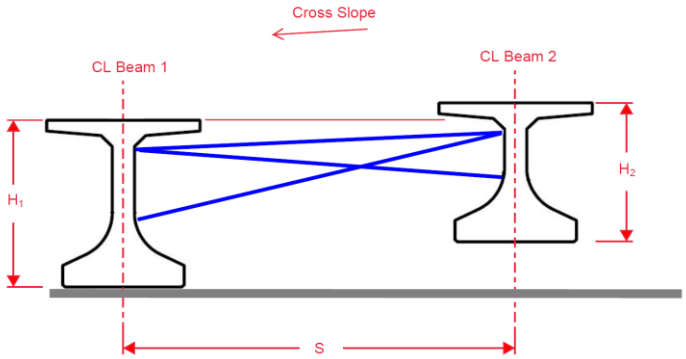
Analysis #4

Bridge 4

A2B ENGINEERING, LLC CONSULTING ENGINEERS	Subject: Girder Bracing Design		
	Comp by: MLS	Date: 09/13/18	Sheet Number: of
	Check by: PRS	Job Number: 135-17-1	



Analysis No. =	4				
Description =	Bridge 4				
Left Girder Height =	48	[in]	Overturning Moment =	50	[ft*kip]
Right Girder Height =	36	[in]	Horizontal Force =	8	[kip]
Girder Spacing =	7	[ft]			
Distance from top of left girder to bracing =	12	[in]	Brace E =	29000	[ksi]
Distance from bot. of left girder to bracing =	12	[in]	Brace A =	2	[in^2]
Distance from bot. of right girder to bracing =	12	[in]	Brace I =	2.85	[in^4]
Distance from bot. of right girder to bracing =	12	[in]			
Cross Slope =	0.02				

Brace Type =	HDPB 5'-9'
Lines of horizontal Bracing per brace line =	1
Lines of diagonal bracing per brace line =	1

	Member		
	1	2	3
Tensile Strength	6.034	6.221	6.556
Max Tension	12.097	11.903	-4.128
Lines Required	3	2	1
Compressive Strength	8.943	6.034	8.118
Max Compression	-2.058	-2.025	-25.105
Lines Required	1	1	4

Lines of bracing required =	4	
Stiffness =	20807	[kip-ft/rad]
Span Length =	150	[ft]
Bracing Point Type =	End Points only	
Empirical Scale Factor =	1	
Pu =	75	[psf]
Pavg =	37.5	[psf]
Beam Weight =	971	[plf]
C0 =	2.213540411	
C =	0.362750973	>1
Check =	NG	