MILLER LEGG

SJWMD Permit No 4-127-0369C-ERP

Miller Legg Project No.
09-00268

# Florida Sandhill Crane 2022 Annual Monitoring Report

Prepared For:

Victoria Park Community Council

IMPROVING COMMUNITIES. CREATING ENVIRONMENTS.

# VICTORIA PARK COMMUNITY
## Florida Sandhill Crane Annual Monitoring Report – 2022

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# Victoria Park Mitigation Area
## Florida Sandhill Crane Annual Monitoring Report – 2022

## I. INTRODUCTION

Victoria Park is a 1,859-acre multi-use Development of Regional Impact (DRI #698-06) located in southern Volusia County, Florida. The project includes residential communities, golf courses, commercial tracts and numerous wetland and upland preservation areas. This project includes the preservation of approximately 215 acres of uplands and approximately 161 acres of wetlands, including the enhancement of 22-acres of wetlands and the creation of 6.8-acres of wetlands. The St. John's River Water Management District (SJRWMD) required the preservation and management of seven potential nest sites for the Florida sandhill crane (*Grus canadensis pratensis*), which consists of primary wetland, primary upland, secondary and ancillary foraging areas. The development plan for Victoria Park has been implemented in a phased manner to give the cranes adequate time for adaptation to the preserved versus developed areas and in turn increase-nesting success. This annual report documents the Florida sandhill crane nesting success during the 2022 monitoring season and includes data collection on survivorship, productivity, and habitat use.

## II. PROJECT LOCATION

The project is adjacent to County Road 4101 (Martin Luther King, Jr. Beltway (MLK Beltway)), Orange Camp Road, Taylor Road, State Road 472, Blue Lake Road and Interstate 4 within Sections 22-27, 34, 35, and 36; Township 17 South and Range 30 East, near Deland in Volusia County, Florida as depicted on Exhibit 1.

## III. LICENSE/PERMIT INFORMATION

SJRWMD Permit No. 4-127-0369C-ERP was originally issued to St. Joe Residential Acquisitions, Inc. on October 12, 1999. Data describing the extent of sampling effort, nest occurrence, nest status and other appropriate information must be submitted to the District by the following October for each sample season for the life of this permit. In accordance with the permit, monitoring of cranes and their habitat will be conducted by a qualified biologist during the crane-nesting season. The sandhill crane Site Mitigation and Management Plan (SMMP) is centered on the preservation and management of seven potential nest sites that includes primary wetland, primary upland, secondary and ancillary foraging areas. Victoria Park Community Council umbrella association is the responsible entity for this monitoring, environmental preserve area maintenance, and all the shared amenities and infrastructure within the Victoria Park community.

## IV. NEST SITE ANALYSIS

Seven potential nest sites throughout the development are divided into four quadrants. The NW Quadrant is found north of Orange Camp Road, west of Dr. Martin Luther King Jr. Beltway, and east of Blue Lake Avenue and consists of two potential nest sites (Sites A and B). The NE Quadrant is located north of Orange Camp Road, east of Dr. Martin Luther King Jr. Beltway, and west of Interstate 4 and consists of three potential nest sites (Sites C, D, and E). The SW Quadrant is located south of Orange Camp Road and west of Dr. Martin Luther King Jr. Beltway and consists of one potential nest site (Site F). The SE Quadrant is located south of Orange Camp Road and east of Dr. Martin Luther King Jr. Beltway and consists of one potential nest site (Site G). These potential nesting sites and associated wetlands along with secondary habitats are all labeled on the sandhill crane maps enclosed in Exhibit 2.

Each potential nest site includes at least one wetland that is comprised of appropriate nesting and foraging habitat for sandhill cranes. The primary upland habitat for the cranes consists of those upland areas that are comprised of suitable foraging habitat and are contiguous to the primary wetlands. Secondary/ancillary habitats consist of natural wetland and upland areas, golf course, retention pond banks, and parks. The project acreages of areas preserved and constructed for planning purposes established this project consists of approximately 188 acres of primary habitat, 317 acres of secondary habitat, and 110 acres ancillary/tertiary habitat. The total acreage of sandhill crane habitat is approximately 615 acres, which is in excess of the 570 acres required in the SMMP. The excess acreage is primarily based upon the construction of additional storm water treatment areas associated with permitted development activities and the documented use of the shorelines typically associated with those areas. The Sandhill Crane Maps attached as Exhibit 2 were updated with the most recent aerial photography available for this report to provide a clear depiction of development and preservation activities.

The Florida sandhill cranes were observed throughout the potential nesting habitat in freshwater herbaceous wetlands with nests made of plant material naturally found in the adjacent wetlands such as rushes (*Scirpus* sp.), spikerush (*Eleocharis* spp.), pickerel weed (*Pontederia cordata*), and maidencane (*Panicum hemitomon*). Nesting pairs of sandhill cranes were observed at the nests or in nearby wetland habitats foraging. The nests observed during the 2022 monitoring period were typically three to four feet in diameter and approximately one to two feet above the water surface and were similar in size to nests observed in preceding years. Water levels continue to be a key component in nesting behavior and location of nests. As water levels fluctuate several pairs relocated to different nesting areas within the individual wetlands. The overall water levels noted at each nest site remained constant from the prior year and corresponded to the wetland extents delineated during the original permitting. Monthly total precipitation data was summarized from a local NOAA station and can be seen in Figure 2. Data was compared to

average monthly totals observed in Deland and the total difference was slightly over average at 2.29 inches of precipitation at the conclusion of the monitoring period.

## A. Methods

Monitoring included a ground level inspection of potentially suitable nesting habitat on a regular basis during the Florida sandhill crane nesting season (January through June, approximate 26 weeks) totaling 6 visits. The ground level inspection consisted of a visual survey of each freshwater herbaceous wetland in search of nests or nesting behavior by cranes. Water levels and nest locations within the marshes during the nesting season limited access for direct nest observations of most of the nests without disturbing and/or frightening cranes off the nest. During the reviews, the number of eggs in the majority of nests could not be determined. The SMMP requires at least one aerial review of the crane habitat during the nesting season. This was performed via helicopter on May 23, 2022 and photographs taken are enclosed within Exhibit 3. This was conducted to help identify potentially active nests that were obscured from view on the ground.

Miller Legg greatly appreciates the Victoria Park residents and Evergreen Management staff that continue to aid with observations and photographs in between field reviews. Their support is extremely valuable in determining the day-to-day activities of the cranes between visits. The Florida sandhill cranes were observed using a diversity of native habitats during the monitoring period. Shallow marshes were used for nesting, and shorelines of wetland habitats for foraging. In addition the cranes are present in urban areas of Victoria Park including golf courses and suburban subdivisions.

## B. Results

This section provides detailed information on the individual nesting sites including a summary discussion of the observations, incidental wildlife observations, and recent maintenance efforts. Photographs documenting the on-site sandhill cranes and their nesting activity can be found in Exhibit 3.

### *Potential Nest Site A (±46.4 acres)*

Potential nesting site A is comprised of ±18.6 acres of primary wetland habitat and ±24.9 acres of primary upland foraging habitat. The primary wetland habitat at this nesting site includes Wetlands 104, 106, 107, 112, 113, 114, 115, and 116. The secondary habitat for this site is comprised of ±2.9 acres of secondary wetlands.

