



1500 County Road 269
Leander, TX 78641

P.O. Box 2029
Leander, TX 78646-2029

Date: Wednesday, November 14, 2018

Jason Reece
Kimley Horn
10814 Jollyville Road
Austin 78759
Jason.Reece@kimley-horn.com

Permit Number 2018-P-1154-PP
Job Address: Shadowglen Phase 3 Section 1 & 2 Preliminary Plan, Manor, TX. 78653

Dear Jason Reece,

The first submittal of the Shadowglen Phase 3 Section 1 & 2 Preliminary Plan (*Preliminary Plan*) submitted by Kimley Horn and received on July 31, 2023, have been reviewed for compliance with the City of Manor Subdivision Ordinance 263B.

Engineer Review

The review of the submittal package has resulted in the following comments. Should you have any questions or require additional information regarding any of these comments, please contact Pauline Gray, P.E. by telephone at (737) 247-7557 or by email at pgray@gbateam.com.

1. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(2)(iii), Significant Trees, within the boundaries of the subdivision and of 8-inch caliper and larger, shall be shown accurately to the nearest one (1) foot, Critical Root Zones of these trees shall also be shown on the preliminary plat.
2. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(2)(vii), the locations, sizes and descriptions of all existing utilities, including but not limited to wastewater lines, lift stations, wastewater and storm sewer manholes, waterlines, water storage tanks, and wells within the subdivision, and/or adjacent thereto should be shown on the preliminary plat.
3. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(3)(iii), the locations, dimensions, names and descriptions of all proposed streets, alleys, parks, nature preserves, open spaces, blocks, lots, reservations, easements, and rights-of-way; and areas within the subdivision, indicating the connection to or continuation of other improvements in adjacent subdivisions be shown on the preliminary plat.
4. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(3)(vii), Significant Trees to remain during construction showing the Critical Root Zones as solid circles, and Significant Trees designated to be removed showing the Critical Root Zones as dashed circles on the preliminary plat.
5. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(3)(viii), Replacement Trees shall be shown on the Preliminary Plat based on a replacement ratio (inches removed to inches planted) of:
 - a) 1:2 for Significant Trees eighteen (18) inches in caliper and larger, and
 - b) 1: 1 for Significant Trees between eight (8) and eighteen (18) in caliper.
 - c) Replacement Trees shall not be required for the removal of trees smaller than eight (8) inches in caliper. The removal of Significant Trees larger than eighteen inches in caliper require Commission approval.
6. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(4)(iv), Traffic Impact Analysis (TIA), consistent with the City of Austin Transportation Criteria Manual is required. A scoping meeting must be conducted with City Staff prior to assembly of the TIA document.
7. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(3)(vi), the lengths of each proposed property line of all lots. The area of each non-rectangular lot shall be provided.
8. Some of the drawings appear to be cut off. Adding matchlines where applicable may help to clarify where each section is located.
9. The MUD number that will serve the proposed project is not listed on under the General Information on Sheet 2.

10. Clearly differentiate between existing and proposed waterline and wastewater lines.
11. Clearly show where the proposed waterline and wastewater lines will tie in to the existing systems.
12. The following comments pertain to the requested variances:
 - i. The lot sizes have been determined for the entire Shadowglen Development. Per the Development Agreement (DA), 25% can be 5,000 sf, 20% can be 5,500 sf, 20% can be 6,000 sf, 20% can be 6,500 sf, 7.5% can be 7,400 sf and 7.5% can be 8,000 sf. These are percentages for what has been already been constructed and approved. It should be shown how many of each lot type has already been constructed and approved and how many are proposed with this Phase.
 - ii. There are set percentages for lot widths that need to be followed: 15% = 65 ft, 20%=60 ft, 20%=55 ft, 20%=50 ft and 25%=40 ft. You can deviate from those percentages +/- 5%. It would be helpful to have a table of where the development currently is and what it will be at with the proposed lots.
 - iii. Is taken from the DA and is fine.
 - iv. Is taken from the DA and is fine.
 - v. Is taken from the DA and is fine.
 - vi. Is taken from the DA and is fine.
 - vii. This needs to be clarified as to what the development plan and report are. Would this show the lot sizes and widths for Shadowglen overall?
 - viii. Clarify what was revoked.
 - ix. Would full construction plan sets be submitted for the pathways?
 - x. Is ok.
 - xi. Please provide documentation as to when the variance request was granted along with a copy of the approved request.
13. There appears to be now variance process in the DA so the only way to have any new variances approved would be through an amendment to the DA. There are already agreed to variances in the DA, so if additional ones are requested the DA would need to be amended.
14. It is highly unlikely that any waivers to deviate from the DA will be granted.
15. Parkland is required to be dedicated with Phase 3 of Shadowglen and should be consistent with Exhibit I of the DA. For Phase 3, 6.4 acres of greenbelt trails/linear parks and 8.5 acre community park is required.

Please revise the project plans to address the comments noted above. Following revision, please upload one full set of the revised drawings in PDF format. Please include a comment response narrative indicating how comments have been addressed with your plan resubmittal. To access your project online, please go to www.mygovernmentonline.org and use the online portal to upload your drawings in PDF format.

Additional comments may be generated as requested information is provided. Review of this submittal does not constitute verification that all data, information and calculations supplied by the applicant are accurate, complete, or adequate for the intended purpose. The engineer of record is solely responsible for the completeness, accuracy, and adequacy of his/her submittal, whether or not City Engineers review the application for Ordinance compliance.

Thank you,



11/14/2018 4:58:19 PM
Shadowglen Phase 3 Section 1 & 2 Preliminary Plan
2018-P-1154-PP
Page 4

Pauline Gray, P.E.
Lead AES
GBA



February 18, 2019

City of Manor
Pauline Gray, P.E.
105 E. Eggleston Street
Manor, TX 78653

**RE: Preliminary Plan for Shadowglen Phase 3 (Permit No. 2018-P-1154-PP)
Section 1 & 2
Manor, Texas 78653**

Dear Ms. Gray:

Please accept this Comment Response Letter for the above reference project. This submittal is in response to the comments provided by the City of Manor on November 14, 2018. The original comments have also been included below, for reference.

Comment 1. Significant Trees, within the boundaries of the subdivision and of 8-inch caliper and larger, shall be shown accurately to the nearest one (1) foot, Critical Root Zones of these trees shall also be shown on the preliminary plat.

Response: A tree survey has been included with this submittal.

Comment 2. The locations, sizes and descriptions of all existing utilities, including but not limited to wastewater lines, lift stations, wastewater and storm sewer manholes, waterlines, water storage tanks, and wells within the subdivision, and/or adjacent thereto should be shown on the preliminary plat.

