188.73	11347.16

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	880.19	2341.32	39.20	2306.16	-232.01	-11423.37
3	4	-899.83	2227.79	38.69	2291.22	237.42	12144.17

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	883.38	2177.34	-39.25	-2076.79	234.47	-12070.43
3	4	-863.74	2391.76	-38.63	-2067.24	-234.96	11022.25

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.14	2157.07	-40.15	-2446.56	244.77	-11209.74
3	4	-818.11	2207.94	-39.27	-2449.35	-233.87	10571.47

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.28	2117.03	-38.96	-1711.42	220.70	-11403.74
3	4	-822.64	2271.98	38.93	-1671.64	-248.73	10502.43

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	834.20	2105.27	-39.51	-2390.18	246.28	-11272.65
3	4	-814.56	2248.61	-38.38	-2406.58	-223.15	10400.49

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	900.62	2251.39	-39.25	-2077.16	234.13	-12151.28
3	4	-880.98	2317.72	-38.64	-2066.87	-235.30	11439.11

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	883.46	2435.82	-39.23	-2078.09	233.28	-11431.68

Units: US (English)

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Combination No. 39
 Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.45	2172.03	-39.87	-1740.17	231.72	-11336.40
3	4	-826.42	2228.79	-39.55	-1714.31	-246.91	10684.56

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	902.33	2344.02	-39.24	-2077.63	233.70	-11920.60
3	4	-882.69	2225.09	-38.65	-2066.40	-235.73	11719.07

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.28	2117.03	-38.96	-1711.42	220.70	-11403.74
3	4	-822.64	2271.98	38.93	-1671.64	-248.73	10502.43

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	834.20	2105.27	-39.51	-2390.18	246.28	-11272.65
3	4	-814.56	2248.61	-38.38	-2406.58	-223.15	10400.49

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	900.62	2251.39	-39.25	-2077.16	234.13	-12151.28
3	4	-880.98	2317.72	-38.64	-2066.87	-235.30	11439.11

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	883.46	2435.82	-39.23	-2078.09	233.28	-11431.68

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-863.82	2133.29	-38.66	-2065.94	-236.15	11663.24

Combination No. 44

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	841.46	2266.06	-39.83	-2462.46	230.29	-11000.64
3	4	-821.43	2098.95	-39.58	-2433.46	-248.34	10876.35

Combination No. 45

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	849.87	2287.75	-40.20	-1723.30	247.09	-11113.52
3	4	-829.85	2113.07	-39.22	-1731.19	-231.55	11006.35

Combination No. 46

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.29	2316.02	-39.53	-1682.49	247.05	-10911.37
3	4	-822.65	2072.98	-38.36	-1700.57	-222.38	10995.24

Combination No. 47

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	834.33	2292.67	-38.97	-2417.43	221.47	-10810.35
3	4	-814.69	2061.21	-38.91	-2379.33	-247.96	10866.44

Combination No. 48

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.50	2357.84	-30.77	-1601.82	183.02	-10670.62
3	4	-817.09	2042.46	-30.32	-1592.41	-185.16	11014.33

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Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.56	2255.62	-31.08	-1287.32	197.67	-10314.63
3	4	-787.16	2003.42	-30.00	-1310.08	-170.51	10506.23

Combination No. 50

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.44	2083.38	-30.80	-1600.43	184.29	-11329.25
3	4	-817.04	2316.92	-30.29	-1593.80	-183.89	10354.14

Combination No. 51

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.55	2044.33	-30.48	-1318.09	169.64	-10822.05
3	4	-787.15	2214.71	-30.61	-1279.30	-198.54	9998.61

Combination No. 52

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	855.48	2174.04	-39.12	-1703.09	228.28	-11464.65
3	4	-835.84	2214.96	-38.77	-1679.97	-241.15	10822.58

Combination No. 53

Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.77	2158.95	-39.35	-2398.03	239.14	-11332.42
3	4	-827.13	2194.93	-38.53	-2398.74	-230.29	10703.38

Combination No. 54

Group Id: STR GP 1 Name: STRENGTH GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	884.16	2229.06	-39.34	-2181.04	238.60	-11877.01
3	4	-864.52	2268.31	-38.54	-2180.57	-230.83	11238.23

Combination No. 55

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	752.34	1973.56	-18.25	-740.91	100.00	-9993.84
3	4	-743.10	2096.44	-18.40	-713.70	-120.91	9466.42

Combination No. 56

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.10	1992.15	-18.49	-907.77	111.09	-10272.62
3	4	-758.86	2162.61	-18.16	-904.94	-109.82	9642.47

Combination No. 57

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	883.71	2313.25	-39.27	-2184.58	235.37	-11636.18
3	4	-864.07	2184.12	-38.61	-2177.03	-234.06	11466.08

Combination No. 58

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	853.33	2130.05	-39.09	-1807.40	227.08	-11599.26
3	4	-833.69	2318.36	-38.79	-1781.62	-242.35	10625.86

Combination No. 59

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	866.57	2256.89	-39.13	-2300.78	228.63	-11448.49

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-846.92	2168.74	-38.76	-2278.41	-240.80	11158.76

Combination No. 60

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	883.02	2434.56	-39.28	-2003.71	235.87	-11426.17
3	4	-863.38	2132.66	-38.60	-1997.24	-233.56	11656.06

Combination No. 61

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	847.69	2348.68	-39.12	-2301.24	228.21	-10959.56
3	4	-828.05	2076.94	-38.77	-2277.95	-241.22	11102.92

Combination No. 62

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	884.59	2218.01	-39.25	-1902.67	234.10	-11928.48
3	4	-864.94	2289.81	-38.64	-1892.32	-235.33	11198.95

Combination No. 63

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	870.30	2212.53	-39.10	-1807.15	227.30	-11652.40
3	4	-850.65	2235.88	-38.79	-1781.87	-242.13	11062.54

Combination No. 64

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.24	2199.00	-18.47	-908.83	110.13	-9824.14
3	4	-758.99	1955.76	-18.18	-903.88	-110.78	10094.83

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Combination No. 65
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	749.37	2119.92	-18.26	-1072.87	100.61	-9613.49
3	4	-740.13	1933.55	-18.39	-1047.02	-120.29	9760.96

Combination No. 66
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	886.43	2307.93	-39.35	-1897.53	238.78	-11708.01
3	4	-866.79	2199.89	-38.54	-1897.45	-230.66	11472.71

Combination No. 67
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	854.86	2254.44	-39.35	-1691.47	238.87	-11235.47
3	4	-835.22	2134.57	-38.54	-1691.59	-230.57	11033.80

Combination No. 68
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.04	2234.66	-39.14	-2408.97	229.17	-11114.49
3	4	-826.40	2119.22	-38.75	-2387.80	-240.26	10900.35

Combination No. 69
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.18	2356.76	-30.83	-1542.68	185.78	-10666.85
3	4	-816.77	2042.06	-30.26	-1539.33	-182.40	11008.85

Combination No. 70
Group id: STR GP 1 Name: STRENGTH GROUP 1



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Combination No. 71
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	899.77	2355.82	-39.24	-2077.69	233.65	-11853.02
3	4	-880.13	2213.29	-38.65	-2066.34	-235.78	11712.84

Combination No. 72
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.24	1628.61	39.19	2270.40	-231.49	-9133.08
3	4	-688.89	1880.30	38.70	2254.30	237.94	8939.82

Combination No. 73
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.62	1608.04	39.83	1986.58	-230.32	-8263.97
3	4	-643.65	1696.76	39.58	1957.64	248.31	8497.49

Combination No. 74
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.92	1623.00	40.12	2692.97	-243.36	-8390.63
3	4	-651.95	1717.61	39.30	2692.68	235.27	8610.58

Combination No. 75
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	688.19	1795.28	39.21	2269.56	-232.25	-8983.26
3	4	-707.84	1713.62	38.68	2255.14	237.18	9636.64

Combination No. 76
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.14	1568.29	39.49	2635.76	-245.26	-8466.39

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	1760.51	1760.51	38.40	2649.91	224.17	8419.99

Combination No. 76
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.07	1556.53	38.93	1957.00	-219.67	-8335.30
3	4	-639.71	1737.15	38.95	1914.96	249.76	8318.05

Combination No. 77
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	686.49	1702.65	39.20	2270.02	-231.83	-9213.94
3	4	-706.13	1806.25	38.69	2254.68	237.60	9356.68

Combination No. 78
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.32	1887.08	39.22	2269.09	-232.68	-8494.33
3	4	-688.96	1621.83	38.67	2255.61	236.75	9580.81

Combination No. 79
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.94	1717.04	40.15	1970.69	-244.79	-8054.86
3	4	-646.96	1587.77	39.27	1973.53	233.84	8802.37

Combination No. 80
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.35	1738.73	39.78	2709.85	-228.00	-8167.75
3	4	-655.38	1601.88	39.63	2675.80	250.64	8932.37

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Group Id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 81

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.16	1767.28	38.92	2664.70	-218.91	-7974.03
3	4	-647.80	1561.52	38.97	2620.97	250.52	8912.80

Combination No. 82
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.19	1743.93	39.47	1929.75	-244.49	-7873.00
3	4	-639.84	1549.75	38.42	1942.21	224.94	8784.00

Combination No. 83
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.58	1812.22	30.76	1799.83	-182.50	-7825.95
3	4	-637.99	1527.87	30.33	1789.26	185.69	8838.86

Combination No. 84
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.65	1710.01	30.44	2114.33	-167.85	-7469.96
3	4	-608.05	1488.82	30.65	2071.60	200.33	8330.76

Combination No. 85
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.53	1537.77	30.73	1801.22	-181.23	-8484.57
3	4	-637.93	1802.32	30.36	1787.87	186.95	8178.68

Combination No. 86
Group Id: STR GP 1 Name: STRENGTH GROUP 1

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Version: 12.01.00.57
Phone: 1-800-778-4277

File Name: Pier 12_Straddle.rcp

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.64	1498.72	31.05	2083.55	-195.88	-7977.37
3	4	-608.05	1700.12	30.04	2102.38	172.31	7823.14

Combination No. 87
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.34	1625.30	39.32	2644.09	-237.67	-8527.30
3	4	-660.98	1703.50	38.56	2641.58	231.76	8740.15

Combination No. 88
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.63	1610.21	39.09	1949.16	-226.82	-8395.07
3	4	-652.27	1683.47	38.80	1922.80	242.61	8620.95

Combination No. 89
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	670.03	1680.32	39.10	2166.15	-227.35	-8939.66
3	4	-689.67	1756.84	38.79	2140.97	242.08	9155.79

Combination No. 90
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	548.57	1432.50	18.67	1285.42	-119.43	-7283.96
3	4	-557.82	1577.30	17.98	1300.90	101.48	7155.63

Combination No. 91
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	564.33	1451.09	18.43	1118.55	-108.34	-7562.73

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1643.47	18.22	1109.66	112.57	7331.68

Combination No. 92
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.58	1764.51	39.17	2162.60	-230.58	-8698.83
3	4	-689.22	1672.65	38.72	2144.52	238.85	9383.64

Combination No. 93
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.19	1581.32	39.35	2539.79	-238.88	-8661.91
3	4	-658.83	1806.89	38.54	2539.92	230.56	8543.43

Combination No. 94
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.43	1708.15	39.32	2046.41	-237.32	-8511.14
3	4	-672.07	1657.27	38.57	2043.13	232.11	9076.32

Combination No. 95
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	668.88	1885.82	39.16	2343.48	-230.09	-8488.82
3	4	-688.52	1621.20	38.73	2324.31	239.34	9573.62

Combination No. 96
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.55	1799.94	39.32	2045.94	-237.75	-8022.21
3	4	-653.20	1565.48	38.56	2043.60	231.68	9020.49

Units: US (English) Design Code: AASHTO LRFD



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Combination No. 97
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	670.45	1669.27	39.20	2444.52	-231.85	-8991.13
3	4	-690.09	1778.34	38.69	2429.23	237.58	9116.51

Combination No. 98
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.16	1663.79	39.34	2540.03	-238.65	8715.05
3	4	-675.80	1724.41	38.54	2539.68	230.78	8980.10

Combination No. 99
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	564.46	1657.94	18.45	1117.50	-109.30	-7714.25
3	4	-573.71	1436.61	18.20	1110.72	111.61	7784.04

Combination No. 100
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	545.60	1578.86	18.66	953.46	-118.81	-6903.60
3	4	-554.84	1414.41	18.00	967.58	102.09	7450.17

Combination No. 101
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	672.29	1759.19	39.10	2449.65	-227.18	-8770.66
3	4	-691.94	1688.42	38.79	2424.10	242.25	9390.27

Combination No. 102
Group id: STR GP 1 Name: STRENGTH GROUP 1



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Combination No. 97
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.72	1705.70	39.09	2655.71	-227.09	-8298.13
3	4	-660.36	1623.10	38.79	2629.96	242.34	8951.37

Combination No. 103
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.90	1685.92	39.30	1938.21	-236.78	-8177.14
3	4	-651.55	1607.75	38.58	1933.75	232.65	8817.92

Combination No. 104
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.26	1811.15	30.70	1858.97	-179.74	-7822.17
3	4	-637.67	1527.46	30.39	1842.35	188.44	8833.39

Combination No. 105
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	685.64	1807.08	39.21	2269.50	-232.31	-8915.68
3	4	-705.28	1701.83	38.68	2255.20	237.12	9630.40

Combination No. 106
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	688.83	1643.11	39.25	2113.45	234.18	-9562.73
3	4	-669.18	1865.80	-38.64	-2103.26	-235.25	8508.48

Combination No. 107
Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.59	1622.83	40.14	2483.22	244.47	-8702.04

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-623.56	1681.98	-39.27	-2485.37	-234.16	8057.70

Combination No. 108
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.89	1637.79	-39.86	-1776.83	231.43	-8828.70
3	4	-631.86	1702.82	-39.55	-1750.33	-247.20	8170.79

Combination No. 109
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	707.78	1809.78	-39.23	-2114.29	233.41	-9412.91
3	4	-688.13	1699.12	-38.66	-2102.42	-236.02	9205.30

Combination No. 110
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.72	1582.79	-38.95	-1748.08	220.41	-8896.04
3	4	-628.08	1746.01	-38.94	-1707.66	-249.02	7988.66

Combination No. 111
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.65	1571.03	-39.50	-2426.84	245.99	-8764.95
3	4	-620.01	1722.65	-38.38	-2442.60	-223.44	7886.72

Combination No. 112
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	706.07	1717.15	-39.24	-2113.82	233.84	-9643.59
3	4	-686.43	1791.75	-38.65	-2102.89	-235.60	8925.34

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Combination No. 113
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	688.90	1901.58	-39.22	-2114.75	232.99	-8923.98
3	4	-669.26	1607.33	-38.66	-2101.96	-236.44	9149.47

Combination No. 114
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.90	1731.82	-39.83	-2499.12	230.00	-8492.94
3	4	-626.88	1572.98	-39.59	-2469.48	-248.63	8362.58

Combination No. 115
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.32	1753.51	-40.19	-1759.96	246.80	-8605.82
3	4	-635.29	1587.10	-39.22	-1767.21	-231.84	8492.58

Combination No. 116
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.74	1781.78	-39.52	-1719.15	246.76	-8403.68
3	4	-628.10	1547.02	-38.37	-1736.59	-222.67	8481.47

Combination No. 117
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.78	1758.43	-38.97	-2454.10	221.18	-8302.65
3	4	-620.13	1535.25	-38.92	-2415.35	-248.25	8352.67

Combination No. 118
Group Id: STR GP 1 Name: STRENGTH GROUP 1

Units: US (English)

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Combination No. 119

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.94	1823.60	-30.76	-1638.48	182.73	-8162.93
3	4	-622.53	1516.50	-30.33	-1628.43	-185.45	8500.56

Combination No. 120

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.01	1721.39	-31.08	-1323.98	197.38	-7806.94
3	4	-592.60	1477.45	-30.01	-1346.10	-170.80	7992.46

Combination No. 121

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.89	1549.14	-30.79	-1637.09	184.00	-8821.55
3	4	-622.48	1790.95	-30.30	-1629.82	-184.18	7840.38

Combination No. 122

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.00	1510.09	-30.47	-1354.75	169.35	-8314.35
3	4	-592.59	1688.74	-30.61	-1315.32	-198.83	7484.84

Combination No. 123

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.92	1639.80	-39.11	-1739.76	227.99	-8956.95
3	4	-641.28	1689.00	-38.77	-1715.98	-241.44	8308.81

Combination No. 124

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	689.61	1694.82	-39.34	-2217.70	238.31	-9369.31
3	4	-669.97	1742.34	-38.55	-2216.59	-231.12	8724.46

Combination No. 125

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	557.79	1439.32	-18.24	-777.57	99.70	-7486.15
3	4	-548.55	1570.47	-18.41	-749.72	-121.21	6952.65

Combination No. 126

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.55	1457.91	-18.48	-944.44	110.80	-7764.92
3	4	-564.30	1636.64	-18.17	-940.95	-110.11	7128.70

Combination No. 127

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	689.16	1779.01	-39.27	-2221.24	235.08	-9128.48
3	4	-669.52	1658.15	-38.62	-2213.05	-234.35	8952.31

Combination No. 128

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.77	1595.82	-39.09	-1844.06	226.79	-9091.56
3	4	-639.13	1792.39	-38.80	-1817.64	-242.64	8112.09

Combination No. 129

Group id: STR GP 1 Name: STRENGTH GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.77	1595.82	-39.09	-1844.06	226.79	-9091.56
3	4	-639.13	1792.39	-38.80	-1817.64	-242.64	8112.09



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Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 129

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	672.01	1722.65	-39.12	-2337.44	228.34	-8940.79
3	4	-652.37	1642.77	-38.76	-2314.43	-241.09	8644.99

Combination No. 130

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 130

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	688.46	1900.32	-39.28	-2040.37	235.58	-8918.47
3	4	-668.82	1606.70	-38.61	-2033.26	-233.85	9142.29

Combination No. 131

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 131

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.14	1814.44	-39.11	-2337.90	227.92	-8451.86
3	4	-633.50	1550.98	-38.77	-2313.97	-241.51	8589.15

Combination No. 132

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 132

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	690.03	1683.77	-39.24	-1939.33	233.81	-9420.79
3	4	-670.39	1763.84	-38.65	-1928.33	-235.62	8685.18

Combination No. 133

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 133

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.74	1678.29	-39.09	-1843.81	227.01	-9144.70
3	4	-656.10	1709.91	-38.79	-1817.89	-242.42	8548.77

Combination No. 134

Group id: STR GP 1 Name: STRENGTH GROUP 1



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Combination No. 135

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 135

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.68	1664.76	-18.46	-1109.53	109.84	-7316.44
3	4	-564.44	1429.79	-18.19	-1083.03	-111.07	7581.06

Combination No. 136

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 136

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	554.82	1585.69	-18.26	-1109.53	100.32	-7105.79
3	4	-545.57	1407.58	-18.40	-1083.03	-120.59	7247.19

Combination No. 137

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 137

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	691.88	1773.69	-39.34	-1934.20	238.48	-9200.31
3	4	-672.23	1673.92	-38.55	-1933.47	-230.95	8958.94

Combination No. 138

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 138

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.30	1720.20	-39.34	-1728.13	238.57	-8727.78
3	4	-640.66	1608.60	-38.54	-1727.61	-230.86	8520.03

Combination No. 139

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 139

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.49	1700.42	-39.13	-2445.63	228.88	-8606.79
3	4	-631.85	1593.25	-38.75	-2423.82	-240.55	8386.58

Combination No. 139

Group id: STR GP 1 Name: STRENGTH GROUP 1

Combination No. 139

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.62	1822.53	-30.82	-1579.34	185.48	-8159.15

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		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-622.21	1516.09	-30.27	-1575.35	-182.70	8495.08

Combination No. 140
Group Id: STR GP 1 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	705.22	1821.58	-39.23	-2114.35	233.36	-9345.33
3	4	-685.58	1687.33	-38.66	-2102.36	-236.07	9199.07

Combination No. 141
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	715.54	1865.39	17.81	807.00	-80.77	-9629.24
3	4	-594.44	1695.71	12.73	732.52	99.34	7077.38

Combination No. 142
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	757.42	1937.25	30.26	1227.41	-117.69	-10251.59
3	4	-645.83	1849.20	17.51	1051.14	157.11	7790.24

Combination No. 143
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	753.23	1934.95	44.96	1725.52	-164.72	-10164.71
3	4	-649.19	1851.49	24.19	1441.06	227.16	7870.56

Combination No. 144
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	740.34	1928.94	55.12	2054.83	-192.66	-9900.17
3	4	-658.96	1857.51	28.11	1686.83	272.80	8110.23

Units: US (English)

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		Job #	59219
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		Date	

Combination No. 145
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	715.99	1917.37	58.85	2163.69	-199.10	-9391.00
3	4	-678.75	1869.07	29.08	1758.94	286.95	8583.11

Combination No. 146
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	701.23	1911.41	60.97	2271.44	-216.81	-9096.21
3	4	-688.69	1875.03	32.57	1884.71	300.88	8839.38

Combination No. 147
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	674.14	1950.59	-17.86	-545.13	82.85	-8282.87
3	4	-795.24	2061.19	-12.68	-475.24	-97.25	10878.12

Combination No. 148
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.26	1878.74	-30.30	-965.55	119.77	-7660.52
3	4	-743.86	1907.71	-17.46	-793.86	-155.02	10165.26

Combination No. 149
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.45	1881.03	-45.01	-1463.66	166.81	-7747.41
3	4	-740.50	1905.41	-24.14	-1183.78	-225.08	10084.93

Combination No. 150
Group Id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	715.99	1917.37	58.85	2163.69	-199.10	-9391.00
3	4	-678.75	1869.07	29.08	1758.94	286.95	8583.11

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.35	1887.05	-55.16	-1792.97	194.74	-8011.95
3	4	-730.72	1899.39	-28.07	-1429.55	-270.72	9845.27

Combination No. 151

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 152

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	673.70	1898.61	-58.89	-1901.82	201.18	-8521.11
3	4	-710.93	1887.83	-29.04	-1501.66	-284.87	9372.38

Combination No. 153

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 154

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	688.46	1904.57	-61.02	-2009.57	218.89	-8815.91
3	4	-700.99	1881.87	32.52	-1627.43	-298.79	9116.12

Combination No. 155

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 156

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	520.98	1331.16	17.82	770.34	-81.06	-7121.54
3	4	-399.89	1169.75	12.72	696.50	99.04	4563.61

Combination No. 157

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 158

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	562.86	1403.01	30.26	1190.75	-117.98	-7743.90
3	4	-451.27	1323.23	17.50	1015.12	156.82	5276.47

Combination No. 159

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 160

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	558.67	1400.71	44.97	1688.86	-165.02	-7657.01

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	545.78	1394.70	55.12	2018.17	-192.95	-7392.47
3	4	-464.41	1331.54	28.11	1650.82	272.51	5596.46

Combination No. 156

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 157

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	521.43	1383.14	58.85	2127.03	-199.39	-6883.31
3	4	-484.19	1343.10	29.08	1722.92	286.66	6069.34

Combination No. 158

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 159

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	506.67	1377.17	60.98	2234.77	-217.10	-6588.51
3	4	-494.14	1349.07	32.56	1848.69	300.58	6325.61

Combination No. 160

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 161

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	479.59	1416.35	-17.85	-581.79	82.56	-5775.18
3	4	-600.69	1535.22	-12.69	511.26	-97.54	8364.35

Combination No. 162

Group id: STR GP 3 Name: STRENGTH GROUP III

Combination No. 163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	437.71	1344.50	-30.30	-1002.21	119.48	-5152.82
3	4	-549.30	1381.74	-17.47	829.88	-155.32	7651.49

Units: US (English)

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File Name:	Pier 12_ Straddle.rcp	Phone: 1-800-778-4277	
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.27	2081.27	37.44	1853.27	-210.20	-10688.75
3	4	-770.34	2087.11	35.77	1808.75	229.91	9863.24

Combination No. 167
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.68	2092.81	37.65	2398.20	-220.26	-10786.45
3	4	-776.75	2103.19	35.56	2375.78	219.85	9950.48

Combination No. 168
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	852.08	2225.72	36.95	2071.56	-211.69	-11243.63
3	4	-819.86	2100.11	35.08	2038.25	221.32	10742.01

Combination No. 169
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.75	2050.61	37.17	2354.06	-221.72	-10844.90
3	4	-773.53	2136.29	34.86	2342.78	211.28	9803.46

Combination No. 170
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.53	2041.54	36.74	1830.45	-201.99	-10743.77
3	4	-767.31	2118.26	35.29	1775.82	231.02	9724.82

Combination No. 171
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	850.77	2154.26	36.94	2071.92	-211.37	-11421.58
3	4	-780.55	2100.11	35.08	2038.25	221.32	10742.01



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	441.90	1346.80	-45.00	-1500.32	166.52	-5239.71
3	4	-545.94	1379.44	-24.15	-1219.80	-225.37	7571.16

Combination No. 161
Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	454.79	1352.81	-55.15	-1829.63	194.45	-5504.25
3	4	-536.17	1373.43	-28.08	-1465.57	-271.01	7331.50

Combination No. 162
Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	479.14	1364.37	-58.89	-1938.48	200.89	-6013.41
3	4	-516.38	1361.87	-29.05	-1537.67	-285.16	6858.61

Combination No. 163
Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	493.90	1370.34	-61.01	-2046.23	218.60	-6308.21
3	4	-506.44	1355.90	-32.53	-1663.45	-299.08	6602.35

Combination No. 164
Group id: STR GP 3 Name: STRENGTH GROUP III

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.46	2097.14	36.94	2072.21	-211.10	-11359.21
3	4	-805.24	2228.70	35.09	2037.60	221.91	10204.46

Combination No. 165
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.46	2097.14	36.94	2072.21	-211.10	-11359.21
3	4	-805.24	2228.70	35.09	2037.60	221.91	10204.46

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-818.54	2171.57	35.09	2037.89	221.64	10526.04

Combination No. 172

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.52	2296.53	36.96	2071.21	-212.02	-10866.46
3	4	-805.30	2029.30	35.07	2038.61	220.99	10698.94

Combination No. 173

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.83	2165.35	37.68	1841.01	-221.37	-10527.44
3	4	-772.90	2003.03	35.53	1821.01	218.74	10098.44

Combination No. 174

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	811.32	2182.09	37.40	2411.22	-208.41	-10614.52
3	4	-779.39	2013.92	35.81	2362.76	231.70	10198.72

Combination No. 175

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.77	2204.11	36.73	2376.39	-201.40	-10465.08
3	4	-773.54	1982.78	35.30	2320.46	231.61	10183.63

Combination No. 176

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.62	2186.10	37.16	1809.43	-221.13	-10387.14
3	4	-767.40	1973.70	34.88	1796.85	211.88	10084.27

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.47	2238.78	30.43	1709.20	-173.31	-10350.85
3	4	-765.98	1956.82	28.64	1678.86	181.59	10126.58

Combination No. 177

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.47	2238.78	30.43	1709.20	-173.31	-10350.85
3	4	-765.98	1956.82	28.64	1678.86	181.59	10126.58

Combination No. 178

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	778.37	2159.94	30.19	1951.82	-162.01	-10076.22
3	4	-742.88	1926.70	28.88	1896.66	192.89	9734.62

Combination No. 179

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.43	2027.06	30.41	1710.28	-172.33	-10858.92
3	4	-765.94	2168.54	28.66	1677.79	182.57	9617.30

Combination No. 180

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.43	2027.06	30.41	1710.28	-172.33	-10858.92
3	4	-765.94	2168.54	28.66	1677.79	182.57	9617.30

Combination No. 181

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	778.37	1996.94	30.66	1928.08	-183.63	-10467.66
3	4	-742.88	2089.70	28.42	1920.40	171.27	9343.03

Combination No. 182

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.94	2094.59	37.04	2360.49	-215.87	-10891.89
3	4	-783.72	2092.31	34.99	2336.36	217.13	10050.44

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.22	2082.95	36.86	1824.40	-207.50	-10789.89
3	4	-777.00	2076.85	35.17	1781.87	225.51	9958.48

Combination No. 183

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 183

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.07	2137.03	36.87	1991.79	-207.91	-11209.99
3	4	-805.84	2133.46	35.16	1950.18	225.09	10371.07

Combination No. 184

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 184

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	744.38	1945.85	21.11	1312.37	-124.66	-9932.74
3	4	-704.13	1994.95	19.11	1302.12	116.63	8828.09

Combination No. 185

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 185

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	756.53	1960.19	20.92	1183.65	-116.10	-10147.80
3	4	-716.29	2046.00	19.30	1154.59	125.19	8963.91

Combination No. 186

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 186

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.72	2201.98	36.92	1989.06	-210.40	-11024.21
3	4	-805.50	2068.51	35.11	1952.91	222.60	10546.84

Combination No. 187

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 187

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.28	2060.66	37.06	2280.03	-216.80	-10995.73

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.49	2158.50	37.04	1899.42	-215.60	-10879.42
3	4	-792.27	2056.65	35.00	1874.70	217.40	10309.77

Combination No. 188

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 188

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.49	2158.50	37.04	1899.42	-215.60	-10879.42
3	4	-792.27	2056.65	35.00	1874.70	217.40	10309.77

Combination No. 189

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 189

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.18	2295.56	36.92	2128.59	-210.02	-10862.20
3	4	-804.96	2028.82	35.12	2091.61	222.99	10693.40

Combination No. 190

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 190

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.93	2229.31	37.04	1899.06	-215.93	-10502.25
3	4	-777.71	1985.83	34.99	1875.06	217.08	10266.70

Combination No. 191

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 191

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.39	2128.51	36.94	2206.53	-211.39	-11249.70
3	4	-806.17	2150.04	35.09	2172.55	221.62	10340.77

Combination No. 192

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 192

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	827.37	2124.28	37.06	2280.22	-216.63	-11036.72
3	4	-795.15	2108.44	34.97	2257.75	216.38	10235.54

Units: US (English)

Design Code: AASHTO LRFD

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.22	2237.96	30.39	1754.82	-171.18	-10347.93
3	4	-765.73	1956.51	28.68	1719.81	183.72	10122.36

Combination No. 199
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	850.11	2234.81	36.95	2071.52	-211.73	-11191.49
3	4	-817.89	2091.02	35.08	2038.30	221.27	10737.20

Combination No. 200
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	848.47	2116.96	41.07	2217.01	-225.08	-11516.02
3	4	-820.89	2273.26	37.03	2153.14	241.89	10429.21

Combination No. 201
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.28	2101.10	41.57	1998.07	-224.18	-10845.56
3	4	-785.99	2131.67	37.71	1924.29	249.89	10087.99

Combination No. 202
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.68	2112.64	41.79	2543.00	-234.24	-10943.27
3	4	-792.39	2147.75	37.49	2491.32	239.83	10175.23

Combination No. 203
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.09	2245.54	41.08	2216.37	-225.67	-11400.45

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	756.63	2119.76	20.94	1182.83	-116.84	-9801.82
3	4	-716.39	1886.43	19.28	1155.41	124.45	9312.86

Combination No. 193
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	742.08	2058.76	21.10	1056.29	-124.18	-9639.32
3	4	-701.84	1869.29	19.12	1044.99	117.11	9055.31

Combination No. 194
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	839.82	2197.87	36.87	2210.49	-207.78	-11079.62
3	4	-807.59	2080.68	35.16	2168.59	225.23	10551.96

Combination No. 195
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.46	2156.61	36.87	2369.45	-207.71	-10715.10
3	4	-783.24	2030.29	35.17	2327.39	225.30	10213.37

Combination No. 196
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.66	2141.35	37.03	1815.96	-215.19	-10621.77
3	4	-776.44	2018.45	35.00	1790.32	217.82	10110.43

Combination No. 197
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.66	2141.35	37.03	1815.96	-215.19	-10621.77
3	4	-776.44	2018.45	35.00	1790.32	217.82	10110.43

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-835.50	2144.68	37.01	2153.79	241.30	10966.76

Combination No. 204

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.76	2070.43	41.30	2498.87	-235.70	-11001.72
3	4	-789.18	2180.85	36.80	2458.33	231.27	10028.21

Combination No. 205

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.54	2061.36	40.88	1975.25	-215.97	-10900.59
3	4	-782.95	2162.82	37.22	1891.37	251.00	9949.57

Combination No. 206

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	861.77	2174.08	41.08	2216.72	-225.35	-11578.40
3	4	-834.19	2216.13	37.02	2153.43	241.63	10750.79

Combination No. 207

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	848.53	2316.35	41.09	2216.01	-226.00	-11023.27
3	4	-820.95	2073.86	37.01	2154.15	240.97	10923.69

Combination No. 208

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.84	2185.17	41.81	1985.81	-235.35	-10684.26
3	4	-788.55	2047.59	37.47	1936.55	238.73	10233.19

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.33	2201.91	41.53	2556.02	-272.39	-10771.34
3	4	-795.04	2058.48	37.75	2478.30	251.68	10423.47

Combination No. 209

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.78	2223.94	40.86	2521.19	-215.38	-10621.90
3	4	-789.19	2027.34	37.24	2436.00	251.60	10408.38

Combination No. 210

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.63	2205.92	41.29	1954.23	-235.11	-10543.96
3	4	-783.05	2018.26	36.81	1912.39	231.86	10309.01

Combination No. 211

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	812.48	2258.61	34.57	1854.00	-187.29	-10507.66
3	4	-781.62	2001.38	30.57	1794.40	201.58	10351.33

Combination No. 212

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	789.38	2179.76	34.32	2096.62	-175.99	-10233.04
3	4	-758.53	1971.26	30.82	2012.20	212.87	9959.37

Combination No. 213

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.84	2185.17	41.81	1985.81	-235.35	-10684.26
3	4	-788.55	2047.59	37.47	1936.55	238.73	10233.19

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	812.43	2046.88	34.55	1855.08	-186.31	-11015.74
3	4	-781.58	2213.10	30.59	1793.33	202.55	9842.05

Combination No. 215

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 216

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	789.38	2016.76	34.79	2072.88	-197.61	-10624.48
3	4	-758.52	2134.26	30.35	2035.95	191.26	9567.78

Combination No. 217

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	826.95	2114.41	41.17	2505.29	-229.85	-11048.71
3	4	-799.36	2136.87	36.92	2451.90	237.12	10275.18

Combination No. 218

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.23	2102.77	40.99	1969.20	-221.48	-10946.70
3	4	-792.64	2121.41	37.11	1897.42	245.49	10183.23

Combination No. 219

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	849.08	2156.85	41.00	2136.59	-221.89	-11366.81
3	4	-821.49	2178.02	37.10	2065.72	245.08	10595.82

Combination No. 220

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	755.38	1965.67	25.24	1457.17	-138.64	-10089.56



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	767.54	1980.01	25.06	1328.45	-130.08	-10304.61
3	4	-731.93	2090.56	21.23	1270.14	145.17	9188.65

Combination No. 221

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 222

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	848.73	2221.80	41.06	2133.86	-224.38	-11181.03
3	4	-821.14	2113.07	37.04	2068.45	242.59	10771.59

Combination No. 223

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.29	2080.48	41.19	2424.83	-230.78	-11152.55
3	4	-797.70	2216.63	36.90	2373.48	236.19	10123.43

Combination No. 224

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.50	2178.32	41.17	2044.22	-229.58	-11036.24
3	4	-807.91	2101.21	36.93	1990.24	237.39	10534.52



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-822.42	2274.34	39.60	2293.19	265.97	10464.82

Combination No. 236

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	811.50	2100.01	46.45	2169.23	-241.63	-10808.12
3	4	-787.53	2132.75	40.28	2064.33	273.97	10123.60

Combination No. 237

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.91	2111.55	46.66	2174.16	-251.69	-10905.83
3	4	-793.93	2148.84	40.06	2631.36	263.91	10210.84

Combination No. 238

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	861.32	2244.46	45.96	2387.53	-243.12	-11363.01
3	4	-837.04	2145.76	39.59	2293.84	265.38	11002.37

Combination No. 239

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.99	2069.34	46.18	2670.03	-253.15	-10964.28
3	4	-790.72	2181.93	39.37	2598.37	255.35	10063.81

Combination No. 240

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.76	2060.28	45.75	2146.41	-233.42	-10863.15
3	4	-784.49	2163.91	39.80	2031.41	275.08	9985.18

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	860.00	2173.00	45.95	2387.89	-242.79	-11540.96
3	4	-835.73	2217.22	39.60	2293.48	265.71	10786.40

Combination No. 241

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.76	2315.27	45.97	2387.17	-243.45	-10985.83
3	4	-822.48	2074.94	39.58	2294.20	265.05	10959.30

Combination No. 242

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.06	2184.09	46.69	2156.97	-252.79	-10646.82
3	4	-790.08	2048.67	40.04	2076.59	262.81	10358.79

Combination No. 243

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.55	2200.83	46.41	2727.18	-239.84	-10733.90
3	4	-796.58	2059.56	40.32	2618.34	275.76	10459.08

Combination No. 244

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.00	2222.85	45.74	2692.35	-232.83	-10584.46
3	4	-790.73	2028.42	39.81	2576.05	275.68	10443.98

Combination No. 245

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.00	2222.85	45.74	2692.35	-232.83	-10584.46
3	4	-790.73	2028.42	39.81	2576.05	275.68	10443.98

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.86	2204.84	46.16	2125.39	-252.56	-10506.52
3	4	-784.59	2019.34	39.38	2052.43	255.94	10344.62

Combination No. 247

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.70	2257.52	39.44	2025.17	-204.74	-10470.22
3	4	-783.16	2002.46	33.15	1934.44	225.66	10386.94

Combination No. 248

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	787.61	2178.67	39.20	2267.78	-193.44	-10195.60
3	4	-760.07	1972.34	33.39	2152.25	236.96	9994.98

Combination No. 249

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.66	2045.80	39.42	2026.24	-203.76	-10978.30
3	4	-783.12	2214.19	33.17	1933.37	226.63	9877.66

Combination No. 250

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	787.61	2015.68	39.67	2244.04	-215.06	-10587.04
3	4	-760.06	2135.34	32.92	2175.99	215.34	9603.39

Combination No. 251

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.18	2113.33	46.05	2676.45	-247.30	-11011.27

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	818.46	2101.69	45.87	2140.36	-238.93	-10909.26
3	4	-794.18	2122.50	39.68	2037.46	269.57	10218.84

Combination No. 252

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	818.46	2101.69	45.87	2140.36	-238.93	-10909.26
3	4	-794.18	2122.50	39.68	2037.46	269.57	10218.84

Combination No. 253

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	847.30	2155.77	45.88	2307.75	-239.34	-11329.37
3	4	-823.03	2179.10	39.67	2205.76	269.16	10631.43

Combination No. 254

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	753.61	1964.59	30.12	1628.33	-156.09	-10052.12
3	4	-721.31	2040.60	23.62	1557.71	160.70	9088.45

Combination No. 255

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.77	1978.93	29.93	1495.61	-147.53	-10267.17
3	4	-733.47	2091.64	23.81	1410.18	169.25	9224.26

Combination No. 256

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.96	2220.72	45.93	2305.02	-241.83	-11143.59
3	4	-822.68	2114.15	39.62	2208.50	266.67	10807.20

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: PIER 12 Straddle.rcp

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.52	2079.39	46.07	2595.99	-248.23	-11115.11
3	4	-799.24	2217.71	39.48	2513.52	260.27	10159.04

Combination No. 257

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.73	2177.24	46.04	2215.38	-247.03	-10998.80
3	4	-809.45	2102.29	39.50	2130.28	261.47	10570.13

Combination No. 258

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.42	2314.30	45.92	2444.55	-241.45	-10981.58
3	4	-822.14	2074.46	39.62	2347.19	267.05	10953.76

Combination No. 259

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.17	2248.05	46.05	2525.02	-247.36	-10621.63
3	4	-794.89	2031.48	39.50	2130.64	261.14	10527.05

Combination No. 260

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.70	2175.35	45.87	2685.42	-239.14	-10834.48
3	4	-800.42	2075.93	39.67	2582.98	269.36	10473.73

Combination No. 261

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	849.05	2216.61	45.88	2526.46	-239.21	-11199.00
3	4	-824.78	2126.32	39.67	2424.17	269.29	10812.32

Combination No. 262

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	836.61	2143.02	46.07	2596.18	-248.06	-11156.10
3	4	-812.33	2154.08	39.48	2513.33	260.44	10495.90

Combination No. 263

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.87	2138.50	29.95	1498.80	-148.27	-9921.20
3	4	-733.57	1932.07	23.79	1410.99	168.51	9573.22

Combination No. 264

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	751.32	2077.50	30.11	1372.25	-155.61	-9758.70
3	4	-719.02	1914.94	23.63	1300.58	161.17	9315.67

Combination No. 265

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	849.05	2216.61	45.88	2526.46	-239.21	-11199.00
3	4	-824.78	2126.32	39.67	2424.17	269.29	10812.32

Combination No. 266

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.70	2175.35	45.87	2685.42	-239.14	-10834.48
3	4	-800.42	2075.93	39.67	2582.98	269.36	10473.73

Combination No. 267

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.90	2160.09	46.04	2131.92	-246.62	-10741.15

Sheet # 63
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: PIER 12 Straddle.rcp

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.52	2079.39	46.07	2595.99	-248.23	-11115.11
3	4	-799.24	2217.71	39.48	2513.52	260.27	10159.04

Combination No. 257

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.73	2177.24	46.04	2215.38	-247.03	-10998.80
3	4	-809.45	2102.29	39.50	2130.28	261.47	10570.13

Combination No. 258

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.42	2314.30	45.92	2444.55	-241.45	-10981.58
3	4	-822.14	2074.46	39.62	2347.19	267.05	10953.76

Combination No. 259

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.17	2248.05	46.05	2525.02	-247.36	-10621.63
3	4	-794.89	2031.48	39.50	2130.64	261.14	10527.05

Combination No. 260

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.70	2175.35	45.87	2685.42	-239.14	-10834.48
3	4	-800.42	2075.93	39.67	2582.98	269.36	10473.73

Combination No. 261

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	849.05	2216.61	45.88	2526.46	-239.21	-11199.00
3	4	-824.78	2126.32	39.67	2424.17	269.29	10812.32

Combination No. 262

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	836.61	2143.02	46.07	2596.18	-248.06	-11156.10
3	4	-812.33	2154.08	39.48	2513.33	260.44	10495.90

Combination No. 263

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.87	2138.50	29.95	1498.80	-148.27	-9921.20
3	4	-733.57	1932.07	23.79	1410.99	168.51	9573.22

Combination No. 264

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	751.32	2077.50	30.11	1372.25	-155.61	-9758.70
3	4	-719.02	1914.94	23.63	1300.58	161.17	9315.67

Combination No. 265

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	849.05	2216.61	45.88	2526.46	-239.21	-11199.00
3	4	-824.78	2126.32	39.67	2424.17	269.29	10812.32

Combination No. 266

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.70	2175.35	45.87	2685.42	-239.14	-10834.48
3	4	-800.42	2075.93	39.67	2582.98	269.36	10473.73

Combination No. 267

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.90	2160.09	46.04	2131.92	-246.62	-10741.15

Sheet # 64
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: PIER 12 Straddle.rcp

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	836.61	2143.02	46.07	2596.18	-248.06	-11156.10
3	4	-812.33	2154.08	39.48	2513.33	260.44	10495.90

Combination No. 263

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.87	2138.50	29.95	1498.80	-148.27	-9921.20
3	4	-733.57	1932.07	23.79	1410.99	168.51	9573.22

Combination No. 264

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	751.32	2077.50	30.11	1372.25	-155.61	-9758.70
3	4	-719.02	1914.94	23.63	1300.58	161.17	9315.67

Combination No. 265

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	849.05	2216.61	45.88	2526.46	-239.21	-11199.00
3	4	-824.78	2126.32	39.67	2424.17	269.29	10812.32

Combination No. 266

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.70	2175.35	45.87	2685.42	-239.14	-10834.48
3	4	-800.42	2075.93	39.67	2582.98	269.36	10473.73

Combination No. 267

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.90	2160.09	46.04	2131.92	-246.62	-10741.15

		Sheet #	65
		Job #	59219
Program: LEAP® RC-PIER® V8i (SELECTseries 5) Version: 12.01.00.57		Designed CAM	9/10/14
		Checked	
File Name: Pier 12 Straddle.rcp		Date	
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-793.62	2064.09	39.51	2045.90	261.89	10370.79

Combination No. 268

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.46	2256.70	39.40	2070.79	-202.61	-10467.31
3	4	-782.91	2002.15	33.19	1975.40	227.78	10382.72

Combination No. 269

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	859.35	2253.55	45.96	2387.48	-243.16	-11310.87
3	4	-835.07	2136.66	39.59	2293.88	265.34	10997.56

Combination No. 270

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	841.87	2113.31	49.10	2493.17	-252.03	-11377.83
3	4	-826.37	2276.91	40.97	2374.24	280.55	10558.57

Combination No. 271

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.67	2097.45	49.60	2274.22	-251.13	-10707.36
3	4	-791.47	2135.32	41.66	2145.39	288.54	10217.35

Combination No. 272

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.08	2108.99	49.82	2819.15	-261.19	-10805.07
3	4	-797.88	2151.40	41.44	2712.41	278.48	10304.59

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	66
		Job #	59219
Program: LEAP® RC-PIER® V8i (SELECTseries 5) Version: 12.01.00.57		Designed CAM	9/10/14
		Checked	
File Name: Pier 12 Straddle.rcp		Date	
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Combination No. 273

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	856.49	2241.89	49.12	2492.52	-252.62	-11262.25
3	4	-840.99	2148.33	40.96	2374.89	279.95	11096.12

Combination No. 274

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.16	2066.78	49.33	2775.02	-262.65	-10863.52
3	4	-794.66	2184.50	40.75	2679.42	269.92	10157.56

Combination No. 275

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	803.93	2057.71	48.91	2251.41	-242.92	-10762.39
3	4	-788.43	2166.47	41.17	2112.46	289.66	10078.92

Combination No. 276

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	855.17	2170.43	49.11	2492.88	-252.29	-11440.20
3	4	-839.67	2219.78	40.97	2374.53	280.28	10880.15

Combination No. 277

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	841.93	2312.70	49.12	2492.16	-252.95	-10885.07
3	4	-826.43	2077.51	40.96	2375.25	279.63	11053.05

Combination No. 278

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.23	2181.52	49.84	2832.17	-249.34	-10546.06
3	4	-794.03	2051.24	41.41	2157.65	277.38	10452.54

Combination No. 279

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.72	2198.26	49.56	2832.17	-249.34	-10633.14
3	4	-800.52	2062.13	41.69	2699.40	290.34	10552.82

Combination No. 280

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.17	2220.28	48.89	2797.34	-242.33	-10483.70
3	4	-794.67	2030.99	41.18	2657.10	290.25	10537.73

Combination No. 281

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.03	2202.27	49.32	2230.38	-262.06	-10405.76
3	4	-788.53	2021.91	40.76	2133.49	270.52	10438.37

Combination No. 282

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.87	2254.96	42.60	2130.16	-214.24	-10369.46
3	4	-787.11	2005.03	34.52	2015.50	240.23	10480.69

Combination No. 283

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	782.78	2176.11	42.35	2372.78	-202.94	-10094.84

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-764.01	1974.91	34.76	2233.30	251.53	10088.73

Combination No. 284

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.83	2043.23	42.88	2131.23	-213.26	-10877.54
3	4	-787.06	2216.75	34.54	2014.42	241.21	9971.40

Combination No. 285

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	782.77	2013.11	42.82	2349.03	-224.56	-10486.28
3	4	-764.01	2137.91	34.30	2257.04	229.91	9697.14

Combination No. 286

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.34	2110.76	49.21	2781.44	-256.80	-10910.51
3	4	-804.85	2140.52	40.87	2673.00	275.77	10404.54

Combination No. 287

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.62	2099.12	49.03	2245.35	-248.43	-10808.50
3	4	-798.13	2125.06	41.05	2118.51	284.15	10312.58

Combination No. 288

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.47	2153.20	49.03	2412.75	-248.84	-11228.61
3	4	-826.97	2181.67	41.04	2286.82	283.73	10725.18

Units: US (English)

Design Code: AASHTO LRFD



Program: LEAP® RC-PIER® V8i (SELECTseries 5)

Version: 12.01.00.57

File Name: **Pier 12 Straddle.rcp**

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Combination No. 289

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	748.78	1962.02	33.27	1733.33	-165.59	-9951.36
3	4	-725.26	2043.16	25.00	1638.76	175.27	9182.20

Combination No. 290

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	760.94	1976.36	33.09	1604.60	-157.03	-10166.41
3	4	-737.42	2094.21	25.18	1491.23	183.83	9318.01

Combination No. 291

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.12	2218.15	49.09	2410.01	-251.33	-11042.83
3	4	-826.63	2116.72	40.99	2289.55	281.24	10900.95

Combination No. 292

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	818.68	2076.83	49.23	2700.98	-257.73	-11014.35
3	4	-803.19	2220.28	40.85	2594.57	274.85	10252.78

Combination No. 293

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.90	2174.67	49.20	2320.38	-256.53	-10898.04
3	4	-813.40	2104.86	40.88	2211.34	276.04	10663.87

Combination No. 294

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	746.49	2074.93	33.26	1477.24	-165.11	-9657.94
3	4	-737.52	1934.64	25.16	1492.05	183.09	9666.97

Units: US (English)

Design Code: AASHTO LRFD



Program: LEAP® RC-PIER® V8i (SELECTseries 5)

Version: 12.01.00.57

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Combination No. 295

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	841.59	2311.73	49.08	2320.02	-256.86	-10880.82
3	4	-826.09	2077.03	41.00	2428.25	281.62	11047.50

Combination No. 296

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.34	2245.48	49.21	2320.02	-256.86	-10880.82
3	4	-798.84	2034.04	40.87	2211.70	275.72	10620.80

Combination No. 297

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.80	2144.68	49.11	2627.49	-252.31	-11268.32
3	4	-827.30	2198.25	40.97	2509.18	280.26	10694.88

Combination No. 298

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.77	2140.45	49.22	2701.17	-257.56	-11055.34
3	4	-816.28	2156.65	40.86	2594.39	275.02	10589.65

Combination No. 299

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	761.04	2135.93	33.10	1603.79	-157.77	-9820.44
3	4	-737.52	1934.64	25.16	1492.05	183.09	9666.97

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-722.97	1917.50	25.01	1381.63	175.75	9409.42

Combination No. 300

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	844.22	2214.04	49.03	2631.45	-248.71	-11098.24
3	4	-828.72	2128.89	41.05	2505.22	283.87	10906.06

Combination No. 301

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.86	2172.78	49.03	2790.41	-248.64	-10733.72
3	4	-804.37	2078.50	41.05	2664.03	283.94	10567.48

Combination No. 302

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.06	2157.52	49.19	2236.91	-256.12	-10640.39
3	4	-797.57	2066.66	40.89	2126.96	276.46	10464.53

Combination No. 303

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.62	2254.13	42.55	2175.78	-212.11	-10366.55
3	4	-786.86	2004.72	34.57	2056.45	242.36	10476.46

Combination No. 304

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	854.51	2250.99	49.12	2492.47	-252.66	-11210.11
3	4	-839.02	2139.23	40.96	2374.94	279.91	11091.30

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.78	2108.42	50.04	2518.57	-253.08	-11185.52
3	4	-834.17	2281.79	41.12	2389.20	283.78	10740.68

Combination No. 305

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	797.58	2092.56	50.53	2299.62	-252.19	-10515.06
3	4	-799.27	2140.20	41.80	2160.34	291.78	10399.46

Combination No. 306

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	803.99	2104.10	50.75	2844.55	-262.25	-10612.77
3	4	-805.68	2156.29	41.58	2727.37	281.72	10486.70

Combination No. 307

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	847.40	2237.00	50.05	2517.92	-253.68	-11069.94
3	4	-848.79	2153.21	41.11	2389.85	283.19	11278.23

Combination No. 308

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.07	2061.89	50.27	2800.42	-263.71	-10671.21
3	4	-802.46	2189.38	40.89	2694.38	273.16	10339.67

Combination No. 309

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.07	2061.89	50.27	2800.42	-263.71	-10671.21
3	4	-802.46	2189.38	40.89	2694.38	273.16	10339.67

Combination No. 310

Group Id: STR GP 5 Name: STRENGTH GROUP V

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File Name: **Pier 12_ Straddle.rcp**

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.84	2052.82	49.84	2276.80	-243.97	-10570.09
3	4	-796.23	2171.36	41.32	2127.42	292.89	10261.04

Combination No. 310
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 311

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.08	2165.55	50.04	2518.28	-263.35	-11247.89
3	4	-847.47	2224.67	41.11	2389.49	283.51	11062.26

Combination No. 312
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 313

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.84	2307.82	50.06	2517.56	-254.00	-10692.77
3	4	-834.23	2082.40	41.10	2390.20	282.86	11235.16

Combination No. 314
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 315

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	800.14	2176.64	50.78	2287.36	-263.35	-10353.75
3	4	-801.83	2056.12	41.56	2172.60	280.62	10634.65

Combination No. 316
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 317

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.63	2193.38	50.50	2857.57	-250.39	-10440.83
3	4	-808.32	2067.01	41.84	2714.35	293.57	10734.93

Combination No. 318
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 319

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.74	2038.35	43.51	2156.63	-214.32	-10685.24
3	4	-794.86	2221.64	34.69	2029.38	244.44	10153.52

Combination No. 320
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 321

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	773.68	2008.22	43.75	2374.43	-225.61	-10293.97
3	4	-771.81	2142.79	34.44	2272.00	233.14	9879.25

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.94	2197.39	50.25	2255.78	-263.12	-10213.46
3	4	-796.33	2026.79	40.90	2148.44	273.75	10620.48

Combination No. 316
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 316

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.94	2197.39	50.25	2255.78	-263.12	-10213.46
3	4	-796.33	2026.79	40.90	2148.44	273.75	10620.48

Combination No. 317
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 318

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.78	2250.07	43.53	2155.56	-215.29	-10177.16
3	4	-794.91	2009.92	34.67	2030.45	243.46	10662.80

Combination No. 319
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 319

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	773.69	2171.22	43.29	2398.18	-203.99	-9902.54
3	4	-771.81	1979.79	34.91	2248.25	254.76	10270.84

Combination No. 320
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 320

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.74	2038.35	43.51	2156.63	-214.32	-10685.24
3	4	-794.86	2221.64	34.69	2029.38	244.44	10153.52

Combination No. 321
Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 321

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	773.68	2008.22	43.75	2374.43	-225.61	-10293.97
3	4	-771.81	2142.79	34.44	2272.00	233.14	9879.25

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 321
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	811.25	2105.88	50.14	2806.84	-257.86	-10718.20
3	4	-812.65	2145.40	41.02	2687.95	279.01	10586.65

Combination No. 322
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.53	2094.23	49.96	2270.75	-249.48	-10616.20
3	4	-805.93	2129.95	41.20	2133.47	287.38	10494.70

Combination No. 323
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.38	2148.32	49.97	2438.15	-249.90	-11036.31
3	4	-834.77	2186.55	41.19	2301.77	286.97	10907.29

Combination No. 324
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	739.69	1957.14	34.21	1758.73	-166.64	-9759.05
3	4	-733.06	2048.05	25.14	1653.72	178.50	9364.31

Combination No. 325
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.25	2240.60	50.14	2345.42	-257.91	-10328.56
3	4	-806.64	2038.93	41.02	2226.65	278.95	10802.91

Combination No. 326
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.50	2306.85	50.01	2574.94	-252.01	-10688.52
3	4	-833.89	2081.91	41.14	2443.20	284.86	11229.62

Combination No. 327
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.03	2213.26	50.02	2726.38	-258.78	-10822.04
3	4	-834.43	2121.60	41.14	2609.53	278.08	10434.90

Combination No. 328
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.59	2071.94	50.16	2726.38	-258.78	-10822.04
3	4	-810.99	2225.16	41.00	2609.53	278.08	10434.90

Combination No. 329
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.80	2169.79	50.13	2345.78	-257.59	-10705.73
3	4	-821.20	2109.74	41.02	2226.29	279.28	10845.98

Combination No. 330
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.50	2306.85	50.01	2574.94	-252.01	-10688.52
3	4	-833.89	2081.91	41.14	2443.20	284.86	11229.62



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Combination No. 321
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	811.25	2105.88	50.14	2806.84	-257.86	-10718.20
3	4	-812.65	2145.40	41.02	2687.95	279.01	10586.65

Combination No. 322
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.53	2094.23	49.96	2270.75	-249.48	-10616.20
3	4	-805.93	2129.95	41.20	2133.47	287.38	10494.70

Combination No. 323
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.38	2148.32	49.97	2438.15	-249.90	-11036.31
3	4	-834.77	2186.55	41.19	2301.77	286.97	10907.29

Combination No. 324
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	739.69	1957.14	34.21	1758.73	-166.64	-9759.05
3	4	-733.06	2048.05	25.14	1653.72	178.50	9364.31

Combination No. 325
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.25	2240.60	50.14	2345.42	-257.91	-10328.56
3	4	-806.64	2038.93	41.02	2226.65	278.95	10802.91

Combination No. 326
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.50	2306.85	50.01	2574.94	-252.01	-10688.52
3	4	-833.89	2081.91	41.14	2443.20	284.86	11229.62

Combination No. 327
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.03	2213.26	50.02	2726.38	-258.78	-10822.04
3	4	-834.43	2121.60	41.14	2609.53	278.08	10434.90

Combination No. 328
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.59	2071.94	50.16	2726.38	-258.78	-10822.04
3	4	-810.99	2225.16	41.00	2609.53	278.08	10434.90

Combination No. 329
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.80	2169.79	50.13	2345.78	-257.59	-10705.73
3	4	-821.20	2109.74	41.02	2226.29	279.28	10845.98

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-835.10	2203.14	41.11	2524.14	283.49	10876.99

Combination No. 332
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.68	2135.57	50.16	2726.57	-258.61	-10863.04
3	4	-824.08	2161.53	41.00	2609.34	278.25	10771.76

Combination No. 333
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	751.95	2131.05	34.04	1629.19	-158.82	-9628.13
3	4	-745.32	1939.52	25.31	1507.00	186.32	9849.08

Combination No. 334
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	737.40	2070.05	34.20	1502.64	-166.17	-9465.64
3	4	-730.77	1922.39	25.15	1396.59	178.98	9591.53

Combination No. 335
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.13	2209.16	49.97	2656.85	-249.76	-10905.94
3	4	-836.52	2133.77	41.19	2520.18	287.10	11088.18

Combination No. 336
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.77	2167.89	49.96	2815.81	-249.69	-10541.41
3	4	-812.17	2083.38	41.19	2678.99	287.17	10749.59

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		Date	

Combination No. 337
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	803.97	2152.64	50.12	2262.31	-257.17	-10448.08
3	4	-805.37	2071.54	41.03	2141.91	279.69	10646.64

Combination No. 338
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.53	2249.25	43.49	2201.18	-213.17	-10174.25
3	4	-794.66	2009.60	34.71	2071.41	245.59	10658.58

Combination No. 339
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	845.42	2246.10	50.05	2517.87	-253.72	-11071.81
3	4	-846.82	2144.11	41.11	2389.89	283.15	11273.42

Combination No. 340
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	827.22	2105.73	50.58	2546.48	-257.75	-11071.93
3	4	-838.36	2284.48	42.05	2422.29	287.35	10843.37

Combination No. 341
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	792.03	2089.87	51.07	2327.53	-256.85	-10401.47
3	4	-803.46	2142.90	42.73	2193.43	295.35	10502.14

Combination No. 342
Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English) Design Code: AASHTO LRFD



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Version: 12.01.00.57
File Name: **Pier 12_ Straddle.rcp**

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12.01.00.57
Pier 12_ Straddle.rcp

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	798.43	2101.41	51.29	2872.46	-266.91	-10499.18
3	4	-809.87	2158.98	42.51	2760.46	285.29	10589.38

Combination No. 343
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	841.84	2234.31	50.59	2545.83	-258.34	-10956.36
3	4	-852.98	2155.90	42.04	2422.93	286.76	11380.91

Combination No. 344
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	795.51	2059.20	50.81	2828.33	-268.37	-10557.63
3	4	-806.65	2192.08	41.82	2727.47	276.73	10442.36

Combination No. 345
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	789.29	2050.13	50.38	2304.71	-248.64	-10456.50
3	4	-800.42	2174.05	42.25	2160.51	296.46	10363.72

Combination No. 346
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	840.52	2162.85	50.58	2546.19	-258.02	-11134.31
3	4	-851.66	2227.36	42.04	2422.58	287.08	11164.94

Combination No. 347
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	827.28	2305.12	50.60	2545.47	-258.67	-10579.18

Units: US (English) Design Code: AASHTO LRFD

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Version: 12.01.00.57
File Name: **Pier 12_ Straddle.rcp**

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12.01.00.57
Pier 12_ Straddle.rcp

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	798.43	2101.41	51.29	2872.46	-266.91	-10499.18
3	4	-809.87	2158.98	42.51	2760.46	285.29	10589.38

Combination No. 343
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	841.84	2234.31	50.59	2545.83	-258.34	-10956.36
3	4	-852.98	2155.90	42.04	2422.93	286.76	11380.91

Combination No. 344
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	795.51	2059.20	50.81	2828.33	-268.37	-10557.63
3	4	-806.65	2192.08	41.82	2727.47	276.73	10442.36

Combination No. 345
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	789.29	2050.13	50.38	2304.71	-248.64	-10456.50
3	4	-800.42	2174.05	42.25	2160.51	296.46	10363.72

Combination No. 346
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	840.52	2162.85	50.58	2546.19	-258.02	-11134.31
3	4	-851.66	2227.36	42.04	2422.58	287.08	11164.94

Combination No. 347
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	827.28	2305.12	50.60	2545.47	-258.67	-10579.18

Units: US (English) Design Code: AASHTO LRFD

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	794.59	2173.95	51.31	2315.27	-268.02	-10240.17
3	4	-806.02	2058.82	42.49	2205.69	284.18	10737.34

Combination No. 348
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	801.08	2190.68	51.04	2885.48	-255.06	-10327.25
3	4	-812.51	2069.71	42.77	2747.44	297.14	10837.62

Combination No. 349
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	795.53	2212.71	50.37	2850.65	-248.05	-10177.81
3	4	-806.66	2038.57	42.26	2705.14	297.05	10822.53

Combination No. 350
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	789.38	2194.69	50.79	2283.69	-267.78	-10099.87
3	4	-800.52	2029.49	41.83	2181.53	277.32	10723.17

Combination No. 351
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	791.23	2247.38	44.07	2183.47	-219.96	-10063.57
3	4	-799.09	2012.61	35.60	2063.54	247.03	10765.48

Combination No. 352
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	791.23	2247.38	44.07	2183.47	-219.96	-10063.57
3	4	-799.09	2012.61	35.60	2063.54	247.03	10765.48

Units: US (English) Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	827.83	2145.62	50.51	2466.06	-254.56	-10922.72
3	4	-838.96	2189.25	42.12	2334.86	290.54	11009.97

Combination No. 359
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	734.13	1954.45	34.75	1786.64	-171.31	-9645.47
3	4	-737.25	2050.74	26.07	1686.80	182.07	9466.99

Combination No. 360
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	746.29	1968.78	34.56	1657.91	-162.75	-9860.52
3	4	-749.40	2101.79	26.26	1539.28	190.63	9602.81

Combination No. 361
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	827.48	2210.57	50.56	2463.32	-257.05	-10736.94
3	4	-838.61	2124.30	42.06	2337.60	288.05	11185.74

Combination No. 362
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.04	2069.25	50.70	2754.29	-263.45	-10708.46
3	4	-815.17	2227.86	41.93	2642.62	281.65	10537.58

Combination No. 363
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.25	2167.09	50.67	2373.69	-262.25	-10692.15

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.13	2168.53	43.83	2426.09	-208.66	-9788.95
3	4	-776.00	1982.49	35.84	2281.34	258.33	10373.52

Combination No. 353
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.18	2035.66	44.05	2184.54	-218.98	-10571.65
3	4	-799.05	2224.33	35.62	2062.47	248.01	10256.20

Combination No. 354
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.13	2005.53	44.29	2402.34	-230.28	-10180.39
3	4	-775.99	2145.49	35.37	2305.09	236.71	9981.93

Combination No. 355
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.70	2103.18	50.68	2834.75	-262.52	-10604.62
3	4	-816.83	2148.09	41.95	2721.04	282.58	10689.34

Combination No. 356
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	798.98	2091.54	50.50	2298.66	-254.15	-10502.61
3	4	-810.11	2132.64	42.13	2166.56	290.95	10597.38

Combination No. 357
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.25	2167.09	50.67	2373.69	-262.25	-10692.15

		Sheet #	83
		Job #	59219
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		Date	9/10/14
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		Phone: 1-800-778-4277	
File Name: Pier 12 Straddle.rcp		Checked	
		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-825.38	2112.43	41.95	2259.38	282.85	10948.67

Combination No. 364

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	826.94	2304.15	50.55	2602.85	-256.67	-10574.93
3	4	-838.08	2084.61	42.07	2476.29	288.43	11332.30

Combination No. 365

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.69	2237.90	50.68	2373.33	-262.58	-10214.98
3	4	-810.83	2041.62	41.95	2259.74	282.52	10905.60

Combination No. 366

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.15	2137.10	50.58	2680.80	-258.04	-10962.43
3	4	-839.29	2205.83	42.04	2557.23	287.06	10979.67

Combination No. 367

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.13	2132.87	50.70	2754.48	-263.28	-10749.45
3	4	-828.26	2164.23	41.93	2642.43	281.82	10874.44

Combination No. 368

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	746.39	2128.36	34.58	1657.10	-163.49	-9514.55
3	4	-749.51	1942.21	26.24	1540.09	189.89	9951.76

Units: US (English)

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		Sheet #	84
		Job #	59219
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		Date	9/10/14
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		Phone: 1-800-778-4277	
File Name: Pier 12 Straddle.rcp		Checked	
		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	731.84	2067.35	34.74	1530.55	-170.83	9352.05
3	4	-734.95	1925.08	26.08	1429.67	182.55	9694.21

Combination No. 369

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.58	2206.46	50.50	2684.76	-254.43	-10792.35
3	4	-840.71	2136.47	42.12	2553.27	290.67	11190.86

Combination No. 370

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.22	2165.20	50.50	2843.72	-254.36	-10427.83
3	4	-816.35	2086.07	42.12	2712.08	290.74	10852.27

Combination No. 371

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	798.42	2149.95	50.66	2290.22	-261.84	-10334.50
3	4	-809.55	2074.24	41.96	2175.00	283.26	10749.33

Combination No. 372

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.98	2246.55	44.03	2229.09	-217.83	-10060.66
3	4	-798.85	2012.30	35.64	2104.50	249.16	10761.26

Combination No. 373

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.98	2246.55	44.03	2229.09	-217.83	-10060.66
3	4	-798.85	2012.30	35.64	2104.50	249.16	10761.26

Combination No. 374

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

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Sheet # 86
Job # 59219

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File Name: Pier 12_Straddle.rcp

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	839.87	2243.41	50.59	2545.78	-258.38	-10904.22
3	4	-851.00	2146.81	42.04	2422.98	286.72	11376.10

Combination No. 375

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	852.57	2108.32	-23.57	-1309.61	148.13	-11690.65
3	4	-790.04	2217.51	-24.57	-1323.95	-143.13	9871.72

Combination No. 376

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	817.67	2092.68	-24.26	-1594.87	156.07	-11026.69
3	4	-754.85	2075.70	-25.06	-1618.72	-142.29	9523.98

Combination No. 377

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	824.08	2104.22	-24.04	-1049.94	146.01	-11124.40
3	4	-761.25	2091.79	-25.27	-1051.69	-152.35	9611.22

Combination No. 378

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	867.19	2236.90	-23.56	-1310.26	147.53	-11575.07
3	4	-804.66	2088.93	-24.58	-1323.30	-143.72	10409.27

Combination No. 379

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	820.86	2061.79	-23.34	-1027.76	137.50	-11176.35

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	839.87	2243.41	50.59	2545.78	-258.38	-10904.22
3	4	-851.00	2146.81	42.04	2422.98	286.72	11376.10

Combination No. 375

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	852.57	2108.32	-23.57	-1309.61	148.13	-11690.65
3	4	-790.04	2217.51	-24.57	-1323.95	-143.13	9871.72

Combination No. 376

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	817.67	2092.68	-24.26	-1594.87	156.07	-11026.69
3	4	-754.85	2075.70	-25.06	-1618.72	-142.29	9523.98

Combination No. 377

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	824.08	2104.22	-24.04	-1049.94	146.01	-11124.40
3	4	-761.25	2091.79	-25.27	-1051.69	-152.35	9611.22

Combination No. 378

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	867.19	2236.90	-23.56	-1310.26	147.53	-11575.07
3	4	-804.66	2088.93	-24.58	-1323.30	-143.72	10409.27

Combination No. 379

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	820.86	2061.79	-23.34	-1027.76	137.50	-11176.35

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	814.63	2052.72	-23.77	-1551.37	157.24	-11075.22
3	4	-752.11	2107.08	-24.37	-1585.73	-134.02	9392.08

Combination No. 380

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	865.87	2165.44	-23.56	-1309.90	147.86	-11753.02
3	4	-803.35	2160.39	-24.57	-1323.66	-143.40	10193.30

Combination No. 381

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	852.63	2307.72	-23.55	-1310.62	147.21	-11197.90
3	4	-790.10	2018.12	-24.59	-1322.94	-144.05	10366.20

Combination No. 382

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	820.23	2176.76	-24.02	-1607.13	144.90	-10865.38
3	4	-757.41	1991.63	-25.30	-1606.46	-153.45	9759.17

Combination No. 383

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	826.72	2193.49	-24.30	-1036.92	157.86	-10952.46
3	4	-763.90	2002.51	-25.02	-1064.71	-140.50	9859.45

Combination No. 384

Group id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

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Units: US (English)



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 385

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.87	2215.30	-23.78	-1005.43	157.83	-10796.52
3	4	-758.35	1971.59	-24.36	-1041.09	-133.43	9850.88

Combination No. 386

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.73	2197.29	-23.35	-1572.40	138.10	-10718.59
3	4	-752.20	1962.51	-24.78	-1564.70	-153.16	9751.52

Combination No. 387

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.32	2247.56	-17.02	-943.21	108.44	-10610.80
3	4	-754.06	1948.05	-18.15	-957.65	-104.71	9865.61

Combination No. 388

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.22	2168.71	-17.27	-700.59	119.74	-10336.18
3	4	-730.96	1917.93	-17.91	-739.85	-93.41	9473.65

Combination No. 389

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.27	2035.84	-17.05	-942.13	109.42	-11118.88
3	4	-754.02	2159.77	-18.13	-958.72	-103.74	9356.33

Combination No. 390

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	763.64	1965.46	-7.55	-407.80	52.95	-10303.77



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Combination No. 391

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.22	2005.71	-16.80	-724.33	98.12	-10727.62
3	4	-730.96	2080.92	-18.38	-716.11	-115.03	9082.06

Combination No. 392

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.05	2105.77	-23.47	-1021.33	143.35	-11223.33
3	4	-768.52	2081.12	-24.67	-1025.19	-147.90	9717.69

Combination No. 393

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.33	2094.13	-23.65	-1557.42	151.73	-11121.33
3	4	-761.80	2065.67	-24.49	-1579.67	-139.53	9625.74

Combination No. 394

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	853.17	2148.21	-23.64	-1390.03	151.31	-11541.44
3	4	-790.65	2122.27	-24.50	-1411.37	-139.94	10038.33

Combination No. 395

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	751.48	1951.12	-7.37	-279.08	44.39	-10088.71
3	4	-696.98	1989.69	-8.96	-279.79	-55.15	8671.51

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-709.13	2040.73	-8.78	-427.31	-46.59	8807.32

