



**Ormond Beach
Site Plan Review Committee (SPRC)
Request for Additional Information**

Project Name:	Ormond Crossing, Phase A Preliminary Plat
Project Number:	08-21000002
Site Address:	East of I-95 and West of US1
Review:	1 st Review
Review Date:	January 9, 2009
Project Description:	Preliminary plat for Phase A.
Project Contacts:	<u>Csmith@allete.com;bwitte@saiengineers.com</u>

Please find below the Site Plan Review Committee (SPRC) comments for your project below. The SPRC meets every Wednesday, beginning at 9:00 am, with sign-up beginning at 8:00 am. There are twenty minute time slots available for discussion of projects. There will be no time slots between 11:40am and 1:00pm. Once there are no individuals left on the sign-up sheet, the SPRC will adjourn. The applicant may utilize the time slot to address major issues and discuss design solutions for projects.

General Comments (no response required)

1. When responding to the SPRC comments, a response letter (one copy per each plan submitted) addressing each comment in writing is required, indicating sheet numbers where revisions were made.
2. For resubmittal, the following is required:
 - a. 9 sets of all plans (1 signed and sealed, the others may be copies).
 - b. 1 set (11" by 17") of all plans.
 - c. 1 CD of all plan pages in a PDF Format

For final sign-off, the above is required, with all plan sets required to be signed and sealed by the appropriate design professional.
3. Prior to construction, the project will need to provide cost estimates, including landscaping, that will be the basis of the engineering inspection fee as follows 1.5% of the first \$100,000 of site improvements and 0.5% over \$100,000; minimum of \$250 (Section 8-10 of the City Code of Ordinances).
4. Section 4-05(b)(3) of the Land Development Code states: Applicants shall respond to SPRC written comments within one hundred (180) calendar

days of the issuance date or the project shall be considered withdrawn. All projects that do not respond within the allotted time shall be required to submit a new application and SPRC review fees. Applicants may request a maximum of two (2) ninety (90) calendar-day extensions with a written request to the planning director detailing the reason for the delay in responding to the SPRC comments.

Steven Spraker, AICP, Senior Planner, 386.676.3341

Plat

5. Preliminary plats are reviewed by an advisory board (Planning Board) and heard twice by the City Commission. There are no advertising requirements for Preliminary Plats.
6. Prior to construction, the project will need to provide subdivision cost estimates, including landscaping, that will be the basis of the engineering inspection fee prior to the start of each phase. The Performance Bond, if required, will be based on 125% of this cost.
7. Remove City Planning Manager as a title block.
8. Add signature block for City Attorney.
9. It appears that the plat shall re-align Pineland Trail. The segment that is no longer proposed to be used would require a street vacation. The street vacation requires City Commission approval and letters of no objection from all utility providers.
10. Is the 25' Utility easement shown on the plat, the mixed use easement referenced in the Master Development Plan? If so, why not call it the mixed use easement and include the utility description. It is my understanding that this 25' area allows all applicable utilities and the site landscaping.
11. The plat map does not appear to include proposed lots 11 and 12 (along US1) in the vicinity map.
12. The plat provides drainage easements for the owners of the lots. As stated in our meeting on September 3, 2014, the stormwater facilities need to be in tracts with the entity responsible for maintenance identified on the plat. See Engineering comments also.
13. The plat map does not appear to include proposed lots 11 and 12 (along US1) in the vicinity map.

