



Estimated Cost: \$700,000

Alternative 1: Signal at NW 121st Street and IA 141

Polk County, Iowa

06/18/2019



IA 141 Corridor

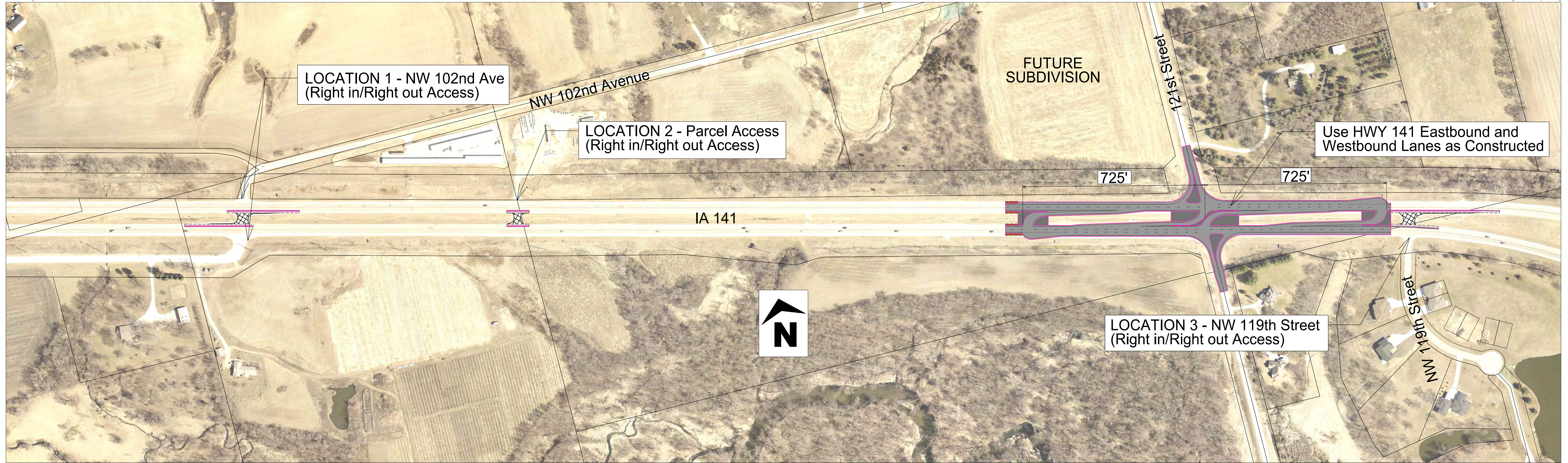
Alternative 1: Traffic Signal at NW 121st Street Estimated Cost: \$700,000