Combination No. 396

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	852.83	2213.16	-23.58	-1392.77	148.82	-11355.66
3	4	-790.30	2057.33	-24.55	-1408.64	-142.43	10214.10

Combination No. 397

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.39	2071.84	-23.45	-1101.79	142.43	-11327.18
3	4	-766.86	2160.88	-24.69	-1103.61	-148.83	9565.94

Combination No. 398

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	839.60	2169.68	-23.47	-1482.40	143.62	-11210.87
3	4	-777.07	2045.46	-24.66	-1486.85	-147.63	9977.03

Combination No. 399

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	852.29	2306.75	-23.59	-1253.23	149.20	-11193.65
3	4	-789.76	2017.63	-24.54	-1269.94	-142.05	10360.66

Combination No. 400

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.04	2240.50	-23.47	-1482.76	143.30	-10833.69
3	4	-762.51	1974.65	-24.67	-1486.49	-147.96	9933.96

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 401

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	853.50	2139.69	-23.56	-1175.29	147.84	-11581.15
3	4	-790.97	2138.86	-24.57	-1189.00	-143.42	10008.03

Combination No. 402

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.48	2135.47	-23.45	-1101.61	142.60	-11368.17
3	4	-779.95	2097.25	-24.69	-1103.80	-148.66	9902.80

Combination No. 403

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	763.74	2125.03	-7.53	-408.61	52.21	-9957.80
3	4	-709.24	1881.16	-8.79	-426.50	-47.33	9156.28

Combination No. 404

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	749.19	2064.03	-7.38	-535.16	44.87	-9795.30
3	4	-694.69	1864.03	-8.95	-536.92	-54.67	8898.73

Combination No. 405

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	854.92	2209.06	-23.64	-1171.33	151.45	-11411.07
3	4	-792.40	2069.49	-24.50	-1192.96	-139.81	10219.22

Combination No. 406

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	830.57	2167.79	-23.64	-1012.37	151.52	-11046.54
3	4	-768.04	2019.10	-24.49	-1034.16	-139.74	9880.63

Combination No. 407
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.77	2152.54	-23.48	-1565.87	144.04	-10953.21
3	4	-761.24	2007.26	-24.66	-1571.23	-147.22	9777.69

Combination No. 408
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.07	2246.73	-17.07	-897.59	110.56	-10607.89
3	4	-753.81	1947.73	-18.11	-916.70	-102.59	9861.39

Combination No. 409
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	865.22	2246.00	-23.56	-1310.30	147.49	-11522.94
3	4	-802.69	2079.83	-24.58	-1323.25	-143.76	10404.46

Combination No. 410
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.58	2128.14	-19.44	-1164.81	134.14	-11847.47
3	4	-805.69	2262.07	-22.63	-1208.41	-123.15	10096.47

Combination No. 411
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.68	2112.50	-20.13	-1450.06	142.09	-11183.51

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.09	2124.04	-19.91	-905.13	132.03	-11281.21
3	4	-776.90	2136.35	-23.34	-936.14	-132.37	9835.96

Combination No. 412
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	878.20	2256.72	-19.42	-1165.46	133.55	-11731.89
3	4	-820.31	2133.49	-22.64	-1207.76	-123.74	10634.02

Combination No. 413
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.87	2081.61	-19.21	-882.96	123.52	-11333.16
3	4	-773.98	2169.66	-22.86	-903.22	-133.77	9695.46

Combination No. 414
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.64	2072.54	-19.63	-1406.57	143.26	-11232.04
3	4	-767.75	2151.64	-22.43	-1470.18	-114.04	9616.83

Combination No. 415
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	876.88	2185.27	-19.43	-1165.10	133.88	-11909.84
3	4	-818.99	2204.95	-22.64	-1208.12	-123.41	10418.05

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Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.32	2267.38	-12.89	-798.41	94.46	-10767.62
3	4	-769.70	1992.61	-16.22	-842.11	-84.73	10090.36

Combination No. 423

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.23	2188.53	-13.13	-555.79	105.76	-10493.00
3	4	-746.61	1962.49	-15.97	-624.31	-73.43	9698.40

Combination No. 424

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.28	2055.66	-12.91	-797.33	95.43	-11275.70
3	4	-769.66	2204.33	-16.20	-843.18	-83.75	9581.07

Combination No. 425

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.23	2025.53	-12.67	-579.53	84.14	-10884.43
3	4	-746.60	2125.48	-16.44	-600.56	-95.05	9306.81

Combination No. 426

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.05	2125.59	-19.33	-876.53	129.37	-11380.15
3	4	-784.16	2125.68	-22.73	-909.65	-127.92	9942.44

Combination No. 427

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.33	2113.95	-19.51	-1412.62	137.75	-11278.15

Combination No. 427

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.33	2113.95	-19.51	-1412.62	137.75	-11278.15



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.64	2327.54	-19.42	-1165.82	133.23	-11354.72
3	4	-805.75	2062.68	-22.65	-1207.40	-124.07	10590.95

Combination No. 417

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.24	2196.58	-19.88	-1462.32	130.92	-11022.20
3	4	-773.05	2036.19	-23.36	-1490.91	-133.47	9983.92

Combination No. 418

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.73	2213.31	-20.16	-892.12	143.88	-11109.28
3	4	-779.54	2047.07	-23.08	-949.16	-120.51	10084.20

Combination No. 419

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.88	2235.12	-19.65	-860.63	143.85	-10953.34
3	4	-773.99	2016.15	-22.42	-925.55	-113.44	10075.63

Combination No. 420

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.74	2217.11	-19.22	-1427.59	124.11	-10875.41
3	4	-767.85	2007.07	-22.85	-1449.16	-133.18	9976.27

Combination No. 421

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.74	2217.11	-19.22	-1427.59	124.11	-10875.41

Combination No. 422

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.74	2217.11	-19.22	-1427.59	124.11	-10875.41



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-777.44	2110.23	-22.55	-1464.13	-119.54	9850.48

Combination No. 428

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	864.18	2168.04	-19.51	-1245.23	137.33	-11698.26
3	4	-806.29	2166.83	-22.56	-1295.83	-119.96	10263.08

Combination No. 429

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	762.49	1970.94	-3.23	-134.27	30.41	-10245.53
3	4	-712.62	2034.25	-7.03	-164.24	-35.17	8896.26

Combination No. 430

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	774.65	1985.28	-3.42	-263.00	38.97	-10460.59
3	4	-724.78	2085.29	-6.84	-311.77	-26.61	9032.07

Combination No. 431

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.84	2232.98	-19.45	-1247.97	134.84	-11512.47
3	4	-805.94	2101.89	-22.62	-1293.10	-122.45	10438.85

Combination No. 432

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	840.39	2091.66	-19.31	-956.99	128.44	-11483.99
3	4	-782.50	2205.44	-22.75	-988.07	-128.85	9790.68

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp

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Combination No. 433

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	850.61	2189.51	-19.34	-1337.60	129.64	-11367.68
3	4	-792.71	2090.02	-22.73	-1371.31	-127.65	10201.77

Combination No. 434

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	863.30	2326.57	-19.46	-1108.43	135.22	-11350.46
3	4	-805.41	2062.19	-22.61	-1154.40	-122.07	10585.41

Combination No. 435

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	836.05	2260.32	-19.33	-1337.96	129.32	-10990.51
3	4	-778.16	2019.21	-22.74	-1370.95	-127.98	10158.70

Combination No. 436

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	864.51	2159.51	-19.43	-1030.49	133.86	-11737.97
3	4	-806.62	2183.42	-22.64	-1073.46	-123.43	10232.78

Combination No. 437

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	853.48	2155.29	-19.32	-956.81	128.62	-11524.99
3	4	-795.59	2141.81	-22.75	-988.26	-128.68	10127.55

Combination No. 438

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	830.10	2080.53	-14.33	-711.80	106.07	-11295.72
3	4	-775.52	2170.74	-20.29	-763.18	-109.69	9731.07

Combination No. 449

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	830.10	2071.46	-14.76	-1235.41	125.81	-11194.60
3	4	-769.29	2152.72	-19.86	-1330.14	-89.95	9652.43

Combination No. 450

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	875.11	2184.18	-14.56	-993.94	116.43	-11872.40
3	4	-820.53	2206.03	-20.06	-1068.07	-99.33	10453.66

Combination No. 451

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	861.87	2326.45	-14.54	-994.66	115.78	-11317.28
3	4	-807.29	2063.76	-20.08	-1067.35	-99.98	10626.56

Combination No. 452

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.47	2195.50	-15.01	-1291.16	113.48	-10984.76
3	4	-774.59	2037.27	-20.79	-1350.87	-109.39	10019.53

Combination No. 453

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.96	2212.23	-15.29	-689.47	126.40	-10915.90
3	4	-781.08	2048.16	-20.51	-809.12	-89.36	10111.24

Combination No. 454

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.97	2216.03	-14.34	-1256.43	106.67	-10837.97
3	4	-769.39	2008.15	-20.27	-1309.12	-109.10	10011.88

Combination No. 455

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.55	2266.30	-8.02	-627.24	77.01	-10730.18
3	4	-771.24	1993.69	-13.64	-702.07	-60.65	10125.96

Combination No. 456

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.46	2187.45	-8.26	-384.63	88.31	-10455.56
3	4	-748.15	1963.57	-13.40	-484.26	-49.35	9734.00

Combination No. 457

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 458

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 459

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 460

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 461

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 462

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 463

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 464

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 465

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 466

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 467

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 468

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 469

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 470

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 471

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 472

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 473

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 474

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 475

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 476

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 477

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 478

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 479

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 480

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 481

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 482

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-11238.26

Combination No. 483

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.51	2054.58	8.04	-626.17	77.99	-1123



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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
3	4	-771.20	2205.41	-13.62	-703.14	-59.67	9616.68

Combination No. 460

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	799.45	2024.45	-7.79	-408.37	66.69	-10847.00
3	4	-748.14	2126.57	-13.87	-460.52	-70.97	9342.41

Combination No. 461

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	840.28	2124.51	-14.46	-705.37	111.92	-11342.71
3	4	-785.70	2126.76	-20.16	-769.61	-103.84	9978.05

Combination No. 462

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	833.56	2112.87	-14.64	-1241.46	120.30	-11240.71
3	4	-778.98	2111.31	-19.98	-1324.09	-95.46	9886.09

Combination No. 463

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	862.41	2166.95	-14.63	-1074.07	119.88	-11660.82
3	4	-807.83	2167.92	-19.99	-1155.79	-95.88	10298.69

Combination No. 464

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	760.72	1969.86	1.64	36.89	12.96	-10208.09
3	4	-714.16	2035.33	4.45	-24.20	-11.09	8931.86

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	772.88	1984.20	1.46	-91.84	21.52	-10423.15
3	4	-726.32	2086.38	-4.27	-171.73	-2.53	9067.68

Combination No. 465

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	862.06	2231.90	14.58	-1076.80	117.39	-11475.03
3	4	-807.48	2102.97	-20.04	-1153.05	-98.37	10474.46

Combination No. 466

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	838.62	2090.58	-14.44	-785.83	111.00	-11446.56
3	4	-784.04	2206.52	-20.18	-848.03	-104.77	9826.29

Combination No. 467

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	848.83	2188.42	-14.46	-1166.44	112.19	-11330.25
3	4	-794.25	2091.10	-20.16	-1231.26	-103.57	10237.38

Combination No. 468

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	861.53	2325.49	-14.58	-937.27	117.78	-11313.03
3	4	-806.95	2063.27	-20.03	-1014.36	-97.99	10621.01

Combination No. 469

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	861.53	2325.49	-14.58	-937.27	117.78	-11313.03
3	4	-806.95	2063.27	-20.03	-1014.36	-97.99	10621.01

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	834.28	2259.24	-14.46	-1166.80	111.87	-10953.07
3	4	-779.69	2020.29	-20.16	-1230.91	-103.90	10194.31

Combination No. 474

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	862.74	2158.43	-14.55	-859.33	116.41	-11700.53
3	4	-808.16	2184.50	-20.06	-933.42	-99.35	10268.39

Combination No. 475

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	851.71	2154.21	-14.44	-785.64	111.17	-11487.55
3	4	-797.13	2142.90	-20.18	-848.22	-104.60	10163.16

Combination No. 476

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	772.98	2143.77	1.47	-92.65	20.78	-10077.17
3	4	-726.42	1926.80	4.28	-170.91	3.27	9416.64

Combination No. 477

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	758.43	2082.77	1.63	-219.19	13.44	-9914.68
3	4	-711.87	1909.67	4.44	-281.33	-10.61	9159.08

Combination No. 478

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	864.16	2227.80	-14.63	-855.37	120.02	-11530.45



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	839.80	2186.53	-14.63	-696.41	120.09	-11165.92
3	4	-785.22	2064.74	-19.98	-778.57	-95.68	10140.99

Combination No. 476

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.00	2171.28	-14.47	-1249.90	112.61	-11072.59
3	4	-778.42	2052.90	-20.15	-1315.65	-103.15	10038.04

Combination No. 477

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.30	2265.47	-8.06	-581.62	79.13	-10727.27
3	4	-770.99	1993.38	-13.60	-661.11	-58.52	10121.74

Combination No. 478

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	874.45	2264.74	-14.55	-994.34	116.06	-11642.32
3	4	-819.87	2125.47	-20.07	-1067.67	-99.70	10664.81

Combination No. 479

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	856.98	2124.49	-11.41	-888.65	107.20	-11709.27
3	4	-811.17	2265.72	-18.68	-987.31	-84.49	10225.83

Combination No. 480

Group id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: PIER 12 Straddle.rcp

Job #: 59219
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Checked: []
Date: []

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	870.28	2181.62	-11.40	-888.94	106.93	-11771.64
3	4	-824.47	2208.60	-18.69	-987.02	-84.76	10547.40

Combination No. 487
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	857.04	2323.89	-11.39	-889.66	106.28	-11216.52
3	4	-811.23	2066.33	-18.70	-986.30	-85.41	10720.30

Combination No. 488
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.63	2192.93	-11.85	-1186.17	103.98	-10884.00
3	4	-778.54	2039.84	-19.41	-1269.82	-94.81	10113.27

Combination No. 489
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.13	2209.66	-12.13	-615.96	116.93	-10971.08
3	4	-785.03	2050.72	-19.13	-728.07	-81.86	10213.55

Combination No. 490
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.28	2231.47	-11.62	-584.48	116.90	-10815.14
3	4	-779.48	2019.80	-18.47	-704.45	-74.79	10204.99

Combination No. 491
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.14	2213.46	-11.19	-1151.44	97.17	-10737.21

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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Job #: 59219
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.08	2108.85	-12.09	-1173.91	115.14	-11045.31
3	4	-775.98	2123.91	-19.17	-1282.08	-83.65	9878.08

Combination No. 481
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.48	2120.39	-11.88	-628.98	105.08	-11143.01
3	4	-782.38	2140.00	-19.39	-715.05	-93.71	9965.32

Combination No. 482
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	871.59	2253.07	-11.39	-889.30	106.61	-11593.69
3	4	-825.79	2137.14	-18.70	-986.66	-85.08	10763.38

Combination No. 483
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.27	2077.96	-11.18	-606.80	96.57	-11194.96
3	4	-779.46	2173.31	-18.91	-682.13	-95.11	9824.82

Combination No. 484
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.04	2068.89	-11.60	-1130.42	116.31	-11093.84
3	4	-773.24	2155.29	-18.49	-1249.09	-75.38	9746.18

Combination No. 485
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.14	2213.46	-11.19	-1151.44	97.17	-10737.21

Units: US (English)

Design Code: AASHTO LRFD

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		Job #	59219
Program: LEAP® RC-PIER® V8i (SELECTseries 5) Version: 12.01.00.57 Copyright © Bentley Systems, Inc. 2012 www.bentley.com Phone: 1-800-778-4277		Designed CAM	
		Date	9/10/14
File Name: Pier 12 Straddle.rcp		Checked	
		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-773.33	2010.72	-18.90	-1228.06	-94.52	10105.63

Combination No. 492
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.72	2263.73	-4.86	-522.25	67.51	-10629.42
3	4	-775.19	1996.26	-12.27	-621.01	-46.07	10219.71

Combination No. 493
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.63	2184.88	-5.10	-279.63	78.81	-10354.80
3	4	-752.09	1966.14	-12.03	-403.21	-34.77	9827.75

Combination No. 494
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.68	2052.01	-4.88	-521.18	68.49	-11137.50
3	4	-775.14	2207.98	-12.25	-622.08	-45.10	97710.43

Combination No. 495
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.62	2021.88	-4.64	-303.38	57.19	-10746.23
3	4	-752.09	2129.13	-12.49	-379.47	-56.39	9436.16

Combination No. 496
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.45	2121.94	-11.30	-600.38	102.42	-11241.95
3	4	-789.65	2129.33	-18.79	-688.55	-89.26	10071.80

Units: US (English)

Design Code: AASHTO LRFD

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		Job #	59219
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		Date	

Combination No. 497
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.73	2110.30	-11.48	-1136.47	110.80	-11139.95
3	4	-782.93	2113.88	-18.61	-1243.04	80.89	9979.84

Combination No. 498
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	857.58	2164.39	-11.47	-969.08	110.38	-11560.06
3	4	-811.78	2170.48	-18.62	-1074.73	81.30	10392.44

Combination No. 499
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	755.89	1967.29	4.80	141.88	3.46	-10107.33
3	4	-718.11	2037.90	-3.08	56.85	3.49	9025.61

Combination No. 500
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.04	1981.63	4.61	13.15	12.02	-10322.39
3	4	-730.26	2088.94	-2.89	-90.67	12.05	9161.42

Combination No. 501
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	857.23	2229.33	-11.42	-971.81	107.89	-11374.27
3	4	-811.43	2105.54	-18.67	-1072.00	-83.79	10568.20

Combination No. 502
Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.79	2088.01	-11.28	-680.84	101.50	-11345.80
3	4	-787.99	2209.09	-18.81	-766.98	-90.19	9920.04

Combination No. 503

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	844.00	2185.86	-11.31	-1061.45	102.69	-11229.48
3	4	-798.20	2093.67	-18.78	-1150.21	-89.00	10331.13

Combination No. 504

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	856.70	2322.92	-11.43	-832.28	108.28	-11212.27
3	4	-810.89	2065.84	-18.66	-933.30	-83.41	10714.76

Combination No. 505

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.44	2256.67	-11.30	-1061.81	102.37	-10852.31
3	4	-783.64	2022.86	-18.79	-1149.85	-89.32	10288.06

Combination No. 506

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	857.90	2155.86	-11.40	-754.33	106.91	-11599.77
3	4	-812.10	2187.07	-18.69	-852.37	-84.78	10362.13

Combination No. 507

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	846.88	2151.64	-11.29	-680.65	101.67	-11386.79

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-801.08	2145.46	-18.80	-767.16	-90.02	10256.90

Combination No. 508

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.15	2141.20	4.63	12.34	11.28	-9976.41
3	4	-730.37	1929.37	-2.91	-89.86	11.31	9510.38

Combination No. 509

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	753.60	2080.20	4.79	-114.20	3.94	-9813.92
3	4	-715.82	1912.24	-3.07	-200.28	3.96	9252.83

Combination No. 510

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	859.33	2225.23	-11.48	-750.37	110.52	-11429.69
3	4	-813.53	2117.70	-18.61	-856.32	-81.17	10573.32

Combination No. 511

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	834.97	2183.96	-11.48	-591.41	110.59	-11065.16
3	4	-789.17	2067.31	-18.61	-697.52	-81.10	10234.74

Combination No. 512

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.17	2168.71	-11.32	-1144.91	103.11	-10971.83
3	4	-782.37	2055.47	-18.77	-1234.59	88.58	10131.79

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	862.50	2248.19	-10.46	-863.90	105.52	-11401.38
3	4	-833.59	2142.02	-18.55	-971.70	-81.85	10945.49

Combination No. 519

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 519

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.17	2073.08	-10.24	-581.40	95.52	-11002.66
3	4	-787.26	2178.20	-18.77	-667.17	-91.88	10006.93

Combination No. 520

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 520

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.95	2064.01	-10.67	-1105.02	115.25	-10901.53
3	4	-781.04	2160.17	-18.34	-1234.13	-72.15	9928.29

Combination No. 521

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 521

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	861.19	2176.73	-10.47	-863.54	105.88	-11579.34
3	4	-832.27	2213.48	-18.54	-972.06	-81.52	10729.52

Combination No. 522

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 522

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	847.94	2319.00	-10.45	-864.26	105.22	-11024.21
3	4	-819.03	2071.21	-18.56	-971.34	-82.18	10902.42

Combination No. 523

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 523

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.54	2188.05	-10.92	-1160.77	102.92	-10691.69

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.47	2262.90	-4.91	-476.63	69.63	-10626.51
3	4	-774.94	1995.94	-12.22	-580.06	-43.95	10215.49

Combination No. 513

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 513

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	869.62	2262.17	-11.39	-889.35	106.56	-11541.56
3	4	-823.82	2128.04	-18.70	-986.61	-85.13	10758.56

Combination No. 514

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 514

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	847.88	2119.61	-10.47	-863.25	106.14	-11516.96
3	4	-818.97	2270.60	-18.54	-972.35	-81.26	10407.94

Combination No. 515

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 515

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	812.98	2103.97	-11.16	-1148.51	114.08	-10853.00
3	4	-783.78	2128.80	-19.03	-1267.12	-80.42	10060.19

Combination No. 516

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 516

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.39	2115.51	-10.94	-603.58	104.02	-10950.71
3	4	-790.18	2144.88	-19.25	-700.09	-90.48	10147.43

Combination No. 517

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 517

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.51	2188.05	-10.92	-1160.77	102.92	-10691.69



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-786.34	2044.72	-19.27	-1254.86	-91.58	10295.39

Combination No. 524

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.03	2204.78	-11.20	-590.56	115.88	-10778.78
3	4	-792.83	2055.61	-18.99	-713.11	-78.62	10395.67

Combination No. 525

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.19	2226.59	-10.68	-559.08	115.85	-10622.83
3	4	-787.28	2024.69	-18.33	-689.49	-71.55	10387.10

Combination No. 526

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.04	2208.58	-10.26	-1126.04	96.11	-10544.90
3	4	-781.13	2015.61	-18.75	-1213.11	-91.29	10287.74

Combination No. 527

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.63	2258.85	-3.93	-496.85	66.45	-10437.11
3	4	-782.99	2001.14	-12.13	-606.06	-42.84	10401.82

Combination No. 528

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.54	2180.00	-4.17	-254.23	77.75	-10162.49
3	4	-759.89	1971.02	-11.88	-388.25	-31.54	10009.86

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 529

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.59	2047.12	-3.95	-495.78	67.43	-10945.19
3	4	-782.94	2212.86	-12.10	-607.13	-41.86	9892.54

Combination No. 530

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.53	2017.00	-3.70	-277.98	56.13	-10553.93
3	4	-759.89	2134.02	-12.35	-364.51	-53.16	9618.27

Combination No. 531

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	826.36	2117.06	-10.37	-574.98	101.37	-11049.65
3	4	-797.45	2134.21	-18.64	-673.60	-86.03	10253.91

Combination No. 532

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.64	2105.42	-10.55	-1111.07	109.74	-10947.64
3	4	-790.73	2118.76	-18.46	-1228.08	-77.66	10161.95

Combination No. 533

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	848.49	2159.50	-10.54	-943.68	109.33	-11367.75
3	4	-819.58	2175.37	-18.47	-1059.78	-78.07	10574.55

Combination No. 534

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	746.80	1962.40	5.73	167.28	2.40	-9915.02
3	4	-725.91	2042.78	-2.93	71.81	6.72	9207.72

Combination No. 535

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 536

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	758.95	1976.74	5.55	38.55	10.96	-10130.08
3	4	-738.06	2093.83	-2.75	-75.72	15.28	9343.54

Combination No. 537

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 538

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	848.14	2224.45	-10.49	-946.41	106.84	-11181.97
3	4	-819.23	2110.42	-18.52	-1057.04	-80.56	10750.32

Combination No. 539

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 540

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.70	2083.13	-10.35	-655.44	100.44	-11153.49
3	4	-795.79	2213.97	-18.66	-752.02	-86.96	10102.15

Combination No. 541

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 542

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	759.06	2136.31	5.56	37.74	10.22	-9784.11
3	4	-738.17	1934.26	-2.76	-74.90	14.54	9692.50

Combination No. 543

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 544

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	744.50	2075.31	5.72	-88.80	2.88	-9621.61
3	4	-723.62	1917.12	-2.92	-185.32	7.20	9434.94



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.35	2251.78	-10.37	-1036.41	101.31	-10660.00
3	4	-791.44	2027.74	-18.64	-1134.90	-86.09	10470.17

Combination No. 540

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 541

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.35	2251.78	-10.37	-1036.41	101.31	-10660.00
3	4	-791.44	2027.74	-18.64	-1134.90	-86.09	10470.17

Combination No. 542

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 543

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	848.81	2150.98	-10.47	-728.93	105.86	-11407.46
3	4	-819.90	2191.95	-18.54	-837.41	-81.54	10544.25

Combination No. 544

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 545

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.79	2146.76	-10.35	-655.25	100.61	-11194.48
3	4	-808.88	2150.35	-18.66	-752.21	-86.79	10439.02

Combination No. 546

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 547

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	759.06	2136.31	5.56	37.74	10.22	-9784.11
3	4	-738.17	1934.26	-2.76	-74.90	14.54	9692.50

Combination No. 548

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 549

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	744.50	2075.31	5.72	-88.80	2.88	-9621.61
3	4	-723.62	1917.12	-2.92	-185.32	7.20	9434.94



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 545

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	850.24	2220.35	-10.54	-724.97	109.46	-11237.38
3	4	-821.33	2122.59	-18.47	-841.37	-77.94	10755.43

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 546

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.88	2179.08	-10.55	-566.01	109.53	-10872.85
3	4	-796.97	2072.19	-18.47	-682.56	-77.87	10416.85

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 547

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.08	2163.83	-10.38	-1119.51	102.06	-10779.52
3	4	-790.17	2060.36	-18.63	-1219.64	-85.34	10313.90

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 548

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.38	2258.02	-3.97	-451.23	68.58	-10434.20
3	4	-782.74	2000.83	-12.08	-565.10	-40.72	10397.60

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 549

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	860.53	2257.29	-10.46	-863.95	105.51	-11349.25
3	4	-831.62	2132.92	-18.55	-971.66	-81.89	10940.67

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 550

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.39	2061.31	-10.13	-1077.11	110.59	-10787.95
3	4	-791.45	2180.89	-17.84	-634.08	-88.31	10109.62



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 551

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.33	2116.91	-9.93	-835.34	101.48	-11403.38
3	4	-823.16	2273.30	-17.61	-939.26	-77.69	10510.62

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 552

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	807.43	2101.27	-10.62	-1120.60	109.42	-10739.42
3	4	-787.96	2131.49	-18.10	-1234.03	-76.85	10162.88

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 553

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.84	2112.81	-10.40	-575.67	99.36	-10837.12
3	4	-794.37	2147.58	-18.32	-667.00	-86.91	10250.12

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 554

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	856.95	2245.50	-9.92	-835.99	100.88	-11287.80
3	4	-837.78	2144.72	-17.62	-938.61	-78.28	11048.17

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 555

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.62	2070.38	-9.70	-553.49	90.85	-10889.07
3	4	-791.45	2180.89	-17.84	-634.08	-88.31	10109.62

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 556

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.39	2061.31	-10.13	-1077.11	110.59	-10787.95
3	4	-791.45	2180.89	-17.84	-634.08	-88.31	10109.62

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		Date	9/10/14
File Name: Pier 12 Straddle.rcp		Checked	
		Date	

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
3	4	-785.22	2162.87	-17.41	-1201.04	-68.58	10030.98

Combination No. 556
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	855.63	2174.04	-9.93	-835.63	101.21	-11465.75
3	4	-836.46	2216.18	-17.61	-938.97	-77.95	10832.20

Combination No. 557
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	842.39	2316.31	-9.91	-836.35	100.56	-10910.63
3	4	-823.22	2073.91	-17.63	-938.26	-78.61	11005.10

Combination No. 558
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	809.99	2185.35	-10.38	-1132.86	98.25	-10578.11
3	4	-790.52	2047.41	-18.34	-1221.77	-88.01	10398.07

Combination No. 559
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	816.48	2202.09	-10.66	-562.65	111.21	-10665.19
3	4	-797.01	2058.30	-18.06	-680.02	-75.05	10498.35

Combination No. 560
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	810.63	2223.89	-10.14	-531.17	111.18	-10509.25
3	4	-791.46	2027.38	-17.40	-656.41	-67.99	10489.78

Units: US (English)

Design Code: AASHTO LRFD

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		Date	

Combination No. 561
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	804.49	2205.88	-9.72	-1098.13	91.45	-10431.32
3	4	-785.32	2018.30	-17.83	-1180.02	-87.72	10390.42

Combination No. 562
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	803.07	2256.15	-3.39	-468.94	61.79	-10323.53
3	4	-787.17	2003.84	-11.20	-572.97	-39.27	10504.51

Combination No. 563
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	779.98	2177.30	-3.63	-226.32	73.09	-10048.91
3	4	-764.08	1973.72	-10.95	-355.17	-27.97	10112.55

Combination No. 564
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	803.03	2044.43	-3.41	-467.87	62.76	-10831.61
3	4	-787.13	2215.56	-11.17	-574.04	-38.29	9995.23

Combination No. 565
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	779.98	2014.30	-3.16	-250.07	51.47	-10440.34
3	4	-764.07	2136.71	-11.42	-331.42	-49.59	9720.96

Combination No. 566
Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.80	2114.37	-9.83	-547.07	96.70	-10936.06
3	4	-801.63	2136.91	-17.71	-640.51	-82.46	10356.59

Combination No. 567

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 568

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.08	2102.73	-10.01	-1083.16	105.08	-10834.06
3	4	-794.91	2121.46	-17.53	-1194.99	-74.09	10264.64

Combination No. 569

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 570

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.93	2156.81	-10.00	-915.77	104.66	-11254.17
3	4	-823.76	2178.06	-17.54	-1026.69	-74.50	10677.23

Combination No. 571

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 572

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	741.24	1959.71	6.27	195.19	-2.26	-9801.44
3	4	-730.10	2045.48	-2.00	104.90	10.29	9310.41

Combination No. 573

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 574

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	753.40	1974.05	6.09	66.46	6.30	-10016.50
3	4	-742.25	2096.52	-1.82	-42.63	18.85	9446.22

Combination No. 575

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 576

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.58	2221.76	9.95	-918.50	102.17	-11068.38

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.42	2113.11	-17.59	-1023.95	-76.99	10853.00
3	4	-823.42	2113.11	-17.59	-1023.95	-76.99	10853.00

Combination No. 572

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 573

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.14	2080.43	-9.81	-627.53	95.78	-11039.90
3	4	-799.97	2216.67	-17.73	-718.93	-83.39	10204.84

Combination No. 574

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 575

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.36	2178.28	-9.84	-1008.14	96.97	-10923.59
3	4	-810.19	2101.25	-17.71	-1102.17	-82.19	10615.93

Combination No. 576

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 577

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.05	2315.34	-9.96	-778.97	102.55	-10906.38
3	4	-822.88	2073.42	-17.59	-885.26	-76.61	10999.56

Combination No. 578

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.80	2249.09	-9.83	-1008.50	96.65	-10546.42
3	4	-795.63	2030.44	-17.71	-1101.81	-82.52	10572.86

Combination No. 580

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 581

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	843.26	2148.29	-9.93	-701.02	101.19	-11293.88
3	4	-824.09	2194.65	-17.62	-804.32	-77.97	10646.93

Units: US (English)

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Combination No. 577
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.23	2144.06	-9.81	-627.34	95.95	-11080.90
3	4	-813.06	2153.04	-17.73	-719.12	-83.22	10541.70

Combination No. 578
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	753.50	2133.62	6.10	65.65	5.50	-9670.52
3	4	-742.35	1936.95	-1.83	-41.81	18.11	9795.18

Combination No. 579
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	738.95	2072.62	6.26	-60.89	-1.78	-9508.02
3	4	-727.80	1919.82	-1.99	-152.23	10.77	9537.63

Combination No. 580
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	844.68	2217.65	-10.00	-697.06	104.80	-11123.79
3	4	-825.51	2125.28	-17.54	-808.28	-74.37	10858.12

Combination No. 581
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	820.32	2176.39	-10.01	-538.10	104.87	-10759.27
3	4	-801.15	2074.89	-17.54	-649.47	-74.30	10519.53

Combination No. 582
Group id: STR GP 5 Name: STRENGTH GROUP V



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Combination No. 583
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.52	2161.13	-9.84	-1091.60	97.39	-10665.94
3	4	-794.35	2063.05	-17.70	-1186.55	-81.77	10416.59

Combination No. 584
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.83	2255.33	-3.43	-423.32	63.91	-10320.62
3	4	-786.93	2003.52	-11.15	-532.01	-37.15	10500.29

Combination No. 584
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	854.97	2254.59	-9.92	-836.04	100.84	-11235.67
3	4	-835.81	2135.62	-17.62	-938.57	-78.32	11043.36

Combination No. 585
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	812.90	2112.05	23.51	1547.10	-145.12	-10695.05
3	4	-875.42	2342.55	24.63	1554.84	146.14	11570.89

Combination No. 586
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	777.70	2096.19	24.00	1328.16	-144.22	-10024.59
3	4	-840.53	2200.96	25.31	1325.99	154.13	11229.67

Combination No. 587
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	784.11	2107.73	24.22	1873.09	-154.28	-10122.30

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		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-846.93	2217.05	25.09	1893.02	144.07	11316.91

Combination No. 588
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	827.52	2240.63	23.52	1546.45	-145.71	-10579.47
3	4	-890.04	2213.97	24.62	1555.49	145.54	12108.44

Combination No. 589
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	781.19	2065.52	23.73	1828.95	-155.74	-10180.74
3	4	-843.72	2250.14	24.40	1860.03	135.51	11169.89

Combination No. 590
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	774.96	2056.45	23.31	1305.34	-136.01	-10079.62
3	4	-837.49	2232.12	24.83	1293.07	155.25	11091.25

Combination No. 591
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	826.20	2169.17	23.51	1546.81	-145.39	-10757.42
3	4	-888.73	2285.43	24.63	1555.13	145.87	11892.47

Combination No. 592
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	812.96	2311.44	23.52	1546.09	-146.04	-10202.30
3	4	-875.48	2143.15	24.61	1555.85	145.22	12065.37

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		Date	

Combination No. 593
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	780.26	2180.26	24.24	1315.90	-155.39	-9863.28
3	4	-843.08	2116.88	25.07	1338.25	142.97	11464.87

Combination No. 594
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	786.75	2197.00	23.96	1886.11	-142.43	-9950.36
3	4	-849.58	2127.77	25.35	1880.00	155.93	11565.15

Combination No. 595
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	781.20	2219.02	23.30	1851.28	-135.42	-9800.92
3	4	-843.73	2096.63	24.84	1837.70	155.84	11550.06

Combination No. 596
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	775.06	2201.01	23.72	1284.32	-155.15	-9722.99
3	4	-837.59	2087.55	24.42	1314.09	136.11	11450.70

Combination No. 597
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	776.90	2253.70	17.00	1184.09	-107.33	-9686.69
3	4	-836.16	2070.67	18.18	1196.10	105.82	11493.01

Combination No. 598
Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English) Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	753.81	2174.85	16.76	1185.17	-106.35	-10194.77
3	4	-813.07	2040.55	18.42	1195.03	106.80	10983.73

Combination No. 599
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	719.81	1960.76	7.67	787.26	-58.68	-9268.58
3	4	-774.31	2108.81	8.65	819.36	40.86	10194.52

Combination No. 600
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	731.96	1975.10	7.49	658.53	-50.12	-9483.64
3	4	-786.47	2159.85	8.84	671.84	49.42	10330.33

Combination No. 601
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.15	2216.89	23.49	1463.95	-144.42	-10360.05
3	4	-875.68	2182.36	24.65	1470.15	146.83	11193.27

Combination No. 602
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	789.71	2075.57	23.63	1754.92	-150.82	-10331.58
3	4	-852.24	2285.92	24.51	1775.18	140.44	11265.11

Combination No. 603
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.92	2173.41	23.60	1374.31	-149.62	-10215.26
3	4	-862.45	2170.50	24.53	1391.94	141.63	11676.20

Units: US (English)
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	753.81	2174.85	16.76	1185.17	-106.35	-9412.07
3	4	-813.07	2040.55	18.42	1195.03	106.80	11101.05

Combination No. 599
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	719.81	1960.76	7.67	787.26	-58.68	-9268.58
3	4	-774.31	2108.81	8.65	819.36	40.86	10194.52

Combination No. 600
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	731.96	1975.10	7.49	658.53	-50.12	-9483.64
3	4	-786.47	2159.85	8.84	671.84	49.42	10330.33

Combination No. 601
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.37	2109.50	23.61	1835.38	-149.89	-10227.73
3	4	-853.90	2206.16	24.53	1853.60	141.36	11416.87

Combination No. 602
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	784.65	2097.86	23.43	1299.29	-141.52	-10125.73
3	4	-847.18	2190.71	24.71	1299.12	149.74	11324.91

Combination No. 603
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.50	2151.94	23.44	1466.68	-141.93	-10545.84

Units: US (English)
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Combination No. 609
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	812.62	2310.47	23.48	1603.48	-144.04	-10198.05
3	4	-875.14	2142.67	24.66	1608.85	147.21	12059.83

Combination No. 610
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.37	2244.22	23.61	1373.95	-149.95	-9838.09
3	4	-847.89	2099.69	24.53	1392.30	141.31	11633.13

Combination No. 611
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.83	2143.42	23.51	1681.42	-145.41	-10585.55
3	4	-876.35	2263.89	24.63	1689.79	145.85	11707.20

Combination No. 612
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.80	2139.19	23.62	1755.10	-150.65	-10372.57
3	4	-865.33	2222.29	24.51	1774.99	140.61	11601.97

Combination No. 613
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	732.07	2134.67	7.51	657.72	-50.86	-9137.67
3	4	-786.57	2000.28	8.82	672.65	48.68	10679.29

Combination No. 614
Group id: STR GP 5 Name: STRENGTH GROUP V



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Combination No. 615
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	717.52	2073.67	7.66	531.18	-58.20	-8975.17
3	4	-772.02	1983.15	8.66	562.23	41.34	10421.74

Combination No. 615
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.25	2212.78	23.43	1685.38	-141.80	-10415.47
3	4	-877.78	2194.53	24.70	1685.83	149.46	11918.39

Combination No. 616
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.89	2171.52	23.43	1844.34	-141.73	-10050.94
3	4	-853.42	2144.14	24.70	1844.64	149.53	11579.80

Combination No. 617
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	784.09	2156.26	23.59	1290.85	-149.21	-9957.61
3	4	-846.62	2132.30	24.54	1307.56	142.05	11476.86

Combination No. 618
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	776.65	2252.87	16.95	1229.71	-105.21	-9683.78
3	4	-835.91	2070.36	18.22	1237.05	107.95	11488.79

Combination No. 619
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.54	2249.73	23.52	1546.41	-145.76	-10827.34

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-888.07	2204.87	24.62	1555.54	145.50	12103.63

Combination No. 620

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.89	2092.23	19.37	1402.30	-131.14	-10538.23
3	4	-859.78	2297.99	22.70	1439.30	126.15	11346.15

Combination No. 621

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	766.69	2076.36	19.87	1183.36	-130.24	-9867.77
3	4	-824.88	2156.40	23.38	1210.45	134.15	11004.92

Combination No. 622

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	773.10	2087.90	20.09	1728.29	-140.30	-9965.48
3	4	-831.29	2172.48	23.16	1777.48	124.09	11092.17

Combination No. 623

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.51	2220.81	19.38	1401.65	-131.73	-10422.65
3	4	-874.40	2169.41	22.68	1439.95	125.56	11883.70

Combination No. 624

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	770.18	2045.70	19.60	1684.15	-141.76	-10023.93
3	4	-828.07	2205.58	22.47	1744.49	115.53	10945.14

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	763.95	2036.63	19.18	1160.54	-122.03	-9922.80
3	4	-821.84	2187.56	22.89	1177.52	135.26	10866.50

Combination No. 625

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.19	2149.35	19.38	1402.01	-131.41	-10600.60
3	4	-873.08	2240.86	22.69	1439.59	125.89	11667.72

Combination No. 626

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.95	2291.62	19.39	1401.29	-132.06	-10045.48
3	4	-859.84	2098.59	22.68	1440.31	125.23	11840.63

Combination No. 627

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.95	2291.62	19.39	1401.29	-132.06	-10045.48
3	4	-859.84	2098.59	22.68	1440.31	125.23	11840.63

Combination No. 628

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	769.25	2160.44	20.11	1171.10	-141.41	-9706.46
3	4	-827.44	2072.32	23.14	1222.71	122.99	11240.12

Combination No. 629

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	775.74	2177.18	19.83	1741.30	-128.45	-9793.55
3	4	-833.93	2083.21	23.42	1764.46	135.94	11340.40

Combination No. 630

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	770.19	2199.20	19.16	1706.48	-121.44	-9644.10
3	4	-828.08	2052.07	22.91	1722.16	135.86	11325.31

Combination No. 631

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	764.05	2181.19	19.59	1139.52	-141.17	-9566.17
3	4	-821.94	2042.99	22.48	1198.55	116.12	11225.95

Combination No. 632

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.89	2233.87	12.87	1039.29	-93.35	-9529.87
3	4	-820.52	2026.11	16.24	1080.56	85.84	11268.26

Combination No. 633

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	742.80	2155.03	12.62	1281.91	-82.05	-9255.25
3	4	-797.42	1995.99	16.49	1298.36	97.13	10876.30

Combination No. 634

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.85	2022.15	12.85	1040.36	-92.37	-10037.95
3	4	-820.47	2237.84	16.26	1079.49	86.81	10758.98

Combination No. 635

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	742.79	1992.03	13.09	1258.17	-103.67	-9446.69

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	780.36	2089.68	19.48	1690.58	-135.91	-10070.92
3	4	-838.26	2161.60	22.59	1738.06	121.38	11192.12

Combination No. 636

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	773.64	2078.04	19.29	1154.49	-127.54	-9968.91
3	4	-831.54	2146.15	22.77	1183.58	129.75	11100.16

Combination No. 637

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.49	2132.12	19.30	1321.88	-127.95	-10389.02
3	4	-860.38	2202.75	22.77	1351.88	129.34	11512.76

Combination No. 638

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	708.80	1940.94	3.54	642.46	-44.70	-9111.76
3	4	-758.67	2064.24	6.72	703.82	20.88	9969.77

Combination No. 639

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	720.96	1955.28	3.36	513.73	-36.14	-9326.82
3	4	-770.83	2115.29	6.90	556.30	29.43	10105.59

Combination No. 640

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: **Pier 12 Straddle.rcp**

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Combination No. 641
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.15	2197.07	19.36	1319.14	-130.44	-10203.24
3	4	-860.04	2137.80	22.71	1354.61	126.85	11688.52

Combination No. 642
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	778.70	2055.74	19.50	1610.12	-136.84	-10174.76
3	4	-836.60	2241.36	22.57	1659.64	120.45	11040.36

Combination No. 643
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.92	2153.59	19.47	1229.51	-135.64	-10058.45
3	4	-846.81	2125.94	22.60	1276.40	121.65	11451.45

Combination No. 644
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.61	2290.65	19.35	1458.68	-130.06	-10041.23
3	4	-859.50	2098.11	22.72	1493.31	127.23	11835.08

Combination No. 645
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.24	2192.96	19.30	1540.58	-127.82	-10258.65
3	4	-862.13	2149.97	22.71	1570.29	129.47	11693.64



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Combination No. 641
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.15	2197.07	19.36	1319.14	-130.44	-10203.24
3	4	-860.04	2137.80	22.71	1354.61	126.85	11688.52

Combination No. 642
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	778.70	2055.74	19.50	1610.12	-136.84	-10174.76
3	4	-836.60	2241.36	22.57	1659.64	120.45	11040.36

Combination No. 643
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.92	2153.59	19.47	1229.51	-135.64	-10058.45
3	4	-846.81	2125.94	22.60	1276.40	121.65	11451.45

Combination No. 644
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.61	2290.65	19.35	1458.68	-130.06	-10041.23
3	4	-859.50	2098.11	22.72	1493.31	127.23	11835.08

Combination No. 645
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.24	2192.96	19.30	1540.58	-127.82	-10258.65
3	4	-862.13	2149.97	22.71	1570.29	129.47	11693.64

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-837.78	2099.58	22.77	11729.09	129.54	11355.06

Combination No. 652
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	773.08	2136.44	19.46	11446.05	-135.23	-9800.79
3	4	-830.98	2087.74	22.61	1192.02	122.07	11252.11

Combination No. 653
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.65	2233.05	12.82	1084.91	-91.22	-9526.96
3	4	-820.27	2025.80	16.29	1121.51	87.96	11264.04

Combination No. 654
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	814.53	2229.90	19.39	1401.61	-131.77	-10370.52
3	4	-872.43	2160.31	22.68	1440.00	125.52	11878.88

Combination No. 655
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	803.66	2093.31	14.50	1231.14	-113.69	-10575.67
3	4	-858.24	2296.91	20.12	1299.26	102.07	11310.54

Combination No. 656
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.47	2077.45	14.99	1012.19	-112.79	-9905.21
3	4	-823.34	2155.32	20.80	1070.40	110.07	10969.32

Units: US (English)

Design Code: AASHTO LRFD

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Combination No. 657
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	774.87	2088.99	15.21	1557.12	-122.86	-10002.92
3	4	-829.75	2171.40	20.59	1637.43	100.01	11056.56

Combination No. 658
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	818.28	2221.89	14.51	1230.49	-114.28	-10460.09
3	4	-872.86	2168.32	20.11	1299.91	101.48	11848.08

Combination No. 659
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	771.95	2046.78	14.73	1512.99	-124.32	-10061.37
3	4	-826.53	2204.50	19.89	1604.44	91.45	10909.53

Combination No. 660
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.72	2037.71	14.30	989.38	-104.58	-9960.24
3	4	-820.31	2186.47	20.32	1037.48	111.18	10830.89

Combination No. 661
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.96	2150.43	14.50	1230.85	-113.96	-10638.04
3	4	-871.54	2239.78	20.12	1299.55	101.81	11632.11

Combination No. 662
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	768.47	2077.45	14.99	1012.19	-112.79	-9905.21
3	4	-823.34	2155.32	20.80	1070.40	110.07	10969.32

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	803.72	2292.70	14.52	1230.13	-114.61	-10082.92
3	4	-858.30	2097.51	20.10	1300.27	101.15	11805.01

Combination No. 663

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	771.02	2161.53	15.24	999.93	-123.96	-9743.90
3	4	-825.90	2071.24	20.56	1082.66	98.91	11204.51

Combination No. 664

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	771.52	2178.26	14.96	1570.14	-111.00	-9830.99
3	4	-832.39	2082.13	20.84	1624.41	111.86	11304.79

Combination No. 665

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	771.96	2200.29	14.29	1535.31	-103.99	-9681.54
3	4	-826.54	2050.99	20.33	1582.12	111.77	11289.70

Combination No. 666

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.82	2182.27	14.71	968.35	-123.72	-9603.61
3	4	-820.40	2041.91	19.91	1058.50	92.04	11190.34

Combination No. 667

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	767.66	2234.96	7.99	868.13	-75.90	-9567.31

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-818.98	2025.03	13.67	1940.52	61.76	11232.65

Combination No. 668

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	744.57	2156.11	7.75	1110.75	-64.60	-9292.69
3	4	-795.88	1994.91	13.91	1158.32	73.05	10840.69

Combination No. 669

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	767.62	2023.24	7.97	869.20	-74.92	-10075.39
3	4	-818.94	2236.75	13.69	939.44	62.73	10723.37

Combination No. 670

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	744.57	1993.11	8.21	1087.00	-86.22	-9684.12
3	4	-795.88	2157.91	13.45	1182.06	51.43	10449.10

Combination No. 671

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	782.14	2090.76	14.60	1519.42	-118.46	-10108.35
3	4	-836.72	2160.52	20.02	1598.02	97.30	11156.51

Combination No. 672

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	775.42	2079.12	14.42	983.33	-110.09	-10006.35
3	4	-830.00	2145.06	20.20	1043.53	105.67	11064.55

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Combination No. 673
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.26	2133.20	14.43	1150.72	-110.51	-10426.46
3	4	-858.84	2201.67	20.19	1211.83	105.26	11477.14

Combination No. 674
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	710.57	1942.02	1.33	471.30	-27.25	9149.20
3	4	-757.13	2063.16	4.14	563.78	-3.21	9934.17

Combination No. 675
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	722.73	1956.36	-1.52	342.57	-18.69	-9364.26
3	4	-769.29	2114.21	4.33	416.25	5.35	10069.98

Combination No. 676
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	803.92	2198.15	14.48	1147.98	-113.00	-10240.68
3	4	-858.50	2136.72	20.14	1214.57	102.77	11652.91

Combination No. 677
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	780.48	2056.83	14.62	1438.95	-119.39	-10212.20
3	4	-835.06	2240.28	20.00	1519.59	96.37	11004.75



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Combination No. 679
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.69	2154.67	14.59	1058.35	-118.20	-10095.89
3	4	-845.27	2124.86	20.03	1136.36	97.57	11415.84

Combination No. 680
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	803.38	2291.73	14.47	1287.52	-112.61	-10078.67
3	4	-857.96	2097.03	20.15	1353.26	103.15	11799.47

Combination No. 681
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	776.13	2225.48	14.60	1057.99	-118.52	-9718.71
3	4	-830.71	2054.04	20.02	1136.72	97.24	11372.77

Combination No. 682
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.59	2124.68	14.50	1365.46	-113.98	-10466.17
3	4	-859.17	2218.25	20.12	1434.20	101.79	11446.84

Combination No. 683
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	793.57	2120.45	14.62	1439.14	-119.22	-10253.19
3	4	-848.15	2176.65	20.00	1519.41	96.54	11341.61

Combination No. 684
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	722.83	2115.94	-1.50	341.76	-19.43	-9018.29



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-769.39	1954.64	4.31	417.07	4.61	10418.94

Combination No. 684

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	708.28	2054.93	-1.34	215.22	-26.77	-8855.79
3	4	-754.84	1937.50	4.15	306.65	-2.73	10161.39

Combination No. 685

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.01	2194.04	14.42	1369.42	-110.37	-10296.09
3	4	-860.59	2148.89	20.19	1430.24	105.39	11658.03

Combination No. 686

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	781.66	2152.78	14.42	1528.38	-110.30	-9931.56
3	4	-836.24	2098.50	20.20	1589.05	105.46	11319.45

Combination No. 687

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	774.86	2137.52	14.58	974.88	-117.78	-9838.23
3	4	-829.44	2086.66	20.03	1051.97	97.99	11216.50

Combination No. 688

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	767.42	2234.13	7.95	913.75	-73.78	-9564.40
3	4	-818.73	2024.72	13.71	981.47	63.88	11228.43

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.31	2230.99	14.51	1230.45	-114.33	-10407.96
3	4	-870.89	2159.23	20.11	1299.95	101.44	11843.27

Combination No. 689

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.49	2095.88	11.34	1126.15	-104.19	-10676.43
3	4	-854.30	2294.34	18.75	1218.21	87.50	11216.79

Combination No. 690

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	773.30	2080.01	11.84	907.20	-103.29	-10005.97
3	4	-819.40	2152.75	19.43	989.35	95.50	10875.57

Combination No. 691

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.70	2091.55	12.06	1452.13	-113.36	-10103.68
3	4	-825.80	2168.83	19.21	1556.38	85.43	10962.81

Combination No. 692

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.11	2224.46	11.35	1125.50	-104.78	-10560.85
3	4	-868.91	2165.76	18.74	1218.85	86.90	11754.34

Combination No. 693

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.11	2224.46	11.35	1125.50	-104.78	-10560.85
3	4	-868.91	2165.76	18.74	1218.85	86.90	11754.34

Combination No. 694

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	776.80	2048.42	11.13	1430.32	-94.49	-9782.30
3	4	-822.60	2048.42	18.96	1501.06	97.20	11195.95

Combination No. 700
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	776.80	2202.85	11.13	1430.32	-94.49	-9782.30
3	4	-822.60	2048.42	18.96	1501.06	97.20	11195.95

Combination No. 701
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	770.65	2184.84	11.56	863.36	-114.22	-9704.37
3	4	-816.46	2039.34	18.53	977.45	77.47	11096.59

Combination No. 702
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	772.50	2237.52	4.84	763.14	-66.40	-9668.07
3	4	-815.03	2022.46	12.29	859.46	47.18	11138.91

Combination No. 703
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	749.40	2158.68	4.59	1005.76	-55.10	-9393.45
3	4	-791.94	1992.34	12.54	1077.26	58.48	10746.95

Combination No. 704
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	772.45	2025.80	4.81	764.21	-65.42	-10176.15
3	4	-814.99	2234.18	12.32	858.39	48.16	10629.63

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	776.78	2049.35	11.57	1408.00	-114.82	-10162.13
3	4	-822.59	2201.93	18.52	1523.39	76.87	10815.78

Combination No. 695
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	770.56	2040.28	11.14	884.38	-95.08	-10061.00
3	4	-816.36	2183.91	18.95	956.43	96.61	10737.14

Combination No. 696
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	821.79	2153.00	11.35	1125.86	-104.46	-10738.80
3	4	-867.60	2237.21	18.74	1218.50	87.23	11538.37

Combination No. 697
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	808.55	2295.27	11.36	1125.14	-105.11	-10183.68
3	4	-854.36	2094.94	18.73	1219.21	86.58	11711.27

Combination No. 698
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	775.86	2164.09	12.08	894.94	-114.46	-9844.66
3	4	-821.96	2068.67	19.19	1001.61	84.33	11110.76

Combination No. 699
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	782.35	2180.83	11.80	1465.15	-101.50	-9931.75

Units: US (English)

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Combination No. 705
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	749.40	1995.68	5.06	982.01	-76.72	-9784.88
3	4	-791.93	2155.34	12.07	1101.01	36.86	10355.36

Combination No. 706
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	786.97	2093.33	11.44	1414.42	-108.96	-10209.12
3	4	-832.77	2157.95	18.65	1516.96	82.72	11062.76

Combination No. 707
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	780.25	2081.69	11.26	878.33	-100.59	-10107.11
3	4	-826.05	2142.50	18.83	962.48	91.10	10970.80

Combination No. 708
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.10	2135.77	11.27	1045.73	-101.01	-10527.22
3	4	-854.90	2199.10	18.82	1130.78	90.68	11383.40

Combination No. 709
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	715.40	1944.59	-4.49	366.31	-17.75	-9249.96
3	4	-753.19	2060.59	2.77	482.72	-17.78	9840.42

Combination No. 710
Group id: STR GP 5 Name: STRENGTH GROUP V

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Combination No. 705
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	749.40	1995.68	5.06	982.01	-76.72	-9784.88
3	4	-791.93	2155.34	12.07	1101.01	36.86	10355.36

Combination No. 706
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	786.97	2093.33	11.44	1414.42	-108.96	-10209.12
3	4	-832.77	2157.95	18.65	1516.96	82.72	11062.76

Combination No. 707
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	780.25	2081.69	11.26	878.33	-100.59	-10107.11
3	4	-826.05	2142.50	18.83	962.48	91.10	10970.80

Combination No. 708
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.10	2135.77	11.27	1045.73	-101.01	-10527.22
3	4	-854.90	2199.10	18.82	1130.78	90.68	11383.40

Combination No. 709
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	715.40	1944.59	-4.49	366.31	-17.75	-9249.96
3	4	-753.19	2060.59	2.77	482.72	-17.78	9840.42

Combination No. 710
Group id: STR GP 5 Name: STRENGTH GROUP V



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Combination No. 711
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	727.56	1958.93	-4.67	237.58	-9.19	-9465.02
3	4	-765.34	2111.64	2.95	335.20	-9.22	9976.23

Combination No. 711
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.75	2200.72	11.33	1042.99	-103.50	-10341.44
3	4	-854.55	2134.15	18.76	1133.52	88.19	11559.17

Combination No. 712
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.31	2059.40	11.46	1333.96	-109.89	-10312.96
3	4	-831.11	2237.71	18.63	1438.54	81.80	10911.00

Combination No. 713
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	795.52	2157.24	11.44	953.36	-108.70	-10196.65
3	4	-841.32	2122.29	18.65	1055.30	82.99	11322.09

Combination No. 714
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.21	2294.30	11.32	1182.52	-103.11	-10179.43
3	4	-854.02	2094.46	18.77	1272.21	88.58	11705.72

Combination No. 715
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	780.96	2228.05	11.45	953.00	-109.02	-9819.47



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-826.76	2051.47	18.64	1055.66	82.67	11279.02

Combination No. 716

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.42	2127.25	11.35	1260.47	-104.48	-10566.93
3	4	-855.22	2215.68	18.74	1353.15	87.21	11353.10

Combination No. 717

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	798.40	2123.02	11.46	1334.15	-109.72	-10353.95
3	4	-844.20	2174.08	18.63	1438.35	81.97	11247.87

Combination No. 718

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	727.66	2118.50	-4.66	236.77	-9.93	-9119.05
3	4	-765.44	1952.07	2.94	336.01	9.96	10325.19

Combination No. 719

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	713.11	2057.50	-4.50	110.22	-17.27	-8956.55
3	4	-750.89	1934.94	2.78	225.59	17.30	10067.64

Combination No. 720

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.85	2196.61	11.27	1264.43	-100.87	-10396.85
3	4	-856.65	2146.32	18.82	1349.19	90.82	11564.29

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	786.49	2155.35	11.27	1423.39	-100.80	-10032.32
3	4	-832.29	2095.93	18.82	1508.00	90.89	11225.70

Combination No. 721

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.69	2140.09	11.43	869.89	-108.28	-9938.99
3	4	-825.49	2084.09	18.66	970.92	83.41	11122.75

Combination No. 722

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	772.25	2236.70	4.79	808.76	-64.28	-9665.16
3	4	-814.78	2022.15	12.34	900.42	49.31	11134.69

Combination No. 723

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	821.14	2233.55	11.35	1125.45	-104.83	-10508.72
3	4	-866.94	2156.66	18.74	1218.90	86.86	11749.53

Combination No. 724

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.58	2100.76	10.41	1100.75	-103.14	-10868.74
3	4	-846.50	2289.45	18.60	1203.25	84.26	11034.68

Combination No. 725

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.85	2196.61	11.27	1264.43	-100.87	-10396.85
3	4	-856.65	2146.32	18.82	1349.19	90.82	11564.29

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	782.39	2084.90	10.90	881.80	-102.24	-10198.28
3	4	-811.60	2147.87	19.28	974.40	92.26	10693.46

Combination No. 727
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.80	2096.44	11.12	1426.73	-112.30	-10295.98
3	4	-818.00	2163.95	19.07	1541.42	82.20	10780.70

Combination No. 728
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.20	2229.34	10.42	1100.10	-103.73	-10753.16
3	4	-861.11	2160.87	18.59	1203.90	83.67	11572.23

Combination No. 729
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.88	2054.23	10.64	1382.60	-113.76	-10354.43
3	4	-814.79	2197.05	18.37	1508.43	73.64	10653.67

Combination No. 730
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.65	2045.16	10.21	858.98	-94.03	-10253.31
3	4	-808.56	2179.02	18.80	941.47	93.37	10555.03

Combination No. 731
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	830.89	2157.88	10.41	1100.46	-103.40	-10931.11

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.64	2300.15	10.43	1099.74	-104.06	-10375.99
3	4	-846.56	2090.06	18.58	1204.26	83.34	11529.16

Combination No. 732
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.64	2300.15	10.43	1099.74	-104.06	-10375.99
3	4	-846.56	2090.06	18.58	1204.26	83.34	11529.16

Combination No. 733
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	784.95	2185.71	11.15	869.54	-113.40	-10036.97
3	4	-814.16	2063.79	19.04	986.65	81.10	10928.65

Combination No. 734
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.44	2185.71	10.87	1439.75	-100.45	-10124.05
3	4	-820.65	2074.68	19.32	1528.40	94.06	11028.93

Combination No. 735
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.89	2207.74	10.20	1404.92	-93.43	-9974.61
3	4	-814.80	2043.54	18.81	1486.11	93.97	11013.84

Combination No. 736
 Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.74	2189.73	10.62	837.96	-113.17	-9896.68
3	4	-808.66	2034.46	18.39	962.49	74.23	10914.48

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-823.31	2232.82	18.48	1423.58	78.56	10728.89

Combination No. 748

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.61	2162.12	10.50	927.96	-107.64	-10388.95
3	4	-833.52	2117.40	18.51	1040.35	79.76	11139.98

Combination No. 749

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.30	2299.18	10.38	1157.12	-102.06	-10371.73
3	4	-846.22	2089.57	18.63	1257.25	85.34	11523.61

Combination No. 750

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.05	2232.93	10.51	927.60	-107.97	-10011.78
3	4	-818.96	2046.59	18.50	1040.71	79.43	11096.91

Combination No. 751

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	818.51	2132.13	10.41	1235.07	-103.42	-10759.23
3	4	-847.42	2210.80	18.60	1338.19	83.98	11170.98

Combination No. 752

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	807.49	2127.91	10.53	1308.75	-108.67	-10546.26
3	4	-836.40	2169.20	18.48	1423.40	78.73	11065.76

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	736.75	2123.39	-5.59	211.37	-8.88	-9311.35
3	4	-757.64	1947.18	2.79	321.06	-13.19	10143.08

Combination No. 753

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	722.20	2062.39	-5.43	84.82	-16.22	-9148.85
3	4	-743.09	1930.05	2.63	210.64	-20.54	9885.53

Combination No. 754

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.94	2201.50	10.34	1239.03	-99.82	-10589.15
3	4	-848.85	2141.44	18.67	1334.23	87.58	11382.17

Combination No. 755

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	795.58	2160.23	10.33	1397.99	-99.75	-10224.63
3	4	-824.49	2091.04	18.68	1493.04	87.65	11043.59

Combination No. 756

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.78	2144.98	10.50	844.49	-107.22	-10131.30
3	4	-817.69	2079.21	18.52	955.97	80.18	10940.64

Combination No. 757

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	807.49	2127.91	10.53	1308.75	-108.67	-10546.26
3	4	-836.40	2169.20	18.48	1423.40	78.73	11065.76

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	781.34	2241.58	3.86	783.36	-63.22	-9857.46
3	4	-806.98	2017.27	12.19	885.46	46.07	10952.57

Combination No. 759

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 759

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	830.23	2238.44	10.42	1100.05	-103.77	-10701.02
3	4	-859.14	2151.77	18.59	1203.94	83.63	11567.41

Combination No. 760

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 760

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.14	2103.45	9.87	1072.84	-98.47	-10982.32
3	4	-842.31	2286.76	17.67	1170.16	80.69	10931.99

Combination No. 761

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 761

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	787.94	2087.59	10.37	853.89	-97.57	-10311.86
3	4	-807.41	2145.17	18.35	941.31	88.69	10590.77

Combination No. 762

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 762

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.35	2099.13	10.58	1398.82	-107.63	-10409.57
3	4	-813.82	2161.26	18.14	1508.33	78.63	10678.01

Combination No. 763

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 763

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.76	2232.03	9.88	1072.19	-99.06	-10866.74



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-856.93	2158.18	17.66	1170.81	80.10	11469.54

Combination No. 764

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 764

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.43	2056.92	10.10	1354.69	-109.09	-10468.02
3	4	-810.60	2194.35	17.44	1475.34	70.07	10530.99

Combination No. 765

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 765

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.20	2047.85	9.67	831.07	-89.36	-10366.89
3	4	-804.37	2176.33	17.87	908.38	89.81	10452.35

Combination No. 766

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 766

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	836.44	2160.58	9.87	1072.55	-98.74	-11044.69
3	4	-855.61	2229.64	17.67	1170.45	80.43	11253.57

Combination No. 767

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 767

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.20	2302.85	9.89	1071.83	-99.39	-10489.57
3	4	-842.37	2087.37	17.65	1171.17	79.77	11426.47

Combination No. 768

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 768

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.50	2171.67	10.61	841.63	-108.74	-10150.55
3	4	-809.97	2061.09	18.11	953.57	77.53	10825.97



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Combination No. 769
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.99	2188.41	10.33	1411.84	-95.78	-10237.64
3	4	-816.46	2071.98	18.39	1495.32	90.49	10926.25

Combination No. 770
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.44	2210.43	9.66	1377.01	-88.77	-10088.19
3	4	-810.61	2040.84	17.88	1453.02	90.40	10911.16

Combination No. 771
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.30	2192.42	10.08	810.05	-108.50	-10010.26
3	4	-804.47	2031.76	17.46	929.41	70.66	10811.79

Combination No. 772
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	787.14	2245.10	3.36	709.83	-60.68	-9973.96
3	4	-803.04	2014.89	11.22	811.42	40.38	10854.11

Combination No. 773
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	764.05	2166.25	3.12	952.45	-49.38	-9699.34
3	4	-779.95	1984.76	11.46	1029.22	51.68	10462.15

Combination No. 774
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.99	2188.41	10.33	1411.84	-95.78	-10237.64
3	4	-816.46	2071.98	18.39	1495.32	90.49	10926.25

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	787.10	2033.38	3.34	710.90	-59.70	-10482.04
3	4	-803.00	2226.61	11.24	810.34	41.36	10344.83

Combination No. 775
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	764.04	2003.26	3.59	928.70	-71.00	-10090.78
3	4	-779.95	2147.76	11.00	1052.96	30.06	10070.56

Combination No. 776
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.61	2100.91	9.97	1361.11	-103.24	-10515.01
3	4	-820.78	2150.37	17.57	1468.92	75.92	10777.96

Combination No. 777
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.89	2089.26	9.79	825.02	-94.87	-10413.00
3	4	-814.06	2134.92	17.75	914.43	84.30	10686.01

Combination No. 778
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.74	2143.35	9.80	992.42	-95.28	-10833.11
3	4	-842.91	2191.52	17.74	1082.74	83.88	11098.60

Combination No. 779
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	730.05	1952.17	-5.96	313.00	-12.03	-9555.85

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-741.20	2053.02	1.70	434.68	-24.58	9555.62

Combination No. 780

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	742.21	1966.51	-6.15	184.27	-3.47	-9770.91
3	4	-753.35	2104.06	1.88	287.15	-16.02	9691.43

Combination No. 781

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.40	2208.30	9.85	989.68	-97.77	-10647.33
3	4	-842.56	2126.57	17.69	1085.47	81.39	11274.37

Combination No. 782

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.95	2066.97	9.99	1280.65	-104.17	-10618.85
3	4	-819.12	2230.13	17.55	1390.49	74.99	10626.21

Combination No. 783

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.17	2164.82	9.96	900.05	-102.97	-10502.54
3	4	-829.34	2114.71	17.58	1007.26	76.19	11037.30

Combination No. 784

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.86	2301.88	9.84	1129.21	-97.39	-10485.32
3	4	-842.03	2086.88	17.70	1224.17	81.77	11420.93

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Combination No. 785

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	795.61	2235.63	9.97	899.69	-103.30	-10125.36
3	4	-814.78	2043.90	17.57	1007.62	75.86	10994.23

Combination No. 786

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.07	2134.83	9.87	1207.16	-98.76	-10872.82
3	4	-843.24	2208.11	17.67	1305.10	80.41	11068.30

Combination No. 787

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.04	2130.60	9.99	1280.84	-104.00	-10659.84
3	4	-832.21	2166.50	17.55	1390.31	75.16	10963.07

Combination No. 788

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	742.31	2126.08	-6.13	183.46	-4.21	-9424.94
3	4	-753.46	1944.49	1.86	287.97	-16.76	10040.39

Combination No. 789

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	727.76	2065.08	-5.97	56.91	-11.55	-9252.44
3	4	-738.91	1927.36	1.71	177.55	-24.11	9782.84

Combination No. 790

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	822.86	2301.88	9.84	1129.21	-97.39	-10485.32
3	4	-842.03	2086.88	17.70	1224.17	81.77	11420.93

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-860.23	2331.36	-35.03	-1806.71	-218.90	11238.15

Combination No. 796

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	793.10	2107.59	-37.69	-2119.98	222.05	-10362.53
3	4	-825.03	2189.56	-35.52	-2101.47	-218.06	10890.41

Combination No. 797

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.51	2119.13	-37.48	-1575.05	211.99	-10460.24
3	4	-831.44	2205.64	-35.73	-1534.44	-228.12	10971.65

Combination No. 798

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	842.62	2251.81	-36.99	-1835.37	213.51	-10910.92
3	4	-874.84	2202.78	-35.04	-1806.06	-219.49	11775.70

Combination No. 799

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.30	2076.70	-36.77	-1552.87	203.48	-10512.19
3	4	-828.52	2238.95	-35.26	-1501.52	-229.53	10837.14

Combination No. 800

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.07	2067.63	-37.20	-2076.48	223.22	-10411.06
3	4	-822.29	2220.93	-34.83	-2068.48	-209.79	10758.51

Combination No. 801

Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.49	2204.19	9.80	1211.12	-95.15	-10702.74
3	4	-844.66	2138.74	17.75	1301.15	84.01	11279.49

Combination No. 791

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	801.13	2162.93	9.79	1370.08	-95.08	-10338.21
3	4	-820.30	2088.35	17.75	1459.95	84.08	10940.90

Combination No. 792

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.33	2147.67	9.96	816.58	-102.56	-10244.88
3	4	-813.50	2076.51	17.59	922.88	76.61	10837.96

Combination No. 793

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	786.90	2244.28	3.32	755.45	-58.55	-9971.05
3	4	-802.80	2014.57	11.27	852.37	42.50	10849.89

Combination No. 794

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	835.79	2241.13	9.88	1072.14	-99.10	-10814.61
3	4	-854.95	2149.08	17.66	1170.86	80.06	111464.73

Combination No. 795

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.00	2123.23	-37.00	-1834.72	214.10	-11026.49

Combination No. 796

Group id: STR GP 5 Name: STRENGTH GROUP V



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Combination No. 801
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	841.31	2180.36	-37.00	-1835.01	213.84	-11088.87
3	4	-873.53	2274.24	-35.03	-1806.42	-219.17	11559.73

Combination No. 802
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.06	2322.63	-36.98	-1835.73	213.19	-10533.74
3	4	-860.29	2131.91	-35.05	-1805.70	-219.82	11732.63

Combination No. 803
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	795.66	2191.67	-37.45	-2132.24	210.88	-10201.22
3	4	-827.59	2105.48	-35.76	-2089.21	-229.22	11125.60

Combination No. 804
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.15	2208.40	-37.73	-1562.03	223.84	-10288.31
3	4	-834.08	2116.37	-35.48	-1547.46	-216.27	11225.88

Combination No. 805
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.31	2230.21	-37.21	-1530.55	223.81	-10132.37
3	4	-828.53	2085.45	-34.82	-1523.85	-209.20	11217.31

Combination No. 806
Group id: STR GP 5 Name: STRENGTH GROUP V



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Combination No. 807
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.17	2212.20	-36.79	-2097.51	204.07	-10054.43
3	4	-822.39	2076.36	-35.24	-2047.46	-228.93	11117.95

Combination No. 808
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.75	2262.47	-30.46	-1468.32	174.42	-9946.64
3	4	-824.24	2061.90	-28.61	-1440.41	-180.48	11232.04

Combination No. 809
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.66	2183.62	-30.70	-1225.70	185.72	-9672.02
3	4	-801.15	2031.78	-28.37	-1222.61	-169.19	10840.08

Combination No. 810
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.71	2050.75	-30.48	-1467.24	175.39	-10454.72
3	4	-824.20	2273.62	-28.59	-1441.48	-179.51	10722.75

Combination No. 811
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	765.65	2020.62	-30.23	-1249.44	164.10	-10063.46
3	4	-801.14	2194.78	-28.84	-1198.86	-190.80	10448.49