Sandhill cranes were observed nesting in Site A in two wetlands during the 2022 monitoring period in multiple locations. The primary habitat remains suitable for nesting behavior and water levels were appropriate throughout.

An active nest in Wetland 107 was first observed in mid-January 2022 on the east side and cranes were observed and photographed nesting through the April 13th field review. Subsequent field visits in May and June revealed the nest empty and no adults or colts were observed in the vicinity of Wetland 107. A second occupied nest was in Wetland 112 during the May 23rd, 2022, helicopter review and observed from the ground with a crane on the nest on the June 9th field review.

Off-road vehicles documented in previous reports entering the site from the adjacent property to the north and trespassing on the site have essentially stopped. Illegal vehicle access was not observed during this monitoring period. Improved fencing along the northern boundary and trees that were felled to block trail access remain intact. Based on ground and aerial observations historic trespassing by off-road vehicles has ceased at this time. We intend to remain vigilant in keeping off-road vehicles from unauthorized access.

### *Potential Nest Site B (±30.5 acres)*

Potential nesting Site B is comprised of ±2.4 acres of primary wetland habitat that includes Wetlands 87, 88, and 89. The secondary habitat for this site is comprised of ±4.9 acres of secondary wetlands including Wetland 99 and ±23.2 acres of secondary upland habitat.

No nests in Site B were observed during the ground monitoring or aerial review in May.

During field reviews a pair of cranes was observed in May and June foraging in the yards of homes off site from Victoria Park adjacent to Wetlands 87, 88, and 89. Miller Legg questioned one of the homeowners familiar with that pair of cranes and they did not observe colts this year.

A pair of Florida sandhill cranes nested in Wetland 99 for the past few years but did not nest this monitoring period. This pair was observed in and around the wetland on multiple monitoring visits, but the aerial review revealed no nest, and no colts were observed by Miller Legg, Evergreen staff, or residents adjacent this wetland that were interviewed.

Adjacent construction to the south and east of potential nest site B on Orange Camp Road and the Martin Luther King Beltway was ongoing during this monitoring year and may have influenced nesting behavior.

Incidental observations of sandhill cranes throughout the Victoria Trails community was commonly observed during this monitoring year. Cranes were observed foraging along internal residential roadways and retention pond buffers.

### *Potential Nest Site C (±81.3 acres)*

Potential Nest Site C is comprised of 33.6 acres of primary wetland and upland foraging habitat. The primary wetland habitat at this nesting site includes Wetlands 1, 2, 3, 4, 5, 6, 16, 17, 18, and 20. There are approximately 47.7 acres of secondary and ancillary upland habitat within this potential nest site. This habitat coincides with the Scrub Jay/Gopher Tortoise Preserve.

All wetlands within Site C contained appropriate water levels during the 2022 monitoring period. Site C had one nest observed in Wetland 17. Sandhill crane activity was high in potential nest site C during the 2022 monitoring period. Wetlands 5 and 6 had activity from a pair of cranes throughout the monitoring season, however nesting activity was not observed from this pair which have nested in Wetland 5 or 6 for the past few years but did not nest this monitoring period. Ground monitoring and the aerial review revealed no nesting, and no colts were observed by Miller Legg for this pair. It is unknown why this pair did not nest this season.

A nest was monitored in Wetland 17 and this pair successfully raised two colts and these two offspring were observed until the end of the monitoring period. Typically, this family was observed along the edges of the stormwater pond immediately south of Wetland 17. Photographs of this family with different stages of the offspring are included in the photo pages.

### *Potential Nest Site D (±131.2 acres)*

Potential Nest Site D is comprised of 13.6 acres of primary wetlands and 20.6 acres of primary upland foraging areas. The primary wetland habitat at this nesting site includes Wetlands 33, 34, 36, 38, 39, 40, 47, 48, and 49. The secondary habitat for this site is comprised of 19.2 acres secondary wetlands and 77.8 secondary/ancillary uplands. The secondary wetland habitat includes Wetlands 21, 23, 24, 26, 27, 30, 31, 32, 35, 43, 44, 45, 46, 51, and 53. The secondary/ancillary upland foraging areas for this nest site consists of approximately 68.7 acres of managed uplands within the Scrub Jay/Gopher Tortoise Preserve and 9.1 acres of park and retention pond banks.

Nesting activity was observed in Wetlands 21, 27, and 40 during the 2022 nesting season. Overall, Site D had five confirmed nesting attempts, with four hatchlings, and two confirmed surviving juveniles.

Nesting activity was first noted in Wetland 21 on January 11th and again March 1st. Two colts were observed on April 1st and one colt on April 13th. On a subsequent monitoring event May 11th this pair was observed adjacent Wetland 21 with no colts. It is unknown what happened to the colts hatched by this pair.

A nest was first observed in Wetland 27 in January and two colts observed in March. This pair and two colts were noted in the adjacent Wetland 26 behind the recreation center on the April review. The pair was last seen foraging in Wetland 27 with two healthy juveniles on June 10th.

Three unsuccessful nesting attempts were documented in Wetland 40 during this monitoring period starting in January and continuing through April. No determination on why the attempts were unsuccessful could be made. Predation, egg death or infertility, and water fluctuations are all potential sources of nest failure.

Incidental observations of adult sandhill cranes foraging and resting were made within the vicinity of nest site D in and around the Victoria Park Gardens community throughout the 2022 nesting season as reported by the residents assisting with the observations.

### *Potential Nest Site E (±30.1 acres)*

Potential nest Site E is comprised of 1.1 acres of primary wetlands and 7.0 acres of primary upland foraging areas. The primary wetland habitat at this nesting site is Wetland 64. The secondary habitat for this site is comprised of 13.8 acres of secondary wetlands and 8.2 acres of secondary uplands, which include retention pond banks and managed upland buffers.

The Wetland 9 is at the northeast portion of Site E in the secondary habitat associated with the FPL Easement. During the 2022 season nesting was observed during the January 10th field review and confirmed as single nest during the May flight. Water levels in this wetland remained constant until June.

Based on discussions with the residents adjacent Wetland 9 two colts were hatched in February and were doing well as juveniles observed by Miller Legg staff on May 11th.

There were no other nesting attempts observed in Site E. Incidental observations of adult sandhill cranes foraging and resting were made within the vicinity of nest site E throughout the 2022 monitoring period.

### *Potential Nest Site F (±257 acres)*

Potential nest Site F is comprised of 8.0 acres of primary wetland habitat and 42.8 acres of primary upland foraging habitat. The primary wetland habitat at this nesting site includes Wetlands 82, 83, and 86. The primary upland foraging habitat for this site includes 42.8 acres of managed uplands. Approximately 206.2 acres of this site is secondary upland foraging habitat, which is comprised of 112.1 acres of golf course, 16.3 acres of retention pond banks, and 77.8 acres of managed upland natural areas.

Site F wetlands contained standing water for the duration of the nesting season. A nesting pair was observed in Wetland 82 in January and March and one nest was documented. A family of sandhill cranes with one colt and later a juvenile was observed along the managed upland and golf course around Wetland 82 during the April, May, and June field reviews.

