GEOMETRY

	LAY LENGTH (FT)	PERP. SPAN (FT)	RISE (FT)	SKEW HAUNCH (FT)	HAUNCH DEPTH (FT)	ROOF (IN) (avg)	PERP. WALLS (IN.)	SKEW (DEG.)
INPUT:	5.04	32.00	9.25	0.67	0.67	23.00	12.00	0.00

	PERP. LENGTH (FT)	SKEW SPAN (FT)	RISE (FT)	PERP. HAUNCH (FT)	HAUNCH DEPTH (FT)	ROOF (IN) (avg)	SKEW WALLS (IN.)	SKEW (DEG.)
COMPUTED	5.04	32.00	9.25	0.67	0.67	23.00	12.00	0.00

CONCRETE STRENGTH: 7,500 psi = 51.7107 Mpa

LIFTING STRESSES

	BALANCED		ACTUAL
Pick points (measured from wall interior face @ unit centerline):	4.084		4.50000
Center Area - Moment Multipliers:			
Concrete in Center Roof (Half Span) =	136.070		126.740
Concrete in Center Haunch =	0.000		0.000
Total Moment Multiplier in Center Area =	136.070		126.740
		Line A	
Moment =	10.205	K ft	7.582
End Area - Moment Multipliers:			
Concrete in End Roof (Half Span) =	24.772		28.990
End Haunch=	0.859		0.952
Wall=	42.404		46.250
Total Moment Multiplier in End Area =	68.035		76.191
		Line B	
Moment =	-10.205	K ft	-11.429

BALANCED:
End Area (Line B) should be equal to the Center Area (Line A) at the Inflection Point, thus causing the legs to hang plumb.

ACTUAL:
By moving the pick points inside the Inflection Point the legs will hang slightly in from plumb, allowing proper installation & function of the backfill shims. This is done without exceeding the maximum lifting stresses.

MIDSPAN STRESS - ACTUAL:

410.79 psi = f'_r allowable (AASHTO 5.4.2.6)

STRESS = 86.00 psi x 1.50 (Impact) = 129.00 psi (Actual)

129.00 < 410.79 **OK**

LIFTING LOCATION STRESS - ACTUAL:

STRESS = 129.63 psi x 1.50 (Impact) = 194.44 psi (Actual)

194.44 < 410.79 **OK**