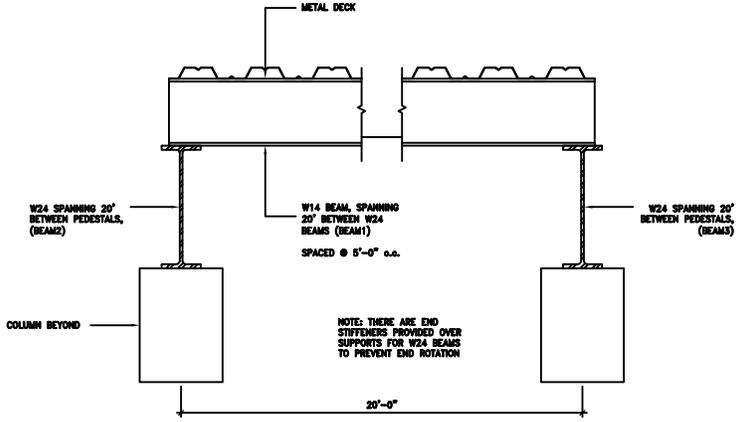


**CASE A**



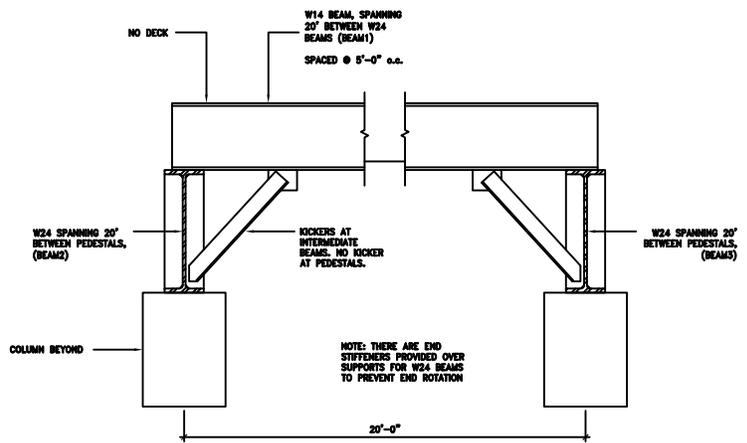
SCENARIO 1: UNBRACED LENGTH IS 5'-0"

THE TOP FLANGE OF W24 WANTS TO DISPLACE/ROTATE DUE TO COMPRESSION, BUT THE DECK SPANNING BETWEEN PEDESTALS WORKS AS A DEEP BEAM. THE BRACING FORCE TRAVELS FROM THE TOP FLANGE OF THE W24 THROUGH THE WEB OF THE W14 INTO THE DECK, WHICH THEN SPANS TO THE SUPPORTS PREVENTING TRANSLATION/ROTATION. THE END SHEARS IN THE DECK ARE TRANSFERRED INTO THE PEDESTAL THROUGH THE STIFFENERS.

SCENARIO 2: UNBRACED LENGTH IS 30'-0", IF NO END STIFFENERS ARE PROVIDED ON W24.

THIS IS BECAUSE THE DECK IS NOT ABLE TO TRANSFER THE SHEAR INTO THE PEDESTAL AND "DOES FOR A RIDE". ALSO, HOWEVER, REQUIRES END STIFFENERS TO PREVENT ROTATION. THIS SCENARIO WOULD NOT APPLY IN A PROPERLY DESIGNED SCHEME.

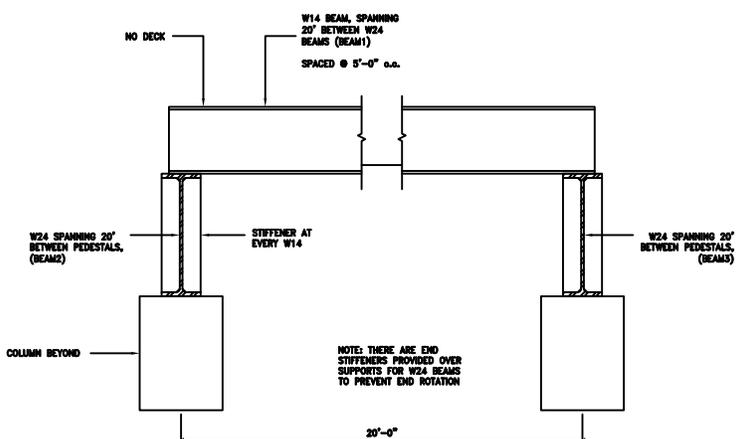
**CASE C**



SCENARIO 1: IS UNBRACED LENGTH IS 5'-0" OR 20'-0"??

ROTATION AND RELATIVE TRANSLATION OF THE BEAMS AT THE LOCATIONS OF KICKERS IS PREVENTED. HOWEVER, CAN THE ENTIRE SYSTEM CAN TRANSLATE BECAUSE RELATIVE DISPLACEMENT BETWEEN SUPPORTS IS NOT PREVENTED.?

**CASE B**



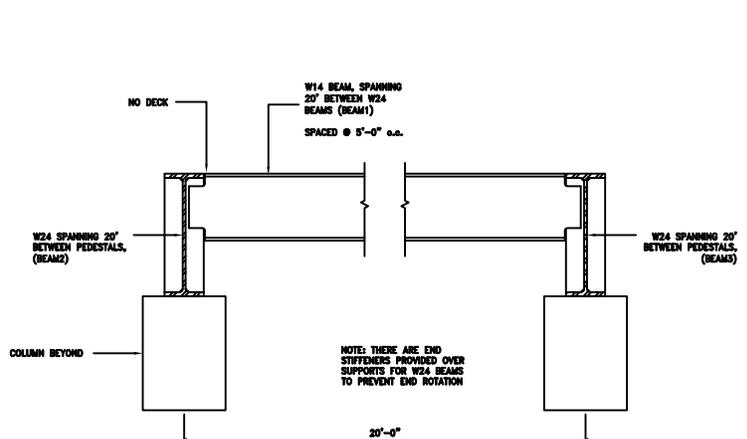
SCENARIO 1: IS UNBRACED LENGTH IS 5'-0" OR 20'-0"?? YOUR THOUGHTS?

THE TOP FLANGE OF W24 WANTS TO DISPLACE/ROTATE RELATIVE TO THE BOTTOM FLANGE DUE TO COMPRESSION.

1. THE STIFFENER TRIES TO PREVENT RELATIVE DISPLACEMENT BETWEEN FLANGES, AND THE W14 PREVENTS THE OVERALL ROTATION.
2. THE OVERALL TRANSLATION IS RESTRAINED BY THE WEAK AXIS BENDING AND TORSIONAL CAPACITY OF THE W24 SPANNING 20' THOUGHTS?

BASED ON THE DISCUSSIONS, IT APPEARS THAT THERE IS NOTHING PREVENTING THE OVERALL LATERAL TRANSLATION OF THE SYSTEM AND THE UNBRACED LENGTH SHOULD BE 20'. SEE BARETIRE'S POST ON 12 May 11 16:57

**CASE D**



SCENARIO 1: IS UNBRACED LENGTH IS 5'-0" OR 20'-0"??