



# PHOENIX ENGINEERING & SURVEYING, LLC

CIVIL ENGINEERS SURVEYORS PLANNERS

April 24, 2019

TRANSMITTED VIA ELECTRONIC SUBMITTAL ONLY

**LOMC Clearinghouse**

Attn: LOMA Manager

3601 Eisenhower Avenue, Suite 500

Alexandria, VA 22304-6426

**RE: Letter of Map Revision (based on Fill) Application**  
**3923 SW Pryor Road**  
Lee's Summit, Jackson County, Missouri

Sir or Madam:

On behalf of Whispering Wood Land, LLC we have submitted an application for a Letter of Map Revision (based on fill) for property located within the corporate limits of the City of Lee's Summit, Jackson County, Missouri.

At the request of the City of Lee's Summit's City Council, we are submitting the LOMR-F application prior to the official platting of the property located within the Southwest Quarter of Section 24, Township 47 North, Range 32 West. Council's request was to provide documentation that the property has removed from the floodway fringe prior to them approving the platting of the property into residential lots.

Due to this request, we have provided seventeen (17) certified metes and bounds descriptions, one description for each of the future lots that will become legal parcels upon approval and recording of the plat.

An exhibit for each legal description has been provided along with as-built topographic exhibits that were developed from survey information obtained in January 2019 for verification that the areas of engineered fill were adequately elevated above the 1% annual chance (100-yr) floodplain. Base Flood Elevations were obtained primarily from the published Flood Insurance Study's Flood Profile for Mouse Creek. The lone exception was for the legal description entitled "Proposed Lot 9" which resides along a backwater area and is not immediately adjacent to the Mouse Creek Floodway. For this parcel, the base flood elevation was derived from the FEMA FIRM Map Number 29095C0531G; Revised January 20, 2017.

Feel free to contact me if you need additional information or have comments.

Sincerely,  
Phoenix Engineering and Surveying, L.L.C.

Brian L. Glenn, PE, CFM, LEED AP

DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY  
COMMUNITY ACKNOWLEDGMENT FORM

O.M.B. NO. 1660-0015  
Expires February 28, 2014

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average 1.38 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0015). NOTE: Do not send your completed form to this address.

This form must be completed for requests involving the existing or proposed placement of fill (complete Section A) **OR** to provide acknowledgment of this request to remove a property from the SFHA which was previously located within the regulatory floodway (complete Section B).

This form must be completed and signed by the official responsible for floodplain management in the community. The six digit NFIP community number and the subject property address must appear in the spaces provided below. Incomplete submissions will result in processing delays. Please refer to the MT-1 instructions for additional information about this form.

Community Number: 290174

Property Name or Address: 3923 SW Pryor Road, Lee's Summit, MO 64082

**A. REQUESTS INVOLVING THE PLACEMENT OF FILL**

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision Based on Fill (LOMR-F) or Conditional LOMR-F request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a Conditional LOMR-F, will be obtained. For Conditional LOMR-F requests, the applicant has or will document Endangered Species Act (ESA) compliance to FEMA prior to issuance of the Conditional LOMR-F determination. For LOMR-F requests, I acknowledge that compliance with Sections 9 and 10 of the ESA has been achieved independently of FEMA's process. Section 9 of the ESA prohibits anyone from "taking" or harming an endangered species. If an action might harm an endangered species, a permit is required from U.S. Fish and Wildlife Service or National Marine Fisheries Service under Section 10 of the ESA. For actions authorized, funded, or being carried out by Federal or State agencies, documentation from the agency showing its compliance with Section 7(a)(2) of the ESA will be submitted. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by DHS-FEMA, all analyses and documentation used to make this determination. For LOMR-F requests, we understand that this request is being forwarded to DHS-FEMA for a possible map revision.

Community Comments:

Community Official's Name and Title: (Please Print or Type)  
George Binger - Deputy Director of Public Works / City Engineer

Telephone No.:  
816-969-1800

Community Name:

City of Lee's Summit, MO

Community Official's Signature: (required)

*George M. Binger*

Date:

4/26/2019

**B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY**

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this request for a LOMA. We understand that this request is being forwarded to DHS-FEMA to determine if this property has been inadvertently included in the regulatory floodway. We acknowledge that no fill on this property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements.

Community Comments:

Community Official's Name and Title: (Please Print or Type)

Telephone No.:

Community Name:

Community Official's Signature (required):

Date:

**DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY  
ELEVATION FORM**

**O.M.B. NO. 1660-0015  
Expires February 28, 2014**

**PAPERWORK BURDEN DISCLOSURE NOTICE**

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This form must be completed for requests and must be completed and signed by a registered professional engineer or licensed land surveyor. A DHS - FEMA National Flood Insurance Program (NFIP) Elevation Certificate may be submitted in lieu of this form for single structure requests.

For requests to remove a structure on natural grade OR on engineered fill from the Special Flood Hazard Area (SFHA), submit the lowest adjacent grade (the lowest ground touching the structure), **including an attached deck or garage**. For requests to remove an entire parcel of land from the SFHA, provide the lowest lot elevation; or, if the request involves an area described by metes and bounds, provide the lowest elevation within the metes and bounds description. All measurements are to be rounded to nearest tenth of a foot. In order to process your request, all information on this form must be completed **in its entirety**. Incomplete submissions will result in processing delays.

1. NFIP Community Number: **290174** Property Name or Address: **3923 SW Pryor Road, Lee's Summit, MO 64082**
2. Are the elevations listed below based on ☒ **existing** or ☐ **proposed** conditions? (Check one)
3. For the existing or proposed structures listed below, what are the types of construction? (check all that apply)  
☐ crawl space ☐ slab on grade ☐ basement/enclosure ☒ other (explain) **Structure style TBD based on future platting of property**
4. Has DHS - FEMA identified this area as subject to land subsidence or uplift? (see instructions) ☐ Yes ☒ No  
 If yes, what is the date of the current re-leveling? / (month/year)
5. What is the elevation datum? ☐ NGVD 29 ☒ NAVD 88 ☐ Other (explain)  
 If any of the elevations listed below were computed using a datum different than the datum used for the effective Flood Insurance Rate Map (FIRM) (e.g., NGVD 29 or NAVD 88), what was the conversion factor?  
 Local Elevation +/- ft. = FIRM Datum
6. Please provide the Latitude and Longitude of the most upstream edge of the **structure** (in decimal degrees to the nearest fifth decimal place):  
 Indicate Datum: ☐ WGS84 ☐ NAD83 ☐ NAD27 Lat. Long.  
 Please provide the Latitude and Longitude of the most upstream edge of the **property** (in decimal degrees to the nearest fifth decimal place):  
 Indicate Datum: ☐ WGS84 ☒ NAD83 ☐ NAD27 Lat. **N38.87418** Long. **W94.41285**

Address	Lot Number	Block Number	Lowest Lot Elevation*	Lowest Adjacent Grade To Structure	Base Flood Elevation	BFE Source
see metes and bounds exhibit	Proposed Lot 1		<b>957.6</b>		<b>957.4</b>	<b>FIS Profile</b>
" "	Proposed Lot 2		<b>957.9</b>		<b>957.8</b>	<b>FIS Profile</b>

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

<b>Certifier's Name:</b> Brian L. Glenn, P.E.	<b>License No.:</b> Missouri: PE-2010011667	<b>Expiration Date:</b> 12/31/2020
<b>Company Name:</b> Phoenix Engineering & Surveying, LLC	<b>Telephone No.:</b> 816-743-9000	<div style="border: 2px solid black; width: 150px; height: 100px; margin: 0 auto; text-align: center; vertical-align: middle;">                     Seal (optional)                 </div>
<b>Email:</b> brian@phoenix-llc.com	<b>Fax No.:</b> 816-743-9700	
<b>Signature:</b>	<b>Date:</b>	

\* For requests involving a portion of property, include the lowest ground elevation within the metes and bounds description.  
 Please note: If the Lowest Adjacent Grade to Structure is the only elevation provided, a determination will be issued for the structure only.

Continued from Page 1.

[illegible]

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<b>Email:</b> brian@phoenix-llc.com	<b>Fax No.</b> 816-743-9700
<b>Signature:</b>	<b>Date:</b>

**Expiration Date:**  
12/31/2020

\* For requests involving a portion of property, include the lowest ground elevation within the metes and bounds description.  
Please note: If the Lowest Adjacent Grade to Structure Is the only elevation provided, a determination will be issued for the structure only.

Seal (optional)

DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY  
PROPERTY INFORMATION FORM

O.M.B. NO. 1660-0015  
Expires February 28, 2014

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This form may be completed by the property owner, property owner's agent, licensed land surveyor, or registered professional engineer to support a request for a Letter of Map Amendment (LOMA), Conditional Letter of Map Amendment (CLOMA), Letter of Map Revision Based on Fill (LOMR-F), or Conditional Letter of Map Revision Based on Fill (CLOMR-F) for existing or proposed, single or multiple lots/structures. In order to process your request, all information on this form must be completed *in its entirety*, unless stated as optional. Incomplete submissions will result in processing delays. Please check the item below that describes your request:

<input type="checkbox"/> LOMA	A letter from DHS-FEMA stating that an existing structure or parcel of land that has not been elevated by fill (natural grade) would not be inundated by the base flood.
<input type="checkbox"/> CLOMA	A letter from DHS-FEMA stating that a proposed structure that is not to be elevated by fill (natural grade) would not be inundated by the base flood if built as proposed.
<input checked="" type="checkbox"/> LOMR-F	A letter from DHS-FEMA stating that an existing structure or parcel of land that has been elevated by fill would not be inundated by the base flood.
<input type="checkbox"/> CLOMR-F	A letter from DHS-FEMA stating that a parcel of land or proposed structure that will be elevated by fill would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed.

**Fill** is defined as material from any source (including the subject property) placed that raises the ground to or above the Base Flood Elevation (BFE). The common construction practice of removing unsuitable existing material (topsoil) and backfilling with select structural material is not considered the placement of fill if the practice does not alter the existing (natural grade) elevation, which is at or above the BFE. Fill that is placed before the date of the first National Flood Insurance Program (NFIP) map showing the area in a Special Flood Hazard Area (SFHA) is considered natural grade.

Has fill been placed on your property to raise ground that was previously below the BFE?

☒ Yes ☐ No

If yes, when was fill placed?

mm/dd/yyyy

Will fill be placed on your property to raise ground that is below the BFE?

☐ Yes\* ☐ No

If yes, when will fill be placed?

12/10/2018

mm/dd/yyyy

\* If yes, Endangered Species Act (ESA) compliance must be documented to FEMA prior to issuance of the CLOMR-F determination (please refer page 4 to the MT-1 instructions).

1. Street Address of the Property (if request is for multiple structures or units, please attach additional sheet referencing each address and enter street names below):

3923 SW Pryor Road, Lee's Summit, MO 64082

2. Legal description of Property (Lot, Block, Subdivision or abbreviated description from the Deed):

See included survey

3. Are you requesting that a flood zone determination be completed for (check one):

☐ Structures on the property? What are the dates of construction? \_\_\_\_\_ (MM/YYYY)

☒ A portion of land within the bounds of the property? (A certified metes and bounds description and map of the area to be removed, certified by a licensed land surveyor or registered professional engineer, are required. For the preferred format of metes and bounds descriptions, please refer to the MT-1 Form 1 Instructions.)

☐ The entire legally recorded property?

4. Is this request for a (check one):

☐ Single structure

☐ Single lot

☐ Multiple structures (How many structures are involved in your request? List the number: \_\_\_\_\_)

☒ Multiple lots (How many lots are involved in your request? List the number: 17)

In addition to this form (MT-1 Form 1), please complete the checklist below. ALL requests must include one copy of the following:

- ☒ Copy of the effective FIRM panel on which the structure and/or property location has been accurately plotted (property inadvertently located in the NFIP regulatory floodway will require Section B of MT-1 Form 3)
- ☐ Copy of the Subdivision Plat Map for the property (with recordation data and stamp of the Recorder's Office)
- OR
- ☒ Copy of the Property Deed (with recordation data and stamp of the Recorder's Office), accompanied by a tax assessor's map or other certified map showing the surveyed location of the property relative to local streets and watercourses. The map should include at least one street intersection that is shown on the FIRM panel.
- ☒ Form 2 - Elevation Form. If the request is to remove the structure, and an Elevation Certificate has already been completed for this property, it may be submitted in lieu of Form 2. If the request is to remove the entire legally recorded property, or a portion thereof, the lowest lot elevation must be provided on Form 2.
- ☒ Please include a map scale and North arrow on all maps submitted.

For LOMR-Fs and CLOMR-Fs, the following must be submitted in addition to the items listed above:

- ☒ Form 3 - Community Acknowledgment Form

For CLOMR-Fs, the following must be submitted in addition to the items listed above:

- ☐ Documented ESA compliance, which may include a copy of an Incidental Take Permit, an Incidental Take Statement, a "not likely to adversely affect" determination from the National Marine Fisheries Service (NMFS) or the U.S. Fish and Wildlife Service (USFWS), or an official letter from NMFS or USFWS concurring that the project has "No Effect" on proposed or listed species or designated critical habitat. Please refer to the MT-1 instructions for additional information.

Please do not submit original documents. Please retain a copy of all submitted documents for your records.

DHS-FEMA encourages the submission of all required data in a digital format (e.g. scanned documents and images on Compact Disc [CD]). Digital submissions help to further DHS-FEMA's Digital Vision and also may facilitate the processing of your request.

Incomplete submissions will result in processing delays. For additional information regarding this form, including where to obtain the supporting documents listed above, please refer to the MT-1 Form Instructions located at [http://www.fema.gov/plan/prevent/fhm/dl\\_mt-1.shtml](http://www.fema.gov/plan/prevent/fhm/dl_mt-1.shtml).

**Processing Fee** (see instructions for appropriate mailing address; or visit [http://www.fema.gov/fhm/fhm\\_fees.shtml](http://www.fema.gov/fhm/fhm_fees.shtml) for the most current fee schedule)

Revised fee schedules are published periodically, but no more than once annually, as noted in the Federal Register. Please note: single/multiple lot(s)/structure(s) LOMAs are fee exempt. The current review and processing fees are listed below:

Check the fee that applies to your request:

- ☐ \$325 (single lot/structure LOMR-F following a CLOMR-F)
- ☐ \$425 (single lot/structure LOMR-F)
- ☐ \$500 (single lot/structure CLOMA or CLOMR-F)
- ☐ \$700 (multiple lot/structure LOMR-F following a CLOMR-F, or multiple lot/structure CLOMA)
- ☒ \$800 (multiple lot/structure LOMR-F or CLOMR-F)

Please submit the Payment Information Form for remittance of applicable fees. Please make your check or money order payable to:  
**National Flood Insurance Program.**

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Applicant's Name (required): **Doug Park**

Company (if applicable): **Whispering Woods Land, LLC**

Mailing Address (required):

**803 P.C.A Road, Warrensburg, MO 64093**

Daytime Telephone No. (required): **(816) 564-2333**

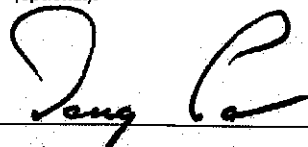
E-Mail Address (optional): ☐ By checking here you may receive correspondence electronically at the email address provided:

Fax No. (optional):

Date (required)

**2-19-19**

Signature of Applicant (required)



DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY  
ELEVATION FORM

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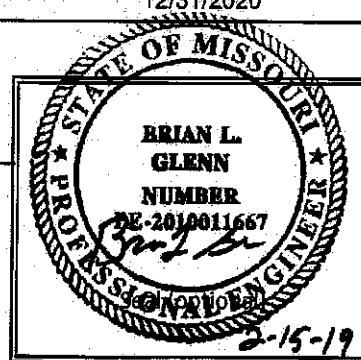
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☐ crawl space ☐ slab on grade ☐ basement/enclosure ☒ other (explain) Structure style TBD based on future platting of property
4. Has DHS - FEMA identified this area as subject to land subsidence or uplift? (see instructions): ☐ Yes ☒ No  
If yes, what is the date of the current re-leveling? / (month/year)
5. What is the elevation datum? ☐ NGVD 29 ☒ NAVD 88 ☐ Other (explain)  
If any of the elevations listed below were computed using a datum different than the datum used for the effective Flood Insurance Rate Map (FIRM) (e.g., NGVD 29 or NAVD 88), what was the conversion factor?  
Local Elevation +/- ft. = FIRM Datum
6. Please provide the Latitude and Longitude of the most upstream edge of the structure (in decimal degrees to the nearest fifth decimal place):  
Indicate Datum: ☐ WGS84 ☐ NAD83 ☐ NAD27 Lat. Long.  
Please provide the Latitude and Longitude of the most upstream edge of the property (in decimal degrees to the nearest fifth decimal place):  
Indicate Datum: ☐ WGS84 ☒ NAD83 ☐ NAD27 Lat. Long.

Address	Lot Number	Block Number	Lowest Lot Elevation*	Lowest Adjacent Grade To Structure	Base Flood Elevation	BFE Source
see metes and bounds exhibit	Proposed Lot 1		957.6		957.4	FIS Profile
" "	Proposed Lot 2		957.9		957.8	FIS Profile

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Brian L. Glenn, P.E.	License No.: Missouri: PE-2010011667	Expiration Date: 12/31/2020
Company Name: Phoenix Engineering & Surveying, LLC	Telephone No.: 816-743-9000	
Email: brian@phoenix-llc.com	Fax No.: 816-743-9700	
Signature: <i>Brian L. Glenn</i>	Date: 2-15-19	

\* For requests involving a portion of property, include the lowest ground elevation within the metes and bounds description.  
Please note: If the Lowest Adjacent Grade to Structure is the only elevation provided, a determination will be issued for the structure only.

**Continued from Page 1.**

[illegible]

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**Certifier's Name:**  
Brian L. Glenn, P.E.

