

APPENDIX C

ALTERNATE EVALUATION AND TRAFFIC DATA

RECOMMENDED PREFERRED ALTERNATIVE, ALTERNATIVE 1 AND ALTERNATIVE 2 MATRIX - ROUTE 63 EIS

IMPACT SUMMARY

	Engineering Considerations *	Recommended Preferred		Alt 1		Alt 2		Recommended Preferred		Alt 1		Alt 2		Recommended Preferred		Alt 1		Alt 2	
		Westphalia	Alt 1	Alt 2	South of Westphalia		Alt 1	Alt 2	Freeburg		Alt 1	Alt 2	Vienna		Alt 1	Alt 2	Vichy		TOTALS
	Measurement																		
	New Alignment Length	6.0	5.2	5.4	6.5	6.0	5.9	5.9	9.0	8.8	9.6	9.4	12.3	11.9	13.4	11.9	11.4	10.9	44.6
	Traffic Flow (Travel Time)	5.5	4.8	5.5	5.4	5.5	5.4	5.4	8.3	8.8	8.8	8.7	11.3	10.9	12.4	10.9	11.1	10.1	45.6
	Bridges	1	2	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	42.0
	Creek/Stream/River Crossings	11	4	7	10	8	10	8	18	22	22	19	21	22	25	22	10	15	70
	Stream length impact	16,977	2,542	8,545	10,303	7,720	10,951	7,705	19,468	17,705	17,705	16,010	13,260	15,690	14,020	5,093	7,843	5,093	64,811
	Stream mitigation costs (millions)	3.4	0.5	1.7	2.1	1.6	2.0	3.2	4.0	3.2	3.2	2.9	2.4	2.8	2.8	2.5	0.9	1.4	13
	Construction costs (millions)	20.2	43.8	15.5	26.1	24.5	30.7	45.1	40.0	45.1	45.1	40.1	36.2	39.0	34.6	14.4	24.2	14.4	136.9
	Access Points	11	17	39	16	5	22	19	18	19	19	27	32	40	29	89	45	166	143
	RAW Impacts *																		
	Parcels Impacted	38	33	48	25	35	19	43	43	39	39	43	69	63	90	63	131	117	306
	Residential Displacements	2	9	6	3	8	3	7	6	7	7	7	1	2	8	2	15	1	27
	Commercial Displacements	1	2	15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	15
	ROW Costs (millions)***	3.7	4.4	9.3	3.5	5.9	3.9	6.1	5.6	6.1	6.1	6.0	6.6	6.5	8.2	6.5	9.6	5.9	29.0
	ROW - New (acres)	474	304	305	534	455	589	870	820	870	870	777	691	734	655	277	464	277	2,796
	ROW - Existing (acres)	11	12	28	0	36	0	0	0	0	0	12	78	78	86	78	96	138	226
	Environmental Impacts **																		
	Potential Section 4(f) Parklands	0	1	1	0	0	0	0	1	0	0	0	1	1	1	1	0	0	3
	Wetlands (ORAL)	8.1	4.4	1.9	1.6	2.5	1.2	2.9	2.8	3.1	3.1	2.9	20.1	20.0	22.8	20.0	0.9	1.3	33.54
	PUB (Palustrine Emergent Wetland)	0.4	0.4	0.3	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.2	0.0	0.0	0.1	0.0	0.3	0.3	3.0
	PUB (Palustrine Forested Wetland)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.6	19.6	19.6	19.6	0.0	0.0	19.6
	PSS (Palustrine Shrub Wetland)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	PUB - Ponds (Palustrine Unconsolidated Bottom)	7.8	0.8	1.7	1.6	2.5	1.2	2.7	2.8	2.9	2.9	2.7	0.5	0.4	3.1	0.4	0.6	1.0	13.28
	Riverine (Riverine Wetlands)	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Farmland	237	216	116	174	144	162	376	302	433	433	376	400	473	473	362	319	249	1,432
	Open Area	165	181	182	366	359	400	432	448	432	432	407	402	353	353	360	94	320	1,475
	Floodplain	48	28	17	0	0	0	0	0	0	0	0	121.6	67.4	67.4	127.7	5.5	5.5	174.8
	Threatened & Endangered Species	yes	yes	yes	no known	no known	no known	no known	no known	no known	no known	no known	yes	yes	yes	yes	possibly	possibly	yes
	Potential Hazardous Waste Location	2	0	7	0	3	0	0	0	0	0	0	0	0	0	0	9	5	11
	Airports	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	Cultural Resource Impacts																		
	Cemeteries	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Potential Historic/4(f) Properties ***	3	4	4	1	0	0	2	***	2	2	2	1	1	1	1	2	0	7
	Cost Estimate (millions)	27	49	26	32	32	37	49	50	54	54	49	45	44	50	44	25	31	179

*New construction links have a 750' wide corridor. Links along the existing route have a 300' wide corridor.

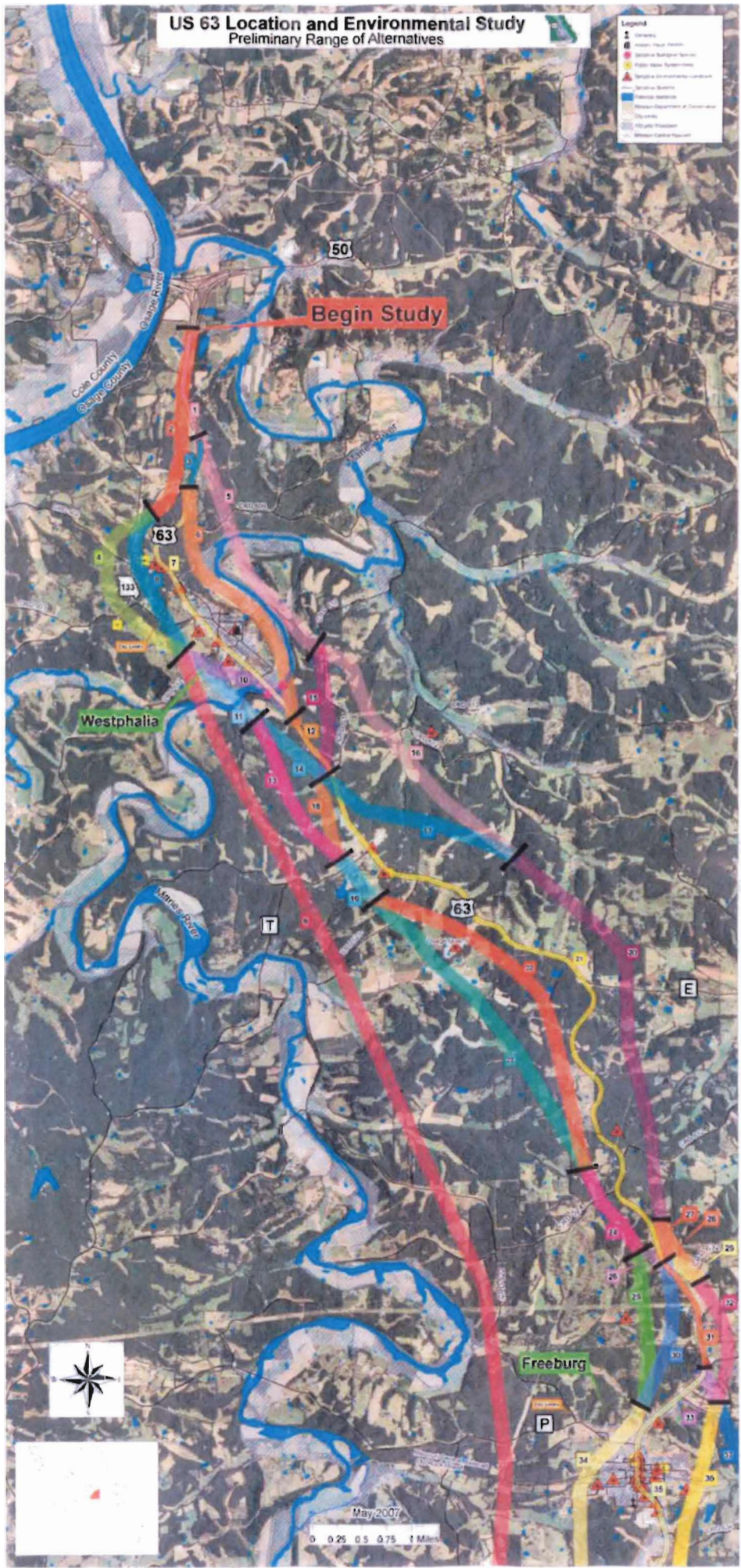
**Data based on screening only. No field data available at this stage.