Response: All existing utilities have been shown and labeled.

Comment 3. The locations, dimensions, names and descriptions of all proposed streets, alleys, parks, nature preserves, open spaces, blocks, lots, reservations, easements, and rights-of-way; and areas within the subdivision, indicating the connection to or continuation of other improvements in adjacent subdivisions be shown on the preliminary plat

Response: Proposed street names, easements, right-of-way and dimensions have been shown on the Preliminary Plan.

Comment 4. Significant Trees to remain during construction showing the Critical Root Zones as solid circles, and Significant Trees designated to be removed showing the Critical Root Zones as dashed circles on the preliminary plat.

Response: All Significant Trees within the project limits to remain and/or removed have been shown with this submittal.

Comment 5. The Replacement Trees shall be shown on the Preliminary Plat based on a replacement ratio (inches removed to inches planted) of:

- a) 1:2 for Significant Trees eighteen (18) inches in caliper and larger, and
- b) 1:1 for Significant Trees between eight (8) and eighteen (18) in caliper.
- c) Replacement Trees shall not be required for the removal of trees smaller than eight (8) inches in caliper. The removal of Significant Trees larger than eighteen inches in caliper require Commission approval

Response: **The Development Agreement requires a minimum of 2 – 2” caliper trees to be planted for each residential lot.**

Comment 6. A Traffic Impact Analysis (TIA), consistent with the City of Austin Transportation Criteria Manual is required. A scoping meeting must be conducted with City Staff prior to assembly of the TIA document.

Response: **TIA Scope has been approved and will be submitted as soon as it has been completed.**

Comment 7. Provide the lengths of each proposed property line of all lots. The area of each non-rectangular lot shall be provided

Response: **Lengths are depicted for each proposed property line for all lots except for future lots on Sheet 3 & 4. Area for every lot is provided in Sheet 5.**

Comment 8. Some of the drawings appear to be cut off. Adding match lines where applicable may help to clarify where each section is located

Response: **Match lines have been added. In addition, a Key Map is provided on each sheet where drawings are cut off.**

Comment 9. The MUD number that will serve the proposed project is not listed on under the General Information on Sheet 2.

Response: **The MUD that will serve the proposed project is Wilbarger Creek M.U.D. #1 and is noted in Note 3 on Sheet 2.**

Comment 10. Clearly differentiate between existing and proposed waterline and wastewater lines.

Response: **All proposed utilities are shown in bold and existing utilities are thin.**

Comment 11. Clearly show where the proposed waterline and wastewater lines will tie in to the existing systems.

Response: **The proposed wastewater connection tie-in location is shown on Sheet EX-L and the proposed water tie-in locations are shown on Sheet EX-J.**

Comment 12. The following comments pertain to the requested variances:

- i. The lot sizes have been determined for the entire Shadowglen Development. Per the Development Agreement (DA), 25% can be 5,000 sf, 20% can be 5,500 sf, 20% can be 6,000 sf, 20% can be 6,500 sf, 7.5% can be 7,400 sf and 7.5% can be

8,000 sf. These are percentages for what has been already been constructed and approved. It should be shown how many of each lot type has already been constructed and approved and how many are proposed with this Phase.

Response: This information was shown on the Cover Sheet (Sheet #1) just under the Vicinity Map.

ii. There are set percentages for lot widths that need to be followed: 15% = 65 ft, 20%=60 ft, 20%=55 ft, 20%=50 ft and 25%=40 ft. You can deviate from those percentages +/- 5%. It would be helpful to have a table of where the development currently is and what it will be at with the proposed lots.

Response: This information was shown on the Cover Sheet (Sheet #1) just under the Vicinity Map.

iii. Is taken from the DA and is fine.

Response: Noted

iv. Is taken from the DA and is fine.

Response: Noted

v. Is taken from the DA and is fine.

Response: Noted

vi. Is taken from the DA and is fine.

Response: Noted

vii. This needs to be clarified as to what the development plan and report are. Would this show the lot sizes and widths for Shadowglen overall?

Response: The report and development plan were submitted with the initial submittal of the Preliminary Plan review.

viii. Clarify what was revoked.

Response: This noted was copied from Phase 2 Preliminary Plan. This note has been removed.

ix. Would full construction plan sets be submitted for the pathways?

Response: Yes, a full separate construction plan set will be submitted for the pathways.

x. Is ok.

Response: Noted

xi. Please provide documentation as to when the variance request was granted along with a copy of the approved request.

Response: This noted was copied from Phase 2 Preliminary Plan. There are no new variance being requested. The variance as discussed in the general notes refers to the existing approved PUD variances.

Comment 13. There appears to be now variance process in the DA so the only way to have any new variances approved would be through an amendment to the DA. There are already agreed to variances in the DA, so if additional ones are requested the DA would need to be amended

Response: No additional waivers to deviate from the Development Agreement are being requested at this time.

Comment 14. It is highly unlikely that any waivers to deviate from the DA will be granted.

Response: No additional waivers to deviate from the Development Agreement are being requested at this time.

Comment 15. Parkland is required to be dedicated with Phase 3 of Shadowglen and should be consistent with Exhibit I of the DA. For Phase 3, 6.4 acres of greenbelt trails/linear parks and 8.5-acre community park is required.

Response: Lot 1 in Section 1 (7.7 acres) will be utilized for the amenity center and detention pond. The subsequent sections of Shadowglen Phase 3 will satisfy the remaining parkland requirements.

Please contact me at 512-551-1839 if additional information is required.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Jason Reece, P.E.
Project Manager



1500 County Road 269
Leander, TX 78641

P.O. Box 2029
Leander, TX 78646-2029

Date: Wednesday, March 27, 2019

Jason Reece
Kimley Horn
10814 Jollyville Road
Austin 78759
Jason.Reece@kimley-horn.com

Permit Number 2018-P-1154-PP
Job Address: Shadowglen Phase 3 Section 1 & 2 Preliminary Plan, Manor 78653

Dear Jason Reece,

The subsequent submittal of the Shadowglen Phase 3 Section 1 & 2 Preliminary Plan submitted by Kimley Horn and received on July 31, 2023, have been reviewed for compliance with the City of Manor Subdivision Ordinance 263B. We can offer the following comments based upon our review (satisfied comments stricken, new or outstanding comments in bold):

Engineer Review

The following comments have been provided by Pauline Gray, P.E.. Should you have any questions or require additional information regarding any of these comments, please contact Pauline Gray, P.E. by telephone at (737) 247-7557 or by email at pgray@gbateam.com.