License No.:  
Missouri: PE-2010011667

Expiration Date:  
12/31/2020

**Company Name:**  
Phoenix Engineering & Surveying, LLC

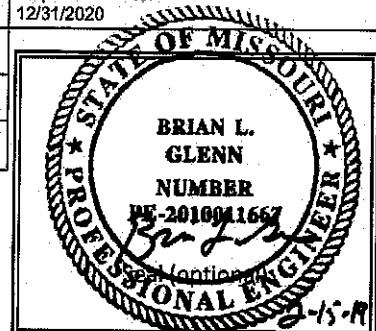
**Telephone No.:**  
816-743-9000

**Email:**  
brian@phoenix-llc.com

**Fax No.**  
816-743-9700

**Signature:**

Date:

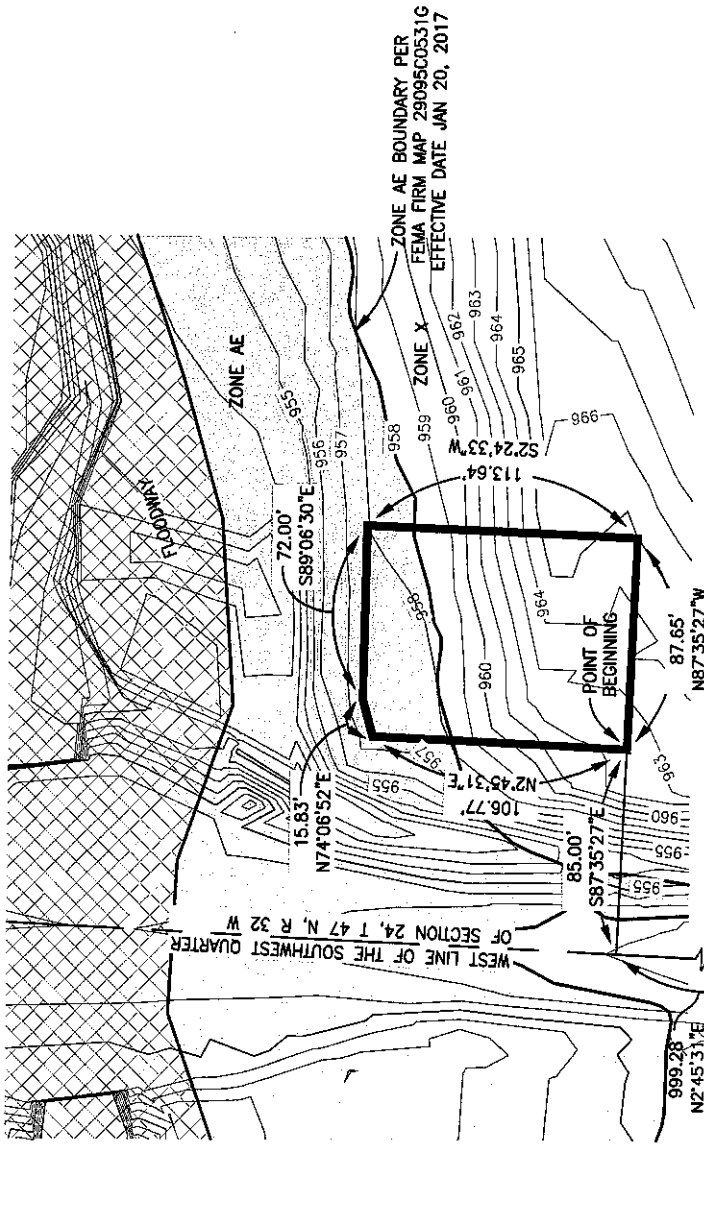


\* For requests involving a portion of property, include the lowest ground elevation within the metes and bounds description.

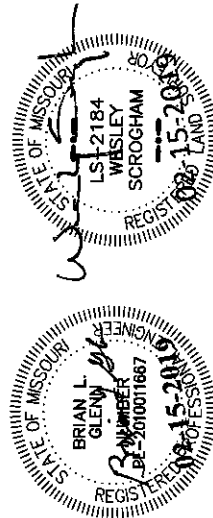
Please note: If the lowest Adjacent Grade to Structure is the only elevation provided, a determination will be issued for the structure only.



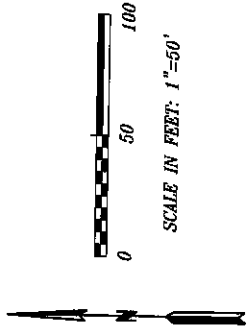
**ASBUILT TOPOGRAPHIC EXHIBIT**  
**PROPOSED LOT 1**  
 PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



POINT OF COMMENCING  
 SW Cor. of the SW  
 1/4 of Section 24,  
 TWP-47-N, R-32-W.



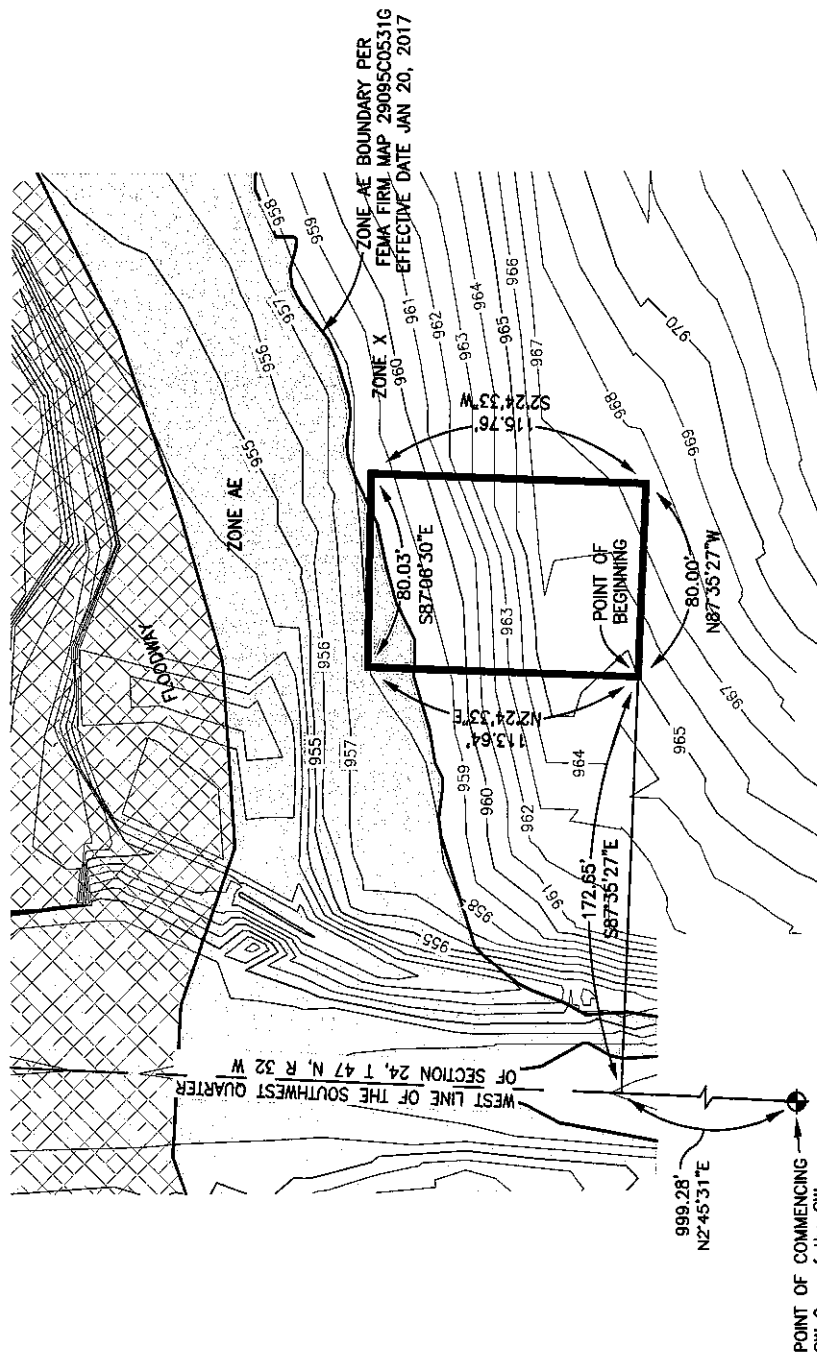
Base Flood Elevation (From FIS Profile) = 957.4  
 Lowest Elevation within Description = 957.6



**BOUNDARY DESCRIPTION:**  
 Part of the Southwest Quarter of Section  
 24, Township 47 North of the Baseline,  
 Range 32 West of the Fifth Principal  
 Meridian, Lee's Summit, Jackson County,  
 Missouri, described as follows:  
 COMMENCING at the Southwest Corner of  
 said Southwest Quarter, THENCE North  
 2°45'31" East on the West Line of said  
 Southwest Quarter, 999.28 feet; THENCE  
 South 87°35'27" East, 85.00 feet to the  
 POINT OF BEGINNING; THENCE North  
 74°06'52" East, 15.83 feet; THENCE South  
 89°06'30" East, 72.00 feet; THENCE South  
 2°24'33" West, 113.64 feet; THENCE North  
 87°35'27" West, 87.65 feet to the POINT  
 OF BEGINNING, containing 9,791 square feet  
 more or less. All bearings herein are  
 referenced to the Missouri State Plane  
 Coordinate System of 1983, West Zone.

**PHOENIX ENGINEERING & SURVEYING, LLC**  
 Civil Engineers • Planners • Surveyors  
 3855 S. Northern Blvd.  
 Independence, MO 64052  
 Phone: (816) 743-9000 Fax: (816) 743-9700  
 DATE: 08-15-2019 DRAWN: BSG CHECKED: PROJECT NO: 040704 SCALE: 1"=50'

**ASBUILT TOPOGRAPHIC EXHIBIT**  
**PROPOSED LOT 2**  
 PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

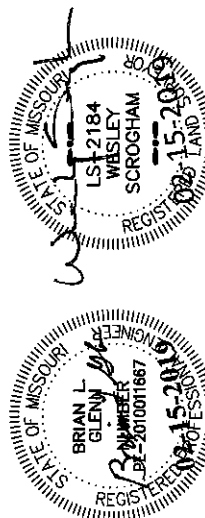


0 50 100  
 SCALE IN FEET: 1"=50'

**BOUNDARY DESCRIPTION:**  
 Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
 COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 172.65 feet to the POINT OF BEGINNING; THENCE North 2°24'33" East, 113.64 feet; THENCE South 89°06'30" East, 80.03 feet; THENCE North 2°24'33" West, 115.76 feet; THENCE North 87°35'27" West, 80.00 feet to the POINT OF BEGINNING, containing 9,176 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.

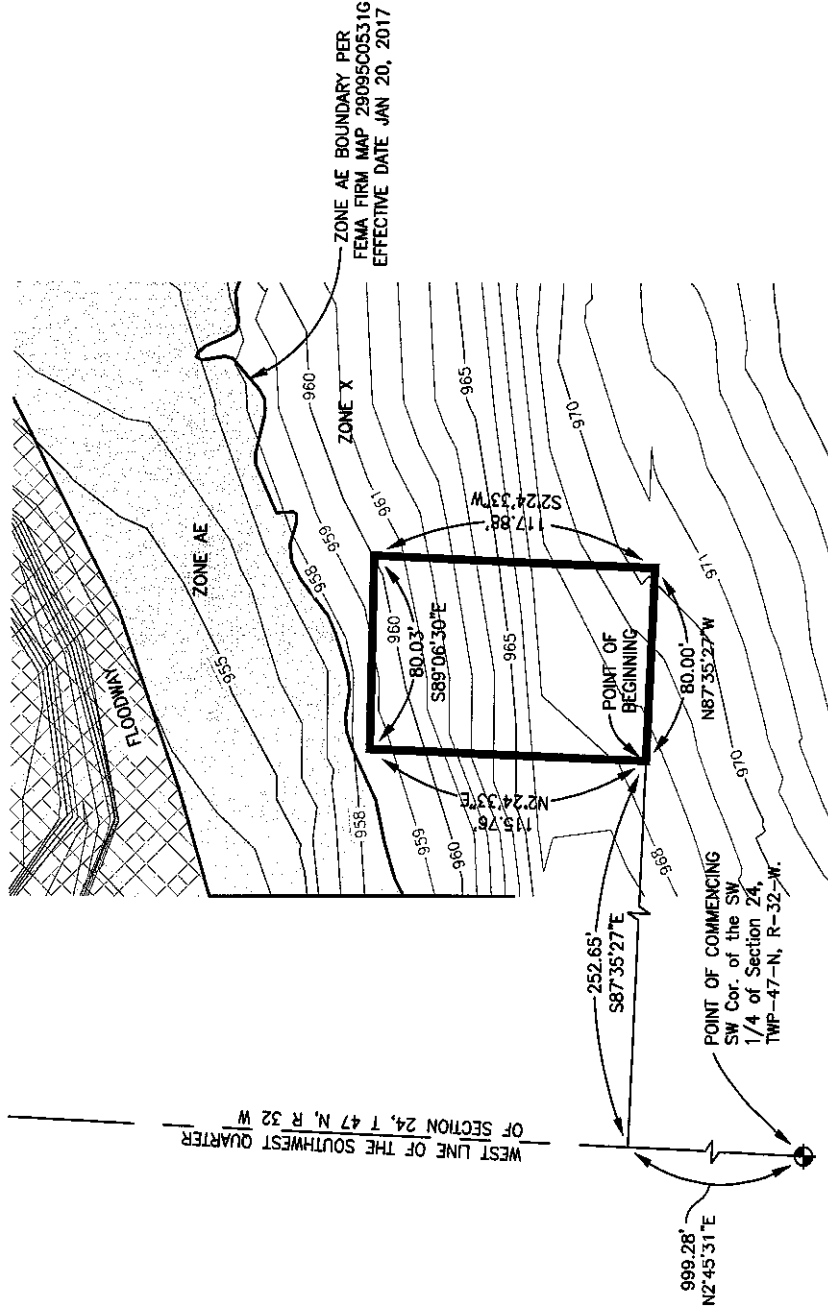
**PHOENIX ENGINEERING & SURVEYING, LLC**  
 CM Engineers • Planners • Surveyors  
 3855 S. Northern Blvd.  
 Independence, MO 64052  
 Phone: (816) 743-9000 Fax: (816) 743-9700  
 DATE: 10-15-2019 DRAWN: B.G. CHECKED: PROJECT NO.: 040724 SCALE: 1"=50'

Base Flood Elevation (From FIS PROFILE) = 957.8  
 Lowest Elevation within Description = 957.9

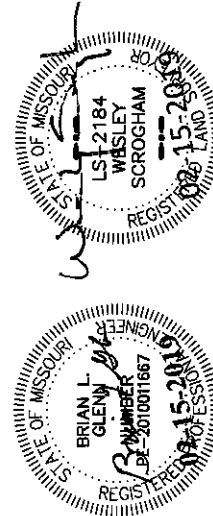


# ASBUILT TOPOGRAPHIC EXHIBIT PROPOSED LOT 3

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



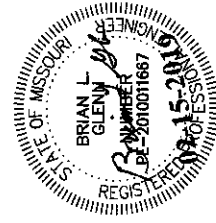
**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 252.65 feet to the POINT OF BEGINNING; THENCE North 22°4'33" East, 115.76 feet; THENCE South 89°06'30" East, 80.03 feet; THENCE South 22°4'33" West, 117.88 feet; THENCE North 87°35'27" West, 80.00 feet to the POINT OF BEGINNING, containing 9,346 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



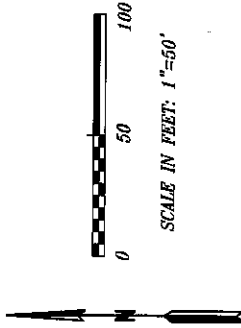
Base Flood Elevation (From FIS Profile) = 958.1  
Lowest Elevation within Description = 958.6

**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers - Planners - Surveyors  
3855 S. Northern Blvd.  
Independence, MO 64052  
Phone: (816) 743-9000 Fax: (816) 743-9700  
DATE: 12-15-2019 DRAWN: BLC CHECKED: PROJECT NO. 190794 SCALE: 1"=50'

POINT OF COMMENCING  
SW Cor. of the SW  
1/4 of Section 24,  
TWP-47-N. R-32-W.



**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 332.65 feet to the POINT OF BEGINNING; THENCE North 2°24'33" East, 117.88 feet; THENCE South 87°06'30" East, 80.03 feet; THENCE South 2°24'33" West, 120.00 feet; THENCE North 87°35'27" West, 80.00 feet to the POINT OF BEGINNING, containing 9,515 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



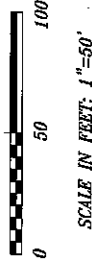
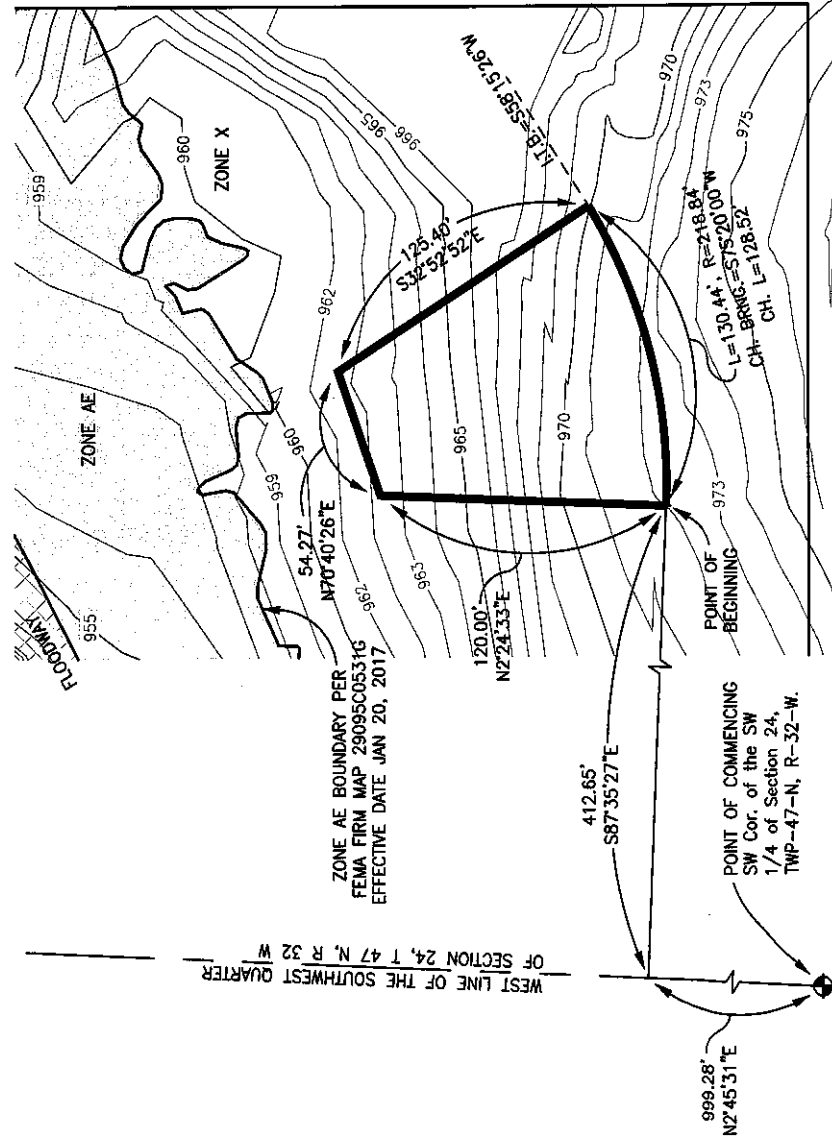
PHOENIX ENGINEERING  
& SURVEYING, LLC

**CM Engineers - Planners - Surveyors**  
3555 S. Northern Blvd.  
Phone: (816) 743-9000  
Independence, MO 64052  
Fax: (816) 743-9700

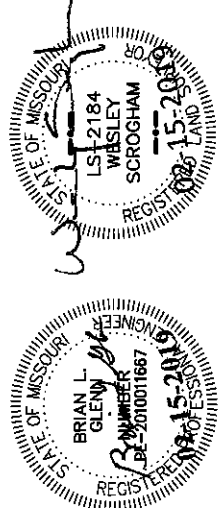
# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 5

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to the POINT OF BEGINNING; THENCE North 2°24'33" East, 120.00 feet; THENCE North 70°40'26" East, 54.27 feet; THENCE South 32°52'52" East, 125.40 feet; THENCE westerly on a curve to the right (said curve having an initial tangent bearing South 58°15'26" West, a radius of 218.84 feet, a chord bearing South 75°20'00" West, a chord distance of 128.52 feet) an arc length of 130.44 feet to the POINT OF BEGINNING, containing 11,510 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