***Data based on screening only. No field data available at this stage.

**** Property owner has denied permission to conduct field survey

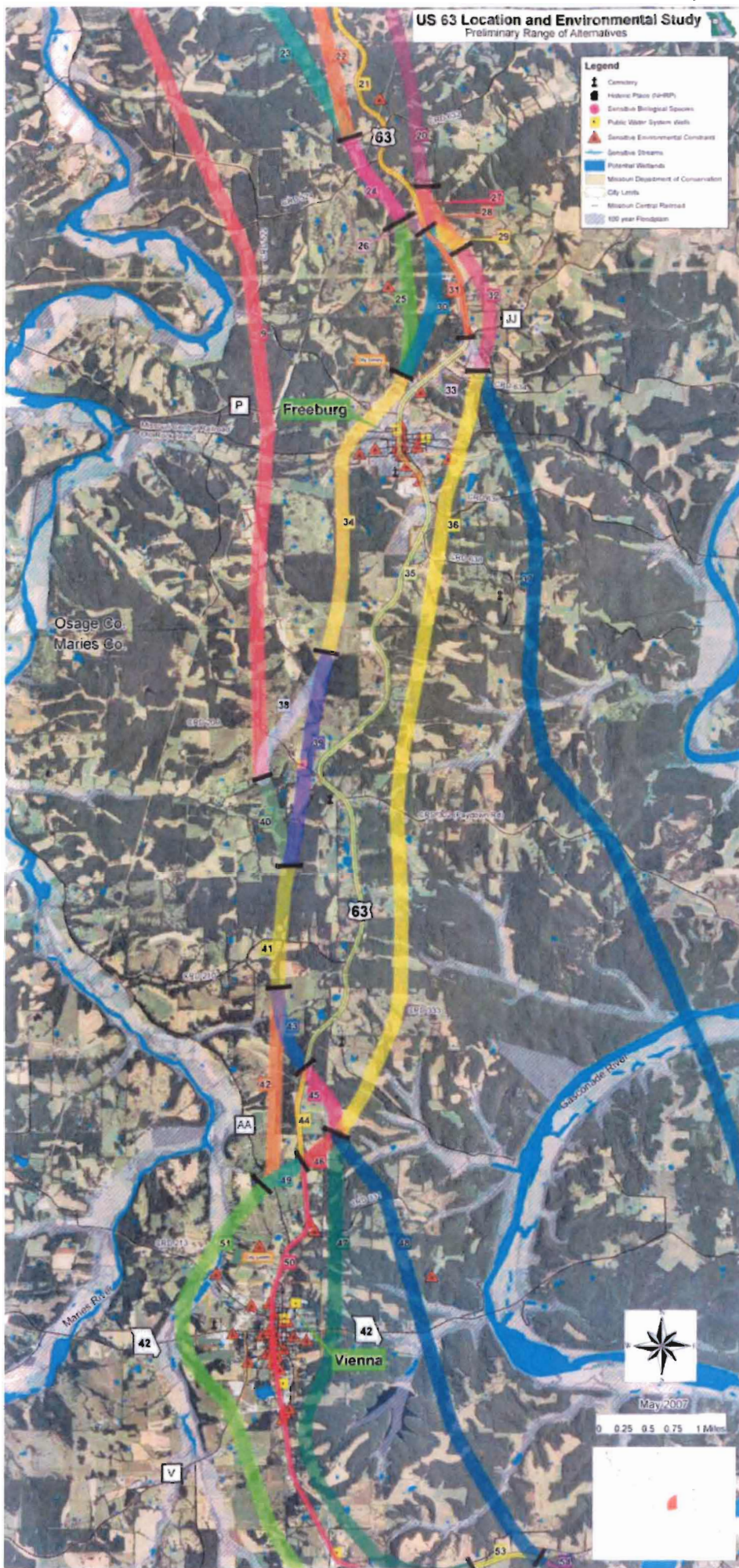
US 63 Location and Environmental Study Preliminary Range of Alternatives

- Legend
- 1 Corridor
 - 2 Project Area
 - 3 Study Area
 - 4 Study Area
 - 5 Study Area
 - 6 Study Area
 - 7 Study Area
 - 8 Study Area
 - 9 Study Area
 - 10 Study Area
 - 11 Study Area
 - 12 Study Area
 - 13 Study Area
 - 14 Study Area
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 - 44 Study Area
 - 45 Study Area
 - 46 Study Area
 - 47 Study Area
 - 48 Study Area
 - 49 Study Area
 - 50 Study Area



US 63 Location and Environmental Study Preliminary Range of Alternatives

- Legend**
- Cemetery
 - Historic Place (dHRP)
 - Sensitive Biological Species
 - Public Water System shell
 - Sensitive Environmental Constraints
 - Sensitive Streams
 - Potential Wetlands
 - Missouri Department of Conservation
 - City Limits
 - Missouri Central Railroad
 - 100 year Floodplain



[illegible]

1.55 Miles from Existing Rte. 63 in Vienna

Spring Creek Gap Conservation Area

Vichy Area

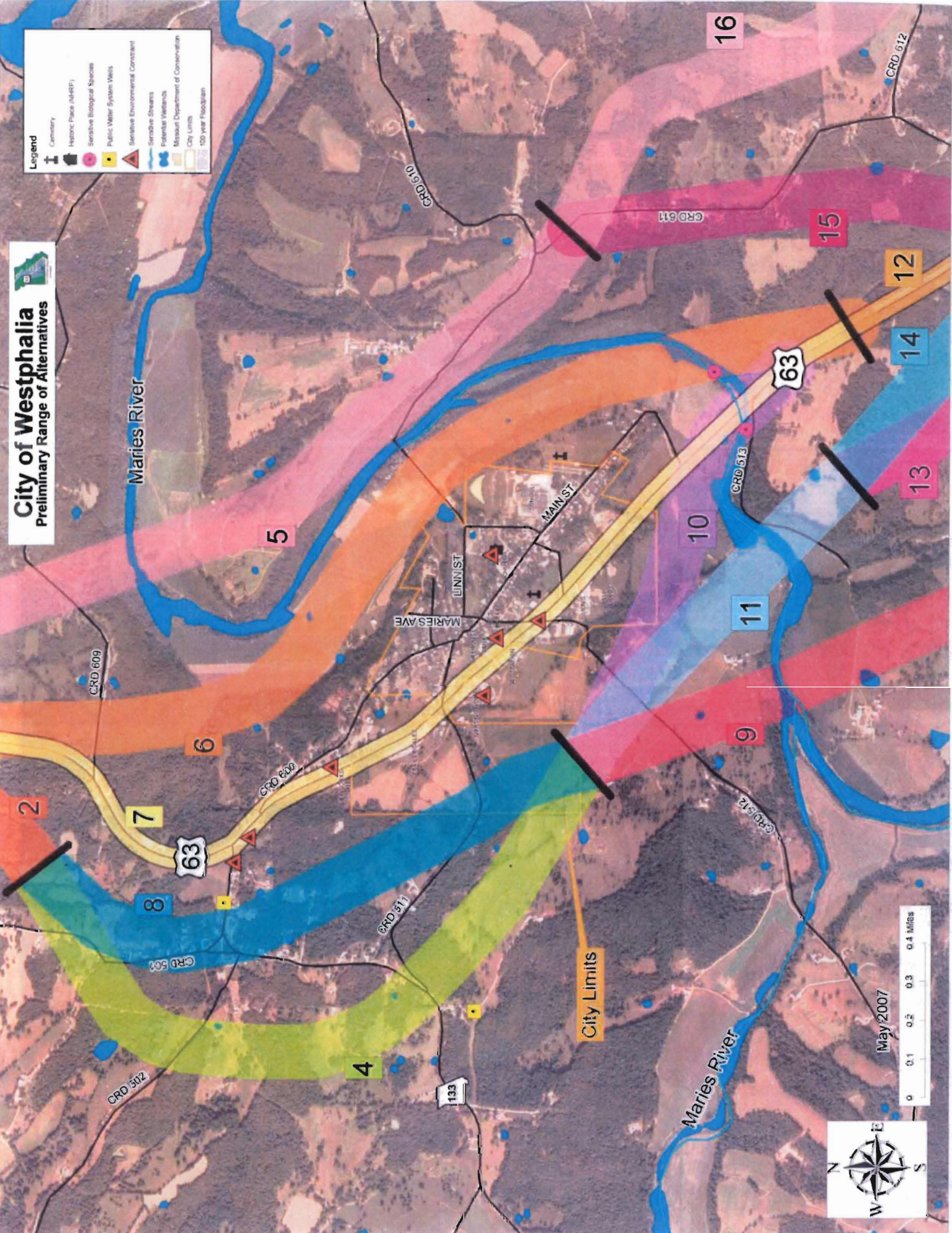
May 2007	0.25	0.5	0.75	1 Miles
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US 63 Location and Environmental Study Preliminary Range of Alternatives



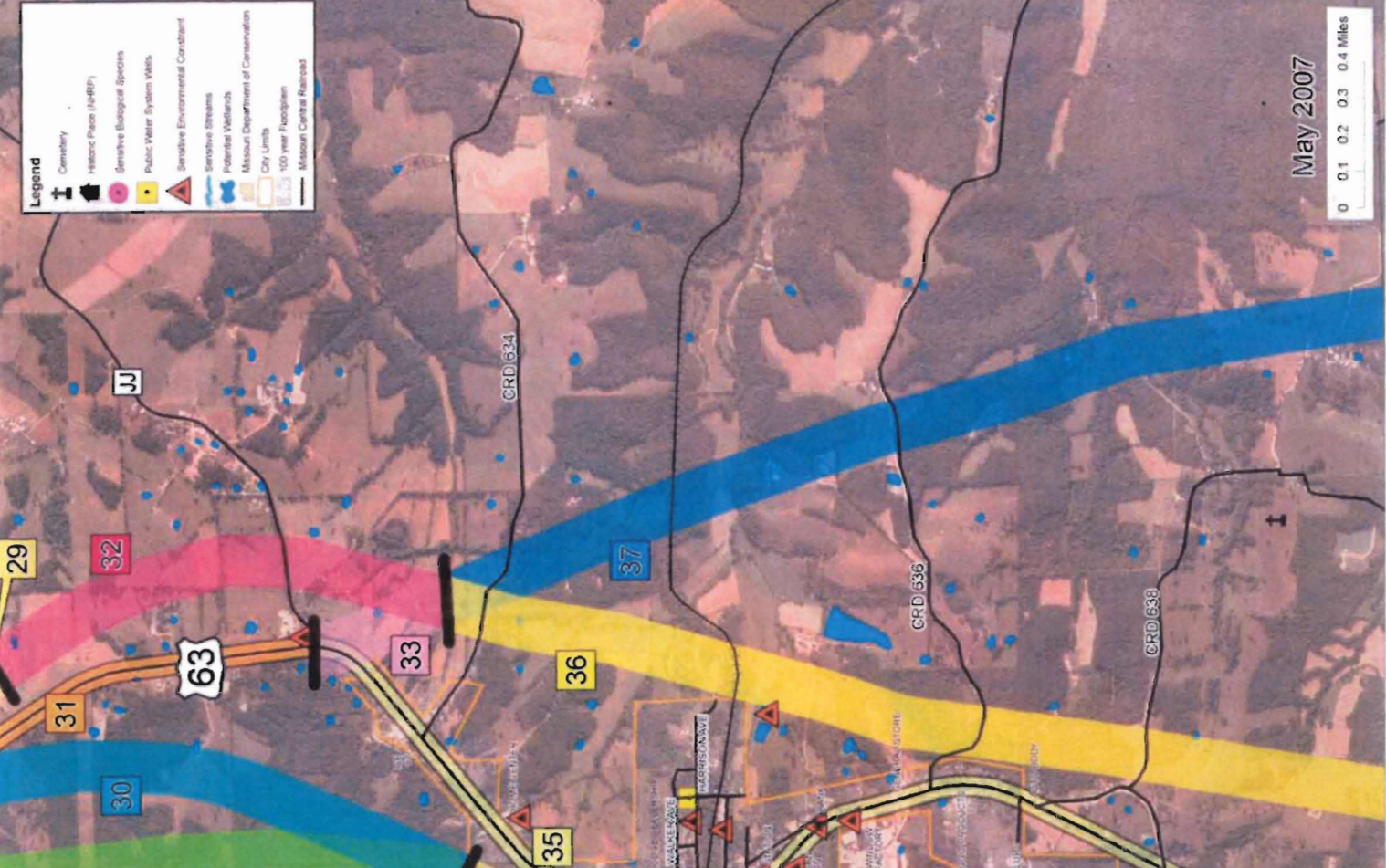
City of Westphalia **Preliminary Range of Alternatives**