Water levels and location in the marsh limited access for nest observations from the ground in Wetland 86. A single empty nest was observed in Wetland 86 during the May aerial review. However, a pair of adult cranes with a single juvenile was observed in this area on the June 10th field review.

Incidental observations of foraging and resting sandhill cranes were noted all over the golf course and Site F throughout the 2022 monitoring period.

### Potential Nest Site G (±39.4 acres)

Potential nest Site G is comprised of 15.8 acres of primary wetland habitat and 4.2 acres of primary upland foraging pastureland habitat. The primary wetland habitat at this nesting site includes Wetlands 73, 74, 75, 76, and a created wetland. Site G includes approximately 19.3 acres of secondary upland foraging habitat distributed throughout this potential nest site.

During the May aerial review a nest was observed in Wetland 74. This area was dry during the January and March field reviews and no nests were observed.

Typical observations of adult sandhill cranes within Site G in and around the Victoria Park community adjoining this wetland complex were not made throughout the 2022 monitoring period. This site was reviewed thoroughly during the monitoring period and Florida sandhill cranes were not seen. Adjacent construction to the north of potential nest site G on Orange Camp Road was ongoing during this monitoring year and may have impacted or influenced nesting behavior.

## C. Discussion

During the 2022 nest season sandhill cranes were observed successfully nesting throughout the Victoria Park community. Surviving colts from this year's nesting season were observed throughout the project during the June 10-11th visit. Suitable weather conditions and appropriate wetland inundation was observed and results in successful nesting season.

The number of active nests decreased from the previous year (Figure 1). Fluctuations of water levels was observed and typical from the transition of the dry and wet seasons with no extremes observed. As with earlier years success of the nesting efforts appear to correlate to the amount and timing of rainfall within the project area during the nesting season. The number of viable sandhill crane nests typically drops in years that experience drought conditions. In addition, there was a multi-day freeze in DeLand with several days of nighttime lows in the twenties. The effect of this weather event was not clear.

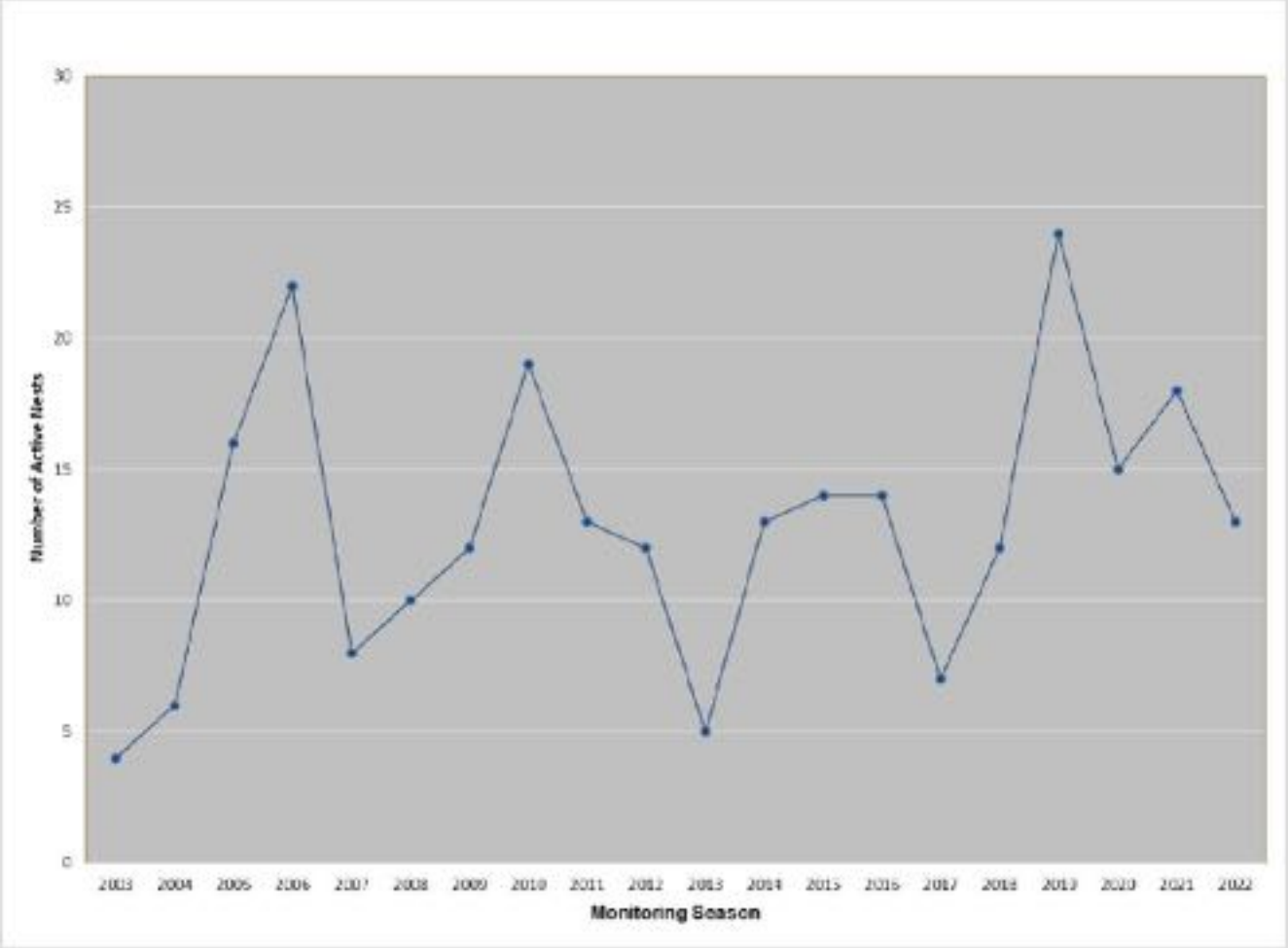



Figure 1. Active sandhill crane nests observed at Victoria Park, Deland, Florida.

Table 1- Overall Nest Status

| Nest Location | 2022 Overall Nest Status | | | | |
|---|---|---|---|---|---|
| **Wetland #** | **# of Nests** | **# of Nests w/ Incubating Cranes** | **Colts Observed** | **# of Colts Survived** | **Nesting Pair Number** |
| A107 | 1 | 1 | | | 1 |
| A112 | 1 | 1 | | | 1 |
| C17 | 1 | 1 | 2 | 2 | 1 |
| D21 | 1 | 1 | 2 | 0 | 1 |
| D27 | 1 | 1 | 2 | 2 | 1 |
| D40 | 3 | 1 | | | 1 |
| D44 | 1 | 0 | | | 1 |
| E9 | 1 | 1 | 2 | 2 | 1 |
| F82 | 1 | 1 | 1 | 1 | 1 |
| F86 | 1 | 1 | 1 | 1 | 1 |
| G74 | 1 | 0 | | | 1 |
| **TOTALS** | **13** | **9** | **10** | **8** | **10** |

* Based on estimates of surviving juveniles observed at end of monitoring June 11th, 2022

During the 2022 Florida sandhill crane nesting season, approximately 13 nests were observed (Table 1). Nine of these nests were designated as active nests with observations of incubation. Based on observations ten colts successfully hatched and eight survived through the end of nesting season. The exact number hatchings may have been slightly higher but there is no way of determining if all eggs hatched or not.