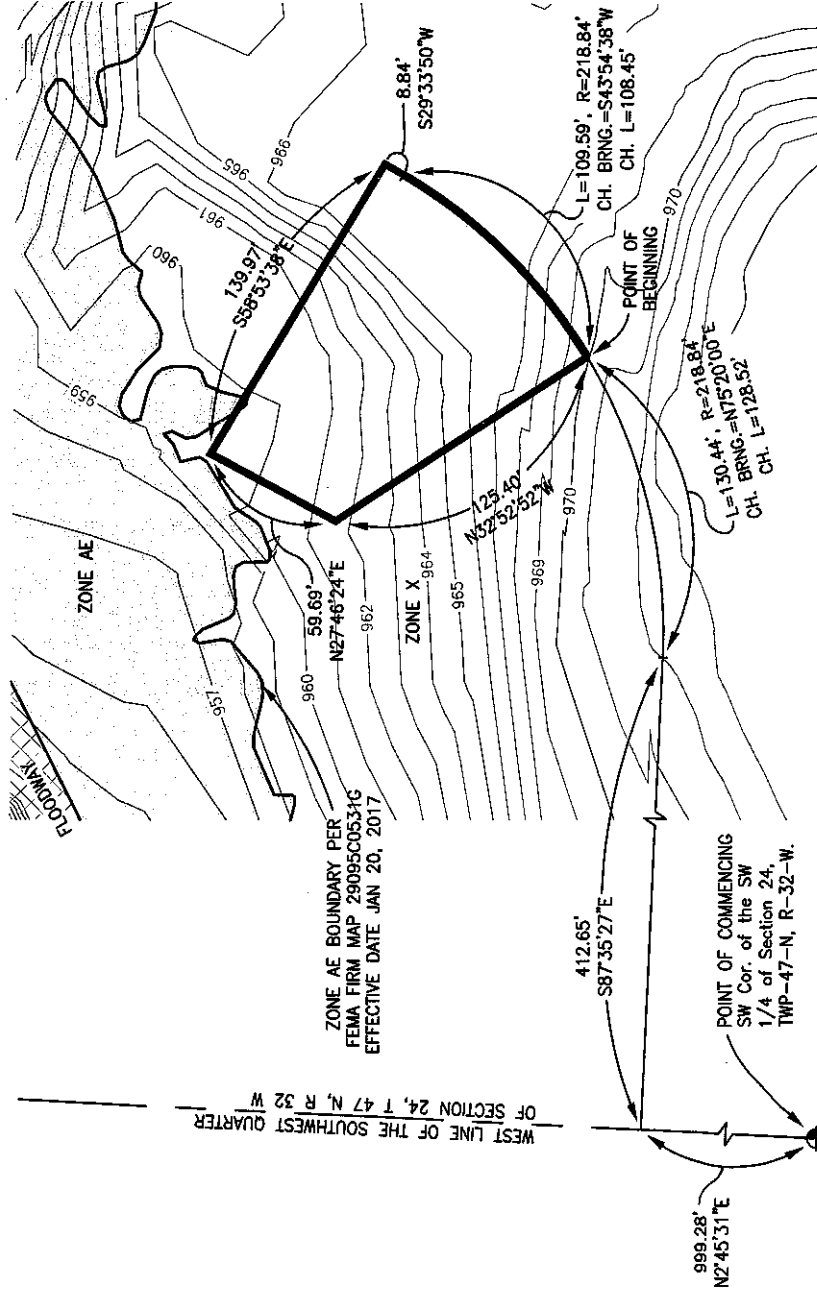
Base Flood Elevation (From FIS Profile) = 958.6  
Lowest Elevation within Description = 961.6

**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers • Planners • Surveyors  
3955 S. Northern Blvd. Independence, MO 64052  
Phone: (816) 743-9000 Fax: (816) 743-9700  
DATE: 12-15-2019 DRAWN BY: B.G. CHECKED BY: G.M.T. SCALE: 1"=50'

# ASBUILT TOPOGRAPHIC EXHIBIT

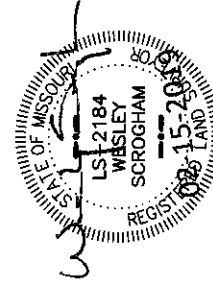
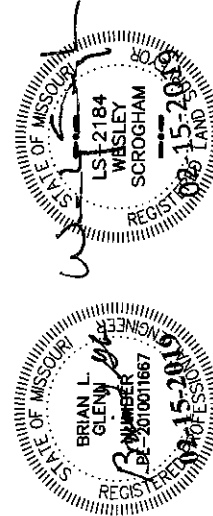
## PROPOSED LOT 6

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



SCALE IN FEET: 1"=50'

**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 24°5'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 75°20'00" East, a chord distance of 128.52 feet) an arc length of 130.44 feet to the POINT OF BEGINNING; THENCE North 32°52'52" West, 125.40 feet; THENCE North 27°46'24" East, 59.69 feet; THENCE South 58°53'38" East, 139.97 feet; THENCE South 29°33'50" West, 8.84 feet to a point of curvature; THENCE southwesterly on a curve to the right (said curve having a radius of 218.84 feet, a chord bearing South 43°54'38" West, a chord distance of 108.45 feet) an arc length of 109.59 feet to the POINT OF BEGINNING, containing 11,895 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



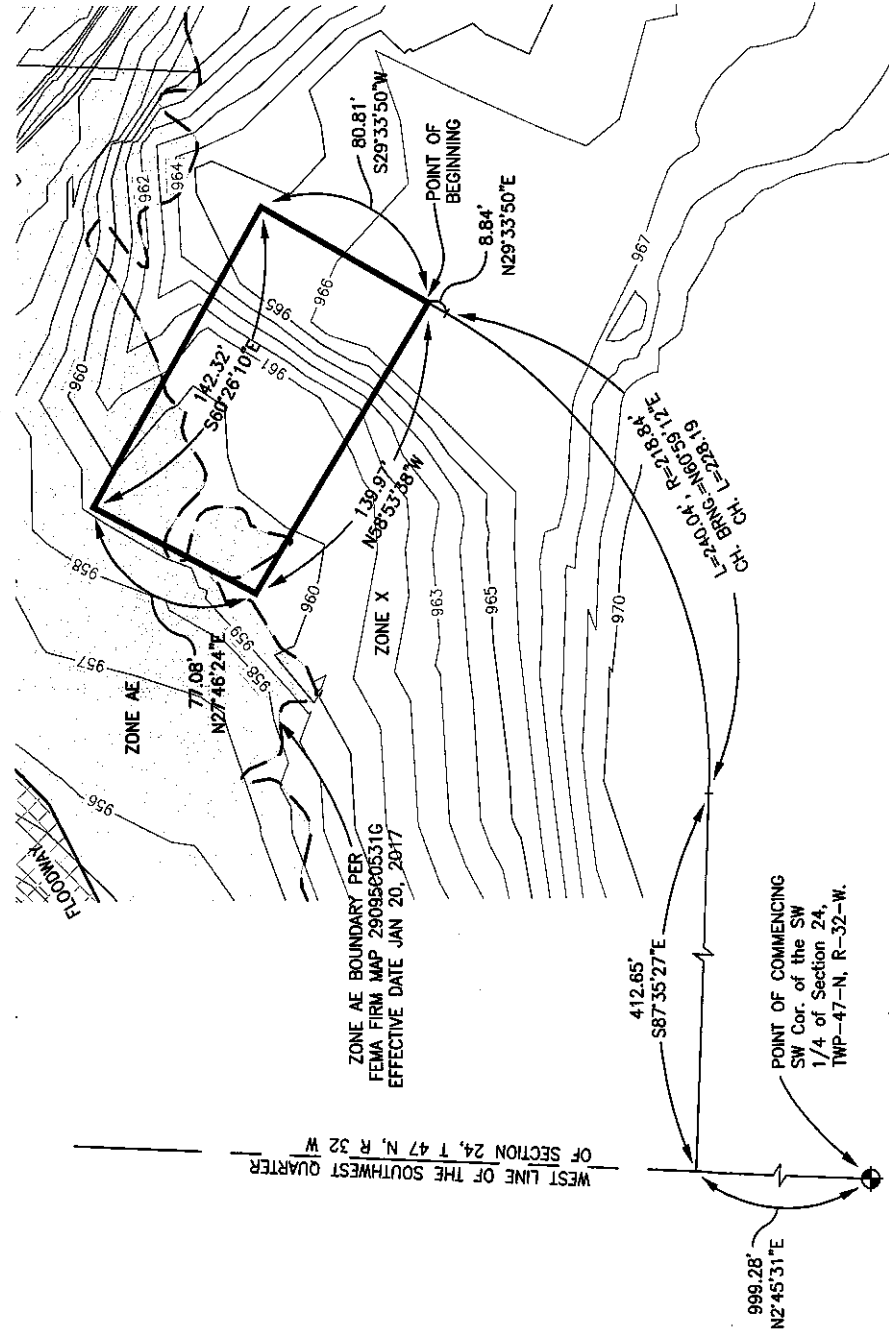
**PHOENIX ENGINEERING & SURVEYING, LLC**  
**CM Engineers - Planners - Surveyors**  
 3855 S. Northern Blvd.  
 Independence, MO 64052  
 Phone: (816) 743-9000 Fax: (816) 743-9700  
 DATE: 02-15-2019 DRAWN: BLO PROJECT NO.: 040784 SCALE: 1"=50'

Base Flood Elevation (From FIS Profile) = 958.7  
 Lowest Elevation within Description = 959.4

# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 7

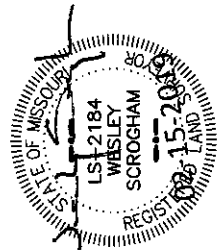
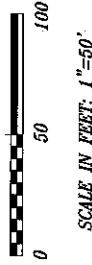
PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



WEST LINE OF THE SOUTHWEST QUARTER  
OF SECTION 24, T 47 N, R 32 W

ZONE AE BOUNDARY PER  
FEMA FIRM MAP 2909580531G  
EFFECTIVE DATE JAN 20, 2017

**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord distance of North 60°59'12" East, a chord length of 240.04 feet to a point of tangency; THENCE North 29°33'50" East, 8.84 feet to the POINT OF BEGINNING; THENCE North 58°53'38" West, 139.97 feet; THENCE North 27°46'24" East, 77.08 feet; THENCE South 29°33'50" West, 142.32 feet to the POINT OF BEGINNING, containing 11,136 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



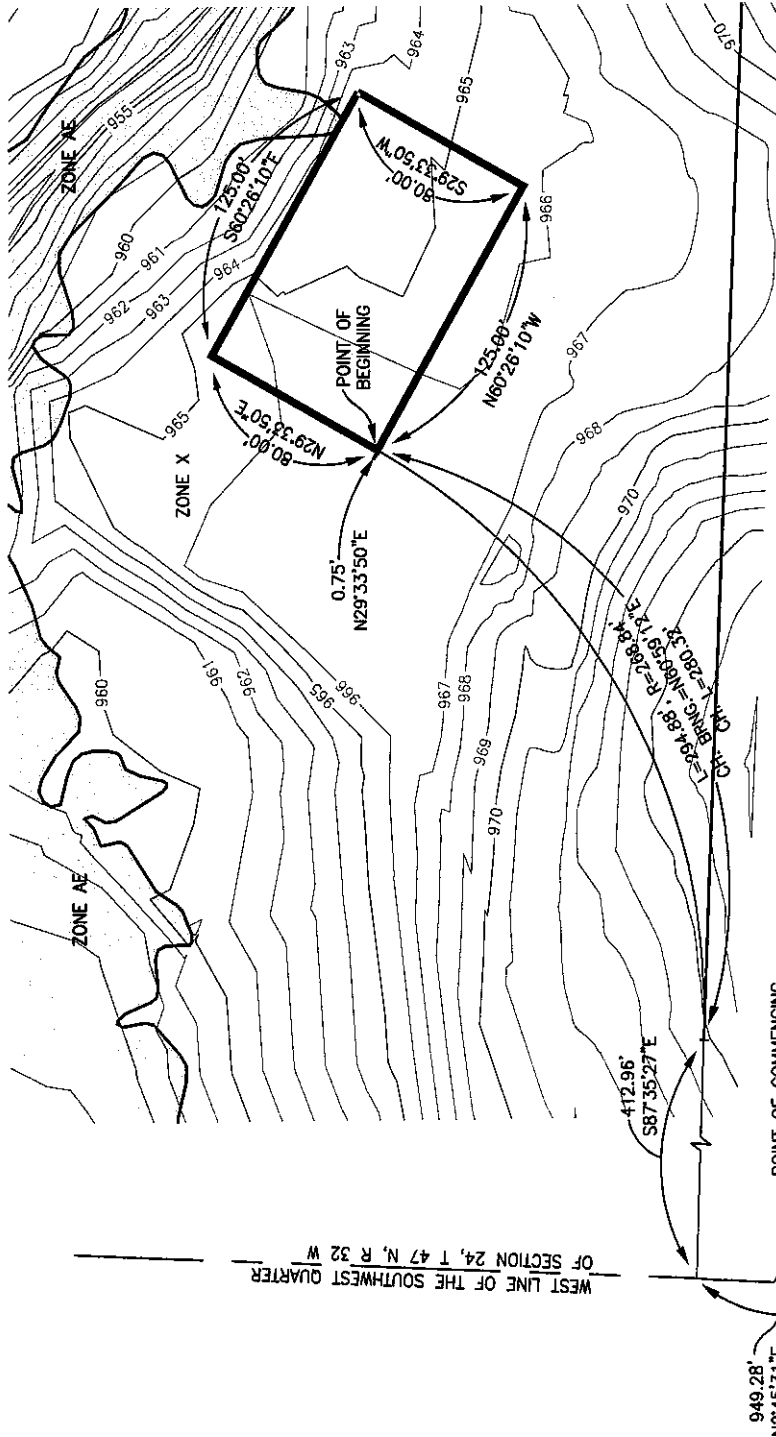
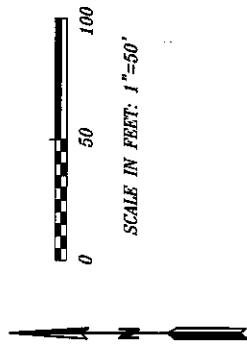
Base Flood Elevation (From FIS Profile) = 959.0  
Lowest Elevation within Description = 959.1

**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers - Planners - Surveyors  
3855 S. Northern Blvd. Independence, MO 64052  
Phone: (816) 743-9000 Fax: (816) 743-9700  
DATE: 02-15-2019 DRAWN: BLO CHECKED: DMO/284 SCALE: 1"=50'

# ASBUILT TOPOGRAPHIC EXHIBIT

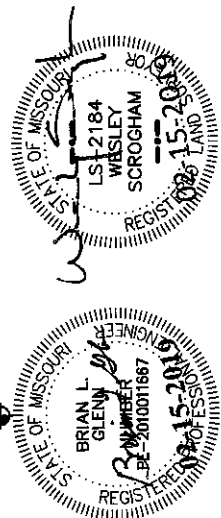
## PROPOSED LOT 9

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 24°45'31" East on the West Line of said Southwest Quarter, 949.28 feet to the Westerly Prolongation of the North Line of Lot 1, "R-7 ELEMENTARY SCHOOL AT PRYOR ROAD, LOT 1", a Subdivision recorded in Plat Book 1-67, Page 68 at the Jackson County Recorder's Office; THENCE South 87°35'27" East on said Westerly Prolongation and said North Line, 412.96 feet to a point of curvature; THENCE northeasterly departing from said North Line on a curve to the left (said curve having a radius of 268.84 feet, chord bearing North 60°59'12" East, a chord distance of 280.32 feet) an arc length of 294.88 feet to a point of tangency; THENCE North 29°33'50" East, 0.75 feet to the POINT OF BEGINNING; THENCE continuing North 29°33'50" East, 80.00 feet; THENCE South 60°26'10" East, 125.00 feet; THENCE South 29°33'50" West, 80.00 feet to the POINT OF BEGINNING, containing 10,000 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.

R-7 ELEMENTARY SCHOOL AT PRYOR ROAD,  
LOT 1



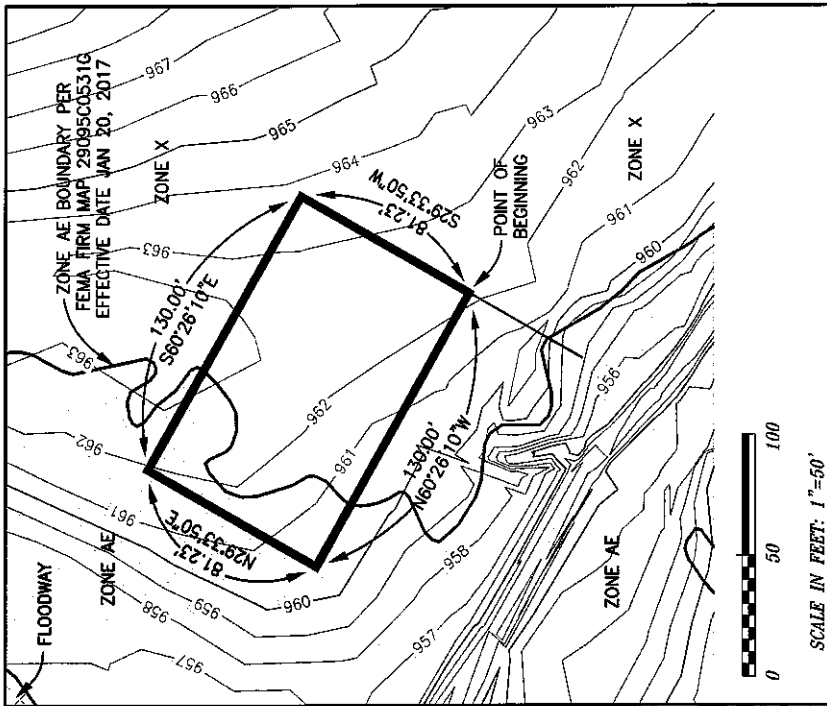
Base Flood Elevation (interpolated from FIRM, No published FIS Profile) = 961.0  
Lowest Elevation within Description = 964.3

**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers • Planners • Surveyors  
3955 S. Northern Blvd., Independence, MO 64052  
Phone: (816) 743-5000 Fax: (816) 743-9700  
DATE: 02-15-2019 DRAWN BY: BJC CHECKED BY: D07261 SCALE: 1"=50'



# ASBUILT TOPOGRAPHIC EXHIBIT PROPOSED LOT 10

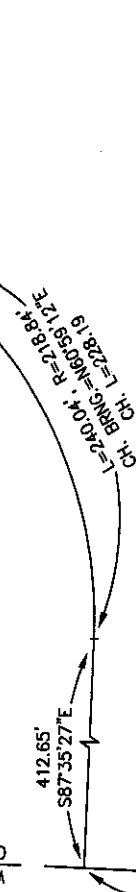
PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