Paul MacDonald, City Landscape Architect, 386.676.3269

14. We need landscape planting plans for all roadways within the Phase "A" boundary limits.

15. The plat must include notes that a CDD will be established to handle all landscape and irrigation maintenance activities. Please provide the City with minimum maintenance specifications/ frequency of events to review. If you would like we will provide you with our current specification/ frequency to adopt as your standards.
16. Some of the proposed pedestrian crosswalks at the intersection of Commerce and Broadway enter or exit into planting beds. The proposed oak in the NE cutout will prevent a clear line of sight with vehicle and pedestrian entering the roadway.
17. Please review the proposed rotary planting design to ensure vehicular visibility will not be impacted by limiting lines of sight.
18. Please revise the median planting design or include under plantings in locations where mowers will have to enter the roadway to negotiate proposed tree plantings. For safety purposes we would like to keep the mowers out of the roadway.
19. Please move all other proposed trees from beneath the oak canopies to avoid future overcrowding.
20. Medjool spacing at 20' tends to become overcrowded with age. Might want to consider 25' or 30'. Overcrowding promotes leaf fungal diseases such as graphia.
21. Please turn all the proposed blowup designs so they all face north. Showing them in different directions gets confusing.
22. Provide entry feature planting design.
23. Revise proposed streetlight locations where they are inside the tree canopy. Example: Sheet LA2, proposed light within 10' of proposed magnolia trees.
24. Please provide examples that the proposed dura-heat birch will perform in Ormond Beach.
25. Please indicate if the proposed crape myrtles are standard or multi's.
26. Please indicate sod species. If more than one, clearly define locations.
27. Consider Eagleston in lieu of East Palatka holly as we have found they are short lived trees.
28. An irrigation plan is required that must meet County design guidelines and include the following
 - a. Sleeving, mainline and laterals sized
 - b. Zones labeled
 - c. Water source, valve, controller, rain sensor locations
 - d. Head location with nozzle size

- e. Specifications and details
- f. Rain sensor device is required

David Allen, P.E., Civil Engineer, 386.615.7047

Response letter dated July 30, 2014

- 29. Item 46, Please provide documentation from all user for the existing utility easements/right of way for the acknowledgement of the release of easement.
- 30. Item 47 – Repeat Comment. All ponds are to be located in separate Common Drainage Area tracts, similar to Tract “B”, defined by bearings and distances and reserved by the Owner for installation and maintenance of storm water drainage facilities. Include all over flow and bleed down drainage areas. Provide letter designation and parcel area for each tract. (The tracts appear to be generally outlined on Sheet 7 of 46 of the Construction drawings).
- 31. Item 52 – Repeat Comment - Please define the limits of each Conservation Easement Area with bearings and distances. Provide letter designation and parcel area for each easement. The Conservation easements must be delineated on the plat prior to approval.
- 32. Item 53 – Thank you for your response to this item. Based on this response, please revise the Dedication and Reservation on Sheet 1 to reflect the maintenance entity will be the Developer, property Owners Association or Community Development District, (CDD).
- 33. Item 54 – Thank you for your response. To clarify this concern, please note on Sheet 1 in the Dedication and Reservation, the City of Ormond Beach will be responsible for the maintenance of infrastructure within the right of way only. The City would only need to provide maintenance on areas outside of the roadway rights-of-way in the event that other agencies failed to do so.
- 34. Item 56 – Provide reference on the plat that Lot 2 will be utilized as water storage site and future fire station.
- 35. Item 61 – Provide definition of Access Easements by bearing and distance. The response does not provide adequate location of the easement.
- 36. Item 62 – Delineate the Easement and Buffer on plat as noted on Sheet 6 of 46 of the construction plans.
- 37. Item 64 – The attached easement between the Florida East Coast Railroad should be modified to reflect the bridge only. An additional easement for the underground utilities should be created.

Plat

38. The construction plans as submitted do not delineate the construction of the required infrastructure, (roadway access) to various lots and portions of lots. If the construction of the infrastructure is to be delayed. Please remove these lots from the plat document.
39. The construction plans indicate the drainage system, along Lot 1, will lie within the FEC right of way. Please provide easement for the drainage system.
40. When reviewing the construction plans in comparison to the plat, Lot 10 seems to be mainly pond area. Is this Lot to be purely a drainage tract? If not, please provide documentation on building envelope, (buildable area), for this lot when setbacks are in place. There was not a water service nor wastewater lateral shown for this lot.
41. Plat utilizes FIRM Flood Maps from April 15, 2002. Please revise to reflect latest FEMA documentation and FIRM Flood Maps dated February 19, 2014.
42. Sheet 3 of 8 – Northwest corner of property, FEC R/W and I-95 R/W. Provide means to identify centerline of public roadway and limits of Lot 2.
43. In response Item 56, Lot 2 is to be used for both the water storage tank and future fire station. The size of this lot does not appear to be sufficient to house both uses. If during the design process of the lots, there was a conceptual layout for these two uses, please provide a copy to the City.

