CATEGORICAL EXCLUSION LEVEL 1 FORM	**Date:** January 23, 2013

[X] **Initial Version** [ ] **Additional Information to CE Level 1 Dated:**

Purpose of this document:

[X] CE Level 1 documentation for exempted projects [ ] State-funded categorical exemption documentation

Approval of Exempt, CE Level 1 or State-Funded CE: Ernest A. Stoops 1-23-2013

Environmental Scoping Manager ~~or Environmental Policy Manager~~ Date

PROJECT INFORMATION			
Project Number, County, Route	US 150, Orange County, LA Code 3121, Parcel 2 - Excess Land	**Des Number**	8459780
Project Description	**Liquidation of Excess Land** – This includes the liquidation of State property classified as excess land.		
Purpose and Need for Action:	Excess Land Liquidation: The purpose of this action is to liquidate the excess property that has been determined to be unnecessary. By selling the property, it eliminates the need for maintenance and allows the limitation of unnecessary land holdings.		
Alternatives Considered:	The do-nothing alternative was considered, but rejected since it would not meet the purpose and need of the projects.		
Project Termini:	n/a		
Funding Source(s):	___ Federal ___ State ___ Local	**Estimated Cost**	n/a
Project Sponsor:	INDOT	**Project Length**	n/a

Name and organization of CE Level 1 Preparer:: Kelly Cummins – INDOT, Vincennes District

SCOPE OF THE PROPOSED ACTION			
Public Involvement		No: **X**	Possible:
Comments:	No public controversy is expected.		
Relocation of residences/businesses/etc.*		No: **X**	Possible:
Comments:	No relocations will be necessary.		
Right-of-way in acres (permanent and temporary)*		No: **X**	Possible:
Comments:	Property will only be sold to willing buyers. Applicable Federal regulations will be followed.		
Added through-traffic lanes – length*		No: **X**	Possible:
Comments:	No through-lanes will be added.		
Permanent alteration of local traffic pattern*		No: **X**	Possible:
Comments:	There will be no alteration of local traffic patterns.		
Facility on new location or realignment*		No: **X**	Possible:
Comments:	There will be no new alignment or realignment of existing roads.		
Disruption to public facilities/services (such as schools, emergency service)		No: **X**	Possible:
Comments:	There will be no disruption to public service providers.		
Involvement with existing bridge(s) (Include structure number(s)		No: **X**	Possible:
Comments:	There are no bridges within the limits of the excess property.		

INVOLVEMENT WITH RESOURCES			
Watercourses Impacted (linear feet)		No: **X**	Possible:
Comments:	There will be no construction in waterways as part of this project		
Other Surface Waters (such as ponds, lakes, reservoirs, in acres)		No: **X**	Possible:
Comments:	There will be no construction in water bodies as part of this project.		
Wetlands (acres)*		No: **X**	Possible:
Comments:	There will be no adverse impacts to wetlands as part of this project.		
Disturbance of Terrestrial Habitat (acres)		No: **X**	Possible:
Comments:	There will be no construction which adversely affects habitat as part of this project.		

INVOLVEMENT WITH RESOURCES			
Karst Features		No: **X**	Possible:
Comments:	There are two karst features located within a ½ mile of the parcel. They will not be impacted by the sale of this property.		
Threatened and Endangered Species Present/Impacted*		No: **X**	Possible:
Comments:	No endangered species will be impacted.		
Impacts to Sole Source Aquifer*		No: **X**	Possible:
Comments:	There is no known Sole Source Aquifer located in the Vincennes District.		
Flood Plains (note transverse or longitudinal impact)		No: **X**	Possible:
Comments:	This parcel is within a floodplain (DFIRM). The sale of the property will not alter flood elevations.		
Farmland (acres)		No: **X**	Possible:
Comments:	This project is not of a type which will affect farmland.		
Cultural Resources (Section 106)*		No: **X**	Possible:
Comments:	The property has been determined to be of a nature which has no potential to adversely affect resources protected by Section 106 of the Historic Preservation Act. With regard to above-ground resources, no buildings are located on this parcel (LA Code 3121, Parcel 2). The State and National Register of Historic Places (NRHP) lists for Orange County were checked by an INDOT- Cultural Resources Office (CRO) historian who meets the Secretary of the Interior's Professional Qualification Standards per 36 CFR Part 61. None of the resources on these lists are located near the parcel. Additionally, the *Orange County Interim Report* (2006) of the Indiana Historic Sites and Structures Inventory (IHSSI) was referenced (Paoli Township Scattered Sites, page 86). The SHPO's NRHP & IHSSI information available in the Indiana GIO Library, as the DNR/IDNR_DHPA_SHAARD_open layer, was checked against the Interim Report hard copy maps. No properties are recorded within 0.25 mile of this parcel. The closest recorded property is Site No. 117-226-30027, a Craftsman House at 2948 US 150, and rated "contributing." Generally, properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered National Register eligible. Additionally, this property is located approximately 0.37 mile to the east of the excess parcel. Based on the available information, INDOT-CRO does not think that pursuant to Indiana Code 14-21-1-14, this parcel contains historic structures or that the sale of this parcel is an activity that has the potential to cause effects on any above-ground resources eligible for or listed in the National Register. With regard to archaeology, Landmark Archaeological and Environmental Services conducted a Phase 1a Archaeological Field Reconnaissance which found well drained alluvial soil that had the potential to contain deeply buried archaeological deposits. A Phase 1c Subsurface Reconnaissance was performed and no previously unknown archaeological sites were discovered. No additional archaeological work is recommended prior to the sale of the parcel. See Attachment 2 for Archaeological Reports and SHPO Concurrence Letters.		
Section 4(f) and Section 6(f) Resources *		No: **X**	Possible:
Comments:	There are no Section 4(f) or 6(f) resources involved.		
Air Quality Non-attainment Area		No: **X**	Possible:

INVOLVEMENT WITH RESOURCES			
Comments:	This projects is exempt from air quality analysis in accordance with 40 CFR Part 93.126 Table 2. This project is not of air quality concern; therefore, it will have no significant impact on air quality.		
Noise Analysis Required*		No: **X**	Possible:
Comments:	This project is not a Type I project. In accordance with 23 CFR 772 and the INDOT Traffic Noise Policy (FHWA concurrence on February 26, 2007), these actions do not require formal noise analysis.		
Community/Economic Impacts		No: **X**	Possible:
Comments:	No negative impacts are anticipated for the established communities.		
Environmental Justice		No: **X**	Possible:
Comments:	Any property to be sold will be sold to willing buyers. No disproportionate adverse impacts to protected populations are expected.		
Hazardous Materials		No: **X**	Possible:
Comments:	The property to be sold has been assessed for hazardous materials, and no areas of concern were found. See Attachment 3 for Red Flag Investigation.		
Permits		No: **X**	Possible:
Comments:	Permits are not required for this project.		

*Criteria used for determination of CE Level. See threshold table below.

ENVIRONMENTAL COMMITMENTS:

If any archaeological artifacts or human remains are uncovered during construction, federal law and regulations (16 USC 470, et seq.; 36 CFR 800.11, et al.) and State Law (IC 14-21-1) require that work must stop immediately and that the discovery must be reported to the Division of Historic Preservation and Archaeology in the Indiana Department of Natural Resources within 2 business days. INDOT's Cultural Resources Section in INDOT Environmental Services (INDOT ES) shall also be notified. (Required)

Categorical Exclusion Level Thresholds

	Level 1	Level 2	Level 3	Level 4
Relocations	None	≤ 2	> 2	> 10
Land[1]	< 0.5 acres	< 10 acres	≥ 10 acres	≥ 10 acres
Length of added through lane	None	< 1 miles	≥ 1 mile	≥ 1 mile
Permanent Traffic pattern alteration	None	None	Yes	Yes
New alignment	None	None	< 1 mile	≥ 1 mile[2]
Wetlands	< 0.1 acres	< 1 acre	< 1 acre	≥ 1 acre
Stream Impacts	≤ 300 linear feet of stream impacts, no work beyond 75 feet from pavement	> 300 linear feet impacts, or work beyond 75 feet from pavement	N/A	N/A
Section 4(f)*	None	None	None	Any impacts
Section 6(f)	None	None	Any impacts	Any impacts
Section 106	"No Historic Properties Affected" or falls within guidelines of Minor Projects PA	"No Adverse Effect" or "Adverse Effect"	N/A	If ACHP involved
Noise Analysis Required	No	No	Yes[3]	Yes[3]
Threatened/Endangered Species*	"Not likely to Adversely Affect", or Falls within Guidelines of USFWS 9/8/93 Programmatic Response	N/A	N/A	"Likely to Adversely Affect"[4]
Sole Source Aquifer Groundwater Assessment	Detailed Assessment Not Required	Detailed Assessment Not Required	Detailed Assessment Not Required	Detailed Assessment Required
Approval Level • **ESM**[5] • **ES**[6] • **FHWA**	Yes	Yes	Yes Yes	Yes Yes Yes

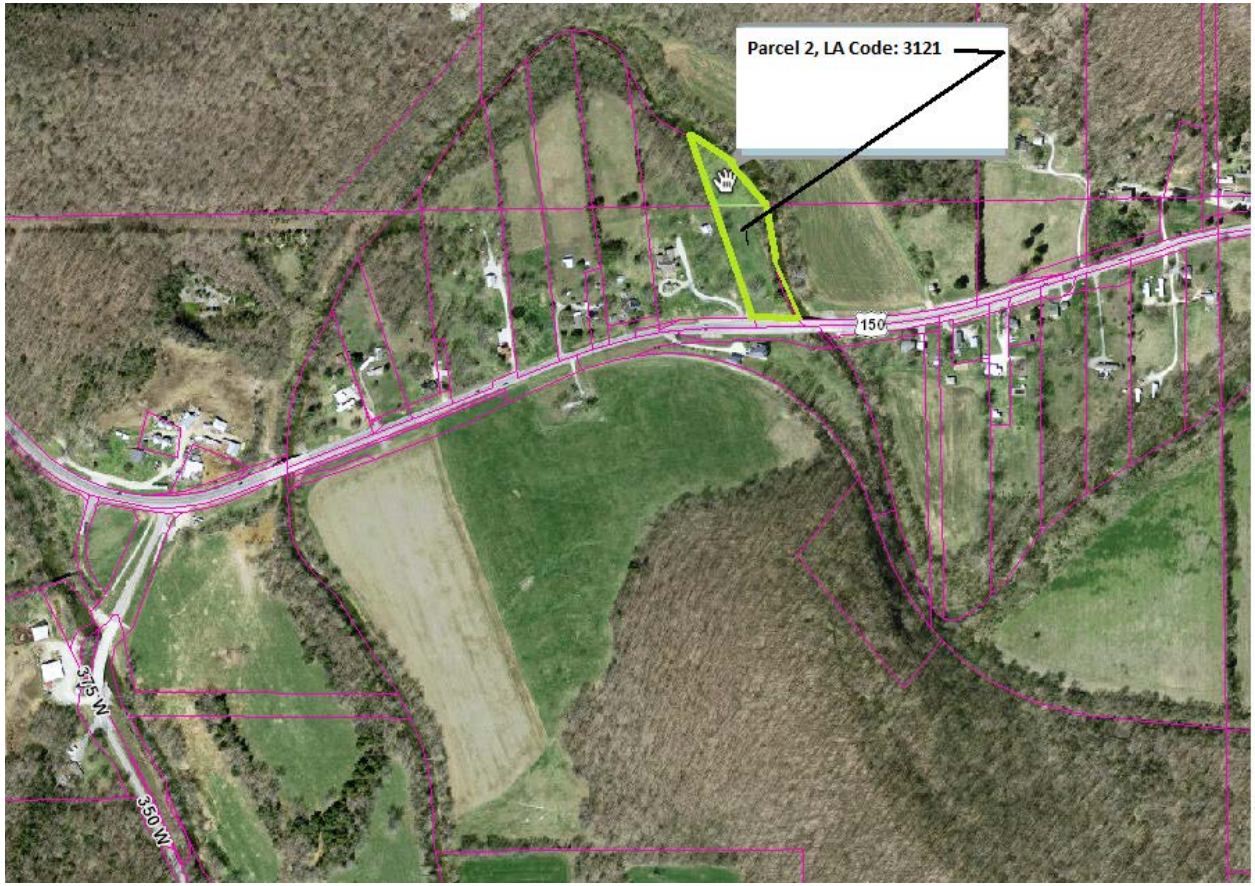
*These thresholds have changed from the March 2009 Manual.
[1]Permanent and/or temporary land.
[2]If the length of the new alignment is equal to or greater than one mile, contact the FHWA's Air Quality/Environmental Specialist.
[3]In accordance with INDOT's Noise Policy.
[4]If the project is considered Likely to Adversely Affect Threatened and/or Endangered Species, INDOT and the FHWA should be consulted to determine whether a higher class of document is warranted.
[5]Environmental Scoping Manager
[6]Environmental Services

Attachment 1

Location Map

And

Project Plans



Location Map Parcel #2 LA Code: 3121, US 150 Orange County.

CODE NO. 3121
DES. NO. 8459780

BRIDGES OVER 20' SPAN					
FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	STP-024-4(018)		1	15

RIGHT-OF-WAY INDEX

PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION
STP-024-4(018)	150-59-7306	CONTINUOUS PRESTRESSED CONCRETE I-BEAM BRIDGE	3 SPANS: 1 @ 48'-6, 1 @ 53'-0, 1 @ 48'-6	LICK CREEK	439+00.93 "A" (R.P. 131+10)

SHEET NO.	SHEET DESIGNATION	SUBJECT	F.H.W.A. APPROVAL
1	ONE SHEET	TITLE SHEET	–
2-3	TWO SHEETS	TYPICAL CROSS SECTIONS	
4	ONE SHEET	PARCEL LISTINGS	
5	ONE SHEET	PLAT NO. 1	
6,7,8	THREE SHEETS	PLAN & PROFILE – LINE "A"	
9	ONE SHEET	PLAN & PROFILE – LINE "RAR"	
10	ONE SHEET	TEMPORARY RUNAROUND DETAILS	
11	ONE SHEET	SUPERELEVATION TRANSITION DIAGRAM	
12	ONE SHEET	GUARDRAIL, PAVEMENT AND SHOULDER CONSTRUCTION DETAILS	
13	C1	LAYOUT	
14	C2	GENERAL PLAN	
15	ONE SHEET	BRIDGE SUMMARY	
16-28	THIRTEEN SHEETS	CROSS SECTIONS– LINE "A"	
29-31	THREE SHEETS	CROSS SECTIONS– LINE "T-1-A"	

INDIANA DEPARTMENT OF TRANSPORTATION

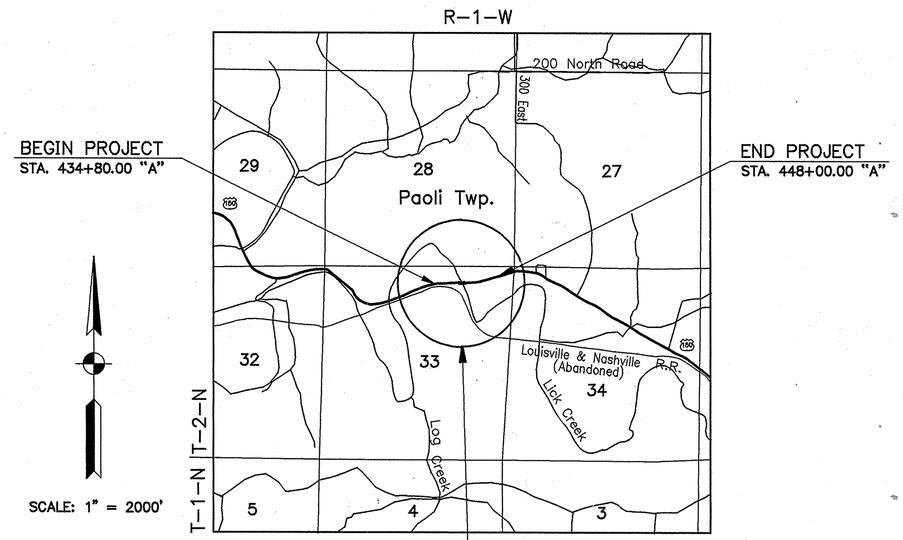
RIGHT-OF-WAY
FOR SPANS OVER 20 FEET
ON
U.S. ROAD NO. 150
PROJECT NO. STP-024-4

~~(---) P.E.~~
(018) R/W
~~(---) CONST~~

BEGINNING AT A POINT ON THE CENTERLINE OF EXISTING U.S. 150 THAT IS APPROXIMATELY 462.37 FEET SOUTH AND 2,046.93 FEET WEST OF THE NORTHEAST CORNER OF SECTION 33, T-2-N, R-1-W, PAOLI TOWNSHIP, ORANGE COUNTY, THENCE RUNNING IN AN EASTERLY DIRECTION 1,320.00 FEET TO A POINT ON THE CENTERLINE OF EXISTING U.S. 150, IN PAOLI TOWNSHIP, ORANGE COUNTY, STATE OF INDIANA, FROM R.P. 131+02 TO R.P. 131+27.