- Legend**
- Century
 - Historic Place (HP)
 - Sensitive Biological Species
 - Public Water System Wells
 - Sensitive Environmental Corridor
 - Sensitive Streams
 - Potential Wetlands
 - Missouri Department of Conservation
 - City Limits
 - 100 year Floodplain



May 2007



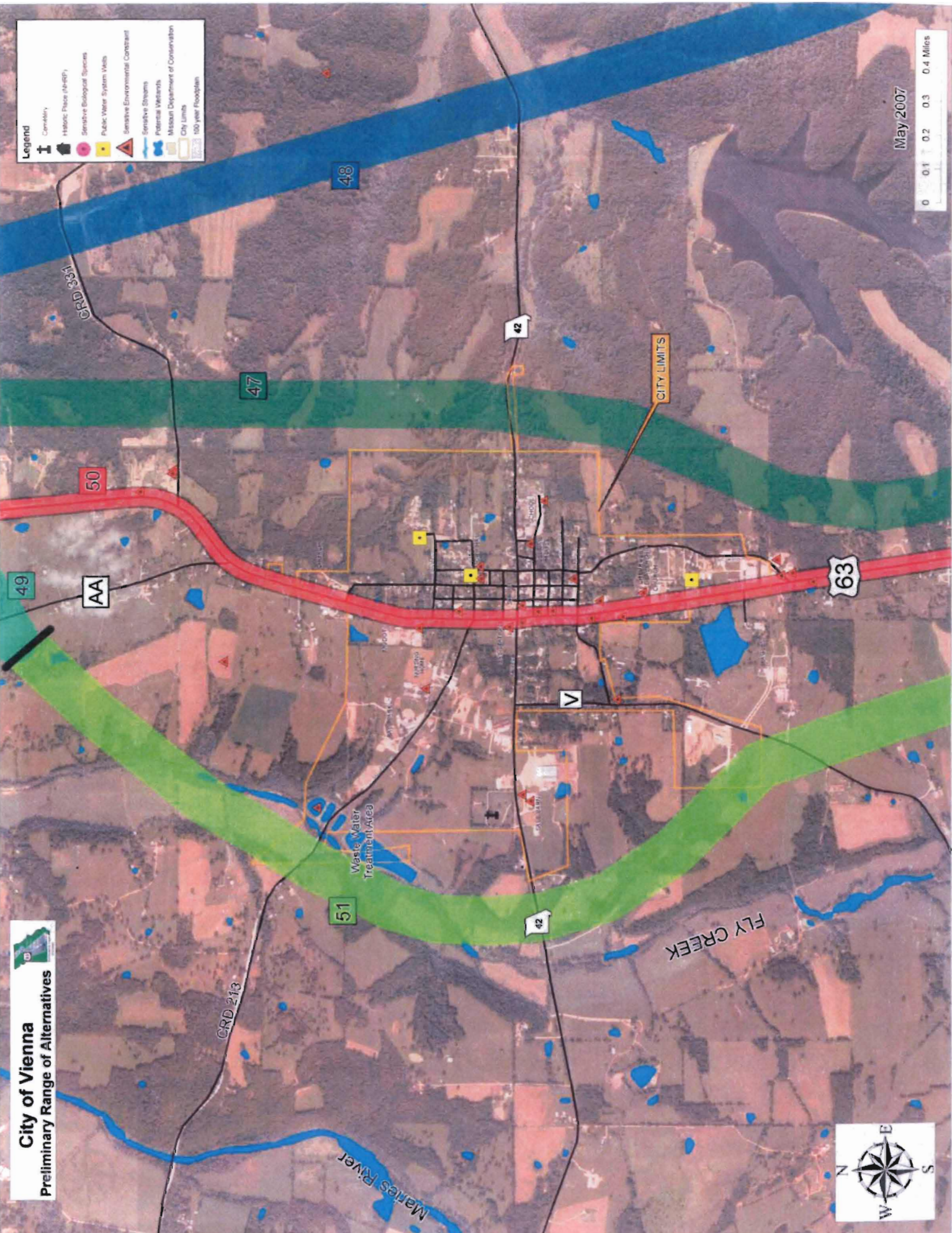


City of Vienna Preliminary Range of Alternatives

- Legend**
- City Limits
 - Historic Place (HP)
 - Sensitive Biological Species
 - Public Water System Wells
 - Sensitive Environmental Constraint
 - Sensitive Streams
 - Potential Wetlands
 - Missouri Department of Conservation
 - City Limits
 - 100 year Floodplain

May 2007

0 0.1 0.2 0.3 0.4 Miles



Vichy Area

Preliminary Range of Alternatives

Legend

 Cemetery

 Sensitive Environmental Constraint

 Sensitive Biological Species

 Public Water System Wells

 Historic Place (NHP)

 Sensitive Streams

 Potential Wetlands

 Missouri Department of Conservation

 100 year Floodplain

SPRING CREEK GAP
CONSERVATION AREA

AIRPORT

CAFE

SCENIC VIEW
PARK

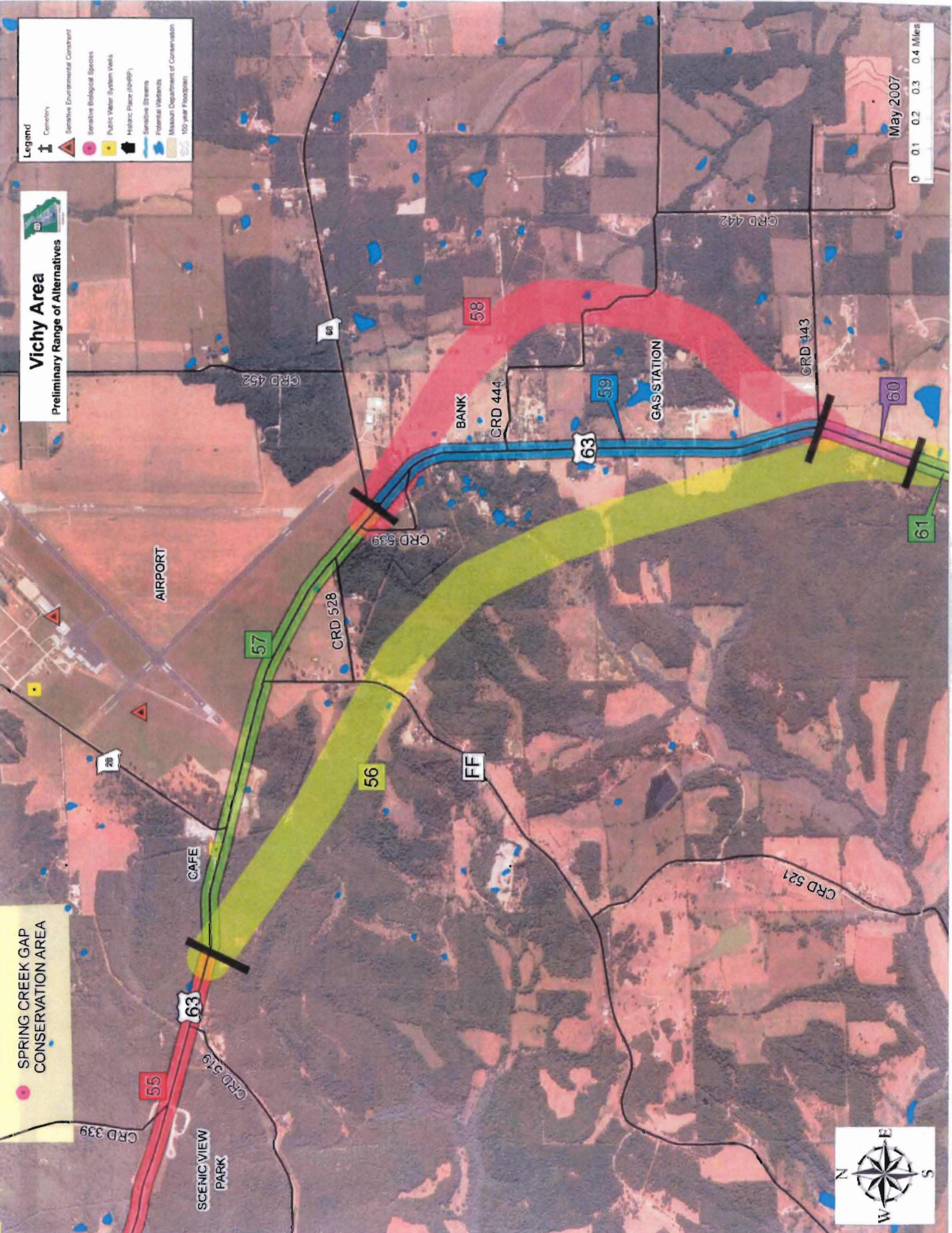
FF

BANK

GAS STATION



May 2007



US 63 Location and Environmental Study Reasonable Range of Alternatives - Westphalia Section

Legend

- Connector
- Intersecting Road
- Specialty Bridge or Structure
- Public Water System
- State Environmental Condition
- State 10 Years
- Private Property
- Minimum Displacement of Farmhouse or Land
- 100 year Floodplain
- Mountain Creek Watershed

- Alternate A (West)
- Alternate B (East)
- Connector
- Usable Existing

Begin Study

A preferred alternative can be a combination of various points on either the east, west or along existing Route 63.