Nest failure, or unsuccessful nests, can result from many factors. Predators such as bobcats, coyotes, raccoons, red-tailed hawks, bald eagles, various owls, and American alligator can eat the eggs or young colts. Relating to the Victoria Park Community sandhill crane habitat, low and changing water levels and raccoon predation appear to have the greatest effect on nesting success. Additional reasons for nest failure include abandonment, egg infertility, and sudden flooding. Based on long term observations and physical location of the nests within the wetlands human disturbance is minimal as it relates to nesting of cranes associated within the project area.

Based on a review of data the National Oceanic and Atmospheric Administration (NOAA), the precipitation levels were comparable to the average overall (+2.29 inches) from June 2021 to June 2022 (Figure 2).

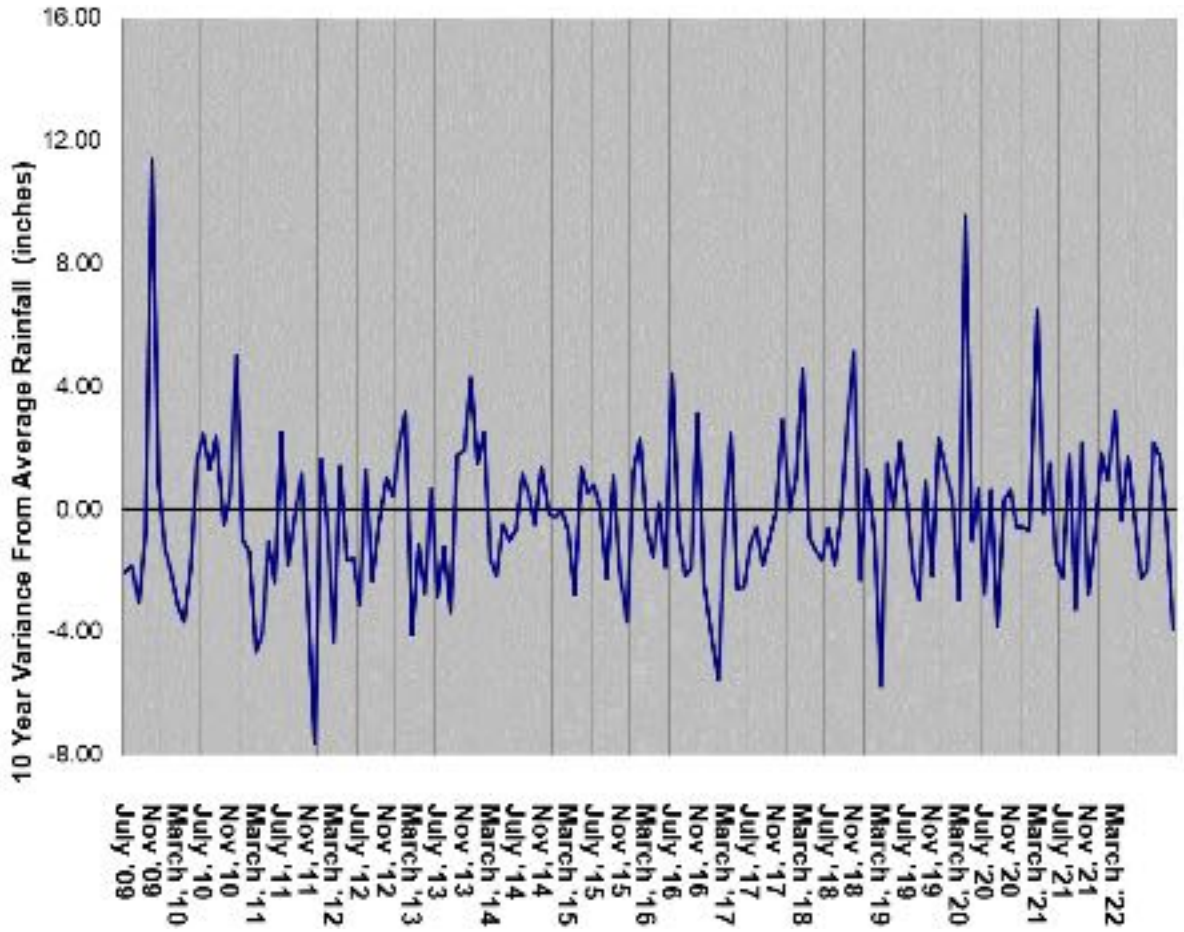



Figure 2. 10 Year difference between actual and average precipitation in Deland, FL (NOAA).

Drought conditions lower the water levels, which reduces success due to increased predator access to nests. In contrast, normal to high rainfall should increase productivity by creating more suitable water depths for nesting and improving feeding conditions. Several sandhill crane pairs in the Victoria Park community nested multiple times this year due to fluctuating water levels based on the interpretation of the photographs taken during the aerial review. As in previous years, nests appeared underwater or high and dry with a second or third nest constructed in the same proximity.

## V. INCIDENTAL WILDLIFE OBSERVATIONS

The following faunal species were observed directly or indirectly by Miller Legg, within or near the areas monitored since 2010. **Bold = Observed During 2022 Monitoring Period**

### MAMMALS

| Species | Common name |
|---|---|
| ***Canis latrans*** | **Coyote** |
| ***Odocoileus virginianus*** | **White-tailed deer** |
| ***Lynx rufus*** | **Bobcat** |
| ***Procyon lotor*** | **Raccoon** |
| *Scalopus aquaticus* | Eastern mole |
| ***Sciurus carolinensis*** | **Grey squirrel** |
| *Sciurus niger shermani* | Sherman's fox squirrel |
| ***Sigmodon hispidus*** | **Cotton rat** |
| ***Sylvilagus palustris*** | **Marsh rabbit** |
| *Ursus major* | Black bear* |

*only scat observed

### AMPHIBIANS & REPTILES

| | |
|---|---|
| *Acris gryllus dorsalis* | Florida cricket frog |
| ***Alligator mississipiensis*** | **American alligator** |
| ***Anolis sagrei*** | **Brown anole** |
| ***Apalone ferox*** | **Florida softshell turtle** |
| ***Bufo quercicus*** | **Oak toad** |
| ***Bufo terrestris*** | **Southern toad** |
| ***Coluber constrictor*** | **Black racer** |
| *Crotalus adamanteus* | Eastern diamondback rattlesnake |
| ***Gopherus polyphemus*** | **Gopher tortoise** |
| *Hyla femoralis* | Pinewoods treefrog |
| *Lithobates capito* | Gopher frog |
| *Micrurus fulvius* | Coral snake |
| *Pantherophis guttatus* | Corn snake |