BRIDGE LENGTH: 0.03 MI.
ROADWAY LENGTH: 0.22 MI.
TOTAL LENGTH: 0.25 MI.
MAX. GRADE: +5.45 %

TRAFFIC DATA		
A.D.T. (1994)		7,580 V.P.D.
A.D.T. (2014 PROJECTED)		12,850 V.P.D.
D.H.V. (2014 PROJECTED)		1,028 V.P.H.
TRUCKS		D.H.V.14 % A.D.T.18 %
DESIGN SPEED		55 M.P.H.
ACCESS CONTROL		NONE
TERRAIN		Rolling
FUNCTIONAL CLASSIFICATION		Rural Minor Arterial



BRIDGE FILE NO. 150-59-7306
SINGLE STRUCTURE
3 SPANS: 1 @ 48'-6; 1 @ 53'-0; 1 @ 48'-6
SKEW: 40° 00' 00" LT.
CONTINUOUS PRESTRESSED CONCRETE I-BEAM
STA. 439+00.93 "A"

PLANS PREPARED BY

sieco, inc.

1000 WASHINGTON ST.
MICHIGAN CITY, IN 46360

CERTIFIED BY: _____
PHONE (219) 874-6238 DATE

APPROVED: 1-25-95 DATE
Jay D. Marks
CHIEF, DIVISION OF LAND ACQUISITION

RECOMMENDED FOR APPROVAL: 1-25-95 DATE
James H. Barr
MANAGER, R/W ENGINEERING SECTION

CONTRACT NO.	STRUCTURE NO.			
DES. NO. 8459780	PROJECT NO. STP-024-4(018)	YEAR	SHEET 1	TOTAL 15

BRIDGE FILE: 150-59-7306

REVISION	
DATE	SHEET NO.
3-24-95	– 5, 7 & 13 CHANGED PAR. 2 TO A TOTAL TAKE
8-10-95	5 & 7 ELIMINATED PARCEL 9A & ADDED PARCEL 8A
1-9-96	REV. CL. II DR. @ STA. 446+24 & ADDED DRIVE DETAIL - Shs. 7, 8 & 15
10-1-96	Name Chg. On Par 3. Shs. 4, 5 & 7
11-04-96	Rev. Par. 8, Elimnated Par. 8A, Added Par. 8B -PLAN SHEET 12 REPLACED

REVISION	
DATE	SHEET NO.
–	–

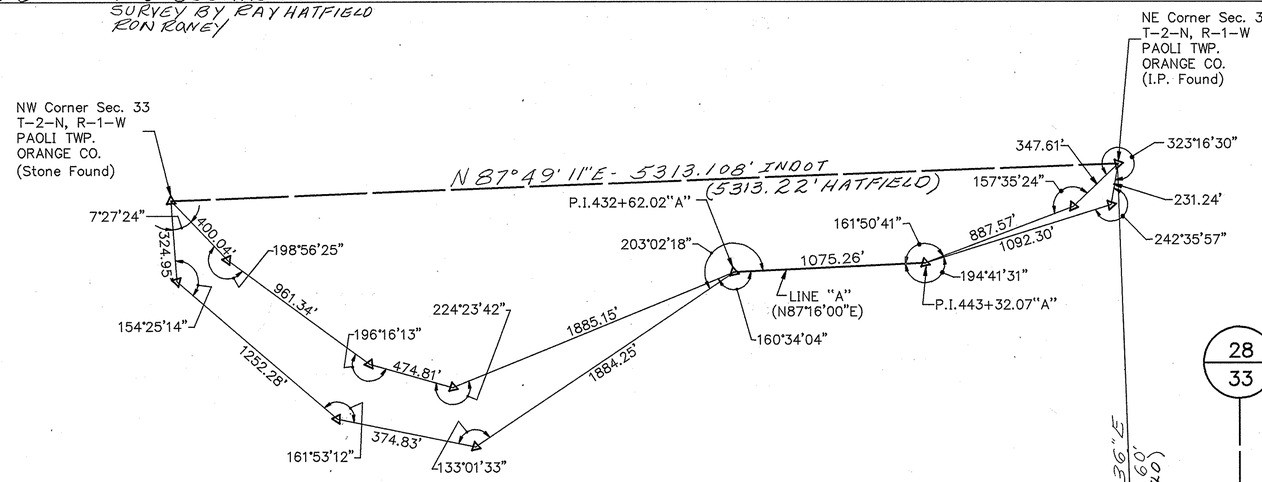
INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 1993
TO BE USED WITH THESE PLANS.

PLOT DATE & TIME: JUL 20, 1994 - 13:23:40
SHEET REVISED: MAY 1, 1993

REV 5-30-96 ADD SEC LINE PER SURVEY BY RAY HATFIELD RON RONEY

CODE NO. 3121

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	STP-024-4(018)		5	15

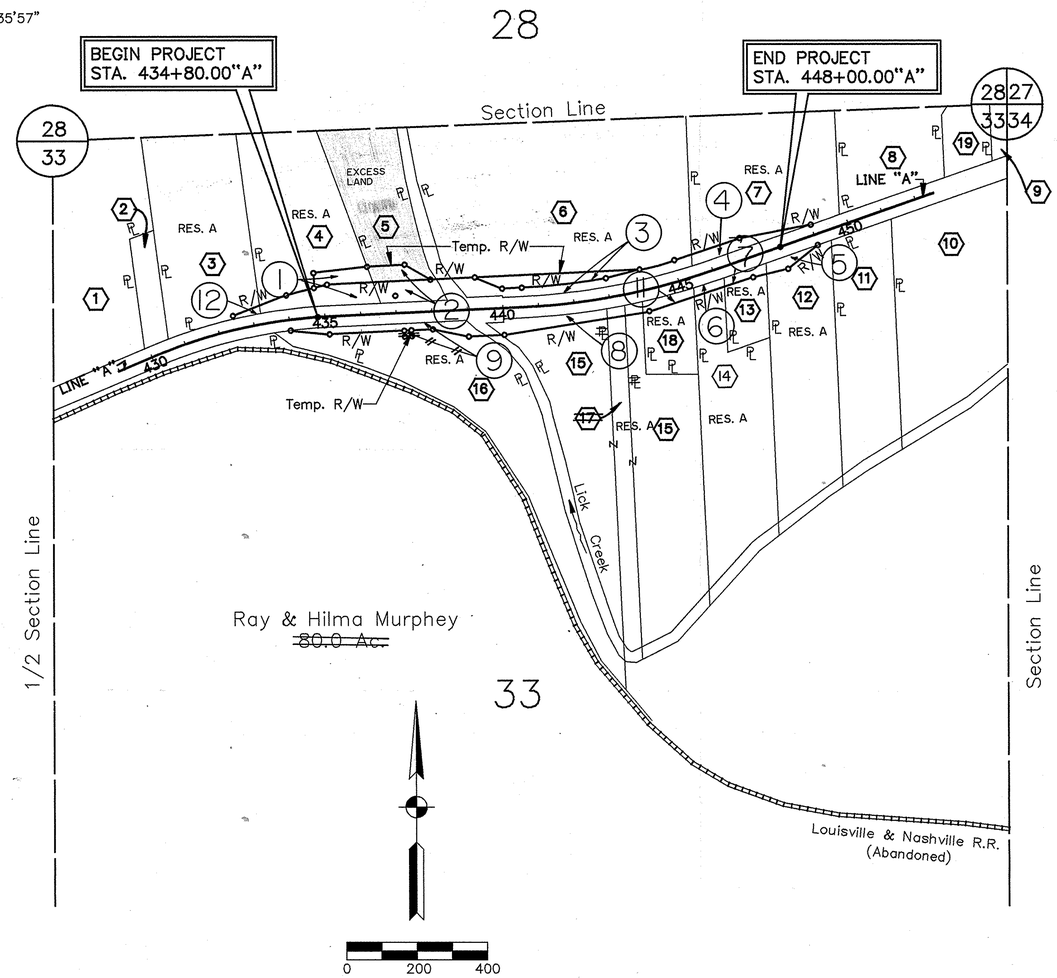


SECTION CORNER TIE-IN

No Scale

5/8 RE-BAR PER SURVEY BY RAY HATFIELD SE COR NE 1/4 33-2-1

INDEX NO.	OWNER
1	William Clyde & Leatha Thacker ~~2.1 Ac.~~
2	Marvin Gene & Lorraine Mabel Marshall ~~0.5 Ac.~~
3	Dennis R. & Ruth A. Flick ~~2.54 Ac.~~
4	Max Eugene & Carol C. Stewart ~~3.34 Ac.~~
5	Russell J. & Jean Ferguson ~~0.7 Ac.~~
6	~~James R. Jones~~ OWEN BILLY D. ~~5.0 Ac.~~
7	Charles A. & Kathleen Huff ~~3.71 Ac.~~
8	Norman W. & Arlene Love ~~1.563 Ac.~~
9	Clinton B. & Janet L. Lee ~~0.25 Ac.~~
10	Richard & Mildred Joan Lankford ~~5.25 Ac.~~
11	Frederick W. & Mary C. Campbell ~~2.9 Ac.~~
12	Carl E. & Eileen R. Lambdin ~~4.1 Ac.~~
13	Kenneth E. Sanders ET UX, ~~0.57 Ac.~~
14	Bill O. Weeks ~~4.43 Ac.~~
15	Elvin & Margie Ann Zehr ~~4.12 Ac.~~
16	Cecil C. & Beatrice Bobbitt ~~2.39 Ac.~~
~~17~~	~~Margie Ann Zehr 1.5 Ac.~~
18	Lonnie & Charlotte A. Hatfield ~~0.65 Ac.~~
19	Charles L. & Norma L. McDonald ~~0.687 Ac.~~



ALL IN SECTION 33, T-2-N, R-1-W
PAOLI TOWNSHIP - ORANGE COUNTY
STATE OF INDIANA

PLAT NO. 1

SCALE: 1"=200'

PLOT DATE & TIME: JUL 27, 1994 - 09:12:43

DESIGNED: CHECKED:
DRAWN: SLG 6/93 CHECKED:
REVISED: CHECKED:

SHEET REVISED: JUNE 16, 1992

150PLAT1/200

REV. 10-1-96(Per Ron Raney) NAME CHANGE ON PAR. 3. Melvine Hall

REV. 8-10-95 ELIMINATED PARCEL 9A & ADDED PARCEL 8A JM GARDNER

REV. 3-24-95 CHANGED PARCEL 2 TO A TOTAL TAKE K.M. JOHNSON

CODE NO. 3121

REV. 8-23-95 ADJUSTED PROP. LINES K.M. JOHNSON

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		STP-024-4(018)		7	15

REV. 1-8-96, REV CL. II OR @ STA. 446+24 RT. M.E. HALL

REV. 11-4-96 PARCELS 8, 8A & 8B USI

BEGIN PROJECT STA. 434+80.00 "A"

APPARENT EASEMENT FOR POWER POLE IN FAVOR OF PUBLIC SERVICE COMPANY OF INDIANA, INC.

STR. NO. 11
64 Lft. of 15" Pipe & 2 Pipe End Sections Req'd.

Construction Limits

Class II Drive Req'd W=14'

MAX E. & CAROL C. STEWART

APPARENT EASEMENT FOR ELECTRIC LINES IN FAVOR OF PUBLIC SERVICE COMPANY OF INDIANA, INC.

Do not disturb woody vegetation outside construction limits

BEGIN CONSTRUCTION 11+25.45 "RAR" = 434+64.27 "A", 12.5' Lt.

RAY & HILMA MURPHEY

P.T.435+10.56 "A"

Temp. R/W For Shed Removal Bldg.

Class II Drive Req'd. W=12'

STR. NO. 12
30 Lft. of 15" Pipe & 2 Pipe End Sections Req'd.

Temp. R/W For Bldg. Removals ~~And Temp. Runaround Construction~~

STR. NO. 13
See Sheet No. 13

RUSSELL J. & JEAN FERGUSON

APPARENT EASEMENT FOR ELECTRIC LINE IN FAVOR OF PUBLIC SERVICE COMPANY OF INDIANA, INC.

Class II Drive Req'd W=14'

EXCESS LAND

ELIMINATED 03/24/1995

Indicates Existing Pavement Removal

STR. NO. 14
See Sheet No. 13

P.O.T.440+00.00 "A" = P.I.20+00.00 "T-1-A"

117°40'00"

P.C.440+54.87 "A"

Temp. R/W For Temp. Runaround Construction

STR. NO. 15
See Sheet No. 13

Sec. 33, T-2-N, R-1-W
PAOLI TOWNSHIP
ORANGE COUNTY

Temporary Runaround-LINE "RAR" See Sheet 9 For Alignment callout and Additional Details.

STR. NO. 17
44 Lft. of 24" Pipe & 2-Pipe End Sections Req'd.

~~JAMES R. JONES~~ OWEN, BENNY

Class V Drive Req'd. W=24'

CHARLES A. & KATHLEEN HUFF

END CONSTRUCTION 21+53.99 "RAR" = 444+95.03 "A", 12.5' Lt.

P.T.446+05.43 "A"

APPARENT EASEMENT FOR ELECTRIC LINES IN FAVOR OF PUBLIC SERVICE COMPANY OF INDIANA, INC.

Construction Limits

STR. NO. 19
56 Lft. of 15" Pipe & 2 Pipe End Sections Req'd.

~~CARL E. & EILEEN R. LAMBDIN~~

KENNETH E. SANDERS ET UX.

ELVIN & MARJIE ANN ZEHR

LONNIE & CHAROLOTTE A. HATFIELD

APPARENT EASEMENT FOR POWER POLE IN FAVOR OF PUBLIC SERVICE COMPANY OF INDIANA, INC.

