


City of Lee's Summit

Department of Planning & Special Projects

July 27, 2017

TO: Board of Zoning Adjustments

FROM: Christina Stanton, AICP, Senior Planner 

RE: **PUBLIC HEARING – Application #PL2017-139 – Variance to Unified Development Ordinance Article 8, Section 8.050.E.1, Maximum Number of Detached Garage or Storage Building, and Table 8-1, Front Setback for a Detached Garage – 1350 NE Blackwell Road; Jerald & Kerry Krepps, applicant**

Recommendation

The Department of Planning & Special Projects recommends **APPROVAL** of the variance as requested.

Request

Variance Requested: a non-use variance to the maximum number of detached garages/storage buildings and a variance to the front setback for a detached garage.

Site Characteristics

Location: 1350 NE Blackwell Road

Zoning: R-1 (Single-Family Residential)

Property Owner(s): Jerald & Kerry Krepps

Surrounding Zoning and Uses:

North: R-1 – Single-family residential

South: R-1 – Single-family residential

East (across NE Blackwell Road): AG (Agricultural) – Legacy Park

West: AG & R-1 – Prairie Lee Lake

Background

- December 31, 1964 – A large area of land, including the land in question, was annexed into the City of Lee's Summit.
- October 19, 1976 – The City Council approved a rezoning (Appl. #1976-019) from A (Agricultural, now AG) to R-1 (Single-Family Residential) by Ord. #1712.
- November 21, 1977 – A building permit (#77-736) was approved for a 1,632 square foot single-family residence on septic (approximately 8 acres) at 1350 NE Blackwell Road.
- September 19, 1978 – A building permit (#78-574) was approved for a 900 square foot barn at 1350 NE Blackwell Road.
- May 4, 1989 – A building permit (#89-295) was approved for a 12' x 24' room addition at 1350 NE Blackwell Road.

Ordinance Requirement

Maximum Number of Detached Garage/Storage Building. For any one-family or two-family dwelling in a residential district, there shall be permitted one detached garage or storage building/shed (UDO Article 8, Sec. 8.050.E.1).

Front Setback for Detached Garage. No closer than the principal structure (UDO, Article 8, Table 8-1).

Existing Conditions. The applicants' property currently has a 1,920 square foot single-family residence and a 900 square foot barn. The property is approximately 8 acres in size and the house is set back approximately 581 feet from the right-of-way of NE Blackwell Road.

Request. The applicant requests a variance to construct a second detached garage/storage building and to place the detached garage 23 feet in front of and adjacent to the house.

Analysis of Variance

With respect to all variances, the following is an evaluation of the criteria set forth in the Unified Development Ordinance Article 4, Sec. 4.530.B.3.:

Criteria #1 – The granting of the variance will not adversely affect the rights of adjacent landowners or residents.

It is not anticipated that a variance will directly affect the adjacent property owners. The proposed new detached garage will exceed the side and rear yard setback requirements. In addition, it should be noted that the front of the house is approximately 581 from the right-of-way and the proposed structure would be approximately 378 feet to the nearest corner of the house of the nearest neighbor.

Criteria #2 – The granting of the variance will not be opposed to the general spirit and intent of this Ordinance.

The intent of limiting the number of detached garages on a single-family residential property is to avoid the primary use of the property being dominated by accessory structures and minimize the amount of impervious coverage. The intent of a detached garage being set back, from the house, to either the side or rear of the house is to maintain the prominence of the (residential) primary use. This property is approximately 8 acres in size and is comprised of a 1,920 square foot single-family residence with a 900 square foot barn, making the concern for the amount of impervious area a moot point; and the house is set back approximately 581 feet from the right-of-way such that the house is barely even visible from the street.

Criteria #3 – The variance desired will not adversely affect the public health, safety or general welfare.

It is not anticipated that granting a variance will cause an increased risk in the health, safety or general welfare of the community.

Criteria #4 – The variance requested arises from a condition that is unique to the property in question, is not ordinarily found in the same zoning district, and is not created by an action or actions of the landowner or the applicant.

The variance request arises from the applicants' desire to maintain the existing barn; the applicants' desire to retain some mature trees and not disrupt the current location of an existing chain link fence; and the need to avoid building on top of an underground utility line.

While it is not uncommon for larger lots to have a home set back further into the property, this property is unique compared to other large lots located along NE Blackwell Road since many of them are located much closer to the front of the property. The house and barn have existed in their current location and configuration since 1989, when a 12' x 24' room addition was constructed on the south side of the house.

Criteria #5 – Substantial justice will be done.

There is a demonstrated hardship. The need for a variance stems from the applicants' desire to both maintain the existing barn and construct a 24' x 26' detached garage; and the location of the existing house. The applicant has stated that the previous owner converted the original garage into a mother-in-law apartment. If the existing barn were demolished the applicants would still need a variance for the location of the garage since it would be in front of the primary structure.

Analysis of Non-Use Variance

With respect to a non-use variance, the following is an evaluation of the criteria set forth in the Unified Development Ordinance Article 4, Sec. 4.530.B.2.:

Criteria #1 – Whether practical difficulties exist that would make it impossible to carry out the strict letter of the Ordinance.

There are practical difficulties that make it difficult, if not impossible, to carry out the strict letter of the ordinance. The property slopes down from the south to the north considerably (the high point along the southern property line is approximately 948' above sea level and the low point along the northern property line, in the vicinity of the house, is approximately 932' above sea level). To the south side of the house there are buried utilities lines, a chain link fence, and two mature trees that currently provide shade to the house. The only remaining options are either behind or in front of the house. The applicants' have stated that locating the garage to the west, beyond the chain link fence, is impractical from an accessibility standpoint and staff is inclined to agree with them.

In making such recommendation, the Staff has analyzed the following considerations set forth in the Unified Development Ordinance Article 4, Sec. 4.530.B.2.:

Consideration #1 – How substantial the variation is, in relation to the requirement.

No more than one detached garage or storage building is allowed for any single-family residence in a residential zoning district. The applicants have an existing barn and propose a detached garage. In addition, a detached garage is required to be set back no closer than the principal structure. The applicants are requesting the detached garage be located 23 feet in front of and adjacent to their house.

Consideration #2 – If the variance is allowed, the effect of increased population density, if any, on available public facilities and services.

Approval of the requested variance will not increase population and thus would have minimal, if any, effect on the available public facilities.

Consideration #3 – Whether a substantial change will be produced in the character of the neighborhood or a substantial detriment to adjoining properties is created.

It is not anticipated that granting a variance will produce a substantial change in the character of the neighborhood. The architectural style proposed is consistent with the existing style of the house. In addition, the house and detached garage are set back a considerable distance on the property and are barely visible from the street or abutting properties.

Consideration #4 – Whether the difficulty can be obviated by some method, feasible for the applicant to pursue, other than a variance.

The need for a variance cannot be obviated because, even if the property owners were to demolish the existing barn, the only reasonable location to locate the detached garage is where the applicants have proposed.

Consideration #5 – Whether, in view of the manner in which the difficulty arose and considering all of the above factors, the interests of justice will be served by allowing the variance.

Allowing the requested variance enables the applicant to have a garage, keeps the existing mature trees, and avoids the underground utility line and chain link fence.

Consideration #6 – Conditions of the land in question, and not conditions personal to the landowner. Evidence of the applicant's personal financial hardship unrelated to any economic impact upon the land shall not be considered.

The need for a variance to allow a second detached garage/storage building is attributed to: 1) the applicants' desire to maintain the existing barn; 2) the applicants' desire to retain some mature trees and not disrupt the current location of an existing chain link fence; and 3) the need to avoid building on top of an underground utility line.

Attachments:

1. Reduced copy of Garage Variance Proposal with photos prepared by the applicants, date stamped June 22, 2017 – 6 pages
2. Garage Plans, date stamped June 22, 2017 – 2 pages
3. Truss Drawings, date stamped June 22, 2017 – 5 pages
4. Board of Zoning Adjustment Application and Variance Criteria, date stamped June 22, 2017 – 8 pages
5. Location Map

1350 NE Blackwell Rd.
Front View of Proposed Garage Location

This small, 24' x 26' garage will have brick wainscoting and matching roof shingles to aesthetically blend with the house.

