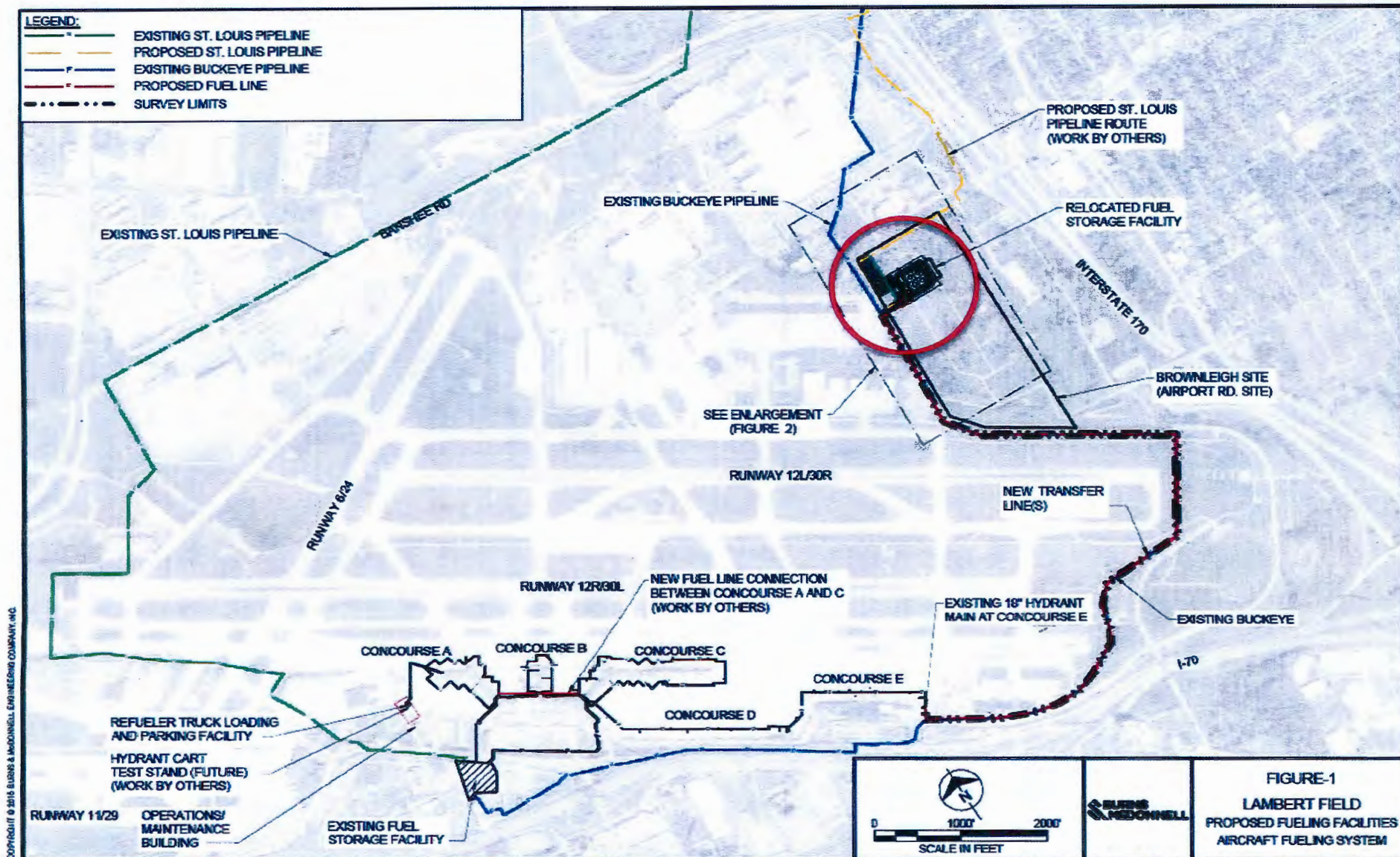
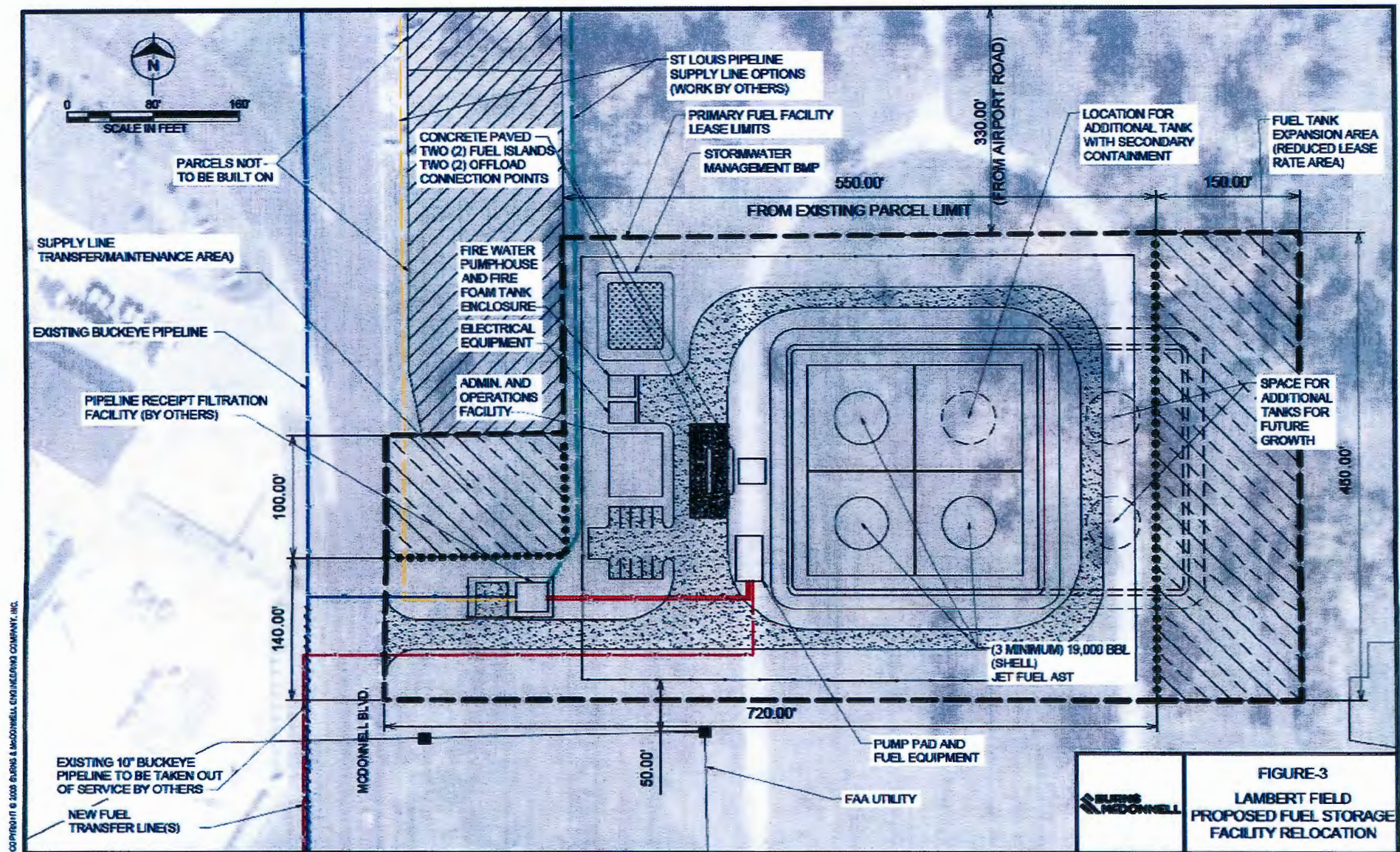


Attachment A
Proposed Action Drawings

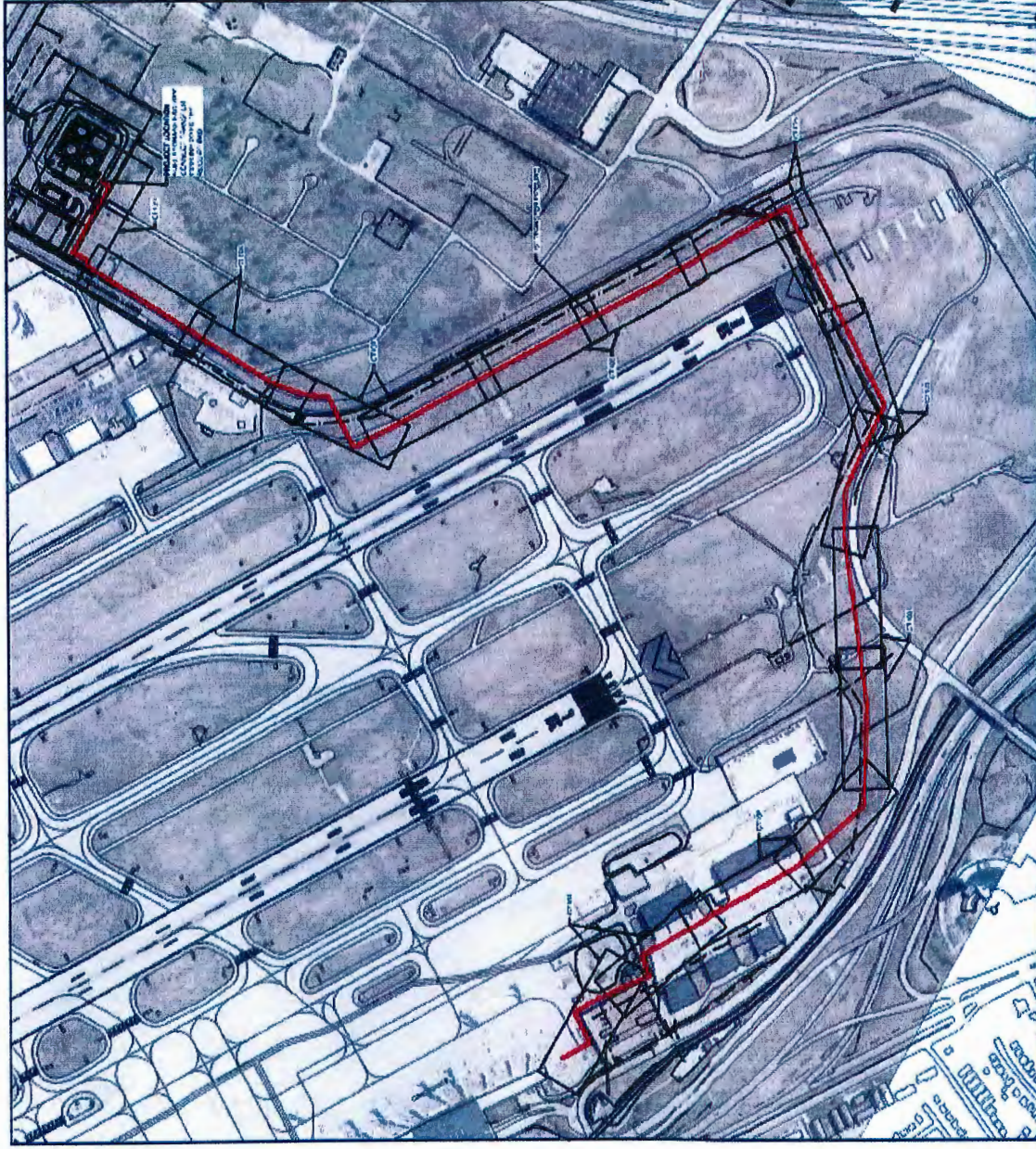


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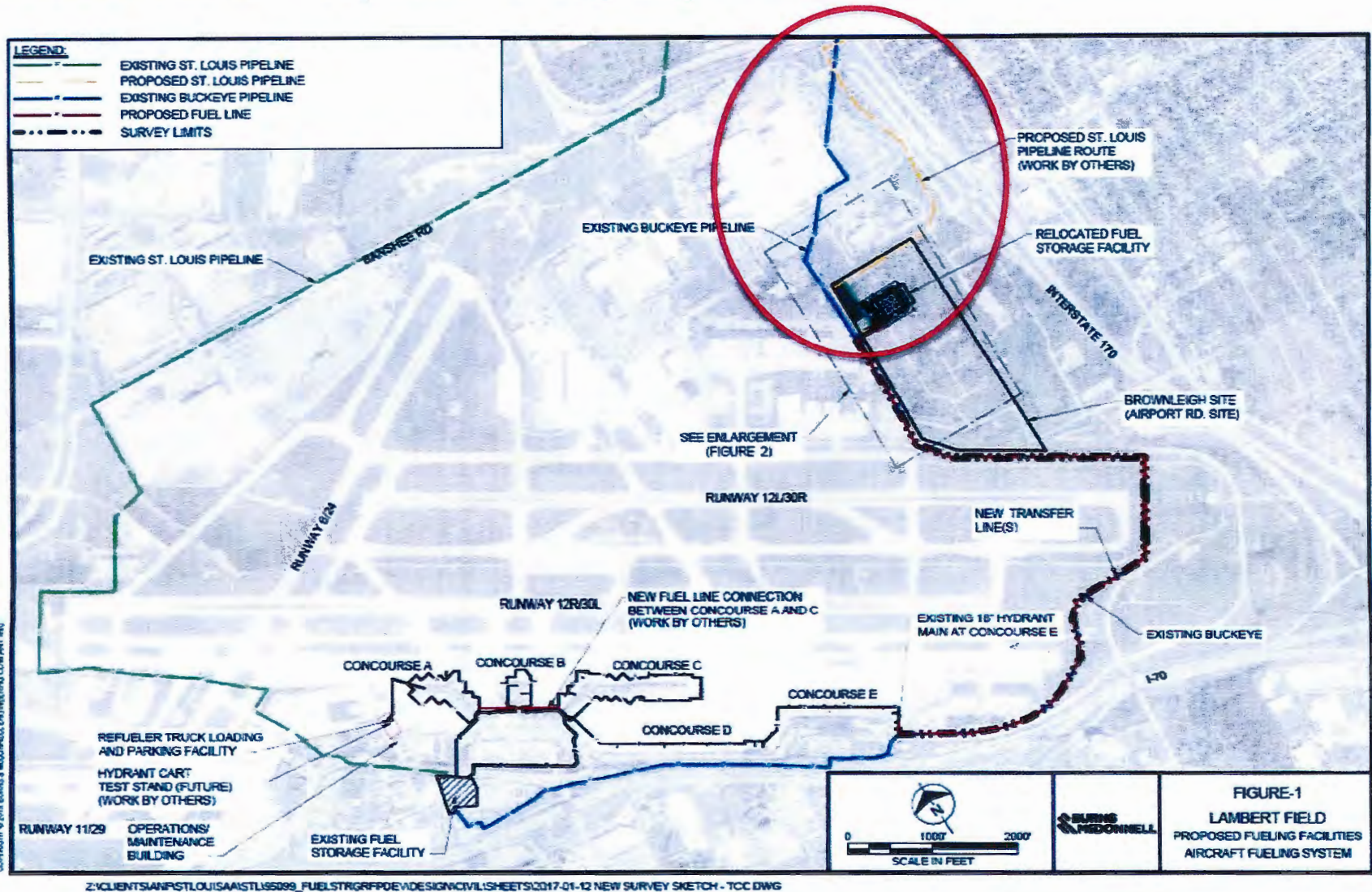


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STL Fuel Farm – Transfer Pipeline



STL Fuel Farm – Pipeline Company Reroutes



Attachment B

Project Site Photographs

Photo 1, looking north-northwest along James S McDonnell Blvd to the intersection of McConnell and Airport Road:



Photo 2, from near southwest corner of project site, looking northeast



Photo 3, From near Airport Road, looking south across proposed Site.



Photo 4. From east side of proposed Site, looking west, UPS facilities shown in background, across James S McDonnell Blvd from site.



Photo 5, from near southeast corner of proposed site, looking northwest. Boeing office building in background.



Photo 6, from east side of proposed site, looking west-northwest. FedEx facility in background.



Photo 7. From near northeast corner of proposed site, looking south-southwest.



Attachment C

City of Berkeley Zoning Map Zoning Application and Public Involvement

City of Berkeley, MO Official Zoning Map 11/07/11

I HEREBY CERTIFY THAT THIS IS THE CURRENT ZONING MAP PREPARED TO
be in the City of Berkeley Zoning Regulations; Chapter 400
(codified in Sections 400.010 through 415.170). This map
replaces and supercedes the previous Official Zoning Map
through the adoption of Ordinance NO. 4016 by the City of
Berkeley, Missouri on November 7th, 2011.

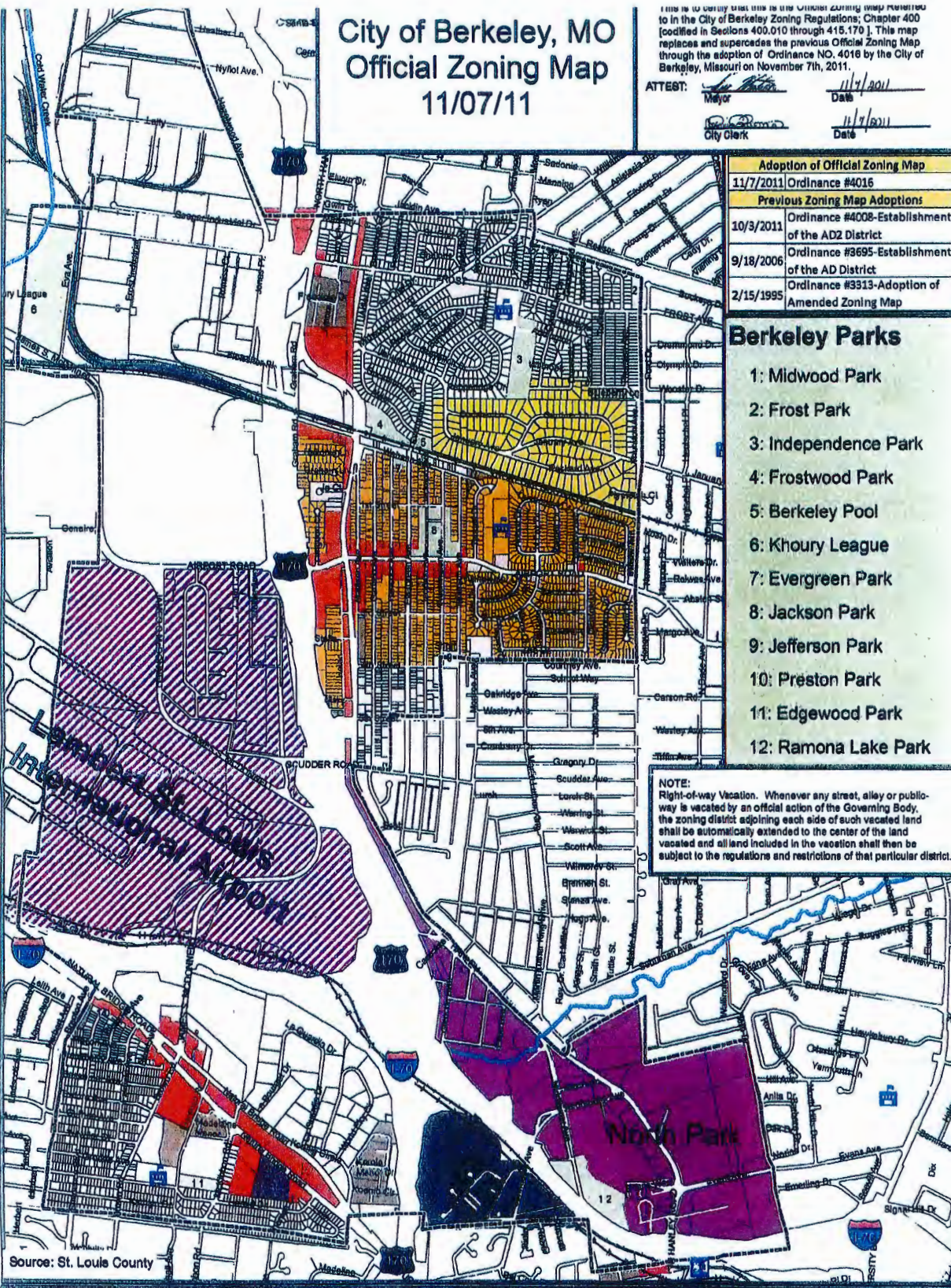
ATTEST: 11/7/2011
Mayor Date
 11/7/2011
City Clerk Date

Adoption of Official Zoning Map	
11/7/2011	Ordinance #4016
Previous Zoning Map Adoptions	
10/3/2011	Ordinance #4008-Establishment of the AD2 District
9/18/2006	Ordinance #3695-Establishment of the AD District
2/15/1995	Ordinance #3313-Adoption of Amended Zoning Map

Berkeley Parks

- 1: Midwood Park
- 2: Frost Park
- 3: Independence Park
- 4: Frostwood Park
- 5: Berkeley Pool
- 6: Khoury League
- 7: Evergreen Park
- 8: Jackson Park
- 9: Jefferson Park
- 10: Preston Park
- 11: Edgewood Park
- 12: Ramona Lake Park

NOTE:
Right-of-way Vacation. Whenever any street, alley or public-
way is vacated by an official action of the Governing Body,
the zoning district adjoining each side of such vacated land
shall be automatically extended to the center of the land
vacated and all land included in the vacation shall then be
subject to the regulations and restrictions of that particular district.



