

Jay Lilly Thompson Turner Construction Co. 100 N. Main Street Sumter, SC 29150

RE: EWO – Olympic Steel (S20A0480A)

Mr. Lilly:

Nucor Building Systems has completed an engineering analysis of existing Nucor job #S08A0480A. The EWO included investigating the impacts of updating the building code to IBC 2018. The follow loads are as follows:

Live Load is 20psf reducible.

Wind Speed is 122 MPH, wind exposure is B

Ground Snow is 10 psf, Snow exposure (Ce) is 1.0, Thermal Coefficient (Ct) is 1.0

Occupancy Category II

Building use 3A

Primary and Secondary Collateral load is 5psf

Seismic values: Ss = 0.370 and S1 = 0.125, Site Class C.

This analysis is only for the material that is about to be erected. When and if the future expansion is to occur, an additional engineering investigation will need to be completed.

The following modifications must be made:

- 1) Frame lines 10-18 will require the following reinforcements:
 - a. The column flanges on lines E, J. and P will required cover plates.
 - b. The stiffeners in the fixed base connection will be field cut back to allow the cover plates to extend to the base plate.
 - c. The moment connections above the columns on lines E, J, and P will require bearing stiffener reinforcements.
 - d. (2) Endplates per frame (10 total) will require bolt replacements.
 - e. See pages 3-5, and 10 for the fieldwork required.
- 2) Frame lines 1&3 will require the following reinforcements:
 - a. The column flanges on line N will required cover plates.
 - b. The stiffeners in the fixed base connection will be field cut back to allow the cover plates to extend to the base plate.
 - c. See pages 6-7, and 10 for the field work required.
- 3) Frame lines 5-8 will require the following reinforcements:
 - a. The column flanges on lines E, J. and P will required cover plates.
 - b. The stiffeners in the fixed base connection will be field cut back to allow the cover plates to extend to the base plate.



- c. The moment connections above the columns on lines E, J, and P will require bearing stiffener reinforcements and additional holes will be field drilled into the connection for the attachment of additional bolts.
- d. (2) Endplates per frame (10 total) will require bolt replacements.
- e. See pages 8-10 for the fieldwork required.
- 4) A separate submittal from Vulcraft will be sent at a later date with the investigation results for the roof joist.

Specified plate materials must be F_y=55 ksi. Please contact your project coordinator, Mike Baker, for pricing and schedule if you would like to purchase these materials from Nucor Building Systems.

Please note that all field welding must be performed by AWS qualified welders for the processes and positions indicated in all details used for this EWO. Weld electrodes used for the SMAW (or stick) weld process must be of 70 ksi steel and low hydrogen content.

All dimensions not listed for bolted connections shall meet AISC minimum edge distances and standard bolt gages.

A325 & A490 Bolt tightening requirements:

It is the responsibility of the erector to ensure proper bolt tightness in accordance with applicable regulations. See the RCSC Specification for Structural Joints Using A325 or A490 Bolts or CAN/CSA S16 "Limit States Design of Steel Structures" for more information.

If you have any questions or concerns, please feel free to give me a call at (803) 381-9375.

