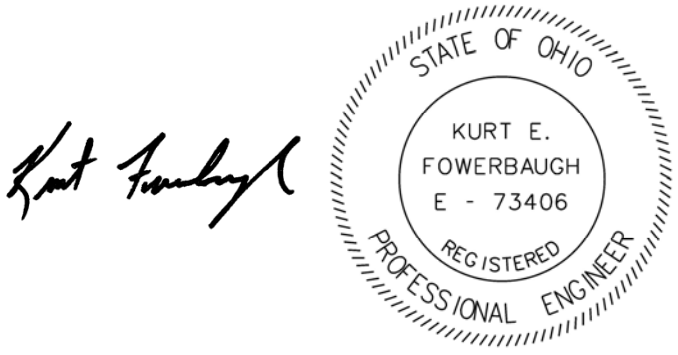
BRIDGE LOAD RATING REPORT

FOR PROPOSED BRIDGE PROJECT No.: 77332 / 85531

BRIDGE NO.: **CUY-90-1627** SFN: **1809687**

BRIDGE LOAD RATING REPORT

Bridge Description	East 14th Street On-Ramp to I-90 WB (I-90 WB over East 9th Street) Single span prestressed concrete bulb-tee beams with composite reinforced concrete deck supported by MSE wall with stub abutments on piles.			
Work Details	New bridge on new alignment			
Spans (C/C Bearings)	138'-0 7/8" c/c bearing (Maximum span length measured along B4 - B10)			
Bridge Plan Information	Design build submittal to ODOT District 12			
Material Strengths	f'c = 4.5 ksi, f_{ps} = 11.0 ksi, Fy(reinforcing steel) = 60 ksi			
Live Load Distribution	LL Distribution Factor for Interior girders @ 8'-9 3/4" c/c, (AASHTO Section 3.23.2.2)			n/a
	LL Distribution Factor for Exterior girders (AASHTO Section 3.23.2.3.1.5)			1.385
Rating Method	Load Factor			
Rating Software	VIRTIS			
Special Assumptions				
Structure Rating Summary	Inventory HS20 (Tons)	**Rating**	**Member**	**Location**
		60.94	Exterior (Beam B1)	70% (Shear)
	Operating HS20 (Tons)	100.70	Exterior (Beam B1)	30% (Shear)
	Ohio Legal Loads (%)	280%	Exterior (Beam B1)	30% (Shear)
	2F1 (Tons)	55.58	Exterior (Beam B1)	30% (Shear)
	3F1 (Tons)	85.23	Exterior (Beam B1)	30% (Shear)
	4F1 (Tons)	83.84	Exterior (Beam B1)	30% (Shear)
	5C1 (Tons)	110.95	Exterior (Beam B1)	70% (Shear)
Rated by (Name, signature, PE #)	Kurt Fowerbaugh, P.E.	73406		
Company	Shrewsberry & Associates, LLC 7321 Shadeland Station, Suite 160 Indianapolis, IN 46256 Phone: (317) 841-4799 Fax: (317) 841-4790			
Date	1/10/2012			



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Material Strengths	f'c = 4.5 ksi, f_{ps} = 11.0 ksi, Fy(reinforcing steel) = 60 ksi			
Live Load Distribution	LL Distribution Factor for Interior girders @ 8'-9 3/4" c/c, (AASHTO Section 3.23.2.2)			1.602
	LL Distribution Factor for Exterior girders (AASHTO Section 3.23.2.3.1.5)			n/a
Rating Method	Load Factor			
Rating Software	VIRTIS			
Special Assumptions				
Structure Rating Summary	Inventory HS20 (Tons)	**Rating** 52.80	**Member** Interior (Beam B5)	**Location** 70% (Shear)
	Operating HS20 (Tons)	86.11	Interior (Beam B5)	30% (Shear)
	Ohio Legal Loads (%)	240%	Interior (Beam B5)	30% (Shear)
	2F1 (Tons)	48.20	Interior (Beam B5)	30% (Shear)
	3F1 (Tons)	73.80	Interior (Beam B5)	30% (Shear)
	4F1 (Tons)	72.65	Interior (Beam B5)	30% (Shear)
	5C1 (Tons)	96.30	Interior (Beam B5)	70% (Shear)
Rated by (Name, signature, PE #)	Kurt Fowerbaugh, P.E.	73406		
Company	Shrewsberry & Associates, LLC 7321 Shadeland Station, Suite 160 Indianapolis, IN 46256 Phone: (317) 841-4799 Fax: (317) 841-4790			
Date	1/10/2012			

CUY-20-1627
BL-6 Load Ratings
LFR

Analysis Results - PSC Bulb Tee #1

Report Type: Rating Results Summary | Lane/Impact Loading Type: As Requested / Detailed | Display Format: Mutiple rating levels per row

Live Load	Live Load Type	Rating Method	Inventory Load Rating (Ton)	Operating Load Rating (Ton)	Inventory Rating Factor	Operating Rating Factor	Inventory Location (ft)	Inventory Location Span-(%)	Operating Location (ft)	Operating Location Span-(%)	Inventory Limit State	Operating Limit State	Impact	Lane
HS 20-44	Lane	LFD	60.94	100.70	1.693	2.797	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
2F1	Lane	LFD	33.66	55.58	2.244	3.705	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
3F1	Lane	LFD	51.62	85.23	2.244	3.705	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
4F1	Lane	LFD	60.59	100.05	2.244	3.705	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
5C1	Lane	LFD	89.77	148.22	2.244	3.705	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
HS 25-44	Lane	LFD	76.17	125.88	1.693	2.797	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
HS 20-44	Axle Load	LFD	61.03	99.03	1.695	2.751	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
2F1	Axle Load	LFD	54.45	87.87	3.630	5.858	41.42	1 - (30.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
3F1	Axle Load	LFD	55.55	92.08	2.415	4.003	82.84	1 - (60.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
4F1	Axle Load	LFD	50.56	83.84	1.872	3.105	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
5C1	Axle Load	LFD	67.63	110.95	1.691	2.774	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
HS 25-44	Axle Load	LFD	61.68	100.35	1.371	2.230	96.65	1 - (70.0)	96.65	1 - (70.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested

AASHTO LFR Engine Version 6.3.0.3001

Analysis Results - PSC Bulb Tee #5

Report Type: Rating Results Summary | Lane/Impact Loading Type: As Requested / Detailed | Display Format: Mutiple rating levels per row

Live Load	Live Load Type	Rating Method	Inventory Load Rating (Ton)	Operating Load Rating (Ton)	Inventory Rating Factor	Operating Rating Factor	Inventory Location (ft)	Inventory Location Span-(%)	Operating Location (ft)	Operating Location Span-(%)	Inventory Limit State	Operating Limit State	Impact	Lane
HS 20-44	Lane	LFD	52.80	87.30	1.467	2.425	96.65	1 - (70.0)	96.65	1 - (70.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
2F1	Lane	LFD	29.18	48.20	1.945	3.213	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
3F1	Lane	LFD	44.74	73.90	1.945	3.213	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
4F1	Lane	LFD	52.52	86.75	1.945	3.213	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
5C1	Lane	LFD	77.80	128.52	1.945	3.213	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
HS 25-44	Lane	LFD	66.00	109.13	1.467	2.425	96.65	1 - (70.0)	96.65	1 - (70.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
HS 20-44	Axle Load	LFD	52.98	86.11	1.472	2.392	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
2F1	Axle Load	LFD	47.38	76.50	3.158	5.100	41.42	1 - (30.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
3F1	Axle Load	LFD	48.43	80.13	2.106	3.484	82.84	1 - (60.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
4F1	Axle Load	LFD	43.79	72.65	1.622	2.691	96.65	1 - (70.0)	41.42	1 - (30.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
5C1	Axle Load	LFD	58.64	96.30	1.466	2.407	96.65	1 - (70.0)	96.65	1 - (70.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested
HS 25-44	Axle Load	LFD	53.50	87.19	1.189	1.938	96.65	1 - (70.0)	96.65	1 - (70.0)	Design Shear - Concrete	Design Shear - Concrete	As Requested	As Requested

AASHTO LFR Engine Version 6.3.0.3001

PSCBulbTee1 Std Dist Factor

```
*****************************************************************
** Note that this file contains the distribution factors       **
** computed by the Virtis wizard based on the bridge description **
** in Virtis on the date and time below.  These computed values  **
** may not match those shown in Virtis if the user has changed   **
** the Virtis bridge description after these distribution        **
** factors were computed.                                       **
*****************************************************************

Bridge: E 14th St Ramp to I90WB
Bridge ID: CUY-90-1627 LFD      NBI Structure ID: BL-6 LFD
BID: 25

Superstructure Def: 10 Beam System
Member: PSC BT1
Member Alternative: PSC Bulb Tee #1

Date:  01/10/2012               Time: 01:41:36 PM

AASHTO Standard Specifications for Highway Bridges, Seventeenth  Edition - 2002

Article 3.12 Reduction in Load Intensity
----------------------------------------
3 Lane Reduction Factor = 0.90
4 or more Lane Reduction Factor = 0.75



=========================
Simple Beam Distribution
=========================

Compute Simple Beam Deck Distribution Factors
---------------------------------------------

DF =   1.38


Number Lanes Loaded = 1

Truck Wheel Positions from Left Edge of Deck

 Truck      Left Wheel       Right Wheel
              (ft)              (ft)
-------------------------------------------
  1             3.50              9.50


DF =   1.38


Number Lanes Loaded = 1

Truck Wheel Positions from Left Edge of Deck

 Truck      Left Wheel       Right Wheel
              (ft)              (ft)
-------------------------------------------
  1             3.50              9.50


============================
```