Boundary Survey

44. Boundary Survey, Kuhar Surveying and Mapping, LLC. Reference is made to Zones A and X as shown on FEMA FIRM Map 2002. Please revise to reflect the latest Flood Insurance Rate Map. Dated February 19, 2014.

General Comments

45. Based on the Agreement/ Developer Commitments, there are several portions of the project that should be added to the current submittal:
 - a. 1,000,000 gal potable water storage tank, Lot 2- Concurrent with initial phase of project.
 - b. 12" Wastewater Force main along US1 from Airport Road to Ormond Crossings – Concurrent with first phase of construction
46. Sheet 5 of 46 – Cross-section of Pineland Trail should reflect a 5' sidewalk on the side where the development will occur. This should include Lot 2.

47. Provide a cross-section of Pineland Trail 80+00 to 111+16, show 5' sidewalk on the development side. Show how this right of way will interact with the right of way of I-95. How will the Multi-use Easement functions on the I-95 side of Pineland Trail.
48. Sheet 8 of 46 – Mass Grading Plan. Mass grading plan does not reflect the fill/grading for the roadways. The plan and profile sheets for the roadway indicate a fill condition. Please provide this information on the Mass grading.
49. Sheet 8 of 46 – Mass Grading. Typical Section Adjacent to Pineland Trail – Fill grade on lot does not match elevations shown on Plan sheet.
50. Sheet 8 of 46 - Revise “Note” “Grade Lots to drain to swale and Stormwater Pits. Do not grade lots to drain to ponds, temporary ditches or public right of way.”
51. Sheet 9 of 46 – Potable Water Master Plan – A note “Additional fire hydrants may be required within the right of way in conjunction with development of lots.”
52. Sheet 9 of 46 – Potable Water Master Plan – Add note that the fire hydrants shall be placed to match the fill on the lots/roadways.
53. Sheet 9 of 46 – Extend water system to provide infrastructure for Lot 6. Or remove Lot 6 and eastern portion of Lot 7, from plans.
54. Sheet 10 of 46 – Wastewater System Master Plan. Extend wastewater system to provide infrastructure to Lot 6. Or remove Lot 6 and eastern portion of Lot 7 from Plans.
55. Remove Note at US1. Based on the Developers Commitments the Future connection is the required 12” sanitary sewer force main to be concurrent with first phase of construction. Provide plans for this force main.
56. Sheet 11 of 46 – Reuse Water System Master Plan. Extend wastewater system to provide infrastructure to Lot 6. Or remove Lot 6 and eastern portion of Lot 7 from Plans.
57. Provide reuse water service to Lot 10 for irrigation.
58. Provide reuse water service to Lot 9 for irrigation.
59. Sheet 12 of 46 – Add note for Sanitary Sewer Manhole No. 2. “Manhole within 200 feet of lift station shall be fiberglass or PVC lined.”
60. Revise the contour call outs for Pond 1.20.
61. Provide rationale for 2” ARV on each side of roadway at Station 209+30.
62. The 18 foot depth of the sanitary sewer system seems excessive. This depth will create difficulty for future maintenance.
63. Sheet 13 of 46 – Provide grades for all portion of the round about to ensure the surface drainage will be directed into the storm water collection system.

64. Sheet 15 of 46 Island in profile, 37+23 to 39+73 does not match island in plans sheet 32+65 to 38+15. The island in the profile will block the intersection.
65. Provide call outs contours of Pond 1.52.
66. Stormwater collection pipe, Inlet 30 to MES-26 is quite deep. Provide reasons for this depth.
67. Sheet 16 of 46 – provide call outs for contours on ponds
68. Peak stage for Ponds 1.51 and 1.52 is well above the inverts of the 36” pipe between the ponds. What is the rationale for the depth of the pipes as water will be above the top of pipes in Inlets #4 and #6.
69. Provide note on how the roadway between 49+00 and 50+00 is to be replaced.
70. Sheet 19 of 46 – Pineland Trail – Since baseline does not coincide with centerline of roadway, provide dimensions to ensure proper location of roadway.
71. NOTE: For all ponds, provide detail dimensions/coordinate geometry to ensure construction matches design criteria.
72. Provide weir/out-fall structure information on Pond layout sheets for ease of construction.
73. Sheet 21 of 46 – Stormwater Pond 1.20 – The slope below the 2 foot below the NWI is noted as 3:1. The drawing scales at 2:1 slope. Please clarify.
74. Show contour that reflects 1.0 foot free board for the 25 year 24 hour storm event in accordance with Standard Detail ST-5. This maybe noted as future with development of the adjacent lot.
75. Sheet 23 of 46 – Stormwater Pond 1.40 – The slope below the 2 foot below the NWI is noted as 3:1. The drawing scales at 2:1 slope. Please clarify.
76. Show contour that reflects 1.0 foot free board for the 25 year 24 hour storm event, in accordance with Standard Detail ST-5. This maybe noted as future with development of the adjacent lot.
77. Note on the 5 ft swale is that “Do not encroach into wetland” Provide the limits of the wetland area in proximity of swale.
78. Sheet 25 of 46 Stormwater Ponds 1.53 and 1.60 Site layout - Show contour on pond 1.60 that reflects 1.0 foot free board in accordance with Standard Detail ST-5. This maybe noted as future with development of the adjacent lot.
79. Sheet 26 of 46 Stormwater Pond 1.80 Site Layout Show contours that reflect 1.0 foot free board in accordance with Standard Detail ST-5. This maybe noted as future with development of the adjacent lot.

