

**ENGINEERED STEEL TRUSS JOIST
PROCEDURES
& APPLICATION GUIDELINES**



CITY OF
NORTH LAS VEGAS

City of North Las Vegas
Land Development
Building Safety and Fire Prevention Division
2250 Las Vegas Blvd. North,
North Las Vegas, NV. 89030
Phone: (702) 633-1536
Facsimile: (702) 649-9643

Engineered Steel Truss Joist Procedures & Application Guidelines

TABLE OF CONTENTS

- I. DEFINITIONS
- II. SUBMITTAL REQUIREMENTS
- III. ENGINEERED CONSTRUCTION METHOD PROCEDURES
- IV. CONVENTIONAL CONSTRUCTION METHOD PROCEDURES
- V. SUBSTANTIAL DESIGN CHANGES
- VI. TRUSS REPAIRS AND/OR FIXES
- VII. CHANGE OF ENGINEER
- VIII. REFERENCES
- IX. STEEL TRUSS JOIST WAIVER (DEFERRED TRUSS FORM)

City of North Las Vegas

Engineered Steel Truss Joist PROCEDURES & APPLICATION GUIDELINES

This guide will assist in outlining the requirements for *Engineered Steel Truss Joists*. The City of North Las Vegas Building **Safety and Fire Prevention** Division requires steel truss joist engineering for all residential, multi-family, industrial, and commercial projects to be reviewed prior to issuance of permits. All projects must submit prior to issuance of permits or fill out the Steel Truss Joist Waiver Form.

I. DEFINITIONS

- A. **Engineered** - Items such as plans, calculations, and documents prepared by a Nevada registered engineer or design professional.
- B. **Steel Truss Joist**- Unitary pre-fabricated floor or roof framing items.
- C. **Steel Truss Joist Package** - Includes a truss placement plan, engineered truss design drawings, and engineered calculations.
- D. **Engineered Construction Method** - Structural frame of the building has been designed by an appropriately licensed design professional and is based on an engineered analysis of the structure.
- E. **Conventional Construction Method** - Prescriptive construction method for light-framed wood construction that does not require an engineering analysis. International Building Code (IBC) Section 2308 allows this method to be used for limited applications.

II. SUBMITTAL REQUIREMENTS

- A. An engineered steel truss joist package must be included with the submittal of required plans and documents as part of the application for a building permit. This steel truss joist package shall include all generic steel truss joist repair calculations.
- B. Steel truss joists are typically prefabricated and engineered by registered engineers working for the fabricator. The building frame is typically designed by engineers or other design professionals, depending on the construction method selected.

III. ENGINEERED CONSTRUCTION METHOD PROCEDURES

- A. Two (2) sets of the following documents shall be delivered to the licensed design professional of record for review:

- _____ 1. Final steel truss joist placement plans
- _____ 2. Engineered, wet sealed truss design drawings and calculations

B. The building designer shall review the steel truss joist design drawings, calculations, and placement plans for conformance with the construction design documents. Upon acceptance, the licensed design professional shall:

- _____ 1. Place a signed and dated “shop drawing review” stamp on the steel truss joist package; **OR**
- _____ 2. Issue a signed letter of approval for a dated truss calculation package

C. The items reviewed by the Building **Safety & Fire Prevention** Division include:

- _____ 1. Nevada professional engineer’s seal, signature and date on the steel truss joist design drawings and calculations
- _____ 2. “Shop drawing review” stamp or signed letter of approval from the licensed design professional of record on the project
- _____ 3. Truss placement for general conformance to the submitted plans
- _____ 4. Location of the steel truss joist bearing points for consistency with bearing walls, beams, headers, posts, etc.
- _____ 5. Location and magnitude of concentrated gravity loads for consistency with the design documents
- _____ 6. Location and magnitude of lateral/drag loads for consistency with the design documents
- _____ 7. Verification that the fabricator is approved by Clark County as a steel truss joist manufacturer
- _____ 8. Design and calculations for “generic steel truss joist repairs”

IV. CONVENTIONAL CONSTRUCTION METHOD PROCEDURES

When the structure is not designed by a licensed design professional and the design utilizes conventional light-frame construction methods from the International Building Code, Building **Safety and Fire Prevention** staff will review the engineered steel truss joist package for the following items in addition to the normal plan review items:

- _____ 1. Nevada professional engineer’s seal, signature and date on the steel truss joist design drawings and calculations. A truss placement plan must also be provided.
- _____ 2. Truss placement for general conformance to the submitted plans

- _____ 3. Location of the steel truss joist bearing points for consistency with bearing walls, beams, headers, post, etc.
- _____ 4. Top chord dead and live loads used in the design of the trusses
- _____ 5. Bottom chord dead and live loads used in the design of the trusses
- _____ 6. Location and magnitude of concentrated gravity loads imposed on trusses or framing
- _____ 7. Verification that the fabricator is approved by Clark County as steel truss joist manufacturer
- _____ 8. The engineered steel truss joist package will be stamped "approved" by Building **Safety and Fire Prevention** staff and will be included with the building permit documents provided to Building Records

V. SUBSTANTIAL DESIGN CHANGES

When substantial design changes occur after the review is completed and modifications to the trusses are made due to framing plan changes, the Building **Safety and Fire Prevention** Division shall require submittal of revised plans, calculations, and steel truss joist design as appropriate.

VI. STEEL TRUSS JOIST REPAIRS AND/OR FIXES

When repairs or fixes are required, the applicant shall submit the appropriate documentation to the city building inspectors. The city building inspectors will determine if the repair or fix is substantial enough to require additional plan review by the Building **Safety and Fire Prevention** staff. The city building inspectors will then approve the repairs and/or fixes and forward copies to the construction site and the Building Records Office, or the applicant will be sent to the Building **Safety and Fire Prevention** Division for approval.

Generic truss repairs may be submitted at the time of initial plan review.

VII. CHANGE OF ENGINEER

When an engineer other than the original engineer prepares or modifies steel truss joist plans and calculations for final construction, a complete steel truss joist design package must be resubmitted with the new engineer's stamp and signature. This submittal shall follow the procedures above and will be processed as a revision and assessed hourly fees as allowed in the City of North Las Vegas Administrative Code.

_____ Date

Valarie Evans M.C.P Building Official
Land Development
Building **Safety and Fire Prevention** Division
2250 Las Vegas Blvd North
North Las Vegas, NV. 89030

Plan Check # _____
Project Name _____
Project Address _____

Dear Ms. Evans,

STEEL TRUSS JOISTS

The undersigned, in consideration of being issued permits for construction prior to Final Steel Truss Joist approval, hereby assumes all risk, financially and otherwise, for any construction performed that may need to be removed once the truss calculations and layout are reviewed if they are not appropriate to the structure.

I understand that final steel truss joist approval may take up to ten working days (or longer if there are problems) from the date of submission.

(Signature of owner, principal, or authorized agent)

_____ Date

Printed Name of above Person & Title

Printed Name of Company

Printed Address of Company

Telephone Number & Fax Number