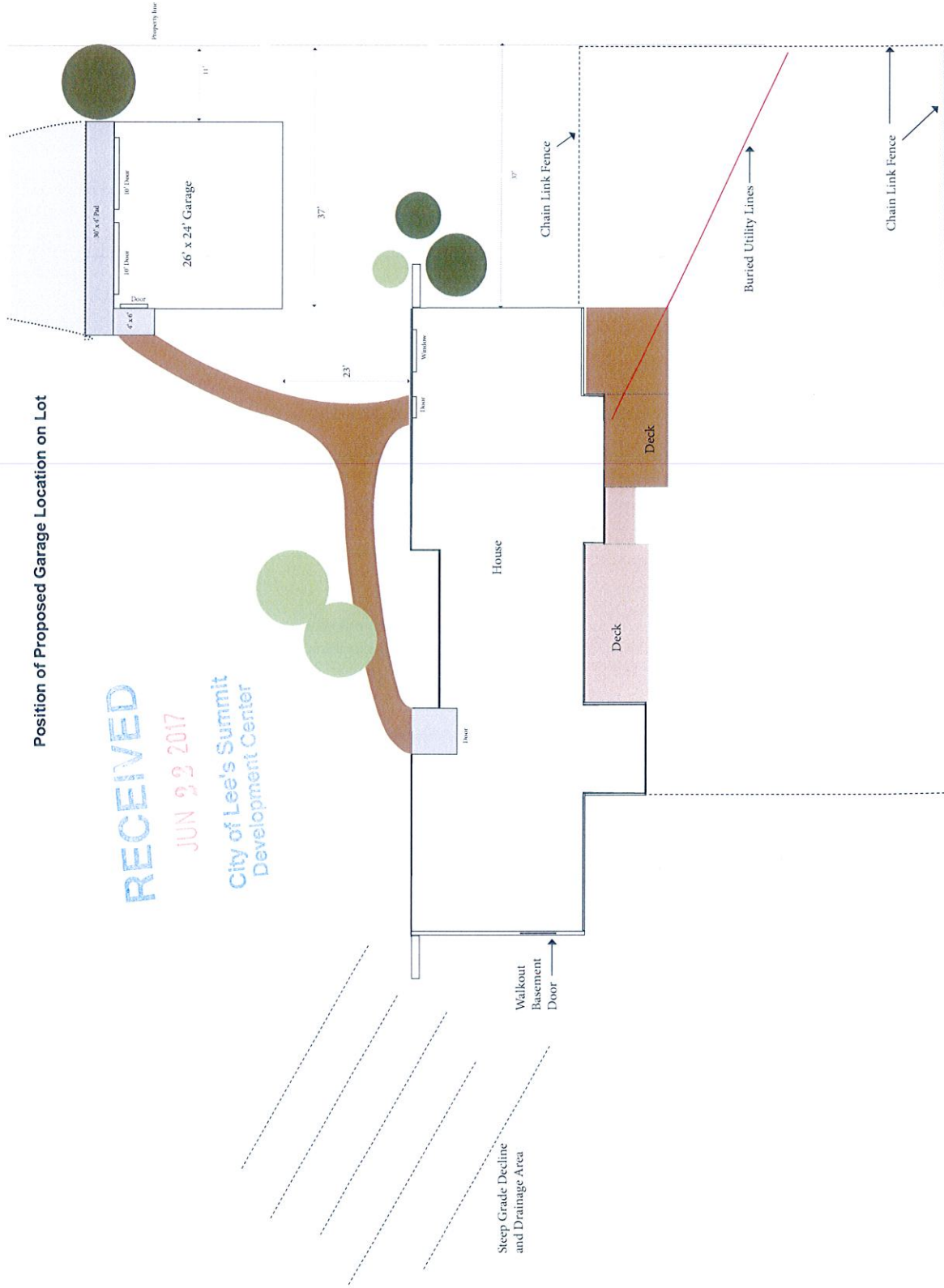


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Position of Proposed Garage Location on Lot

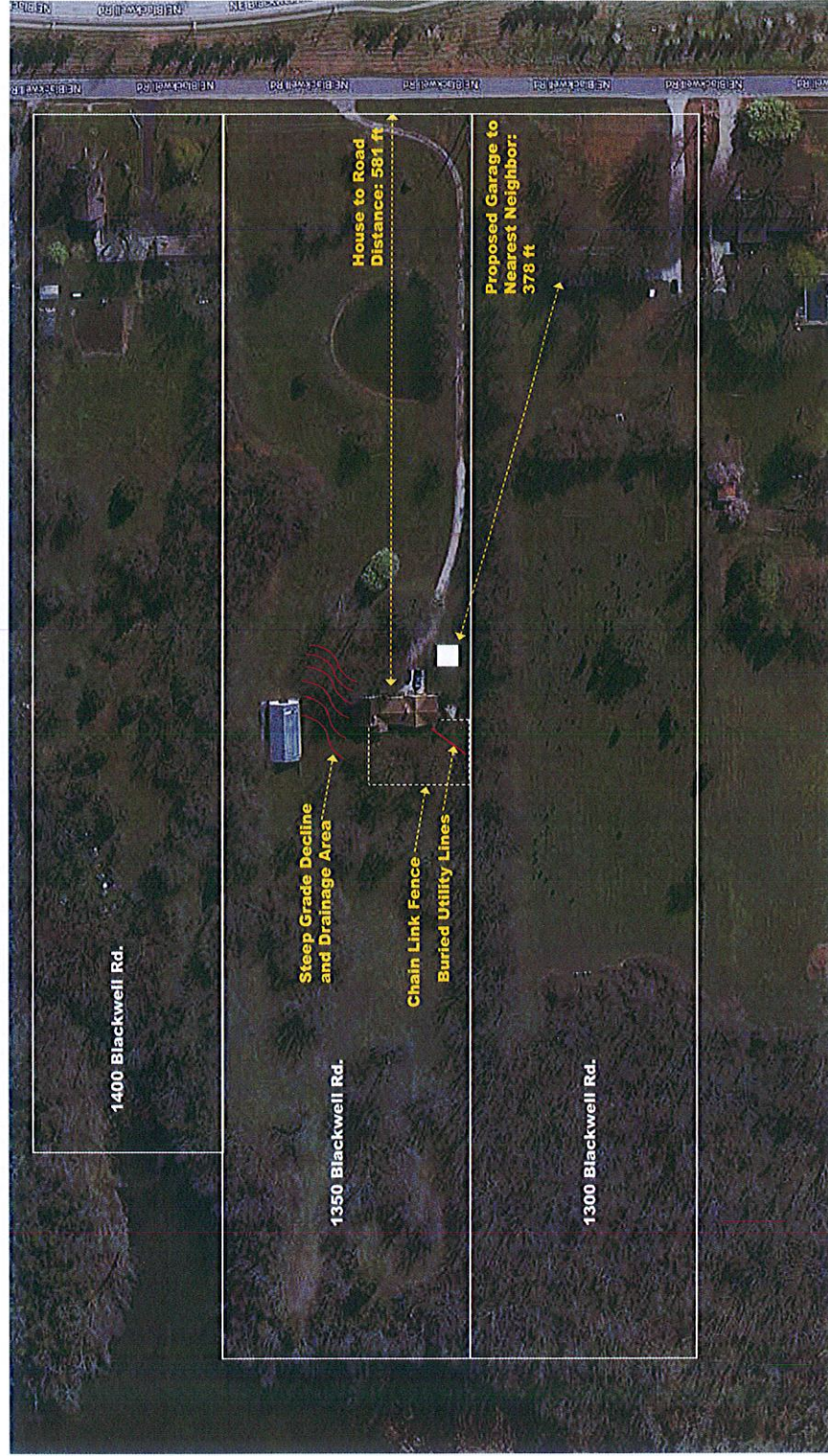


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Overhead View of Proposed Garage and Neighbors

