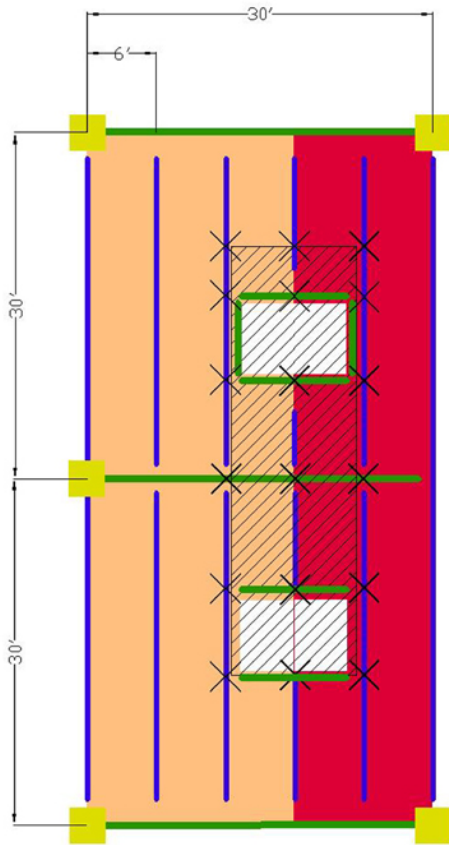

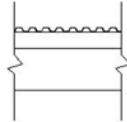

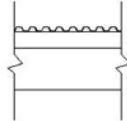


Appendix E: Structural Calculations

Rooftop Unit A1 Structural Bay

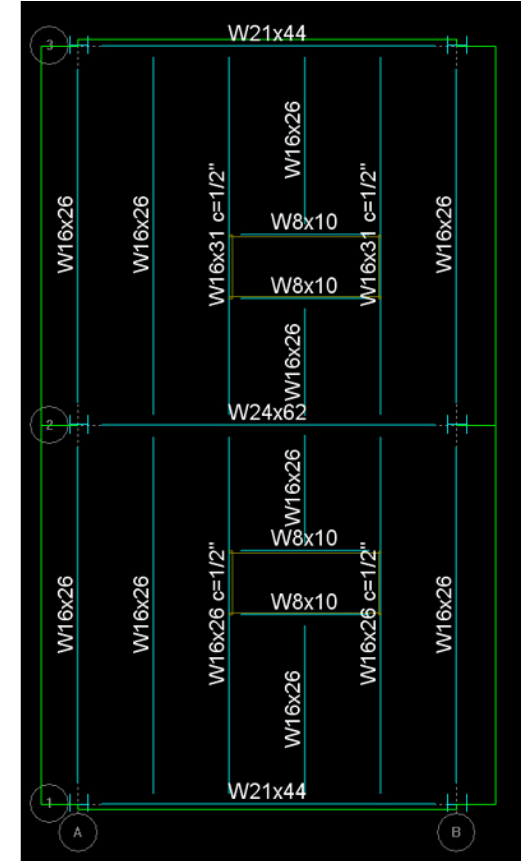




 1.5" x 16 GAUGE DECK
 TOP OF DECK EL. 71'- 1 1/4"
 TOP OF STEEL EL. 70'- 11 3/4"

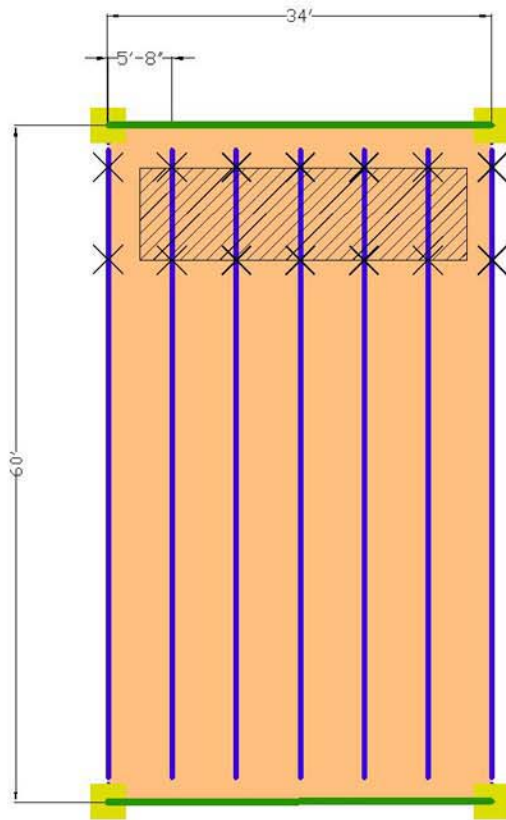


 1.5" x 18 GAUGE DECK
 TOP OF DECK EL. 71'- 1 1/4"
 TOP OF STEEL EL. 70'- 11 3/4"