### BIRDS

| | |
|---|---|
| *Accipiter cooperii* | Cooper's hawk |
| ***Aix sponsa*** | **Wood duck** |
| ***Anhinga anhinga*** | **Anhinga** |
| *Aphelocoma coerulescens* | Florida scrub jay |
| *Aramus guarauna* | Limpkin |
| ***Ardea alba*** | **Great egret** |
| ***Ardea herodias*** | **Great blue heron** |
| ***Aytha affinis*** | **Lesser scaup** |
| ***Aytha collaris*** | **Ring-necked duck** |
| ***Baeolophus bicolor*** | **Tufted titmouse** |
| ***Bubulcus ibis*** | **Cattle egret** |

| **BIRDS – cont.** | |
|---|---|
| *Buteo jamaicensis* | Red-tailed hawk |
| ***Buteo lineatus*** | **Red-shouldered hawk** |
| ***Cardinalis cardinalis*** | **Northern cardinal** |
| ***Cathartes aura*** | **Turkey vulture** |
| ***Ceryle alcyon*** | **Belted kingfisher** |
| ***Charadrius vociferus*** | **Killdeer** |
| *Chordeiles minor* | Common nighthawk |
| ***Colinus virginianus*** | **Bobwhite quail** |
| ***Coragyps atratus*** | **Black vulture** |
| ***Corvus brachyrhynchos*** | **American crow** |
| ***Cyanocitta cristata*** | **Blue jay** |
| ***Dendroica coronata*** | **Yellow-rumped warbler** |
| *Dendroica pinus* | Pine warbler |
| ***Dryocopus pileatus*** | **Pileated woodpecker** |
| ***Dumetella carolinensis*** | **Grey catbird** |
| ***Egretta caerulea*** | **Little blue heron** |
| ***Egretta thula*** | **Snowy egret** |
| ***Egretta tricolor*** | **Tricolored heron** |
| ***Eudocimus albus*** | **White ibis** |
| *Falco sparverius* | American kestrel |
| **Gallinago gallinago** | **Common snipe** |
| ***Gallinula chloropus*** | **Common moorhen** |
| ***Haliaeetus leucocephalus*** | **Bald eagle** |
| *Lanius ludovicianus* | Loggerhead shrike |
| ***Lophodytes cucullatus*** | **Hooded merganser** |
| *Melanerpes carolinus* | Red-bellied woodpecker |
| ***Melanerpes erythrocephalus*** | **Red-headed woodpecker** |
| ***Meleagris gallopavo*** | **Wild turkey** |
| ***Mimus polyglottos*** | **Northern mockingbird** |
| ***Mycteria americana*** | **Wood stork** |
| *Myiarchus crinitus* | Great-crested flycatcher |
| ***Palacrocorax auritush*** | **Double-crested cormorant** |
| ***Pandion haliaetus*** | **Osprey** |
| *Parula americana* | Northern parula |
| *Picoides pubescens* | Downy woodpecker |
| *Plegadis falcinellus* | Glossy ibis |
| ***Podilymbus podiceps*** | **Pied-billed grebe** |
| *Poecile carolinensis* | Carolina chickadee |
| ***Quiscalus quiscula*** | **Common grackle** |
| *Sialia sialis* | Eastern bluebird |
| *Tachycineta bicolor* | Tree swallow |
| ***Thryothorus ludovicianus*** | **Carolina wren** |
| *Toxostoma rufum* | Brown thrasher |
| *Tringa flavipes* | Lesser yellow-legs |
| ***Turdus migratorius*** | **American robin** |

## VI. MAINTENANCE

The habitat for the sandhill cranes is maintained to eliminate the presence of exotic/invasive plant species using the following techniques: mowing, timbering, and mechanical chopping. Potential nest Sites C and D overlap upland habitats with the scrub jay/gopher tortoise preserve, in the NE Quadrant. The preserve is primarily managed for the gopher tortoise and Florida scrub jay, but the management techniques are also beneficial for crane foraging habitat. The upland habitats within the preserve are maintained, according to the SMMP, by using similar techniques. Controlled burns were to be the primary tool utilized for habitat management but has proven difficult. The overall goal is to mechanically reduce the vegetation to heights that can safely lead to potentially utilizing a prescribed burn in the future.

Maintenance for 2022 is scheduled for July in North Preserve Management Unit 2 and 3 and South Preserve Management Unit 1 consisting of mechanically mowing and herbicidal nuisance/exotic plant (cogon grass) treatments to enhance the habitat and wildfire risk reduction reducing the height and density of flammable shrubs adjacent to homes abutting the preserve. These areas coincide with previous observations of sandhill cranes and were managed in a manner that benefits the cranes by reducing vegetation around the wetlands and foraging areas that could conceal predators. This generally follows habitat management guidelines intended to mimic some of the effects of fire. These management treatments were applied in ways that minimize soil disturbance and reduced the possibility of introducing or expanding coverage of invasive or exotic species. The management is potentially setting the stage for potential prescribed fire treatment in the future. Thinning activities along with normal hydroperiods after the protracted drought continues to reduce the number of pine seedlings and wax myrtle from encroaching in the wetlands. The Council is committed to continued monitoring efforts to determine if these treatments are having the desired effect and adjust if necessary.

### *Site A*

The SMMP includes clearing within Site A via mechanical chopping, timbering, and herbicide treatments as planned in the scrub jay preserve. The upland areas are periodically mowed and managed with respect to crane habitat needs. Current construction to the north of site A was ongoing during the 2022 monitoring season. This construction did not impact nesting behavior or have any impacts to the habitat. A silt fence and new fence was observed along the north perimeter last year and remains in place.

As previously reported, during the 2007 monitoring season (March - June), the upland areas were cleared of thick shrubs, opening the habitat to increase crane utilization. The area was then replanted with native herbaceous vegetation to enhance the area. Wetlands 104 and 107 were mowed at the conclusion of the 2008-nesting season. Maintenance in June 2016 and consisted of thinning the pine saplings encroaching in Wetlands 107, 112, and herbicide spot treatment of exotic species.

### *Site B*

No maintenance is required for this nest site, because the suitable upland forage habitat is south and off-site of the primary wetland.

### *Site C*

The upland habitat occurring in this site is predominantly secondary/ancillary foraging uplands locate in the north preserve. Even though the area is already managed primarily for the gopher tortoise and Florida scrub jay, sandhill cranes were observed foraging within this area. Underbrush mowing of ground cover vegetation in the upland areas was conducted in 2021 and included 5.15 acres of north preserve unit 1 and 1.61 acres within units 3 and 4. Sandhill cranes were observed foraging within these areas post maintenance. No maintenance within the wetland habitats were conducted in 2022.

### *Site D*

The primary foraging upland habitat at this potential nest site consists of pastureland and scrubby uplands. Maintenance for 2021 in South Preserve Management Unit 2 and 3 consisted of mechanically mowing and invasive/exotic plant (cogon grass) herbicide treatments to enhance the habitat adjacent to Wetlands 43, 44, 45, and 46. The secondary/ancillary foraging uplands of this site are located in the south preserve. This area is primarily managed for the gopher tortoise and Florida Scrub Jay, identical to the management methods outlined in the Scrub Jay Site Mitigation and Management Plan. This management consists of mowing that greatly enhances the foraging value to Florida sandhill cranes as well.