80. Provide delineation between the two overflow structures on plan sheet.
81. Sheet 27 of 46 Stormwater Pond 1.30 Site Layout Show contours that reflect 1.0 foot free board in accordance with Standard Detail ST-5. This maybe noted as future with development of the adjacent lot.
82. Sheet 28 of 46- Stormwater Pond Details & Cross Sections – In chart add column for invert of orifice. Provide detail of where orifice is placed on the PVC Tee.
83. Sheet 28 of 46- Stormwater Pond Details & Cross Sections- Chart indicates that Pond 1.20 has a bleed down device. Sheet 21 does not show the location of the bleed down. If it is part of the Overflow structure, note this on the plan sheet.
84. Provide clearer detail of rectangular weir in the sheet pile.
85. Sheet 30 of 46 – Special Details - Provide detail of proposed railroad crossing.
86. Sheet 33 of 46 – Utility Details – For all detail sheets – cover references City Details dated 2014. Detail sheets use the 2012 details. Please review and update.
87. Sheet 40 & 41 of 46 – Sanitary Lift Stations – Provide pump data and elevations for lift station design.
88. There are not sheets within this plan set that provide the design/construction information for the utilities to the US1 corridor. Inwood Consulting Engineers plans indicate that this design falls under SAI.
89. City staff reserves the right to provide additional comments on construction plans based on the project re-submittal.

Design Considerations

90. Provide repost on the Lift Station Design criteria.
91. Provide hydraulic grade³ line for all storm drainage pipe systems within the roadway. Also include calculation for spread within the outer lane.
92. Provide design considerations for pipes used for bypass of surface water.

Inwood Construction Plans

93. Sidewalk widths do not match typical sections of Conceptual Design. Minimum width is 8 feet.
94. Various sheets call out utilities with reference to see SAI. The design of these utilities must appear on one or the other sets of plans. Provide assurance that the construction plans will reflect the utility design.

95. Sheet 14 Plan – The pipe from Structure S-102 is called out as 42” diameter. On Profile, the pipe parallel to centerline, east from S-102, is shown as 36” diameter.
96. The depth of the stormwater drainage system, (10 feet +) on the west side and eastside of the bridge seems excessive.
97. Fire hydrant on north side of Ormond Crossings Blvd., Sta 923+60 appears to be 6’ below the pavement. Add note to plans for this hydrant to be installed after fill is in place on the lot.
98. It is our understanding that an agreement for the utilities to be placed underground for the railroad crossing. If this is true, please revise the plans to match this crossing.
99. Provide profile along the western edge of pavement of US1 across the proposed intersection, 490+00 to 496+00. It appears that there will be a hump in the outer most lane headed south on US1.
100. Sheet 20 – It appears that the bypass pipe, (14X23 ERCP) extends into the property on the north side of Ormond Crossing Blvd. Provide easement for this encroachment.
101. Structure Plans are noted as preliminary. Upon submittal of full structure plans, the City will utilize the services of a structural engineer consultant for review services. The cost of this review will be the responsibility of the Applicant.
102. City staff reserves the right to provide additional comments on these construction plans.

