



Gavin Central Elementary School

Observations related to Annual Roof Truss Inspection by Legat Architects

Date: March 27, 2013

Time: 8:00 a.m. – 2:30 p.m.

On-Site during Inspection:

Ted Haug; Legat Architects

3 Associates; Legat Architects

John Sfura; Wiss, Janney, Elstner Associates

Steve Wright; DLA Architects

During the course of the Truss Inspection performed by Legat Architects, 2 breaks (considered as Structural Breaks requiring repair); consisting of one partial bottom chord fracture and one diagonal member were found.

The diagonal member was not on the scheduled list of trusses to be reviewed this year but was identified by DLA Architects; pointed out to Wiss, Janney, Elstner Associates as well as Legat Architects for review.

The suggested corrective work for the trusses will be presented by Wiss, Janney, Elstner Associates (WJE) through Legat Architects under separate cover.

The following is a list of trusses exhibiting breaks of various types of breaks as noted on the day of the Annual Inspection. The following photographs detail the type and location of break as noted on March 27, 2013.

Total Count of Trusses Reviewed by Module

TRUSSES REVIEWED

Module A: 19 Trusses

Module B: 7 Trusses

Module C: 19 Trusses

Total 45 Trusses

BREAKS OBSERVED

1 Partial Diagonal / 19 Trusses = 5.2%

1 Partial / 7 Trusses = 14.3%

0 Partial / 19 Trusses = 0.0%

2 Partial / 45 Trusses = 4.4%

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MODULE A: Breaks

- **Module A: Truss #26 – Full Diagonal Chord Split; Immediately adjacent to Catwalk. This diagonal was identified by DLA Architects and brought to the attention of Legat Architects and WJE for review. WJE determined split has gone more than 50% of the way through the member section.**

WJE has reviewed and will be developing a fix

It was noted in the field that this split diagonal member is immediately adjacent to a past truss correction at a spliced connection repair. Because of this relationship to a past break, this condition was pointed out to WJE for review and they have agreed that condition warrants a designed “Fix”.

MODULE A: Additional Items for Review

- **Module A: Between Trusses #16 & #18 – The drywall Fire Separation which is required by Code was opened up for an engineered fix at Truss #17 from last year’s inspection. The drywall was removed for the correction and never re-established. The drywall needs to be patched to re-establish the required Fire Barrier.**

Work to be corrected by Boller Construction

- **Module A: Between Trusses #1 & #2 – During the course of previous corrective Work, an area of drywall ceiling was opened up to supply materials for other corrective Work. The drywall ceiling was repaired but never recovered with insulation. The insulation is required to be respread.**

Work to be corrected by Boller Construction

MODULE B: Breaks

- **Module B: Truss #B5-9 – Partial Bottom Chord Fracture at Multiple knots– Horizontal Split originating at a past Plate correction made in the past**

WJE has reviewed and will be developing a fix

It was noted in the field that for the most part, a break of this type has not been documented in the past in this area of the building.

Miscellaneous Comments:

- **Module C: Drywall Debris**
There are sections of drywall that have been left in the attic space from earlier repair jobs. Extra material needs to be removed from the attic space.

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Observations:

The conditions of each break are to be reviewed and repair details developed by Wiss, Janney, Elstner under separate cover.

DLA Observations and Recommendations:

As mentioned during last year's review and report, during the normal course of review of the bottom chords of the trusses, it is necessary to displace the blown-in insulation between the trusses in order to observe the bottom chords. The displacement of insulation creates various mounds of insulation and has the appearance of hills and valleys in the insulated attic space being observed. ***In order to better maintain an evenly insulated attic, it is recommended that the insulation be raked or respread in an even manner and to a level consistency throughout the attic space once the inspection has been completed.***

A rake or some other leveling device could be used to level out the affected insulation at the time when contractors are in the attic for required repair work.

Extra Materials in Attic Space

It is recommended that all unused (extra) materials present in the attic space be removed upon completion of all truss fixes. It is a hazard to have extra material lying around while trying to maneuver through the trusses. Most material is of the size that it could be easily removed from the attic to make future observations more readily accessible.

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- ***Module A: Between Trusses #16 & #18 – The drywall Fire Separation which is required by Code was opened up for an engineered fix at Truss #17 from last year’s inspection. The drywall was removed for the correction and never re-established. The drywall needs to be patched to re-establish the required Fire Barrier.***

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- ***Module A: Between Trusses #1 & #2 – During the course of previous corrective Work, an area of drywall ceiling was opened up to supply materials for other corrective Work. The drywall ceiling was repaired but never recovered with insulation. The insulation is required to be respread.***

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- **Module B: Truss #B5-9 – Partial Bottom Chord Fracture at Multiple knots– Horizontal Split originating at a past Plate correction made in the past**

WJE has reviewed and will be developing a fix



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- **Module C: Drywall Debris**
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