Legend

- City Limits
- Schools
- MetroLink Stations
- Railways
- Streams

Zoning

- "R-1" Single Family Residence District
- "R-2" Single Family Residence District
- "R-3" Single Family Residence District
- "R-4" Multiple Family Residence District
- "C-1" Local Commercial District
- "C-2" General Commercial District
- "C-3" Planned Commercial District
- "M-1" Industrial District
- "M-2" Planned Research & Ind. Dist.
- "AD" North Park
- "AD-2" Airport
- "P-1" Park District

0 0.05 0.1 0.2 0.3 0.4
Miles



Source: St. Louis County

Attachment C

City of Berkeley Zoning Map, Zoning Application and Public Involvement

Petition Request Time Line of Activity

Date	Activity	Outcome
9 August 2018	Application submitted to City of Berkeley for zoning change and special use permit	City Manager recommended the application to City Council
20 August 2018	Petition to Berkeley City Council for zoning change and special use permit, and presentation of project plan	Council referred application to the City Plan Commission
12 September 2018	Petition and presentation of site plans to Berkeley City Plan Commission	Commission recommended a public hearing and approval of petition by City Council; referred to Board of Adjustment
13 September 2018	City Clerk posted Notice of Public Hearing scheduled for October 15 at Berkeley City Council chambers	N/A
24 September 2018	Response to City Plan Commission questions	N/A
8 October 2018	Petition to Board of Adjustment requesting change to side-yard setback	Board recommended change be granted by City Council
15 October 2018	Public Hearing for zoning change, special use permit, and Board of Adjustment change	Hearing no objections from the public, City Council recommended an ordinance be introduced
15 October 2018	City Clerk introduced Bill #4650 an ordinance authorizing a zoning change, special use permit, and approving a site plan	Approved by City Council and recommended for second and third read.
5 November 2018	Second and third read of Bill #4650	By unanimous vote Bill #4650 adopted and motion passed by City Council as Ordinance #4494

**TYPE OF APPLICATION**

(Please check all that apply)

INITIAL FEE \$350

<input type="checkbox"/> Preliminary (Plats)	<input checked="" type="checkbox"/> Special Use Permit
<input type="checkbox"/> Re-approval (Plats)	<input checked="" type="checkbox"/> Zoning Change
<input type="checkbox"/> Amending (Plats)	<input type="checkbox"/> Resubdivision/Reconsolidation
<input type="checkbox"/> Site Plan	<input type="checkbox"/> Business Name/Ownership Change
<input type="checkbox"/> Lot Consolidation	<input type="checkbox"/> Variance
<input type="checkbox"/> Street Name (New, Change)	<input type="checkbox"/> Liquor/Lottery/Financials (Money Grams/Order)
<input type="checkbox"/> Street Vacation	<input type="checkbox"/> Other

REQUIREMENTS:

1. Prepare twenty (20) legible sets of drawings detailing interior & exterior of property.
2. Submit a completed application three (3) weeks prior to Planning meeting. (SEE attached Deadline & Meeting dates)
3. **DO NOT** destroy, tear down or remodel proposed business structure until 'FINAL' approval by City Council.
4. If you do not submit your application in a timely manner your request will be considered on the next meeting date.

APPLICANT(S) LEGAL NAME(S) St. Louis Lambert International AirportAPPLICANT IS (CHECK ONE): OWNER _____ AGENT ☒ PURCHASER OF CONTRACT _____ TENANT _____APPLICANT(S) ADDRESS: STREET 10701 Lambert International Blvd.CITY St Louis STATE MO ZIP 63145 PHONE (314) 551-5034 E-MAIL GABeckmann@flystl.com**LOCATION OF PROPOSED USE**STREET ADDRESS: James S. McDonnell Boulevard, Berkeley MO 63134PROPERTY DESCRIPTION: Three tracts of land located east of James S. McDonnell Boulevard and south of Airport Road.PRESENT ZONING DISTRICT: "AD-2" Airport PROPOSED ZONING DISTRICT (If applicable) "M-1" Industrial DistrictTHE PROPERTY IS PRESENTLY BEING USED AS FOLLOWS: UnusedTHE PROPERTY IS TO USE IT FOR: (Type of Business) St. Louis Lambert International Airport - Bulk Jet Fuel StorageDAYS & HOURS OF OPERATION ETC. 7 days per week, 24 hours per dayPROPOSED NAME OF BUSINESS: STL Fuel Company, Fuel Storage FacilityAPPROXIMATE SIZE OF TRACT: ACRES 7.858 SQ FT OF SPACE (Under roof) 4,267 (M&O building) 429 (fire protection buildg)IF APPLICANT IS NOT OWNER: OWNER(S) NAME: City of St Louis MissouriADDRESS: STREET: PO Box 10212 CITY St. LouisSTATE: Missouri ZIP: 63145 PHONE: (314) 426-8000 E-MAIL RKHamm-Niebruegge@flystl.com

I HAVE AUTHORITY TO ACT ON BEHALF OF THE OWNER: _____

SIGNATURE

By signing this application the owner(s) and applicant(s) attest that all information and facts provided on this form and attachments are complete and accurate and that any omission or incorrect fact or information may invalidate any notice or subsequent action taken by the City of Berkeley Board of Adjustments, City of Berkeley Planning & Zoning Commission. (All applicants and owners shall sign the application. Attach additional name/address/signature/date pages as needed.)

APPLICANT(S) SIGNATURE Gerald A Beckmann, Deputy Airport DirectorOWNER(S) SIGNATURE Rhonda Hamm-Niebruegge, Airport DirectorDATE 8/9/18

DATE _____

On this date _____, all items necessary for a technical review of the proposed special use permit plan have been submitted and constitute a COMPLETE APPLICATION. STAFF SIGNATURE: _____

DATE PAID _____ ☐ Cash ☐ Check ☐ Money Order ☐ Debit/Credit RECEIPT NO: _____ CASE NO: _____

SITE PLAN REQUIREMENTS

See Exhibit B

1. Must have a north arrow, including key map
2. Be drawn to scale and the scale indicated on the (24" x 36" size) one drawing
3. 20 copies of drawing (11 X 17)
4. Show all property lines and building setback lines
5. Show all buildings on the lot
6. Date plans were drawn
7. Show all easements on property
8. Show any power poles on property
9. Curb cuts including dimensions
10. Parking stalls including ADA complying facilities
11. Dumpster locations
12. All plans drawn by a Professional Architect/Engineer/Surveyor should have signatures, name and date
13. The attached "Additional Information" does not replace the City's Zoning Regulations all applicants are encourage to follow City's Codes & Ordinances.

Checklist √ all that applies to your application packet

- ✓ A complete application for special use permit approval
- ✓ Plan prepared by a registered architect or professional engineer
- ✓ Map showing the applicant's entire property and adjacent properties and streets See Exhibit A
- ✓ A locator map at a convenient scale
- ✓ The proposed location, use and design of all buildings and structures
- ✓ Proposed division of buildings into units of separate occupancy, detailed breakdowns of all proposed floor space by type of use and floor level See Exhibit G & H
- ✓ Existing topography and proposed grade elevations See Exhibit C
- ✓ Location of driveways
- ✓ Location of all existing and proposed site improvements, including drains, culverts, retaining walls and fences See Exhibit D
- ✓ Location, design and size of all signs See Exhibits E & F

ADDITIONAL INFORMATION THAT SHALL BE REFLECTED ON SITE PLAN

A. *Minimum Parking Requirements.*

Location of parking spaces and vehicle types that may be parked

- A.1.a. Parking spaces may be located and vehicles may be parked in the front, side or rear yards, except that parking in the front yard shall be set back twenty (20) feet from the front lot line.
- A.1.b. Any vehicle licensed in excess of twelve thousand (12,000) pounds gross vehicle weight is not permitted. Vehicles in excess of 12,000 pounds will access the facility.
- A.1.c. Parking requirements for uses not specifically listed shall be the same as required for a similar use. When fractional spaces result, the spaces required are the next whole number. In the case of mixed uses, the spaces required are the sum of the uses computed separately. Whenever an existing building is changed as to use or is enlarged in floor area, the spaces provided shall comply with these full parking requirements set forth herein.

A.1.d.No trucks, truck trailers or vehicles of any type shall be used for storage purposes nor on skids, jacks or any other device that will make them immobile or inoperable, except for emergency repairs.

A.2.Number of required off-street spaces.

A.2.a.Retail store, personal service establishment or household service establishment or automotive service establishment, except as otherwise specified herein. One (1) parking space for each two hundred (200) square feet of floor area.

B. Loading Requirements. There shall be provided at the time any building is erected or structurally altered, off-street loading space in accordance with the following requirements:

B.1.All commercial uses. One (1) space for each fifteen thousand (15,000) square feet of floor area, or fraction thereof in excess of three thousand (3,000) square feet. Where such place is located in a manner that a truck must back directly from a major street into the loading space, a maneuvering space of not less than forty-nine (49) feet shall be provided.

B.2.Enlargements and extensions. No building or part thereof heretofore erected which is used for any of the purposes specified above, shall hereafter be enlarged or extended unless off-street loading space is provided in accordance with the provisions of this Chapter.

C. Area Requirements.

C.1. Minimum depth of front yard. Twenty-five (25) feet.

C.2. Minimum width of side yard. Five (5) feet.

C.3. Minimum depth of rear yard. Ten (10) feet commercial; twenty-five (25) feet residential

C.4. Where a lot is located at the intersection of two (2) or more streets or between two (2) streets, there shall be a front yard on each street that the lot abuts. No accessory building shall project beyond the building line on any street.

Height Requirements. The maximum height is forty-five (45) feet or three (3) stories. Supplemental height requirements are provided in Article IV of this Chapter.

D. Site Design Requirements.

D.1. All roads, parking and loading areas and walks shall be paved with asphalt or concrete in accordance with City specifications on file in the office of the Director of Public Works. All roads, parking and loading areas shall be concrete curbs and gutters.

D.2. Any part of a lot not used for buildings or other structures, or for parking, loading or access ways shall be landscaped with grass, ground covers, trees, shrubs and pedestrian walks.

D.3. When the rear or side yard of a commercial use abuts any residential district or a residential lot situated in the "C-1" District, a twenty-five (25) foot landscaped buffer area shall be established and maintained along the rear or side property line. The buffer area shall contain evergreen plant material with a minimum height of ten (10) feet, planted in two (2) rows on eight (8) foot centers.

- D.4. A planting strip of twenty (20) feet shall be established and maintained within the required front yard. A minimum ratio of one (1), three (3) inch caliper, shade tree or three (3), two (2) inch caliper, grouped ornamentals shall be planted within the twenty (20) foot wide planting strip for each twenty-five (25) feet of linear front footage.
- D.5. A ratio of one (1), two (2) inch caliper tree for every five (5) parking spaces shall be required.
- D.6. Foundation plantings shall be planted and maintained along all exterior walls of all buildings at the ratio of one (1), twenty-four (24) inch evergreen shrub for every five (5) lineal feet of exterior wall.
- D.7. Where possible, existing plant material should be preserved and may serve in lieu of required planting.
- D.8. Where a commercial use abuts a residential district on the rear or side yards of the commercial use, a six (6) foot high fence shall be erected and maintained by the commercial property owner. The type of fence shall be approved by the City Fence Review Committee.
- D.9. All electrical, telephone, cable and similar wires and all utilities must be placed underground for structures constructed after the date of adoption of this Chapter, and for additions of more than twenty-five percent (25%) of the existing floor area in square feet as of the date of adoption of this Chapter.
- E. *Fence Requirements – In Side and Rear Yards.* Fences in required side and rear yards shall not exceed five (5) feet in height.



City of Berkeley, Missouri
City Council Meeting
August 20, 2018
Minutes

Meeting Called to Order:

Mayor Hoskins called the special council meeting to order and requested the reading of the notice at 6:32pm.

Special Meeting Notice

Notice is hereby given that the City Council of the City of Berkeley, Missouri shall hold a Special Meeting in the Council Chambers, located at 8425 Airport Road, with a vote to go into closed session on Monday, August 20, 2018 at 6:30 pm.

1. Meeting Called To Order
 - a. Roll Call
 - b. Vote to go into closed session for Real Estate.
2. Real Estate (RSMo. 610.021 (2))
3. Adjournment

Roll Call:

Councilwoman Mitchell (W1)	present	Councilwoman Williams (W2)	present
Councilwoman Hoskins (W3)	absent	Councilwoman Mathison (W4)	Rest in Peace
Councilman Hindeleh (W5)	present	Councilwoman-at-Large Greene	present
Mayor Hoskins	present	Quorum established.	

City Manager Irvin, City Attorney Smith, Finance Director King, Martin Ghafoori (Stifel) and City Clerk Jones were in attendance.

No action was taken during this meeting.

Councilwoman Williams moved and Councilwoman-at-Large Green seconded the motion for adjournment at 6:54pm. Roll Call: Mayor-Aye, Hoskins-Absent, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-5) motion passed.

Meeting Called to Order:

Mayor Hoskins called the council meeting to order at 7:00 pm.

Roll Call:

Councilwoman Mitchell (W1)	present	Councilwoman Williams (W2)	present
Councilwoman Hoskins (W3)	present	Councilwoman Mathison (W4)	Rest in Peace
Councilman Hindeleh (W5)	present	Councilwoman-at-Large Greene	present
Mayor Hoskins	present	Quorum established.	

A "Moment of Silence" was called by Mayor Hoskins. There was a recitation of the Pledge of Allegiance. City Manager Irvin and Department Directors were present.

Approval of the Minutes:

Mayor Hoskins moved, Councilman Hindeleh seconded, and the motion carried to approve the 07/16/18 regular meeting minutes.

Public Hearings:

Mayor Hoskins opened the Public Hearing to discuss the submission of the 2019 MML Grant application to improve the Lee Etta Hoskins Park, William Miller Park, and the Municipal Pool Swimming Pool House Renovations. The public did not offer any additional enquiries or comments about the 3 projects. Councilwomen Williams moved, Councilwoman-at-Large Greene seconded, and the motion carried to close this Public Hearing.

Request for Rezoning, Special Use Permits, Resubdivision:

Citizens Hearing:

Councilman Hindeleh moved, Councilwoman-at-Large Greene moved, and the motion carried to allow Ms.

Chiquetta Roy to use the City Float on 09-09-18 in the Prince Hall Americanism Day Parade.

Mayor Hoskins moved, Councilwoman-at-Large Greene seconded, and the motion carried to grant an open air permit for Deer Valley Community Day (8600 Airport) on 08-25-18 10am-2pm.

Mayor Hoskins, on behalf of the council, presented Councilwoman Louvenia Mathison's family with her name plate.

Request for Referral to City Plan Commission September 12, 2018 Agenda:

- Councilwoman Mitchell moved, Councilman Hindeleh seconded, and the motion carried for Case #18-07 St. Louis Lambert International Airport – Bulk Jet Fuel Storage.
- Councilwoman Mitchell moved, Councilwoman Williams seconded, and the motion carried for Case #18-08 Lauren & Dawon Stokes, Chloe's Playhouse – 4340 Marshall Rd (W5).
- Councilman Hindeleh moved, Councilwoman-at-Large Greene seconded, and the motion carried for Case #18-09 Pandey Corporation, Hotel RL St. Louis – 9600 Natural Bridge (W5).
- Councilwoman Mitchell moved, Councilman Hindeleh seconded, and the motion carried for Case #18-10 Barclenon Dixon & Henry Trinidad, Auto Repair Shop – 5814 N. Hanley (W4).
- Councilwoman Mitchell moved, Councilwoman-at-Large Greene seconded, and the motion carried for Case #18-11 Derek Willyard, Paintless Dent Removal & Minor Repairs – 583.2 Garfield (W4).
- Councilwoman Hoskins moved, Councilman Hindeleh seconded, and the motion carried for Case #18-12 Mitesh Limbachia, A-1 Smoke Shop – 9351 Natural Bridge (W5)
- Councilwoman Mitchell moved, Councilwoman-at-Large Greene seconded, and the motion carried for Case #18-13 Amend Zoning Code – Definitions
- Councilwoman Mitchell moved, Councilman Hindeleh seconded, and the motion carried for Case #18-14 James Leahy – Ownership & Name Change – Current Coin Laundry 8650 Frost Ave (W3).

Councilwoman Williams moved, Councilwoman-at-Large Greene seconded, and the motion carried to close the citizens hearing session of this meeting.

Resolutions:

Res #3449 – A Resolution to Reimburse such Councilpersons and City Manager for Expenses Specifically Incurred by them, if any, for the Months of July/August 2018 (Council)

Mayor Hoskins moved and Councilwoman Williams seconded the motion to adopt Resolution #3449. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed.