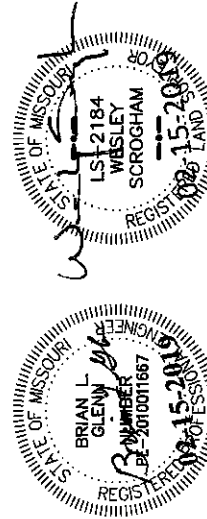
**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 949.28 feet to the Westerly Prolongation of the North Line of Lot 1, "R-7 ELEMENTARY SCHOOL AT PRYOR ROAD, LOT 1", a Subdivision recorded in Plat Book 1-67, Page 68 at the Jackson County Recorder's Office; THENCE South 87°35'27" East on said Westerly Prolongation and said North Line, 412.96 feet to a point of curvature; THENCE northeasterly departing from said North Line on a curve to the left (said curve having a radius of 268.84 feet, chord bearing North 60°59'12" East, a chord distance of 280.32 feet) an arc length of 294.88 feet to a point of tangency; THENCE North 29°33'50" East, 0.75 feet to the POINT OF BEGINNING; THENCE continuing North 29°33'50" East, 80.00 feet; THENCE South 60°26'10" East, 125.00 feet; THENCE South 29°33'50" West, 80.00 feet; THENCE North 60°26'10" West, 125.00 feet to the POINT OF BEGINNING, containing 10,000 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



**PHOENIX ENGINEERING & SURVEYING, LLC**  
Civil Engineers - Planners - Surveyors  
3855 S. Northern Blvd., Independence, MO 64052  
Phone: (816) 743-9000 Fax: (816) 743-9700  
DATE: 02-15-2019 DRAWN: JLG CHECKED: JLG SCALE: AS SHOWN NOTED



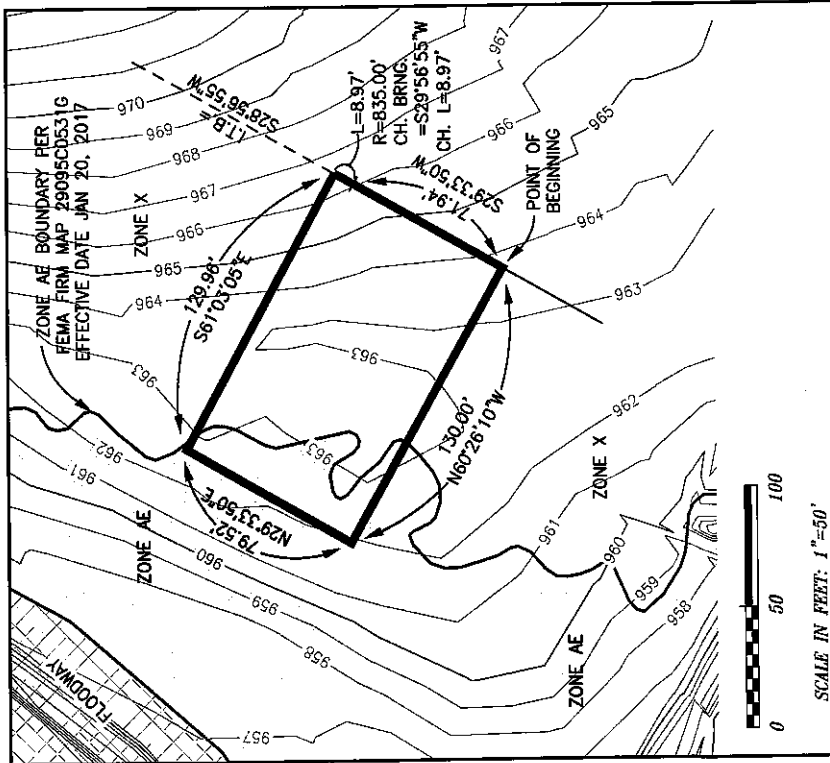
Base Flood Elevation (From FIS Profile) = 959.9  
Lowest Elevation within Description = 960.4



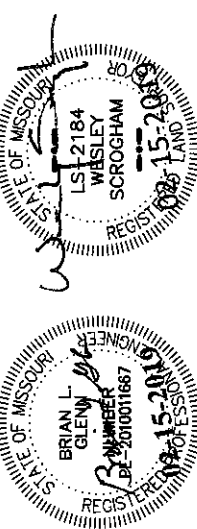
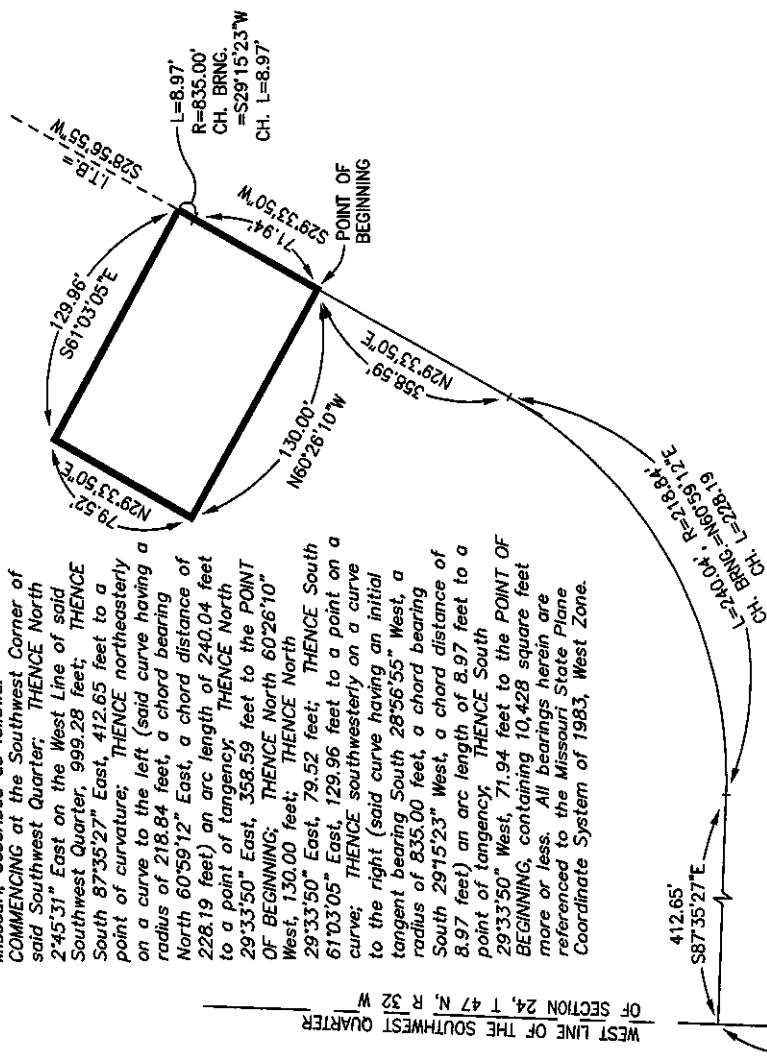
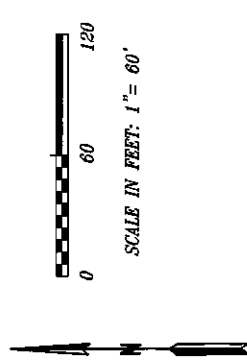
# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 11

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
**COMMENCING** at the Southwest Corner of said Southwest Quarter; **THENCE** North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; **THENCE** South 87°35'27" East, 412.65 feet to a point of curvature; **THENCE** northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; **THENCE** North 29°33'50" East, 358.59 feet to the **POINT OF BEGINNING**; **THENCE** North 60°26'10" West, 130.00 feet; **THENCE** North 29°33'50" East, 79.52 feet; **THENCE** South 61°03'05" East, 129.96 feet to a point on a curve; **THENCE** southeasterly on a curve to the right (said curve having an initial tangent bearing South 28°56'55" West, a radius of 835.00 feet, a chord bearing South 29°15'23" West, a chord distance of 8.97 feet) an arc length of 8.97 feet to a point of tangency; **THENCE** South 29°33'50" West, 71.94 feet to the **POINT OF BEGINNING**, containing 10,428 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



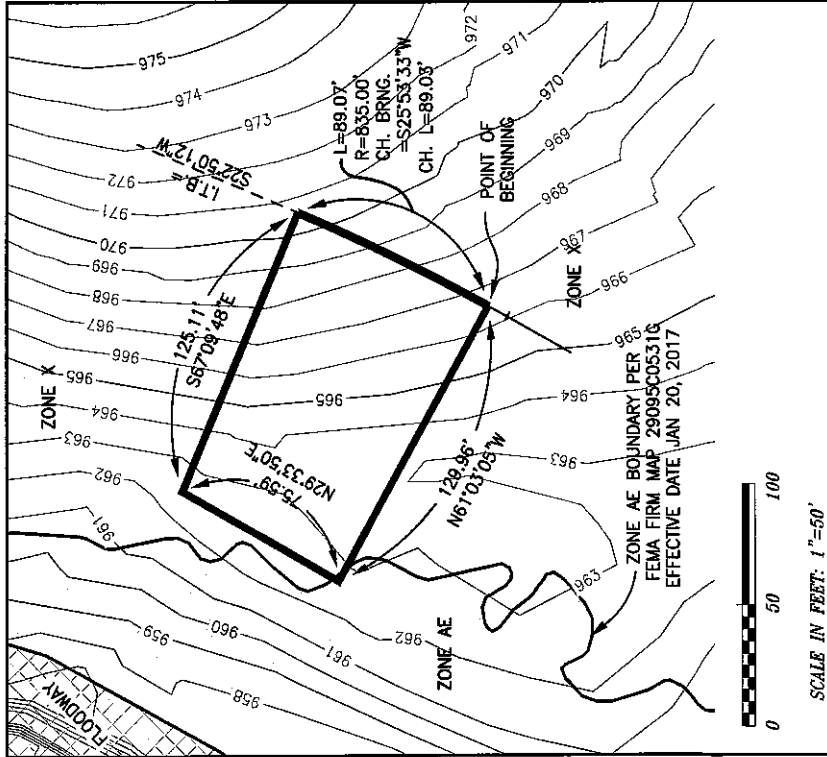
**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers - Planners - Surveyors  
3825 S. Northern Blvd., Independence, MO 64052  
Phone: (816) 743-8000 Fax: (816) 743-9700  
DATE: 08-15-2019 DRAWN BY: BCG CHECKED BY: PROJECT NO.: 040784 NOTED BY:

Base Flood Elevation (From FIS Profile) = 960.2  
Lowest Elevation within Description = 961.9

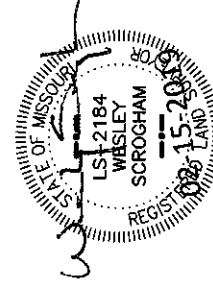
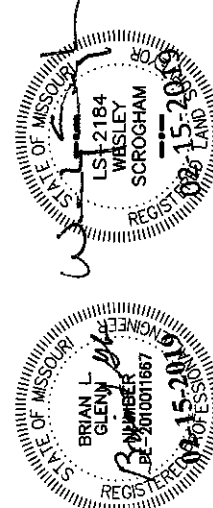
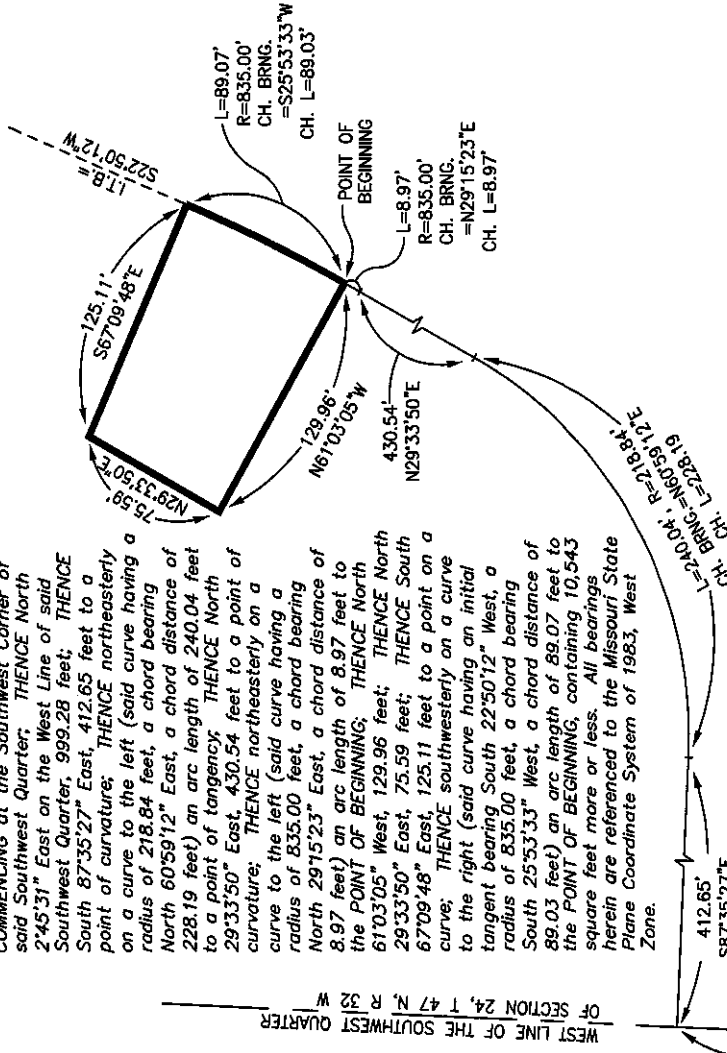
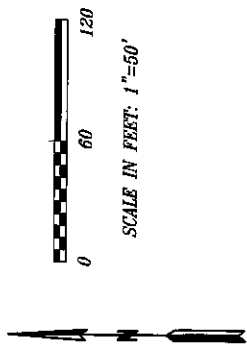
# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 12

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



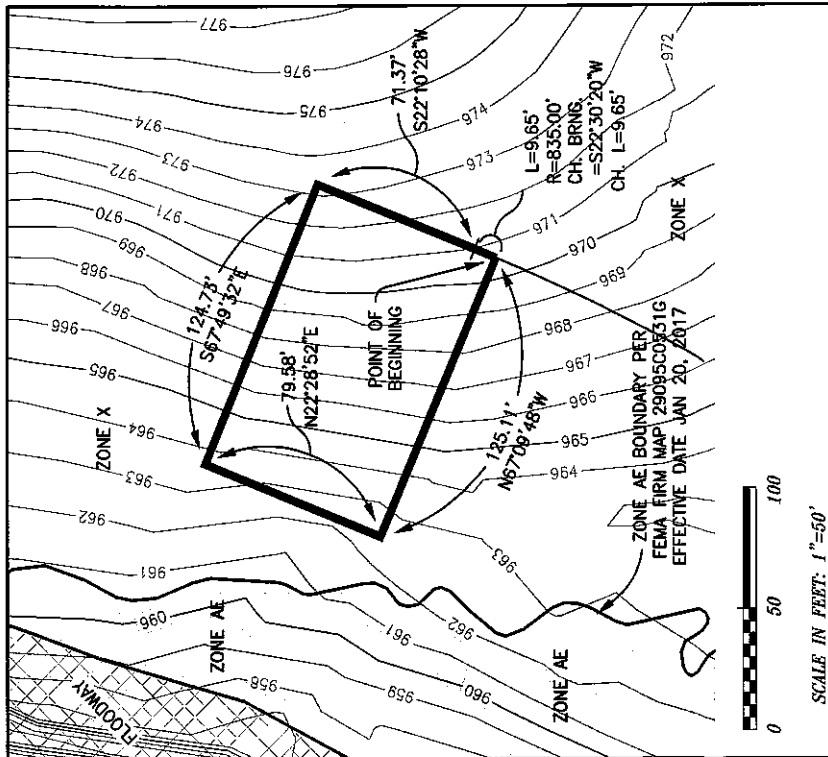
**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; THENCE North 29°33'50" East, 430.54 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 835.00 feet, a chord bearing North 29°15'23" East, a chord distance of 8.97 feet) an arc length of 8.97 feet to the POINT OF BEGINNING; THENCE North 61°03'05" West, 129.96 feet; THENCE North 29°33'50" East, 75.59 feet; THENCE South 67°09'48" East, 125.11 feet to a point on a curve; THENCE southeasterly on a curve to the right (said curve having an initial tangent bearing South 22°50'12" West, a radius of 835.00 feet, a chord bearing South 25°53'33" West, a chord distance of 89.03 feet) an arc length of 89.07 feet to the POINT OF BEGINNING, containing 10,543 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



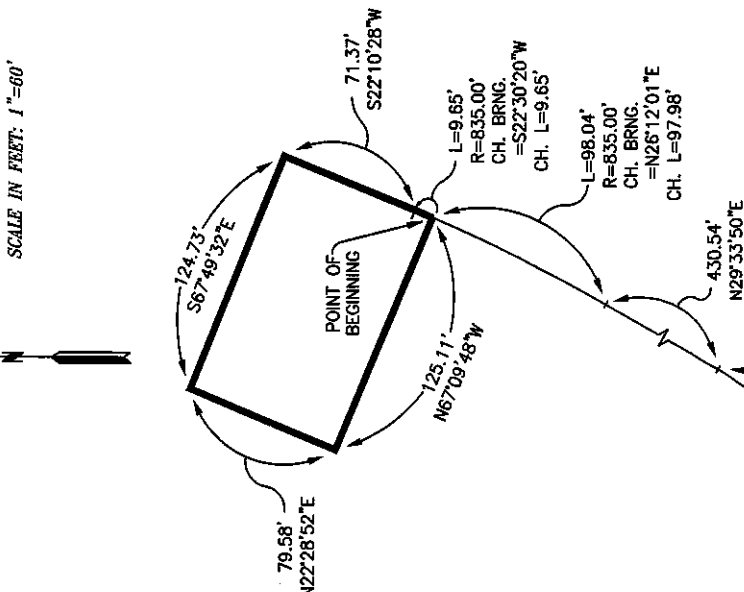
**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers - Planners - Surveyors  
3000 S. Main Street, Suite 100  
Phoenix, AZ 85004  
Phone: (602) 743-9000  
Fax: (602) 743-9700  
Email: info@phoenixeng.com  
Website: www.phoenixeng.com

Base Flood Elevation (From FIS Profile) = 960.4  
Lowest Elevation within Description = 962.7

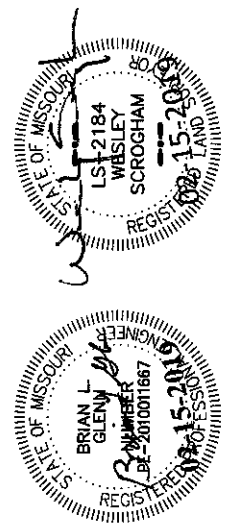
# **ASBUILT TOPOGRAPHIC EXHIBIT** **PROPOSED LOT 13** **PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W** **LEE'S SUMMIT, JACKSON COUNTY, MISSOURI**



**BOUNDARY DESCRIPTION:**  
 Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
 COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; THENCE North 29°33'50" East, 430.54 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 835.00 feet, a chord bearing North 26°12'01" East, a chord distance of 97.98 feet) an arc length of 98.04 feet to the POINT OF BEGINNING; THENCE North 67°09'48" West, 125.11 feet; THENCE North 22°28'52" East, 79.58 feet; THENCE South 67°49'32" East, 124.73 feet; THENCE South 22°10'28" West, 71.37 feet to a point of curvature; THENCE southwesterly on a curve to the right (said curve having a radius of 835.00 feet, a chord bearing South 22°30'20" West, a chord distance of 9.65 feet) an arc length of 9.65 feet to the POINT OF BEGINNING, containing 10,033 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



Base Flood Elevation (From FIS Profile) = 960.6  
 Lowest Elevation within Description = 962.5