1. ~~Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(2)(iii), Significant Trees, within the boundaries of the subdivision and of 8-inch caliper and larger, shall be shown accurately to the nearest one (1) foot, Critical Root Zones of these trees shall also be shown on the preliminary plat.~~
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6. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(4)(iv), Traffic Impact Analysis (TIA), consistent with the City of Austin Transportation Criteria Manual is required. A scoping meeting must be conducted with City Staff prior to assembly of the TIA document.

~~7. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(3)(vi), the lengths of each proposed property line of all lots. The area of each non-rectangular lot shall be provided.~~

~~8. Some of the drawings appear to be cut off. Adding matchlines where applicable may help to clarify where each section is located.~~

9. The MUD number that will serve the proposed project is not listed on under the General Information on Sheet 2. (See upper left corner of sheet).

~~10. Clearly differentiate between existing and proposed waterline and wastewater lines.~~

~~11. Clearly show where the proposed waterline and wastewater lines will tie in to the existing systems.~~

12. The following comments pertain to the requested variances:

- i. The lot sizes have been determined for the entire Shadowglen Development. Per the Development Agreement (DA), 25% can be 5,000 sf, 20% can be 5,500 sf, 20% can be 6,000 sf, 20% can be 6,500 sf, 7.5% can be 7,400 sf and 7.5% can be 8,000 sf. These are percentages for what has been already been constructed and approved. It should be shown how many of each lot type has already been constructed and approved and how many are proposed with this Phase.
- ii. There are set percentages for lot widths that need to be followed: 15% = 65 ft, 20% = 60 ft, 20% = 55 ft, 20% = 50 ft and 25% = 40 ft. You can deviate from those percentages +/- 5%. It would be helpful to have a table of where the development currently is and what it will be at with the proposed lots.
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- ix. Would full construction plan sets be submitted for the pathways?
- x. Is ok.
- xi. Please provide documentation as to when the variance request was granted along with a copy of the approved request.

~~13. There appears to be a new variance process in the DA so the only way to have any new variances approved would be through an amendment to the DA. There are already agreed to variances in the DA, so if additional ones are requested the DA would need to be amended.~~

~~14. It is highly unlikely that any waivers to deviate from the DA will be granted.~~

15. Parkland is required to be dedicated with Phase 3 of Shadowglen and should be consistent with Exhibit I of the DA. For Phase 3, 6.4 acres of greenbelt trails/linear parks and an 8.5 acre community park is required. The 8.5 acres is shown on the park plan as a contiguous tract that is 100% non-floodplain and contains only approved "Parkland Infrastructure". Lot 1 in Section 1 is shown as open space on the park plan, which is separate from the required community park space, and the lot contains detention facilities which are not approved "Parkland Infrastructure" for a community park. Any lot proposed to meet the "Additional Land" requirement of the DA should be labeled as only "Additional Land" or "Upland Park" with separately defined acreage from any open space or drainage lots.

Please revise the project plans to address the comments noted above. Following revision, please upload one full set of the revised drawings in PDF format. To access your project online, please go to www.mygovernmentonline.org and use the online portal to upload your drawings in PDF format.

Should you have questions regarding specific comments, please contact the staff member referenced under the section in which the comment occurs. Should you have questions or require additional information regarding the plan review process itself, please feel free to contact me directly. I can be reached by telephone at (737) 247-7557, or by e-mail at pgray@gbateam.com.

Review of this submittal does not constitute verification that all data, information and calculations supplied by the applicant are accurate, complete, or adequate for the intended purpose. The engineer of record is solely responsible for the completeness, accuracy, and adequacy of his/her submittal, whether or not City Engineers review the application for Ordinance compliance.

Thank you,



Pauline Gray, P.E.
Lead AES
GBA



1500 County Road 269
Leander, TX 78641

P.O. Box 2029
Leander, TX 78646-2029

Date: Wednesday, September 9, 2020

Jason Reece
Kimley Horn
10814 Jollyville Road
Austin 78759
Jason.Reece@kimley-horn.com

Permit Number 2018-P-1154-PP
Job Address: Shadowglen Phase 3 Section 1 & 2 Preliminary Plan, Manor, TX. 78653

Dear Jason Reece,

The first submittal of the Shadowglen Phase 3 Section 1 & 2 Preliminary Plan (*Preliminary Plan*) submitted by Kimley Horn and received on July 31, 2023, have been reviewed for compliance with the City of Manor Subdivision Ordinance 263B.

Engineer Review

The review of the submittal package has resulted in the following comments. Should you have any questions or require additional information regarding any of these comments, please contact Pauline Gray, P.E. by telephone at (737) 247-7557 or by email at pgray@gbateam.com.

THE FOLLOWING COMMENTS ARE FOR THE FIRST SUBMITTAL OF THE DETENTION WAIVER REQUEST:

- 1. The detention waiver request will need to be approved by TRAVIS COUNTY as well the City of Manor.**
2. Clarify why the Areas for the curve numbers are different for existing vs proposed in Table 3.
3. Clarify which section of the City of Austin Drainage Criteria Manual you are requesting the Waiver Request for.
4. Per the City of Austin Drainage Criteria Manual Section 1.2.2(D), stormwater runoff peak flow rates shall not be increased at any point of discharge from a site for the two (2), ten (10), 25 and 100-year storm frequency events.
5. The waiver request states that minor changes in velocity occur within Wilbarger Creek and that the changes are minor. The report states that increases in peak flows during the 2- and 25-year storm events are less than 0.02% of their existing peak flows and will have no adverse impact on Wilbarger Creek and no additional adverse flooding will take place as a result of the proposed development. Please provide calculations showing that the increased velocities will not affect erosion.
6. Provide calculations showing that the developed intensity curve numbers include streets, sidewalks and any other impervious cover items in their calculations. The residential curve numbers appear low.
- 7. PROVIDE DOCUMENTATION THAT THE WAIVER REQUEST HAS BEEN APPROVED BY TRAVIS COUNTY.**

Please revise the project plans to address the comments noted above. Following revision, please upload one full set of the revised drawings in PDF format. Please include a comment response narrative indicating how comments have been addressed with your plan resubmittal. To access your project online, please go to www.mygovernmentonline.org and use the online portal to upload your drawings in PDF format.

Additional comments may be generated as requested information is provided. Review of this submittal does not constitute verification that all data, information and calculations supplied by the applicant are accurate, complete, or adequate for the intended purpose. The engineer of record is solely responsible for the completeness, accuracy, and adequacy of his/her submittal, whether or not City Engineers review the application for Ordinance compliance.