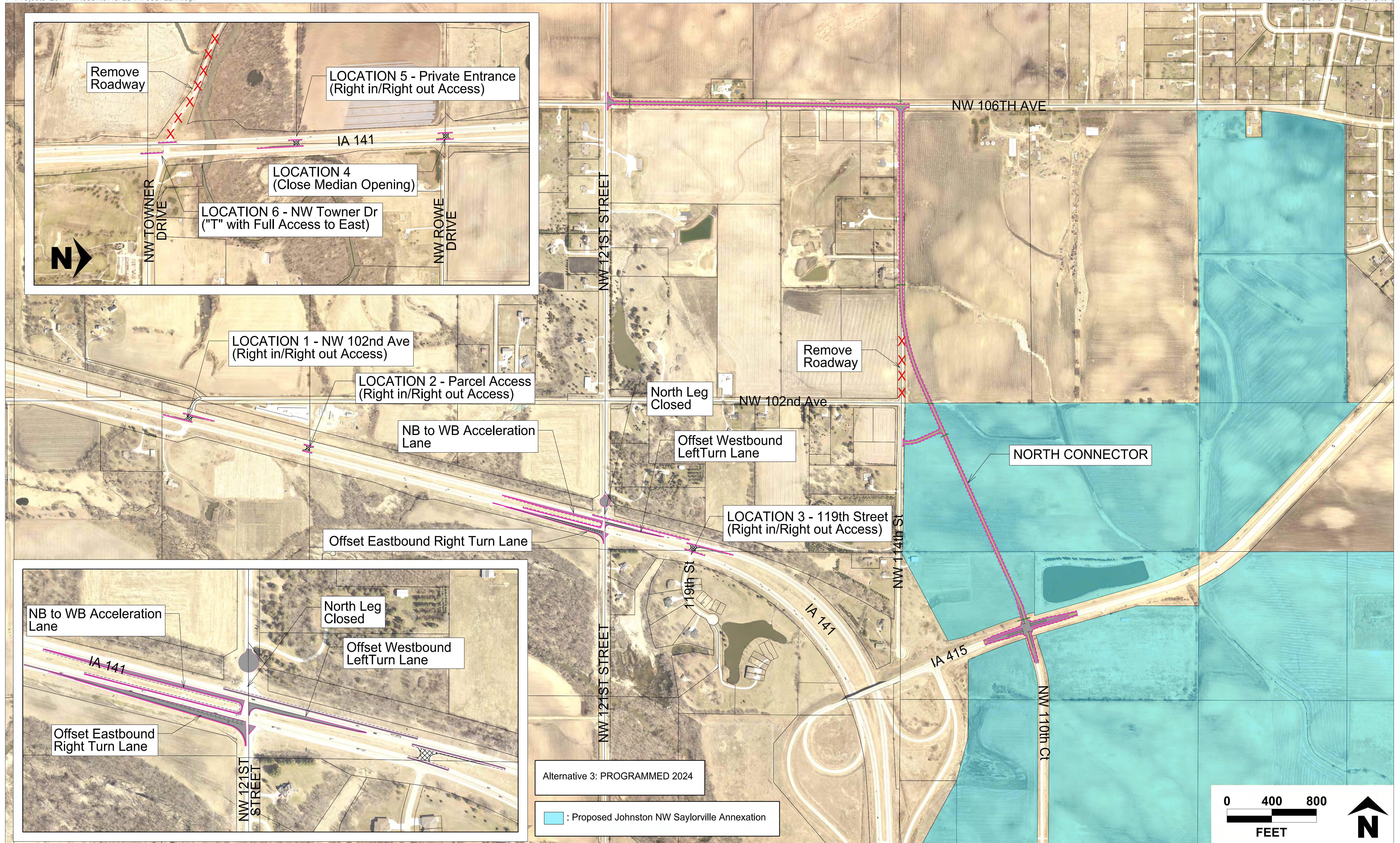
Pros	Cons
<ul style="list-style-type: none"> Acceptable intersection delays. 	<ul style="list-style-type: none"> Safety concerns for signalized intersection on high speed roadway near an interchange and a horizontal curve. (High speed rear-end collisions)
<ul style="list-style-type: none"> Provides good local access. 	<ul style="list-style-type: none"> Intersection location does not meet Access Management Manual criteria for spacing from adjacent westbound entrance ramp taper. (1770' existing vs 2640' recommended for major intersections)
<ul style="list-style-type: none"> Minimal to no right-of-way needs. 	<ul style="list-style-type: none"> Signal and spacing from interchange not consistent with driver expectations. (Lacks corridor continuity)
<ul style="list-style-type: none"> Less traffic impact during construction. 	<ul style="list-style-type: none"> Intersection spacing from westbound entrance ramp taper to NW 119th Court does not meet Access Management Manual criteria for spacing between minor intersections. (950' existing vs 1320' recommended)
<ul style="list-style-type: none"> Lowest cost alternative. 	<ul style="list-style-type: none"> Elevated risk of high-speed high-severity crashes.

Alternative 2: J-Turn at NW 121st Street Estimated Cost: \$2,030,000

Pros	Cons
<ul style="list-style-type: none"> Improved safety compared to existing conditions or traffic signal. 	<ul style="list-style-type: none"> Intersection spacing from westbound entrance ramp taper to NW 119th Court does not meet Access Management Manual criteria for spacing between minor intersections. (950' existing vs 1320' recommended)
<ul style="list-style-type: none"> Provides good local access. 	<ul style="list-style-type: none"> East U-turn movement close to 119th Court intersection.
<ul style="list-style-type: none"> Moderately low cost. 	<ul style="list-style-type: none"> Potentially confusing for drivers.
	<ul style="list-style-type: none"> The east U-turn movement close to IA 141 curve and 1045' from westbound entrance ramp taper.







