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Date: January 30, 2023

To: Reserve at River Oaks Homeowners Association & Honorable Mayor Anzevino

From: Bradley Kosco, PE, PS, City Engineer

CC: Thomas J. Sheridan, City Manager
Greg Hannan, Community Development Director

Re: Reserve at River Oaks Subdivision – 2022 Traffic Study Recommendations

This memo serves as my recommendations for traffic safety improvements within the Reserve at River Oaks Subdivision. Upon your review, please let me know if you have any follow up questions or comments.

Summary of Studies and Recommended Improvements:

In early 2022, residents within the Reserve at River Oaks Subdivision inquired if the introduction of multi-way stop signs or other safety improvements to alleviate speeding, improve pedestrian safety and reduce risk of vehicle crashes could be implemented within the subdivision. Hudson Engineering Department staff collected vehicle speed & volume data in the summer 2022, and a traffic engineering consultant conducted stop sign warrant analysis to identify if the introduction of multi-way stop signs within the subdivision at Timberline/Kingswood and Regal Woods/Rosewood were warranted. The stop-sign study determined that the introduction of multi-way stop signs were not warranted at these intersections and that modification to stop sign orientations was not recommended.

In the fall of 2022, a follow up study by a second traffic engineering consultant was conducted to identify other recommended improvements to improve pedestrian safety within the neighborhood. Included in the study were both short-term and long-term recommendations which are summarized below, along with an estimated schedule for their implementation, if needed:

River Oaks Subdivision Traffic Safety Study Recommendations (from 2022 Study)		
Short Term Recommendations and Schedule		
Ref. No.	Description	Schedule for Implementation
1	Increase the size of all stop signs from 30 inches to 36 inches to increase visibility.	Public Works has ordered and is scheduled to install in coming months with suitable weather.
2	Place red post reflectors on all stop signs to increase visibility.	Public Works has ordered and is scheduled to install in coming months with suitable weather.
3	Paint stop bars on the stop approaches and high visibility crosswalks at each intersection to increase pedestrian awareness per ODOT SDC TC-74.10.	Engineering to have stop bars painted as part of annual striping program in summer 2023.
4	Move the location of the stop sign on Timberline Trail on the north side of the intersection closer to the curb to increase visibility.	Public Works to preform in the coming months with suitable weather.
5	Continuously trim and prune trees at both intersections to provide positive sight distance and visibility of all signs.	Public Works, via City Arborist, pruned street trees in fall, 2022. Additional street tree pruning may occur in coming months based upon follow-up field review. In addition, Code Enforcement Department may need to send letter regarding private property vegetation removal based upon follow up field review.
6	Consider installing STOP AHEAD (W3-1) signs ahead of the stop signs if sign visibility is limited after intermittent obstructions, such as trees, are addressed and the lateral offsets of signs are adjusted.	Implement, if needed, at a future date if stop sign and pavement marking improvements are identified as not effective by the City.

River Oaks Subdivision Traffic Safety Study Recommendations (from 2022 Study)

Long Term Recommendations and Schedule

Ref. No.	Description	Schedule for Implementation
1	Reconstruct the curb returns at both intersections to match urban radius guidelines of the ODOT Location and Design Manual Volume 1. By reconstructing the curb returns with 25 foot radii, pedestrian crossings become shorter and stopped vehicles are moved closer to the intersection and sight distance improves. Turning movements around the radii will naturally be slower as well.	After implementing short-term recommendations noted above, the City should to continue to monitor intersections of concern within the subdivision. If it is determined by the City that a major reconstruction improvement is needed, a long term solution to reconstruct curb returns could be implemented in a future Capital Improvements budget and scheduled for construction.
2	Consider installing a mini roundabout at both intersections. Instead of decreasing the turning radii and reconstructing the intersections, a mini roundabout can fit in the existing pavement. See example below in figure 5. Mini roundabouts can be constructed with just pavement markings or raised islands on the approaches and in the center of the intersection. The purpose of the mini roundabout would be to lower vehicular speeds and the associated traffic islands can provide a refuge for pedestrians crossing the street. Plowing and ice removal during the winter months is a potential maintenance issue that will need discussed with city crews prior to installation.	The introduction of a mini-round about is not recommended due to future maintenance concerns.

Conclusions:

The City and traffic safety consultants collected vehicle speed and volume data in the summer 2022, field reviewed and provided the recommendations noted above, to improve pedestrian safety within the Reserve at River Oaks Subdivision.

Based upon data collected, traffic safety studies and analysis, **I recommend the City proceed with the short-term recommendations.**

As the City and traffic consultants did not identify a speeding issue or accident history as part of the studies, **I recommend postponing the design and construction of any of the long-term improvements identified,** until after all short-term improvements have been installed and further monitoring of traffic safety within the subdivision has taken place. If deemed necessary at a later date, the City can then proceed with scheduling these future improvements.

Note that the introduction of mini-round about utilizing a raised island is not recommended due to maintenance and snow-plow concerns. This is based upon observations of an existing mini roundabout in a neighboring community and discussions with staff regarding snow plowing efforts, and other potential sources of damage to a raised island in the roadway.