RTU-2 WEIGHT = 17,800 LBS


X POINT LOADS = 989 LBS (TYP 18)



Jenbacher Engine Structural Bay

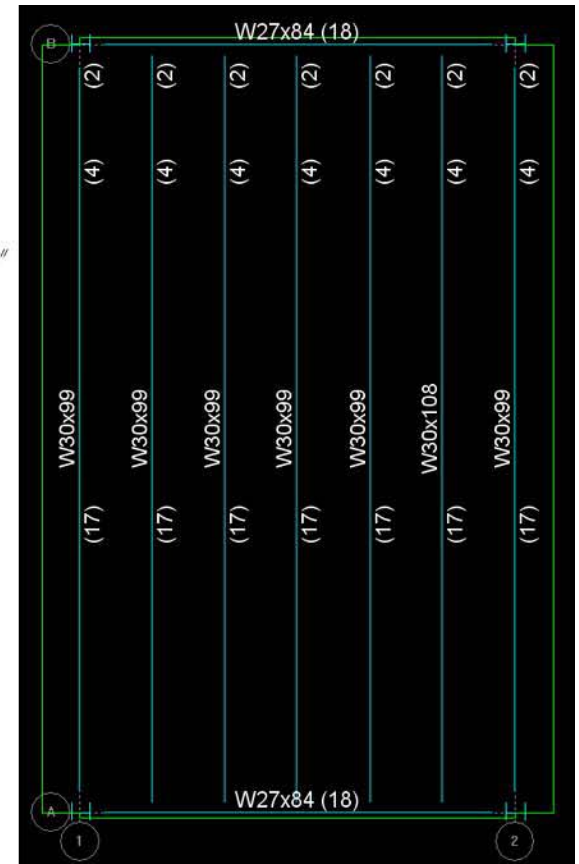


Existing
 1.5" x 16 GAUGE DECK
 TOP OF DECK EL. 71'- 1 1/4"
 TOP OF STEEL EL. 70'- 11 3/4"

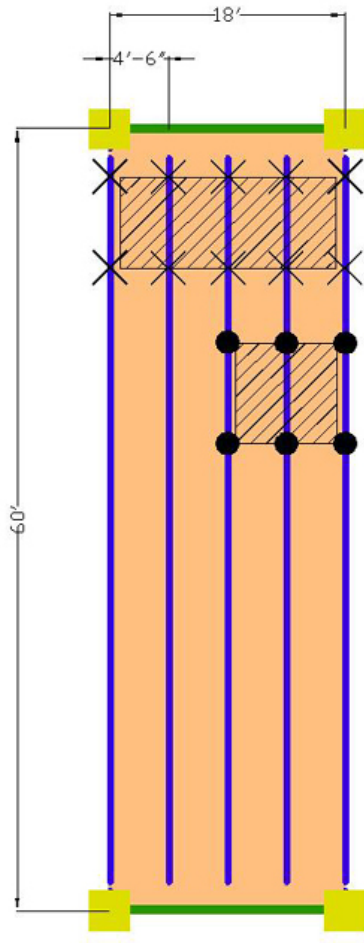
Redesign (Vibration Reduction)
 3" x 18 GAUGE DECK W/ 3-1/4" CONCRETE
 TOP OF DECK EL. 71'- 1 1/4"
 TOP OF STEEL EL. 67'- 9"


ENGINE WEIGHT = 41,350 LBS
 X POINT LOADS = 2,954 LBS (TYP 14)