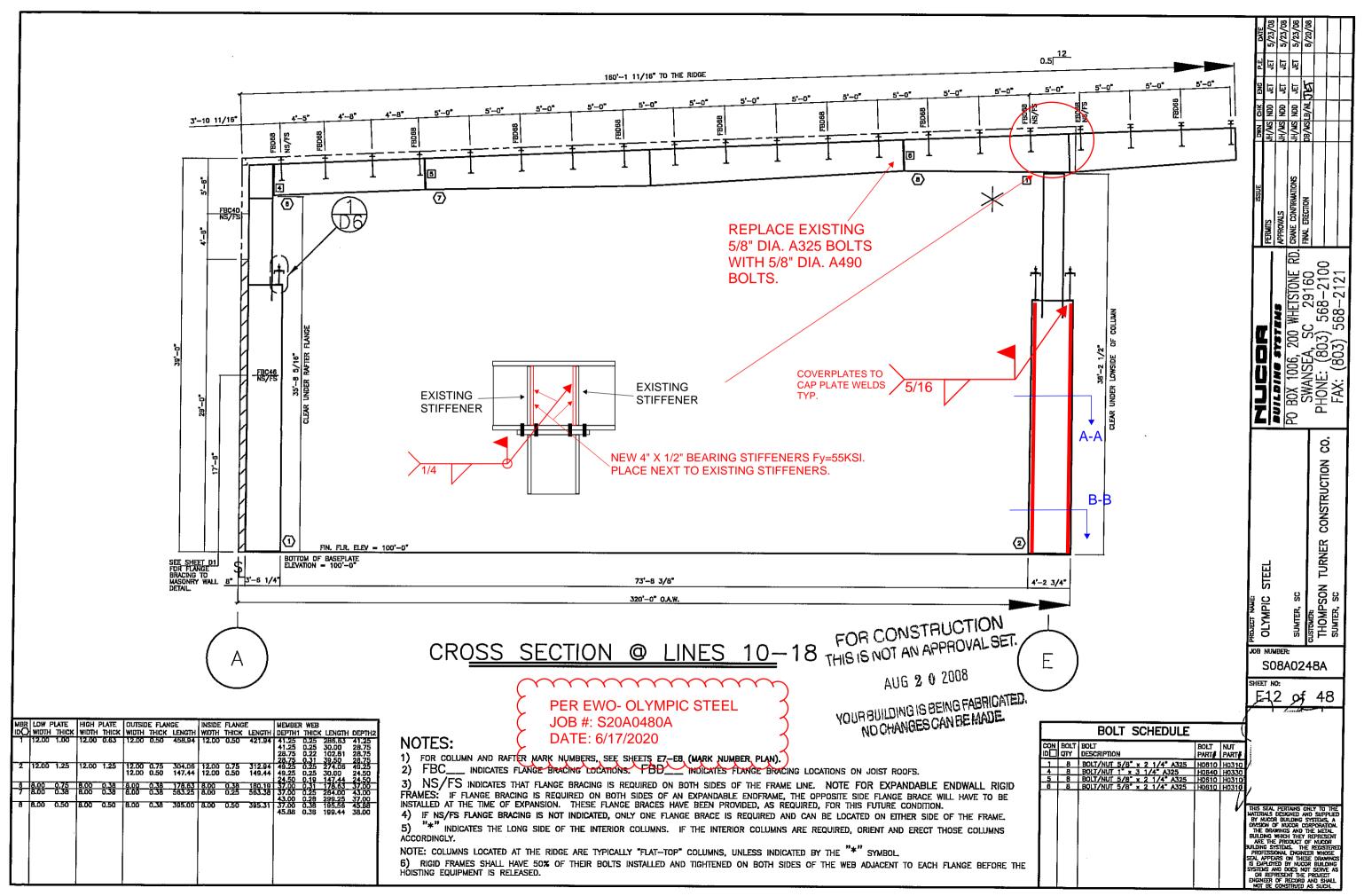
Sincerely,

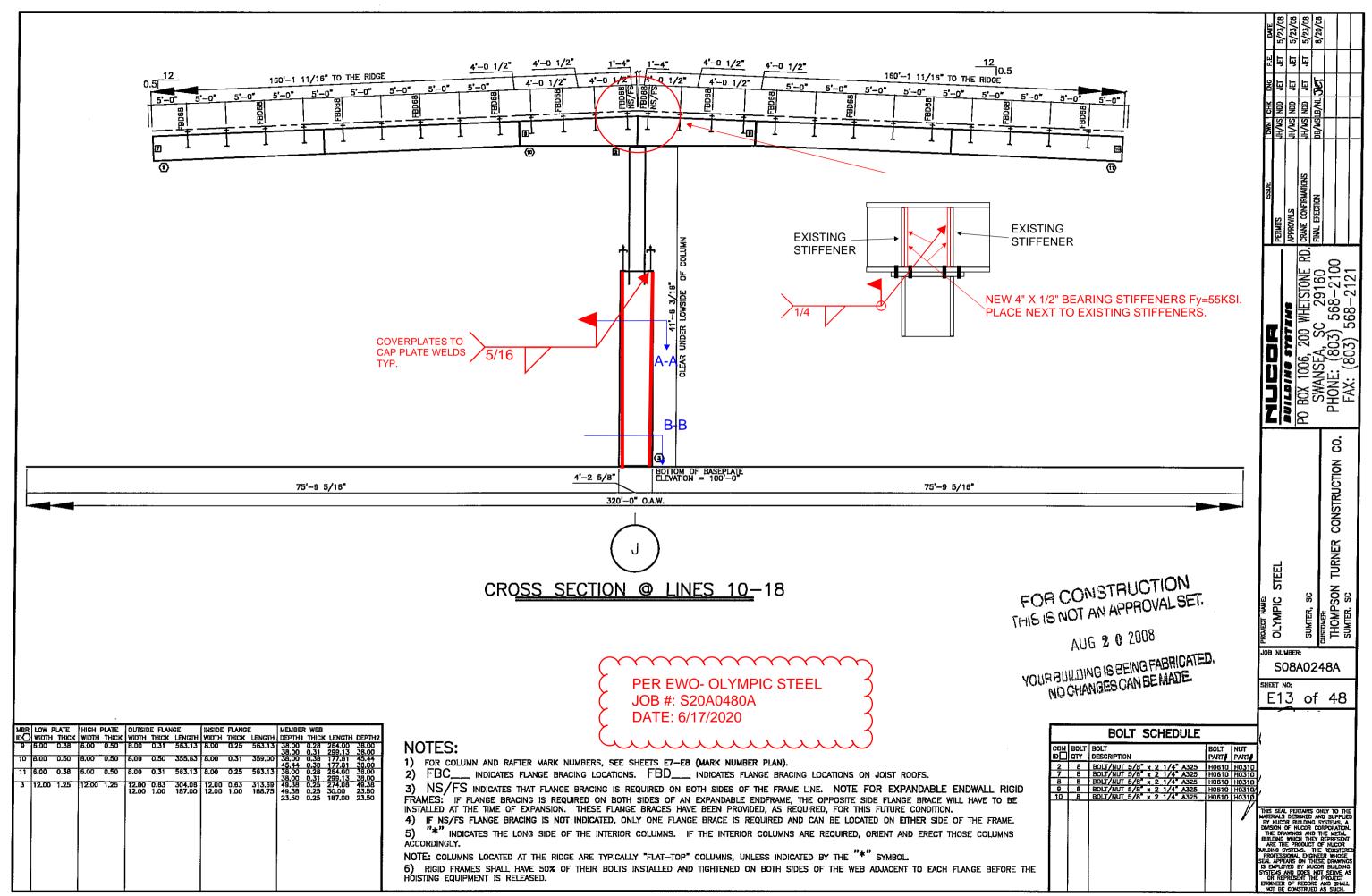
Chris DeClue, P.E.* Project Engineer *Registered in SC