Thank you,



Pauline Gray, P.E.
Lead AES
GBA

André Betit, PE
Daniela Guthrie, PE
Travis County TNR Road and Bridge
Mailing Address: P.O. Box 1748; Austin, TX 78701-1748
Physical Address: 700 Lavaca Street; Austin, TX 78701

Traffic Impact Analysis for Shadowglen Phase 3 TIA

Please accept this *Comment Response Letter* in reply to Travis County Completion Check review, dated December 14, 2020 regarding the referenced project. Original comments have been included for reference, while Kimley-Horn responses are listed in **maroon**.

COMPLETION CHECK COMMENTS

1. Sight Distance Analysis: The TIA shall include horizontal and vertical sight distance analysis for both Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD); however, only the horizontal intersection sight distance analysis was included in the report. Please include all exhibits as part of the update.

Response: Vertical sight distance figures have been included in this submittal in Appendix M along with the horizontal sight distance figures.

2. Section I.5.d requires a roadway sizing analysis for all connecting internal roadways. It appears the driveways/internal roadways weren't included in the report.

Response: A roadway sizing analysis has been included in the Phase 1 section of the report (Page 40-41) for the primary entrance roads to the Phase 1 development (2023) – called Driveway 1 and Driveway 2. The roadway sizing analysis for Driveway 3/Misty Grove Boulevard is included with the Phase 2 development (2025) of the report (Page 60).

The roadway classifications are noted on the overall site plan included as Figure 1, including notes for each classification used.

3. Section II.1 (a): Annual growth rate. Please provide printouts or screen shots of the TxDOT count maps in the appendix of the report.

Response: Growth rate calculations and the relevant TxDOT historical data has been included in Appendix C.

The growth rate table included shows an average growth rate of 9%; however, we are proposing a 3% growth rate as a more realistic growth rate to be sustainable over a 5-year development schedule. A 3% growth rate also aligns with the growth trends utilized in the background projects included in this TIA, as shown in the table below.

Project	Growth Rate
Wildhorse PUD	*
Lagos	1.00%
Equinox East	3.00%
Shadowglen PUD	2.00%
*Not included in report provided	

4. Please provide the electronic version of the NCHRP 457 spreadsheets. They appear to be missing.

Response: The Excel spreadsheets are included with this submittal.

Please contact me with questions or if additional information is required before January 4, 2021. I can be reached at 979 307 5030 or via email at allison.adams@kimley-horn.com.

Sincerely,



Allison Adams, P.E.

For future communication, questions and comments may continue to be directed to Santiago Araque Rojas, P.E., the project manager, using the following information:

*Santiago A. Araque Rojas, P.E.
Project Manager
santiago.araque@kimley-horn.com
(512) 418-4514*

February 8, 2021

Mr. Santiago A. Araque Rojas, P.E.
Kimley-Horn and Associates, Inc.
10814 Jollyville Road
Campus IV, Suite 200
Austin, TX 78759

SUBJECT: Review Comments for Traffic Impact Analysis Report
Shadowglen – Phase 3 (Manor, TX) (1st Submittal)

As requested by the City of Manor, GBA's traffic and transportation engineers have completed a technical review of the above referenced Traffic Impact Analysis (TIA) report submitted by Kimley-Horn. This TIA report submittal was received by the City of Manor on January 8, 2021 and provided to GBA at that time. In addition, we have also reviewed your supplemental information provided in response to the Travis County Completion Check review, dated December 14, 2020.

We would offer the following comments and observations regarding both our independent review of the submitted TIA report, as well as the County's comments provided during their content review and Kimley-Horn's subsequent responses:

1. There are several minor mistakes within the report document's Table of Contents:
 - It appears that there is a gap in the report page numbering, with Pages 12-19 missing.
 - The "Trip Distribution and Assignment" description is actually provided on Page 10.
 - In the Listing of Tables, **Tables 9-10** (2023 AM/PM Queuing Summary) and **Tables 16-17** (2025 AM/PM Queuing Summary) have been omitted, and items from **Table 9** to **Table 21** have been mislabeled as a result.
2. We find the submitted TIA report to be in general compliance with the Scope & Study Area guidance provided by Travis County personnel, as depicted in **Appendix A**, but would offer these observations:
 - We generally concur with the "factoring" of the existing traffic counts, including Kimley-Horn's COVID adjustment process and the use of some historical traffic growth factors to adjust 2019 traffic counts to current conditions (see further discussion of utilized traffic growth factors provided below in comment #4).
 - Please provide additional description, clarification and illustrations of the data collected for the purposes of calibrating the existing Synchro operational analyses.
 - We noted that there was an increase of 6 dwelling units proposed within the development between the scoping stage and this report submittal, resulting in negligible increases in expected trip generation of 58 daily trips, 4 total AM trips, and 6 total PM trips.
 - In **Appendix B**, the **Exhibit B1** does not explicitly provide the trip generation estimates for each adjacent approved project individually as required, nor does **Exhibit B2** allow for any tracking of site-generated trips from these adjacent projects on an individual basis with the way that these trips have been aggregated and summarized.
 - While we did note that existing traffic signal timing sheets were included within the electronic submittal package, they were not included in the Appendix of the TIA as listed in Submittal Requirement #5.
3. Please clarify the background traffic development volumes used for the purposes of this TIA. Good description is provided for the adjacent approved developments on Page 3 for the 2023

scenario. However, different (i.e., higher) assumptions for the background traffic from the adjacent approved developments may have been appropriate for the 2025 scenario.

- Was additional traffic beyond Phase 1 of the Lagos development included in the 2025 scenario, as this development progresses toward completion in 2030? If not, why?
 - The Equinox East development is expected to be completed by 2027. Should additional traffic (up to 75% if linear growth is assumed) from this development have been considered for the 2025 scenario?
4. We have independently reviewed the supplemental TxDOT historical data provided by Kimley-Horn and summarized in the attached **Appendix C**. We understand that a 3% annual growth rate appears consistent with the growth trends utilized in the several background projects included in this TIA report, and why it is therefore recommended for use by Kimley-Horn. The TIA report also says that this 3% growth rate has previously received concurrence from both City and County staff.

However, our independent review of the TxDOT data in **Appendix C** indicates that annual growth rates in the range of 6% to 12% have been demonstrated over the five-year period from 2015 to 2019 at several of the nearby count stations, most notably those on US-290, Lexington Street south of US-290, and at the two locations on FM 0973 to the north of US-290. Therefore, more substantial background traffic growth has recently been demonstrated and sustained in the vicinity of this project site, and a more aggressive background growth rate may be advisable. We would note that any substantial increase in the background traffic volumes under the 2023 and 2025 development thresholds could result in additional mitigation countermeasures being required at the study intersections.

