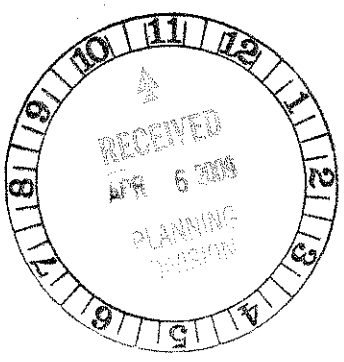
090182

Petitioner's Response to Environmental Staff Comments

4/6/09



090182

SITE PLAN EVALUATION SHEET

ENVIRONMENTAL REVIEW 334-5070 M.S. 58

Petition No. PZ-09-00019 Review Date: 3/25/09 Review For : Technical Review Committee Plan Reviewed: 3/26/2009 Description, Agent & Location: Hatchet Creek Eng, Denman & Associates, Inc. 2100 NE 39th Avenue	Review Type: Preliminary Final Project Planner: Scott Wright

☐APPROVED (as submitted) ☐APPROVED (subject to below) ☐DISAPPROVED

☒Wetlands or wetland buffers must be shown.
☒Creeks or creek setbacks must be shown.
☐Lakes or lake setbacks must be shown.
☒Significant ecological communities on site.
☐Archaeological/historical sites on site.

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APR 6 2009
PLANNING DIVISION

Comments By:

Mark A. Garland
Environmental Coordinator

NOTES/RECOMMENDATIONS:

According to the Planning Department, for the purposes of this review the site includes only the portion of the property that is not zoned Industrial (about 291 acres). My comments reflect this.

Below are what I believe are the six most important environmental issues affecting the development of this parcel, excerpted from my comments of May 23, 2007, on the proposed Planned Unit Development land-use change:

"1. Protection of the water quality of Little Hatchet Creek. *Channelized branches of Little Hatchet Creek flow through the site, across Waldo Road to the Gainesville Regional Airport, and into Newnan's Lake. Little Hatchet Creek contributes two nutrients, nitrogen and phosphorus, to Newnan's Lake. Because of high levels of such nutrients, the lake is now the most eutrophic lake in Florida, surpassing Lake Apopka (Carol Lippincott, St. Johns River Water Management District, personal communication). Development of this area has the potential to increase the levels of nitrogen and phosphorus in the upper reaches of Little Hatchet Creek, further degrading Newnan's Lake.*

Moreover, Newnan's Lake and all of its tributaries are subject to a Total Maximum Daily Load (TMDL) restriction on nutrients, and in the future the city may be required to reduce the levels of nutrients in Little Hatchet Creek. Development of this area will increase the expense of this reduction. In view of this potential expense, this project should be required to meet the strictest standards of low-impact development; in particular, the applicant should preserve larger buffers around creeks and wetlands than those required in the Gainesville land development regulations (more than 150 feet from creeks and more than 50 feet around wetlands), and should restrict the use of fertilizer and pesticides to the greatest extent possible, by such means as requiring xeriscaping and sharply restricting the use of turfgrasses.

Response:

The proposed stormwater systems have been preliminarily designed based on the new requirements by SJRWMD to provide water quality for phosphorus removal and to achieve reduction of the level of nutrients. The stormwater system will also control flow rate and volume for the 100yr-24hr storm as

required by the City LDC and the District. The majority of the proposed stormwater systems are located between the development and the wetlands and creeks which provides an additional buffer area.

2. Protection of the Murphree wellfield, which lies just to the north of the site. *The northern part of the site lies within the primary wellfield protection zone and the rest of the site is in the secondary wellfield protection zone. In fact, several of the city's wells and the Murphree Water Treatment Plant lie directly across 53rd Street from this project. Development of this area has the potential to affect the groundwater below the site, and perhaps eventually the Floridan Aquifer from which the city draws its drinking water. The most obvious way to reduce the potential for impacts to groundwater here is to restrict the intensity of development, perhaps by clustering development outside the primary wellfield protection zone and preserving large undeveloped areas within the primary zone.*

Response:

According to the City code Section 30-201, single family residential development is a permitted use in the primary and secondary wellfield zones and is not required to obtain a wellfield protection permit. As far as we know, there is not a minimum distance from the wells to single family residential development.