Combination No. 811
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.48	2120.68	-36.90	-1546.44	209.33	-10559.18



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-838.70	2194.91	-35.13	-1507.95	-223.67	11084.12

Combination No. 812

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.76	2109.04	-37.08	-2082.53	217.71	-10457.17
3	4	-831.98	2179.52	-34.95	-2062.43	-215.30	10992.17

Combination No. 813

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.61	2163.13	-37.07	-1915.14	217.29	-10877.28
3	4	-860.83	2236.13	-34.96	-1894.13	-215.72	11404.76

Combination No. 814

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	726.92	1966.03	-20.80	-804.19	110.37	-9424.55
3	4	-767.16	2103.54	-19.42	-762.54	-130.92	10037.94

Combination No. 815

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	739.07	1980.37	-20.98	-932.91	118.93	-9639.61
3	4	-779.32	2154.59	-19.24	-910.07	-122.36	10173.75

Combination No. 816

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.26	2228.07	-37.02	-1917.88	214.80	-10691.50
3	4	-860.48	2171.18	-35.01	-1891.40	-218.21	11580.53

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Combination No. 817

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.82	2086.75	-36.88	-1626.91	208.40	-10643.02
3	4	-837.04	2274.73	-35.15	-1586.37	-224.60	10932.37

Combination No. 818

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.03	2184.60	-36.91	-2007.51	209.60	-10546.71
3	4	-847.25	2159.31	-35.12	-1969.61	-223.41	11343.45

Combination No. 819

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	827.72	2321.66	-37.03	-1778.34	215.18	-10529.49
3	4	-859.95	2131.48	-35.00	-1752.70	-217.82	11727.08

Combination No. 820

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	800.47	2255.41	-36.90	-2007.87	209.27	-10169.54
3	4	-832.69	2088.50	-35.13	-1969.25	-223.73	11300.38

Combination No. 821

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.93	2154.60	-37.00	-1700.40	213.82	-10916.99
3	4	-861.16	2252.71	-35.03	-1671.76	-219.19	11374.46

Combination No. 822

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.91	2150.38	-36.88	-1626.72	208.58	-10704.01
3	4	-850.13	2211.11	-35.15	-1586.56	-224.43	11269.23

Combination No. 823

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 823

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	739.18	2139.94	-20.97	-933.72	118.19	-9293.64
3	4	-779.42	1995.01	-19.25	-909.26	-123.10	10522.71

Combination No. 824

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 824

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	724.62	2078.94	-20.81	-1060.27	110.84	-9131.14
3	4	-764.87	1977.88	-19.41	-1019.67	-130.45	10265.16

Combination No. 825

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 825

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	830.36	2223.97	-37.08	-1696.44	217.43	-10746.91
3	4	-862.58	2183.34	-34.96	-1675.72	-215.58	11585.65

Combination No. 826

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 826

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.00	2182.70	-37.08	-1537.48	217.50	-10382.38
3	4	-838.22	2132.95	-34.95	-1516.91	-215.51	11247.06

Combination No. 827

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 827

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	799.20	2167.45	-36.92	-2090.98	210.02	-10289.05

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.42	2121.11	-35.12	-2053.99	-222.99	11144.12

Combination No. 828

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 828

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.50	2261.64	-30.50	-1422.70	176.54	-9943.73
3	4	-823.99	2061.59	-28.57	-1399.45	-178.36	11227.82

Combination No. 829

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 829

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	840.65	2260.91	-36.99	-1835.42	213.47	-10858.78
3	4	-872.87	2193.68	-35.04	-1806.01	-219.54	11770.89

Combination No. 830

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 830

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.00	2103.41	-41.14	-1979.52	228.09	-10869.68
3	4	-844.58	2286.80	-36.96	-1922.25	-238.89	11013.40

Combination No. 831

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 831

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	782.10	2087.77	-41.83	-2264.78	236.03	-10205.71
3	4	-809.39	2145.00	-37.45	-2217.01	-238.05	10665.66

Combination No. 832

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 832

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.50	2099.31	-41.61	-1719.85	225.97	-10303.42
3	4	-815.79	2161.08	-37.67	-1649.99	-248.11	10752.90

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Combination No. 833

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.61	2231.99	-41.12	-1980.17	227.49	-10754.10
3	4	-859.20	2158.22	-36.98	-1921.60	-239.48	11550.95

Combination No. 834

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.29	2056.88	-40.91	-1697.67	217.46	-10355.37
3	4	-812.87	2194.39	-37.19	-1617.06	-249.51	10612.40

Combination No. 835

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.06	2047.81	-41.33	-2221.28	237.20	-10254.24
3	4	-806.65	2176.37	-36.77	-2184.02	-229.78	10533.76

Combination No. 836

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	830.30	2160.53	-41.13	-1979.81	227.82	-10932.05
3	4	-857.88	2229.68	-36.97	-1921.96	-239.15	11334.98

Combination No. 837

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.06	2302.80	-41.12	-1980.53	227.17	-10376.92
3	4	-844.64	2087.41	-36.98	-1921.24	-239.81	11507.88

Combination No. 838

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	754.65	2163.80	-34.83	-1370.50	199.70	-9515.21
3	4	-784.65	2071.34	-30.55	-1555.95	-200.47	111007.29

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Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	784.66	2171.85	-41.58	-2277.04	224.86	-10044.41
3	4	-811.95	2060.92	-37.69	-2204.75	-249.21	10900.85

Combination No. 840

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.15	2188.58	-41.86	-1706.83	237.82	-10131.49
3	4	-818.44	2071.81	-37.41	-1663.00	-236.25	11001.13

Combination No. 841

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.30	2210.39	-41.35	-1675.35	237.79	-9975.55
3	4	-812.89	2040.88	-36.75	-1639.39	-229.18	10992.56

Combination No. 842

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.16	2192.38	-40.92	-2242.31	218.06	-9897.61
3	4	-806.74	2031.80	-37.18	-2163.00	-248.92	10893.20

Combination No. 843

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	777.74	2242.65	-34.59	-1613.12	188.40	-9789.83
3	4	-808.60	2017.34	-30.55	-1555.95	-200.47	111007.29

Combination No. 844

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	754.65	2163.80	-34.83	-1370.50	199.70	-9515.21
3	4	-784.65	2071.34	-30.55	-1555.95	-200.47	111007.29

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-785.50	1987.22	-30.31	-1338.15	-189.17	10615.33

Combination No. 844

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	777.70	2030.93	-34.61	-1612.05	189.37	-10297.91
3	4	-808.55	2229.06	-30.53	-1557.02	-199.49	10498.01

Combination No. 845

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	754.64	2000.80	-34.37	-1394.24	178.08	-9906.64
3	4	-785.50	2150.22	-30.77	-1314.41	-210.79	10223.74

Combination No. 846

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	795.47	2100.86	-41.03	-1691.24	223.31	-10402.36
3	4	-823.06	2150.41	-37.07	-1623.49	-243.66	10859.37

Combination No. 847

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.75	2089.22	-41.21	-2227.34	231.69	-10300.36
3	4	-816.34	2134.96	-36.88	-2177.97	-235.29	10767.42

Combination No. 848

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.60	2143.30	-41.21	-2059.94	231.27	-10720.46
3	4	-845.19	2191.57	-36.89	-2009.67	-235.70	11180.01

Units: US (English)

Design Code: AASHTO LRFD



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File Name: | Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	715.91	1946.21	-24.93	-948.99	124.35	-9267.74
3	4	-751.52	2058.98	-21.36	-878.08	-150.91	9813.19

Combination No. 849

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	728.06	1960.55	25.12	-1077.71	132.91	-9482.79
3	4	-763.67	2110.02	-21.17	-1025.61	-142.35	9949.00

Combination No. 850

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.25	2208.25	-41.15	-2062.68	228.78	-10534.68
3	4	-844.84	2126.62	-36.95	-2006.94	-238.19	11355.78

Combination No. 851

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	793.81	2066.93	-41.01	-1771.71	222.39	-10506.20
3	4	-821.40	2230.17	-37.09	-1701.91	-244.59	10707.62

Combination No. 852

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.02	2164.77	-41.04	-2152.31	223.58	-10389.89
3	4	-831.61	2114.75	-37.06	-2085.15	-243.39	11118.71

Combination No. 853

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.02	2164.77	-41.04	-2152.31	223.58	-10389.89
3	4	-831.61	2114.75	-37.06	-2085.15	-243.39	11118.71

Combination No. 854

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.72	2301.84	-41.16	-1923.15	229.16	-10372.67
3	4	-844.30	2086.92	-36.94	-1868.24	-237.81	11502.34

Combination No. 855

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 855

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	789.46	2235.59	-41.03	-2152.67	223.26	-10012.72
3	4	-817.05	2043.94	-37.07	-2084.79	-243.72	11075.64

Combination No. 856

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 856

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	817.92	2134.78	-41.13	-1845.20	227.80	-10760.17
3	4	-845.51	2208.15	-36.97	-1787.30	-239.17	11149.71

Combination No. 857

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 857

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.90	2130.56	-41.02	-1771.52	222.56	-10547.19
3	4	-834.49	2166.55	-37.08	-1702.10	-244.42	11044.48

Combination No. 858

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 858

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	728.17	2120.12	-25.10	-1078.53	132.17	-9136.82
3	4	-763.78	1950.45	-21.19	-1024.80	-143.09	10297.96

Combination No. 859

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 859

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	713.62	2059.12	-24.94	-1205.07	124.83	-8974.32

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	749.23	1933.32	-21.35	-1135.21	-150.43	10040.41
3	4	-749.23	1933.32	-21.35	-1135.21	-150.43	10040.41

Combination No. 860

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 860

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.35	2204.15	-41.21	-1841.24	231.41	-10590.09
3	4	-846.94	2138.78	-36.89	-1791.26	-235.57	11360.90

Combination No. 861

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 861

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	794.99	2162.88	-41.21	-1682.28	231.48	-10225.57
3	4	-822.58	2088.39	-36.89	-1632.45	-235.50	11022.31

Combination No. 862

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 862

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	788.19	2147.63	-41.05	-2235.78	224.00	-10132.24
3	4	-815.78	2076.55	-37.05	-2169.53	-242.97	10919.37

Combination No. 863

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 863

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	777.49	2241.82	-34.64	-1567.50	190.52	-9786.91
3	4	-808.35	2017.03	-30.50	-1515.00	-198.34	11003.07

Combination No. 864

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 864

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	829.64	2241.09	-41.12	-1980.22	227.45	-10701.96
3	4	-857.23	2149.12	-36.98	-1921.55	-239.52	11546.14

Units: US (English)

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		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-811.35	2039.80	-39.33	-1779.43	-253.26	10956.96

Combination No. 876
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	780.93	2193.46	-45.80	-2413.47	235.50	-9935.05
3	4	-805.20	2030.72	-39.75	-2303.05	-273.00	10857.60

Combination No. 877
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.51	2243.73	-39.47	-1784.28	205.85	-9827.27
3	4	-807.06	2016.26	-33.12	-1695.99	-224.55	10971.68

Combination No. 878
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	756.42	2164.88	-39.71	-1541.66	217.14	-9552.64
3	4	-783.96	1986.14	-32.88	-1478.19	-213.25	10579.72

Combination No. 879
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.47	2032.01	-39.49	-1783.21	206.82	-10335.34
3	4	-807.02	2227.98	33.10	-1697.07	-223.57	10462.40

Combination No. 880
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	756.41	2001.88	-39.24	-1565.41	195.52	-9944.08
3	4	-783.96	2149.13	33.35	-1454.45	-234.87	10188.13

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Combination No. 881
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	797.24	2101.95	-45.91	-1862.41	240.76	-10439.80
3	4	-821.52	2149.33	-39.64	-1763.53	-267.74	10823.76

Combination No. 882
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	790.52	2090.30	46.09	2398.50	249.14	-10337.79
3	4	-814.80	2133.88	-39.46	-2318.02	-259.37	10731.81

Combination No. 883
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.37	2144.39	-46.08	-2231.11	248.72	-10757.90
3	4	-843.65	2190.48	-39.47	-2149.72	-259.78	11144.40

Combination No. 884
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	717.68	1947.29	-29.81	-1120.15	141.80	-9305.18
3	4	-749.98	2057.90	-23.93	-1018.13	-174.99	9777.58

Combination No. 885
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	729.84	1961.63	-29.99	-1248.87	150.36	-9520.23
3	4	-762.13	2108.94	-23.75	-1165.65	-166.43	9913.39

Combination No. 886
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	729.84	1961.63	-29.99	-1248.87	150.36	-9520.23
3	4	-762.13	2108.94	-23.75	-1165.65	-166.43	9913.39

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.02	2209.33	-46.03	-2233.84	246.23	-10572.12
3	4	-843.30	2125.53	-39.52	-2146.98	-262.27	11320.17

Combination No. 887

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	795.58	2068.01	-45.89	-1942.87	239.83	-10543.64
3	4	-819.86	2229.09	-39.66	-1841.96	-268.67	10672.01

Combination No. 888

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.79	2165.86	-45.92	-2323.48	241.03	-10427.33
3	4	-830.07	2113.67	-39.63	-2225.19	-267.47	11083.10

Combination No. 889

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	818.49	2302.92	-46.04	-2094.31	246.61	-10410.11
3	4	-842.76	2085.84	-39.51	-2008.29	-261.89	11466.73

Combination No. 890

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.24	2236.67	-45.91	-2323.83	240.70	-10050.16
3	4	-815.51	2042.86	-39.64	-2224.83	-267.80	11040.03

Combination No. 891

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.70	2135.87	-46.01	-2016.30	245.25	-10797.61

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-843.97	2207.07	-39.54	-1927.35	-263.25	11114.10

Combination No. 892

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	808.67	2131.64	-45.89	-1942.68	240.00	-10584.63
3	4	-832.95	2165.46	-39.66	-1842.14	-268.50	11008.87

Combination No. 893

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	729.94	2121.20	-29.98	-1249.69	149.62	-9174.26
3	4	-762.24	1949.37	-23.76	-1164.84	-167.17	10262.35

Combination No. 894

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	715.39	2060.20	-29.82	-1376.23	142.27	-9011.76
3	4	-747.69	1932.24	-23.92	-1275.26	-174.51	10004.80

Combination No. 895

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	821.12	2205.23	-46.08	-2012.40	248.85	-10627.53
3	4	-845.40	2137.70	-39.46	-1931.31	-259.65	11325.29

Combination No. 896

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.76	2163.96	-46.09	-1853.44	248.92	-10263.01
3	4	-821.04	2087.31	-39.46	-1772.50	-259.58	10986.70

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 897

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	789.96	2148.71	-45.92	-2406.94	241.45	-10169.68
3	4	-814.24	2075.47	-39.62	-2309.58	-267.05	10883.76

Combination No. 898

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	779.27	2242.90	-39.51	-1738.66	207.97	-9824.35
3	4	-806.81	2015.94	-33.08	-1655.04	-222.42	10967.46

Combination No. 899

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	831.41	2242.17	-46.00	-2151.38	244.90	-10739.40
3	4	-855.69	2148.04	-39.55	-2061.60	-263.60	11510.53

Combination No. 900

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.66	2051.46	-49.36	-2497.44	264.15	-10392.44
3	4	-801.16	2172.72	-40.71	-2405.12	-268.43	10404.40

Combination No. 901

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	836.90	2164.18	-49.16	-2255.97	254.77	-11070.25
3	4	-852.40	2226.03	-40.92	-2143.05	-277.81	11205.63

Combination No. 902

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.66	2306.46	-49.15	-2256.68	254.12	-10515.12
3	4	-823.66	2306.46	-49.15	-2256.68	254.12	-10515.12

Combination No. 903

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.22	2235.64	-49.16	-2256.32	254.44	-10892.30
3	4	-853.72	2154.57	-40.92	-2142.69	-278.13	11421.60

Combination No. 904

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.89	2060.53	-48.94	-1973.82	244.41	-10493.57
3	4	-807.39	2190.74	-41.14	-1838.16	-288.16	10483.04

Combination No. 905

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.89	2060.53	-48.94	-1973.82	244.41	-10493.57
3	4	-807.39	2190.74	-41.14	-1838.16	-288.16	10483.04

Combination No. 906

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.66	2051.46	-49.36	-2497.44	264.15	-10392.44
3	4	-801.16	2172.72	-40.71	-2405.12	-268.43	10404.40

Combination No. 907

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	836.90	2164.18	-49.16	-2255.97	254.77	-11070.25
3	4	-852.40	2226.03	-40.92	-2143.05	-277.81	11205.63

Combination No. 908

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.66	2306.46	-49.15	-2256.68	254.12	-10515.12
3	4	-823.66	2306.46	-49.15	-2256.68	254.12	-10515.12

		Sheet #	185
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		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-839.16	2083.76	-40.93	-2142.34	-278.46	11378.53

Combination No. 908
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.26	2175.50	-49.62	-2553.19	251.81	-10182.61
3	4	-806.46	2057.27	-41.64	-2425.85	-287.86	10771.50

Combination No. 909
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	797.75	2192.23	-49.90	-1982.98	264.77	-10269.69
3	4	-812.95	2068.16	-41.36	-1884.10	-274.91	10871.78

Combination No. 910
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	791.90	2214.04	-49.38	-1951.50	264.74	-10113.75
3	4	-807.40	2037.23	-40.70	-1860.48	-267.84	10863.21

Combination No. 911
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	785.76	2196.03	-48.95	-2518.46	245.00	-10035.81
3	4	-801.26	2028.15	-41.13	-2384.10	-287.57	10763.85

Combination No. 912
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	784.34	2246.30	-42.62	-1889.27	215.35	-9928.03
3	4	-803.11	2013.69	-34.50	-1777.05	-239.12	10877.93

Units: US (English) Design Code: AASHTO LRFD

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Combination No. 913
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	761.25	2167.45	-42.87	-1646.65	226.64	-9653.40
3	4	-780.02	1983.57	-34.25	-1559.25	-227.82	10485.97

Combination No. 914
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	784.30	2034.58	-42.64	-1888.20	216.32	-10436.11
3	4	-803.07	2225.41	-34.48	-1778.12	-238.15	10368.65

Combination No. 915
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	761.25	2004.45	-42.40	-1670.40	205.02	-10044.84
3	4	-780.01	2146.57	-34.72	-1535.50	-249.44	10094.38

Combination No. 916
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	802.07	2104.51	-49.06	-1967.40	250.26	-10540.56
3	4	-817.57	2146.76	-41.01	-1844.59	-282.31	10730.02

Combination No. 917
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	795.35	2092.87	-49.25	-2503.49	258.64	-10438.55
3	4	-810.85	2131.31	-40.83	-2399.07	-273.94	10638.06

Combination No. 918
Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English) Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.20	2146.95	-49.24	-2336.10	258.22	-10858.66
3	4	-839.70	2187.91	-40.84	-2230.77	-274.35	11050.66

Combination No. 919

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	722.51	1949.86	-32.96	-1225.14	151.30	-9405.94
3	4	-746.03	2055.33	-25.30	-1099.18	-189.56	9683.83

Combination No. 920

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	734.67	1964.20	-33.15	-1353.87	159.86	-9620.99
3	4	-758.19	2106.37	-25.12	-1246.71	-181.00	9819.65

Combination No. 921

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.86	2211.90	-49.18	-2338.83	255.73	-10672.88
3	4	-839.35	2122.97	-40.90	-2228.03	-276.84	11226.43

Combination No. 922

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	800.41	2070.58	-49.04	-2047.86	249.33	-10644.40
3	4	-815.91	2226.52	-41.03	-1923.01	-283.24	10578.20

Combination No. 923

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.63	2168.42	-49.07	-2428.47	250.53	-11028.09

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-826.12	2111.10	-41.01	-2306.25	-282.04	10989.35

Combination No. 924

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	823.32	2305.49	-49.19	-2199.30	256.11	-10510.87
3	4	-838.82	2083.27	-40.89	-2089.34	-276.46	11372.98

Combination No. 925

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	796.07	2239.24	-49.06	-2428.83	250.20	-10150.92
3	4	-811.57	2040.29	-41.01	-2305.89	-282.37	10946.28

Combination No. 926

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	824.53	2138.43	-49.16	-2121.35	254.75	-10898.37
3	4	-840.03	2204.50	-40.92	-2008.40	-277.83	11020.35

Combination No. 927

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	813.50	2134.21	-49.05	-2047.67	249.50	-10685.39
3	4	-829.00	2162.90	-41.03	-1923.20	-283.07	10915.13

Combination No. 928

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	734.77	2123.77	-33.13	-1354.66	159.12	-9275.02
3	4	-758.29	1946.80	-25.14	-1245.89	-181.74	10168.60

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
3	4	-799.59	2185.86	-41.29	-1853.12	-291.40	10300.93

Combination No. 940

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	794.75	2056.35	-50.30	-2522.84	265.20	-10584.75
3	4	-793.36	2167.84	-40.86	-2420.08	-271.66	10222.29

Combination No. 941

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	845.99	2169.07	-50.10	-2281.36	255.82	-11262.55
3	4	-844.60	2221.15	-41.06	-2158.01	-281.04	11023.51

Combination No. 942

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	832.75	2311.34	-50.08	-2282.08	255.17	-10707.43
3	4	-831.36	2078.87	-41.08	-2157.29	-281.69	11196.41

Combination No. 943

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	800.35	2180.38	-50.55	-2578.59	252.87	-10374.91
3	4	-798.66	2052.38	-41.79	-2440.81	-291.10	10589.38

Combination No. 944

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	806.84	2197.12	-50.83	-2008.38	265.82	-10462.00
3	4	-805.15	2063.27	-41.51	-1899.06	-278.14	10689.60

Units: US (English)

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Combination No. 945

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	800.99	2218.92	-50.31	-1976.90	265.79	-10306.05
3	4	-799.60	2032.35	-40.85	-1875.44	-271.07	10681.10

Combination No. 946

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	794.85	2200.91	-49.89	-2543.86	246.06	-10228.12
3	4	-793.46	2023.27	-41.27	-2399.05	-290.81	10581.74

Combination No. 947

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	793.44	2251.18	-43.56	-1914.67	216.40	-10720.33
3	4	-795.31	2008.81	-34.64	-1792.00	-242.36	10695.82

Combination No. 948

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	770.34	2172.33	-43.80	-1672.05	227.70	-9845.71
3	4	-772.22	1978.68	-34.40	-1574.20	-231.06	10303.86

Combination No. 949

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	793.39	2039.46	-43.58	-1913.60	217.38	-10628.41
3	4	-795.27	2220.53	-34.62	-1793.08	-241.38	10186.54

Combination No. 950

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	806.84	2197.12	-50.83	-2008.38	265.82	-10462.00
3	4	-805.15	2063.27	-41.51	-1899.06	-278.14	10689.60

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	770.34	2009.33	-43.33	-1695.80	206.08	-10237.15
3	4	-772.21	2141.68	-34.87	-1550.46	-252.68	9912.27

Combination No. 951
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	811.17	2109.40	-50.00	-1992.80	251.32	-10732.87
3	4	-809.77	2141.88	-41.16	-1859.54	-285.55	10547.91

Combination No. 952
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	804.45	2097.76	-50.18	-2528.89	259.69	-10630.86
3	4	-803.05	2126.43	-40.98	-2414.03	-277.17	10455.95

Combination No. 953
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	833.29	2151.84	-50.17	-2361.50	259.28	-11050.97
3	4	-831.90	2183.03	-40.99	-2245.72	-277.59	10868.54

Combination No. 954
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	731.60	1954.74	-33.90	-1250.54	152.35	-9598.24
3	4	-738.23	2050.45	-25.45	-1114.14	-192.80	9501.72

Combination No. 955
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	743.76	1969.08	-34.08	-1379.27	160.91	-9813.30

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-750.39	2101.49	-25.27	-1261.66	-184.24	9637.53

Combination No. 956
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.95	2216.79	-50.12	-2364.23	256.79	-10865.19
3	4	-831.55	2118.08	-41.04	-2242.99	-280.08	11044.31

Combination No. 957
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.51	2075.46	-49.98	-2073.26	250.39	-10836.71
3	4	-808.11	2221.64	-41.18	-1937.97	-286.48	10396.15

Combination No. 958
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	819.72	2173.31	-50.00	-2453.87	251.59	-10720.40
3	4	-818.32	2106.22	-41.15	-2321.20	-285.28	10807.24

Combination No. 959
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	832.41	2310.37	-50.12	-2224.70	257.17	-10703.18
3	4	-831.02	2078.39	-41.03	-2104.30	-279.70	11190.87

Combination No. 960
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.16	2244.12	-50.00	-2454.23	251.26	-10343.22
3	4	-803.77	2035.41	-41.16	-2320.84	-285.61	10764.17



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-791.91	2133.77	-42.47	-2486.16	-283.50	10251.50

Combination No. 972

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.75	2110.54	-51.11	-2049.31	258.64	-10747.51
3	4	-798.32	2149.85	-42.69	-1919.13	-293.56	10338.75

Combination No. 973

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	852.86	2243.22	-50.63	-2309.63	260.16	-11198.19
3	4	-841.73	2146.99	-42.00	-2190.74	-284.94	11136.80

Combination No. 974

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.54	2068.11	-50.41	-2027.13	250.13	-10799.46
3	4	-795.40	2183.17	-42.21	-1886.21	-294.97	10198.24

Combination No. 975

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	800.31	2059.04	-50.84	-2550.75	269.87	-10698.33
3	4	-789.17	2165.14	-41.79	-2453.17	-275.23	10119.60

Combination No. 976

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	851.55	2171.76	-50.64	-2309.27	260.49	-11376.14
3	4	-840.41	2218.45	-41.99	-2191.10	-284.61	10920.83

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.31	2314.03	-50.62	-2309.99	259.84	-10821.01
3	4	-827.17	2076.18	-42.00	-2190.38	-285.26	11093.73

Combination No. 977

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	805.91	2183.08	-51.09	-2606.50	257.53	-10488.50
3	4	-794.47	2049.69	-42.72	-2473.90	-294.67	10486.70

Combination No. 978

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	812.40	2199.81	-51.37	-2036.29	270.49	-10575.58
3	4	-800.96	2060.58	-42.44	-1932.15	-287.71	10586.98

Combination No. 979

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	806.55	2221.62	-50.85	-2004.81	270.46	-10419.64
3	4	-795.41	2029.66	-41.78	-1908.53	-274.64	10578.41

Combination No. 980

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	800.41	2203.61	-50.42	-2571.77	250.72	-10341.70
3	4	-789.27	2020.58	-42.20	-2432.14	-294.38	10479.05

Combination No. 981

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	851.55	2171.76	-50.64	-2309.27	260.49	-11376.14
3	4	-840.41	2218.45	-41.99	-2191.10	-284.61	10920.83

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	798.99	2175.03	-44.10	-1942.58	221.07	-10233.92
3	4	-791.12	2006.11	-35.57	-1825.09	-245.93	10593.14

Combination No. 983
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	775.90	2175.03	-44.34	-1699.96	232.37	-9959.29
3	4	-768.03	1975.99	-35.33	-1607.29	-234.63	10201.18

Combination No. 984
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	798.99	2042.16	-44.12	-1941.51	222.04	-10742.00
3	4	-791.08	2217.83	35.55	-1826.16	-244.95	10083.85

Combination No. 985
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	775.89	2012.03	-43.87	-1723.71	210.75	-10350.73
3	4	-768.03	2138.99	35.79	-1583.55	256.25	9809.58

Combination No. 986
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.72	2112.09	50.54	-2020.71	255.98	-10846.45
3	4	-805.59	2139.18	-42.09	-1892.63	-289.12	10445.22

Combination No. 987
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.00	2100.45	-50.72	-2556.80	264.36	-10744.45

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.85	2154.53	-50.71	-2389.41	263.94	-11164.55
3	4	-827.71	2180.34	-41.92	-2278.81	-281.16	10765.86

Combination No. 988
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.85	2154.53	-50.71	-2389.41	263.94	-11164.55
3	4	-827.71	2180.34	-41.92	-2278.81	-281.16	10765.86

Combination No. 989
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	737.16	1957.44	-34.44	-1278.45	157.02	-9711.83
3	4	-734.05	2047.75	-26.38	-1147.23	-196.37	9399.04

Combination No. 990
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	749.32	1971.77	-34.62	-1407.18	165.58	-9926.88
3	4	-746.20	2098.80	-26.19	-1294.75	-187.81	9534.85

Combination No. 991
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	838.50	2219.48	-50.66	-2392.14	261.45	-10978.77
3	4	-827.37	2115.39	-41.97	-2276.08	-283.65	10941.63

Combination No. 992
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	815.06	2078.16	-50.52	-2101.17	255.06	-10950.29
3	4	-803.93	2218.94	-42.11	-1971.05	-290.04	10293.46

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Combination No. 993

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	825.27	2176.00	-50.54	-2481.78	256.25	-10833.98
3	4	-814.14	2103.53	-42.08	-2354.29	-288.85	10704.55

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 994

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	837.97	2313.07	-50.66	-2252.61	261.83	-10816.76
3	4	-826.83	2075.69	-41.96	-2137.38	-283.27	11088.18

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 995

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	810.71	2246.82	-50.54	-2482.14	255.93	-10456.81
3	4	-799.58	2032.71	-42.09	-2353.93	-289.17	10661.48

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 996

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	839.17	2146.01	-50.63	-2174.66	260.47	-11204.26
3	4	-828.04	2196.92	-41.99	-2056.45	-284.63	10735.56

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 997

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	828.15	2141.79	-50.52	-2100.98	255.23	-10991.28
3	4	-817.02	2155.32	-42.10	-1971.24	-289.87	10630.33

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 998

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	798.74	2253.05	-44.14	-1896.96	223.19	-10231.00

Group id: STR GP 5 Name: STRENGTH GROUP V

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Combination No. 999

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	749.42	2131.35	-34.61	-1407.99	164.84	-9580.91
3	4	-746.31	1939.22	-26.21	-1293.94	-188.55	9883.81

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1000

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	734.87	2070.34	-34.45	-1534.53	157.49	-9418.41
3	4	-731.75	1922.09	-26.37	-1404.36	-195.89	9626.26

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1001

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	840.60	2215.38	-50.71	-2170.71	264.08	-11034.18
3	4	-829.46	2127.56	-41.91	-2060.40	-281.02	10946.75

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1002

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	816.24	2174.11	-50.71	-2011.74	264.15	-10669.66
3	4	-805.11	2077.16	-41.91	-1901.60	-280.95	10608.16

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1003

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	809.44	2158.86	-50.55	-2565.24	256.67	-10576.33
3	4	-798.31	2065.33	-42.07	-2438.67	-288.43	10505.21

Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-790.88	2005.80	-35.53	-1784.14	-243.80	10588.92

Combination No. 1004

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	850.89	2252.32	-50.63	-2309.68	260.12	-11146.05
3	4	-839.76	2137.89	-42.00	-2190.69	-284.98	11131.99

Combination No. 1005

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.91	1562.90	36.95	2035.55	-211.39	-8851.51
3	4	-610.69	1702.73	35.09	2001.58	221.61	7690.70

Combination No. 1006

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.71	1547.04	37.44	1816.61	-210.49	-8181.05
3	4	-575.79	1561.14	35.71	1772.73	229.61	7349.47

Combination No. 1007

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.12	1558.58	37.66	2361.54	-220.56	-8278.76
3	4	-582.19	1577.23	35.55	2339.76	219.55	7436.71

Combination No. 1008

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.53	1691.48	36.96	2034.90	-211.98	-8735.93
3	4	-625.30	1574.15	35.07	2002.23	221.02	8228.24

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.20	1516.37	37.17	2317.40	-222.02	-8337.21
3	4	-578.98	1610.32	34.86	2306.76	210.99	7289.69

Combination No. 1009

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.97	1507.30	36.75	1793.79	-202.28	-8236.08
3	4	-572.75	1592.30	35.28	1739.80	230.73	7211.05

Combination No. 1010

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.21	1620.02	36.95	2035.26	-211.66	-8913.88
3	4	-623.99	1645.61	35.08	2001.87	221.35	8012.27

Combination No. 1011

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.97	1762.29	36.96	2034.54	-212.31	-8358.76
3	4	-610.75	1503.34	35.07	2002.59	220.70	8185.17

Combination No. 1012

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.27	1631.12	37.68	1804.35	-221.66	-8019.74
3	4	-578.35	1477.06	35.53	1784.99	218.45	7584.67

Combination No. 1013

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.27	1631.12	37.68	1804.35	-221.66	-8019.74
3	4	-578.35	1477.06	35.53	1784.99	218.45	7584.67

Combination No. 1014

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.76	1647.85	37.40	2374.56	-208.70	-8106.83
3	4	-584.84	1487.95	35.80	2326.74	231.41	7684.95

Combination No. 1015
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.21	1669.88	36.74	2339.73	-201.69	-7957.38
3	4	-578.99	1456.81	35.30	2284.44	231.32	7669.86

Combination No. 1016
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.07	1651.86	37.16	1772.77	-221.42	-7879.45
3	4	-572.85	1447.73	34.87	1760.83	211.58	7570.50

Combination No. 1017
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.91	1704.55	30.44	1672.54	-173.60	-7843.15
3	4	-571.42	1430.86	28.63	1642.84	181.30	7612.81

Combination No. 1018
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.82	1625.70	30.20	1915.16	-162.30	-7568.53
3	4	-548.33	1400.73	28.88	1860.64	192.60	7220.85

Combination No. 1019
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.87	1492.83	30.42	1673.62	-172.62	-8351.23



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.81	1462.70	30.66	1891.42	-183.92	-7959.96
3	4	-548.32	1563.73	28.41	1884.38	170.98	6829.26

Combination No. 1020
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.81	1462.70	30.66	1891.42	-183.92	-7959.96
3	4	-548.32	1563.73	28.41	1884.38	170.98	6829.26

Combination No. 1021
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.38	1560.35	37.05	2323.83	-216.16	-8384.19
3	4	-589.16	1566.34	34.98	2300.34	216.84	7536.67

Combination No. 1022
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.66	1548.71	36.87	1787.74	-207.79	-8282.19
3	4	-582.44	1550.89	35.16	1745.86	225.22	7444.71

Combination No. 1023
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.51	1602.79	36.88	1955.13	-208.21	-8702.30
3	4	-611.29	1607.49	35.15	1914.16	224.80	7857.30

Combination No. 1024
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	549.82	1411.62	21.11	1275.71	-124.95	-7425.04
3	4	-509.58	1468.99	19.11	1266.10	116.34	6314.32



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	561.98	1425.95	20.93	1146.98	-116.39	-7640.10
3	4	-521.73	1520.03	19.29	1118.58	124.90	6450.14

Combination No. 1026

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.16	1667.74	36.93	1952.40	-210.70	8516.52
3	4	-610.94	1542.54	35.10	1916.89	222.31	8033.07

Combination No. 1027

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.72	1526.42	37.07	2243.37	-217.09	-8488.04
3	4	-587.50	1646.10	34.96	2221.92	215.91	7384.91

Combination No. 1028

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.94	1624.26	37.04	1862.76	-215.90	-8371.73
3	4	-597.71	1530.68	34.99	1838.68	217.11	7796.00

Combination No. 1029

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.63	1761.32	36.92	2091.93	-210.31	-8354.51
3	4	-610.41	1502.85	35.11	2055.59	222.69	8179.63

Combination No. 1030

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.26	1663.63	36.87	2173.83	-208.07	8571.93



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Combination No. 1031

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.38	1695.07	37.05	1862.40	-216.22	-7994.55
3	4	-583.15	1459.87	34.98	1839.04	216.78	7752.93

Combination No. 1032

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.84	1594.27	36.95	2169.87	-211.68	-8742.01
3	4	-611.62	1624.08	35.08	2136.53	221.33	7827.00

Combination No. 1033

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.81	1590.04	37.06	2243.55	-216.92	-8529.03
3	4	-600.59	1582.47	34.97	2221.73	216.09	7721.77

Combination No. 1034

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	562.08	1585.53	20.95	1146.17	-117.13	-7294.13
3	4	-521.83	1360.46	19.28	1119.39	124.16	6799.09

Combination No. 1035

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	547.53	1524.52	21.10	1019.63	-124.47	-7131.63
3	4	-507.28	1343.33	19.12	1008.97	116.82	6541.54

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-613.04	1554.71	35.16	2132.57	224.94	8038.19

Combination No. 1036

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.90	1622.37	36.87	2332.79	-208.00	-8207.40
3	4	-588.68	1504.32	35.16	2291.37	225.01	7699.60

Combination No. 1037

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.10	1607.11	37.03	1779.30	-215.48	-8114.07
3	4	-581.88	1492.48	35.00	1754.30	217.53	7596.66

Combination No. 1038

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.66	1703.72	30.39	1718.16	-171.48	-7840.24
3	4	-571.17	1430.54	28.68	1683.79	183.42	7608.59

Combination No. 1039

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.55	1700.58	36.96	2034.86	-212.03	-8683.80
3	4	-623.33	1565.05	35.07	2002.28	220.98	8223.43

Combination No. 1040

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.92	1582.72	41.08	2180.35	-225.37	-9008.33
3	4	-626.33	1747.29	37.02	2117.12	241.60	7915.44

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 1041

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.72	1566.86	41.58	1961.41	-224.48	-8337.87
3	4	-591.43	1605.70	37.70	1888.27	249.60	7574.22

Combination No. 1042

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.13	1578.40	41.79	2506.34	-234.54	-8435.58
3	4	-597.84	1621.79	37.48	2455.30	239.54	7661.46

Combination No. 1043

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	668.54	1711.30	41.09	2179.70	-225.97	-8892.75
3	4	-640.95	1618.71	37.01	2117.77	241.01	8452.99

Combination No. 1044

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.21	1536.19	41.31	2462.20	-236.00	-8494.02
3	4	-594.62	1654.88	36.79	2422.31	230.98	7514.44

Combination No. 1045

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.98	1527.12	40.88	1938.59	-216.26	-8392.90
3	4	-588.39	1636.86	37.22	1855.35	250.71	7435.80

Combination No. 1046

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.22	1639.84	41.08	2180.06	-225.64	-9070.70
3	4	-639.63	1690.17	37.02	2117.41	241.33	8237.02

Combination No. 1047

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.98	1782.11	41.10	2179.35	-226.29	-8515.58
3	4	-626.39	1547.90	37.00	2118.13	240.68	8409.92

Combination No. 1048

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.28	1650.94	41.82	1949.15	-235.64	-8176.56
3	4	-593.99	1521.62	37.46	1900.53	238.43	7809.42

Combination No. 1049

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.77	1667.67	41.54	2519.36	-222.68	-8263.64
3	4	-600.48	1532.51	37.74	2442.28	251.39	7909.70

Combination No. 1050

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.22	1689.70	40.87	2484.53	-215.67	-8114.20
3	4	-594.63	1501.37	37.23	2399.98	251.30	7894.61

Combination No. 1051

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.08	1671.69	41.29	1917.57	-235.40	-8036.27

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.92	1724.37	34.57	1817.34	-187.58	-7999.97
3	4	-587.06	1475.42	30.57	1758.38	201.28	7837.56

Combination No. 1052

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.92	1724.37	34.57	1817.34	-187.58	-7999.97
3	4	-587.06	1475.42	30.57	1758.38	201.28	7837.56

Combination No. 1053

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.83	1645.52	34.33	2059.96	-176.28	-7725.34
3	4	-563.97	1445.29	30.81	1976.18	212.58	7445.60

Combination No. 1054

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.88	1512.65	34.55	1818.42	-186.60	-8508.05
3	4	-587.02	1687.14	30.59	1757.31	202.26	7328.28

Combination No. 1055

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.82	1482.52	34.80	2036.22	-197.90	-8116.78
3	4	-563.97	1608.29	30.34	1999.93	190.96	7054.01

Combination No. 1056

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.39	1580.17	41.18	2468.63	-230.15	-8541.01
3	4	-604.80	1610.90	36.92	2415.88	236.83	7761.41

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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1057

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.67	1568.63	41.00	1932.54	-221.77	-8439.01
3	4	-598.09	1595.45	37.10	1861.40	245.20	7669.46

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1058

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.52	1622.61	41.01	2099.93	-222.19	-8859.12
3	4	-626.93	1652.05	37.09	2029.70	244.79	8082.05

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1059

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	560.83	1431.44	25.25	1420.51	-138.93	-7581.86
3	4	-525.22	1513.55	21.04	1381.64	136.32	6539.07

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1060

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	572.98	1445.78	25.06	1291.79	-130.37	-7796.92
3	4	-537.37	1564.59	21.23	1234.12	144.88	6674.88

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1061

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.17	1687.56	41.06	2097.20	-224.68	-8673.33
3	4	-626.59	1587.10	37.04	2032.43	242.30	8257.82



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Combination No. 1063

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.73	1546.24	41.20	2388.17	-231.07	-8644.85
3	4	-603.14	1690.66	36.90	2337.46	235.90	7609.66

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1064

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.94	1644.08	41.18	2007.56	-229.88	-8528.54
3	4	-613.36	1575.24	36.92	1954.22	237.10	8020.75

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1065

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.64	1781.14	41.05	2236.73	-224.29	-8511.32
3	4	-626.05	1547.41	37.04	2171.13	242.68	8404.38

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1066

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.39	1714.89	41.18	2007.20	-230.20	-8151.37
3	4	-598.80	1504.43	36.92	1954.58	236.77	7977.68

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1067

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.85	1614.09	41.08	2314.67	-225.66	-8898.83
3	4	-627.26	1668.64	37.02	2252.07	241.31	8051.75

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-616.23	1627.03	36.90	2337.27	236.07	7946.52

Combination No. 1068

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.09	1605.35	25.08	1290.97	-131.11	-7450.94
3	4	-537.48	1405.02	21.21	1234.93	144.14	7023.84

Combination No. 1069

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	558.54	1544.35	25.24	1164.43	-138.46	-7288.44
3	4	-522.93	1387.89	21.05	1124.51	136.80	6766.29

Combination No. 1070

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.27	1683.46	41.01	2318.63	-222.05	-8728.75
3	4	-628.68	1599.27	37.09	2248.11	244.92	8262.94

Combination No. 1071

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.91	1642.19	41.00	2477.59	-221.98	-8364.22
3	4	-604.32	1548.88	37.09	2406.92	244.99	7924.35

Combination No. 1072

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.11	1626.94	41.17	1924.10	-229.46	-8270.89
3	4	-597.53	1537.04	36.93	1869.84	237.51	7821.41

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Combination No. 1073

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.67	1723.54	34.53	1862.96	-185.46	-7997.05
3	4	-586.82	1475.10	30.61	1799.33	203.41	7833.34

Combination No. 1074

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.56	1720.40	41.09	2179.66	-226.01	-8840.62
3	4	-638.98	1609.61	37.01	2117.82	240.97	8448.18

Combination No. 1075

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.14	1581.64	45.95	2351.52	-242.82	-8970.89
3	4	-627.87	1748.37	39.59	2257.17	265.68	7951.05

Combination No. 1076

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.95	1565.78	46.45	2132.57	-241.92	-8300.43
3	4	-592.97	1606.78	40.27	2028.31	273.68	7609.83

Combination No. 1077

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.36	1577.32	46.67	2677.50	-251.98	-8398.14
3	4	-599.38	1622.87	40.06	2595.34	263.62	7697.07

Combination No. 1078

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.76	1710.22	45.97	2350.87	-243.41	-8855.31
3	4	-642.49	1619.79	39.58	2257.82	265.09	8488.60

Combination No. 1079

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1079

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.44	1535.11	46.18	2633.37	-253.44	-8456.58
3	4	-596.16	1655.96	39.37	2562.35	255.06	7550.05

Combination No. 1080

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1080

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.21	1526.04	45.76	2109.75	-233.71	-8355.46
3	4	-589.93	1637.94	39.79	1995.39	274.79	7471.41

Combination No. 1081

Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.45	1638.76	45.96	2351.23	-243.09	-9033.26
3	4	-641.17	1691.25	39.59	2257.46	265.42	8272.63

Combination No. 1082

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1082

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.20	1781.03	45.97	2350.51	-243.74	-8478.14
3	4	-627.93	1548.98	39.57	2258.18	264.76	8445.53

Combination No. 1083

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1083

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.51	1649.86	46.69	2120.31	-253.09	-8139.12



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.00	1666.59	46.41	2690.52	-240.13	-8226.20
3	4	-602.02	1533.60	40.31	2582.32	275.47	7945.31

Combination No. 1084

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1084

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.45	1688.62	45.74	2655.69	-233.12	-8076.76
3	4	-596.17	1502.45	39.80	2540.03	275.38	7930.21

Combination No. 1085

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1085

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.31	1670.60	46.17	2088.73	-252.85	-7998.83
3	4	-590.03	1493.37	39.38	2016.41	255.65	7830.85

Combination No. 1086

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1086

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.31	1670.60	46.17	2088.73	-252.85	-7998.83
3	4	-590.03	1493.37	39.38	2016.41	255.65	7830.85

Combination No. 1087

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1087

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.15	1723.29	39.45	1988.51	-205.03	-7962.53
3	4	-588.60	1476.50	33.14	1898.42	225.37	7873.17

Combination No. 1088

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1088

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.06	1644.44	39.20	2231.12	-193.73	-7687.91
3	4	-565.51	1446.38	33.38	2116.23	236.66	7481.21



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Combination No. 1089
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.11	1511.57	39.43	1989.58	-204.05	-8470.61
3	4	-588.56	1688.22	33.16	1897.35	226.34	7363.89

Combination No. 1090
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.05	1481.44	39.67	2207.38	-215.35	-8079.34
3	4	-565.51	1609.37	32.92	2139.97	215.04	7089.62

Combination No. 1091
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.62	1579.09	46.06	2639.79	-247.59	-8503.57
3	4	-606.34	1611.98	39.49	2555.92	260.91	7797.02

Combination No. 1092
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.90	1567.45	45.88	2103.70	-239.22	-8401.57
3	4	-599.62	1596.53	39.67	2001.44	269.28	7705.07

Combination No. 1093
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.75	1621.53	45.89	2271.09	-239.63	-8821.68
3	4	-628.47	1653.14	39.66	2169.74	268.87	8117.66

Combination No. 1094
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.87	1780.06	45.93	2407.89	-241.74	-8473.89
3	4	-614.90	1576.32	39.50	2094.27	261.18	8056.36

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Combination No. 1095
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	559.06	1430.35	30.12	1591.67	-156.38	-7544.42
3	4	-526.76	1514.63	23.62	1521.69	160.40	6574.68

Combination No. 1096
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.21	1444.69	29.94	1462.95	-147.82	-7759.48
3	4	-538.91	1565.67	23.80	1374.16	168.96	6710.49

Combination No. 1097
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.40	1686.48	45.94	2268.36	-242.12	-8635.89
3	4	-628.12	1588.19	39.61	2172.48	266.38	8293.43

Combination No. 1098
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.96	1545.16	46.08	2559.33	-248.52	-8607.42
3	4	-604.68	1691.74	39.47	2477.50	259.98	7645.27

Combination No. 1099
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.17	1643.00	46.05	2178.72	-247.32	-8491.10
3	4	-614.90	1576.32	39.50	2094.27	261.18	8056.36

Combination No. 1099
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.87	1780.06	45.93	2407.89	-241.74	-8473.89
3	4	-614.90	1576.32	39.50	2094.27	261.18	8056.36

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-627.59	1548.49	39.62	2311.17	266.76	8439.99

Combination No. 1100

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.61	1713.81	46.06	2178.36	-247.65	-8113.93
3	4	-600.34	1505.51	39.49	2094.62	260.85	8013.29

Combination No. 1101

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.07	1613.01	45.96	2485.84	-243.11	-8861.39
3	4	-628.80	1669.72	39.59	2392.11	265.40	8087.36

Combination No. 1102

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.05	1608.78	46.07	2559.52	-248.35	-8648.41
3	4	-617.77	1628.12	39.48	2477.31	260.15	7982.13

Combination No. 1103

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.31	1604.26	29.95	1462.13	-148.56	-7413.51
3	4	-539.02	1406.10	23.78	1374.97	168.22	7059.45

Combination No. 1104

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	556.76	1543.26	30.11	1335.59	-155.90	-7251.01
3	4	-524.46	1388.97	23.63	1264.56	160.88	6801.90

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Combination No. 1105

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.50	1682.37	45.88	2489.80	-239.50	-8691.31
3	4	-630.22	1600.35	39.67	2388.15	269.00	8298.55

Combination No. 1106

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.14	1641.11	45.88	2648.76	-239.43	-8326.78
3	4	-605.86	1549.96	39.67	2546.96	269.07	7959.96

Combination No. 1107

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.34	1625.85	46.04	2095.26	-246.91	-8233.45
3	4	-599.06	1538.12	39.51	2009.88	261.59	7857.02

Combination No. 1108

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.90	1722.46	39.40	2034.12	-202.91	-7959.62
3	4	-588.36	1476.18	33.19	1939.38	227.49	7868.95

Combination No. 1109

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.79	1719.32	45.97	2350.82	-243.46	-8803.18
3	4	-640.51	1610.69	39.58	2257.86	265.05	8483.79

Combination No. 1110

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.79	1719.32	45.97	2350.82	-243.46	-8803.18
3	4	-640.51	1610.69	39.58	2257.86	265.05	8483.79

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.12	1579.07	49.11	2456.51	-252.32	-8870.13
3	4	-631.82	1750.94	40.97	2338.22	280.25	8044.80

Combination No. 1111
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.52	1563.21	49.61	2237.56	-251.42	-8199.67
3	4	-596.92	1609.35	41.65	2109.37	288.25	7703.58

Combination No. 1112
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.52	1574.75	49.82	2782.49	-261.48	-8297.38
3	4	-603.32	1625.44	41.43	2676.39	278.19	7790.82

Combination No. 1113
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.93	1707.65	49.12	2452.86	-252.91	-8754.55
3	4	-646.43	1622.36	40.96	2338.87	279.66	8582.35

Combination No. 1114
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.60	1532.54	49.34	2738.36	-262.94	-8355.82
3	4	-600.11	1658.53	40.74	2643.40	269.63	7643.79

Combination No. 1115
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.38	1523.47	48.91	2214.74	-243.21	-8254.70

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.12	1579.07	49.11	2456.51	-252.32	-8870.13
3	4	-631.82	1750.94	40.97	2338.22	280.25	8044.80

Combination No. 1116
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.61	1636.19	49.11	2456.22	-252.59	-8932.50
3	4	-645.12	1693.82	40.96	2338.51	279.99	8366.38

Combination No. 1117
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.37	1778.46	49.13	2455.50	-253.24	-8377.38
3	4	-631.88	1551.55	40.95	2339.23	279.34	8539.28

Combination No. 1118
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.68	1647.29	49.85	2225.30	-262.59	-8038.36
3	4	-599.48	1525.27	41.41	2121.63	277.09	7938.77

Combination No. 1119
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.17	1664.02	49.57	2795.51	-249.63	-8125.44
3	4	-605.97	1536.16	41.69	2663.38	290.05	8039.05

Combination No. 1120
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.62	1686.05	48.90	2760.68	-242.62	-7976.00
3	4	-600.12	1505.02	41.18	2621.08	289.96	8023.96

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.79	1576.52	49.21	2744.78	-257.09	-8402.81
3	4	-610.29	1614.55	40.87	2636.98	275.48	7890.77

Combination No. 1127
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.07	1564.88	49.03	2208.69	-248.72	-8300.81
3	4	-603.57	1599.10	41.05	2082.49	283.86	7798.81

Combination No. 1128
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.92	1618.96	49.04	2376.08	-249.13	-8720.92
3	4	-632.42	1655.70	41.04	2250.80	283.44	8211.41

Combination No. 1129
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	554.22	1427.79	33.28	1696.66	-165.88	-7443.66
3	4	-530.70	1517.20	24.99	1602.74	174.98	6668.43

Combination No. 1130
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	566.38	1442.13	33.09	1567.94	-157.32	-7658.72
3	4	-542.86	1568.24	25.17	1455.21	183.54	6804.24

Combination No. 1131
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.57	1683.91	49.09	2373.35	-251.62	-8535.13



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.47	1668.04	49.33	2193.72	-262.35	-7898.07
3	4	-593.98	1495.94	40.75	2097.47	270.22	7924.60

Combination No. 1121
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.32	1720.72	42.60	2093.50	-214.53	-7861.77
3	4	-592.55	1479.07	34.51	1979.48	239.94	7966.92

Combination No. 1122
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	588.22	1641.87	42.36	2336.11	-203.23	-7587.15
3	4	-569.46	1448.94	34.76	2197.28	251.24	7574.96

Combination No. 1123
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.27	1509.00	42.58	2094.57	-213.55	-8369.85
3	4	-592.51	1690.79	34.54	1978.41	240.92	7457.63

Combination No. 1124
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	588.22	1478.87	42.83	2312.37	-224.85	-7978.58
3	4	-569.45	1611.94	34.29	2221.02	229.62	7183.37

Combination No. 1125
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	588.22	1478.87	42.83	2312.37	-224.85	-7978.58
3	4	-569.45	1611.94	34.29	2221.02	229.62	7183.37



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-632.07	1590.76	40.98	2253.53	280.95	8387.18

Combination No. 1132

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.13	1542.59	49.23	2664.32	-258.02	-8506.65
3	4	-608.63	1694.31	40.85	2558.55	274.55	7739.01

Combination No. 1133

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.34	1640.43	49.21	2283.72	-256.82	-8390.34
3	4	-618.84	1578.89	40.87	2175.32	275.75	8150.10

Combination No. 1134

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.03	1777.49	49.09	2512.88	-251.24	-8373.13
3	4	-631.54	1551.06	40.99	2392.23	281.33	8533.73

Combination No. 1135

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.78	1711.24	49.21	2283.36	-257.15	-8013.17
3	4	-604.28	1508.08	40.86	2175.68	275.42	8107.03

Combination No. 1136

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.24	1610.44	49.12	2590.83	-252.61	-8760.63
3	4	-632.74	1672.29	40.96	2473.16	279.97	8181.11

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 228
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.22	1606.21	49.23	2664.51	-257.85	-8547.65
3	4	-621.72	1630.68	40.85	2558.37	274.72	8075.88

Combination No. 1137

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	566.48	1601.70	33.11	1567.13	-158.06	-7312.74
3	4	-542.96	1408.67	25.16	1456.03	182.80	7153.20

Combination No. 1138

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	566.48	1601.70	33.11	1567.13	-158.06	-7312.74
3	4	-542.96	1408.67	25.16	1456.03	182.80	7153.20

Combination No. 1139

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	551.93	1540.70	33.27	1440.58	-165.40	-7150.25
3	4	-528.41	1391.54	25.00	1345.61	175.46	6895.65

Combination No. 1140

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.67	1679.81	49.04	2594.79	-249.00	-8590.54
3	4	-634.17	1602.92	41.04	2469.21	283.58	8392.29

Combination No. 1141

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.31	1638.54	49.04	2753.75	-248.93	-8226.02
3	4	-609.81	1552.53	41.04	2628.01	283.65	8053.71

Combination No. 1142

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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File Name: **Pier 12_Straddle.rcp**

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.51	1623.29	49.20	2200.25	-256.41	-8132.69
3	4	-603.01	1540.69	40.88	2090.94	276.17	7950.76

Combination No. 1143
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.07	1719.89	42.56	2139.12	-212.41	-7858.85
3	4	-592.30	1478.75	34.56	2020.43	242.06	7962.70

Combination No. 1144
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	659.96	1716.75	49.12	2455.81	-252.96	-8702.42
3	4	-644.46	1613.26	40.95	2338.92	279.62	8577.53

Combination No. 1145
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.22	1574.19	50.04	2481.91	-253.38	-8677.82
3	4	-639.62	1755.82	41.11	2353.18	283.49	8226.91

Combination No. 1146
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.03	1558.32	50.54	2262.96	-252.48	-8007.36
3	4	-604.72	1614.24	41.79	2124.32	291.49	7885.69

Combination No. 1147
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.43	1569.86	50.76	2807.89	-262.54	-8105.07



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.84	1702.77	50.06	2481.26	-253.97	-8562.24
3	4	-654.23	1627.24	41.10	2353.83	282.90	8764.46

Combination No. 1148
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.84	1702.77	50.06	2481.26	-253.97	-8562.24
3	4	-654.23	1627.24	41.10	2353.83	282.90	8764.46

Combination No. 1149
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.51	1527.65	50.27	2763.76	-264.00	-8163.52
3	4	-607.91	1663.42	40.89	2658.36	272.86	7825.90

Combination No. 1150
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.29	1518.59	49.85	2240.14	-244.26	-8062.39
3	4	-601.68	1645.39	41.31	2091.40	292.60	7747.27

Combination No. 1151
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.52	1631.31	50.05	2481.62	-253.64	-8740.19
3	4	-652.92	1698.70	41.11	2353.47	283.22	8548.49

Combination No. 1152
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.28	1773.58	50.06	2480.90	-254.30	-8185.07
3	4	-639.68	1556.43	41.09	2354.19	282.57	8721.39



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1153

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.59	1642.40	50.78	2250.70	-263.64	-7846.05
3	4	-607.28	1530.16	41.55	2136.58	280.32	8120.88

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1154

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.08	1659.14	50.50	2820.91	-250.69	-7933.14
3	4	-613.77	1541.09	41.83	2678.33	293.28	8221.17

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1155

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.52	1681.16	49.83	2786.08	-243.67	-7783.69
3	4	-607.92	1509.91	41.32	2636.04	293.19	8206.07

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1156

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.38	1663.15	50.26	2219.12	-263.41	-7705.76
3	4	-601.78	1500.83	40.90	2112.42	273.46	8106.71

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1157

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.23	1715.83	43.54	2118.90	-215.58	-7669.46
3	4	-600.35	1483.95	34.66	1994.43	243.17	8149.03

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1158

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.23	1715.83	43.54	2118.90	-215.58	-7669.46
3	4	-600.35	1483.95	34.66	1994.43	243.17	8149.03

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1159

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	579.13	1473.99	43.76	2337.77	-225.91	-7786.28
3	4	-577.25	1616.83	34.44	2235.98	232.85	7365.48

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1160

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	579.13	1473.99	43.76	2337.77	-225.91	-7786.28
3	4	-577.25	1616.83	34.44	2235.98	232.85	7365.48

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1161

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.70	1571.64	50.15	2770.18	-258.15	-8210.51
3	4	-618.09	1619.43	41.01	2651.93	278.72	8072.88

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1162

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.98	1560.00	49.97	2234.09	-249.77	-8108.50
3	4	-611.37	1603.98	41.19	2097.45	287.09	7980.93

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1163

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.82	1614.08	49.97	2401.49	-250.19	-8528.61

Group id: STR GP 5 Name: STRENGTH GROUP V

Group id: STR GP 5 Name: STRENGTH GROUP V



Sheet # 233
Job # 59219

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File Name: Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-640.22	1660.59	41.18	2265.75	286.67	8393.52

Combination No. 1164

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	545.13	1422.90	34.21	1722.06	-166.94	-7251.35
3	4	-538.51	1522.08	25.14	1617.70	178.21	6850.54

Combination No. 1165

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	557.29	1437.24	34.03	1593.34	-158.38	-7466.41
3	4	-550.66	1573.12	25.32	1470.17	186.77	6986.35

Combination No. 1166

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.48	1679.03	50.03	2398.75	-252.68	-8342.83
3	4	-639.87	1595.64	41.13	2268.49	284.18	8569.29

Combination No. 1167

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.04	1537.70	50.17	2689.72	-259.08	-8314.35
3	4	-616.43	1699.19	40.99	2573.51	277.79	7921.13

Combination No. 1168

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.25	1635.55	50.14	2309.12	-257.88	-8198.04
3	4	-626.64	1583.77	41.02	2190.27	278.98	8332.21

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 234
Job # 59219

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.94	1772.61	50.02	2538.28	-252.30	-8180.82
3	4	-639.34	1555.94	41.14	2407.18	284.57	8715.85

Combination No. 1169

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.69	1706.36	50.15	2308.76	-258.21	-7820.86
3	4	-612.08	1512.96	41.01	2190.63	278.66	8289.14

Combination No. 1170

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.15	1605.56	50.05	2616.23	-253.66	-8568.32
3	4	-640.54	1677.17	41.11	2488.12	283.20	8363.22

Combination No. 1171

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.13	1601.33	50.16	2689.91	-258.91	-8355.34
3	4	-629.52	1635.57	41.00	2573.32	277.96	8257.99

Combination No. 1172

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	557.39	1596.81	34.04	1592.53	-159.12	-7120.44
3	4	-550.76	1413.55	25.30	1470.98	186.03	7335.31

Combination No. 1173

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.25	1635.55	50.14	2309.12	-257.88	-8198.04
3	4	-626.64	1583.77	41.02	2190.27	278.98	8332.21

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	542.84	1535.81	34.20	1465.98	-166.46	-6957.94
3	4	-536.21	1396.42	25.15	1360.57	178.69	7077.76

Combination No. 1175

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1176

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.57	1674.92	49.97	2620.19	-250.06	-8398.24
3	4	-641.97	1607.81	41.19	2484.16	286.81	8574.41

Combination No. 1177

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1178

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.22	1633.66	49.97	2779.15	-249.99	-8033.71
3	4	-617.61	1557.41	41.19	2642.97	286.88	8235.82

Combination No. 1179

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1180

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.42	1618.40	50.13	2225.65	-257.46	-7940.38
3	4	-610.81	1545.58	41.03	2105.89	279.40	8132.88

Combination No. 1181

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1182

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.98	1715.01	43.49	2164.52	-213.46	-7666.55
3	4	-600.10	1483.64	34.71	2035.39	245.30	8144.81

Combination No. 1183

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1184

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.87	1711.86	50.06	2481.21	-254.01	-8510.11



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.67	1571.49	50.58	2509.82	-258.04	-8564.24
3	4	-643.80	1758.52	42.04	2386.27	287.06	8329.60

Combination No. 1180

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1181

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.67	1571.49	50.58	2509.82	-258.04	-8564.24
3	4	-643.80	1758.52	42.04	2386.27	287.06	8329.60

Combination No. 1182

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1183

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	597.47	1555.63	51.08	2290.87	-257.14	-7893.78
3	4	-608.90	1616.93	42.72	2157.41	295.06	7988.37

Combination No. 1184

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1185

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.88	1567.17	51.30	2835.80	-267.21	-7991.49
3	4	-615.31	1633.02	42.51	2724.44	285.00	8075.62

Combination No. 1186

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1187

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.29	1700.07	50.60	2509.17	-258.63	-8448.66
3	4	-658.42	1629.94	42.03	2386.92	286.47	8867.14

Combination No. 1188

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1189

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.96	1524.96	50.81	2791.67	-268.67	-8049.93
3	4	-612.09	1666.11	41.81	2691.45	276.43	7928.59



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1185

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.73	1515.89	50.39	2268.05	-248.93	-7948.81
3	4	-605.86	1648.09	42.24	2124.49	296.17	7849.95

Combination No. 1186

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.97	1628.61	50.59	2509.53	-258.31	8626.61
3	4	-657.10	1701.40	42.04	2386.56	286.79	8651.17

Combination No. 1187

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.73	1770.88	50.60	2508.81	-258.96	-8071.49
3	4	-643.86	1559.13	42.02	2387.27	286.14	8824.07

Combination No. 1188

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.03	1639.71	51.32	2278.61	-268.31	-7732.47
3	4	-611.46	1532.85	42.48	2169.67	283.89	8223.57

Combination No. 1189

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.52	1656.44	51.04	2848.82	-255.35	-7819.55
3	4	-617.95	1543.74	42.76	2711.42	296.85	8323.85

Combination No. 1190

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1191

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.97	1678.47	50.37	2813.99	-248.34	-7670.11
3	4	-612.10	1512.60	42.25	2669.12	296.76	8308.76

Combination No. 1192

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.83	1660.46	50.80	2247.03	-268.07	-7592.18
3	4	-605.96	1503.52	41.83	2145.51	277.03	8209.40

Combination No. 1193

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.67	1713.14	44.08	2146.81	-220.25	-7555.88
3	4	-604.54	1486.64	35.59	2027.52	246.74	8251.71

Combination No. 1194

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.58	1634.29	43.83	2389.42	-208.95	-7281.25
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1195

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1196

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1197

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1198

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1199

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1200

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1201

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1202

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1203

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1204

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1205

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1206

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1207

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1208

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1209

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1210

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1211

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1212

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1213

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1214

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1215

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1216

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.63	1501.42	44.06	2147.88	-219.27	-8063.96
3	4	-604.50	1698.37	35.61	2026.45	247.72	7742.43

Combination No. 1217

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.57	1471.29	44.30	2365.68	-230.57	-7672.69
3	4	-581.44	1456.52	35.83	2245.32	258.04	7859.75

Combination No. 1218

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
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File Name: Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-587.44	1619.52	35.37	2269.07	236.42	7468.16

Combination No. 1196

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.14	1568.94	50.69	2798.09	-262.81	-8096.92
3	4	-622.28	1622.13	41.94	2685.02	282.28	8175.57

Combination No. 1197

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.42	1557.30	50.50	2262.00	-254.44	-7994.92
3	4	-615.56	1606.68	42.12	2130.54	290.66	8083.61

Combination No. 1198

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.27	1611.38	50.51	2429.39	-254.86	-8415.03
3	4	-644.40	1663.28	42.11	2298.84	290.24	8496.21

Combination No. 1199

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	539.58	1420.21	34.75	1749.97	-171.60	-7137.77
3	4	-542.69	1524.78	26.06	1650.78	181.78	6953.22

Combination No. 1200

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	551.73	1434.55	34.57	1621.25	-163.04	-7352.83
3	4	-554.85	1575.82	26.25	1503.26	190.34	7089.04

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1676.33	50.57	2426.66	-257.35	-8229.24
3	4	-644.06	1598.33	42.06	2301.58	287.75	8671.97

Combination No. 1201

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.48	1535.01	50.71	2717.63	-263.74	-8200.76
3	4	-620.62	1701.89	41.92	2606.60	281.36	8023.81

Combination No. 1202

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.69	1632.85	50.68	2337.03	-262.55	-8084.45
3	4	-630.83	1586.47	41.95	2223.36	282.55	8434.90

Combination No. 1203

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.39	1769.92	50.56	2566.19	-256.96	-8067.23
3	4	-643.52	1558.64	42.07	2440.27	288.14	8818.53

Combination No. 1204

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.13	1703.67	50.69	2336.67	-262.87	-7707.28
3	4	-616.27	1515.66	41.94	2223.72	282.23	8391.83

Combination No. 1205

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.13	1703.67	50.69	2336.67	-262.87	-7707.28
3	4	-616.27	1515.66	41.94	2223.72	282.23	8391.83

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 1217
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.52	1569.98	-24.04	-1086.60	145.72	-8616.70
3	4	-566.70	1565.82	-25.28	-1087.71	-152.64	7097.45

Combination No. 1218
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	672.63	1702.66	-23.55	-1346.92	147.24	-9067.38
3	4	-610.11	1562.96	-24.59	-1359.32	-144.01	7895.50

Combination No. 1219
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.31	1527.55	-23.33	-1064.42	137.21	-8668.65
3	4	-563.78	1599.14	-24.80	-1054.78	-154.05	6956.95

Combination No. 1220
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.08	1518.48	-23.76	-1588.03	156.95	-8567.52
3	4	-557.55	1581.11	-24.38	-1621.75	-134.31	6878.31

Combination No. 1221
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.32	1631.21	-23.56	-1346.56	147.57	-9245.33
3	4	-608.79	1634.42	-24.58	-1359.68	-143.69	7679.53



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Combination No. 1223
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.07	1773.48	-23.54	-1347.28	146.92	-8690.20
3	4	-595.55	1492.15	-24.59	-1358.96	-144.34	7852.43

Combination No. 1224
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.67	1642.52	-24.01	-1643.79	144.61	-8357.69
3	4	-562.85	1465.66	-25.30	-1642.47	-153.75	7245.40

Combination No. 1225
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.17	1659.26	-24.29	-1073.58	157.57	-8444.77
3	4	-569.34	1476.55	-25.02	-1100.72	-140.79	7345.68

Combination No. 1226
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.32	1663.06	-23.77	-1042.10	157.54	-8288.83
3	4	-563.79	1445.63	-24.36	-1077.11	-133.72	7337.11

Combination No. 1227
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.18	1663.05	-23.35	-1609.06	137.80	-8210.89
3	4	-557.65	1436.55	-24.79	-1600.72	-153.45	7237.75

Combination No. 1227
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.76	1713.32	-17.02	-979.87	108.15	-8103.11



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-559.50	1422.08	-18.76	-993.67	-105.00	7351.84

Combination No. 1228

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.67	1634.47	-17.26	-737.25	119.44	-7828.48
3	4	-536.41	1391.96	-17.92	-775.87	-93.71	6959.88

Combination No. 1229

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.72	1501.60	-17.04	-978.79	109.12	-8611.18
3	4	-559.46	1633.80	-18.14	-994.74	-104.03	6842.56

Combination No. 1230

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.66	1471.47	-16.79	-760.99	97.83	-8219.92
3	4	-536.40	1554.96	-18.38	-752.13	-115.33	6568.29

Combination No. 1231

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.49	1571.54	-23.46	-1057.99	143.06	-8715.64
3	4	-573.96	1555.15	-24.68	-1061.21	-148.20	7203.92

Combination No. 1232

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.77	1559.89	-23.64	-1594.08	151.44	-8613.63
3	4	-567.24	1539.70	-24.50	-1615.69	-139.82	7111.97

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.62	1613.98	-23.63	-1426.69	151.02	-9033.74
3	4	-596.09	1596.31	-24.50	-1447.39	-140.24	7524.56

Combination No. 1233

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	556.93	1416.88	7.36	-315.74	44.10	-7581.02
3	4	-502.42	1463.72	-8.97	-315.80	-55.44	6157.74

Combination No. 1234

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.08	1431.22	-7.54	-444.46	52.66	-7796.07
3	4	-514.58	1514.77	-8.78	-463.33	-46.88	6293.55

Combination No. 1235

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.27	1678.93	-23.58	-1429.43	148.53	-8847.96
3	4	-595.74	1531.36	-24.56	-1444.66	-142.73	7700.33

Combination No. 1236

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.83	1537.60	-23.44	-1138.46	142.13	-8819.48
3	4	-572.30	1634.91	-24.70	-1139.63	-149.12	7052.17

Combination No. 1237

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.83	1537.60	-23.44	-1138.46	142.13	-8819.48
3	4	-572.30	1634.91	-24.70	-1139.63	-149.12	7052.17

Combination No. 1238

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.04	1635.45	-23.47	-1519.06	143.33	-8703.17
3	4	-582.52	1519.49	-24.67	-1522.87	-147.93	7463.26

Combination No. 1239
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.48	1772.51	-23.59	-1289.90	148.91	-8685.95
3	4	-595.21	1491.66	-24.55	-1305.96	-142.34	7846.89

Combination No. 1240
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.48	1706.26	-23.46	-1519.42	143.00	-8326.00
3	4	-567.96	1448.68	-24.68	-1522.51	-148.25	7420.19

Combination No. 1241
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.94	1605.46	-23.56	-1211.95	147.55	-9073.45
3	4	-596.42	1612.89	-24.58	-1225.02	-143.71	7494.26

Combination No. 1242
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.92	1601.23	-23.44	-1138.27	142.30	-8860.47
3	4	-585.39	1571.29	-24.69	-1139.82	-148.95	7389.03

Combination No. 1243
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.19	1590.79	-7.53	-445.27	51.92	-7450.10

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	554.64	1529.79	-7.37	-571.82	44.57	-7287.60
3	4	-500.13	1338.06	-8.96	-572.93	-54.97	6384.96

Combination No. 1244
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	554.64	1529.79	-7.37	-571.82	44.57	-7287.60
3	4	-500.13	1338.06	-8.96	-572.93	-54.97	6384.96

Combination No. 1245
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.37	1674.82	-23.64	-1207.99	151.16	-8903.37
3	4	-597.84	1543.53	-24.50	-1228.98	-140.10	7705.45

