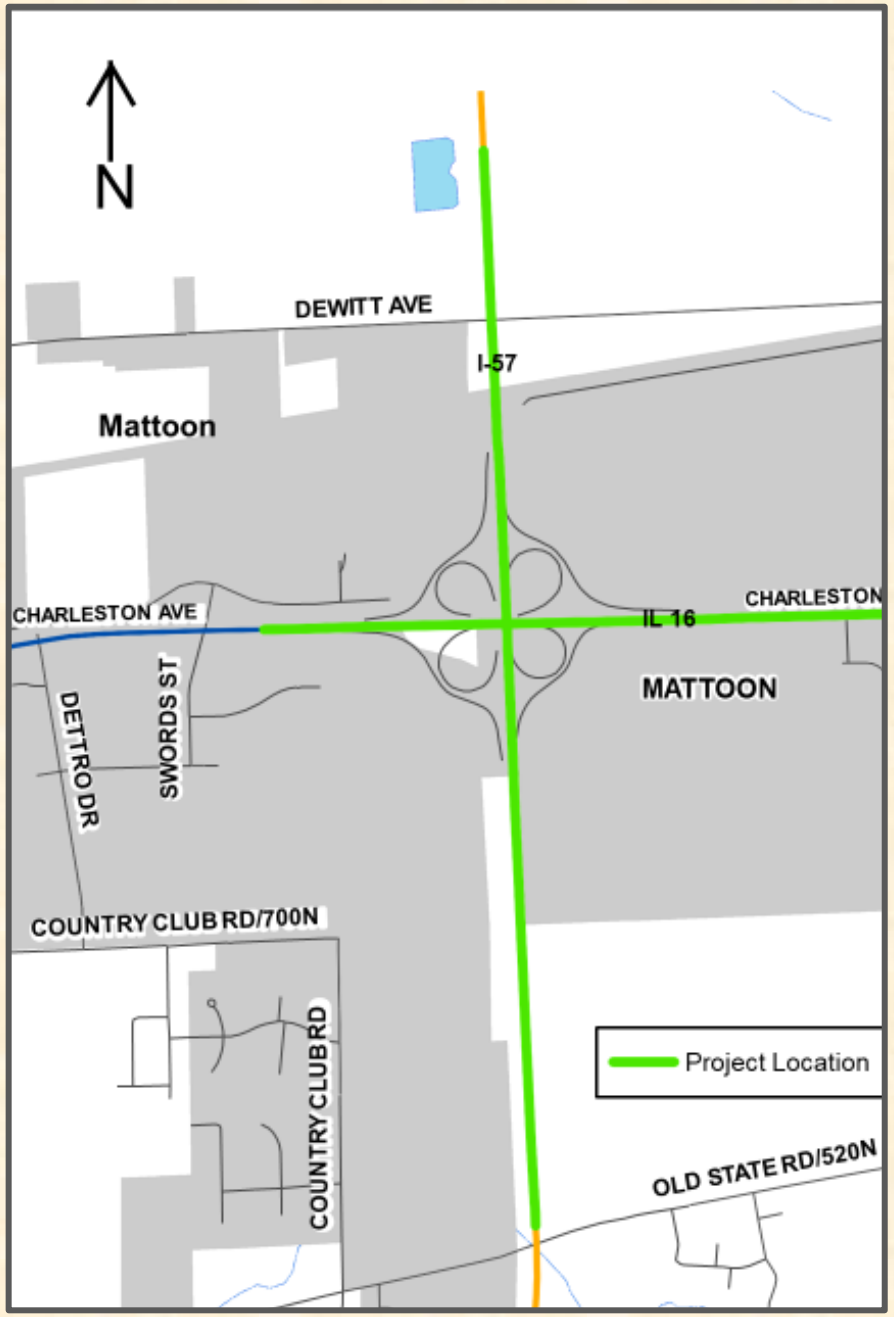


VIRTUAL PUBLIC MEETING
I-57/IL 16 INTERCHANGE PROJECT
COLES COUNTY, ILLINOIS

PUBLIC INVOLVEMENT

Thank you for attending the I-57/IL 16 Interchange Public Information Meeting

- The purpose of the meeting is to:
  - Introduce the project
  - Provide information on the project alternates
  - Provide exhibits detailing the preferred alternate
  - Identify impacts of the project
  - Provide an opportunity to comment on the preferred alternate
  - Provide project funding information and anticipated timelines
- No formal presentations are planned. You are welcome to browse the exhibits and project information at your own pace.
- After reviewing the project materials, we encourage you to complete an online comment form.
- If you would like to request an individual meeting to speak with IDOT representatives, please contact Tom Ronan by email at Thomas.Ronan@illinois.gov.