Estimated Cost: \$7,750,000

PREFERRED ALTERNATIVE (Alternative 3): North Connector & Closure of NW 121st Street North Leg

Polk County, Iowa

06/18/2019



IA 141 Corridor

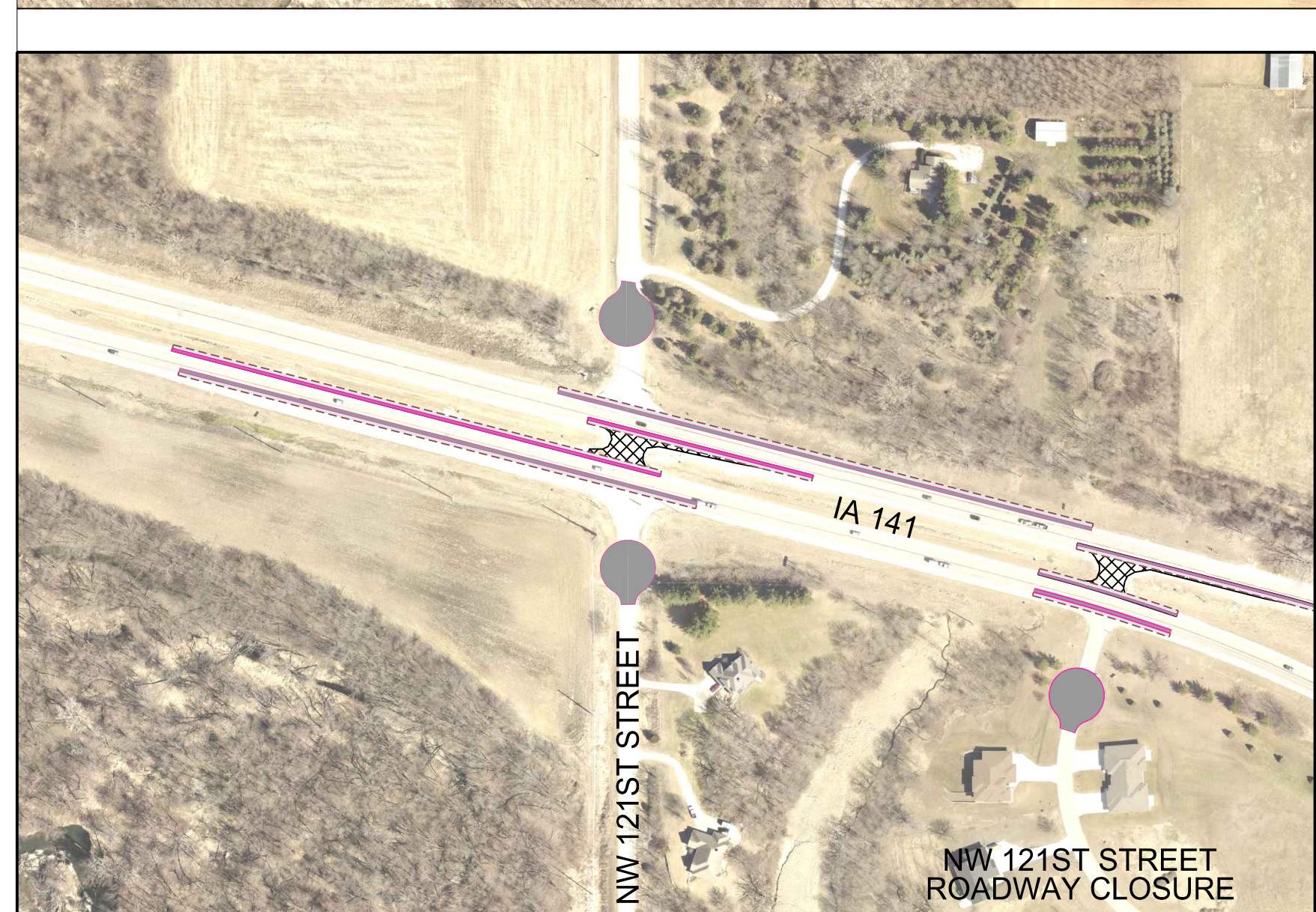
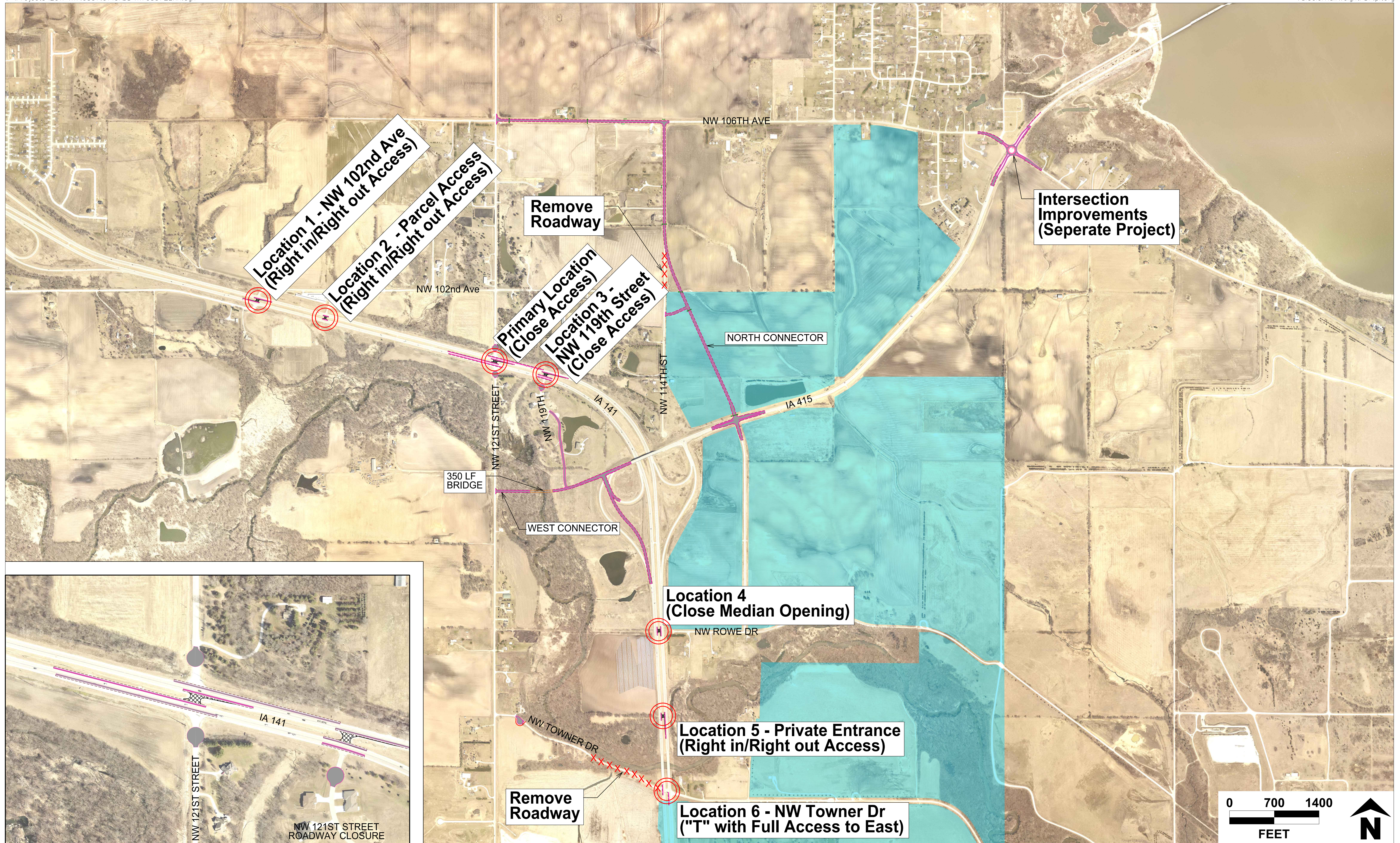
Alternative 3: North Connector and Closure of NW 121st Street North Leg Estimated Cost: \$7,750,000

