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**VILLAGE OF SUGAR GROVE  
BOARD REPORT**

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**TO:** VILLAGE PRESIDENT & BOARD OF TRUSTEES  
**FROM:** BRAD MERKEL, DIRECTOR OF PUBLIC WORKS  
**SUBJECT:** PRESENTATION ILLINOIS ROUTE 47 AT PARK AVENUE  
INTERSECTION IMPROVEMENTS CONCEPT STUDY-HR  
GREEN  
**AGENDA:** FEBRUARY 6, 2024, REGULAR BOARD MEETING  
**DATE:** JANUARY 22, 2024

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**ISSUE**

Presentation Illinois Route 47 at Park Avenue Intersection Improvements Concept Study.

**DISCUSSION**

HR Green will present the Illinois Route 47 at Park Avenue Intersection Improvements Concept Study.

**COST**

NA

**RECOMMENDATION**

The Village Board listens to the presentation and provide feedback to staff and HR Green.



Building Communities.  
Improving Lives.



# Park Avenue at Illinois Route 47

Traffic Study and Proposed Geometry Modifications



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Improving Lives.

# Park Avenue at IL 47

Traffic Study and Proposed Geometry Modifications



# Purpose of Study



- **Primary – Safety Improvement**
  - History of serious crashes at intersection
  - Most crashes involve vehicles from Park Avenue crossing or turning onto IL 47
  - Intersection is stop-controlled on the minor approaches only (2-way stop)
  - Heavy traffic volumes and high speeds on IL 47 make entry gaps infrequent
  - Driver frustration with delay can lead to reduced gap acceptance, resulting in unsafe decisions
- **Secondary – Traffic Performance**
  - Insufficient entry gaps result in long delays on Park Avenue
  - Congestion and queuing from the delay results in substandard Level of Service (LOS)

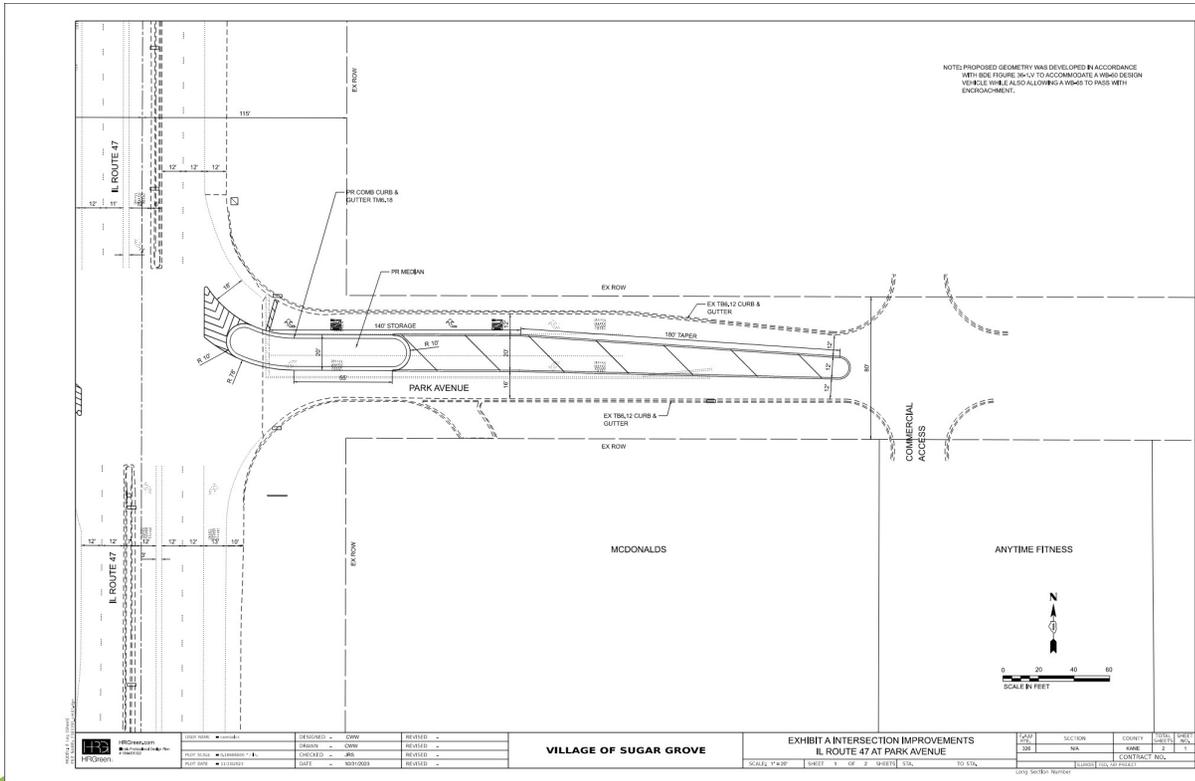
# Proposed Improvements



- Geometric Modifications
  - Proposing to prohibit through movements across IL 47 and left-turns from Park Avenue
  - All existing movements originating from IL 47 would remain permissible
  - Install raised medians/islands on Park Avenue to physically restrict prohibited movements
  - Enhanced signage and pavement markings on each approach to reinforce desired driver behavior
- Traffic Impact
  - The eliminated EB and WB through movements and left turns would be redistributed as follows:
    - North to Wheeler Road / Bliss Road
    - South to Galena Boulevard
  - Only right-turns would remain from Park Avenue onto IL 47