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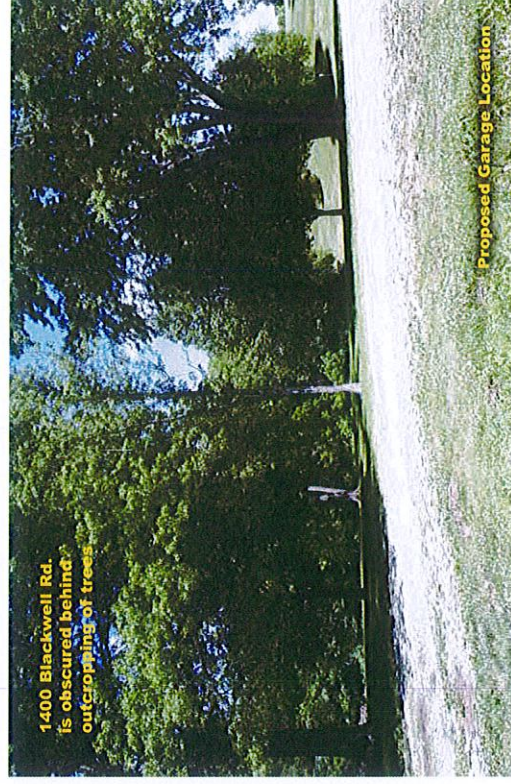
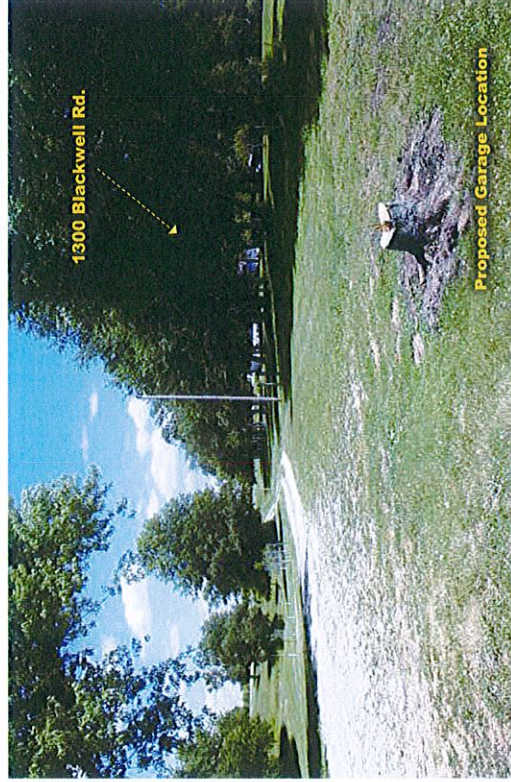


View of Neighbors from Proposed Garage Location

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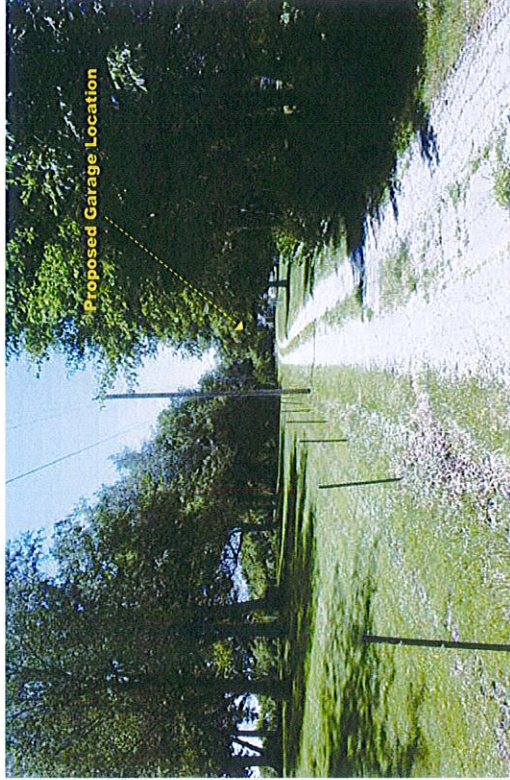


View of Proposed Garage Location from Neighbors

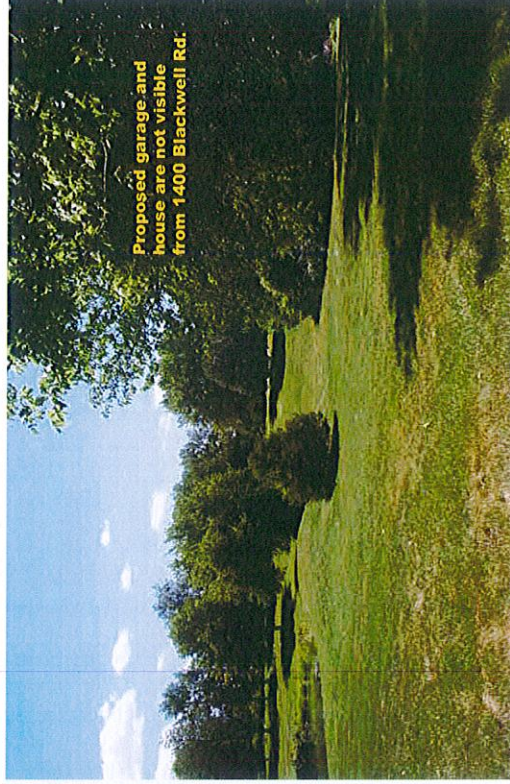
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Blackwell
Rd.



1400
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View of Proposed Garage Location from Blackwell Rd.



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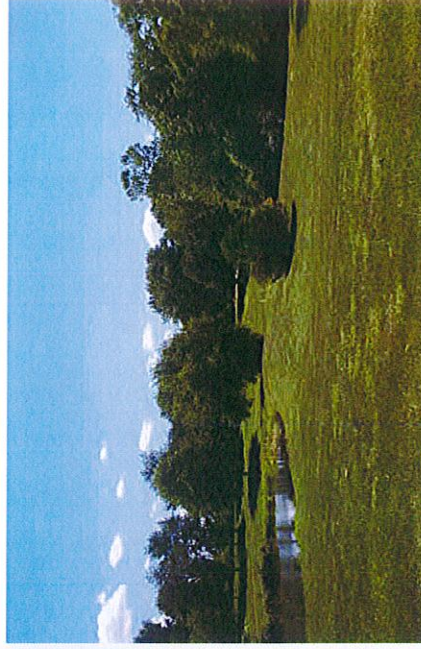


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1400
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F TRUSSES PER MANUFACTURER'S SPECIFICATIONS
OR: SEPARATE LAYOUT)

12-31
SHEET METALWORK
FINISH

[illegible]

GENERAL NOTES
- INTERIOR OF GARAGE

ELECTRICAL NOTES
- ALL ELECTRICAL WORK TO BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (NEC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70B.

WATER NOTES
- WATER MAINS

CITY -
- AREA -

DATE: 11/1/88

1. FORMS: YES
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ATION
 $4'' = 1'-0''$
 A MOUND DEPTH OF 36"
 OF FINISHED GRADE.

Technical drawing of a house with a gabled roof. The drawing shows a front elevation and a side elevation. The front elevation features a chimney on the left side and a dormer window on the right. The side elevation shows the roofline and the chimney. The drawing includes dimensions and labels for the roof and chimney.

Labels and dimensions:

- CHIMNEY (10' x 12')
- ROOF 2' x 12'
- CHIMNEY (10' x 12')
- ROOF 2' x 12'

1

1

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SCALE: 1/4" = 1'-0"

RIGHT ELEVATION
SCALE: 1/4" = 1'-0"

PHYSICAL ADDRESS: 1350 NE BLACKWELL RD. LEE'S SUMMIT, MO 64086	SHEET TITLE: ROOF & ELEVATIONS	SHEET NO.: 2 OF 2 DATE: 05/30/2017
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VIEWPOINT RESIDENTIAL DESIGN LLC

1550 SW Market St., Ste. 230-A • Lees Summit, MO 64081-3113 • Office: (816) 654-0400 Ext. 101
www.viewpointresidential.com • Email: Plans@viewpointresidential.com

"For God so loved the world, that he gave his only begotten Son, that whosoever believeth in him should not perish, but have everlasting life."

[illegible]

STEEL TRUSSES PER MANUFACTURER'S SPECIFICATIONS

R-O P. SEFFI

1'-0" DP. RAKE
UNLESS NOTED OTHERWISE

16" X 16" ATTIC VENT

constant return elastic

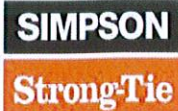
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POSITIONS

© 2000 Cisco Systems, Inc.

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References



TRUSS DESIGN DRAWINGS & DETAILS

Prepared for: M & M TRUSSES
Job: small garage 26x 24
Date: 05/30/17

Ref. Number: 0530080726

Notes:

1. The truss design drawings referenced below have been prepared based on design criteria and requirements set forth in the Construction Documents, as communicated by the Truss Manufacturer.
2. The engineer's signature on these drawings indicates professional engineering responsibility solely for the individual components to be able to resist the design loads indicated, utilizing all the design parameter and materials indicated or referenced on each individual design.
3. It is the Building Designer's responsibility to review the truss design drawings to insure compatibility with the Building design. Refer to all notes on the individual truss design drawings.