PURPOSE AND NEED STATEMENT

- The purpose of reconstructing the I-57/IL 16 interchange is to eliminate impacts to the bridge beams and address the structural deficiencies of the I-57 bridges spanning IL 16 and to address the geometric deficiencies of the existing cloverleaf interchange while minimizing the effects on capacity.

EXISTING I-57 STRUCTURES OVER IL 16

- Require significant repairs to the bridge deck, substructures and paint
- Have a history of impacts to the bridge beams from over-height loads traveling beneath the bridges on IL 16
- The existing bridges accommodate the weaving sections of the cloverleaf ramps, which requires the bridges to be 3 lanes wide instead of 2 and span 6 lanes of IL 16 instead of 4
- The vertical clearance of eastbound IL 16 is 14’-3”
- The vertical clearance of westbound IL 16 is 14’-11”
- IDOT is recommending the bridges be raised to achieve a minimum vertical clearance of 16’-6” to meet policy for rural expressways

ALTERNATE OPTIONS FOR STRUCTURES

- Bridge Rehabilitation
  - Option was eliminated from consideration since it does not address the vertical clearance issues
- Superstructure Replacement
  - Option requires the re-use of the substructure which does not allow the width or length of the structure to change
- Full Structure Replacement
  - Option allows for the modification of the bridge width and length to meet the project needs

OPTION	CORRECTS STRUCTURAL DEFICINCIES	CORRECTS VERTICAL CLEARANCE	COST	EXPECTED LIFE SPAN (YEARS)
BRIDGE REHABILITATION	YES	NO	-	-
SUPERSTRUCTURE REPLACEMENT	YES	YES	$3,220,000	45
FULL STRUCTURE REPLACEMENT	**YES**	**YES**	**$3,700,000**	**70**