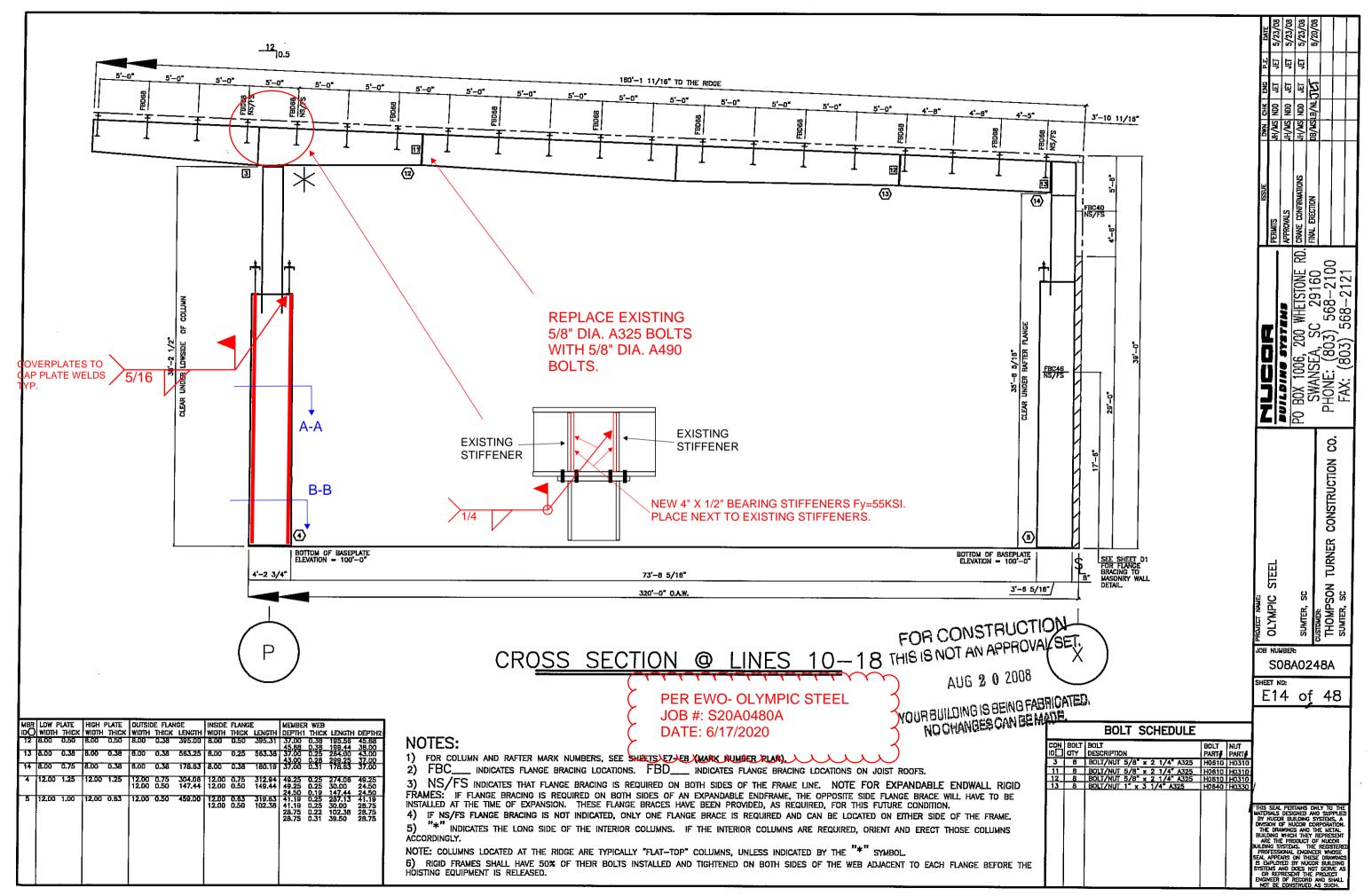
PER EWO- OLYMPIC STEEL