PSCBulbTee1 Std Dist Factor

```
Moment Distribution Factors
===========================

-------------------------------------
Concrete Deck on Exterior Beams
(Article 3.23.2.2 and Table 3.23.1)
-------------------------------------

Check Range of Applicability
----------------------------
Input:
S =    4.39  (ft)          s <= 10.0: One Lane FAILED
                           s <= 16.0: Multi Lane PASSED


******* WARNING! *********
One or more range of applicability checks failed.
The simple beam distribution factors will be used as necessary


Compute Moment Distribution Factors
-----------------------------------
Input:
S =    4.39  (ft)

One Design Lane Loaded:
Use Simple Beam DF =   1.38 Wheels

Two or More Design Lanes Loaded:
Use Simple Beam DF =   1.38 Wheels


============================
Shear Distribution Factors
============================

--------------------------------
Concrete Deck on Exterior Beams
(Article 3.23.1.2)
--------------------------------
Same as moment distribution factors:

One Design Lane Loaded:
DF =   1.38 Wheels

Two or More Design Lanes Loaded:
DF =   1.38 Wheels


======================================
Shear at Supports Distribution Factors
======================================
Use simple beam distribution factors:

One Design Lane Loaded:
DF =   1.38 Wheels

Two or More Design Lanes Loaded:
DF =   1.38 Wheels


==============================
Deflection Distribution Factors
```

```
                              PSCBulbTee1 Std Dist Factor
==================================

Compute Deflection Distribution Factors
---------------------------------------
Input:
Number Lanes     =  6
Reduction Factor =    0.75
Number Beams     =  10

One Design Lane Loaded:
DF = 2.0/Number beams = 2.0/10 =   0.20 Wheels

Two or More Design Lanes Loaded:
DF = 2.0 * Number Lanes * Reduction Factor/ Number beams   = (2.0 * 6 *   0.75)/10 =
  0.90 Wheels
```

Page 3

PSCBulbTee5 Std Dist Factor

```
**********************************************************************
** Note that this file contains the distribution factors            **
** computed by the Virtis wizard based on the bridge description    **
** in Virtis on the date and time below.  These computed values     **
** may not match those shown in Virtis if the user has changed      **
** the Virtis bridge description after these distribution           **
** factors were computed.                                           **
**********************************************************************

Bridge: E 14th St Ramp to I90WB
Bridge ID: CUY-90-1627 LFD      NBI Structure ID: BL-6 LFD
BID: 25

Superstructure Def: 10 Beam System
Member: PSC BT5
Member Alternative: PSC Bulb Tee #5

Date:  01/10/2012               Time: 01:43:59 PM

AASHTO Standard Specifications for Highway Bridges, Seventeenth  Edition - 2002

Article 3.12 Reduction in Load Intensity
----------------------------------------
3 Lane Reduction Factor = 0.90
4 or more Lane Reduction Factor = 0.75



=========================
Simple Beam Distribution
=========================

Compute Simple Beam Deck Distribution Factors
---------------------------------------------

DF =   1.32


Number Lanes Loaded = 1

Truck Wheel Positions from Left Edge of Deck

 Truck      Left Wheel       Right Wheel
              (ft)              (ft)
-------------------------------------------
  1            32.59             38.59


DF =   1.87


Number Lanes Loaded = 5

Truck Wheel Positions from Left Edge of Deck

 Truck      Left Wheel       Right Wheel
              (ft)              (ft)
-------------------------------------------
  1            38.59             44.59
  2            28.59             34.59
  3            50.59             56.59
  4            16.59             22.59
  5            62.59             68.59
```


PSCBulbTee5 Std Dist Factor

```
============================
Moment Distribution Factors
============================

---------------------------------------
Concrete Deck on Interior Beams
(Article 3.23.2.2 and Table 3.23.1)
---------------------------------------

Check Range of Applicability
----------------------------
Input:
S =    8.81  (ft)          s <= 10.0: One Lane FAILED
                           s <= 16.0: Multi Lane PASSED


******* WARNING! *********
One or more range of applicability checks failed.
The simple beam distribution factors will be used as necessary


Compute Moment Distribution Factors
-----------------------------------
Input:
S =    8.81  (ft)

One Design Lane Loaded:
Use Simple Beam DF =   1.26 Wheels

Two or More Design Lanes Loaded:
DF = s/  5.50 =       1.60 Wheels


============================
Shear Distribution Factors
============================

--------------------------------
Concrete Deck on Interior Beams
(Article 3.23.1.2)
--------------------------------
Same as moment distribution factors:

One Design Lane Loaded:
DF =   1.26 Wheels

Two or More Design Lanes Loaded:
DF =   1.60 Wheels


=======================================
Shear at Supports Distribution Factors
=======================================
Use simple beam distribution factors:

One Design Lane Loaded:
DF =   1.32 Wheels

Two or More Design Lanes Loaded:
DF =   1.87 Wheels
```

PSCBulbTee5 Std Dist Factor

```
================================
Deflection Distribution Factors
================================

Compute Deflection Distribution Factors
----------------------------------------
Input:
Number Lanes     =  6
Reduction Factor =    0.75
Number Beams     =  10

One Design Lane Loaded:
DF = 2.0/Number beams = 2.0/10 =   0.20 Wheels

Two or More Design Lanes Loaded:
DF = 2.0 * Number Lanes * Reduction Factor/ Number beams   = (2.0 * 6 *   0.75)/10 =
  0.90 Wheels
```

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Username: virtis
Date: Thursday, January 12, 2012 19:41:01

Bridge ID CUY-90-1627 LFD E 14th St Ramp to I90WB
NBI Structure ID (8): BL-6 LFD
Description: Single Span Prestressed Concrete Bulb-Tee Bridge
Rated by: Jennifer L. Hart, PE (Shrewsberry)
Reviewed by: Kurt E. Fowerbaugh, PE (Shrewsberry)

Superstructure Definition 10 Beam System
Definition
Units: US Customary
Number of spans: 1
Number of girders: 10

Span	Length (ft)
1	138.0730

Frame Structure Simplified Definition:

Support	Frame Connection
1	
2	

Girder Spacing Display Type: Perpendicular
Average Humidity: 70.000 (%)
Analysis
Default Library Factors
Factor Override
Analysis Module
Analysis Method: ASD
Analysis Module:
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module:
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module:
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module:
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module:
Analysis Module Component:

Properties:

Default rating method: LFD

Impact
Standard Impact Factor
Type: Standard - AASHTO
LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 (%)
All other limit states: 33.0 (%)

Structure Framing Plan Details
Layout

Support	Skew (Degrees)
1	-12.7550
2	-12.7550

Girder Spacing Orientation: Perpendicular

Girder Bay	Girder Spacing Start (ft)	End (ft)
1	8.7700	8.7700
2	8.7700	8.7700
3	8.4375	8.4375
4	8.8125	8.8125
5	8.8125	8.8125
6	8.8125	8.8125
7	8.8125	8.8125
8	8.8125	8.8125
9	8.8125	8.8125

Diaphragms
Girder Bay 1

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.56	33.57	0.00	1	0.2503
35.56	33.57	34.52	2	0.2503
138.07	138.07	0.00	1	

Girder Bay 2

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.56	33.57	34.52	2	0.2503
35.56	33.57	0.00	1	0.2503
138.07	138.07	0.00	1	

Girder Bay 3

Distance	Distance	Diaphragm	Number of	Diaphragm

Left Girder (ft)	Right Girder (ft)	Spacing (ft)	Spaces	Weight (kip)
0.00	0.00	0.00	1	
35.48	33.57	0.00	1	0.2503
35.48	33.57	34.52	2	0.2503
138.07	138.07	0.00	1	

Girder Bay 4

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.57	33.57	34.52	2	0.2503
35.57	33.57	0.00	1	0.2503
138.07	138.07	0.00	1	

Girder Bay 5

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.57	33.57	34.52	2	0.2503
35.57	33.57	0.00	1	0.2503
138.07	138.07	0.00	1	

Girder Bay 6

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.57	33.57	34.52	2	0.2503
35.57	33.57	0.00	1	0.2503
138.07	138.07	0.00	1	

Girder Bay 7

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.57	33.57	34.52	2	0.2503
35.57	33.57	0.00	1	0.2503
138.07	138.07	0.00	1	

Girder Bay 8

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.57	33.57	34.52	2	0.2503
35.57	33.57	0.00	1	0.2503
138.07	138.07	0.00	1	

Girder Bay 9

Distance Left Girder (ft)	Distance Right Girder (ft)	Diaphragm Spacing (ft)	Number of Spaces	Diaphragm Weight (kip)
0.00	0.00	0.00	1	
35.57	33.57	0.00	1	0.2503
35.57	33.57	34.52	2	0.2503
138.07	138.07	0.00	1	

Structure Typical Section

Deck

Left start width: 42.96 *(ft)*
Left end width: 42.96 *(ft)*
Right start width: 42.96 *(ft)*
Right end width: 42.96 *(ft)*
Left start overhang: 3.80 *(ft)*
Left end overhang: 3.80 *(ft)*

Deck (Cont'd)