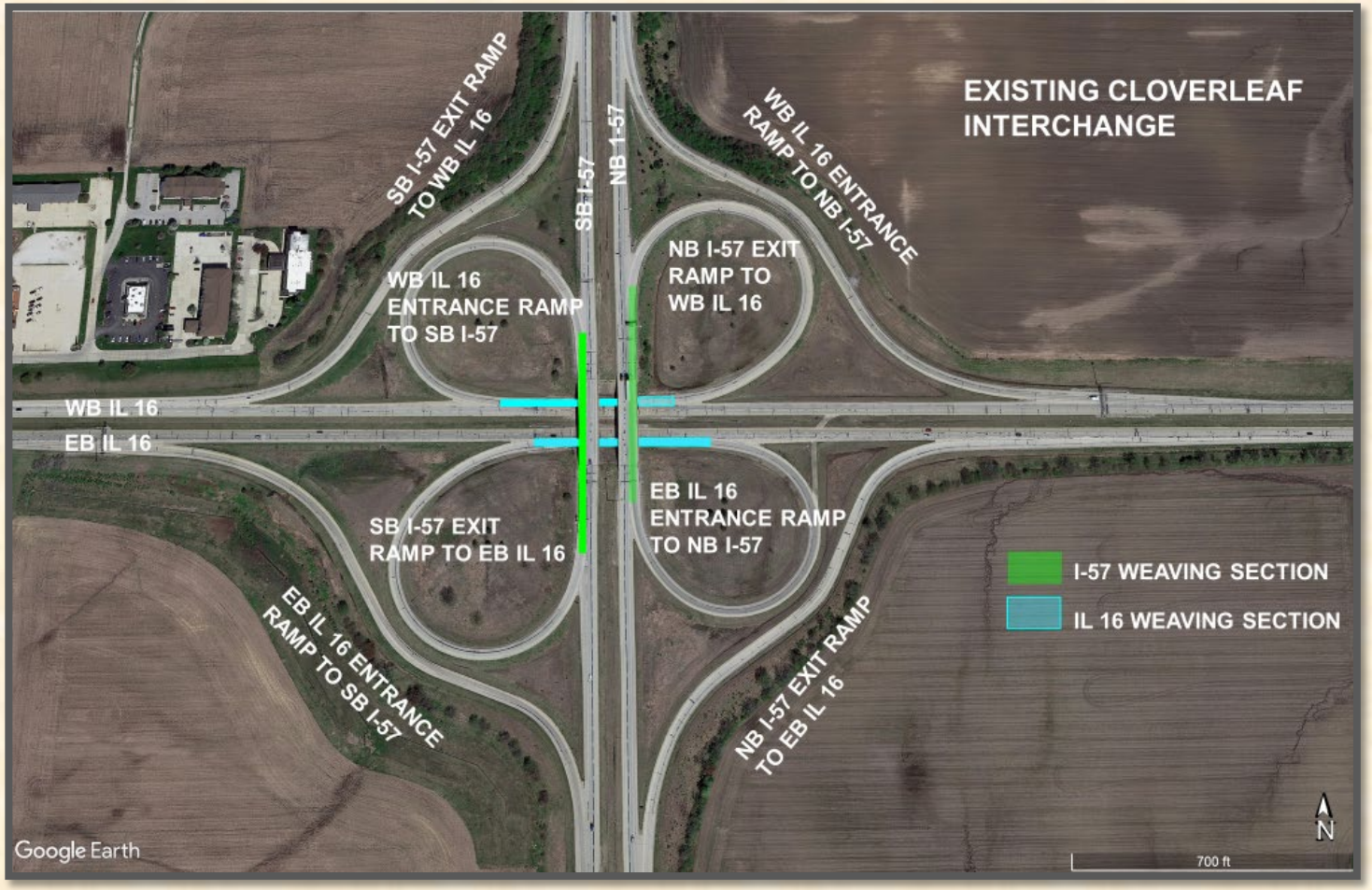
PREFERRED OPTION FOR STRUCTURES

FULL STRUCTURE REPLACEMENT

- Eliminates the structural deficiencies
- Allows the profile to be raised to achieve the minimum 16’-6” vertical clearance above IL 16
- Allows the bridge width and length to be reduced to match the preferred alternate of the proposed interchange configuration
- Has the highest benefit to cost ratio of the options considering the construction cost and the expected life span

EXISTING I-57/IL 16 INTERCHANGE

- Existing Interchange is a Cloverleaf Configuration
  - Consists of 4 inner loop ramps and 4 outer ramps that connect I-57 & IL 16
  - Consists of 4 weaving sections for vehicles entering/exiting the roadway
- The I-57 road profile change will require additional work to the ramps
- Geometric deficiencies of the interchange must be addressed



WEAVING SECTION DEFICIENCIES

- Length of Weaving Section
  - The weaving sections provide access from the inner loop ramps to mainline I-57 and IL 16
  - Weaving sections with lengths less than the minimum do not provide adequate distance for vehicles to merge in and out of the inner loop ramps

ROUTE	WEAVING LENGTH (FEET)	MINIMUM WEAVING LENGTH (FEET)	DEFICIENT (YES/NO)
I-57	615	650	**YES**
IL 16	465	550	**YES**

HORIZONTAL CURVE DEFICINCIES

- Minimum Radius for Horizontal Curves
  - The outer ramps of the interchange have deficient horizontal curve radii per IDOT standards
  - Horizontal curves on the ramps with radii less than the minimum lowers the speeds of vehicles exiting from and merging onto I-57

ALTERNATE OPTIONS FOR INTERCHANGE

CLOVERLEAF

- Advantages:
  - Uses free-flow ramps to eliminate vehicular stops
  - Increases safety by eliminating the need for intersections and left-turn movements across traffic
  - No signal maintenance or electricity costs
- Disadvantages:
  - Requires extensive right-of-way (R.O.W.) to correct geometric deficiencies
  - Requires 8 ramps to be constructed while other designs only require 4
  - Requires a longer and wider bridge compared to other options to accommodate the weaving sections of the inner loop ramps
  - Requires weaving sections with enough length to provide satisfactory traffic operations
  - Tighter radii on the ramps leads to lower operating speeds
  - Cannot economically accommodate pedestrians or bicyclists

