

FIELD REPORT #3

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Project No.:**07-003** Date: **March 5, 2007**
Project Name: **Mercy Hospital**
Project Location: **Portland, Maine**
Weather Conditions: **Snowing/windy, 20's**
Contact Person(s): **Steven Grant-SRG Eng.**
James Lanza-Gilbane Co.
Butch –American Steel

Discussion/Observations:

Copies To: Shawn Welty-KLMK
Roger Domingo-SWC
James Lanza-Gilbane
Paul Stevens-SMRT

(Level 1: Between Grids A to H, from 1 to 3 Line)

SRG Observations:

1. Welders working on column and bracing welds.
2. Wire mesh (setting on top of bolsters) is in-place at the depressed floor zone near grid 5 (see SRG field report #2).
3. Wire mesh is starting to be laid out at main floor level starting near line 5.
4. Shear studs are about 80% in place for this area.
5. I took my 5 lb hammer and checked the weld for almost half of the studs, and not one "failed".
6. Beam shear stud layout when floor deck is perpendicular (not parallel) to the beam span did fail at beams where studs had to be spaced closer than the 12" o.c. flute spacing. At most of these locations, there were "double studs" side-by-side with one stud each side of the lower rib (aligning directly over beam web) spaced anywhere from three (3) to four (4) inches on center, which is less than the minimum 4 1/2" specified, and therefore, not acceptable (see SMRT project sheet #SG001). **ACTION REQUIRED: "Double studs" in this condition must be removed and placed correctly in accordance with contract documents.**
7. Metal decking with ribs not parallel to beam or girder axis did not have studs (at many beams) located in the lower ribs of deck positioned with respect to the stiffening rib toward the nearest support, as shown on note 7 of "Shear Stud Placement Requirements" as shown on sheet SG001. I spoke with Janusz at SMRT before leaving the job site, and he indicated there is approximately a 30% reduction in beam capacity when studs are in this condition. As a result, Janusz told Jim Lanza that one additional stud must be placed for every 3 studs located in the incorrect position. **ACTION REQUIRED: Add at least one new stud for every 3 that are not correctly placed, per Janusz at SMRT.**
8. **Butch indicated to me that all studs at beams located on the following grids will be removed and replaced in correct position/spacing: Lines F and G: 1-2 and 2-3; Line H: 3-4 and 4-5.** (Stud spacing is predominantly less than 4 1/2".)
9. W33x152 braced frame beam on Grid 3 from C to D had 30 sets of "double studs" (60 total) with stud position directly over beam web, which is not acceptable. **ACTION REQUIRED: All studs must be removed and correctly placed.**
10. The following beams were noted to have less than required beam studs: **ACTION REQUIRED: Add stud(s).**
 - A. Between Grids B and C: W16x31 West side of opening; had 18 studs, requires 20.
 - B. Between Grids B and C: W16x31 East side of opening; had 19 studs, requires 20.
 - C. Between Grids D and E: W16x31 8ft West of Grid 4; had 13 studs, requires 14.
 - D. W30x211 at Grid 4: Had 11 studs, requires 16.
 - E. W21x44 at Grid 3: Had 27 studs, requires 30.
11. "Stringer beams" spanning in the N-S direction between grids A and D: These stringer beams are connected to the main girders with a shop bolted leg and field welded outstanding leg to girder. **ACTION REQUIRED: Verify welded connection(s) are adequate for design loads shown.**
12. W33x130 beam on Grid line H from 4 to 5 line: Beam anchor bolts at grid H-5 have nuts not tightened. Presently, the nuts extend close to the top of threaded rod at least 6 inches above top of concrete. **ACTION REQUIRED: Tighten all nuts.**
13. **Column base at D-3:** Shear lug is not grouted into concrete shear key. (see photo) **ACTION REQUIRED: SMRT to verify if gap between shear lug and shear key must be grouted solid. Notify Gilbane repectively.**

(Note: Item #7 has been revised, as noted in *bold italics*)

Diagrams:

C: File

Signed: _____