Westphalia



October 2007

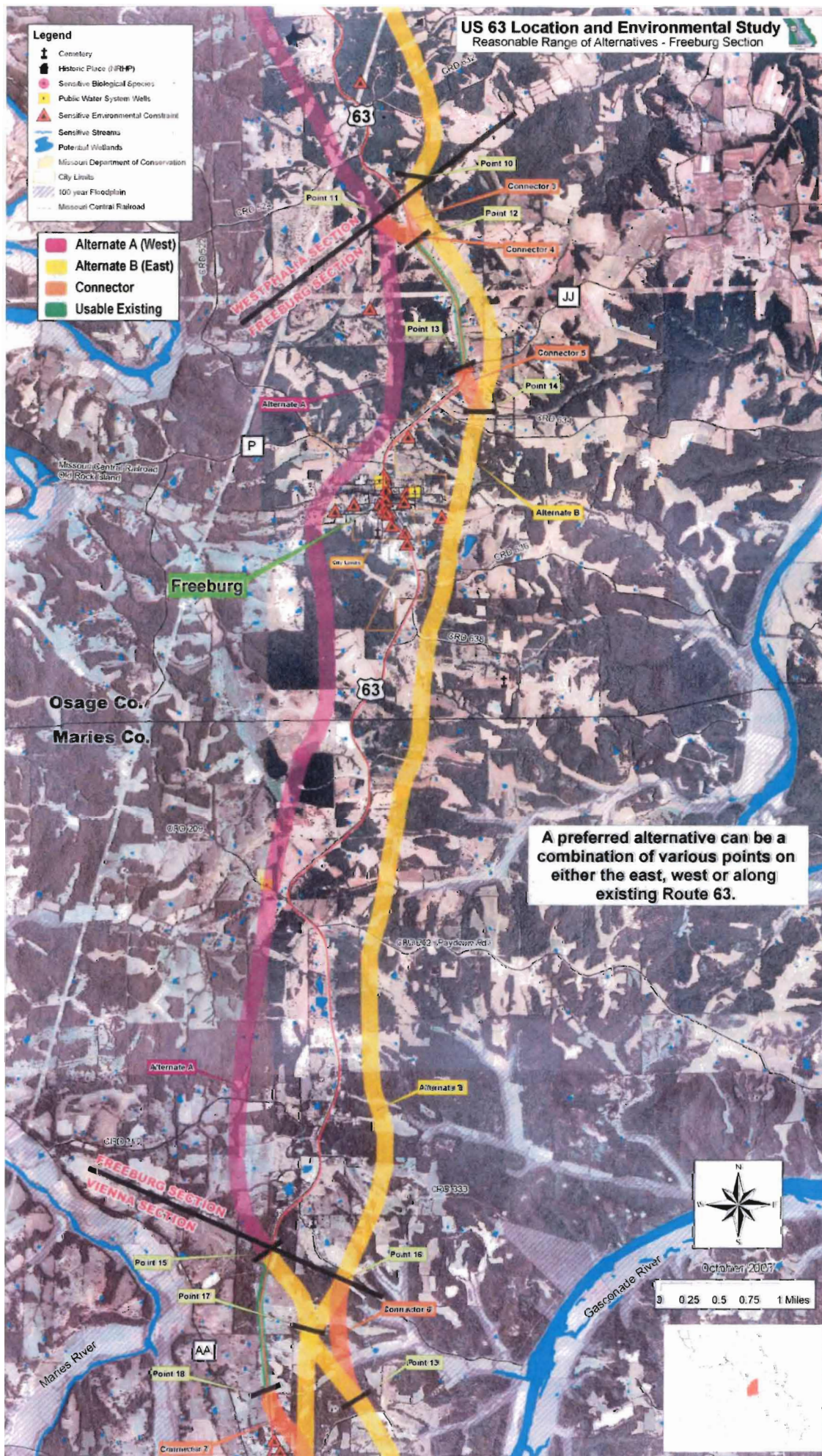
0 0.25 0.5 0.75 1 Miles



US 63 Location and Environmental Study Reasonable Range of Alternatives - Freeburg Section

- Legend**
- Cemetery
 - Historic Place (HP)
 - Sensitive Biological Species
 - Public Water System Wells
 - Sensitive Environmental Constraint
 - Sensitive Stream
 - Potential Wetlands
 - Missouri Department of Conservation
 - City Limits
 - 100 year Floodplain
 - Missouri Central Railroad

- Alternate A (West)
- Alternate B (East)
- Connector
- Usable Existing

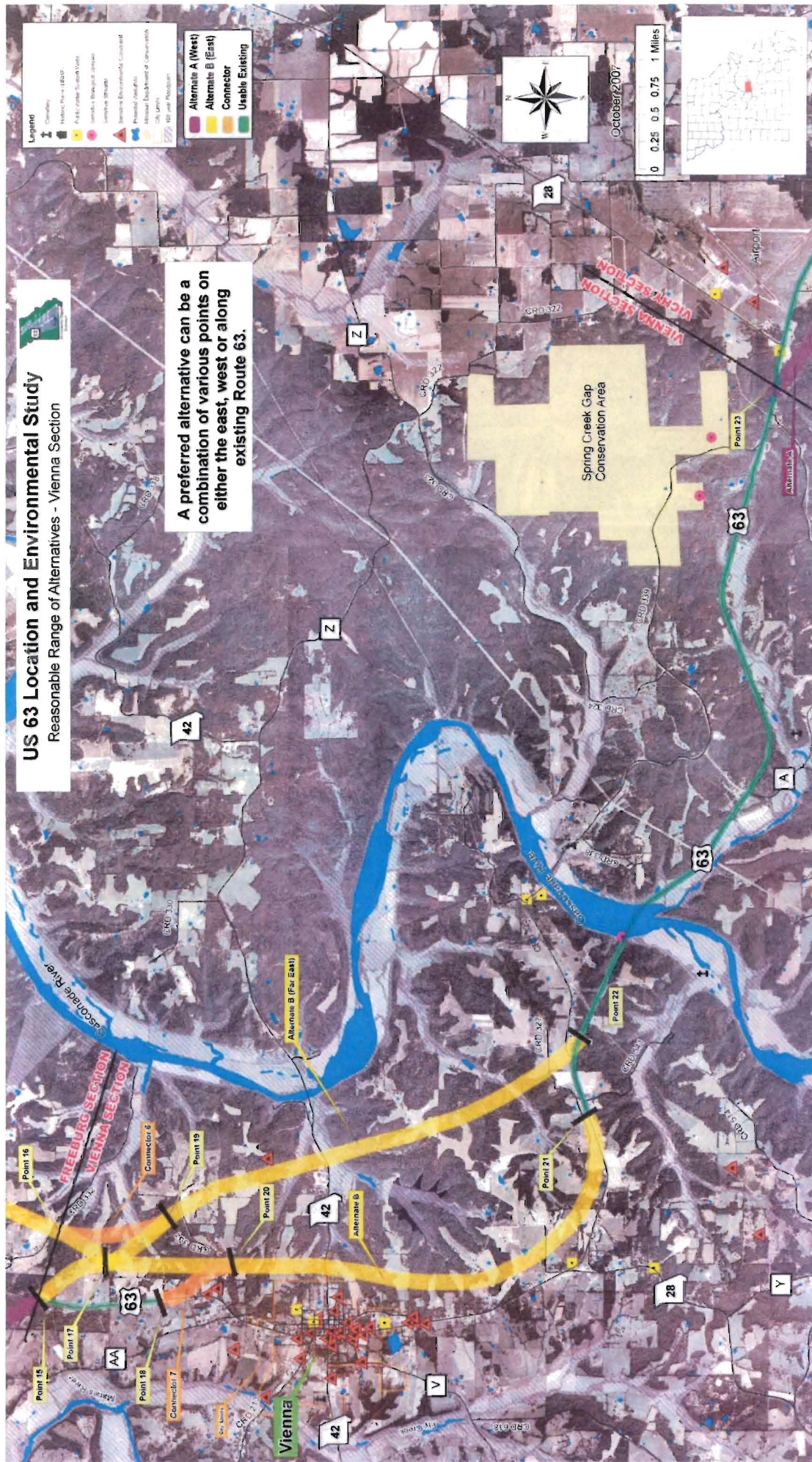


Reasonable Range of Alternatives - Vienna Section

Legend

	Community
	Madison, Plains (H&M)
	Public Order - Goodly Value
	Community - Religious & Spiritual
	Service - Strength
	Service - Environmental - Conservation
	Personal - Health
	Advanced - Environment of Consumption
	City Limits
	100 year Floodplain