Pros	Cons
<ul style="list-style-type: none"> Reduced conflicts at NW 121st Street intersection. 	<ul style="list-style-type: none"> Project will take longer to complete. (Estimated 5 years)
<ul style="list-style-type: none"> Provides good local access to area south of IA 141. 	<ul style="list-style-type: none"> Potential traffic pattern impacts to residential areas along the North Connector Road and NW 106th Avenue.
<ul style="list-style-type: none"> Supports development of future residential areas adjacent to North Connector. 	<ul style="list-style-type: none"> Potential environmental and right-of-way impacts associated with this alternative.
<ul style="list-style-type: none"> Improved safety with other median closures. 	
<ul style="list-style-type: none"> Improved safety with closure of west leg of NW Towner Drive intersection at IA 141. 	
<ul style="list-style-type: none"> Improved safety at IA 141/121st Street intersection as compared to existing conditions or traffic signal. 	
<ul style="list-style-type: none"> Maximizes safety for gaining access to/from IA 141 to/from local street network by utilizing interchange. 	

Alternative 4: IA 141/415 Corridor Full Build Estimated Cost: \$14,600,000

Pros	Cons
<ul style="list-style-type: none"> Improves safety at the IA 141 intersection with NW 121st Street. 	<ul style="list-style-type: none"> High cost.
<ul style="list-style-type: none"> Provides good local access that supports increasing traffic volumes. 	<ul style="list-style-type: none"> Project will take longer to complete. (est. > 5 years)
<ul style="list-style-type: none"> Improves intersection spacing within Iowa 141 corridor. 	<ul style="list-style-type: none"> Potential environmental and right-of-way impacts associated with this alternative.
<ul style="list-style-type: none"> Greatly improves corridor continuity and driver expectations. 	<ul style="list-style-type: none"> Potential traffic pattern impacts to residential areas along the North Connector Road.
<ul style="list-style-type: none"> Maximizes safety for gaining access to/from IA 141 from/to local street network by fully utilizing the interchange. 	
<ul style="list-style-type: none"> Improves access to the 119th Street Corridor. 	







Estimated Cost: \$920,000

Alternative A: Signal IA 415 & NW Beaver Intersection

Polk County, Iowa

06/18/2019



IA 415 & NW BEAVER DRIVE

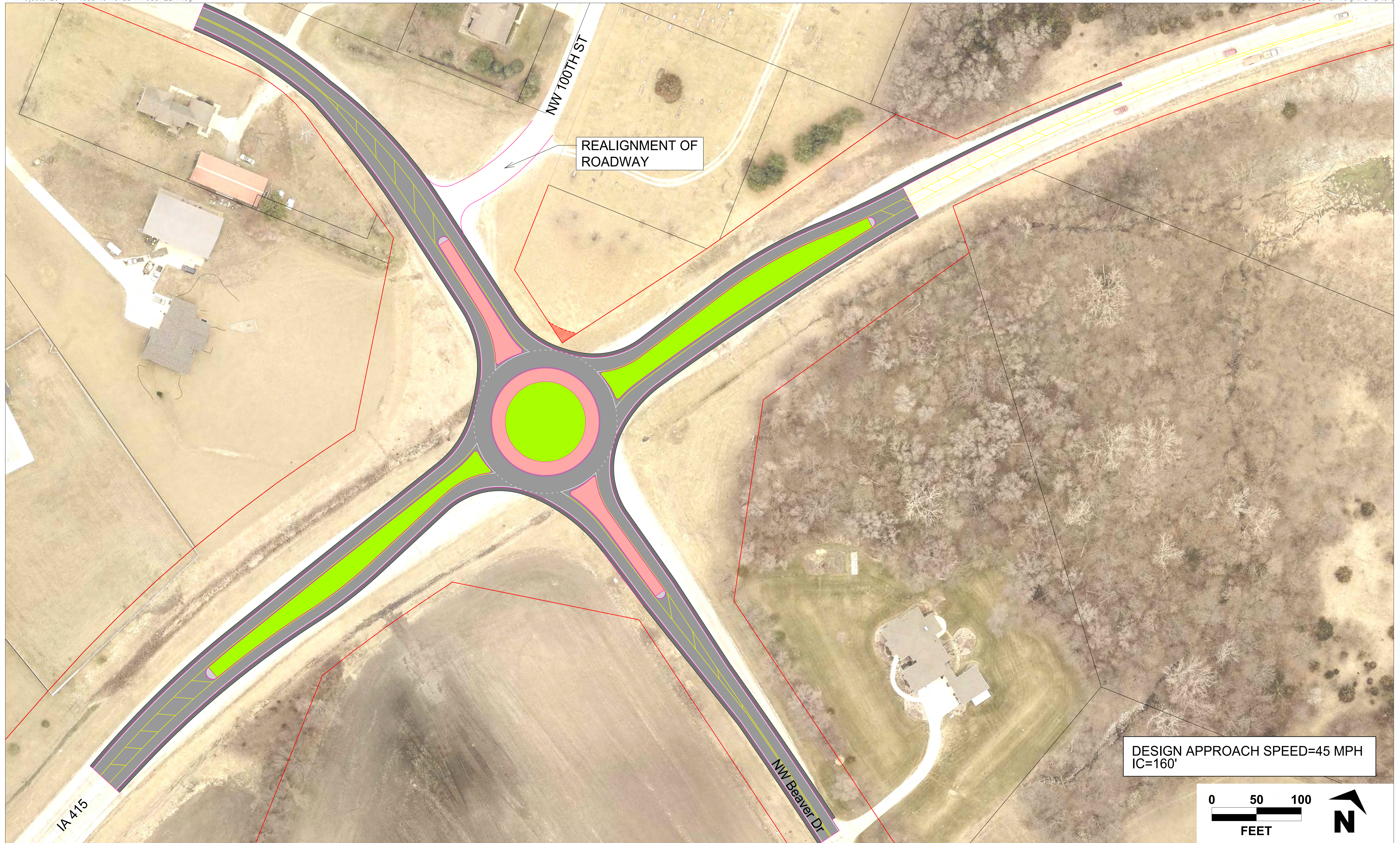
Alternative A: Traffic Signal Estimated Cost: \$920,000