Petitions:

Unfinished Business:

Bill #4634 – An Ordinance of the City of Berkeley, MO, Amending Schedule XIIA-Defining One Way Streets; By Authorizing the Closure of Madison Avenue at Fourth Avenue, Eliminating the One Way in St. Louis County, Berkeley MO (Council) – 2nd & 3rd Reading

Councilwoman Mitchell moved, Councilwoman Williams seconded, and the motion carried for the 2nd reading of Bill #4634, by title only. Councilwoman-at-Large Greene moved and Councilman Hindeleh seconded the motion for the 3rd reading, by title only, and adoption of Bill #4634. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4477*)

Bill #4635 – An Ordinance of the City of Berkeley Amending the Employee Handbook of Personnel Rules and Regulations, Policies, and Benefits in Section 9.02: Sick Leave (Council) – 2nd & 3rd Reading

Councilwoman Hoskins moved, Councilman Hindeleh seconded, and the motion carried for the 2nd reading of Bill #4635, by title only. Councilwoman-at-Large Greene moved and Councilman Hindeleh seconded the motion for the 3rd reading, by title only, and adoption of Bill #4635. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4478*)

Bill #4636 – An Ordinance of the City of Berkeley, MO, Authorizing the Mayor to Execute the Attached Agreement with Alpha & Omega Demolition for Demolition for Structures according to Bid #872 – CDBG Funds (Council) – 2nd & 3rd Reading

Councilwoman Hoskins moved, Councilman Hindeleh seconded, and the motion carried for the 2nd reading of Bill #4636, by title only. Councilwoman Mitchell moved and Councilwoman-at-Large Greene seconded the motion for the 3rd reading, by title only, and adoption of Bill #4636. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4479*)

Bill #4637 – An Ordinance of the City of Berkeley, MO, Authorizing the Mayor to Execute the Attached Agreement with Sweetens Concrete Service, LLC for the Sidewalk Replacement Project According to Bid #873 – CDBG Funds (Council) – 2nd & 3rd Reading

Councilwoman Hoskins moved, Councilwoman Williams seconded, and the motion carried for the 2nd reading of Bill #4637, by title only. Councilwoman Hoskins moved and Councilman Hindeleh seconded the motion for the 3rd reading, by title only, and adoption of Bill #4637. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4480*)

New Business:

Introduction of Bills:

Bill #4638 – An Ordinance for the City of Berkeley, MO, Authorizing the Mayor to Execute the Attached Agreement with Sweetens Concrete Service, LLC for the Berkeley Firehouse No 2 – Building Entrance Concrete Replacement Project (Council)

Bill #4639 – An Ordinance for the City of Berkeley, Amending the Employee Handbook of Personnel Rules and Regulations, Policies, and Benefits in Section 9.10; Relating to Death in the Family (Council)

Bill #4640 – An Ordinance for the City of Berkeley, Amending the Employee Handbook of Personnel Rules and Regulations, Policies, and Benefits in Section 9.07; Relating to Military Leaved (Council)

Bill #4641 – An Ordinance for the City of Berkeley, Authorizing the Mayor to execute the Attached Contract with Stifel, Nicolaus, & Company, Inc. for Financial Advisory Services (Council)

Bill #4642 – An Ordinance Ordering the Levy and Fixing the Rate of Taxes to be Collected in the City of Berkeley, MO, for the Fiscal 2018/2019, to provide for the General Revenue; Establishment and Maintenance of Public Parks; and to Provide for the Payment of Interest and Principal on All Outstanding bonds of the City of Berkeley, MO (Council)

Appointments to Boards and Commissions:

Communications:

Reports and Recommendations from the City Manager:

Reports from the Clerk:

Reports from the City Attorney:

Reports from the Special Committees:

Reports from the Standing Committees:

Reports from the Council:

Audience Participation (Limited to Subjects Addressed During the Meeting):

Adjourn:

Councilman Hindeleh moved, Councilwoman-at-Large Greene seconded, and the motion carried to adjourn the meeting at 8:22 pm.

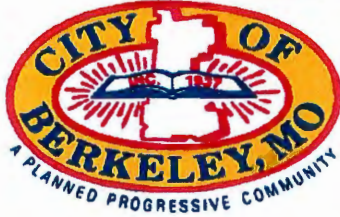
Approved: This 10th day of September 2018

Attest:

Theodore Hoskins, Mayor

Deanna Jones, City Clerk

PLAN COMMISSION MEETING MINUTES OF SEPTEMBER 10, 2018



MEETING MINUTES

City of Berkeley City Plan Commission

Wednesday, September 12, 2018

6:00 P.M.

Council Chambers, 8425 Airport Road, St. Louis, MO 63134

Note: The agenda for this meeting was posted on the bulletin board at the City Hall complex, 8425 Airport Road, September 5, 2018 at 5:00 p.m. in compliance with the Open Meetings Law.

Members Present: Mayor Hoskins, Kyra Watson, Robert Phillips, Carolyn Crimes and, Will Ferguson

Staff present: Debra M. Irvin, City Manager and Jim Linhardt, Fire Chief

CALL TO ORDER / DECLARATION OF QUORUM

With a quorum present, Chairperson Watson called the meeting to order at 6:03 pm

MINUTES

Approval of June 13, 2018 City Plan Regular Meeting Minutes:

Phillips made a **MOTION** to approve the minutes as presented. Hoskins **SECOND** the motion. A voice vote was taken, and the minutes were unanimously approved with a voice vote 5:0, Watson, Hoskins, Ferguson, Crimes, and Phillips

PUBLIC COMMENT:

Chairperson Watson asked if anybody present from the public would like to speak. With no public comment, Chairperson Watson moved to the next item on the agenda

OLD BUSINESS

None

NEW BUSINESS:

CASE NO. 18-07 – A request for a Special Use Permit, Zoning Change, and a referral to Board of Adjustment for three tracts of land by Saint Louis International Airport, located east of James S. McDonnell Blvd, and south of Airport Road in the City of Berkeley, St. Louis County, Missouri.

Representatives from Saint Louis International Airport (Dana Ryan), Burns and McDonnell (Kurt Janisch) and a member of the Fuel Consortium (Jim Stevenson) appeared before the Commission and gave a detailed overview of the \$50M fuel farm. The fuel consortium consists of Southwest Airlines, Delta, American, United, Frontier, and Spirit. The airlines have joined together to share the cost of the new fuel farm. The group showed a PowerPoint presentation, giving an overview of the proposed site, and the existing site. It was noted that St Louis Pipeline and Buckeye Pipeline will relocate their lines during construction. The construction time line is about 24 months, at which time the old pipe lines and underground tanks will be demolished. The Commissioners asked questions on pipe type, size, spills, fire response, and the size of office building, impact to neighbors and businesses, EPA inspections, fueling procedures, fuel separators, and water treatment, alarm detectors, leak detections,

PLAN COMMISSION MEETING MINUTES OF SEPTEMBER 10, 2018

and frequency of inspections. The airport group responded, "the site does not have a physical address at this time, the office is less ant 4500 sq. and does not require a sprinkler system, spills will be contained in the 5-foot dike wall surrounding the tanks, the floor has drains that will open in the event of a spill, no product should reach outside of the dike. Berkeley Fire will be the first responders in the event of a fire or spill and training will be provided to Fire Staff, and neighboring mutual aid agencies. The fuel is Jet A – combustible, and alarm sensors are buried 6-ft below grade that will sensor in the event of a spill. The tanks are double wall, steel plat, and can withstand punctures. The underground sensors will rapidly extinguish with Triple F-foam mixed with water. Buckeye and St Louis Pipelines will install new 16" lines to 138 locations throughout the airport for fueling. Testing will be done every 10 years; however, there will be regular pigging and degradation testing every 2 years, where Berkeley fire department will be on site and share finding with mutual aid agencies. Kurt Janisch, Burns and McDonnell stated he will send over a testing report before the public hearing to ensure that testing times are in compliance. After much discussion; Chairperson Watson entertained a motion to approve the request with conditions and add (19) to conditions "Leak detections shall be done semi-annually or annually, corrosion testing and pigging test every ____ years (council discretion) or earlier; Consortium to install leak detection alarm at time of construction. *Note: Testing report received on September 24, 2018 via email.*

Phillips made a **MOTION** to add (19) to conditions "Leak detections shall be done semi-annually or annually, corrosion testing and pigging test every ____ years (council discretion) or earlier; Consortium to install leak detection alarm at time of construction. Crimes **SECOND** the motion. A voice vote was taken, and (19) was unanimously approved to the conditions with a voice vote 5:0, Watson, Hoskins, Ferguson, Crimes, and Phillips.

Chairperson Watson entertained a motion to approve Case No. 18-07 and refer to City Council; Hoskins made a **MOTION** to refer to Board of Adjustment (BOA) to reduce the setbacks; depending on BOA then refer to City Council Case No 18-07 with conditions. Phillips **SECOND** the motion. A voice vote was taken, and the minutes were unanimously approved with a voice vote 5:0, Watson, Hoskins, Ferguson, Crimes, and Phillips.

Mayor Hoskins announced he needed to be excused for the remainder of the meeting, and asked to remove Case No. 18-15 from the agenda until further discussion with the owner. Chairperson Watson asked if any other cases needed to be removed. CM Irvin announced Case No. 18-08 withdrew, and Case No. 18-11, made no further contact with the City. With that, Chairperson Watson entertained a motion to remove Cases 18-08, 18-11 and 18-15 from tonight's agenda. Hoskins made a **MOTION** to motion to remove Cases 18-08, 18-11 and 18-15 from tonight's agenda. Phillips **SECOND** the motion. A voice vote was taken, and the minutes were unanimously approved with a voice vote 5:0, Watson, Hoskins, Ferguson, Crimes, and Phillips.

Mayor Hoskins left the meeting 7:03pm.

CASE NO. 18-09 – A request for a Special Use Permit by Pandey Corporation for Hotel RL St. Louis to operate a full-service hotel, bar and restaurant located at 9600 Natural Bridge Road, in the City of Berkeley, St. Louis County, Missouri.

Charles Richards, Maintenance Chief Engineer for the hotel appeared before the commission seeking approval to re-open the hotel. Commission noted that this is the third time that Charles has appeared and no activity has occurred. Charles promised that this is the final time and the hotel will open

PLAN COMMISSION MEETING MINUTES OF SEPTEMBER 10, 2018

January 16, 2019. Commission asked what are some of the changes at the hotel; Charles said the interior stage and check in will be revised a platform areas. The applicant is requesting an SUP for hotel operations, liquor and a full service restaurant offering room service. Watson stated that the chain link fence shall be removed from the generator and a vinyl fence install to remain uniform with the Business District; this change will become number (20) in the list of conditions. With no further discussion.

Chairperson Watson entertained a motion to add number (20) vinyl fencing not to exceed 8-ft around the generator. Phillips made a **MOTION** to approve adding number (20); Crimes **SECOND** the motion. A voice vote was taken, and number (20) was unanimously added as a condition with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips

Chairperson Watson entertained a motion to approve Case No. 18-09 and refer to City Council for a Public Hearing; a request for a Special Use Permit by Pandey Corporation for Hotel RL St. Louis to operate a full-service hotel, liquor license, and restaurant located at 9600 Natural Bridge Road, in the City of Berkeley, St. Louis County, Missouri. Phillips made a **MOTION** to approve Case 18-09 Crimes **SECOND** the motion. A voice vote was taken, and the minutes were unanimously approved with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips.

CASE NO. 18-10– A request for a Special Use Permit and Name Change by Barclenon Dixon and Henry Trinidad for the continued operation of an Auto Repair Shop at 5814 North Hanley, in the City of Berkeley, St. Louis County, Missouri.

Barclenon Dixon and Henry Trinidad appeared before the Commission requesting to continue operating the existing auto repair shop at 5814 North Hanley Road. Applicants stated they are already operating, they took over the lease from previous tenant. Commissioners knows the location and did not ask any questions of the applicants. Chairperson Watson entertained a motion to approve Case No. 18-10 and refer to City Council for a Public Hearing; Phillips made a **MOTION** to approve Case 18-10, Crimes **SECOND** the motion. A voice vote was taken, and Case 18-10 were unanimously approved with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips.

CASE NO. 18-12– A request for a Special Use Permit by Mitesh Limbachia to operate a Smoke Shop, selling tobacco products & accessories, under the name **A-1 Smoke Shop** at 9351 Natural Bridge, in the City of Berkeley, St. Louis County, Missouri.

Mitesh “Sam” Limbachia, appeared before the Commission requesting to open and operate smoke shop. Commissioners asked several questions of the applicant, “Is there a business like this is the area; are customers allowed to smoke in the shop, are children allowed, what else you are selling.” Applicant responded, he owns the A-1 Liquor store in the plaza and the Laundromat. The store will not allow smoking, children are allowed in the company of an adult. The products are all tobacco products and smoking accessories, such as pipe, bong, bulk cigarettes and cigars. No Cuban cigars. City Manager Irvin asked he would sell Lottery Tickets, applicant stated yes. With no further questions, Chairperson Watson entertained a motion to add the sale of Lottery tickers as (12) on the list of conditions. Phillips made a **MOTION** to add Lottery as (12) on the conditions, Crimes **SECOND** the motion. A voice vote was taken, and unanimously approved with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips.

PLAN COMMISSION MEETING MINUTES OF SEPTEMBER 10, 2018

Chairperson Watson entertained a motion to approve Case No. 18-12 and refer to City Council for a Public Hearing; Phillips made a **MOTION** to approve Case 18-12, Ferguson **SECOND** the motion. A voice vote was taken, and Case 18-12 was unanimously approved with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips.

CASE NO. 18-13 – A request from the City Manager to amend the Zoning Code, Chapter 400 by adding additional definitions.

City Manager (CM) Irvin presented to the commission the new definitions supporting the changes that have been made to certain types of uses in the past year. CM Irvin desired to add two additional definitions, Short Term Rentals/Vacations Rentals (prohibited) and Primary Residence; however, after much discussion the commissioners decided that they would support adding primary residence as a new definition, but not prohibiting Short Term Rentals/Vacations Rentals. Commission Crimes spoke passionately about the city considering Short Term Rentals/Vacations Rentals, she has used Short Term Rentals/Vacations Rentals when she travels and they are kept well because owners want to have profitable property. Commission Crimes believes that the city would do well to consider these types of investment in the city. Chairperson Watson asked for more research with the next few months. The board nodded in agreement.

Chairperson Watson entertained a motion to add “Primary Residence” into the definitions. Phillips made a **MOTION** to add “Primary Residence,” Crimes **SECOND** the motion. A voice vote was taken, and was unanimously approved with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips.

Chairperson Watson entertained a motion to approve Case No. 18-12 and refer to City Council for a Public Hearing; Phillips made a **MOTION** to approve Case 18-12, Ferguson **SECOND** the motion. A voice vote was taken, and Case 18-12 was unanimously approved with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips.

CASE NO. 18-14 – A request for a Special Use Permit to James Leahy for a Change of Ownership and Name Change for the continued operation of an existing coin laundry at 8650 Frost Ave, in the City of Berkeley, St. Louis County, Missouri.

James Leahy 808 Dutchhill Road, Ballwin, Missouri appeared before the Commission, seeking a Special Use Permit and a Change of Ownership and Name Change for the continued operation of an existing coin laundry at 8650 Frost Ave. Mr. Leahy is buying the laundromat and will add new washers, dryers and bring the property up to code. He will have an attendant on duty. Commissioners asked about the loitering problem and security. Leahy explained that he will have security cameras and will monitor the problem. He hopes that the hours of operation, security and attending will curtail the loitering problem.

With no further questions, Chairperson Watson entertained a motion to approve Case No. 18-14 and refer to City Council for a Public Hearing; Phillips made a **MOTION** to approve Case 18-14, Crimes **SECOND** the motion. A voice vote was taken, and Case 18-14 was unanimously approved with conditions with a voice vote 4:0, Watson, Ferguson, Crimes, and Phillips.

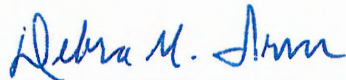
PLAN COMMISSION MEETING MINUTES OF SEPTEMBER 10, 2018

CONCLUDED

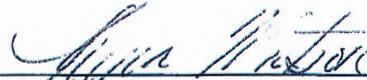
That the next regularly scheduled meeting of the City Plan Commission is held on **Wednesday, October 10, 2018 at 6:00 p.m.** and that consideration of the dates and times of future Committee meetings be deferred to this meeting.

ADJOURNMENT

There being no further business to come before the Commission, Chairman Watson adjourned the meeting at 8:03 p.m. with a voice vote 4:0, Watson, Hoskins, Ferguson and Phillips



Respectfully submitted by:
Debra Irvin, City Manager
Recording Secretary



Approved for submittal by:
Kyra Watson, Chairman

These minutes are subject to the City Plan Commission approval at their next scheduled meeting.

PLAN COMMISSION MEETING MINUTES OF SEPTEMBER 10, 2018

CONDITIONS CASE NO. 18-07

CASE NO. 18-07 – A request for a Special Use Permit, Zoning Change, and refer to Board of Adjustment for three tracts of land located east of James S. McDonnell Blvd and South of Airport Road in the City of Berkeley, St. Louis County, Missouri.

1. Refer to the Board of Adjustment for encroachment into side yards setback
- a. New side yard setback 10'
2. Adhere to the Performance Standards of the M-1 District
3. Owner shall provide a legal address numbers, routing to Berkeley Fire Department
4. Hours of operation shall be 24 hours per day – 7 days per week.
5. Owner shall comply with Ordinance 4373 and install a commercial enclosure
6. After construction of the replacement fuel farm, owner shall close and decommission the existing fuel storage facility, by removing underground and above-ground tanks, structures, and related equipment, and remediating environmental conditions on the site.
7. Pipes and associated equipment connecting to the Fuel Hydrant System located outside of the existing fuel farm shall be cleaned, capped, and abandoned in place. (*Permits required from City of Berkeley*)
8. The building, lot, landscaping and yard areas shall be maintained and kept free and clear of any debris or trash or weeds including maintenance of all landscaped areas.
9. All parking areas must be a paved surface, the parking lot should be cleaned of all the debris, weeds and trash, etc.
10. Install perimeter fence in accordance to plans submitted
11. All required inspections by the city are required before issuance of occupancy permit or business license.
12. This Special Use Permit will be revoked if for any reason the applicant ceases operation and closes its doors to the public for a period of six (6) months or more and not complying with the City's Special Use Permit.
13. The Special Use Permit shall not be assigned, or sold, or conveyed, or operated by another without prior approval by the City Council and occupancy permit, building permit or business license shall be issued to such assignee until such approves is secured.
14. Any violations can be a reason for the City to revoke this permit, according to the City's current regulations. The applicant will comply with all the City's rules and regulations.
15. Prior to issuance of any Occupancy Permit, the above noted conditions, the conditions as described in the attached Report, the inspections as part of the normal occupancy permit process shall be met, and as approved by the City Council.
16. If the City Council determines that the public health, welfare and safety are adequately protected in view of the foregoing criteria, then the special use permit shall be granted; but if it is negative as to any of such paragraphs, then the special use permit shall be denied.
17. In granting such special use permits, the City Council may provide that the permit be valid for a limited period of time not to exceed fifty (50) years. Upon expiration of the time limit specified in the permit, the holder of the permit may request the permit be reviewed by the City Council, and the City Council may extend it for another limited period of time not to exceed fifty (50) years. The City Council shall provide that the permit be exclusive only for the holder and non-transferable.
18. The City Council may, in accordance with Section 400.580, institute a rezoning. The City Council, after a public hearing, may revoke a special use permit for failure of compliance with the regulations and restrictions of this Chapter or the requirements of the special use permit.