Combination No. 1246
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.01	1633.56	-23.64	-1049.03	151.23	-8638.85
3	4	-573.48	1493.13	-24.50	-1070.18	-140.03	7366.86

Combination No. 1247
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.21	1618.30	-23.48	-1602.53	143.75	-8445.52
3	4	-566.68	1481.30	-24.66	-1607.25	-147.51	7263.92

Combination No. 1248
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.51	1712.49	-17.06	-934.25	110.27	-8100.19
3	4	-559.25	1421.77	-18.11	-952.72	-102.88	7347.62

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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1249

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	670.66	1711.76	-23.55	-1346.97	147.20	-9015.24
3	4	-608.13	1553.86	-24.59	-1359.27	-144.06	7890.69

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1250

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.02	1593.91	-19.43	-1201.47	133.85	-9339.77
3	4	-611.13	1736.10	-22.64	-1244.43	-123.44	7582.70

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1251

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.12	1578.26	-20.12	-1486.73	141.79	-8675.81
3	4	-575.93	1594.30	-23.13	-1539.19	-122.60	7234.95

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1252

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.53	1589.80	-19.90	-941.80	131.73	-8773.52
3	4	-582.34	1610.38	-23.34	-972.16	-132.66	7322.20

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1253

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.75	1607.52	-22.65	-1202.12	133.26	-9224.19
3	4	-625.75	1607.52	-22.65	-1243.78	-124.03	8120.25

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1254

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.17	1679.08	-20.16	-928.78	143.59	-8601.58

Group id: STR GP 5 Name: STRENGTH GROUP V

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Combination No. 1255

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.31	1547.37	-19.20	-919.62	123.23	-8825.47
3	4	-579.42	1643.70	-22.87	-939.24	-134.06	7181.69

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1255

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.09	1538.31	-19.63	-1443.23	142.96	-8724.34
3	4	-573.19	1625.67	-22.44	-1506.20	-114.33	7103.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1256

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	682.32	1651.03	-19.42	-1201.76	133.59	-9402.14
3	4	-624.43	1678.98	-22.64	-1244.14	-123.70	7904.28

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1257

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.08	1793.30	-19.41	-1202.48	132.93	-8847.02
3	4	-611.19	1536.71	-22.66	-1243.42	-124.36	8077.18

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1258

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.68	1662.34	-19.88	-1498.99	130.63	-8514.50
3	4	-578.49	1510.22	-23.37	-1526.93	-133.76	7470.15

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1259

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.17	1679.08	-20.16	-928.78	143.59	-8601.58

Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-584.99	1521.11	-23.09	-985.18	-120.80	7570.43

Combination No. 1260
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.33	1700.88	-19.64	-897.29	143.56	-8445.64
3	4	-579.43	1490.19	-22.43	-961.57	-113.73	7561.86

Combination No. 1261
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.18	1662.87	-19.21	-1464.26	123.82	-8367.71
3	4	-573.29	1481.11	-22.85	-1485.18	-133.47	7462.50

Combination No. 1262
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.77	1733.14	-12.88	-835.07	94.17	-8259.92
3	4	-575.14	1466.64	-16.22	-878.13	-85.02	7576.59

Combination No. 1263
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.68	1654.29	-13.13	-592.45	105.46	-7985.30
3	4	-552.05	1436.52	-15.98	-660.33	-73.72	7184.63

Combination No. 1264
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.73	1521.42	-12.91	-833.99	95.14	-8768.00
3	4	-575.10	1678.36	-16.20	-879.20	-84.04	7067.30

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Combination No. 1265
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.67	1491.29	-12.66	-616.19	83.84	-8376.74
3	4	-552.05	1599.52	-16.45	-636.58	-95.34	6793.04

Combination No. 1266
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.50	1591.36	-19.33	-913.19	129.08	-8872.46
3	4	-589.61	1599.71	-22.74	-945.67	-128.21	7428.67

Combination No. 1267
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.78	1579.72	-19.51	-1449.28	137.46	-8770.45
3	4	-582.89	1584.26	-22.56	-1500.15	-119.84	7336.72

Combination No. 1268
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.63	1633.80	-19.50	-1281.89	137.04	-9190.56
3	4	-611.73	1640.87	-22.57	-1331.85	-120.25	7749.31

Combination No. 1269
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	567.94	1436.70	-3.23	-170.94	30.12	-7737.83
3	4	-518.07	1508.28	-7.03	-200.26	-35.46	6382.49

Combination No. 1270
Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.09	1451.04	-3.41	-299.66	38.67	-7952.89
3	4	-530.22	1559.33	-6.85	-347.79	-26.90	6518.30

Combination No. 1271

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1271

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.84	1698.75	-19.45	-1284.63	134.55	-9004.78
3	4	-611.39	1575.92	-22.62	-1329.12	-122.74	7925.08

Combination No. 1272

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1272

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.84	1557.42	-19.31	-993.65	128.15	-8976.30
3	4	-587.95	1679.47	-22.76	-1024.09	-129.14	7276.92

Combination No. 1273

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1273

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.05	1655.27	-19.33	-1374.26	129.35	-8859.99
3	4	-598.16	1564.05	-22.74	-1407.33	-127.94	7688.00

Combination No. 1274

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1274

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	668.74	1792.33	-19.45	-1145.09	134.93	-8842.77
3	4	-610.85	1536.22	-22.61	-1190.42	-122.36	8071.64

Combination No. 1275

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1275

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.49	1726.08	-19.33	-1374.62	129.02	-8482.81

Units: US (English)

Design Code: AASHTO LRFD



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File Name: | Pier 12_ Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.95	1625.28	-19.42	-1067.15	133.57	-9230.27
3	4	-612.06	1657.45	-22.64	-1109.48	-123.72	7719.01

Combination No. 1276

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1276

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.95	1625.28	-19.42	-1067.15	133.57	-9230.27
3	4	-612.06	1657.45	-22.64	-1109.48	-123.72	7719.01

Combination No. 1277

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1277

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.93	1621.05	-19.31	-993.47	128.32	-9017.29
3	4	-601.04	1615.85	-22.76	-1024.28	-128.97	7613.78

Combination No. 1278

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1278

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.20	1610.61	-3.40	-300.47	37.93	-7606.92
3	4	-530.33	1399.76	-6.86	-346.98	-27.64	6867.26

Combination No. 1279

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1279

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	565.64	1549.61	-3.24	-427.02	30.59	-7444.42
3	4	-515.77	1382.62	-7.02	-457.39	-34.98	6609.71

Combination No. 1280

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1280

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.38	1694.64	-19.50	-1063.19	137.17	-9060.19
3	4	-613.48	1588.09	-22.57	-1113.44	-120.12	7930.20

Units: US (English)

Design Code: AASHTO LRFD



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File Name: PIER 12 Straddle.rcp

Combination No. 1281
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.02	1653.38	-19.50	-904.23	137.24	-8695.66
3	4	-589.13	1537.69	-22.56	-954.63	-120.05	7591.61

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.22	1638.12	-19.34	-1457.73	129.77	-8602.33
3	4	-582.33	1525.86	-22.73	-1491.71	-127.52	7488.66

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.52	1732.32	-12.93	-789.45	96.29	-8257.01
3	4	-574.90	1466.33	-16.18	-837.18	-82.90	7572.37

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	681.67	1731.58	-19.42	-1202.16	133.22	-9172.06
3	4	-623.78	1598.42	-22.65	-1243.73	-124.07	8115.44

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.25	1592.82	-14.55	-1030.31	116.40	-9302.33
3	4	-612.67	1737.19	-20.06	-1104.38	-99.36	7618.31

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.54	1546.29	-14.33	-748.46	105.78	-8788.03
3	4	-580.96	1644.78	-20.29	-799.20	-109.98	7217.30

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	681.87	1721.40	-14.54	-1030.96	115.81	-9186.75
3	4	-627.29	1608.60	-20.08	-1103.73	-99.95	8155.86

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.35	1577.18	-15.24	-770.63	114.29	-8736.08
3	4	-577.47	1595.38	-20.55	-832.12	-108.58	7357.80

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.35	1577.18	-15.24	-770.63	114.29	-8736.08
3	4	-577.47	1595.38	-20.55	-832.12	-108.58	7357.80

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.31	1537.22	-14.75	-1272.07	125.52	-8686.90
3	4	-574.73	1626.75	-19.87	-1366.16	-90.25	7138.66

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.31	1537.22	-14.75	-1272.07	125.52	-8686.90
3	4	-574.73	1626.75	-19.87	-1366.16	-90.25	7138.66

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.55	1649.95	-14.55	-1030.60	116.14	-9364.71

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		Sheet #	257
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Program: LEAP® RC-PIER® V8i (SELECTseries 5)		Designed CAM	
		Date	9/10/14
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File Name: Pier 12 Straddle.rcp		Checked	
		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-625.97	1680.06	-20.07	-1104.09	-99.62	7939.89

Combination No. 1292
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.31	1792.22	-14.53	-1031.32	115.49	-8809.58
3	4	-612.73	1537.79	-20.08	-1103.37	-100.28	8112.79

Combination No. 1293
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.91	1661.26	-15.00	-1327.82	113.18	-8477.06
3	4	-580.03	1511.30	-20.79	-1386.89	-109.68	7505.76

Combination No. 1294
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.40	1677.99	-15.28	-757.62	126.14	-8564.15
3	4	-586.52	1522.19	-20.52	-845.14	-96.72	7606.04

Combination No. 1295
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.55	1699.80	-14.76	-726.13	126.11	-8408.21
3	4	-580.97	1491.27	-19.85	-821.52	-89.65	7597.47

Combination No. 1296
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.41	1681.79	-14.34	-1293.09	106.37	-8330.27
3	4	-574.83	1482.19	-20.28	-1345.14	-109.39	7498.11

Units: US (English) Design Code: AASHTO LRFD

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Combination No. 1297
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.00	1732.06	-8.01	-663.91	76.72	-8222.48
3	4	-576.68	1467.72	-13.65	-738.08	-60.94	7612.19

Combination No. 1298
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.90	1653.21	-8.25	-421.29	88.02	-7947.86
3	4	-553.59	1437.60	-13.41	-520.28	-49.64	7220.23

Combination No. 1299
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.95	1520.34	-8.03	-662.83	77.69	-8730.56
3	4	-576.64	1679.45	-13.63	-739.16	-59.96	7102.91

Combination No. 1300
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.90	1490.21	-7.79	-445.03	66.40	-8339.30
3	4	-553.59	1600.60	-13.87	-496.54	-71.26	6828.64

Combination No. 1301
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.73	1590.28	-14.45	-742.03	111.63	-8835.02
3	4	-591.15	1600.80	-20.17	-805.62	-104.13	7464.28

Combination No. 1302
Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	639.01	1578.63	-14.63	-1278.12	120.01	-8733.01
3	4	-584.43	1585.34	-19.99	-1360.11	-95.76	7372.32

Combination No. 1303
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	667.85	1632.72	-14.62	-1110.73	119.59	-9153.12
3	4	-613.27	1641.95	-20.00	-1191.81	-96.17	7784.92

Combination No. 1304
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	566.17	1435.62	1.65	0.23	12.67	-7700.39
3	4	-519.61	1509.36	-4.46	-60.22	-11.38	6418.10

Combination No. 1305
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	578.32	1449.96	1.46	-128.50	21.23	-7915.45
3	4	-531.76	1560.41	-4.27	-207.74	-2.82	6553.91

Combination No. 1306
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	667.51	1697.66	-14.57	-1113.47	117.10	-8967.34
3	4	-612.93	1577.00	-20.05	-1189.07	-98.66	7960.69

Combination No. 1307
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	644.07	1556.34	-14.43	-822.49	110.70	-8938.86

Units: US (English)
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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	654.28	1654.19	-14.46	-1203.10	111.90	-8822.55
3	4	-599.70	1565.14	-20.16	-1267.28	-103.86	7723.61

Combination No. 1308
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	666.97	1791.25	-14.58	-973.93	117.48	-8805.33
3	4	-612.39	1537.31	-20.04	-1050.38	-98.28	8107.24

Combination No. 1309
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	639.72	1725.00	-14.45	-1203.46	111.57	-8445.38
3	4	-585.14	1494.32	-20.17	-1266.93	-104.19	7680.54

Combination No. 1310
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	668.18	1624.20	-14.55	-895.99	116.12	-9192.83
3	4	-613.60	1658.53	-20.07	-969.44	-99.64	7754.62

Combination No. 1311
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	657.16	1619.97	-14.44	-822.31	110.88	-8979.85
3	4	-602.58	1616.93	-20.18	-884.24	-104.89	7649.39

Combination No. 1312
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kft	kft	kft
1	1	657.16	1619.97	-14.44	-822.31	110.88	-8979.85
3	4	-602.58	1616.93	-20.18	-884.24	-104.89	7649.39

Units: US (English)
Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-631.24	1611.17	-18.70	-1022.68	-85.38	8249.60

Combination No. 1324

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.71	1543.72	-11.17	-643.46	96.28	-8687.27
3	4	-584.91	1647.35	-18.92	-718.15	-95.41	7311.05

Combination No. 1325

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.48	1534.66	-11.60	-1167.08	116.02	-8586.14
3	4	-578.68	1629.32	-18.49	-1285.11	-75.67	7232.41

Combination No. 1326

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.72	1647.38	-11.39	-925.61	106.64	-9263.94
3	4	-629.92	1682.63	-18.70	-1023.04	-85.05	8033.63

Combination No. 1327

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.48	1789.65	-11.38	-926.32	105.99	-8708.82
3	4	-616.68	1540.36	-18.71	-1022.32	-85.70	8206.53

Combination No. 1328

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.08	1658.69	-11.85	-1222.83	103.68	-8376.30
3	4	-583.98	1513.87	-19.42	-1305.84	-95.11	7599.50

Units: US (English)

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Combination No. 1329

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.57	1675.43	-12.13	-652.62	116.64	-8463.39
3	4	-590.47	1524.76	-19.14	-764.09	-82.15	7699.78

Combination No. 1330

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.72	1697.23	-11.61	-621.14	116.61	-8307.44
3	4	-584.92	1493.84	-18.48	-740.47	-75.08	7691.22

Combination No. 1331

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.58	1679.22	-11.18	-1188.10	96.87	-8229.51
3	4	-578.78	1484.76	-18.91	-1264.08	-94.81	7591.86

Combination No. 1332

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.16	1729.49	-4.85	-558.91	67.22	-8121.72
3	4	-580.63	1470.29	-12.28	-657.03	-46.36	7705.94

Combination No. 1333

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.07	1650.64	-5.10	-316.30	78.52	-7847.10
3	4	-557.54	1440.17	-12.03	-439.23	-35.07	7313.98

Combination No. 1334

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.12	1517.77	-4.87	-557.84	68.19	-8629.80
3	4	-580.59	1682.01	-12.26	-658.10	-45.39	7196.66

Combination No. 1335
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.07	1487.64	-4.63	-340.04	56.90	-8238.54
3	4	-557.53	1603.17	-12.50	-415.49	-56.69	6922.39

Combination No. 1336
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.89	1587.71	-11.30	-637.04	102.13	-8734.26
3	4	-595.09	1603.36	-18.79	-724.57	-89.56	7558.03

Combination No. 1337
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.17	1576.07	-11.48	-1173.13	110.51	-8632.25
3	4	-588.37	1587.91	-18.61	-1279.06	-81.18	7466.07

Combination No. 1338
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.02	1630.15	-11.47	-1005.74	110.09	-9052.36
3	4	-617.22	1644.52	-18.62	-1110.75	-81.60	7878.67

Combination No. 1339
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	561.33	1433.05	4.80	105.22	3.17	-7599.63

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-523.55	1511.93	-3.09	20.83	3.20	6511.84

Combination No. 1340
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.49	1447.39	4.62	-23.51	11.73	-7814.69
3	4	-535.71	1562.98	-2.90	-126.69	11.75	6647.65

Combination No. 1341
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.68	1695.10	-11.41	-1008.47	107.60	-8866.58
3	4	-616.87	1579.57	-18.68	-1108.02	-84.09	8054.43

Combination No. 1342
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.23	1553.77	-11.28	-717.50	101.20	-8838.10
3	4	-593.43	1683.12	-18.81	-802.99	-90.48	7406.27

Combination No. 1343
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.45	1651.62	-11.30	-1098.11	102.40	-8721.79
3	4	-603.64	1567.70	-18.79	-1186.23	-89.29	7817.36

Combination No. 1344
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.14	1788.68	-11.42	-868.94	107.98	-8704.57
3	4	-616.34	1539.88	-18.67	-969.32	-83.71	8200.99

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Combination No. 1345

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.89	1722.43	-11.30	-1098.47	102.07	-8344.61
3	4	-589.09	1496.89	-18.79	-1185.87	-89.61	7774.29

Combination No. 1346

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.35	1621.63	-11.39	-791.00	106.62	9092.07
3	4	-617.55	1661.10	-18.70	-888.38	-85.07	7848.36

Combination No. 1347

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.32	1617.40	-11.28	-777.31	101.38	-8879.09
3	4	-606.52	1619.50	-18.81	-803.18	-90.31	7743.13

Combination No. 1348

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.59	1606.96	4.64	-24.32	10.99	-7468.72
3	4	-535.81	1403.41	-2.92	-125.88	11.01	6996.61

Combination No. 1349

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	559.04	1545.96	4.79	-150.86	3.64	-7306.22
3	4	-521.26	1386.27	-3.07	-236.30	3.67	6739.06

Combination No. 1350

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.33	1585.37	-10.47	-899.92	105.85	-9009.27

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Combination No. 1351

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.77	1690.99	-11.47	-628.07	110.23	-8557.46
3	4	-618.97	1591.74	-18.62	-733.54	-81.39	7720.97

Combination No. 1352

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.61	1634.47	-11.31	-1181.57	102.82	-8464.13
3	4	-587.81	1529.51	-18.78	-1270.61	-88.87	7618.02

Combination No. 1353

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.92	1728.67	-4.90	-513.29	69.34	-8118.81
3	4	-580.38	1469.98	-12.23	-616.08	-44.24	7701.72

Combination No. 1354

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.07	1727.93	-11.39	-926.01	106.27	-9033.86
3	4	-629.26	1602.07	-18.70	-1022.63	85.42	8244.79

Combination No. 1355

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.33	1585.37	-10.47	-899.92	105.85	-9009.27

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Combination No. 1351

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.77	1690.99	-11.47	-628.07	110.23	-8557.46
3	4	-618.97	1591.74	-18.62	-733.54	-81.39	7720.97

Combination No. 1352

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.61	1634.47	-11.31	-1181.57	102.82	-8464.13
3	4	-587.81	1529.51	-18.78	-1270.61	-88.87	7618.02

Combination No. 1353

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.92	1728.67	-4.90	-513.29	69.34	-8118.81
3	4	-580.38	1469.98	-12.23	-616.08	-44.24	7701.72

Combination No. 1354

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.07	1727.93	-11.39	-926.01	106.27	-9033.86
3	4	-629.26	1602.07	-18.70	-1022.63	85.42	8244.79

Combination No. 1355

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.33	1585.37	-10.47	-899.92	105.85	-9009.27

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Combination No. 1351

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.77	1690.99	-11.47	-628.07	110.23	-8557.46
3	4	-618.97	1591.74	-18.62	-733.54	-81.39	7720.97

Combination No. 1352

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.61	1634.47	-11.31	-1181.57	102.82	-8464.13
3	4	-587.81	1529.51	-18.78	-1270.61	-88.87	7618.02

Combination No. 1353

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.92	1728.67	-4.90	-513.29	69.34	-8118.81
3	4	-580.38	1469.98	-12.23	-616.08	-44.24	7701.72

Combination No. 1354

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.07	1727.93	-11.39	-926.01	106.27	-9033.86
3	4	-629.26	1602.07	-18.70	-1022.63	85.42	8244.79

Combination No. 1355

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.33	1585.37	-10.47	-899.92	105.85	-9009.27

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-624.42	1744.64	-18.54	-1008.37	-81.55	7894.17

Combination No. 1356

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.43	1569.73	-11.15	-1185.17	113.79	-8345.30
3	4	-589.22	1602.83	-19.03	-1303.14	-80.71	7546.42

Combination No. 1357

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.84	1581.27	-10.94	-640.24	103.73	-8443.01
3	4	-595.63	1618.92	-19.25	-736.11	-90.77	7633.66

Combination No. 1358

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.95	1713.95	-10.45	-900.56	105.26	-8893.69
3	4	-639.04	1616.06	-18.56	-1007.72	-82.14	8431.72

Combination No. 1359

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.62	1538.84	-10.24	-618.06	95.23	-8494.96
3	4	-592.71	1652.23	-18.77	-703.19	-92.17	7493.16

Combination No. 1360

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.39	1529.77	-10.66	-1141.68	114.96	-8393.83
3	4	-586.48	1634.21	-18.35	-1270.15	-72.44	7414.52

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Combination No. 1361

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.63	1642.49	-10.46	-900.21	105.59	-9071.64
3	4	-637.72	1687.52	-18.55	-1008.08	-81.82	8215.75

Combination No. 1362

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.39	1784.76	-10.45	-900.92	104.93	-8516.52
3	4	-624.48	1545.24	-18.56	-1007.36	-82.47	8388.65

Combination No. 1363

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.99	1653.81	-10.91	-1197.43	102.63	-8184.00
3	4	-591.78	1518.75	-19.28	-1290.88	-91.87	7781.62

Combination No. 1364

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.48	1670.54	-11.19	-627.22	115.59	-8271.08
3	4	-598.27	1529.64	-19.00	-749.13	-78.92	7881.90

Combination No. 1365

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.63	1692.35	-10.68	-595.74	115.55	-8115.14
3	4	-592.72	1498.72	-18.34	-725.51	-71.85	7873.33

Combination No. 1366

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.63	1692.35	-10.68	-595.74	115.55	-8115.14
3	4	-592.72	1498.72	-18.34	-725.51	-71.85	7873.33

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.49	1674.34	-10.25	-1162.70	95.82	-8037.20
3	4	-586.58	1489.64	-18.76	-1249.13	-91.58	7773.97

Combination No. 1367

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.07	1724.61	-3.92	-533.51	66.16	-7929.42
3	4	-588.43	1475.18	-12.13	-642.08	-43.13	7888.05

Combination No. 1368

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.98	1645.76	-4.16	-290.90	77.46	-7654.80
3	4	-565.34	1445.05	-11.89	-424.27	-31.83	7496.09

Combination No. 1369

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.03	1512.89	-3.94	-532.44	67.14	-8437.50
3	4	-588.39	1686.90	-12.11	-643.15	-42.15	7378.77

Combination No. 1370

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.98	1482.76	-3.70	-314.64	55.84	-8046.23
3	4	-565.33	1608.05	-12.35	-400.53	-53.45	7104.50

Combination No. 1371

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.80	1582.82	-10.36	-611.04	101.08	-8541.95

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
Phone: 1-800-778-4277

Sheet # 1272
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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.08	1571.18	-10.54	-1147.73	109.45	-8439.95
3	4	-596.17	1592.80	-18.47	-1264.10	-77.95	7648.18

Combination No. 1372

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.08	1571.18	-10.54	-1147.73	109.45	-8439.95
3	4	-596.17	1592.80	-18.47	-1264.10	-77.95	7648.18

Combination No. 1373

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.93	1625.26	-10.53	-980.34	109.04	-8860.05
3	4	-625.02	1649.40	-18.48	-1095.80	-78.36	8060.78

Combination No. 1374

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	552.24	1428.17	5.74	130.62	2.11	-7407.33
3	4	-531.35	1516.82	-2.94	35.79	6.43	6693.95

Combination No. 1375

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	564.40	1442.51	5.55	1.89	10.67	-7622.38
3	4	-543.51	1567.86	-2.75	-111.74	14.99	6829.77

Combination No. 1376

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.58	1690.21	-10.48	-983.07	106.55	-8674.27
3	4	-624.67	1584.45	-18.53	-1093.06	80.85	8236.55

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier 12 Straddle.rcp

Sheet # 1273
Job # 59219
Designed CAM
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Date

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1377

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.14	1548.89	-10.34	-692.10	100.15	-8645.79
3	4	-601.23	1688.01	-18.67	-788.04	-87.25	7588.38

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1378

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.36	1646.73	-10.37	-1072.71	101.35	-8529.48
3	4	-611.44	1572.59	-18.64	-1171.28	-86.05	7999.47

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.05	1783.80	-10.49	-843.54	106.93	-8512.26
3	4	-624.14	1544.76	-18.52	-954.37	-80.47	8383.10

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1380

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.80	1777.55	-10.36	-1073.07	101.02	-8152.31
3	4	-596.89	1501.77	-18.65	-1170.92	-86.38	7956.40

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1381

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.26	1616.74	-10.46	-765.60	105.57	-8899.76
3	4	-625.35	1665.98	-18.55	-873.43	-81.84	8030.48

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1382

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1383

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.23	1612.52	-10.35	-691.91	100.32	-8686.78
3	4	-614.32	1624.38	-18.66	-788.23	-87.08	7925.25

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1384

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	549.95	1541.08	5.73	-125.46	2.59	-7113.91
3	4	-529.06	1391.16	-2.93	-221.34	6.91	6921.18

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1385

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.68	1686.11	-10.54	-761.64	109.17	-8729.68
3	4	-626.77	1596.62	-18.47	-877.39	-78.23	8241.66

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1386

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.32	1644.84	-10.54	-602.67	109.24	-8365.16
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1387

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1388

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1389

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1390

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1391

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1392

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1393

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1394

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1395

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1396

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1397

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1398

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1399

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1400

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1401

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1402

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1403

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1404

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1405

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58	-78.16	7903.08

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1406

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.52	1629.59	-10.38	-1156.17	101.77	-8271.83
3	4	-602.41	1546.23	-18.47	-718.58		



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File Name: | Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-595.61	1534.39	-18.63	-1255.66	-85.64	7800.13

Combination No. 1388

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	613.83	1723.78	-3.97	-487.89	68.29	-7926.50
3	4	-588.18	1474.86	-12.09	-601.12	-41.01	7883.83

Combination No. 1389

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.97	1723.05	-10.45	-900.61	105.22	-8841.55
3	4	-637.06	1606.96	-18.56	-1007.68	-82.18	8426.90

Combination No. 1390

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.77	1582.68	-9.93	-872.01	101.18	-8895.68
3	4	-628.60	1747.33	-17.62	-975.28	-77.98	7996.85

Combination No. 1391

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.87	1567.03	-10.61	-1157.26	109.13	-8231.72
3	4	-593.41	1605.53	-18.10	-1270.05	-77.14	7649.11

Combination No. 1392

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.28	1578.57	-10.40	-612.33	99.07	-8329.43
3	4	-599.81	1621.61	-18.32	-703.02	-87.20	7736.35

Units: US (English)

Design Code: AASHTO LRFD



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File Name: | Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.39	1711.26	-9.91	-872.65	100.59	-8780.10
3	4	-643.22	1618.75	-17.63	-974.63	-78.57	8534.40

Combination No. 1393

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.39	1711.26	-9.91	-872.65	100.59	-8780.10
3	4	-643.22	1618.75	-17.63	-974.63	-78.57	8534.40

Combination No. 1394

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.06	1536.15	-9.70	-590.15	90.56	-8381.38
3	4	-596.89	1654.92	-17.84	-670.10	-88.60	7596.85

Combination No. 1395

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.84	1527.08	-10.12	-1113.77	110.30	-8280.25
3	4	-590.67	1636.90	-17.42	-1237.06	-68.87	7517.21

Combination No. 1396

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.07	1639.80	-9.92	-872.30	100.92	-8958.05
3	4	-641.91	1690.21	-17.62	-974.99	-78.25	8318.43

Combination No. 1397

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.83	1782.07	-9.91	-873.01	100.27	-8402.93
3	4	-628.66	1547.94	-17.64	-974.28	-78.90	8491.33

Combination No. 1398

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.83	1782.07	-9.91	-873.01	100.27	-8402.93
3	4	-628.66	1547.94	-17.64	-974.28	-78.90	8491.33

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.43	1651.11	-10.37	-1169.52	97.96	-8070.41
3	4	-595.97	1521.45	-18.35	-1257.79	-88.30	7884.30

Combination No. 1399

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1399

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.92	1667.85	-10.65	-599.31	110.92	-8157.50
3	4	-602.46	1532.34	-18.07	-716.04	-75.35	7994.58

Combination No. 1400

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1400

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.08	1689.65	-10.14	-567.83	110.89	-8001.55
3	4	-596.91	1501.42	-17.41	-692.42	-68.28	7976.01

Combination No. 1401

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1401

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.93	1671.64	-9.71	-1134.79	91.15	-7923.62
3	4	-590.76	1492.33	-17.83	-1216.04	88.01	7876.65

Combination No. 1402

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1402

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.52	1721.91	-3.38	-505.60	61.50	-7815.83
3	4	-592.62	1477.87	-11.20	-608.99	-39.56	7990.74

Combination No. 1403

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1403

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.43	1643.06	-3.62	-262.99	72.79	-7541.21

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.48	1510.19	-3.40	-504.53	62.47	-8323.91
3	4	-592.58	1689.59	-11.18	-610.06	-38.59	7481.46

Combination No. 1404

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1404

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.48	1510.19	-3.40	-504.53	62.47	-8323.91
3	4	-592.58	1689.59	-11.18	-610.06	-38.59	7481.46

Combination No. 1405

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1405

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.42	1480.07	-3.16	-286.73	51.17	-7932.65
3	4	-569.52	1610.75	-11.42	-367.44	-49.88	7207.19

Combination No. 1406

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1406

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.25	1580.13	-9.82	-583.73	96.41	-8428.37
3	4	-607.08	1610.94	-17.72	-676.53	-82.75	7842.82

Combination No. 1407

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1407

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.53	1568.49	-10.00	-1119.82	104.79	-8326.36
3	4	-600.36	1595.49	-17.54	-1231.01	-74.38	7750.87

Combination No. 1408

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1408

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.38	1622.57	-9.99	-952.43	104.37	-8746.47
3	4	-629.21	1652.10	-17.55	-1062.71	-74.79	8163.46

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 1409

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	546.69	1425.47	6.28	158.53	-2.55	-7293.74
3	4	-535.54	1519.51	-2.01	68.88	10.00	6796.64

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1410

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	558.84	1439.81	6.09	29.80	6.01	-7508.80
3	4	-547.69	1570.56	-1.83	-78.65	18.56	6932.45

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1411

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.03	1687.52	-9.94	-955.16	101.88	-8560.69
3	4	-628.86	1587.15	-17.60	-1059.97	-77.28	8339.23

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1412

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.59	1546.20	-9.80	-664.19	95.48	-8532.21
3	4	-605.42	1690.70	-17.74	-754.95	-83.68	7691.07

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1413

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.80	1644.04	-9.83	-1044.80	96.68	-8415.90
3	4	-615.63	1575.28	-17.71	-1138.19	-82.48	8102.16

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1414

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	544.39	1538.38	6.27	-97.55	2.08	-7000.33



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Combination No. 1415

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.49	1781.10	-9.95	-1045.63	102.26	-8398.68
3	4	-628.32	1547.45	-17.59	-921.28	-76.90	8485.79

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1416

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.24	1714.85	-9.82	-1045.16	96.35	-8038.72
3	4	-601.07	1504.47	-17.72	-1137.83	-82.81	8059.09

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1417

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.70	1614.05	-9.92	-737.69	100.90	-8786.18
3	4	-629.53	1668.68	-17.62	-840.34	-78.27	8133.16

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1418

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.68	1609.82	-9.81	-664.00	95.65	-8573.20
3	4	-618.51	1627.08	-17.73	-755.14	-83.51	8027.93

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1419

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	558.95	1599.38	6.11	28.99	5.27	-7162.83
3	4	-547.80	1410.98	-1.84	-77.83	17.82	7281.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1420

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	544.39	1538.38	6.27	-97.55	2.08	-7000.33

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		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-533.25	1393.85	-2.00	-188.25	10.48	7023.86

Combination No. 1420

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.13	1683.41	-10.00	-733.73	104.50	-8616.10
3	4	-630.96	1599.31	-17.54	-844.30	-74.66	8344.35

Combination No. 1421

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.77	1642.15	-10.00	-574.76	104.57	-8251.57
3	4	-606.60	1548.92	-17.54	-685.49	-74.59	8005.76

Combination No. 1422

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.97	1626.89	-9.84	-1128.26	97.10	-8158.24
3	4	-599.80	1537.08	-17.70	-1222.57	-82.07	7902.82

Combination No. 1423

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.27	1721.09	-3.43	-459.98	63.62	-7812.92
3	4	-592.37	1477.56	-11.16	-568.03	-37.44	7986.52

Combination No. 1424

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.42	1720.36	-9.91	-872.70	100.55	-8727.97
3	4	-641.25	1609.65	-17.63	-974.59	-78.61	8529.59

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.34	1577.81	23.51	1510.44	-145.41	-8187.35
3	4	-680.87	1816.58	24.63	1518.82	145.84	9057.13

Combination No. 1425

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.15	1561.95	24.01	1291.50	-144.52	-7516.89
3	4	-645.97	1674.99	25.31	1289.97	153.84	8715.90

Combination No. 1426

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	589.55	1573.49	24.23	1836.43	-154.58	-7614.60
3	4	-652.38	1691.08	25.09	1857.00	143.78	8803.14

Combination No. 1427

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.96	1706.39	23.52	1509.79	-146.01	-8071.77
3	4	-695.49	1688.00	24.61	1519.47	145.25	9594.67

Combination No. 1428

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.96	1706.39	23.52	1509.79	-146.01	-8071.77
3	4	-695.49	1688.00	24.61	1519.47	145.25	9594.67

Combination No. 1429

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.63	1531.28	23.74	1792.29	-156.04	-7673.05
3	4	-649.16	1724.17	24.40	1824.01	135.22	8656.12

Combination No. 1430

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.41	1522.21	23.31	1268.68	-136.30	-7571.92
3	4	-642.93	1706.15	24.82	1257.05	154.96	8577.48

Combination No. 1431

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1432

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.64	1634.93	23.52	1510.15	-145.68	-8249.73
3	4	-694.17	1759.46	24.62	1519.11	145.58	9378.70

Combination No. 1433

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1434

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.40	1777.20	23.53	1509.43	-146.33	-7694.60
3	4	-680.93	1617.19	24.61	1519.83	144.92	9551.60

Combination No. 1435

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1436

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.71	1646.03	24.25	1279.24	-155.68	-7355.59
3	4	-648.53	1590.92	25.06	1302.23	142.68	8951.10

Combination No. 1437

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1438

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.20	1662.76	23.97	1849.44	-142.72	-7442.67
3	4	-655.02	1601.81	25.34	1843.98	155.64	9051.38

Combination No. 1439

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1440

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.64	1684.79	23.30	1814.62	-135.71	-7293.22



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.50	1666.78	23.73	1247.66	-155.44	-7215.29
3	4	-643.03	1561.58	24.41	1278.07	135.81	8936.93

Combination No. 1436

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1437

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.35	1719.46	17.01	1147.43	-107.62	-7178.99
3	4	-641.60	1544.71	18.17	1160.08	105.53	8979.24

Combination No. 1438

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1439

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	559.25	1640.61	16.76	1390.05	-96.32	-6904.37
3	4	-618.51	1514.59	18.42	1377.88	116.83	8587.28

Combination No. 1440

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1441

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.30	1507.74	16.99	1148.50	-106.64	-7687.07
3	4	-641.56	1756.43	18.19	1159.01	106.51	8469.96

Combination No. 1442

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1443

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	559.25	1477.61	17.23	1366.31	-117.94	-7295.81
3	4	-618.51	1677.58	17.95	1401.63	95.21	8195.69



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Combination No. 1441
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.82	1575.26	23.61	1798.72	-150.19	-7720.04
3	4	-659.34	1680.19	24.52	1817.58	141.07	8903.10

Combination No. 1442
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.10	1563.62	23.43	1262.63	-141.81	-7618.03
3	4	-652.62	1664.74	24.70	1263.10	149.45	8811.14

Combination No. 1443
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.94	1617.70	23.44	1430.02	-142.23	-8038.14
3	4	-681.47	1721.34	24.69	1431.40	149.03	9223.73

Combination No. 1444
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	525.25	1426.53	7.68	750.60	-58.97	-6760.89
3	4	-579.76	1582.84	8.65	783.34	40.57	7680.75

Combination No. 1445
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	537.41	1440.86	7.50	621.87	-50.41	-6975.94
3	4	-591.91	1633.88	8.83	635.82	49.13	7816.57

Combination No. 1446
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.82	1575.26	23.61	1798.72	-150.19	-7720.04
3	4	-659.34	1680.19	24.52	1817.58	141.07	8903.10

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Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.60	1682.65	23.50	1427.28	-144.72	-7852.36
3	4	-681.12	1656.40	24.64	1434.13	146.54	9399.50

Combination No. 1448
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.16	1541.33	23.63	1718.26	-151.11	-7823.88
3	4	-657.68	1759.95	24.50	1739.16	140.14	8751.34

Combination No. 1449
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.37	1639.17	23.61	1337.65	-149.92	-7707.57
3	4	-667.90	1644.53	24.53	1355.92	141.34	9162.43

Combination No. 1450
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.06	1776.23	23.49	1566.82	-144.34	-7690.35
3	4	-680.59	1616.70	24.65	1572.83	146.92	9546.06

Combination No. 1451
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.81	1709.98	23.62	1337.29	-150.24	-7330.40
3	4	-653.34	1573.72	24.52	1356.28	141.01	9119.36

Combination No. 1451
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.27	1609.18	23.52	1644.76	-145.70	-8077.85
3	4	-681.12	1656.40	24.64	1434.13	146.54	9399.50

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-681.80	1737.93	24.62	1653.77	145.56	9193.43

Combination No. 1452

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.25	1604.95	23.63	1718.44	-150.94	-7864.87
3	4	-670.77	1696.33	24.51	1738.97	140.31	9088.20

Combination No. 1453

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	537.51	1600.44	7.51	621.06	-51.15	-6629.97
3	4	-592.02	1474.31	8.82	636.63	48.39	8165.52

Combination No. 1454

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	522.96	1539.44	7.67	494.52	-58.50	-6467.47
3	4	-577.46	1457.18	8.66	526.21	41.04	7907.97

Combination No. 1455

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.69	1678.55	23.44	1648.72	-142.09	-7907.77
3	4	-683.22	1668.56	24.70	1649.81	149.16	9404.62

Combination No. 1456

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.34	1637.28	23.44	1807.68	-142.02	-7543.24
3	4	-658.86	1618.17	24.70	1808.62	149.23	9066.03

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	589.54	1622.03	23.60	1254.19	-149.50	-7449.91
3	4	-652.06	1606.33	24.54	1271.54	141.76	8963.09

Combination No. 1457

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.10	1718.63	16.96	1193.05	-105.50	-7176.08
3	4	-641.36	1544.39	18.22	1201.04	107.65	8975.02

Combination No. 1458

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.10	1718.63	16.96	1193.05	-105.50	-7176.08
3	4	-641.36	1544.39	18.22	1201.04	107.65	8975.02

Combination No. 1459

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.99	1715.49	23.53	1509.75	-146.05	-8019.64
3	4	-693.51	1678.90	24.61	1519.52	145.21	9589.86

Combination No. 1460

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.33	1557.99	19.38	1365.64	-131.43	-8030.54
3	4	-665.23	1772.02	22.69	1403.28	125.86	8832.38

Combination No. 1461

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	572.14	1542.13	19.88	1146.69	-130.53	-7360.07
3	4	-630.33	1630.43	23.37	1174.43	133.86	8491.15

Combination No. 1462

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	578.54	1553.67	20.09	1691.62	-140.60	-7457.78
3	4	-636.73	1646.52	23.15	1741.46	123.80	8578.40

Combination No. 1463

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1463

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.95	1686.57	19.39	1364.99	-132.02	-7914.96
3	4	-679.84	1643.44	22.68	1403.93	125.27	9369.92

Combination No. 1464

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1464

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	575.62	1511.46	19.61	1647.49	-142.06	-7516.23
3	4	-633.52	1679.61	22.46	1708.47	115.24	8431.37

Combination No. 1465

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1465

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.40	1502.39	19.18	1123.88	-122.32	-7415.10
3	4	-627.29	1661.59	22.89	1141.51	134.97	8352.73

Combination No. 1466

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1466

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.63	1615.11	19.38	1365.35	-131.70	-8092.91
3	4	-678.53	1714.90	22.68	1403.57	125.59	9153.95

Combination No. 1467

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1467

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.39	1757.38	19.40	1364.63	-132.35	-7537.78

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	574.70	1626.21	20.12	1134.43	-141.70	-7198.77
3	4	-632.89	1546.36	23.13	1186.69	122.69	8726.35

Combination No. 1468

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1468

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	574.70	1626.21	20.12	1134.43	-141.70	-7198.77
3	4	-632.89	1546.36	23.13	1186.69	122.69	8726.35

Combination No. 1469

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1469

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	581.19	1642.94	19.84	1704.64	-128.74	-7285.85
3	4	-639.38	1557.24	23.41	1728.44	135.65	8826.63

Combination No. 1470

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1470

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	575.64	1664.97	19.17	1669.82	-121.73	-7136.41
3	4	-633.53	1526.10	22.90	1686.14	135.56	8811.54

Combination No. 1471

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1471

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.49	1646.95	19.59	1102.85	-141.46	-7058.47
3	4	-627.39	1517.02	22.47	1162.53	115.83	8712.18

Combination No. 1472

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1472

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.34	1699.64	12.87	1002.63	-93.64	-7022.18
3	4	-625.96	1500.15	16.24	1044.54	85.54	8754.49

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-652.25	1599.91	22.59	1240.38	121.36	8937.68

Combination No. 1484

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.05	1756.41	19.36	11422.02	-130.35	-7533.53
3	4	-664.95	1572.14	22.71	1457.29	126.94	9321.31

Combination No. 1485

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	579.80	1690.16	19.48	1192.49	-136.26	-7173.58
3	4	-637.69	1529.16	22.59	1240.74	121.03	8894.61

Combination No. 1486

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.26	1589.36	19.38	1499.96	-131.72	-7921.03
3	4	-666.15	1693.37	22.68	1538.23	125.57	8968.68

Combination No. 1487

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	597.24	1585.13	19.50	1573.64	-136.96	-7708.05
3	4	-655.13	1651.76	22.57	1623.43	120.33	8863.45

Combination No. 1488

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	526.50	1580.62	3.38	476.26	-37.17	-6473.15
3	4	-576.37	1429.75	6.88	521.09	28.40	7940.77

Units: US (English)

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Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	511.95	1519.61	3.54	349.72	-44.51	-6310.65
3	4	-561.82	1412.62	6.72	410.67	21.06	7683.22

Combination No. 1490

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.69	1658.72	19.31	1503.92	-128.11	-7750.95
3	4	-667.58	1624.00	22.76	1534.27	129.18	9179.87

Combination No. 1491

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.33	1617.46	19.31	1662.88	-128.04	-7386.43
3	4	-643.22	1573.61	22.76	1693.08	129.25	8841.29

Combination No. 1492

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	578.53	1602.20	19.47	1109.38	-135.52	-7293.10
3	4	-636.42	1561.77	22.60	1156.00	121.77	8738.34

Combination No. 1493

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.09	1698.81	12.83	1048.25	-91.52	-7019.26
3	4	-625.71	1499.83	16.28	1085.49	87.67	8750.27

Combination No. 1494

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-631.98	1678.53	19.89	1568.42	91.16	8395.76

Combination No. 1500
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.17	1503.47	14.31	952.72	-104.87	-7452.54
3	4	-625.75	1660.51	20.31	1001.46	110.89	8317.12

Combination No. 1501
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.41	1616.19	14.51	1194.19	-114.25	-8130.35
3	4	-676.99	1713.82	20.11	1263.53	101.51	9118.34

Combination No. 1502
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.17	1758.46	14.52	1193.47	-114.90	-7575.22
3	4	-663.75	1571.55	20.10	1264.25	100.86	9291.25

Combination No. 1503
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	576.47	1627.29	15.24	963.27	-124.25	-7236.21
3	4	-631.35	1545.27	20.56	1046.64	98.61	8690.74

Combination No. 1504
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.96	1644.02	14.96	1533.48	-111.29	-7323.29
3	4	-637.84	1556.16	20.84	1588.39	111.57	8791.02

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.98	1695.67	19.39	1364.95	-132.07	-7862.82
3	4	-677.87	1634.34	22.68	1403.98	125.23	9365.11

Combination No. 1495
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.11	1559.07	14.50	1194.48	-113.98	-8067.97
3	4	-663.69	1770.94	20.12	1263.24	101.78	8796.77

Combination No. 1496
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.91	1543.21	15.00	975.53	-113.09	-7397.51
3	4	-628.79	1629.35	20.80	1034.38	109.78	8455.55

Combination No. 1497
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.32	1554.75	15.22	1520.46	-123.15	-7495.22
3	4	-635.19	1645.44	20.58	1601.41	99.72	8542.79

Combination No. 1498
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.72	1687.65	14.52	1193.83	-114.58	-7952.40
3	4	-678.30	1642.36	20.10	1263.69	101.19	9334.32

Combination No. 1499
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	577.40	1512.54	14.73	1476.33	-124.61	-7553.67

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Combination No. 1505

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.41	1666.05	14.29	1498.65	-104.28	-7173.85
3	4	-631.99	1525.02	20.33	1546.10	111.48	8775.93

Combination No. 1506

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.27	1648.04	14.72	931.69	-124.02	-7095.91
3	4	-625.85	1515.94	19.90	1022.48	91.75	8676.57

Combination No. 1507

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.11	1700.72	8.00	831.47	-76.19	-7059.61
3	4	-624.42	1499.07	13.66	904.50	61.46	8718.88

Combination No. 1508

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	550.02	1621.87	7.75	1074.09	-64.89	-6784.99
3	4	-601.33	1468.94	13.91	1122.30	72.76	8326.92

Combination No. 1509

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.07	1489.00	7.98	832.54	-75.22	-7567.69
3	4	-624.38	1710.79	13.68	903.42	62.44	8209.60

Combination No. 1510

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.07	1489.00	7.98	832.54	-75.22	-7567.69
3	4	-624.38	1710.79	13.68	903.42	62.44	8209.60

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Combination No. 1511

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	550.01	1458.87	8.22	1050.34	-86.51	-7176.43
3	4	-601.32	1631.94	13.44	1146.04	51.14	7935.33

Combination No. 1512

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.58	1556.52	14.61	1482.76	-118.76	-7600.66
3	4	-642.16	1634.55	20.01	1562.00	97.01	8642.74

Combination No. 1513

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.86	1544.88	14.42	946.67	-110.38	-7498.65
3	4	-635.44	1619.10	20.19	1007.51	105.38	8550.78

Combination No. 1514

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.71	1598.96	14.43	1114.06	-110.80	-7918.76
3	4	-664.29	1675.70	20.19	1175.81	104.97	8963.38

Combination No. 1515

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	516.02	1407.79	-1.33	434.64	-27.54	-6641.51
3	4	-562.58	1537.20	4.14	627.76	-3.50	7420.40

Combination No. 1515

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	528.17	1422.13	-1.51	305.91	-18.98	-6856.56
3	4	-574.65	1537.20	4.14	627.76	-3.50	7420.40

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-574.73	1588.24	4.32	380.23	5.06	7556.21

Combination No. 1516

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.36	1663.91	14.49	1111.32	-113.29	-7732.98
3	4	-663.94	1610.75	20.13	1178.55	102.48	9139.15

Combination No. 1517

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.92	1522.59	14.63	1402.29	-119.68	-7704.50
3	4	-640.50	1714.31	19.99	1483.57	96.08	8490.98

Combination No. 1518

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.13	1620.43	14.60	1021.69	-118.49	-7588.19
3	4	-650.71	1598.89	20.02	1100.34	97.28	8902.07

Combination No. 1519

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.83	1757.50	14.48	1250.85	-112.91	-7570.97
3	4	-663.41	1571.06	20.14	1317.24	102.86	9285.70

Combination No. 1520

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	581.57	1691.24	14.61	1021.33	-118.81	-7211.02
3	4	-636.15	1528.08	20.01	1100.70	96.95	8859.00

Units: US (English)

Design Code: AASHTO LRFD



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File Name: Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.03	1590.44	14.51	1328.80	-114.27	-7958.47
3	4	-664.62	1692.29	20.11	1398.18	101.49	8933.07

Combination No. 1521

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	599.01	1586.22	14.62	1402.48	-119.51	-7745.49
3	4	-653.59	1650.68	20.00	1483.39	96.25	8827.85

Combination No. 1522

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	528.28	1581.70	-1.50	305.10	-19.72	-6510.59
3	4	-574.83	1428.67	4.31	381.05	4.32	7905.17

Combination No. 1523

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	513.72	1520.70	-1.34	178.56	-27.07	-6348.09
3	4	-560.28	1411.54	4.15	270.63	-3.02	7647.62

Combination No. 1524

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.46	1659.81	14.43	1332.76	-110.66	-7788.39
3	4	-666.04	1622.92	20.19	1394.22	105.10	9144.26

Combination No. 1525

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.46	1659.81	14.43	1332.76	-110.66	-7788.39
3	4	-666.04	1622.92	20.19	1394.22	105.10	9144.26

Units: US (English)

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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-624.84	1626.78	19.42	953.33	95.20	8361.80

Combination No. 1527

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1527

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.30	1603.29	14.43	1491.72	-110.59	-7423.87
3	4	-634.88	1560.69	20.03	1015.95	97.69	8702.73

Combination No. 1528

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1528

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	572.86	1699.89	7.95	877.09	-74.07	-7056.70
3	4	-624.17	1498.75	13.71	945.45	63.59	8714.66

Combination No. 1529

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1529

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.75	1696.75	14.52	1193.78	-114.62	-7900.26
3	4	-676.33	1633.26	20.10	1263.93	101.15	9329.50

Combination No. 1530

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1530

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	613.94	1561.64	11.35	1089.49	-104.48	-8168.73
3	4	-659.74	1768.37	18.74	1182.19	87.20	8703.02

Combination No. 1531

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1531

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	578.74	1545.78	11.84	870.54	-103.59	-7498.27



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File Name: Pier 12_Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-624.84	1626.78	19.42	953.33	95.20	8361.80

Combination No. 1532

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1532

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.15	1557.32	12.06	1415.47	-113.65	-7595.98
3	4	-631.25	1642.87	19.21	1520.36	85.14	8449.04

Combination No. 1533

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1533

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.56	1690.22	11.36	1088.84	-105.08	-8053.16
3	4	-674.36	1639.79	18.73	1182.84	86.61	9240.57

Combination No. 1534

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1534

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.23	1515.11	11.58	1371.34	-115.11	-7654.43
3	4	-628.03	1675.96	18.51	1487.37	76.58	8302.01

Combination No. 1535

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1535

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	576.00	1506.04	11.15	847.72	-95.37	-7553.30
3	4	-621.80	1657.94	18.94	920.41	96.32	8223.38

Combination No. 1536

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1536

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.24	1618.76	11.35	1089.20	-104.75	-8231.11
3	4	-673.04	1771.25	18.74	1182.48	86.94	9024.60



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1537

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.00	1761.03	11.37	1088.48	-105.40	-7675.98
3	4	-659.80	1568.98	18.72	1183.19	86.29	9197.50

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1538

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	581.30	1629.86	12.09	858.28	-114.75	-7336.97
3	4	-627.40	1542.71	19.18	965.59	84.04	8596.99

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1539

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.79	1646.59	11.81	1428.49	-101.79	-7424.05
3	4	-633.89	1553.59	19.46	1507.34	97.00	8697.27

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1540

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.24	1668.62	11.14	1393.66	-94.78	-7274.61
3	4	-628.04	1522.45	18.95	1465.05	96.91	8682.18

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1541

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	576.10	1650.60	11.56	826.70	-114.52	-7196.67
3	4	-621.90	1513.37	18.53	941.43	77.17	8582.82

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1542

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	577.94	1703.29	4.84	969.09	-55.39	-6885.75
3	4	-620.47	1496.50	12.29	1041.24	58.19	8233.18

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1543

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	554.85	1624.44	4.60	969.09	-55.39	-6885.75
3	4	-597.38	1466.37	12.53	1041.24	58.19	8233.18

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1544

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	577.90	1491.57	4.82	727.55	-65.72	-7668.45
3	4	-620.43	1708.22	12.31	822.37	47.87	8115.86

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1545

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	554.84	1461.44	5.06	945.35	-77.01	-7277.19
3	4	-597.38	1629.37	12.07	1064.99	36.57	7841.59

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1546

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.41	1559.09	11.45	1377.76	-109.26	-7701.42
3	4	-638.21	1631.98	18.64	1480.94	82.43	8548.99

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1547

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1548

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1549

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1550

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1551

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1552

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1553

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1554

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1555

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1556

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1557

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1558

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1559

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1560

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1561

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1562

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1563

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1564

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1565

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1566

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1567

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1568

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1569

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1570

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1571

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.88	-7599.41

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1572

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.69	1547.45	11.27	841.67	-100.8	



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-631.50	1616.53	18.82	1926.46	90.81	8457.03

Combination No. 1548

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.54	1601.53	11.28	1009.06	-101.30	-8019.52
3	4	-660.34	1673.13	18.81	1094.76	90.39	8869.63

Combination No. 1549

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	520.85	1410.36	-4.48	329.64	-18.04	-6742.27
3	4	-558.63	1534.63	2.76	446.71	-18.07	7326.65

Combination No. 1550

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	533.00	1424.69	-4.67	200.92	-9.48	-6957.32
3	4	-570.78	1585.67	2.95	299.18	9.51	7462.46

Combination No. 1551

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.19	1666.48	11.33	1006.33	-103.79	-7833.74
3	4	-660.00	1608.19	18.76	1097.50	87.90	9045.40

Combination No. 1552

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.75	1525.16	11.47	1297.30	-110.18	-7805.26
3	4	-636.55	1711.74	18.62	1402.52	81.50	8397.23

Units: US (English)

Design Code: AASHTO LRFD



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Job # 59219

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File Name: Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.96	1623.00	11.44	916.69	-108.99	-7688.95
3	4	-646.77	1596.32	18.65	1019.28	82.70	8808.32

Combination No. 1553

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	613.66	1760.06	11.32	1145.86	-103.41	-7671.73
3	4	-659.46	1568.49	18.77	1236.19	88.28	9191.96

Combination No. 1554

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.41	1693.81	11.45	916.34	-109.31	-7311.78
3	4	-632.21	1525.51	18.64	1019.64	82.37	8765.25

Combination No. 1555

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.87	1593.01	11.35	1223.81	-104.77	-8059.23
3	4	-660.67	1689.72	18.74	1317.13	86.92	8839.33

Combination No. 1556

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.84	1588.78	11.47	1297.49	-110.01	-7846.25
3	4	-649.64	1648.11	18.62	1402.33	81.67	8734.10

Combination No. 1557

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.84	1588.78	11.47	1297.49	-110.01	-7846.25
3	4	-649.64	1648.11	18.62	1402.33	81.67	8734.10

Combination No. 1558

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
Phone: 1-800-778-4277

Sheet # 307
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

File Name: PIER 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	533.11	1584.27	-4.65	200.11	-10.22	-6611.35
3	4	-570.89	1426.10	2.93	299.99	-10.25	7811.42

Combination No. 1559

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1559

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	518.56	1523.26	-4.49	73.56	-17.57	-6448.85
3	4	-556.34	1408.97	2.77	189.57	-17.59	7553.87

Combination No. 1560

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1560

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.29	1662.37	11.28	1227.77	-101.16	-7889.15
3	4	-662.09	1620.35	18.81	1313.17	90.53	9050.52

Combination No. 1561

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1561

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.93	1621.11	11.27	1386.73	-101.09	-7524.63
3	4	-637.73	1569.96	18.82	1471.98	90.60	8711.93

Combination No. 1562

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1562

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.13	1605.85	11.44	1383.23	-108.57	-7431.30
3	4	-630.93	1558.12	18.65	1471.98	83.12	8608.98

Combination No. 1563

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1563

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	577.69	1702.46	4.80	772.10	-64.57	-7157.46

Units: US (English)

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File Name: PIER 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.58	1699.32	11.36	1088.79	-105.12	-8001.02
3	4	-672.39	1630.69	18.73	1182.88	86.57	9235.76

Combination No. 1564

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1564

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.03	1566.52	10.41	1064.09	-103.43	-8361.04
3	4	-651.94	1763.49	18.60	1167.23	83.97	8520.91

Combination No. 1566

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1566

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.83	1550.66	10.91	845.14	-102.53	-7690.58
3	4	-617.04	1621.90	19.28	938.38	91.97	8179.69

Combination No. 1567

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1567

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.24	1562.20	11.13	1390.07	-112.59	-7788.29
3	4	-623.45	1637.98	19.06	1505.40	81.91	8266.93

Combination No. 1568

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1568

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.65	1695.10	10.43	1063.44	-104.02	-8245.46
3	4	-666.56	1634.91	18.58	1167.88	83.38	9058.46

Units: US (English)

Design Code: AASHTO LRFD



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1569

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.32	1519.99	10.64	1345.94	-114.05	-7846.74
3	4	-620.23	1671.08	18.37	1472.41	73.35	8119.90

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1570

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.09	1510.92	10.22	822.32	94.32	-7745.61
3	4	-614.00	1653.06	18.79	905.45	93.08	8041.26

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1571

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.33	1623.64	10.42	1063.80	-103.69	-8423.41
3	4	-665.24	1706.36	18.59	1167.52	83.71	8842.48

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1572

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.09	1765.92	10.43	1063.08	-104.35	-7868.29
3	4	-652.00	1564.09	18.58	1168.24	83.05	9015.39

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1573

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.39	1634.74	11.15	832.88	-113.69	-7529.27
3	4	-619.60	1537.82	19.04	950.64	80.81	8414.88

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1574

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1575

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.88	1651.47	10.87	1403.09	-100.74	-7616.36
3	4	-626.09	1548.71	19.32	1492.39	93.76	8515.16

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1576

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.33	1673.50	10.20	1368.26	-93.73	-7466.91
3	4	-620.24	1517.57	18.81	1450.09	93.68	8500.07

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1577

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.19	1655.49	10.63	801.30	-113.46	-7388.98
3	4	-614.10	1508.49	18.38	926.47	73.94	8400.71

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1578

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.03	1708.17	3.91	701.08	-65.64	-7352.68
3	4	-612.67	1491.61	12.14	808.49	43.66	8443.02

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	563.94	1629.32	3.66	943.69	-54.34	-7078.06
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1579

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.99	1496.45	3.89	702.15	-64.66	-7860.76
3	4	-589.58	1461.49	12.39	1026.29	54.95	8051.06



Sheet # 311
Job # 59219

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-612.63	1703.33	12.16	807.41	44.63	7933.74

Combination No. 1580

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	563.93	1466.32	4.13	919.95	-75.96	-7469.49
3	4	-589.58	1624.49	11.92	1050.03	33.34	7659.47

Combination No. 1581

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.50	1563.97	10.52	1352.36	-108.20	-7893.72
3	4	-630.41	1627.10	18.49	1465.99	79.20	8366.88

Combination No. 1582

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.78	1552.33	10.34	816.27	-99.83	-7791.72
3	4	-623.69	1611.65	18.67	911.50	87.57	8274.92

Combination No. 1583

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.63	1606.41	10.34	983.66	-100.24	-8211.83
3	4	-652.54	1668.25	18.67	1079.81	87.16	8687.52

Combination No. 1584

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	529.94	1415.24	-5.42	304.24	-16.99	-6934.57
3	4	-550.83	1529.74	2.62	431.75	-21.30	7144.54

Units: US (English)

Design Code: AASHTO LRFD



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Job # 59219

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File Name: | Pier 12 Straddle.rcp

Combination No. 1585

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	542.10	1429.58	-5.60	175.52	-8.43	-7149.63
3	4	-562.98	1580.79	2.80	284.22	-12.75	7280.35

Combination No. 1586

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.28	1671.36	10.40	980.93	-102.73	8026.05
3	4	-652.20	1603.30	18.61	1082.54	84.67	8863.29

Combination No. 1587

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	599.84	1530.04	10.54	1271.90	-109.13	-7997.57
3	4	-628.75	1706.86	18.47	1387.56	78.27	8215.12

Combination No. 1588

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.06	1627.88	10.51	891.29	-107.93	-7884.26
3	4	-638.97	1591.44	18.50	1004.33	79.47	8626.21

Combination No. 1589

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.75	1764.95	10.39	1120.46	-102.35	-7864.04
3	4	-651.66	1563.61	18.62	1221.23	85.05	9009.84

Combination No. 1590

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.50	1698.70	10.52	890.94	-108.26	-7504.08
3	4	-624.41	1520.62	18.49	1004.69	79.14	8583.14

Combination No. 1591
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.96	1597.89	10.42	1198.41	-103.71	-8251.54
3	4	-652.87	1684.83	18.59	1302.17	83.69	8657.21

Combination No. 1592
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.93	1593.67	10.53	1272.09	-108.96	-8038.56
3	4	-641.84	1643.23	18.48	1387.38	78.44	8551.99

Combination No. 1593
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	542.20	1589.15	-5.59	174.71	-9.17	-6803.66
3	4	-563.09	1421.22	2.79	285.04	-13.49	7629.31

Combination No. 1594
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	527.65	1528.15	-5.43	48.16	-16.51	-6641.16
3	4	-548.54	1404.09	2.63	174.62	-20.83	7371.76

Combination No. 1595
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.38	1667.26	10.34	1202.37	-100.11	-8081.46

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.02	1625.99	10.34	1361.33	-100.04	-7716.93
3	4	-629.93	1565.08	18.67	1457.02	87.36	8529.82

Combination No. 1596
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.02	1625.99	10.34	1361.33	-100.04	-7716.93
3	4	-629.93	1565.08	18.67	1457.02	87.36	8529.82

Combination No. 1597
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.22	1610.74	10.50	807.83	-107.52	-7623.60
3	4	-623.13	1553.24	18.51	919.95	79.89	8426.87

Combination No. 1598
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.78	1707.35	3.86	746.70	-63.51	-7349.77
3	4	-612.43	1491.30	12.19	849.44	45.78	8438.80

Combination No. 1599
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.67	1704.20	10.43	1063.39	-104.06	-8193.33
3	4	-664.58	1625.81	18.58	1167.93	83.34	9053.64

Combination No. 1600
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.58	1569.22	9.87	1036.18	-98.76	-8474.63
3	4	-647.75	1760.79	17.67	1134.14	80.40	8418.22

Units: US (English) Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.89	1626.34	9.88	1035.89	-99.03	-8537.00
3	4	-661.05	1703.67	17.66	1134.43	80.14	8739.80

Combination No. 1607

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1607

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.64	1768.61	9.89	1035.17	-99.68	-7981.87
3	4	-647.81	1561.40	17.65	1135.15	79.48	8912.70

Combination No. 1608

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1608

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.95	1637.43	10.61	804.97	-109.03	-7642.86
3	4	-615.41	1535.13	18.11	917.55	77.24	8312.20

Combination No. 1609

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1609

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.44	1654.17	10.33	1375.18	-96.07	-7729.94
3	4	-621.90	1546.02	18.39	1459.30	90.19	8412.48

Combination No. 1610

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1610

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.89	1676.19	9.66	1340.35	-89.06	-7580.50
3	4	-616.06	1514.88	17.88	1417.00	90.11	8397.39

Combination No. 1611

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1611

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.74	1658.18	10.09	773.39	-108.79	-7502.56

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.39	1553.35	10.37	817.23	-97.87	-7804.16
3	4	-612.85	1619.21	18.35	905.29	88.40	8077.00

Combination No. 1601

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1602

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	599.79	1564.89	10.59	1362.16	-107.93	-7901.87
3	4	-619.26	1635.29	18.13	1472.31	78.34	8164.24

Combination No. 1603

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1603

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.20	1697.80	9.89	1035.53	-99.36	-8359.05
3	4	-662.37	1632.21	17.65	1134.79	79.81	8955.71

Combination No. 1604

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1604

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.87	1522.69	10.10	1318.03	-109.39	-7960.32
3	4	-616.04	1668.38	17.44	1439.32	69.78	8017.22

Combination No. 1605

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1605

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.65	1513.62	9.68	794.41	-89.65	-7859.19
3	4	-609.82	1650.36	17.86	872.36	89.51	7938.58

Combination No. 1606

Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-609.91	1505.80	17.45	893.39	70.37	8298.03

Combination No. 1612

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.59	1710.87	3.37	673.17	-60.97	-7466.27
3	4	-608.49	1488.92	11.21	775.40	40.09	8340.34

Combination No. 1613

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.49	1632.02	3.13	915.78	-49.67	-7191.64
3	4	-585.40	1458.80	11.46	993.20	51.39	7948.38

Combination No. 1614

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.55	1499.14	3.35	674.24	-59.99	-7974.34
3	4	-608.45	1700.64	11.23	774.33	41.06	7831.06

Combination No. 1615

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.49	1469.02	3.59	892.04	-71.29	-7583.08
3	4	-585.39	1621.79	10.99	1016.94	29.77	7556.79

Combination No. 1616

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.06	1566.67	9.98	1324.45	-103.54	-8007.31
3	4	-626.23	1624.40	17.56	1432.90	75.63	8264.19

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.34	1555.03	9.80	788.36	-95.16	-7905.31
3	4	-619.51	1608.95	17.75	878.41	84.00	8172.24

Combination No. 1617

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.19	1609.11	9.81	955.75	-95.58	-8325.41
3	4	-648.36	1665.56	17.74	1046.72	83.59	8584.83

Combination No. 1618

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	535.50	1417.93	-5.96	276.33	-12.32	-7048.16
3	4	-546.64	1527.05	1.69	398.66	-24.87	7041.85

Combination No. 1619

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	547.65	1432.27	-6.14	147.61	-3.76	-7263.21
3	4	-558.80	1578.09	1.87	251.13	-16.32	7177.66

Combination No. 1620

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.84	1674.06	9.86	953.02	-98.07	-8139.63
3	4	-648.01	1600.61	17.68	1049.45	81.10	8760.60

Combination No. 1621

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.06	1566.67	9.98	1324.45	-103.54	-8007.31
3	4	-626.23	1624.40	17.56	1432.90	75.63	8264.19

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.40	1532.74	10.00	1243.99	-104.46	-8111.15
3	4	-624.57	1704.16	17.54	1354.48	74.70	8112.44

Combination No. 1623

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1623

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.61	1630.58	9.97	863.39	-103.27	-7994.84
3	4	-634.78	1588.74	17.57	971.24	75.90	8523.53

Combination No. 1624

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1624

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.30	1767.64	9.85	1092.55	-97.68	-7977.62
3	4	-647.47	1560.91	17.69	1188.15	81.48	8907.16

Combination No. 1625

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1625

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.05	1701.39	9.98	863.03	-103.59	-7617.67
3	4	-620.22	1517.93	17.56	971.60	75.57	8480.46

Combination No. 1626

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1626

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.51	1600.59	9.88	1170.50	-99.05	-8365.12
3	4	-648.68	1682.14	17.66	1269.09	80.12	8554.53

Combination No. 1627

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1627

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.49	1596.36	9.99	1244.18	-104.29	-8152.14

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	547.75	1591.84	-6.13	146.80	-4.50	-6917.24
3	4	-558.90	1418.52	1.86	251.95	-17.06	7526.62

Combination No. 1628

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1628

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	547.75	1591.84	-6.13	146.80	-4.50	-6917.24
3	4	-558.90	1418.52	1.86	251.95	-17.06	7526.62

Combination No. 1629

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1629

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	533.20	1530.84	-5.97	20.25	-11.85	-6754.74
3	4	-544.35	1401.39	1.70	141.53	-24.40	7269.07

Combination No. 1630

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1630

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.94	1669.95	9.80	1174.46	-95.44	-8195.04
3	4	-650.11	1612.77	17.74	1265.13	83.72	8765.72

Combination No. 1631

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1631

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.58	1628.69	9.80	1333.42	-95.37	-7830.52
3	4	-625.75	1562.38	17.74	1423.93	83.79	8427.13

Combination No. 1632

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1632

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	599.78	1613.43	9.96	779.92	-102.85	-7737.19
3	4	-618.95	1550.54	17.58	886.86	76.32	8324.19

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-633.03	1579.51	-35.76	-2125.23	-229.52	8611.83

Combination No. 1644

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.60	1674.17	-37.72	-1598.69	223.55	-7780.61
3	4	-639.52	1590.40	-35.48	-1583.48	-216.56	8712.11

Combination No. 1645

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.75	1695.97	-37.21	-1567.21	223.52	-7624.67
3	4	-633.97	1559.48	-34.82	-1559.87	-209.49	8703.54

Combination No. 1646

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.61	1677.96	-36.78	-2134.17	203.78	-7546.74
3	4	-627.83	1550.40	-35.25	-2083.48	-229.23	8604.18

Combination No. 1647

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.19	1728.23	-30.45	-1504.98	174.12	-7438.95
3	4	-629.68	1535.93	-28.62	-1476.43	-180.78	8718.27

Combination No. 1648

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.10	1649.38	-30.70	-1262.36	185.42	-7164.33
3	4	-606.59	1505.81	-28.38	-1258.63	-169.48	8326.31

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.15	1516.51	-30.47	-1503.91	175.10	-7947.03
3	4	-629.64	1747.66	-28.60	-1477.50	-179.80	8208.99

Combination No. 1649

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.10	1486.38	-30.23	-1286.10	163.80	-7555.76
3	4	-606.59	1668.81	-28.84	-1234.88	-191.10	7934.72

Combination No. 1650

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.92	1586.45	-36.89	-1583.10	209.04	-8051.48
3	4	-644.15	1669.01	-35.14	-1543.97	-223.97	8570.35

Combination No. 1651

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.20	1574.81	-37.08	-2119.20	217.41	-7949.48
3	4	-637.43	1653.55	-34.96	-2098.45	-215.59	8478.40

Combination No. 1652

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.05	1628.89	-37.07	-1951.80	217.00	-8369.58
3	4	-666.27	1710.16	-34.96	-1930.15	-216.01	8890.99

Combination No. 1653

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.10	1649.38	-30.70	-1262.36	185.42	-7164.33
3	4	-606.59	1505.81	-28.38	-1258.63	-169.48	8326.31

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	532.36	1431.79	-20.79	-840.85	110.08	-6916.86
3	4	-572.61	1577.57	-19.43	-798.56	-131.22	7524.17

Combination No. 1655
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	544.52	1446.13	-20.98	-969.57	118.63	-7131.92
3	4	-584.76	1628.62	-19.24	-946.09	-122.66	7659.98

Combination No. 1656
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	633.70	1693.84	-37.01	-1954.54	214.51	-8183.80
3	4	-665.93	1645.21	35.02	-1927.41	-218.50	9066.76

Combination No. 1657
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	610.26	1552.51	-36.87	-1663.57	208.11	-8155.32
3	4	-642.49	1748.77	35.16	-1622.39	224.89	8418.60

Combination No. 1658
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	620.48	1650.36	-36.90	-2044.17	209.31	-8039.01
3	4	-652.70	1633.35	35.13	-2005.63	223.70	8829.69

Combination No. 1659
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	633.17	1787.42	-37.02	-1815.01	214.89	-8021.79

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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: **Pier 12_Straddle.rcp**

Sheet # 326
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

Phone: 1-800-778-4277

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	605.92	1721.17	-36.89	-2044.53	208.98	-7661.84
3	4	-638.14	1562.53	-35.14	-2005.27	-224.02	8786.61

Combination No. 1660
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	634.38	1620.37	-36.99	-1737.06	213.53	-8409.29
3	4	-666.60	1726.74	-35.04	-1707.78	-219.48	8860.69

Combination No. 1661
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	623.35	1616.14	-36.88	-1663.38	208.28	-8196.32
3	4	-655.58	1685.14	35.15	-1622.58	-224.72	8755.46

Combination No. 1662
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	544.62	1605.70	-20.96	-970.39	117.89	-6785.94
3	4	-584.86	1469.05	-19.26	-945.27	-123.40	8008.94