ALL R/W ON THIS SHEET TO BE AS SHOWN.
ALL R/W ON THIS SHEET DESCRIBED FROM LINE "A" EXCEPT AS SHOWN.

CURVE DATA
P.I. 443+32.07 "A"
Δ = 16°31'00" Lt.
D = 3°00'00"
R = 1,909.86'
T = 277.20'
L = 550.56'
E = 20.01'
S.E. = 0.060 ft./ft.

BILL O. WEEKS

Class II Drive Req'd W=20'

STR. NO. 18
42 Lft. of 15" Pipe & 2 Pipe End Sections Req'd.

Class II Drive Req'd W=14'

Mobile Home

APPARENT EASEMENT FOR POWER POLE IN FAVOR OF PUBLIC SERVICE COMPANY OF INDIANA, INC.

Temp. R/W for Carport Removal

Class II Drive Req'd. W=24'

~~MARJIE ANN ZEHR~~

STR. NO. 16
28 Lft. of 15" Pipe & 2 Pipe End Sections Req'd.

ELVIN & MARGIE ANN ZEHR

PARCEL 8A
TEMP R/W FOR DRIVE CONSTRUCTION
ELIMINATED II-4-96

CECIL C. & BEATRICE BOBBITT

APPARENT EASEMENT FOR POWER POLE IN FAVOR OF PUBLIC SERVICE COMPANY OF INDIANA, INC.

Do not disturb woody vegetation outside construction limits

Creek (Navigable)

Rd.N.F. / Tfp. / Fe.P. — P.T.435+10.56 "A"

N.E.Crnr. / N.Cb. / S.E.Crnr. / S.Cb. — P.O.T.440+00 "A" = P.I.20+00 "T-1-A"

Rd.N.F. / I.P.L. — P.C.440+54.87 "A"

I.P.L. / 21" Syc. — P.I.443+32.07 "A"

Rd.N.F. / 21" Syc. — P.O.C.444+00.00 "A"

BM#1 Bt. Spk. in 15"ø Walnut. 56' Rt. of Sta. 433+50 "A" Elev. 547.17
BM#2 "a" cut in east end of north wheelguard, 16.5' Lt. of Sta 439+66 "A" Elev. 535.19
BM#3 Bt. Spk. in Tfp. 22' Rt. of Sta. 445+62 "A" Elev. 543.87

P.V.I. 436+77.00
El. 537.70
V.C. 280'

P.V.I. 444+00.00
El. 535.89
V.C. 325'

See Sheet 12 For Guardrail Details.

Sys. of Nursery Sodding for Side Slopes, Ditch and Lawn Req'd. Lt.

Tons of Uniform Riprap Req'd. Lt. in Ditch

Sys. of Sodding Req'd. Lt. in Ditch

Begin Project Sta. 434+80.00 "A" Elev. 546.39

Grade of 4' bottom Ditch Req'd. Lt. (Plotted 20' Above Datum) (Typ.)

Grade of 4' bottom Ditch Req'd. Rt. (Plotted On Datum) (Typ.)

Structure Limits

Existing Grade

Tons of Uniform Riprap Req'd. Rt. in Ditch

Sys. of Nursery Sodding for Side Slopes, Ditch and Lawn Req'd. Rt.

Incidental Construction for pavement and shoulder wedging and leveling, and ditch grading (Typ. Lt. & Rt.)

Uniform Riprap Req'd. Rt. in Ditch

PLATE 1 — PLAN — PROFILE B. R. R. STANDARD 1975

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
STP-024-4(018)	"A"	7	15	150-59-7306

TP114

150P-P1/50

PLOT DATE & TIME: JUL. 20, 1994 - 16:34:53

SHEET REVISED: JUNE 30, 1992

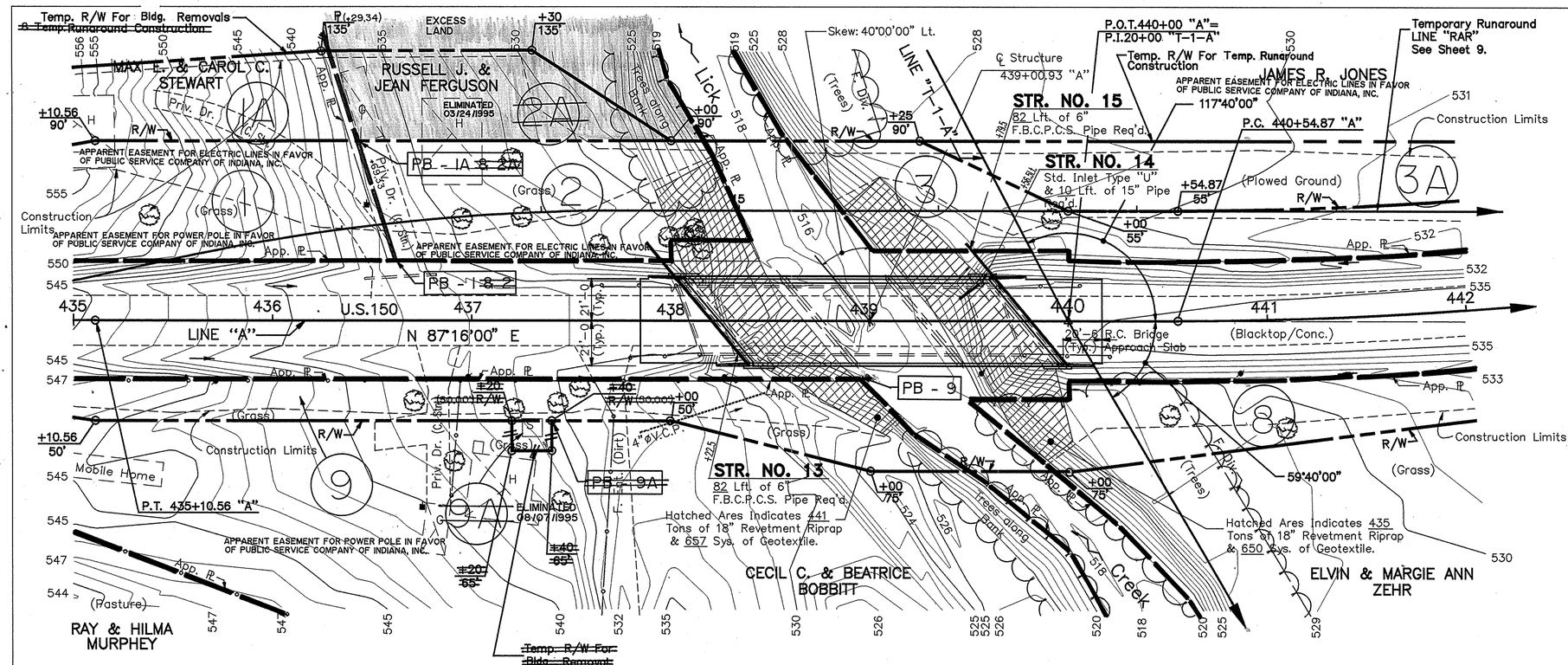
PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, NOTE BOOK, No. — BY: SLG, LS — DATE: 1/93, 6/93

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, NOTE BOOK, No. — STRUCTURE NOTATIONS CHECKED

REV. 3-24-95 CHANGED PARCEL 2 TO A TOTAL TAKE K.M. JOHNSON

REV. 8-10-95 ELIMINATED PAR 9A JM GARDNER

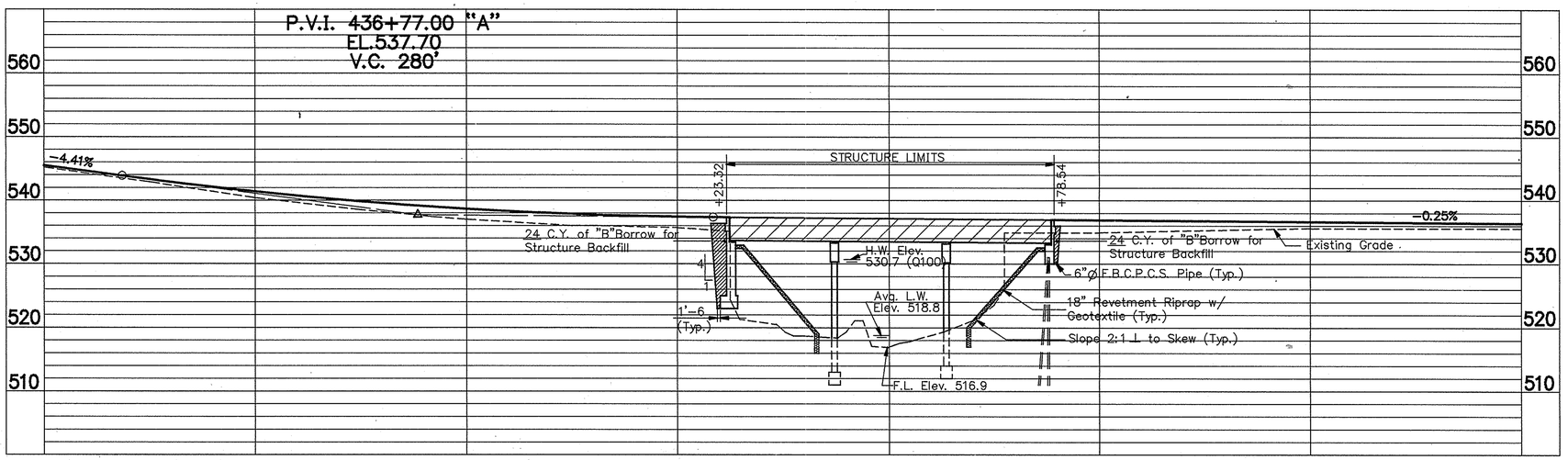
CODE NO. 3121



Sec. 33, T-2-N, R-1-W
PAOLI TOWNSHIP
ORANGE COUNTY

SITUATION PLAN
SCALE:- 1"=30'-0", CONTOUR INTERVAL = 1 FT.

Do not disturb woody vegetation outside construction limits

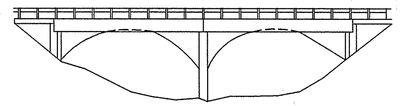


PROFILE ON PROPOSED ℄ ROADWAY
SCALES: HORIZ. 1"=30'-0" VERT. 1"=10'-0"

NOTE: FIELD NOTES, BOOK #BR-2877

Present Structure

Two span (2 @ 60'-0) reinforced concrete arch bridge w/ concrete slab built in 1927. Widened in 1968 with two box beams at each coping on widened substructures. Clear roadway width=32'-4, skew 20° Lt. Plans available from INDOT, FA16-H2-2 and 150-59-566A.



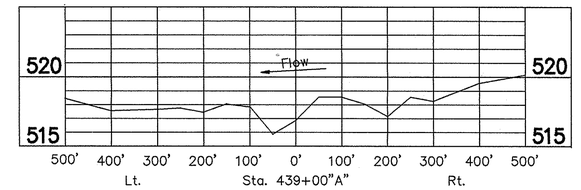
PUBLIC UTILITIES

TELEPHONE: GTE Indiana-Jasper District
505 Newton Street
Jasper,In.

POWER: Public Service Co. of Indiana, Inc.
533 West Main Street
Mitchell,In.

HYDRAULIC DATA

DRAINAGE AREA	35.7 SQ. MI.
Q_{100}	5,800 CFS
ELEVATION AT Q_{100}	530.7 MSL
BACKWATER	0.3 FT.
VELOCITY AT Q_{100}	6.2 FT./SEC.
WATERWAY OPENING REQUIRED BELOW Q_{100} ELEVATION (STR.)	931 SQ. FT.
WATERWAY OPENING PROVIDED	931 SQ. FT.
MINIMUM LOW STRUCTURE ELEVATION	532.7 MSL
SKEW	40 DEG. (LT.)
EXISTING WATERWAY OPENING BELOW Q_{100} ELEVATION (STR.)	893 SQ. FT.
EXISTING LOW STRUCTURE	531.9 MSL
EXISTING BACKWATER	0.4 FT.
SCOUR DEPTH (100 YR.)	6.5 FT.
LOW SCOUR ELEVATION (100 YR.)	510.5 MSL



Stream Profile
No Scale

LAYOUT

CONTINUOUS PRESTRESSED CONCRETE I-BEAM BRIDGE
3 SPANS: 1@48'-6, 1@53'-0, 1@48'-6
SKEW: 40°00'00" LT. 42'-0 CLEAR ROADWAY
U.S. 150 OVER LICK CREEK

INDIANA DEPARTMENT OF TRANSPORTATION

ORANGE COUNTY

SCALE: As Noted DATE: 19

SUBMITTED FOR APPROVAL: _____

DRAWING: C1 OF C SHEET: 13 OF 15
PROJECT: STP-024-4(018)
BRIDGE CONTRACT NO.
BRIDGE FILE: 150-59-7306

DESIGNED _____ CHECKED _____
DRAWN SLG 5/93 CHECKED _____
REVISED _____ CHECKED _____
SHEET REVISED: JUNE 16, 1992

150LAYO/30

Attachment 2

Archaeological Reports

And

SHPO Concurrence Letters

Phase Ia Archaeological Field Reconnaissance: INDOT Project STP-024-4(018), Disposal of Excess Land Parcel Along US 150 West in Orange County, Indiana

prepared by:

Karstin Carmany M.A.
Cultural Anthropologist/Staff Archaeologist

approved by:

(August 19, 2002)

Anthony W. Adderley M.S., RPA
Principal Investigator
Landmark Archaeological and Environmental Services, Inc.
518 South Main Street
Sheridan, Indiana 46069
317-758-9301

for

Indiana Department of Transporation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204-2228

Landmark Archaeology, Inc. Project #02IN0033-P1r01

Management Summary

In response to a request by the Indiana Department of Transporation, a review of all pertinent archaeological literature and a Phase Ia archaeological field reconnaissance has been conducted for the proposed disposal of an excess land parcel along US 150 West in Orange County, Indiana.

The Phase Ia archaeological field reconnaissance for the proposed project was conducted on August 13, 2002 by Karstin Carmany and Jessica Fork of Landmark Archaeological and Environmental Services, Inc. No previously unregistered archaeological sites were found during the reconnaissance; however, it was found that the entire project area is located in well drained alluvial soils.

Based on the results of the Phase Ia field reconnaissance and other available data, the proposed project was found to be located in an area containing well drained alluvial soil that have the potential to contain deeply buried archaeological deposits. Therefore, it is recommended that a Phase Ic subsurface reconnaissance be performed on the entire area to determine if there are deeply buried archaeological deposits that meet the criteria established for inclusion to the State or National Registers of Historic Places. Federal and State environmental provisions concerning the identification of archaeological resources have been accomplished, and it is recommended that a Phase Ic be performed prior to any action taken regarding the property.

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Project Description

In response to a request by the Indiana Department of Transporation, a Phase Ia archaeological field reconnaissance has been conducted for the proposed disposal of an excess land parcel along US 150 in Orange County, Indiana. The project is located in the SW 1/4 of the SE 1/4 of the SW 1/4 of the SE 1/4 of Section 28 and the NE 1/4 of the NW 1/4 of the NE 1/4 of Section 33, Township 2 North, Range 1 West in Paoli Township as shown on the USGS 7.5' French Lick, Indiana topographic quadrangle (Figure 1). This project is approximately 10,269 square meters (110,534 square feet), which totals approximately 1.03 hectares (2.55 acres).

The purpose of this study was to locate archaeological resources within the project area and determine their potential eligibility for listing in the Indiana Register of Historic Sites and Structures (IRHSS) or the National Register of Historic Places (NRHP).