3. Minimization of impacts to the habitat of listed species. *The applicant has provided an environmental survey of the site that reports 8 burrows of gopher tortoise (*Gopherus polyphemus*), most in a degraded sandhill on the northeastern part of the site. Rare species that live in tortoise burrows, like eastern indigo snake (*Pituophis melanoleucus mugitus*), probably also occur. Two rare plants, variable-leaf crownbeard (*Verbesina heterophylla*) and giant orchid (*Pteroglossaspis ecristata*), may also occur in the flatwoods on site. Development should be planned around these rare species to the greatest extent possible.*

Response:

The Environmental Features Inventory report details the locations of 30 gopher tortoise burrows which occur in and around the project site. Of the 30 burrows, 27 lie within the development parcel and 3 lie within an adjacent parcel (see Figures 29 & 30 on pages 94 & 95, respectively; Table 5 on page 96, and text page 20). Four burrows lie within the cluster subdivision project site. These 4 burrows do not occur in typical natural gopher tortoise habitat but instead are found in disturbed berm areas. The applicant intends to establish the remnant sandhill as a gopher tortoise preservation and relocation area. The tortoises found in the 4 on-site burrows will be relocated to the remnant sandhill for their perpetual protection. All gopher tortoises as described in the Environmental Features Inventory report will be preserved on-site within the same project parcel which appears to be the intent of Section 30-309. All gopher tortoise commensals will be relocated to the conservation area at the same time of gopher tortoise relocation.

Variable-leaf crownbeard (*Verbesina heterophylla*) and giant rein orchid (*Pteroglossapsis ecristata*) have not been found or reported within the project site.

4. Minimization of impacts to the highest-quality uplands on the site. *This site lies within the Significant Ecological Communities overlay zoning district (sect. 30-309, Gainesville Code of Ordinances). The applicant will be required to prepare an environmental inventory as a condition for development approval on the site. As part of this inventory, the highest-quality uplands on the site should be delineated and any development within these high-quality areas should be restricted.*

Response:

The applicant has prepared an Environmental Features Inventory report and identified all valuable uplands on the parcels which comprise the project site. The applicant further responded to this issue in response to staff comments. The most valuable habitat on the site is the remnant sandhill. Excluding this area there are no uplands that are rare or exemplary or even high quality if compared to what would be the expected conditions for high quality flatwoods of this type. The quality of these habitats has been explained in great detail within the Environmental Features Inventory report.

Within the site of the cluster subdivision, there is no basis for prioritization of upland communities. In this area, the uplands are neither rare, exemplary, nor unique. The highest quality area within the parcel is the sandhill; this area and adjacent areas are proposed to be set-aside as described in the Environmental Features Inventory report.

5. Minimization of impacts to the wetlands on the site. *Most of the wetlands on the site have been affected by drainage. Nevertheless, they should be protected by wide buffers to preserve the pre-development water quality of the area (see item 1 above). Filling of wetlands should not be allowed here. The applicant should also consider improving the hydrology of the drained wetlands on site through such measures as ditch blocks.*

Response:

The applicant has supplied substantial historic documentation and current hydrologic data to support the assertion that all wetlands on the site have been severely hydrologically altered. Due to the presence of large ditches, the on-site wetlands do not inundate and have minimal surface water interaction with the channelized branches of Little Hatchet Creek. As a result, there is very little difference in the comparable hydrologic functions of wetlands and uplands on the site. During high flow events there is no wetland-to-wetland surface water flow. Due to the depth of the ditches and adjacent development, the installation of ditch blocks is not practical and would cause significant upstream flooding.

6. Protection of connectivity of wetlands and uplands throughout the site. *One way of preserving the ecological health of a site is to ensure that natural plant communities are connected throughout the site. In this way, wildlife will be able to move from one area to another with less disturbance from developed areas, and the plant communities themselves, both wetland and upland, have a better chance of surviving the effects of development. Here the applicant should preserve areas of undeveloped uplands that connect wetlands, particularly the better-quality wetlands.*"

Response:

The better quality wetlands on the site are being preserved with buffers. In addition, substantially larger buffer areas will occur around the majority of surface waters and wetlands by the placement of stormwater basins which will buffer the wetlands from the development area (see Figure 34, page 121 in the Environmental Features Inventory report).