Combination No. 1663
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	530.07	1544.70	-20.80	-1096.93	110.55	-6623.44
3	4	-570.31	1451.92	-19.42	-1055.69	130.74	7751.39

Combination No. 1664
Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English) Design Code: AASHTO LRFD



Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier 12 Straddle.rcp
Group id: STR GP 5 Name: STRENGTH GROUP V
Combination No. 1665
Combination No. 1666
Combination No. 1667
Combination No. 1668
Combination No. 1669
Combination No. 1670

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.80	1689.73	37.07	-1733.10	217.13	-8239.21
3	4	-668.02	1657.38	-34.96	-1771.74	-215.87	9071.88

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.44	1648.47	37.07	-1574.14	217.20	-7874.69
3	4	-643.67	1606.99	-34.96	-1552.93	-215.80	8733.29

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.64	1633.21	-36.91	-2127.64	209.73	-7781.36
3	4	-636.87	1595.15	-35.12	-2090.01	-223.28	8630.35

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.95	1727.41	-30.50	-1459.36	176.25	-7436.04
3	4	-629.44	1535.62	-28.57	-1435.47	-178.65	8714.05

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.73	1522.64	-40.90	-1734.33	217.17	-7847.67
3	4	-618.32	1668.43	-37.20	-1653.08	-249.80	8098.63

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.50	1513.57	-41.33	-2257.95	236.91	-7746.55
3	4	-584.50	1513.57	-41.33	-2257.95	236.91	-7746.55

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.54	1553.53	-41.82	-2301.44	235.74	-7698.02
3	4	-614.83	1619.03	-37.46	-2253.03	-238.34	8151.89

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.95	1565.07	-41.60	-1756.51	225.68	-7795.73
3	4	-621.24	1635.11	-37.68	-1686.01	-248.40	8239.13

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.06	1697.75	-41.12	-2016.83	227.20	-8246.40
3	4	-664.65	1632.25	-36.98	-1957.62	-239.77	9037.18

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.73	1522.64	-40.90	-1734.33	217.17	-7847.67
3	4	-618.32	1668.43	-37.20	-1653.08	-249.80	8098.63

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.73	1522.64	-40.90	-1734.33	217.17	-7847.67
3	4	-618.32	1668.43	-37.20	-1653.08	-249.80	8098.63

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.50	1513.57	-41.33	-2257.95	236.91	-7746.55
3	4	-584.50	1513.57	-41.33	-2257.95	236.91	-7746.55



Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier 12 Straddle.rcp
Group id: STR GP 5 Name: STRENGTH GROUP V
Combination No. 1671
Combination No. 1672
Combination No. 1673
Combination No. 1674
Combination No. 1675
Combination No. 1676

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.44	1569.17	-41.13	-2016.18	227.79	-8361.98
3	4	-650.03	1760.84	-36.97	-1958.27	-239.18	8499.63

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.54	1553.53	-41.82	-2301.44	235.74	-7698.02
3	4	-614.83	1619.03	-37.46	-2253.03	-238.34	8151.89

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.95	1565.07	-41.60	-1756.51	225.68	-7795.73
3	4	-621.24	1635.11	-37.68	-1686.01	-248.40	8239.13

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.06	1697.75	-41.12	-2016.83	227.20	-8246.40
3	4	-664.65	1632.25	-36.98	-1957.62	-239.77	9037.18

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.73	1522.64	-40.90	-1734.33	217.17	-7847.67
3	4	-618.32	1668.43	-37.20	-1653.08	-249.80	8098.63

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.50	1513.57	-41.33	-2257.95	236.91	-7746.55
3	4	-584.50	1513.57	-41.33	-2257.95	236.91	-7746.55

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.54	1553.53	-41.82	-2301.44	235.74	-7698.02
3	4	-614.83	1619.03	-37.46	-2253.03	-238.34	8151.89

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.95	1565.07	-41.60	-1756.51	225.68	-7795.73
3	4	-621.24	1635.11	-37.68	-1686.01	-248.40	8239.13

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.06	1697.75	-41.12	-2016.83	227.20	-8246.40
3	4	-664.65	1632.25	-36.98	-1957.62	-239.77	9037.18

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.73	1522.64	-40.90	-1734.33	217.17	-7847.67
3	4	-618.32	1668.43	-37.20	-1653.08	-249.80	8098.63

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.73	1522.64	-40.90	-1734.33	217.17	-7847.67
3	4	-618.32	1668.43	-37.20	-1653.08	-249.80	8098.63

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.50	1513.57	-41.33	-2257.95	236.91	-7746.55
3	4	-584.50	1513.57	-41.33	-2257.95	236.91	-7746.55



Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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Designed CAM
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File Name: | Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-612.09	1650.40	-36.77	-2220.04	-230.07	8019.99

Combination No. 1676

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.74	1626.30	-41.12	-2016.47	227.53	-8424.35
3	4	-663.33	1703.71	-36.97	-1957.98	-239.44	8821.21

Combination No. 1677

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.50	1768.57	-41.11	-2017.19	226.88	-7869.23
3	4	-650.09	1561.44	-36.99	-1957.26	-240.10	8994.11

Combination No. 1678

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.10	1637.61	-41.58	-2313.70	224.57	-7536.71
3	4	-617.39	1534.95	-37.70	-2240.77	-249.50	8387.08

Combination No. 1679

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.59	1654.35	-41.86	-1743.49	237.53	-7623.79
3	4	-623.88	1545.84	-37.42	-1699.02	-236.54	8487.36

Combination No. 1680

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.74	1676.15	-41.34	-1712.01	237.50	-7467.85
3	4	-618.33	1514.92	-36.76	-1675.41	-229.48	8478.79

Units: US (English)

Design Code: AASHTO LRFD



Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: | Pier 12 Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.60	1658.14	-40.91	-2278.97	217.76	-7389.92
3	4	-612.19	1505.84	-37.19	-2199.02	-249.21	8379.43

Combination No. 1681

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.18	1708.41	-34.58	-1649.78	188.11	-7282.13
3	4	-614.04	1491.37	-30.56	-1591.97	-200.76	8493.52

Combination No. 1682

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.18	1708.41	-34.58	-1649.78	188.11	-7282.13
3	4	-614.04	1491.37	-30.56	-1591.97	-200.76	8493.52

Combination No. 1683

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	560.09	1629.56	-34.83	-1407.16	199.40	-7007.51
3	4	-590.95	1461.25	-30.31	-1374.17	-189.46	8101.56

Combination No. 1684

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.14	1496.69	-34.61	-1648.71	189.08	-7790.21
3	4	-614.00	1703.10	-30.53	-1593.04	-199.78	7984.24

Combination No. 1685

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	560.09	1466.56	-34.36	-1430.91	177.78	-7398.95
3	4	-590.94	1624.25	-30.78	-1350.42	-211.08	7709.97

Combination No. 1686

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	560.09	1466.56	-34.36	-1430.91	177.78	-7398.95
3	4	-590.94	1624.25	-30.78	-1350.42	-211.08	7709.97

Units: US (English)

Design Code: AASHTO LRFD



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Sheet # 331
Job # 59219
Designed CAM
Date 9/10/14
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Date

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier 12_Straddle.rcp

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	600.91	1566.63	-41.03	-1727.91	223.02	-7894.66
3	4	-628.50	1624.44	-37.07	-1659.51	-243.95	8345.60

Combination No. 1687
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	594.20	1554.98	-41.21	-2264.00	231.40	-7792.66
3	4	-621.78	1608.99	-36.89	-2213.99	-235.58	8253.65

Combination No. 1688
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	623.04	1609.07	-41.20	-2096.60	230.98	-8212.77
3	4	-650.63	1665.60	-36.90	-2045.69	-235.99	8666.24

Combination No. 1689
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	521.35	1411.97	-24.93	-985.65	124.06	-6760.04
3	4	-556.96	1533.01	-21.36	-914.10	-151.20	7299.42

Combination No. 1690
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	533.51	1426.31	-25.11	-1114.37	132.62	-6975.10
3	4	-569.12	1584.06	-21.18	-1061.63	-142.64	7435.23

Combination No. 1691
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	622.70	1674.02	-41.15	-2099.34	228.49	-8026.98

Units: US (English)

Design Code: AASHTO LRFD



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Sheet # 332
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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier 12_Straddle.rcp

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	599.25	1532.69	-41.01	-1808.37	222.09	-7998.51
3	4	-626.84	1704.21	-37.09	-1737.93	-244.88	8193.85

Combination No. 1692
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	609.47	1630.54	-41.03	-2188.97	223.29	-7882.20
3	4	-637.05	1588.78	-37.07	-2121.17	-243.68	8604.94

Combination No. 1693
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	622.16	1767.60	-41.15	-1959.81	228.87	-7864.98
3	4	-649.75	1560.96	-36.95	-1904.26	-238.10	8988.57

Combination No. 1694
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	594.91	1701.35	-41.03	-2189.33	222.96	-7505.02
3	4	-622.50	1517.97	-37.07	-2120.81	-244.01	8561.87

Combination No. 1695
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	623.37	1600.55	-41.12	-1881.86	227.51	-8252.48
3	4	-650.96	1682.18	-36.98	-1823.32	-239.46	8635.94

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	335
		Job #	59219
Program: LEAP® RC-PIER® V8i (SELECTseries 5)		Designed CAM	
		Date	9/10/14
Version: 12.01.00.57		Copyright © Bentley Systems, Inc. 2012	
		Phone: 1-800-778-4277	
File Name: Pier 12 Straddle.rcp		Checked	
		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-619.70	1634.03	-40.25	-1826.05	-272.48	8203.52

Combination No. 1708

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.83	1698.84	-45.99	-2181.99	244.65	-8283.84
3	4	-663.11	1631.17	-39.56	-2097.66	-263.85	9001.57

Combination No. 1709

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.50	1523.73	-45.78	-1905.49	234.62	-7885.11
3	4	-616.78	1667.35	-39.77	-1793.13	-273.88	8063.02

Combination No. 1710

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.28	1514.66	-46.20	-2429.11	254.35	-7783.99
3	4	-610.55	1649.32	-39.35	-2360.09	-254.15	7984.38

Combination No. 1711

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.51	1627.38	-46.00	-2187.63	244.98	-8461.79
3	4	-661.79	1702.63	-39.55	-2098.02	-263.52	8785.60

Combination No. 1712

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.27	1769.65	-45.99	-2188.35	244.32	-7906.67
3	4	-648.55	1560.36	-39.56	-2097.30	-264.18	8958.50

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	336
		Job #	59219
Program: LEAP® RC-PIER® V8i (SELECTseries 5)		Designed CAM	
		Date	9/10/14
Version: 12.01.00.57		Copyright © Bentley Systems, Inc. 2012	
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File Name: Pier 12 Straddle.rcp		Checked	
		Date	

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.87	1638.69	-46.45	-2484.86	242.02	-7574.15
3	4	-615.85	1533.87	-40.27	-2380.82	-273.58	8351.47

Combination No. 1713

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.87	1638.69	-46.45	-2484.86	242.02	-7574.15
3	4	-615.85	1533.87	-40.27	-2380.82	-273.58	8351.47

Combination No. 1714

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.36	1655.43	-46.73	-1914.65	254.98	-7661.23
3	4	-622.34	1544.76	-39.99	-1839.07	-260.63	8451.75

Combination No. 1715

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.51	1677.23	-46.22	-1883.17	254.95	-7505.29
3	4	-616.79	1513.84	-39.33	-1815.45	-253.56	8443.19

Combination No. 1716

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.37	1659.22	-45.79	-2450.13	235.21	-7427.36
3	4	-610.65	1504.76	-39.76	-2339.07	-273.29	8343.83

Combination No. 1717

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.96	1709.49	-39.46	-1820.94	205.55	-7319.57
3	4	-612.50	1490.29	-33.13	-1732.01	-224.84	8457.91

Combination No. 1718

Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	561.86	1497.71	-39.70	-1578.32	216.85	-7044.95
3	4	-589.41	1460.17	-32.89	-1514.21	-213.54	8065.95

Combination No. 1719

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1719

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.92	1497.71	-39.48	-1819.87	206.53	-7827.65
3	4	-612.46	1702.01	-33.11	-1733.09	-223.86	7948.63

Combination No. 1720

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1720

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	561.86	1467.64	-39.24	-1602.07	195.23	-7436.38
3	4	-589.40	1623.17	33.35	-1490.47	-235.16	7674.36

Combination No. 1721

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1721

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.69	1567.71	-45.90	-1899.07	240.47	-7932.10
3	4	-626.96	1623.36	39.65	-1799.55	-268.03	8310.00

Combination No. 1722

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1722

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.97	1556.07	-46.08	-2435.16	248.84	-7830.10
3	4	-620.24	1607.91	39.46	-2354.04	-259.66	8218.04

Combination No. 1723

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1723

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.81	1610.15	-46.07	-2267.77	248.43	-8250.21

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	523.13	1413.05	-29.80	-1156.81	141.50	-6797.48
3	4	-555.42	1531.93	-23.94	-1054.15	-175.28	7263.81

Combination No. 1724

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1724

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	523.13	1413.05	-29.80	-1156.81	141.50	-6797.48
3	4	-555.42	1531.93	-23.94	-1054.15	-175.28	7263.81

Combination No. 1725

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1725

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	535.28	1427.39	-29.99	-1285.54	150.06	-7012.54
3	4	-567.58	1582.98	-23.75	-1201.67	-166.72	7399.62

Combination No. 1726

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1726

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.47	1675.10	-46.02	-2270.50	245.94	-8064.42
3	4	-648.74	1599.57	39.53	-2183.00	-262.56	8806.40

Combination No. 1727

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1727

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.03	1533.77	-45.88	-1979.53	239.54	-8035.94
3	4	-625.30	1703.12	39.67	-1877.98	-268.96	8158.24

Combination No. 1728

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1728

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.24	1631.62	-45.91	-2360.14	240.74	-7919.63
3	4	-635.52	1587.70	39.64	-2261.21	-267.76	8569.33

Units: US (English)

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Combination No. 1729

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.93	1768.68	-46.03	-2130.97	246.32	-7902.42
3	4	-648.21	1559.87	-39.52	-2044.31	-262.18	8952.96

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1730

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.68	1702.43	-45.90	-2360.50	240.41	-7542.46
3	4	-620.96	1516.89	-39.65	-2260.85	-268.09	8526.26

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1731

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.14	1601.63	-46.00	-2053.02	244.96	-8289.92
3	4	-649.42	1681.10	-39.55	-1963.37	-263.54	8600.33

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1732

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.12	1597.40	-45.89	-1979.34	239.71	-8076.94
3	4	-638.39	1639.50	-39.66	-1878.16	-268.79	8495.10

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1733

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	535.38	1586.96	-29.97	-1286.35	149.32	-6666.56
3	4	-567.68	1423.40	-23.77	-1200.86	-167.46	7748.58

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1734

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.86	1707.93	-45.99	-2188.04	244.61	-8231.71

Group id: STR GP 5 Name: STRENGTH GROUP V

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Combination No. 1735

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	520.83	1525.96	-29.81	-1412.89	141.98	-6504.06
3	4	-553.13	1406.27	-23.93	-1311.28	-174.80	7491.03

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1736

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.56	1670.99	-46.08	-2049.06	248.56	-8119.84
3	4	-650.84	1611.74	-39.47	-1967.33	-259.94	8811.52

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1737

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.21	1629.73	-46.08	-1890.10	248.63	-7755.31
3	4	-626.48	1561.34	-39.47	-1808.52	-259.87	8472.93

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1738

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.41	1614.47	-45.92	-2443.60	241.16	-7661.98
3	4	-619.68	1549.51	-39.63	-2345.59	-267.34	8369.99

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1739

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.71	1708.67	-39.51	-1775.32	207.68	-7316.66
3	4	-612.25	1489.98	-33.08	-1691.06	-222.72	8453.69

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1739

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.86	1707.93	-45.99	-2188.04	244.61	-8231.71

Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-661.13	1622.07	-39.56	-2097.62	-263.89	8996.76

Combination No. 1740

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.04	1572.82	-49.16	-2292.34	254.74	-8500.18
3	4	-644.54	1757.18	-40.92	-2179.36	-277.83	8370.28

Combination No. 1741

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.14	1557.18	-49.85	-2577.59	262.68	-7836.22
3	4	-609.34	1615.38	-41.41	-2474.13	-276.99	8022.53

Combination No. 1742

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.55	1568.72	-49.63	-2032.66	252.62	-7933.93
3	4	-615.75	1631.46	-41.62	-1907.10	-287.05	8109.77

Combination No. 1743

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.66	1701.40	-49.15	-2292.99	254.15	-8384.60
3	4	-659.16	1628.60	-40.93	-2178.71	-278.43	8907.83

Combination No. 1744

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	597.33	1526.29	-48.93	-2010.49	244.12	-7985.87
3	4	-612.83	1664.78	-41.15	-1874.18	-288.46	7969.27

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Combination No. 1745

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.11	1517.22	-49.36	-2534.10	263.85	-7884.75
3	4	-606.60	1646.75	-40.72	-2441.14	-268.72	7890.63

Combination No. 1746

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.35	1629.95	-49.16	-2292.63	254.48	-8562.55
3	4	-657.84	1700.06	-40.92	-2179.07	-278.10	8691.85

Combination No. 1747

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.10	1772.22	-49.14	-2293.34	253.82	-8007.43
3	4	-644.60	1557.79	-40.94	-2178.35	-278.75	8864.75

Combination No. 1748

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.70	1641.26	-49.61	-2589.85	251.52	-7674.91
3	4	-611.90	1531.30	-41.65	-2461.87	-288.16	8257.73

Combination No. 1749

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.19	1658.00	-49.89	-2019.64	264.48	-7761.99
3	4	-618.40	1542.19	-41.37	-1920.12	-275.20	8358.01

Combination No. 1750

Group Id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	597.35	1679.80	-49.37	-1988.16	264.45	-7606.05
3	4	-612.84	1511.27	-40.71	-1896.50	-268.13	8349.44

Combination No. 1751
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.20	1661.79	-48.95	-2555.12	244.71	-7528.12
3	4	-606.70	1502.19	-41.13	-2420.12	-287.86	8250.08

Combination No. 1752
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	589.79	1712.06	-42.62	-1925.93	215.05	-7420.33
3	4	-608.55	1487.72	34.50	-1813.07	-239.41	8364.16

Combination No. 1753
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	566.70	1633.21	-42.86	-1683.32	226.35	-7145.71
3	4	-585.46	1457.60	34.26	-1595.27	-228.12	7972.20

Combination No. 1754
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	589.75	1500.34	-42.64	-1924.86	216.03	-7928.41
3	4	-608.51	1699.45	34.48	-1814.14	-238.44	7854.88

Combination No. 1755
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	566.69	1470.21	-42.39	-1707.06	204.73	-7537.14

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.52	1570.28	-49.06	-2004.06	249.97	-8032.86
3	4	-623.02	1620.79	-41.02	-1880.61	-282.61	8216.25

Combination No. 1756
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.80	1558.63	-49.24	-2540.15	258.34	-7930.86
3	4	-616.30	1605.34	-40.84	-2435.09	-274.23	8124.29

Combination No. 1757
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.65	1612.72	-49.23	-2372.76	257.93	-8350.97
3	4	-645.14	1661.95	-40.85	-2266.79	-274.65	8536.89

Combination No. 1758
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	527.96	1415.62	-32.96	-1261.80	151.00	-6898.24
3	4	-551.48	1529.36	25.31	-1135.20	-189.85	7170.06

Combination No. 1759
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	540.11	1429.96	-33.14	-1390.53	159.56	-7113.30
3	4	-563.63	1580.41	25.13	-1282.73	-181.30	7305.88

Combination No. 1760
Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.30	1677.67	-49.18	-2375.49	255.44	-8165.18
3	4	-644.80	1597.00	-40.90	-2264.05	-277.14	8712.66

Combination No. 1761
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.86	1536.34	-49.04	-2084.52	249.04	-8136.71
3	4	-621.36	1700.56	-41.04	-1959.03	-283.53	8064.49

Combination No. 1762
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.07	1634.19	-49.06	-2465.13	250.24	-8020.39
3	4	-631.57	1585.13	-41.01	-2342.27	-282.34	8475.58

Combination No. 1763
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.76	1771.25	-49.18	-2235.96	255.82	-8003.18
3	4	-644.26	1557.31	-40.89	-2125.36	-276.76	8859.21

Combination No. 1764
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	601.51	1705.00	-49.06	-2465.49	249.91	-7643.22
3	4	-617.01	1514.32	-41.02	-2341.91	-282.66	8432.51

Combination No. 1765
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.40	1673.56	-49.23	-2154.06	258.06	-8220.60
3	4	-646.89	1609.17	-40.84	-2048.38	-274.51	8717.77

Combination No. 1766
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.04	1632.30	-49.23	-1995.09	258.13	-7856.07

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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: **Pier 12 Straddle.rcp**

Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.97	1604.20	-49.16	-2158.02	254.46	-8390.68
3	4	-645.47	1678.53	-40.92	-2044.42	-278.12	8506.58

Combination No. 1767
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.95	1599.97	-49.04	-2084.33	249.21	-8177.70
3	4	-634.45	1636.93	-41.04	-1959.22	-283.36	8401.36

Combination No. 1768
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	540.22	1589.53	-33.13	-1391.34	158.82	-6767.32
3	4	-563.74	1420.84	-25.14	-1281.91	-182.04	7654.83

Combination No. 1769
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	525.66	1528.53	-32.97	-1517.88	151.48	-6604.83
3	4	-549.18	1403.71	-25.30	-1392.33	-189.38	7397.28

Combination No. 1770
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.40	1673.56	-49.23	-2154.06	258.06	-8220.60
3	4	-646.89	1609.17	-40.84	-2048.38	-274.51	8717.77

Combination No. 1771
Group id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.04	1632.30	-49.23	-1995.09	258.13	-7856.07

Units: US (English) Design Code: AASHTO LRFD

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File Name: Pier 12 Straddle.rcp			

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
3	4	-622.54	1558.78	-40.84	-1889.57	-274.44	8379.19

Combination No. 1772
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	600.24	1617.04	-49.07	-2548.59	250.66	-7762.74
3	4	-615.74	1546.94	-41.00	-2426.65	-281.92	8276.24

Combination No. 1773
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	589.54	1711.23	-42.66	-1880.31	217.18	-7417.42
3	4	-608.31	1487.41	-34.46	-1772.11	-237.29	8359.94

Combination No. 1774
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	641.69	1710.50	-49.15	-2293.03	254.11	-8332.47
3	4	-657.19	1619.51	-40.93	-2178.67	-278.47	8903.01

Combination No. 1775
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	638.14	1577.71	-50.10	-2317.74	255.80	-8692.48
3	4	-636.74	1752.30	-41.06	-2194.32	-281.07	8188.17

Combination No. 1776
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	603.23	1562.07	-50.78	-2602.99	263.74	-8028.52
3	4	-601.54	1610.50	-41.55	-2489.09	-280.23	7840.42

Units: US (English)

Design Code: AASHTO LRFD

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Combination No. 1777
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	609.64	1573.61	-50.57	-2058.06	253.68	-8126.23
3	4	-607.95	1626.58	-41.77	-1922.06	-290.29	7927.66

Combination No. 1778
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	652.75	1706.29	-50.08	-2318.39	255.21	-8576.91
3	4	-651.36	1623.72	-41.07	-2193.67	-281.66	8725.71

Combination No. 1779
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	606.43	1531.18	-49.87	-2035.89	245.17	-8178.18
3	4	-605.03	1659.89	-41.29	-1889.14	-291.69	7787.16

Combination No. 1780
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	600.20	1522.11	-50.29	-2559.50	264.91	-8077.05
3	4	-598.80	1641.87	-40.87	-2456.10	-271.96	7708.52

Combination No. 1781
Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	651.44	1634.83	-50.09	-2318.03	255.53	-8754.86
3	4	-650.04	1695.18	-41.07	-2194.03	-281.33	8509.74

Combination No. 1782
Group Id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.79	1777.10	-50.08	-2318.74	254.88	-8199.73
3	4	-636.80	1552.91	-41.08	-2193.31	-281.99	8682.64

Combination No. 1783

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1783

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.79	1646.14	-50.54	-2615.25	252.58	-7867.22
3	4	-604.10	1526.42	-41.79	-2476.83	-291.39	8075.61

Combination No. 1784

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1784

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.29	1662.88	-50.82	-2045.04	265.53	-7954.30
3	4	-610.59	1537.31	-41.51	-1935.08	-278.43	8175.89

Combination No. 1785

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1785

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.44	1664.69	-50.30	-2013.56	265.50	-7798.36
3	4	-605.04	1506.38	-40.85	-1911.46	-271.36	8167.33

Combination No. 1786

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1786

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.30	1666.67	-49.88	-2580.52	245.77	-7720.42
3	4	-598.90	1497.30	-41.28	-2435.07	-291.10	8067.97

Combination No. 1787

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1787

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.88	1716.94	-43.55	-1951.33	216.11	-7612.64

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-600.75	1482.84	-34.65	-1828.02	-242.65	8182.05

Combination No. 1788

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1788

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	575.79	1638.09	-43.79	-1708.72	227.41	-7338.01
3	4	-577.66	1452.72	-34.40	-1610.22	-231.35	7790.09

Combination No. 1789

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1789

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.84	1505.22	-43.57	-1950.26	217.09	-8120.72
3	4	-600.71	1694.56	-34.63	-1829.09	-241.67	7612.77

Combination No. 1790

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1790

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	575.78	1475.10	-43.33	-1732.46	205.79	-7729.45
3	4	-577.66	1615.72	-34.87	-1586.48	-252.97	7398.50

Combination No. 1791

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1791

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.61	1575.16	-49.99	-2029.46	251.02	-8225.17
3	4	-615.22	1615.91	-41.17	-1895.56	-285.84	8034.14

Combination No. 1792

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1792

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.89	1563.52	-50.17	-2565.55	259.40	-8123.16
3	4	-608.50	1600.46	-40.98	-2450.05	-277.47	7942.18

Units: US (English)

Design Code: AASHTO LRFD



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1793

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.74	1617.60	50.16	-2398.16	258.98	-8543.27
3	4	-637.34	1657.06	-40.99	-2281.74	-277.88	8354.77

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1794

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	537.05	1420.50	33.89	-1287.20	152.06	-7090.55
3	4	-543.68	1524.48	-25.46	-1150.16	-193.09	6987.95

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1795

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	549.20	1434.84	-34.08	-1415.93	160.62	-7305.60
3	4	-555.83	1575.52	-25.27	-1297.68	-184.53	7123.76

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1796

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.39	1682.55	-50.11	-2400.89	256.49	-8357.49
3	4	-637.00	1592.12	-41.05	-2279.01	-280.37	8530.54

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1797

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.95	1541.23	-49.97	-2109.92	250.10	-8329.01
3	4	-613.56	1695.67	-41.19	-1973.99	-286.77	7882.38

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1798

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	549.31	1594.41	34.06	-1416.74	159.88	-6959.63

Group id: STR GP 5 Name: STRENGTH GROUP V

Units: US (English)

Design Code: AASHTO LRFD



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Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1799

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.16	1639.07	-50.00	-2490.53	251.29	-8212.70
3	4	-623.77	1580.25	-41.16	-2357.22	-285.57	8293.47

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1800

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.86	1776.13	-50.12	-2261.36	256.88	-8195.48
3	4	-636.46	1552.42	-41.04	-2140.31	-279.99	8677.10

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1801

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.60	1709.88	-49.99	-2490.89	250.97	-7835.53
3	4	-609.21	1509.44	-41.17	-2356.86	-285.90	8250.40

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1802

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.06	1609.08	-50.09	-2183.42	255.51	-8582.98
3	4	-637.67	1673.65	-41.07	-2059.38	-281.35	8324.47

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1803

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.04	1604.85	-49.98	-2109.73	250.27	-8370.00
3	4	-626.65	1632.04	-41.18	-1974.17	-286.60	8219.24

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1803

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	549.31	1594.41	34.06	-1416.74	159.88	-6959.63

Group id: STR GP 5 Name: STRENGTH GROUP V

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-555.94	1415.95	-25.29	-1296.87	-185.27	7472.72

Combination No. 1804

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	534.76	1533.41	-33.90	-1543.28	152.94	-6797.13
3	4	-541.38	1398.82	-25.45	-1407.29	-192.61	7215.17

Combination No. 1805

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.49	1678.44	-50.17	-2179.46	259.12	-8412.90
3	4	-639.09	1604.28	-40.99	-2063.33	-277.75	8535.66

Combination No. 1806

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.13	1637.18	-50.17	-2020.49	259.19	-8048.38
3	4	-614.74	1553.89	-40.99	-1904.53	-277.68	8197.07

Combination No. 1807

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.33	1621.92	-50.01	-2573.99	251.71	-7955.05
3	4	-607.94	1542.05	-41.15	-2441.60	-285.15	8094.13

Combination No. 1808

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.63	1716.12	-43.60	-1905.71	218.23	-7609.72
3	4	-600.51	1482.53	-34.60	-1787.07	-240.52	8177.83

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.78	1715.39	-50.08	-2318.43	255.16	-8524.77
3	4	-649.39	1614.62	-41.08	-2193.62	-281.70	8720.90

Combination No. 1809

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.69	1580.40	-50.63	-2345.65	260.46	-8806.07
3	4	-632.56	1749.61	-41.99	-2221.41	-284.64	8085.48

Combination No. 1810

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.79	1564.76	-51.32	-2630.90	268.41	-8142.11
3	4	-597.36	1607.80	-42.48	-2522.18	-283.80	7737.73

Combination No. 1811

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.20	1576.30	-51.11	-2085.97	258.34	-8239.82
3	4	-603.77	1623.88	-42.70	-1955.15	-293.86	7824.98

Combination No. 1812

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.31	1708.98	-50.62	-2346.29	259.87	-8690.49
3	4	-647.17	1621.03	-42.00	-2226.76	-285.23	8623.03

Combination No. 1813

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.63	1716.12	-43.60	-1905.71	218.23	-7609.72
3	4	-600.51	1482.53	-34.60	-1787.07	-240.52	8177.83

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.98	1533.87	-50.41	-2063.79	249.84	-8291.76
3	4	-600.85	1657.20	-42.22	-1922.23	-295.26	7684.47

Combination No. 1815

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1815

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.75	1524.80	-50.83	-2587.41	269.57	-8190.64
3	4	-594.62	1639.17	-41.79	-2489.19	-275.52	7605.84

Combination No. 1816

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1816

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.99	1637.52	-50.63	-2345.94	260.20	-8868.44
3	4	-645.86	1692.48	-42.00	-2227.12	-284.90	8407.06

Combination No. 1817

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1817

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.75	1779.80	-50.61	-2346.65	259.54	-8313.32
3	4	-632.62	1550.21	-42.01	-2226.40	-285.56	8579.96

Combination No. 1818

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1818

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.35	1648.84	-51.08	-2643.16	257.24	-7980.80
3	4	-599.92	1523.72	-42.72	-2509.92	-294.96	7972.93

Combination No. 1819

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1819

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.84	1665.57	-51.36	-2072.95	270.20	-8067.88

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.99	1687.38	-50.84	-2041.47	270.17	-7911.94
3	4	-600.86	1503.69	-41.78	-1944.55	-274.93	8064.64

Combination No. 1820

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1820

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.99	1687.38	-50.84	-2041.47	270.17	-7911.94
3	4	-600.86	1503.69	-41.78	-1944.55	-274.93	8064.64

Combination No. 1821

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1821

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.85	1669.37	-50.42	-2608.43	250.43	-7834.01
3	4	-594.72	1494.61	-42.21	-2468.16	-294.67	7965.28

Combination No. 1822

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1822

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.44	1719.64	-44.09	-1979.24	220.78	-7726.22
3	4	-596.57	1480.15	-35.58	-1861.11	-246.22	8079.37

Combination No. 1823

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1823

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	581.34	1640.79	-44.33	-1736.63	232.07	-7451.60
3	4	-573.48	1450.02	-35.33	-1643.31	-234.92	7687.41

Combination No. 1824

Group id: STR GP 5 Name: STRENGTH GROUP V

Combination No. 1824

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.39	1507.92	-44.11	-1978.17	221.75	-8234.30
3	4	-596.53	1691.87	-35.56	-1862.18	-245.24	7570.08

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-605.02	1506.74	-42.10	-2389.95	-289.47	8147.71

Combination No. 1836

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.62	1611.77	-50.63	-2211.33	260.18	-8696.57
3	4	-633.48	1670.95	-42.00	-2092.46	-284.92	8221.79

Combination No. 1837

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.60	1607.55	-50.52	-2137.64	254.93	-8483.59
3	4	-622.46	1629.35	-42.11	-2007.26	-290.17	8116.56

Combination No. 1838

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	554.86	1597.11	-34.60	-1444.65	164.54	-7073.22
3	4	-551.75	1413.26	-26.22	-1329.96	-188.84	7370.04

Combination No. 1839

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	540.31	1536.11	-34.44	-1571.19	157.20	-6910.72
3	4	-537.20	1396.13	-26.38	-1440.38	-196.18	7112.49

Combination No. 1840

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.04	1681.14	-50.71	-2207.37	263.78	-8526.49
3	4	-634.91	1601.59	-41.92	-2096.42	-281.32	8432.98

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.69	1639.87	-50.71	-2048.40	263.85	-8161.96
3	4	-610.55	1551.20	-41.92	-1937.62	-281.25	8094.39

Combination No. 1841

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.69	1639.87	-50.71	-2048.40	263.85	-8161.96
3	4	-610.55	1551.20	-41.92	-1937.62	-281.25	8094.39

Combination No. 1842

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.89	1624.62	-50.55	-2601.90	256.38	-8068.63
3	4	-603.75	1539.36	-42.08	-2474.69	-288.72	7991.44

Combination No. 1843

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	604.19	1718.81	-44.13	-1933.62	222.90	-7723.31
3	4	-596.32	1479.83	-35.53	-1820.16	-244.09	8075.15

Combination No. 1844

Group Id: STR GP 5 Name: STRENGTH GROUP V

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.34	1718.08	-50.62	-2346.34	259.83	-8638.36
3	4	-645.20	1611.93	-42.01	-2226.71	-285.27	8618.22

Combination No. 1845

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.23	1667.61	27.83	1562.51	-159.02	-9982.97
3	4	-635.73	1760.50	26.44	1536.40	167.24	8049.49

Combination No. 1846

Group Id: SER GP 1 Name: SERVICE GROUP I

Units: US (English)

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	637.15	1655.86	28.20	1400.33	-158.35	-8486.33
3	4	-609.87	1655.62	26.95	1366.88	173.16	7796.73

Combination No. 1847

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1847

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	641.90	1664.41	28.36	1803.98	-165.81	-8558.71
3	4	-614.62	1667.53	26.79	1786.90	165.71	7861.35

Combination No. 1848

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1848

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	674.05	1762.86	27.84	1562.03	-159.46	-8897.35
3	4	-646.55	1665.25	26.43	1536.88	166.80	8447.67

Combination No. 1849

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1849

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	639.74	1633.14	28.00	1771.29	-166.89	-8602.00
3	4	-612.24	1692.05	26.27	1762.46	159.37	7752.45

Combination No. 1850

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1850

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	635.12	1626.43	27.68	1383.43	-152.27	-8527.09
3	4	-607.62	1678.69	26.59	1342.49	173.99	7694.19

Combination No. 1851

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1851

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	673.08	1709.92	27.83	1562.30	-159.21	-9029.17



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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	663.27	1815.31	27.84	1561.76	-159.70	-8617.96
3	4	-635.77	1612.80	26.43	1537.15	166.56	8415.77

Combination No. 1852

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1852

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	639.05	1718.14	28.38	1391.25	-166.62	-8366.84
3	4	-611.77	1593.34	26.77	1375.96	164.89	7970.95

Combination No. 1853

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1853

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	643.86	1730.54	28.17	1813.62	-157.02	-8431.35
3	4	-616.58	1601.40	26.98	1777.26	174.49	8045.23

Combination No. 1854

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1854

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	639.75	1746.85	27.67	1787.83	-151.83	-8320.65
3	4	-612.25	1578.34	26.60	1745.93	174.43	8034.05

Combination No. 1855

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1855

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	635.20	1733.51	27.99	1367.85	-166.45	-8262.92
3	4	-607.70	1571.61	26.28	1358.07	159.81	7960.45

Combination No. 1856

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1856

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	635.20	1733.51	27.99	1367.85	-166.45	-8262.92
3	4	-607.70	1571.61	26.28	1358.07	159.81	7960.45



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.30	1657.10	27.77	1378.95	-156.35	-8561.25
3	4	-614.80	1648.02	26.50	1346.98	169.91	7867.28

Combination No. 1863
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.67	1697.16	27.78	1502.94	-156.66	-8872.44
3	4	-636.17	1689.95	26.50	1471.64	169.60	8172.90

Combination No. 1864
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.27	1555.55	16.10	999.67	-94.99	-7926.32
3	4	-560.83	1587.35	14.61	991.60	89.26	7029.95

Combination No. 1865
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.28	1566.17	15.97	904.31	-88.65	-8085.62
3	4	-569.83	1625.16	14.74	882.32	95.60	7130.56

Combination No. 1866
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.42	1745.27	27.82	1500.91	-158.50	-8734.82
3	4	-635.91	1641.84	26.46	1473.67	167.76	8303.10

Combination No. 1867
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.05	1640.59	27.92	1716.45	-163.24	-8713.73

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.56	1772.54	23.01	1293.62	-131.02	-8236.03
3	4	-606.64	1559.11	21.66	1270.67	137.38	7991.80

Combination No. 1857
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.46	1714.13	22.83	1473.33	-122.66	-8032.61
3	4	-589.53	1536.79	21.84	1432.00	145.74	7701.46

Combination No. 1858
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.53	1615.70	22.99	1294.41	-130.30	-8612.39
3	4	-606.61	1715.94	21.68	1269.87	138.10	7614.55

Combination No. 1859
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.45	1593.39	23.17	1455.74	-138.67	-8322.56
3	4	-589.53	1657.53	21.50	1449.59	129.73	7411.39

Combination No. 1860
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.28	1665.72	27.90	1776.05	-162.55	-8636.81
3	4	-619.78	1659.47	26.37	1757.70	163.70	7935.39

Combination No. 1861
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.05	1640.59	27.92	1716.45	-163.24	-8713.73

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-618.55	1718.55	26.35	1699.61	163.02	7822.98

Combination No. 1868

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.62	1713.06	27.90	1434.52	-162.35	-8627.57
3	4	-626.12	1633.05	26.37	1415.73	163.90	8127.49

Combination No. 1869

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.83	1814.59	27.81	1604.27	-158.22	-8614.82
3	4	-635.52	1612.44	26.46	1576.41	168.04	8411.66

Combination No. 1870

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.83	1765.52	27.91	1434.25	-162.60	-8348.18
3	4	-615.33	1580.60	26.37	1416.00	163.66	8095.59

Combination No. 1871

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.91	1690.85	27.83	1662.01	-159.23	-8901.85
3	4	-636.41	1702.23	26.44	1636.36	167.03	8150.46

Combination No. 1872

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.75	1687.72	27.92	1716.59	-163.11	-8744.09
3	4	-628.25	1671.42	26.36	1699.47	163.14	8072.51

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Combination No. 1873

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.35	1684.37	15.98	903.71	89.20	-7829.35
3	4	-569.91	1506.96	14.73	882.93	95.05	7389.04

Combination No. 1874

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	592.57	1639.19	16.09	809.97	94.63	-7708.98
3	4	-559.13	1494.27	14.62	801.14	89.61	7198.27

Combination No. 1875

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.97	1742.23	27.78	1664.94	-156.56	-8775.87
3	4	-637.47	1650.85	26.50	1633.43	169.70	8306.89

Combination No. 1876

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.93	1711.66	27.71	1782.69	-156.51	-8505.85
3	4	-619.42	1613.53	26.50	1751.06	169.75	8056.09

Combination No. 1877

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.89	1700.36	27.89	1372.69	-162.04	-8436.71
3	4	-614.39	1604.76	26.38	1353.23	164.21	7979.83

Combination No. 1878

Group Id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
File Name: Pier 12 Straddle.rcp

Sheet # 369
Job # 59219
Designed CAM
Date 9/10/14
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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1889

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.88	1745.23	31.41	1928.40	-168.37	-8543.71
3	4	-628.55	1635.00	28.57	1870.04	190.35	8219.06

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1890

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.76	1761.54	30.92	1902.60	-163.17	-8433.01
3	4	-624.22	1611.93	28.19	1838.71	190.28	8207.88

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1891

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.21	1748.20	31.23	1482.63	-177.79	-8375.28
3	4	-619.67	1605.21	27.88	1450.85	175.67	8134.28

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1892

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.58	1787.22	26.25	1408.39	-142.37	-8348.40
3	4	-618.61	1592.70	23.26	1363.45	153.23	8165.63

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1893

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.47	1728.82	26.07	1588.10	-134.00	-8144.97
3	4	-601.51	1570.39	23.44	1524.78	161.60	7875.29

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1894

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.29	1570.24	19.35	1114.44	-106.33	-8038.69

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1895

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.47	1608.08	26.42	1570.52	-150.01	-8434.93
3	4	-601.50	1691.13	23.09	1542.37	145.59	7585.22

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1896

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.30	1680.41	31.15	1890.82	-173.90	-8749.17
3	4	-631.75	1693.06	27.96	1850.49	179.56	8109.22

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1897

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.32	1671.79	31.01	1493.72	-167.69	-8673.61
3	4	-626.78	1681.62	28.10	1439.76	185.76	8041.11

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1898

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.69	1711.85	31.02	1617.71	-168.00	-8984.80
3	4	-648.14	1723.55	28.09	1564.43	185.46	8346.73

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.29	1570.24	19.35	1114.44	-106.33	-8038.69

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.55	1630.39	26.24	1409.18	-141.64	-8724.75
3	4	-618.58	1749.54	23.27	1362.66	153.96	7788.38

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1899

		Sheet #	371
		Job #	59219
		Designed CAM	
		Date	9/10/14
		Checked	
		Date	
Program: LEAP® RC-PIER® V8i (SELECTseries 5) SE Client Licenses			
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File Name: Pier 12 Straddle.rcp			

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-572.80	1620.95	16.20	1084.39	105.11	7203.78

Combination No. 1900
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.29	1580.86	19.21	1019.08	-99.99	-8197.99
3	4	-581.81	1658.76	16.34	975.11	111.45	7304.39

Combination No. 1901
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.43	1759.96	31.06	1615.68	-169.85	-8847.19
3	4	-647.89	1675.44	28.05	1566.45	183.61	8476.93

Combination No. 1902
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.07	1655.28	31.16	1831.22	-174.58	-8826.09
3	4	-630.52	1752.15	27.95	1792.40	178.87	7996.81

Combination No. 1903
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.63	1727.75	31.14	1549.29	-173.70	-8739.93
3	4	-638.09	1666.65	27.97	1508.52	179.76	8301.32

Combination No. 1904
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.04	1829.28	31.05	1719.04	-169.56	-8727.18
3	4	-647.49	1646.03	28.06	1669.19	183.90	8585.49

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	372
		Job #	59219
		Designed CAM	
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File Name: Pier 12 Straddle.rcp			

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.85	1780.21	31.15	1549.02	-173.94	-8460.55
3	4	-627.30	1614.19	27.96	1508.78	179.52	8269.42

Combination No. 1905
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.93	1705.54	31.08	1776.78	-170.57	-9014.22
3	4	-648.39	1735.83	28.03	1729.15	182.89	8324.29

Combination No. 1906
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.77	1702.41	31.16	1831.36	-174.46	-8856.46
3	4	-640.22	1705.01	27.95	1792.26	179.00	8246.34

Combination No. 1907
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.37	1699.06	19.22	1018.48	-100.54	-7941.71
3	4	-581.88	1540.56	16.33	975.71	110.91	7562.87

Combination No. 1908
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.59	1653.87	19.34	924.75	-105.98	-7821.34
3	4	-571.10	1527.87	16.21	893.92	105.47	7372.10

Combination No. 1909
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.04	1829.28	31.05	1719.04	-169.56	-8727.18
3	4	-647.49	1646.03	28.06	1669.19	183.90	8585.49

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-649.00	1795.01	30.13	1741.38	202.17	8253.19

Combination No. 1916

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1916

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.70	1669.63	35.27	1650.68	-183.79	-8567.46
3	4	-623.15	1690.13	30.64	1571.86	208.10	8000.43

Combination No. 1917

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1917

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.44	1678.18	35.43	2054.33	-191.24	-8639.84
3	4	-627.89	1702.05	30.48	1991.88	200.65	8065.06

Combination No. 1918

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1918

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.60	1776.63	34.91	1812.38	-184.89	-8978.48
3	4	-659.83	1699.77	30.12	1741.86	201.73	8651.37

Combination No. 1919

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1919

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.28	1646.91	35.07	2021.64	-192.32	-8683.13
3	4	-625.51	1726.56	29.96	1967.44	194.30	7956.15

Combination No. 1920

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1920

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.67	1640.20	34.75	1633.78	-177.70	-8608.22
3	4	-620.90	1713.21	30.28	1547.47	208.92	7897.90

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	672.99	1756.92	31.02	1779.71	-167.90	-8888.23
3	4	-649.44	1684.45	28.09	1726.21	185.56	8480.72

Combination No. 1911

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1911

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.94	1726.35	31.14	1897.46	-167.85	-8618.21
3	4	-631.40	1647.12	28.09	1843.85	185.61	8279.92

Combination No. 1912

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1912

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.91	1715.05	31.14	1487.46	-173.39	-8549.08
3	4	-626.36	1638.35	27.97	1446.01	180.07	8153.66

Combination No. 1913

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1913

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.40	1786.61	26.22	1472.18	-140.79	-8346.24
3	4	-618.43	1592.47	23.29	1393.79	154.81	8162.50

Combination No. 1914

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1914

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.61	1784.28	31.08	1676.77	-170.83	-8971.10
3	4	-657.07	1692.11	28.03	1629.70	182.63	8617.94

Combination No. 1915

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1915

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.77	1681.38	34.90	1812.87	-184.45	-9064.10

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 1921
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	679.62	1723.69	34.90	1812.65	-184.65	-9110.30
3	4	-658.85	1752.70	30.13	1741.59	201.98	8491.40

Combination No. 1922
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.81	1829.08	34.91	1812.12	-185.13	-8699.10
3	4	-649.04	1647.31	30.12	1742.13	201.49	8619.47

Combination No. 1923
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.59	1731.91	35.44	1641.60	-192.05	-8447.97
3	4	-625.04	1627.85	30.46	1580.94	199.83	8174.65

Combination No. 1924
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.40	1744.31	35.24	2063.98	-182.46	-8512.48
3	4	-629.85	1635.92	30.67	1982.23	209.43	8248.93

Combination No. 1925
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.29	1760.62	34.74	2038.18	-177.26	-8401.78
3	4	-625.52	1612.85	30.29	1950.90	209.36	8237.75

Combination No. 1926
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.07	1629.48	30.06	1706.10	-164.10	-8403.69
3	4	-619.88	1750.45	25.37	1654.57	164.67	7615.09



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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Combination No. 1927
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.74	1747.28	35.06	1618.21	-191.88	-8344.05
3	4	-620.97	1606.12	29.97	1563.04	194.74	8164.15

Combination No. 1928
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.11	1786.31	30.08	1543.97	-156.46	-8317.16
3	4	-619.91	1593.62	25.35	1475.64	172.31	8195.50

Combination No. 1929
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.00	1727.90	29.90	1723.69	-148.09	-8113.74
3	4	-602.81	1571.31	25.53	1636.98	180.68	7995.16

Combination No. 1930
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.07	1629.48	30.06	1544.76	-155.73	-8693.52
3	4	-619.88	1750.45	25.37	1474.85	173.03	7818.25

Combination No. 1931
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.00	1607.16	30.24	1706.10	-164.10	-8403.69
3	4	-602.80	1692.05	25.19	1654.57	164.67	7615.09

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-633.05	1693.98	30.06	1962.68	198.64	8139.09

Combination No. 1932
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.85	1670.87	34.84	1629.30	-181.78	-8642.38
3	4	-628.08	1682.54	30.19	1551.95	204.84	8070.98

Combination No. 1933
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	670.22	1710.93	34.85	1753.29	-182.09	-8953.57
3	4	-649.44	1724.47	30.19	1676.62	204.53	8376.60

Combination No. 1934
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.82	1569.32	23.17	1250.02	-120.42	-8007.45
3	4	-574.10	1621.87	18.30	1196.58	124.19	7233.66

Combination No. 1935
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.82	1579.94	23.03	1154.67	-114.08	-8166.76
3	4	-583.10	1659.68	18.44	1087.30	130.53	7334.26

Combination No. 1936
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.96	1759.04	34.89	1751.27	-183.93	-8815.95
3	4	-649.19	1676.36	30.15	1678.65	202.69	8506.80

Units: US (English)

Design Code: AASHTO LRFD

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Combination No. 1937
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.60	1654.36	34.99	1966.80	-188.67	-8704.86
3	4	-631.82	1753.06	30.04	1904.59	197.95	8026.68

Combination No. 1938
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.16	1726.83	34.97	1684.87	-187.79	-8708.70
3	4	-639.39	1667.57	30.06	1620.71	198.84	8331.19

Combination No. 1939
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.56	1828.36	34.88	1854.62	-183.65	-8695.95
3	4	-648.79	1646.95	30.15	1781.38	202.97	8615.36

Combination No. 1940
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.38	1779.29	34.97	1684.61	-188.03	-8429.31
3	4	-628.60	1615.11	30.06	1620.98	198.60	8299.29

Combination No. 1941
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	670.46	1704.62	34.90	1912.36	-184.66	-8982.98
3	4	-649.68	1736.75	30.13	1841.34	201.96	8354.16

Units: US (English)

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File Name: Pier 12_ Straddle.rcp													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	662.29	1701.49	34.99	1966.94	-188.55	-8825.22	1701.49	34.99	1966.94	-188.55	-8825.22	1701.49
3	4	-641.52	1705.93	30.05	1904.45	198.08	8276.21	1705.93	30.05	1904.45	198.08	8276.21	1705.93

Combination No. 1943
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1943													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	609.12	1698.14	23.05	1154.06	-114.63	-7910.48	1698.14	23.05	1154.06	-114.63	-7910.48	1698.14
3	4	-583.18	1541.48	18.42	1087.90	129.98	7592.74	1541.48	18.42	1087.90	129.98	7592.74	1541.48

Combination No. 1944
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1944													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	599.12	1652.96	23.16	1060.33	-120.07	-7790.11	1652.96	23.16	1060.33	-120.07	-7790.11	1652.96
3	4	-572.40	1528.79	18.31	1006.11	124.54	7401.97	1528.79	18.31	1006.11	124.54	7401.97	1528.79

Combination No. 1945
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1945													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	671.51	1756.00	34.84	1915.29	-181.99	-8857.00	1756.00	34.84	1915.29	-181.99	-8857.00	1756.00
3	4	-650.74	1685.37	30.19	1838.40	204.63	8510.59	1685.37	30.19	1838.40	204.63	8510.59	1685.37

Combination No. 1946
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1946													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	653.47	1725.43	34.84	2033.04	-181.94	-8586.98	1725.43	34.84	2033.04	-181.94	-8586.98	1725.43
3	4	-632.70	1648.04	30.19	1956.04	204.68	8259.79	1648.04	30.19	1956.04	204.68	8259.79	1648.04

Combination No. 1947
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1947													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	648.43	1714.13	34.96	1623.05	-187.48	-8517.85	1714.13	34.96	1623.05	-187.48	-8517.85	1714.13
3	4	-648.43	1714.13	34.96	1623.05	-187.48	-8517.85	1714.13	34.96	1623.05	-187.48	-8517.85	1714.13

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File Name: Pier 12_ Straddle.rcp													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	642.92	1785.69	30.05	1577.76	-154.88	-8315.00	1785.69	30.05	1577.76	-154.88	-8315.00	1785.69
3	4	-619.73	1593.39	25.39	1505.98	173.88	8192.37	1593.39	25.39	1505.98	173.88	8192.37	1593.39

Combination No. 1948
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1948													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	642.92	1785.69	30.05	1577.76	-154.88	-8315.00	1785.69	30.05	1577.76	-154.88	-8315.00	1785.69
3	4	-619.73	1593.39	25.39	1505.98	173.88	8192.37	1593.39	25.39	1505.98	173.88	8192.37	1593.39

Combination No. 1949
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1949													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	679.14	1783.37	34.91	1812.35	-184.92	-8939.87	1783.37	34.91	1812.35	-184.92	-8939.87	1783.37
3	4	-658.36	1693.03	30.12	1741.89	201.70	8647.81	1693.03	30.12	1741.89	201.70	8647.81	1693.03

Combination No. 1950
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1950													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	665.86	1679.24	37.33	1894.34	-191.96	-8982.23	1679.24	37.33	1894.34	-191.96	-8982.23	1679.24
3	4	-652.25	1797.15	31.23	1804.88	213.49	8329.82	1797.15	31.23	1804.88	213.49	8329.82	1797.15

Combination No. 1951
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1951													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	639.79	1667.49	37.70	1732.15	-191.29	-8485.60	1667.49	37.70	1732.15	-191.29	-8485.60	1667.49
3	4	-626.39	1692.27	31.73	1635.35	219.41	8077.06	1692.27	31.73	1635.35	219.41	8077.06	1692.27

Combination No. 1952
Group Id: SER GP 1 Name: SERVICE GROUP I

Combination No. 1952													
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mx	My	Mz
1	1	644.53	1676.04	37.86	2135.80	-198.74	-8557.97	1676.04	37.86	2135.80	-198.74	-8557.97	1676.04
3	4	-631.14	1704.18	31.57	2055.38	211.96	8141.68	1704.18	31.57	2055.38	211.96	8141.68	1704.18

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-606.05	1573.45	26.63	1700.48	191.99	7981.79

Combination No. 1964

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.16	1627.34	32.49	1626.23	-163.24	-8611.65
3	4	-623.13	1752.59	26.46	1538.35	184.35	7894.88

Combination No. 1965

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.09	1605.02	32.67	1787.57	-171.61	-8321.83
3	4	-606.05	1694.19	26.28	1718.06	175.98	7691.72

Combination No. 1966

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.91	1677.35	37.40	2107.87	-195.49	-8636.07
3	4	-636.30	1696.12	31.15	2026.18	209.95	8215.72

Combination No. 1967

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.94	1668.73	37.27	1710.77	-189.29	-8560.51
3	4	-631.32	1684.67	31.29	1615.45	216.16	8147.60

Combination No. 1968

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.31	1708.79	37.28	1834.76	-189.59	-8871.71
3	4	-652.69	1726.60	31.28	1740.12	215.85	8453.23

Units: US (English)

Design Code: AASHTO LRFD

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	596.90	1567.18	25.60	1331.49	-127.92	-7925.59
3	4	-577.35	1624.01	19.39	1260.08	135.51	7310.28

Combination No. 1969

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.91	1577.80	25.46	1236.14	-121.58	-8084.89
3	4	-586.35	1661.82	19.53	1150.80	141.85	7410.88

Combination No. 1970

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.91	1577.80	25.46	1236.14	-121.58	-8084.89
3	4	-586.35	1661.82	19.53	1150.80	141.85	7410.88

Combination No. 1971

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.05	1756.90	37.32	1832.74	-191.44	-8734.09
3	4	-652.43	1678.49	31.24	1742.14	214.00	8583.43

Combination No. 1972

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.69	1652.22	37.42	2048.27	-196.18	-8712.99
3	4	-635.07	1755.20	31.14	1968.09	209.27	8103.31

Combination No. 1973

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.25	1724.70	37.40	1766.34	-195.29	-8626.84
3	4	-642.64	1669.70	31.16	1684.21	210.15	8407.82

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.65	1826.22	37.31	1936.09	-191.16	-8614.08
3	4	-652.04	1649.09	31.25	1844.88	214.29	8691.99

Combination No. 1975

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1975

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.47	1777.15	37.41	1766.07	-195.53	-8347.45
3	4	-631.85	1617.25	31.15	1684.47	209.91	8375.92

Combination No. 1976

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1976

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.55	1702.48	37.33	1993.83	-192.17	-8901.12
3	4	-652.93	1738.89	31.22	1904.84	213.28	8430.79

Combination No. 1977

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1977

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.38	1699.35	37.42	2048.41	-196.05	-8743.36
3	4	-644.77	1708.07	31.14	1967.95	209.39	8352.84

Combination No. 1978

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1978

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.99	1696.00	25.48	1235.53	-122.13	-7828.62
3	4	-586.43	1543.62	19.52	1151.40	141.30	7669.37

Combination No. 1979

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1979

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.21	1650.82	25.59	1141.80	-127.57	-7708.25

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.60	1753.86	37.27	1996.76	-189.50	-8775.13
3	4	-653.99	1687.51	31.28	1901.90	215.95	8587.22

Combination No. 1980

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1980

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.56	1723.30	37.27	2114.51	-189.44	-8505.11
3	4	-635.95	1650.18	31.28	2019.54	216.00	8336.42

Combination No. 1981

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1981

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.52	1712.00	37.39	1704.52	-194.98	-8435.98
3	4	-630.91	1641.41	31.16	1621.70	210.46	8260.16

Combination No. 1982

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1982

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.01	1783.56	32.48	1659.23	-162.39	-8233.14
3	4	-622.98	1595.53	26.48	1569.48	185.20	8269.00

Combination No. 1983

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 1983

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.23	1781.23	37.34	1893.82	-192.42	-8858.00
3	4	-661.61	1695.16	31.22	1805.39	213.02	8724.44

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.41	1634.00	37.85	1732.88	-185.80	-8370.42
3	4	-630.53	1719.41	31.45	1620.77	222.46	8122.86

Combination No. 1985
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.51	1675.18	37.99	1911.96	-192.55	-8826.29
3	4	-658.63	1801.21	31.30	1814.68	215.71	8478.15

Combination No. 1986
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.44	1663.44	38.36	1749.78	-191.88	-8329.66
3	4	-632.78	1696.33	31.81	1645.16	221.63	8225.40

Combination No. 1987
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.18	1671.98	38.52	2153.43	-199.34	-8402.03
3	4	-637.53	1708.24	31.65	2065.18	214.18	8290.02

Combination No. 1988
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.34	1770.43	38.00	1911.48	-192.99	-8740.68
3	4	-669.46	1705.96	31.29	1815.16	215.27	8876.34

Combination No. 1989
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.02	1640.72	38.16	2120.74	-200.42	-8445.33
3	4	-635.14	1732.76	31.13	2040.74	207.84	8181.11

Combination No. 1990
 Group id: SER GP 1 Name: SERVICE GROUP 1



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.41	1634.00	37.85	1732.88	-185.80	-8370.42
3	4	-630.53	1719.41	31.45	1620.77	222.46	8122.86

Combination No. 1991
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	668.36	1717.50	38.00	1911.75	-192.75	-8872.50
3	4	-668.49	1758.89	31.30	1814.90	215.51	8716.36

Combination No. 1992
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.55	1822.88	38.01	1911.21	-193.23	-8461.29
3	4	-658.68	1653.51	31.29	1815.43	215.03	8844.43

Combination No. 1993
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.33	1725.72	38.54	1740.70	-200.15	-8210.17
3	4	-634.68	1634.05	31.63	1654.24	213.37	8399.61

Combination No. 1994
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.14	1738.11	38.34	2163.07	-190.56	-8274.68
3	4	-639.49	1642.11	31.84	2055.54	222.96	8473.90

Combination No. 1995
 Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.03	1754.43	37.84	2137.27	-185.36	-8163.98

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-635.15	1619.05	31.46	2024.21	222.90	8462.72

Combination No. 1996
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.48	1741.09	38.16	1717.30	-199.98	-8106.25
3	4	-630.60	1612.32	31.14	1636.34	208.28	8389.12

Combination No. 1997
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.84	1780.11	33.18	1643.06	-164.56	-8079.36
3	4	-629.55	1599.82	26.52	1548.95	185.85	8420.46

Combination No. 1998
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.74	1721.70	33.00	1822.78	-156.19	-7875.94
3	4	-612.44	1577.51	26.70	1770.28	194.22	8130.12

Combination No. 1999
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.81	1623.28	33.16	1643.86	-163.83	-8455.72
3	4	-629.52	1756.65	26.54	1548.15	186.57	8043.22

Combination No. 2000
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.73	1600.96	33.34	1805.19	-172.20	-8165.89
3	4	-612.44	1698.25	26.36	1727.87	178.20	7840.05

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.56	1673.30	38.07	2125.50	-196.09	-8480.14
3	4	-642.69	1700.18	31.23	2035.98	212.18	8364.06

Combination No. 2001
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.59	1664.67	37.94	1728.39	-189.88	-8404.58
3	4	-637.71	1688.73	31.36	1625.25	218.38	8295.94

Combination No. 2002
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.59	1664.67	37.94	1728.39	-189.88	-8404.58
3	4	-637.71	1688.73	31.36	1625.25	218.38	8295.94

Combination No. 2003
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.95	1704.73	37.94	1852.39	-190.19	-8715.77
3	4	-659.08	1730.66	31.36	1749.92	218.07	8601.57

Combination No. 2004
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	589.55	1563.12	26.21	1349.11	-128.52	-7769.65
3	4	-583.74	1628.06	19.47	1269.88	137.73	7458.62

Combination No. 2005
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.56	1573.74	26.13	1253.76	-122.18	-7928.95
3	4	-592.74	1665.87	19.60	1160.60	144.07	7559.22

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.70	1752.84	37.98	1850.36	-192.03	-8578.15
3	4	-658.82	1682.55	31.32	1751.95	216.23	8731.77

Combination No. 2007

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2007

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.33	1648.16	38.09	2065.90	-196.77	-8557.06
3	4	-641.46	1759.26	31.21	1977.89	211.49	8251.64

Combination No. 2008

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2008

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.90	1720.64	38.07	1783.97	-195.89	-8470.90
3	4	-649.02	1673.76	31.23	1694.01	212.37	8556.15

Combination No. 2009

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2009

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.30	1822.17	37.98	1953.72	-191.75	-8458.14
3	4	-658.43	1653.15	31.32	1854.69	216.51	8840.33

Combination No. 2010

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2010

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.11	1773.09	38.07	1783.70	-196.13	-8191.51
3	4	-638.24	1621.31	31.23	1694.28	212.13	8524.25

Combination No. 2011

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2011

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	659.20	1698.42	38.00	2011.46	-192.70	-8745.18

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.03	1695.29	38.08	2066.04	-196.65	-8587.42
3	4	-651.15	1712.13	31.22	1977.75	211.61	8501.17

Combination No. 2012

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2012

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.03	1695.29	38.08	2066.04	-196.65	-8587.42
3	4	-651.15	1712.13	31.22	1977.75	211.61	8501.17

Combination No. 2013

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2013

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.63	1691.95	26.14	1253.16	-122.73	-7672.68
3	4	-592.82	1547.67	19.59	1161.21	143.52	7817.71

Combination No. 2014

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2014

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.85	1646.76	26.26	1159.42	-128.17	-7552.31
3	4	-582.04	1534.98	19.48	1079.41	138.08	7626.93

Combination No. 2015

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2015

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.25	1749.80	37.94	2014.39	-190.09	-8619.20
3	4	-660.38	1691.56	31.36	1911.71	218.17	8735.56

Combination No. 2016

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2016

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.21	1719.24	37.94	2132.14	-190.04	-8349.18
3	4	-642.33	1654.24	31.36	2029.34	218.22	8484.75

Units: US (English)

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Combination No. 2017

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.17	1707.94	38.06	1722.14	-195.58	-8280.04
3	4	-637.30	1645.47	31.24	1631.51	212.68	8408.50

Combination No. 2018

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.66	1779.50	33.14	1676.86	-162.98	-8077.20
3	4	-629.36	1599.59	26.56	1579.28	187.42	8417.33

Combination No. 2019

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.87	1777.17	38.01	1911.44	-193.02	-8702.06
3	4	-668.00	1699.22	31.29	1815.20	215.24	8872.77

Combination No. 2020

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.01	1672.92	38.38	1932.17	-195.95	-8733.77
3	4	-662.11	1803.48	31.98	1838.79	218.28	8562.53

Combination No. 2021

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.93	1661.17	38.75	1769.99	-195.29	-8237.13
3	4	-636.26	1698.60	32.49	1669.27	224.21	8309.78

Combination No. 2022

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.17	1707.94	38.06	1722.14	-195.58	-8280.04
3	4	-637.30	1645.47	31.24	1631.51	212.68	8408.50

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Combination No. 2023

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.68	1669.71	38.91	2173.64	-202.74	-8309.51
3	4	-641.00	1710.51	32.33	2089.29	216.76	8374.40

Combination No. 2023

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.83	1768.16	38.39	1931.69	-196.39	-8648.15
3	4	-672.94	1708.23	31.98	1839.27	217.85	8960.72

Combination No. 2024

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.52	1638.45	38.55	2140.95	-203.82	-8352.80
3	4	-638.62	1735.03	31.81	2064.85	210.42	8265.49

Combination No. 2025

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.90	1631.73	38.24	1753.09	-189.20	-8277.89
3	4	-634.01	1721.67	32.13	1644.88	225.03	8207.24

Combination No. 2026

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.86	1715.23	38.39	1931.96	-196.15	-8779.97
3	4	-671.96	1761.16	31.98	1839.00	218.09	8800.74

Combination No. 2027

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.05	1820.61	38.40	1931.43	-196.63	-8368.77

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Combination No. 2028											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
3	4	-662.15	1655.78	31.97	1839.53	217.60	8928.81				

Combination No. 2028											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	629.83	1723.45	38.93	1760.91	-203.56	-8117.64				
3	4	-638.15	1636.32	32.31	1678.35	215.94	8483.99				

Combination No. 2029											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	634.64	1735.84	38.72	2183.29	-193.96	-8182.15				
3	4	-642.96	1644.38	32.52	2079.64	225.54	8558.28				

Combination No. 2030											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	630.53	1752.16	38.23	2157.49	-188.76	-8071.45				
3	4	-638.63	1621.32	32.14	2048.31	225.47	8547.10				

Combination No. 2031											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	625.98	1738.82	38.54	1737.52	-203.38	-8013.72				
3	4	-634.08	1614.59	31.82	1660.45	210.85	8473.50				

Combination No. 2032											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	627.34	1777.84	33.56	1663.28	-167.96	-7986.83				
3	4	-633.02	1602.09	27.20	1573.05	188.42	8504.84				

Units: US (English)

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Combination No. 2033											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	610.24	1719.43	33.38	1842.99	-159.59	-7783.41				
3	4	-615.92	1579.77	27.38	1734.39	196.79	8214.50				

Combination No. 2034											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	627.31	1621.01	33.55	1664.07	-167.23	-8363.19				
3	4	-632.99	1758.92	27.22	1572.26	189.15	8127.59				

Combination No. 2035											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	610.23	1598.70	33.73	1825.41	-175.60	-8073.36				
3	4	-615.91	1700.51	27.04	1751.97	180.78	7924.43				

Combination No. 2036											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	638.06	1671.03	38.46	2145.71	-199.49	-8387.61				
3	4	-646.16	1702.45	31.91	2060.09	214.75	8448.44				

Combination No. 2037											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	633.06	1663.41	38.33	1748.61	-193.28	-8312.05				
3	4	-641.19	1691.00	32.04	1649.36	220.95	8380.32				

Combination No. 2038											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	627.34	1777.84	33.56	1663.28	-167.96	-7986.83				
3	4	-633.02	1602.09	27.20	1573.05	188.42	8504.84				

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.45	1702.47	38.33	1872.60	-193.59	-8623.24
3	4	-662.56	1732.93	32.04	1774.03	220.65	8685.95

Combination No. 2039

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2039

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	585.05	1560.85	26.66	1369.33	-131.92	-7677.12
3	4	-587.21	1630.33	20.15	1293.99	140.30	7543.00

Combination No. 2040

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2040

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.06	1571.48	26.52	1273.97	-125.58	-7836.43
3	4	-596.22	1668.14	20.29	1184.71	146.64	7643.60

Combination No. 2041

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2041

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.20	1750.58	38.37	1870.58	-195.43	-8485.62
3	4	-662.30	1684.82	32.00	1776.05	218.80	8816.15

Combination No. 2042

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2042

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.83	1645.89	38.47	2086.11	-200.17	-8464.53
3	4	-644.93	1761.53	31.89	2002.00	214.06	8336.02

Combination No. 2043

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2043

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.40	1718.37	38.45	1804.18	-199.29	-8378.37



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.80	1819.90	38.37	1973.93	-195.15	-8365.62
3	4	-661.90	1655.42	32.00	1878.79	219.08	8924.71

Combination No. 2044

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2044

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.80	1819.90	38.37	1973.93	-195.15	-8365.62
3	4	-661.90	1655.42	32.00	1878.79	219.08	8924.71

Combination No. 2045

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2045

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.61	1770.82	38.46	1803.91	-199.53	-8098.98
3	4	-641.71	1623.58	31.91	1718.39	214.71	8608.63

Combination No. 2046

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2046

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.69	1696.15	38.39	2031.67	-196.16	-8652.65
3	4	-662.80	1745.21	31.98	1938.75	218.07	8663.50

Combination No. 2047

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2047

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.53	1693.02	38.47	2086.25	-200.05	-8494.89
3	4	-654.63	1714.40	31.90	2001.86	214.19	8585.55

Combination No. 2048

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2048

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	594.13	1689.68	26.53	1273.37	-126.13	-7580.15
3	4	-596.29	1549.94	20.27	1185.31	146.09	7902.09



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Combination No. 2049

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	583.35	1644.49	26.65	1179.64	-131.57	-7459.78
3	4	-585.51	1537.25	20.16	1103.52	140.66	7711.31

Combination No. 2050

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.75	1747.54	38.33	2034.60	-193.49	8526.67
3	4	-663.85	1693.83	32.04	1935.81	220.74	8819.93

Combination No. 2051

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.71	1716.97	38.33	2152.35	-193.44	-8256.65
3	4	-645.81	1656.51	32.04	2053.45	220.80	8569.13

Combination No. 2052

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.67	1705.67	38.45	1742.35	-198.98	-8187.52
3	4	-640.77	1647.74	31.92	1655.61	215.26	8492.88

Combination No. 2053

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.16	1777.23	33.53	1697.07	-166.38	-7984.68
3	4	-632.84	1601.85	27.24	1603.39	190.00	8501.71

Combination No. 2054

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.93	1641.43	-16.82	733.76	99.21	8847.51
3	4	-650.93	1641.43	-16.82	733.76	99.21	8847.51

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 2055

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.37	1774.90	38.39	1931.66	-196.42	-8609.54
3	4	-671.48	1701.49	31.97	1839.30	217.82	8957.15

Combination No. 2056

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	674.42	1675.90	-16.99	-942.54	107.08	-9228.48
3	4	-624.47	1752.21	-17.75	-953.63	-103.16	7803.01

Combination No. 2057

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.56	1664.31	-17.50	-1153.84	112.96	-8736.66
3	4	-598.40	1647.17	-18.11	-1171.98	-102.54	7545.42

Combination No. 2058

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.31	1672.86	-17.34	-750.19	105.51	-8809.03
3	4	-603.14	1659.08	-18.27	-751.96	-109.99	7610.05

Combination No. 2059

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	685.24	1771.14	-16.98	943.02	106.64	-9142.87
3	4	-635.30	1656.96	-17.76	-953.15	-103.60	8201.20

Combination No. 2059

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.93	1641.43	-16.82	733.76	99.21	8847.51
3	4	-650.93	1641.43	-16.82	733.76	99.21	8847.51

Units: US (English)

Design Code: AASHTO LRFD

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.94	1755.14	-17.15	-717.23	114.26	-8566.16
3	4	-600.99	1570.05	-17.59	-744.11	-95.97	7787.58

Combination No. 2066

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2066

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.39	1741.80	16.83	-1137.20	99.65	-8508.43
3	4	-596.44	1563.32	-17.91	-1131.97	-110.59	7713.98

