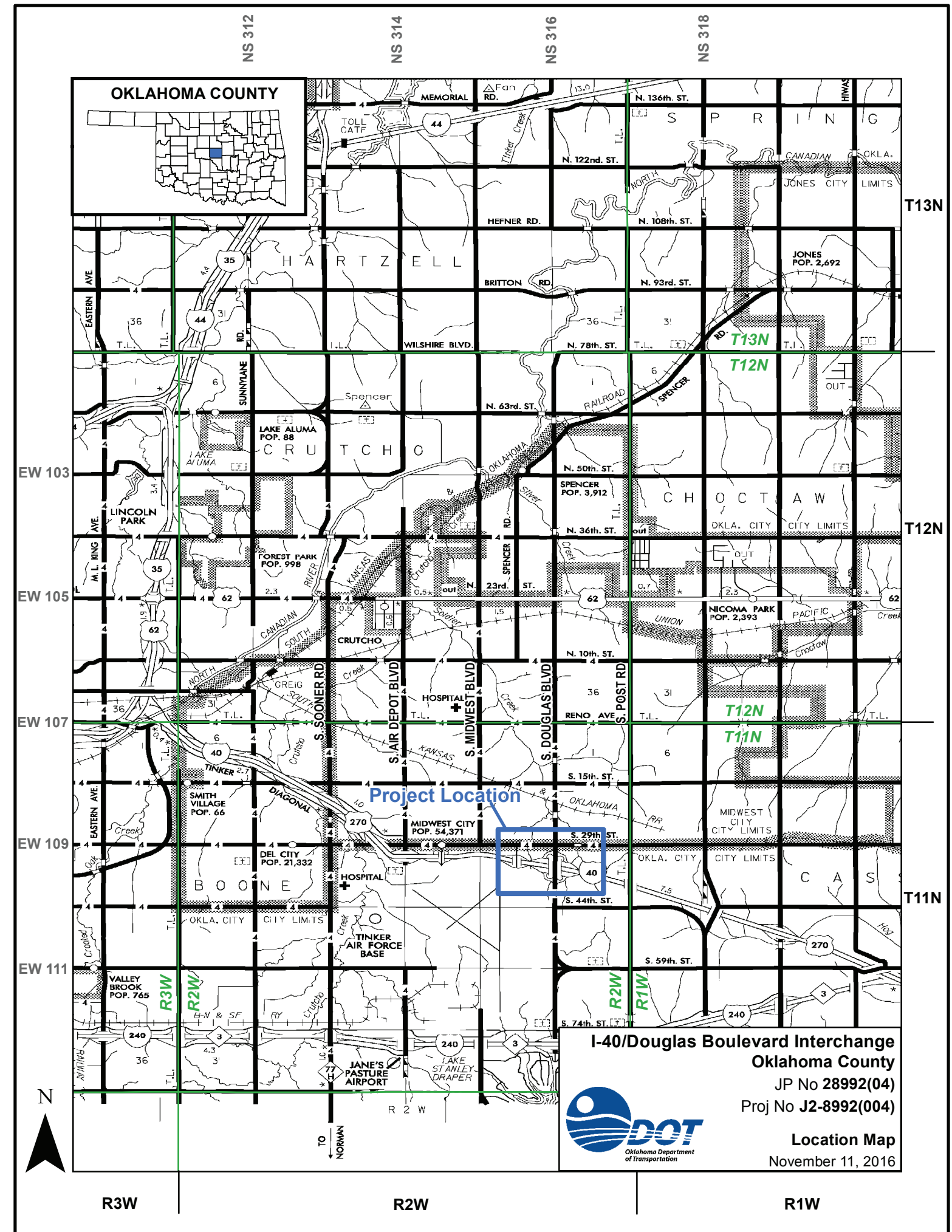


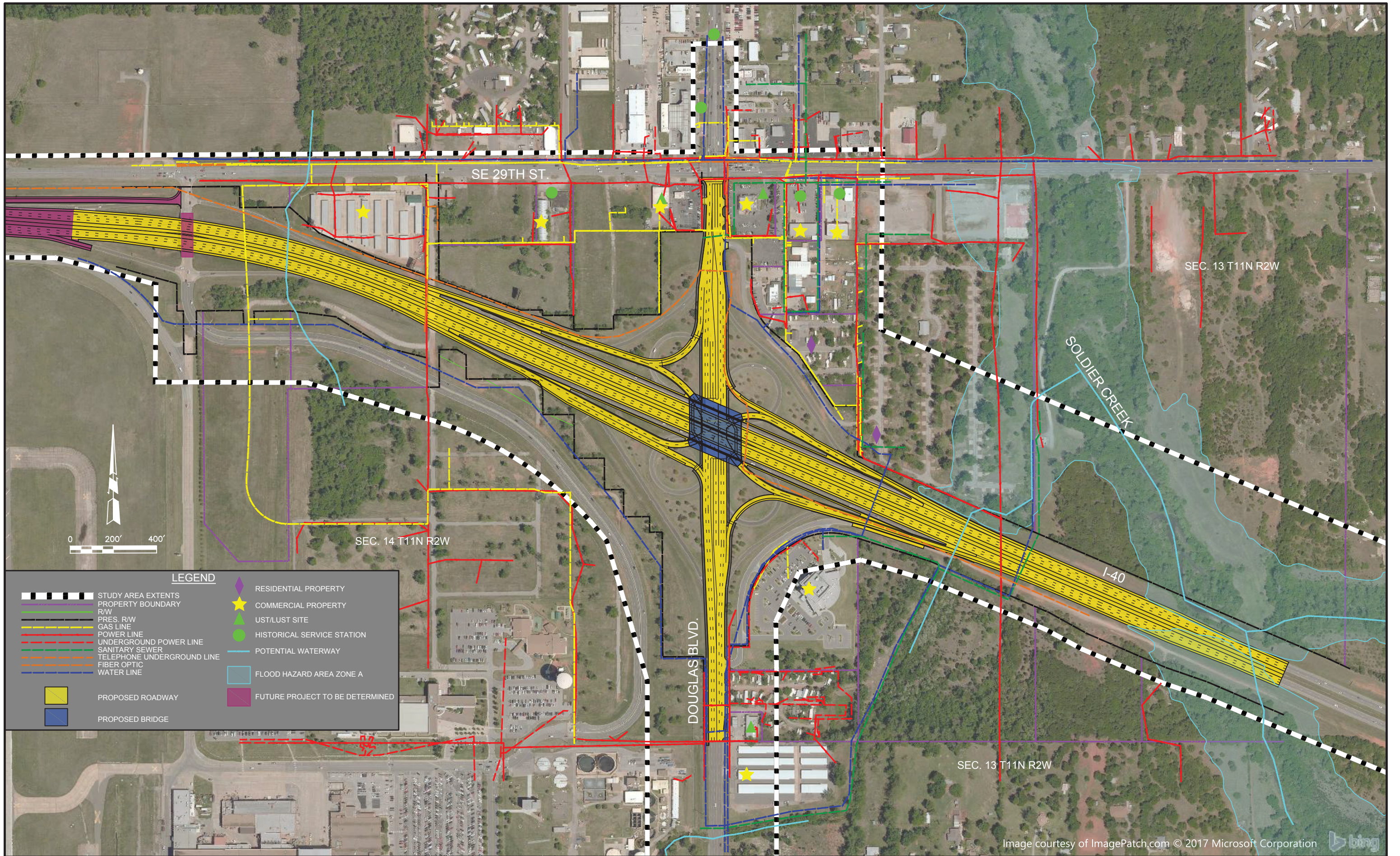
Project Description

Three (3) interchange alternatives have been identified for consideration:

- **Alternative 1 - Single Point Urban Interchange (SPUI).** A Single Point Urban Interchange is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing the single set of traffic signals. The SPUI interchange accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.
- **Alternative 2 - Tight Urban Diamond Interchange (TUDI) with Ramp Flyover.** A Tight Urban Diamond Interchange is an interchange that compresses a standard diamond interchange. This design includes all four interchange ramps, as well as the option of adding a future flyover ramp for northbound Douglas Boulevard traffic destined for westbound I-40. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Upon construction of the northbound to westbound ramp flyover, the northbound to westbound left-turn lanes on Douglas will be removed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.
- **Alternative 3 - Cloverleaf Interchange.** The existing cloverleaf will be completely reconstructed to accommodate widening I-40 to a six-lane facility. All ramps and both collector-distributor roads will be reconstructed. Through the interchange, Douglas Boulevard will consist of four through lanes, two lanes for loop ramp weaving, two additional lanes located in the median which can be used in the future for left turning traffic, and entrance and exit lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40.