Below I address how this proposed design plat addresses each of these concerns and the requirements of the City's land development code.

1. Protection of the water quality of Newnan's Lake. The applicant has designed an intense development that proposes 744 small lots, 52 acres of impervious surface, 50 acres of dry stormwater basins, and the removal of 9.3 acres of wetlands. The applicant notes that all city and state requirements for stormwater treatment will be met by the proposed stormwater system, but this does not guarantee that the development will not affect the water quality of Newnan's Lake. A particular concern in this area is that the deeper ditches on site may be contributing phosphorus at times to Newnan's Lake. The Environmental Features Inventory, required by 30-309(d) for this site,

must include a plan for monitoring nutrients like phosphorus in surface water entering and exiting the site. The applicant has proposed a plan that is generally acceptable. This monitoring must begin at least one year before any development of the site. I would appreciate the opportunity to discuss the details of the water-quality monitoring plan.

Response:

The applicant welcomes the opportunity to discuss the monitoring plan with City staff. The proposed stormwater systems have been preliminary designed based to provide water quality treatment for phosphorus removal to meet the new requirements by SJRWMD.

2. *Protection of the Murphree Wellfield.* The development must comply with the requirements of Section 30-305, Gainesville Code. To further protect the wellfield, the applicant should consider reducing the intensity of development in the primary wellfield protection zone.

Response:

According to the City code Section 30-201, single family residential development is a permitted use in the primary and secondary wellfield zones and is not required to obtain a wellfield protection permit. As far as we know, there is not a minimum distance from the wells to single family residential development.

3. *Minimization of impacts to the habitats of listed species*. The applicant's Environmental Features Inventory reports one active and three inactive gopher tortoise (*Gopherus polyphemus*) burrows within the site and proposes relocation of these animals "to an on-site Conservation Area." The applicant should specify where this Conservation Area is proposed. There are also hooded pitcherplants (*Sarracenia minor*) in three wetlands on site that are not proposed to be impacted. The Environmental Features Policy Manual requires that "at least 50% of listed species must be preserved *in situ*," which may be difficult for mobile animals. The applicant should clarify whether the proposed relocation of gopher tortoises complies with this requirement.

In my opinion, listed plant species on this site are most likely to be found in wetlands; the upland flatwoods community may be a suitable habitat for listed plants after frequent growing-season burns, but is not now. Listed animals that require large areas of undeveloped land, such as Florida black bears, may use this site; they will most likely not use the site after development.

Response:

See Response 3 Above. To summarize, <u>all</u> tortoises will be preserved within the parcel. Since any project involving gopher tortoises will require consultation with the Florida Fish and Wildlife Conservation Commission (FWC), the final resolution of gopher tortoise preservation should be addressed at the final development application level. The FWC requires gopher tortoise surveys to be performed within a short time frame prior to development. At this time, the gopher tortoise burrows in the cluster subdivision development area may be abandoned since they occur in distinctly marginal habitat. In any case, the FWC recommendation for disposition of the tortoises may supersede any requirements contained in Section 30-309.

Additional Comment: All known plant species listed by the Florida Natural Areas Inventory (FNAI) are protected in-situ. There is no known usage of this site by black bears.

4. *Minimization of impacts to the highest-quality uplands on the site.* The site is covered with pine flatwoods and cypress-gum swamps and has been drained by large ditches since the construction of the Ironwood Golf Course in the 1960's. The applicant's Environmental Features Inventory rightly points out that the natural communities have

been altered by drainage and fire suppression, and that the highest-quality upland in the area may be the remnant sandhill in the Industrial area east of this site. The Environmental Features Inventory Policy Manual requires delineation and protection of all rare, vulnerable, or exemplary natural communities on-site. The uplands on-site qualify as Mesic Flatwoods in the Florida Natural Areas Inventory classification and do not qualify as rare, vulnerable, or exemplary natural communities. (The City's Environmental Resource Report of January 2001 did consider this area to be an exemplary mosaic of communities.) They are valuable within the City of Gainesville for their size and their protection of the remaining wetlands and the surface waters on site. Although they have suffered from drainage and from lack of fire, they have not been bedded and treated with herbicide as have the commercial forests to the north. With proper management, they can become good examples of North Florida pine flatwoods.

