

Submitted into the Record by Gary Hunter at the
8-8-2021 Special Meeting



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Colt Schwerdt, P.E.
Deputy Director, Public Works Department
City of Port St. Lucie
121 SW Port St. Lucie Blvd.
Port St. Lucie, FL 34984
(772) 871-7644
cschwerdt@cityofpsl.com

RE: **Riverland/Kennedy DRI Traffic Study Review**

Dear Mr. Schwerdt:

WGI has reviewed several documents with respect to the proposed Riverland/Kennedy Development of Regional Impact (DRI) project:

- "Riverland/Kennedy Development of Regional Impact (DRI) Development Order Amendment," (August 31, 2020)
- "Traffic Impact Statement, Riverland/Kennedy," prepared by Simmons & White (August 26, 2020)
- "Resolution 16-R52," (September 12, 2016)
- "Resolution 21-RXX," prepared and proposed to replace Resolution 16-R52 (undated)
- Proposed Exhibit B for Resolution R21-RXX
- Existing and Proposed Exhibit D – Map H from Resolution 16-R52 and Resolution R21-RXX

This review looks at the methodology completed for the August 2020 traffic analysis, anticipated volumes generated by the project and proposed conditions, and potential impacts from the proposed development, including roadway capacity needs and required roadway improvements as a result of the development.

The proposed land use (Project) for the full buildout will consist of up to 8,424 single-family dwelling units (of which 3,275 are single-family age-restricted dwelling units), 3,276 multi-family dwelling units, 1,361,250 square feet of light industrial development, 892,668 square feet of commercial retail, 1,361,250 square feet of office and research and development space, and 327,327 square feet of institutional use. An updated traffic study was completed to review the effects of moving uses to different areas of the Riverland/Kennedy area. The Project will be located west of Community Boulevard and south of Discovery Way in the City of Port Saint Lucie, Florida.

We have reviewed the following aspects of transportation with respect to the Project:

- Proposed land use in the existing and updated studies
- Methodology and available model assumptions, including trip generation estimates
- Programmed and funded improvements in the existing and updated studies



TRIP GENERATION ESTIMATES

Land use assumptions have changed between the existing and updated studies; however, the final buildout land use intensities, as well as the land uses assumed in each of the phases, have remained the same.

The author of the traffic study notes that “[t]o properly reflect the existing and proposed plan of development, 3,275 of the overall 8,424 single-family dwelling units are to be designated as age-restricted single-family. The age-restricted single-family land use category was not available in the ITE Trip Generation when the Western Annexation Traffic Study (WATS) was completed.” This will create lower trip generation totals holding all other variables constant, but it is more accurate with respect to the anticipated trip generation.

Table 1 below summarizes the changes by area in terms of the types of uses included in parcels throughout the Riverland/Kennedy area. Approximately 2.3 percent of the acreage is proposed for a change of land use. There are no changes to the light industrial, office, research and development, and institutional uses included as part of the DRI.

TABLE 1: LAND USE CHANGES SUMMARY

Parcel	Approved Uses	Proposed Uses	Additions	Subtractions	Percentage Area Changed
A	No Changes				
B	339 Acres Residential 30 Acres Commercial	334 Acres Residential 4 Acres Commercial 31 Acres Mixed Use	31 Acres Mixed Use	-5 Acres Residential -26 Acres Commercial	8.4%
C	No Changes				
D	426 Acres Residential 10 Acres Commercial	436 Acres Residential	10 Acres Residential	-10 Acres Commercial	2.3%
E	No Changes				
F	393 Acres Residential 31 Acres Commercial	399 Acres Residential 25 Acres Commercial	6 Acres Residential	-6 Acres Commercial	1.4%
G	345 Acres Residential 10 Acres Commercial	334 Acres Residential 21 Acres Commercial	11 Acres Commercial	-11 Acres Residential	3.1%
South of Becker Road	290 Acre Mixed Use	259 Acre Mixed Use 31 Acre Commercial	31 Acre Commercial	-31 Acre Mixed Use	10.7%
Total					2.3%

Source: WGI, Inc., 2020.

The author of the traffic states that “[t]he developer is not requesting any removal or changes to their conditions of approval regarding the required roadway improvements. The existing development order also already requires



a trip generation analysis as part of each Site Plan application and has other traffic monitoring conditions...” and proposed the following methodology for comparison:

- Comparison of trip generation between previously approved plans and the proposed overall master plan.
- Modified trip distribution based on the comparison of the land use locations of the approved Western Annexation Traffic Study (WATS) and the proposed master plan.
- Roadway capacity analysis within the internal DRI roadway network. Since the overall land use intensities are not changing, it was assumed that the trip distribution and impact outside of the subject DRI would remain the same.