5. When reviewing the provided Trip Generation estimates in **Table 4** and **Appendix D**, we confirmed that Kimley-Horn utilized the Average Rates from ITE for Land Use 210. In this case, we concur with the use of these Average Rates since doing so represents a “conservative” approach that actually generates additional daily, AM, and PM trips from the Shadowglen – Phase 3 development.
6. Please provide additional clarification and/or justification for the intermittent usage of both ICU and HCM – 6th Ed. overall intersection Levels of Service within **Table 6**. These appear to be used interchangeably at times, and in some cases the summarized LOS values do not correlate with the provided Synchro analysis for each respective intersection? We would suggest a thorough review to ensure the completeness and accuracy of this table.
7. Regarding the traffic signal warrants provided throughout the TIA report for both the 2023 and 2025 scenarios, please provide additional clarification for your recommendations about MUTCD Peak Hour Warrant 3. If the poor operations at several of the study intersections will not be improved using traffic signalization per Kimley-Horn’s recommendations, what additional geometric and/or traffic control mitigation countermeasures should be considered, if any?
8. We have reviewed the Sight Distance Analysis provided within this TIA, both the prior horizontal measurements and the supplemental vertical analysis now included in **Appendix M**. Although the Intersection Sight Distance (ISD) condition looking west from Drive 1 onto Rector Loop is marginally deficient (i.e., by about 35 feet from the 400 feet required), in general we concur that no detrimental sight conditions are expected for egress drivers at the site access street connections onto either Rector Loop (Drives 1 and 2) or Fuchs Grove Road (Drive 3).

9. The roadway sizing analyses completed for Drives 1 and 2 during Phase 1 of this development, as well as for Drive 3 during Phase 2, appear to be complete and accurate. As noted by Kimley-Horn, the proposed roadway classifications are included on **Figure 1** provided in the TIA report.
10. We have reviewed the Excel calculation spreadsheets provided by Kimley-Horn to perform evaluations for the mainline auxiliary turn lane warrants, as described by NCHRP 457. We have independently confirmed the results of these auxiliary turn lane warrant analyses, in particular those at the location of Drive 3 onto Fuchs Grove Road (see Pages 61-63 of the TIA report) that indicate both a southbound left-turn lane and a northbound right-turn lane are warranted. These recommended mainline turn lane improvements appear to have been properly accounted within the phased mitigation plans and “pro rata” cost estimates within the TIA, with the southbound left-turn lane being accommodated by the recommended roadway widening to provide a three-lane section with a two-way left-turn lane (TWLTL) on Fuchs Grove Road from Rector Loop to Gregg Lane and the northbound right-turn lane indicated as the last item in **Table 21** on Page 75.
11. In **Tables 11-12** and **Tables 18-19**, there are numerous instances where the lane group MOEs provided (i.e., v/c ratios and movement delays) do not directly correspond with the associated LOS colorations and are misrepresented. This is especially true for many of the shared mainline through/right-turn lane groups. It would be very helpful if the overall delay and LOS results for the signalized intersections was also depicted in these tables. For the AM conditions provided in **Table 11**, the comparative overall signalized data provided references the Existing PM Peak Hour results and should instead reference the Existing AM Peak Hour MOEs in our opinion.

Again, please provide additional clarification and/or justification for the intermittent usage of both ICU and HCM – 6th Ed. overall intersection Levels of Service within these tables. These appear to be used interchangeably at times, or in some cases the summarized LOS does not correlate with either LOS found in the provided Synchro analysis for each respective intersection? We would suggest a thorough review to ensure the completeness and accuracy of these MOE summary tables.

12. The adopted Austin Transportation Criteria Manual (TCM) considers an LOS “F” to be unacceptable. The TIA report must include proposed improvements that will raise the level of service to an acceptable level. Please confirm during your review of the reported MOEs in revised versions of **Tables 11-12** and **Tables 18-19** that these acceptable levels have been achieved at all study intersections.
13. **Tables 16-17** appear to be mislabeled, as they are supposed to be indicating the “2025” AM and PM Queue and Storage Length summaries.
14. Comments from Travis County and TxDOT have not been included within this review letter.
15. Additional comments may be generated as the requested information is provided. A comment response letter, indicating how each comment has been addressed, must be submitted with the resubmittal. Review of this submittal does not constitute a verification of all data, information, and calculations supplied by the applicant are accurate, complete, or adequate for the intended purpose. The engineer of record is solely responsible for the completeness, accuracy, and adequacy of his/her submittal, whether or not the City Engineers review the application for Ordinance compliance.

16. The phased mitigation cost estimates and “pro rata” cost sharing summaries may need to be reviewed pending the identification of any additional mitigation countermeasures at the study intersections.

Please feel free to contact us if you should have any questions regarding these independent review comments or need additional information.

Sincerely,

GEORGE BUTLER ASSOCIATES, INC.



Eric Sierra-Ortega, P.E.
Project Manager



David J. Mennenga, P.E., PTOE
Traffic Engineer

cc: City of Manor, TX
Pauline M. Gray, P.E. (GBA)
file



January 31st, 2022

City of Manor
Pauline Gray, P.E.
105 E. Eggleston Street
Manor, TX 78653

**RE: *Preliminary Plan for Shadowglen Phase 3 (Permit No. 2018-P-1154-PP)
Section 1 & 2
Manor, Texas 78653***

Dear Pauline Gray:

Please accept this Comment Response Letter for the above reference project. This submittal is in response to the comments provided by the City of Manor on March 27th, 2019. The original comments have also been included below, for reference. A summary of changes made since the previous submittal has also been included with this submittal.

Comment 1. Per City of Manor Code of Ordinances Chapter 10, Section 10.02 Exhibit A Subdivision Ordinance 263B Section 22(c)(4)(iv), Traffic Impact Analysis (TIA), consistent with the City of Austin Transportation Criteria Manual is required.

Response: **Noted. The TIA for this project has been submitted and is currently in the final stages of review/approval.**

Comment 2. The MUD number that will serve the proposed project is not listed on under the General Information on Sheet 2. (See upper left corner of sheet).