Design Considerations.

103. In review of the hydraulic grade line and lane spread, there are several areas that appear to not meet the criteria of the City of Ormond Beach. The inlets on the upper portions of the steep slopes for the bridge do not appear to catch the surface runoff. Please review these inlets. A modification to the length of throat of the inlet may be necessary. An example of our concern is in review of S-204, the total runoff is 1.42 cfs, the intercepted flow is 0.82 cfs, but the bypass flow is shown as 0.0. Should these flows add up to the total? This is an area that could adversely impact US1.
104. In the design of the stormwater drainage system, there are pipes that exceed the maximum allow velocity of 10 fps per the LDC.
105. When reviewing the lane spread calculations, the Rainfall intensity is shown as 4.00 in/hour. The Overland Runoff is calculated as 6.8 in/hour. Please revise to be consistent.

106. Provide documentation for FDOT approval of modifications to US1 and the intersection of the new roadway.
107. Provide detail sheets in accordance with City of Ormond Beach Standard Details, Mar. 2014.

Michael Dunn, Utilities Engineering Manager – 386 - 676-3583

Singhofen & Associates, Inc. drawings

108. Sheet 5 – Typical Roadway Sections & Details
 - a. Dimensioning from the right-of-way is more difficult to field locate than dimensioning from the curb. Dimensioning from the curb is preferable.
 - b. The force main and reclaimed water main orientation is reversed in the Ormond Crossings Blvd (Sta. 216+64.16 to 222+36.29) cross-section.
109. Sheet 9 – Potable Water System Master Plan
 - a. Describe the developer's plan as to when the 16-inch water main along Tymber Creek Road is to be constructed.
110. Sheet 10 – Wastewater System Master Plan
 - a. Show a stub out from manhole 28 along Pineland Trail.
 - b. Show the 4" force main from Future Lift Station 010 connecting directly to the 12" force main along Ormond Crossing Blvd.
 - c. Reduce the force main size to the minimum diameter required to achieve a 2 foot per second velocity from Lift Station 020 to the connection to the 12-inch force main at the Ormond Crossings Boulevard and Commerce Crossings Boulevard intersection.
 - d. Show the location of the force main valves on Commerce Crossings Boulevard and Ormond Crossing Boulevard.
 - e. The existing force main is on the west side of US-1. Consider terminating the force main on the west side of US-1.
111. Sheet 11 – Reuse Water System Master Plan
 - a. Show a flushing hydrant at the north end of Ormond Crossing Boulevard.
 - b. Extend the reclaimed water main termination to the east side of US-1
 - c. Describe the developer's plan as to when the 16-inch reclaimed water main extension along US 1 to Airport Road is to be constructed.

112. Sheet 12 – Ormond Crossings Blvd. East Plan & Profile
- a. Master Plan sheets 9, 10 and 11 call out Ormond Crossing Blvd. The street name needs to be consistent on all plan sheets.
 - b. The drop manhole elevations to serve lots 5 and 7 seems to be 4 feet deeper than necessary to provide service. Please check to determine if the drop elevations can be raised.
 - c. Sanitary sewer inverts are very deep. Please consider adding additional pump stations to reduce the maximum depth to around 12 feet.
 - d. Add a pigging port to the force main from Lift Station 020.
 - e. Reduce the force main size to the minimum diameter required to achieve a 2 foot per second velocity.
113. Sheet 13 – Ormond Crossings Blvd. East Plan & Profile
- a. Add service to lot 4.
 - b. Call out invert elevations to lots 4 and 8 at manhole 4.
 - c. Show Manhole 22 in the profile and identify the top and invert elevations.
 - d. Sanitary sewer inverts are very deep. Please consider adding additional pump stations to reduce the maximum depth to around 12 feet
 - e. Call out the fittings for the water, force main and reclaimed water mains at the roundabout.
 - f. Profile between stations 216+50 and 218+50 shows two reclaimed water mains. Plans show the same invert elevation for the force main and the reclaimed water main. The profile needs to be revised to show the crossing of the force main and reclaimed water main near station 217+25 and the crossing of the reclaimed water main and force main underneath the water main in the same general vicinity.
 - g. Drainage plan shown does not match the pie size and location shown in the Inwood plans on sheet 14. Revise the plans so the information is consistent.
 - h. No plans are provided for Ormond Crossings Boulevard beyond station 924+50.
 - i. Street is labeled as Ormond Crossing Blvd. and the plan title calls out Ormond Crossings Blvd. Revise the sheet so both names are consistent.
 - j. Show the 42-inch storm sewer in the profile at Station 924+75 where it crosses the reclaimed water main and the force main.