PLAN COMMISSION MEETING MINUTES OF SEPTEMBER 10, 2018

19. "Leak detections shall be done semi-annually or annually, corrosion testing and pigging test every ____ years (council discretion) or earlier; Consortium to install leak detection alarm at time of construction.

CONDITIONS CASE NO. 18-09

CASE NO. 18-09 – A request for a Special Use Permit by Pandey Corporation for Hotel RL St. Louis located at 9600 Natural Bridge Road, in the City of Berkeley, St. Louis County, Missouri.

1. Established hours of operations - 24 hours
2. Paint exterior of hotel to conform to natural colors in the area
3. Build new trash enclosures in accordance with city ordinance.
4. Signage needs to be replaced.
5. Replace dilapidated fence around property.
6. The entire parking lot shall be sealed and striped.
7. The entire interior will be thoroughly inspected by City's Building and Fire Departments. The St. Louis County Health Department needs to be brought in for their inspection of the restaurant.
8. The applicant will need to acquire all the necessary building/occupancy & fire safety permits from the City of Berkeley and other jurisdictions, after getting Council's approval on this Special Use Permit application. The applicant is being informed of the following items:
9. To continue occupying the building and facilities while complying with all the applicable rules and regulations of the City of Berkeley, St. Louis County, State and Federal rules and regulations.
10. Any vehicle licensed in excess of twelve thousand (12,000) pounds gross vehicle weight is not permitted on the parking lot.
11. No truck, truck trailer or vehicle of any type shall be used for storage purposes, not on skids, jacks or any other device that will make them immobile or inoperable. No repair of any nature will be performed on these parking lots.
12. This facility will comply with "performance standards", in terms of vibrations, noise, odor, smoke, toxic gases, emissions, air pollution.
13. Commercial occupancy and business license will be required from the City of Berkeley.
14. This Special Use Permit will be revoked if for any reasons the applicant ceases operations and not complying with the City's Special Use Permit.
15. This Special Use Permit shall not be assigned, or sold, or conveyed, without prior written approval from the City Council.
16. Any violations can be a reason for the City to revoke this permit, according to the City's current regulations. The applicant agrees to comply with all the City's rules and regulations.
17. The applicant needs to provide a written time schedule by when these outstanding items mentioned above will be completed.
18. Prior to issuance of any Occupancy Permit, the above noted conditions shall be met.
19. In granting such special use permits, the City Council may provide that the permit be valid for a limited period of time not to exceed ten (10) years. Upon expiration the holder may request a review and the City Council may extend it for another limited period of time not to exceed ten (10) years.
20. Remove chain-link construction fence around generator; add white vinyl not to exceed 8-ft. in height.



September 24, 2018

Debra M. Irvin,
City of Berkeley
8425 Airport Rd
Berkeley Mo 63134

RE: Case Number 18-07 – STL Bulk Jet Fuel Storage

Dear Ms. Irvin,

I want to thank you, the City Council and the Planning Commission for your consideration of our request for the zoning change and special use permit for the upcoming bulk jet fuel storage facility at St Louis Lambert International Airport.

At the planning commission meeting there was a request for some additional information. The first question was regarding the toxicity of burning jet fuel and concern for the impact to the residents of Berkeley in case of a fire. The combustion of jet fuel to ambient air would generally produce the same products of combustion/air emissions as a diesel or kerosene-fueled fire and would have less emission of pollutants than a gasoline fire. As shown below, the primary products of Jet A fuel combustion are carbon dioxide and water.

Jet A Products of combustion:

- Carbon dioxide (CO₂) – 70%
- Water vapor (H₂O) - < 30%
- Nitrous oxides (NO_x) - < 1%
- Carbon Monoxide (CO) - < 1%
- Oxides of sulfur (SO_x) - < 1%
- Unburned/partially combusted hydrocarbons (C) - < 1%

As a comparison, below are the products of combustion of a typical house fire.

House fire products of combustion:

- Carbon dioxide (CO₂)
- Water vapor (H₂O)
- Nitrous oxides (NO_x)
- Carbon Monoxide (CO)
- Oxides of sulfur (SO_x)
- Hydrogen cyanide (HCN)
- Hydrochloric acid (HCL)
- Hydrogen bromide (HBr)
- Hydrogen fluoride (HF)
- Carbonyl fluoride (COF₂)
- Phosphoric acid (H₃PO₄)
- Phosphorous pentoxide (P₂O₅)
- Phosgene
- Additional irritants (acrolein, formaldehyde, crotonaldehyde)
- Particulates

Sources of this information is provided below.

It is important to note the fuel storage industry has many codes and regulations in place to reduce the risk of a fuel fire and/or quickly extinguish it. Because of this, in the past 30 years there have only been three major jet fuel fires at airport fuel storage facilities in the U.S. Jet fuel fires at airport fuel storage facilities are rare, unlike for example, house fires.

As discussed, we will have an emergency response plan for a fire incident which is fully coordinated with the Fire Department. This plan will include procedures on how to notify local emergency services and the surrounding community if a fire event were to occur. Most importantly, the fire protection for this facility exceeds the code requirements. Our Jet A fuel storage facility will have state-of-the-art optical flame detection on the pump pad, which will recognize and automatically notify emergency responders during the incipient stages of a fire. We are also providing an onsite foam/water cannon which will allow emergency responders spray a foam/water solution on areas where fuel is stored or transferred. This will allow for the rapid smothering and extinguishment of a fire event from a distance.

The other question was a request for more information regarding the inspection of the transfer pipeline. As we discussed, the transfer pipeline will include a leak detection system. The leak detection system will have an EPA-approved minimum detectable leak rate and will be tested semiannually. The cathodic protection system, which protects the piping against corrosion, will be inspected annually. In addition, the transfer pipeline is being designed with the ability to use a "smart pig" for inspections to evaluate the integrity of the pipe. While not a requirement by industry code or standards, the smart pig provides an additional method of inspection for the pipeline.

Due to the cost to perform the smart pig inspection and the potential impact to airport operations, the planned inspection interval is customarily 10 or more years. The reason that the smart pig is not used more frequently is because of the potential for the smart pig to become lodged in or otherwise damage the pipeline. Since this pipeline will be the only source of fuel to the airport, should the smart pig become lodged in the pipe, there is a potential that fueling operations at STL could be interrupted for several days while the smart pig is removed from the pipeline and for repairs to be made. The transfer pipeline piping has a design life of 50 years; however, it is expected to last indefinitely with proper maintenance. Use of the smart pig is not for leak detection or to otherwise protect the pipe, but instead to evaluate the metal and perform other measurements. For that reason, use of the smart pig should be limited to no more than once every 10 years.

Lastly, there was a concern raised for possible damage to the tanks from tornadoes. We design the tanks to meet all codes and regulations. The wind load in the local building code that we design for is for wind pressures on a vertical plane and not tornado winds; however, the tanks will typically have fuel in them, so this will help prevent damage or movement of the tank in the event of a tornado or strong winds. In the event the tank is empty, the tank has anchor bolts to prevent tank movement/turnover (due to wind loads) and floatation (if the dike fills up with water). Regarding puncture strength of the tank, the tanks are made of A36 carbon steel plates that are ¼-inch thick toward the top and the plates typically get thicker lower on the shell. A36 steel plate has a yield strength of 36,000 psi and an ultimate tensile strength of 58,000 psi. Puncturing the tank with flying objects from a tornado would be difficult. If somehow a tank was to get punctured, the tank farm operators would detect it and quickly transfer fuel

from that tank to another tank to stop the release of fuel. Any leaked fuel would be contained within the 5 ft tall concrete tank dike containment area and would not leave the site.

We have also discussed the tornadoes impact concern with a tank construction contractor. They had previously performed a high-level study on the potential effects of a tornado impacting a fuel storage facility with above ground fuel storage tanks similar to the ones that will be constructed here. They specifically looked at a facility in Cushing OK in the heart of tornado alley. Their research indicated that while damage will most likely occur, there are no records of complete failures of tanks. Damage of equipment and local buckling of the shell may occur from direct impacts of debris; however, as previously stated, if failure were to occur, the facilities containment system would reduce the likelihood of a release from the site.

Please let me know if you have any questions or need more information. I look forward to seeing you during the public hearing on October 1.

Sincerely,



Kurt Janisch
Project Manager

Cc: Jim Stevenson, Chair STL Fuel Company
Dana Ryan, St Louis Lambert International Airport

Fire Information Sources:

FAA (https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/AEPRIMER.pdf)
Risk Factors of Jet Fuel Combustion Products

(<https://www.sciencedirect.com/science/article/pii/S0378427403005095?via%3Dihub>)

NIST (https://www.nist.gov/sites/default/files/documents/el/fire_research/4-Purser.pdf)

World Health Organization

(http://www.who.int/hac/techguidance/tools/products_of_combustion_July2006.pdf)

Fire Engineering *Toxicology of Smoke Inhalation* (<https://www.fireengineering.com/articles/print/volume-162/issue-8/features/toxicology-of-smoke-inhalation.html>)



City of Berkeley, Missouri
City Council Meeting
October 15, 2018
Minutes

Meeting Called to Order:

Mayor Hoskins called the council meeting to order at 7:00 pm.

Roll Call:

Councilwoman Mitchell (W1)	present	Councilwoman Williams (W2)	present
Councilwoman Hoskins (W3)	present	(W4)	vacant
Councilman Hindeleh (W5)	present	Councilwoman-at-Large Greene	present
Mayor Hoskins	present	Quorum established.	

Approval of the Minutes:

Councilwoman Williams moved, Councilwoman-at-Large Greene seconded, and the motion carried to approve the 10/01/18 regular meeting minutes.

Public Hearings:

Mayor Hoskins opened the Public Hearing to discuss Case #18-07: Shall a Special Use Permit, Zoning Change, and referral from the Board of Adjustment be granted for three tracts of land located east of James S. McDonnell Blvd and South of Airport Rd in the City of Berkeley, St. Louis County, MO? The public did not offer any additional questions or comments. The council members were given an opportunity for clarification inquiries. Councilwoman-at-Large Greene moved, Councilwoman Williams seconded, and the motion carried to close this Public Hearing.

Mayor Hoskins opened the Public Hearing to discuss Case #18-10: Shall a Special Use Permit be granted to Barclenon Dixon and Henry Trinidad to operate an Auto Repair Shop at 5814 North Hanley? The public did not offer any additional questions or comments. The council members were given an opportunity for clarification inquiries. Motor Vehicles are not allowed to be sold from this business or location. Councilman Hindeleh moved, Mayor Hoskins seconded, and the motion carried to close this Public Hearing.

Request for Rezoning, Special Use Permits, Resubdivision:

Citizens Hearing:

Mayor Hoskins moved and Councilwoman Mitchell seconded the motion to continue with the demolition process of 8431 Pinon. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. The request by owner Rauchelle Reed to consider stopping the demolition process is denied.

Councilman Hindeleh moved, Councilman-at-Large Greene seconded, and the motion carried to close the citizens hearing session of this meeting.

Resolutions:

Res #3455 – A Resolution Authorizing Barclenon Dixon & Henry Trinidad a Special Use Permit to Operate an Auto Repair Shop Located at 5814 North Hanley, in the City of Berkeley, St. Louis County, MO (Council) Councilwoman Mitchell moved and Councilwoman-at-Large Greene seconded the motion to adopt Resolution #3455. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed.

Proclamation #18-04 – A Proclamation Dedicating the William Miller City Park to William “Bill” Former Mayor & Councilman Ward I (Council)

Councilwoman-at-Large Greene moved and Councilman Hindeleh seconded the motion to adopt Proclamation #18-04. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed.

Petitions:

Unfinished Business:

Bill #4646 – An Ordinance Amending the Zoning Code Chapter 400 by Adding Additional Definitions (Council) – 2nd & 3rd Reading

Councilwoman Williams moved, Councilwoman-at-Large Greene seconded, and the motion carried for the 2nd reading of Bill #4646, by title only. Councilwoman-at-Large Greene moved and Councilman Hindeleh seconded the motion for the 3rd reading, by title only, and adoption of Bill #4646. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4490*)

Bill #4647 – An Ordinance for the City of Berkeley, MO, Authorizing the Mayor and City Manager to Execute the Attached Memorandum of Understanding with BKM Fitness for a Family Fitness Program (Council) – 2nd & 3rd Reading

Councilwoman Mitchell moved, Councilman Hindeleh seconded, and the motion carried for the 2nd reading of Bill #4647, by title only. Councilwoman-at-Large Greene moved and Councilwoman Mitchell seconded the motion for the 3rd reading, by title only, and adoption of Bill #4647. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4491*)

Bill #4648 – An Ordinance for the City of Berkeley, MO, Authorizing the Mayor and City Manager to Execute the Attached Memorandum of Understanding with Explosion Sports Academy for a Flag Football Program (Council) – 2nd & 3rd Reading

Councilwoman-at-Large Greene moved, Councilwoman Hoskins seconded, and the motion carried for the 2nd reading of Bill #4648, by title only. Councilwoman Hoskins moved and Councilman Hindeleh seconded the motion for the 3rd reading, by title only, and adoption of Bill #4648. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4492*)

Bill #4649 – An Ordinance Authorizing an Agreement with the MO Office of State Courts Administrator (OSCA) for Implementation of the Show-Me Courts (SMC) Automation Software and Imposing a Court Automation Surcharge of Seven Dollars on Municipal Cases in Order to Assist in Payment Thereof and Amending the Municipal Code Relating Thereto (Council) – 2nd & 3rd Reading

Councilwoman Mitchell moved, Mayor Hoskins seconded, and the motion carried for the 2nd reading of Bill #4649, by title only. Councilwoman-at-Large Greene moved and Councilman Hindeleh seconded the motion for the 3rd reading, by title only, and adoption of Bill #4649. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4493*)

New Business:

Introduction of Bills:

Bill #4650 – An Ordinance Authorizing a Special Use Permit for Bulk Jet Fuel Storage, New Site Plan, and Zoning Change for Three Tracts of Land located East of James S. McDonnell Blvd and South of Airport Road in the City of Berkeley, St. Louis County, Missouri (Council)

Bill #4651 – An Ordinance Authorizing the Mayor to Execute the Attached School Resource Officer Memorandum of Understanding between the Ferguson-Florissant School District and the City of Berkeley, Missouri 2018-2019 (Council)

Appointments to Boards and Commissions:

Councilwoman Mitchell moved, Mayor Hoskins seconded the motion to accept Councilwoman Mitchell's nomination to reappoint Richard Schmitt to the Board of Adjustment. Councilwoman Mitchell moved, Mayor Hoskins seconded the motion to accept Councilwoman Mitchell's nomination to appoint Delores Broadnax to the Economic Development Commission.

Communications:

Reports and Recommendations from the City Manager:

Councilman Hindeleh moved and Councilwoman-at-Large Greene seconded the motion to hold a closed session for litigation. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed.

Reports from the Clerk:

Reports from the City Attorney:

Reports from the Special Committees:

Reports from the Standing Committees:

Councilwoman Hoskins moved, Councilwoman Mitchell seconded, and the motion carried to receive and file the Pension Board minutes – 03/29/18 & 06/28/18.

Councilwoman Mitchell moved, Councilwoman Williams seconded, and the motion carried to receive and file the Board of Adjustment minutes – 04/09/18.

Councilwoman Hoskins moved, Councilwoman-at-Large Greene seconded, and the motion carried to receive and file the City Plan Commission minutes – 06/13/18 & 09/10/18.

Reports from the Council:

City Manager Irvin was directed to put together a RFP for the Community Center.

Audience Participation (Limited to Subjects Addressed During the Meeting):

Adjourn:

Councilwoman Mitchell moved, Councilwoman-at-Large Greene seconded, and the motion carried to adjourn the meeting at 7:59 pm.

Closed Session:

Mayor Hoskins moved and Councilwoman Mitchell seconded the motion to open the closed session at 8:00 pm. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. City Manager Irvin, City Attorney Smith, and City Clerk Jones were present.

No action taken during this session.

Councilwoman Mitchell moved, Councilwoman Williams seconded, and the motion carried to adjourn the meeting at 8:13 pm.

Approved: This 05th day of November 2018

Attest:

Theodore Hoskins, Mayor

Deanna Jones, City Clerk



City of Berkeley, Missouri
City Council Meeting
November 05, 2018
Minutes

Meeting Called to Order:

Mayor Hoskins called the council meeting to order at 7:00 pm.

Roll Call:

Councilwoman Mitchell (W1)	present	Councilwoman Williams (W2)	present
Councilwoman Hoskins (W3)	present	(W4)	vacant
Councilman Hindeleh (W5)	present	Councilwoman-at-Large Greene	present
Mayor Hoskins	present	Quorum established.	

Approval of the Minutes:

Councilman Hindeleh moved, Councilwoman Williams seconded, and the motion carried to approve the 10/15/18 regular meeting minutes.

Public Hearings:

Application has been withdrawn for consideration for Case #18-14: Shall a Special Use Permit be granted to Joshua Hampton to operate a dine-in and carry out seafood restaurant at 8544 Airport Road, St. Louis MO?

Councilwoman Mitchell moved, Councilman Hindeleh seconded, and the motion carried to close this Public Hearing

Request for Rezoning, Special Use Permits, Resubdivision:

Citizens Hearing:

Mayor Hoskins moved and Councilwoman Mitchell seconded the motion to continue with the demolition process of 8431 Pinon. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. The request by owner Rauchelle Reed to consider stopping the demolition process is denied.

Councilman Hindeleh moved, Councilman-at-Large Greene seconded, and the motion carried to close the citizens hearing session of this meeting.