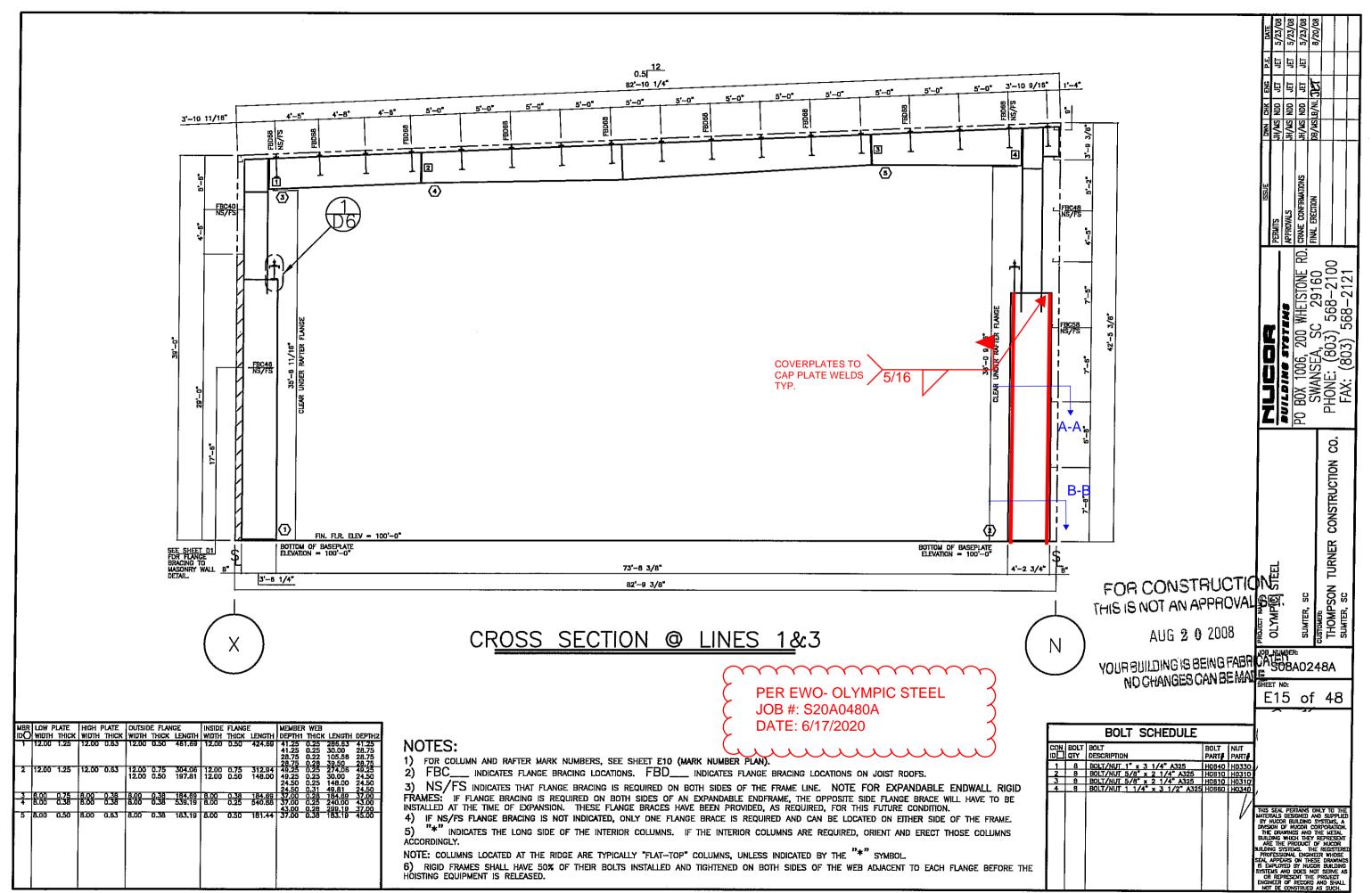
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