Combination No. 2067

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2067

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.34	1779.03	-12.14	-671.13	77.68	-8428.59
3	4	-597.81	1552.61	-13.00	-682.30	-74.70	7798.48

Combination No. 2068

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2068

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.23	1720.63	-12.32	-491.42	86.05	-8225.17
3	4	-580.70	1530.30	-12.82	-520.97	-66.33	7508.14

Combination No. 2069

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2069

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.31	1622.20	-12.16	-670.34	78.40	-8804.95
3	4	-597.78	1709.44	-12.98	-683.10	-73.98	7421.24

Combination No. 2070

Group id: SER GP 1 Name: SERVICE GROUP I

Units: US (English)

Design Code: AASHTO LRFD

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Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2065

Combination No. 2065

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.94	1755.14	-17.15	-717.23	114.26	-8566.16
3	4	-600.99	1570.05	-17.59	-744.11	-95.97	7787.58

Combination No. 2066

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2066

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.31	1634.71	-17.14	-1121.63	113.82	-8772.60
3	4	-596.37	1670.41	-17.60	-1147.54	-96.41	7447.72

Combination No. 2067

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2067

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	684.27	1718.21	-16.99	-942.76	106.88	-9274.68
3	4	-634.32	1709.90	-17.75	-953.42	-103.36	8041.22

Combination No. 2068

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2068

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	674.46	1823.59	-16.98	-943.29	106.40	-8863.48
3	4	-624.51	1604.51	-17.76	-952.89	-103.84	8169.29

Combination No. 2069

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2069

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.46	1726.59	-17.32	-1162.93	104.69	-8617.17
3	4	-600.29	1584.89	-18.29	-1162.90	-110.81	7719.64

Combination No. 2064

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2064

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.27	1738.99	-17.53	-740.55	114.29	-8681.68
3	4	-605.10	1592.95	-18.08	-761.00	-101.21	7793.92

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.23	1599.89	-11.98	-509.00	70.03	-8515.12
3	4	-580.70	1651.04	-13.16	-503.38	-82.35	7218.07

Combination No. 2070
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.47	1674.01	-16.92	-729.00	103.54	-8882.32
3	4	-608.52	1651.18	-17.82	-732.33	-106.69	7688.92

Combination No. 2071
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.49	1665.39	-17.05	-1126.11	109.74	-8806.76
3	4	-603.55	1639.73	-17.69	-1143.06	-100.49	7620.80

Combination No. 2072
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	674.86	1705.45	-17.04	-1002.11	109.44	-9117.95
3	4	-624.91	1681.66	-17.70	-1018.39	-100.80	7926.43

Combination No. 2073
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	599.54	1559.45	-4.99	-179.18	30.23	-8041.86
3	4	-555.53	1583.45	-6.19	-180.18	-37.99	6913.96

Combination No. 2074
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.54	1570.07	-5.13	-274.54	36.57	-8201.16

Combination No. 2075
Group id: SER GP 1 Name: SERVICE GROUP 1



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	674.61	1753.56	-17.00	-1004.14	107.59	-8980.34
3	4	-624.66	1633.55	-17.74	-1016.37	-102.64	8056.63

Combination No. 2076
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.24	1648.87	-16.90	-788.61	102.85	-8959.24
3	4	-607.29	1710.26	-17.84	-790.42	-107.38	7576.50

Combination No. 2077
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.81	1721.35	-16.92	-1070.54	103.74	-8873.08
3	4	-614.86	1624.77	-17.82	-1074.30	-106.50	7881.01

Combination No. 2078
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	674.21	1822.88	-17.01	-900.78	107.87	-8860.33
3	4	-624.26	1604.15	-17.73	-913.63	-102.36	8165.19

Combination No. 2079
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.02	1773.80	-16.92	-1070.80	103.50	-8593.70
3	4	-604.07	1572.31	-17.83	-1074.04	-106.74	7849.11

Combination No. 2080
Group id: SER GP 1 Name: SERVICE GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	658.12	1719.95	-17.05	-722.36	109.59	-8751.36
3	4	-608.17	1605.24	-17.69	-738.97	-100.65	7809.61

Combination No. 2087
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.08	1708.65	-16.93	-1132.36	104.05	-8682.23
3	4	-603.13	1596.47	-17.81	-1136.81	-106.19	7733.36

Combination No. 2088
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.15	1778.42	-12.18	-637.34	79.25	-8426.43
3	4	-597.63	1552.38	-12.96	-651.97	-73.13	7795.36

Combination No. 2089
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	683.78	1777.88	-16.98	-943.06	106.61	-9104.25
3	4	-633.83	1650.23	-17.76	-953.12	-103.63	8197.63

Combination No. 2090
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	682.43	1690.58	-13.75	-827.77	95.73	-9340.84
3	4	-636.44	1785.81	-16.15	-860.85	-87.30	7976.84

Combination No. 2091
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.58	1679.00	-14.26	-1039.07	101.61	-8849.02

Units: US (English)

Design Code: AASHTO LRFD



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.10	1699.13	-16.99	-843.05	106.86	-9147.37
3	4	-625.16	1693.95	-17.75	-853.67	-103.37	7903.98

Combination No. 2081
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.94	1696.00	-16.90	-788.47	102.98	-8989.61
3	4	-616.99	1663.13	-17.84	-790.56	-107.26	7826.03

Combination No. 2082
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.62	1688.27	-5.12	-275.14	36.02	-7944.88
3	4	-564.61	1503.06	-6.06	-288.86	-32.20	7273.05

Combination No. 2083
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	597.84	1643.08	-5.00	-368.87	30.59	-7824.51
3	4	-553.83	1490.37	-6.18	-370.65	-37.64	7082.28

Combination No. 2084
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	676.16	1750.52	-17.05	-840.11	109.54	-9021.38
3	4	-626.21	1642.57	-17.69	-856.61	-100.70	8060.42

Combination No. 2085
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	676.16	1750.52	-17.05	-840.11	109.54	-9021.38
3	4	-626.21	1642.57	-17.69	-856.61	-100.70	8060.42

Units: US (English)

Design Code: AASHTO LRFD

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		Date	
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File Name: Pier 12 Straddle.rcp			

Combination No. 2092											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
3	4	-610.37	1680.77	-16.52	-1079.20	-86.68	7719.25				

Combination No. 2092											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	661.33	1687.55	-14.10	-635.42	94.16	-8921.40				
3	4	-615.11	1692.68	-16.68	-659.18	-94.13	7783.88				

Combination No. 2093											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	693.26	1785.83	-13.74	-828.25	95.29	-9255.23				
3	4	-647.27	1690.56	-16.16	-860.37	-87.74	8375.03				

Combination No. 2094											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	658.94	1656.12	-13.58	-618.99	87.86	-8959.88				
3	4	-612.95	1717.36	-16.32	-634.79	-95.17	7679.80				

Combination No. 2095											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	654.33	1649.40	-13.89	-1006.86	102.48	-8884.97				
3	4	-608.34	1704.01	-16.01	-1054.76	-80.55	7621.55				

Combination No. 2096											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	692.29	1732.90	-13.74	-827.99	95.54	-9387.05				
3	4	-646.29	1743.49	-16.16	-860.64	-87.50	8215.05				

Units: US (English)

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File Name: Pier 12 Straddle.rcp			

Combination No. 2097											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	682.48	1838.28	-13.73	-828.52	95.05	-8975.84				
3	4	-636.49	1638.11	-16.17	-860.10	-87.98	8343.12				

Combination No. 2098											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	658.48	1741.28	-14.08	-1048.15	93.35	-8729.53				
3	4	-612.26	1618.48	-16.70	-1070.11	-94.95	7893.47				

Combination No. 2099											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	663.28	1753.67	-14.29	-625.78	102.94	-8794.04				
3	4	-617.07	1626.55	-16.49	-668.82	-85.35	7967.75				

Combination No. 2100											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	658.95	1769.83	-13.90	-602.46	102.92	-8678.53				
3	4	-612.96	1603.65	-16.00	-651.33	-80.11	7961.75				

Combination No. 2101											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	654.40	1756.49	-13.59	-1022.43	88.30	-8620.80				
3	4	-608.41	1596.92	-16.31	-1039.19	-94.73	7887.81				

Combination No. 2102											
Group Id: SER GP 1 Name: SERVICE GROUP I											
Memb	Node	Fx	Fy	Fz	Mx	My	Mz	Fx	Fy	Fz	Mz
1	1	654.40	1756.49	-13.59	-1022.43	88.30	-8620.80				
3	4	-608.41	1596.92	-16.31	-1039.19	-94.73	7887.81				

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.35	1793.72	-9.08	-556.36	66.33	-8540.96
3	4	-609.78	1586.21	-11.40	-589.52	-58.84	7972.31

Combination No. 2103
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.25	1735.32	-9.08	-376.65	74.70	-8337.53
3	4	-592.68	1563.89	-11.22	-428.18	-50.47	7681.97

Combination No. 2104
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.32	1636.89	-8.92	-555.57	67.06	-8917.31
3	4	-609.75	1743.04	-11.39	-590.31	-58.12	7595.07

Combination No. 2105
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.25	1614.58	-8.74	-394.23	58.69	-8627.49
3	4	-592.67	1684.63	-11.57	-410.60	-66.49	7391.90

Combination No. 2106
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.49	1688.70	-13.67	-614.23	92.20	-8994.68
3	4	-620.50	1684.78	-16.23	-639.55	-90.84	7862.75

Combination No. 2107
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.51	1680.07	-13.81	-1011.34	98.40	-8919.13

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.88	1720.14	-13.80	-887.34	98.09	-9230.32
3	4	-636.89	1715.26	-16.10	-925.61	-84.94	8100.26

Combination No. 2108
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.88	1720.14	-13.80	-887.34	98.09	-9230.32
3	4	-636.89	1715.26	-16.10	-925.61	-84.94	8100.26

Combination No. 2109
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.55	1574.14	-1.75	-64.41	18.89	-8154.22
3	4	-567.50	1617.05	-4.59	-87.40	-22.13	7087.79

Combination No. 2110
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.56	1584.76	-1.88	-159.77	25.23	-8313.52
3	4	-576.51	1654.86	-4.46	-196.67	-15.79	7188.40

Combination No. 2111
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	682.62	1768.24	-13.76	-889.37	96.25	-9092.70
3	4	-636.63	1667.15	-16.14	-923.58	-86.79	8230.46

Combination No. 2112
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.26	1663.56	-13.66	-673.83	91.51	-9071.60
3	4	-619.27	1743.86	-16.25	-697.64	-91.52	7750.33

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Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2113

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	672.82	1736.04	-13.68	-955.77	92.40	-8985.45
3	4	-626.83	1658.36	-16.23	-981.52	-90.64	8054.84

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2114

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	682.23	1837.57	-13.77	-786.01	96.53	-8972.69
3	4	-636.23	1637.75	-16.14	-820.85	-86.50	8339.02

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2115

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.04	1788.49	-13.67	-956.03	92.15	-8706.06
3	4	-616.05	1605.91	-16.23	-981.25	-90.88	8022.94

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2116

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	683.12	1713.82	-13.74	-728.27	95.52	-9259.73
3	4	-637.13	1727.55	-16.16	-760.89	-87.51	8077.81

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2117

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	674.96	1710.69	-13.66	-673.70	91.64	-9101.97
3	4	-628.96	1696.73	-16.24	-697.78	-91.40	7999.86

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2118

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.17	1793.11	8.93	-522.57	67.91	-8538.80

Group id: SER GP 1 Name: SERVICE GROUP I

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Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2119

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.63	1702.96	-1.87	-160.37	24.68	-8057.25
3	4	-576.58	1536.66	-4.47	-196.07	-16.34	7446.88

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2120

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.86	1657.77	-1.75	-254.10	19.24	-7936.88
3	4	-565.81	1523.97	-4.59	-277.86	-21.78	7256.11

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2121

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	684.18	1765.20	-13.80	-725.34	98.19	-9133.75
3	4	-638.18	1676.16	-16.10	-763.82	-84.84	8234.25

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2122

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.13	1734.64	-13.80	-607.59	98.24	-8863.73
3	4	-620.14	1638.84	-16.10	-646.19	-84.79	7983.44

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2123

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.10	1723.34	-13.68	-1017.59	92.71	-8704.59
3	4	-615.10	1630.07	-16.22	-1044.02	-90.33	7907.19

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2123

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.17	1793.11	8.93	-522.57	67.91	-8538.80

Group id: SER GP 1 Name: SERVICE GROUP I

Units: US (English)

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Combination No. 2129

Combination No. 2129

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.47	1655.20	-9.75	-483.41	73.77	-8928.64
3	4	-614.25	1718.27	-14.23	-522.60	-76.09	7709.67

Combination No. 2130

Combination No. 2130

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.86	1648.48	-10.07	871.27	88.39	-8853.74
3	4	-609.64	1704.92	-13.91	-942.57	-61.48	7651.42

Combination No. 2131

Combination No. 2131

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	690.81	1731.98	-9.92	-692.40	81.45	-9355.81
3	4	-647.59	1744.41	-14.06	-748.44	-68.42	8244.92

Combination No. 2132

Combination No. 2132

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	681.00	1837.37	-9.91	-692.94	80.96	-8944.61
3	4	-637.78	1639.03	-14.07	-747.91	-68.91	8372.92

Combination No. 2133

Combination No. 2133

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.00	1740.36	-10.26	-912.57	79.26	-8698.30
3	4	-613.56	1619.40	-14.60	-957.92	-75.87	7923.34

Combination No. 2134

Combination No. 2134

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.00	1740.36	-10.26	-912.57	79.26	-8698.30
3	4	-613.56	1619.40	-14.60	-957.92	-75.87	7923.34

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Combination No. 2124

Combination No. 2124

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	691.80	1792.57	-13.74	-828.29	95.26	-9216.61
3	4	-645.81	1683.82	-16.16	-860.34	-87.71	8371.46

Combination No. 2125

Combination No. 2125

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.96	1689.67	-9.92	-692.19	81.64	-9309.61
3	4	-637.74	1786.72	-14.06	-748.66	-68.23	8006.71

Combination No. 2126

Combination No. 2126

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.11	1678.08	-10.43	-903.49	87.53	-8817.79
3	4	-611.67	1681.68	-14.42	-967.00	-67.60	7749.12

Combination No. 2127

Combination No. 2127

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	659.85	1686.63	-10.27	-499.84	80.07	-8890.16
3	4	-616.41	1693.60	-14.58	-546.98	-75.05	7813.75

Combination No. 2128

Combination No. 2128

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	691.79	1784.91	-9.91	-692.67	81.21	-9224.00
3	4	-648.57	1691.48	-14.07	-748.18	-68.66	8404.90

Combination No. 2129

Combination No. 2129

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.00	1740.36	-10.26	-912.57	79.26	-8698.30
3	4	-613.56	1619.40	-14.60	-957.92	-75.87	7923.34

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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-611.05	1743.95	9.29	-478.12	-39.04	7624.94

Combination No. 2140
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.77	1613.66	-4.91	-238.65	44.60	-8596.25
3	4	-593.97	1685.55	-9.47	-298.40	-47.41	7421.78

Combination No. 2141
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.02	1687.78	-9.85	-478.65	78.11	-8963.45
3	4	-621.79	1685.69	-14.13	-527.36	-71.76	7892.62

Combination No. 2142
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.04	1679.16	-9.98	-875.75	84.31	-8887.89
3	4	-616.82	1674.25	-14.00	-938.09	-65.56	7824.50

Combination No. 2143
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	681.41	1719.22	-9.97	-751.76	84.00	-9199.08
3	4	-638.19	1716.18	-14.01	-813.42	-65.86	8130.13

Combination No. 2144
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.08	1573.22	2.08	71.17	4.80	-8122.99
3	4	-568.80	1617.97	-2.50	24.80	3.06	7117.67

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.81	1752.76	-10.46	-490.19	88.85	-8762.81
3	4	-618.37	1627.47	-14.39	-556.63	-66.27	7997.62

Combination No. 2135
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.48	1768.91	-10.08	-466.87	88.83	-8647.29
3	4	-614.26	1604.56	-13.90	-539.13	-61.04	7991.28

Combination No. 2136
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.93	1755.57	-9.76	-886.85	74.21	-8689.57
3	4	-609.71	1597.84	-14.22	-927.00	-75.66	7917.68

Combination No. 2137
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.88	1792.81	-5.07	-420.78	52.24	-8509.72
3	4	-611.08	1587.12	-9.31	-477.33	-39.77	8002.18

Combination No. 2138
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.78	1734.40	-5.26	-241.06	60.61	-8306.30
3	4	-593.98	1564.81	-9.13	-315.99	-31.40	7711.84

Combination No. 2139
Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.85	1635.97	-5.09	-419.98	52.97	-8886.08

Units: US (English)

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Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.09	1583.84	1.94	-24.18	11.14	-8282.29
3	4	-577.81	1655.78	-2.36	-84.48	3.28	7218.27

Combination No. 2145

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	681.15	1767.33	-9.93	-753.79	82.16	-9061.47
3	4	-637.93	1668.07	-14.05	-811.39	-67.71	8260.33

Combination No. 2146

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.79	1662.64	-9.83	-538.25	77.42	-9040.37
3	4	-620.56	1744.78	-14.15	-585.45	-72.45	7780.21

Combination No. 2147

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.35	1735.12	-9.85	-820.18	78.31	-8954.22
3	4	-628.13	1659.28	-14.13	-869.33	-71.56	8084.72

Combination No. 2148

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.75	1836.65	-9.94	-650.43	82.44	-8941.46
3	4	-637.53	1638.67	-14.04	-708.65	-67.43	8368.89

Combination No. 2149

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.57	1787.57	-9.85	-820.45	78.07	-9228.50
3	4	-617.35	1606.83	-14.13	-869.06	-71.80	8052.81

Combination No. 2150

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	682.70	1764.29	-9.98	-589.76	84.10	-9102.51
3	4	-637.88	1537.58	-2.37	-83.88	2.74	7476.76

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Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.09	1583.84	1.94	-24.18	11.14	-8282.29
3	4	-577.81	1655.78	-2.36	-84.48	3.28	7218.27

Combination No. 2145

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	681.15	1767.33	-9.93	-753.79	82.16	-9061.47
3	4	-637.93	1668.07	-14.05	-811.39	-67.71	8260.33

Combination No. 2146

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.79	1662.64	-9.83	-538.25	77.42	-9040.37
3	4	-620.56	1744.78	-14.15	-585.45	-72.45	7780.21

Combination No. 2147

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.35	1735.12	-9.85	-820.18	78.31	-8954.22
3	4	-628.13	1659.28	-14.13	-869.33	-71.56	8084.72

Combination No. 2148

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.75	1836.65	-9.94	-650.43	82.44	-8941.46
3	4	-637.53	1638.67	-14.04	-708.65	-67.43	8368.89

Combination No. 2149

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.57	1787.57	-9.85	-820.45	78.07	-9228.50
3	4	-617.35	1606.83	-14.13	-869.06	-71.80	8052.81

Combination No. 2150

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	682.70	1764.29	-9.98	-589.76	84.10	-9102.51
3	4	-637.88	1537.58	-2.37	-83.88	2.74	7476.76

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Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.09	1583.84	1.94	-24.18	11.14	-8282.29
3	4	-577.81	1655.78	-2.36	-84.48	3.28	7218.27

Combination No. 2145

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	681.15	1767.33	-9.93	-753.79	82.16	-9061.47
3	4	-637.93	1668.07	-14.05	-811.39	-67.71	8260.33

Combination No. 2146

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.79	1662.64	-9.83	-538.25	77.42	-9040.37
3	4	-620.56	1744.78	-14.15	-585.45	-72.45	7780.21

Combination No. 2147

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.35	1735.12	-9.85	-820.18	78.31	-8954.22
3	4	-628.13	1659.28	-14.13	-869.33	-71.56	8084.72

Combination No. 2148

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	680.75	1836.65	-9.94	-650.43	82.44	-8941.46
3	4	-637.53	1638.67	-14.04	-708.65	-67.43	8368.89

Combination No. 2149

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.57	1787.57	-9.85	-820.45	78.07	-9228.50
3	4	-617.35	1606.83	-14.13	-869.06	-71.80	8052.81

Combination No. 2150

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	682.70	1764.29	-9.98	-589.76	84.10	-9102.51
3	4	-637.88	1537.58	-2.37	-83.88	2.74	7476.76



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-639.48	1677.08	-14.00	-657.63	-65.71	8264.12

Combination No. 2156

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.66	1733.72	-9.98	-472.01	84.16	-8832.49
3	4	-621.44	1639.75	-14.00	-534.00	-65.71	8013.31

Combination No. 2157

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	659.62	1722.42	-9.86	-882.01	78.62	-8763.36
3	4	-616.40	1630.99	-14.12	-931.83	-71.25	7937.06

Combination No. 2158

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.70	1792.19	-5.11	-386.99	53.82	-8507.57
3	4	-610.90	1586.89	-9.27	-446.99	-38.19	7999.06

Combination No. 2159

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	690.33	1791.65	-9.91	-692.70	81.17	-9185.38
3	4	-647.11	1684.74	-14.07	-748.14	-68.69	8401.33

Combination No. 2160

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	677.05	1687.53	-7.49	-610.72	74.14	-9227.75
3	4	-640.99	1798.86	-12.96	-685.16	-56.91	8083.34

Units: US (English)

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Combination No. 2161

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.20	1675.94	-8.00	-822.02	80.02	-8735.92
3	4	-614.92	1683.82	-13.33	-903.51	-56.29	7825.75

Combination No. 2162

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.94	1684.49	-7.84	-418.37	72.57	-8808.30
3	4	-619.66	1695.74	-13.49	-483.49	-63.74	7890.37

Combination No. 2163

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	687.88	1782.77	-7.48	-611.20	73.70	-9142.13
3	4	-651.82	1693.62	-12.97	-684.68	-57.35	8481.52

Combination No. 2164

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.56	1653.06	-7.32	-401.94	66.27	-8846.78
3	4	-617.50	1720.41	-13.13	-459.10	-64.78	7786.30

Combination No. 2165

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.95	1646.34	-7.64	-789.80	80.89	-8771.87
3	4	-612.89	1707.06	-12.82	-879.07	-50.16	7728.05

Combination No. 2166

Group Id: SER GP 1 Name: SERVICE GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	686.90	1729.84	-7.49	-610.93	73.94	-9273.95
3	4	-650.84	1746.55	-12.97	-684.95	-57.11	8321.55

Combination No. 2167

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2167

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	677.09	1835.23	-7.48	-611.47	73.46	-8862.75
3	4	-641.03	1641.16	-12.98	-684.41	-57.59	8449.62

Combination No. 2168

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2168

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.09	1738.22	-7.82	-831.10	71.75	-8616.44
3	4	-616.81	1621.54	-13.51	-894.42	-64.56	7999.97

Combination No. 2169

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2169

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.90	1750.62	-8.03	-408.72	81.35	-8680.94
3	4	-621.62	1629.61	-13.30	-493.13	-54.96	8074.25

Combination No. 2170

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2170

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.57	1766.77	-7.65	-385.40	81.33	-8565.43
3	4	-617.51	1606.70	-12.81	-475.64	-49.72	8067.90

Combination No. 2171

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2171

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.02	1753.43	-7.33	-805.38	66.71	-8507.70

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.97	1790.67	-2.64	-339.31	44.74	-8424.86
3	4	-614.33	1589.26	-8.21	-413.83	-28.45	8078.81

Combination No. 2172

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2172

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.97	1790.67	-2.64	-339.31	44.74	-8424.86
3	4	-614.33	1589.26	-8.21	-413.83	-28.45	8078.81

Combination No. 2173

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2173

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.87	1732.26	-2.83	-159.59	53.11	-8224.43
3	4	-597.23	1566.95	-8.03	-252.49	-20.08	7788.47

Combination No. 2174

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2174

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.94	1633.84	-2.66	-338.51	45.46	-8804.21
3	4	-614.30	1746.09	-8.20	-414.62	-27.73	7701.57

Combination No. 2175

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2175

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.86	1611.52	-2.48	-177.18	37.09	-8514.39
3	4	-597.22	1687.69	-8.38	-234.91	-36.10	7498.40

Combination No. 2176

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2176

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.10	1685.64	-7.42	-397.18	70.60	-8881.59
3	4	-625.04	1687.83	-13.04	-463.86	-60.45	7969.25

Units: US (English)

Design Code: AASHTO LRFD



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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2177

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.13	1677.02	-7.55	-794.28	76.81	-8806.03
3	4	-620.07	1676.39	-12.91	-874.59	-54.24	7901.13

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2178

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	677.50	1717.08	-7.54	-670.29	76.50	-9117.22
3	4	-641.43	1718.32	-12.91	-749.92	-54.55	8206.75

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2179

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	602.17	1571.08	4.51	152.64	-2.70	-8041.13
3	4	-572.05	1620.11	-1.40	88.29	8.26	7194.29

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2180

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.17	1581.70	4.37	57.29	3.64	-8200.43
3	4	-581.05	1657.92	-1.27	-20.98	14.60	7294.89

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2181

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	677.24	1765.19	-7.50	-672.32	74.66	-8979.60
3	4	-641.18	1670.21	-12.95	-747.89	-56.39	8336.96

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2182

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.57	1707.64	-7.40	-456.64	70.04	-8988.87

Group id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)

Design Code: AASHTO LRFD



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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2183

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	659.88	1660.51	-7.40	-456.78	69.92	-8958.51
3	4	-623.81	1746.92	-13.06	-521.95	-61.13	7856.83

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2184

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.44	1732.98	-7.42	-738.71	70.80	-8872.35
3	4	-631.38	1661.42	-13.04	-805.83	-60.25	8161.34

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2185

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	676.84	1834.51	-7.51	-568.96	74.94	-8859.60
3	4	-640.78	1640.80	-12.95	-645.16	-56.11	8445.51

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2186

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.66	1785.44	-7.42	-738.98	70.56	-8592.96
3	4	-620.59	1608.97	-13.04	-805.56	-60.49	8129.44

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2187

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	677.74	1710.77	-7.49	-511.22	73.93	-9146.63
3	4	-641.68	1730.60	-12.97	-585.20	-57.12	8184.31

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2188

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.57	1707.64	-7.40	-456.64	70.04	-8988.87

Group id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	425
		Job #	59219
		Designed CAM	
		Date	9/10/14
		Checked	
		Date	
Program: LEAP® RC-PIER® V8i (SELECTseries 5)			
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		Phone: 1-800-778-4277	
File Name: Pier 12 Straddle.rcp			

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-633.51	1699.78	-13.05	-522.09	-61.01	8106.36

Combination No. 2188

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.25	1699.90	4.38	56.69	3.09	-7944.15
3	4	-581.13	1539.72	-1.28	-20.38	14.05	7553.38

Combination No. 2189

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.47	1654.72	4.50	-37.05	-2.35	-7823.78
3	4	-570.35	1527.03	-1.40	-102.17	8.61	7362.60

Combination No. 2190

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	678.79	1762.15	-7.55	-508.29	76.60	-9020.65
3	4	-642.73	1679.22	-12.91	-588.13	-54.45	8340.74

Combination No. 2191

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.75	1731.58	-7.55	-390.54	76.65	-8750.63
3	4	-624.69	1641.89	-12.91	-470.50	-54.40	8089.94

Combination No. 2192

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.71	1720.28	-7.43	-800.54	71.11	-8681.50
3	4	-619.65	1633.12	-13.03	-868.33	-59.94	8013.68

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	426
		Job #	59219
		Designed CAM	
		Date	9/10/14
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		Date	
Program: LEAP® RC-PIER® V8i (SELECTseries 5)			
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File Name: Pier 12 Straddle.rcp			

Combination No. 2193

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.79	1790.05	-2.68	-305.52	46.31	-8425.70
3	4	-614.15	1589.03	-8.18	-383.49	-26.88	8075.68

Combination No. 2194

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	686.42	1789.51	-7.48	-611.23	73.67	-9103.52
3	4	-650.35	1686.88	-12.97	-684.65	-57.38	8477.96

Combination No. 2195

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	669.70	1683.47	-6.83	-593.09	73.54	-9071.81
3	4	-647.37	1792.92	-12.89	-675.35	-54.69	8231.68

Combination No. 2196

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.85	1671.88	-7.34	-804.40	79.43	-8579.99
3	4	-621.30	1687.88	-13.25	-893.70	-54.07	7974.09

Combination No. 2197

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.59	1680.43	-7.18	-400.74	71.97	-8652.36
3	4	-626.05	1699.79	-13.41	-473.68	-61.52	8038.71

Combination No. 2198

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.59	1680.43	-7.18	-400.74	71.97	-8652.36
3	4	-626.05	1699.79	-13.41	-473.68	-61.52	8038.71

Units: US (English)

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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	680.53	1778.72	-6.82	-593.57	73.11	-8986.20
3	4	-658.20	1697.68	-12.90	-674.87	-55.13	8629.86

Combination No. 2199
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	646.21	1649.00	-6.66	-384.32	65.67	-8690.84
3	4	-623.89	1724.47	-13.06	-449.29	-62.56	7934.63

Combination No. 2200
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	641.60	1642.29	-6.97	-772.18	80.29	-8615.93
3	4	-619.27	1711.12	-12.74	-869.26	-47.94	7876.38

Combination No. 2201
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	679.55	1725.78	-6.82	-593.31	73.35	-9118.01
3	4	-657.23	1750.61	-12.89	-675.14	-54.88	8469.88

Combination No. 2202
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	669.74	1831.17	-6.81	-593.84	72.86	-8706.81
3	4	-647.42	1645.22	-12.90	-674.61	-55.37	8597.96

Combination No. 2203
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	645.74	1734.16	-7.16	-813.48	71.16	-8460.50

Units: US (English)
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Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	650.55	1746.56	-7.37	-391.10	80.75	-8525.00
3	4	-628.01	1633.67	-13.22	-483.32	-52.74	8222.59

Combination No. 2204
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	646.22	1762.71	-6.98	-367.78	80.73	-8409.49
3	4	-623.90	1610.76	-12.73	-465.83	-47.50	8216.24

Combination No. 2205
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	641.67	1749.37	-6.67	-787.75	66.11	-8351.76
3	4	-619.35	1604.03	-13.05	-853.69	-62.12	8142.64

Combination No. 2206
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	640.62	1786.61	-1.98	-321.68	44.15	-8271.92
3	4	-620.72	1593.32	-8.14	-404.02	-26.23	8227.15

Combination No. 2207
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
		kip	kip	kip	kip	kip	kip
1	1	623.51	1728.20	-2.16	-141.97	52.51	-8068.50
3	4	-603.61	1571.01	-7.96	-242.69	-17.86	7936.81

Combination No. 2208
Group Id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)
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Combination No. 2209

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2209		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	640.59	1629.78	-1.99	-320.89	44.87	-8648.28
3	4	-620.69	1750.15	-8.12	-404.82	-25.51	7849.90

Combination No. 2210

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2210		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	623.51	1607.46	-1.81	-159.56	36.50	-8358.45
3	4	-603.61	1691.75	-8.30	-225.10	-33.88	7646.74

Combination No. 2211

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2211		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	653.75	1681.58	-6.75	-379.56	70.01	-8725.65
3	4	-631.43	1691.89	-12.96	-454.05	-58.22	8117.58

Combination No. 2212

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2212		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	648.78	1672.96	-6.88	-776.66	76.21	-8650.09
3	4	-626.45	1680.45	-12.83	-864.78	-52.02	8049.46

Combination No. 2213

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2213		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	670.14	1713.02	-6.88	-652.67	75.90	-8961.28
3	4	-647.82	1722.38	-12.84	-740.11	-52.33	8355.09

Combination No. 2214

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2214		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	669.49	1830.45	-6.84	-551.33	74.34	-8703.66
3	4	-647.76	1830.45	-12.96	-796.02	-58.02	8309.68

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 2215

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2215		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	594.82	1567.02	5.18	170.26	-3.30	-7885.19
3	4	-578.44	1624.17	-1.33	98.10	10.48	7342.63

Combination No. 2216

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2216		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	603.82	1571.64	5.04	74.91	3.04	-8044.49
3	4	-587.44	1661.98	-1.19	-11.18	16.82	7443.23

Combination No. 2217

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2217		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	669.89	1761.13	-6.84	-654.69	74.06	-8823.67
3	4	-647.56	1674.27	-12.88	-738.09	-54.17	8485.29

Combination No. 2218

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2218		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	652.52	1656.45	-6.74	-439.16	69.32	-8802.57
3	4	-630.20	1750.97	-12.98	-512.14	-58.91	8005.17

Combination No. 2219

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2219		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	660.09	1728.92	-6.75	-721.09	70.21	-8716.41
3	4	-637.76	1665.48	-12.96	-796.02	-58.02	8309.68

Combination No. 2220

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2220		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	669.49	1830.45	-6.84	-551.33	74.34	-8703.66
3	4	-647.76	1830.45	-12.96	-796.02	-58.02	8309.68

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 2215

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2215		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	594.82	1567.02	5.18	170.26	-3.30	-7885.19
3	4	-578.44	1624.17	-1.33	98.10	10.48	7342.63

Combination No. 2216

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2216		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	603.82	1571.64	5.04	74.91	3.04	-8044.49
3	4	-587.44	1661.98	-1.19	-11.18	16.82	7443.23

Combination No. 2217

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2217		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	669.89	1761.13	-6.84	-654.69	74.06	-8823.67
3	4	-647.56	1674.27	-12.88	-738.09	-54.17	8485.29

Combination No. 2218

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2218		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	652.52	1656.45	-6.74	-439.16	69.32	-8802.57
3	4	-630.20	1750.97	-12.98	-512.14	-58.91	8005.17

Combination No. 2219

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2219		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	660.09	1728.92	-6.75	-721.09	70.21	-8716.41
3	4	-637.76	1665.48	-12.96	-796.02	-58.02	8309.68

Combination No. 2220

[Group id: SER GP 1 Name: SERVICE GROUP 1]

Combination No. 2220		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kip	kft	kft
1	1	669.49	1830.45	-6.84	-551.33	74.34	-8703.66
3	4	-647.76	1830.45	-12.96	-796.02	-58.02	8309.68

Units: US (English)

Design Code: AASHTO LRFD



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Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-647.17	1644.86	-12.87	-635.35	-53.89	85993.85

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.30	1781.38	-6.75	-721.35	69.97	-8437.03
3	4	-626.98	1613.02	-12.96	-795.76	-58.27	8277.77

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	670.39	1706.71	-6.82	-493.60	73.33	-8990.70
3	4	-648.06	1734.66	-12.89	-575.40	-54.90	8332.64

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.22	1703.58	-6.74	-439.02	69.45	-8832.93
3	4	-639.90	1703.84	-12.98	-512.28	-58.78	8254.70

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.90	1695.84	5.05	74.31	2.49	-7788.21
3	4	-587.52	1543.77	-1.20	-10.58	16.27	7701.72

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	593.12	1650.66	5.17	-19.43	-2.95	-7667.84
3	4	-576.74	1531.08	-1.32	-92.37	10.83	7510.94



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: Pier 12 Straddle.rcp

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Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.44	1758.09	-6.88	-490.66	76.00	-8864.71
3	4	-649.12	1683.28	-12.83	-578.33	-52.23	8489.08

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.40	1727.52	-6.88	-372.92	76.06	-8594.69
3	4	-631.07	1645.95	-12.83	-460.69	-52.18	8238.28

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.36	1716.22	-6.76	-782.91	70.52	-8525.56
3	4	-626.04	1637.18	-12.95	-858.53	-57.71	8162.02

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.44	1786.00	-2.01	-287.89	45.72	-8269.76
3	4	-620.53	1593.09	-8.10	-373.69	-24.66	8224.02



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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Sheet # 432
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Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.44	1758.09	-6.88	-490.66	76.00	-8864.71
3	4	-649.12	1683.28	-12.83	-578.33	-52.23	8489.08

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.40	1727.52	-6.88	-372.92	76.06	-8594.69
3	4	-631.07	1645.95	-12.83	-460.69	-52.18	8238.28

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.36	1716.22	-6.76	-782.91	70.52	-8525.56
3	4	-626.04	1637.18	-12.95	-858.53	-57.71	8162.02

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.44	1786.00	-2.01	-287.89	45.72	-8269.76
3	4	-620.53	1593.09	-8.10	-373.69	-24.66	8224.02



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: Pier 12_ Straddle.rcp

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.20	1681.20	-6.44	-572.88	70.14	-8979.28
3	4	-650.85	1795.19	-12.21	-651.25	-52.11	8316.06

Combination No. 2231

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2231

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.34	1669.62	-6.95	-784.18	76.03	-8487.46
3	4	-624.78	1690.15	-12.57	-869.59	-51.49	8058.47

Combination No. 2232

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2232

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.09	1678.16	-6.79	-380.53	68.57	-8659.83
3	4	-629.52	1702.06	-12.73	-449.57	-58.94	8123.09

Combination No. 2233

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2233

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	676.02	1776.45	-6.43	-573.36	69.70	-8893.67
3	4	-661.68	1699.94	-12.22	-650.77	-52.55	8714.24

Combination No. 2234

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2234

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.71	1646.73	-6.27	-364.10	62.27	-8598.31
3	4	-627.36	1726.74	-12.38	-425.19	-59.98	8019.01

Combination No. 2235

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2235

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.09	1640.02	-6.58	-751.96	76.89	-8523.41

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.05	1723.52	-6.43	-573.10	69.95	-9025.48
3	4	-660.70	1752.88	-12.21	-651.03	-52.31	8554.26

Combination No. 2236

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2236

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	675.05	1723.52	-6.43	-573.10	69.95	-9025.48
3	4	-660.70	1752.88	-12.21	-651.03	-52.31	8554.26

Combination No. 2237

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2237

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.24	1828.90	-6.42	-573.63	69.46	-8614.28
3	4	-650.90	1647.49	-12.22	-650.50	-52.79	8682.33

Combination No. 2238

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2238

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.24	1731.90	-6.77	-793.26	67.76	-8367.97
3	4	-626.67	1627.87	-12.75	-860.51	-59.76	8232.68

Combination No. 2239

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2239

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.05	1744.29	-6.98	-370.89	77.35	-8432.48
3	4	-631.48	1635.93	-12.54	-459.22	-50.16	8306.97

Combination No. 2240

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2240

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.72	1760.44	-6.59	-347.57	77.33	-8316.96
3	4	-627.37	1613.03	-12.05	-441.72	-44.93	8300.62

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 2241

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.17	1747.10	-6.28	-767.54	62.71	-8259.24
3	4	-622.82	1606.30	-12.37	-829.59	-59.54	8227.02

Combination No. 2242

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.12	1784.34	1.59	-301.47	40.74	-8179.39
3	4	-624.19	1595.59	-7.46	-379.92	-23.66	8311.53

Combination No. 2243

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.01	1725.93	-1.77	-121.75	49.11	-7975.97
3	4	-607.09	1573.28	-7.28	-218.58	-15.29	8021.19

Combination No. 2244

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.09	1627.51	-1.61	-300.68	41.47	-8555.75
3	4	-624.16	1752.42	-7.44	-380.71	-22.93	7934.28

Combination No. 2245

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.01	1605.19	-1.42	-139.34	33.10	-8265.92
3	4	-607.08	1694.02	-7.62	-201.00	-31.30	7731.12

Combination No. 2246

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.17	1747.10	-6.28	-767.54	62.71	-8259.24
3	4	-622.82	1606.30	-12.37	-829.59	-59.54	8227.02

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 2247

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.25	1679.31	-6.36	-359.34	66.61	-8633.12
3	4	-634.91	1694.16	-12.28	-429.95	-55.65	8201.96

Combination No. 2248

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.27	1670.69	-6.50	-756.45	72.81	-8557.56
3	4	-629.93	1682.71	-12.15	-840.68	-49.45	8133.84

Combination No. 2249

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.64	1710.75	-6.49	-632.45	72.50	-8868.75
3	4	-651.30	1724.64	-12.16	-716.01	-49.75	8439.47

Combination No. 2250

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.32	1564.75	5.56	190.48	-6.70	-7792.66
3	4	-581.91	1626.43	-0.65	122.21	13.06	7427.01

Combination No. 2251

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	599.32	1575.38	5.43	95.13	-0.36	-7951.96
3	4	-590.92	1664.24	-0.51	12.93	19.40	7527.61

Combination No. 2251

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.39	1758.86	6.45	-634.48	70.66	-8731.14

Units: US (English)

Design Code: AASHTO LRFD

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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2257

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.72	1701.31	-6.35	-418.80	66.05	-8740.41
3	4	-643.37	1706.11	-12.30	-488.18	-56.21	8339.08

Combination No. 2258

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2258

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	599.40	1693.58	5.44	94.52	-0.91	-7695.69
3	4	-590.99	1546.04	-0.52	13.53	18.88	7786.10

Combination No. 2259

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2259

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	588.62	1648.39	5.56	0.79	-6.35	-7575.32
3	4	-580.22	1533.35	-0.64	-68.26	13.41	7595.32

Combination No. 2260

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2260

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.94	1755.82	-6.49	-470.45	72.60	-8772.18
3	4	-652.59	1685.55	-12.15	-554.22	-49.65	8573.46

Combination No. 2261

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2261

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.90	1725.25	-6.49	-352.70	72.65	-8502.16
3	4	-634.55	1648.22	-12.15	-436.59	-49.60	8322.65

Combination No. 2262

Group id: SER GP 1 Name: SERVICE GROUP 1

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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2252

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.02	1654.18	-6.35	-418.94	65.92	-8710.04
3	4	-633.68	1753.24	-12.30	-488.04	-56.34	8089.55

Combination No. 2253

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2253

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.59	1726.66	-6.37	-700.87	66.81	-8623.89
3	4	-641.24	1667.75	-12.28	-771.92	-55.45	8394.06

Combination No. 2254

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2254

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	664.99	1828.18	-6.46	-531.12	70.94	-8611.13
3	4	-650.64	1647.13	-12.19	-611.25	-51.31	8678.23

Combination No. 2255

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2255

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.80	1779.11	-6.36	-701.14	66.56	-8344.50
3	4	-630.46	1615.29	-12.28	-771.65	-55.69	8362.15

Combination No. 2256

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2256

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	665.88	1704.44	-6.43	-473.38	69.93	-8898.17
3	4	-651.54	1736.93	-12.21	-551.29	-52.32	8417.02

Combination No. 2257

Group id: SER GP 1 Name: SERVICE GROUP 1



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.44	1726.97	17.49	962.72	-112.33	-7798.85
3	4	-667.61	1681.08	18.12	979.47	103.17	9065.90

Combination No. 2273
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.25	1739.36	17.28	1385.09	-102.73	-7863.36
3	4	-672.42	1689.15	18.33	1380.71	112.76	9140.18

Combination No. 2274
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.14	1755.68	16.79	1359.30	-97.54	-7752.66
3	4	-668.09	1666.08	17.95	1349.44	112.70	9129.00

Combination No. 2275
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	613.59	1742.34	17.10	939.33	-112.16	-7694.93
3	4	-663.54	1659.36	17.64	961.58	98.08	9055.40

Combination No. 2276
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.95	1781.36	12.12	865.09	-76.73	-7668.04
3	4	-662.48	1646.85	13.02	874.18	75.65	9086.75

Combination No. 2277
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.69	1665.93	16.88	950.42	-102.06	-7993.26
3	4	-670.64	1735.77	17.86	950.49	108.18	8962.22

Combination No. 2278
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.95	1781.36	12.12	865.09	-76.73	-7668.04
3	4	-662.48	1646.85	13.02	874.18	75.65	9086.75

Combination No. 2279
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	597.85	1722.95	11.94	1044.80	-68.36	-7464.62
3	4	-645.37	1624.54	13.20	1035.51	84.02	8796.40

Combination No. 2280
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	597.84	1602.21	12.29	1027.21	-84.38	-7754.57
3	4	-645.37	1745.28	12.85	1053.10	68.00	8506.34

Combination No. 2281
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.67	1674.55	17.02	1347.52	-108.26	-8068.82
3	4	-675.62	1747.21	17.72	1361.22	101.97	9030.34

Combination No. 2282
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.69	1665.93	16.88	950.42	-102.06	-7993.26
3	4	-670.64	1735.77	17.86	950.49	108.18	8962.22

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89	1074.41	-102.37	-8304.45

Combination No. 2283
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.06	1705.99	16.89			



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-692.01	1777.70	17.85	1075.16	107.87	9267.85

Combination No. 2284

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	572.66	1564.37	5.22	571.14	-40.70	-7358.34
3	4	-616.67	1675.10	5.96	595.11	27.53	8124.90

Combination No. 2285

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	581.67	1575.00	5.08	475.78	-34.36	-7517.64
3	4	-625.67	1712.91	6.10	485.84	33.87	8225.50

Combination No. 2286

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.81	1754.10	16.93	1072.38	-104.21	-8166.83
3	4	-691.75	1729.59	17.81	1077.18	106.03	9398.05

Combination No. 2287

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.44	1649.41	17.03	1287.92	-108.95	-8145.74
3	4	-674.39	1806.29	17.71	1303.13	101.29	8917.93

Combination No. 2288

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.01	1721.89	17.01	1005.99	-108.06	-8059.58
3	4	-681.95	1720.80	17.73	1019.25	102.17	9222.44

Units: US (English)

Design Code: AASHTO LRFD



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Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.41	1823.42	16.93	1175.74	-103.93	-8046.83
3	4	-691.36	1700.18	17.82	1179.92	106.31	9506.61

Combination No. 2290

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.22	1774.34	17.02	1005.72	-108.30	-7780.19
3	4	-671.17	1668.34	17.72	1019.51	101.93	9190.54

Combination No. 2291

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.30	1699.67	16.95	1233.48	-104.94	-8333.86
3	4	-692.25	1789.98	17.79	1239.87	105.30	9245.40

Combination No. 2292

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.14	1696.54	17.03	1288.06	-108.82	-8176.10
3	4	-684.09	1759.16	17.71	1302.99	101.41	9167.46

Combination No. 2293

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	581.74	1693.20	5.09	475.18	-34.90	-7261.36
3	4	-625.75	1594.71	6.09	486.44	33.32	8483.99

Combination No. 2294

Group Id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	570.96	1648.01	5.21	381.44	-40.34	-7140.99
3	4	-614.97	1582.02	5.97	404.65	27.88	8293.21

Combination No. 2295

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2296

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.36	1751.05	16.89	1236.41	-102.27	-8207.88
3	4	-693.31	1738.60	17.85	1236.94	107.97	9401.84

Combination No. 2297

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2298

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.32	1720.49	16.89	1354.16	-102.21	-7937.86
3	4	-675.26	1701.27	17.85	1354.58	108.02	9151.04

Combination No. 2299

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2299

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.28	1709.19	17.01	944.16	-107.75	-7868.73
3	4	-670.23	1692.50	17.73	956.74	102.48	9074.78

Combination No. 2299

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2299

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.77	1780.75	12.09	898.88	-75.16	-7665.89
3	4	-662.30	1646.62	13.05	904.51	77.22	9083.62

Combination No. 2299

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2299

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.98	1778.42	16.95	1133.47	-105.20	-8290.75

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.60	1661.75	13.70	1019.21	-93.38	-8302.61
3	4	-679.59	1814.65	16.20	1047.13	89.65	8970.61

Combination No. 2300

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2300

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.60	1661.75	13.70	1019.21	-93.38	-8302.61
3	4	-679.59	1814.65	16.20	1047.13	89.65	8970.61

Combination No. 2301

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2301

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.53	1650.00	14.07	857.03	-92.72	-7805.98
3	4	-653.74	1709.77	16.71	877.61	95.58	8717.85

Combination No. 2302

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2302

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.27	1658.55	14.23	1260.68	-100.17	-7878.35
3	4	-658.49	1721.68	16.55	1297.63	88.12	8782.47

Combination No. 2303

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2303

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.43	1756.99	13.71	1018.73	-93.82	-8217.00
3	4	-690.42	1719.40	16.20	1047.61	89.21	9368.79

Combination No. 2304

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2304

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.11	1627.28	13.87	1227.99	-101.25	-7921.65
3	4	-656.10	1746.19	16.03	1273.19	81.78	8673.56

Units: US (English)

Design Code: AASHTO LRFD



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Combination No. 2305

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.50	1620.56	13.55	840.13	86.63	-7846.74
3	4	-651.49	1732.84	16.35	853.22	96.40	8615.31

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2306

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.45	1704.06	13.70	1019.00	-93.58	-8348.82
3	4	-689.44	1772.33	16.20	1047.35	89.46	9208.81

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2307

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.64	1809.45	13.71	1018.46	-94.06	-7937.61
3	4	-679.64	1666.95	16.19	1047.88	88.97	9336.89

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2308

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.42	1712.28	14.25	847.95	-100.99	-7686.49
3	4	-655.64	1647.49	16.53	886.69	87.31	8892.07

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2309

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.23	1724.67	14.04	1270.32	-91.39	-7751.00
3	4	-660.44	1655.55	16.74	1287.99	96.90	8966.35

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2310

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2311

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.12	1740.99	13.54	1244.52	-86.19	-7640.30
3	4	-656.11	1632.48	16.36	1256.66	96.84	8955.17

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2312

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	605.57	1727.65	13.86	824.55	-100.81	-7582.57
3	4	-651.56	1625.76	16.04	868.79	82.22	8881.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2313

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.93	1766.67	8.88	750.31	-65.39	-7555.68
3	4	-650.51	1613.26	11.42	781.40	59.79	8912.92

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2314

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	589.83	1708.27	8.70	930.03	-57.02	-7352.26
3	4	-633.40	1590.94	11.60	942.73	68.16	8622.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2315

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2316

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	589.83	1587.53	9.04	912.44	-73.03	-7642.21
3	4	-633.40	1587.53	9.04	912.44	-73.03	-7642.21

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2317

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2318

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2319

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2320

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2321

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2322

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2323

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2324

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2325

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2326

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2327

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2328

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2329

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2330

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2331

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2332

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2333

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2334

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.90	1609.84	8.86	751.11	-64.66	-7932.03
3	4	-650.48	1770.09	11.44	780.60	60.51	8535.67

Group id: SER GP 1 Name: SERVICE GROUP 1



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-633.40	1711.68	11.26	960.32	52.14	8332.51

Combination No. 2316

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.65	1659.86	13.77	1232.75	-96.92	-7956.45
3	4	-663.65	1713.62	16.13	1268.43	86.12	8856.51

Combination No. 2317

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.68	1651.24	13.64	835.64	-90.71	-7880.90
3	4	-658.67	1702.17	16.26	857.70	92.32	8788.39

Combination No. 2318

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.05	1691.30	13.65	959.64	-91.02	-8192.09
3	4	-680.04	1744.10	16.26	982.37	92.01	9094.02

Combination No. 2319

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	564.64	1549.69	1.97	456.36	-29.35	-7245.97
3	4	-604.69	1641.50	4.37	502.33	11.67	7951.07

Combination No. 2320

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.65	1560.31	1.84	361.01	-23.01	-7405.27
3	4	-613.70	1679.31	4.51	393.05	18.01	8051.67

Units: US (English)

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Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.79	1739.41	13.69	957.61	-92.87	-8054.47
3	4	-679.78	1695.99	16.22	984.40	90.17	9224.22

Combination No. 2322

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.42	1634.72	13.79	1173.15	-97.61	-8033.37
3	4	-662.42	1772.70	16.11	1210.34	85.43	8744.10

Combination No. 2323

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.99	1707.20	13.77	891.22	-96.72	-7947.22
3	4	-669.98	1687.20	16.13	926.46	86.32	9048.61

Combination No. 2324

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.39	1808.73	13.68	1060.97	-92.58	-7934.46
3	4	-679.38	1666.59	16.22	1087.13	90.45	9332.78

Combination No. 2325

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	613.21	1759.65	13.78	890.95	-96.96	-7667.83
3	4	-659.20	1634.75	16.13	926.73	86.07	9016.71

Combination No. 2326

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	613.21	1759.65	13.78	890.95	-96.96	-7667.83
3	4	-659.20	1634.75	16.13	926.73	86.07	9016.71

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.29	1684.99	13.70	1118.71	-93.59	-8221.50
3	4	-680.28	1756.38	16.20	1147.09	89.44	9071.57

Combination No. 2327
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.12	1681.85	13.79	1173.29	-97.48	-8063.74
3	4	-672.11	1725.57	16.12	1210.20	85.56	8993.63

Combination No. 2328
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.73	1678.51	1.85	360.41	-23.56	-7149.00
3	4	-613.78	1561.11	4.49	393.65	17.46	8310.16

Combination No. 2329
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	562.95	1633.32	1.96	266.67	-29.00	-7028.63
3	4	-603.00	1548.42	4.38	311.86	12.02	8119.38

Combination No. 2330
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.34	1736.37	13.65	1121.64	-90.92	-8095.51
3	4	-681.33	1705.00	16.26	1144.16	92.11	9228.01

Combination No. 2331
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.30	1705.80	13.64	1239.39	-90.87	-7825.50

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.26	1694.50	13.76	829.39	-96.41	-7756.36
3	4	-658.25	1658.91	16.14	863.96	86.63	8900.95

Combination No. 2332
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.75	1766.06	8.85	784.11	-63.81	-7553.52
3	4	-650.32	1613.02	11.46	811.73	61.36	8909.79

Combination No. 2333
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.97	1763.73	13.71	1018.70	-93.85	-8178.38
3	4	-688.96	1712.66	16.19	1047.65	89.18	9365.22

Combination No. 2334
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.07	1662.66	9.87	883.63	-79.29	-8333.85
3	4	-678.29	1813.73	14.11	934.94	70.57	8940.73

Combination No. 2335
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	609.00	1650.92	10.24	721.45	-78.63	-7837.21
3	4	-652.44	1708.85	14.61	765.42	76.50	8687.98

Combination No. 2336
Group id: SER GP 1 Name: SERVICE GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-649.21	1612.34	9.33	669.20	40.71	8883.04

Combination No. 2348

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.30	1709.18	4.87	794.45	-42.93	-7383.49
3	4	-632.10	1590.03	9.51	830.54	49.08	8592.70

Combination No. 2349

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.38	1610.76	5.04	615.53	-50.58	-7963.27
3	4	-649.18	1769.17	9.34	668.41	41.44	8505.80

Combination No. 2350

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.30	1588.44	5.22	776.86	-58.95	-7673.44
3	4	-632.10	1710.77	9.16	848.13	33.07	8302.64

Combination No. 2351

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.13	1660.78	9.95	1097.17	-82.83	-7987.69
3	4	-662.35	1712.70	14.03	1156.24	67.04	8826.64

Combination No. 2352

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.15	1652.15	9.82	700.06	-76.63	-7912.13
3	4	-657.37	1701.25	14.17	745.51	73.24	8758.52

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.52	1692.21	9.82	824.06	-76.93	-8223.32
3	4	-678.74	1743.18	14.16	870.18	72.94	9064.15

Combination No. 2353

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.52	1692.21	9.82	824.06	-76.93	-8223.32
3	4	-678.74	1743.18	14.16	870.18	72.94	9064.15

Combination No. 2354

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	566.12	1550.60	1.85	320.78	-15.26	-7277.20
3	4	-603.40	1640.58	2.27	390.14	-7.41	7921.20

Combination No. 2355

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	575.12	1561.22	-1.99	225.43	-8.92	-7436.50
3	4	-612.40	1678.39	2.41	280.86	-1.07	8021.80

Combination No. 2356

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.26	1740.32	9.86	822.03	-78.78	-8085.70
3	4	-678.48	1695.07	14.12	872.21	71.09	9194.35

Combination No. 2357

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.90	1635.64	9.96	1037.56	-83.52	-8064.61
3	4	-661.12	1771.78	14.02	1098.15	66.35	8714.23

Combination No. 2358

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.90	1635.64	9.96	1037.56	-83.52	-8064.61
3	4	-661.12	1771.78	14.02	1098.15	66.35	8714.23

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.46	1708.12	9.94	755.63	-82.63	-7978.45
3	4	-668.68	1686.28	14.04	814.27	67.24	9018.74

Combination No. 2359
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.86	1809.65	9.86	925.39	-78.50	-7965.70
3	4	-678.09	1665.67	14.13	974.94	71.37	9302.91

Combination No. 2360
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.68	1760.57	9.95	755.37	-82.87	-7699.06
3	4	-657.90	1633.83	14.03	814.54	67.00	8986.83

Combination No. 2361
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.76	1682.90	9.88	983.12	-79.51	-8252.73
3	4	-678.98	1755.47	14.10	1034.90	70.36	9041.70

Combination No. 2362
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.59	1682.77	9.96	1037.70	-83.39	-8094.97
3	4	-670.81	1724.65	14.02	1098.01	66.48	8963.75

Combination No. 2363
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	575.20	1679.43	-1.98	224.83	-9.47	-7180.23

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-612.48	1560.19	2.40	281.46	-1.62	8280.29

Combination No. 2364
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	564.42	1634.24	-1.86	131.09	-14.91	-7059.86
3	4	-601.70	1547.50	2.28	199.67	-7.05	8089.51

Combination No. 2365
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.81	1737.28	9.82	986.06	-76.83	-8126.75
3	4	-680.04	1704.08	14.16	1031.96	73.03	9198.14

Combination No. 2366
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.77	1706.72	9.82	1103.81	-76.78	-7856.73
3	4	-661.99	1666.76	14.16	1149.60	73.09	8947.33

Combination No. 2367
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	613.73	1695.42	9.94	693.81	-82.32	-7787.60
3	4	-656.96	1657.99	14.04	751.76	67.55	8871.08

Combination No. 2368
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	608.22	1766.98	5.02	648.52	-49.73	-7584.75
3	4	-649.02	1612.11	9.36	699.54	42.29	8879.92

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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2369

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.44	1764.65	9.88	883.11	-79.76	-8209.61
3	4	-687.66	1711.74	14.10	935.45	70.11	9335.35

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2370

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.98	1664.80	7.44	802.16	-71.79	-8415.71
3	4	-675.04	1811.59	13.01	871.44	59.26	8864.11

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2371

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.91	1653.05	7.81	639.98	-71.12	-7919.07
3	4	-649.19	1706.71	13.52	701.92	65.19	8611.35

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2372

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.66	1661.60	7.97	1043.63	-78.58	-7991.45
3	4	-653.94	1718.62	13.36	1121.94	57.73	8675.97

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2373

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.81	1760.05	7.45	801.68	-72.23	-8330.10
3	4	-685.87	1716.34	13.01	871.92	58.82	9262.29

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2374

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2375

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.49	1630.34	7.61	1010.94	-79.66	-8034.74
3	4	-651.56	1743.14	12.85	1097.50	51.39	8567.07

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2376

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.88	1623.62	7.30	623.07	-65.04	-7959.84
3	4	-646.94	1729.79	13.16	677.53	66.01	8508.81

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2377

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.84	1707.12	7.45	801.94	-71.99	-8461.91
3	4	-684.90	1769.28	13.01	871.66	59.06	9102.31

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2378

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.03	1812.50	7.46	801.41	-72.47	-8050.71
3	4	-675.09	1663.89	13.00	872.19	58.58	9230.39

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	614.81	1715.33	7.99	630.89	-79.39	-7799.59
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2379

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.62	1727.73	7.78	1053.27	-69.80	-7964.09
3	4	-651.09	1644.43	13.34	771.00	56.92	8785.57

Group id: SER GP 1 Name: SERVICE GROUP 1



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-655.90	1652.50	13.55	1112.30	66.51	8859.85

Combination No. 2380

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.50	1744.05	7.29	1027.47	-64.60	-7753.39
3	4	-651.56	1629.43	13.17	1080.97	66.45	8848.67

Combination No. 2381

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	610.95	1730.70	7.60	607.50	-79.22	-7695.67
3	4	-647.02	1622.70	12.85	693.10	51.83	8775.07

Combination No. 2382

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.32	1769.73	2.62	533.26	-43.80	-7668.78
3	4	-645.96	1610.20	8.23	605.71	29.40	8806.42

Combination No. 2383

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.21	1711.32	2.44	712.98	-35.43	-7465.35
3	4	-628.85	1587.89	8.41	767.04	37.77	8516.08

Combination No. 2384

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.29	1612.90	2.61	534.06	-43.07	-8045.13
3	4	-645.93	1767.03	8.25	604.91	30.12	8429.17

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Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	595.21	1590.58	2.79	695.39	-51.44	-7755.31
3	4	-628.85	1708.63	8.07	784.63	21.75	8226.01

Combination No. 2386

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.04	1662.92	7.52	1015.70	-75.32	-8069.55
3	4	-659.10	1710.56	12.94	1092.74	55.73	8750.01

Combination No. 2387

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.06	1654.29	7.38	618.59	-69.12	-7993.99
3	4	-654.12	1699.11	13.07	682.01	61.93	8681.90

Combination No. 2388

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.43	1694.35	7.39	742.59	-69.43	-8305.18
3	4	-675.49	1741.04	13.07	806.68	61.62	8987.52

Combination No. 2389

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	570.03	1552.74	-4.28	239.31	-7.76	-7359.07
3	4	-600.15	1638.45	1.18	326.64	-18.72	7844.57

Combination No. 2390

Group Id: SER GP 1 Name: SERVICE GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	579.03	1563.36	-4.42	143.96	-1.42	-7518.37
3	4	-609.15	1676.26	1.32	217.36	-12.38	7945.17

Combination No. 2391

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2391

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.17	1742.46	7.43	740.56	-71.27	-8167.57
3	4	-675.23	1692.93	13.03	808.71	59.78	9117.72

Combination No. 2392

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2392

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.81	1637.78	7.53	956.09	-76.01	-8146.47
3	4	-657.87	1769.64	12.92	1034.65	55.04	8637.60

Combination No. 2393

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2393

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.37	1710.26	7.51	674.16	-75.13	-8060.31
3	4	-665.43	1684.14	12.94	750.77	55.92	8942.11

Combination No. 2394

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2394

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.78	1811.78	7.43	843.92	-70.99	-8047.56
3	4	-674.84	1663.53	13.03	911.44	60.06	9226.28

Combination No. 2395

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2395

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.59	1762.71	7.52	673.90	-75.37	-7780.93

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-654.65	1631.69	12.94	751.04	55.68	8910.21

Combination No. 2396

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2396

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	639.67	1688.04	7.45	901.65	-72.00	-8334.60
3	4	-675.73	1753.33	13.01	971.40	59.05	8965.08

Combination No. 2397

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2397

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.50	1684.91	7.53	956.23	-75.89	-8176.84
3	4	-667.57	1722.51	12.93	1034.51	55.16	8887.13

Combination No. 2398

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2398

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	579.11	1681.56	-4.41	143.36	-1.97	-7262.09
3	4	-609.23	1558.06	1.30	217.96	-12.93	8203.66

Combination No. 2399

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2399

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	568.33	1636.38	-4.29	49.62	-7.41	-7141.72
3	4	-598.45	1545.37	1.19	136.17	-18.37	8012.88

Combination No. 2400

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2400

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.73	1739.42	7.39	904.59	-69.33	-8208.61
3	4	-676.79	1701.95	13.07	968.47	61.72	9121.51

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Combination No. 2401

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.68	1708.86	7.39	1022.34	-69.28	-7938.59
3	4	-658.74	1664.62	13.07	1086.10	61.77	8870.71

Combination No. 2402

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.65	1697.56	7.51	612.34	-74.82	-7869.46
3	4	-653.71	1655.88	12.95	688.27	56.23	8794.45

Combination No. 2403

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	612.14	1769.12	2.59	567.05	-42.22	-7666.62
3	4	-645.78	1609.97	8.27	636.04	30.97	8803.29

Combination No. 2404

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.35	1766.79	7.45	801.64	-72.26	-8291.48
3	4	-684.41	1709.60	13.00	871.96	58.79	9258.73

Combination No. 2405

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.33	1668.86	6.78	784.53	-71.19	-8571.65
3	4	-668.66	1807.53	12.94	861.63	57.04	8715.77

Combination No. 2406

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.19	1711.17	6.78	784.32	-71.39	-8617.85
3	4	-640.56	1725.73	13.08	867.73	63.79	8360.48

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Combination No. 2407

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.26	1657.11	7.14	622.35	-70.53	-8075.01
3	4	-642.81	1702.65	13.44	692.11	62.96	8463.02

Combination No. 2408

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.01	1665.66	7.31	1026.00	-77.98	-8147.39
3	4	-647.55	1714.57	13.28	1112.13	55.51	8527.64

Combination No. 2409

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.16	1764.11	6.78	784.05	-71.63	-8486.04
3	4	-679.49	1712.29	12.93	862.12	56.60	9113.96

Combination No. 2409

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.85	1634.39	6.95	993.31	-79.06	-8190.68
3	4	-645.17	1739.08	12.77	1087.70	49.17	8418.73

Combination No. 2410

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.23	1627.68	6.63	605.45	-64.45	-8115.77
3	4	-640.56	1725.73	13.08	667.73	63.79	8360.48

Combination No. 2411

Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.19	1711.17	6.78	784.32	-71.39	-8617.85
3	4	-640.56	1725.73	13.08	867.73	63.79	8360.48

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	467
		Job #	59219
		Designed CAM	9/10/14
		Checked	
Program:	LEAP® RC-PIER® V8i (SELECTseries 5)	SE Client Licenses	
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		www.bentley.com	Phone: 1-800-778-4277
File Name:	Pier 12 Straddle.rcp		

Combination No. 2417
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2417		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	619.67	1773.79	1.96	515.64	-43.20	-7824.71
3	4	-639.57	1606.14	8.16	595.90	27.17	8658.08

Combination No. 2418
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2418		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	602.56	1715.38	1.78	695.35	-34.83	-7621.29
3	4	-622.47	1583.83	8.34	757.23	35.54	8367.74

Combination No. 2419
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2419		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	619.64	1616.96	1.94	516.43	-42.48	-8201.07
3	4	-639.54	1762.97	8.17	595.11	27.90	8280.83

Combination No. 2420
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2420		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	602.56	1594.64	2.12	677.77	-50.85	-7911.24
3	4	-622.46	1704.57	7.99	774.82	19.53	8077.67

Combination No. 2421
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2421		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	630.39	1666.97	6.85	998.07	-74.73	-8225.49
3	4	-652.71	1706.50	12.86	1082.94	53.50	8601.68

Combination No. 2422
 Group id: SER GP 1 Name: SERVICE GROUP 1

		Sheet #	467
		Job #	59219
		Designed CAM	9/10/14
		Checked	
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File Name:	Pier 12 Straddle.rcp		

Combination No. 2412
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2412		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	646.38	1816.56	6.79	783.79	-71.88	-8206.65
3	4	-668.70	1659.83	12.92	862.38	56.36	9082.05

Combination No. 2413
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2413		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	622.16	1719.39	7.32	613.27	-78.80	-7955.52
3	4	-644.70	1640.37	13.26	701.19	54.69	8637.23

Combination No. 2414
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2414		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	626.97	1731.79	7.12	1035.65	-69.20	-8020.03
3	4	-649.51	1648.44	13.47	1102.49	64.29	8711.52

Combination No. 2415
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2415		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	622.86	1748.10	6.62	1009.85	-64.01	-7909.33
3	4	-645.18	1625.37	13.09	1071.16	64.23	8700.34

Combination No. 2416
 Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2416		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	618.31	1734.76	6.94	589.88	-78.62	-7851.60
3	4	-640.63	1618.64	12.78	683.30	49.61	8626.74



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Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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File Name: Plier 12 Straddle.rcp

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.41	1658.35	6.72	600.97	-68.53	-8149.93
3	4	-647.74	1695.06	13.00	672.21	59.71	8533.56

Combination No. 2423

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.78	1698.41	6.72	724.96	-68.83	-8461.12
3	4	-669.10	1736.99	12.99	796.88	59.40	8839.19

Combination No. 2423

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	577.38	1556.80	-4.95	221.69	-7.16	-7515.01
3	4	-593.76	1634.39	1.10	316.83	-20.94	7696.24

Combination No. 2424

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.41	1658.35	6.72	600.97	-68.53	-8149.93
3	4	-647.74	1695.06	13.00	672.21	59.71	8533.56

Combination No. 2424

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.38	1567.42	-5.09	126.33	-0.82	-7674.31
3	4	-602.76	1672.20	1.24	207.56	-14.60	7796.84

Combination No. 2425

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.52	1746.52	6.76	722.93	-70.68	-8323.50
3	4	-668.85	1688.88	12.95	798.90	57.55	8969.39

Combination No. 2426

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.41	1658.35	6.72	600.97	-68.53	-8149.93
3	4	-647.74	1695.06	13.00	672.21	59.71	8533.56

Combination No. 2427

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.78	1698.41	6.72	724.96	-68.83	-8461.12
3	4	-669.10	1736.99	12.99	796.88	59.40	8839.19

Combination No. 2427

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.72	1714.31	6.85	656.54	-74.53	-8216.25
3	4	-659.05	1680.09	12.87	740.97	53.70	8793.77

Combination No. 2428

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.13	1815.84	6.76	826.29	-70.40	-8203.50
3	4	-668.45	1659.47	12.96	901.64	57.84	9077.95

Combination No. 2429

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.94	1766.71	6.85	656.27	-74.77	-7936.87
3	4	-648.26	1627.63	12.86	741.23	53.46	8761.87

Combination No. 2430

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	647.02	1692.10	6.78	884.03	-71.41	-8490.54
3	4	-669.35	1749.27	12.93	961.59	56.83	8816.74

Combination No. 2431

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.86	1688.97	6.86	938.61	-75.29	-8332.77
3	4	-661.18	1718.45	12.85	1024.71	52.94	8738.79

Combination No. 2432

Group Id: SER GP 1 Name: SERVICE GROUP 1



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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2433

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.46	1685.62	5.08	125.73	-1.37	-7418.03
3	4	-602.84	1554.00	1.23	208.16	-15.15	8055.33

Combination No. 2434

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	575.68	1640.44	4.96	32.00	6.81	-7297.66
3	4	-592.06	1541.31	1.11	126.37	-20.59	7864.55

Combination No. 2435

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.08	1743.48	6.72	886.96	-68.73	-8364.55
3	4	-670.40	1697.89	12.99	958.66	59.50	8973.18

Combination No. 2436

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.03	1772.91	6.72	1004.71	-68.68	-8094.53
3	4	-652.36	1660.56	12.99	1076.30	59.55	8722.37

Combination No. 2437

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.00	1701.61	6.84	594.71	-74.22	-8025.40
3	4	-647.32	1651.79	12.87	678.46	54.01	8646.12

Combination No. 2438

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.66	1766.37	6.40	763.84	-68.23	-8578.56
3	4	-684.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2439

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.49	1773.17	1.92	549.43	-41.63	-7822.56
3	4	-639.39	1605.91	8.19	626.24	28.75	8654.96

Combination No. 2440

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.70	1770.85	6.79	784.02	-71.66	-8447.42
3	4	-678.02	1705.55	12.93	862.15	56.57	9110.39

Combination No. 2441

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.84	1671.13	6.39	764.32	-67.79	-8664.18
3	4	-665.18	1805.26	12.26	837.53	54.46	8631.39

Combination No. 2442

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.76	1659.38	6.76	602.14	-67.13	-8167.54
3	4	-639.33	1700.38	12.76	668.01	60.39	8378.64

Combination No. 2443

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.51	1667.93	6.92	1005.79	-74.58	-8239.92
3	4	-644.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2444

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.66	1766.37	6.40	763.84	-68.23	-8578.56
3	4	-684.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2445

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.49	1773.17	1.92	549.43	-41.63	-7822.56
3	4	-639.39	1605.91	8.19	626.24	28.75	8654.96

Combination No. 2446

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.70	1770.85	6.79	784.02	-71.66	-8447.42
3	4	-678.02	1705.55	12.93	862.15	56.57	9110.39

Combination No. 2447

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.84	1671.13	6.39	764.32	-67.79	-8664.18
3	4	-665.18	1805.26	12.26	837.53	54.46	8631.39

Combination No. 2448

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.76	1659.38	6.76	602.14	-67.13	-8167.54
3	4	-639.33	1700.38	12.76	668.01	60.39	8378.64