WGI generally agrees with this assessment, with exception of the final assumption; however, that is likely to be true based on the following changes:

- Changes in internal capture percentages as a result of the shifting land uses
- Decreased trip generation estimate considering the age-restricted single-family land use consideration
- Shift from ITE Trip Generation (7th Edition), which was current at the time of the WATS study, ITE Trip Generation (10th Edition).

Table 3 in the August 26, 2020 Simmons & White study provides a trip generation for four scenarios to provide appropriate context for these changes:

- (#1 – Original) Approved WATS: directly from the WATS which utilized rates from the ITE Trip Generation, 7th Edition
- (#2 – Original/Updated): WATS updated to the ITE Trip Generation, 10th Edition
- (#3 – Approved): Currently approved master plan using the ITE Trip Generation, 10th Edition
- (#4 – Proposed): Proposed master plan using the ITE Trip Generation, 10th Edition

These reflect the scenarios requested when discussing the scope of the study with the applicant and their engineer. The change from Scenario 1 to Scenario 2 reduced the number of gross trips by 0.3 percent and the net number of trips by 4.9 percent. While the internal capture actually decreased, the number of pass-by trips with the updated data from ITE increased significantly, meaningfully (and appropriately) affecting the number of net trips. These patterns are similar in the PM peak hour (1.9 percent decrease in gross trips, 6.5 percent decrease in net trips).

The comparison from Scenario 2 to Scenario 3 is also very similar, with 1.0 percent more gross trips included in Scenario 3 and 0.4 percent more net trips. This indicates that the approved master plan was accurately reflected in the travel demand model on which the WATS study is based, which should give additional support for the results of that analysis. Again, these patterns are similar in the PM peak hour (0.4 percent increase in gross trips, 0.2 percent crease in net trips).



Finally, the comparison from Scenario 3 to Scenario 4 confirms that the internal capture and pass-by trips increase slightly with the new land use mixes, and the overall trip generation decreases with consideration of the single-family age-restricted dwelling units. WGI did a comparison of the trip generation for these scenarios without considering those units as age-restricted. Trip generation totals for both the daily and PM peak hour periods were within 1 percent of the those in Scenario 3 with this method of analysis. We would also note that there is a typo in Table 3; the daily internal capture and pass-by trips are shown to be the same, though the pass-by trips number is incorrect. The total gross trips and net trips appear to be correct though.

TRIP DISTRIBUTION AND ROADWAY CAPACITY ANALYSIS

In the updated traffic study, the trip distribution was based on the analysis from the approved WATS and adjusted to reflect the proposed trip generation within the Traffic Analysis Zones (TAZs). The author states that "[i]t was assumed that the distribution outside of the DRI boundaries would remain the same since the overall land uses and intensities were not changing." This is likely not true, given that the location of trips internal to the DRI likely changes connections to the external roadways and desired paths to and from origins and destinations; however, based on the trip generation analysis, it is very unlikely to require additional transportation capacity.

Finally, the updated trips from the Riverland/Kennedy area were applied to the roadway capacity analysis from the WATS and the net difference was added or subtracted from the previous Riverland/Kennedy project trips. The author states that a "[a] peak to daily ratio of (K Factor) of 0.95...was used to be consistent with the WATS." This is likely just a typo, because the analysis would not make sense otherwise. That K Factor is more likely 0.095, and the author should clarify.

While the updated traffic analysis for the internal and adjacent roadways to the Riverland/Kennedy DRI showed that some roadways saw an increase in anticipated traffic volumes, none of those roadways would require additional capacity.



CONCLUSION

The relocated land uses within the overall Master Plan do not change the previously approved results or agreed-to timeline for transportation improvements, even without any other changes. In addition, the applicant has designated 3,275 dwelling units of the approved 8,424 single-family dwelling units as age-restricted, which have a lower trip generation estimate.

WGI has no comments on the amendments to the Development Order Amendment or its Amended Conditions of Approval from a technical perspective related to transportation.

This concludes our peer review of the updated Riverland/Kennedy DRI Traffic Study. Please contact Dan Hennessey at (772) 408-5258 or dan.hennessey@wginc.com with any questions or comments.

Sincerely,

WGI, Inc.

A handwritten signature in black ink, appearing to read 'D. Hennessey'.

Dan Hennessey, P.E., PTOE
Director, Mobility