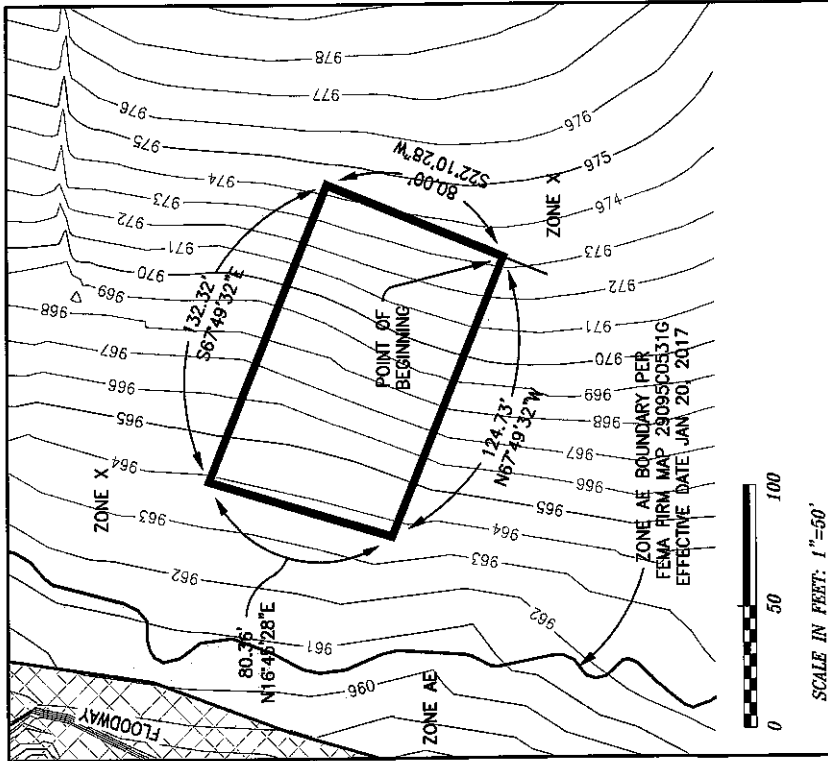


**PHOENIX ENGINEERING & SURVEYING, LLC**  
 CM Engineers - Planners - Surveyors  
 1000 S. 10th St., Suite 100  
 Phoenix, AZ 85006  
 Phone: (602) 743-9000  
 Fax: (602) 743-9700  
 Email: info@phoenixeng.com  
 Website: www.phoenixeng.com

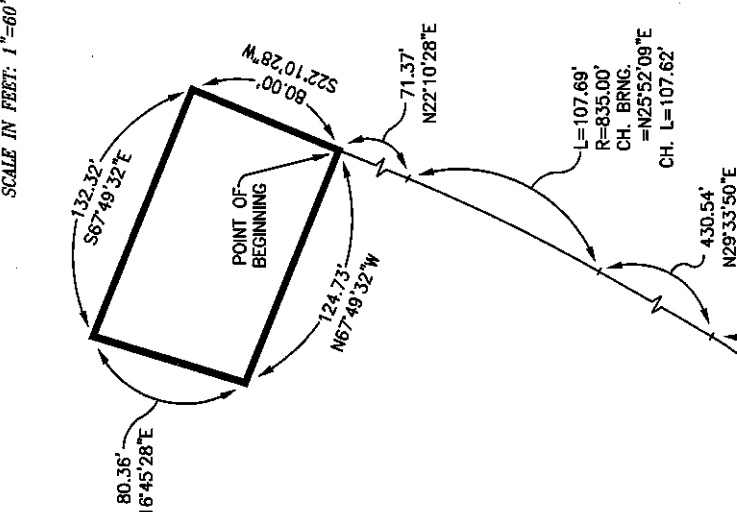
# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 14

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

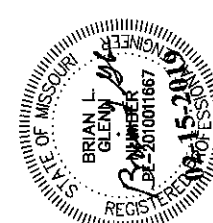
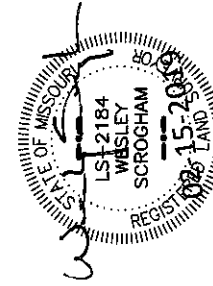


**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; THENCE North 29°33'50" East, 430.54 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 835.00 feet, a chord bearing North 25°52'09" East, a chord distance of 107.62 feet) an arc length of 107.69 feet; THENCE North 22°10'28" East, 71.37 feet to the POINT OF BEGINNING; THENCE North 67°49'32" West, 124.73 feet; THENCE North 16°45'28" East, 80.36 feet; THENCE South 67°49'32" East, 132.32 feet; THENCE South 22°10'28" West, 80.00 feet to the POINT OF BEGINNING, containing 10,282 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



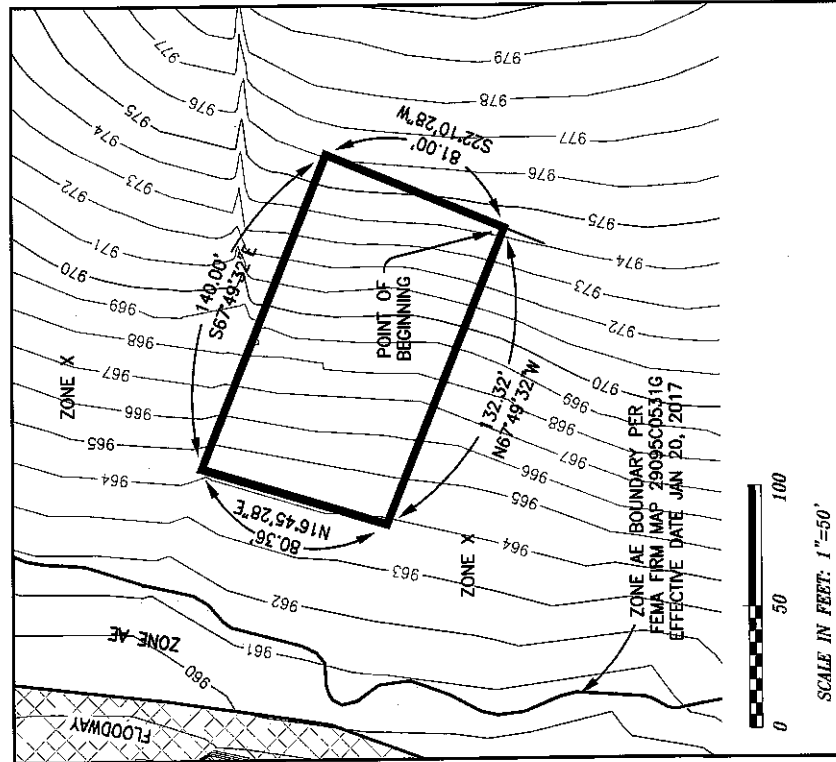
**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers • Planners • Surveyors  
3855 S. Northern Blvd. Independence, MO 64052  
Phone: (816) 743-8000 Fax: (816) 743-8700  
DATE: 02-15-2019 DRAWN: BJC CHECKED: 04/07/24 NOTED: [initials]

Base Flood Elevation (From FIS Profile) = 960.9  
Lowest Elevation within Description = 963.7

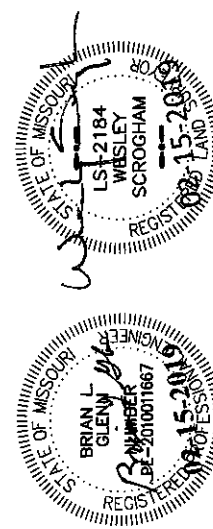
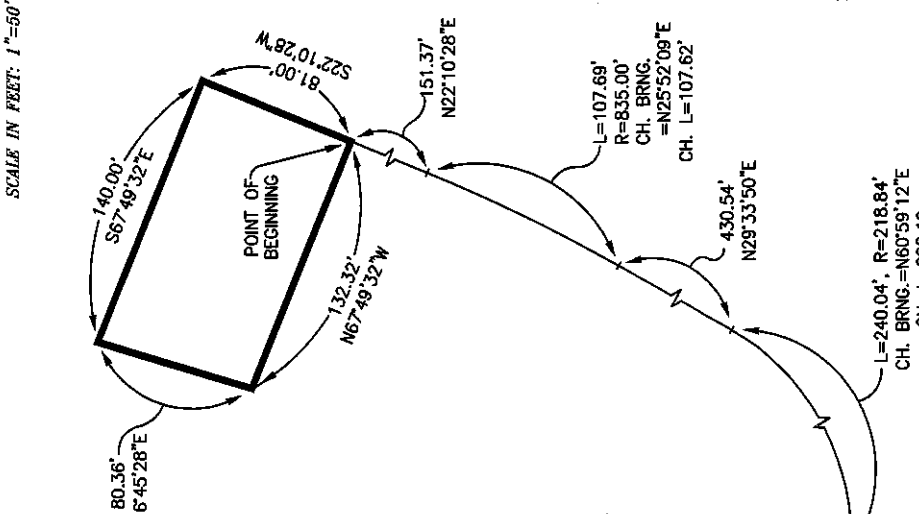


# ASBUILT TOPOGRAPHIC EXHIBIT

PROPOSED LOT 15  
PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; THENCE North 29°33'50" East, 430.54 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 835.00 feet, a chord bearing North 25°52'09" East, a chord distance of 107.62 feet) an arc length of 107.69 feet; THENCE North 22°10'28" East, 151.37 feet to the POINT OF BEGINNING; THENCE North 67°49'32" West, 132.32 feet; THENCE North 16°45'28" East, 81.36 feet; THENCE South 67°49'32" East, 140.00 feet; THENCE South 22°10'28" West, 81.00 feet to the POINT OF BEGINNING, containing 11,029 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



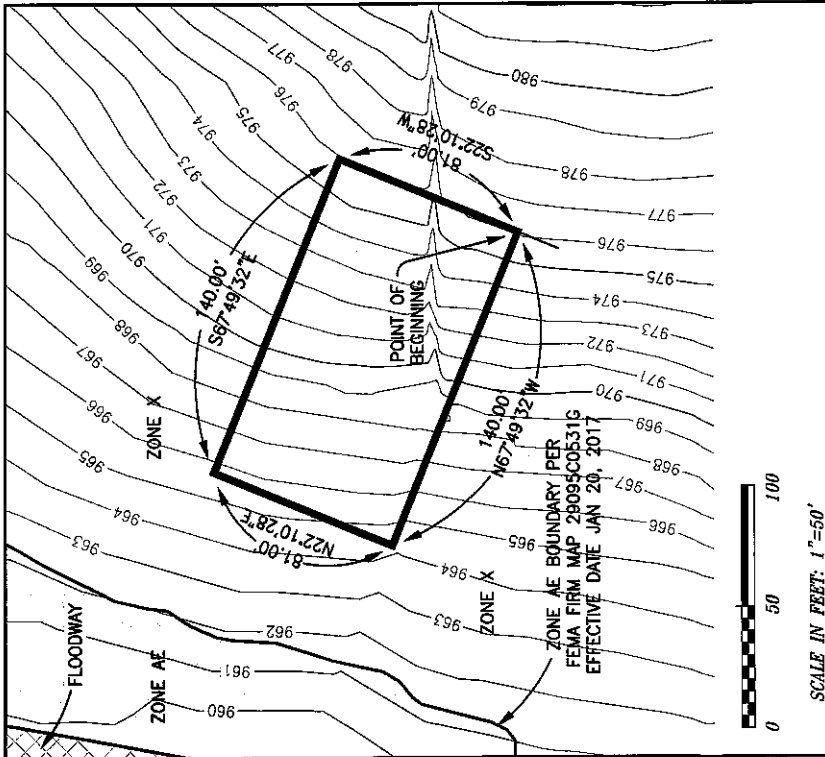
**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers - Planners - Surveyors  
3855 S. Northern Blvd., Independence, MO, 64052  
Phone: (816) 833-9000  
FAX: (816) 833-9001  
DATE: 08-15-2019  
DRAWN: CHEN  
CHECKED: PHILIP  
SCALE: AS SHOWN  
NOTED: 04/28/21

Base Flood Elevation (From FIS Profile) = 961.3  
Lowest Elevation within Description = 963.9

# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 16

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

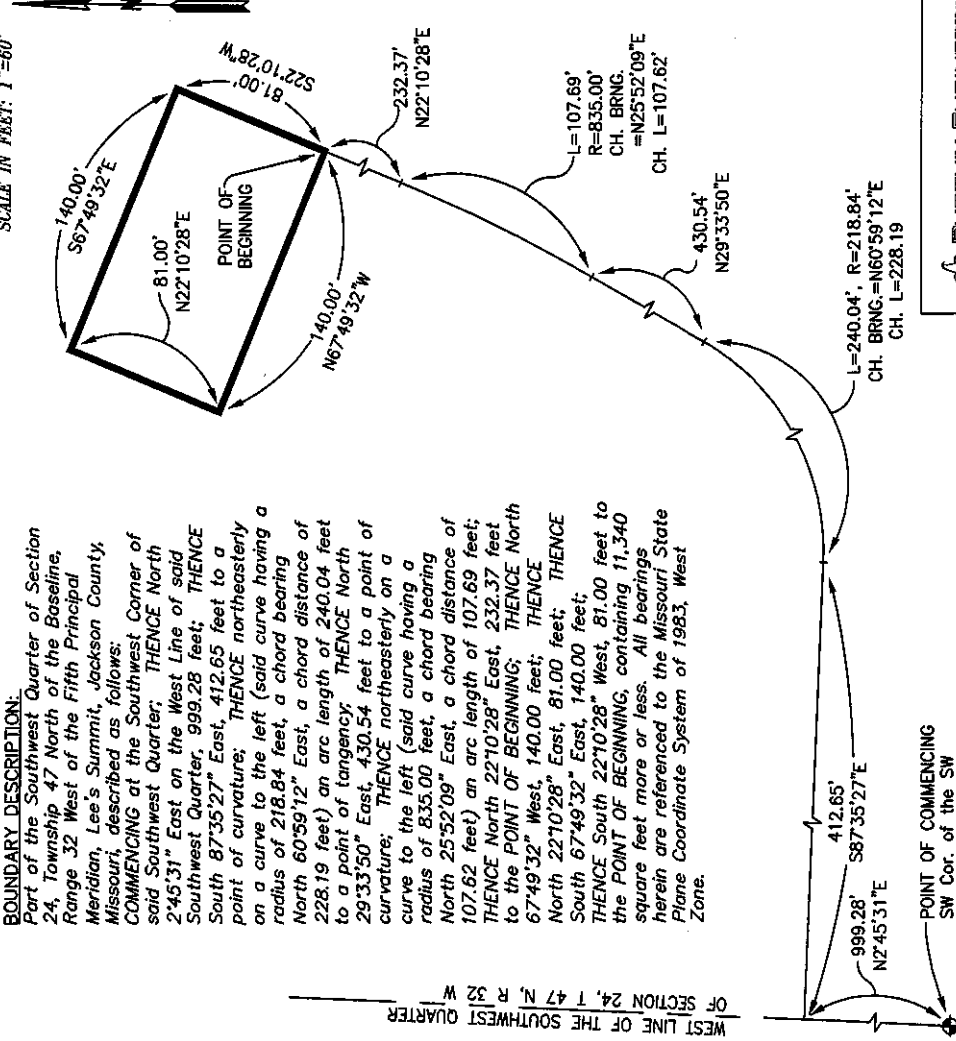


**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
**COMMENCING** at the Southwest Corner of said Southwest Quarter; **THENCE** North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; **THENCE** South 87°35'27" East, 412.65 feet to a point of curvature; **THENCE** northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; **THENCE** North 29°33'50" East, 430.54 feet to a point of curvature; **THENCE** northeasterly on a curve to the left (said curve having a radius of 835.00 feet, a chord bearing North 25°52'09" East, a chord distance of 107.62 feet) an arc length of 107.69 feet; **THENCE** North 22°10'28" East, 232.37 feet to the **POINT OF BEGINNING**; **THENCE** North 67°49'32" West, 140.00 feet; **THENCE** North 22°10'28" East, 81.00 feet; **THENCE** South 67°49'32" East, 140.00 feet; **THENCE** South 22°10'28" West, 81.00 feet to the **POINT OF BEGINNING**, containing 11,340 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.

WEST LINE OF THE SOUTHWEST QUARTER  
OF SECTION 24, T 47 N, R 32 W



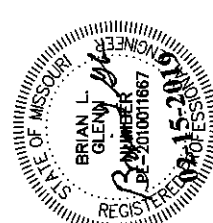
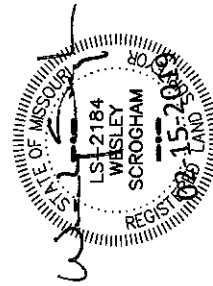
SCALE IN FEET: 1"=60'



Base Flood Elevation (From FIS Profile) = 961.6  
Lowest Elevation within Description = 964.3

**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers • Planners • Surveyors

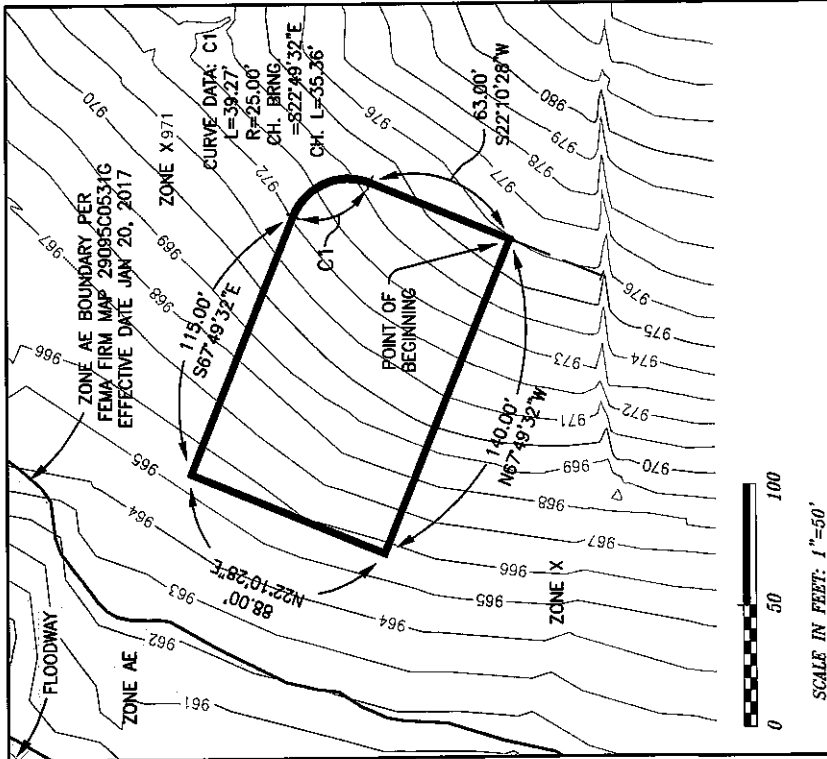
3085 S. Independence Road  
Phoenix, AZ 85032  
Phone: (602) 743-9000 (818) 743-9000  
Fax: (602) 743-9000  
Email: info@phoenix-engineering.com  
Website: www.phoenix-engineering.com



# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 17

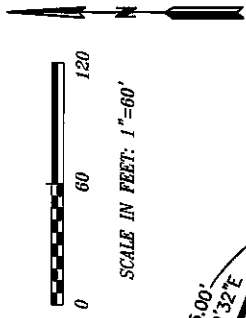
PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:

COMMENCING at the Southwest Corner of said Southwest Quarter; THENCE North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; THENCE South 87°35'27" East, 412.65 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; THENCE North 29°33'50" East, 430.54 feet to a point of curvature; THENCE northeasterly on a curve to the left (said curve having a radius of 835.00 feet, a chord bearing North 25°52'09" East, a chord distance of 107.62 feet) an arc length of 107.69 feet; THENCE North 22°10'28" East, 313.37 feet to the POINT OF BEGINNING; THENCE North 67°49'32" West, 140.00 feet; THENCE South 22°10'28" East, 88.00 feet; THENCE South 67°49'32" East, 115.00 feet to a point of curvature; THENCE southeasterly on a curve to the right (said curve having a radius of 25.00 feet, a chord bearing South 22°49'32" East, a chord distance of 35.36 feet) an arc length of 39.27 feet to a point of tangency; THENCE South 22°10'28" West, 63.00 feet to the POINT OF BEGINNING, containing 12,186 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.