Natural Setting

The project is located in the Crawford Upland bedrock physiographic unit (Schneider 1966) and within the Escarpment Section of the Shawnee Hills Natural Region (Homoya 1985). Portions of the project are underlain by Mississippian shale, siltstone, and limestone (Gutschick 1966). The surface deposits within the project lie within Paleozoic Rocks Formation (Wayne 1966) and are in the general physiographic unit known as the Crawford Upland (Schneider 1966). The project is within the Lower White River, East Fork watershed (Kingsbury 1970). The Pre-Euroamerican vegetation of the area was primarily oak-hickory forest (Petty and Jackson 1966).

The project is in Crider-Caneyville-Frederick general soil association, which consists of gently sloping to very steep, deep and moderately deep, well drained soils that formed in loess and in the underying residuum of limestone (Wingard, Jr. 1984: General Soils Map). The specific soil type in the project area is Haymond silt loam (Hd). This is a nearly level, deep, well drained soil on bottom lands that is frequently flooded and that was formed in alluvial deposits (Wingard, Jr. 1984).

Cultural Overview

The evidence for Paleo-Indian peoples (prior to 8000 B.C.) in eastern North America includes several types of lanceolate fluted and unfluted points as well as a diverse assemblage of chipped stone tools. During late glacial and early post-glacial times these tools were used to exploit large game such as caribou, musk oxen, mammoth, and mastodon as well as scarce edible plants. Paleoindian occupations of the surrounding area are known only from isolated artifacts in disturbed/plowzone contexts with the absence of any other associated artifacts or deposits (Tankersley 1987). Small sites with no evidence for permanent structures and low artifact densities imply high mobility and band-level

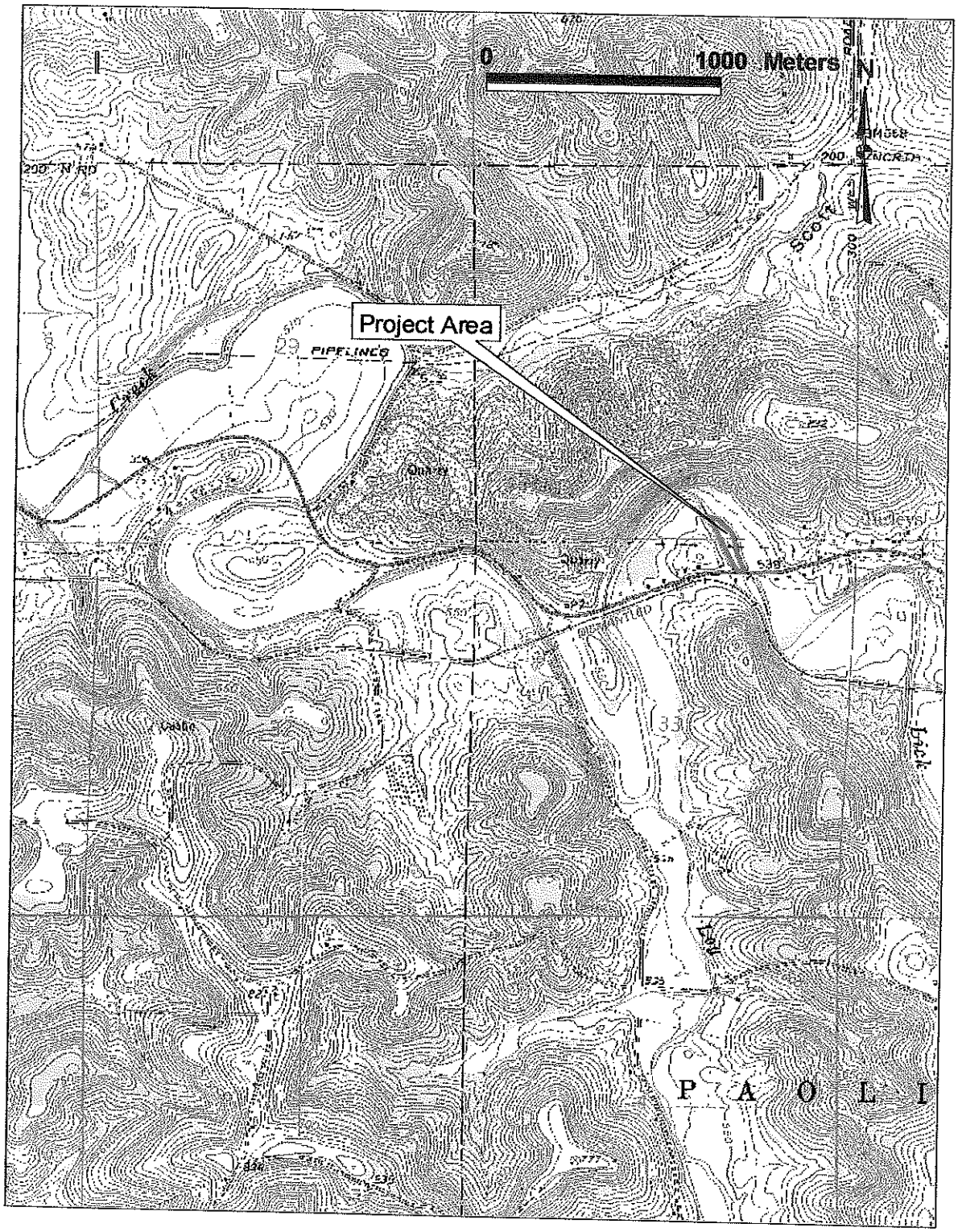

Figure 1: Project Location Map as Shown on the USGS 7.5' French Lick, Indiana Topographic Quadrangle

social organization. While the number and distribution of Paleoindian artifacts in Indiana are well documented, to date, no in situ sites have been documented in the state.

Warmer climate and the extinction of large game brought about as a result of environmental changes during the early post-glacial times spawned new traditions. The Archaic Period (ca. 8000 – 6000 B.C.) marks a time of transition from specialized hunting and limited foraging toward more regionally focused subsistence strategies that were more diverse drawing on a greater range of resources. Subsistence during this period was based on hunting and gathering, with increasing importance placed on riverine resources through time. Larger sites or base camps of this period tend to be located on river terraces and elevated landforms near marshes and wetlands; however, smaller sites are common on uplands as well.

Adaptation to local environments and further utilization of available resources continued with the introduction of pottery, marking the transition to the Woodland Period (ca. 1000 B.C. - A.D. 1000). Also marking this transition is an increasing importance of burial ceremonialism. Long distance trade networks, especially along the major rivers, flourished by the Early and Middle Woodland, bringing exotic goods and knowledge to local peoples. Intensive hunting and gathering appears to have been supplemented by cultivation of squash and gourd and the indigenous cultigens sunflower, sumpweed, and goosefoot. The increasing importance of burial ceremonialism and earthwork construction flourishes during the Early and Middle Woodland; however, its importance seems to diminish during the Late Woodland.

In some portions of Indiana, Late Woodland cultures existed until contact with Euroamericans. However, some areas of Indiana, mainly the areas along the Ohio and lower Wabash Rivers, were populated by Mississippian (ca. 1000 A.D. – Contact) peoples. The forty-hectare Angel Mounds site and associated villages, hamlets, and camps are located in the southwestern tip of the state along the Ohio and Wabash Rivers. The Angel Mounds site represents a palisaded town with platform mounds, plazas, rectangular house remains, and a main occupation date between 1200 and 1400 A.D. Distinctly less complex Mississippian sites of the Murphy and Vincennes complexes are located along the lower Wabash River in Illinois and Indiana (Griffin 1978:550). The Caborn-Welborn phase of Mississippian, with more dispersed and unfortified settlements, replaces earlier Mississippian occupations in the Ohio/Wabash area after A.D. 1450 and continues until the time of European exploration of eastern North America (Griffin 1983:288).

Post-Euroamerican Contact (A.D. 1650-Present)

Historically, the first recorded people in the area now referred to as Orange County were Native Americans. The Shawnee had a village recorded by Guernsey as Kingbilly's Village. Guernsey also recorded several Indian trails in the area along the numerous creeks and streams, including the Lananzokimiwi Trail. He also recorded Captain Kirby's Road, later known as the Cincinnati Trace (Figure 2). The area was

ceded to the United States government through a series of treaties including the 1803 Treaty of Fort Wayne and the 1804 Treaty of Vincennes (Guernsey 1932).

Orange County was the last county to be organized under the Territorial Government in 1815. By 1818 the county's boundaries reflected their current state. Due to the rugged terrain, agriculture was not a prosperous venture and the economy has relied on tourism and small manufacturing (Taylor et al. 1989:336-337).

Paoli was designated as the County Seat in 1816 and was predominately settled by Quaker families led by Jonathan Lindley, a wealthy Carolina businessman who platted the town in 1811. The town was named after the son of the North Carolina governor who died prior to Lindley's migration (Taylor et al. 1989:338).

Historic maps of the project area show two county roads and a church near the project area (Figure 3).

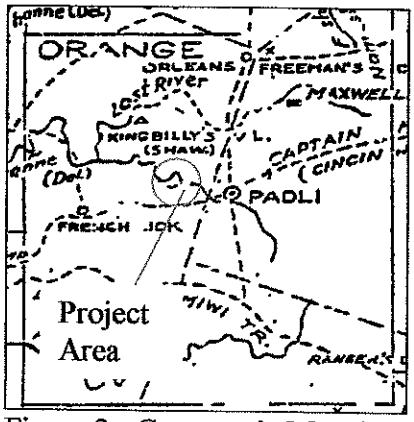

Figure 2: Guernsey's Map (1932) of the Project Area

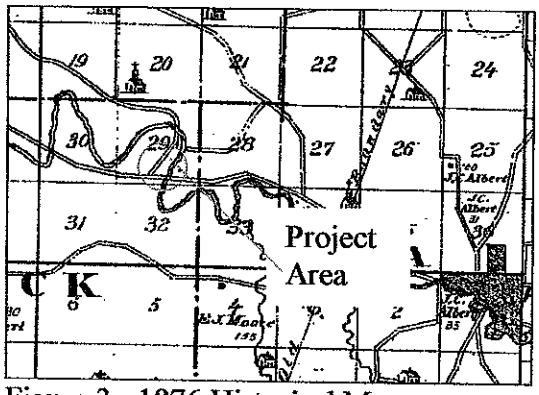

Figure 3: 1876 Historical Map of the Project Area

Archaeological Records Check

Records at the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology (DHPA) show at least 603 archaeological sites in Orange County. A review of archaeological site registrations and pertinent archaeological literature, conducted at DHPA prior to the field investigations, revealed that two surveys have taken place within a mile of the project area. One was conducted for Texas Eastern Pipeline, which located sites 12-Or-279 through 12-Or-282 within a mile of the project area; however, the report was not found in the files at DHPA. The other survey was conducted by Indiana State University for the replacement of the bridge carrying US 150 over Lick Creek that is located adjacent to the project area. No sites were recorded as a result of this survey (Adderley 1995).

There are seven previously recorded sites with a mile of the project area (Table 2).

Table 1: Sites Located Within One Mile of the Project Area (DHPA 2002)

Site #	Site Description	Recommendations
12-Or-279	Multi-component—Early Archaic, Late Woodland, Mississippian Resource Procurement Camp	Tested
12-Or-280	Unidentified Pre-Euroamerican Contact Lithic Scatter	No Further Work Needed
12-Or-281	Unidentified Pre-Euroamerican Contact Lithic Scatter	No Further Work Needed
12-Or-282	Multi-component—Early to Late Archaic, Middle Woodland Resource Procurement Camp	No Further Work Needed
12-Or-392	No Information Available	
12-Or-393	No Information Available	
12-Or-459	Middle Woodland Isolated Find	None Given

There is no site density information available for this environmental zone. There are no National Register of Historic Places sites or Indiana Register of Historic Sites and Structures sites in or immediately adjacent to the project area (DHPA 1999).

Field Reconnaissance

Methodology

Methodology was determined by the surface visibility, amount of previous disturbance, terrain, and vegetation found within the project area.

Surface visibility was estimated to be below 30%, and the area was relatively undisturbed. Therefore, the area was surveyed using shovel probes at 10 m (32.8 ft) intervals that were 30 cm in diameter and excavated down to 35-50 cm (Figure 4). All soil from the shovel probes was thoroughly troweled and hand sifted in search of artifacts. Radial shovel probes were placed in each cardinal direction 5 m (16.4 ft) from all positive shovel probes in order to determine site boundaries or until the project boundaries had been reached. All artifacts, expect fire-cracked rock and brick (which were counted), were collected from each positive shovel probe.

If artifacts were recovered, they were cleaned and initially analyzed at the laboratory of Landmark Archaeological and Environmental Services, Inc. Unless otherwise requested by the landowner, artifacts will be returned to INDOT where a determination regarding permanent curation will be made.

Results of the Reconnaissance

Karstin Carmany and Jessica Fork of Landmark Archaeological and Environmental Services, Inc. conducted the Phase Ia archaeological field reconnaissance on the excess land parcel on August 13, 2002.

The project area is bounded by US 150 to the south, Lick Creek to the west and north, and a steeply sloped rise to the west. The area was covered with approximately six foot tall weeds, which reduced ground visibility to 0%. The entire project area was surveyed on a 10-meter grid using shovel probes.

No archaeological resources were located during this survey. However, it should be mentioned that a recent burn pile was located during the survey with evidence of burned lumber and tress stumps. The area around the burn pile was thoroughly examined and several shovel probes were placed around the area on a 5-meter grid. These shovel probes revealed no evidence of buried archaeological deposits, indicating that the pile had been brought to the area for burning.

All shovel probes in the area revealed well drained alluvial soils. Due to the recent drought which has caused the ground to become extremely hard, it was not possible to take all shovel probes down to 50 cm below surface. Therefore, three auger probes were placed within the project area (Figure 4) to determine the nature of the alluvial soils. All three auger probes were taken to a depth of 1.1 meters (the length of the auger probe handle) and revealed similar profiles, which were 0-10 cm below surface of a 10YR 4/4 silt loam, 10-40 cm below surface of a 10YR 5/4 silt loam, and 40-110 cm below surface of a 10YR 5/6 silt loam. This soil profile indicates that the alluvial soils in the area are well drained, and well drained alluvial soils have the potential to contain deeply buried archaeological deposits.

Based on the well drained, alluvial soils within the project area, it is recommended that a Phase Ic subsurface reconnaissance be conducted over the entire area (Figure 5).