Resolutions:

Petitions:

Unfinished Business:

Bill 4650 – An Ordinance Authorizing a Special Use Permit for Bulk Jet Fuel Storage, New Site Plan, and Zoning Change for Three Tracts of Land located East of James S. McDonnell Blvd and South of Airport Road in the City of Berkeley, St. Louis County, Missouri (Council) – 3rd Reading

Councilwoman Williams moved and Councilwoman Mitchell seconded the motion for the 3rd reading, by title only, and adoption of Bill #4650. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4494*)

Bill #4651 – An Ordinance Authorizing the Mayor to Execute the Attached School Resource Officer Memorandum of Understanding between the Ferguson-Florissant School District and the City of Berkeley, Missouri 2018-2019 (Council) 4649 – An Ordinance Authorizing an Agreement with the MO Office of State Courts Administrator (OSCA) – 2nd & 3rd Reading

Councilman Hindeleh moved, Councilwoman Mitchell seconded, and the motion carried for the 2nd reading of Bill #4651, by title only. Councilman Hindeleh moved and Councilwoman-at-Large Greene seconded the motion for the 3rd reading, by title only, and adoption of Bill #4651. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. (*Ordinance #4495*)

New Business:

Introduction of Bills:

Bill #4652 – An Ordinance of the City of Berkeley, MO, Authorizing the Mayor to Execute the Attached Fy2018 CDBG Supplemental Cooperation Agreement *(The City Council does hereby find and declare that an emergency exists which requires the immediate passage of this ordinance for preservation of the welfare of the citizens for the City of Berkeley.)*

Councilwoman-at-Large Greene moved, Councilwoman Williams seconded, and the motion carried for the 2nd reading of Bill #4652, by title only. Councilwoman-at-Large Greene moved and Councilman Hindeleh seconded the motion for the 3rd reading, in its entirety, and adoption of Bill #4652. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. *(Ordinance #4496)*

Bill #4653 – An Ordinance Authorizing the Appropriation of not to Exceed \$325,000 for the Purpose of Defeasing a Portion of the City's Outstanding General Obligation bonds, Paying Certain costs of Such Defeasance and Authorizing Certain Other Actions in Connection Therewith. (Council)

Bill #4654 – An Ordinance Repealing Berkeley Police Department General Order Policy #2016-07, 2016-13, 2016-22, 28, 29, 39, 54, 56, and 57 and Replacing with New General Order Policy #7, 13, 22, 28, 29, 39, 54, 56, and 57 (Council)

Bill #4655 – An Ordinance for the Berkeley Police Department General Order #66 "Administrative Reporting System" Policy (Council)

Bill #4656 – An Ordinance Amending Section 200.050 Disposition of Unclaimed Property (Council)

Bill #4657 – An Ordinance of the City of Berkeley, MO, Authorizing the Transfer of Certain Real Estate Properties from St. Louis County to the City of Berkeley, See Exhibit A (Council)

Appointments to Boards and Commissions:

Councilwoman Williams moved, Councilwoman Mitchell seconded the motion to accept Councilwoman Williams's nomination to appoint Damon Swink to the Betterment.

Communications:

Reports and Recommendations from the City Manager:

Councilman Hindeleh moved and Councilwoman-at-Large Greene seconded the motion to hold a closed session for litigation and real estate. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed.

Reports from the Clerk:

Mayor Hoskins moved, Councilman Hindeleh seconded, and the motion carried to accept the 2019 Calendar: Canceled City Meeting Dates 01/15/19, 07/01/19, 08/05/19, & 09/02/19.

Mayor Hoskins moved, Councilwoman-at-Large Greene seconded, and the motion carried to accept the bid from Messenger Print Group to print the 2019 City Calendars.

Reports from the City Attorney:

Reports from the Special Committees:

Reports from the Standing Committees:

Reports from the Council:

City Manager Irvin was directed to put together a RFP for the Community Center.

Audience Participation (Limited to Subjects Addressed During the Meeting):

Adjourn:

Mayor Hoskins moved, Councilwoman-at-Large Greene seconded, and the motion carried to adjourn the meeting at 7:44 pm.

Closed Session:

Mayor Hoskins moved and Councilwoman Mitchell seconded the motion to open the closed session at 7:48 pm. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed. City Manager Irvin, City Attorney Smith, and City Clerk Jones were present.

Councilwoman Hoskins moved and Councilwoman Mitchell seconded the motion to hire Errol Bush as a broker advisor. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed.

Councilman Hindeleh moved and Councilwoman-at-Large Greene seconded the motion to accept and pay for court order payment; case 44250659. Roll Call: Mayor-Aye, Hoskins-Aye, Mitchell-Aye, Williams-Aye, Greene-Aye, and Hindeleh-Aye (Aye-6) motion passed.

Councilwoman Williams moved, Councilwoman-at-Large Greene seconded, and the motion carried to adjourn the meeting at 8:30 pm.

Approved: This 19th day of November 2018

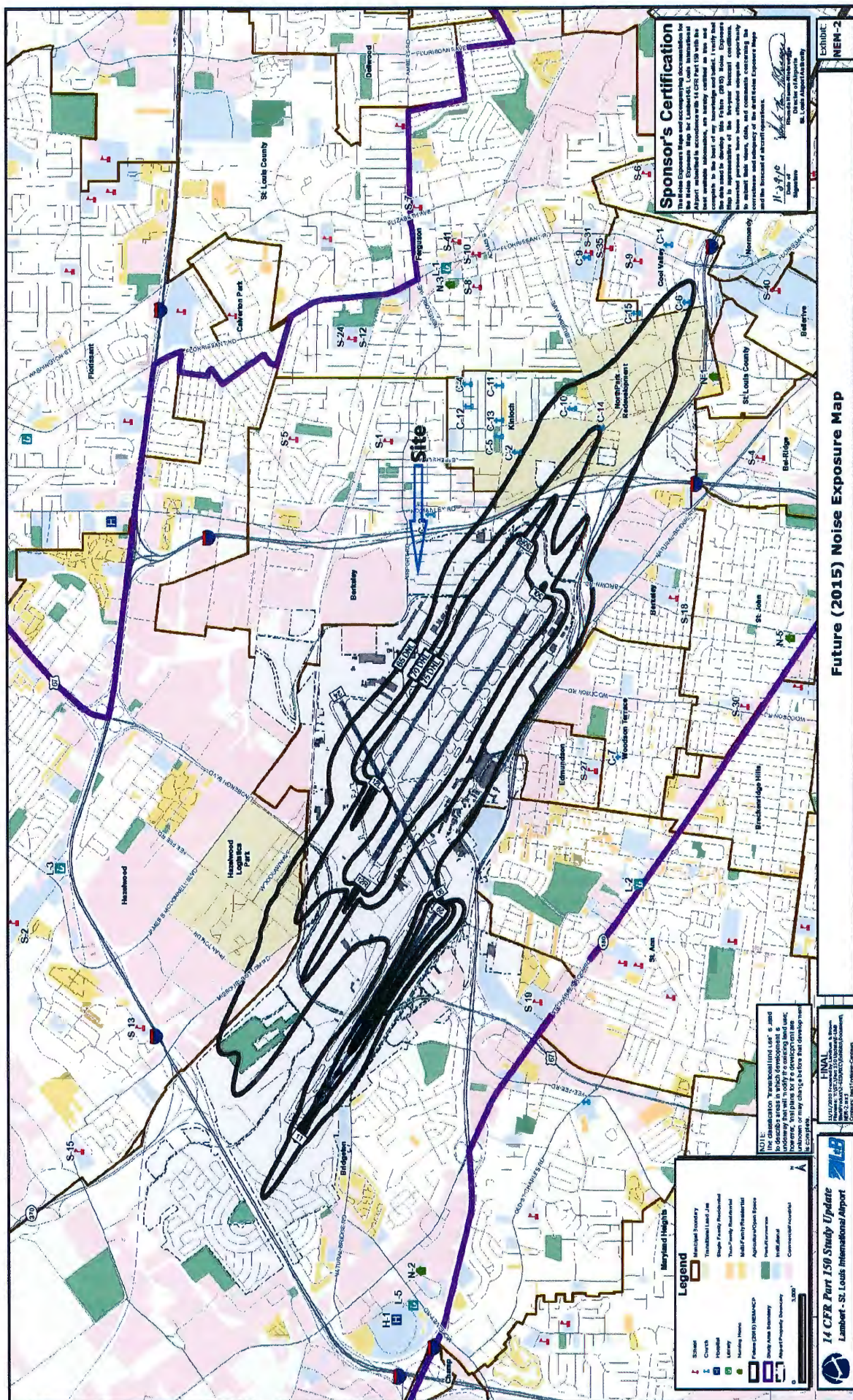
Attest:

Theodore Hoskins, Mayor

Deanna Jones, City Clerk

Attachment D

Airport Noise Contours Map



Attachment E

St. Louis County Clean Air Act Status



You are here: EPA Home > Green Book > >National Area and County-Level Multi-Pollutant Information >Missouri Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Missouri Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of December 31, 2017

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m³) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:

MISSOURI

Important Notes

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or Part County	Population (2010)	State/County FIPS Codes
MISSOURI								
Clay Co	1-Hour Ozone (1979)-NAAQS revoked	Kansas City, MO-KS		07/23/1992	Other	Whole	221,939	29/047
Dent Co	Lead (2008)	Iron, Dent, and Reynolds Counties, MO	10 11 12 13 14 15 16 17	//		Part	106	29/065
Franklin Co	1-Hour Ozone (1979)-NAAQS revoked	St. Louis, MO-IL	92 93 94 95 96 97 98 99 00 01 02	05/12/2003	Serious	Whole	101,492	29/071
Franklin Co	8-Hour Ozone (1997)-NAAQS revoked	St. Louis, MO-IL	04 05 06 07 08 09 10 11 12 13 14	02/20/2015	Moderate	Whole	101,492	29/071

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/Part County	Population (2010)	State/County FIPS Codes
Franklin Co	8-Hour Ozone (2008)	St. Louis-St. Charles-Farmington, MO-IL	12 13 14 15 16 17	//	Marginal	Whole	101,492	29/071
Franklin Co	PM-2.5 (1997)	St. Louis, MO-IL	05 06 07 08 09 10 11 12 13 14 15 16 17	//	Moderate	Whole	101,492	29/071
Iron Co	Lead (1978)	Iron County (part); Dent Township, MO	92 93 94 95 96 97 98 99	12/18/2000		Part	1,194	29/093
Iron Co	Lead (1978)	Iron County (part); Liberty and Arcadia, MO	92 93 94 95 96 97 98 99 00 01 02 03	11/29/2004		Part	6,066	29/093
Iron Co	Lead (2008)	Iron, Dent, and Reynolds Counties, MO	10 11 12 13 14 15 16 17	//		Part	253	29/093
Jackson Co	1-Hour Ozone (1979)-NAAQS revoked	Kansas City, MO-KS		07/23/1992	Other	Whole	674,158	29/095
Jackson Co	Sulfur Dioxide (2010)	Jackson County, MO	13 14 15 16 17	//		Part	57,293	29/095
Jefferson Co	1-Hour Ozone (1979)-NAAQS revoked	St. Louis, MO-IL	92 93 94 95 96 97 98 99 00 01 02	05/12/2003	Serious	Whole	218,733	29/099
Jefferson Co	8-Hour Ozone (1997)-NAAQS revoked	St. Louis, MO-IL	04 05 06 07 08 09 10 11 12 13 14	02/20/2015	Moderate	Whole	218,733	29/099
Jefferson Co	8-Hour Ozone (2008)	St. Louis-St. Charles-Farmington, MO-IL	12 13 14 15 16 17	//	Marginal	Whole	218,733	29/099
Jefferson Co	Lead (1978)	Jefferson County (part); Herculaneum, MO	92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17	//		Part	2,560	29/099

County	NAAQS	Area Name	Nonattainment in Year														Redesignation to Maintenance	Classification	Whole or Part County	Population (2010)	State/County FIPS Codes
Jefferson Co	Lead (2008)	Jefferson County, MO		10	11	12	13	14	15	16	17						//		Part	4,814	29/099
Jefferson Co	PM-2.5 (1997)	St. Louis, MO-IL	05	06	07	08	09	10	11	12	13	14	15	16	17		//	Moderate	Whole	218,733	29/099
Jefferson Co	Sulfur Dioxide (2010)	Jefferson County, MO								13	14	15	16	17			//		Part	61,933	29/099
Platte Co	1-Hour Ozone (1979)-NAAQS revoked	Kansas City, MO-KS															07/23/1992	Other	Whole	89,322	29/165
Reynolds Co	Lead (2008)	Iron, Dent, and Reynolds Counties, MO		10	11	12	13	14	15	16	17						//		Part	101	29/179
St Charles Co	1-Hour Ozone (1979)-NAAQS revoked	St. Louis, MO-IL	92	93	94	95	96	97	98	99	00	01	02				05/12/2003	Serious	Whole	360,485	29/183
St Charles Co	8-Hour Ozone (1997)-NAAQS revoked	St. Louis, MO-IL		04	05	06	07	08	09	10	11	12	13	14			02/20/2015	Moderate	Whole	360,485	29/183
St Charles Co	8-Hour Ozone (2008)	St. Louis-St. Charles-Farmington, MO-IL									12	13	14	15	16	17	//	Marginal	Whole	360,485	29/183
St Charles Co	PM-2.5 (1997)	St. Louis, MO-IL		05	06	07	08	09	10	11	12	13	14	15	16	17	//	Moderate	Whole	360,485	29/183
St Louis	1-Hour Ozone (1979)-NAAQS revoked	St. Louis, MO-IL	92	93	94	95	96	97	98	99	00	01	02				05/12/2003	Serious	Whole	319,294	29/510
St Louis	8-Hour Ozone (1997)-NAAQS revoked	St. Louis, MO-IL		04	05	06	07	08	09	10	11	12	13	14			02/20/2015	Moderate	Whole	319,294	29/510

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or Part County	Population (2010)	State/County FIPS Codes
St Louis	8-Hour Ozone (2008)	St. Louis-St. Charles-Farmington, MO-IL	12 13 14 15 16 17	//	Marginal	Whole	319,294	29/510
St Louis	Carbon Monoxide (1971)	St. Louis, MO	92 93 94 95 96 97 98	03/29/1999	Not Classified	Whole	319,294	29/510
St Louis	PM-2.5 (1997)	St. Louis, MO-IL	05 06 07 08 09 10 11 12 13 14 15 16 17	//	Moderate	Whole	319,294	29/510
St Louis Co	1-Hour Ozone (1979)-NAAQS revoked	St. Louis, MO-IL	92 93 94 95 96 97 98 99 00 01 02	05/12/2003	Serious	Whole	998,954	29/189
St Louis Co	8-Hour Ozone (1997)-NAAQS revoked	St. Louis, MO-IL	04 05 06 07 08 09 10 11 12 13 14	02/20/2015	Moderate	Whole	998,954	29/189
St Louis Co	8-Hour Ozone (2008)	St. Louis-St. Charles-Farmington, MO-IL	12 13 14 15 16 17	//	Marginal	Whole	998,954	29/189
St Louis Co	Carbon Monoxide (1971)	St. Louis, MO	92 93 94 95 96 97 98	03/29/1999	Not Classified	Part	908,233	29/189
St Louis Co	PM-2.5 (1997)	St. Louis, MO-IL	05 06 07 08 09 10 11 12 13 14 15 16 17	//	Moderate	Whole	998,954	29/189
Important Notes								

Discover.

Connect.

Ask.

Follow.

2017-12-31

Attachment F

TANKS Data Sheets

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	STL Airport JFT- Tank 1
City:	St. Louis
State:	Missouri
Company:	
Type of Tank:	Vertical Fixed Roof Tank
Description:	Jet Fuel Storage Tank #1 - 60' dia. 48' ht Fixed Roof; Max Nominal Cap. 24,000 bbl; 811,111 bbl/yr throughput; Actual Emissions Calculation

Tank Dimensions

Shell Height (ft):	48.00
Diameter (ft):	60.00
Liquid Height (ft) :	47.00
Avg. Liquid Height (ft):	38.00
Volume (gallons):	994,084.81
Turnovers:	34.27
Net Throughput(gal/yr):	34,066,662.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Dome
Height (ft)	2.00
Radius (ft) (Dome Roof)	60.00

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meteorological Data used in Emissions Calculations: St. Louis, Missouri (Avg Atmospheric Pressure = 14.46 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

STL Airport JFT- Tank 1 - Vertical Fixed Roof Tank
St. Louis, Missouri

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Jet kerosene	All	57.84	52.89	62.80	56.05	0.0077	0.0065	0.0090	129.9803			160.73	Option 1: VP50 = .006 VP60 = .0085
Jet kerosene						0.0080	0.0067	0.0092	130.0000	0.9700	0.9892	162.00	Option 1: VP50 = .006 VP60 = .0085
Naphthalene						0.0023	0.0018	0.0028	128.2000	0.0300	0.0108	128.20	Option 2: A=7.3729, B=1968.36, C=222.61

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

STL Airport JFT- Tank 1 - Vertical Fixed Roof Tank
St. Louis, Missouri

Annual Emission Calculations	
Standing Losses (lb):	70.3070
Vapor Space Volume (cu ft):	31,105.9560
Vapor Density (lb/cu ft):	0.0002
Vapor Space Expansion Factor:	0.0343
Vented Vapor Saturation Factor:	0.9955
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	31,105.9560
Tank Diameter (ft):	60.0000
Vapor Space Outage (ft):	11.0015
Tank Shell Height (ft):	48.0000
Average Liquid Height (ft):	38.0000
Roof Outage (ft):	1.0015
Roof Outage (Dome Roof)	
Roof Outage (ft):	1.0015
Dome Radius (ft):	60.0000
Shell Radius (ft):	30.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0002
Vapor Molecular Weight (lb/lb-mole):	129.9803
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0077
Daily Avg. Liquid Surface Temp. (deg. R):	517.5110
Daily Average Ambient Temp. (deg. F):	56.0333
Ideal Gas Constant R (psia cu ft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.7233
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,337.6368
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0343
Daily Vapor Temperature Range (deg. R):	19.8192
Daily Vapor Pressure Range (psia):	0.0024
Breather Vent Press. Setting Range (psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0077
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0065
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0090
Daily Avg. Liquid Surface Temp. (deg R):	517.5110
Daily Min. Liquid Surface Temp. (deg R):	512.5562
Daily Max. Liquid Surface Temp. (deg R):	522.4658
Daily Ambient Temp. Range (deg. R):	18.6833
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9955
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0077
Vapor Space Outage (ft):	11.0015
Working Losses (lb):	
Working Losses (lb):	816.6054
Vapor Molecular Weight (lb/lb-mole):	129.9803
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0077
Annual Net Throughput (gal/yr.):	34,066,662.0000
Annual Turnovers:	34.2694
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	994,084.8070
Maximum Liquid Height (ft):	47.0000
Tank Diameter (ft):	60.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	886.9124

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

STL Airport JFT- Tank 1 - Vertical Fixed Roof Tank
St. Louis, Missouri

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Jet kerosene	816.61	70.31	886.91
Jet kerosene	807.79	69.55	877.34
Naphthalene	8.81	0.76	9.57

Attachment G

Endangered Species Report and Wetlands Evaluation

November 27, 2017

Mr. Dave Germeroth
Tetra Tech, Inc.
1634 Eastport Plaza Drive
Collinsville, Illinois 62234

Subject: Bulk Fuel Storage Facility Threatened & Endanger Species and Wetland Delineation Letter

Dear Mr. Dave Germeroth:

Tetra Tech, Inc. (Tetra Tech) has completed a routine wetland delineation and an evaluation of federally listed threatened or endangered (T&E) flora and fauna species that have the potential to occur within the referenced project corridor. Tetra Tech understands that the project consists of the initial phase of a proposed bulk fuel storage facility adjacent to the UPS terminal at the Lambert International Airport in St. Louis County, Missouri. A copy of an aerial map (with the site location) is enclosed for your review (Figure 1). The site is located within an old residential neighborhood; the habitat is primarily manicured turf grass with small wood thickets throughout. The site is bordered by commercial developments on all four sides. Any activities that will result in disturbance to any disturbances to T&E will be coordinated through the U.S. Fish and Wildlife Service (USFWS) and Missouri Department of Conservation (MDC).