2 Truss Design Drawing(s):

1 - common 2 - drop gable

Details:

**Simpson Strong-Tie
Company, Inc.**

5956 W. Las Positas Blvd.
Pleasanton, CA 94588
(800) 999-5099






WWW.strongtie.com

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Symbols and Nomenclature

- 5x7** Indicates the plate size; the first digit is the plate width (perpendicular to the slots) and the second digit is the plate length (parallel to the slots).
- 5x7-18** Indicates the plate is 18 ga.
- | / ** These symbols, which follow the truss plate size, designate the required direction of the slots in the connector plate.
- *-*** Plates with this symbol next to it must be installed with a solid section of steel (area between the slots) directly over the joint.
- 10'-4-3/16"** Dimensions are shown in feet-inches-sixteenths (for this example the dimension is 10'-4 3/16").
-  Joints are numbered clockwise around the truss starting at the left end. Chords and webs are identified using their end joint numbers (e.g., TC 2-3).
-  When this symbol is shown, lateral restraint is required on the member near the location indicated and may be on either edge of the member. See Note 3 under Handling, Installing, Restraint & Bracing for more information.
-  Truss-to-wall (or other structural support) connection. Trusses must bear completely on all supports. When the species of bearing material is shown on the TDD, it indicates that the perpendicular-to-grain resistance of the material has been checked. The Building Designer is responsible for all other bearing design considerations.
-  Truss-to-Structural Element Connection. The design of the Structural Element and the connection of the Truss to the Structural Element is by others.
-  Truss-to-Truss Connection, which may be a hanger or other structural connection (e.g., toe-nail) that has adequate capacity to resist the max. reactions and uplifts shown in the Reaction Summary on the TDD.

Note: These symbols are for graphical interpretation only; they are not intended to give any indication of the geometry requirements of the actual item (i.e., restraint, bearing, Structural Element, hanger, etc.) that is represented.

Materials and Fabrication

- Design assumes truss is manufactured in accordance with the TDD and the quality criteria in ANSI/TPI 1 Chapter 3, unless more restrictive criteria are part of the contract specifications.
- Unless specifically stated, lumber shall not exceed 19% moisture content at time of fabrication or in service.
- Design is not applicable for use with fire retardant, preservative treated or green lumber unless specifically stated on the TDD.
- Plate type, size, orientation and location indicated are minimum plating requirements. Plates shall be embedded on both faces of the truss at each joint.
- Truss plates shall be centered on the joint unless otherwise specified by the plate offsets on the TDD or joint details.

Referenced Standards

ANSI/TPI 1: National Design Standard for Metal Plate Connected Wood Truss Construction, a Truss Plate Institute publication (www.tpinst.org).

BCSI: Guide to Good Practice for Handling, Installing, Restraining & Bracing Metal Plate Connected Wood Trusses, a joint publication of the Truss Plate Institute (www.tpinst.org) and the Structural Building Components Association (www.sbcindustry.com).

General Notes

- Each Truss Design Drawing (TDD) provided with this sheet has been prepared in conformance with ANSI/TPI 1. Refer to ANSI/TPI 1 Chapter 2 for definitions of all capitalized terms and for the responsibilities of all parties involved, which include but are not limited to the responsibilities listed on this sheet.
- TDDs should not be assumed to be to scale.
- The Contractor and Building Designer shall review and approve the Truss Submittal Package.
- The suitability and use of the component depicted on the TDD for any particular building design is the responsibility of the Building Designer.
- The Building Designer is responsible for the anchorage of the truss at all bearing locations as required to resist uplift, gravity and lateral loads, and for all Truss-to-Structural Element connections except Truss-to-Truss connections.
- The Building Designer shall ensure that the supporting structure can accommodate the vertical and/or horizontal truss deflections.
- Unless specifically stated otherwise, each Design assumes trusses will be adequately protected from the environment, including not being used in locations where the sustained temperature is greater than 150°F.
- Trusses are designed to carry loads within their plane. Any out-of-plane loads must be resisted by the Permanent Building Stability Bracing.
- Design dead loads must account for all materials, including self-weight (if the word "rake" follows the specified dead load on the TDD that indicates the software applied a pitch increase).
- Trusses installed with roof slopes less than 0.25/12 may experience (but are not designed for) ponding. The Building Designer must ensure that adequate drainage is provided to prevent ponding.

Handling, Installing, Restraint & Bracing

- The Contractor is responsible for the proper handling, erection, restraint and bracing of the Trusses. In lieu of job-specific details, refer to BCSI.
- ANSI/TPI 1 stipulates that for trusses spanning 60' or greater, the Owner shall contract with any Registered Design Professional for the design and inspection of the temporary and permanent truss restraint and bracing. Simpson Strong-Tie is not responsible for providing these services.
- Trusses require permanent lateral restraint of chords and certain web members (when indicated) at the locations or intervals indicated on the TDD. This shall be accomplished in accordance with: standard industry lateral restraint/bracing details in BCSI-B3 or BCSI-B7, supplemental bracing details referenced on the TDD, or as specified in a project-specific truss permanent bracing plan provided by the Building Designer.
- Additional building stability permanent bracing shall be installed as specified in the Construction Documents.
- Special end wall bracing design considerations may be required if a flat gable end frame is used with adjacent trusses that have sloped bottom chords (see BCSI-B3).
- Do not cut, drill, trim, or otherwise alter truss members or plates without prior written approval of an engineer, unless specifically noted on the TDD.
- Piggyback assemblies shall be braced as per BCSI-B3 unless otherwise specified in the Construction Documents.

DSB-89: Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses, a Truss Plate Institute publication (www.tpinst.org).

NDS: National Design Specification for Wood Construction published by American Forest & Paper Association and American Wood Council.

ESR-2762: Simpson Strong-Tie® AS Truss Plates are covered under ESR-2762 published by the International Code Council Evaluation Service (www.icc-es.org).

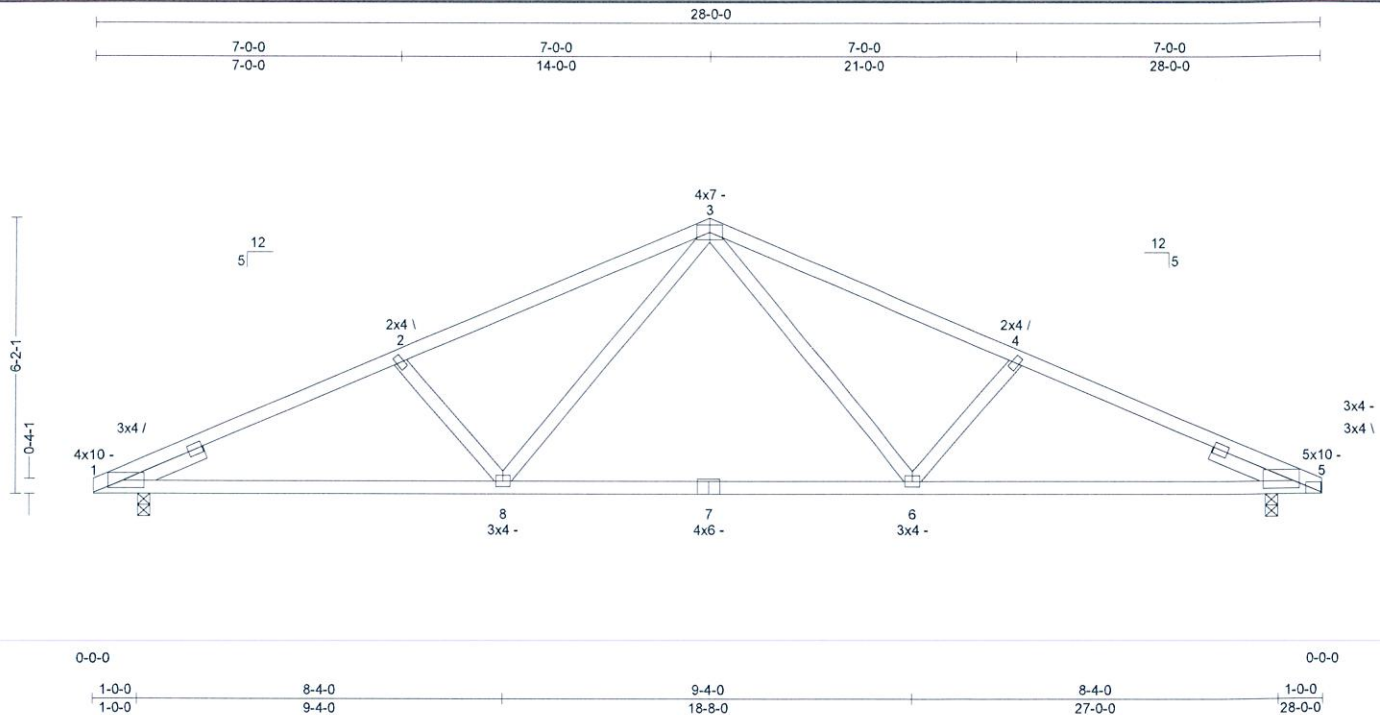


Component Solutions™
Truss
Version: 2017.1.4 [Build 4]
Material Database version: 1560