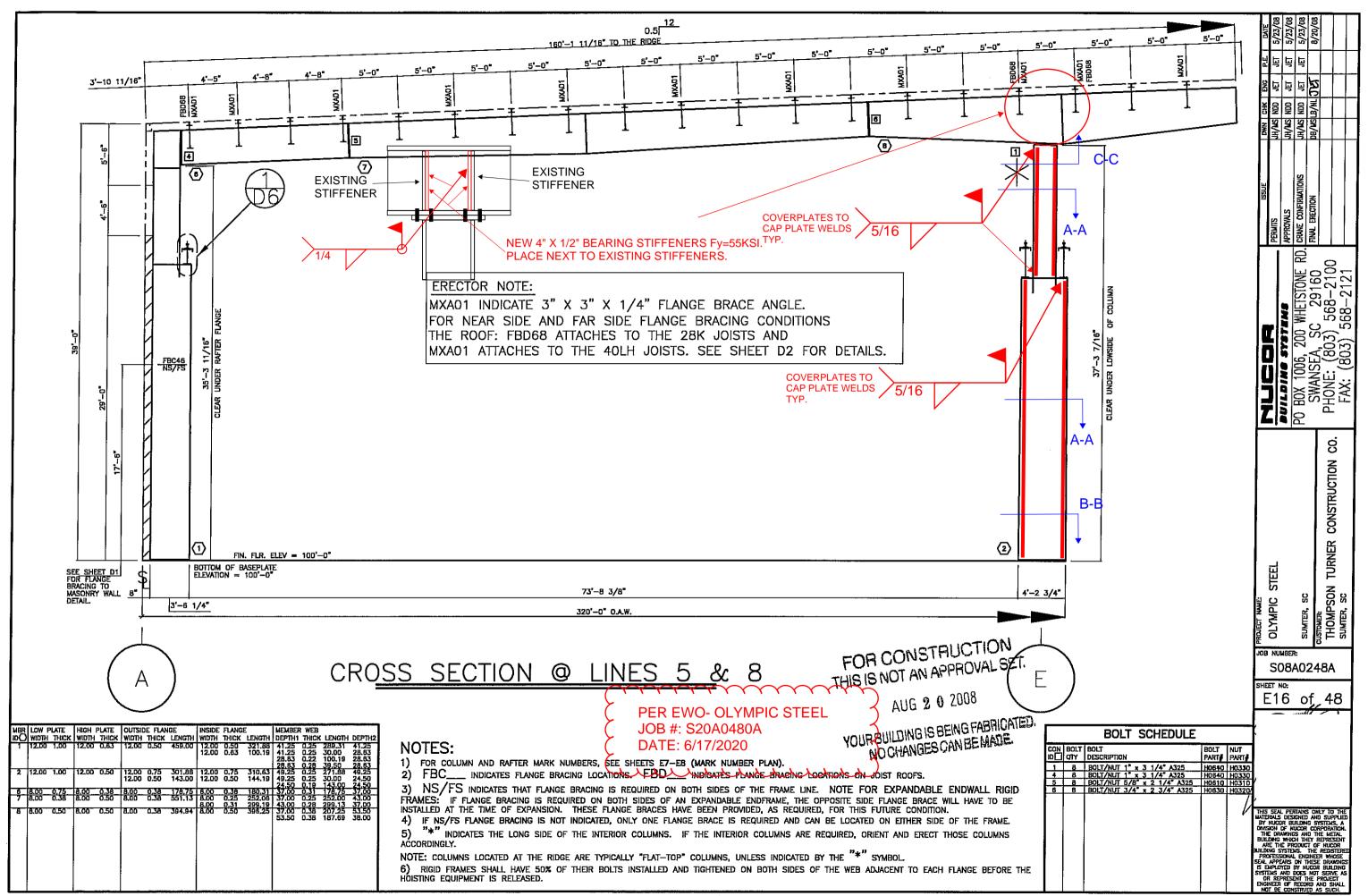