Deck concrete: QSC2 - 4500psi
Total deck thickness: 8.5000 *(in)*
Deck crack control parameter: *(kip/in)*
Sustained modular ratio factor: 3.000

Parapet

Name	Load Case	Measure To	Measured From	Distance At Start	Distance At End	Front Face Orientation
3'-6" Par...	DC2	Front	Left Ed...	1.50	1.50	Right
4'-9" Par...	DC2	Front	Right E...	1.50	1.50	Left

Lane Position

Offset Left Start: -41.46 *(ft)*
Offset Left End: -41.46 *(ft)*
Offset Right Start: 41.46 *(ft)*
Offset Right End: 41.46 *(ft)*

Wearing Surface

Wearing surface material:
Description:
Wearing surface thickness: *(in)*
Wearing surface density: *(pcf)*
Load case: DW

Load Case Description

Load Case Name	Description	Stage	Type	Time (Days)
DC2	DC acting on long-ter...	Composite (long te...	D,DC	
DW	DW acting on long-ter...	Composite (long te...	D,DW	
SIP Forms	Weight due to stay-in...	Non-composite (Sta...	D,DC	

Superstructure Loads

DL Distribution

Stage 1 Dead Load Distribution: Tributary Area
Stage 2 Dead Load Distribution: Uniformly to All Girders

Stiffener Definitions

Stress Limits

Name: **PSC Properties**
Description: PSC Properties
Concrete material: PSC 11.0 ksi
Initial allowable tension (LFD): 0.200 *(ksi)*
Initial allowable compression (LFD): 4.500 *(ksi)*
Final allowable slab compression (LFD): *(ksi)*
Final allowable tension (LFD): 0.630 *(ksi)*
Final allowable DL compression (LFD): 4.400 *(ksi)*
Final allowable compression (LFD): 6.600 *(ksi)*
Final allowable compression (LL + 1/2(Pe+DL)) (LFD): 4.400 *(ksi)*
Initial allowable tension (LRFD): 0.200 *(ksi)*
Initial allowable compression (LRFD): 4.500 *(ksi)*
Final allowable slab compression (LRFD): *(ksi)*
Final allowable tension (LRFD): 0.630 *(ksi)*
Final allowable DL compression (LRFD): 4.950 *(ksi)*
Final allowable compression (LRFD): 6.600 *(ksi)*
Final allowable compression (LL + 1/2(Pe+DL)) (LRFD): 4.400 *(ksi)*

Prestress Properties

Name: **PS Properties**
General Pretress Data
Prestressing Strand: 0.6" (7W-270) LR
Loss Method: AASHTO Refined
Jacking stress ratio: 0.750
Transfer stress ratio:
Transfer time: 24.0 *(Hours)*
AASHTO - Dead load percent: 0.0 *(%)*
Loss Data - PCI
PCI - Maturity coefficient:
PCI - Ultimate creep loss: *(ksi)*
PCI - Ultimate shrinkage loss: *(ksi)*
PCI - Additional time 1: *(Days)*
PCI - Additional time 2: *(Days)*
PCI - Additional time 3: *(Days)*
PCI - Additional time 4: *(Days)*
PCI - Additional time 5: *(Days)*
PCI - Additional time 6: *(Days)*
PCI - Additional time 7: *(Days)*
PCI - Additional time 8: *(Days)*
PCI - Additional time 9: *(Days)*
PCI - Additional time 10: *(Days)*
Loss Data - Lump-sum
Lump-sum - Composite loss: *(ksi)*
Lump-sum - Continuous loss: *(ksi)*
Lump-sum - Final loss: *(ksi)*

Shear Reinforcement Definitions - Vertical

Name: **401**
Vertical Reinforcement: Grade 60 EC
Vertical Rebar: 4
Number of legs (Vertical): 2.00
Inclination angle alpha (Vertical): 90.0 *(Degrees)*
No horizontal shear reinforcement definitions.

Member PSC BT1

Link with: None
Description:

Existing: PSC Bulb Tee #1 -
Current: PSC Bulb Tee #1 -
Number of Spans: 1

Span Number	Span Length *(ft)*
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal *(in)*	Vertical *(in)*	Rotational *(Radians)*	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation *(kip/ft)*	Y Translation *(kip/ft)*	Z Rotation *(kip-in/rad)*	Override Computed Z Rotation
1				
2				

Member Alternative PSC Bulb Tee #1

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary

Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials

Deck concrete: QSC2 - 4500psi
Deck reinforcement: Grade 60 EC
Beam concrete: PSC 11.0 ksi
Beam reinforcement: Grade 60 EC
Stirrup reinforcemt: Grade 60 EC
Prestressing strand: 0.6" (7W-270) LR

Impact
Standard Impact Factor
Type: Standard - AASHTO
LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 *(%)*
All other limit states: 33.0 *(%)*

Live Load Distribution
Standard

	Distribution Factor (Wheels)			
Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.385	1.385	1.385	0.200
Multi-Lane	1.385	1.385	1.385	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.831	0.831
0.00	13.81	Shear	0.855	0.855
13.81	110.46	Shear	0.831	0.831
124.27	13.81	Shear	0.855	0.855
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time
Deck curing method:
Deck drying time: *(Days)*
Consider deck differential shrinkage loads:
Beam Curing method:
Curing time: *(Days)*
Service life: 75.00 *(Years)*
Analysis time: *(Years)*
Composite time: *(Days)*
Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Use	Shape	Concrete Material n	Prestress Properties	Left Projection	Right
	Projection		Creep			

				(in) (in)
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...

Continuous Support Details

Support Number	Support Distance on Left, SL (in)	Support Distance on Right, SR (in)
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance (ft)	Length (ft)
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width:	(in)
Deck cohesion factor:	0.280 (ksi)
Deck friction factor:	1.000

Continuity Diaphragm

Span No.	Material	Left Support Distance	Bar Count	Bar Size	Material	Right Support Distance
	Bar	Bar			Bar	

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance (ft)	Debond Distance (in)	Harp Curvature (in)
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000

	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000
	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			
	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000
1		4	1	Harped			
	Left						0.0000
	Right						0.0000
1		4	2	Harped			
	Left						0.0000
	Right						0.0000
1		4	3	Harped			
	Left						0.0000
	Right						0.0000
1		4	4	Harped			
	Left						0.0000
	Right						0.0000
1		4	5	Harped			
	Left	22	1		62.88		0.0000
	Right	22	1		62.88		0.0000
1		4	6	Harped			
	Left	22	2		62.88		0.0000
	Right	22	2		62.88		0.0000
1		4	7	Harped			
	Left	22	3		62.88		0.0000
	Right	22	3		62.88		0.0000
1		4	8	Harped			
	Left						0.0000
	Right						0.0000
1		4	9	Harped			
	Left						0.0000
	Right						0.0000
1		4	10	Harped			
	Left						0.0000
	Right						0.0000
1		4	11	Harped			
	Left						0.0000
	Right						0.0000
1		5	1	Harped			
	Left						0.0000
	Right						0.0000
1		5	2	Harped			
	Left						0.0000
	Right						0.0000
1		5	3	Harped			
	Left						0.0000
	Right						0.0000
1		5	4	Harped			
	Left	23	1		62.88		0.0000
	Right	23	1		62.88		0.0000
1		5	5	Harped			
	Left	23	2		62.88		0.0000
	Right	23	2		62.88		0.0000
1		5	6	Harped			
	Left	23	3		62.88		0.0000
	Right	23	3		62.88		0.0000
1		5	7	Harped			
	Left						0.0000
	Right						0.0000
1		5	8	Harped			
	Left						0.0000
	Right						0.0000
1		5	9	Harped			
	Left						0.0000
	Right						0.0000
1		6	1	Harped			
	Left						0.0000
	Right						0.0000

1		6	2	Harped			
	Left	24	1		62.88		0.0000
	Right	24	1		62.88		0.0000
1		6	3	Harped			
	Left	24	2		62.88		0.0000
	Right	24	2		62.88		0.0000
1		6	4	Harped			
	Left	24	3		62.88		0.0000
	Right	24	3		62.88		0.0000
1		6	5	Harped			
	Left						0.0000
	Right						0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	98.2440	98.2440

Haunch Profile

Distance *(ft)*	Length *(ft)*	Z1 *(in)*	Z2 *(in)*	Z3 *(in)*	Z4 *(in)*	Y1 *(in)*	Y2 *(in)*	Y3 *(in)*
0.00	138.07 0.0000	0.0000	0.0000	0.0000	0.0000	2.0000	0.0000	

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance *(ft)*	Number Spaces	Spacing *(in)*	Extends into Deck
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT2

Link with: None
Description:

Existing: PSC Bulb Tee #2 -
Current: PSC Bulb Tee #2 -
Number of Spans: 1

Span Number	Span Length *(ft)*
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal *(in)*	Vertical *(in)*	Rotational *(Radians)*	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation *(kip/ft)*	Y Translation *(kip/ft)*	Z Rotation *(kip-in/rad)*	Override Computed Z Rotation
1				
2				

Member Alternative PSC Bulb Tee #2

Description:

Description

Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*

Analysis Module

Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials
Deck concrete: QSC2 - 4500psi
Deck reinforcement: Grade 60 EC
Beam concrete: PSC 11.0 ksi
Beam reinforcement: Grade 60 EC
Stirrup reinforcemt: Grade 60 EC
Prestressing strand: 0.6" (7W-270) LR