Response: **Noted. The MUD number has been added to Sheet 2.**

Comment 3. Parkland is required to be dedicated with Phase 3 of Shadowglen and should be consistent with Exhibit I of the DA. For Phase 3, 6.4 acres of greenbelt trails/linear parks and an 8.5 acre community park is required. The 8.5 acres is shown on the park plan as a contiguous tract that is 100% non-floodplain and contains only approved "Parkland Infrastructure". Lot 1 in Section 1 is shown as open space on the park plan, which is separate from the required community park space, and the lot contains detention facilities which are not approved "Parkland Infrastructure" for a community park. Any lot proposed to meet the "Additional Land" requirement of the DA should be labeled as only "Additional Land" or "Upland Park" with separately defined acreage from any open space or drainage lots.

Response: **Noted.**

Please contact me at 512-551-1839 if additional information is required.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Jason Reece, P.E.
Project Manager

12/19/2022

David Peyton
Travis County TNR
Mailing Address: P.O. Box 1748; Austin, TX 78701-1748
Physical Address: 700 Lavaca Street; Austin, TX 78701

**Re: Project: APP-Sub 450
Shadowglen Ph 3 Sec 1 & 2**

Dear David Peyton,

Please accept this Comment Response Letter in reply to the Traffic Engineering Division review, dated March 10th, 2022, regarding the above-referenced project. Original comments have been included below for reference. All Kimley-Horn's responses are listed in **Blue**

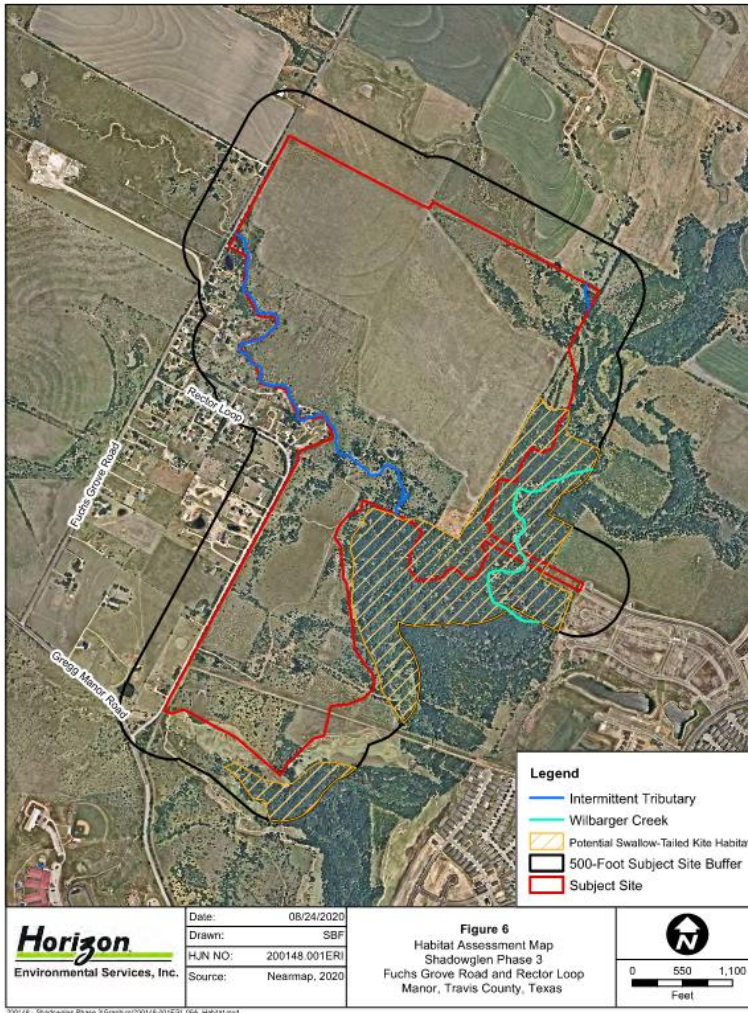
GENERAL

1. Add subdivision plat notes from 482.945.
Response: Acknowledged. Subdivision plat notes have been added to page 4 of the plat.
2. **Note:** If applicable, add a note when the preliminary plan associated with this project was approved.
Response: We are currently resubmitting for our preliminary plan for this project.

WATERWAY, CEF SETBACK AND TREE PRESERVATION

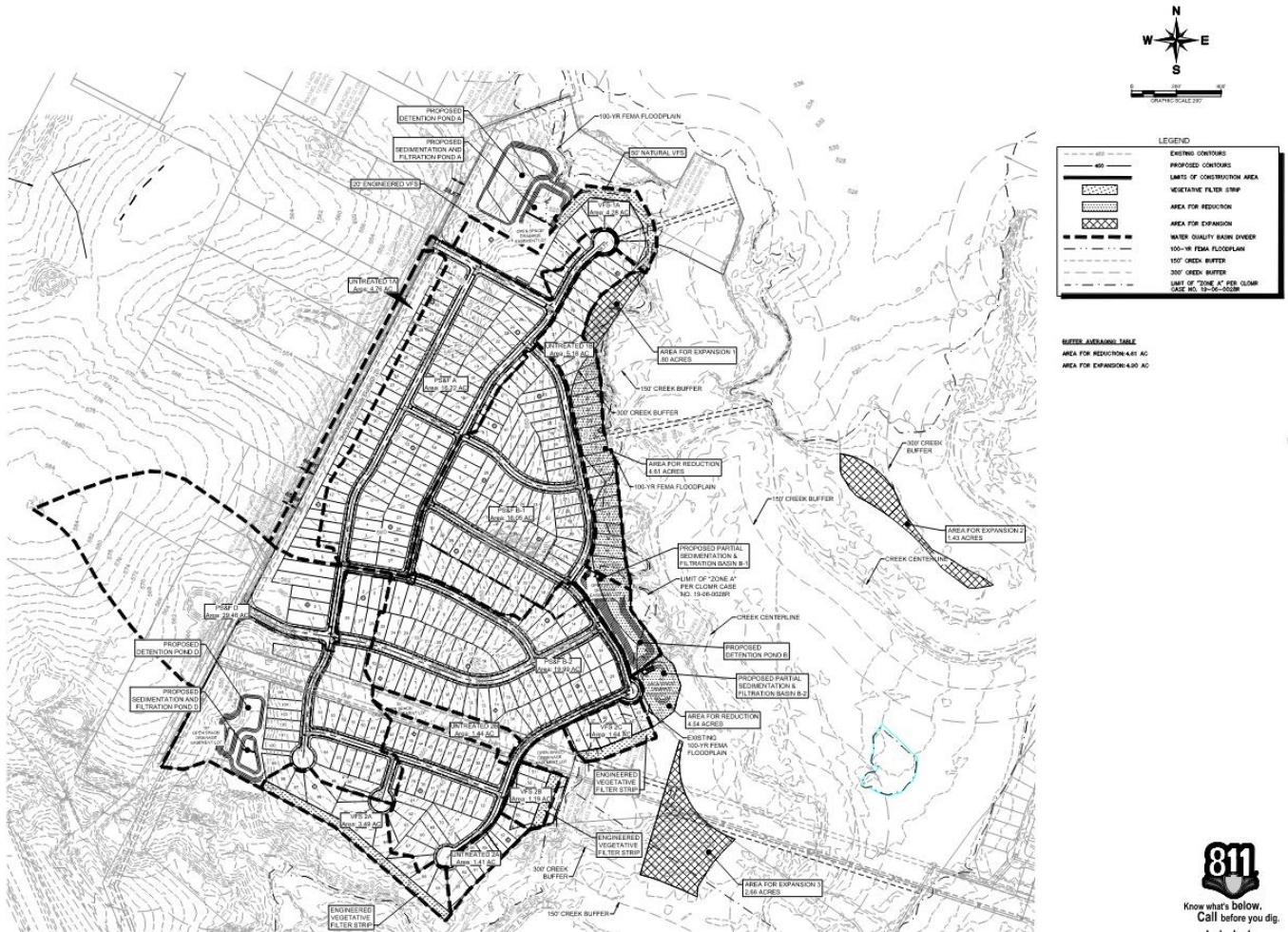
3. Provide a copy of the full environmental resource inventory more per the requirements found in 482.942.
Response: Acknowledged. A copy of the ERI has been attached with this submittal titled "Phase 3 ERI"
4. Any waterway and or critical environmental feature setback areas identified by the ERI must be shown as a protective, platted easement, and once the plat is approved by the County Executive, must be recorded by the owner in the Official Public Records of Travis County, Texas as stated in 482.914.
Response: Based on the ERI there are no CEFs or waterways within the property. See Figure 5 and 6 (sheet 17 and 18) of the ERI.