ALTERNATE OPTIONS FOR INTERCHANGE

CONVENTIONAL DIAMOND

- Advantages:
  - Exiting/entering the freeway occurs before/after the bridges, which conforms to driver expectancy
  - Common usage of this configuration has resulted in a high level of driver familiarity
  - Only requires 4 ramps to be constructed and they do not affect the required size of the bridges
  - Exiting/entering the freeway can occur at higher speeds
  - Can economically accommodate pedestrians and bicyclists
- Disadvantages:
  - Traffic is subjected to stop-and-go operations rather than free-flow
  - Two signalized intersections are required
  - Signalized intersections introduce angle and high speed rear-end crashes
  - Spacing of the signalized intersections pushes the ramps out further and will require extensive R.O.W.
  - Ramp terminals to the north of IL 16 will extend into the I-57 bridges over IL 316, which will require widening or replacement of the bridges

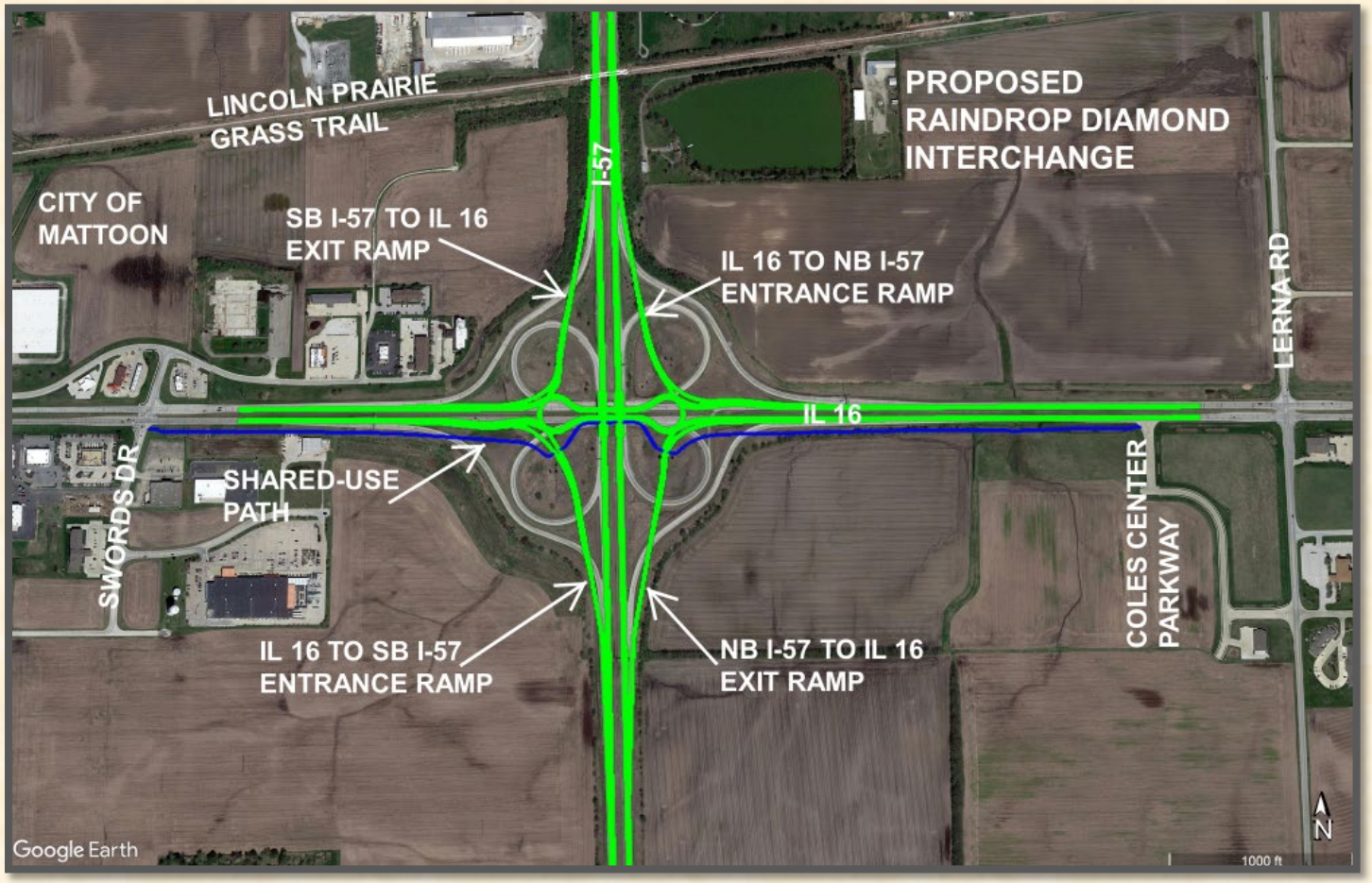
ALTERNATE OPTIONS FOR INTERCHANGE

RAINDROP DIAMOND

- Advantages:
  - Exiting/entering the freeway occurs before/after the bridges, which conforms to driver expectancy
  - Vehicles are only required to yield to traffic already in the raindrop, which increases vehicular capacity by minimizing stopped time for all movements.
  - Left turns do not occur across opposing traffic, which eliminates severe angle type crashes
  - Only requires 4 ramps to be constructed and they do not affect the length or width of the bridges