Regardless of the interchange alternative selected, the Engle Road bridge over I-40, which is no longer in service, will be removed as a part of this project.





**I-40 & DOUGLAS BOULEVARD
OKLAHOMA COUNTY**

DATE: 01-17-17
SCALE: AS SHOWN
DRWN BY: XXX

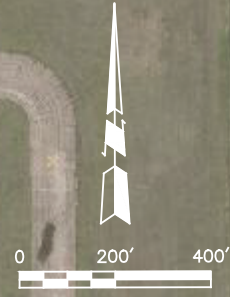
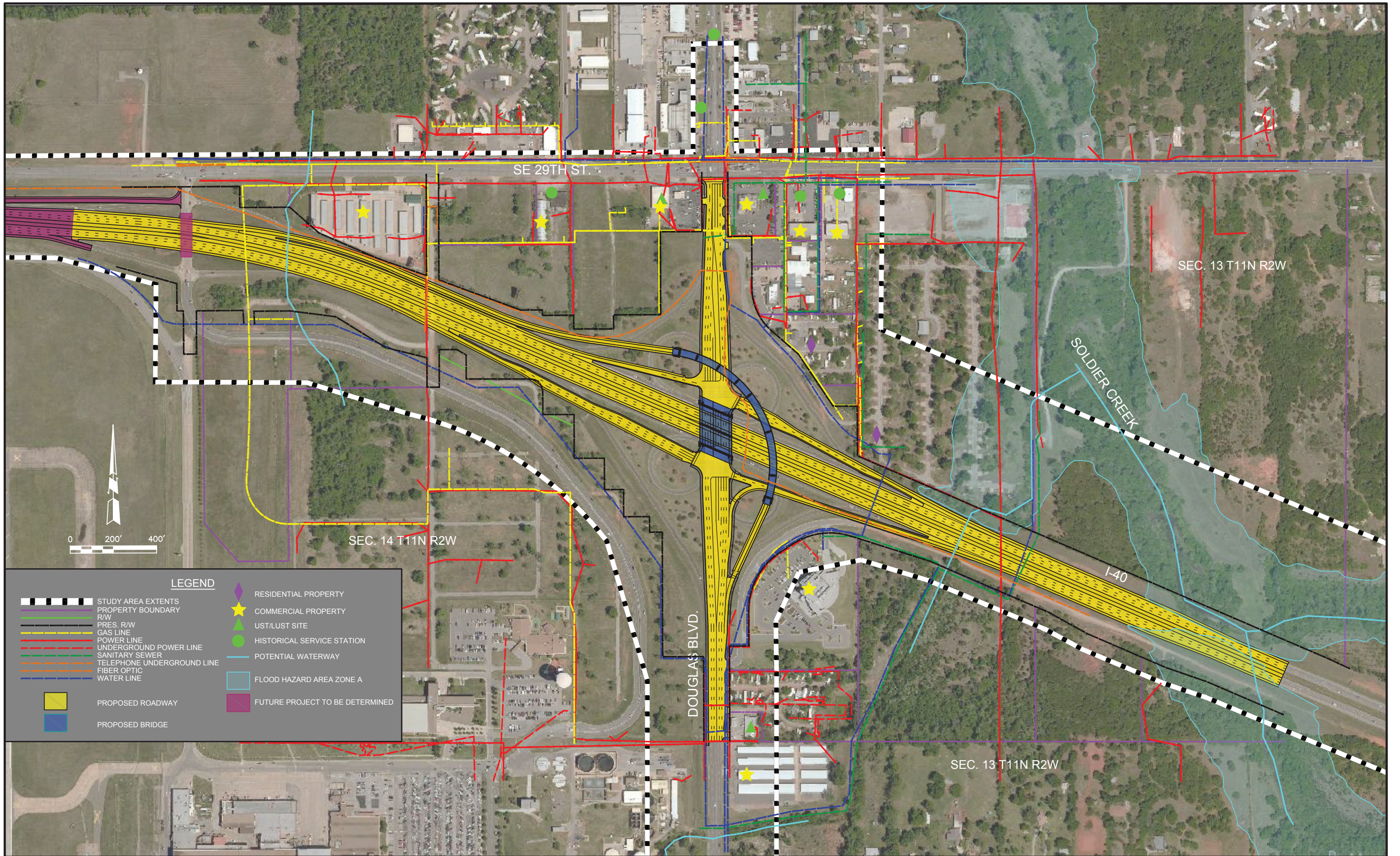