- An exception request would need to be approved by the Division Director under 482.941.j.7. for the waterway buffer encroachments noted.
Please submit your request for approval.

Response: As discussed in our previous comment response a buffer averaging is proposed for the residential lots and Pond B located within the 300' setback per COA ECM 1.5.2.D. The 4.61ac area of reduction shown on Exhibit B will be averaged with three areas of expansion that account for a total of 4.9 acres. See exhibit G below and on sheet 12 of the prelim plan.



PERMANENT WATER QUALITY BMPs

- 6. Provide a general description of any future improvements (permanent water quality controls (PWQC) or storm water plan) that are planned for the site as described in Sec 482.931.b.

Response: The proposed improvements include storm network, a wet pond and 2 partial sedimentation/filtration ponds for water quality and detention as shown in the Preliminary Engineering report attached with this submittal.

7. **NOTE**

Clearly mark and label the location and dimensions of any easement for placement of a permanent water quality control.

A Protective Easement document has been must be submitted to postinspection@traviscountytx.gov for review and approval prior to notarizing it.

Once the easement document receives review approval, the document will be returned to be legally recorded with the County Clerk's Office. A digital recorded copy must be provided.

Response: Water Quality Easement Lots have been called out on plat and coordination has been started for easement documents. Recordation number will be provided when available.

8. Please add the following permanent water quality plat note:

As depicted on the plat, all water quality easement areas are subject to periodic inspection and monitoring by Travis County for the purpose of ensuring water quality compliance, as applicable, according to Sec. 16.014 of the Texas Water Code.

Response: Acknowledged. The note has been added to general notes as note #21.

**** **PLEASE NOTE** ****

1. *Additional ENV comments may be issued and based on the answers and information provided to items listed above.*
2. *Include a response to comments memo.*
3. *When resubmitting information on mypermitnow.org please include an email to david.peyton@traviscountytx.gov indicating that new information has been added to the application. **REFERNCE YOUR APPLICATION #***

End of Report

Please contact me at (512) 418-1771 if additional information is required.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

A handwritten signature in black ink that reads "Jacob Kondo". The signature is written in a cursive, slightly slanted style.

Jacob Kondo, P.E.
Project Manager

Shadowglen Phase 3 Sections 1 And 2 – Formal Review
S-23-147
City of Manor, Precinct 1
July 20, 2023 Lauren Winek, P.E.

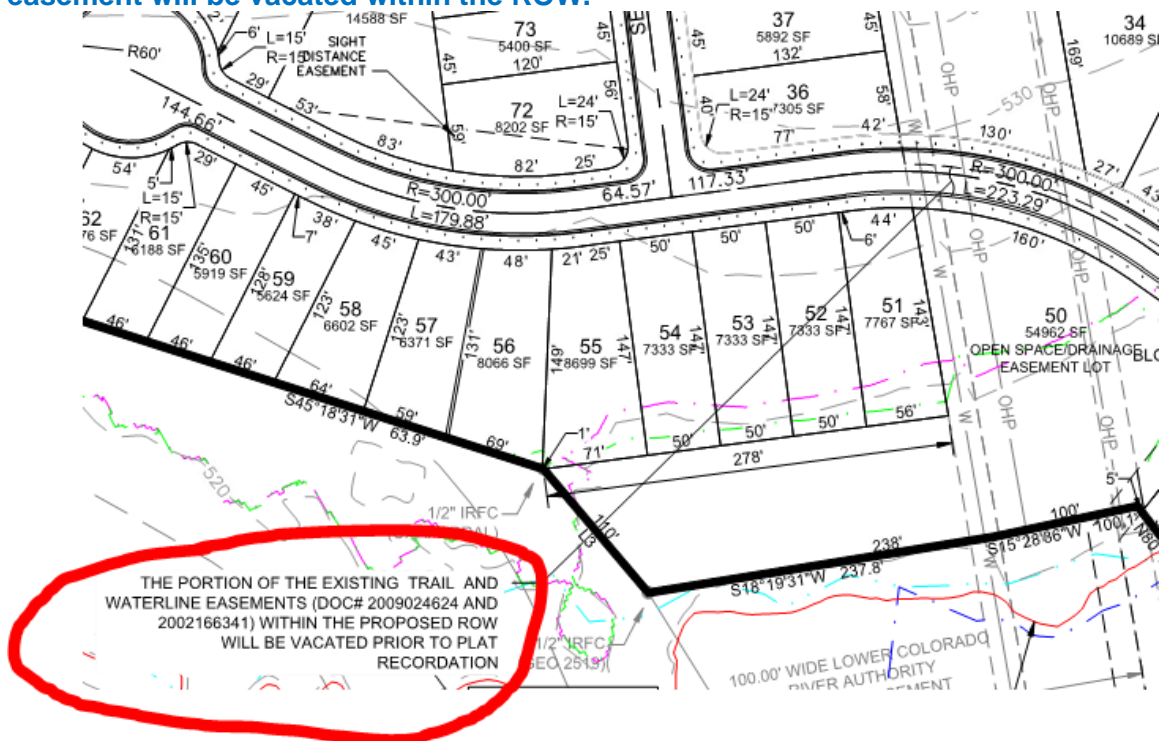
Engineering Review

Lauren Winek, P.E.