Tetra Tech completed the investigation for wetland and other waters of the U.S. on November 22, 2017; the field survey was conducted outside of the Natural Resource Conservation Service (NRCS) published growing season. The site is primarily a maintained manicured turf grass field with small wood thickets throughout. No wetlands or other waters of the U.S. were found on site. Therefore no notification to the USACE – St. Louis District is needed.

The wood thickets are typical of an eastern Missouri wood thicket and consists of the following dominate species; Sycamore (*Platanus occidentalis*), sweetgum (*Liquidambar styraciflua*), red mulberry (*Morus rubra*), eastern cottonwood (*Populus deltoides*), red oak (*Quercus rubra*) amur honeysuckle (*Lonicera maackii*) with the average diameter at breast height (DBH) of 3.6 to 36.7.

The manicured turf grass area is dominated by fescue spp. (*Festuca spp.*), orchardgrass (*Dactylis glomerata*), common plantain (*Plantago major*), common dandelion (*Taraxacum officinale*), goldenrod spp. (*Solidago spp.*) and white clover (*Trifolium repens*).

Tetra Tech obtained a list of federally threatened and endangered species for St. Louis County, Missouri. This list was obtained from the USFWS Information for Planning and Consultation (IPaC) website on November 6, 2017. Additionally, a Natural Heritage Review Report was initiated through the MDC on November, 6, 2017, and has been received for the project. Both the USFWS IPaC report, USFWS Fact sheet for each species and the MDC Heritage Review report have been enclosed for your review.

According to information obtained from the USFWS IPaC website, there are four threatened and/or endangered species that have the potential to occur within the boundary of the project corridor and may be affected by the proposed project. These species include: Gray Bat, Indiana bat, Northern long-eared bat, and the Decurrent False Aster. An assessment of each of the species follows:

Gray bat – This species is found in caves year-round. During the winter gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are located in limestone karst areas. **The required habitat for this species is not found within the project site.**

Indiana bat – This species hibernates during winter in caves or, occasionally, in abandoned mines. They migrate to summer habitat in forested areas after emerging from hibernation. Preferred habitat includes live or dead trees and snags with peeling or exfoliating bark, split trunks, or cavities. Preferred tree species may include eastern cottonwood, maple, oak species, shagbark hickory, or shellbark hickory. Foraging habitat typically includes upland forest, riparian areas, and stream corridors. **Tetra Tech recommends assuming the bats are present on the property and avoiding all tree clearing and disturbance to forested areas of the site during the tree roosting period from April 1 through October 31. If disturbances can be avoided during this time period, no further restrictions related to these species would be required. Alternatively, if tree cutting cannot be avoided during the roosting period, the USFWS states a qualified biologist can conduct surveys to determine if bats are present.**

Northern long-eared bat – Similarly to the Indiana bat, this species hibernates in caves or mines only during the winter. The rest of the year they roost under loose tree bark in tree crevices or cavities during the day and forage around tree canopies of floodplain, riparian, and upland forests at night. **Tetra Tech recommends assuming the bats are present on the property and avoiding all tree clearing and disturbance to forested areas of the site during the tree roosting period from April 1 through October 31. If disturbances can be avoided during this time period, no further restrictions related to this species would be required. Alternatively, if tree cutting cannot be avoided during the summer roosting period, the USFWS states a qualified biologist can conduct surveys to determine if bats are present.**

Decurrent false aster – The aster is a perennial plant found in moist, sandy floodplains and prairie wetlands along the Mississippi and Illinois Rivers. The aster relies on periodic flooding and minimal ground disturbance to scour away other plants that compete for the same habitat. **The required habitat for this species is not found within the project site.**

Tetra Tech has reviewed all of the above listed species and their preferred habitats and determined that suitable habitat for any federally-listed, candidate, or proposed species are not likely to be affected by the project assuming that all tree removal is conducted outside of the tree roosting period of April 1 through October 31. If tree removal must be conducted from April 1 through

ENCLOSURE





United States Department of the Interior

FISH AND WILDLIFE SERVICE
Missouri Ecological Services Field Office
101 Park Deville Drive
Suite A
Columbia, MO 65203-0057
Phone: (573) 234-2132 Fax: (573) 234-2181



In Reply Refer To:

November 06, 2017

Consultation Code: 03E14000-2018-SLI-0235

Event Code: 03E14000-2018-E-00495

Project Name: Replace BFSF

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).

Threatened and Endangered Species

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. **Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days.** The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance

Refer to the Midwest Region [S7 Technical Assistance](#) website for step-by-step instructions for making species determinations and for specific guidance on the following types of projects: projects in developed areas, HUD, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

Federally Listed Bat Species

Indiana bats, gray bats, and northern long-eared bats occur throughout Missouri and the information below may help in determining if your project may affect these species.

Gray bats - Gray bats roost in caves or mines year-round and use water features and forested riparian corridors for foraging and travel. If your project will impact caves, mines, associated riparian areas, or will involve tree removal around these features particularly within stream corridors, riparian areas, or associated upland woodlots gray bats could be affected.

Indiana and northern long-eared bats - These species hibernate in caves or mines only during the winter. In Missouri the hibernation season is considered to be November 1 to March 31. During the active season in Missouri (April 1 to October 31) they roost in forest and woodland habitats. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags 5 inches diameter at breast height (dbh) for Indiana bat, and 3 inches dbh for northern long-eared bat, that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Tree species often include, but are not limited to, shellbark or shagbark hickory, white oak, cottonwood, and maple. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, Indiana bats or northern long-eared bats could be affected.

Examples of unsuitable habitat include:

- Individual trees that are greater than 1,000 feet from forested or wooded areas;
- Trees found in highly-developed urban areas (e.g., street trees, downtown areas);
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees; and
- A stand of eastern red cedar shrubby vegetation with no potential roost trees.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of “There are no listed species found within the vicinity of the project,” then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.

2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project other than bats (see #3 below) then project proponents can conclude the proposed activities **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain [Life History Information for Listed and Candidate Species](#) through the S7 Technical Assistance website.

3. If IPaC returns a result that one or more federally listed bat species (Indiana bat, northern long-eared bat, or gray bat) are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** these bat species **IF** one or more of the following activities are proposed:

- a. Clearing or disturbing suitable roosting habitat, as defined above, at any time of year;
- b. Any activity in or near the entrance to a cave or mine;
- c. Mining, deep excavation, or underground work within 0.25 miles of a cave or mine;
- d. Construction of one or more wind turbines; or
- e. Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on listed bat species. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records. An example ["No Effect" document](#) also can be found on the S7 Technical Assistance website.

If any of the above activities are proposed in areas where one or more bat species may be present, project proponents can conclude the proposed activities **may affect** one or more bat species. We recommend coordinating with the Service as early as possible during project planning. If your project will involve removal of over 5 acres of suitable forest or woodland habitat, we recommend you complete a Summer Habitat Assessment prior to contacting our office to expedite the consultation process. The Summer Habitat Assessment Form is available in Appendix A of the most recent version of the [Range-wide Indiana Bat Summer Survey Guidelines](#).

Other Trust Resources and Activities

Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act

and the Migratory Bird Treaty Act. Should bald or golden eagles occur within or near the project area please contact our office for further coordination. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed [voluntary guidelines for minimizing impacts](#).

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to [guidelines](#) developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's [Wind Energy Guidelines](#). In addition, please refer to the Service's [Eagle Conservation Plan Guidance](#), which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Next Steps

Should you determine that project activities **may affect** any federally listed species or trust resources described herein, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

If you have not already done so, please contact the Missouri Department of Conservation (Policy Coordination, P. O. Box 180, Jefferson City, MO 65102) for information concerning Missouri Natural Communities and Species of Conservation Concern.

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Karen Herrington

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Missouri Ecological Services Field Office

101 Park Deville Drive

Suite A

Columbia, MO 65203-0057

(573) 234-2132

Project Summary

Consultation Code: 03E14000-2018-SLI-0235

Event Code: 03E14000-2018-E-00495

Project Name: Replace BFSF

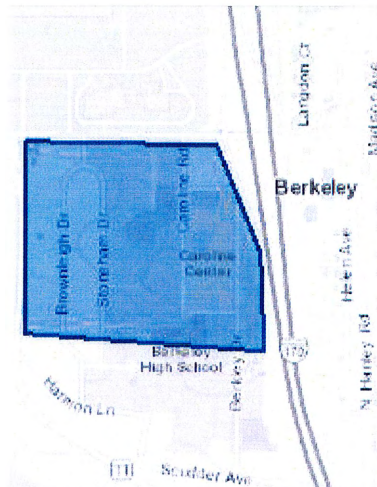
Project Type: DEVELOPMENT

Project Description: Construct a bulk fuel storage facility

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/38.74704927402618N90.34164121403981W>



Counties: St. Louis, MO

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Decurrent False Aster <i>Boltonia decurrens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7705	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

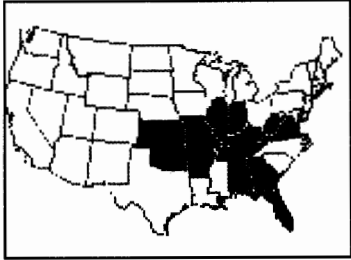
THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.



U.S. Fish & Wildlife Service

Threatened and Endangered Species

Gray Bat *Myotis grisescens*



State where the gray bat is found.

The gray bat is an endangered species. Endangered Species are animals and plants that are in danger of becoming extinct. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting, and restoring, endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.



What is the Gray Bat?

Appearance - Gray bats are distinguished from other bats by the unicolored fur on their back. In addition, following their molt in July or August, gray bats have dark gray fur which often bleaches to a chestnut brown or russet. They weigh 7-16 grams. The bat's wing membrane connects to its ankle instead of at the toe, where it is connected in other species of *Myotis*.

Habitat - With rare exceptions, gray bats live in caves year-round. During the winter, gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States. They do not use houses or barns.

Reproduction - Females give birth to a single young in late May or early June.

Feeding Habitats - The bats eat a variety of flying aquatic and terrestrial insects present along rivers or lakes.

What is the Gray Bat? (cont'd.)

Range - The gray bat occupies a limited geographic range in limestone karst areas of the southeastern United States. They are mainly found in Alabama, northern Arkansas, Kentucky, Missouri, and Tennessee. A few can be found in northwestern Florida, western Georgia, southeastern Kansas, southern Indiana, southern and southwestern Illinois, northeastern Oklahoma, northeastern Mississippi, western Virginia, and possibly western North Carolina.

Why is the Gray Bat threatened?

Human Disturbance - Gray bats are endangered largely because of their habit of living in very large numbers in only a few caves. As a result, they are extremely vulnerable to disturbance. Arousing bats while they are hibernating can cause them to use up a lot of energy, which lowers their energy reserves. If a bat runs out of reserves, it may leave the cave too soon and die. In June and July, when flightless young are present, human disturbance can lead to mortality as frightened females drop their young in the panic to flee from the intruder.

Habitat Loss or Degradation - Many important caves were flooded and submerged by reservoirs. Other caves are in danger of natural flooding. Even if the bats escape the flood, they have difficulty finding a new cave that is suitable.

Cave Commercialization and Improper Gating - The commercialization of caves drives bats away. Any gating on the cave that prevents access or alters the air flow, temperature, humidity, and amount of light is harmful.

What is being done to prevent extinction of the Gray Bat?

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

Recovery Plan - The U.S. Fish and Wildlife Service has developed a recovery plan that describes actions needed to help the bat survive.

Habitat Protection - A variety of government and private conservation agencies are all working to preserve gray bats and their caves.

What can I do to help prevent the extinction of species?

Learn - Learn more about the gray bat and other endangered and threatened species. Understand how the destruction of habitat leads to loss of endangered and threatened species and our nation's plant and animal diversity. Tell others about what you have learned.

Join - Join a conservation group; many have local chapters.

Volunteer - Volunteer at a local nature center, Wildlife Refuge, or zoo.



U.S. Fish & Wildlife Service

Threatened and Endangered Species

Indiana Bat (*Myotis sodalis*)

The Indiana bat is an endangered species. Endangered species are animals and plants that are in danger of becoming extinct. Threatened species are those that are likely to become endangered in the foreseeable future. Identifying, protecting, and restoring endangered and threatened species are primary objectives of the U.S. Fish and Wildlife Service's endangered species program.

What is the Indiana Bat?

Description

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.

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.

Habitat

Indiana bats hibernate during winter in caves or, occasionally, in abandoned mines. For hibernation, they require cool, humid caves with stable temperatures, under 50° F but above freezing. Very few caves within the range of the species have these conditions.



Photo by Rich Fields

Indiana bats eat up to half their body weight in insects each night.

Hibernation is an adaptation for survival during the cold winter months when no insects are available for bats to eat. Bats must store energy in the form of fat before hibernating. During the six months of hibernation the stored fat is their only source of energy. If bats are disturbed or cave temperatures increase, more energy is needed and hibernating bats may starve.

After hibernation, Indiana bats migrate to their summer habitat in wooded areas where they usually roost under loose tree bark on dead or dying trees. During summer, males roost alone or in small groups, while females roost in larger groups of up to 100 bats or more. Indiana bats also forage in or along the edges of forested areas.

Reproduction

Indiana bats mate during fall before they enter caves to hibernate. Females store the sperm through winter and become pregnant in spring soon after they emerge from the caves.

After migrating to their summer areas, females roost under the peeling bark of dead and dying trees in groups of up to 100 or more. Such groups are called maternity colonies. Each female in the colony gives birth to only one pup per year. Young bats are nursed by the mother, who leaves the roost tree only to forage for food. The young stay with the maternity colony throughout their first summer.

Feeding Habits

Indiana bats eat a variety of flying insects found along rivers or lakes and in uplands. Like all insect-eating bats, they benefit people by consuming insects that are considered pests or otherwise harmful to humans. Their role in insect control is not insignificant – Indiana bats eat up to half their body weight in insects each night.

Range

Indiana bats are found over most of the eastern half of the United States. Almost half of all Indiana bats (207,000

in 2005) hibernate in caves in southern Indiana. In 2005, other states which supported populations of over 40,000 included Missouri (65,000), Kentucky (62,000), Illinois (43,000) and New York (42,000). Other states within the current range of the Indiana bat include Alabama, Arkansas, Connecticut, Iowa, Maryland, Michigan, New Jersey, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Vermont, Virginia, West Virginia. The 2005 population estimate is about 457,000 Indiana bats, half as many as when the species was listed as endangered in 1967.

Why is the Indiana Bat Endangered?

Human Disturbance

Indiana bats, because they hibernate in large numbers in only a few caves, are extremely vulnerable to disturbance. During hibernation, they cluster in groups of up to 500 per square foot. Since the largest hibernation caves support from 20,000 to 50,000 bats, it is easy to see how a large part of the total population can be affected by a single event. Episodes of large numbers of Indiana bat deaths have occurred due to human disturbance during hibernation.

Cave Commercialization and Improper Gating

The commercialization of caves – allowing visitors to tour caves during hibernation – drives bats away. Changes in the structure of caves, such as blocking an entrance, can change the temperature in a cave. A change of even a few degrees can make a cave unsuitable for hibernating bats. Some caves are fitted with gates to keep people out, but improper gating that prevents access by bats or alters air flow, temperature, or humidity can also be harmful. Properly constructed gates are beneficial because they keep people from disturbing hibernating bats while maintaining temperature and other requirements and allowing access for bats.

Summer Habitat Loss or Degradation

Indiana bats use trees as roosting and foraging sites during summer months.

Loss and fragmentation of forested habitats can affect bat populations.

Pesticides and Environmental Contaminants

Insect-eating bats may seem to have an unlimited food supply, but in local areas, insects may not be plentiful because of pesticide use. This can also affect the quality of the bats' food supply. Many scientists believe that population declines occurring today might be due, in part, to pesticides and environmental contaminants. Bats may be affected by eating contaminated insects, drinking contaminated water, or absorbing the chemicals while feeding in areas that have been recently treated.

What is Being Done to Prevent Extinction of the Indiana Bat?

Listing

Prompted by declining populations caused by disturbance of bats during hibernation and modification of hibernacula, the Indiana bat was listed in 1967 as "in danger of extinction" under the Endangered Species Preservation Act of 1966. It is listed as "endangered" under the current Endangered Species Act of 1973. Listing under the Endangered Species Act protects the Indiana bat from take (harming, harassing, killing) and requires Federal agencies to work to conserve it.

Recovery Plan

The Endangered Species Act requires that recovery plans be prepared for all listed species. The U.S. Fish and Wildlife Service developed a recovery plan for the Indiana bat in 1983 and is now revising that Plan. The recovery plan describes actions needed to help the bat recover.

Habitat Protection

Public lands like National Wildlife Refuges, military areas, and U.S. Forest Service lands are managed for Indiana bats by protecting forests. This means ensuring that there are the size and species of trees needed by Indiana bats for roosting; and providing a supply of dead and dying trees that can be used as roost sites. In addition, caves used for hibernation are managed to

maintain suitable conditions for hibernation and eliminate disturbance.

Education and Outreach

Understanding the important role played by Indiana bats is a key to conserving the species. Helping people learn more about the Indiana bat and other endangered species can lead to more effective recovery efforts.

U.S. Fish & Wildlife Service

1 Federal Drive

Fort Snelling, Minnesota 55111

612/713-5350

<http://www.fws.gov/midwest/endangered>

December 2006



U.S. Fish & Wildlife Service

Northern Long-Eared Bat

Myotis septentrionalis

The northern long-eared bat is federally listed as a threatened species under the Endangered Species Act. **Endangered** species are animals and plants that are in danger of becoming extinct. **Threatened** species are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's Endangered Species Program.