J/P 28992(04)

**ALTERNATIVE 1
SINGLE POINT URBAN INTERCHANGE (SPUI)**

Image courtesy of ImagePatch.com © 2017 Microsoft Corporation





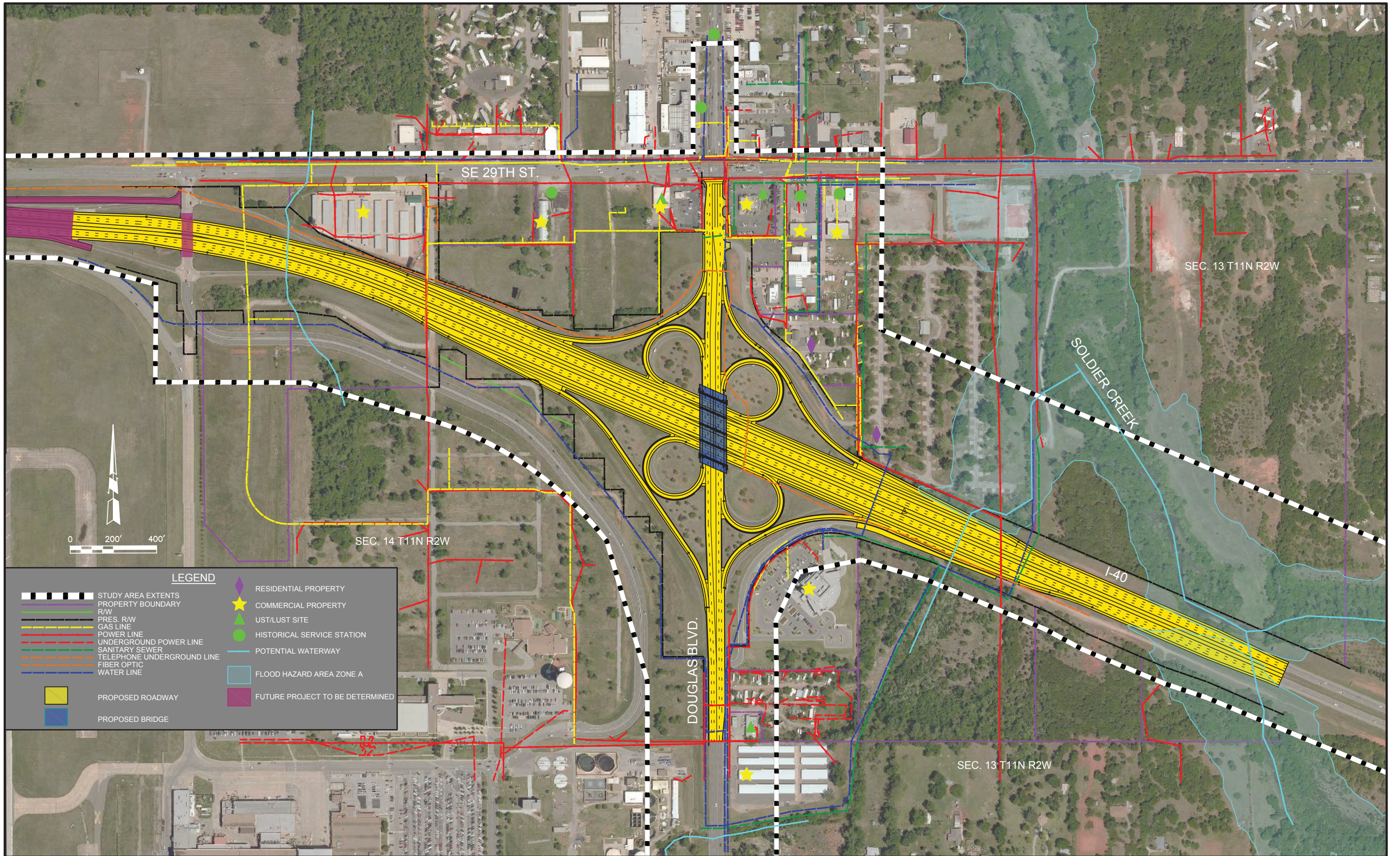
LEGEND	
	STUDY AREA EXTENTS
	PROPERTY BOUNDARY
	R/W
	PRES. R/W
	GAS LINE
	POWER LINE
	UNDERGROUND POWER LINE
	SANITARY SEWER
	TELEPHONE UNDERGROUND LINE
	FIBER OPTIC
	WATER LINE
	PROPOSED ROADWAY
	PROPOSED BRIDGE
	RESIDENTIAL PROPERTY
	COMMERCIAL PROPERTY
	UST/LUST SITE
	HISTORICAL SERVICE STATION
	POTENTIAL WATERWAY
	FLOOD HAZARD AREA ZONE A
	FUTURE PROJECT TO BE DETERMINED