 Alternate A (West)
 Alternate B (East)
 Connector
 Usable Existing

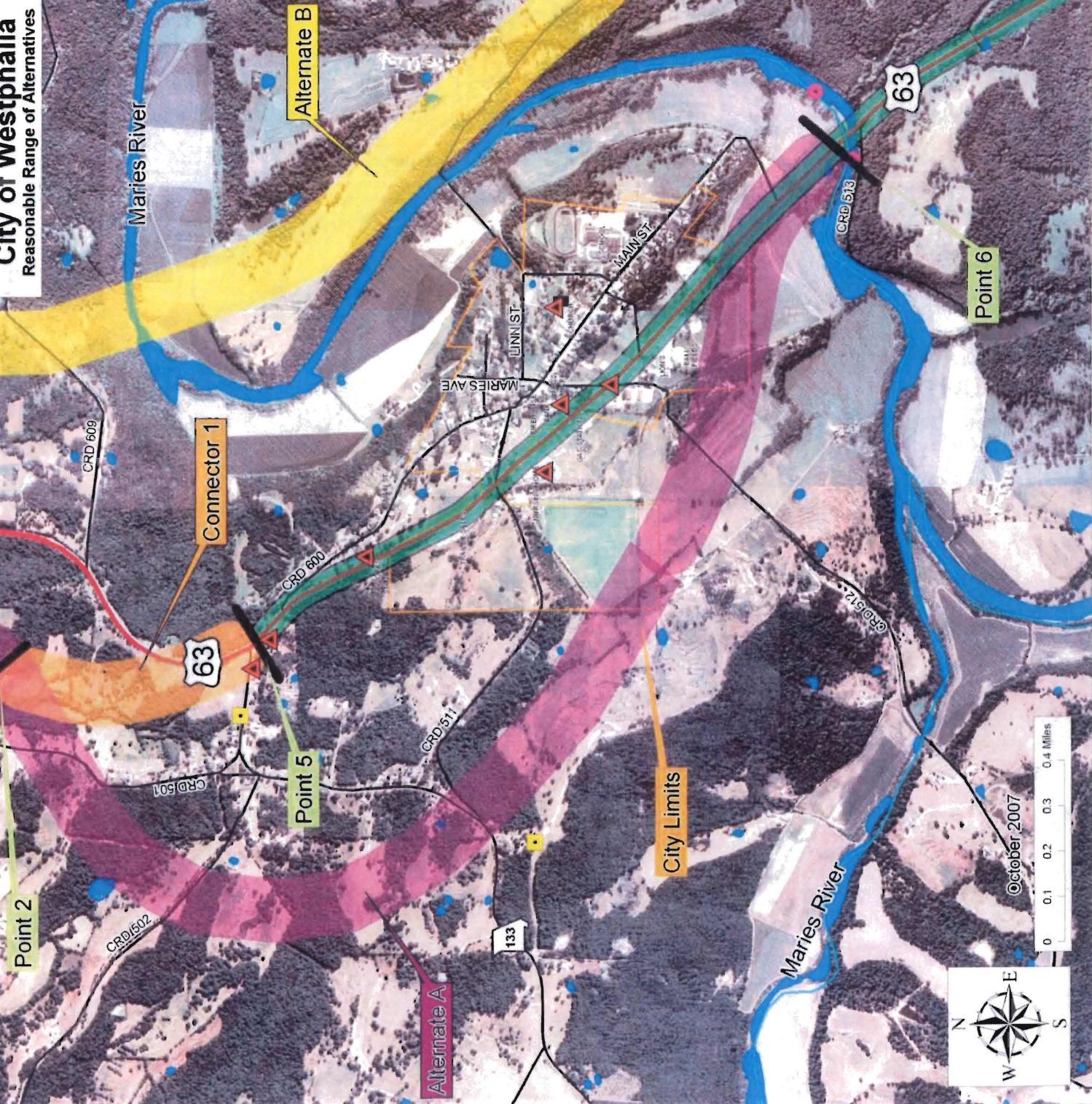




City of Westphalia Reasonable Range of Alternatives

- Legend**
- County
 - Historic Place (HP)
 - Sensitive Biological Species
 - Public Water System Wells
 - Sensitive Environmental Constraint
 - Sensitive Streams
 - Potential Wetlands
 - Missouri Department of Conservation
 - City Limits
 - 100 year Floodplain

- Alternate A (West)
- Alternate B (East)
- Connector
- Usable Existing



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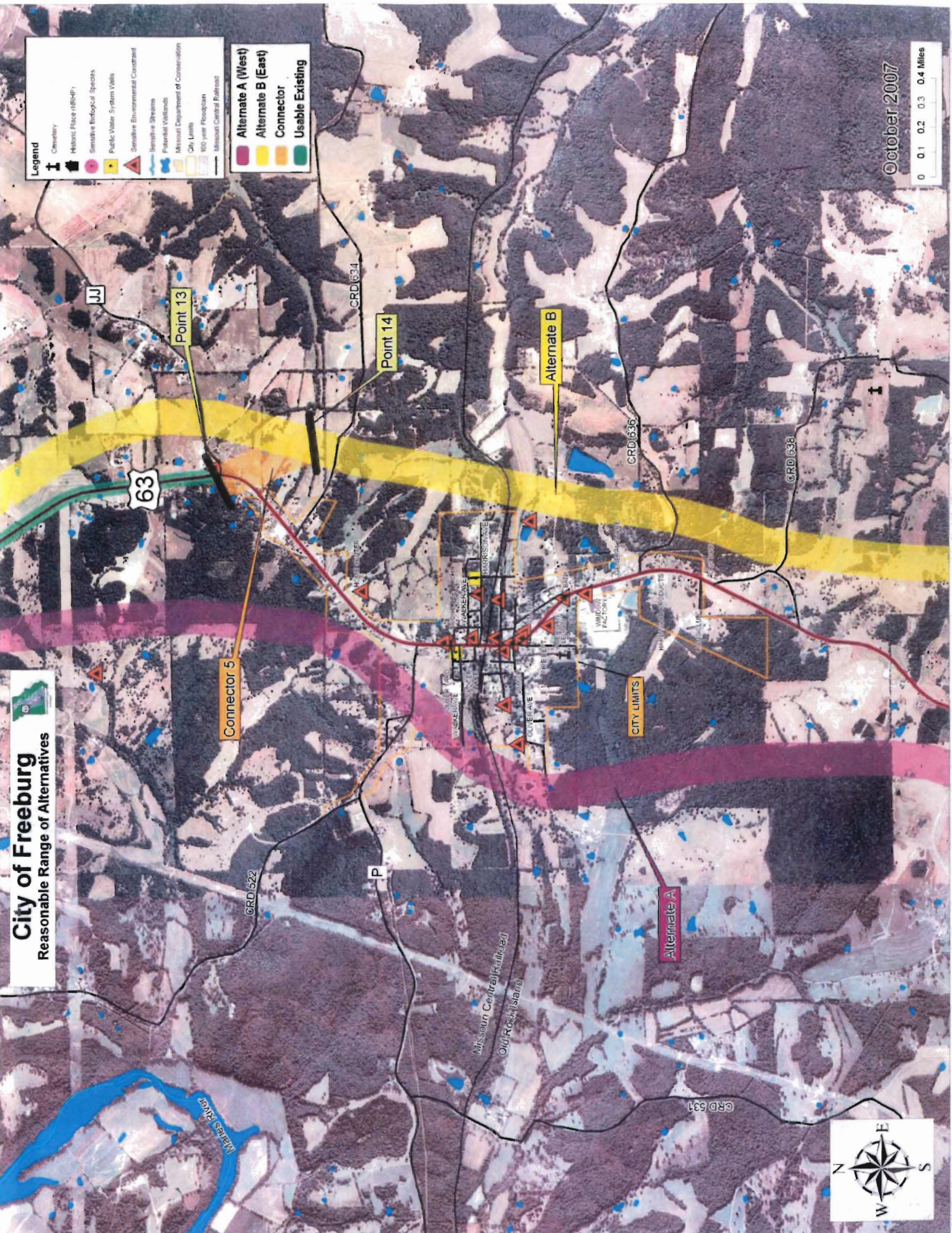


City of Freeburg Reasonable Range of Alternatives

- Legend**
- Boundary
 - Historic Place (NRHP)
 - Sensitive Biological Species
 - Public Water System Wells
 - Sensitive Environmental Constraints
 - Sensitive Streams
 - Potential Wetlands
 - Missouri Department of Conservation
 - Oil Leaks
 - 100 Year Floodplain
 - Missouri Central Railroad
 - Alternate A (West)
 - Alternate B (East)
 - Connector
 - Usable Existing

October 2007

0 0.1 0.2 0.3 0.4 Miles



City of Vienna Reasonable Range of Alternatives

Legend

- Consistency
- Private Place (Values)
- Sensitive Biological Species
- Public Water System (Vials)
- Sensitive Environmental Constraint
- Sensitive Streams
- Potential Wetlands
- Magnuson Department of Conservation
- City Limits
- 100 year Floodplain