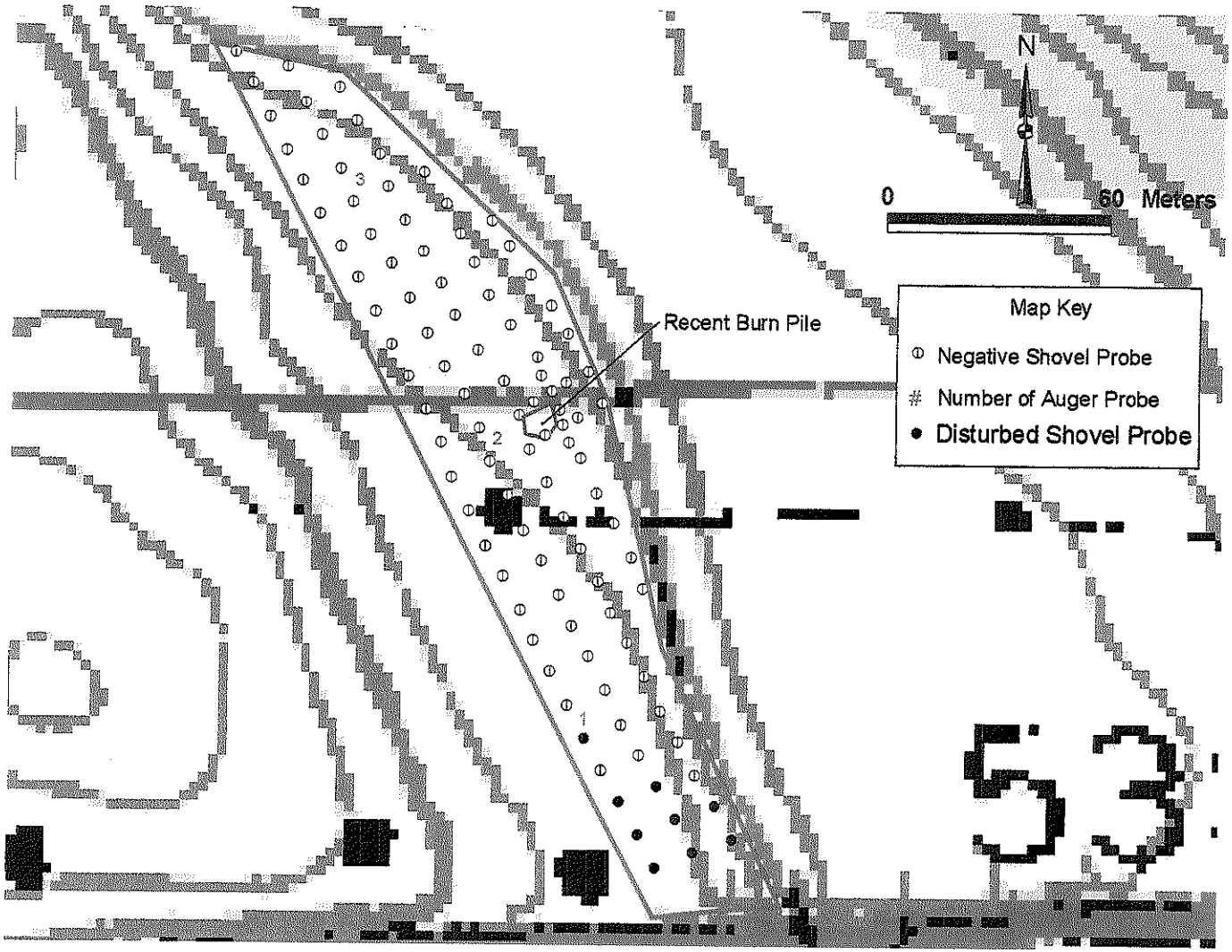

Figure 4: Sketch Map of Survey

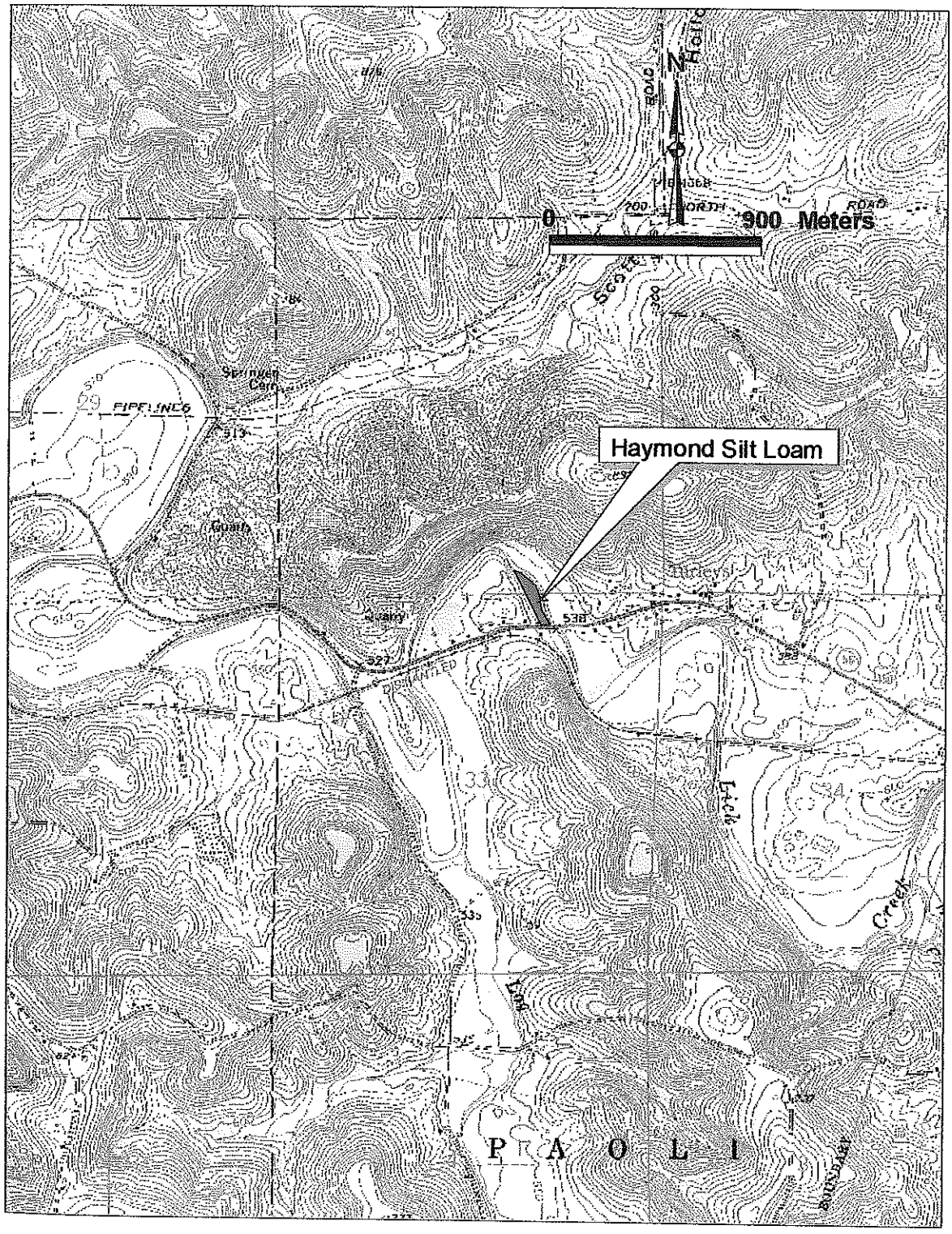

Figure 5: Map of Well Drained Alluvial Soils within the Project Area as Shown on the 7.5' USGS French Lick, Indiana Topographic Quadrangle

Recommendations

Based on the results of the Phase Ia field reconnaissance and other available data, the proposed project was found to be located in an area containing well drained alluvial soil that have the potential to contain deeply buried archaeological deposits. Therefore, it is recommended that a Phase Ic subsurface reconnaissance be performed on the entire area to determine if there are deeply buried archaeological deposits that meet the criteria established for inclusion to the State or National Registers of Historic Places. Federal and State environmental provisions concerning the identification of archaeological resources have been accomplished, and it is recommended that a Phase Ic be performed prior to any action taken regarding the property.

The study was conducted per guidelines in "The Management of Archaeological Resources, The Airlie House Report" (McGimsey and Davis 1977), and the "Indiana Archaeological Report Guidelines, 1989", issued by the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology. The study is in compliance with recent amendments to the Indiana Historic Preservation Act (IC 14-21-1). The archaeological records check, Phase Ia field reconnaissance, and the report and recommendations have been accomplished or directly supervised by a Professional Archaeologist meeting the standards set forth by the U.S. Department of the Interior.

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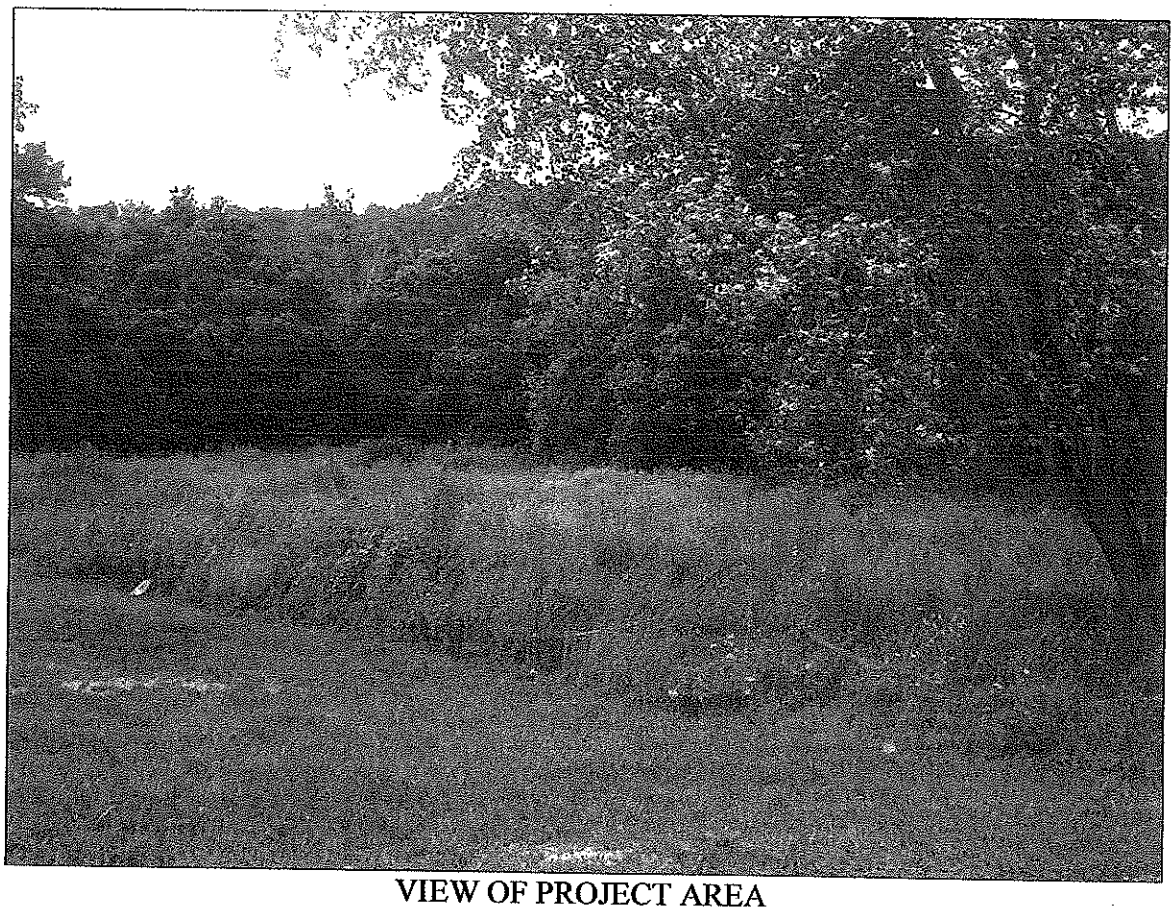

VIEW OF PROJECT AREA

French Lick Quad

2041723

GEOARCHAEOLOGICAL SUBSURFACE INVESTIGATIONS PROJECT STP-024-4(018) RELATED TO SALE OF EXCESS LAND PARCEL 2 ALONG US150 IN ORANGE COUNTY, INDIANA

By

David Holycross

Submitted to:

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Environmental Assessment Section
Division of Preliminary Engineering and Environment
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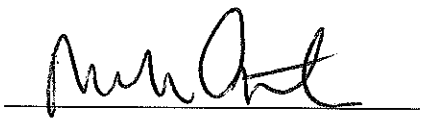
Indianapolis, Indiana 46204-2249

Submitted by:



Mark Cantin, M.A.
Assistant Director
Anthropology Laboratory
Indiana State University
Terre Haute, IN 47809

June 7, 2004

Indiana State University Anthropology Laboratory
Cultural Resource Management Report 04-15

GEOARCHAEOLOGICAL SUBSURFACE INVESTIGATIONS PROJECT STP-024-4(018) RELATED TO SALE OF EXCESS LAND PARCEL 2 ALONG US150 IN ORANGE COUNTY, INDIANA

Project Description and History of Investigations

The Indiana Department of Transportation proposes the disposal of an excess land parcel (approximately 2.55 acres or 1.03 ha) previously acquired for the construction and relocation of a bridge carrying US 150 West over Lick Creek in Orange County, Indiana. This parcel is located in the SW 1/4 of the SE 1/4 of the SW 1/4 of the SE 1/4 of Section 28 and the NE 1/4 of the NW 1/4 of the NE 1/4 of Section 33, Township 2 North, Range 1 West in Paoli Township as shown on the USGS 7.5' French Lick Quadrangle (Figure 1).

A Phase Ia archaeological reconnaissance was previously conducted by Landmark Archaeological and Environmental Services, Inc. (Carmany 2002). No archaeological sites were found, but alluvial settings with the potential for buried cultural deposits were identified.

INDOT requested this facility to conduct an assessment of buried site potential via a Giddings hydraulic soil probe in advance of trenching by addressing the relative age of soils and environments of sediment deposition. In agreement with INDOT and DHPA, two cores were recommended to be extracted from alluvial settings within the project area. Two primary alluvial units were identified as a result of investigations of the proposed US150 project area: 1) historic or post-settlement alluvium and 2) older Holocene alluvium and an associated buried soil. Historic alluvium was found throughout the Core 1 profile, and the upper 1.2 m of Core 2. Based on these findings, the excavation of a series of backhoe trenches was recommended at 60 m intervals. Trenching was largely to be limited to the western margin of the parcel where older Holocene alluvium and a buried soil was encountered. Additionally, one trench was recommended to be staggered to the east to potentially detect the edge of the identified buried soil (Holycross and Cantin 2004).

A Phase Ic subsurface reconnaissance resulted in the identification of four geomorphic units within the project parcel. These units are an historic unit (UI), a late Holocene unit (UII), an early to middle Holocene unit (UIII) and Pleistocene deposits (UIV).

Soil-Geomorphic Setting

The project area is located in the Crawford Upland physiographic zone. This zone is characterized as a maturely dissected upland plateau with ridge and valley topography. Landforms within this part of the state consist of narrow interfluves and deeply incised drainages (Schnieder 1966). This portion of Orange County, which remained unglaciated during the Pleistocene, is representative of the Crawford Upland. The quad is dominated by a rugged ridge-and-valley system, with relief of 350' typical and a well-integrated dendritic drainage system is present.