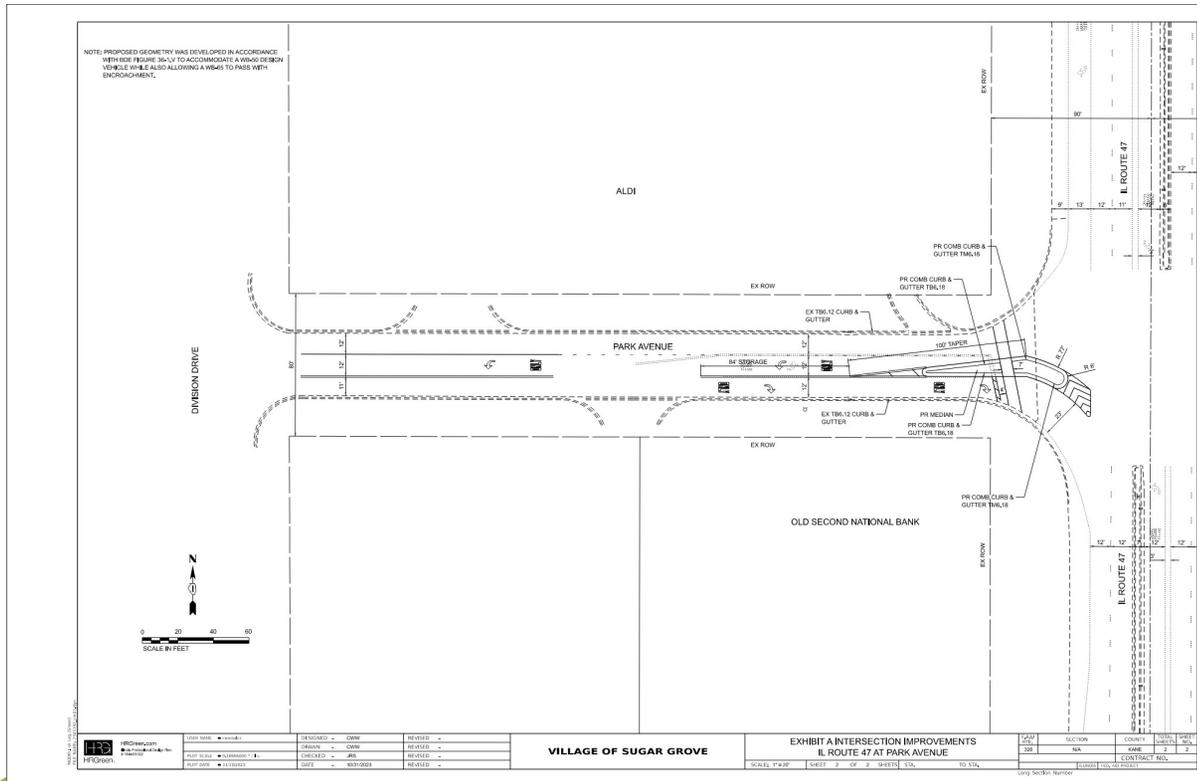


# Park Avenue – East of IL 47



Park Avenue at IL 47  
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# Park Avenue – West of IL 47



Park Avenue at IL 47  
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# Traffic Impacts



- Projected Growth by 2050 (from CMAP)
  - 40% growth on IL 47 – 23,000 existing to 32,300 in 2050 (ADT)
  - 27% growth on Park Avenue east of IL 47 – 3,000 existing to 3,800 in 2050 (ADT)
  - 25% growth on Park Avenue west of IL 47 – 2,400 existing to 3,000 in 2050 (ADT)
- Results of Capacity Analysis
  - Under proposed conditions, with through movements and left turns diverted north and south:
    - Projected delays on Park Avenue in 2050 **reduced by up to 200 seconds** during peak periods – LOS A
    - No change to LOS C at Galena Boulevard, with increase in delay **no more than 1.0 sec** during peak periods
    - No change to LOS B/C at Wheeler/Bliss, with increase in delay **no more than 1.1 sec** during peak periods
  - Significant improvement at Park Avenue, with minimal negative impact to surrounding intersections



# Summary



- Safety enhancements look to be feasible and maintain acceptable traffic performance
- Seeking Board approval to submit study to IDOT
- Next step would be to initiate detailed engineering, pending IDOT concurrence with the concept
- Project would be permitted through IDOT's Bureau of Traffic because IL 47 is a State Highway
- Rough cost estimate for engineering and construction is \$235,000

# Questions



Park Avenue at IL 47  
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1/22/2024



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*THANK YOU!*



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