M&M Trusses
1713 NW 900th Road
Bates City, MO 64011
816-697-2291 mmtrusses@isp.com

Truss: common
Project Name: small garage 26x 24
Date: 5/31/2017 6:49:02 PM
Page: 1 of 1

Span 28-0-0	Pitch 5 / 12	Qty 11	OHL 0-0-0	OHR 0-0-0	CANT L 1-0-0	CANT R 1-0-0	PLIES 1	Spacing 24 in	WGT/PLY 120 lbs
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Loading	General	CSI Summary	Deflection	L/	(loc)	Allowed
Load (psf)	IRC 2012/	TC: 0.78 (2-3)	Vert TL: 0.48 in	L / 632	7	L / 180
Roof Snow (Ps): 21 psf	TPI 1-2007	BC: 0.75 (5-6)	Vert LL: 0.22 in	L / 999	7	L / 240
TCCL: 10	Rep Mbr Increase: Yes	Web: 0.14 (4-6)	Horz TL: 0.09 in		5	
BCCL: 0	D.O.L.: 125 %		Creep Factor, Kcr = 1.5			
BCDL: 10						
Plate Offsets (Int X,Y,Ang): (1.8-12.0-9.0) (2.0-0.3-13.48) (3.0-0.3-13.0) (4.0-0.3-13.48) (5.11-1.0-1.0) (6.0-0.3-8.0) (7.0-0.2-0.0) (8.0-0.3-8.0)						

Reaction Summary

JT	Type	Brg Combo	Brg Width	Material	Rqd Brg Width	Max React	Max Grv Uplift	Max Wind Uplift	Max Uplift	Max Horiz
1	Pin (Wall)	1	3.5 in	Spurce-Pine-Fir	1.90 in	1,209 lbs	-	-52 lbs	-52 lbs	-49 lbs
5	H Roll (Wall)	1	3.5 in	Spurce-Pine-Fir	1.90 in	1,209 lbs	-	-52 lbs	-52 lbs	0 lbs

Material Summary

TC SP (ALSC6-2013) #1 2x4
BC SP (ALSC6-2013) #1 2x4
Webs SP (ALSC6-2013) #1 2x4
Slider SP (ALSC6-2013) #1 2x4

Bracing Summary

TC Bracing Sheathed or Purlins at 3-0-0, Purlin design by Others.
BC Bracing Sheathed or Purlins at 8-0-0, Purlin design by Others.

Loads Summary

- This truss has been designed for the effects due to 10 psf bottom chord live load plus dead loads.
- This truss has been designed for the effects of a balanced design snow load (Ps = 21 psf) and unbalanced design snow loads (5 / 12, 6.3 psf wind, 21 psf lee, 19.2 psf lee over peak to 6.9 ft) for hips/gables in accordance with ASCE7 - 10 with the following user defined input: 30 psf ground snow load (Pg), Terrain Category C, Exposure Category Partially Exposed (Ce = 1.0), Building Category II (I = 1.0), Thermal Condition All Others (Ct = 1.0), Roof Slope Factor (Cs = 1.00), DOL = 1.15.
- This truss has been designed for the effects of wind loads in accordance with ASCE7 - 10 with the following user defined input: 115 mph ultimate, Exposure C, Fully Enclosed, Gable/Hip, Building Category II (I = 1.00), Overall Bldg Dims 40 ft x 60 ft, h = 12 ft, End Zone Truss, Both end webs considered, DOL = 1.60, CC Zone Width 4 ft.
- In addition to the snow loading specified on this drawing, this truss has also been designed for a roof live load (TCLL) of 20 psf.
- Minimum storage attic loading in accordance with IRC Table R301.5 has been applied.

Member Forces Summary

Table indicates: Member ID, max CSI, max axial force, (max compr force if different from max axial force)

TC	1-2	0.649	-2,641 lbs	3-4	0.783	-2,276 lbs
BC	2-3	0.783	-2,276 lbs	4-5	0.649	-2,641 lbs
Webs	5-6	0.749	2,318 lbs	6-8	0.679	1,424 lbs
	2-8	0.142	-607 lbs	3-6	0.140	868 lbs
	3-8	0.140	868 lbs	4-6	0.142	-607 lbs

Notes:

- A quality control factor, Cq = 0.80, has been applied to the plate lateral resistance design values based on a 20 % Fabrication Tolerance selected by the Truss Manufacturer per ANSI/TPI 1-2007 Section 2.3.6.9.
- Listed wind uplift reactions based on MWFRS Only loading.
- Bearing material shown in the above table has only been checked for resistance perpendicular to grain, and does not indicate adequacy of material for other design considerations.

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JUN 23 2017

City of Lee's Summit
Development Center



COA#
E-2012037963

05/31/2017

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Simpson Strong-Tie Company

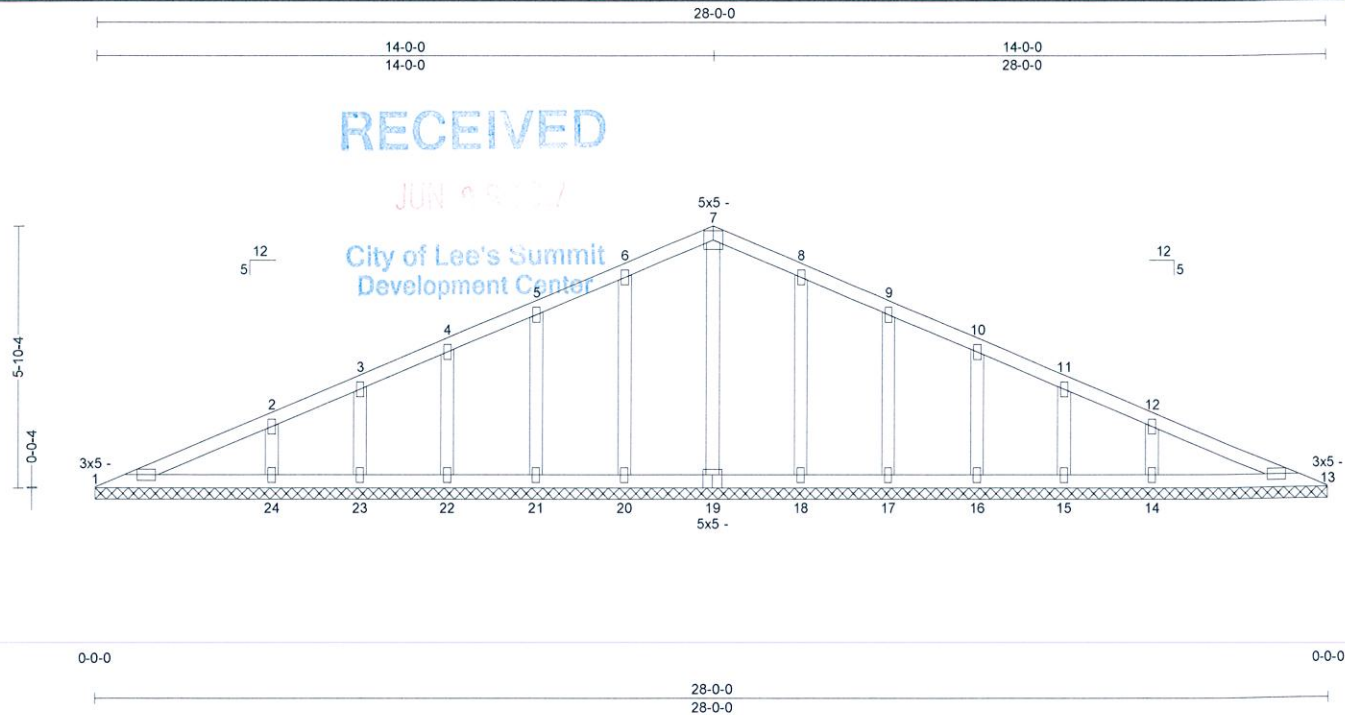


Component Solutions™
Truss
Version: 2016.11.3 [Build 10]
Material Database version: 1558