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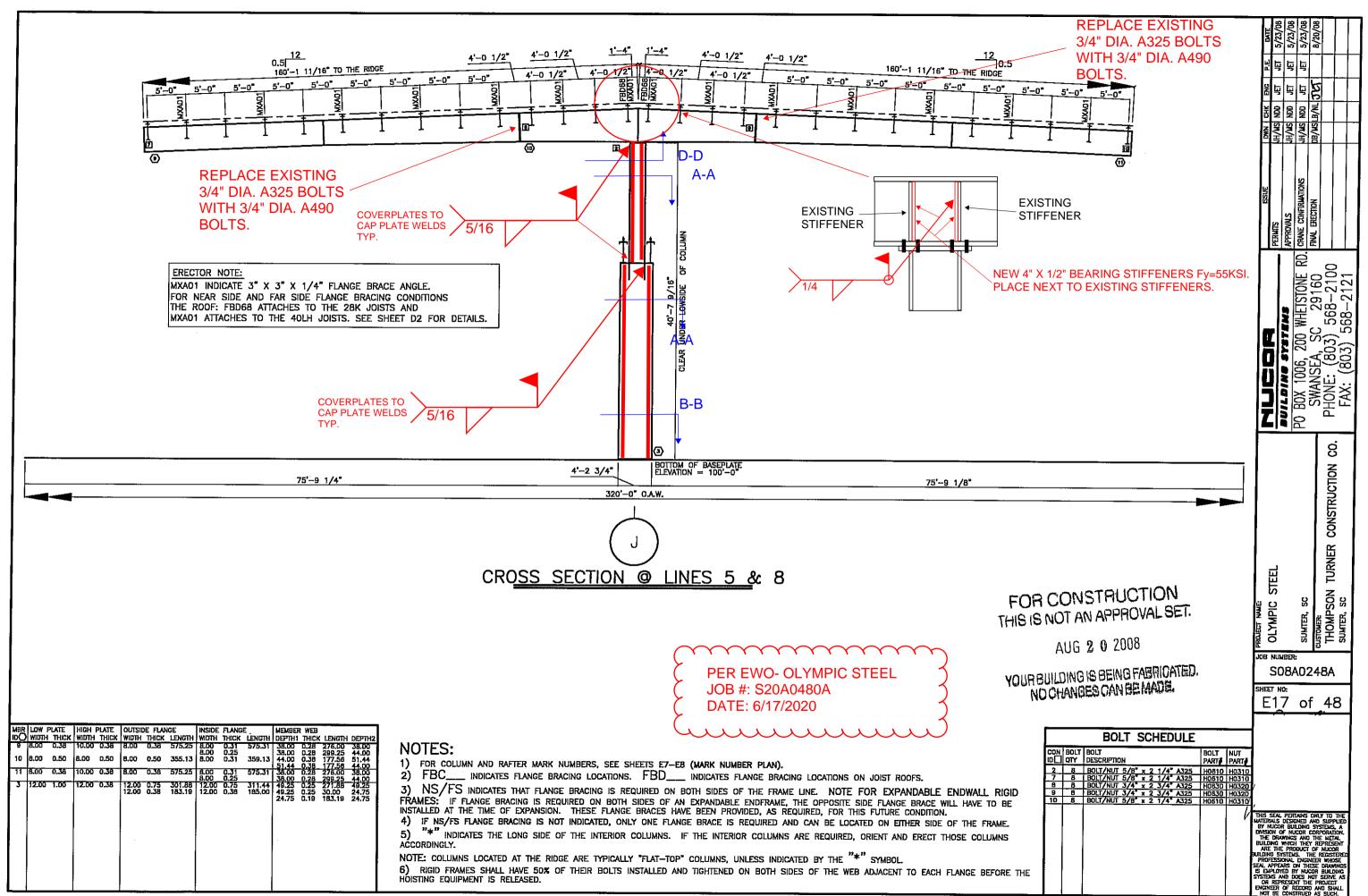