Alternates

- Alternate A (West)
- Alternate B (East)
- Connector
- Usable Existing



0 0.1 0.2 0.3 0.4 Miles

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Alternate B

Connector 7

Alternate A

Point 20

AA

42

63

V

Waste Water Treatment Area

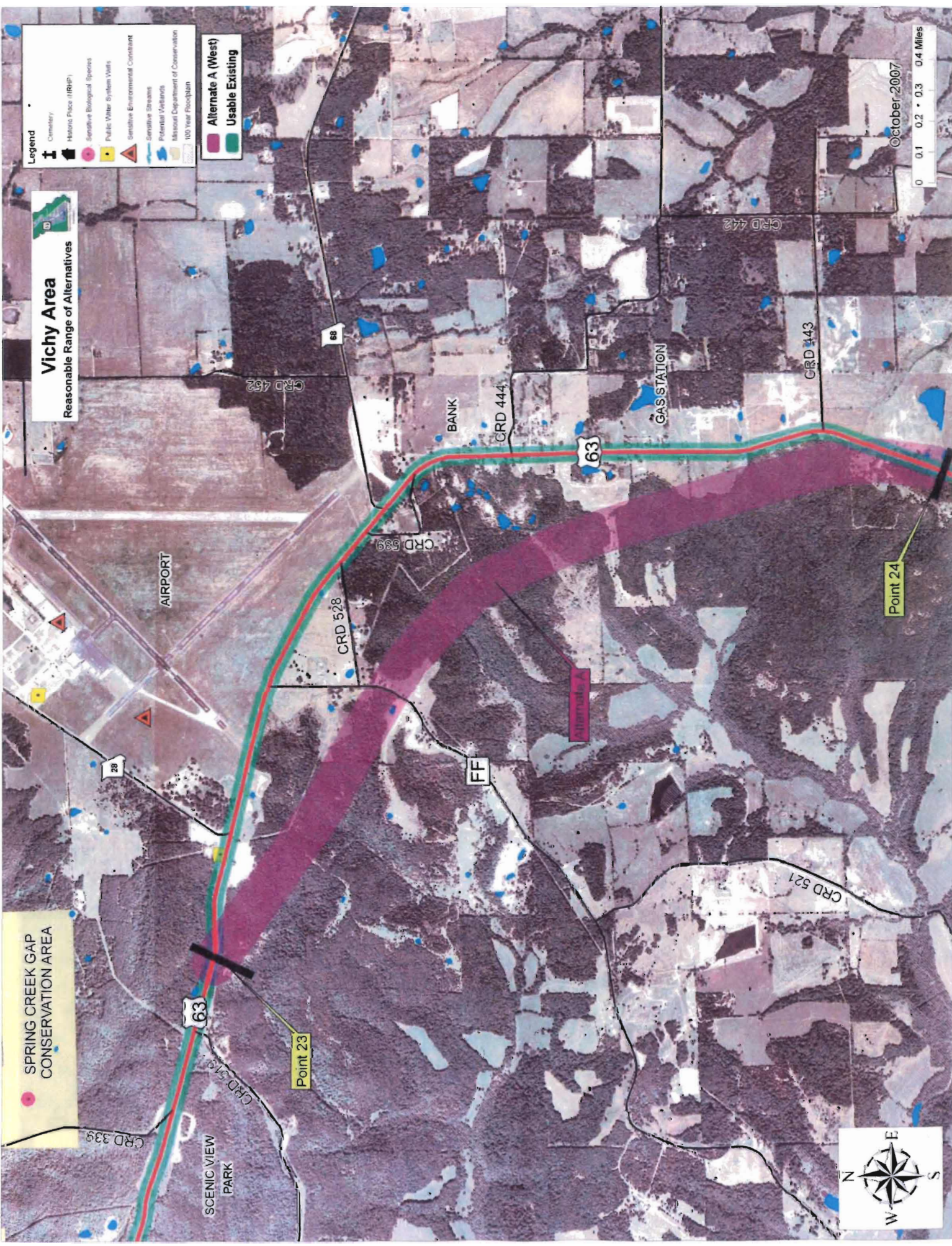
CITY LIMITS

FLY CREEK

CRD 213

CRD 334

Maries River



- Legend**
- County
 - Historic Place (IRHP)
 - Sensitive Biological Species
 - Public Water System Vials
 - Sensitive Environmental Corridor
 - Sensitive Stream
 - Potential Wetlands
 - Missouri Department of Conservation
 - 100 Year Floodplain

Vichy Area
Reasonable Range of Alternatives

- Alternate A (West)
- Usable Existing

SPRING CREEK GAP
CONSERVATION AREA

Point 24

Point 23



0 0.1 0.2 0.3 0.4 Miles
October 2007

[illegible]

[illegible]

[illegible]

[illegible]

PRELIMINARY RANGE OF ALTERNATIVES MATRIX

PRELIMINARY RANGE OF ALTERNATIVES MATRIX														
Route Segment to Point Segment	1a	4a	5a	6a	7a	8a	9a	10a	11a	12a	13a	14a	15a	16a
Distance (mi.)	1b	4b	5b	6b	7b	8b	9b	10b	11b	12b	13b	14b	15b	16b
New Alignment Length, mi.	1.482	1.166	0.630	3.054	1.700	1.180	3.900	3.240	1.117	2.401	2.650	6.179	8.918	0.264
Travel Time (min.)	1.37	1.08	0.82	2.82	2.27	1.09	3.60	2.99	1.03	2.22	2.48	5.70	8.23	0.24
Accident Rating	1	1	1	1	3	1	1	1	1	1	1	1	1	1
No. of Bridges	0	0	0	0	0	1	2	0	0	0	0	0	0	0
No. of Creek/Stream Crossings	2	1	1	5	1	1	2	6	0	4	4	13	18	0
Streams requiring channelization	2	0	1	2	0	0	0	2	0	1	1	1	4	0
No. of River Crossings	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Ruggedness of Terrain Rating	2	1	1	2	1	2	3	3	1	3	3	3	2	2
Constructability Rating	1	5	3	1	5	5	2	1	5	1	1	1	1	3
Construction Costs (millions)	\$6.99	\$2.35	\$1.52	\$17.68	\$3.43	\$5.65	\$44.11	\$15.29	\$2.25	\$11.33	\$12.69	\$29.15	\$42.07	\$17.25
Local Road Access Points	1	8	1	7	35	2	9	15	2	2	1	22	16	1
Parcels Impacted	12	15	4	20	22	10	18	18	17	11	7	19	42	1
Residential Impacts	11	13	3	20	22	10	18	18	12	8	7	19	41	1
Commercial Impacts	0	2	1	0	10	0	0	0	5	3	0	0	0	0
Displacements	4	1	2	7	25	0	12	3	10	5	5	4	8	2
ROW Costs (millions)	\$1.38	\$0.76	\$0.77	\$2.65	\$4.64	\$0.62	\$3.85	\$2.15	\$2.09	\$2.01	\$2.16	\$3.84	\$5.88	\$0.44
ROW - New (acres)	134,727	31,093	52,424	277,636	45,333	31,467	354,545	294,545	0,000	218,273	244,545	561,727	810,727	24,000
ROW - Existing (acres)	0,000	11,307	4,848	0,000	16,485	11,442	0,000	0,000	40,618	0,000	0,000	0,000	0,000	0,000
Impact to Communities Rating	2	1	1	2	3	1	2	1	2	1	1	1	2	1
Parklands	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recreational Use Facilities owned Privately	0	1	0	1	1	0	0	0	0	0	0	0	0	0
Wetlands (acres) total	0.76	0	0	1.8	0.25	0.3	3.26	1.04	0	0.58	0.44	1.18	1.97	0
PEM	0	0	0	0.25	0.25	0	0.16	0	0	0	0	0	0	0
PFO	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0
PSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PUB- Ponds	0.76	0	0	1.55	0	0.3	0.6	1.04	0	0.58	0.44	1.18	1.97	0
Riverine	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Farmland	46,340	35,343	22,650	143,170	29,600	17,400	180,716	119,530	34,400	56,000	54,000	162,030	342,000	10,200
Forested Area (acres)	88,387	7,040	34,620	134,470	33,170	25,510	173,830	175,020	6,220	162,270	190,550	400,000	468,720	13,800
Floodplain (acres)	0	0	0	45.1	16.6	0	28.8	0	0	0	0	0	0	0
Threatened & Endangered Species	no known	no known	no known	no known	no known	yes	yes	no known	no known	no known	no known	no known	no known	no known
Hazardous Waste Locations	0	0	1	1	5	0	0	0	2	2	0	0	0	0
Airports	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Publicly Noted (Potential) Envir. Cont.	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Cemeteries	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Registered Historic Properties (NRHP)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Possible Historic 4(f) Resources**	1	1	0	2	3	3	1	0	0	0	0	?	0	0
*New construction links have a 750' wide corridor. Links along the existing route have a 300' wide corridor.														
**Data based on screening only - no field data available at this stage														