As previously reported, a large portion of Site D in south preserve was mowed in July 2016 and consisted of mowing pines and palmettos encroaching on Wetlands 43, 44, 45, and 46. Wetlands 19, 21, 23, 24, 26, 30, 31, 32, 33, 34, 35, 36, 38, 40, 43, 44, 47, 48, 49, and 51 were mowed at the conclusion of the 2008-nesting season. The understory of a portion of the South Preserve (Management Units 1 and 2) was cleared in March through April of 2007. The scrubby upland is comprised of dense vegetation and will be converted into more appropriate foraging habitat via mechanical clearing. Maintenance occurred for 2019 in the South Preserve Management Unit 1 around Wetlands 21, 23, and 24 consisting of vegetation mowing.

### *Site E*

The uplands for this site primarily consist of pastureland, which provides valuable foraging habitat for flightless cranes. Even though cattle actively forage in the pastureland, periodic mowing is still the only required maintenance technique for this nest site. As with previous years, mowing has not been necessary.

### *Site F*

The upland habitat occurring at Site F is primarily comprised of golf course fairways, a secondary upland foraging habitat. An ecologically sensitive pesticide management plan is in place for the golf

course, which is also beneficial for foraging cranes. The primary upland habitat is subject to mowing and removal of undesirable vegetation to ensure ideal ground cover for foraging cranes. Maintenance of invasive/exotic vegetation within Site F was ongoing throughout 2021. The last time Wetlands 82 and 86 was mowed occured at the conclusion of the 2008-nesting season.

### *Site G*

Maintenance of the upland habitat for this site consists of periodic mowing and controlling undesirable plants to ensure ideal vegetation height for cranes. This area was treated for invasive/exotic cogon grass with the intent to eliminate this species.

As reported in earlier reports, Wetlands 73 and 74, the Wetland Creation Area and the surrounding pasture areas were mowed at the conclusion of the 2008-nesting season. Maintenance of exotic vegetation within Site G was completed in August 2015 and consisted of treatment of invasive/exotic cogon grass and thinning of pine saplings in Wetland 73.

## VII. NEXT MONITORING REPORT

The next annual monitoring report will be prepared for review in July 2023.

## VIII. SUMMARY

During the 2022 Florida sandhill crane nesting season, approximately 13 nests were observed (Table 1). Nine of these nests were designated as active nests with observations of incubation. Based on observations ten colts successfully hatched and eight survived through the end of nesting season. The exact number hatchings may have been slightly higher but there is no way of determining if all eggs hatched or not. The number of colts surviving this season was comparable to previously monitored years.

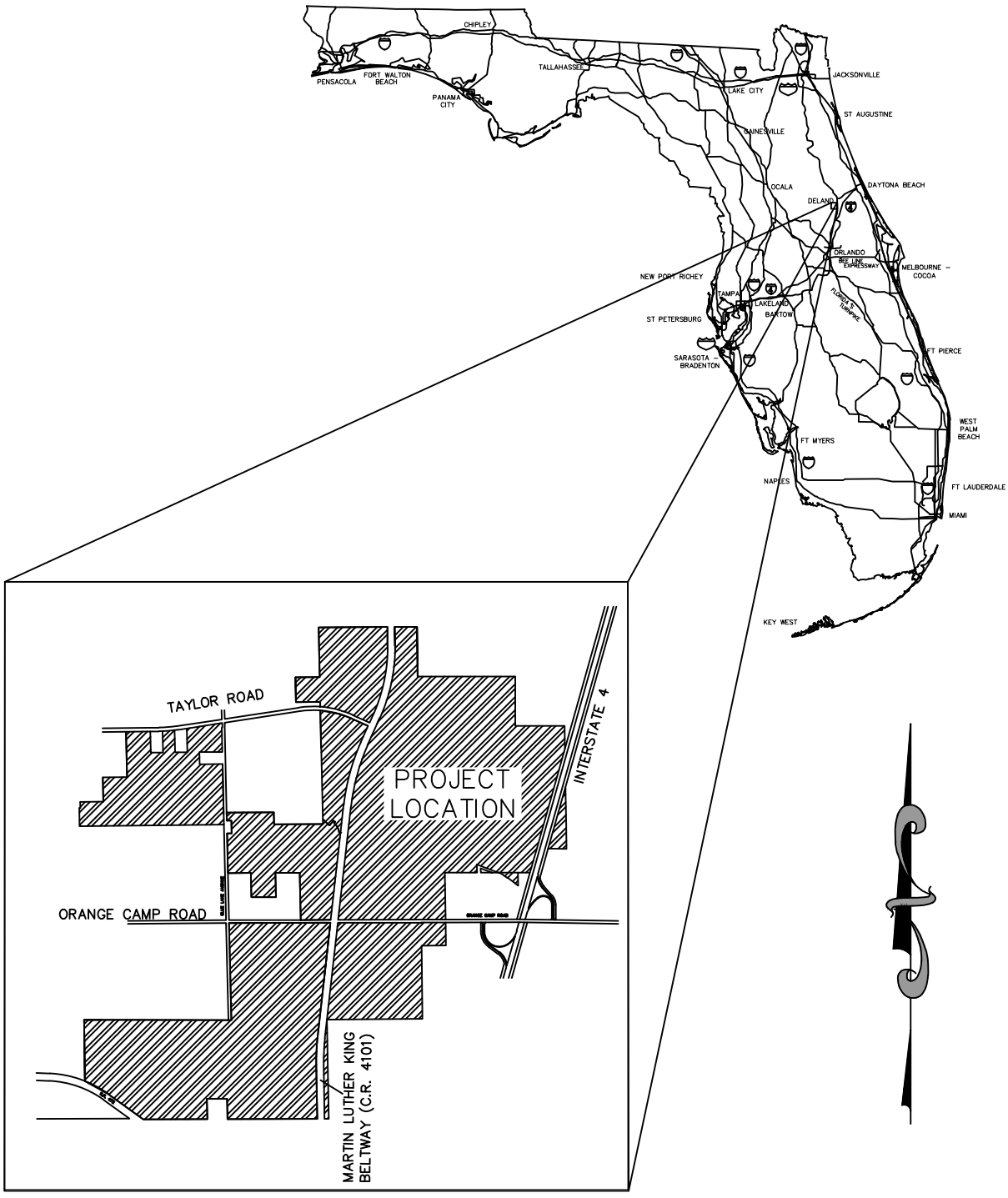
Adjacent roadway construction to potential nest sites B, D, and G on Orange Camp Road and the Martin Luther King Beltway was ongoing during this monitoring year and may have influenced nesting behavior. This roadwork should be completed by the start of the 2023 monitoring season. Successful nesting results are anticipated if the positive rainfall and hydrologic trends continue. Based on observations and physical location of nests within the wetlands human disturbance within the project is minimal to crane nesting. Miller Legg will continue its long-term monitoring of the Victoria Park Community in relation to rainfall and water levels and evaluate the maintenance needs based on site conditions.

The wetlands of the Victoria Park Community continue to provide feeding and nesting habitat for Florida sandhill cranes and several additional state and/or federally listed wetland dependent bird species. We look forward to reporting on the success of the cranes within the Victoria Park Community in the future.