The bedrock consists of the Pennsylvanian Raccoon Creek Group, or Mississippian Blue River, Stephensport and West Baden Groups shale, sandstone, and limestone (Gray et al. 1970; Gray

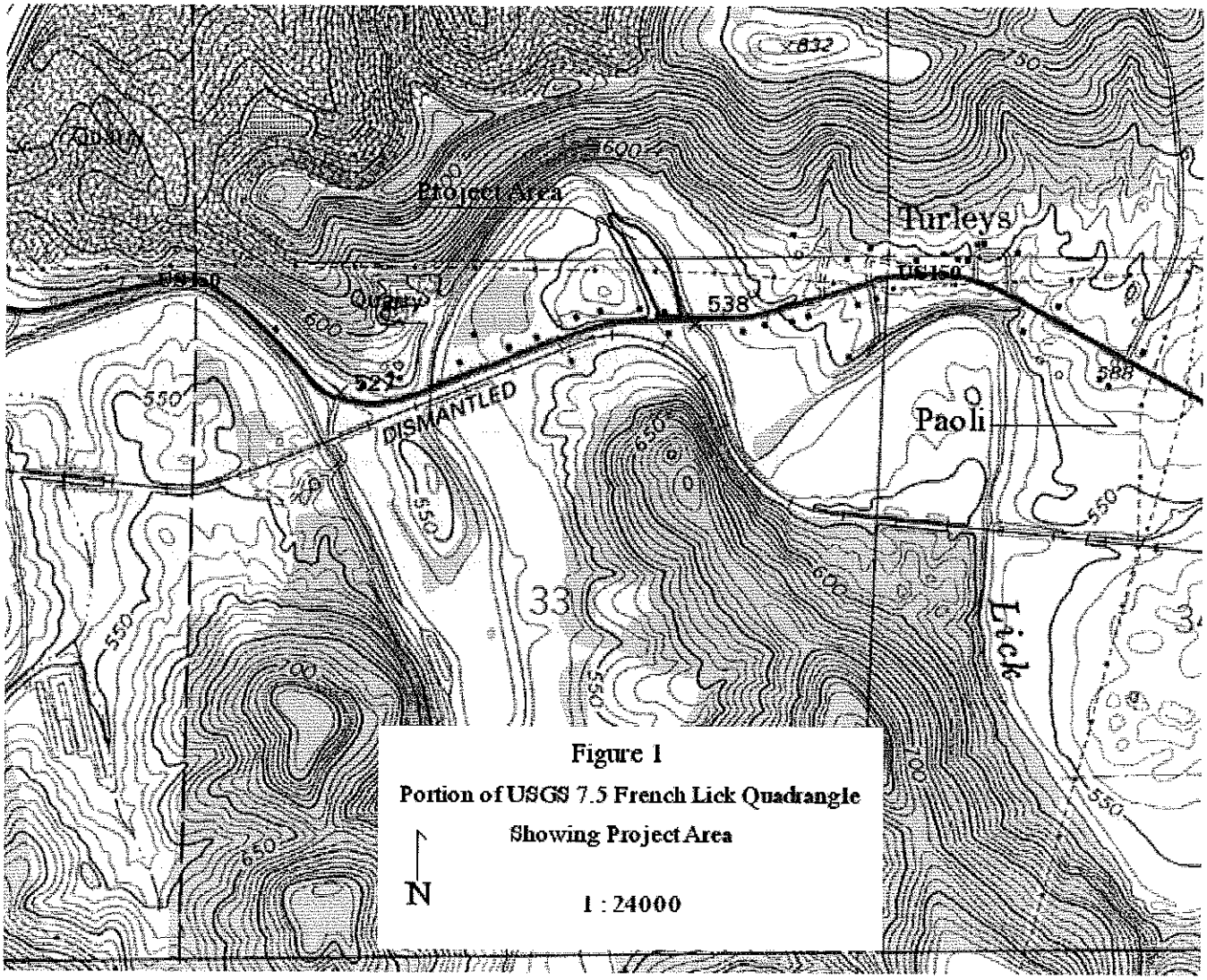


Figure 1

Portion of USGS 7.5 French Lick Quadrangle

Showing Project Area

1 : 24000

1989). Mantling bedrock within the project area are unconsolidated deposits which include Recent alluvium of the Martinsville Formation and Illinoian alluvium/colluvium/lacustrine sediments of the Prospect Formation. No loess is mapped on the 1^0 x 2^0 geologic map of the area (Gray et al. 1970).

The project is within the Lick Creek basin which is approximately 15 linear kilometers (25 river kilometers) in length. The Lick Creek headwaters begin about twenty linear kilometers southeast of Prospect. The Lick Creek/Lost River confluence is located approximately 6.7 km west of the project area, just south of an existing bridge carrying US 150 over the Lost River. The Lick Creek drainage flows across a floodplain of limited relief and up to approximately 250 m wide in the project area north of US 150. Landforms within the project parcel consist of a floodplain bounded by a subdued natural levee to the east and a terrace to the west. This terrace gives way to an upland ridge which rises sharply above the floodplain.

Soils of the general project area are of the Crider-Caneyville-Fredrick soil association, which are described as gently sloping to very steep, deep and moderately deep, well-drained soils that form in loess and underlying limestone residuum (Soil Survey Staff 1984). More specifically, the mapped soil type is Haymond silt loam, frequently flooded (Hd). Haymond silt loam is a nearly level, well drained soil on bottom lands that is subject to flooding (Soil Survey Staff 1984). It is an Inceptisol that is characterized by an Ap-Bw-C profile. Haymond series soils are described as occurring on floodplains, floodplain steps, and natural levees (Soil Survey Division 2001). Haymond silt loam is along active drainage channels and extensive portions of the Lost River and Lick Creek floodplains, making it one of the dominate alluvial soils mapped in this area. Nearby upland soils include Crider silt loam, 6 to 12 percent slopes, eroded (CrC2) and Crider-Caneyville silt loams, 12 to 18 percent slopes, eroded. The Crider series consists of deep, well drained soils on uplands. The Caneyville series consists of moderately deep, well drained, upland soils (Soil Survey Staff 1984). Both Crider and Caneyville soil profiles consist of A horizons overlying multiple Bt horizons.

Natural and Cultural Setting

Presettlement vegetation varied in response to local and regional physiography (Lindsey et al. 1969; Sieber et al. 1989). Much of the Crawford Upland was dominated by climax oak-hickory forests. A significant exception would be in the valleys of major drainages where more mesic communities would have been established, where beech-maple stands would have been more prevalent, and beneath that canopy, a more varied understory composition. On a more local scale, ridge tops and south- and west-facing slopes would have supported oak-hickory assemblages, while north- and east-facing slopes were more mesophytic. The nearby Mitchell Plain would have supported a mesophytic community as well, and xeric "barrens" were established. The floral community would have provided a range of sustenance resources, including nuts, roots, tubers, berries, shoots, greens, and other fruits.

Most woodland and aquatic fauna native to Indiana would have inhabited this region

one acre village site was ringed with at least one stockade, and possibly a second (though it could represent an episode of rebuilding). It was occupied from ca. AD 1276-1433, which is coeval with Fort Ancient groups of southeastern Indiana, and upstream along the Ohio. A large central plaza was defined which was virtually devoid of cultural materials and features, and homesteads were confined to the perimeter of the stockade. Subsistence evidence suggests that a major portion of the diet was based on maze, supplemented by a hunting/collecting economy.

The second site is 12Or1, Cox's Woods site (Sieber et al. 1989; Redmond and McCullough 1996), which is located about one mile east of Paoli, Orange County. It reportedly consisted of an earthen enclosure some 1200' in circumference, and possibly double-walled. Within the enclosure were numerous mounds. Mounds existed outside of the enclosure as well. It was initially test-excavated in the 1940s and 1950s by Jesuit priests from West Baden college, and in the 1990s by Indiana University (Redmond & McCullough 1993 & 1996).

Methodology of Investigation

The project area was investigated March 15 and March 22, but due to inclement weather, trench excavations, descriptions, profiling, etc. were not conducted until March 23 and March 24, 2004. Final operations such as mapping trench locations and charcoal sampling were completed April 16, 2004. The crew consisted of the author (Project Supervisor), Susan Pearman and James Bays. Mark Cantin served as Principal Investigator.

In the course of the project, five trenches were excavated (Figure 2) along the floodplain/upland interface and in the Lick Creek floodplain. Trenching was conducted from a point just north of the bridge carrying US150 over Lick Creek to a point where the project parcel becomes constricted by the Lick Creek channel and private property at its northern end. Trenching was largely limited to the western margin of the parcel where older Holocene alluvium and a buried soil was encountered. Additionally, one trench was staggered to the east to potentially detect the edge of the identified buried soil (Holycross and Cantin 2004). Intervals between trenches were a maximum of 60 m, but intervals were reduced between Trench 2 and Trench 3 (40 m) and Trench 3 and Trench 4 (20 m).

Backhoe trenching was conducted in accordance with DHPA Guidelines and OSHA standards. A 1.5 m toothless bucket was utilized to excavate trenches a minimum of 5 m in length and excavated to depths where ground water, high-energy deposits or regolith/bedrock was encountered (Table 1).

Upon excavation, one trench wall was stepped for safety after initial inspection. Trench walls were scraped by Ingalls handpick or trowel and examined for the presence of cultural materials. Stratigraphic profiles were then mapped and formally described based on standard USDA soil terminology (Soil Survey Division Staff 1993). Trench locations were plotted using a Trimble GeoExplorer handheld GPS unit (NAD 83) and differential correction software. Ten liter soil

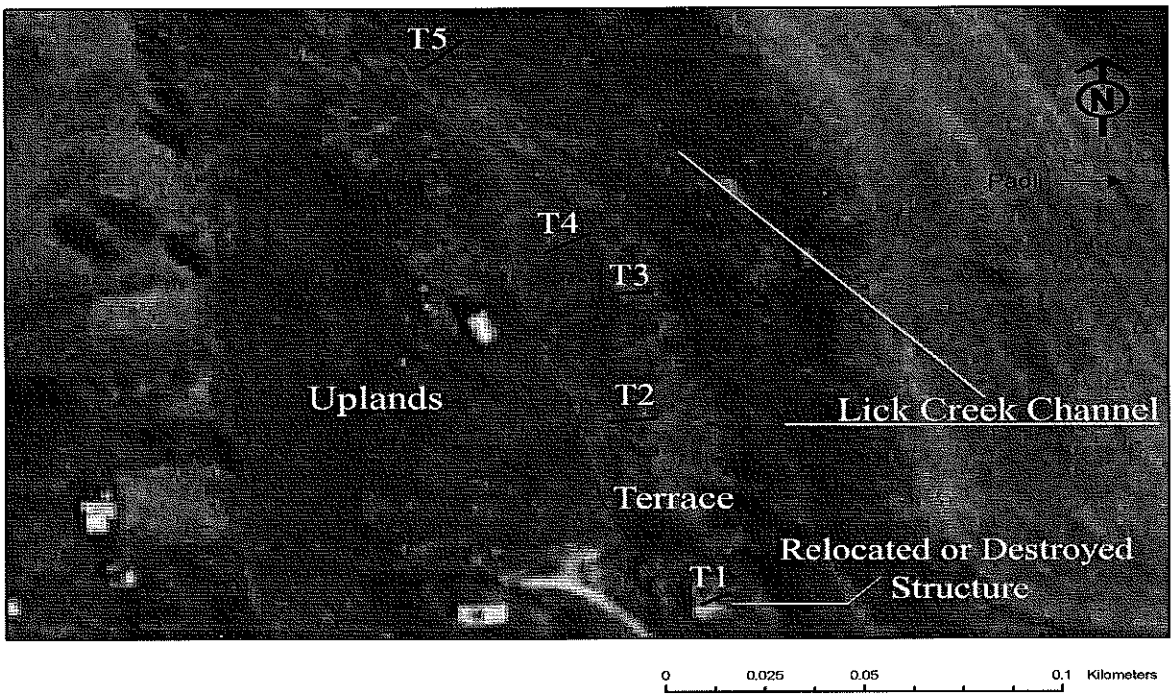


Figure 2.
Portion of French Lick Digital Orthophoto Quadrangle
Showing Location of Excavated Trenches

samples were collected and transported back to ISUAL for possible C-14 dating of wood charcoal inclusions.

Table 1. General trench dimensions.

Trench #	Length (m)	Maximum Depth (m)
1	7.60	2.95
2	9.3	2.5
3	10.6	2.7
4	11.35	2.5
5	9.3	2.6

Trench Descriptions

Trench 1

Trench 1 (Figure 3) was excavated on a slightly elevated position along the floodplain/upland interface just north of the bridge carrying US150 over Lick Creek. This was near the location of an historic structure appearing on the 1965 and 1997 USGS French Lick Topographic Quadrangles and 1998 French Lick Digital Orthophoto Quadrangle (DOQ). The structure is no longer present and was apparently destroyed or moved from the project parcel.

The excavated soil profile was not characteristic of a Haymond silt loam pedon (A-Bw-C), but rather that of an older Alfisol such as the Crider or Caneyville soils mapped (Soil Survey Staff 1984) along the margins of the project parcel. No cambic B (BW) horizons were identified, but Bt horizons were instead present. These horizons result from the weathering, translocation and accumulation of clays down into the soil profile and are present in Alfisol soil profiles. Mottling was more extensive in terms of size and quantity in the lower portion of the profile than seen elsewhere with the exception of Trench 2. No prehistoric cultural materials were identified in Trench 1 and material associated with the former structure was limited to remnants of an old sewer pipe identified in the eastern end of the trench. A formal description is provided for the Trench 1 profile in Table 2.

where coring had previously recovered evidence of a buried soil (Holycross and Cantin 2004). Excavations revealed a complex of two different soil profiles that represent an Inceptisol and an Alfisol. The shape, orientation and sorting of deposits suggest this is very likely the result of alluvial deposition converging with down-slope or colluvial deposition. The Ab-2Bt1-2Bt2 strata have a downward trend; Bt horizons reflect a wedge shape, and these deposits have poorer sorting than would be expected with primary alluvial deposition.

The Inceptisol had a weakly developed profile (A-Bw-C) that generally correlates with the description for Haymond silt loam, frequently flooded (Soil Survey Staff 1984). While mottling was very limited and fine in size, they were distinct when contrasted to the surrounding matrix.

A buried A horizon (Ab) was identified with a downward trend that is particularly expressed in the eastern portion of the trench. In the western portion of the trench, this buried A horizon is welded to overlying younger deposits. Underlying this A horizon were at least two discrete argillic (Bt) horizons. These horizons varied in thickness and exhibit downward trends from west to east. The downward trend of these strata has resulted in considerable variability in below surface depth. As was the case with Trench 1 mottling was more extensive in terms of size and quantity in the lower portion of the profile than seen elsewhere in the project area. No prehistoric cultural materials were identified in Trench 2. A formal description for the trench profile is provided in Table 3.

Table 6. US 150 Trench 5 - Lick Creek Floodplain.

UTM West End: N4269397 E541670 UTM East End: N4269407 E541681

Depth	Description	Horizon	Unit
0-55 cm bs	10YR3/4 (dark yellowish brown) silt loam Moderate, fine to medium granular structure Clear Boundary	A	I
Thins east to west. Max. thickness ca. 132 cm.	10YR4/4 (dark yellowish brown) silt loam with 10YR5/4 (yellowish brown) silt loam and 5YR4/6 (yellowish red) silty clay beds Massive structure Few, fine 5YR3/3 (reddish brown) to 5YR2.5/1 (black) iron accumulations Clear Boundary	C1	I
Downward sloping trend west to east. Max. exposed thickness 48 cm. 212/245-260 cm bs	10YR4/4 (dark yellowish brown) loam Massive structure Common, fine 5YR3/3 (reddish brown) to 5YR2.5/1 (black) iron accumulations	C2	I

Discussion

Trenching and coring (Holycross and Cantin 2004) in the project parcel confirmed an age progression of soils from east to west. As would be expected, soils nearest to the Lick Creek channel are generally younger and weakly developed as a result of recent deposition. Soils in intermediary and farther positions from the active channel are older and better developed. Based on models for determining the relative age of Holocene alluvium (Bettis 1992; Stafford and Creasman 1998), at least four geomorphic units can be defined within the project parcel. These units have been defined on the basis of pedogenic development, oxidation characteristics and landscape position.