Pros	Cons
<ul style="list-style-type: none"> Significantly reduces delays compared to existing all-way STOP. (currently LOS E/F for EB and WB approaches) 	<ul style="list-style-type: none"> Reduced safety compared to roundabout.
<ul style="list-style-type: none"> Slightly reduced peak hour delays compared to roundabout. 	<ul style="list-style-type: none"> Increased predicted crash rate over four-way stop.
<ul style="list-style-type: none"> Minimal to no right-of-way impacts. 	<ul style="list-style-type: none"> Intersection is not currently ranked high on the Statewide Safety Improvement Candidate List. (Statewide: #25,022 of 170,000 intersections. Polk County: 75 of top 200 intersections on the list are in Polk County)

Alternative B: Roundabout Estimated Cost: \$1,950,000

Pros	Cons
<ul style="list-style-type: none"> Significantly reduced delays compared to existing all-way STOP. (Currently LOS E/F for EB and WB approaches) 	<ul style="list-style-type: none"> Highest cost alternative.
<ul style="list-style-type: none"> Improved safety compared to traffic signal. 	<ul style="list-style-type: none"> Slightly increased peak hour delay compared to traffic signal.
<ul style="list-style-type: none"> Minimal to no right-of-way impacts. 	<ul style="list-style-type: none"> Intersection is not currently ranked high on the Statewide Safety Improvement Candidate List. (Statewide: #25,022 of 170,000 intersections. Polk County: 75 of the top 200 intersections on the list are in Polk County)
<ul style="list-style-type: none"> Reduced off-peak hour delays compared to traffic signal. 	







Alternative C: PROGRAMMED 2020

Estimated Cost: \$475,500

PREFERRED ALTERNATIVE (Alternative C): Additional Through Lanes IA 415 at All Way Stop



Polk County, Iowa

IA 415 & NW BEAVER DRIVE

Alternative C: Added Through Lanes IA 415 All Way STOP Estimated Cost: \$475,500

Pros	Cons
<ul style="list-style-type: none"> Reduces delays compared to existing all-way STOP. (Avg PM Peak Delay EB improves from LOS F to LOS C) 	<ul style="list-style-type: none"> Interim solution does not support volume growth for design year 2050.
<ul style="list-style-type: none"> Minimal to no right-of-way impacts. 	
<ul style="list-style-type: none"> Minimal disruption to traffic during construction. 	
<ul style="list-style-type: none"> Lower cost alternative. 	

Alternative D: Permitted U-Turns – NW Beaver Drive All Way STOP Estimated Cost: \$374,000

Pros	Cons
<ul style="list-style-type: none"> Reduces delays compared to existing all way STOP. (Avg PM Peak Delay improves 42 sec but remains LOS F) 	<ul style="list-style-type: none"> Interim solution does not support volume growth for design year 2050.
<ul style="list-style-type: none"> Minimal disruption to traffic curing construction. 	<ul style="list-style-type: none"> May be confusing to drivers.
<ul style="list-style-type: none"> Minimal to no right-of-way impacts. 	<ul style="list-style-type: none"> Usage may present operational issues on NW Beaver Drive and NW 106th Avenue.
<ul style="list-style-type: none"> Lowest cost alternative. 	





Estimated Cost: \$374,000

Alternative D: All Way Stop with Permitted U-Turns on NW Beaver Drive

Polk County, Iowa