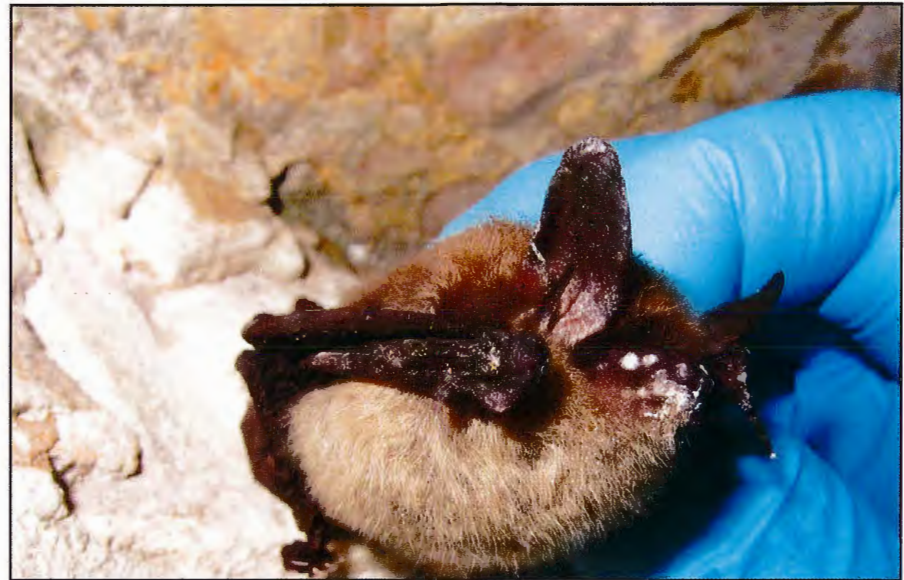
What is the northern long-eared bat?

Appearance: The northern long-eared bat is a medium-sized bat with a body length of 3 to 3.7 inches and 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*.

Winter Habitat: Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. Within hibernacula, surveyors find them hibernating most often in small crevices or cracks, often with only the nose and ears visible.

Summer Habitat: During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. They rarely roost in human structures like barns and sheds.

Reproduction: Breeding begins in late summer or early fall when males begin to swarm near hibernacula. After



This northern long-eared bat, observed during an Illinois mine survey, shows visible symptoms of white-nose syndrome.

copulation, females store sperm during hibernation until spring. In spring, females emerge from their hibernacula, ovulate and the stored sperm fertilizes an egg. This strategy is called delayed fertilization.

After fertilization, pregnant bats migrate to summer areas where they roost in small colonies and give birth to a single pup. Maternity colonies of females and young generally have 30 to 60 bats at the beginning of the summer, although larger maternity colonies have also been observed. Numbers of bats in roosts typically decrease from the time of pregnancy to post-lactation. Most bats within a maternity colony give birth around the same time, which may occur from late May or early June to late July, depending where the colony is located within the species' range. Young bats start flying by 18 to 21 days after birth. Maximum lifespan for the northern long-eared bat is estimated to be up to 18.5 years.

Feeding Habits: Like most bats, northern long-eared bats emerge at dusk to feed. They primarily fly through the

understory of forested areas feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation or by gleaning motionless insects from vegetation.

Range: The northern long-eared bat's range includes much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia. The species' range includes 37 States and the District of Columbia: Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

Why is the northern long-eared bat in trouble?

White-nose Syndrome: No other threat is as severe and immediate as

Photo by Steve Taylor, University of Illinois

this. If this disease had not emerged, it is unlikely that northern long-eared bat populations would be experiencing such dramatic declines. Since symptoms were first observed in New York in 2006, white-nose syndrome has spread rapidly from the Northeast to the Midwest and Southeast; an area that includes the core of the northern long-eared bat's range, where it was most common before this disease. Numbers of northern long-eared bats (from hibernacula counts) have declined by up to 99 percent in the Northeast. Although there is uncertainty about the rate that white-nose syndrome will spread throughout the species' range, it is expected to continue to spread throughout the United States in the foreseeable future.

Other Sources of Mortality:

Although no significant population declines have been observed due to the sources of mortality listed below, they may now be important factors affecting this bat's viability until we find ways to address WNS.

Impacts to Hibernacula: Gates or other structures intended to exclude people from caves and mines not only restrict bat flight and movement, but also change airflow and microclimates. A change of even a few degrees can make a cave unsuitable for hibernating bats. Also, cave-dwelling bats are vulnerable to human disturbance while hibernating. Arousal during hibernation causes bats to use up their energy stores, which may lead to bats not surviving through winter.

Loss or Degradation of Summer

Habitat: Highway construction, commercial development, surface mining, and wind facility construction permanently remove habitat and are activities prevalent in many areas of this bat's range. Many forest management activities benefit bats by keeping areas forested rather than converted to other uses. But, depending on type and timing, some forest management activities can cause mortality and temporarily remove or degrade roosting and foraging habitat.

Wind Farm Operation: Wind turbines kill bats, and, depending on the species, in very large numbers. Mortality from windmills has been documented for northern long-eared bats, although a

small number have been found to date. However, there are many wind projects within a large portion of the bat's range and many more are planned.

What Is Being Done to Help the Northern Long-Eared Bat?

Disease Management: Actions have been taken to try to reduce or slow the spread of white-nose syndrome through human transmission of the fungus into caves (e.g. cave and mine closures and advisories; national decontamination protocols). A national plan was prepared by the Service and other state and federal agencies that details actions needed to investigate and manage white-nose syndrome. Many state and federal agencies, universities and non-governmental organizations are researching this disease to try to control its spread and address its affect. See www.whitenosesyndrome.org/ for more.

Addressing Wind Turbine

Mortality: The Service and others are working to minimize bat mortality from wind turbines on several fronts. We fund and conduct research to determine why bats are susceptible to turbines, how to operate turbines to minimize mortality and where important bird and bat migration routes are located. The Service, state natural resource agencies, and the wind energy industry are developing a Midwest Wind Energy Habitat Conservation Plan, which will provide wind farms a mechanism to continue operating legally while minimizing and mitigating listed bat mortality.

Listing: The northern long-eared bat is listed as a threatened species under the federal Endangered Species Act. Listing a species affords it the protections of the Act and also increases the priority of the species for funds, grants, and recovery opportunities.

Hibernacula Protection: Many federal and state natural resource agencies and conservation organizations have protected caves and mines that are important hibernacula for cave-dwelling bats.

What Can I Do?

Do Not Disturb Hibernating Bats:

To protect bats and their habitats, comply with all cave and mine closures, advisories, and regulations. In areas without a cave and mine closure policy, follow approved decontamination protocols (see <http://whitenosesyndrome.org/topics/decontamination>). Under no circumstances should clothing, footwear, or equipment that was used in a white-nose syndrome affected state or region be used in unaffected states or regions.

Leave Dead and Dying Trees

Standing: Like most eastern bats, the northern long-eared bat roosts in trees during summer. Where possible and not a safety hazard, leave dead or dying trees on your property. Northern long-eared bats and many other animals use these trees.

Install a Bat Box: Dead and dying trees are usually not left standing, so trees suitable for roosting may be in short supply and bat boxes may provide additional roost sites. Bat boxes are especially needed from April to August when females look for safe and quiet places to give birth and raise their pups.

Support Sustainability: Support efforts in your community, county and state to ensure that sustainability is a development goal. Only through sustainable living will we provide rare and declining species, like the northern long-eared bat, the habitat and resources they need to survive alongside us.

Spread the Word: Understanding the important ecological role that bats play is a key to conserving the northern long-eared and other bats. Helping people learn more about the northern long-eared bat and other endangered species can lead to more effective recovery efforts. For more information, visit www.fws.gov/midwest/nleb and www.whitenosesyndrome.org

Join and Volunteer: Join a conservation group; many have local chapters. Volunteer at a local nature center, zoo, or national wildlife refuge. Many state natural resource agencies benefit greatly from citizen involvement in monitoring wildlife. Check your state agency websites and get involved in citizen science efforts in your area.



U.S. Fish & Wildlife Service

Threatened and Endangered Species



Although not very tolerant to prolonged flooding, this plant relies on periodic flooding to scour away other plants that compete for the same habitat.



Decurrent False Aster **(*Boltonia decurrens*)**

The Decurrent False Aster is a federally *threatened species*. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. *Endangered species* are animals and plants that are in danger of becoming extinct. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.

Habitat

This plant is found on moist, sandy floodplains and prairie wetlands along the Illinois River. It relies on periodic flooding to scour away other plants that compete for the same habitat.

Why It's Threatened

Excessive silting seems to be a major cause of the decurrent false aster's decline. Highly intensive agricultural practices have increased topsoil runoff, which smothers seeds and seedlings.

Habitat destruction is another threat. Agriculture has eliminated wet prairies and marshes within the species' range, natural lakes have been drained and converted to row crops. Building levees along rivers and draining wetlands for cultivation has also changed patterns of flooding and eliminated habitat. Herbicides also kill these plants and may be a factor in the decline of the species.

Several communities of decurrent false asters have been found in areas of low-intensity agriculture. Biologists believe that the plant may actually benefit from occasional farming, which eliminates competitive plant species.

U.S. Fish & Wildlife Service
Endangered Species Division
1 Federal Drive
Fort Snelling, Minnesota 55111-4056
612/713-5350
Federal Relay Service 1-800-877-8339
<http://midwest.fws.gov/endangered>
1997



Missouri Department of Conservation

Missouri Department of Conservation's Mission is to protect and manage the forest, fish, and wildlife resources of the state and to facilitate and provide opportunities for all citizens to use, enjoy and learn about these resources.

Natural Heritage Review Level Two Report: State Listed Endangered Species and/or Missouri Species/Natural Communities of Conservation Concern

There are records for state-listed Endangered Species, or Missouri Species or Natural Communities of Conservation Concern within or near the defined Project Area. Please contact Missouri Department of Conservation for further coordination.

Foreword: Thank you for accessing the Missouri Natural Heritage Review Website developed by the Missouri Department of Conservation with assistance from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, Missouri Department of Transportation and NatureServe. The purpose of this website is to provide information to federal, state and local agencies, organizations, municipalities, corporations and consultants regarding sensitive fish, wildlife, plants, natural communities and habitats to assist in planning, designing and permitting stages of projects.

PROJECT INFORMATION

Project Name and ID Number: Construct Replacement Bulk Fuel Storage Facility #3510

Project Description: Construct replacement bulk fuel storage facility

Project Type: Residential, Commercial and Governmental Building Development

Contact Person: Mark Eldridge

Contact Information: mark.eldridge@tetrattech.com or 618.3432338

Disclaimer: The NATURAL HERITAGE REVIEW REPORT produced by this website identifies if a species tracked by the Natural Heritage Program is known to occur within or near the area submitted for your project, and shares suggested recommendations on ways to avoid or minimize project impacts to sensitive species or special habitats. If an occurrence record is present, or the proposed project might affect federally listed species, the user must contact the Department of Conservation or U.S. Fish and Wildlife Service for more information. The Natural Heritage Program tracks occurrences of sensitive species and natural communities where the species or natural community has been found. Lack of an occurrence record does not mean that a sensitive plant, animal or natural community is not present on or near the project area. Depending on the project, current habitat conditions, and geographic location in the state, surveys may be necessary. Additionally, because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, Reports include information about records near but not necessarily on the project site.

The Natural Heritage Report is not a site clearance letter for the project. It provides an indication of whether or not public lands and sensitive resources are known to be (or are likely to be) located close to the proposed project. Incorporating information from the Natural Heritage Program into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive fish, forest and wildlife resources. However, the Natural Heritage Program is only one reference that should be used to evaluate potential adverse project impacts. Other types of information, such as wetland and soils maps and on-site inspections or surveys, should be considered. Reviewing current landscape and habitat information, and species' biological characteristics would additionally ensure that Missouri Species of Conservation Concern are appropriately identified and addressed in planning efforts.

U.S. Fish and Wildlife Service – Endangered Species Act (ESA) Coordination: Lack of a Natural Heritage Program occurrence record for federally listed species in your project area does not mean the species is not present, as the area may never have been surveyed. Presence of a Natural Heritage Program occurrence record does not mean the project will result in negative impacts. The information within this report is not intended to replace Endangered Species Act consultation with the U.S. Fish and Wildlife Service (USFWS) for listed species. Direct contact with the USFWS may be necessary to complete consultation and it is required for actions with a federal connection, such as federal funding or a federal permit; direct contact is also required if ESA concurrence is necessary. Visit the USFWS Information for Planning and Conservation (IPaC) website at <https://ecos.fws.gov/ipac/> for further information. This site was developed to help streamline the USFWS environmental review process and is a first step in ESA coordination. The Columbia Missouri Ecological Field Services Office may be reached at 573-234-2132, or by mail at 101 Park Deville Drive, Suite A, Columbia, MO 65203.

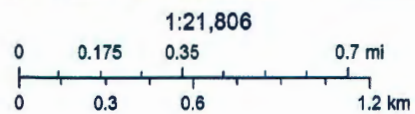
Transportation Projects: If the project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or www.modot.mo.gov/ehp/index.htm for additional information on recommendations.

Construct Replacement Bulk Fuel Storage Facility



November 6, 2017

- Project Boundary
- Buffered Project Boundary



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Species or Communities of Conservation Concern within the Area:

There are records for state-listed Endangered Species, or Missouri Species or Natural Communities of Conservation Concern within or near the defined Project Area. Please contact the Missouri Department of Conservation for further coordination.

MDC Natural Heritage Review
Resource Science Division
P.O. Box 180
Jefferson City, MO
65102-0180
Phone: 573-522-4115 ext. 3182
NaturalHeritageReview@mdc.mo.gov

Other Special Search Results:

No results have been identified for this project location.

Project Type Recommendations:

New construction, maintenance and remodeling, including government, commercial and residential buildings and other structures. Fish, forest, and wildlife impacts can be avoided by siting projects in locations that have already been disturbed or previously developed, where and when feasible, and by avoiding alteration of areas providing existing habitat, such as wetlands, streams, forest, native grassland, etc. The project should be managed to minimize erosion and sedimentation/runoff to nearby wetlands, streams and lakes, including adherence to any "Clean Water Act Permit" conditions. Project design should include stormwater management elements that assure storm discharge rates to streams for heavy rain events will not increase from present levels. Revegetate areas in which the natural cover is disturbed to minimize erosion using native plant species compatible with the local landscape and wildlife needs. Annual ryegrass may be combined with native perennials for quicker green-up. Avoid aggressive exotic perennials such as crownvetch and sericea lespedeza. Pollutants, including sediment, can have significant impacts far downstream. Use silt fences and/or vegetative filter strips to buffer streams and drainages, and monitor the site after rain events and until a well-rooted ground cover is reestablished.

Project Location and/or Species Recommendations:

Endangered Species Act Coordination - Indiana bats (*Myotis sodalis*, federal- and state-listed endangered) and Northern long-eared bats (*Myotis septentrionalis*, federal-listed threatened) may occur near the project area. Both of these species of bats hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in wooded areas, often riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats or Northern long-eared bats, especially from September to April. **If any trees need to be removed for your project, please contact the U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.**

The project location submitted and evaluated is within the range of the Gray Myotis (i.e., Gray Bat) in Missouri. Depending on habitat conditions of your project's location, Gray Myotis (*Myotis grisescens*, federal and state-listed endangered) could occur within the project area, as they forage over streams, rivers, lakes, and reservoirs. Avoid entry or disturbance of any cave inhabited by Gray Myotis and when possible retain forest vegetation along the stream and from the cave opening to the stream. See <http://mdc.mo.gov/104> for best management recommendations.

Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment. Please inspect and clean equipment thoroughly before moving between project sites. See <http://mdc.mo.gov/9633> for more information.

- Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
- Drain water from boats and machinery that have operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
- When possible, wash and rinse equipment thoroughly with hard spray or HOT water (?140° F, typically available at do-it-yourself car wash sites), and dry in the hot sun before using again.

Streams and Wetlands – Clean Water Act Permits: Streams and wetlands in the project area should be protected from activities that degrade habitat conditions. For example, soil erosion, water pollution, placement of fill, dredging, in-stream activities, and riparian corridor removal, can modify or diminish aquatic habitats. Streams and wetlands may be protected under the Clean Water Act and require a permit for any activities that result in fill or other modifications to the site. Conditions provided within the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 permit (<http://www.nwk.usace.army.mil/Missions/RegulatoryBranch.aspx>) and the Missouri Department of Natural Resources (DNR) issued Clean Water Act Section 401 Water Quality Certification (<http://dnr.mo.gov/env/wpp/401/index.html>), if required, should help minimize impacts to the aquatic organisms and aquatic habitat within the area. Depending on your project type, additional permits may be required by the Missouri Department of Natural Resources, such as permits for stormwater, wastewater treatment facilities, and confined animal feeding operations. Visit <http://dnr.mo.gov/env/wpp/permits/index.html> for more information on DNR permits. Visit both the USACE and DNR for more information on Clean Water Act permitting.

For further coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Services, please see the contact information below.

MDC Natural Heritage Review
Resource Science Division

P.O. Box 180

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65102-0180

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U.S. Fish and Wildlife Service

Ecological Service

101 Park Deville Drive

Suite A

Columbia, MO

65203-0007

Phone: 573-234-2132

Miscellaneous Information

FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.

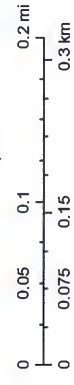
STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and that are protected under the Wildlife Code of Missouri (RSMo 3 CSR 1 0). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR 1 0-4.111. Species tracked by the Natural Heritage Program have a "State Rank" which is a numeric rank of relative rarity. Species tracked by this program and all native Missouri wildlife are protected under rule 3CSR 10-4.110 General Provisions of the Wildlife Code.

Additional information on Missouri's sensitive species may be found at <http://mdc.mo.gov/discover-nature/field-guide/endangered-species>. Detailed information about the animals and some plants mentioned may be accessed at http://mdc4.mdc.mo.gov/applications/mofwis/mofwis_search1.aspx. If you would like printed copies of best management practices cited as internet URLs, please contact the Missouri Department of Conservation.