  - Exiting/entering the freeway can occur at higher speeds
  - The ramps are spaced tighter which minimizes the need for additional R.O.W.
  - No signal maintenance or electricity costs
  - Can economically accommodate pedestrians and bicyclists
- Disadvantages:
  - This configuration is newer to Illinois and not frequently encountered by local drivers

PREFERED OPTION FOR INTERCHANGE

- Raindrop Diamond Interchange
  - Eliminates the geometric deficiencies of the existing interchange
  - Maintains smooth, continuous, safe and efficient flow for large volumes of traffic
  - Combines the advantages of the cloverleaf and diamond
  - Creates a diamond interchange without the need for traffic signals
  - Minimizes R.O.W. needs
  - Eliminates need for the I-57 bridges over IL 316 to be widened or replaced



SIMILAR INTERCHANGE PROJECT

- The picture is of a similar raindrop diamond interchange located at US 31 and 191st St near Westfield, Indiana
- This corridor of US 31 runs from I-465 to 191st St. and has 7 raindrop interchanges

EXISTING I-57 STRUCTURES OVER THE LINCOLN PRAIRIE GRASS TRAIL

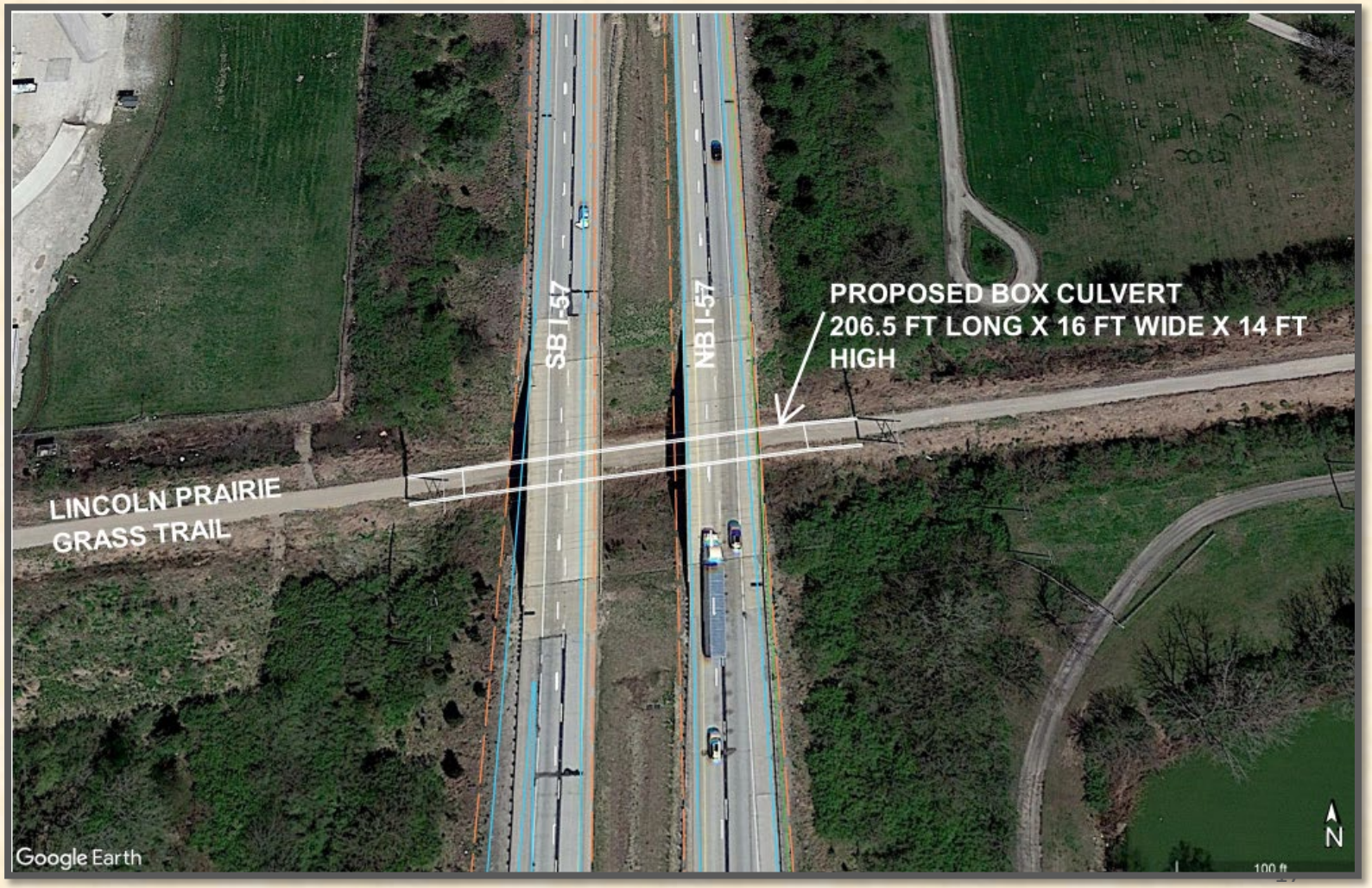
- Each existing structure carries two lanes of I-57 along with an inside and outside shoulder
- The proposed north ramps of the raindrop diamond interchange will extend through these structures
- The existing structures are not wide enough to accommodate the proposed interchange ramps