General

1. Please submit a signed and sealed code compliance summary.
R1: Cleared.
2. Please provide the subdivision checklist and ensure all applicable documents have been provided.
R1: Cleared.
3. Please provide updated documentation that LCRA has no objection to the roadways and drainage improvements in their easement. The acceptance letter LCRA provided has approval dates of plans from 2019. Plans from 2023 have been submitted to the County. Please show that LCRA has no objection to the current plans.
R1: Cleared.
4. Please clarify if the note that indicates all existing easements will be vacated prior to plat recordation will apply to the existing electrical easements?
R1: Please update the note to accurately reflect the easements that will be vacated.

RESPONSE: Note has been updated to specify that the trail and water easement will be vacated within the ROW.



5. Please label the existing electric easements on all sheets.
R1: Cleared.

6. Please remove the duplicate numbering shown on the lots for clarity.
R1: Cleared.
7. Please show all line weights in the legend on all applicable sheets.
R1: Cleared.
8. Please provide approval from the Fire Marshal.
R1: Cleared.
9. Please ensure and confirm the preliminary plan complies with all requirements of 482.203.
R1: Cleared.

Transportation

10. Please show that you have the 50-foot minimum tangent between curves including on Tollington Street. Please show all tangent measurements where required for curves.
R1: Cleared.
11. Please provide information on what criteria are being met with the site distance exhibits in accordance with the COA TCM. Please ensure the building setback lines are clearly visible so we can ensure the sight distance easement is outside of the building envelope.
R1: Cleared.
12. Confirm all sight-distance easements have been shown on the preliminary plan.
R1: Cleared.
13. Ensure and confirm your vision clearance conforms to the 30 mile per hour design speed.
R1: Cleared.
14. Per 482.203(b)19, are there any proposed clustered mailboxes and roadway pullouts with the subdivision? Please indicate the location on the preliminary plan and subsequent final plat and construction plans.
R1: Cleared.
15. Please confirm the classification of roadway that is assumed for Rector Loop and the minimum right-of-way that will be available from the center line with this preliminary plan. This is to confirm that the boundary street ROW per Chapter 482.202(G).
R1: Cleared.
16. Please include the dotted line indicator for sidewalk construction along Rector Loop.
R1: Cleared.
17. Per Chapter 482.202(Q), please include sidewalks along both sides of the street for all streets located internally in the subdivision including along Rothwell Road. Please also make sure the dotted line for sidewalk locations is visible where the phasing line is shown.
R1: Cleared.
18. Please include a note indicating that a certification from a Registered Accessibility Specialist will be provided with the construction plans stating compliance with accessibility standards has been met per Chapter 482.202(Q).
R1: Cleared.
19. Ensure and confirm all cul-de-sacs and eyebrows comply with Chapter 482.202(J).

R1: Cleared.

Drainage

20. Confirm and ensure that all drainage analysis and calculations comply with Chapter 482 and the DCM.
R1: Cleared.
21. The drainage report shows two different CN values pages 3 and 4 for existing conditions. Please clarify or correct the discrepancy in the two CN values stated in the report for on-site drainage (page 3) and water quality detention (page 4).
R1: Cleared.
22. Please show the FEMA 500-year and Atlas-14 fully developed conditions and show that the greater extents of these two floodplains is contained within a drainage easement or confirm you will be constructing under Alt Fiscal and processing a LOMR before you can record the plat, per chapter 482.207(e). Please provide all associated analysis and calculations for drainage conditions.
R1: Cleared.
23. Please note a LOMR will need to be recorded prior to platting the lots containing floodplain that will significantly impact the buildable area.
R1: Cleared.
24. Please note that right-of-way cannot be located in a floodplain drainage easement unless the roadway is intentionally crossing the floodplain. A LOMR will be required prior to recordation of FEMA 500-year floodplain in the right-of-way.
R1: Cleared.
25. Please note the final plat cannot be recorded until all improvements for the subdivision have been removed from the floodplain including drainage pond improvements.
R1: Cleared.
26. Please confirm time of concentration calculations accurately reflect the conditions shown on sheet 6 and 7, in particular the segments that are shown as channel flow.
R1: Cleared for preliminary. Please note the following that will need to be addressed prior to construction plan approval: TC path for EX BP A and EX BP D have TC lines that cross into another drainage area. Please revise. Channel flow for EX DA C does not make sense for the drainage area shown. Please review and revise all TC paths and calculations.
27. Please include a time of concentration calculation for each drainage area shown. There are more drainage areas than time of concentration calculations in the tables on sheet 7, including but not limited to, BP A-1.
R1: Cleared for preliminary. Please note the following that will need to be addressed prior to construction plan approval: Please clarify if BP D is included in the analysis.
28. Please be sure all drainage areas are included in the analysis on sheet 7. There are more drainage areas on the plan than in the Pond Pack schematic for points of analysis.

R1: Cleared for preliminary. Please note the following that will need to be addressed prior to construction plan approval: There are several points of analysis that show increased flows in the post-developed condition where flows leave the site. Please revise.

29. Please be sure all drainage areas have flow arrows, time of concentration paths, and TC paths that are contained within the drainage area boundary. At a minimum, OS-BP A and BP A-1 have TC paths that appear to cross drainage boundaries.
R1: Cleared.
30. Please clarify the TC path for BP A-1 and why it starts in the middle of the drainage area and crosses drainage area boundaries.
R1: Cleared.
31. Please be sure all labels in the plan match the labels in the table. For example, BP A is shown in the table but is not shown in the plans on sheet 7.
R1: Cleared.
32. Ensure that all lots can provide driveways that allow for a minimum transition of 10 feet from the inlet. For example, Block F, Lot 26 appears to have an inlet in the middle of the lot. Please ensure the transition can be met or relocated the inlet. Please note the minimum inlet size is 10-feet.
R1: Cleared.

Advisory Comments

33. Please be advised every time a final plat is submitted a drainage report will need to demonstrate all proposed flows leaving the portion of the project area to be platted do not exceed the existing flows leaving the site.