PRELIMINARY RANGE OF ALTERNATIVES MATRIX

PRELIMINARY RANGE OF ALTERNATIVES MATRIX												
Route - Point to Point Segment Description	10-13	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23
	Count	Exit	Count	Alt. B	Alt. B	Alt. B	Exit	Alt. B	Alt. B	Alt. B	Alt. B	Alt. B
New Alignment Length, mi.	0.382	1.351	0.348	2.042	7.470	0.546	0.939	0.792	1.100	0.792	1.100	1.100
Travel Time (min.)	0.35	1.25	0.32	1.89	6.90	0.50	0.92	0.73	1.02	0.73	1.02	1.02
Accident Rating	1	1	1	1	1	1	1	1	1	1	1	1
No. of Bridges	0	0	0	0	0	0	0	0	0	0	0	0
No. of Creek/Stream Crossings	0	0	1	4	18	2	0	0	1	0	2	2
Streams requiring channelization	0	0	0	0	2	0	0	0	0	0	0	0
No. of River Crossings	0	0	0	0	0	0	0	0	0	0	0	0
Ruggedness of Terrain Rating	2	1	2	2	2	2	1	2	2	2	2	2
Constructability Rating	3	5	3	1	1	1	5	3	1	3	1	1
Construction Costs (millions)	\$1.80	\$2.73	\$0.84	\$9.63	\$35.24	\$2.58	\$2.02	\$3.74	\$5.19	\$3.74	\$5.19	\$5.19
Local Road Access Points	1	9	3	5	14	1	8	3	1	8	3	1
Parcels Impacted	3	7	4	8	31	2	8	5	9	8	5	9
Residential Impacts	3	7	4	8	31	2	8	5	9	8	5	9
Commercial Impacts	0	0	0	0	0	0	0	0	0	0	0	0
Displacements	1	3	2	2	10	0	3	1	1	3	1	1
ROW Costs (millions)	\$0.35	\$1.16	\$0.48	\$1.37	\$5.42	\$0.29	\$0.97	\$0.57	\$0.73	\$0.97	\$0.57	\$0.73
ROW - New (acres)	34.727	36.027	31.636	185.636	679.091	49.649	26.640	72.000	100.000	26.640	72.000	100.000
ROW - Existing (acres)	0.000	13.101	0.000	0.000	0.000	0.000	9.687	0.000	0.000	9.687	0.000	0.000
Impact to Communities Rating	1	1	2	2	2	2	1	2	3	1	2	3
Parklands	0	0	0	0	0	0	0	0	0	0	0	0
Recreational Use Facilities owned Privately	0	0	0	0	0	0	0	0	0	0	0	0
Wetlands (acres) total	0.36	0.15	0.49	0.8	1.31	0.24	0	0	0	0	0	0
PEM	0	0	0	0	0	0	0	0	0	0	0	0
PFO	0	0	0	0	0	0	0	0	0	0	0	0
PSS	0	0	0	0	0	0	0	0	0	0	0	0
PUB - Ponds	0	0.15	0.49	0.8	1.31	0.24	0	0	0	0	0	0
Riverine	0	0	0	0	0	0.24	0	0	0	0	0	0
Farmland	0	0	0	0	0	0	0	0	0	0	0	0
Open Area (acres)	28.300	48.268	28.940	144.000	289.000	19.300	27.094	45.787	37.400	27.094	45.787	37.400
Forested Area (acres)	6.430	0.860	2.670	41.840	390.091	30.336	9.250	26.250	68.980	9.250	26.250	68.980
Floodplain (acres)	0	0	0	0	0	0	0	0	0	0	0	0
Threatened & Endangered Species	no known	no known	no known	no known	no known	no known	no known	no known	no known	no known	no known	no known
Hazardous Waste Locations	0	1	1	0	1	0	0	0	0	0	0	0
Airports	0	0	0	0	0	0	0	0	0	0	0	0
Other Publicly Noted (Potential) Envir. Con.	0	0	0	0	4	0	0	0	0	0	0	0
Cemeteries	0	0	0	0	0	0	0	0	0	0	0	0
Registered Historic Properties (NRHP)	0	0	0	0	0	0	0	0	0	0	0	0
Possible Historic 4(f) Resources*	0	1	1	1?	0	?	?	?	?	?	?	?
*New construction links have a 750' wide ct												
**Data based on screening only - no field d												

PRELIMINARY RANGE OF ALTERNATIVES MATRIX

Route	Point	Point Segment	2+22	2+23	2+24	2+25	2+26	2+27	2+28	2+29	2+30	2+31	2+32	2+33	2+34	2+35	2+36	2+37	2+38	2+39	2+40	2+41	2+42	2+43	2+44	2+45	2+46	2+47	2+48	2+49	2+50	2+51	2+52	2+53	2+54	2+55	2+56	2+57	2+58	2+59	2+60	2+61	2+62	2+63	2+64	2+65	2+66	2+67	2+68	2+69	2+70	2+71	2+72	2+73	2+74	2+75	2+76	2+77	2+78	2+79	2+80	2+81	2+82	2+83	2+84	2+85	2+86	2+87	2+88	2+89	2+90	2+91	2+92	2+93	2+94	2+95	2+96	2+97	2+98	2+99	2+100	2+101	2+102	2+103	2+104	2+105	2+106	2+107	2+108	2+109	2+110	2+111	2+112	2+113	2+114	2+115	2+116	2+117	2+118	2+119	2+120	2+121	2+122	2+123	2+124	2+125	2+126	2+127	2+128	2+129	2+130	2+131	2+132	2+133	2+134	2+135	2+136	2+137	2+138	2+139	2+140	2+141	2+142	2+143	2+144	2+145	2+146	2+147	2+148	2+149	2+150	2+151	2+152	2+153	2+154	2+155	2+156	2+157	2+158	2+159	2+160	2+161	2+162	2+163	2+164	2+165	2+166	2+167	2+168	2+169	2+170	2+171	2+172	2+173	2+174	2+175	2+176	2+177	2+178	2+179	2+180	2+181	2+182	2+183	2+184	2+185	2+186	2+187	2+188	2+189	2+190	2+191	2+192	2+193	2+194	2+195	2+196	2+197	2+198	2+199	2+200	2+201	2+202	2+203	2+204	2+205	2+206	2+207	2+208	2+209	2+210	2+211	2+212	2+213	2+214	2+215	2+216	2+217	2+218	2+219	2+220	2+221	2+222	2+223	2+224	2+225	2+226	2+227	2+228	2+229	2+230	2+231	2+232	2+233	2+234	2+235	2+236	2+237	2+238	2+239	2+240	2+241	2+242	2+243	2+244	2+245	2+246	2+247	2+248	2+249	2+250	2+251	2+252	2+253	2+254	2+255	2+256	2+257	2+258	2+259	2+260	2+261	2+262	2+263	2+264	2+265	2+266	2+267	2+268	2+269	2+270	2+271	2+272	2+273	2+274	2+275	2+276	2+277	2+278	2+279	2+280	2+281	2+282	2+283	2+284	2+285	2+286	2+287	2+288	2+289	2+290	2+291	2+292	2+293	2+294	2+295	2+296	2+297	2+298	2+299	2+300	2+301	2+302	2+303	2+304	2+305	2+306	2+307	2+308	2+309	2+310	2+311	2+312	2+313	2+314	2+315	2+316	2+317	2+318	2+319	2+320	2+321	2+322	2+323	2+324	2+325	2+326	2+327	2+328	2+329	2+330	2+331	2+332	2+333	2+334	2+335	2+336	2+337	2+338	2+339	2+340	2+341	2+342	2+343	2+344	2+345	2+346	2+347	2+348	2+349	2+350	2+351	2+352	2+353	2+354	2+355	2+356	2+357	2+358	2+359	2+360	2+361	2+362	2+363	2+364	2+365	2+366	2+367	2+368	2+369	2+370	2+371	2+372	2+373	2+374	2+375	2+376	2+377	2+378	2+379	2+380	2+381	2+382	2+383	2+384	2+385	2+386	2+387	2+388	2+389	2+390	2+391	2+392	2+393	2+394	2+395	2+396	2+397	2+
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Intersection	2007 Turning Movement Counts										Total	2032 Turning Movement Counts										Total
	SBR	SBL	NBR	NBL	WBR	WBL	EBR	EBT	EBL	SBR	SBL	NBR	NBL	WBR	WBL	EBR	EBT	EBL				
Osage County																						
County Rd 809		45	36		42		67			180		0	65	52	0	81	0	83	0	0	281	
MO 133	517			422			391		504	1834	750	0	0	612	0	0	0	567	0	731	2661	
County Rd 800/West Main	0	389	3	0	428	0	6	0	0	834	0	579	4	0	618	0	9	0	0	0	1210	
County Rd 511	9	0	0	15	0	6	0	24	9	69	13	0	0	22	0	9	0	35	13	9	100	
County Rd 512/Mill St	129	12	12	42	16	48	9	45	27	188	507	167	17	17	61	22	70	13	65	39	736	
County Rd 615/County Rd 513	0	27	255	3	38	0	135	0	0	456	0	39	370	4	52	0	195	0	0	0	662	
County Rd 611		185	45		240		60			540	0	283	85	0	348	0	87	0	0	0	784	
Route T	548	0	0	42	0	0	0	60	0	1266	797	0	0	61	0	0	0	87	0	892	1837	
County Rd 521 (North)	83						9		57	159	135	0	0	0	0	0	0	13	0	83	231	
County Rd 521 (South)	0			12			3			15	0	0	0	17	0	0	0	4	0	0	22	
Route E		745	281		833		235			2104	0	1081	422	0	1209	0	341	0	0	0	3053	
County Rd 632		24	24		27		48			123	0	35	35	0	39	0	70	0	0	0	178	
County Rd 524	48			18	27		36			129	70	0	0	26	39	0	52	0	0	0	187	
County Rd 527 (North)	6			8			0		0	12	9	0	0	9	0	0	0	0	0	0	17	
County Rd 527 (South)	9			6			12		6	33	13	0	0	9	0	0	0	17	0	9	48	
Route JJ		30	90		48		81			249	0	44	131	0	70	0	116	0	0	0	361	
Dogwood St (North)	18			12			0		3	33	28	0	0	17	0	0	0	0	0	4	48	
County Rd 634		18	60		21		45			144	0	28	67	0	30	0	65	0	0	0	209	
Dogwood St (South)	8	31	6	12	0	0	3	33	0	3	94	9	45	9	17	0	4	48	0	4	136	
Route P	111	3	0	357	0	0	0	282	0	114	867	161	4	0	518	0	0	409	0	165	1258	
Lewis St	21	24	15	12	33	3	21	12	3	18	182	30	35	22	17	48	4	30	17	4	28	
Walker St	39	30	51	54	57	0	36	75	0	36	378	67	44	74	76	83	0	52	109	0	52	
Harrison St	54	66	117	33	78	3	102	39	3	42	537	78	96	170	48	113	4	148	57	4	61	
Gilbert St	123	96	75	57	114	36	69	42	54	98	762	176	139	109	83	165	52	100	61	78	139	
Oliver St	252	213	33	75	267	36	39	150	108	267	1440	366	309	48	108	387	52	67	218	167	387	
Old Vienna Rd		72	75		51		114			312	0	104	109	0	74	0	185	0	0	0	453	
County Rd 636	0	36	3	0	42	0	3	0	0	84	0	52	4	0	61	0	4	0	0	0	122	
County Rd 637 (North)		42	3		57		9			111	0	81	4	0	83	0	13	0	0	0	161	
County Rd 637 (South)	6	12	12	0	9	0	3	3	0	45	9	17	17	0	13	0	4	4	0	0	85	
Marlee County																						
County Rd 209	12			12			9		27	60	17	0	0	17	0	0	0	13	0	39	87	
County Rd 302		89	72		30		75			246	0	100	104	0	44	0	108	0	0	0	357	
County Rd 210	6			18			9		9	42	9	0	0	26	0	0	0	13	0	13	61	
County Rd 333		21	54		12		48			135	0	30	76	0	17	0	70	0	0	0	196	
County Rd 332		15	9		12		15			51	0	22	13	0	17	0	22	0	0	0	74	
County Rd 331		6	48		9		51			114	0	9	70	0	13	0	74	0	0	0	165	
Route AA	24			222			48		222	516	35	0	0	322	0	0	0	70	0	322	749	
Main St		16	30		15		61			114	0	26	44	0	22	0	74	0	0	0	165	
10th St		18	45		18		39			120	0	26	65	0	26	0	57	0	0	0	174	
9th St		9	9		3		15			36	0	13	13	0	4	0	22	0	0	0	52	
8th St/Ballpark Rd	75	30	57	189	80	33	108	177	21	68	816	109	44	83	274	87	48	167	257	30	96	
6th St	0	69	36	0	15	0	24	0	0	144	0	100	52	0	22	0	35	0	0	0	209	
MO 42	288	359	356	956	429	328	338	1006	333	272	4885	418	521	517	1387	622	473	490	1483	483	395	
4th St	0	132	45	0	204	0	81	0	0	462	0	192	65	0	298	0	118	0	0	0	670	
3rd St	0	84	78	0	63	0	69	0	0	294	0	122	113	0	91	0	100	0	0	0	427	
2nd St	6	45	18	15	68	6	33	27	15	48	279	9	65	26	22	96	9	48	39	22	405	
1st St	30	78	27	57	72	6	48	24	12	18	375	44	113	39	83	104	13	70	35	17	26	
Independence Lane	21	387	135	0	279	0	153	6	3	8	990	30	562	196	0	405	0	222	9	4	9	
Vienna Rolla Rd	6	9	75	0	24	0	36	3	0	8	159	9	13	109	0	35	0	52	4	0	231	
County Rd 640	42			9			6			45	102	61	0	0	13	0	0	9	0	65	148	
MO 28 N (North Leg)/County Rd 328	510	21	0	0	15	0	3	3	0	561	1113	740	30	0	0	22	0	4	4	0	814	
MO 28 N (South Leg)	42			87			144			60	333	61	0	0	128	0	0	209	0	87	483	
County Rd 327/County Rd 514	9	12	9	3	33	0	3	0	0	12	81	13	17	13	4	46	0	4	0	0	17	
County Rd 325		36	30		42		27			135	0	52	44	0	61	0	39	0	0	0	196	
Route A/County Rd 340	105	51	3	9	51	0	3	3	0	120	345	152	74	4	13	74	0	4	4	0	174	
County Rd 519	9			21			24			6	60	13	0	0	30	0	0	35	0	9	87	
MO 28 S	0	87	582	9	105	0	663	0	0	1446	0	126	844	13	152	0	962	0	0	0	2098	
Route FF	30			42			45		27	144	44	0	0	61	0	0	0	65	0	39	208	
County Rd 528	0			27			15		0	42	0	0	0	39	0	0	0	22	0	0	61	
County Rd 539	6			0			6		3	15	0	9	0	0	0	0	0	9	0	4	22	
MO 68		681	96	531		96				1404	0	988	139	770	0	139	0	0	0	0	2037	
County Rd 444	0	12	30	9	6	0	3	6	0	66	0	17	44	13	8	0	4	9	0	0	96	
County Rd 443		12	24		9		12			57	0	17	35	0	13	0	17	0	0	0	83	
Route P		45	93		39		93			270	0	65	135	0	57	0	135	0	0	0	392	
County Rd 522	24	0	0	12	0	0	6	0	27	69	35	0	0	17	0	0	0	9	0	39	100	
Phelps County																						
County Rd 2110(N)/County Rd 8400	9	33	57	84	51	3	54	111	6	12	420	13	48	83	122	74	4	78	161	9	17	
County Rd 2140/County Rd 8340	3	0	9	39	0	0	8	54	6	123	4	0	13	57	0	0	9	78	9	9	178	
County Rd 2110(S)/County Rd 8010	21	21	282	57	16	18	288	45	12	9	768	30	30	409	83	22	26	418	65	17	13	