M&M Trusses
1713 NW 900th Road
Bates City, MO 64011
816-697-2291 mmtrusses@isp.com

Truss: drop gable
Project Name: small garage 26x 24
Date: 05/30/17 07:07:51
Page: 1 of 1

Span 28-0-0 Pitch 5 / 12 Qty 2 OHL 0-0-0 OHR 0-0-0 CANT L 0-0-0 CANT R 0-0-0 PLIES 1 Spacing 24 in WGT/PLY 128 lbs



Loading	General	CSI Summary	Deflection	L/	(loc)	Allowed
Load (psf)	Bldg Code: IRC 2012/ TPI 1-2007	TC: 0.06 (1-2)	Vert TL: 0 in	L / 999	(13-14)	L / 180
Roof Snow (Ps): 21 psf	Rep Mbr Increase: Yes	BC: 0.05 (24-1)	Vert LL: 0 in	L / 999	(13-14)	L / 240
TCDL: 10	D.O.L.: 125 %	Web: 0.07 (6-20)	Horz TL: 0 in		13	
BCCL: 0			Creep Factor, Kcr = 1.5			
BCDL: 10						

Plate Offsets (Int.X,Y,Ang): (1-1-1-14,3-4,0) (7-0-0-3-13,0) (13-1-1-14,3-4,0)

Reaction Summary

JT	Type	Brg Combo	Brg Width	Material	Max React	Ave React	Max Grav Uplift	Max Wind Uplift	Max Uplift	Max Horiz
1	Continuous	1	336 in	Spurce-Pine-Fir	248 lbs	99 plf	-	-27 lbs	-27 lbs	-48 lbs

Material Summary

TC SP (ALSC6-2013) #1 2x4
BC SP (ALSC6-2013) #1 2x4
Webs SP (ALSC6-2013) #1 2x4

Bracing Summary

TC Bracing: Sheathed or Purlins at 6-3-0. Purlin design by Others.
BC Bracing: Sheathed or Purlins at 6-3-0. Purlin design by Others.

Loads Summary

- 1) This truss has been designed for the effects due to 10 psf bottom chord live load plus dead loads.
- 2) This truss has been designed for the effects of a balanced design snow load (Ps = 21 psf) and unbalanced design snow loads (5 / 12, 6.3 psf wind, 21 psf lee, 19.2 psf lee over peak to 6.9 ft) for hips/gables in accordance with ASCE7 - 10 with the following user defined input: 30 psf ground snow load (Pg, Terrain Category C, Exposure Category Partially Exposed (Ce = 1.0), Building Category II (I = 1.0), Thermal Condition All Others (Ct = 1.0), Roof Slope Factor (Cs = 1.00), DOL = 1.15.
- 3) This truss has been designed for the effects of wind loads in accordance with ASCE7 - 10 with the following user defined input: 115 mph ultimate, Exposure C, Fully Enclosed, Gable/Hip, Building Category II (I = 1.00), Overall Bldg Dims 40 ft x 60 ft, h = 12 ft, End Zone Truss, Both end webs considered, DOL = 1.60, CC Zone Width 4 ft.
- 4) In addition to the snow loading specified on this drawing this truss has also been designed for a roof live load (TCLL) of 20 psf.

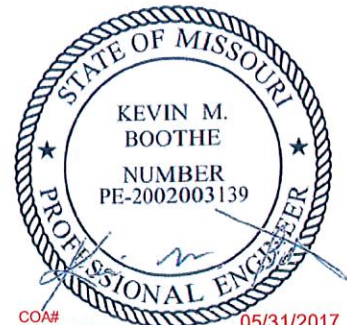
Member Forces Summary

Table indicates: Member ID, max CSI, max axial force, (max compr force if different from max axial force)

TC	1-2	0.065	79 lbs	(-53 lbs)	5-6	0.056	160 lbs	(-70 lbs)	9-10	0.055	123 lbs	(-62 lbs)
	2-3	0.055	55 lbs	(-43 lbs)	6-7	0.053	194 lbs	(-79 lbs)	10-11	0.050	86 lbs	(-45 lbs)
	3-4	0.050	86 lbs	(-45 lbs)	7-8	0.053	194 lbs	(-79 lbs)	11-12	0.055	55 lbs	(-43 lbs)
	4-5	0.055	123 lbs	(-62 lbs)	8-9	0.056	160 lbs	(-70 lbs)	12-13	0.065	79 lbs	(-52 lbs)
BC	13-14	0.046	78 lbs	(-55 lbs)	17-18	0.025	78 lbs	(-12 lbs)	21-22	0.026	78 lbs	(-12 lbs)
	14-15	0.044	78 lbs	(-12 lbs)	18-19	0.025	78 lbs	(-12 lbs)	22-23	0.026	78 lbs	(-12 lbs)
	15-16	0.026	78 lbs	(-12 lbs)	19-20	0.025	78 lbs	(-12 lbs)	23-24	0.044	78 lbs	(-12 lbs)
	16-17	0.026	78 lbs	(-12 lbs)	20-21	0.025	78 lbs	(-12 lbs)	24-1	0.046	78 lbs	(-55 lbs)
Webs	2-24	0.017	-161 lbs		6-20	0.072	-208 lbs		10-16	0.032	-193 lbs	
	3-23	0.014	-117 lbs		7-19	0.057	-121 lbs		11-15	0.014	-117 lbs	
	4-22	0.032	-193 lbs		8-18	0.072	-208 lbs		12-14	0.017	-161 lbs	
	5-21	0.048	-202 lbs		9-17	0.048	-202 lbs					

Notes:

- 1) Gable requires continuous bottom chord bearing.
- 2) Gable webs placed at 24" o.c., U.N.O.
- 3) Attach gable webs with 2x4 20ga plates, U.N.O.
- 4) This truss has been designed for in-plane wind loading. See TD-GBL-0002B for gable stud bracing reinforcement requirements for out-of-plane wind loading.
- 5) This gable has been designed for a 12" (max.) rake overhang.
- 6) A quality control factor, Cq = 0.80, has been applied to the plate lateral resistance design values based on a 20 % Fabrication Tolerance selected by the Truss Manufacturer per ANSI/TPI 1-2007 Section 2.3.6.9.
- 7) Listed wind uplift reactions based on MWFRS Only loading.
- 8) Bearing material shown in the above table has only been checked for resistance perpendicular to grain, and does not indicate adequacy of material for other design considerations.



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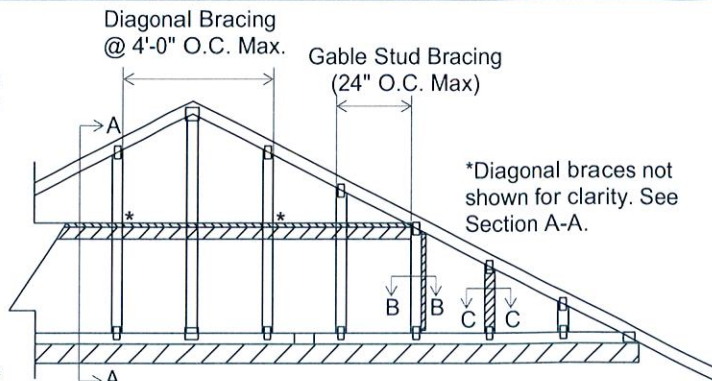
05/31/2017

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Simpson Strong-Tie Company

NOTES:

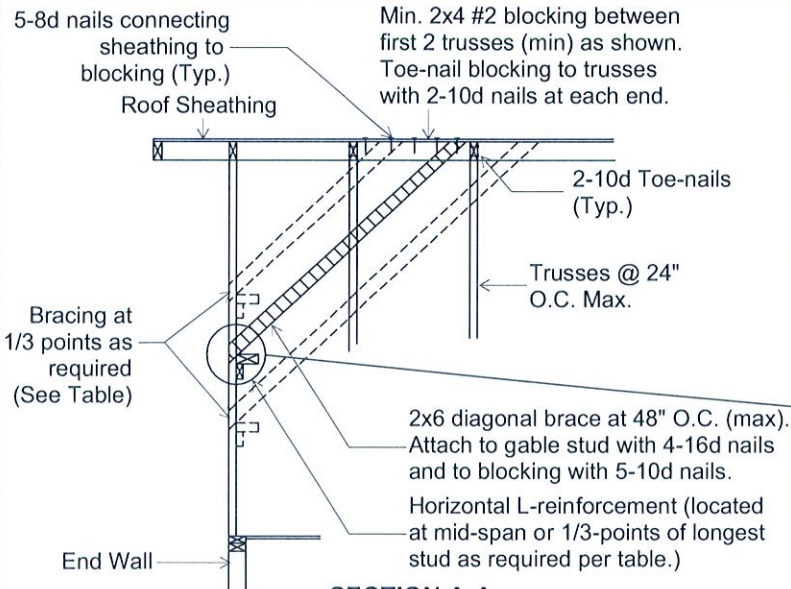
1. This detail provides bracing/reinforcement options for the gable studs to resist the out-of-plane wind loading. Refer to the individual truss design drawing for bracing/reinforcement requirements for resisting the vertical (in-plane) loads assumed in the design of the gable end frame. Additional bracing/reinforcement at the end of the building and/or at the gable end wall may be required. Refer to the Building Designer/Construction Documents for all gable end frame and roof system bracing requirements. For additional information, see BCSI-B3.
2. This detail does not apply to structural gables.
3. Connection requirements between the gable end frame and the wall to be specified by the Building Designer.
4. The gable end frame must match the profile of the adjacent trusses. Do not use a gable end frame with a flat bottom chord next to trusses with sloped bottom chords, such as scissor or vaulted trusses.



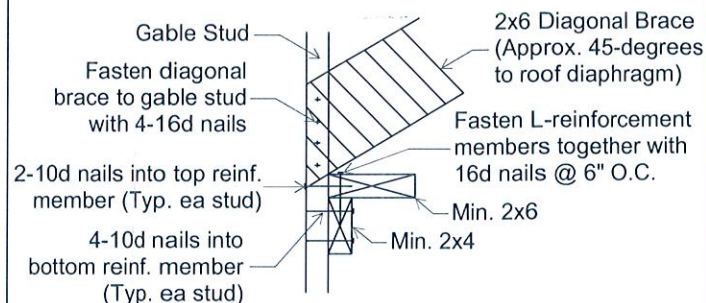
GABLE END WITH STUD BRACING/REINFORCEMENT

MINIMUM GABLE STUD SIZE, SPECIES & GRADE	MAX. GABLE STUD SPACING	WITHOUT BRACE	L-REINFORCEMENT	SCAB REINFORCEMENT	DIAGONAL BRACING @ MID-SPAN ²	DIAGONAL BRACING @ 1/3 POINTS ²
		MAXIMUM STUD LENGTH ³				
2X4 SPF STUD or STANDARD	12" O.C.	5-1-12	9-0-12	10-3-12	10-3-12	15-5-12
	16" O.C.	4-8-4	8-3-0	9-4-8	9-4-8	14-0-12
	24" O.C.	4-1-0	7-0-0	8-2-4	8-2-4	12-3-8

1. L- and Scab Reinforcements shall be minimum 2x4 stud grade and must be a minimum of 90% of the gable stud length. Fasten the reinforcement member to the gable stud with 10d nails @ 6" o.c.
2. Attach horizontal reinforcing member at mid-span (or 1/3 points as required) of the longest stud and install diagonal bracing @ 4' o.c. (max) as shown in Section A-A.
3. Tabulated maximum stud lengths are based on components and cladding wind pressures using the wind design parameters listed in the detail limitations. Gable stud deflection criteria is L/240.



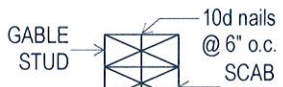
SECTION A-A



NOTE: Diagonal braces over 6'-3" require a 2x4 T-brace attached to one narrow edge. Diagonal braces over 12'-6" require 2x4s attached on both narrow edges. The braces must cover 90% of the diagonal brace and shall be fastened to the narrow edge with 10d nails at 6" o.c. (min. 3" end distance). When attached on both narrow edges, stagger the nails on each side by 3".



SECTION B-B



SECTION C-C

DETAIL LIMITATIONS:

Max. Mean Roof Height: 30'
Category: II
Exposure: B or C
Load Duration Factor: 1.6
Wind Speed: 90 mph Nominal

Wind Speed Equivalent

Nominal	Ultimate
90 mph	(115 mph)

Nail Dimension

16d = 3.5" x 0.162"
10d = 3" x 0.148"
8d = 2.5" x 0.131"

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JUN 22 2017

City of Lee's Summit
Development Center



COA#
E-2012037963

05/31/2017



LEE'S SUMMIT MISSOURI

USE VARIANCE APPLICATION FORM

Application No. PL2017-139

APPLICATION IS HEREBY MADE TO THE BOARD OF ZONING ADJUSTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI, REQUESTING A VARIANCE TO THE UNIFIED DEVELOPMENT ORDINANCE, AS SET FORTH BELOW,

VARIANCE REQUEST (Give description of variance(s) requested) ① REQUEST A DETACHED GARAGE IN FRONT OF AND BE BUILT 23 FT ADJACENT TO HOUSE. ② REQUEST A SECOND ACCESSORY STRUCTURE (DETACHED GARAGE) THERE IS CURRENTLY AN OUTBUILDING/HORSE BARN.

PROPERTY ADDRESS 1350 NE Blackwell Rd., Lee's Summit, MO 64086

LEGAL DESCRIPTION SEC-34 TWP-48 RING-31 N 264' OF S 511.5' MEAS. ON FRONT + REAR LI OF NE NE SEC-34 (EX PT IN PRAIRIE LEE LAKE) CONTG. 8 AC M/L (SEE ATTACHED)

PROPERTY OWNER JERALD + KERRY KREPPS

ADDRESS 1350 NE Blackwell Rd.,

CITY—STATE—ZIP Lee's Summit, MO 64086

PHONE 612 508 6173

FAX —

612 619 7159

APPLICANT JERALD + KERRY KREPPS

ADDRESS 1350 NE Blackwell Rd

CITY—STATE—ZIP Lee's Summit MO 64086

PHONE 612-508-6173, 612 619 7159

FAX —

THIS APPLICATION MUST BE ACCOMPANIED BY:

- Acknowledgement of the Board of Adjustment Process.
- One set of drawings to clearly indicate the requested variance in relation to the property and/or structures. These could include plot plan, plat, site plan, survey and/or building elevation(s).
(Note: These drawings must be able to be clearly read as well as being reproduced. If the drawings are larger than 11" by 17", a smaller copy of the drawings shall also be provided.)



LEE'S SUMMIT MISSOURI

USE VARIANCE APPLICATION FORM

- Statement of Use Variance Criteria.
- Enclosed is the fee in the amount of \$ 465.00 (\$300 filing fee plus \$165 advertising charge)
Payable to the **City of Lee's Summit**.

The application must be signed by the legal property owner AND the applicant, if other than the owner. The property owner may grant permission for the filing of the application by means of a signed and notarized affidavit to that effect.


PROPERTY OWNER

APPLICANT

Print name here: GERALD KREPPS KERRY KREPPS

Receipt #: 2017027951

Date Filed: 6/22/17

Processed by: CS



LEE'S SUMMIT MISSOURI

BOARD OF ZONING ADJUSTMENTS PROCESS

its case to the Board, FULLY describing the situation and the variance criteria. (See Statement of Variance Criteria.)

- Any evidence presented to the Board will become public record and must be provided in duplicate to the City or tagged as an exhibit at the hearing.

Board's Authority

- The Board of Zoning Adjustment may grant a variance only if application of the UDO, when applied to a particular property, would significantly interfere with the use of the property.
- The Board's authority is limited by the statutes of the State of Missouri and the UDO. The Board may only grant a variance if, in its discretion, each of the variance criteria is met. (See Statement of Variance Criteria.) **It is the applicant's responsibility to demonstrate to the Board that each of these criteria have been met.** The Board may evaluate the evidence in the record, and exercise its discretion on whether each of these criteria has been met on a case by case basis.

The person completing the application must sign below.


SIGNATURE

JERALD KREPPS KERRY KREPPS
PRINT NAME HERE



STATEMENT OF VARIANCE CRITERIA

In accordance with Section 4.530.B.3. of the Lee's Summit Unified Development Ordinance, the applicant must meet each of the following requirements to support the granting of the requested variance. **Failure to complete each may result in an incomplete application.** Describe in detail how this application meets each of the following requirements.