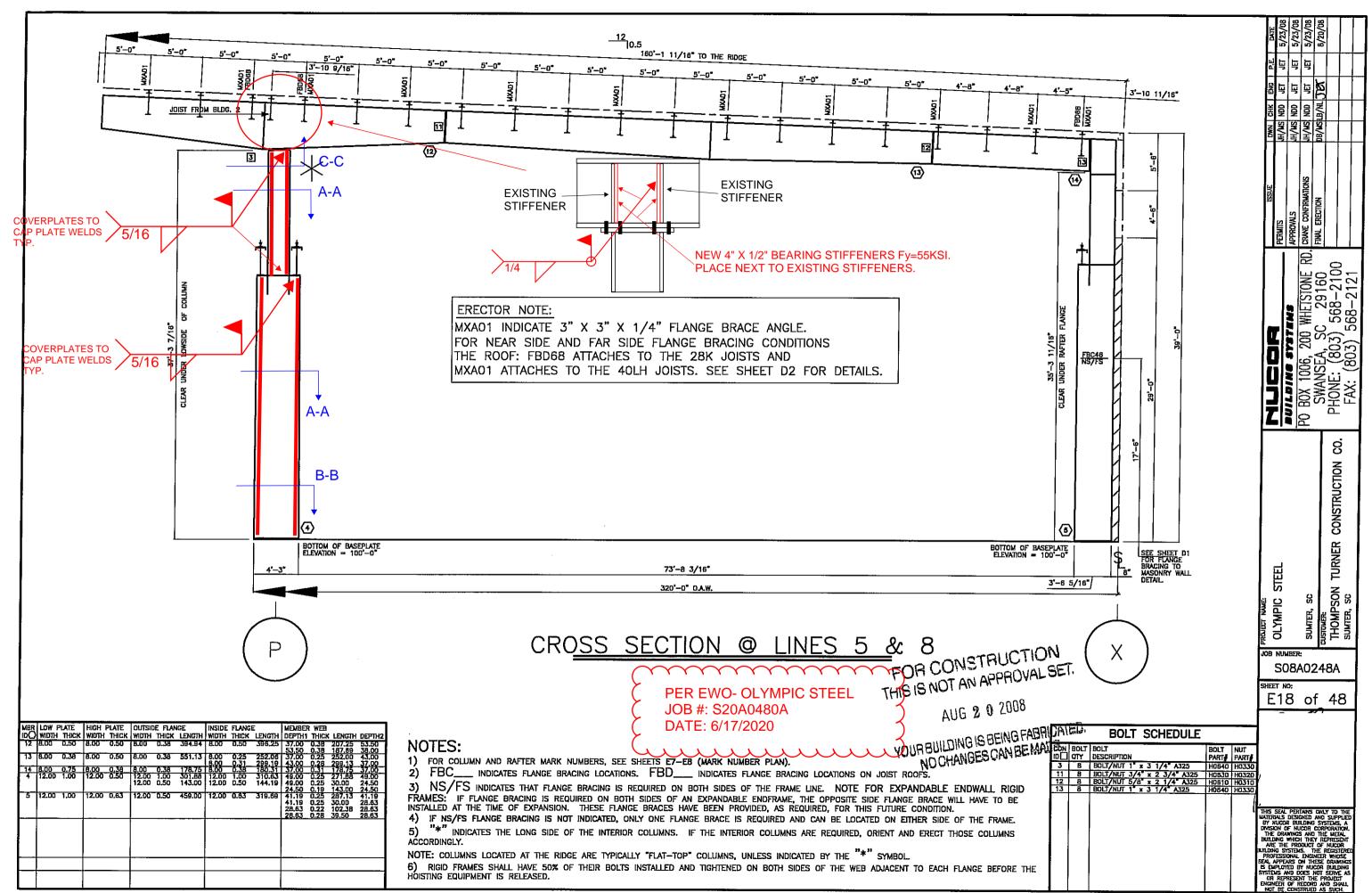


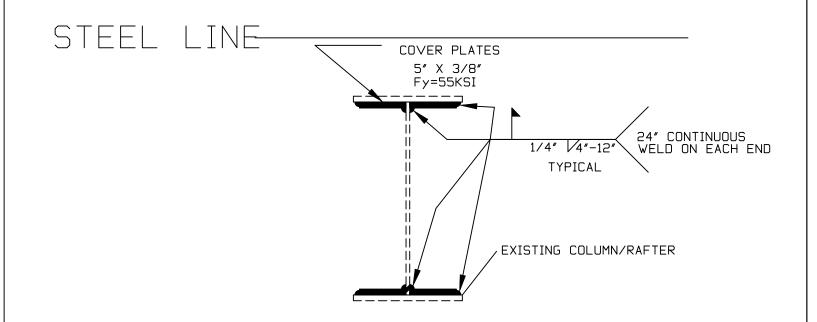












SECTION A-A FRAME COLUMN/RAFTER

