# METAL FORM DECK OVERHANG CONDITION

NON-COMPOSITE 1.5C-36 GR. 50 (20 GAGE)

## SECTION PROPERTIES (PER 1 ft WIDTH)

WEIGHT, $w_{self} = 2$ psf

THICKNESS, $t = 0.0359$ in (20 GAGE)

YIELD STRENGTH, $F_y = 50$ ksi

EFFECTIVE MOMENT OF INERTIA, $I_{d+} = 0.217$ in$^4$/ft

EFFECTIVE SECTION MODULUS, $S_{e+} = 0.229$ in$^3$/ft

ALLOWABLE MOMENT, $\frac{M_{n+}}{\Omega} = 571$ lb-ft/ft $\rightarrow f_{allowable} = \frac{571(12\text{ in/ft})}{0.229\text{ in}^3}$

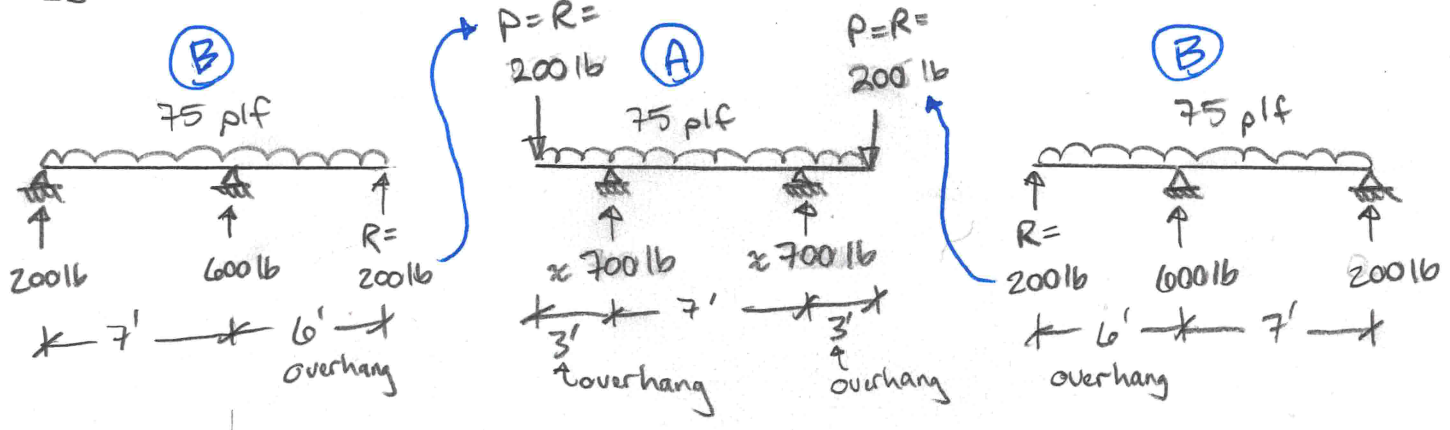
$= M/S$

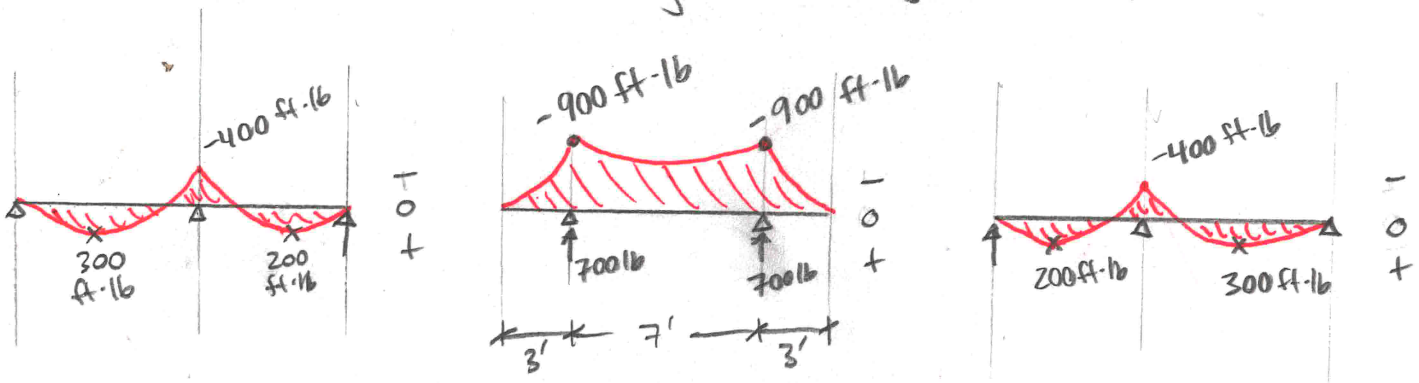
$= f_{allowable} = 30$ ksi

ALLOWABLE SHEAR, $V_n/\Omega = 3207$ lb/ft

## DEMAND FROM RISA: (1 ft STRIP WIDTH)

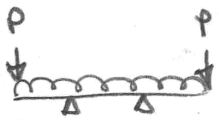
DL = 6" CONC. SLAB = 75psf * 1ft = 75 plf (ASSUMES LL=0)




MOMENT

CHECK (A)




$M = 900$ ft-lb $= 10{,}800$ in-lb

$f_b = \frac{M}{S} = \frac{10{,}800\text{ in-lb/ft}}{0.229\text{ in}^3/\text{ft}} = f_b = 47.2$ ksi

$f_{allowable} = 0.6F_y = 0.6(50\text{ ksi}) = 30\text{ ksi} < 47.2\text{ ksi}$ N.G. XX