Impact
Standard Impact Factor
Type: Standard - AASHTO
LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 *(%)*
All other limit states: 33.0 *(%)*

Live Load Distribution
Standard

Distribution Factor (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.253	1.316	1.253	0.200
Multi-Lane	1.595	1.860	1.595	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.480	0.712
0.00	13.81	Shear	0.731	0.893
13.81	110.46	Shear	0.711	0.868
124.27	13.81	Shear	0.731	0.893
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time
Deck curing method:
Deck drying time: *(Days)*
Consider deck differential shrinkage loads:
Beam Curing method:
Curing time: *(Days)*
Service life: 75.00 *(Years)*
Analysis time: *(Years)*
Composite time: *(Days)*
Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
	Projection	Creep			
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL (in)	Support Distance on Right, SR (in)
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance (ft)	Length (ft)
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width:	(in)
Deck cohesion factor:	0.280 (ksi)
Deck friction factor:	1.000

Continuity Diaphragm

Span No.	Material	Left Support Distance	Bar Count	Bar Size	Material	Right Support Distance
	Bar	Bar			Bar	

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance (ft)	Debond Distance (in)	Harp Curvature (in)
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000

1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000
	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			
	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000
1		4	1	Harped			
	Left						0.0000
	Right						0.0000
1		4	2	Harped			
	Left						0.0000
	Right						0.0000
1		4	3	Harped			
	Left						0.0000
	Right						0.0000
1		4	4	Harped			
	Left						0.0000
	Right						0.0000
1		4	5	Harped			
	Left	22	1		62.88		0.0000
	Right	22	1		62.88		0.0000
1		4	6	Harped			
	Left	22	2		62.88		0.0000
	Right	22	2		62.88		0.0000
1		4	7	Harped			
	Left	22	3		62.88		0.0000
	Right	22	3		62.88		0.0000
1		4	8	Harped			
	Left						0.0000
	Right						0.0000
1		4	9	Harped			
	Left						0.0000
	Right						0.0000
1		4	10	Harped			
	Left						0.0000
	Right						0.0000
1		4	11	Harped			
	Left						0.0000
	Right						0.0000
1		5	1	Harped			
	Left						0.0000
	Right						0.0000
1		5	2	Harped			
	Left						0.0000
	Right						0.0000
1		5	3	Harped			
	Left						0.0000
	Right						0.0000
1		5	4	Harped			
	Left	23	1		62.88		0.0000
	Right	23	1		62.88		0.0000
1		5	5	Harped			
	Left	23	2		62.88		0.0000
	Right	23	2		62.88		0.0000
1		5	6	Harped			
	Left	23	3		62.88		0.0000
	Right	23	3		62.88		0.0000
1		5	7	Harped			
	Left						0.0000
	Right						0.0000
1		5	8	Harped			
	Left						0.0000
	Right						0.0000
1		5	9	Harped			
	Left						0.0000
	Right						0.0000
1		6	1	Harped			
	Left						0.0000
	Right						0.0000
1		6	2	Harped			
	Left	24	1		62.88		0.0000
	Right	24	1		62.88		0.0000
1		6	3	Harped			

	Left	24	2		62.88	0.0000
	Right	24	2		62.88	0.0000
1		6	4	Harped		
	Left	24	3		62.88	0.0000
	Right	24	3		62.88	0.0000
1		6	5	Harped		
	Left					0.0000
	Right					0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	105.2400	105.2400

Haunch Profile

Distance	Length	Z1	Z2	Y1	Y3
(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Extends into Deck
		(ft)		*(in)*	
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT3

Link with: None
Description:

Existing: PSC Bulb Tee #3 -
Current: PSC Bulb Tee #3 -
Number of Spans: 1

Span Number	Span Length *(ft)*
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal *(in)*	Vertical *(in)*	Rotational *(Radians)*	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation *(kip/ft)*	Y Translation *(kip/ft)*	Z Rotation *(kip-in/rad)*	Override Computed Z Rotation
1				
2				

Member Alternative PSC Bulb Tee #3

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD

Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials

Deck concrete:	QSC2 - 4500psi
Deck reinforcement:	Grade 60 EC
Beam concrete:	PSC 11.0 ksi
Beam reinforcement:	Grade 60 EC
Stirrup reinforcemt:	Grade 60 EC
Prestressing strand:	0.6" (7W-270) LR

Impact
Standard Impact Factor
Type: Standard - AASHTO

LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 *(%)*
All other limit states: 33.0 *(%)*

Live Load Distribution
Standard

	Distribution Factor (Wheels)			
Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.229	1.316	1.229	0.200
Multi-Lane	1.564	1.842	1.564	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.475	0.702
0.00	13.81	Shear	0.725	0.881
13.81	110.46	Shear	0.704	0.857
124.27	13.81	Shear	0.725	0.881
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time
Deck curing method:
Deck drying time: *(Days)*
Consider deck differential shrinkage loads:
Beam Curing method:
Curing time: *(Days)*
Service life: 75.00 *(Years)*
Analysis time: *(Years)*
Composite time: *(Days)*
Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
	Projection	Creep			
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		

2

Stress Limit Ranges

Stress Limit	Span	Start Distance (ft)	Length (ft)
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width:	(in)
Deck cohesion factor:	0.280 (ksi)
Deck friction factor:	1.000

Continuity Diaphragm

Span	Material	Left Support Distance	Bar Count	Bar Size	Right Support Material	Right Support Distance
	Bar No.	Bar				

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance (ft)	Debond Distance (in)	Harp Curvature (in)
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1			62.88	0.0000
	Right	20	1			62.88	0.0000
1		2	6	Harped			
	Left	20	2			62.88	0.0000
	Right	20	2			62.88	0.0000
1		2	7	Harped			
	Left	20	3			62.88	0.0000
	Right	20	3			62.88	0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000

1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000
	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			
	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000
1		4	1	Harped			
	Left						0.0000
	Right						0.0000
1		4	2	Harped			
	Left						0.0000
	Right						0.0000
1		4	3	Harped			
	Left						0.0000
	Right						0.0000
1		4	4	Harped			
	Left						0.0000
	Right						0.0000
1		4	5	Harped			
	Left	22	1		62.88		0.0000
	Right	22	1		62.88		0.0000
1		4	6	Harped			
	Left	22	2		62.88		0.0000
	Right	22	2		62.88		0.0000
1		4	7	Harped			
	Left	22	3		62.88		0.0000
	Right	22	3		62.88		0.0000
1		4	8	Harped			
	Left						0.0000
	Right						0.0000
1		4	9	Harped			
	Left						0.0000
	Right						0.0000
1		4	10	Harped			
	Left						0.0000
	Right						0.0000
1		4	11	Harped			
	Left						0.0000
	Right						0.0000
1		5	1	Harped			
	Left						0.0000
	Right						0.0000
1		5	2	Harped			
	Left						0.0000
	Right						0.0000
1		5	3	Harped			
	Left						0.0000
	Right						0.0000
1		5	4	Harped			
	Left	23	1		62.88		0.0000
	Right	23	1		62.88		0.0000
1		5	5	Harped			
	Left	23	2		62.88		0.0000
	Right	23	2		62.88		0.0000
1		5	6	Harped			
	Left	23	3		62.88		0.0000
	Right	23	3		62.88		0.0000
1		5	7	Harped			
	Left						0.0000
	Right						0.0000
1		5	8	Harped			
	Left						0.0000
	Right						0.0000
1		5	9	Harped			
	Left						0.0000
	Right						0.0000
1		6	1	Harped			
	Left						0.0000
	Right						0.0000
1		6	2	Harped			
	Left	24	1		62.88		0.0000
	Right	24	1		62.88		0.0000
1		6	3	Harped			
	Left	24	2		62.88		0.0000
	Right	24	2		62.88		0.0000
1		6	4	Harped			
	Left	24	3		62.88		0.0000
	Right	24	3		62.88		0.0000
1		6	5	Harped			

Left	0.0000
Right	0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n (ft)	Length (ft)	Total Thickness (in)	Structural Thickness (in)	Effective Width (Std) (in)	Effective Width (in)
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	103.2450	103.2450

Haunch Profile

Distance (ft)	Length (ft)	Z1 (in)	Z2 (in)	Y1 (in)	Y3 (in)
0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance (ft)	Number Spaces	Spacing (in)	Extends into Deck
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT4

Link with: None
Description:

Existing: PSC Bulb Tee #4 -
Current: PSC Bulb Tee #4 -
Number of Spans: 1

Span Number	Span Length (ft)
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal (in)	Vertical (in)	Rotational (Radians)	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation (kip/ft)	Y Translation (kip/ft)	Z Rotation (kip-in/rad)	Override Computed Z Rotation
1				
2				

Member Alternative PSC Bulb Tee #4

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD

Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials

Deck concrete:	QSC2 - 4500psi
Deck reinforcement:	Grade 60 EC
Beam concrete:	PSC 11.0 ksi
Beam reinforcement:	Grade 60 EC
Stirrup reinforcemt:	Grade 60 EC
Prestressing strand:	0.6" (7W-270) LR

Impact
Standard Impact Factor
Type: Standard - AASHTO
LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 *(%)*
All other limit states: 33.0 *(%)*