Attachment H

Historical Aerial Photographs and Topographic Maps

1:4,800

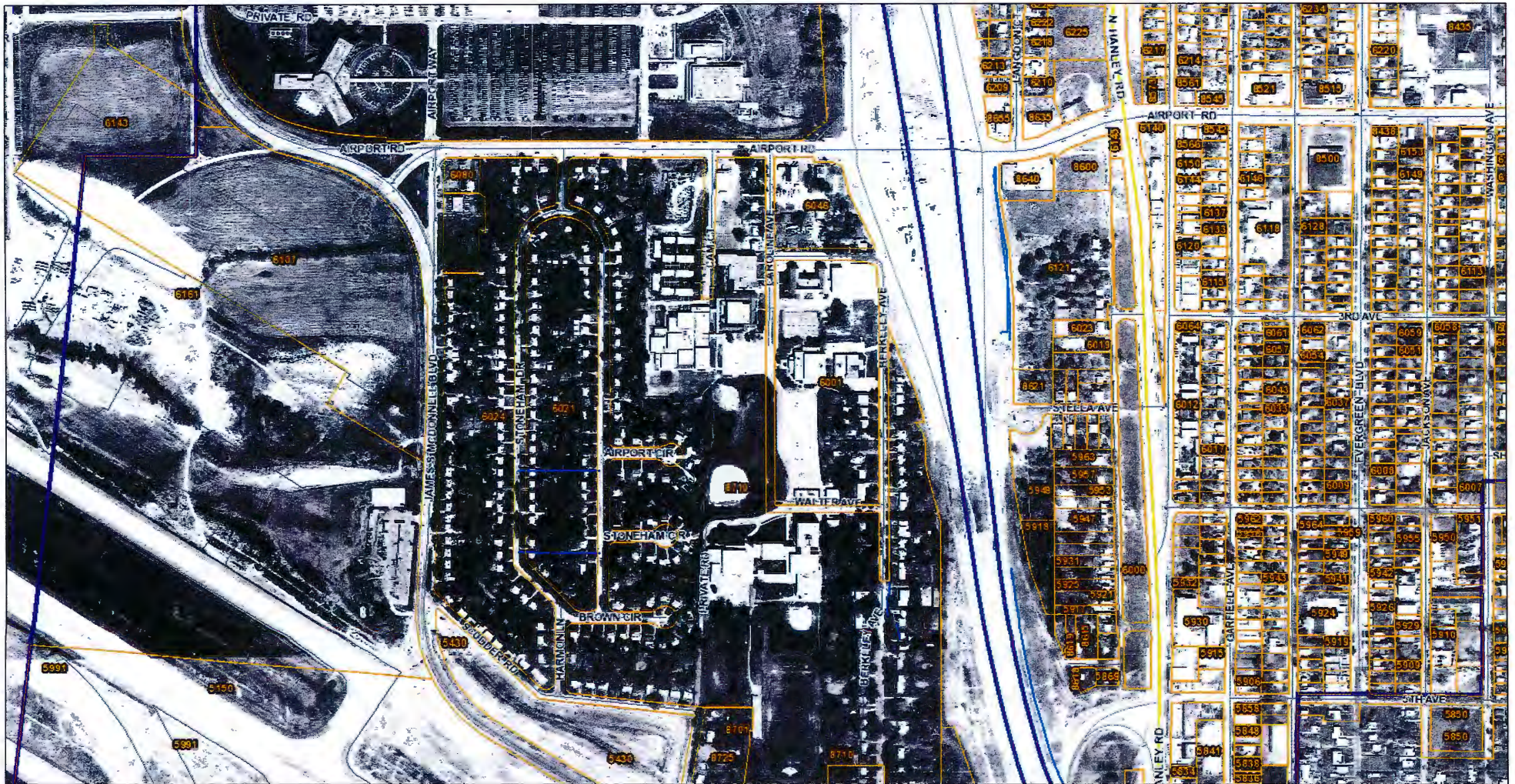


1:4,800

0 0.05 0.1 0.2 mi

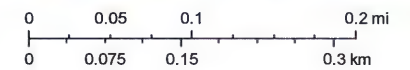
0 0.075 0.15 0.3 km

Brownleigh 1981



10/25/2018 2:50:15 PM

1:4,800

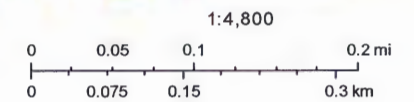


Brownleigh 1955



10/25/2018 2:46:40 PM

- Sales (Last 2 Years)
- Special Flood Hazard Areas (1% Annual Chance)
- Other Flood Areas (0.2% Annual Chance)



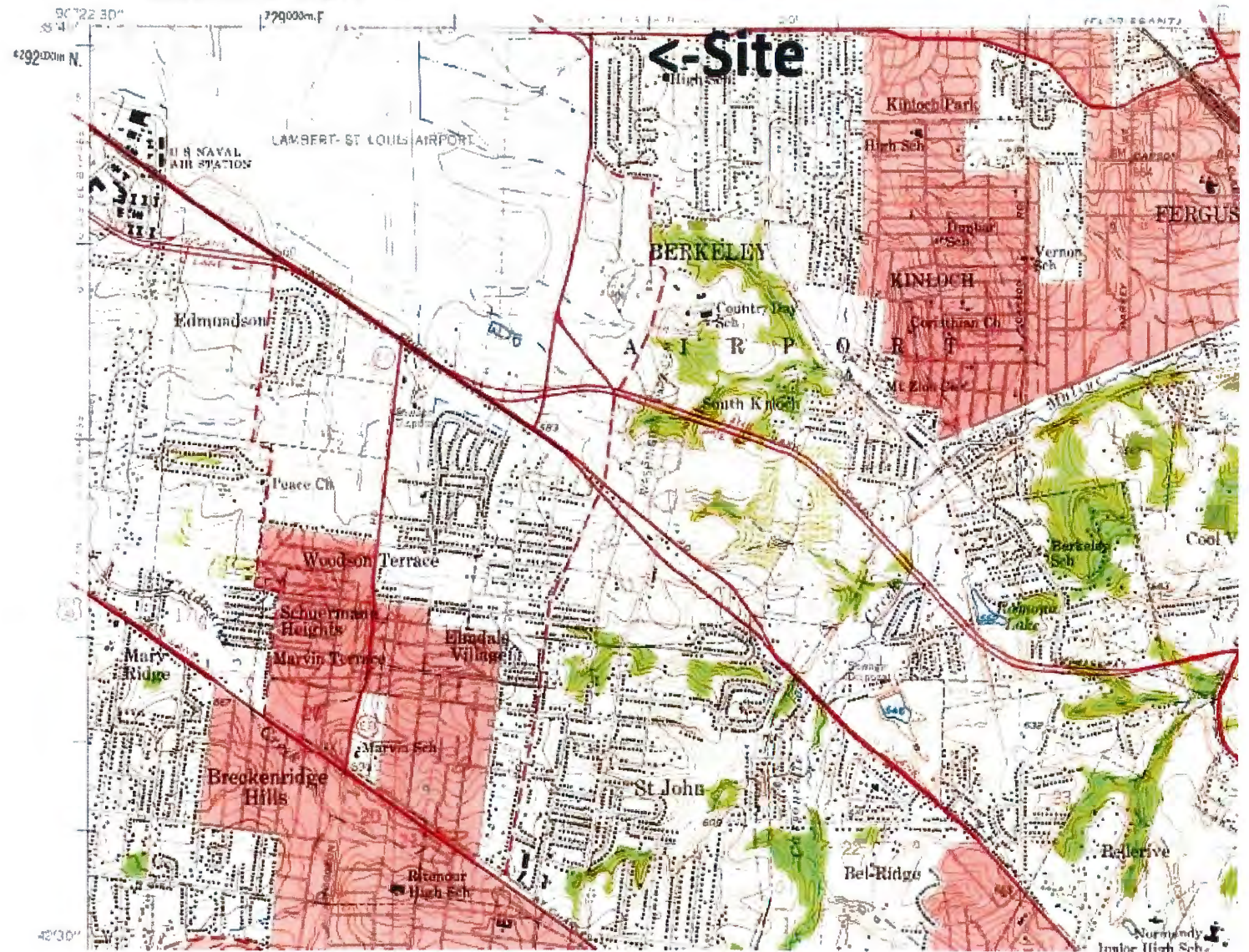
This is an aerial map of a residential area, likely in a suburban or rural setting. The map shows a grid of streets and numerous individual lots, each labeled with a number. The streets visible include Airport Rd, Stoneham Dr, Brown Cir, and others. The map is oriented with North at the top. There are several handwritten annotations on the map, including '33.1', '11.6', and '20.52', which appear to be area measurements. The map also shows some larger areas with handwritten numbers like '4.0', '2.5', and '4.7'. The map is a grayscale aerial photograph with yellow lines indicating property boundaries and lot numbers.

1:4,800

0 0.05 0.1 0.2 mi

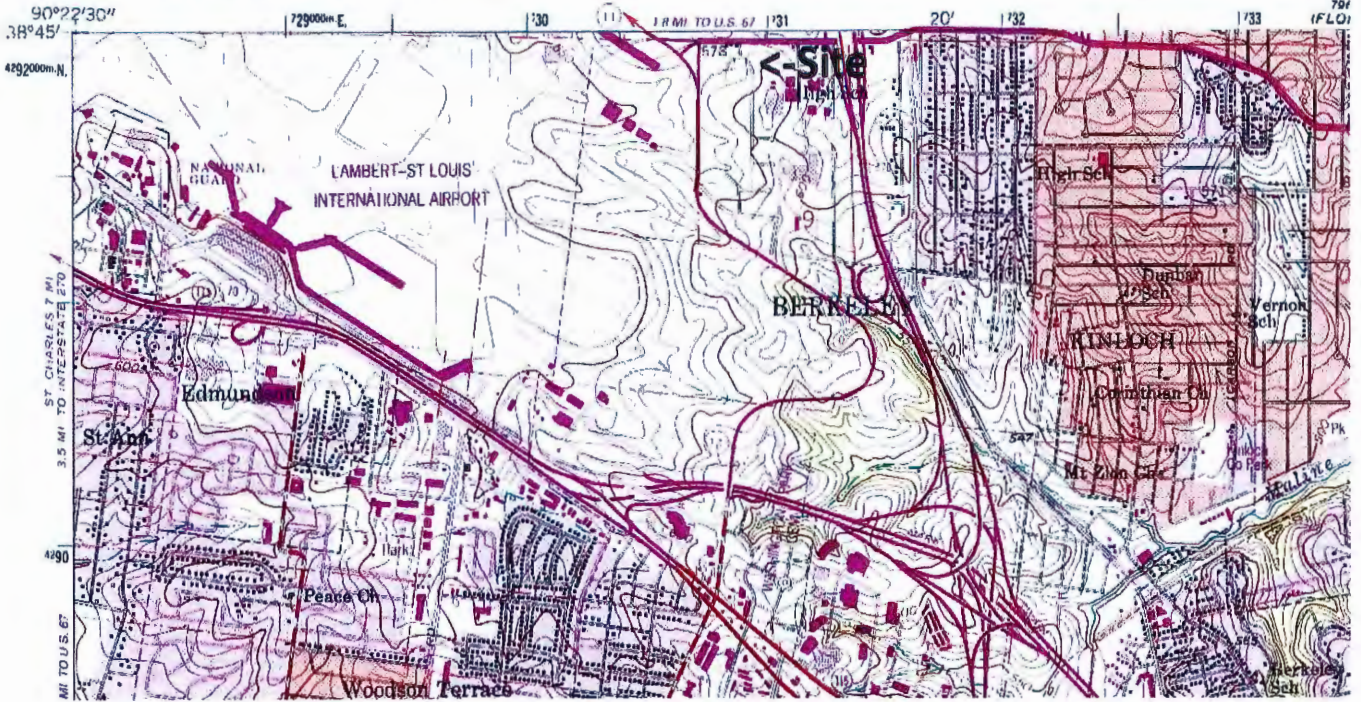
0 0.075 0.15 0.3 km

STATE OF MISSOURI
GEOLOGICAL SURVEY AND WATER



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

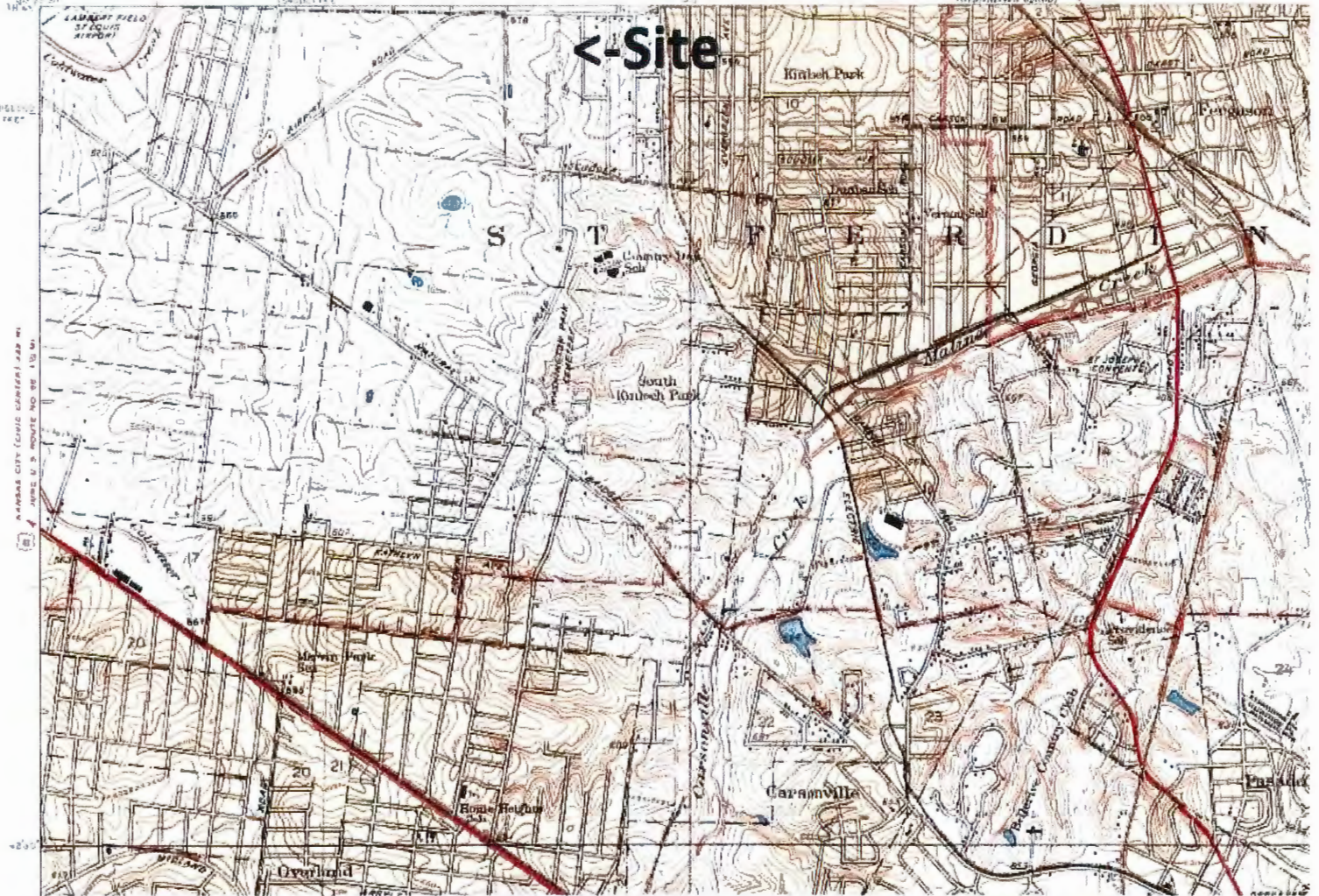
STATE OF
GEOLOGICAL SURVEY



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MISSOURI
GEOLOGICAL SURVEY AND WATER RESOURCES
H.A. BUEHLER, STATE GEOLOGIST
(1892 Charles E. Jones)

<-Site



Attachment I

National Wetlands Inventory Map



U.S. Fish and Wildlife Service

National Wetlands Inventory

New Bulk Fuels Storage Facility Site



October 30, 2017

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

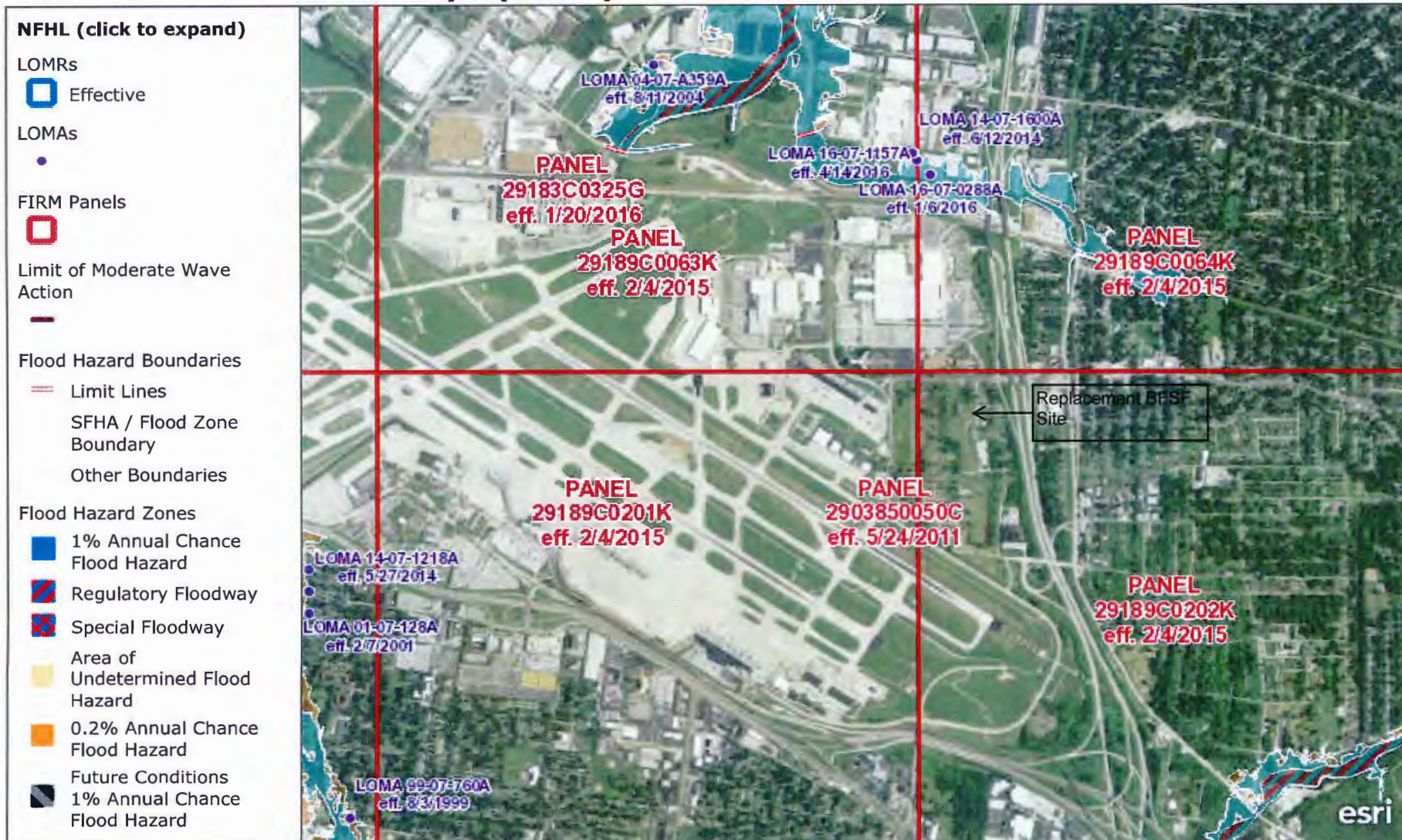
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Attachment J

FEMA Flood Map

FEMA's National Flood Hazard Layer (Official)



Data from Flood Insurance Rate Maps (FIRMs) where available digitally. New NFHL FIRMette Print app available:
<http://tinyurl.com/j4xwp5e>

1mi

USGS The National Map: Orthoimagery | Print here instead: <http://tinyurl.com/j4xwp5e> Support: FEMAMapSpecialist@riskmapcds.com | USGS The National Map: Orthoimagery