Show the conflict resolution between these three lines in the profile.

114. Sheet 14 – Commerce Crossings Boulevard Plan & Profile
- a. The drop manhole elevations to serve lot 9 seems to be 7 feet deeper than necessary to provide service. Please check to determine if the drop elevation can be raised.
 - b. Provide the length, diameter, station and invert of the proposed sanitary sewer to serve lot 8.
 - c. Sanitary sewer inverts are very deep. Please consider adding additional pump stations to reduce the maximum depth to around 12 feet
 - d. Call out the fittings for the water, force main and reclaimed water mains at the roundabout.
 - e. Show the reclaimed water main and force main crossings in the profile near Stations 12+50 and 13+70.
 - f. Show the water main, force main and reclaimed water main crossing in the profile near Station 13+75.
 - g. Show the force main and reclaimed water main crossing over the storm sewer at Station 21+00.
 - h. Utility Note 1 indicates that the force and reuse mains are to be constructed at the same crown elevation as the water main. This will not be feasible where the mains cross and at the service lines. Main elevations will need to be shown in the profile at these locations.
115. Sheet 15 - Commerce Crossings Boulevard Plan & Profile
- a. Service connection to lot 4 indicates conflicts between the water main, reclaimed water main and the force main. The best resolution appears to indicate that the reclaimed water main will be underneath the water main and over the force main at this location. Show a proposed conflict resolution in the profile.
 - b. Service connection to lot 3 indicates conflicts between the water main and reclaimed water main. The best resolution appears to indicate that the reclaimed water main will be underneath the water main. Show a proposed conflict resolution in the profile.
 - c. Call out the separation distance between the force main and inlets 66 and 67.
 - d. Show the reclaimed water main crossing the water main and the sanitary sewer main near Manhole 20 in the profile.
 - e. Revise the ground profile between Stations 37+23.14 and 39+73.14 to show the roadway instead of an island.

116. Sheet 16 - Commerce Crossings Boulevard Plan & Profile
- a. Show the reclaimed water main underneath the water main in the profile near Station 42+80.
 - b. The deflection shown in the profile at Station 46+80 does not appear necessary. The water main can be installed above the storm sewer.
117. Sheet 17 – Pineland Trail Plan & Profile
- a. Show the reclaimed main in the profile where it crosses the water main near Manhole 28.
 - b. The elevation change for the water main near Station 107+00 does not appear to be necessary.
118. Sheet 18 – Pineland Trail Plan & Profile
- a. Show the conflict resolution between the water main, reclaimed water main and storm sewer near station 108+40.
 - b. Relocate the fire hydrant to a portion of the water main where an elevation change is not required to avoid conflict with the storm sewer.
 - c. Show the conflict resolution in the profile at Inlet 50 between the reclaimed water main and the storm sewer. It appears that the conflict can be resolved by deflecting the reclaimed water main over the storm sewer.
 - d. Show the conflict resolution in the profile where water and reclaimed water service is provided to lot 3. It appears that the conflict can be resolved by installing the reclaimed water service line above the storm sewer and under the water main.
119. Sheet 20 - Pineland Trail Plan & Profile
- a. Show the reclaimed water main diameter as 12-inches in the plan and profile.
 - b. Water main call out points to the force main. Revise the call out to point to the water main.
120. Sheets 33 through 37 – Utility Details.
- a. Use the 2014 edition for the standard details.
121. Sheet 38 – Utility Details 6
- a. Indicate whether a jack and bore or directional bore is proposed for crossing the railroad tracks.
 - b. Provide the type and size for the carrier pipe and casing pipe for the crossing option selected.

- c. Inwood plans show the water, reclaimed water and force mains crossing over the railroad tracks
122. Sheets 40 and 41 – Sanitary Lift Station Details
- a. Change fiberglass to concrete in City of Ormond Beach Lift Station Requirements note 17.
 - b. Add note 23 to City of Ormond Beach Lift Station Requirements stating, “Back up float system shall be installed and connected to the SCADA system.
 - c. Change male to female 304 stainless steel camlock in Section View A-A.
 - d. Complete the pump data and design characteristics table.
 - e. Provide design flow and head loss computations for the proposed lift stations.

