

**ENGINEERED WOOD TRUSS
PROCEDURES
& APPLICATION GUIDELINES**



CITY OF
NORTH LAS VEGAS
Your Community of Choice

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Engineered Wood Truss Procedures & Application Guidelines

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City of North Las Vegas

Engineered Wood Truss PROCEDURES & APPLICATION GUIDELINES

This guide will assist in outlining the requirements for *Engineered Wood Trusses*. The City of North Las Vegas Building Safety Division requires wood truss engineering for all residential and multi-family projects to be reviewed prior to issuance of permits and before construction can begin. All commercial projects must submit prior to issuance of permits and before construction can begin, or fill out the Metal Plate Connected Wood Truss Waiver Form.

I. DEFINITIONS

- A. **Engineered** - Items such as plans, calculations, and documents prepared by a Nevada registered engineer or design professional.
- B. **Wood Truss**- Unitary pre-fabricated floor or roof framing items.
- C. **Wood Truss 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 wood truss package must be included with the submittal of required plans and documents as part of the application for a building permit. This truss package shall include all generic truss repair calculations.
- B. Trusses are typically pre-fabricated 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 truss placement plans
- _____ 2. Engineered, wet sealed truss design drawings and calculations

B. The building designer shall review the truss 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 truss package; **OR**
- _____ 2. Issue a signed letter of approval for a dated truss calculation package

C. The items reviewed by the Building Plans Examination Division include:

- _____ 1. Nevada professional engineer’s seal, signature and date on the truss 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 truss 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 the Building Inspection Division as a wood truss manufacturer
- _____ 8. Design and calculations for “generic truss 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 Plans Examination staff will review the engineered wood truss package for the following items in addition to the normal plan review items:

- _____ 1. Nevada professional engineer’s seal, signature and date on the truss 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 truss 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 the Building Inspection Division as a wood truss manufacturer
- _____ 8. The engineered wood truss package will be stamped "approved" by Building Plans Examination 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 Plans Examination Division shall require submittal of revised plans, calculations, and truss design as appropriate.

VI. TRUSS REPAIRS AND/OR FIXES

When repairs or fixes are required, the applicant shall submit the appropriate documentation to the Inspection Division. The Inspection Division will determine if the repair or fix is substantial enough to require additional plan review by the Plan Examination staff. The Inspection Division 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 Plans Examination 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 truss plans and calculations for final construction, a complete truss 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.

REFERENCE INFORMATION

PLANNING AND ZONING DEPARTMENT

(Planning, coordinating, and promoting land development in the community)

- **Planning Division** (land use, setbacks, zoning, height limitations)
☎ 633-2243

PUBLIC WORKS DEPARTMENT

(Development & monitoring of long range planning for roadways, water and sewer utilities, flood control, commercial and residential development and resource acquisition)

- ☎ 633-1200
- **Building Safety Division** (plan review and inspection services to ensure minimum standards of all codes and ordinances are met for all construction and issuance of all building permits)
 - ☎ Plan Check (front counter) 633-1550
 - ☎ Inspections 633-1576
 - ☎ Permit Application Center 633-1536
- **Development & Flood Control Division** (Grading, utilities, flood-related matters, flood zone determinations)
☎ 633-2312
- **Property Management Division** (property acquisition & disposal, relocation, demolition, Geographic Information Services, final map processes)
☎ 633-2087
- **Quality Control Division** (testing & inspection of public installations within the City)
☎ 633-1388
- **Technical Services / Utilities / Environmental Division** (Environmental issues, water supplies, and the planning & design of utilities)
☎ 633-1561
- **Transportation Services Division** (Traffic engineering, transportation planning, performs traffic counts and transportation studies, telecommunications fiber optic network, nuclear waste repository activities)
☎ 633-1235

FIRE DEPARTMENT

(Building and fire protection plans review)

☎ 633-1107

UTILITIES

Clark County Health District	625 Shadow Lane	☎ 702-385-1291
Clark County Sanitation District	5857 E. Flamingo Rd.	☎ 702-434-6600
North Las Vegas Water Billing	2200 Civic Center Dr.	☎ 702-633-1484
Nevada Power		☎ 702-367-5555
Southwest Gas	4300 W. Tropicana Ave.	☎ 702-365-1555
North Las Vegas Fire Dept.	Operations Personnel	☎ 702-633-1102