# Victoria Park Florida Sandhill Crane Monitoring Report 2022

# Exhibit 1

# Location Map



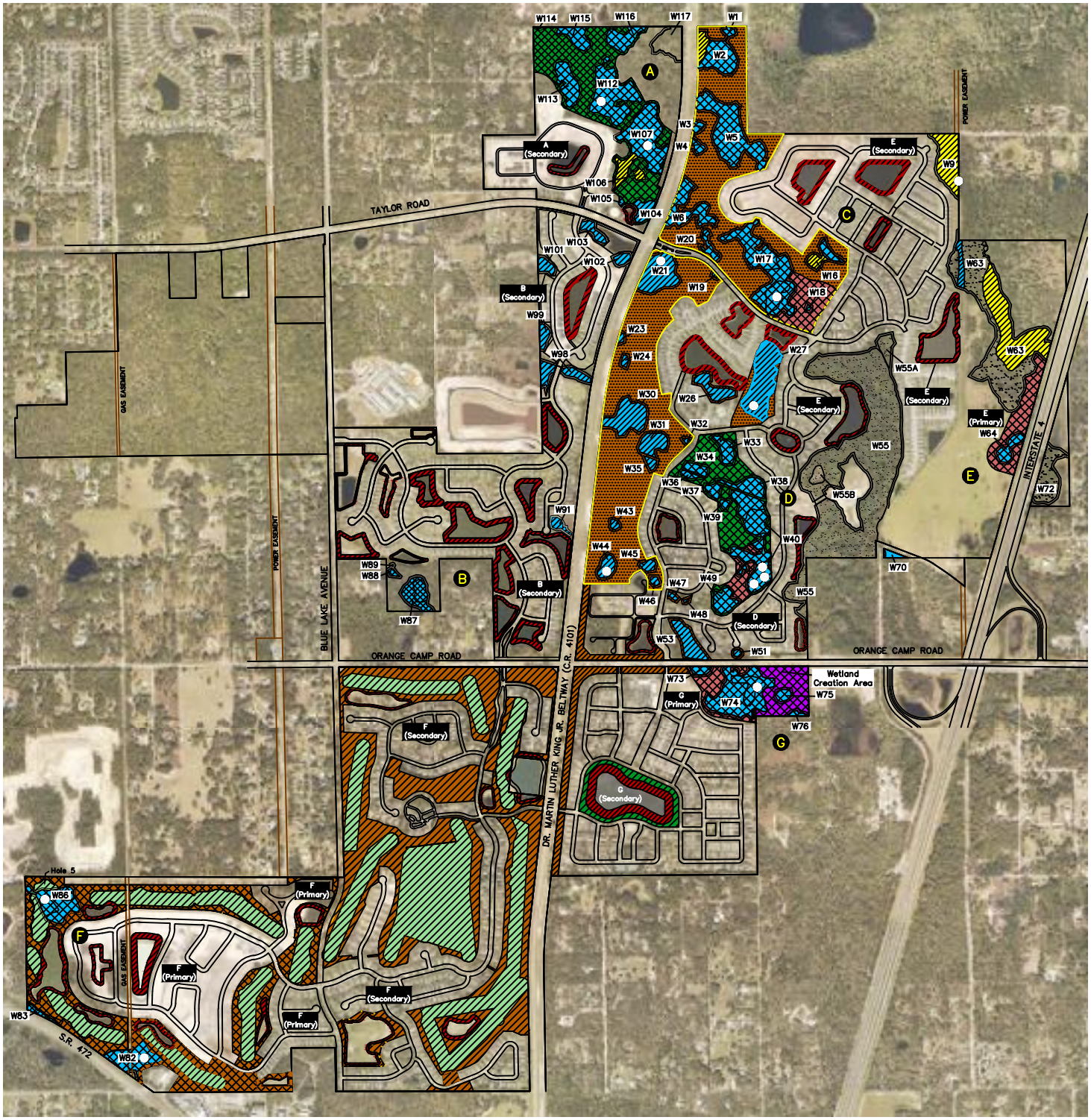

| | | | |
|---|---|---|---|
| Project/File No.: 09-00268<br>Twp/Rng/Sec: 17/30/22-27,34-36<br>Date Drawn: 10/13/2015 | MILLER LEGG<br>Central Florida Office: 631 S. Orlando Avenue · Suite 200<br>Winter Park, Florida · 32789-7122<br>407-629-8880 · Fax: 407-629-7883<br>www.millerlegg.com | **VICTORIA PARK**<br>**DELAND, FLORIDA**<br>**FOR: Victoria Park Community Council** | *LOCATION MAP* |

# Victoria Park Florida Sandhill Crane Monitoring Report 2022

# Exhibit 2

# Florida Sandhill Crane Maps

V:\PROJECTS\2009\09-00268 VICTORIA PARK\DRAWINGS\SHC HABITAT ACREAGE\DRAWINGS\SHC_MAP2.DWG




0 900 1800

GRAPHIC SCALE
1 INCH = 1800 FEET

NOTE:
MINOR MODIFICATIONS TO THE SITE PLAN MAY OCCUR DURING FINAL DESIGN AND ENGINEERING, HOWEVER, SANDHILL CRANE PRIMARY AND SECONDARY ACREAGE REQUIREMENTS WILL BE MAINTAINED.

LEGEND

- Improved Pasture
- Retention Pond (Dry/Wet Bank)
- Managed Upland
- Open Forested Wetland
- Golf Course
- Cleared & Seeded Upland
- Herbaceous Wetland
- Created Herbaceous Wetland
- Primary Habitat
- Secondary Habitat
- Ancillary (Tertiary) Habitat
- W86 Wetland Number
- A Potential Nest Site (A–G)
- Sand Hill Crane Nests (2022)

Project/File No.: 09-00268
Twp/Rng/Sec: 17-30-27
Date Drawn: 6/21/22

MILLER LEGG
South Florida Office: 5747 North Andrews Way
Fort Lauderdale, Florida 33309
954-436-7000 · Fax: 954-493-6539
www.millerlegg.com