Combination No. 2449

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.51	1667.93	6.92	1005.79	-74.58	-8239.92
3	4	-644.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2450

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.66	1766.37	6.40	763.84	-68.23	-8578.56
3	4	-684.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2451

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.49	1773.17	1.92	549.43	-41.63	-7822.56
3	4	-639.39	1605.91	8.19	626.24	28.75	8654.96

Combination No. 2452

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.70	1770.85	6.79	784.02	-71.66	-8447.42
3	4	-678.02	1705.55	12.93	862.15	56.57	9110.39

Combination No. 2453

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.84	1671.13	6.39	764.32	-67.79	-8664.18
3	4	-665.18	1805.26	12.26	837.53	54.46	8631.39

Combination No. 2454

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.76	1659.38	6.76	602.14	-67.13	-8167.54
3	4	-639.33	1700.38	12.76	668.01	60.39	8378.64

Combination No. 2455

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.51	1667.93	6.92	1005.79	-74.58	-8239.92
3	4	-644.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2456

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.66	1766.37	6.40	763.84	-68.23	-8578.56
3	4	-684.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2457

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.49	1773.17	1.92	549.43	-41.63	-7822.56
3	4	-639.39	1605.91	8.19	626.24	28.75	8654.96

Combination No. 2458

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.70	1770.85	6.79	784.02	-71.66	-8447.42
3	4	-678.02	1705.55	12.93	862.15	56.57	9110.39

Combination No. 2459

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.84	1671.13	6.39	764.32	-67.79	-8664.18
3	4	-665.18	1805.26	12.26	837.53	54.46	8631.39

Combination No. 2460

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.76	1659.38	6.76	602.14	-67.13	-8167.54
3	4	-639.33	1700.38	12.76	668.01	60.39	8378.64

Combination No. 2461

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.51	1667.93	6.92	1005.79	-74.58	-8239.92
3	4	-644.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2462

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.66	1766.37	6.40	763.84	-68.23	-8578.56
3	4	-684.08	1712.30	12.60	1088.03	52.94	8443.26

Combination No. 2463

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	619.49	1773.17	1.92	549.43	-41.63	-7822.56
3	4	-639.39	1605.91	8.19	626.24	28.75	8654.96

Combination No. 2464

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.70	1770.85	6.79	784.02	-71.66	-8447.42
3	4	-678.02	1705.55	12.93	862.15	56.57	9110.39

Combination No. 2465

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.84	1671.13	6.39	764.32	-67.79	-8664.18
3	4	-665.18	1805.26	12.26	837.53	54.46	8631.39

Combination No. 2466

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.76	1659.38	6.76	602.14	-67.13	-8167.54
3	4	-639.33	1700.38	12.76	668.01</		



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-676.01	1710.02	12.25	838.01	54.02	9029.58

Combination No. 2444

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.35	1636.66	6.56	973.10	-75.66	-8283.21
3	4	-641.69	1736.81	12.09	1063.59	46.59	8334.35

Combination No. 2445

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.73	1629.94	6.24	585.24	-61.04	-8208.30
3	4	-637.08	1723.46	12.40	643.62	61.21	8276.10

Combination No. 2446

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.69	1713.44	6.39	764.10	-67.99	-8710.38
3	4	-675.03	1762.95	12.25	837.74	54.27	8869.60

Combination No. 2447

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.88	1818.83	6.40	763.57	-68.47	-8299.18
3	4	-665.23	1657.56	12.24	838.28	53.78	8997.67

Combination No. 2448

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.66	1721.66	6.93	593.06	-75.40	-8048.05
3	4	-641.23	1638.10	12.58	677.09	52.12	8552.85

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1734.06	6.73	1015.43	-65.80	-8112.56
3	4	-646.03	1646.17	12.79	1078.39	61.72	8627.14

Combination No. 2449

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.36	1750.37	6.23	989.63	-60.61	-8001.86
3	4	-641.70	1623.10	12.41	1047.05	61.65	8615.96

Combination No. 2450

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.81	1737.03	6.55	569.66	-75.22	-7944.13
3	4	-637.15	1616.38	12.10	659.19	47.03	8542.36

Combination No. 2451

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.17	1776.05	1.57	495.42	-39.80	-7917.24
3	4	-636.10	1603.87	7.48	571.79	24.60	8573.70

Combination No. 2452

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.07	1717.65	1.39	675.14	-31.43	-7713.82
3	4	-618.99	1581.56	7.66	733.13	32.97	8283.36

Combination No. 2453

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.07	1717.65	1.39	675.14	-31.43	-7713.82
3	4	-618.99	1581.56	7.66	733.13	32.97	8283.36

Combination No. 2454

Group Id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.14	1619.22	1.55	496.22	-39.08	-8293.60
3	4	-636.07	1760.70	7.49	571.00	25.32	8196.46

Combination No. 2455

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2455

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	607.06	1596.91	1.73	657.55	-47.44	-8003.77
3	4	-618.99	1702.30	7.31	750.72	16.95	7993.29

Combination No. 2455

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2455

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.89	1669.24	6.46	977.86	-71.33	-8318.02
3	4	-649.24	1704.23	12.18	1058.83	50.93	8517.30

Combination No. 2455

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2455

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.91	1660.62	6.33	580.75	-65.13	-8242.46
3	4	-644.26	1692.79	12.32	648.10	57.13	8449.18

Combination No. 2455

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2455

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.28	1700.68	6.34	704.75	-65.43	-8553.65
3	4	-665.63	1734.72	12.31	772.77	56.82	8754.81

Combination No. 2455

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2455

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	581.88	1559.07	5.34	201.47	-3.76	-7607.53



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.89	1569.69	-5.48	106.12	2.58	-7766.83
3	4	-599.29	1669.93	0.56	183.45	-17.18	7712.46

Combination No. 2460

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2460

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.89	1569.69	-5.48	106.12	2.58	-7766.83
3	4	-599.29	1669.93	0.56	183.45	-17.18	7712.46

Combination No. 2461

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2461

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.03	1748.79	6.38	702.72	-67.28	-8416.03
3	4	-665.37	1686.61	12.27	774.80	54.98	8885.01

Combination No. 2462

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2462

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.66	1644.11	6.48	918.26	-72.02	-8394.94
3	4	-648.01	1763.31	12.17	1000.74	50.24	8404.88

Combination No. 2463

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2463

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.23	1716.58	6.46	636.33	-71.13	-8308.78
3	4	-655.57	1677.82	12.19	716.86	51.13	8709.40

Combination No. 2464

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2464

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.63	1818.11	6.37	806.08	-66.99	-8296.03
3	4	-664.97	1657.20	12.28	877.53	55.26	8993.57



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.58	1745.75	6.33	866.75	-65.33	-8457.08
3	4	-666.92	1695.62	12.31	934.56	56.92	8888.80

Combination No. 2471

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2471

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.54	1715.18	6.33	984.50	-65.28	-8187.06
3	4	-648.88	1658.29	12.31	1052.19	56.97	8637.99

Combination No. 2472

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2472

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.50	1703.88	6.45	574.50	-70.82	-8117.93
3	4	-643.84	1649.52	12.19	654.36	51.44	8561.74

Combination No. 2473

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2473

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.99	1775.44	1.54	529.22	-38.23	-7915.08
3	4	-635.91	1603.64	7.51	602.13	26.17	8570.58

Combination No. 2474

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2474

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.20	1773.11	6.40	763.80	-68.26	-8539.94
3	4	-674.55	1703.28	12.25	838.04	53.99	9026.01

Combination No. 2475

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2475

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.81	1684.72	27.88	1371.07	161.37	-8660.49



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.44	1769.04	6.46	636.06	-71.37	-8029.39
3	4	-644.79	1625.36	12.18	717.13	50.88	8677.49

Combination No. 2465

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2466

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.52	1694.37	6.39	863.82	-68.00	-8583.06
3	4	-665.87	1747.00	12.25	937.49	54.25	8732.36

Combination No. 2467

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2467

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.36	1691.24	6.48	918.40	-71.89	-8425.30
3	4	-657.70	1716.18	12.17	1000.60	50.37	8654.41

Combination No. 2468

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2468

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	590.96	1687.89	-5.46	105.52	2.03	-7510.56
3	4	-599.37	1551.73	0.55	184.05	-17.73	7970.95

Combination No. 2469

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2469

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.18	1642.70	-5.35	11.78	-3.41	-7390.19
3	4	-588.59	1539.04	0.43	102.26	-23.17	7780.17

Combination No. 2470

Group id: SER GP 1 Name: SERVICE GROUP 1

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-680.31	1839.96	-26.39	-1350.12	-164.89	8897.96

Combination No. 2476
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.95	1673.13	-28.39	-1582.37	167.25	-8168.67
3	4	-654.23	1734.91	-26.76	-1568.47	-164.27	8640.37

Combination No. 2477
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.70	1681.68	-28.23	-1178.72	159.80	-8241.04
3	4	-658.98	1746.83	-26.92	-1148.45	-171.72	8704.99

Combination No. 2478
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	663.63	1779.97	-27.87	-1371.55	160.93	-8574.88
3	4	-691.14	1744.71	-26.40	-1349.64	-165.33	9296.14

Combination No. 2479
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.32	1650.25	-27.71	-1162.29	153.50	-8279.53
3	4	-656.82	1771.51	-26.56	-1124.06	-172.76	8600.92

Combination No. 2480
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.70	1643.54	-28.02	-1550.16	168.12	-8204.62
3	4	-652.21	1758.16	-26.25	-1544.03	-158.14	8542.67

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Combination No. 2481
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.66	1727.03	-27.87	-1371.29	161.17	-8706.69
3	4	-690.16	1797.64	-26.40	-1349.91	-165.09	9136.17

Combination No. 2482
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.85	1832.42	-27.86	-1371.82	160.69	-8295.49
3	4	-680.35	1692.26	-26.41	-1349.38	-165.57	9264.24

Combination No. 2483
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.85	1735.42	-28.21	-1591.46	158.98	-8049.18
3	4	-656.13	1672.63	-26.93	-1559.39	-172.54	8814.59

Combination No. 2484
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.66	1747.81	-28.42	-1169.08	168.58	-8113.69
3	4	-660.94	1680.70	-26.73	-1158.09	-162.94	8888.87

Combination No. 2485
 Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.33	1763.96	-28.03	-1145.76	168.56	-7998.18
3	4	-656.83	1657.80	-26.24	-1140.60	-157.70	8882.52

Combination No. 2486
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.78	1750.62	-27.72	-1565.73	153.94	-7940.45
3	4	-652.28	1651.07	-26.55	-1528.46	-172.32	8808.92

Combination No. 2487

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2487

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.73	1787.86	-23.03	-1099.66	131.97	-7860.60
3	4	-653.65	1640.36	-21.64	-1078.79	-136.43	8893.43

Combination No. 2488

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2488

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.62	1729.45	-23.21	-919.95	140.34	-7657.18
3	4	-636.54	1618.04	-21.46	-917.46	-128.06	8603.09

Combination No. 2489

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2489

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.70	1631.03	-23.05	-1098.87	132.69	-8236.96
3	4	-653.62	1797.19	-21.63	-1079.59	-135.71	8516.18

Combination No. 2490

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2490

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	606.62	1608.71	-22.86	-937.53	124.32	-7947.13
3	4	-636.54	1738.78	-21.81	-899.87	-144.08	8313.02

Combination No. 2491

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2491

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.86	1682.83	-27.80	-1157.53	157.83	-8314.33

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-664.36	1738.93	-26.47	-1128.82	-168.42	8783.86

Combination No. 2492

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2492

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.88	1674.21	-27.94	-1554.64	164.04	-8238.77
3	4	-659.38	1727.48	-26.34	-1539.55	-162.22	8715.75

Combination No. 2493

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2493

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.25	1714.27	-27.93	-1430.64	163.73	-8549.96
3	4	-680.75	1769.41	-26.34	-1414.88	-162.53	9021.38

Combination No. 2494

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2494

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	577.93	1568.27	-15.88	-607.71	84.52	-7473.87
3	4	-611.37	1671.20	-14.83	-576.67	-99.72	8008.91

Combination No. 2495

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2495

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	586.93	1578.89	-16.01	-703.07	90.86	-7633.17
3	4	-620.37	1709.01	-14.70	-685.95	-93.38	8109.51

Combination No. 2496

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2496

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.00	1762.38	-27.89	-1432.67	161.88	-8412.35
3	4	-680.50	1721.30	-26.38	-1412.86	-164.37	9151.57

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Version: 12.01.00.57
File Name: Pier 12_ Straddle.rcp

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Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2497

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.63	1657.70	-27.79	-1217.14	157.15	-8391.25
3	4	-663.13	1798.01	-26.48	-1186.91	-169.11	8671.45

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2498

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	643.20	1730.18	27.81	-1499.07	158.03	-8305.10
3	4	-670.70	1712.51	-26.47	-1470.79	-168.23	8915.96

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2499

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	652.60	1831.70	-27.90	-1329.31	162.17	-8292.34
3	4	-680.10	1691.90	-26.38	-1310.12	-164.09	9260.13

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2500

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.41	1782.63	-27.80	-1499.33	157.79	-8025.71
3	4	-659.91	1660.06	-26.47	-1470.52	-168.47	8944.06

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2501

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	653.49	1707.96	-27.87	-1271.58	161.16	-8579.38
3	4	-680.99	1781.69	-26.40	-1250.16	-165.10	8998.93

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2502

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2503

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	587.01	1697.10	-16.00	-703.67	90.32	-7376.90
3	4	-620.45	1590.81	-14.71	-685.34	-93.93	8368.00

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2504

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	576.23	1651.91	-15.88	-797.40	84.88	-7256.53
3	4	-609.67	1578.12	-14.83	-767.14	-99.37	8177.22

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2505

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.55	1759.34	-27.93	-1268.64	163.83	-8453.39
3	4	-682.05	1730.31	-26.34	-1253.10	-162.43	9155.36

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2506

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.51	1728.77	-27.93	-1150.89	163.88	-8183.37
3	4	-664.01	1692.99	-26.34	-1135.46	-162.38	8904.56

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2507

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2508

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.33	1704.83	-27.79	-1217.00	157.27	-8421.62
3	4	-672.83	1750.88	-26.48	-1187.05	-168.99	8920.98

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2509

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.33	1704.83	-27.79	-1217.00	157.27	-8421.62
3	4	-672.83	1750.88	-26.48	-1187.05	-168.99	8920.98

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2510

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2511

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2512

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2513

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2514

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2515

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2516

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2517

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2518

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2519

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2520

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2521

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2522

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2523

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2524

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2525

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2526

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2527

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2528

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2529

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2530

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2531

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.47	1717.47	27.81	-1560.89	158.34	-8114.24

Group id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2532

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft</
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Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2513

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.62	1765.28	-31.11	-1486.32	172.27	-8462.52
3	4	-679.16	1711.11	-28.00	-1442.42	-181.19	9122.31

Combination No. 2514

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.30	1635.57	-30.95	-1277.07	164.84	-8167.16
3	4	-644.85	1737.91	-28.16	-1216.84	-188.62	8427.09

Combination No. 2515

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.69	1628.85	-31.27	-1664.93	179.46	-8092.25
3	4	-640.23	1724.56	-27.84	-1636.82	-174.00	8368.84

Combination No. 2516

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.64	1712.35	-31.12	-1486.06	172.52	-8594.33
3	4	-678.19	1764.05	-27.99	-1442.69	-180.94	8962.33

Combination No. 2517

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.83	1817.73	-31.11	-1486.59	172.03	-8183.13
3	4	-668.38	1658.66	-28.00	-1442.16	-181.43	9090.41

Combination No. 2518

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.83	1817.73	-31.11	-1486.59	172.03	-8183.13
3	4	-668.38	1658.66	-28.00	-1442.16	-181.43	9090.41

Units: US (English)

Design Code: AASHTO LRFD

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Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2508

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.55	1787.25	-23.06	-1065.87	133.54	-7858.45
3	4	-653.47	1640.12	-21.61	-1048.46	-134.86	8890.30

Combination No. 2509

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.17	1786.71	-27.87	-1371.59	160.90	-8536.26
3	4	-689.67	1737.97	-26.40	-1349.61	-165.36	9292.58

Combination No. 2510

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.79	1670.03	-31.12	-1485.84	172.71	-8548.13
3	4	-668.33	1806.36	-27.99	-1442.91	-180.75	8724.13

Combination No. 2511

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.94	1658.45	-31.63	-1697.15	178.59	-8056.30
3	4	-642.26	1701.32	-28.35	-1661.25	-180.12	8466.54

Combination No. 2512

Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.68	1666.99	-31.47	-1293.49	171.14	-8128.68
3	4	-647.01	1713.23	-28.51	-1241.23	-187.58	8531.16

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.83	1720.73	-31.45	-1706.23	170.32	-7936.82
3	4	-644.16	1639.04	-28.53	-1652.17	-188.39	8640.76

Combination No. 2519
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.64	1733.12	-31.26	-1283.85	179.92	-8001.32
3	4	-648.97	1647.10	-28.32	-1250.87	-178.80	8715.04

Combination No. 2520
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.31	1749.28	-31.28	-1260.53	179.90	-7885.81
3	4	-644.85	1624.20	-27.83	-1233.38	-173.56	8708.69

Combination No. 2521
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	616.76	1735.93	-30.96	-1680.50	165.28	-7828.08
3	4	-640.30	1617.47	-28.15	-1621.24	-188.18	8635.09

Combination No. 2522
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.71	1773.17	-26.27	-1214.43	143.31	-7748.24
3	4	-641.68	1606.76	-23.24	-1171.57	-152.29	8719.60

Combination No. 2523
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.61	1714.76	-26.45	-1034.72	151.68	-7544.82

Units: US (English)
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.68	1616.34	-26.29	-1213.64	144.04	-8124.59
3	4	-641.65	1763.59	-23.22	-1172.37	-151.57	8342.35

Combination No. 2524
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.68	1616.34	-26.29	-1213.64	144.04	-8124.59
3	4	-641.65	1763.59	-23.22	-1172.37	-151.57	8342.35

Combination No. 2525
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	598.60	1594.02	-26.11	-1052.31	135.67	-7834.77
3	4	-624.57	1705.18	-23.40	-992.65	-159.93	8139.19

Combination No. 2526
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.84	1668.15	-31.05	-1272.31	169.18	-8201.97
3	4	-652.39	1705.33	-28.06	-1221.60	-184.28	8610.03

Combination No. 2527
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.87	1659.52	-31.18	-1669.41	175.38	-8126.41
3	4	-647.41	1693.88	-27.93	-1632.33	-178.08	8541.92

Combination No. 2528
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.24	1699.58	-31.17	-1545.42	175.07	-8437.60
3	4	-668.78	1735.81	-27.94	-1507.66	-178.39	8847.54

Units: US (English)
Design Code: AASHTO LRFD



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Combination No. 2529
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.91	1553.58	-19.12	-722.49	95.87	-7361.51
3	4	-599.40	1637.60	-16.43	-669.45	-115.58	7835.08

Combination No. 2530
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	578.91	1564.21	-19.26	-817.94	102.21	-7520.81
3	4	-608.40	1675.41	-16.29	-778.73	-109.24	7935.68

Combination No. 2531
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.98	1747.69	-31.13	-1547.44	173.23	-8299.98
3	4	-668.52	1687.70	-27.98	-1505.64	-180.23	8977.74

Combination No. 2532
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.61	1643.01	-31.03	-1331.91	168.49	-8278.89
3	4	-651.16	1764.41	-28.08	-1279.70	-184.97	8497.62

Combination No. 2533
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	635.18	1715.49	-31.05	-1613.84	169.38	-8192.73
3	4	-658.72	1678.91	-28.06	-1563.57	-184.08	8802.13

Combination No. 2534
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	568.21	1637.22	-19.13	-912.18	96.22	-7144.16
3	4	-568.21	1637.22	-19.13	-912.18	96.22	-7144.16

Combination No. 2535
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.40	1767.94	-31.05	-1614.10	169.13	-7913.35
3	4	-647.94	1626.46	-28.06	-1563.31	-184.33	8770.23

Combination No. 2536
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	645.48	1693.27	-31.12	-1386.35	172.50	-8467.02
3	4	-669.02	1748.10	-27.99	-1342.95	-180.96	8825.10

Combination No. 2537
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	637.31	1690.14	-31.03	-1331.77	168.62	-8309.25
3	4	-660.86	1717.28	-28.08	-1279.83	-184.94	8747.15

Combination No. 2538
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	578.99	1682.41	-19.25	-818.44	101.66	-7264.53
3	4	-608.48	1557.21	-16.30	-778.13	-109.79	8194.17

Combination No. 2539
Group id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	644.58	1817.01	-31.14	-1444.08	173.51	-8179.98
3	4	-668.13	1658.30	-27.97	-1402.90	-179.95	9086.30



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-597.70	1544.52	-16.42	-859.92	-115.22	8003.39

Combination No. 2540

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.53	1744.65	-31.18	-1383.41	175.17	-8341.03
3	4	-670.08	1696.72	-27.93	-1345.88	-178.29	8981.53

Combination No. 2541

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.49	1714.09	-31.18	-1265.67	175.22	-8071.01
3	4	-652.03	1659.39	-27.93	-1228.24	-178.24	8730.73

Combination No. 2542

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	623.45	1702.79	-31.06	-1675.66	169.69	-8001.88
3	4	-647.00	1650.62	-28.05	-1626.08	-183.77	8654.47

Combination No. 2543

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.53	1772.56	-26.31	-1180.64	144.89	-7746.08
3	4	-641.49	1606.53	-23.20	-1141.24	-150.72	8716.47

Combination No. 2544

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	654.16	1772.02	-31.11	-1486.36	172.24	-8423.90
3	4	-677.70	1704.37	-28.00	-1442.39	-181.22	9118.75

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Combination No. 2545

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.26	1670.95	-34.95	-1621.43	186.80	-8579.36
3	4	-667.04	1805.44	-30.08	-1555.10	-199.82	8694.26

Combination No. 2546

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.41	1659.36	-35.46	-1832.73	192.68	-8087.54
3	4	-640.96	1700.40	-30.45	-1773.44	-199.20	8436.67

Combination No. 2547

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.16	1667.91	-35.30	-1429.08	185.23	-8159.91
3	4	-645.71	1712.31	-30.61	-1353.42	-206.65	8501.29

Combination No. 2548

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.09	1766.20	-34.94	-1621.91	186.36	-8493.75
3	4	-677.86	1710.20	-30.09	-1554.62	-200.26	9092.44

Combination No. 2549

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.77	1636.48	-34.78	-1412.65	178.93	-8198.39
3	4	-643.55	1736.99	-30.25	-1329.04	-207.69	8397.22

Combination No. 2550

Group Id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.16	1629.77	-35.09	-1800.51	193.55	-8123.49
3	4	-638.93	1723.64	-29.94	-1749.01	-193.07	8338.96

Combination No. 2551

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2552

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	656.11	1713.26	-34.94	-1622.17	186.60	-8625.56
3	4	-676.89	1763.13	-30.09	-1554.88	-200.02	8932.46

Combination No. 2553

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2554

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.31	1818.65	-34.93	-1622.17	184.41	-7968.05
3	4	-667.08	1657.74	30.10	-1554.35	-207.47	9060.54

Combination No. 2555

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2556

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.31	1721.64	-35.28	-1841.81	184.41	-7968.05
3	4	-642.86	1638.12	30.62	-1764.36	-207.47	8610.89

Combination No. 2557

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2558

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	627.11	1734.04	35.49	-1419.43	194.01	-8032.56
3	4	-647.67	1646.19	-30.42	-1363.07	-197.87	8685.17

Combination No. 2559

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2560

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.78	1750.19	35.10	-1396.11	193.99	-7917.04



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.23	1736.85	-34.79	-1816.08	179.37	-7859.32
3	4	-639.01	1616.55	-30.24	-1733.44	-207.25	8605.22

Combination No. 2556

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2557

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	618.23	1736.85	-34.79	-1816.08	179.37	-7859.32
3	4	-639.01	1616.55	-30.24	-1733.44	-207.25	8605.22

Combination No. 2558

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2559

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.18	1774.09	-30.10	-1350.02	157.40	-7779.47
3	4	-640.38	1605.84	-25.33	-1283.77	-171.37	8689.73

Combination No. 2560

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2561

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.08	1715.68	-30.28	-1170.30	165.77	-7576.05
3	4	-623.27	1583.53	-25.15	-1122.43	-163.00	8399.39

Combination No. 2562

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2563

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.15	1617.26	-30.12	-1349.22	158.12	-8155.83
3	4	-640.35	1762.67	-25.32	-1284.56	-170.64	8312.48

Combination No. 2564

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2565

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	600.07	1594.94	-29.93	-1187.89	149.76	-7866.00
3	4	-623.27	1704.27	-25.50	-1104.84	-179.01	8109.32

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Combination No. 2561
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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	630.32	1669.06	-34.87	-1407.89	183.26	-8233.20
3	4	-651.09	1704.41	-30.16	-1333.80	-203.36	8580.16

Combination No. 2562
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.34	1660.44	-35.01	-1804.99	189.47	-8157.64
3	4	-646.11	1692.97	-30.03	-1744.53	-197.16	8512.05

Combination No. 2563
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.71	1700.50	-35.00	-1681.00	189.16	-8468.83
3	4	-667.48	1734.90	-30.03	-1619.86	-197.46	8817.67

Combination No. 2564
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	571.38	1554.50	-22.95	-858.07	109.96	-7392.74
3	4	-598.10	1636.69	-18.52	-781.64	-134.65	7805.21

Combination No. 2565
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.39	1565.12	-23.08	-953.42	116.30	-7552.04
3	4	-607.10	1674.50	-18.39	-890.92	-128.31	7905.81

Combination No. 2566
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

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Combination No. 2567
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.45	1748.61	-34.96	-1683.02	187.32	-8331.22
3	4	-667.22	1686.79	-30.07	-1617.83	-199.31	8947.87

Combination No. 2567
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.09	1643.93	-34.86	-1467.49	182.58	-8310.12
3	4	-649.86	1763.49	-30.17	-1391.89	-204.05	8467.75

Combination No. 2568
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.65	1716.40	-34.88	-1749.42	183.46	-8223.96
3	4	-657.43	1678.00	-30.16	-1675.77	-203.16	8772.26

Combination No. 2569
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.05	1817.93	-34.97	-1579.67	187.60	-8211.21
3	4	-666.83	1657.38	-30.07	-1515.09	-199.03	9056.43

Combination No. 2570
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	625.87	1768.86	-34.87	-1749.69	183.22	-7944.58
3	4	-646.64	1625.54	-30.16	-1675.50	-203.40	8740.36

Combination No. 2571
 [Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.95	1694.19	-34.94	-1521.93	186.59	-8498.25

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-667.72	1747.18	-30.09	-1455.14	-200.03	8795.23

Combination No. 2572

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.78	1691.06	-34.86	-1467.35	182.70	-8340.49
3	4	-659.56	1716.36	-30.17	-1392.03	-203.92	8717.28

Combination No. 2573

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	580.46	1683.32	-23.07	-954.02	115.75	-7295.77
3	4	-607.18	1556.29	-18.40	-890.32	-128.86	8164.30

Combination No. 2574

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	569.68	1638.14	-22.95	-1047.76	110.31	-7175.40
3	4	-596.40	1543.60	-18.52	-972.11	-134.30	7973.52

Combination No. 2575

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	648.00	1745.57	-35.00	-1519.00	189.26	-8372.26
3	4	-668.78	1695.80	-30.03	-1458.07	-197.36	8951.66

Combination No. 2576

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.96	1715.00	-35.00	-1401.25	189.31	-8102.24
3	4	-650.73	1658.47	-30.03	-1340.44	-197.31	8700.86

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.92	1703.70	-34.88	-1811.25	183.77	-8033.11
3	4	-645.70	1649.70	-30.15	-1738.27	-202.85	8624.60

Combination No. 2577

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.92	1703.70	-34.88	-1811.25	183.77	-8033.11
3	4	-645.70	1649.70	-30.15	-1738.27	-202.85	8624.60

Combination No. 2578

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	617.00	1773.48	-30.13	-1316.22	158.97	-7777.31
3	4	-640.19	1605.61	-25.30	-1253.43	-169.79	8686.60

Combination No. 2579

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	655.63	1772.94	-34.94	-1621.94	186.33	-8455.13
3	4	-676.40	1703.46	-30.09	-1554.58	-200.29	9088.88

Combination No. 2580

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.17	1673.09	-37.38	-1702.90	194.30	-8661.23
3	4	-663.79	1803.30	-31.18	-1618.60	-211.14	8617.63

Combination No. 2581

Group Id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	624.32	1661.50	-37.89	-1914.20	200.19	-8169.40
3	4	-637.71	1698.26	-31.54	-1836.94	-210.52	8360.04

Combination No. 2582

Group Id: SER GP 1 Name: SERVICE GROUP I

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.07	1670.05	-37.73	-1510.55	192.73	-8241.78
3	4	-642.46	1710.18	-31.70	-1416.92	-217.97	8424.67

Combination No. 2583
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	661.00	1768.33	-37.37	-1703.38	193.87	-8575.61
3	4	-674.62	1708.06	-31.19	-1618.11	-211.58	9015.82

Combination No. 2584
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.68	1638.62	-37.21	-1494.12	186.44	-8280.26
3	4	-640.30	1734.85	-31.35	-1392.53	-219.01	8320.59

Combination No. 2585
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.07	1631.90	-37.52	-1881.98	201.05	-8205.35
3	4	-635.69	1721.50	-31.03	-1812.51	-204.39	8262.34

Combination No. 2586
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	660.03	1715.40	-37.37	-1703.11	194.11	-8707.43
3	4	-673.64	1760.99	-31.18	-1618.38	-211.33	8855.84

Combination No. 2587
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.22	1820.79	-37.36	-1703.64	193.62	-8296.22

Units: US (English) Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.22	1723.78	-37.71	-1923.28	191.92	-8049.92
3	4	-639.61	1635.98	-31.72	-1827.86	-218.78	8534.26

Combination No. 2588
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.22	1723.78	-37.71	-1923.28	191.92	-8049.92
3	4	-639.61	1635.98	-31.72	-1827.86	-218.78	8534.26

Combination No. 2589
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.02	1736.18	-37.92	-1500.90	201.52	-8114.42
3	4	-644.42	1644.05	-31.51	-1426.56	-209.19	8608.54

Combination No. 2590
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	626.69	1752.33	-37.53	-1477.58	201.49	-7998.91
3	4	-640.31	1621.14	-31.02	-1409.07	-203.95	8602.20

Combination No. 2591
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	622.14	1738.99	-37.22	-1897.55	186.87	-7941.18
3	4	-635.76	1614.42	-31.34	-1796.93	-218.57	8528.60

Combination No. 2592
Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.09	1776.23	-32.53	-1431.49	164.91	-7861.34
3	4	-637.13	1603.70	-26.43	-1347.26	-182.68	8613.10

Units: US (English) Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.99	1717.82	-32.71	-1251.77	173.27	-7657.91
3	4	-620.02	1581.39	-26.25	-1185.93	-174.31	8322.76

Combination No. 2593

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.99	1717.82	-32.71	-1251.77	173.27	-7657.91
3	4	-620.02	1581.39	-26.25	-1185.93	-174.31	8322.76

Combination No. 2594

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.06	1619.40	-32.55	-1430.69	165.63	-8237.69
3	4	-637.10	1760.53	-26.41	-1348.06	-181.96	8235.86

Combination No. 2595

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.99	1597.08	-32.36	-1269.36	157.26	-7947.87
3	4	-620.02	1702.13	-26.59	-1168.34	-190.33	8032.69

Combination No. 2596

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.23	1671.20	-37.30	-1489.36	190.77	-8315.07
3	4	-647.84	1702.27	-31.25	-1397.29	-214.67	8503.54

Combination No. 2597

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.25	1662.58	-37.44	-1886.46	196.97	-8239.51
3	4	-642.86	1690.83	-31.12	-1808.02	-208.47	8435.42

Combination No. 2598

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.56	1718.54	-37.31	-1830.89	190.97	-8305.83
3	4	-646.61	1761.35	-31.27	-1455.39	-215.36	8391.12



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.99	1717.82	-32.71	-1251.77	173.27	-7657.91
3	4	-620.02	1581.39	-26.25	-1185.93	-174.31	8322.76

Combination No. 2593

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.99	1717.82	-32.71	-1251.77	173.27	-7657.91
3	4	-620.02	1581.39	-26.25	-1185.93	-174.31	8322.76

Combination No. 2594

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	621.06	1619.40	-32.55	-1430.69	165.63	-8237.69
3	4	-637.10	1760.53	-26.41	-1348.06	-181.96	8235.86

Combination No. 2595

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	603.99	1597.08	-32.36	-1269.36	157.26	-7947.87
3	4	-620.02	1702.13	-26.59	-1168.34	-190.33	8032.69

Combination No. 2596

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.23	1671.20	-37.30	-1489.36	190.77	-8315.07
3	4	-647.84	1702.27	-31.25	-1397.29	-214.67	8503.54

Combination No. 2597

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.25	1662.58	-37.44	-1886.46	196.97	-8239.51
3	4	-642.86	1690.83	-31.12	-1808.02	-208.47	8435.42

Combination No. 2598

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.56	1718.54	-37.31	-1830.89	190.97	-8305.83
3	4	-646.61	1761.35	-31.27	-1455.39	-215.36	8391.12

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-654.18	1675.86	-31.25	-1739.26	-214.47	8695.63

Combination No. 2604

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	649.97	1820.07	-37.40	-1661.14	195.10	-8293.08
3	4	-663.58	1655.24	-31.16	-1578.59	-210.34	8979.81

Combination No. 2605

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.78	1771.00	-37.30	-1831.16	190.73	-8026.44
3	4	-643.39	1623.40	-31.25	-1739.00	-214.72	8663.73

Combination No. 2606

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	650.86	1696.33	-37.37	-1603.40	194.09	-8580.11
3	4	-664.47	1745.04	-31.18	-1518.64	-211.35	8718.60

Combination No. 2607

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.69	1693.20	-37.29	-1548.82	190.21	-8422.35
3	4	-656.31	1714.22	-31.27	-1455.52	-215.23	8640.65

Combination No. 2608

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	584.37	1685.46	-25.50	-1035.49	123.25	-7377.63
3	4	-603.93	1554.16	-19.49	-953.82	-140.18	8087.67

Units: US (English)

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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	573.60	1640.28	-25.38	-1129.23	117.81	-7257.26
3	4	-593.15	1541.47	-19.61	-1035.61	-145.61	7896.90

Combination No. 2609

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	651.92	1747.71	-37.43	-1600.47	196.76	-8454.13
3	4	-665.53	1693.66	-31.12	-1521.57	-208.68	8875.04

Combination No. 2610

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.87	1717.14	-37.43	-1482.72	196.82	-8184.11
3	4	-647.49	1656.33	-31.12	-1403.93	-208.63	8624.23

Combination No. 2611

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.84	1705.84	-37.31	-1892.72	191.28	-8114.98
3	4	-642.45	1647.56	-31.24	-1801.77	-214.16	8547.97

Combination No. 2612

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.91	1775.62	-32.56	-1397.69	166.48	-7859.18
3	4	-636.95	1603.47	-26.39	-1316.93	-181.11	8609.98

Combination No. 2613

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.91	1775.62	-32.56	-1397.69	166.48	-7859.18
3	4	-636.95	1603.47	-26.39	-1316.93	-181.11	8609.98

Combination No. 2614

Group Id: SER GP 1 Name: SERVICE GROUP 1

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	620.91	1775.62	-32.56	-1397.69	166.48	-7859.18
3	4	-636.95	1603.47	-26.39	-1316.93	-181.11	8609.98

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	659.54	1775.07	-37.37	-1703.41	193.84	-8536.99
3	4	-673.15	1701.32	-31.19	-1618.08	-211.61	9012.25

Combination No. 2615

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2615

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.52	1677.15	-38.05	-1720.52	194.90	-8817.16
3	4	-657.40	1799.24	-31.25	-1628.40	-213.36	8469.30

Combination No. 2616

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2616

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	631.67	1665.56	-38.56	-1931.82	200.78	-8325.34
3	4	-631.33	1694.20	-31.62	-1846.75	-212.74	8211.71

Combination No. 2617

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2617

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.42	1674.11	-38.39	-1528.17	193.33	-8397.71
3	4	-636.07	1706.12	-31.78	-1426.73	-220.19	8276.33

Combination No. 2618

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2618

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	668.35	1772.39	-38.04	-1721.00	194.46	-8731.55
3	4	-668.23	1704.00	-31.26	-1627.92	-213.80	8667.48

Combination No. 2619

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2619

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.04	1642.68	-37.88	-1511.74	187.03	-8436.20

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.42	1635.96	-38.19	-1899.60	201.65	-8361.29
3	4	-629.30	1717.44	-31.11	-1822.31	-206.61	8114.00

Combination No. 2620

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2620

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.42	1635.96	-38.19	-1899.60	201.65	-8361.29
3	4	-629.30	1717.44	-31.11	-1822.31	-206.61	8114.00

Combination No. 2621

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2621

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	667.38	1719.46	-38.04	-1720.74	194.70	-8863.36
3	4	-667.25	1756.93	-31.26	-1628.19	-213.56	8701.50

Combination No. 2622

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2622

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.57	1824.85	-38.03	-1721.27	194.22	-8452.16
3	4	-657.44	1651.55	-31.27	-1627.65	-214.04	8835.58

Combination No. 2623

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2623

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.57	1727.84	-38.38	-1940.90	192.51	-8205.85
3	4	-633.22	1631.92	-31.79	-1837.67	-221.01	8385.92

Combination No. 2624

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2624

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.38	1740.24	-38.58	-1518.53	202.11	-8270.36
3	4	-638.03	1639.99	-31.59	-1436.37	-211.41	8460.21

Units: US (English)

Design Code: AASHTO LRFD



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[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.05	1756.39	-38.20	-1495.21	202.09	-8154.85
3	4	-633.92	1617.08	-31.10	-1418.88	-206.17	8453.86

Combination No. 2626
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	629.50	1743.05	37.89	-1915.18	187.47	-8097.12
3	4	-629.37	1610.36	-31.41	-1806.74	-220.79	8380.26

Combination No. 2627
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.45	1780.29	-33.20	-1449.11	165.50	-8017.27
3	4	-630.74	1599.64	-26.50	-1357.07	-184.90	8464.71

Combination No. 2628
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.34	1721.88	-33.38	-1269.40	173.87	-7813.85
3	4	-613.64	1577.33	-26.32	-1195.74	-176.53	8174.43

Combination No. 2629
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.42	1623.45	-33.21	-1448.32	166.22	-8393.63
3	4	-630.71	1756.47	-26.49	-1357.86	-184.18	8087.52

Combination No. 2630
[Group id: SER GP 1 Name: SERVICE GROUP 1]



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Combination No. 2631
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	611.34	1601.14	-33.03	-1286.98	157.86	-8103.80
3	4	-613.63	1698.07	-26.67	-1178.15	-192.55	7884.36

Combination No. 2632
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.58	1675.26	-37.97	-1506.98	191.36	-8471.00
3	4	-641.45	1698.21	-31.33	-1407.10	-216.90	8355.20

Combination No. 2633
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.60	1666.64	-38.10	-1904.09	197.57	-8395.44
3	4	-636.48	1686.77	-31.20	-1817.83	-210.69	8287.08

Combination No. 2634
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	657.97	1706.70	-38.10	-1780.09	197.26	-8706.64
3	4	-657.85	1728.70	-31.20	-1693.16	-211.00	8592.71

Combination No. 2635
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	582.65	1560.70	-26.04	-957.16	118.06	-7630.54
3	4	-588.46	1630.49	-19.69	-854.95	-148.19	7580.25

Combination No. 2635
[Group id: SER GP 1 Name: SERVICE GROUP 1]

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	591.65	1571.32	-26.18	-1052.51	124.40	-7789.84

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		Date	
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Combination No. 2641
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2641		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	658.21	1700.39	-38.04	-1621.02	194.69	-8736.05
3	4	-658.09	1740.98	-31.26	-1528.44	-213.57	8570.26

Combination No. 2642
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2642		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	650.05	1697.26	37.96	-1566.45	190.80	-8578.29
3	4	-649.92	1710.17	-31.34	-1465.33	-217.46	8492.32

Combination No. 2643
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2643		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	591.73	1689.52	-26.17	-1053.12	123.85	-7533.57
3	4	-597.54	1550.10	-19.57	-963.62	-142.40	7939.34

Combination No. 2644
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2644		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	580.95	1644.34	-26.05	-1146.85	118.41	-7413.20
3	4	-586.76	1537.41	-19.69	-1045.41	-147.84	7748.56

Combination No. 2645
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2645		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	659.27	1751.77	-38.10	-1618.09	197.36	-8610.06
3	4	-659.14	1689.60	-31.20	-1531.38	-210.90	8726.70

Combination No. 2646
 Group id: SER GP 1 Name: SERVICE GROUP I

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		Designed CAM	
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Combination No. 2636
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2636		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	657.71	1754.81	-38.06	-1782.12	195.42	-8569.02
3	4	-657.59	1680.59	-31.24	-1691.13	-212.84	8722.91

Combination No. 2637
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2637		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	640.35	1650.12	-37.95	-1566.58	190.68	-8547.92
3	4	-640.23	1757.30	-31.34	-1465.19	-217.58	8242.79

Combination No. 2638
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2638		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	647.91	1722.60	-37.97	-1848.52	191.56	-8461.77
3	4	-647.79	1671.80	-31.33	-1749.07	-216.70	8547.30

Combination No. 2639
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2639		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	657.32	1824.13	-38.06	-1678.76	195.70	-8449.01
3	4	-657.19	1651.19	-31.24	-1588.40	-212.56	8831.47

Combination No. 2640
 Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2640		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	637.13	1775.05	-37.97	-1848.78	191.32	-8182.38
3	4	-637.01	1619.35	-31.33	-1748.80	-216.94	8515.39



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
3	4	-627.85	1691.93	-32.30	-1870.85	-215.31	8127.33

Combination No. 2652

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2652

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	640.92	1676.38	-38.78	-1548.38	196.73	-8490.24
3	4	-632.60	1703.85	-32.46	-1450.83	-222.77	8191.95

Combination No. 2653

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2653

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	672.85	1774.66	-38.42	-1741.22	197.86	-8824.08
3	4	-664.75	1701.73	-31.94	-1652.03	-216.37	8783.10

Combination No. 2654

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2654

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.54	1644.95	-38.26	-1531.96	190.43	-8528.72
3	4	-630.44	1728.53	-32.10	-1426.45	-223.80	8087.87

Combination No. 2655

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2655

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	633.92	1638.23	-38.58	-1919.82	205.05	-8453.82
3	4	-625.82	1715.17	-31.79	-1846.42	-209.19	8029.62

Combination No. 2656

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2656

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	671.88	1721.73	-38.43	-1740.95	198.10	-8955.89
3	4	-663.78	1754.66	-31.94	-1652.29	-216.13	8623.12

Units: US (English)

Design Code: AASHTO LRFD



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Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.22	1721.20	-38.10	-1500.34	197.41	-8340.04
3	4	-641.10	1652.27	-31.20	-1413.74	-210.85	8475.90

Combination No. 2647

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2647

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.19	1709.90	-37.98	-1910.34	191.87	-8270.91
3	4	-636.06	1643.51	-31.32	-1811.58	-216.39	8399.64

Combination No. 2648

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2648

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	628.26	1779.67	-33.23	-1415.32	167.07	-8015.12
3	4	-630.56	1599.41	-26.47	-1326.73	-183.33	8461.64

Combination No. 2649

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2649

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	666.89	1779.13	-38.04	-1721.04	194.43	-8692.93
3	4	-666.77	1697.26	-31.26	-1627.89	-213.83	8863.92

Combination No. 2650

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2650

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.03	1679.42	-38.43	-1740.73	198.30	-8909.69
3	4	-653.92	1796.98	-31.93	-1652.51	-215.94	8384.92

Combination No. 2651

Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2651

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	636.17	1667.83	-38.94	-1952.04	204.18	-8417.87

Units: US (English)

Design Code: AASHTO LRFD



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Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2657

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	662.07	1827.11	-38.42	-1741.48	197.62	-8544.69
3	4	-653.97	1649.28	-31.95	-1651.76	-216.62	8751.20

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2658

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.07	1730.11	-38.77	-1961.12	195.91	-8298.38
3	4	-629.75	1629.65	-32.47	-1861.77	-223.58	8301.54

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2659

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	642.88	1742.51	-38.97	-1538.74	205.51	-8362.89
3	4	-634.56	1637.72	-32.27	-1460.48	-213.98	8375.83

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2660

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	638.55	1738.66	-38.59	-1515.42	205.49	-8247.37
3	4	-630.44	1614.82	-31.78	-1442.98	-208.75	8369.48

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2661

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	634.00	1745.32	-38.27	-1935.39	190.87	-8189.65
3	4	-625.89	1608.09	-32.09	-1830.84	-223.37	8295.88

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2662

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.08	1677.53	-38.36	-1527.20	194.77	-8563.53
3	4	-637.98	1695.95	-32.01	-1431.21	-219.47	8270.82

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2663

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.84	1724.15	-33.77	-1289.61	177.27	-7906.38
3	4	-610.16	1575.06	-27.00	-1219.84	-179.11	8090.05

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2664

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2665

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	615.84	1603.41	-33.42	-1307.20	161.26	-8196.33
3	4	-610.16	1695.80	-27.35	-1202.25	-195.12	7799.98

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2666

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	646.08	1677.53	-38.36	-1527.20	194.77	-8563.53
3	4	-637.98	1695.95	-32.01	-1431.21	-219.47	8270.82

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2667

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	641.10	1668.91	-38.49	-1924.30	200.97	-8487.97

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2668

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2669

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2670

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2671

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2672

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2673

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2674

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2675

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2676

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2677

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2678

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2679

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2680

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2681

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2682

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2683

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2684

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2685

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

Combination No. 2686

Memb	Node	Fx kip	Fy kip	Fz kip	Mx kft	My kft	Mz kft
1	1	632.92	1625.72	-33.60	-1468.53	169.63	-8486.16
3	4	-627.24	1754.21	-27.17	-1381.97	-186.75	8003.14

Group id: SER GP 1 Name: SERVICE GROUP I

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Combination No. 2673
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2673		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	652.42	1724.87	-38.36	-1868.73	194.96	-854.29
3	4	-644.31	1669.53	-32.01	-1773.18	-219.27	8462.92

Combination No. 2674
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2674		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	661.82	1826.40	-38.45	-1698.98	199.10	-854.54
3	4	-653.72	1648.92	-31.92	-1672.50	-215.14	8747.09

Combination No. 2675
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2675		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	641.63	1777.32	-38.36	-1868.99	194.72	-8274.91
3	4	-633.53	1617.08	-32.01	-1772.91	-219.51	8431.02

Combination No. 2676
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2676		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	662.71	1702.65	-38.43	-1641.24	198.09	-8828.88
3	4	-654.61	1738.71	-31.94	-1552.55	-216.15	8485.89

Combination No. 2677
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2677		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	654.55	1699.52	-38.35	-1586.66	194.20	-8670.82
3	4	-646.45	1707.90	-32.02	-1489.44	-220.03	8407.94

Combination No. 2678
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Units: US (English)

Design Code: AASHTO LRFD

		Sheet #	515
		Job #	59219
		Designed	CAM
		Date	9/10/14
		Checked	
		Date	
Program: LEAP® RC-PIER® V8i (SELECTseries 5) SE Client Licenses Version: 12.01.00.57 Copyright © Bentley Systems, Inc. 2012 www.bentley.com Phone: 1-800-778-4277			
File Name: | Pier 12 Straddle.rcp			

Combination No. 2668
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2668		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	662.47	1708.97	-38.48	-1800.31	200.66	-8799.16
3	4	-654.37	1726.43	-31.88	-1717.27	-213.57	8508.33

Combination No. 2669
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2669		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	587.15	1562.97	-26.43	-977.38	121.46	-7723.07
3	4	-584.99	1628.22	-20.37	-879.05	-150.77	7495.87

Combination No. 2670
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2670		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	596.15	1573.59	-26.57	-1072.73	127.80	-7882.37
3	4	-593.99	1666.03	-20.24	-988.33	-144.43	7596.47

Combination No. 2671
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2671		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	662.22	1757.08	-38.44	-1802.33	198.82	-8661.55
3	4	-654.11	1678.32	-31.92	-1715.24	-215.42	8638.53

Combination No. 2672
 Group Id: SER GP 1 Name: SERVICE GROUP 1

Combination No. 2672		Fx	Fy	Fz	Mx	My	Mz
Memb	Node	kip	kip	kip	kft	kft	kft
1	1	644.85	1652.39	-38.34	-1586.80	194.08	-8640.45
3	4	-636.75	1755.03	-32.02	-1489.30	-220.16	8158.41

Units: US (English)

Design Code: AASHTO LRFD



Sheet # 517
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
Version: 12.01.00.57
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Phone: 1-800-778-4277

File Name: Pier 12 Straddle.rcp
Memb Node Fx Fy Fz Mx My Mz
3 4 -594.07 1547.83 -20.25 -987.73 -144.97 7854.96

Combination No. 2679
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	585.45	1691.79	-26.56	-1167.07	121.81	-7505.73
3	4	-583.29	1535.14	-20.37	-1069.52	-150.41	7664.18

Combination No. 2680
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	663.77	1754.03	-38.49	-1638.31	200.76	-8702.59
3	4	-655.67	1687.33	31.88	-1555.48	-213.48	8642.32

Combination No. 2681
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	645.73	1723.47	-38.49	-1520.56	200.81	-8432.57
3	4	-637.62	1650.01	31.88	-1437.85	-213.42	8391.52

Combination No. 2682
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	640.69	1712.17	-38.37	-1930.55	195.27	-8363.44
3	4	-632.59	1641.24	-32.00	-1835.68	-218.96	8315.26

Combination No. 2683
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	632.76	1781.94	-33.62	-1435.53	170.48	-8107.64

Units: US (English) Design Code: AASHTO LRFD



Sheet # 518
Job # 59219
Designed CAM
Date 9/10/14
Checked
Date

Program: LEAP® RC-PIER® V8i (SELECTseries 5)
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Phone: 1-800-778-4277

File Name: Pier 12 Straddle.rcp
Memb Node Fx Fy Fz Mx My Mz
3 4 -627.08 1597.14 -27.15 -1350.84 -185.90 8377.26

Combination No. 2684
Group id: SER GP 1 Name: SERVICE GROUP I

Memb	Node	Fx	Fy	Fz	Mx	My	Mz
1	1	671.39	1781.40	-38.42	-1741.25	197.83	-8785.46
3	4	-663.29	1694.99	-31.94	-1651.99	-216.40	8779.54

Units: US (English) Design Code: AASHTO LRFD

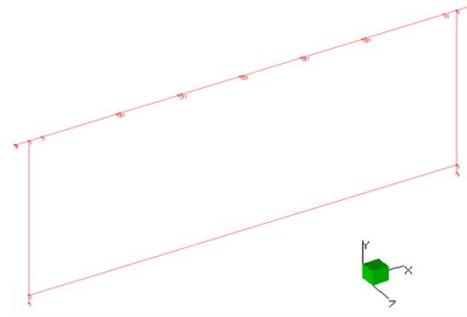
FOR:	I-4 PD&E	JOB NO.:	59219
	St. Johns River Veterans Memorial Bridge	SHEET NO.:	
MADE BY:	CAM	CHECKED BY:	
DATE:	9/20/2013	DATE:	
		BACKCHECKED BY:	
		DATE:	



REVERSIBLE LANE ALTERNATIVE

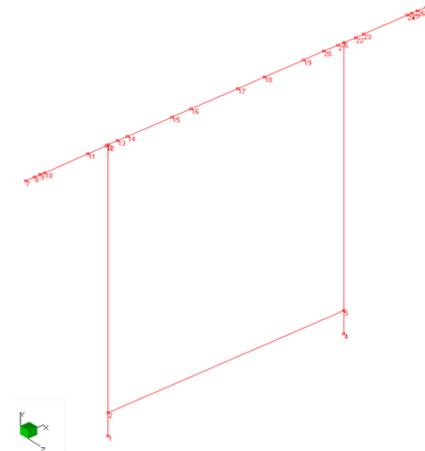
STRADDLE PIER FOOTING LOAD SUMMARY

STRENGTH ENVELOPE						
NODE	FX (kip)	FY (kip)	FZ (kip)	MX (kip-ft)	MY (kip-ft)	MZ (kip-ft)
1	438	1344	-30	-1002	120	-5153
1	877	2289	-39	-2069	234	-11570
1	860	2369	-39	-2069	234	-11140
1	521	1331	18	770	-81	-7122
1	507	1377	61	2235	-217	-6589
1	689	1905	-61	-2010	219	-8816
1	593	1602	-51	-2595	258	-7738
1	783	2143	51	2837	-256	-10080
1	794	2153	-51	-2085	269	-10330
1	582	1593	51	2326	-267	-7490
1	438	1344	-30	-1002	120	-5153
1	875	2208	-39	-2069	234	-11770
4	-877	2194	39	2300	238	11770
4	-400	1170	13	697	99	4564
4	-860	2339	39	2299	238	11160
4	-400	1170	13	697	99	4564
4	-794	2039	43	2702	296	10550
4	-582	1493	-43	-2465	-294	7691
4	-580	1563	-43	-2475	-285	7496
4	-792	2114	43	2712	286	10340
4	-689	1875	33	1885	301	8839
4	-506	1356	-33	-1663	-299	6602
4	-870	2179	25	1562	146	11810
4	-400	1170	13	697	99	4564



PIER 12 EB EXISTING FOOTING LOAD SUMMARY

STRENGTH ENVELOPE						
NODE	FX (kip)	FY (kip)	FZ (kip)	MX (kip-ft)	MY (kip-ft)	MZ (kip-ft)
1	126	-2403	-74	-3993	19	-3768
1	-126	2417	74	4247	-19	4198
1	-19	3590	-105	-6089	23	894
1	19	-3576	105	5729	-23	-831
1	-10	3253	-109	-5487	84	744
1	60	-1305	-109	-6151	82	-2283
1	-62	1279	108	6625	-78	2530
1	-11	1948	-108	-6724	77	1697
1	-10	3253	-109	-5487	84	744
1	10	-3239	109	5116	-84	-708
1	-125	2641	105	5883	-23	4427
1	58	1629	18	673	7	-808
4	125	2686	-109	-6175	35	-4414
4	-47	2071	-14	-706	-6	693
4	18	3635	109	5970	-30	-883
4	-18	-3621	-109	-5596	30	819
4	10	2029	113	6592	26	-1657
4	-10	-2014	-113	-6207	-26	1622
4	7	1426	112	6712	22	-1434
4	65	1878	-112	-6810	-18	-2776
4	64	1914	-106	-5552	93	-2741
4	-64	-1900	106	5191	-93	2521
4	-47	2071	-14	-706	-6	693
4	125	2686	-109	-6175	35	-4414



FOR:	I-4 PD&E St. Johns River Veterans Memorial Bridge	JOB NO.:	59219
MADE BY:	CAM	CHECKED BY:	
DATE:	9/20/2013	DATE:	



COMBINED LOADS ENVELOPE

COLUMN	LOAD CASE	FX (kip)	FY (kip)	FZ (kip)	MX (kip-ft)	MY (kip-ft)	MZ (kip-ft)
1	1	-877	2194	39	2300	238	11770
1	2	-400	1170	13	697	99	4564
1	3	-860	2339	39	2299	238	11160
1	4	-400	1170	13	697	99	4564
1	5	-794	2039	43	2702	296	10550
1	6	-582	1493	-43	-2465	-294	7691
1	7	-580	1563	-43	-2475	-285	7496
1	8	-792	2114	43	2712	286	10340
1	9	-689	1875	33	1885	301	8839
1	10	-506	1356	-33	-1663	-299	6602
1	11	-870	2179	25	1562	146	11810
1	12	-400	1170	13	697	99	4564
2	1	126	-2403	-74	-3993	19	-3768
2	2	-126	2417	74	4247	-19	4198
2	3	-19	3590	-105	-6089	23	894
2	4	19	-3576	105	5729	-23	-831
2	5	-10	3253	-109	-5487	84	744
2	6	60	-1305	-109	-6151	82	-2283
2	7	-62	1279	108	6625	-78	2530
2	8	-11	1948	-108	-6724	77	1697
2	9	-10	3253	-109	-5487	84	744
2	10	10	-3239	109	5116	-84	-708
2	11	-125	2641	105	5883	-23	4427
2	12	58	1629	18	673	7	-808
3	1	125	2686	-109	-6175	35	-4414
3	2	-47	2071	-14	-706	-6	693
3	3	18	3635	109	5970	-30	-883
3	4	-18	-3621	-109	-5596	30	819
3	5	10	2029	113	6592	26	-1657
3	6	-10	-2014	-113	-6207	-26	1622
3	7	7	1426	112	6712	22	-1434
3	8	65	1878	-112	-6810	-18	-2776
3	9	64	1914	-106	-5552	93	-2741
3	10	-64	-1900	106	5191	-93	2521
3	11	-47	2071	-14	-706	-6	693
3	12	125	2686	-109	-6175	35	-4414

Max **-626** **9564** **47** **10862** **478** **16930** ←-Max Controls
Min **-574** **-6027** **-264** **-10822** **-476** **-658**

FOR:	I-4 PD&E	JOB NO.:	59219
	St. Johns River Veterans Memorial Bridge	SHEET NO.:	
MADE BY:	CAM	CHECKED BY:	
DATE:	9/20/2013	DATE:	



Footing Self-Weight (kips)

30.9375

L =	87.5	ft
B =	22	ft
H =	6	ft
n =	14	
m =	4	
a1 =	6	ft
a2 =	6.5	ft
b =	6	ft

Footing length
 Footing width
 Footing height
 Number of pile columns
 Number of pile rows
 Column spacing
 Column spacing
 Row spacing

Notes:

1. This analysis assumes a rigid footing
2. Loads are based on summation of enveloped column reactions
3. Assumed straddle pier strut similarly sized to existing strut may not work for vessel collision. Separate vessel collision analysis needs to be carried out.
4. Pile reactions include self-weight of footing and strut between existing and proposed column

$\Sigma(x)^2 = 133,390 \text{ ft}^2$
 $\Sigma(y)^2 = 2,520 \text{ ft}^2$

Pile X-Coordinates (ft)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	41.75	35.75	29.25	22.75	16.25	9.75	3.25	-3.25	-9.75	-16.25	-22.75	-29.25	-35.75	-41.75
2	41.75	35.75	29.25	22.75	16.25	9.75	3.25	-3.25	-9.75	-16.25	-22.75	-29.25	-35.75	-41.75
3	41.75	35.75	29.25	22.75	16.25	9.75	3.25	-3.25	-9.75	-16.25	-22.75	-29.25	-35.75	-41.75
4	41.75	35.75	29.25	22.75	16.25	9.75	3.25	-3.25	-9.75	-16.25	-22.75	-29.25	-35.75	-41.75

Pile Y-Coordinates (ft)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Pile Reactions (kip)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	169	168	167	166	166	165	164	163	162	162	161	160	159	159
2	195	194	193	192	192	191	190	189	189	188	187	186	185	185
3	221	220	219	218	218	217	216	215	215	214	213	212	212	211
4	247	246	245	245	244	243	242	241	241	240	239	238	238	237

Max Pile Reaction	247 kip
Min Pile Reaction	159 kip

FOR: 1-4 PDiE	JOB NO: 59219	SHEET NO: 1
MADE BY: CAM	CHECKED BY:	BACKCHECKED BY:
DATE: 11/7/13	DATE:	DATE:

VESSEL COLLISION ON PIERS

- ORIGINAL DESIGN INCLUDES EQUIVALENT STATIC FORCE APPLIED AT NEAR HIGH WATER LEVEL

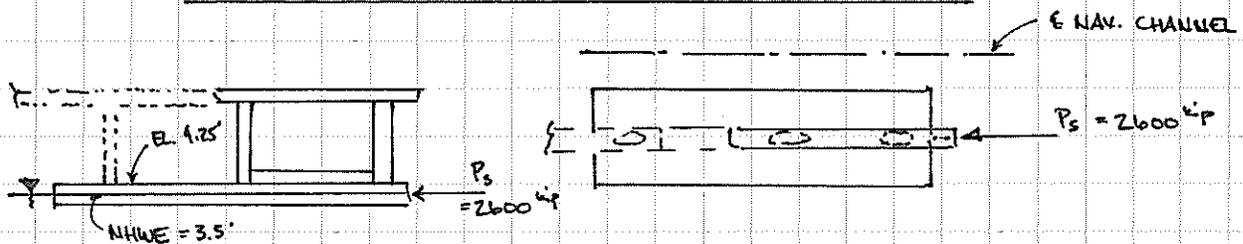
- "TRANSVERSE" = 2600 kip
 - "LONGITUDINAL" = 1300 kip
- BASED ON LRFD 3.14.14, "TRANSVERSE" MUST REFER TO ALONG/PARALLEL TO NAVIGATION CHANNEL
 "LONGITUDINAL" MUST REFER TO NORMAL TO NAVIGATION CHANNEL. ONLY APPLY 1 DIRECTION AT A TIME

- PER AASHTO LRFD 3.14.8, EQUIVALENT STATIC FORCE IS COMPUTED BY:

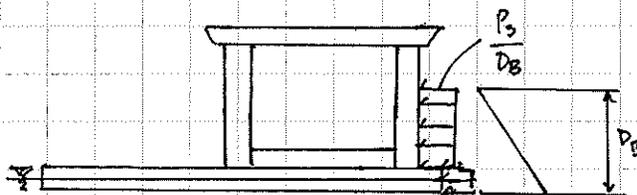
$$P_s = 8.15\sqrt{DWT}$$

- ORIGINAL DESIGN CASES: ("SHIP IMPACT")

- CASE 1A: "TRANSVERSE" FOR OVERALL STABILITY



- CASE 1B: "TRANSVERSE" FOR LOCAL COMPONENTS

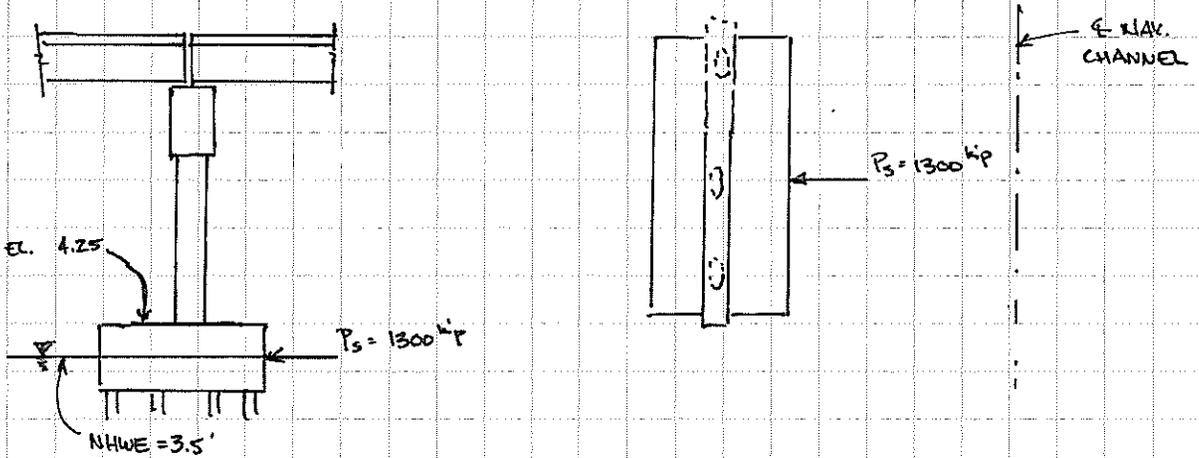


NO INFORMATION IS GIVEN IN PLANS ON BOW DEPTH USED FOR THIS LOAD.
 IT IS ASSUMED ONLY CASE FOR OVERALL STABILITY IS INCLUDED IN ORIGINAL DESIGN

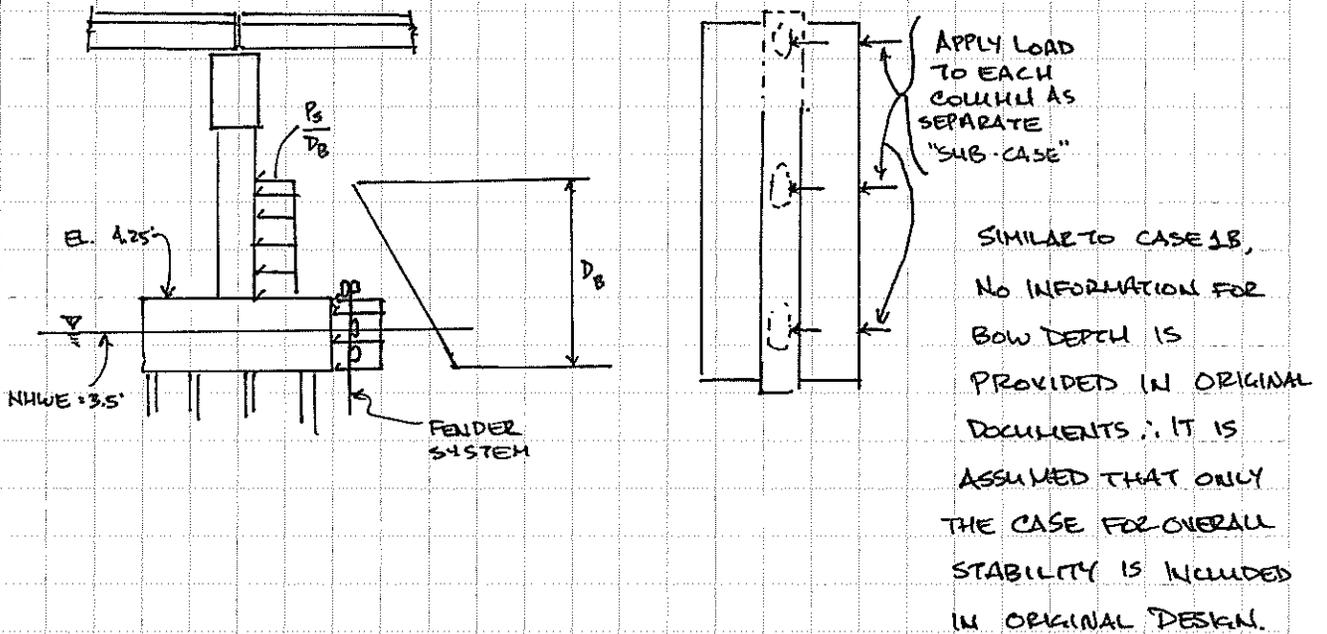
FOR: 1-4 PD IE	JOB NO: 59219	SHEET NO: 2
MADE BY: CAM	CHECKED BY:	BACKCHECKED BY:
DATE: 11/7/13	DATE:	DATE:

ORIGINAL DESIGN CASES: (CONT'D)

CASE 2A: "LONGITUDINAL" FOR OVERALL STABILITY



CASE 2B: "LONGITUDINAL" FOR LOCAL COMPONENTS



FOR: 1-4 TD;E	JOB NO: 59219	SHEET NO: 3
MADE BY: CAM	CHECKED BY:	BACKCHECKED BY:
DATE: 11/7/13	DATE:	DATE:

APPLICATION OF VESSEL COLLISION FORCES TO PROPOSED PIERS

ALTERNATIVE 1: WIDENING

- THIS OPTION ONLY REQUIRES CHANGES ABOVE POINTS OF SHIP IMPACT. ∴ NO NEED FOR FURTHER ANALYSIS FOR THIS CONDITION IS REQUIRED. IN FACT, ADDITIONAL GRAVITY LOADS WILL TEND TO PROVIDE INCREASED STABILITY TO THE SYSTEM THEREBY MITIGATING ANTICIPATED UNDESIRABLE EFFECTS FROM VESSEL COLLISION.

ALTERNATIVE 2: REVERSIBLE LANES ON STRADDLE PIER

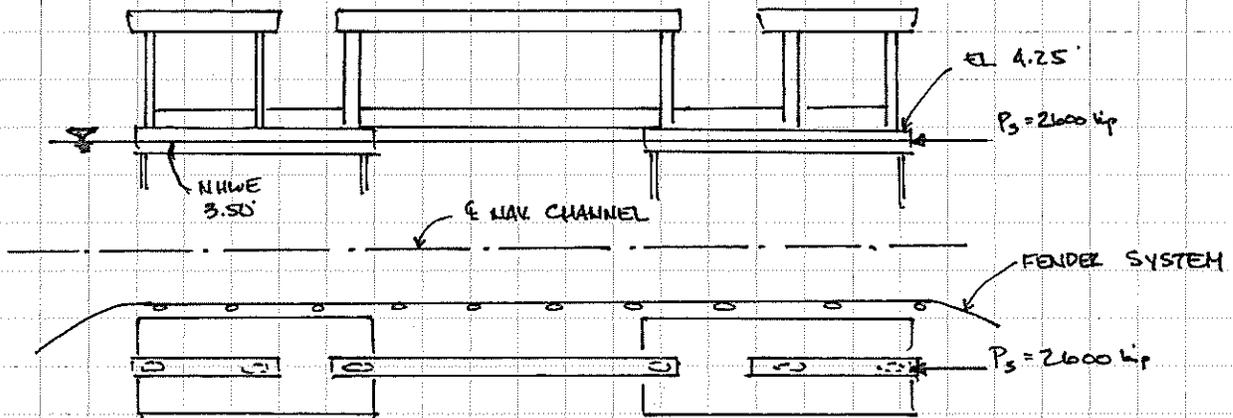
- SINCE THE STRADDLE PIER WILL CHANGE THE WAY THE PREVIOUSLY SEPARATED PIERS BEHAVE BY FORMING A PORTAL FRAME CONNECTING THE FOOTINGS, VESSEL COLLISION NEEDS TO BE INVESTIGATED.
- POTENTIAL FAILURE MODES TO BE INVESTIGATED:
 - SHEAR INTERFACE FAILURE BETWEEN PROPOSED COLUMN & FOOTING
 - FLEXURAL & SHEAR CAPACITY OF STRUT SPANNING BETWEEN EB & WB FOOTINGS
 - OVERALL SYSTEM STABILITY
 - LATERAL PILE LOADING
- FOR MORE COMPLETE ANALYSIS, A SHIP BOW DEPTH SHOULD BE ESTABLISHED. BASED ON GIVEN STATIC FORCE & EQUATION 8.3.14.8-1, & FIGURE 3.9-1 FROM "AASHTO GUIDE SPECIFICATIONS, ^{COMMENTARY} FOR VESSEL COLLISION DESIGN OF HIGHWAY BRIDGES", A 3,000 DWT SHIP TRAVELING AT 5.841/s WILL PRODUCE AN EQUIVALENT STATIC FORCE OF 2600 kip. A 3,000 DWT SHIP HAS A BOW DEPTH OF 39.0 ft. (TABLE 3.5.2-3 OF "VESSEL COLLISION GUIDE SPECIFICATION").