The applicant has not provided post-construction acreages of natural communities as the Environmental Features Inventory Policy Manual requires, but the plan appears to remove essentially all of the natural uplands between the arms of the golf course. The site should be re-examined to determine whether any of these uplands proposed for removal are worthy of preservation as wildlife corridors or buffers connecting wetlands.

Response:

Please see previous responses. The following additional comments are provided.

a. Wildlife corridors are provided and consist of stormwater ponds, wetlands, buffers, surface waters, and green areas. In addition, the most valuable wetlands on-site have been placed into conservation.
b. The highest quality upland and wetland habitats on the site are being preserved.
c. The uplands which are to be developed on-site do not exhibit the following characteristics as noted in Section 30-309:

1. Completeness – The uplands proposed for development do not exhibit the species physical structure or the ecological processes typical of a natural high quality pine flatwoods community.

2. Connectivity – The on-site uplands have marginal connectivity to off-site areas. Within surface waters, movement to off-site areas is seriously restricted by culverts. Movement across uplands to off-site areas is seriously restricted by high volume traffic corridors (i.e.; NE 39th Avenue, NE 15th Street, NE 53rd Avenue, and Waldo Road) which will only continue to grow in intensity in the future.

3. Exemplary – The uplands in no way could be considered as having exemplary species composition or community structure characteristic of an unusually high quality example of a pine flatwoods habitat.

4. High Water Quality – It is impossible to separate the water of this parcel from that of the adjacent Ironwood Golf Course. Therefore, the surface waters of this parcel receive substantial fertilizer inputs from Ironwood Golf Course. Therefore, this parcel as it exists is not a high water quality area.

5. Manageability – It is questionable that the area could be managed in the future with fire to substantially improve the on-site habitats. The wetlands are severely drained, presenting a particularly acute fire hazard. The proposal of an intense fire management regime is not practical considering the adjacency of the golf course, four (4) major highway systems, adjacent residential development, and, last but not least, the airport runway. All of these factors have contributed to the fact that fire has not been used in the past.

6. Rarity – The on-site uplands are not rare based on anyone's criteria.
7. Viability – Given the extent of the drainage on the site, these wetlands will continue to degrade with time.

5. Minimization of impacts to the wetlands on site. Section 30-302.1(d), Gainesville Code, states in part: "Avoidance of loss of wetland function and wetland habitat is of the highest priority. The owner shall avoid loss of wetland function and wetland habitat by implementing practicable design alternatives to minimize adverse impacts to wetlands."

The applicant's design plat includes only post-construction wetland boundaries and buffers, making it difficult to determine how many lots are within existing (pre-construction) wetlands and buffers. Fortunately, the landscape plan overlays the site plan on the survey, allowing an estimate of the number of proposed lots within existing wetland boundaries and buffers.

From this landscape plan, it appears that 170 (23%) out of the 744 lots are completely or partially within existing wetlands or the 50-foot wetland buffer. See the attached listing of lot numbers.

Please explain how placing 23% of the lots in wetlands or buffers "avoids or minimizes adverse impacts to wetlands" on the site. It is inappropriate to discuss mitigation for impacts to wetlands until such impacts are avoided or minimized to the extent practicable.

Section 30-190(g)(3) requires that all wetland mitigation must be on-site, not partially in the Industrial area as the present Environmental Features Inventory proposes.

Moreover, the Environmental Features Inventory Policy Manual requires a plan for protection of the rare, vulnerable, or exemplary natural communities on site. The wetlands least affected by drainage on this site qualify as Dome Swamps, vulnerable according to the Policy Manual. Examples of such less-drained wetlands are Wetlands 52C and 23 in the northern part of the site. The current plan proposes impact to Wetland 52C and the complete removal of Wetland 23. The plat should be redesigned to protect these and other higher-quality wetlands and their buffers.