PISTON STROKE = 0.22m
 PISTON VELOCITY = 11 m/s
 ENGINE OPERATING FREQUENCY = 50 Hz



Absorption Chiller/Heater and Cooling Tower Structural Bay

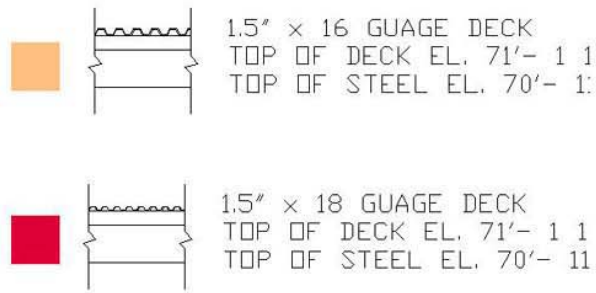
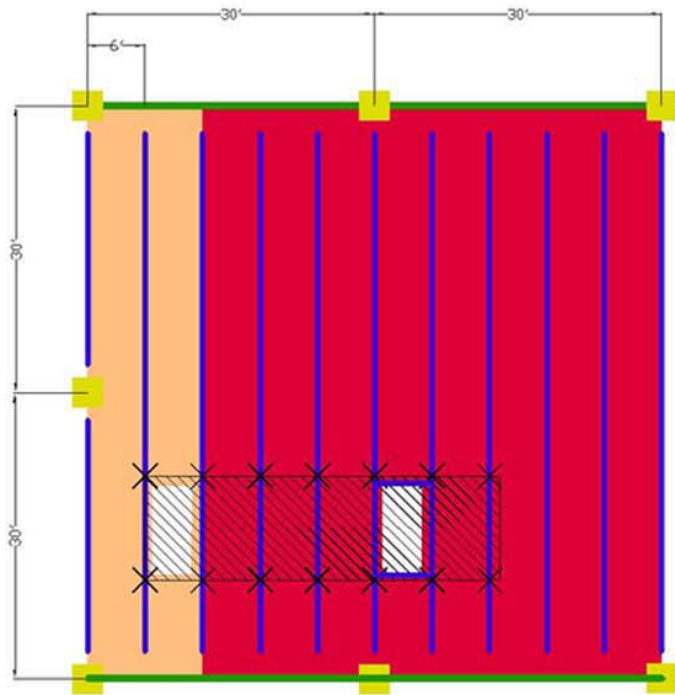




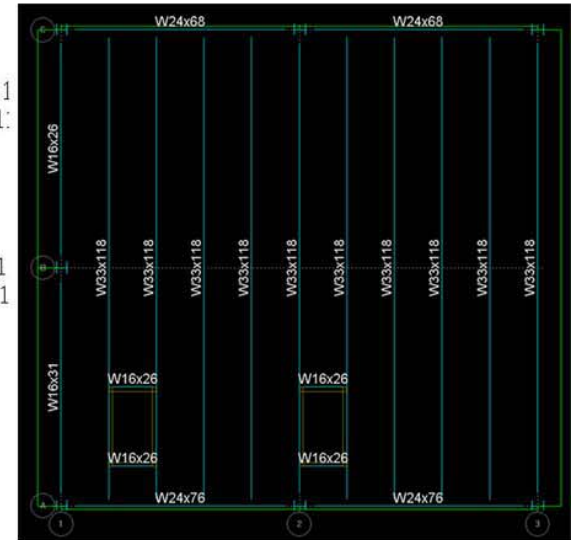
- CHILLER WEIGHT = 24,700 LBS
- COOLING TOWER WEIGHT = 7,500 LBS
- × POINT LOADS = 2,470 LBS (TYP 10)
- POINT LOADS = 1,250 LBS (TYP 6)



Rooftop Unit 2 Structural Bay







RTU-2 WEIGHT = 18,000 LBS
 X POINT LOADS = 1,286 LBS (TYP 14)





Rooftop Units 3 and 4 Structural Bay



- 

 1.5" x 18 GAUGE DECK
 TOP OF DECK EL. 90'-6"
 TOP OF STEEL EL. 90'-4"
- 

 3" x 18 GAUGE DECK W/ 3"-4" LIGHT CONCRETE
 TOP OF DECK EL. 90'-6"
 TOP OF STEEL EL. 90'-4"

RTU-3 WEIGHT = 17,500 LBS
 RTU-4 WEIGHT = 17,300 LBS

-  POINT LOADS = 1,094 LBS (TYP 16)
-  POINT LOADS = 1,081 LBS (TYP 16)