ALTERNATE OPTIONS FOR STRUCTURES

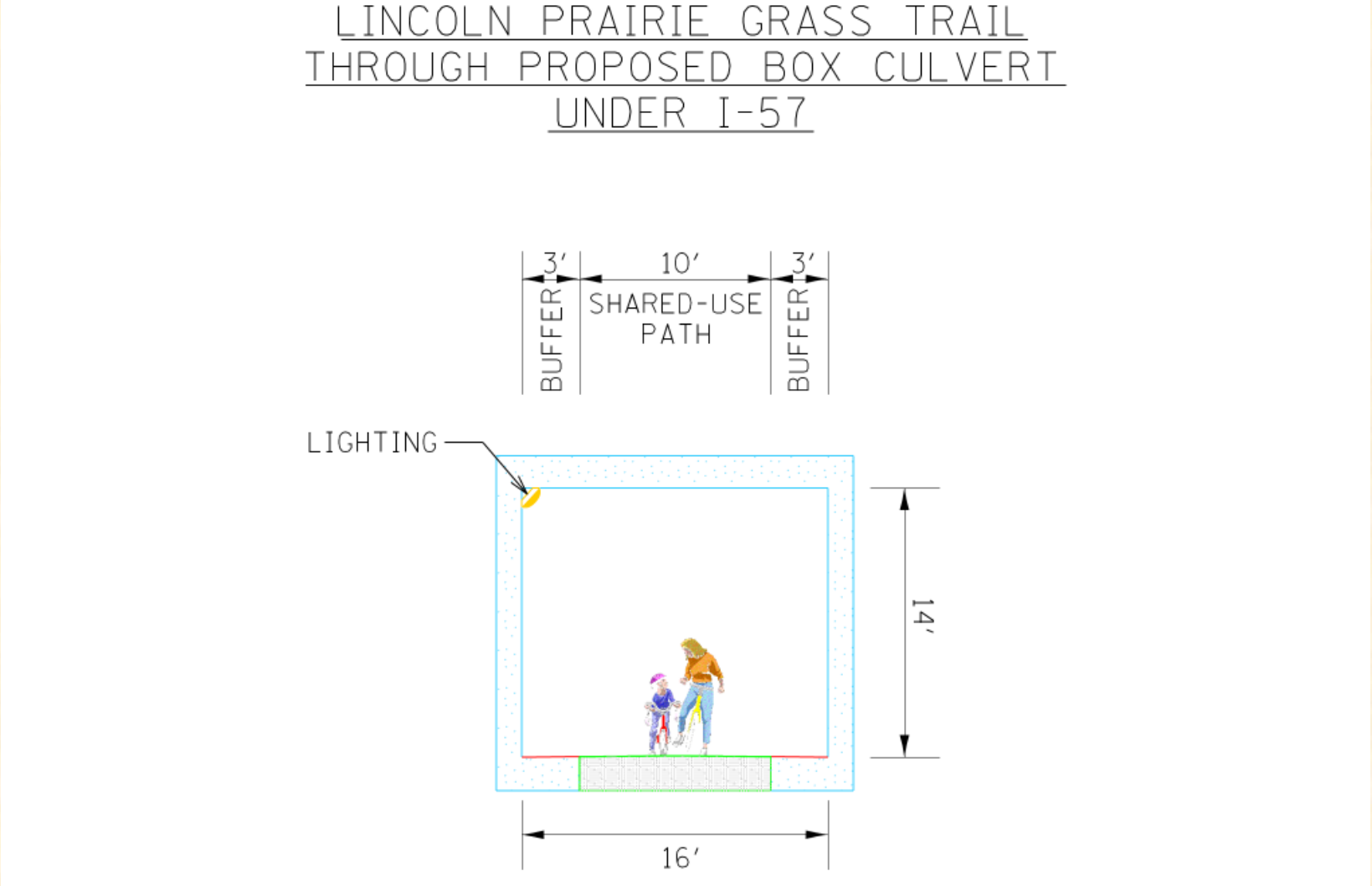
OPTION	DESCRIPTION OF WORK	COST
WIDEN EXISTING STRUCTURES	REPLACE SUPERSTRUCTURE, WIDEN THE PIERS AND ABUTMENTS	$2,400,000
REPLACE EXISTING STRUCTURES WITH A BOX CULVERT	**REMOVE EXISTING STRUCTURES, CONSTRUCT A 16 FT WIDE X 14 FT HIGH X 206.5 FT LONG BOX CULVERT WITH INTERIOR LIGHTING**	**$1,700,000**
REPLACE EXISTING STRUCTURES WITH NEW BRIDGES	REMOVE EXISTING STRUCTURES, CONSTRUCT SINGLE SPAN PPC I-BEAM BRIDGES WITH INTERGAL ABUTMENTS	$2,300,000