Inwood Consulting Engineers plan set

123. Sheet 14 – Plan
- a. Call outs for the water, reclaimed water and force mains reference Singhofen & Associates, Inc. (SAI) plans. The SAI plans provided did not include this information.
 - b. Change force main diameter to 12-inches.
 - c. Storm sewer between inlets S-100 and S-102 is shown to be 78LF on the SAI plans. Lengths need to be consistent.
124. Sheet 15 - Profile
- a. Storm sewer piping shown between stations 922+00 and 923+00 does not match the SAI plans and is inconsistent with the sizes shown on sheet 14. Revise the sizes so all of the plans are consistent.
 - b. SAI plans did not show the storm sewer shown near Station 924+85
125. Sheet 16 – Plan
- a. Call outs for the water, reclaimed water and force mains reference Singhofen & Associates, Inc. (SAI) plans. The SAI plans provided did not include this information.
 - b. Change force main diameter to 12-inches.
126. Sheet 17 – Profile
- a. Show water, reclaimed water and force main in the profile.
127. Sheet 18 – Plan

- a. Call outs for the water, reclaimed water and force mains reference Singhofen & Associates, Inc. (SAI) plans. The SAI plans provided did not include this information.
 - b. Change force main diameter to 12-inches.
 - c. Show the force main from Lift Station 010 connecting directly to the 12-inch force main. Delete the portion of the force main and connection on the south side of the manholes.
 - d. Revise the 8-inch sanitary sewer call out arrow position to point to the sanitary sewer line.
 - e. Show the force main valve on the south side of Manhole 40 to match the SAI wastewater system master plan.
 - f. Extend the reclaimed water main across US 1.
 - g. Terminate the force main on the east side of US 1.
128. Sheet 19 – Profile
- a. The reclaimed water, water and sanitary sewer shown by others was not provided.
129. Sheet 20 – Plan
- a. There is a potential conflict between the storm sewer and water main shown at the intersection.
130. Sheet 21 – Plan
- a. Extend the reclaimed water main across US 1.
 - b. Terminate the force main prior to crossing US 1
 - c. There is a potential conflict between the storm sewer and the force main and reclaimed water mains at the intersection.
131. Sheet 22 – Cross Sections Ormond Crossings Blvd.
- a. SAI plans stopped at Station 921+80 and did not show a cross section at station 921+50.
 - b. Extend the lot fill over the proposed water, reclaimed water and force mains in the profile at Station 922+00. Future lot fill should call out the area beyond the location where the side slope begins.
 - c. Change force main diameter to 12-inches.
132. Sheet 23 – Cross Sections Ormond Crossings Blvd.
- a. Extend the lot fill over the proposed water, reclaimed water and force mains in the profiles. Future lot fill should call out the area beyond the location where the side slope begins.

- b. Change force main diameter to 12-inches.
 - c. Show the 18-inch and 42-inch storm sewers in the profile at station 923+00.00.
133. Sheet 24 – Cross Sections Ormond Crossings Blvd.
- a. Extend the lot fill over the proposed water, reclaimed water and force mains in the profiles. Future lot fill should call out the area beyond the location where the side slope begins.
 - b. Change force main diameter to 12-inches.
 - c. Show the 18-inch and 42-inch storm sewers in the profiles.
134. Sheet 25 – Cross Sections Ormond Crossings Blvd.
- a. Extend the lot fill over the proposed water, reclaimed water and force mains in the profiles. Future lot fill should call out the area beyond the location where the side slope begins.
 - b. Change force main diameter to 12-inches.
 - c. Show the 18-inch storm sewer in the profile at Station 925+00.00.
135. Sheets 26 through 28 - Cross Sections Ormond Crossings Blvd.
- a. Show the 18-inch storm sewer in the profiles.
 - b. Change force main diameter to 12-inches.
136. Sheets 29 through 31 - Cross Sections Ormond Crossings Blvd.
- a. Change force main diameter to 12-inches.
137. Sheet 32 - Cross Sections Ormond Crossings Blvd.
- a. Change force main diameter to 12-inches.
 - b. Indicate that air release valves are to be installed on the water, reclaimed water and force mains.
138. Sheet 33 & 34 - Cross Sections Ormond Crossings Blvd.
- a. Change force main diameter to 12-inches.
139. Sheets 35 and 36 - Cross Sections Ormond Crossings Blvd.
- a. Change force main diameter to 12-inches.
 - b. Show the 24-inch RCP storm sewer in the cross sections.
140. Sheet 37 - Cross Sections Ormond Crossings Blvd.
- a. Change force main diameter to 12-inches.
 - b. Show the 24-inch RCP storm sewer in the cross sections.
 - c. Delete the force main shown in the toe of the slope.
141. Sheet 38 - Cross Sections Ormond Crossings Blvd