FOR: 1-4 PDIE	JOB NO: 59219	SHEET NO: 4.
MADE BY: CAM	CHECKED BY:	BACKCHECKED BY:
DATE: 11/7/13	DATE:	DATE:

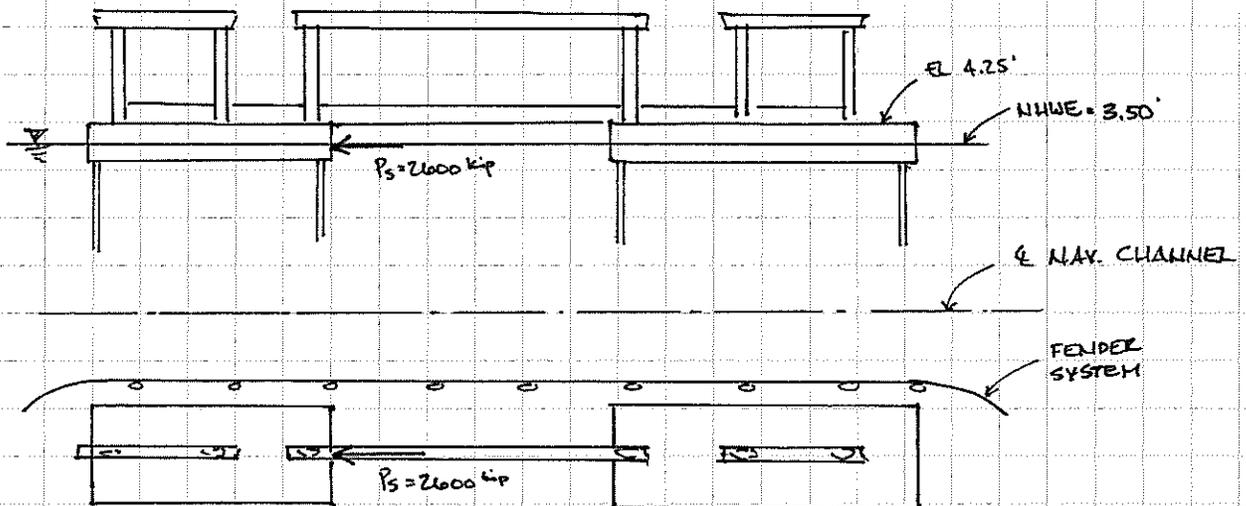
ALTERNATIVE 2: REVERSIBLE LANES ON STRADDLE PIER (CONT'D)

• CASE 1A: "TRANSVERSE" FOR OVERALL STABILITY

- LOAD APPLIED TO EXISTING-PIER-COLUMN-SIDE OF FOOTING

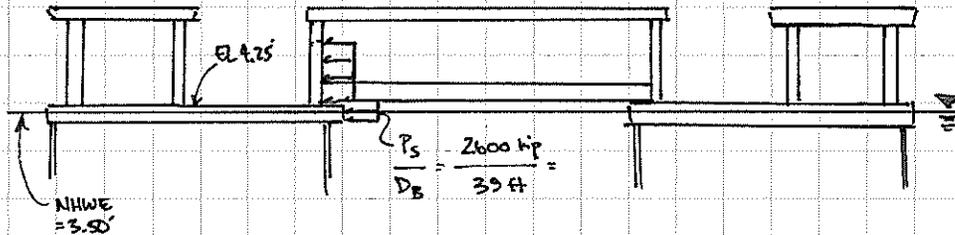


- LOAD APPLIED TO PROPOSED-COLUMN-SIDE OF FOOTING (BASED ON VESSEL APPROACH OUTSIDE OF NAVIGATION CHANNEL)

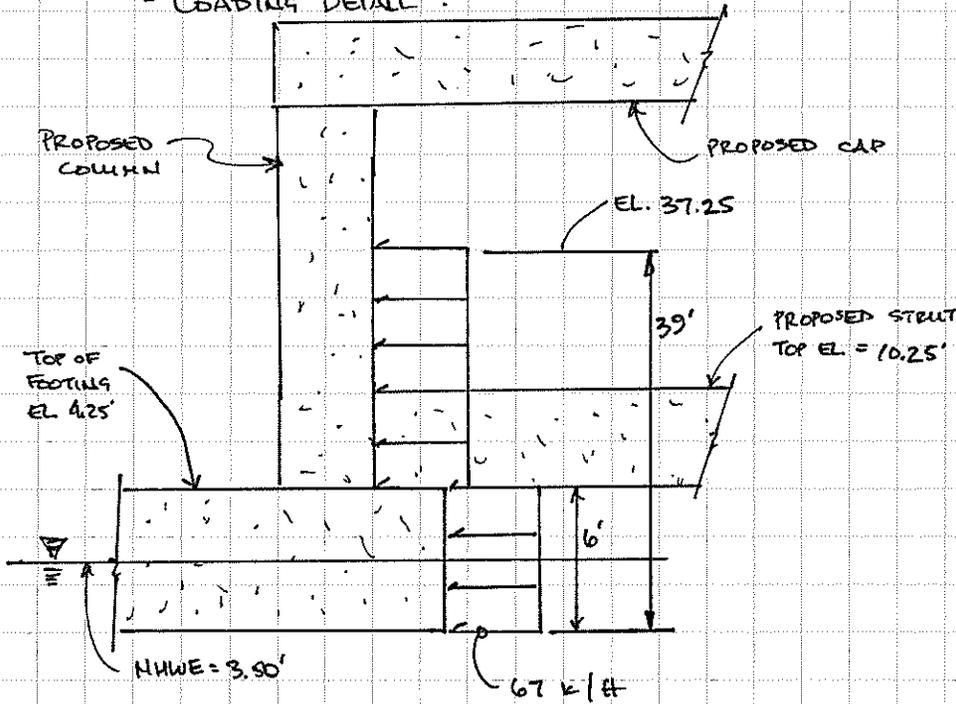


FOR: 1-4 PD iE	JOB NO: 59219	SHEET NO: 5
MADE BY: CAM	CHECKED BY:	BACKCHECKED BY: #
DATE: 11/7/13	DATE:	DATE:

CASE 1B: "TRANSVERSE" FOR LOCAL COMPONENTS
 ONLY APPLY THIS LOAD TO PROPOSED
~~EXISTING COLUMNS HAVE ALREADY~~ PIER COLUMNS

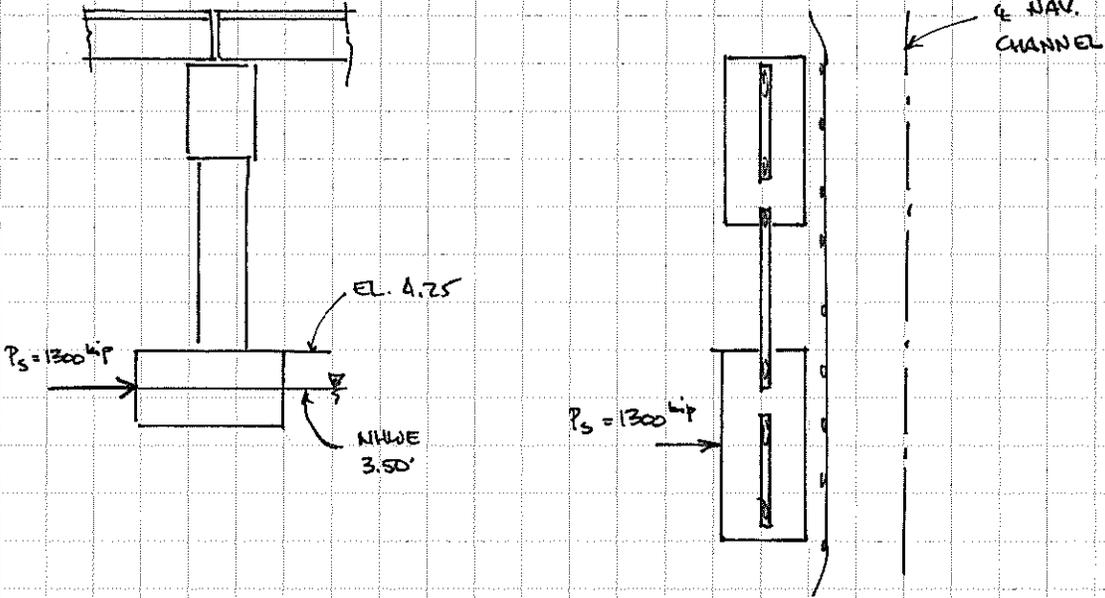


- LOADING DETAIL:

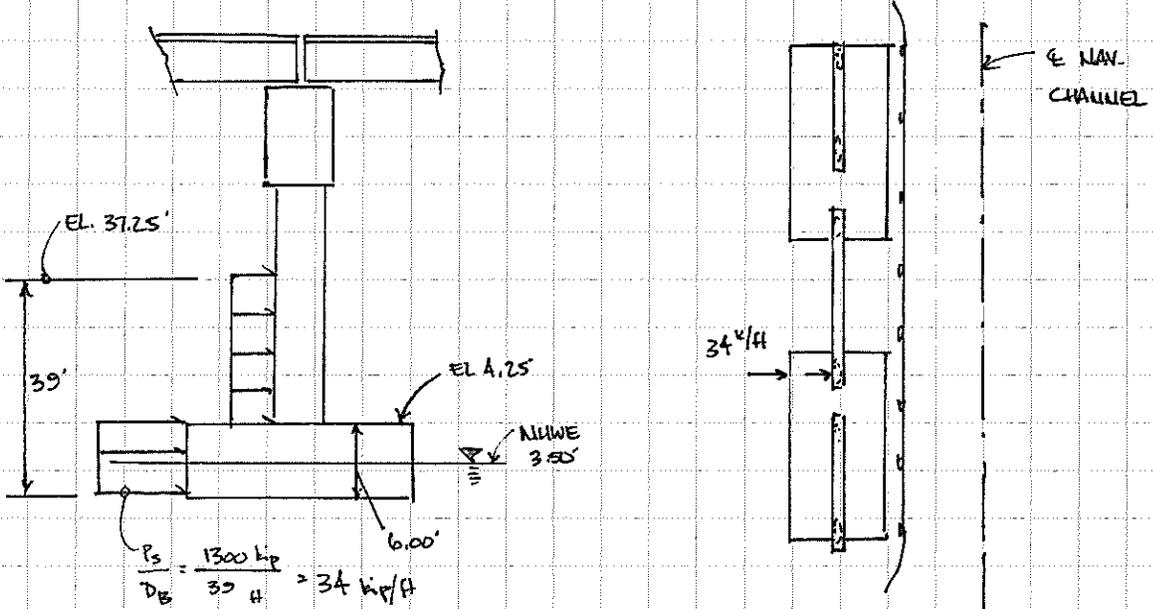


FOR: 1-4 PD iE	JOB NO: 59219	SHEET NO: 6
MADE BY: CAH	CHECKED BY:	BACKCHECKED BY:
DATE: 11/7/13	DATE:	DATE:

CASE 2A: "LONGITUDINAL" FOR OVERALL STABILITY



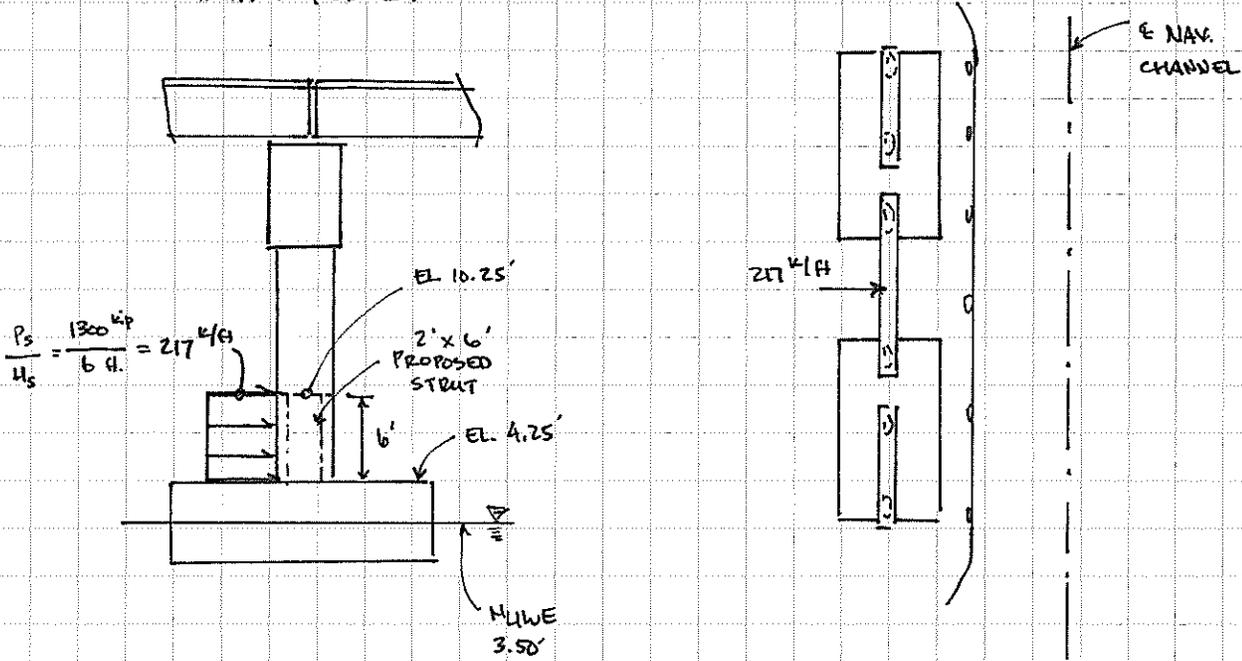
CASE 2B: "LONGITUDINAL" FOR LOCAL COMPONENTS
 - APPLY TO ~~EXISTING~~ PROPOSED COLUMNS



FOR: 1-4 PDSE	JOB NO: 59219	SHEET NO: 7
MADE BY: CAM	CHECKED BY:	BACKCHECKED BY:
DATE: 11/7/13	DATE:	DATE:

CASE 2B: "LONGITUDINAL" FOR LOCAL COMPONENTS (CONT'D)

- APPLY TO PROPOSED STRUT (ASSUME STRUT TAKES ALL OF IMPACT FORCE)



SUMMARY INDEX OF VESSEL COLLISION CASES

- | | | |
|------|---|---|
| CV 1 | - | CASE 1A - APPLIED TO EXISTING COLUMN - FACE OF FOOTING |
| CV 2 | - | CASE 1A - APPLIED TO PROPOSED COLUMN - FACE OF FOOTING |
| CV 3 | - | CASE 1B - "TRANSVERSE" APPLIED TO PROPOSED COLUMN |
| CV 4 | - | CASE 2A - "LONGITUDINAL" APPLIED TO FOOTING |
| CV 5 | - | CASE 2B - "LONGITUDINAL" APPLIED TO PROPOSED STRUT COLUMN |
| CV 6 | - | CASE 2B - "LONGITUDINAL" APPLIED TO PROPOSED STRUT |

APPENDIX C-5

QUANTITIES AND COST ESTIMATE

BRIDGE QUANTITY COMPUTATIONS

I-4 OVER ST. JOHNS RIVER

Bridge NoS.

Financial Project Number:
Seminole/Volusia Counties, Florida

Prepared for:
FDOT DISTRICT 5

Engineer of Record:

HNTB

HNTB Corporation

610 Crescent Executive Court, Suite 400
Lake Mary, Florida 32746
(407) 805-0355 (Phone)
(407) 805-0227 (Fax)



SUMMARY OF QUANTITY CALCULATIONS

Made by: <i>CAM</i>	Date: <i>11-07-13</i>
Checked by:	Date:
Backchecked by:	Date:
Item No.	Page No. <i>i</i>

JOB NAME *I-4 PD&E* JOB NO. *HNTB 59219*
 BRIDGE NO. _____ ITEM NAME *Table of Contents*

ESTIMATED QUANTITIES		
0		
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SUMMARY OF QUANTITY CALCULATIONS

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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Summary of Bridge Pay Items

ESTIMATED QUANTITIES
0

ITEM No.	ITEM DESCRIPTION	UNITS	TOTAL
400-2-4	Concrete Class II (Superstructure)	CY	5,312.7
400-2-10	Concrete Class II (Approach Slabs)	CY	199.0
400-4-5	Concrete Class IV (Substructure)	CY	340.3
400-4-25	Concrete Class IV (Mass-Substructure)	CY	3,899.1
400-9	Bridge Deck Grooving and Planning (Deck Thickness >= 8.5")	SY	21,442
400-147	Composite Neoprene Pads	CF	119.6
415-1-4	Reinforcing Steel (Superstructure)	LB	1,089,109
415-1-5	Reinforcing Steel (Substructure)	LB	707,415
415-1-9	Reinforcing Steel (Approach Slabs)	LB	40,795
455-34-5	Prestressed Concrete Piling (24" Sq.)	LF	15,200
455-143-5	Test Piles - Prestressed Concrete (24" Sq.)	LF	880
458-1-11	Bridge Deck Expansion Joint (New Construction F&I) (Poured Joint with Backer Rod)	LF	1,556
466-2-13	Post Tensioning Tendons (Substructure)	LB	23,372
521-5-4	Concrete Traffic Railing Barrier - Bridge (32" Vertical-shape)	LF	5,253

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QUANTITY CALCULATIONS

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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Plan and Elevation Sheet

DRAWING PROVIDED FOR REFERENCE ONLY -- NOT FOR CONSTRUCTION



**QUANTITY
CALCULATIONS**

Made by:	CAM	Date:	11-07-13
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Item No.	400-2-4	Page No.	2A

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Concrete Class II (Superstructure)

LOCATION	CY
<i>Superstructure</i>	
<i>Entire Bridge</i>	<i>5312.7</i>
<i>Total</i>	<i>5,312.7</i>

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Concrete Class II (Superstructure)

LOCATION Deck, Build-up & Sidewalk

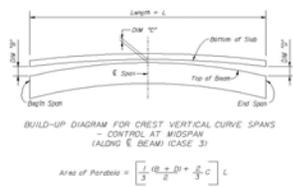
**TOTAL BRIDGE
DECK**

Span Length = 2566.25 ft
Skew = 0.00 degrees
Deck Width = 74.08 ft
Slab Area = 190107.80 ft²
Slab Thickness = 8.50 in
Deck Vol = 134659.7 ft³

CF	CY
134,659.7	4987.4

BUILD-UP FOR CREST VERTICAL CURVE SPANS (CASE 3)

Beam	L (ft)	B (in)	C (in)	D (in)	Area (ft ²)	Width of Build-Up(ft)	Volume ft ³
1-1	2566.25	2.00	1.00	2.00	284.93	4.00	1139.70
1-2	2566.25	2.00	1.00	2.00	285.07	4.00	1140.27
1-3	2566.25	2.00	1.00	2.00	285.07	4.00	1140.27
1-4	2566.25	2.00	1.00	2.00	284.93	4.00	1139.70
1-5	2566.25	2.00	1.00	2.00	284.93	4.00	1139.70
1-6	2566.25	2.00	1.00	2.00	284.93	4.00	1139.70
Total Volume =							6839.3



CF	CY
6,839.3	253.3

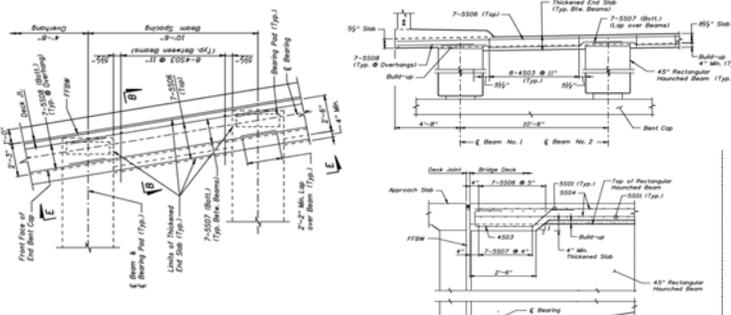
BUILD-UP BETWEEN BEAMS (Thickened End Slab)

Build Up = 4.00 in
Beam Width = 4.00 ft
Beam Spacing = 13.11 ft
Haunch (Dim "B") = 2.00 in
Length of Thickened End Slab = 2.90 ft
Number of Bays = 5

Beam 1-1
Beam 1-2
Beam 1-3
Beam 1-4
Beam 1-5
Beam 1-6

Bay 1 Area = 0.89 ft² Volume = 8.10 ft³
Bay 2 Area = 0.89 ft² Volume = 8.10 ft³
Bay 3 Area = 0.89 ft² Volume = 8.10 ft³
Bay 4 Area = 0.89 ft² Volume = 8.10 ft³
Bay 5 Area = 0.89 ft² Volume = 8.10 ft³

CF	CY
1944.4	72.0



SIDEWALK VOLUME

Span Length = 0.00 ft
Side Walk Width = 0 ft
Cross Sectional Area = 0 ft²
Total Volume = 0 ft³

CF	CY
0.0	0.0

TOTAL = 143,443.5 5,312.7



The HNTB Companies

SUMMARY OF QUANTITY CALCULATIONS

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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Reinforcing Steel (Superstructure)

MEMBER	LBS
<i>Superstructure</i>	
<i>Based on FDOT SDG BDR Table 9.2.3</i>	
<i>Bridge</i>	<i>1,089,109</i>
<i>Total</i>	<i>1,089,109</i>
<i>Total</i>	<i>1,089,109</i>

 <i>The HNTB Companies</i>	QUANTITY CALCULATIONS	Made by: <i>CAM</i>	Date: <i>11-07-13</i>
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JOB NAME *I-4 PD&E*

JOB NO. *HNTB 59219*

BRIDGE NO. *0*

ITEM NAME *Concrete Class II (Approach Slabs)*

LOCATION	CY
<i>Concr. Class II (Approach Slabs)</i>	
<i>Approach Slab No.1</i>	<i>99.5</i>
<i>Approach Slab No. 2</i>	<i>99.5</i>
<i>Total</i>	<i>199.0</i>
<i>Total</i>	<i>199.0</i>

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**QUANTITY
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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Concrete Class II (Approach Slabs)

		CY
Skew = <input type="text" value="15.656"/> deg		
Approach Slab No.1		
No. of Locations = <input type="text" value="1"/>		
Length 1 (ft)= <input type="text" value="30.00"/> Length for Approach Slabs beyond the backwall of end bent		
Length 2 (ft)= <input type="text" value="2.00"/> Length for Approach Slabs on backwall of end bent		
Width (ft)= <input type="text" value="74.08"/> Width of widening for Approach Slabs		
Thickness 1 (ft)= <input type="text" value="1.00"/> Thickness of approach slab beyond end bent backwall		
Thickness 2 (ft)= <input type="text" value="1.146"/> Thickness of approach slab on end bent backwall		
volume = width * (length 1 * thickness 1 + length 2 /cos(Skew)* thickness 2) * number of locations		
SIDEWALK VOLUME		
	Span Length = 32.00 ft	Sidewalks are located at end limits of deck
	Side Walk Width = 7.08 ft	(See Detail)
(Microstation)	ss Sectional Area = 4.5 ft ²	
	Total Volume= 288 ft ³	
Volume =	<input type="text" value="2686.71"/> CF	
Volume =	<input type="text" value="99.5"/> CY	
	Approach Slab No.1	99.5
Approach Slab No. 2		
No. of Locations = <input type="text" value="1"/>		
Length 1 (ft)= <input type="text" value="30.00"/> Length for Approach Slabs beyond the backwall of end bent		
Length 2 (ft)= <input type="text" value="2.00"/> Length for Approach Slabs on backwall of end bent		
Width (ft)= <input type="text" value="74.08"/> Width of widening for Approach Slabs		
Thickness 1 (ft)= <input type="text" value="1.00"/> Thickness of approach slab beyond end bent backwall		
Thickness 2 (ft)= <input type="text" value="1.146"/> Thickness of approach slab on end bent backwall		
volume = width * (length 1 * thickness 1 + length 2 /cos(Skew)* thickness 2) * number of locations		
SIDEWALK VOLUME		
	Span Length = 32.00 ft	Sidewalks are located at end limits of deck
	Side Walk Width = 7.08 ft	(See Detail)
(Microstation)	ss Sectional Area = 4.5 ft ²	
	Total Volume= 288 ft ³	
Volume =	<input type="text" value="2686.71"/> CF	
Volume =	<input type="text" value="99.5"/> CY	
	Approach Slab No. 2	99.5
TOTAL =		199.0



The HNTB Companies

SUMMARY OF QUANTITY CALCULATIONS

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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Reinforcing Steel (Approach Slab)

MEMBER	LBS
<u>Reinforcing Steel (Approach Slab)</u>	
<u>Based on FDOT SDG BDR Table 9.2.3</u>	
Approach Slab 1	20398
Approach Slab 2	20398
Total	40795
<i>Total</i>	40,795

PAY ITEM NO. 400-45
 PAY ITEM NO. 415-15

COMPONENT NAME	NO. OF ELEMENTS	Class IV Concrete (Substructure)			Reinforcing Steel (Substructure)		
		PAY ITEM DESCRIPTION	DESIGN ORIGINAL VOLUME (CY)	CONSTRUCTION FINAL VOLUME (CY)	PAY ITEM DESCRIPTION	DESIGN ORIGINAL WEIGHT (LB)	CONSTRUCTION FINAL WEIGHT (LB)
End Bent No.1	1		45.1		6,089		
Pier No. 2	1		0.4		46,867		
Pier No. 3	1		0.4		46,867		
Pier No. 4	1		0.4		46,867		
Pier No. 5	1		0.4		46,867		
Pier No. 6	1		27.1		27,224		
Pier No. 7	1		27.1		27,224		
Pier No. 8	1		27.1		27,224		
Pier No. 9	1		27.1		27,224		
Pier No. 10	1		27.1		27,224		
Pier No. 11	1		27.1		27,224		
Pier No. 12	1		27.1		27,224		
Pier No. 13	1		27.1		27,224		
Pier No. 14	1		27.1		27,224		
Pier No. 15	1		0.4		46,867		
Pier No. 16	1		0.4		46,867		
Pier No. 17	1		0.4		46,867		
Pier No. 18	1		0.4		46,867		
Pier No. 19	1		0.4		46,867		
Pier No. 20	1		0.4		46,867		
End Bent No.21	1		45.1		6,089		
		340.3	<PAGE TOTAL> <PROJECT GRAND TOTAL>		707,415	<PAGE TOTAL> <PROJECT GRAND TOTAL>	

If the above item is under the Plan Quantity Concept, then the block below must be appropriately filled out
 Plan Quantity Concept Signature Block
 Design Engineer's Responsibility for Calculations: _____ Signature: _____ Print name: _____
 Plan Quantity Item:

NOTES FOR EXPLANATION OF OVER/UNDER RUN
 CONCRETE: _____
 STEEL: _____

EXTRA NOTES / REMARK: _____



The HNTB Companies

**SUMMARY OF QUANTITY
CALCULATIONS**

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JOB NAME I-4 PD&E JOB NO. HNTB 59219

BRIDGE NO. 0.00 ITEM NAME Concrete Class IV (Substructure)

LOCATION	CY
<i>Substructure</i>	
<i>(Does not include Mass Concrete. See Sheets 5-5A for Mass Concrete Quantities)</i>	
<i>End Bent No.1</i>	<i>45.1</i>
<i>Note: Old piles still in place at Piers 2 & 3</i>	<i>Pier No. 2 0.4</i>
<i>Note: Old piles still in place at Piers 2 & 3</i>	<i>Pier No. 3 0.4</i>
	<i>Pier No. 4 0.4</i>
	<i>Pier No. 5 0.4</i>
	<i>Pier No. 6 27.1</i>
	<i>Pier No. 7 27.1</i>
	<i>Pier No. 8 27.1</i>
	<i>Pier No. 9 27.1</i>
	<i>Pier No. 10 27.1</i>
	<i>Pier No. 11 27.1</i>
	<i>Pier No. 12 28.1</i>
	<i>Pier No. 13 28.1</i>
	<i>Pier No. 14 27.1</i>
	<i>Pier No. 15 0.4</i>
	<i>Pier No. 16 0.4</i>
	<i>Pier No. 17 0.4</i>
	<i>Pier No. 18 0.4</i>
	<i>Pier No. 19 0.4</i>
	<i>Pier No. 20 0.4</i>
	<i>End Bent No.21 45.1</i>
	<i>Total = 340.3</i>
<i>Total</i>	340.3



**QUANTITY
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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Concrete Class IV (Substructure)

LOCATION End Bent No.1

	CF	CY
END BENT NO.1		
<u>End Bent Cap</u>		
Cap Width = 4.000 ft		
Cap Depth = 3.000 ft		
Cap Length = 61.083 ft		
Cap Volume = Width * Depth * [Cap Length] = 733.000 ft ³		
No. of Piles in Bent = 5		
Square Pile Size = 24 in		
Embed = 12 in		
Deduct Volume = No. Piles * [Size^2] * Embed = -20.000 ft ³		
End Bent Cap	713.00	26.4
Check Cap for Mass Concrete:		
Minimum Dimension = 3.00 ft		
Surface Area = 879.17 ft ²		
Surface Area = 2 * (width * depth + depth * cap length + width * cap length)		
Volume = 713.00 ft ³		
V/A Ratio = 0.81 ft		
Mass Concrete? No		
<u>End Bent Backwall</u>		
T _{Backwall} = 1.000 ft		
L _{Backwall} = 61.083 ft		
T _{BkwallCoping} (Thickness Btwn Coping & Gutter) = 0.000 ft		
L _{BkwallCoping} (Length Btwn Coping & Gutter) = 0.000 ft		
Angle = 90 deg		
Area = 61.083 ft ²		
Area = T _{Backwall} * L _{Backwall} + T _{BkwallCoping} * L _{BkwallCoping} + 1/2 * T _{Backwall} ² * tan(angle-90°)		
<u>Backwall Height</u>		
Elev at Top of Wall (Pt. 1)		
Elev at Top of Wall (Pt. 2)		
Elev at Top of Wall (Pt. 3)		
Elev at Top of Cap (Pt. 1)		
Elev at Top of Cap (Pt. 2)		
Elev at Top of Cap (Pt. 3)		
Backwall Height (Avg.) = 8.000 ft		
Backwall Volume = Area * average height of backwall = 488.666 ft ³		
End Bent Backwall	488.67	18.1

End Bent Pedestals

Pedestal @ Beam	Avg. Top of Ped. EL.	Cap EL.	PED (ft)
1-1	-	-	
1-2	-	-	
1-3	-	-	
1-4	-	-	
1-5	-	-	
TOTAL			0.000

W= 3.000 Pedestal width (ft)
 L= 2.750 Pedestal length (ft)
 H= 1.875 Total Pedestal Height (ft)

W x L x H = 15.47 ft³

End Bent Pedestals

15.47

0.6

Cheekwall

Cap Width = 0.000 ft
 Cap Depth = 0.000 ft
 L1 (Average cheekwall Length) = 6.184 ft
 L2 (Length from Back face of Backwall to Front of cap) = 0.000 ft

Vol. = 0.000 ft³

Vol. = [Width*(L1-L2) + T_{wingwall}*L2 + 1/2*L2² tan(Angle -90°)]*Depth

No. of Piles in Bent = 0

Deduct Volume = No. Piles * [Size^2] * Embed = 0.000 ft³

0.00

0.0

T_{Cheekwall} = 0.000 ft
 L_{Cheekwall} = 0.000 ft

	Elev at Top of Wall (Pt. 1)	Elev at Top of Wall (Pt. 2)	Elev at Bot of Cap (Pt. 1)	Elev at Top of Cap (Pt. 2)	Backwall Height (Avg.)
South	0.000	0.000	0.000	0.000	0.000 ft
North	0.000	0.000	0.000	0.000	0.000 ft

Backwall Height (Avg.) = 0.000 ft

Cheekwall Volume = T_{Cheekwall} * L_{Cheekwall} * average height of backwall = 0.000 ft³

2 Cheek walls

0.00

0.0

Total =

1217.13

45.1



**CONCRETE QUANTITY
CALCULATIONS**

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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Concrete Class IV (Substructure)

LOCATION Pier No. 2

					CF	CY
PIER NO. 12 & 13						
Pier Pedestals						
	Location	Pedestal	AVG EL.	CAP EL	PED (ft)	
	Pier 12	1	-	-	0.375	
	Pier 12	2	-	-	0.375	
	Pier 12	3	-	-	0.375	
	Pier 12	4	-	-	0.375	
	Pier 12	5	-	-	0.375	
		TOTAL			1.875	
	W =	2.750	Pedestal width (ft)			
	L =	2.250	Pedestal length (ft)			
	H =	1.875	Total Pedestal Height (ft)			
Pier Cap					<i>Pedestals</i>	11.60
	W =	4.5	ft			
	L =	98.6507	ft			
	Depth 1 =	6	ft			
	Volume 1 =	2663.57	ft ³			
	Total =	2663.57	ft ³			
					<i>Cap</i>	2663.57
Cheek Walls						98.7
	No. of walls =	0				
	Angle =	0.000	deg			
	Thickness =	0	in			
	L =	0.000	ft			
	Elev at Top of wall (Pt. 1)	0.000	Elev at Top of wall (Pt. 2)	0.000	Elev at Top of Flange (Pt. 1)	0.000
					Elev at Top of Flange (Pt. 2)	0.000
					Wall Height (Avg.)	0.000
						ft
					<i>Cheekwall</i>	0.00
Column						0.0
	Number of Columns =	2	per pier			
	Length of Column =	6	Length, (ft)			
	Width of Column =	4	Width, (ft)			
	Top Elevation =	41.125	ft			
	Bottom Elevation =	4.25	ft			
	Length Column =	36.875	Height, (ft)			
	Initial Total =	1770	ft ³			
	Volume = Number of Columns * Width of Column* Length column* Height of Column					
	* Note: Chamfer edges on column					
	<i>Deductions</i>					
	Chamfer =	73.75	ft ³			
	New Total =	1696.25	ft ³			
					<i>Column</i>	1696.25
Strut						62.8
	Strut 1 L =	31.0833	ft			
	Strut 1 W =	2	ft			
	Strut 1 H =	6	ft			
	Strut 1 Volume =	372.9996	ft ³ (per strut)			
					<i>Strut 1</i>	746.00
	Strut 2 L =	86.6507	ft			
	Strut 2 W =	2	ft			
	Strut 2 H =	6	ft			
	Strut 2 Volume =	1039.8084	ft ³			
					<i>Strut 2</i>	1039.81
	Total =	1785.8076	ft ³			
						38.5

Footing (Footing already existing)

Number of Footings= 0 per pier
 Lftg= 0 Length, (ft)
 Wftg= 0 Width, (ft)
 Dftg= 0 Depth, (ft)
 Npile= 0 Number of Piles in Footing
 Pile Size= 0 Pile Size (Square), (ft.)
 Embed= 0 Pile Embedment, (ft.)
 Total = 0 ft³

Volume = ((Lftg * Wftg * Dftg) - [Npiles * Pile Size * Pile Size * Embed]) * number of footing

Footing 0.00 0.0

Check for Mass Concrete

Segment	Min Dimension (FT)	Surface Area (SF)	V/A Ratio (FT)	Mass Concrete?
Cap	4.50	2125.66	1.25	YES
Column	4.00	651.10	1.30	YES
Strut 1	2.00	521.33	0.72	NO
Strut 2	2.00	394.60	2.64	YES
Footing	6.00	7964.00	1.45	YES

per column

Total = 6157.23 228.0



**CONCRETE QUANTITY
CALCULATIONS**

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JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Concrete Class IV (Substructure)

LOCATION Pier No. 2

					CF	CY	
Typical River Piers							
Pier Pedestals							
	Location	Pedestal	AVG EL.	CAP EL	PED (ft)		
	Pier	1	-	-	0.375		
	Pier	2	-	-	0.375		
	Pier	3	-	-	0.375		
	Pier	4	-	-	0.375		
	Pier	5	-	-	0.375		
		TOTAL			1.875		
Pier Cap	W =	2.750	Pedestal width (ft)				
	L =	2.250	Pedestal length (ft)				
	H =	1.875	Total Pedestal Height (ft)				
					Pedestals	11.60	
						0.4	
	W =	4.5	ft				
	L =	94.583	ft				
	Depth 1 =	6	ft				
	Volume 1 =	2553.74	ft ³				
	Total =	2553.74	ft ³				
					Cap	2553.74	
						94.6	
Cheek Walls							
	No. of walls =	0					
	Angle =	0.000	deg				
	Thickness =	0	in				
	L =	0.000	ft				
	Elev at Top of wall (Pt. 1)	0.000		Elev at Top of wall (Pt. 2)	0.000		
	Elev at Top of Flange (Pt. 1)	0.000		Elev at Top of Flange (Pt. 2)	0.000		
	Wall Height (Avg.)	0.000	ft				
					Cheekwall	0.00	
						0.0	
Column							
	Number of Columns =	2	per pier				
	Length of Column =	6	Length, (ft)				
	Width of Column =	4	Width, (ft)				
	Top Elevation =	41.125	ft				
	Bottom Elevation =	4.25	ft				
	Length Column =	36.875	Height, (ft)				
	Initial Total =	1770	ft ³				
	Volume =	Number of Columns * Width of Column* Length column* Height of Column					
		* Note: Chamfer edges on column					
	Deductions						
	Chamfer =	73.75	ft ³				
	New Total =	1696.25	ft ³		Column	1696.25	
						62.8	
Strut							
	Strut 1 L =	30	ft				
	Strut 1 W =	2	ft				
	Strut 1 H =	6	ft				
	Strut 1 Volume =	360	ft ³ (per strut)	Strut 1	720.00	26.7	
	Strut 2 L =	82.583	ft				
	Strut 2 W =	2	ft				
	Strut 2 H =	6	ft				
	Strut 2 Volume =	990.996	ft ³	Strut 2	991.00	36.7	
	Total =	1710.996	ft ³				

Footing (Footing already existing)

Number of Footings= 0 per pier
 Lftg= 0 Length, (ft)
 Wftg= 0 Width, (ft)
 Dftg= 0 Depth, (ft)
 Npile= 0 Number of Piles in Footing
 Pile Size= 0 Pile Size (Square), (ft.)
 Embed= 0 Pile Embedment, (ft.)
 Total = 0 ft³

Volume = ((Lftg * Wftg * Dftg) - [Npiles * Pile Size * Pile Size * Embed]) * number of footing

Footing 0.00 0.0

Check for Mass Concrete

Segment	Min Dimension (FT)	Surface Area (SF)	V/A Ratio (FT)	Mass Concrete?
Cap	4.50	2040.24	1.25	YES
Column	4.00	651.10	1.30	YES
Strut 1	2.00	504.00	0.71	NO
Strut 2	2.00	378.33	2.62	YES
Footing	6.00	7964.00	1.45	YES

per column
per strut

Total = 5972.59 221.2



**CONCRETE QUANTITY
CALCULATIONS**

Made by:	CAM	Date:	11/7/2013
Checked by:	0	Date:	1/0/1900
Backchecked By:	0	Date:	1/0/1900
Item No.	400-4-5	Page No.	4C

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Concrete Class IV (Substructure)

LOCATION Pier No. 2

		CF	CY																																			
Typical Land Piers																																						
Pier Pedestals																																						
	<table border="1"> <thead> <tr> <th>Location</th> <th>Pedestal</th> <th>AVG EL.</th> <th>CAP EL</th> <th>PED (ft)</th> </tr> </thead> <tbody> <tr> <td>Pier 1</td> <td>1</td> <td>-</td> <td>-</td> <td>0.375</td> </tr> <tr> <td>Pier 2</td> <td>2</td> <td>-</td> <td>-</td> <td>0.375</td> </tr> <tr> <td>Pier 3</td> <td>3</td> <td>-</td> <td>-</td> <td>0.375</td> </tr> <tr> <td>Pier 4</td> <td>4</td> <td>-</td> <td>-</td> <td>0.375</td> </tr> <tr> <td>Pier 5</td> <td>5</td> <td>-</td> <td>-</td> <td>0.375</td> </tr> <tr> <td colspan="2"></td> <td>TOTAL</td> <td></td> <td>1.875</td> </tr> </tbody> </table>	Location	Pedestal	AVG EL.	CAP EL	PED (ft)	Pier 1	1	-	-	0.375	Pier 2	2	-	-	0.375	Pier 3	3	-	-	0.375	Pier 4	4	-	-	0.375	Pier 5	5	-	-	0.375			TOTAL		1.875		
Location	Pedestal	AVG EL.	CAP EL	PED (ft)																																		
Pier 1	1	-	-	0.375																																		
Pier 2	2	-	-	0.375																																		
Pier 3	3	-	-	0.375																																		
Pier 4	4	-	-	0.375																																		
Pier 5	5	-	-	0.375																																		
		TOTAL		1.875																																		
	<p>W = 2.750 Pedestal width (ft) L = 2.250 Pedestal length (ft) H = 1.875 Total Pedestal Height (ft)</p>																																					
Pier Cap	<p>W = 4.5 ft L = 41.41666667 ft (Based on existing pier caps) Depth = 6 ft Volume = 1118.25 ft³ Total = 1118.25 ft³</p>	Pedestals	11.60	0.4																																		
Cheek Walls	<p>No. of walls = 0 Angle = 0.000 deg Thickness = 0 in L = 0.000 ft</p> <table border="1"> <thead> <tr> <th>Elev at Top of wall (Pt. 1)</th> <th>Elev at Top of wall (Pt. 2)</th> <th>Elev at Top of Flange (Pt. 1)</th> <th>Elev at Top of Flange (Pt. 2)</th> <th>Wall Height (Avg.)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> </tr> </tbody> </table>	Elev at Top of wall (Pt. 1)	Elev at Top of wall (Pt. 2)	Elev at Top of Flange (Pt. 1)	Elev at Top of Flange (Pt. 2)	Wall Height (Avg.)	0.000	0.000	0.000	0.000	0.000	Cap	1118.25	41.4																								
Elev at Top of wall (Pt. 1)	Elev at Top of wall (Pt. 2)	Elev at Top of Flange (Pt. 1)	Elev at Top of Flange (Pt. 2)	Wall Height (Avg.)																																		
0.000	0.000	0.000	0.000	0.000																																		
Column	<p>Number of Columns = 2 per pier Length of Column = 6 Length, (ft) Width of Column = 4 Width, (ft) Top Elevation = 38.387 ft (assume max. land pier elevation, Bottom Elevation = 1 ft (assume min. land pier elevation, Length Column = 37.387 Height, (ft) Initial Total = 1794.576 ft³</p> <p>Volume = Number of Columns * Width of Column * Length column * Height of Column * Note: Chamfer edges on column</p> <p>Deductions</p> <p>Chamfer = 74.774 ft³ New Total = 1719.802 ft³</p>	Cheekwall	0.00	0.0																																		
Strut	<p>Struts not required on land piers</p> <p>Strut 1 L = 0 ft Strut 1 W = 0 ft Strut 1 H = 0 ft Strut 1 Volume = 0 ft³ (per strut)</p> <p>Strut 2 L = 0 ft Strut 2 W = 0 ft Strut 2 H = 0 ft Strut 2 Volume = 0 ft³</p> <p>Total = 0 ft³</p>	Strut 1	0.00	0.0																																		
		Strut 2	0.00	0.0																																		
		Column	1719.80	63.7																																		

Footing

Number of Footings= 2 per pier
 Lftg= 16 Length, (ft)
 Wftg= 16 Width, (ft)
 Dftg= 6 Depth, (ft)
 Npile= 9 Number of Piles in Footing
 Pile Size= 2 Pile Size (Square), (ft.)
 Embed= 1 Pile Embedment, (ft.)
 Total = 3036 ft³

Volume = ((Lftg * Wftg * Dftg) - [Npiles * Pile Size * Pile Size * Embed]) * number of footing

Footing 3036.00 112.4

Check for Mass Concrete

Segment	Min Dimension (FT)	Surface Area (SF)	V/A Ratio (FT)	Mass Concrete?
Cap	4.50	923.75	1.21	YES
Column	4.00	660.14	1.30	YES
Strut 1	0.00	0.00	#DIV/0!	#DIV/0!
Strut 2	0.00	0.00	#DIV/0!	#DIV/0!
Footing	6.00	896.00	3.39	YES

per column
per strut

Total = 5885.65 218.0



The HNTB Companies

SUMMARY OF QUANTITY
CALCULATIONS

Made by:	CAM	Date:	11-07-13
Checked by:	0	Date:	1-00-00
Backchecked By:	0	Date:	1-00-00
Item No.	415-1-5	Page No.	4E

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Reinforcing Steel (Substructure)

MEMBER	LBS
<i>End Bent No.1</i>	6,089
<i>Pier No. 2</i>	46,867
<i>Pier No. 3</i>	46,867
<i>Pier No. 4</i>	46,867
<i>Pier No. 5</i>	46,867
<i>Pier No. 6</i>	27,224
<i>Pier No. 7</i>	27,224
<i>Pier No. 8</i>	27,224
<i>Pier No. 9</i>	27,224
<i>Pier No. 10</i>	27,224
<i>Pier No. 11</i>	27,224
<i>Pier No. 12</i>	27,820
<i>Pier No. 13</i>	27,820
<i>Pier No. 14</i>	27,224
<i>Pier No. 15</i>	27,224
<i>Pier No. 16</i>	46,867
<i>Pier No. 17</i>	46,867
<i>Pier No. 18</i>	46,867
<i>Pier No. 19</i>	46,867
<i>Pier No. 20</i>	46,867
<i>End Bent No.21</i>	6,089
<i>Total</i>	707,415

STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION
CONCRETE AND REINFORCING STEEL COMPUTATIONS

Bridge No. 870196 (SB)

PAY ITEM NO. 400-425
 PAY ITEM NO.

COMPONENT NAME	NO. OF ELEMENTS	PAY ITEM DESCRIPTION		Class IV Concrete (Mass-Substructure)		PAY ITEM DESCRIPTION		CONSTRUCTION FINAL		CONSTRUCTION FINAL		REMARKS
		DESIGN ORIGINAL	VOLUME (CY)	DESIGN ORIGINAL	WEIGHT (LB)	REFERENCE/REMARKS	WEIGHT (LB)	CONSTRUCTION FINAL	WEIGHT (LB)	CONSTRUCTION FINAL	WEIGHT (LB)	
End Bent No.1	0.0											
Pier No. 2	217.6											
Pier No. 3	217.6											
Pier No. 4	217.6											
Pier No. 5	217.6											
Pier No. 6	194.1											
Pier No. 7	194.1											
Pier No. 8	194.1											
Pier No. 9	194.1											
Pier No. 10	194.1											
Pier No. 11	194.1											
Pier No. 12	194.1											
Pier No. 13	194.1											
Pier No. 14	194.1											
Pier No. 15	194.1											
Pier No. 16	217.6											
Pier No. 17	217.6											
Pier No. 18	217.6											
Pier No. 19	217.6											
Pier No. 20	217.6											
End Bent No.21	0.0											
	3.899.1	<PAGE TOTAL>	<PROJECT GRAND>	<TOTAL>						<PAGE TOTAL>	<PROJECT GRAND>	<TOTAL>

If the above item is under the Plan Quantity Concept, then the block below must be appropriately filled out
 Plan Quantity Concept Signature Block
 Design Engineer's Responsibility for Calculations: _____ Signature: _____ Print name: _____
 Plan Quantity Item:

NOTES FOR EXPLANATION OF OVER/UNDER RUN
 CONCRETE: _____ STEEL: _____

EXTRA NOTES / REMARK:



The HNTB Companies

SUMMARY OF QUANTITY CALCULATIONS

Made by:	CAM	Date:	11/7/2013
Checked by:	0	Date:	1/0/1900
Backchecked	0	Date:	1/0/1900
Item No.	400-4-25	Page No.	5A

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0.00

ITEM NAME Concrete Class IV (Mass-Substructure)

LOCATION	CY
<i>End Bent No.1</i>	<i>0.0</i>
<i>Pier No. 2</i>	<i>217.6</i>
<i>Pier No. 3</i>	<i>217.6</i>
<i>Pier No. 4</i>	<i>217.6</i>
<i>Pier No. 5</i>	<i>217.6</i>
<i>Pier No. 6</i>	<i>194</i>
<i>Pier No. 7</i>	<i>194</i>
<i>Pier No. 8</i>	<i>194</i>
<i>Pier No. 9</i>	<i>194</i>
<i>Pier No. 10</i>	<i>194</i>
<i>Pier No. 11</i>	<i>194</i>
<i>Pier No. 12</i>	<i>194</i>
<i>Pier No. 13</i>	<i>194</i>
<i>Pier No. 14</i>	<i>194</i>
<i>Pier No. 15</i>	<i>194</i>
<i>Pier No. 16</i>	<i>217.6</i>
<i>Pier No. 17</i>	<i>217.6</i>
<i>Pier No. 18</i>	<i>217.6</i>
<i>Pier No. 19</i>	<i>217.6</i>
<i>Pier No. 20</i>	<i>217.6</i>
<i>End Bent No.21</i>	<i>0.0</i>
<i>See Conc. Class IV (Substructure) for Calculations.</i>	
<i>Total</i>	<i>3,899.1</i>

STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION
VOLUME MEASURE ITEMS

PAY ITEM NO. **400-147**

LOCATION	DESIGN ORIGINAL			CONSTRUCTION FINAL		
	VOLUME MEASURE (CF)	REMARKS (No. of Pads)	REMARKS	VOLUME MEASURE (CF)	OVER/UNDER RUN	REMARKS
End Bent No.1	5.7	12				
Pier No. 2	5.7	12				
Pier No. 3	5.7	12				
Pier No. 4	5.7	12				
Pier No. 5	5.7	12				
Pier No. 6	5.7	12				
Pier No. 7	5.7	12				
Pier No. 8	5.7	12				
Pier No. 9	5.7	12				
Pier No. 10	5.7	12				
Pier No. 11	5.7	12				
Pier No. 12	5.7	12				
Pier No. 13	5.7	12				
Pier No. 14	5.7	12				
Pier No. 15	5.7	12				
Pier No. 16	5.7	12				
Pier No. 17	5.7	12				
Pier No. 18	5.7	12				
Pier No. 19	5.7	12				
Pier No. 20	5.7	12				
End Bent No.21	5.7	12				
TOTAL	119.6	< PAGE TOTAL >				
		< PROJECT GRAND TOTAL >				

If the above item is under the **Plan Quantity Concept**, then the block below must be appropriately filled out

Plan Quantity Concept Signature Block
 Design Engineers Responsible for Calculations: _____ Signature: _____ Print Name: _____

NOTES FOR EXPLANATION OF OVER/UNDER RU

EXTRA NOTES / REMARKS:



SUMMARY OF QUANTITY CALCULATIONS

Made by:	CAM	Date:	11-07-13
Checked by:	0	Date:	1-00-00
Backchecked by:	0	Date:	1-00-00
Item No.	400-147	Page No.	7A

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Composite Neoprene Bearing Pad

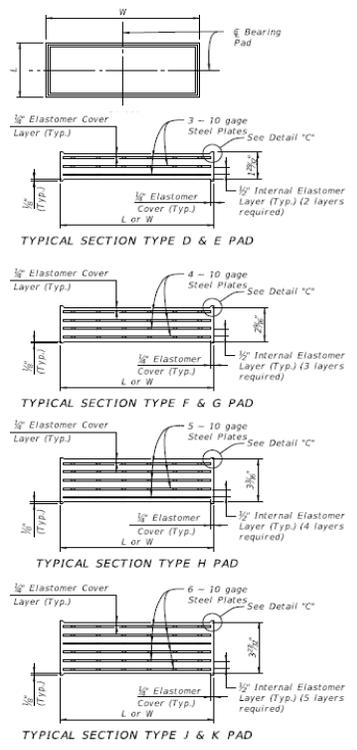
FDOT Standard Bearing Pad Type G

L = 10.00 Length (in)
 W = 32.00 Width (in)
 H = 2.56 Height (in)
 V = 0.47 Volume (ft³) (EACH)

Composite Neoprene Bearing Pad

Unit	No. of Pads	Volume (CF)
End Bent No. 1	12	5.69
Pier No. 2	12	5.69
Pier No. 3	12	5.69
Pier No. 4	12	5.69
Pier No. 5	12	5.69
Pier No. 6	12	5.69
Pier No. 7	12	5.69
Pier No. 8	12	5.69
Pier No. 9	12	5.69
Pier No. 10	12	5.69
Pier No. 11	12	5.69
Pier No. 12	12	5.69
Pier No. 13	12	5.69
Pier No. 14	12	5.69
Pier No. 15	12	5.69
Pier No. 16	12	5.69
Pier No. 17	12	5.69
Pier No. 18	12	5.69
Pier No. 19	12	5.69
Pier No. 20	12	5.69
End Bent No. 21	12	5.69
Sub-Totals	252	119.58

TOTALS Volume (cf) = 119.6



PAD TYPE (See Note 1)	BEARING PAD DIMENSIONS		*BEVELED BEARING PLATE DIMENSIONS	
	L	W	C	D
D (G=110psi)	8"	2'-8"	1'-0"	3'-0"
E (G=110psi)	10"	2'-8"	1'-0"	3'-0"
F (G=110psi)	10"	2'-8"	1'-0"	3'-0"
G (G=150psi)	10"	2'-8"	1'-0"	3'-0"
H (G=150psi)	10"	2'-8"	1'-0"	3'-0"
J (G=150psi)	10"	2'-8"	1'-0"	3'-0"
K (G=150psi)	1'-0"	2'-8"	1'-1 1/2"	3'-0"

PAY ITEM NO. 455-34-5
PAY ITEM NO.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PILING TABULATION

PAY ITEM DESCRIPTION	DESIGN ORIGINAL QUANTITY				CONSTRUCTION FINAL QUANTITY				REMARKS
	NO. PILES	LENGTH EACH LINEAR FT	TOTAL LENGTH LINEAR FT	EA	AUTHORIZED LENGTH* FT	PAY LENGTH DRIVEN* FT	REFERENCE FT	OVER OR UNDER RUN FROM DESIGN ORIGINAL FURNISHED DRIVEN FT	
Structure Component Identification									
End Bent No. 1	5	80.00	400						
Pier No. 2	18	80.00	1,440						
Pier No. 3	18	80.00	1,440						
Pier No. 4	18	80.00	1,440						
Pier No. 5	18	80.00	1,440						
Pier No. 6									
Pier No. 7									
Pier No. 8									
Pier No. 9									
Pier No. 10									
Pier No. 11									
Pier No. 12									
Pier No. 13									
Pier No. 14									
Pier No. 15	18	80.00	1,440						
Pier No. 16	18	80.00	1,440						
Pier No. 17	18	80.00	1,440						
Pier No. 18	18	80.00	1,440						
Pier No. 19	18	80.00	1,440						
Pier No. 20	18	80.00	1,440						
End Bent No. 21	5	80.00	400						
*PROVIDE APPROPRIATE UNITS FOR THIS ITEM IN CONTRACT (i.e. LF, MD).			15,200						
			< PAGE TOTAL >						
			< PROJECT GRAND TOTAL >						

EXPLANATION OF OVER/UNDER RUN (DESIGN ORIGINAL/FINAL PAY LENGTH)

PILING FURNISHED:	

EXTRA NOTES / REMARKS:



**QUANTITY
CALCULATIONS**

Made by:	CAM	Date:	11/7/2013
Checked by:	0	Date:	1/0/1900
Backchecked By:	0	Date:	1/0/1900
Item No.	455-34-3	Page No.	9A

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE 0

ITEM NAME Prestr. Concr. Piling (18" Sq.)

Bent	Total Number of Piles *	Top of Pile Elev. (ft)	Estimated Tip Elev. (ft)	Pile Length (LF)	Subtotal Pile Length (LF)	Total Pile Length (LF)
	<i>Pile Batter =</i>	0.00	in per ft			
<i>End Bent No. 1</i>						
<i>Plumb</i>	5			80.0	400.0	400.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 2</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 3</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 4</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 5</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 15</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 16</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 17</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 18</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 19</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>Pier No. 20</i>						
<i>Plumb</i>	18			80.0	1440.0	1440.0
<i>Battered</i>	0			0.0	0.0	0.0
<i>End Bent No. 21</i>						
<i>Plumb</i>	5			80.0	400.0	400.0
<i>Battered</i>	0			0.0	0.0	0.0
*Not Including Test Piles					SUB-TOTAL =	15200
					TOTAL =	15200



**QUANTITY
CALCULATIONS**

Made by:	CAM	Date:	11/7/2013
Checked by:	0	Date:	1/0/1900
Backchecked	0	Date:	1/0/1900
Item No.	455-143-3	Page No.	10A

JOB NAME I-4 PD&E JOB NO. HNTB 59219
 BRIDGE 0 ITEM NAME Test Piles (Prestr. Concr) (18" SQ.)

Bent	Total Number of Test Piles	Test Pile Length (LF)	Total Test Pile Length (LF)
End Bent No. 1	1	80.0	80
Pier No. 2	1	80.0	80
Pier No. 3	1	80.0	80
Pier No. 4	1	80.0	80
Pier No. 5	1	80.0	80
Pier No. 16	1	80.0	80
Pier No. 17	1	80.0	80
Pier No. 18	1	80.0	80
Pier No. 19	1	80.0	80
Pier No. 20	1	80.0	80
End Bent No. 21	1	80.0	80
Total =	9		SUBTOTAL = 720

PAY ITEM NO. 4584-11

LOCATION	SIDE	PAY ITEM DESCRIPTION		Bridge Deck Expansion Joint (F&I) (Poured Joint with Backer Rod)	
		DESIGN ORIGINAL	CONSTRUCTION FINAL	NGTH*, COMPONENT-WEIGHT, NUMBER PER HOUR, DAY, EACH	NGTH*, COMPONENT-WEIGHT, NUMBER PER HOUR, DAY, EACH
End Bent No.1		74 LF			
Pier No. 2		74 LF			
Pier No. 3		74 LF			
Pier No. 4		74 LF			
Pier No. 5		74 LF			
Pier No. 6		74 LF			
Pier No. 7		74 LF			
Pier No. 8		74 LF			
Pier No. 9		74 LF			
Pier No. 10		74 LF			
Pier No. 11		74 LF			
Pier No. 12		74 LF			
Pier No. 13		74 LF			
Pier No. 14		74 LF			
Pier No. 15		74 LF			
Pier No. 16		74 LF			
Pier No. 17		74 LF			
Pier No. 18		74 LF			
Pier No. 19		74 LF			
Pier No. 20		74 LF			
End Bent No.21		74 LF			
		1556 LF	< PAGE TOTAL >		
			< PROJECT GRAND TOTAL >		

*PROVIDE APPROPRIATE UNITS FOR THIS SHOW IN CONTRACT (i.e. LF, MI, LB, KG).
 If the above item is under the **Plan Quantity Concept**, then the block below must be appropriately filled out.

Plan Quantity Concept Signature Block
 Design Engineers Responsible for Calculations: _____ Signature: _____ Print Name: _____

NOTES FOR EXPLANATION OF OVER/UNDER RUN:
 EXTRA NOTES / REMARKS:



**QUANTITY
CALCULATIONS**

Made by:	CAM	Date:	11-07-13
Checked by:		Date:	
Backchecked by:		Date:	
Item No.	521-5-4	Page No	13A

JOB NAME I-4 PD&E

JOB NO. HNTB 59219

BRIDGE NO. 0

ITEM NAME Conc Traffic Rlg Barr (Bridge) (32" Vertical-Shape)

	LF															
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">Belgian Barrier (ft)</th> <th style="width: 50%; text-align: center;">TOTAL (ft)</th> </tr> </thead> <tbody> <tr> <td>Approach Slab @ EB No.1</td> <td style="text-align: center;">30.00</td> <td style="text-align: center;">60.0</td> </tr> <tr> <td>Bridge Length</td> <td style="text-align: center;">2566.25</td> <td style="text-align: center;">5133.0</td> </tr> <tr> <td>Approach Slab @ EB No.3</td> <td style="text-align: center;">30.00</td> <td style="text-align: center;">60.0</td> </tr> <tr> <td>Total Length</td> <td></td> <td style="text-align: center;">5253</td> </tr> </tbody> </table>		Belgian Barrier (ft)	TOTAL (ft)	Approach Slab @ EB No.1	30.00	60.0	Bridge Length	2566.25	5133.0	Approach Slab @ EB No.3	30.00	60.0	Total Length		5253	
	Belgian Barrier (ft)	TOTAL (ft)														
Approach Slab @ EB No.1	30.00	60.0														
Bridge Length	2566.25	5133.0														
Approach Slab @ EB No.3	30.00	60.0														
Total Length		5253														
Total	5253															

Bridge Development Report Cost Estimating

Effective 7/01/2013

Step One: Estimate Component Items

Utilizing the cost provided herein, develop the cost estimate for each bridge type under consideration.

A. Bridge Substructure

1. Prestressed Concrete Piling, (furnished and installed)			
Size of Piling	Cost per Lin. Foot ¹	Quantity	Cost
18" (Driven Plumb or 1" Batter)	\$65		
18" (Driven Battered)	\$75		
24" (Driven Plumb or 1" Batter)	\$85	15200	\$1,292,000
24" (Driven Battered)	\$95	880	\$83,600
30" (Driven Plumb or 1" Batter)	\$120		
30" (Driven Battered)	\$140		
Heavy mild steel reinforcing in pile head (each)	\$250		
Subtotal			\$1,375,600

1 When silica fume, metakaolin or ultrafine fly ash is used add \$6/LF to the piling cost.

2. Steel Piling, (furnished and installed)			
Size of Piling	Cost per Lin. Foot	Quantity	Cost
14 x 73 H Section	\$70		
14 x 89 H Section	\$90		
20" Pipe Pile	\$105		
24" Pipe Pile	\$114		
30" Pipe Pile	\$160		
Subtotal			

3. Drilled Shaft (Total in-place cost)			
Dia. (on land, casing salvaged)	Cost per Lin. Foot	Quantity	Cost
3 ft	\$300		
4 ft	\$430		
5 ft	\$510		
6 ft	\$630		
7 ft	\$750		
8 ft	\$1,550		
9 ft	\$1,800		
Dia. (in water, casing salvaged)	Cost per Lin. Foot	Quantity	Cost
3 ft	\$320		
4 ft	\$500		
5 ft	\$600		
6 ft	\$690		
7 ft	\$900		
8 ft	\$1,650		
9 ft	\$1,900		
Dia. (in water, permanent casing)	Cost per Lin. Foot	Quantity	Cost
3 ft	\$460		
4 ft	\$625		
5 ft	\$750		
6 ft	\$990		
7 ft	\$1,250		
8 ft	\$2,200		
9 ft	\$2,400		

Subtotal

A. Bridge Substructure (continued)

4. Sheet Piling Walls			
Size (Prestressed Concrete)	Cost per Lin. Foot	Quantity	Cost
10" x 30"	\$100		
12" x 30"	\$110		
Type (Steel)	Cost per Sq. Foot	Quantity	Cost
Permanent Cantilever Wall	\$24		
Permanent Anchored Wall ¹	\$36		
Temporary Cantilever Wall	\$14		
Temporary Anchored Wall ¹	\$22		
Soil Anchors	Cost per Anchor	Quantity	Cost
Permanent	\$3,200		
Temporary	\$2,800		
Subtotal			

¹ Includes the cost of waler steel, miscellaneous steel for permanent/temporary walls and concrete face for permanent walls.

5. Cofferdam Footing (Cofferdam and Seal Concrete¹)			
Prorate the cost provided herein based on area and depth of water. A cofferdam footing having the following attributes cost \$600,000: Area 63 ft x 37.25 ft; Depth of seal 5 ft; Depth of water over footing 16 ft			
Type	Cost per Footing	Quantity	Cost
Cofferdam Footing			
Subtotal			

¹ Cost of seal concrete included in pay item 400-3-20 or 400-4-200.

6. Substructure Concrete			
Type	Cost per Cubic Yard	Quantity	Cost
Concrete ¹	\$575	340.3	\$195,673
Mass Concrete ¹	\$512	3899.1	\$1,996,339
Seal Concrete ¹	\$412		
Bulkhead Concrete ¹	\$925		
Shell Fill ¹	\$30		
Subtotal			\$2,192,012

¹ Admixtures: For Calcium Nitrite add \$40/cy (@4.5 gal/cy) and for silica fume, metakaolin or ultrafine fly ash add \$40/cy (@ 60 lb./cy)

7. Reinforcing Steel			
Type	Cost per Pound	Quantity	Cost
Reinforcing Steel	\$0.90	707415	\$636,674
Subtotal			\$636,674

Substructure Subtotal **\$4,204,285**

B. Bridge Superstructure

1. Bearing Material			
Type	Cost per Cubic Foot	Quantity	Cost
Neoprene Bearing Pads	\$900	119.6	\$107,640
Multitrotational Bearings (Capacity in kips)	Cost per Each	Quantity	Cost
1- 250	\$6,000		
251- 500	\$7,000		
501- 750	\$8,000		
751-1000	\$9,500		
1001-1250	\$9,900		
1251-1500	\$10,000		
1501-1750	\$11,000		
1751-2000	\$12,500		
>2000	\$15,000		
Subtotal			\$107,640

2. Bridge Girders			
Structural Steel (includes coating)	Cost per Pound	Quantity	Cost
Rolled Wide Flange Sections, straight ¹	\$1.70		
Rolled Wide Flange Sections, curved ¹	\$1.85		
Plate Girders, Straight ¹	\$1.70		
Plate Girders, Curved ¹	\$1.90		
Box Girders, Straight ¹	\$1.95		
Box Girders, Curved ¹	\$2.05		
Prestressed Concrete Girders	Cost per Lin. Foot	Quantity	Cost
Fl. Inverted Tee 16" ²	\$80		
Fl. Inverted Tee 20"	\$90		
Fl. Inverted Tee 24" ²	\$105		
Fl. Tub (U-Beam) 48" ²	\$700		
Fl. Tub (U-Beam) 54"	\$750		
Fl. Tub (U-Beam) 63"	\$800		
Fl. Tub (U-Beam) 72"	\$900		
Solid Flat Slab (<48"x12")	\$150		
Solid Flat Slab (<48"x15")	\$160		
Solid Flat Slab (48"x12")	\$160		
Solid Flat Slab (48"x15")	\$170		
Solid Flat Slab (60"x12")	\$170		
Solid Flat Slab (60"x15")	\$180		
AASHTO Type II	\$98		
Florida-I; 36	\$165		
Florida-I; 45	\$180		
Florida-I; 54	\$190		
Florida-I; 63	\$200		
Florida-I; 72	\$230		
Florida-I; 78	\$250	15397.5	\$3,849,375
Florida-I; 84	\$320		
Florida-I; 96	\$400		
Haunched Florida-I; 78	\$700		
Haunched Florida-I; 84	\$800		
Subtotal			\$3,849,375

1 When weathering steel (uncoated) is used reduce the price by \$0.04 per pound. Inorganic zinc coating systems have an expected life cycle of 20 years.

2 Price is based on ability to furnish products without any conversions of

casting beds and without purchasing of forms. If these conditions do not exist, add the following cost: Inverted Tee - \$202,000; Fl. Tub - \$403,000

B. Bridge Superstructure (continued)

3. Cast-in-Place Superstructure Concrete			
Type	Cost per Cubic Yard	Quantity	Cost
Box Girder Concrete, Straight	\$950		
Box Girder Concrete, Curved	\$1,100		
Deck Concrete	\$600	5511.7	\$3,307,020
Precast Deck Overlay Concrete Class IV	\$600		
Subtotal			\$3,307,020

4. Concrete for Precast Segmental Box Girders, Cantilever Construction			
Concrete Cost by Deck Area	Cost per Cubic Yard	Quantity	Cost
≤ 300,000 SF	\$1,250		
> 300,000 SF AND ≤ 500,000 SF	\$1,200		
> 500,000 SF	\$1,150		
Subtotal			

5. Reinforcing Steel			
Type	Cost per Pound	Quantity	Cost
Reinforcing Steel	\$0.60	1089109	\$653,465
Subtotal			\$653,465

6. Post-Tensioning Steel			
Type	Cost per Pound	Quantity	Cost
Strand, Longitudinal	\$2.50		
Strand, Transverse	\$4.00	23372	\$93,488
Bars	\$6.00		
Subtotal			\$93,488

7. Railings and Barriers			
Type	Cost per Lin. Foot	Quantity	Cost
Traffic Railing ¹	\$70	5253	\$367,710
Pedestrian/Bicycle Railings:			
Concrete Parapet (27") ¹	\$65		
Single Bullet Railing ¹	\$27		
Double Bullet Railing ¹	\$36		
Triple Bullet Railing ¹	\$45		
Picket Railing (42") steel	\$65		
Picket Railing (42") aluminum	\$50		
Picket Railing (54") steel	\$95		
Picket Railing (54") aluminum	\$60		
Subtotal			\$367,710

¹ Combine cost of Bullet Railings with Concrete Parapet or Traffic Railing, as appropriate.

8. Expansion Joints			
Type	Cost per Lin. Foot	Quantity	Cost
Strip Seal	\$360	1556	\$560,160
Finger Joint <6"	\$850		
Finger Joint >6"	\$1,500		
Modular 6"	\$500		
Modular 8"	\$700		
Modular 12"	\$900		
Subtotal			\$560,160

Superstructure Subtotal **\$8,938,858**

C. Miscellaneous Items

1. MSE Walls

Type	Cost per Sq. Foot	Quantity	Cost
Permanent	\$26		
Temporary	\$14		
		Walls Subtotal	

2. Sound Barriers

Type	Cost per Sq. Foot	Quantity	Cost
Post and Panel Sound Barriers	\$25		
		Sound Barrier Subtotal	

3. Detour Bridges

Type	Cost per Sq. Foot	Quantity	Cost
Acrow Detour Bridge ¹	\$55		
		Detour Bridge Subtotal	

¹ Using FDOT supplied components. The cost is for the bridge proper and does not include approach work, surfacing, or guardrail.

Unadjusted Total **\$13,143,144**

Step Two: Estimate Conditional Variables and Cost per Square Foot

After developing the total cost estimate utilizing the unit cost, modify the cost to account for site condition variables. If appropriate, the cost will be modified by the following variables:

Conditional Variables	% Increase/	
	Decrease	Cost (+/-)
For construction over water, increase cost by 3 %.	15%	\$1,971,472
Phased construction, increase by 20 % . ¹	20%	\$2,628,629
¹ Phased construction is defined as construction over traffic or construction requiring multiple phases to complete the construction of the entire cross section of the bridge. The 20 percent premium is applied to the affected units of the superstructure and/or substructure.	35%	\$4,600,100

Substructure Subtotal	\$4,204,285
Superstructure Subtotal	\$8,938,858
Walls Subtotal	
Sound Barrier Subtotal	
Detour Bridge Subtotal	
Conditional Variables	\$4,600,100
Total Cost	\$17,743,244

Total Square Feet of Deck **190116.2686**

Cost per Square Foot \$93

Design Aid for Determination of Reinforcing Steel

In the absence of better information, use the following quantities of reinforcing steel per cubic yard of concrete.

Location	Pounds of Steel	Cubic Yds.	Tot. Pounds
Pile Abutments	135		
Pile Bents	145		
Single Column Piers >25'	210		
Single Column Piers <25'	150		
Multiple Column Piers >25'	215		
Multiple Column Piers <25'	195		
Bascule Piers	110		
Standard Deck Slabs	205		
Isotropic Deck Slabs	125		
Concrete Box Girders, Pier Seg	225		
Concrete Box Girders, Typ. Seg	165		
Flat Slabs @ 30ft & 15" Deep	220		

Step Three: Cost Estimate Comparison to Historical Bridge Cost

The final step is a comparison of the cost estimate by comparison with historic bridge cost based on a cost per square foot. These total cost numbers are calculated exclusively for the bridge cost as defined in the General Section of this chapter. Price computed by Steps 1 and 2 should be generally within the range of cost as supplied herein. If the cost falls outside the provided range, good justification must be provided.

Bridge Superstructure Type	Total Cost per Square Foot	
	Low	High
Short Span Bridges:		
Reinforced Concrete Flat Slab- Simple Span ¹	\$92	\$160
Pre-cast Concrete Slab - Simple Span ¹	\$81	\$200
Medium Span Bridges:		
Concrete Deck / Steel Girder - Simple Span ¹	\$125	\$142
Concrete Deck / Steel Girder - Continuous Span ¹	\$135	\$170
Concrete Deck / Prestressed Girder - Simple Span ¹	\$66	\$145
Concrete Deck / Prestressed Girder - Continuous Span ¹	\$83	\$211
Concrete Deck / Steel Box Girder ¹ - Span range from 150' to 280' (for curvature, add 15% premium)	\$100	\$165
Segmental Concrete Box Girders - Cantilever Construction Span range from 150' to 280'	\$130	\$160
Movable Bridge - Bascule Spans & Piers	\$1,800	\$2,000
Demolition Costs:		
Typical	\$35	\$60
Bascule	\$60	\$70
Project Type		
Widening (Construction Only)	\$85	\$160

¹ Increase the cost by twenty percent for phased construction

Estimated Cost per Square Foot \$93