WEST LINE OF THE SOUTHWEST QUARTER  
OF SECTION 24, T 47 N, R 32 W



**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers • Planners • Surveyors  
3955 S. Northern Blvd., Independence, MO 64052  
Phone: (816) 743-9000 Fax: (816) 743-9700  
DATE: 02-15-2019 BY: BJC CHECKED: PROJECT NO: 040784 SCALE: NOTED

STATE OF MISSOURI  
REGISTERED PROFESSIONAL LAND SURVEYOR  
BRIAN L. GLENN  
NUMBER 2010011687  
EXPIRATION DATE 02-15-2019  
LS 2184  
WBSLEY SCROGHAM

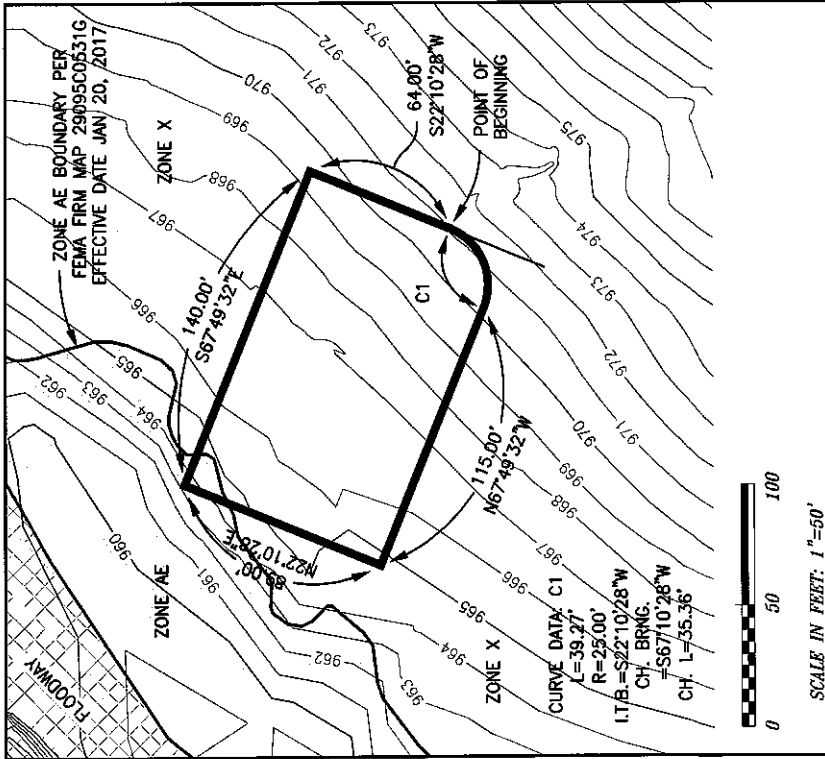
Base Flood Elevation (From FIS Profile) = 962.2  
Lowest Elevation within Description = 965.4



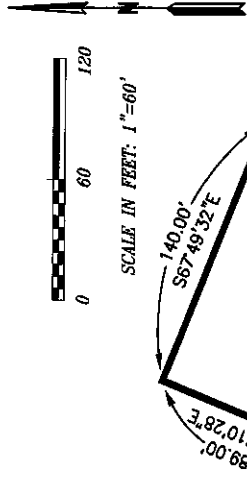
# ASBUILT TOPOGRAPHIC EXHIBIT

## PROPOSED LOT 18

PART OF THE SW 1/4 OF SECTION 24, T 47 N, R 32 W  
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



**BOUNDARY DESCRIPTION:**  
Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
**COMMENCING** at the Southwest Corner of said Southwest Quarter; **THENCE** North 2°45'31" East on the West Line of said Southwest Quarter, 999.28 feet; **THENCE** South 87°35'27" East, 412.65 feet to a point of curvature; **THENCE** Northeast on a curve to the left (said curve having a radius of 218.84 feet, a chord bearing North 60°59'12" East, a chord distance of 228.19 feet) an arc length of 240.04 feet to a point of tangency; **THENCE** North 29°33'50" East, 430.54 feet to a point of curvature; **THENCE** Northeast on a curve to the left (said curve having a radius of 835.00 feet, a chord bearing North 25°52'09" East, a chord distance of 107.62 feet) an arc length of 107.69 feet; **THENCE** North 22°10'28" East, 486.37 feet to the **POINT OF BEGINNING**; **THENCE** Southwesterly on a curve to the right (said curve having an initial tangent bearing South 22°10'28" West, a radius of 25.00 feet, a chord bearing South 67°10'28" West, a chord distance of 35.36 feet) an arc length of 39.27 feet to a point of tangency; **THENCE** North 67°49'32" West, 115.00 feet; **THENCE** North 22°10'28" East, 89.00 feet; **THENCE** South 67°49'32" East, 140.00 feet; **THENCE** South 22°10'28" West, 64.00 feet to the **POINT OF BEGINNING**, containing 12,326 square feet more or less. All bearings herein are referenced to the Missouri State Plane Coordinate System of 1983, West Zone.



**CURVE DATA: C1**  
L=39.27  
R=25.00  
I.T.B.=S22°10'28"W  
CH. BRNG.  
=S67°10'28"W  
CH. L=35.36'

L=107.69'  
R=835.00'  
CH. BRNG.  
=N25°52'09"E  
CH. L=107.62'

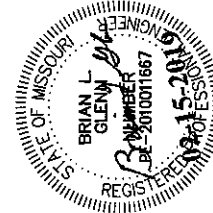
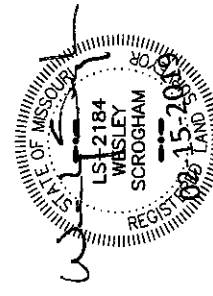
L=240.04', R=218.84'  
CH. BRNG.=N60°59'12"E  
CH. L=228.19

L=107.69'  
R=835.00'  
CH. BRNG.  
=N25°52'09"E  
CH. L=107.62'

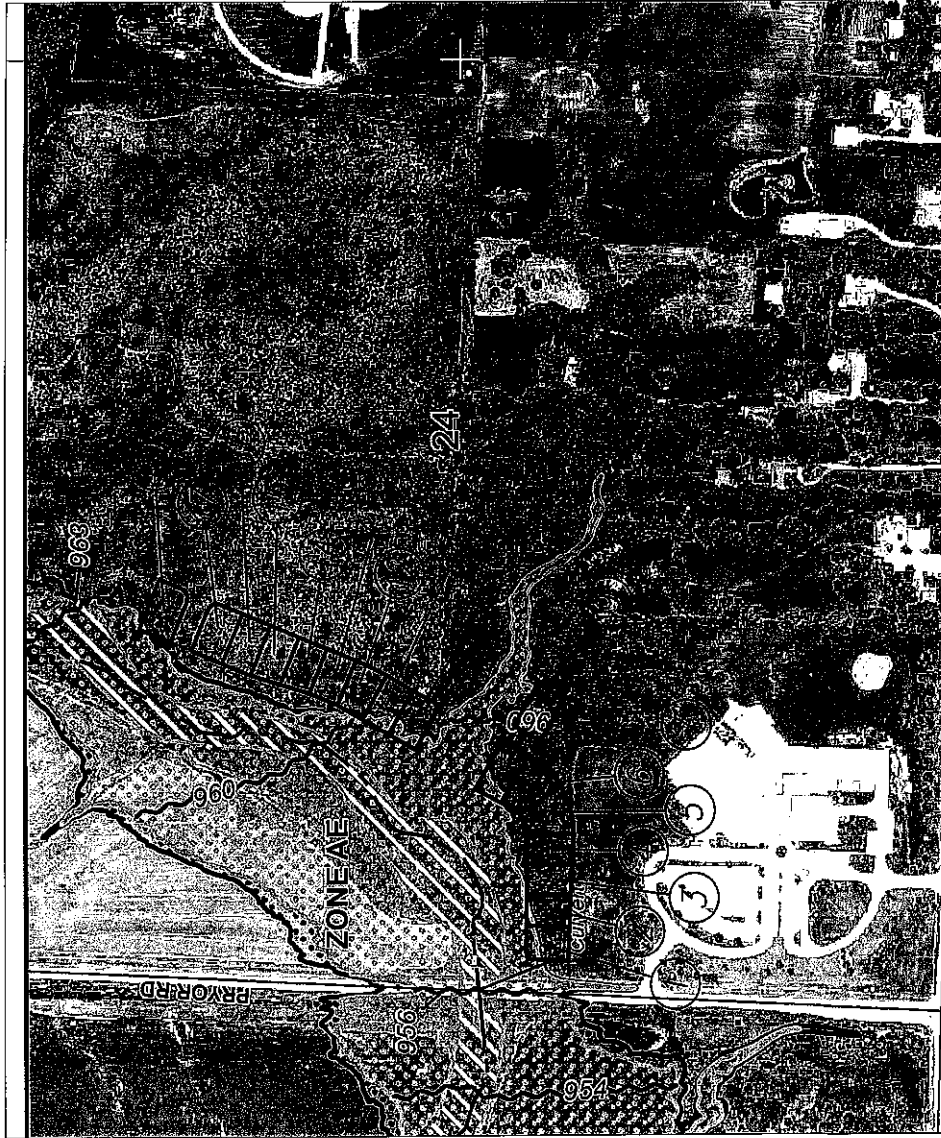
L=240.04', R=218.84'  
CH. BRNG.=N60°59'12"E  
CH. L=228.19

POINT OF COMMENCING  
SW Cor. of the SW  
1/4 of Section 24,  
TWP-47-N, R-32-W.

Base Flood Elevation (From FIS Profile) = 963.0  
Lowest Elevation within Description = 963.3



**PHOENIX ENGINEERING & SURVEYING, LLC**  
CM Engineers • Planners • Surveyors  
3055 S. Northern Blvd.  
Independence, MO 64052  
Phone: (816) 743-5000  
Fax: (816) 743-9700  
DATE: 10-15-2019  
DRAWN: BJC  
CHECKED: GMD/BA  
SCALE: AS SHOWN



Proposed Lots that are shown above have been correlated by number and are reflected in each metes and bounds description provided.



MAP SCALE 1" = 500'



**NFP**

PANEL 0531G

# FIRM

FLOOD INSURANCE RATE MAP  
JACKSON COUNTY,  
MISSOURI  
AND INCORPORATED AREAS

PANEL 531 OF 625  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

## CONTAINS:

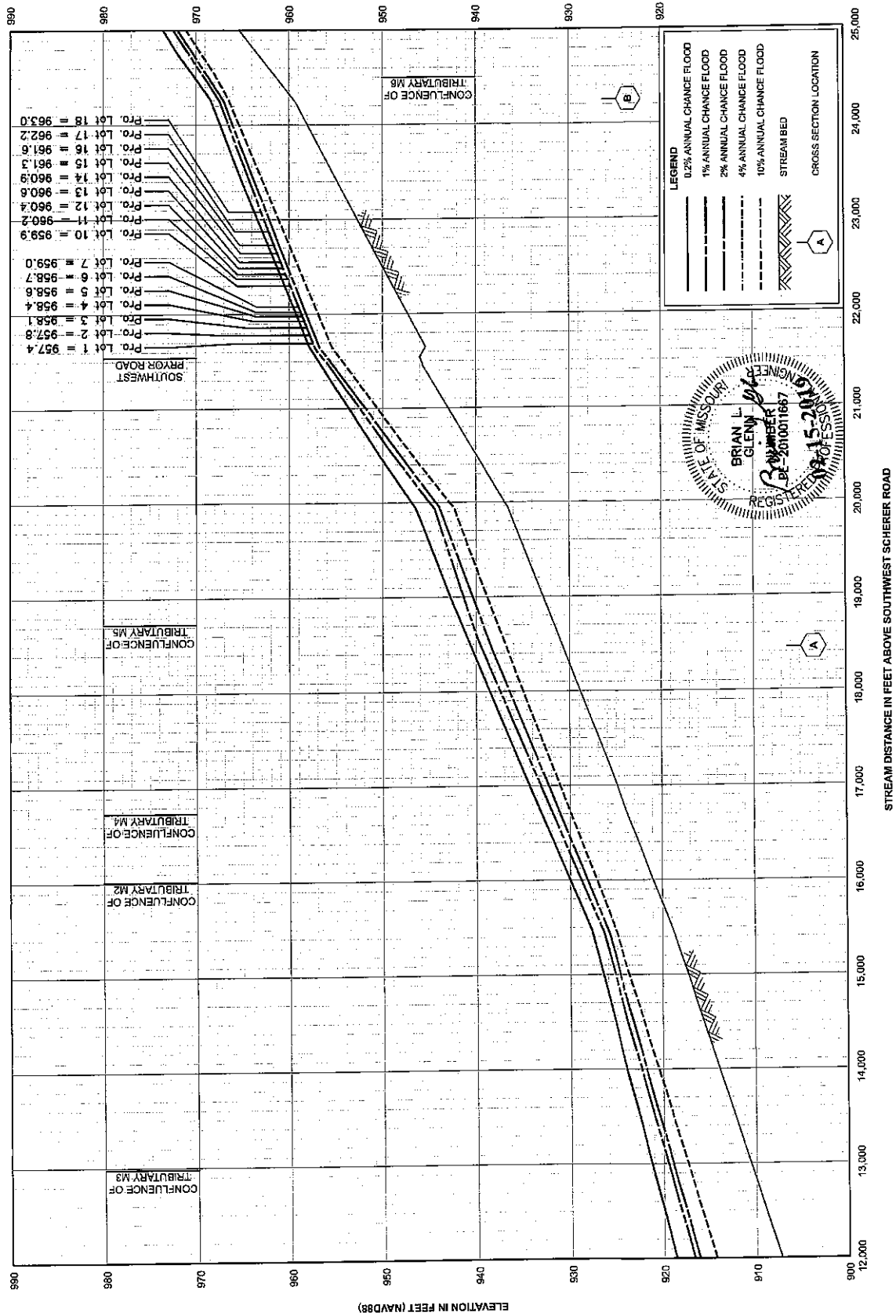
COMMUNITY	NUMBER	PANEL	SUFFIX
KANSAS CITY, CITY OF	290773	0531	G
LEE'S SUMMIT, CITY OF	290774	0531	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER  
29095C0531G  
MAP REVISED  
JANUARY 20, 2017

Federal Emergency Management Agency





ELECTRONICALLY RECORDED  
JACKSON COUNTY, MISSOURI

07/18/2016 08:17:42 AM

WD FEE: \$ 27.00 3 Pages

INSTRUMENT NUMBER:

2016E0064327

### CORPORATION WARRANTY DEED

Kansas City Title, Inc. - File No. KCT-198922  
1257 South 7 Highway  
Blue Springs, MO 64014

THIS INDENTURE, made this 13 day of July, 2016, by and between **Brookside Investment, Inc., a Missouri Corporation**, a corporation duly organized under the laws of the State of Missouri as **GRANTOR**, and **Whispering Woods Land, LLC**, as **GRANTEE**, whose mailing address is **803 PCA Road, Warrensburg, MO 64093**

WITNESSETH: THAT SAID GRANTOR, in consideration of the sum of Ten Dollars and other good and valuable consideration, the receipt and sufficiency which is hereby acknowledged by GRANTOR, does hereby **grant, bargain and sell, convey and confirm**, unto the said GRANTEE, and unto Grantee's heirs and assigns forever, the following described real property situated in the County of Jackson, State of Missouri to-wit:

**SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF**

Subject to all easements, restrictions and reservations, if any, now of record.

TO HAVE AND TO HOLD, the premises aforesaid, with all and singular the rights, privileges, appurtenances and immunities thereto belonging or in anywise appertaining, unto the said GRANTEE and unto Grantee's heirs and assigns forever, the said GRANTOR hereby covenanting that it is lawfully seized of an indefeasible estate in fee in the premises herein conveyed; that it has good right to convey the same; that the said premises are free and clear from any encumbrance done or suffered by it or those under whom it claims; except as stated above and except for all taxes and assessments, general and special, not now due and payable; and that it will warrant and defend the title of the said premises unto the said GRANTEE, and unto Grantee's heirs and assigns forever, against the lawful claims and demands of all persons whomsoever.

If two or more persons constitute either GRANTOR or GRANTEE, the words GRANTOR and GRANTEE shall be construed to read GRANTORS or GRANTEES, whenever the sense of this Deed requires.

**KANSAS CITY TITLE**

IN WITNESS WHEREOF, The said GRANTOR has executed this instrument the day and year first above written.

Brookside Investment, Inc., a Missouri Corporation

BY: Richard E. Frye  
Richard E. Frye, President

State of Missouri

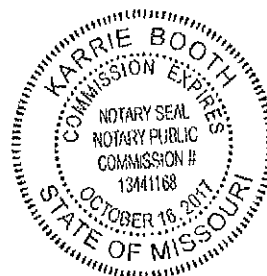
County of Jackson

On this 13 day of July, 2014, before me, the undersigned, appeared of **Richard E. Frye, President of Brookside Investment, Inc., a Missouri Corporation**, a corporation, duly organized under the laws of the State of **Missouri** and that said instrument was signed on behalf of said corporation by authority of its Board of Directors, and said officer acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal in said County and State, the day and year last above written.

My commission expires:

[Signature]  
Notary Public



## EXHIBIT A - LEGAL DESCRIPTION

Part of the Southwest Quarter of Section 24, Township 47 North of the Baseline, Range 32 West of the Fifth Principal Meridian, Lee's Summit, Jackson County, Missouri, described as follows:  
COMMENCING at the Southwest Corner of said Southwest Quarter; thence North 02 degrees 45 minutes 31 seconds East on the West line of said Southwest Quarter, 949.28 feet to the Westerly Prolongation of the North Line of Lot 1, "R-7 ELEMENTARY SCHOOL AT PRYOR ROAD, LOT 1", a subdivision recorded in Plat Book I-67, Page 68 at the Jackson County Recorder's Office; thence South 87 degrees 35 minutes 27 seconds East on said Westerly Prolongation, 50.00 feet to the East Right-of-Way line of Pryor Road, and the Point of Beginning; thence North 02 degrees 45 minutes 31 seconds East on said East Right-of-Way line, being 50.00 feet East from and parallel with the West line of said Southwest Quarter, 1686.19 feet to the North Line of said Southwest Quarter; thence South 87 degrees 40 minutes 43 seconds East on said North Line, 2257.77 feet to the Northwest Corner of Lot 1, "R-7 HIGH SCHOOL AT WARD ROAD, LOT 1", a subdivision recorded in Plat Book I-67, Page 67 at the Jackson County Recorder's Office; thence South 02 degrees 42 minutes 30 seconds West on the West Line of said Lot 1, 1319.46 feet to the South line of the North half of said Southwest Quarter; thence North 87 degrees 38 minutes 05 seconds West on said South line, 1319.41 feet to the Northwest corner of a tract described in the Warranty Deed recorded as Document No. 2016E0032376 in the Jackson County Recorder's Office; thence South 02 degrees 44 minutes 00 seconds West on the West line of said Tract, 369.17 feet to the Northeast corner of said Lot 1, "R-7 ELEMENTARY SCHOOL AT PRYOR ROAD, LOT 1"; thence North 87 degrees 35 minutes 27 seconds West on the North line of said Lot 1, 939.67 feet to the Point of Beginning.