- a. Change force main diameter to 12-inches.
 - b. Show the 24-inch RCP storm sewer in the cross section at Station 933+50.00
 - c. Show the 18-inch RCP storm sewer in the cross section at Station 934+00.00
 - d. Delete the force main shown in the toe of the slope.
142. Sheet 39 - Cross Sections Ormond Crossings Blvd.
- a. Change force main diameter to 12-inches.
 - b. Show the 18-inch and 24-inch RCP storm sewer in the cross sections
 - c. Delete the force main shown in the toe of the slope.
143. Sheet 40 - Cross Sections Ormond Crossings Blvd.
- a. Change force main diameter to 12-inches.
 - b. Show the 18-inch and 24-inch RCP storm sewer in the cross sections at Station 935+50.00.
 - c. Extend the lot fill over the proposed water, reclaimed water and force mains in the profiles. Future lot fill should call out the area beyond the location where the side slope begins.
 - d. Need to show reclaimed water main and force main at a lower elevation to avoid conflicts with the sanitary sewer at Station 935+50.00.
144. Sheet 41 - Cross Sections Ormond Crossings Blvd.
- a. Extend the lot fill over the proposed water, reclaimed water and force mains in the profiles. Future lot fill should call out the area beyond the location where the side slope begins at Station 936+50.00.
 - b. Change force main diameter to 12-inches.
 - c. Show the reclaimed water main in the profile at Station 937+00.00.
145. Sheet 42 – Cross Sections US 1
- a. Show existing water mains, force main and the 18-inch storm sewer in the profile at station 489+00.00
 - b. Show existing water mains and the force main in the remaining cross sections.
146. Sheet 43 – Cross Sections US 1
- a. Show existing water mains, force main and the hydrant in the profile at station 490+50.00

- b. Show existing water mains and the force main in the remaining cross sections.
147. Sheet 44 – Cross Sections US 1
- a. Show existing water mains and the force main in the cross sections.
 - b. Proposed cuts at the right-of way line on the east side will make the existing 12-inch water main too shallow. Revise the cuts so there is at least 3 feet of depth over the pipe.
148. Sheets 45 through 49 – Cross Sections US 1
- a. Show existing water mains and the force main in the cross sections.
149. Sheet 56 – Utility Adjustments
- a. Show the existing water main on the east side of the street and the existing force main. Add a valve to the water main at Station 490+60.
150. Sheet 57 - Utility Adjustments
- a. Show the existing 8-inch PVC force main on the west side of the street and identify the existing water main to be 12-inch PVC.
 - b. Show the reclaimed water main extending across US 1.
 - c. Show the force main stopping on the west side of US 1.
 - d. Show a cross section of the reclaimed water main crossing US1.
 - e. Change the force main size to 12-inch diameter.
 - f. SAI plans provided do not show the reclaimed water main and force main in this area.
151. General Comments
- a. Provide a master utility plan for all phases of the Ormond Crossings project. This plan should show how all of the phases fit together and include recent projections for flow/demand computations for justifying pipe sizes and main sizes.
 - b. The initial phase (Phase A) proposed for construction appears to be sized and configured to receive wastewater flows and provide water demands to future phases. Many pipes are deep and sized well above Phase A needs. Consider re-engineering based on future phase construction schedule.
 - c. Provide a hydraulic analysis of the water main design to verify that flows and pressures will be adequate.

- d. Provide a hydraulic analysis of the force main design to verify that flows and pressures will be adequate.