Live Load Distribution
Standard

D i s t r i b u t i o n F a c t o r (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.232	1.319	1.232	0.200
Multi-Lane	1.568	1.845	1.568	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.476	0.703
0.00	13.81	Shear	0.725	0.883
13.81	110.46	Shear	0.705	0.858
124.27	13.81	Shear	0.725	0.883
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time
Deck curing method:
Deck drying time: *(Days)*
Consider deck differential shrinkage loads:
Beam Curing method:
Curing time: *(Days)*
Service life: 75.00 *(Years)*
Analysis time: *(Years)*
Composite time: *(Days)*
Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance *(ft)*	Length *(ft)*
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width:	*(in)*
Deck cohesion factor:	0.280 *(ksi)*
Deck friction factor:	1.000

Continuity Diaphragm

Span No.	Material	Left Support Distance	Bar Count	Bar Size	Material	Right Support Distance
	Bar	Bar			Bar	

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance *(ft)*	Debond Distance *(in)*	Harp Curvature *(in)*
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000

1		3	5	Harped		
	Left	21	1		62.88	0.0000
	Right	21	1		62.88	0.0000
1		3	6	Harped		
	Left	21	2		62.88	0.0000
	Right	21	2		62.88	0.0000
1		3	7	Harped		
	Left	21	3		62.88	0.0000
	Right	21	3		62.88	0.0000
1		3	8	Harped		
	Left					0.0000
	Right					0.0000
1		3	9	Harped		
	Left					0.0000
	Right					0.0000
1		3	10	Harped		
	Left					0.0000
	Right					0.0000
1		3	11	Harped		
	Left					0.0000
	Right					0.0000
1		4	1	Harped		
	Left					0.0000
	Right					0.0000
1		4	2	Harped		
	Left					0.0000
	Right					0.0000
1		4	3	Harped		
	Left					0.0000
	Right					0.0000
1		4	4	Harped		
	Left					0.0000
	Right					0.0000
1		4	5	Harped		
	Left	22	1		62.88	0.0000
	Right	22	1		62.88	0.0000
1		4	6	Harped		
	Left	22	2		62.88	0.0000
	Right	22	2		62.88	0.0000
1		4	7	Harped		
	Left	22	3		62.88	0.0000
	Right	22	3		62.88	0.0000
1		4	8	Harped		
	Left					0.0000
	Right					0.0000
1		4	9	Harped		
	Left					0.0000
	Right					0.0000
1		4	10	Harped		
	Left					0.0000
	Right					0.0000
1		4	11	Harped		
	Left					0.0000
	Right					0.0000
1		5	1	Harped		
	Left					0.0000
	Right					0.0000
1		5	2	Harped		
	Left					0.0000
	Right					0.0000
1		5	3	Harped		
	Left					0.0000
	Right					0.0000
1		5	4	Harped		
	Left	23	1		62.88	0.0000
	Right	23	1		62.88	0.0000
1		5	5	Harped		
	Left	23	2		62.88	0.0000
	Right	23	2		62.88	0.0000
1		5	6	Harped		
	Left	23	3		62.88	0.0000
	Right	23	3		62.88	0.0000
1		5	7	Harped		
	Left					0.0000
	Right					0.0000
1		5	8	Harped		
	Left					0.0000
	Right					0.0000
1		5	9	Harped		
	Left					0.0000
	Right					0.0000
1		6	1	Harped		
	Left					0.0000
	Right					0.0000
1		6	2	Harped		
	Left	24	1		62.88	0.0000
	Right	24	1		62.88	0.0000
1		6	3	Harped		
	Left	24	2		62.88	0.0000
	Right	24	2		62.88	0.0000
1		6	4	Harped		
	Left	24	3		62.88	0.0000
	Right	24	3		62.88	0.0000
1		6	5	Harped		
	Left					0.0000
	Right					0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	(ft)	(in)	(in)	(in)	(in)
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	103.5000	103.5000

Haunch Profile

Distance (ft)	Length (ft)	Z1 (in)	Z2 (in)	Y1 (in)	Y3 (in)
0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance (ft)	Number Spaces	Spacing (in)	Extends into Deck
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT5

Link with: None
Description:

Existing: PSC Bulb Tee #5 -
Current: PSC Bulb Tee #5 -
Number of Spans: 1

Span Number	Span Length (ft)
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: (lb/ft)

Member Loads

Member Loads - Settlement

Support Number	Horizontal (in)	Vertical (in)	Rotational (Radians)	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation (kip/ft)	Y Translation (kip/ft)	Z Rotation (kip-in/rad)	Override Computed Z Rotation
1				
2				

Member Alternative PSC Bulb Tee #5

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: (kip/ft)
Additional Self Load %: (%)
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:

Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials
Deck concrete: QSC2 - 4500psi
Deck reinforcement: Grade 60 EC
Beam concrete: PSC 11.0 ksi
Beam reinforcement: Grade 60 EC
Stirrup reinforcemt: Grade 60 EC
Prestressing strand: 0.6" (7W-270) LR

Impact
Standard Impact Factor
Type: Standard - AASHTO
LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 *(%)*
All other limit states: 33.0 *(%)*

Live Load Distribution
Standard

D i s t r i b u t i o n F a c t o r (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.259	1.319	1.259	0.200
Multi-Lane	1.602	1.865	1.602	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.482	0.714
0.00	13.81	Shear	0.733	0.896
13.81	110.46	Shear	0.712	0.871
124.27	13.81	Shear	0.733	0.896
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time
Deck curing method:
Deck drying time: *(Days)*
Consider deck differential shrinkage loads:
Beam Curing method:
Curing time: *(Days)*
Service life: 75.00 *(Years)*
Analysis time: *(Years)*
Composite time: *(Days)*
Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance *(ft)*	Length *(ft)*
PSC Properties	1	0.000	139.74

Slab Interface
Deck interface type: Intentionally Roughened
Interface width: *(in)*
Deck cohesion factor: 0.280 *(ksi)*
Deck friction factor: 1.000

Continuity Diaphragm

Span No.	Material	Left Support Distance	Bar Count	Bar Size	Material	Right Support Distance
	Bar	Bar				

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance *(ft)*	Debond Distance *(in)*	Harp Curvature *(in)*
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000

1		3	7	Harped		
	Left	21	3		62.88	0.0000
	Right	21	3		62.88	0.0000
1		3	8	Harped		
	Left					0.0000
	Right					0.0000
1		3	9	Harped		
	Left					0.0000
	Right					0.0000
1		3	10	Harped		
	Left					0.0000
	Right					0.0000
1		3	11	Harped		
	Left					0.0000
	Right					0.0000
1		4	1	Harped		
	Left					0.0000
	Right					0.0000
1		4	2	Harped		
	Left					0.0000
	Right					0.0000
1		4	3	Harped		
	Left					0.0000
	Right					0.0000
1		4	4	Harped		
	Left					0.0000
	Right					0.0000
1		4	5	Harped		
	Left	22	1		62.88	0.0000
	Right	22	1		62.88	0.0000
1		4	6	Harped		
	Left	22	2		62.88	0.0000
	Right	22	2		62.88	0.0000
1		4	7	Harped		
	Left	22	3		62.88	0.0000
	Right	22	3		62.88	0.0000
1		4	8	Harped		
	Left					0.0000
	Right					0.0000
1		4	9	Harped		
	Left					0.0000
	Right					0.0000
1		4	10	Harped		
	Left					0.0000
	Right					0.0000
1		4	11	Harped		
	Left					0.0000
	Right					0.0000
1		5	1	Harped		
	Left					0.0000
	Right					0.0000
1		5	2	Harped		
	Left					0.0000
	Right					0.0000
1		5	3	Harped		
	Left					0.0000
	Right					0.0000
1		5	4	Harped		
	Left	23	1		62.88	0.0000
	Right	23	1		62.88	0.0000
1		5	5	Harped		
	Left	23	2		62.88	0.0000
	Right	23	2		62.88	0.0000
1		5	6	Harped		
	Left	23	3		62.88	0.0000
	Right	23	3		62.88	0.0000
1		5	7	Harped		
	Left					0.0000
	Right					0.0000
1		5	8	Harped		
	Left					0.0000
	Right					0.0000
1		5	9	Harped		
	Left					0.0000
	Right					0.0000
1		6	1	Harped		
	Left					0.0000
	Right					0.0000
1		6	2	Harped		
	Left	24	1		62.88	0.0000
	Right	24	1		62.88	0.0000
1		6	3	Harped		
	Left	24	2		62.88	0.0000
	Right	24	2		62.88	0.0000
1		6	4	Harped		
	Left	24	3		62.88	0.0000
	Right	24	3		62.88	0.0000
1		6	5	Harped		
	Left					0.0000
	Right					0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00	138.07		7.5000	105.7500	105.7500

7.50...