- Travel time was computed and an accident rating developed.

The accident rating is based on state- wide crash ratings for 5-lane roadway and 4-lane expressway. The 5- lane roadway section consists of two driving lanes in each direction with a common center turn –lane. It is assumed that 5-lane sections will be constructed within the city limits. The 4-lane expressway section consists of two 2-lane roadway sections in each direction with standard median divider and it is assumed that 4-lane sections will be constructed out side the city limits in the remainder of the project. The total state-wide crash rating is found to be 644.11 for the 5- lane configuration and 170.12 for the 4-lane configuration.

Total Crash Rate	Rating
0-250	1
251-500	2
501-750	3

- Constructability Rating Table: values based on disruption to the flow of traffic on the existing highway and complexity of traffic control.

The constructability rating is based on traffic control requirements for traffic on existing Rte. 63 and other construction considerations such as major grading obstacles that would drive the grading costs higher. Parallel construction with little or no impacts to traffic flow is most desirable and cost effective. Few or no obstacles to grading operations are also most desirable.

Impacts	Rating
Construction can take place with no impacts to traffic flow on existing Rte. 63 with the exception of tie-ins common to all alternatives.	Rating = 1
Same as 1, but there are obstacles such as river crossings breaking up grading operations.	Rating = 2
New alignment crosses existing Rte. 63 only once with minimal traffic control requirements.	Rating = 3
New alignment crosses existing Rte. 63 several times requiring more traffic control, affecting	Rating = 4

traffic flow and grading operations.	
Construction of improvements along existing	Rating = 5
Rte. 63 requires traffic control that slows traffic	
flow considerably, requires bypasses,	
and affects grading operations.	

- Ruggedness of Terrain Rating Table: values based on existing terrain slopes.

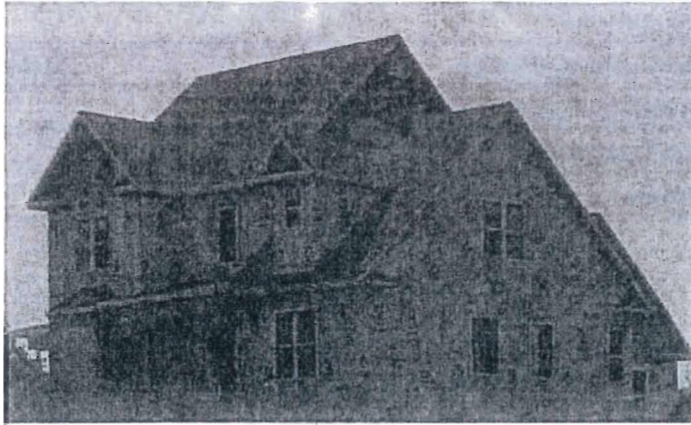
Ruggedness of Terrain rating is based on the *AASHTO Policy on Geometric Design of Highways and Streets* Exhibit 7-2 Maximum Grades for Rural Arterials (2004 version). For a rural arterial with rolling terrain and a design speed of 60-70 mph, the maximum desirable grade is 4%. The rating is based on the grade of 4% being the cut off value for the most desirable grade of terrain.

Percent Grade of Terrain	Rating
$\leq 4 \%$	Rating: 1
$> 4 \%$ or $\leq 6 \%$	Rating: 2
$> 6 \%$ or $\leq 8 \%$	Rating: 3
$> 8 \%$ or $\leq 10 \%$	Rating: 4
$> 10 \%$	Rating: 5

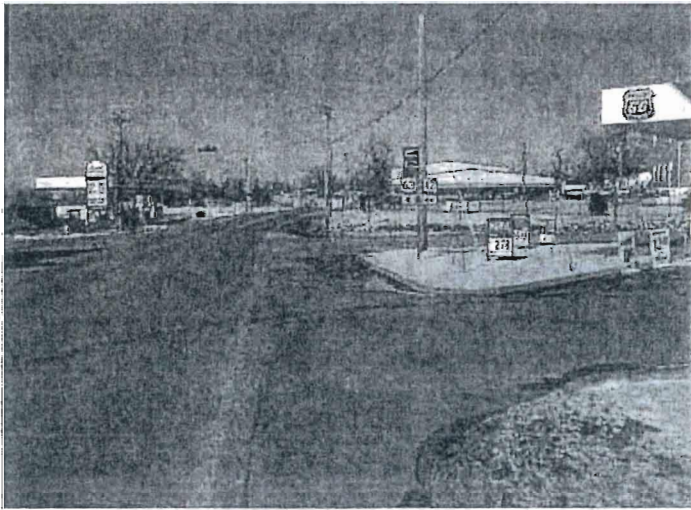
- Creek/Stream Crossings and Bridge Crossings:

There are two river crossings in the study area. The photo on the left shows the Maries River crossing and the photo on the right shows the Gasconade River Crossing. During the study, it was agreed that the best alternative would incorporate a new bridge next to the existing bridge along the sections of upgraded existing alignment, instead of building two new bridges in another location along the rivers, to minimize environmental impacts.

- R/W impacts to residential and commercial property:



The number of residential displacements was used in the evaluation matrix. New and expensive homes are being constructed throughout Osage and Maries Counties, making it even more difficult to place alternatives without some amount of impact to residential properties.



Businesses dot the highway throughout the study area. Alignments through towns or along the existing route could see a heavy impact to both businesses and residential properties. The number of impacts to businesses was also used in the evaluation matrix.