1. The granting of the variance will not adversely affect the rights of adjacent property owners or residents.

The proposed detached garage complies with the 10 ft. setback from the side of the property, but would be positioned 23 ft. in front of our house. However, our house is set far back on an eight-acre lot, 581 ft. from the road, while the houses of our neighbors on both sides are built close to the road. The proposed garage would be approximately 378 ft. from the nearest neighbor's house (1300 NE Blackwell) and obscured by many trees. Neighbors on the other side of us (1400 NE Blackwell) have no view of our house or the proposed garage due to an outcropping of trees and an even further distance. Thus the garage will not impose on the rights of any adjacent property owners or residents.

2. The granting of the variance will not be opposed to the general spirit and intent of the ordinance from which the variance is sought.

We surmise that the spirit of the ordinance is meant to protect other residents from encroachments of accessory structures that would obstruct views and, in general, lower property values by creating an eyesore. The garage we propose is small and designed to be architecturally integrated with the house to include brick wainscoting. We believe this will be an aesthetic improvement to the neighborhood, as it will allow us to park our cars inside the garage rather than along the driveway. Since it presently does not have a garage, it should also increase the value of the property, and thus the neighborhood. Although this would be a second accessory structure, we feel that a garage is an important part of the property and that the eight-acre lot is more than large enough to accommodate both structures without feeling cluttered.

3. The variance requested will not adversely affect the public health, safety, morals, or general welfare of the community.

It is unlikely that the community will be aware of our detached garage, as we are located in a remote section of Lee's Summit. The only effect it should have is an increased level of safety for us to protect our cars in a garage.



STATEMENT OF VARIANCE CRITERIA

4. The variance requested arises from a condition which is unique and peculiar to the property in question and which is not ordinarily found in the same zone or district, and further, is not created by an action or actions of the property owner or applicant.

We, and our contractor, considered various locations for the detached garage but found the following limitations:

1. There are buried utility lines and a chain link fence on the Southwest side of the house that preclude building a structure. As well, there are two mature trees that provide shade for the house that would have to be removed.
2. The North side of the house has the topographical problem of a steep decline. The driveway would be steep, there would be drainage issues and the driveway would have to cut across the entire front lawn. In addition, the access to the house would be from the basement door. The homeowner (Jerald Krepps) has progressive neuropathy and other conditions making it difficult to navigate the basement steps up to the main living area every time the car is used and parked in the garage. (It's one of the reasons we bought this ranch, one-level house).
3. A garage located further back on the West side, beyond the chain link fence would be impractical from an accessibility standpoint.

The location we are proposing is at the natural end of our existing driveway with easy access to the house entry doors on the main living area.

5. Substantial justice will be done by the granting of this variance.

By granting this variance you will allow us to have a sorely needed garage to protect our two vehicles without causing any negative impact on the neighborhood. When we bought the house (last October) we knew that the first thing we wanted to do was to add a garage. The previous owner turned the original garage into a mother-in-law apartment. We love the area and our neighbors and want only to improve the property.

STATEMENT OF VARIANCE CRITERIA (NON-USE)

Pages 6 and 7

1. Practical difficulties exist that would make it impossible to carry out the strict letter of the Unified Development Ordinance when considered in light of the following factors:

As confirmed by our contractor, Josh Goodman, physical barriers prevent positioning the detached garage even with, or behind the house:

- South side of the house: there are buried utility lines on the south and west side of the house.
 - The heat pump, AC and drainage pipes are located on the South side of the house.
 - There is also a chain link fence on the south side and back of the house that is used for pet confinement.
 - The property on the North side of the house slopes steeply down. Our contractor advised that there would be drainage problems if the garage were located on that side as well as the impracticality of building on a steep slope.
 - The septic system and water line is located on the North side of the house where a garage would theoretically be located.
 - In addition, a garage on the North side would require a driveway cutting across the complete front lawn since the drive leading to the house is on the South side of the lot.
- Finally, a detached garage located on the North side of the property, or further behind the house, would mean that the walk-in basement door would be the logical entrance into the house from the garage. The basement has a steep set of stairs leading to the main level. Unfortunately, Jerald Krepps has physical limitations (neuropathy, osteoarthritis, heart disease), which makes climbing stairs difficult. This is one of the reasons we bought this one-level, ranch house: to avoid stairs.

a. How substantial the requested variation is, in relation to the requirement of the Ordinance.

The ordinance states that the structure should be no closer to the front than the primary structure. We are requesting that the detached garage be positioned adjacent to the South side of the house but located 23 ft. from the front of the house to the back of the garage. Because the house is located on a long strip of land, 581 ft. from the road, this 23 ft. of space between the garage and house is a very minor distance when considering the eight-acre lot. The detached garage would be located at the natural end of the driveway and would be visually close to the house. In addition, the ordinance states that there should only be one accessory structure per lot. There is currently a horse barn on the lot used to house tractors and other implements. However, because the lot is eight acres, the addition of a detached garage will be a visually minor addition to the property.

b. The effect of increased population density, if any, on available public facilities and services, if the variance is allowed.

The garage would not increase the population, just house our two cars.

c. Whether a substantial change will be produced in the character of the neighborhood, or whether a substantial detriment to adjoining properties will be created if the variance is allowed.

Our neighborhood is comprised of nine properties along Blackwell Rd., each on lots between five and eight acres. Because of the large size of the lots, there are many accessory structures in our neighborhood including barns, sheds, outbuildings and detached garages among others. Accessory

structures are ubiquitous and a necessary part of the upkeep of large lots/hobby farms. A car garage is a common and valuable structure for most properties, and thus, we will be elevating the value of the property, and by extension, the neighborhood.

There is only one neighbor, living at 1300 NE Blackwell Rd., who would have a view of the garage (albeit from 378 ft.). He has stated that he has no problem with the garage location at all.

d. Whether it is feasible for the applicant to pursue a method, other than a variance, to obviate the practical difficulty.

We spoke with multiple contractors regarding the garage. Their unanimous consensus was that the only feasible location for the detached garage is the one we are proposing due to the physical limitations outlined in question 1 on the previous page.

e. Whether the interests of justice will be served by allowing the variance, in view of the manner in which the practical difficulty arose in consideration of all of the above factors.

The prior homeowner decided to convert the original garage into a mother-in-law apartment due to the understandable need to care for an aging parent. However, we very much need a garage for our cars due to storms and extreme heat. We believe it is just to allow us to have a garage and we have done our due diligence in designing it to be compatible with the house architecture and positioning it in the absolute best location based on the lot's characteristics.

f. Conditions of the land in question, and not conditions personal to the landowner. (The Board will not consider evidence of the applicant's or landowner's personal financial hardship unrelated to any economic impact on the land.)

The mitigating conditions of the land in question are the reasons we have proposed the described location of the garage. Jerald Krepps' physical condition is the only other consideration. As cited in other parts of this proposal, the conditions of the property that impact the garage location are:

- South side of the house: there are buried utility lines on the south and west side of the house.
- There is also a chain link fence on the south side and back of the house that is used for pet confinement.
- The property on the North side of the house slopes steeply down. Our contractor advised that there would be drainage problems if the garage were located on that side as well as the impracticality of building on a steep slope. Driving on the steep incline would also be problematic in icy/snowy weather.
- The septic system and water line are located on the North side of the house where a garage would theoretically be located.
- In addition, a garage on the North side would require a driveway cutting across the complete front lawn since the drive leading to the house is on the South side of the lot. This driveway across the front lawn would also necessitate the removal of several valuable, mature shade trees.
- Finally, a detached garage located on the North side of the property, or further behind the house, would mean that the walk-in basement door would be the closest and logical entrance into the house from the garage. This would require a long hike from the garage, through the unfinished basement to the living area of the house, a practical consideration if carrying groceries, etc.



STATEMENT OF VARIANCE CRITERIA (NON-USE)

- d. Whether it is feasible for the applicant to pursue a method, other than a variance, to obviate the practical difficulty.

- e. Whether the interests of justice will be served by allowing the variance, in view of the manner in which the practical difficulty arose in consideration of all of the above factors.

- f. Conditions of the land in question, and not conditions personal to the landowner. (The Board will not consider evidence of the applicant's or landowner's personal financial hardship unrelated to any economic impact on the land.)

This sheet must be signed by the person completing this sheet.


SIGNATURE

KERRY KREPPS JERALD KREPPS
PRINT NAME HERE

**Appl. #PL2017-139--VAR to garage setback & number
of detached accessory structures
1350 NE Blackwell Rd.;
Jerald & Kerry Krepps, applicant**