Response:

a. **In compliance with Section 30-190(g)93), sufficient mitigation as determined via the UMAM procedure (see attached table) to offset proposed impacts is being performed within the cluster subdivision. Additional mitigation in excess of the UMAM requirements is being performed within same parcel except within the industrial area. The mitigation is summarized by site in the attached table which is a revision of the table originally presented on page 36 of the Environmental Features Inventory report. The mitigation plan will result in a total of 80.07 acres of mitigation within the cluster subdivision. The total mitigation for the entire parcel equals 87.82 acres.**
b. **The "dome swamps" referred to by City staff were historically "dome swamps" but now no longer satisfy the criteria for classification as this type of habitat based on either hydrologic or vegetative criteria. This has been addressed in previous responses. The impacts to wetlands 52C and 23 previously proposed by the applicant have been removed (avoided) except for the road impact to the north part of wetland 52C which is unavoidable unless another entrance is provided through NE 53rd Avenue.**
c. **Section 30-302.1(d) of the Land Development Code states in its entirety:**

(d) *Avoidance through minimization.* Avoidance of loss of wetland function and wetland habitat is of the highest priority. The owner shall avoid loss of wetland function and wetland habitat by implementing practicable design alternatives to minimize adverse impacts to wetlands, except as permitted in this section:

The adverse impacts remaining after practicable design modifications have been made shall be offset by mitigation as provided herein. A development activity cannot cause a net adverse impact on wetland functions, wetland habitat, or surface water functions, if such activity is not offset by mitigation.

Avoidance through practicable design modifications is not required when the ecological value of the function provided by the area of wetland is low and the proposed mitigation will provide greater long-term ecological value than the area of wetland to be affected.

Critical to this section is the two part test which states that avoidance through practicable design modifications is not required when [test 1] "the ecological value provided by the area of wetland is low" and [test 2] "the proposed mitigation will provide greater long-term ecological value than the area of wetland to be affected." The applicant has provided substantial historical information and 2 years of continuously recorded hydrological data that show the on-site wetland areas to be severely hydrologically altered. This issue was extensively addressed in the UMAM analysis which evaluated the wetland impacts and required mitigation. The wetland hydrologic data span 2 years which is more data than has been presented for any other City project. However, the hydrologic data are not the sole basis for determining that the areas are severely altered. Additional evaluation criteria include the following:

1. The existing and historic aerial photographs show very deep ditches extending through or adjacent to all wetlands proposed for impact. It is impractical to suggest that ditches which range in depths from 3 to 7 feet below the surface of the wetland, and which extend entirely through the wetland, have not resulted in a severely altered hydrologic regime.
2. The 100 year storm models for the site support the assertion that even under extreme events inundation is infrequent and drawdown is very rapid for wetlands located adjacent to surface waters.
3. The absence of well-defined lichen and moss lines or any other hydrologic indicators within any of the wetland systems supports the long-term drainage trend shown by the hydrologic data.
4. The absence of a well-defined canopy in the wetlands lends further credence to this long term degradation. There is a noticeable, if not remarkable, absence of any size class structure. In many areas, large cypress may remain but there is no evidence of recruitment of the historically natural canopy species. Canopy mortality is substantial in most areas, with leaning trees, top-dead trees, and trees with buttress rot very widespread. The obvious lack of canopy in most areas is easily seen on the tree survey submitted as part of the application. In areas where a wetland canopy exists, the density is substantially reduced over what would have been expected in a natural community. In addition, soil oxidation is present in the majority of wetland areas with bases of trees exposed due to soil loss.
5. Due to the existing drainage ditches there is virtually no surface water interaction between adjacent wetlands or upon downstream wetlands. The majority of water treatment and above ground water storage on this site occurs in the ditches not the wetlands.
6. In most all wetland areas, the understory, sub-canopy, and canopy shows substantial invasion by gallberry (*Ilex glabra*), slash pine (*Pinus elliottii*), and water oak (*Quercus nigra*). In addition, in all wetland areas there is a serious paucity of Facultative Wet (FACW) and Obligate (OBL) herbaceous groundcover species.
7. Based on all of the above, these wetlands will continue to decline in the future.

In consideration of all these factors, it can be said that these wetlands offer little to no habitat for aquatic and wetland dependent animal species, including listed species; <u>therefore, the quality of the wetland habitat is low</u>.

In previous comments, the City staff has agreed with this assessment. In comments made 29 March 2007, City staff stated "the wetlands in their current severely drained condition are not significant for listed species or general wildlife habitat." In addition, in a report entitled "*Little Hatchet Creek Flatwoods Environmental Site Evaluation*" prepared by the Nature Operations Division, the reviewer states in part "Historically the property's appearance and ecological processes, such as natural fire regime and hydrology, have been significantly altered." The reviewer goes on to state that "These long-term activities have changed both plant and animal species composition and structure." The reviewer further comments that "Hydrologic restoration would be difficult if not impossible."