Haunch Profile

Distance (ft)	Length (ft)	Z1 (in)	Z2 (in)	Y1 (in)	Y3 (in)
0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance (ft)	Number Spaces	Spacing (in)	Extends into Deck
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT6

Link with: None
Description:

Existing: PSC Bulb Tee #6 -
Current: PSC Bulb Tee #6 -
Number of Spans: 1

Span Number	Span Length (ft)
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: (lb/ft)

Member Loads

Member Loads - Settlement

Support	Horizontal	Vertical	Rotational	Load Case Name

Number	(in)	(in)	(Radians)
1			
2			

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation (kip/ft)	Y Translation (kip/ft)	Z Rotation (kip-in/rad)	Override Computed Z Rotation
1				
2				

Member Alternative PSC Bulb Tee #6

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: (kip/ft)
Additional Self Load %: (%)
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:

Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials

Deck concrete:	QSC2 - 4500psi
Deck reinforcement:	Grade 60 EC
Beam concrete:	PSC 11.0 ksi
Beam reinforcement:	Grade 60 EC
Stirrup reinforcemt:	Grade 60 EC
Prestressing strand:	0.6" (7W-270) LR

Impact
Standard Impact Factor
Type: Standard - AASHTO
LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 *(%)*
All other limit states: 33.0 *(%)*

Live Load Distribution
Standard

D i s t r i b u t i o n F a c t o r (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.259	1.319	1.259	0.200
Multi-Lane	1.602	1.865	1.602	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.482	0.714
0.00	13.81	Shear	0.733	0.896
13.81	110.46	Shear	0.712	0.871
124.27	13.81	Shear	0.733	0.896
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time
Deck curing method:
Deck drying time: *(Days)*
Consider deck differential shrinkage loads:
Beam Curing method:
Curing time: *(Days)*
Service life: 75.00 *(Years)*
Analysis time: *(Years)*
Composite time: *(Days)*
Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance *(ft)*	Length *(ft)*
PSC Properties	1	0.000	139.74

Slab Interface
Deck interface type: Intentionally Roughened
Interface width: *(in)*
Deck cohesion factor: 0.280 *(ksi)*
Deck friction factor: 1.000

Continuity Diaphragm

Span	Material	Left Support Distance	Bar	Bar	Right Support Material	Right Support Distance
	Bar	Bar				

No.					Count	Size	Count	Size

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance *(ft)*	Debond Distance *(in)*	Harp Curvature *(in)*
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000

	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			
	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000
1		4	1	Harped			
	Left						0.0000
	Right						0.0000
1		4	2	Harped			
	Left						0.0000
	Right						0.0000
1		4	3	Harped			
	Left						0.0000
	Right						0.0000
1		4	4	Harped			
	Left						0.0000
	Right						0.0000
1		4	5	Harped			
	Left	22	1		62.88		0.0000
	Right	22	1		62.88		0.0000
1		4	6	Harped			
	Left	22	2		62.88		0.0000
	Right	22	2		62.88		0.0000
1		4	7	Harped			
	Left	22	3		62.88		0.0000
	Right	22	3		62.88		0.0000
1		4	8	Harped			
	Left						0.0000
	Right						0.0000
1		4	9	Harped			
	Left						0.0000
	Right						0.0000
1		4	10	Harped			
	Left						0.0000
	Right						0.0000
1		4	11	Harped			
	Left						0.0000
	Right						0.0000
1		5	1	Harped			
	Left						0.0000
	Right						0.0000
1		5	2	Harped			
	Left						0.0000
	Right						0.0000
1		5	3	Harped			
	Left						0.0000
	Right						0.0000
1		5	4	Harped			
	Left	23	1		62.88		0.0000
	Right	23	1		62.88		0.0000
1		5	5	Harped			
	Left	23	2		62.88		0.0000
	Right	23	2		62.88		0.0000
1		5	6	Harped			
	Left	23	3		62.88		0.0000
	Right	23	3		62.88		0.0000
1		5	7	Harped			
	Left						0.0000
	Right						0.0000
1		5	8	Harped			
	Left						0.0000
	Right						0.0000
1		5	9	Harped			
	Left						0.0000
	Right						0.0000
1		6	1	Harped			
	Left						0.0000
	Right						0.0000
1		6	2	Harped			
	Left	24	1		62.88		0.0000
	Right	24	1		62.88		0.0000
1		6	3	Harped			
	Left	24	2		62.88		0.0000
	Right	24	2		62.88		0.0000
1		6	4	Harped			
	Left	24	3		62.88		0.0000
	Right	24	3		62.88		0.0000
1		6	5	Harped			
	Left						0.0000
	Right						0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	105.7500	105.7500

Haunch Profile

Distance	Length	Z1	Z2	Y1	Y3
(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*

0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance (ft)	Number Spaces	Spacing (in)	Extends into Deck
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT7

Link with: None
Description:

Existing: PSC Bulb Tee #7 -
Current: PSC Bulb Tee #7 -
Number of Spans: 1

Span Number	Span Length (ft)
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal (in)	Vertical (in)	Rotational (Radians)	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation (kip/ft)	Y Translation (kip/ft)	Z Rotation (kip-in/rad)	Override Computed Z Rotation
1				
2				

Member Alternative PSC Bulb Tee #7

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials

Deck concrete:	QSC2 - 4500psi
Deck reinforcement:	Grade 60 EC
Beam concrete:	PSC 11.0 ksi
Beam reinforcement:	Grade 60 EC
Stirrup reinforcemt:	Grade 60 EC
Prestressing strand:	0.6" (7W-270) LR

Impact
Standard Impact Factor
Type: Standard - AASHTO
LRFD Dynamic Load Allowance
Fatigue and fracture limit states: 15.0 *(%)*
All other limit states: 33.0 *(%)*

Live Load Distribution
Standard

Distribution Factor (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.259	1.319	1.259	0.200
Multi-Lane	1.602	1.865	1.602	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.482	0.714
0.00	13.81	Shear	0.733	0.896
13.81	110.46	Shear	0.712	0.871
124.27	13.81	Shear	0.733	0.896
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time

Deck curing method:
Deck drying time: *(Days)*
Consider deck differential shrinkage loads:
Beam Curing method:
Curing time: *(Days)*
Service life: 75.00 *(Years)*
Analysis time: *(Years)*
Composite time: *(Days)*
Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance *(ft)*	Length *(ft)*
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width: *(in)*	
Deck cohesion factor:	0.280 *(ksi)*
Deck friction factor:	1.000

Continuity Diaphragm

Span No.	Material	Left Support Distance	Bar Count	Bar Size	Right Support Material	Right Support Distance	Bar Count	Bar Size

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance *(ft)*	Debond Distance *(in)*	Harp Curvature *(in)*
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000
	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			

	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000
1		4	1	Harped			
	Left						0.0000
	Right						0.0000
1		4	2	Harped			
	Left						0.0000
	Right						0.0000
1		4	3	Harped			
	Left						0.0000
	Right						0.0000
1		4	4	Harped			
	Left						0.0000
	Right						0.0000
1		4	5	Harped			
	Left	22	1		62.88		0.0000
	Right	22	1		62.88		0.0000
1		4	6	Harped			
	Left	22	2		62.88		0.0000
	Right	22	2		62.88		0.0000
1		4	7	Harped			
	Left	22	3		62.88		0.0000
	Right	22	3		62.88		0.0000
1		4	8	Harped			
	Left						0.0000
	Right						0.0000
1		4	9	Harped			
	Left						0.0000
	Right						0.0000
1		4	10	Harped			
	Left						0.0000
	Right						0.0000
1		4	11	Harped			
	Left						0.0000
	Right						0.0000
1		5	1	Harped			
	Left						0.0000
	Right						0.0000
1		5	2	Harped			
	Left						0.0000
	Right						0.0000
1		5	3	Harped			
	Left						0.0000
	Right						0.0000
1		5	4	Harped			
	Left	23	1		62.88		0.0000
	Right	23	1		62.88		0.0000
1		5	5	Harped			
	Left	23	2		62.88		0.0000
	Right	23	2		62.88		0.0000
1		5	6	Harped			
	Left	23	3		62.88		0.0000
	Right	23	3		62.88		0.0000
1		5	7	Harped			
	Left						0.0000
	Right						0.0000
1		5	8	Harped			
	Left						0.0000
	Right						0.0000
1		5	9	Harped			
	Left						0.0000
	Right						0.0000
1		6	1	Harped			
	Left						0.0000
	Right						0.0000
1		6	2	Harped			
	Left	24	1		62.88		0.0000
	Right	24	1		62.88		0.0000
1		6	3	Harped			
	Left	24	2		62.88		0.0000
	Right	24	2		62.88		0.0000
1		6	4	Harped			
	Left	24	3		62.88		0.0000
	Right	24	3		62.88		0.0000
1		6	5	Harped			
	Left						0.0000
	Right						0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	105.7500	105.7500

Haunch Profile

Distance	Length	Z1	Z2	Y1	Y3
(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear	Span	Start	Number	Spacing	Extends into

Reinforcement	No	Distance (ft)	Spaces	(in)	Deck
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT8

Link with: None
Description:

Existing: PSC Bulb Tee #8 -
Current: PSC Bulb Tee #8 -
Number of Spans: 1

Span Number	Span Length (ft)
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal (in)	Vertical (in)	Rotational (Radians)	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation (kip/ft)	Y Translation (kip/ft)	Z Rotation (kip-in/rad)	Override Computed
1				Z Rotation
2				

Member Alternative PSC Bulb Tee #8

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials

Deck concrete:	QSC2 - 4500psi
Deck reinforcement:	Grade 60 EC
Beam concrete:	PSC 11.0 ksi
Beam reinforcement:	Grade 60 EC
Stirrup reinforcemt:	Grade 60 EC
Prestressing strand:	0.6" (7W-270) LR

Impact

Standard Impact Factor

Type: Standard - AASHTO

LRFD Dynamic Load Allowance

Fatigue and fracture limit states: 15.0 *(%)*

All other limit states: 33.0 *(%)*

Live Load Distribution

Standard

Distribution Factor (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.259	1.319	1.259	0.200
Multi-Lane	1.602	1.865	1.602	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.482	0.714
0.00	13.81	Shear	0.733	0.896
13.81	110.46	Shear	0.712	0.871
124.27	13.81	Shear	0.733	0.896
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time