PREFERED OPTION FOR STRUCTURES

- Box Culvert
  - Lowest initial cost
  - Lowest life-cycle cost
  - Longest life span



BOX CULVERT TYPICAL SECTION

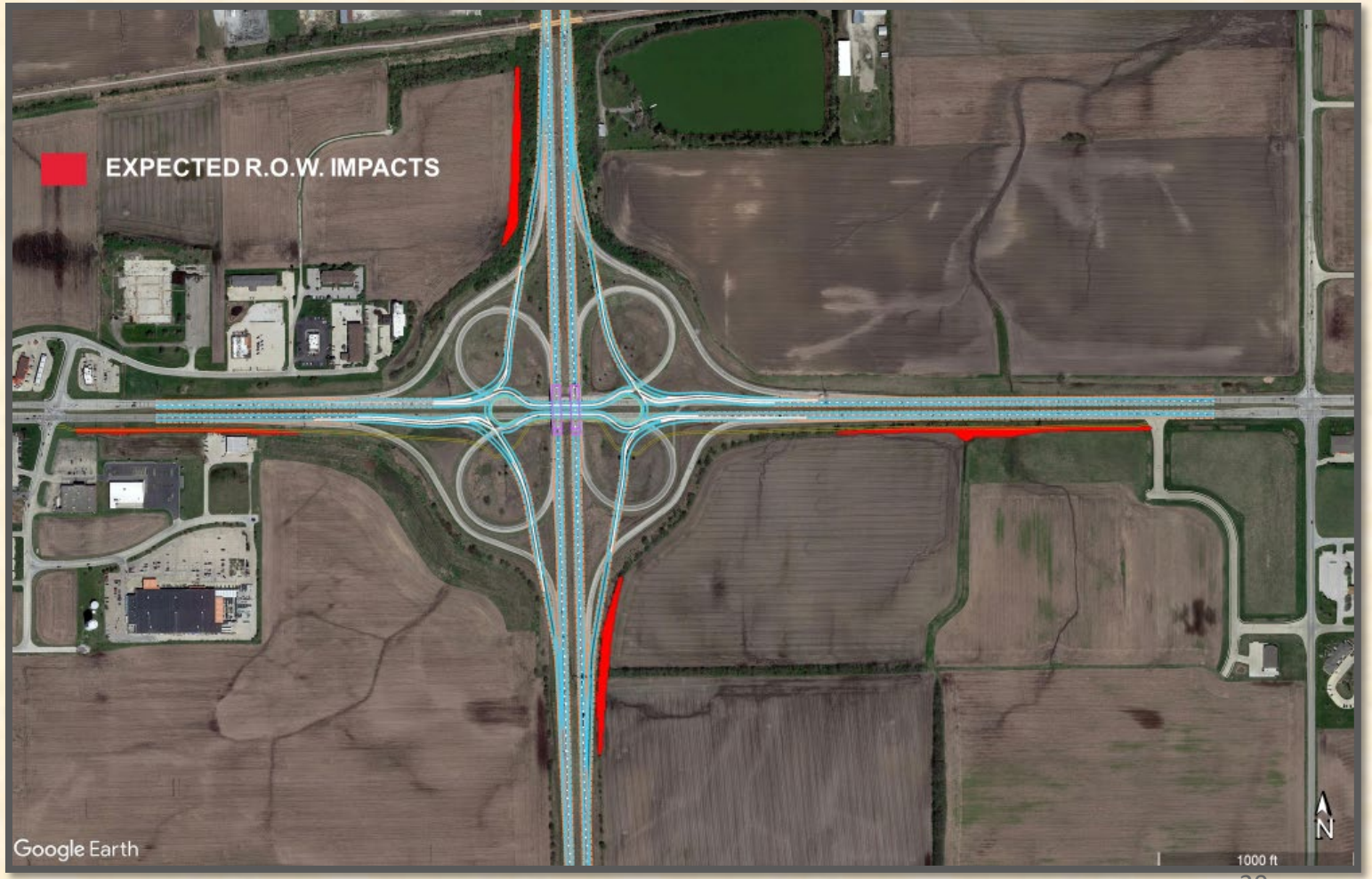


SIMILAR BOX CULVERT PROJECT

- Portland River Trail under I-96 in Portland, Michigan
- Project was constructed from Late 2012 to Early 2013
- The pictured box culvert is 272 feet long, which is 65.5 feet longer than the proposed box culvert for this project

EXPECTED RIGHT-OF WAY IMPACTS

- Southbound I-57 Exit Ramp
- Northbound I-57 Exit Ramp
- West End of Shared-Use Path
- East End of Shared-Use Path



PROJECT SUMMARY

- The I-57 bridges over IL 16 will be removed and replaced with new 2 span bridges that provide a minimum vertical clearance of 16’-6”
- The existing clover-leaf interchange will be removed and replaced with a raindrop diamond interchange
- The I-57 bridges over the Lincoln Prairie Grass Trail will be removed and replaced with a 16 feet wide by 14 feet high box culvert
- A new 10 feet wide concrete shared-use path will be constructed along the south side of IL 16 from Swords Drive in Mattoon to the Coles Center Parkway

PROJECT FUNDING

- Funding for the project comes from the National Highway Performance Program (NHPP)
- Total Program Funding: $31,150,000
  - Federal Funds: $28,035,000 (90%)
  - State Funds: $3,115,000 (10%)
- Shared-Use Path Funding Breakdown
  - Federal Portion: 90%
  - State Portion: 8%
  - City of Mattoon: 2%

PROJECT TIMELINE

- Phase I (Design & Environmental Studies) completion: Fall 2021
- Phase II (Construction Plans and Contract Documents) completion: Spring 2023
- Phase III (Construction) Tentatively Begins: Summer 2023
- Phase III (Construction) Tentative Duration: 3 to 4 years

PUBLIC MEETING COMMENTS

YOUR COMMENTS ARE ENCOURAGED

- Please submit your comments by completing the online comment form or provide your written comments to:

Mr. Jeffrey Myers, P.E.
Region 4 Engineer
Illinois Department of Transportation
400 West Wabash Avenue
Effingham, IL 62401
Attention: Tom Ronan, P.E.

If you would like to request an individual meeting to speak with IDOT representatives, please contact Tom Ronan by email at Thomas.Ronan@illinois.gov.

- Comments received after September 24, 2021 will not be part of the Public Meeting Record.