With regards to the proposed mitigation plan, the plan being offered substantially satisfies the criteria of the UMAM analysis (see attached table). In addition, conservation areas are established that perpetually preserve all high quality wetlands on the site as well as buffers and additional non-regulated upland areas. This action protects these areas from any further development or impacts regardless of rule changes which may occur in the future. In addition, the created wetlands will provide a resource on this site which has been lacking since the late 1960s. This resource is the presence of inundated marsh and mixed forested wetland areas which will have hydroperiods greater than 270 days per year, which was characteristic of the historic condition. This will provide refugia for aquatic dependent species which is sorely lacking on this site in the current condition.

6. Protection of connectivity of wetlands and uplands throughout the site. As mentioned above under point 4, the current plan proposes the near-complete removal of the upland natural communities between the arms of the golf course, eliminating whatever connectivity of wetlands and uplands still exists on the site. The applicant should consider preserving broad areas of uplands that connect otherwise isolated wetlands. Section 30-309(e) can require a set-aside of up to 10% of the total parcel area "based on objective criteria that ecological feature(s) on the parcel require additional protection to remain ecologically viable, or to restore ecological function." The applicant's Environmental Features Inventory is fairly thorough, but does not give enough information to determine where a set-aside or set-asides should be located. I look forward to working with the applicant to determine whether a set-aside should be required, and, if so, where.

Response:

The set-aside was addressed in the Environmental Features Inventory report and in previous responses to the City. To review, an "upland set-aside" has been established within the development parcel consistent with Section 30-309(e). The total residential zoned area within the overlay equals 231.66 acres. The overlay set-aside equals 26.67 acres which is 11.51% of the overlay acreage in the development site. Therefore, the criteria outlined in Section 30-309(e) have been satisfied. In addition, it should be noted that the requirements outlined in Section 30-309(e) do not prohibit using wetlands to satisfy the set-aside criterion. If considered, there are 55.26 acres of wetlands being placed into conservation within the cluster subdivision.

Summary of **Total Functional Gain** Mitigation Credits produced through creation and preservation of wetlands, surface waters, and upland buffers.

Mitigation Area	Size of Area (acres)	Parameter Scores (Before/After Mitigation) Landscape Support (L)		Water Environment (W)		Vegetation Community (V)		Δ	PAF	Adjusted Δ	Relative Functional Gain	Functional Gain
CREATED WETLAND WITHIN CLUSTER SUBDIVISION	**2.48**											
Created Wetland No. 1	2.48	0	7	0	7	0	7	0.7	NA	-0.7	0.448	1.111
(†Time Lag = 1.25; Risk = 1.25)												
CONSERVATION AREA 1	**61.34**											
Wetlands & Surface Waters	44.17	6	7	6	7	6	7	0.1	0.6	0.06	0.06	2.6500
Regulated Upland Buffers	7.70	6	7	NA	NA	6	7	0.1	0.6	0.06	0.06	0.4620
Unregulated Upland Buffers	9.47	6	8	NA	NA	6	7	0.15	0.6	0.09	0.09	0.8523
CONSERVATION AREA 2	**4.45**	5	5	5	5	6	7	0.04	0.4	0.016	0.016	0.0712
CONSERVATION AREA 3	**11.80**											
Wetland & Surface Waters	6.55	6	6	5	5	6	7	0.03	0.6	0.018	0.018	0.1180
Upland Buffers	5.25	6	7	NA	NA	6	7	0.01	0.6	0.06	0.06	0.3150
TOTAL MITIGATION WITHIN CLUSTER SUBDIVISION	80.07											5.580
ADDITIONAL MITIGATION OUTSIDE CLUSTER SUBDIVISION BUT WITHIN PARCEL	**7.75**											
Created Wetlands 2 & 3	7.75	0	7	0	7	0	7	0.7	NA	-0.7	.448	3.472
TOTAL MITIGATION IN PROPOSED SUBDIVISION	87.82											9.0520

Total Functional Loss from Impacts = (9.28 Acres) -4.371 Credits
Total Functional Gain from Mitigation = (87.82 Acres) +9.0520 Credits

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