Unit I is a historic unit underlying the floodplain. It is represented by overbank (silt loam and silty clay loam) and lateral accretion deposits (loam, sandy loam and sand) in Trenches 3, 5 and the upper 1.5 m of Trench 4. Exposed profiles in these trenches reflect weak pedogenic development (A-

C Entisol profiles). Sediments are dark colored, and no mottling is present except that which can probably be attributed to fluctuating water tables (Trench 3 basal deposits).

Unit II is most likely a late Holocene unit represented by overbank (silt loam) deposits in the eastern portion of Trench 2, lower portion of Trench 4. Exposed profiles equating to this unit reflect weak but slightly better pedogenic development (A-Bw-C Inceptisol profiles) with cambic horizons present. This unit is dominated by a relatively high organic content (as demonstrated by typically low chroma and value Munsell colors), a lack of albic and fragic horizons, and fine mottles when present. Although, mottling is somewhat more distinctive in color than is to be expected, this is again probably attributable to the influences of ground water rather than age of the unit.

Unit III appears to be of early to middle Holocene age. This unit is represented by the bulk of the Trench 1 profile and the western half of Trench 2. Exposed profiles equating to this unit reflect stronger pedogenic development (A-Bt1-Bt2-C Alfisol profiles) with Bt horizons present. These deposits exhibit more oxidized colors and have better defined (5-15 mm) mottling features which are strong brown and yellowish-red in color. Chroma and value Munsell colors are typically higher and indicate lower organic content. This unit is confined to upland landforms.

Unit IV consists of high-energy, basal sandy loam and gravel and sandy clay loam and gravel deposits exposed in Trenches 1 and 2. These most likely represent Pleistocene bedload deposits.

These four geomorphic units represent a temporal sequence of landform development in this area of the Lick Creek valley, although this evolutionary sequence is not visible in any single trench. Unit IV (Pleistocene deposits) represents the original non-consolidated surface. This original surface was overlain in time by early to middle Holocene colluvial deposits (Unit III), and these were subsequently buried in portions of the project by late Holocene overbank deposits represented by Unit II. The final depositional event consisted of Unit I historic age overbank and lateral accretion sediments being deposited across the Lick Creek floodplain and lower areas of the terrace, along the western parcel margins, resulting in the burial of earlier geomorphic units.

historic unit (UI), a late Holocene unit (UII), an early to middle Holocene unit (UIII) and (UIV).

Archaeological Subsurface Results and Recommendation

During this reconnaissance, no previously unknown archaeological sites were discovered. The low to moderate density, wood charcoal-enriched zones (Trenches 3 and 4) do not appear to be associated with prehistoric occupations as no evidence of in-situ burning was encountered. The charcoal was unweathered and no other materials were encountered in association with the material during trench excavation, wall cleaning or matrix sampling. Wood charcoal is a frequent constituent of alluvial deposits, with natural sources being common (i.e. lightning fires) and one that is readily entrained and transported in alluvial environments. Ten liter soil samples were collected and transported back to ISUAL for possible C-14 dating of wood charcoal inclusions. This could provide for further enhancement of progressive landform development models in the Lick Creek and Lost

River valleys. Such a model will further facilitate the prediction of buried site potential.

The presence of previously identified buried soils (Holycross and Cantin 2004) was confirmed, but trenching results indicate these are spatially restricted, and no cultural materials were identified in association with these deposits. Fieldwork in the Lick Creek and Lost River Valleys (Holycross and Cantin 2004; Holycross et al 2003; Holycross and Stafford 2000) suggest that buried soils in these small upland valleys are often associated with paleochannels and colluvial units buried by later alluvium.

No further archaeological assessments of the project area are recommended. However, in the course of this project should any additional archaeological deposits be encountered, all activity in the local area should immediately cease, and a qualified archaeologist should then be notified for an on-site assessment. Such deposits may take the form of, but are not limited to, artifact concentrations, midden, features, human burials, or buried/stratified deposits in alluvial/colluvial matrices.

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Bettis, E. Arthur (1992) Soil Morphologic Properties and Weathering Zone Characteristics as Age Indicators in Holocene Alluvium in the Upper Midwest. In *Soils in Archaeology: Landscape Evolution and Human Occupation.* V. T. Holliday (editor). Smithsonian Institution Press, Washington, D.C.

Carmany, Karstin (2002). *Phase Ia Archaeological Field Reconnaissance: INDOT Project STP-024-4(018), Disposal of Excess Land Parcel Along US 150 West in Orange County, Indiana.* Landmark Archaeological and Environmental Services, Inc., Report of Investigations 02IN0033-P1r01. Sheridan, IN.

Gray, Henry H., William J. Wayne and Charles E. Wier (1970) *Geologic Map of the 1^0 x 2^0 Vincennes Quadrangle, Showing Bedrock and Unconsolidated Deposits.* Indiana Geologic Survey, Bloomington.

DNR Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology•402 W. Washington Street, W274 · Indianapolis, IN. 46204-2739
Phone 317-232-1646•Fax 317-232-0693 · dhpa@dnr.state.in.us

Joseph E. Kernan, Governor
John R. Goss, Director

HISTORIC PRESERVATION AND ARCHAEOLOGY

August 27, 2004

Curtis H. Tomak, Archaeologist
Environmental Assessment Section
Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204-2249

State Agency: Indiana Department of Transportation ("INDOT")

Re: Geoarchaeological subsurface investigation (Holycross & Cantin 06/07/04) for the sale of part of excess land parcel 2 along US 150; STP-024-4(018); CODE #3121

Dear Mr. Tomak:

Pursuant to Indiana Code 14-21-1-18 the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("DHPA") has conducted a review of the materials dated July 15, 2004, and received by the DHPA on the same day, for the above indicated project in Paoli Township, Orange County, Indiana.

Based on our analysis, it has been determined that no historic properties will be altered, demolished, or removed by the proposed project.

If any archaeological artifacts, features, or human remains are uncovered during construction, state law (Indiana Code 14-21-1-27 & 29) requires that the discovery must be reported to the Department of Natural Resources.

If you have any further questions regarding this determination, please contact our office at (317) 232-1646. Questions about archaeological issues should be directed to Jim Mohow.

Very truly yours,

James A. Mohow

for Jon C. Smith
Director
Division of Historic Preservation
and Archaeology

JCS:JAM:jam

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DNR Indiana Department of Natural Resources

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Joseph E. Kernan, Governor
John Goss, Director

HISTORIC PRESERVATION AND ARCHAEOLOGY

February 17, 2004

Curtis H. Tomak, Archaeologist
Environmental Assessment Section
Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204-2249

State Agency: Indiana Department of Transportation ("INDOT")

Re: Geoarchaeological report and proposal for Phase Ic investigation (Holycross & Cantin 02/03/04) for the sale of part of excess land parcel 2 along US 150 (Project #STP-024-4[018], CODE #3121)

Dear Mr. Tomak:

Pursuant to Indiana Code 14-21-1-16 the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("DHPA") has conducted a review of the materials dated February 5, 2004, and received by the DHPA on the same day, for the above indicated project in Paoli Township, Orange County, Indiana.

We concur with the findings of the archaeological report in that, based on the evidence from the geomorphological study, the western portion of the subject parcel could contain buried archaeological deposits. Given this, a systematic subsurface reconnaissance of that area will be required.

The proposed subsurface reconnaissance methodology will be acceptable, with the following conditions:

1) If human remains are encountered, they must be treated in accordance with IC 14-21-1 and 312 IAC 22.

2) Any proposed revision of the subsurface reconnaissance methodology must be submitted to our office, in writing, for review and comment, before implementation in the field.

3) A detailed report of the methods and results of the subsurface investigation must be submitted to this office, for review and comment, within six months of the completion of fieldwork.

With these conditions, the proposed subsurface reconnaissance can proceed. This letter, or a copy of this letter, should be carried by the archaeologist in the field, so as to avoid confusion if they are challenged by law enforcement officers.

If you have any further questions regarding this determination, please contact Jim Mohow of the DHPA at (317) 232-1646.

Very truly yours,

James A. Mohow

for Jon C. Smith
Director
Division of Historic Preservation
and Archaeology

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DNR Indiana Department of Natural Resources

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Frank O'Bannon, Governor
John Goss, Director

HISTORIC PRESERVATION AND ARCHAEOLOGY

March 10, 2003

Curtis H. Tomak, Archaeologist
Environmental Assessment Section
Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204-2249

Re: Archaeological proposal for a subsurface reconnaissance (Carmany & Adderley, 1/28/03) for the sale of part of excess land parcel 2 along US 150

Dear Mr. Tomak:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C.§ 470f) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated January 29. 2003, and received by the Indiana SHPO on January 31, 2003, for the above indicated project in Paoli Township, Orange County, Indiana (Project #STP-024-4(018); Code #3121.

Based upon the documentation available at the Indiana SHPO, we are uncertain whether or not historic properties will be altered, demolished or removed by this project. For your information, we do not have any survey information regarding the buildings and structures in Orange County. We observed that there appears to be a building immediately adjacent to or perhaps partially within the parcel to be sold based on the boundaries shown on the topographic map in the archaeological survey. To enable us to share our views on whether or not that building might be historic, please provide us photographs of the building for our analysis, and please indicate on a close-up site plan the area that is currently owned by the state to be sold in relation to the footprint of the building.

The plan for the archaeological subsurface reconnaissance will be acceptable, with the following conditions:

1) If human remains are encountered, they must be treated in accordance with IC 14-2-1-1 and 312 IAC 22.

2) Any proposed revision of the investigation methodology must be submitted to our office, in writing, for review and comment.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call our office at (317) 232-1646. Questions about archaeological issues should be directed to Jim Mohow. Questions about historic buildings or structures pertaining to this project should be directed to Michelle M. Daleiden-Fischer.

Very truly yours,

James A. Mohow

FOR Jon C. Smith
Director, Division of Historic Preservation and Archaeology

JCS:JAM:MDF:mdf

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Attachment 3
Red Flag Investigation

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

Mitchell E. Daniels, Jr., Governor
Michael B. Cline, Commissioner

Date: December 10, 2012

To: Kelly K. Cummins
Environmental/Scoping Engineer
INDOT - Vincennes District
Vincennes District
3650 S US 41
Vincennes, IN 47591

From: Hazardous Materials Unit
Environmental Services
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

Re: RED FLAG INVESTIGATION
Des. No. 8459780, US 150
Excess Parcel, LA CODE 3121 Parcel 2
Orange County, Indiana

NARRATIVE

The subject parcel was acquired by INDOT (Indiana Department of Transportation) for right-of-way purposes for Des. No. 8459780. INDOT has decided that this surplus land will not be needed for right-of-way or other transportation purposes within the foreseeable future. A legal description of parcel 2 is as follows:

A part of the southwest quarter of the southeast quarter of section 28, town 2 north, range 1 west. Also, a part of the northwest quarter of the northeast quarter of section 33, town 2 north, range 1 west, bounded and described as follows, to-wit:

Beginning at a point 268 feet west of the southeast corner of the southwest quarter of the southeast quarter of section 28, town 2 north, range 1 west, thence north 19 degrees 30 minutes east 318 feet to the low water mark on the south bank of Lick Creek, thence southeasterly with the meanderings thereof along said bank of the south line of said section, thence west 200 feet to the point of beginning.

Also, beginning at a point 268 west of the northeast corner of the northwest quarter of the northeast quarter of said section 33, town 2 north, range 1 west and running south 19 degrees 30 minutes west 473 feet to the center line of State Road #150 which point is 136 feet westerly from the northwest corner of the wing wall of the highway bridge across Lick Creek, thence easterly along the center of said highway 150 to the low water mark on the west side of said creek 167 feet, thence northerly with the meanderings along the west bank of said creek to the north line of said section, thence west 200 feet to the point of beginning.

Containing in all 3 acres, more or less. The portion of the above-described real estate which is not already embraced within public rights of way contains 2.850 acres, more or less.

SUMMARY

Infrastructure Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Religious Facilities	**N/A**	Recreational Facilities	**N/A**
Airports	**N/A**	Pipelines	**1**
Cemeteries	**N/A**	Railroads	**1**
Hospitals	**N/A**	Trails	**N/A**
Schools	**N/A**	Managed Lands	**N/A**

Explanation:

Pipelines: There is one (1) pipeline located within the ½ mile buffer. The presence of this item will not impact the sale of the parcel.

Railroads: There is one (1) railroad within the ½ mile buffer. The presence of this item will not impact the sale of the parcel.

Water Resources Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
NWI - Points	**N/A**	NWI - Wetlands	**2**
Karst Springs	**N/A**	IDEM 303d Listed Lakes	**N/A**
Canal Structures – Historic	**N/A**	Lakes	**3**
NWI - Lines	**3**	Floodplain - DFIRM	**2**
IDEM 303d Listed Rivers and Streams (Impaired)	**N/A**	Cave Entrance Density	**N/A**
Rivers and Streams	**1**	Sinkhole Areas	**2**
Canal Routes - Historic	**N/A**	Sinking-Stream Basins	**N/A**

Explanation:

NWI- Lines: There are three (3) NWI-lines located within the within the ½ mile buffer. One of which is located within the project area. Environmental Services, Ecology and Permitting, should be consulted before the sale of the parcel.

Rivers and Streams: There is one (1) river/stream (Lick Creek) located with the ½ mile buffer. The presence of this item will not impact the sale of the parcel.

NWI – Wetlands: There are two (2) NWI wetlands located within the ½ mile buffer. The presence of these items will not impact the sale of the parcel.

Lake: There are three (3) lakes located within the ½ mile buffer. The presence of these items will not impact the sale of the parcel.

Floodplain-DFIRM: There are two (2) floodplains located within the ½ mile buffer, one of which is located within the project area. Environmental Services, Ecology and Permitting, should be consulted before the sale of the parcel.

Sinkhole Areas: There are two (2) sinkhole areas located within the ½ mile buffer. The presence of these items will not impact the sale of the parcel.

Mining/Mineral Exploration Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Petroleum Wells	**N/A**	Petroleum Fields	**N/A**
Mines – Surface	**1**	Mines – Underground	**N/A**

Explanation:

Surface Mines: Mulzer Crushed Stone, Inc, which sells construction sand and gravel, is located approximately 1/3 mile northwest of the subject property. No impact is expected from the sale of the property.

Ecological Information

The Orange County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted.

Research into the Indiana Heritage database revealed no ETR species within a ½ mile radius of the subject parcel. Sale of the subject parcel is not expected to impact ETR species or high quality natural communities.

Cultural Resources

A request was made to INDOT Environmental Services, Cultural Resources, on December 5, 2012.

Hazmat Concerns Indicate the number of items of concern found within ½ mile, including an explanation why each item within the ½ mile radius will/will not impact the project. If there are no items, please indicate N/A:			
Brownfield Sites	**N/A**	Restricted Waste Sites	**N/A**
Corrective Action Sites (RCRA)	**N/A**	Septage Waste Sites	**N/A**
Confined Feeding Operations	**N/A**	Solid Waste Landfills	**N/A**
Construction Demolition Waste	**N/A**	State Cleanup Sites	**N/A**
Industrial Waste Sites (RCRA Generators)	**N/A**	Tire Waste Sites	**N/A**
Infectious/Medical Waste Sites	**N/A**	Waste Transfer Stations	**N/A**
Lagoon/Surface Impoundments	**N/A**	RCRA Waste Treatment, Storage, and Disposal Sites (TSDs)	**N/A**
Leaking Underground Storage Tanks (LUSTs)	**N/A**	Underground Storage Tanks	**N/A**
Manufactured Gas Plant Sites	**N/A**	Voluntary Remediation Program	**N/A**
NPDES Facilities	**N/A**	Superfund	**N/A**
NPDES Pipe Locations	**N/A**	Institutional Control Sites	**N/A**
Open Dump Sites	**N/A**		

Explanation: There are no items of concern located within the ½ mile buffer.