Deck curing method:

Deck drying time: *(Days)*

Consider deck differential shrinkage loads:

Beam Curing method:

Curing time: *(Days)*

Service life: 75.00 *(Years)*

Analysis time: *(Years)*

Composite time: *(Days)*

Continuous time: *(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance *(ft)*	Length *(ft)*
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width:	*(in)*
Deck cohesion factor:	0.280 *(ksi)*
Deck friction factor:	1.000

Continuity Diaphragm

Span	Material	Left Support Distance	Bar Count	Bar Size	Right Support Material	Right Support Distance
No.	Bar	Bar				

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance	Debond Distance	Harp Curvature

					(ft)	*(in)*	*(in)*
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000
	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			
	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000

1		4	1	Harped		
	Left					0.0000
	Right					0.0000
1		4	2	Harped		
	Left					0.0000
	Right					0.0000
1		4	3	Harped		
	Left					0.0000
	Right					0.0000
1		4	4	Harped		
	Left					0.0000
	Right					0.0000
1		4	5	Harped		
	Left	22	1		62.88	0.0000
	Right	22	1		62.88	0.0000
1		4	6	Harped		
	Left	22	2		62.88	0.0000
	Right	22	2		62.88	0.0000
1		4	7	Harped		
	Left	22	3		62.88	0.0000
	Right	22	3		62.88	0.0000
1		4	8	Harped		
	Left					0.0000
	Right					0.0000
1		4	9	Harped		
	Left					0.0000
	Right					0.0000
1		4	10	Harped		
	Left					0.0000
	Right					0.0000
1		4	11	Harped		
	Left					0.0000
	Right					0.0000
1		5	1	Harped		
	Left					0.0000
	Right					0.0000
1		5	2	Harped		
	Left					0.0000
	Right					0.0000
1		5	3	Harped		
	Left					0.0000
	Right					0.0000
1		5	4	Harped		
	Left	23	1		62.88	0.0000
	Right	23	1		62.88	0.0000
1		5	5	Harped		
	Left	23	2		62.88	0.0000
	Right	23	2		62.88	0.0000
1		5	6	Harped		
	Left	23	3		62.88	0.0000
	Right	23	3		62.88	0.0000
1		5	7	Harped		
	Left					0.0000
	Right					0.0000
1		5	8	Harped		
	Left					0.0000
	Right					0.0000
1		5	9	Harped		
	Left					0.0000
	Right					0.0000
1		6	1	Harped		
	Left					0.0000
	Right					0.0000
1		6	2	Harped		
	Left	24	1		62.88	0.0000
	Right	24	1		62.88	0.0000
1		6	3	Harped		
	Left	24	2		62.88	0.0000
	Right	24	2		62.88	0.0000
1		6	4	Harped		
	Left	24	3		62.88	0.0000
	Right	24	3		62.88	0.0000
1		6	5	Harped		
	Left					0.0000
	Right					0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	105.7500	105.7500

Haunch Profile

Distance	Length	Z1	Z2	Y1	Y3
(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Extends into Deck
		(ft)		*(in)*	
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE

401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member PSC BT9

Link with: None
Description:

Existing: PSC Bulb Tee #9 -
Current: PSC Bulb Tee #9 -
Number of Spans: 1

Span Number	Span Length *(ft)*
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal *(in)*	Vertical *(in)*	Rotational *(Radians)*	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation *(kip/ft)*	Y Translation *(kip/ft)*	Z Rotation *(kip-in/rad)*	Override Computed Z Rotation
1				

2

Member Alternative PSC Bulb Tee #9

Description:
Description
Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		

PS Moment Cap.	
Reinforcement	
Bearing Stiffener	
Stirrup	
Timber	NA

Default Materials

Deck concrete:	QSC2 - 4500psi
Deck reinforcement:	Grade 60 EC
Beam concrete:	PSC 11.0 ksi
Beam reinforcement:	Grade 60 EC
Stirrup reinforcemt:	Grade 60 EC
Prestressing strand:	0.6" (7W-270) LR

Impact

Standard Impact Factor

Type:	Standard - AASHTO

LRFD Dynamic Load Allowance

Fatigue and fracture limit states:	15.0 *(%)*
All other limit states:	33.0 *(%)*

Live Load Distribution

Standard

Distribution Factor (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.259	1.319	1.259	0.200
Multi-Lane	1.602	1.865	1.602	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.482	0.714
0.00	13.81	Shear	0.733	0.896
13.81	110.46	Shear	0.712	0.871
124.27	13.81	Shear	0.733	0.896
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time

Deck curing method:	
Deck drying time:	*(Days)*
Consider deck differential shrinkage loads:	
Beam Curing method:	
Curing time:	*(Days)*
Service life:	75.00 *(Years)*
Analysis time:	*(Years)*
Composite time:	*(Days)*
Continuous time:	*(Days)*

Beam Details

Span Details

Span	Prestress Shape Use	Concrete Material n	Prestress Properties	Left Projection *(in)*	Right Projection *(in)*
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties	10.000...	

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance *(ft)*	Length *(ft)*
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width:	*(in)*
Deck cohesion factor:	0.280 *(ksi)*
Deck friction factor:	1.000

Continuity Diaphragm

Span	Material	Left Support Distance	Bar Count	Bar Size	Right Support Material	Right Support Distance
No.	Bar	Bar			Bar	

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance *(ft)*	Debond Distance *(in)*	Harp Curvature *(in)*
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			

	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000
1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000
	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			
	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000
1		4	1	Harped			
	Left						0.0000
	Right						0.0000
1		4	2	Harped			
	Left						0.0000

	Right					0.0000
1		4	3	Harped		
	Left					0.0000
	Right					0.0000
1		4	4	Harped		
	Left					0.0000
	Right					0.0000
1		4	5	Harped		
	Left	22	1		62.88	0.0000
	Right	22	1		62.88	0.0000
1		4	6	Harped		
	Left	22	2		62.88	0.0000
	Right	22	2		62.88	0.0000
1		4	7	Harped		
	Left	22	3		62.88	0.0000
	Right	22	3		62.88	0.0000
1		4	8	Harped		
	Left					0.0000
	Right					0.0000
1		4	9	Harped		
	Left					0.0000
	Right					0.0000
1		4	10	Harped		
	Left					0.0000
	Right					0.0000
1		4	11	Harped		
	Left					0.0000
	Right					0.0000
1		5	1	Harped		
	Left					0.0000
	Right					0.0000
1		5	2	Harped		
	Left					0.0000
	Right					0.0000
1		5	3	Harped		
	Left					0.0000
	Right					0.0000
1		5	4	Harped		
	Left	23	1		62.88	0.0000
	Right	23	1		62.88	0.0000
1		5	5	Harped		
	Left	23	2		62.88	0.0000
	Right	23	2		62.88	0.0000
1		5	6	Harped		
	Left	23	3		62.88	0.0000
	Right	23	3		62.88	0.0000
1		5	7	Harped		
	Left					0.0000
	Right					0.0000
1		5	8	Harped		
	Left					0.0000
	Right					0.0000
1		5	9	Harped		
	Left					0.0000
	Right					0.0000
1		6	1	Harped		
	Left					0.0000
	Right					0.0000
1		6	2	Harped		
	Left	24	1		62.88	0.0000
	Right	24	1		62.88	0.0000
1		6	3	Harped		
	Left	24	2		62.88	0.0000
	Right	24	2		62.88	0.0000
1		6	4	Harped		
	Left	24	3		62.88	0.0000
	Right	24	3		62.88	0.0000
1		6	5	Harped		
	Left					0.0000
	Right					0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	105.7500	105.7500

Haunch Profile

Distance	Length	Z1	Z2	Y1	Y3
(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
0.00	138.07	0.0000	0.0000	2.0000	0.0000

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Extends into Deck
		(ft)		*(in)*	
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE

401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length

Member **PSC BT10**

Link with: None
Description:

Existing: PSC Bulb Tee #10 -
Current: PSC Bulb Tee #10 -
Number of Spans: 1

Span Number	Span Length *(ft)*
1	138.073000

Support	Frame Connection
1	
2	

Pedestrian load: *(lb/ft)*

Member Loads

Member Loads - Settlement

Support Number	Horizontal *(in)*	Vertical *(in)*	Rotational *(Radians)*	Load Case Name
1				
2				

Support Constraints

General

Support Number	Support Type	X Translation	Y Translation	Z Rotation
1	Pinned	Fixed	Fixed	Free
2	Roller	Free	Fixed	Free

Elastic

Support Number	X Translation *(kip/ft)*	Y Translation *(kip/ft)*	Z Rotation *(kip-in/rad)*	Override Computed Z Rotation
1				
2				

Member Alternative **PSC Bulb Tee #10**

Description:
Description

Material Type: Prestressed Concrete
Girder Type: PS Precast I
Member units: US Customary
Girder property input method: Schedule based
Additional Self Load: *(kip/ft)*
Additional Self Load %: *(%)*
Analysis Module
Analysis Method: ASD
Analysis Module: AASHTO ASD
Analysis Module Component:
Properties:

Analysis Method: LFD
Analysis Module: AASHTO LFD
Analysis Module Component:
Properties:

Analysis Method: LRFD
Analysis Module: AASHTO LRFD
Analysis Module Component:
Properties:

Analysis Method: LRFR
Analysis Module: AASHTO LRFR
Analysis Module Component:
Properties:

Analysis Method: Distribution Factors
Analysis Module: Virtis Dist Fact
Analysis Module Component:
Properties:

Default rating method: LFD
LRFD shear computation method: General Procedure

Factors
Factor Override
LRFD:
LFD:
ASD Factors

	Inventory	Operating
Structural steel		
Concrete		
PS Concrete Comp.		
PS Concrete Tens.		
PS Moment Cap.		
Reinforcement		
Bearing Stiffener		
Stirrup		
Timber	NA	

Default Materials

Deck concrete:	QSC2 - 4500psi
Deck reinforcement:	Grade 60 EC
Beam concrete:	PSC 11.0 ksi
Beam reinforcement:	Grade 60 EC
Stirrup reinforcemt:	Grade 60 EC
Prestressing strand:	0.6" (7W-270) LR

Impact

Standard Impact Factor

Type:	Standard - AASHTO

LRFD Dynamic Load Allowance

Fatigue and fracture limit states:	15.0 *(%)*
All other limit states:	33.0 *(%)*

Live Load Distribution

Standard

Distribution Factor (Wheels)

Lanes Loaded	Shear	Shear at Supports	Moment	Deflection
1 Lane	1.268	1.268	1.268	0.200
Multi-Lane	1.268	1.268	1.268	0.900

LRFD

Distance *(ft)*	Length *(ft)*	Type	1 Lane	Multi-Lane
0.00	138.07	Moment	0.761	0.761
0.00	13.81	Shear	0.783	0.783
13.81	110.46	Shear	0.761	0.761
124.27	13.81	Shear	0.783	0.783
0.00	138.07	Deflectio...	0.120	0.390

Shrinkage/Time

Deck curing method:	
Deck drying time: *(Days)*	
Consider deck differential shrinkage loads:	
Beam Curing method:	
Curing time: *(Days)*	
Service life:	75.00 *(Years)*
Analysis time: *(Years)*	
Composite time: *(Days)*	
Continuous time: *(Days)*	

Beam Details

Span Details

Span	Prestress Shape	Concrete Material	Prestress Properties	Left	Right
	Use Projection	n Creep			Projection *(in)* *(in)*
1	Modified AASH... 10.000...	PSC 11.0 ksi TRUE	PS Properties		10.000...

Continuous Support Details

Support Number	Support Distance on Left, SL *(in)*	Support Distance on Right, SR *(in)*
1		
2		

Stress Limit Ranges

Stress Limit	Span	Start Distance *(ft)*	Length *(ft)*
PSC Properties	1	0.000	139.74

Slab Interface

Deck interface type:	Intentionally Roughened
Interface width: *(in)*	
Deck cohesion factor:	0.280 *(ksi)*
Deck friction factor:	1.000

Continuity Diaphragm

Span	Material	Left Support Distance	Bar	Bar	Material	Right Support Distance
	Bar No.	Bar	Count	Size	Count	Size

Prestressing Force Information

Strand Layout

Span	Pos.	Row No.	Col. No.	Config. Type	Harp Distance *(ft)*	Debond Distance *(in)*	Harp Curvature *(in)*
1		1	1	Harped			
	Left						0.0000
	Right						0.0000
1		1	2	Harped			
	Left						0.0000
	Right						0.0000
1		1	3	Harped			
	Left						0.0000
	Right						0.0000

1		1	4	Harped			
	Left						0.0000
	Right						0.0000
1		1	5	Harped			
	Left						0.0000
	Right						0.0000
1		1	6	Harped			
	Left						0.0000
	Right						0.0000
1		1	7	Harped			
	Left						0.0000
	Right						0.0000
1		1	8	Harped			
	Left						0.0000
	Right						0.0000
1		1	9	Harped			
	Left						0.0000
	Right						0.0000
1		1	10	Harped			
	Left						0.0000
	Right						0.0000
1		1	11	Harped			
	Left						0.0000
	Right						0.0000
1		2	1	Harped			
	Left						0.0000
	Right						0.0000
1		2	2	Harped			
	Left						0.0000
	Right						0.0000
1		2	3	Harped			
	Left						0.0000
	Right						0.0000
1		2	4	Harped			
	Left						0.0000
	Right						0.0000
1		2	5	Harped			
	Left	20	1		62.88		0.0000
	Right	20	1		62.88		0.0000
1		2	6	Harped			
	Left	20	2		62.88		0.0000
	Right	20	2		62.88		0.0000
1		2	7	Harped			
	Left	20	3		62.88		0.0000
	Right	20	3		62.88		0.0000
1		2	8	Harped			
	Left						0.0000
	Right						0.0000
1		2	9	Harped			
	Left						0.0000
	Right						0.0000
1		2	10	Harped			
	Left						0.0000
	Right						0.0000
1		2	11	Harped			
	Left						0.0000
	Right						0.0000
1		3	1	Harped			
	Left						0.0000
	Right						0.0000
1		3	2	Harped			
	Left						0.0000
	Right						0.0000
1		3	3	Harped			
	Left						0.0000
	Right						0.0000
1		3	4	Harped			
	Left						0.0000
	Right						0.0000
1		3	5	Harped			
	Left	21	1		62.88		0.0000
	Right	21	1		62.88		0.0000
1		3	6	Harped			
	Left	21	2		62.88		0.0000
	Right	21	2		62.88		0.0000
1		3	7	Harped			
	Left	21	3		62.88		0.0000
	Right	21	3		62.88		0.0000
1		3	8	Harped			
	Left						0.0000
	Right						0.0000
1		3	9	Harped			
	Left						0.0000
	Right						0.0000
1		3	10	Harped			
	Left						0.0000
	Right						0.0000
1		3	11	Harped			
	Left						0.0000
	Right						0.0000
1		4	1	Harped			
	Left						0.0000
	Right						0.0000
1		4	2	Harped			
	Left						0.0000
	Right						0.0000
1		4	3	Harped			
	Left						0.0000
	Right						0.0000
1		4	4	Harped			

	Left					0.0000
	Right					0.0000
1		4	5	Harped		
	Left	22	1		62.88	0.0000
	Right	22	1		62.88	0.0000
1		4	6	Harped		
	Left	22	2		62.88	0.0000
	Right	22	2		62.88	0.0000
1		4	7	Harped		
	Left	22	3		62.88	0.0000
	Right	22	3		62.88	0.0000
1		4	8	Harped		
	Left					0.0000
	Right					0.0000
1		4	9	Harped		
	Left					0.0000
	Right					0.0000
1		4	10	Harped		
	Left					0.0000
	Right					0.0000
1		4	11	Harped		
	Left					0.0000
	Right					0.0000
1		5	1	Harped		
	Left					0.0000
	Right					0.0000
1		5	2	Harped		
	Left					0.0000
	Right					0.0000
1		5	3	Harped		
	Left					0.0000
	Right					0.0000
1		5	4	Harped		
	Left	23	1		62.88	0.0000
	Right	23	1		62.88	0.0000
1		5	5	Harped		
	Left	23	2		62.88	0.0000
	Right	23	2		62.88	0.0000
1		5	6	Harped		
	Left	23	3		62.88	0.0000
	Right	23	3		62.88	0.0000
1		5	7	Harped		
	Left					0.0000
	Right					0.0000
1		5	8	Harped		
	Left					0.0000
	Right					0.0000
1		5	9	Harped		
	Left					0.0000
	Right					0.0000
1		6	1	Harped		
	Left					0.0000
	Right					0.0000
1		6	2	Harped		
	Left	24	1		62.88	0.0000
	Right	24	1		62.88	0.0000
1		6	3	Harped		
	Left	24	2		62.88	0.0000
	Right	24	2		62.88	0.0000
1		6	4	Harped		
	Left	24	3		62.88	0.0000
	Right	24	3		62.88	0.0000
1		6	5	Harped		
	Left					0.0000
	Right					0.0000

Deck Profile

Deck Concrete

Material (LRFD)	Distance n	Length	Total Thickness	Structural Thickness	Effective Width (Std)	Effective Width
	(ft)	*(ft)*	*(in)*	*(in)*	*(in)*	*(in)*
QSC2 - 4500ps...	0.00 7.50...	138.07		7.5000	92.1450	92.1450

Haunch Profile

Distance *(ft)*	Length *(ft)*	Z1 *(in)*	Z2 *(in)*	Z3 *(in)*	Z4 *(in)*	Y1 *(in)*	Y2 *(in)*	Y3 *(in)*
0.00	138.07 0.0000	0.0000	0.0000	0.0000	0.0000	2.0000	0.0000	

Shear Reinforcement Ranges - Vertical

Shear Reinforcement	Span No	Start Distance *(ft)*	Number Spaces	Spacing *(in)*	Extends into Deck
401	1	0.00	1	3.0000	TRUE
401	1	0.25	9	3.0000	TRUE
401	1	2.50	1	6.0000	TRUE
401	1	3.00	1	6.0000	TRUE
401	1	3.50	1	21.0000	TRUE
401	1	5.25	74	20.9443	TRUE
401	1	134.41	1	21.0000	TRUE
401	1	136.16	1	6.0000	TRUE
401	1	136.66	1	6.0000	TRUE
401	1	137.16	9	3.0000	TRUE

Shear Reinforcement Ranges - Horizontal

Shear Reinforcement	Span No	Start Distance	Number Spaces	Spacing	Composite Length