**FLOODPLAIN DEVELOPMENT PERMIT APPLICATION**

Application # \_\_\_\_\_

Date: 8-14-2018

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be done in accordance with the requirements of the Floodplain Management Ordinance, with all other applicable county/city ordinances, and the laws and regulations of the State of Missouri.

Whispering Wood Land, LLC - Doug Park or Rick Frye

Developer/Owner or Agent

Builder

803 P.C.A. Road, Warrensburg, MO 64093

Address

Address

816-564-2333 doug.park32@yahoo.com

Phone

eMail Address (required)

Phone

**SITE INFORMATION**

1. Location: NW &amp; SW 1/4; SW 1/4; Section 24; Township 47-N; Range 32-W

Property Address: not assigned

 2. Type of Development: Filling ☒ Grading ☒ Excavation ☒ Minimum Improvement ☐ Substantial Improvement ☐  
 Routine Maintenance ☐ New Construction ☒ Other ☐

3. Description of Development: Floodway Fringe fill for development of residential subdivision / elevation of rear of residential lots / installation of culvert crossing

4. Premises: Structure Size: \_\_\_\_\_ ft. x \_\_\_\_\_ ft. Area of site: 17.1 ac (total) sq-ft. 1.8 ac (fill w/i floodplain)

Principal Use: Residential Lots/Culvert Crossing

Accessory Uses (storage, parking, etc.): \_\_\_\_\_

5. Value of Improvement (fair market): \$ \_\_\_\_\_ Pre-Improvement/Assessed Value of Structure: \$ \_\_\_\_\_

 6. Property located in a designated FLOODWAY? Yes ☐ No ☒ (If Yes to Question 6, certification must be provided prior to permit issuance indicating this project will result in no increase in the 1% base flood elevations.)

 7. Property located in a designated floodplain FRINGE? Yes ☒ No ☐

8. Elevation of the 1% Base Flood / 100-year flood (ID source): varies along reach MSL/NGVD

9. Elevation of the proposed development site: varies along reach fill to above BFE MSL/NGVD

10. Elevation/floodproofing requirement: Future structures shall be 2-feet above BFE MSL/NGVD

11. Other floodplain elevation information/FIRM panel numbers (ID and describe source): FIRM No. 29095C0531G; effective 01-20-2017

 12. Other Permits required? Corps of Engineer 404 Permit: Yes ☐ No ☒ Provided ☐  
 MO Dept. of Natural Resources: Yes ☒ No ☐ Provided ☒

NOTE: All provisions of City of Lee's Summit UDO Article 6, Division II, Floodplain Management Ordinance, shall be in compliance.

**APPLICATION APPROVAL/DENIAL**

 Plans and Specifications Approved ☒ / Denied ☐ this 30th Day of August, 2018

Signature of Developer/Owner

Authorizing Official

Rick Frye - member Whispering Wood Land, LLC

GEORGE M. BINGER III, City Engineer

Print Name and Title

Rick Frye Prop

Print Name and Title

IF APPROVED, THIS PERMIT REQUIRES A CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY-IMPROVED RESIDENTIAL BUILDING SHALL BE ELEVATED 2 FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, PERMIT APPROVAL WILL REQUIRE A CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED, 2 FEET ABOVE THE BASE FLOOD ELEVATION.

THIS APPLICATION IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY-IMPROVED BUILDING COVERED BY THIS PERMIT APPLICATION.





**Habitat Assessment**  
to  
**Determine Suitable Habitat for Indiana,  
Northern Long-Eared, and Gray Bats**

*for*

**Whispering Woods Land, LLC – 1<sup>st</sup> Plat**  

---

**JACKSON COUNTY, MISSOURI**

*PREPARED BY*



*It's the "Nature" of our Business*

3904 East 185th Street  
Belton, MO 64012

**APRIL 2019**

**HABITAT ARCHITECTS PROJECT NO. 118-19**

## TABLE OF CONTENTS

Table of Contents .....	1
1.0 Introduction .....	2
2.0 Indiana Bat .....	3
2.1 Legal Protection And Life History .....	3
2.2 Roost Trees .....	4
2.3 Hybernacula .....	4
3.0 Northern Long-eared Bat.....	5
3.1 Legal Protection And Life History .....	5
3.2 Critical Habitat .....	8
4.0 Gray Bat.....	8
4.1 Legal Protection And Life History .....	9
4.2 Habitat .....	9
4.3 Hybernacula .....	10
5.0 White Nosed Syndrome .....	10
6.0 Existing Habitats.....	11
6.1 Woodland.....	11
7.0 Effects of the Proposed Action.....	12
8.0 Conclusion .....	12
9.0 Referenced Materials.....	13

## 1.0 INTRODUCTION

Whispering Woods Land, LLC is preparing to construct the Whispering Woods Subdivision within the City of Lee's Summit. The project is an approximately 77-acre area located north of SW Hook Road and east of Pryor Road in the City of Lee's Summit, Missouri (**Figure 1**). The project is more specifically located in the southwest ¼ of Section 24, Township 47 north, Range 32 West, Lee's Summit, Jackson County, Missouri (**Figure 2**).

Prior to conditional approval of final project plans, the City of Lee's Summit has requested that the Client provide written concurrence of coordination with the U.S. Fish and Wildlife Service (USFWS) regarding any potential threatened and endangered species that may require further consultation under the Endangered Species Act (ESA). Whispering Woods Land, LLC informally consulted with the USFWS (2017) regarding tree clearing and potential threatened and endangered species impacts. Based on information provided by USFWS (verbal) at the time, Whispering Woods Land, LLC cleared 7.8 acres during the winter of 2017.

The City of Lee's Summit is requesting documentation from the USFWS that the agency does or does not require further consultation before releasing their approval for project implementation.

Whispering Woods Land, LLC has contracted with Habitat Architects (*Habitat*) to complete a habitat assessment and current condition analysis of the remaining forested areas. The assessment was completed to document potential forested impacts within the known habitat range of the Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*) (NLEB), and gray bat (*Myotis grisescens*).

Utilizing the 2016 Range-Wide Indiana Bat Summer Survey Guidelines, (*Habitat*) completed a Phase I (Initial Project Screening) review of the project area. A field-based habitat assessment and assessment of potential adverse effects to *Listed* bat species is provided.

## 2.0 INDIANA BAT

The scientific name of the Indiana bat is *Myotis sodalis* and it is an accurate description of the species. *Myotis* means “mouse ear” and refers to the relatively small, mouse-like ears of the bats in this group. *Sodalis* is the Latin word for “companion.” The Indiana bat is a very social species; large numbers cluster together during hibernation. The species is called the Indiana bat because the first specimen described to science in 1928 was based on a specimen found in southern Indiana's Wyandotte Cave in 1904 (USFWS, 2015).

The Indiana bat is quite small, weighing only one-quarter of an ounce (about the weight of three pennies). In flight, it has a wingspan of 9 to 11 inches. The fur is dark-brown to black. The Indiana bat is similar in appearance to many other related species. Biologists can distinguish it from similar species by comparing characteristics such as the structure of the foot and color variations in the fur (USFWS, 2015).

### 2.1 LEGAL PROTECTION AND LIFE HISTORY

The Indiana bat was originally listed as in danger of extinction under the Endangered Species Preservation Act of 1966 and is currently listed as endangered under the Endangered Species Act of 1973, as amended.

This species utilizes hibernacula, including caves and old mines, for hibernation during winter months. Prior to entering the hibernacula, mating swarms occur where males mate with females. With the arrival of spring the individuals exit the hibernacula with females dispersing across the eastern United States to form roost colonies, the male species disperse as well but live in solitary or in small bachelor groups in the summer. By process of delayed fertilization, the females conceive their young and raise their pups. Female roost colonies may range from a few individuals to several dozen mothers utilizing appropriate roost trees. It is important to understand that a roost colony requires a variety of roost trees within reasonable proximity as females change roost trees every couple of days. Their diet consists of a variety of insects caught by foraging during the night. By late summer the

Indiana bats return to their hibernacula where mating swarms once again form and the process repeats itself.

## 2.2 ROOST TREES

Research has shown that successful roost colonies require a variety of suitable roost trees. The bats do not have a preference for any particular species of tree but rather seek structure that meets their requirements for canopy cover, height, shelter, and climate control. Such structure excludes a description of a healthy tree and commercial forest management practices in general do not produce roosting habitat for the species. Some species of trees can provide roost habitat in a healthy condition, such as the shagbark and shellbark hickories, but most trees utilized by the species are in a stage of senescence. Understandably, many trees utilized as primary or alternate roosts may serve their purpose for a limited time, and new primary and alternate roost trees must be continually recruited into a stand in order to provide appropriate roost structure. Projects requiring tree clearing may result in a direct adverse impact to the species if conducted during the roosting season or result in the incidental take of Indiana bat habitat if conducted during winter months. According to the United States Fish and Wildlife Service (USFWS), as printed in the *Draft Indiana Bat Recovery Plan, First Revision; Draft Survey Protocol* (USFWS, 2007), threats to the species during the summer months are related to the “loss and degradation of forested habitat”.

## 2.3 HYBERNACULA

Aside from summer roost tree habitat, the winter hibernacula utilized by the species is also a very important habitat. The USFWS has designated critical habitat within Missouri as: Cave 021, Crawford County; Cave 009, Franklin County; Cave 17, Franklin County; Pilot Knob Mine, Iron County; Bat Cave, Shannon County, Cave 029, Washington County...(USFWS, 1976). There is no critical habitat listed for Clay County, Missouri.

For most species, actual utilized habitat exceeds the geographic locations defined as critical habitat. Regarding the Indiana bat in Missouri, caves and mines comprise the hibernacula

habitats. Natural caves in Missouri occur in regions with Karst geology. Projects directly or indirectly impacting hibernacula utilized by the Indiana bat will result in an adverse impact to the species. Examples of such impacts include air and noise pollution, changes in hibernacula climate, disruption of mating swarms, physical damage to hibernacula structure, etc.

### 3.0 NORTHERN LONG-EARED BAT

The scientific name of the northern long-eared bat is *Myotis septentrionalis*. The northern long-eared bat (NLEB) is a medium-sized bat with a body length of 3 to 3.7 inches but a wingspan of 9 to 10 inches. Their fur color can be medium to dark brown on the back and tawny to pale-brown on the underside. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, *Myotis* (USFWS 2016).

#### 3.1 LEGAL PROTECTION AND LIFE HISTORY

NLEB's hibernate in caves or mines only during the winter. During summer, NLEBs roost singly or in colonies in trees (live, dying, dead, or snag) with a diameter at breast height (DBH) of three inches or greater that exhibits any of the following characteristics: exfoliating bark, crevices, cavity, or cracks. Tree species often include, but are not limited to, shagbark hickory (*Carya ovata*), white oak (*Quercus alba*), cottonwood (*Populus deltoides*), and maple (*Acer spp*).

Males and non-reproductive females may also roost in cooler places, like caves and mines. NLEB's have also been occasionally found roosting in structures like barns and sheds (particularly when suitable roost trees are unavailable). NLEB's are a forest interior species that require adequate canopy closure for both roost and foraging habitat (Lausen 2009). They emerge at dusk to forage in upland and lowland woodlots and tree-lined corridors, feeding on insects, which they catch while in flight using echolocation. Wing morphology of the northern long-eared bat makes them ideally suited for the high maneuverability required for glean-type foraging within a cluttered forest interior (Amelon and Burhans 2006, Owen et al. 2003, Henderson and Broders 2008). Bat distribution and abundance are

affected by availability of insect prey, which for northern long-eared bats consists primarily of beetles and moths (Brack and Whitaker 2001, Carter et al. 2003). Abundance of these prey items is typically higher in more closed forest stands than in openings, which supports studies which have found northern long-eared bats to avoid open habitats (Owen et al. 2003).

Roosting and foraging activities tend to occur within closed, intact forest stands (Sasse and Pekins 1996, Foster and Kurta 1999, Lacki and Schwierjohann 2001, Owen et al 2002). Small canopy gaps may be used, as they will increase solar radiation for maternity roost trees as well as support a warmer environment conducive to insect abundance and activity (Owen et al. 2003). Although they are a predominantly forest interior species, northern long-eared bats will use riparian areas for foraging and seem to prefer streams protected by canopy closure (Yates and Muzika 2006, Henderson and Broders 2008). However, researchers reported capturing more little brown bats (*Myotis lucifugus*) over open water habitat than northern long-eared bats (Broders et al. 2006). During the lactation period, proximity to aquatic habitat may be an important variable in roost tree selection (Sasse and Pekins 1996).

Henderson and Broders (2008) found that northern long-eared bats did not travel more than 78 meters (m) from the edge of intact forest structure. Lacki et al. (2009) reviewed relative elevation data from eight projects studying northern long-eared bat roost characteristics and found more than half of the northern long-eared bats roost trees were located at higher points in the landscape, along midslopes and upperslopes than lower habitats.

The USFWS proposed the northern long-eared bat (NLEB) as endangered in October 2013. During review of the threats, it was determined that the NLEB met the Endangered Species Act (ESA) definition of threatened. Under the Act, a threatened species is likely to become endangered in the foreseeable future, while an endangered species is currently in danger of becoming extinct. The listing became effective on May 4, 2015, 30 days after publication of the final listing determination in the Federal Register.

The final listing also included a 4(d) rule. A 4(d) rule is one of many tools provided by the ESA to allow for flexibility in the ESA's implementation and to tailor prohibitions to those

that make the most sense for protecting and managing at-risk species. This rule, which may be applied only to species listed as threatened, directs the USFWS to issue regulations deemed “necessary and advisable to provide for the conservation of threatened species.”

The 4(d) rule ensures private landowners and citizens are not unduly burdened by regulations that do not further the conservation of the species and are exempted from “take” prohibitions (defined in the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, etc.), when conducting certain activities. The rule is often used to clarify or simplify what forms of take of a threatened species are and are not prohibited. The following provisions are provided for in the 4(d) rule.

#### **PURPOSEFUL TAKE**

For all areas within the range of the northern long-eared bat, all purposeful take is prohibited except:

- Removal of northern long-eared bats from human structures.
- Defense of human life (e.g., public health monitoring for rabies).
- Removal of hazardous trees for the protection of human life and property.

#### **INCIDENTAL TAKE**

For areas of the country not affected by white-nose syndrome (WNS) (i.e., areas outside the WNS zone), there are no prohibitions on incidental take.

For areas of the country impacted by WNS (i.e., areas inside the WNS zone), incidental take is prohibited under the following circumstances:

- If it occurs within a hibernaculum.
- If it results from tree removal activities and
- the activity occurs within 0.25 mile (0.4 km) of a known hibernaculum; or,



- the activity cuts or destroys a known, occupied maternity roost tree or other trees within a 150-foot radius from the maternity roost tree during the pup season from June 1 through July 31.

(iii) Activity avoids clearcuts (and similar harvest methods, e.g. seed tree, shelterwood and coppice) within 0.25 mile (0.4 km) of known, occupied roost trees during the pup season (June 1–July 31).

### 3.2 CRITICAL HABITAT

The USFWS has determined that designating critical habitat for the northern long-eared bat is not prudent. Northern long-eared bat summer habitat is not limited or in short supply and summer habitat loss is not a range-wide threat to the species. Designating critical habitat in the areas where it summers would not benefit the northern long-eared bat, and therefore, would not be prudent. Winter habitat does have specific physical and biological features that are essential to the conservation of the species, and, therefore, meets the definition of critical habitat. However, information became available demonstrating that designating critical habitat would likely increase vandalism, disturbance, and, potentially, the spread of white-nose syndrome in the caves and mines where northern long-eared bats hibernate. Therefore, it is not prudent to designate winter habitat as critical habitat (USFWS, 2016).

It should be noted that there is **NO** known hibernacula located in vicinity of the project.

## 4.0 GRAY BAT

Gray bat is the largest member of its genus in the eastern United States. They weigh between 7 and 16 g and are 75 to 101 mm in length. Forearm length ranges between 40 and 46 mm. Gray bats can be distinguished from all other eastern bats by their uni-colored dorsal fur (all others have bi- or tri-colored dorsal fur). They are also the only species of *Myotis* in which the wing membrane connects to the foot at the ankle as opposed to connecting at the base of the first toe.

Gray bats are dark gray in color directly after they molt in July or August. Between molts, they bleach to a russet color. This difference in fur color is most apparent in females during the reproductive season (May or June) (USFW, 1991).

#### 4.1 LEGAL PROTECTION AND LIFE HISTORY

Gray bats roost, breed, rear young and hibernate in caves year round. They migrate between summer and winter caves and will use transient or stopover caves along the way. Mating occurs as bats return to winter caves in September and October. By November, most gray bats are hibernating. Adult females begin to emerge in late March, followed by juveniles and adult males. A few hundred to many thousands of pregnant females congregate to form maternity colonies. Males and nonreproductive females gather in smaller groups to form what are known as bachelor colonies. A single pup is born in late May or early June. Young begin to fly 20 to 25 days after birth. Gray bats feed primarily on flying insects over rivers and lakes. Aquatic insects, particularly mayflies, make up most of their diet.

Because gray bats are found in caves year round, they are very vulnerable to human disturbance. This has contributed greatly to their decline. As with any cave bat, alterations of caves and cave entrances have negative affects on their populations. Gray bats have also been killed during natural flooding and flooding caused by manmade impoundments. The overuse of pesticides has also contributed to their decline. Pollution and siltation of streams causing a reduction in aquatic insects may also affect gray bat populations.

The gray bat was added to the U.S. List of Endangered and Threatened Wildlife and Plants on April 28, 1976.

#### 4.2 HABITAT

Gray bats are restricted entirely to areas with caves or cave-like habitats. These caves are in limestone karst areas of the southeastern United States. Gray bats do not inhabit barns or other similar structures. This leads to extremely restricted nesting opportunities. Due to their

requirement of unique cave types, Gray bats can only use 0.1% of available caves in the winter and 2.4% in the summer (Tuttle, 1986). Winter caves are deep and vertical and provide a large volume of air below the lowest entrance that acts as a cold air trap (Tuttle 1976). In the summer, maternity colonies prefer caves that act as warm air traps or that provides restricted rooms or domed ceilings that are capable of trapping the combined body heat from thousands of clustered individuals (Tuttle 1975, Tuttle and Stevenson 1977).

There are no known caves in the project area.

#### 4.3 HYBERNACULA

Ninety-five percent of the total Gray bat population hibernates in only eight or nine caves. Two are located in Tennessee, three in Missouri, one in Kentucky, one in Alabama, and one in Arkansas. The winter caves utilized by Gray bats have deep, vertical passages with large rooms that function as cold air traps. The temperature of these caves ranges between 6 and 11 degrees Celsius (42 and 52 degrees Fahrenheit). (Kentucky Bat Working Group, 1999; USFWS, 1992; USFWS Division of Endangered Species, 1991).