RECOMMENDATIONS

INFRASTRUCTURE: N/A

WATER RESOURCES: Environmental Services, Ecology and Permitting, should be consulted before the sale of the parcel.

MINING/MINERAL EXPLORATION: N/A

ECOLOGICAL INFORMATION: N/A

CULTURAL RESOURCES: A request was made to INDOT Environmental Services, Cultural Resources, on December 5, 2012.

HAZMAT CONCERNS: N/A

INDOT Environmental Services concurrence: _____(Signature)

Prepared by:
Karen Frantsi
NEPA Specialist
INDOT Environmental Services

Graphics:

A map for each report section with a ½ mile radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

GENERAL SITE MAP SHOWING PROJECT AREA: YES

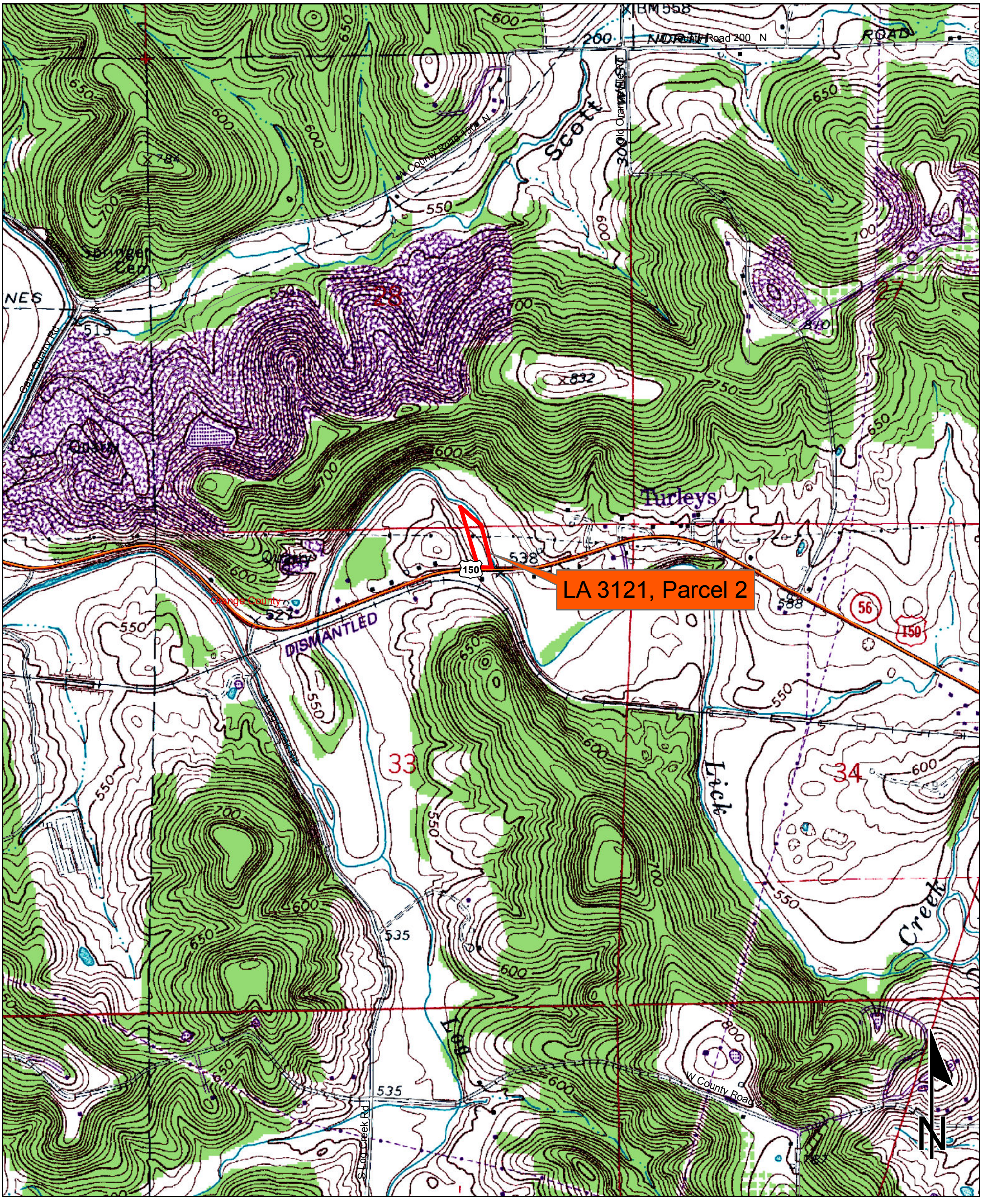
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: NO

Red Flag Investigation -Location
US 150
LA 3121, Excess Parcel 2
Orange County, Indiana



0.25 0.125 0 0.25 Miles

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

FRENCH LICK QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)

Red Flag Investigation -Infrastructure
US 150
LA 3121, Excess Parcel 2
Orange County, Indiana

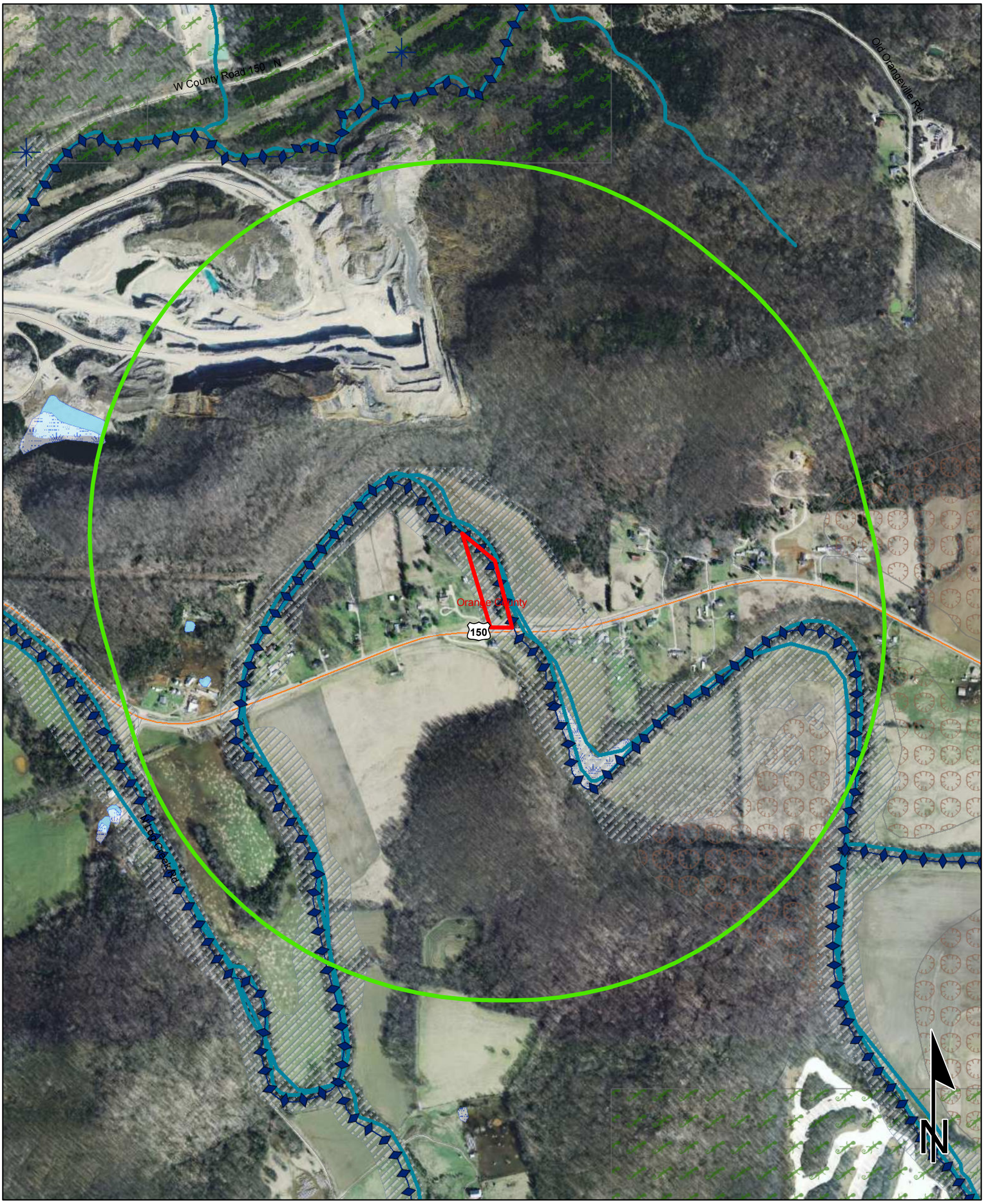
0.15 0.075 0 0.15 Miles

Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

- Religious Facility
- Airport
- Cemeteries
- Hospital
- School
- Recreation Facility
- Pipeline
- Railroad
- Trails
- Managed Lands
- County Boundary
- Project Area
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation -Water Resources
US 150
LA 3121, Excess Parcel 2
Orange County, Indiana



0.15 0.075 0 0.15 Miles

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

- NWI - Point
- Karst Spring
- Canal Structure - Historic
- NWI- Line
- Stream - Impaired
- River
- Canal Route - Historic
- Wetlands
- Lake - Impaired
- Lake
- Floodplain - DFIRM
- Cave Entrance Density
- Sinkhole Area
- Sinking-Stream Basin
- County Boundary
- Project Area
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road

Red Flag Investigation -Mining/Mineral Exploration
US 150
LA 3121, Excess Parcel 2
Orange County, Indiana

0.15 0.075 0 0.15 Miles

Sources:

Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

- Petroleum Well
- Mine - Surface
- Mine - Underground
- Petroleum Field
- County Boundary
- Project Area
- Half Mile Radius
- Interstate
- State Route
- US Route
- Local Road

Indiana County Endangered, Threatened and Rare Species List

County: Orange

Species Name	Common Name	FED	STATE	GRANK	SRANK
Platyhelminthes (Flatworms)					
Sphalloplana weingartneri	Weingartner's Cave Flatworm		WL	G4	S4
Diplopoda					
Conotyla bollmani	Bollman's Cave Milliped		WL	G5	S4
Pseudotremia indianae	Blue River Cave Milliped		WL	G4	S4
Crustacean: Malacostraca					
Crangonyx packardi	Packard's Cave Amphipod		WL	G4	S4
Orconectes inermis inermis	A Troglobitic Crayfish		WL	G5T4	S4
Crustacean: Copepoda					
Cauloxenus stygius	Northern Cavefish Commensal Copepod		WL	G1G2	SNR
Diacyclops jeanneli	Jeannel's Cave Copepod		ST	G3G4	S2
Crustacean: Ostracoda					
Dactylocythere susanae	An Ostracod		WL	G2G4	S3
Sagittocythere barri	Barr's Commensal Cave Ostracod		WL	G5	S3S4
Mollusk: Gastropoda					
Glyphyalinia latebricola	Stone Glyph			G1G2	SNR
Ellipluran: Collembola					
Arrhopalites benitus	A Springtail		WL	G1	S1
Arrhopalites bimus	Springtail		SE	G3G4	S1
Folsomia prima	Primitive Springtail		WL	GNR	S4
Onychiurus casus	Fallen Springtail		WL	GNR	S4
Onychiurus reluctus	A Springtail		WL	GNR	S4
Onychiurus subtenuis	Slender Springtail		WL	GNR	SNR
Sensillanura barberi	Barber's Springtail		WL	GNR	SNR
Sinella alata	Springtail		WL	G5	S4
Insect: Coleoptera (Beetles)					
Necrophilus pettiti	A Carrion Beetle		ST	GNR	S1?
Pseudanophthalmus youngi	Young's cave ground beetle		SR	G3G4	S3
Insect: Odonata (Dragonflies & Damselflies)					
Enallagma divagans	Turquoise Bluet		SR	G5	S3
Arachnida					
Apochthonius indianensis	Indiana Cave Pseudoscorpion		SE	G1G2	S1
Dolomedes scriptus	Lined Nursery Web Spider			GNR	S1?
Erebomaster flavescens	Golden Cave Harvestman		ST	G3G4	S2
Hesperochernes mirabilis	Southeastern Cave Pseudoscorpion		WL	G5	S4
Kleptochthonius packardi	Packard's Cave Pseudoscorpion		SE	G2G3	S1S2
Porhomma cavernicola	Appalachian Cave Spider		SE	G5	S1

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list

GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank

SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Orange

Species Name	Common Name	FED	STATE	GRANK	SRANK
Fish					
Amblyopsis spelaea	Northern Cavefish		SE	G4	S1
Amphibian					
Rana blairi	Plains Leopard Frog		SSC	G5	S1
Scaphiopus holbrookii	Eastern Spadefoot		SSC	G5	S2
Reptile					
Clonophis kirtlandii	Kirtland's Snake		SE	G2	S2
Crotalus horridus	Timber Rattlesnake		SE	G4	S2
Opheodrys aestivus	Rough Green Snake		SSC	G5	S3
Bird					
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Buteo platypterus	Broad-winged Hawk	No Status	SSC	G5	S3B
Haliaeetus leucocephalus	Bald Eagle	LT,PDL	SE	G5	S2
Lanius ludovicianus	Loggerhead Shrike	No Status	SE	G4	S3B
Mniotilta varia	Black-and-white Warbler		SSC	G5	S1S2B
Pandion haliaetus	Osprey		SE	G5	S1B
Tyto alba	Barn Owl		SE	G5	S2
Wilsonia citrina	Hooded Warbler		SSC	G5	S3B
Mammal					
Lutra canadensis	Northern River Otter		SSC	G5	S2
Lynx rufus	Bobcat	No Status	SSC	G5	S1
Myotis sodalis	Indiana Bat or Social Myotis	LE	SE	G2	S1
Nycticeius humeralis	Evening Bat		SE	G5	S1
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Bacopa rotundifolia	Roundleaf Water-hyssop		ST	G5	S1
Gonolobus obliquus	Angle Pod		SR	G4?	S2
Hydrastis canadensis	Golden Seal		WL	G4	S3
Isoetes engelmannii	Appalachian Quillwort		SE	G4	S1
Juglans cinerea	Butternut		WL	G4	S3
Penstemon canescens	Gray Beardtongue		SE	G4	S2
Rudbeckia fulgida var. fulgida	Orange Coneflower		WL	G5T4?	S2
Stenanthium gramineum	Eastern Featherbells		ST	G4G5	S1
Tragia cordata	Heart-leaved Noseburn		WL	G4	S2
High Quality Natural Community					
Forest - upland dry-mesic	Dry-mesic Upland Forest		SG	G4	S4
Forest - upland mesic	Mesic Upland Forest		SG	G3?	S3
Primary - cave aquatic	Aquatic Cave		SG	GNR	SNR

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
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Indiana County Endangered, Threatened and Rare Species List

County: Orange

Species Name	Common Name	FED	STATE	GRANK	SRANK
Other					
Geomorphic - Nonglacial Erosional Feature - Water Fall and Cascade	Water Fall and Cascade			GNR	SNR

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