I-40 & DOUGLAS BOULEVARD
OKLAHOMA COUNTY

DATE: 01-17-17
SCALE: AS SHOWN
DRWN BY: XXX



ALTERNATIVE 2
TIGHT URBAN DIAMOND INTERCHANGE (TUDI) WITH FLYOVER
J/P 28992(04)



I-40 & DOUGLAS BOULEVARD
OKLAHOMA COUNTY

DATE: 01-17-17
SCALE: AS SHOWN
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J/P 28992(04)

ALTERNATIVE 3
RECONSTRUCTED CLOVERLEAF

Comparison of Alternatives

I-40/Douglas Improvements



Comparison Parameters	Alternative 1 Single Point Urban Interchange (SPUI)	Alternative 2 Tight Urban Diamond Interchange (TUDI) with Future Ramp Flyover	Alternative 3 Cloverleaf Interchange Reconstruction
Traffic Operations¹	<ul style="list-style-type: none"> I-40 Facilities: Good 1 Interchange Signal on Douglas SPUI Operates Better than TUDI for All Movements Except NB to WB Movement 	<ul style="list-style-type: none"> I-40 Facilities: Good 2 Interchange Signals on Douglas NB to WB Movement Operates Better than SPUI (All Other Movements Operate Better With the SPUI) 	<ul style="list-style-type: none"> I-40 Facilities: Good No Interchange Signal on Douglas Traffic on Douglas Remains Free-Flow Weaving on Douglas and CD Roads Remains
Interchange Geometry	<ul style="list-style-type: none"> Ramp Design Speed 50 mph All Weaving Eliminated Flat Dual Left-Turn Curves Allow for Ease of Movement Between Ramps and Douglas 	<ul style="list-style-type: none"> Ramp Design Speed 35-50 mph All Weaving Eliminated Dual Left-Turns Between Ramps and Douglas Will Be at Slow Speed Due to Ramp Intersection Angles 	<ul style="list-style-type: none"> Ramp Design Speed 20 mph Loops and Weaving on Douglas and CD Roads Remain CD Roads Reconstructed 2 Lanes Wide in Ramp Merge Areas
Environmental Impacts²	Minimal Wetland and Stream Impacts	Minimal Wetland and Stream Impacts	Minimal Wetland and Stream Impacts
Utility Relocations	7 Utilities Impacted	7 Utilities Impacted	7 Utilities Impacted
Right-of-Way Impacts	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County
Total Project Cost	\$47 million	\$56 million	\$45 million

Colors are to aid visual comparison only; i.e., green, yellow, and red indicate which alternate is better, neutral, and worse, respectively, for each parameter of comparison. The color scheme has relevance only to the comparison of Alternatives 1, 2, and 3, and is not meant to imply any parameter is “ideal”, as compared to other projects or situations.

Notes:

1: By 2045, the Douglas & 29th Street intersection will need additional lanes to ensure proper interchange operations. In addition, eastbound to northbound pm traffic will need an additional route alternative to ensure proper interchange operations.

2: No other environmental constraints identified.