#### 5.0 WHITE NOSED SYNDROME

The most significant threat to the continued survival of both Indiana and NLEB beyond habitat loss is white nose syndrome. White nose syndrome affects the survival rate of species overwintering in their hibernacula. The name of the syndrome describes the appearance of a species of fungus that grows on the face of the bat causing uncomfortable itching or burning. Infected bats may come out of hibernation metabolic rates to try and scratch the infected areas. The energy expense associated with this activity is not budgeted for as this species evolved without this disease and many individuals either die in the winter or emerge from the hibernacula in a weakened condition. It is suspected that spelunkers from Europe introduced these fungal spores into bat hibernacula in the United States.

## 6.0 EXISTING HABITATS

Habitat Architects completed a pedestrian survey of the entire action area on April 3, 2019. Data was collected relative to the 2016 Range-Wide Indiana Bat Summer Survey Guidelines (April 2016). Data collected is included in this report and on subsequent attachments and figures. A summary of the woodlands is provided to better represent the habitat and its function in the project area. Plant nomenclature is derived from the Flora of Missouri, authored by Julian A. Steyermark.

### 6.1 WOODLAND

The remaining woodlands include approximately 9% of the project site. The woodland is characterized by a closed canopy with the majority of trees being greater than 10" dbh. The site is dominated by mostly honey locust (*Gleditsia triacanthos*) and ash (*Fraxinus pennsylvanica*). Other noted species include; hackberry (*Celtis occidentalis*), cottonwood (*Populus deltoides*), hedge (*Maclura pomifera*), walnut (*Juglans nigra*) and a few oak species. The majority of trees are between 10" and 15" dbh, however, there are a few very large trees, as well, with a couple exceeding 30" dbh. The large proportion of honey locust in the woodland all have exfoliating bark. The larger diameter trees are mostly eastern cottonwoods which are live and have exfoliating bark, large burls and dead snag limbs/hollows.

The understory includes approximately 70% coverage by bush honeysuckle (*Lonicera mackii*). The bush honeysuckle is an invasive species that has negative effects on the vegetative community and prevents herbaceous understory growth. The coverage by bush honeysuckle may effect insect communities and will effect regeneration of native trees over time.

## 7.0 EFFECTS OF THE PROPOSED ACTION

*Habitat* has quantified the acreage of impacted wooded habitat by means of overlaying the subdivision tree clearing (Previous Timber Disturbance) on a map detailing the location and extent of vegetation communities (**Figure 3**). As no hibernacula habitat occurs within the action area, effects are defined in terms of acres of suitable wooded habitat lost due to project implementation.

The project site is approximately 77 acres with a majority of the area consisting of old pasture and row crop. Prior to clearing trees in the winter of 2017, there were approximately 17 acres of woodland on the property. The clearing activities in the winter of 2017 included approximately 7.8 acres of area where residential homes and infrastructure would occur. The current phase of development does **NOT** include any additional woodland impacts. There would be no direct impact to regional bat species.

## 8.0 CONCLUSION

Habitat Architects (*Habitat*) makes no statement as to the definitive presence/absence of listed bat species during the summer season. Given that woodland impacts occurred in the winter of 2017 and that no further woodland impacts will occur during the current phase of development, it is our opinion that the project will have No Negative effect on any bat species.

## 9.0 REFERENCED MATERIALS

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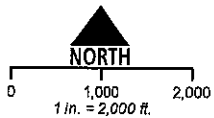
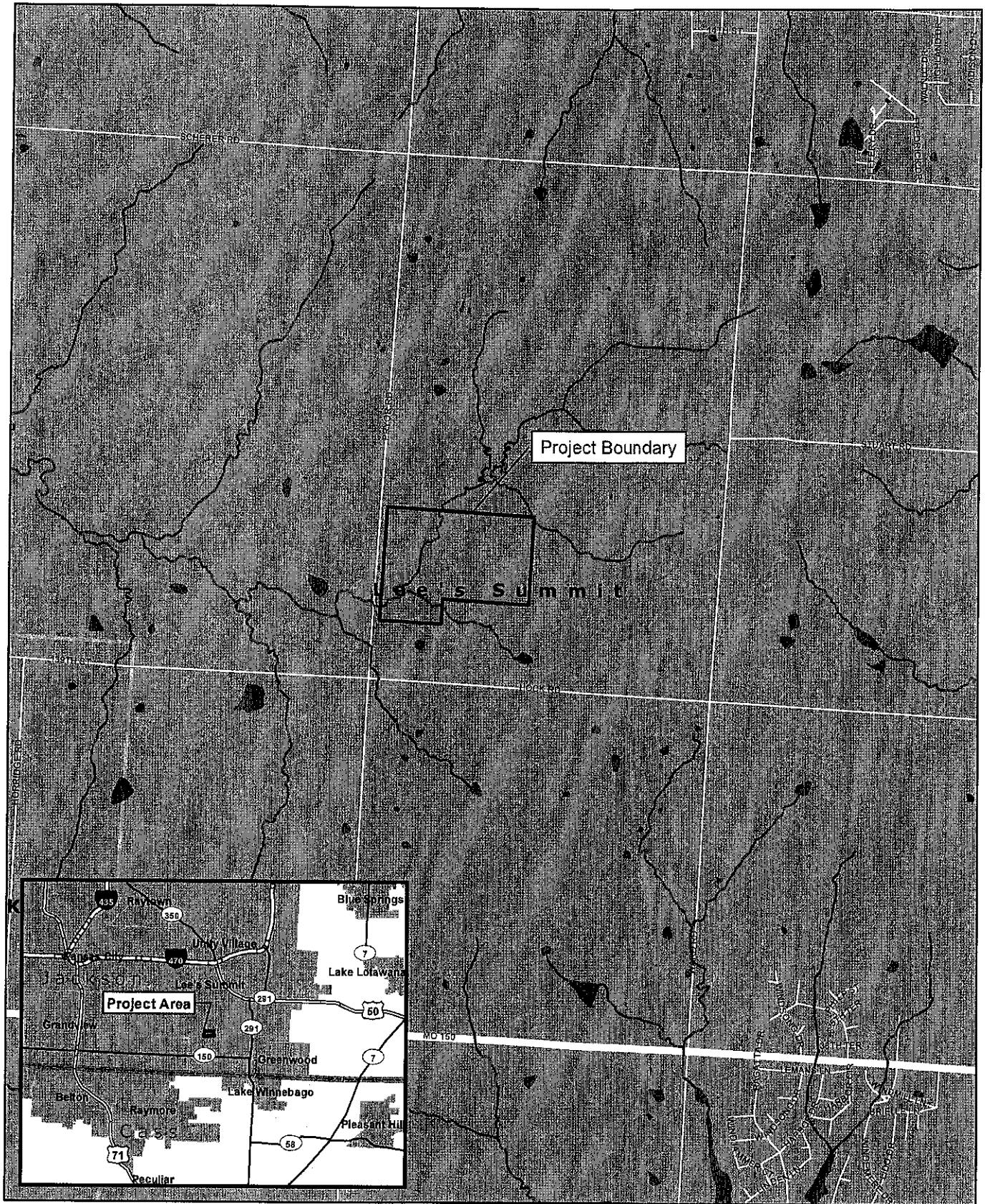
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## ***ATTACHMENT A***

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### **Figures**



Source: MO Dept. of Transportation  
 Location: SW 1/4 of Sec 24 - T47N - R32W, Jackson County, Missouri

FIGURE 1  
 SITE VICINITY MAP

WHISPERING WOODS  
 LEE'S SUMMIT, MISSOURI



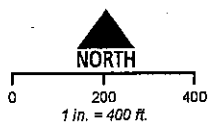
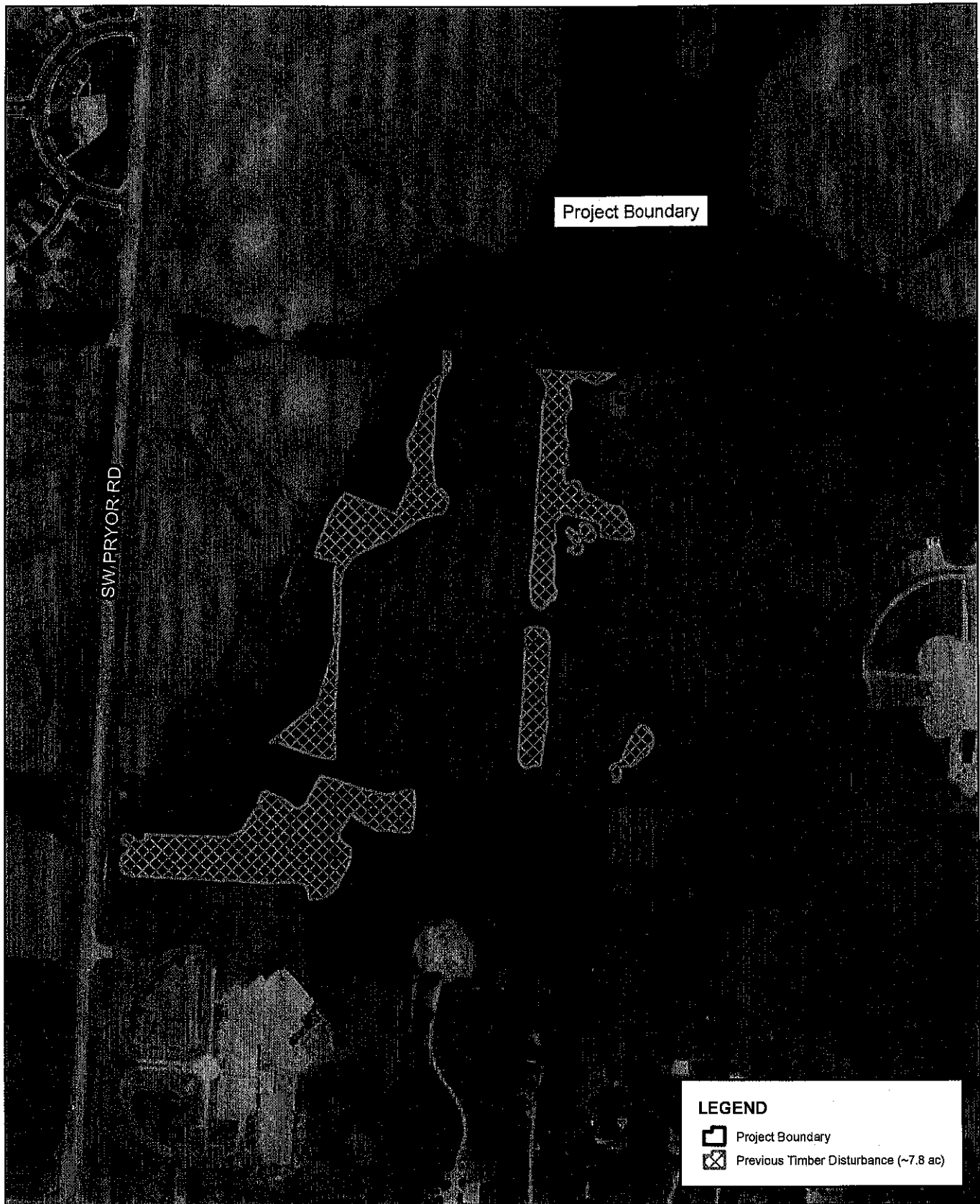


FIGURE 2  
USGS TOPOGRAPHIC MAP

WHISPERING WOODS  
LEE'S SUMMIT, MISSOURI



Source: US Geologic Survey  
Location: SW 1/4 of Sec 24 - T47N - R32W, Jackson County, MO  
Raymore, MO 1:24K Quadrangle



**FIGURE 3**  
**PREVIOUS TIMBER DISTURBANCE MAP**

**WHISPERING WOODS**  
**LEE'S SUMMIT, MISSOURI**



Source: NAIP 2016  
Location: SW 1/4 of Sec 24 - T47N - R32W, Jackson County, MO  
Raymore, MO 1:24K Quadrangle

**CITY OF LEE'S SUMMIT, MISSOURI  
DOCUMENT TO BE RECORDED  
WITH JACKSON COUNTY, MISSOURI**

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DATE OF DOCUMENT: April 26, 2019

DOCUMENT TITLE: DEED OF RELEASE

GRANTOR(S) NAME: CITY OF LEE'S SUMMIT, MO.

ADDRESS: 220 S.E. GREEN STREET  
LEE'S SUMMIT, MO. 64063

GRANTEE(S): NAME: Nicholas A. Adkins

ADDRESS: 616 SE Timbercreek Lane  
LEE'S SUMMIT, MO 64063

LEGAL DESCRIPTION: Please see Page 2 of the subject document.

DOCUMENT # 2007E0085826

Please return recorded copies to: Planning & Development  
City of Lee's Summit  
220 SE Green Street  
Lee's Summit, Mo. 64063

## Gene Williams

---

**From:** Tucker, Todd <Todd.Tucker@fema.dhs.gov>  
**Sent:** Thursday, April 25, 2019 12:19 PM  
**To:** doug.park32@yahoo.com  
**Cc:** Gene Williams; George Binger III; Mike Weisenborn; Sessa, Kenneth; Nusz, Rick; Ownby, Dean  
**Subject:** RE: Whispering Woods Subdivision - LOMR-F application - Lee's Summit, MO

**\*\*\* This email is from an external source, use caution before clicking on links or opening attachments. \*\*\***

Hi Doug,  
Can you fill me in on this project and the status of the LOMR-F application?

Kind regards,  
Todd

Todd C. Tucker AICP  
Natural Hazards Program Specialist/FM&I Crew Lead  
DHS FEMA Region VII, Floodplain Management & Insurance - Mitigation Division  
11224 Holmes Rd, Kansas City, MO 64131  
Office: 816-283-7063 Desk:816-283-7528

To protect your property, the most valuable preparation is to have flood insurance. Most standard homeowners' policies do not cover flood damage. Homeowners may contact the National Flood Insurance Program to receive referrals to flood policy providers in their area. How do you buy flood insurance? First, talk to your regular insurance agency. If they don't offer flood insurance, call the National Flood Insurance Program's Help Center at **800-427-4661** to learn more about how to purchase flood insurance or to find a carrier doing business in your area.



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**From:** Brian G <brian.glenn2012@gmail.com>  
**Sent:** Thursday, April 25, 2019 11:53 AM  
**To:** Tucker, Todd <Todd.Tucker@fema.dhs.gov>  
**Cc:** gene.williams@cityofls.net; george.binger@cityofls.net; mike.weisenborn@cityofls.net; styree@habitatarchitects.net; dena.mezger@cityofls.net; doug.park32@yahoo.com  
**Subject:** Whispering Woods Subdivision - LOMR-F application - Lee's Summit, MO

Todd,  
Thank you for the call back regarding the LOMR-F and ESA requirements. As I indicated on the phone, based on current documentation on the MT-1 forms, documentation from US Fish and Wildlife does not appear to be a requirement except under the Conditional applications (although these requirements will be changing).

Under this project we applied for and obtained a Floodplain Development Permit under the Lee's Summit Unified Development Ordinance (UDO). We have proceeded with the placement of compacted fill within the floodway fringe (outside the regulatory floodway) and have prepared a LOMR-F application.

Upon submittal to the City for signature, it was requested that we obtain a clearance letter from US Fish and Wildlife on the project. Doug Park contracted with Habitat Architects to prepare a report and coordinate with US Fish and Wildlife to obtain clearance. The response that Shannon Tyree received was "The Service cannot consult on activities and projects that already have impacted suitable habitat and/or species that might have been present."

The UDO Article 5, Division II Sec. 5.150.C.2 implies that upon issuance of the Floodplain Development Permit that any additional permits required have been obtained. If the City felt that additional documentation was necessary, we could have initiated coordination pre-construction prior to the release of the Floodplain Development Permit.

Since the City is now requiring a retro-active coordination letter to which the agency is unwilling to comment. How do we move forward on submitting an application for review when the City is unwilling to concur with the LOMR-F application after they approved the construction of the project?

Any input and guidance would be helpful.

Thank you

Brian L. Glenn, P.E., CFM, LEED AP



## Gene Williams

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**From:** styree <styree@habitatarchitects.net>  
**Sent:** Thursday, April 18, 2019 9:25 AM  
**To:** Gene Williams  
**Subject:** Fwd: Re: [EXTERNAL] Whispering Woods Land - Bat Assessment

**\*\*\* This email is from an external source, use caution before clicking on links or opening attachments. \*\*\***

Gene,

Thank you for returning my call. I've attached the correspondence we received from USFWS following our completion of a habitat suitability assessment for bat species. USFWS basically has no comment on the current project proposal given there would be no additional tree clearing.

Please let me know if you have any questions.

Thank you  
Shannon Tyree

Sent from my Sprint Samsung Galaxy S10.

----- Original message -----

**From:** "Marquardt, Shauna" <shauna\_marquardt@fws.gov>  
**Date:** 4/11/19 10:56 AM (GMT-06:00)  
**To:** Shannon Tyree <styree@habitatarchitects.net>  
**Cc:** Karen Herrington <karen\_herrington@fws.gov>  
**Subject:** Re: [EXTERNAL] Whispering Woods Land - Bat Assessment

Shannon,

Thank you for submitting the habitat assessment. As a side note, for your upcoming projects, please refer to the most current Rangewide Indiana Bat Summer Survey Guidance available. There are annual updates and the 2019 document will be available any day on our website.

The U.S. Fish and Wildlife Service (Service) has reviewed your April 10, 2019 email and enclosures, requesting consultation on the Whispering Wood Lands project in Johnson County, Missouri, and submits these comments pursuant to the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531-1544). You have requested Service review of the project relative to potential impacts to the Indiana bat, northern long-eared bat, and gray bat. The residential development project included removal of what has been noted as suitable habitat for federally listed bats. Based on the assessment, tree clearing (approximately 17 acres) occurred in winter 2017 without prior coordination with the Service. No surveys were conducted for the Indiana bat and northern long-eared bat to determine presence/probably absence, which the Service would have recommended in order to evaluate impacts and potential adverse effects of the project to these species. The Service cannot consult on activities and projects that already have impacted suitable habitat and/or species that might have been present. Any impacts to listed species that would have been caused by project activities have already occurred. For these reasons, we cannot concur with any endangered species determinations and have no further guidance for the project proponent relative to compliance with the Act. For future projects that may affect endangered species, we recommend you coordinate with the Service prior to



taking any action

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**Shauna Marquardt**

Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service

**Missouri Ecological Services Field Office**

101 Park Deville Drive, Suite A, Columbia, MO 65203  
O: 573-234-2132 x174 // M: 573-239-3293 // F: 573-234-2181

On Wed, Apr 10, 2019 at 3:12 PM <[styree@habitatarchitects.net](mailto:styree@habitatarchitects.net)> wrote:

Shauna,

Please find attached a brief habitat assessment we completed for the Whispering Woods Land, LLC subdivision in Lee's Summit. This is the project that I spoke with you on the phone briefly last week about. The developer cleared trees in the winter of 2017 in preparation for the current Phase of development. The current phase does not include any further land clearing. However, the City of Lee's Summit is required an official response from your office regarding any further consultation or authorizations.

The attached report includes a brief description of the project followed by mostly narrative data until the conclusions section. Based on no current tree clearing planned we do not see any need for further consultation at this time and would like to obtain your concurrence of those findings or comments relative to additional information that might be needed.

Please feel free to email or call if you have any questions.

Thank you

Shannon Tyree

**President - Restoration Ecologist**

**Habitat Architects**

ENVIRONMENTAL COMPLIANCE & RESTORATION

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