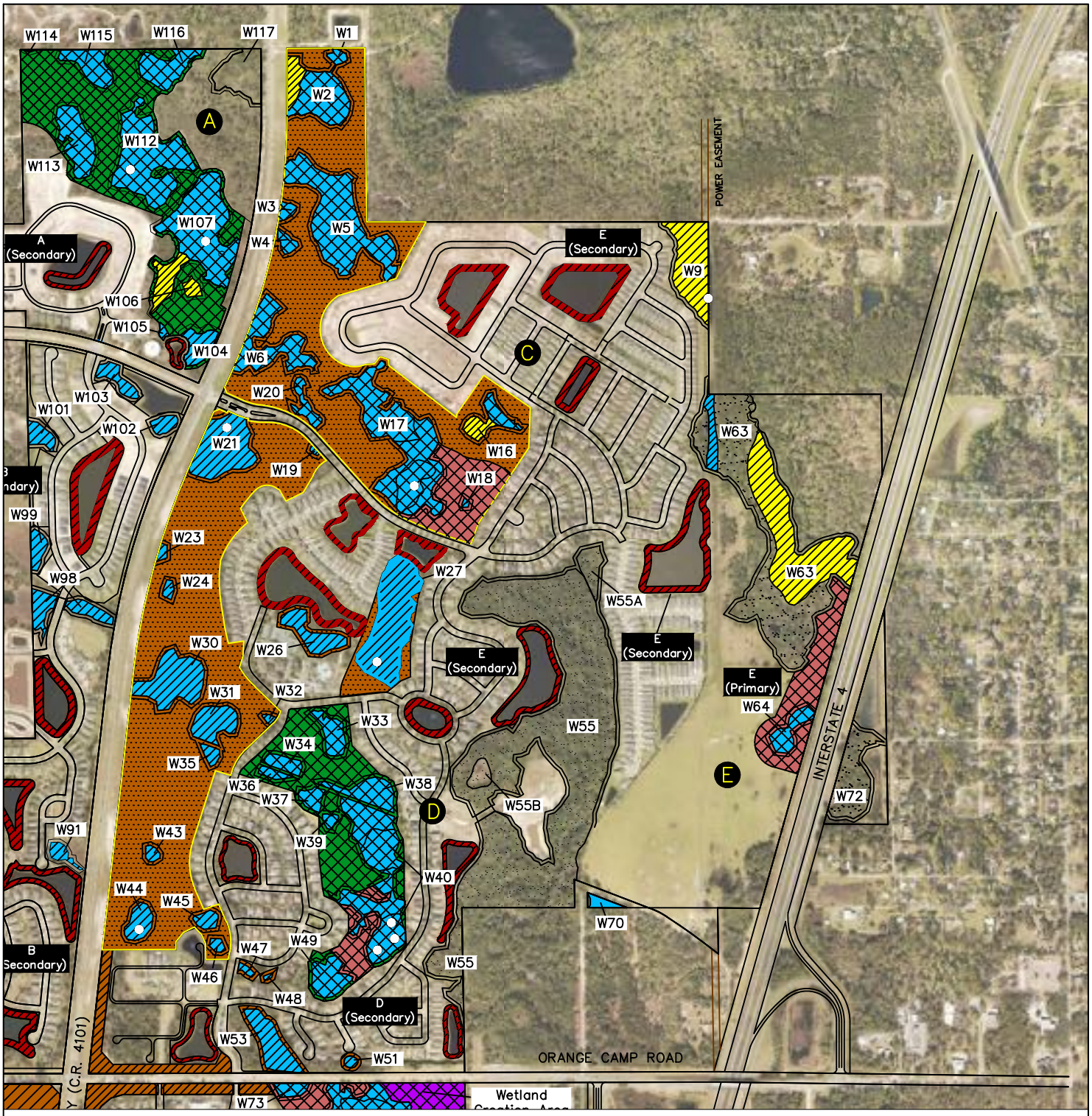
# VICTORIA PARK

DELAND, FLORIDA

FOR: KOLTER HOMES

SANDHILL CRANE OVERALL MAP

V:\PROJECTS\2009\09-00268 VICTORIA PARK\DRAWINGS\SHC HABITAT ACREAGE\DRAWINGS\SHC_MAP2.DWG




0 550 1100

GRAPHIC SCALE
1 INCH = 1100 FEET

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# VICTORIA PARK

DELAND, FLORIDA

FOR: KOLTER HOMES

SANDHILL CRANE MAP

Northeast Quadrant

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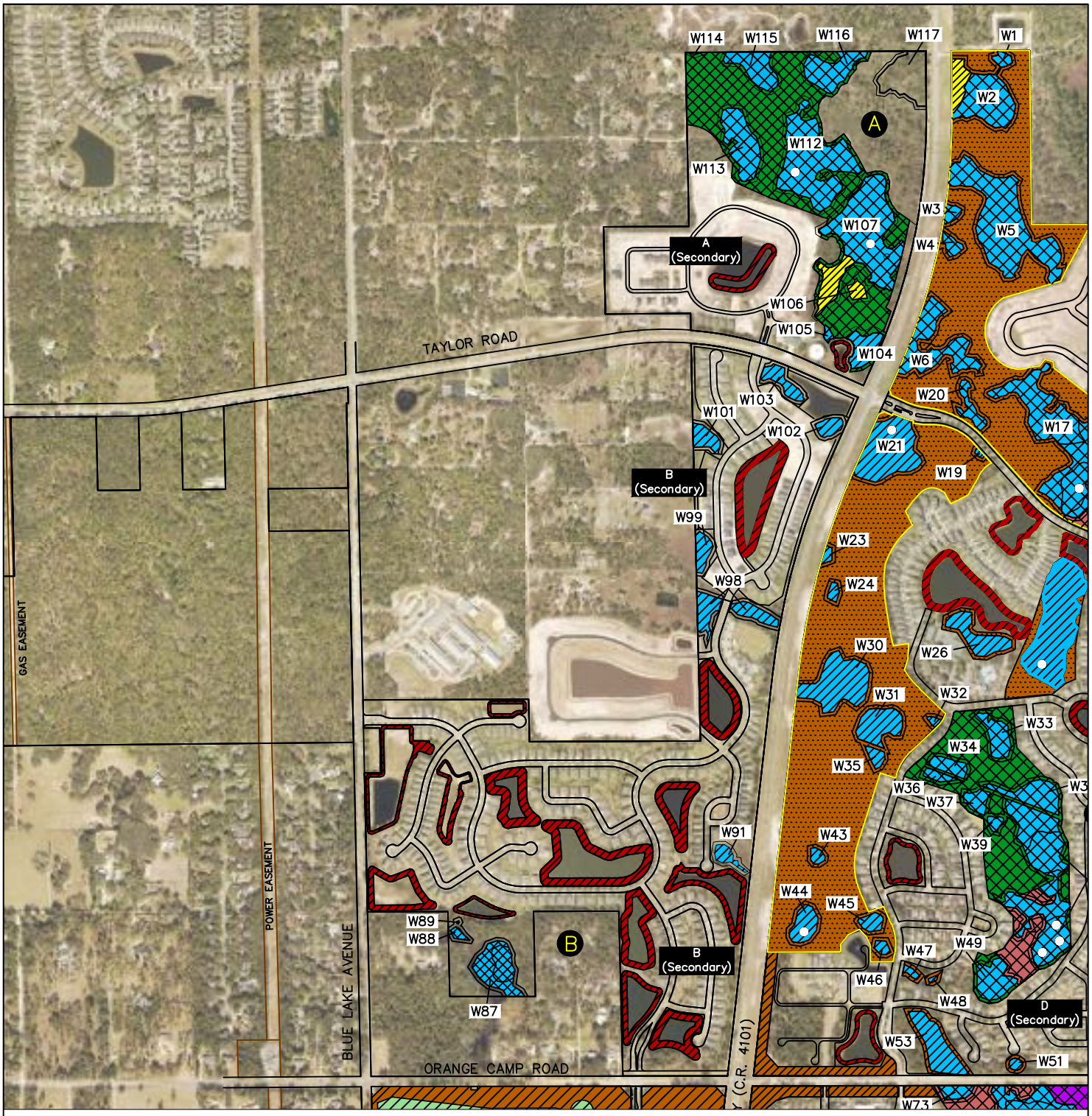


0 550 1100

GRAPHIC SCALE
1 INCH = 1100 FEET

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# VICTORIA PARK

DELAND, FLORIDA

FOR: KOLTER HOMES

SANDHILL CRANE MAP

Northwest Quadrant

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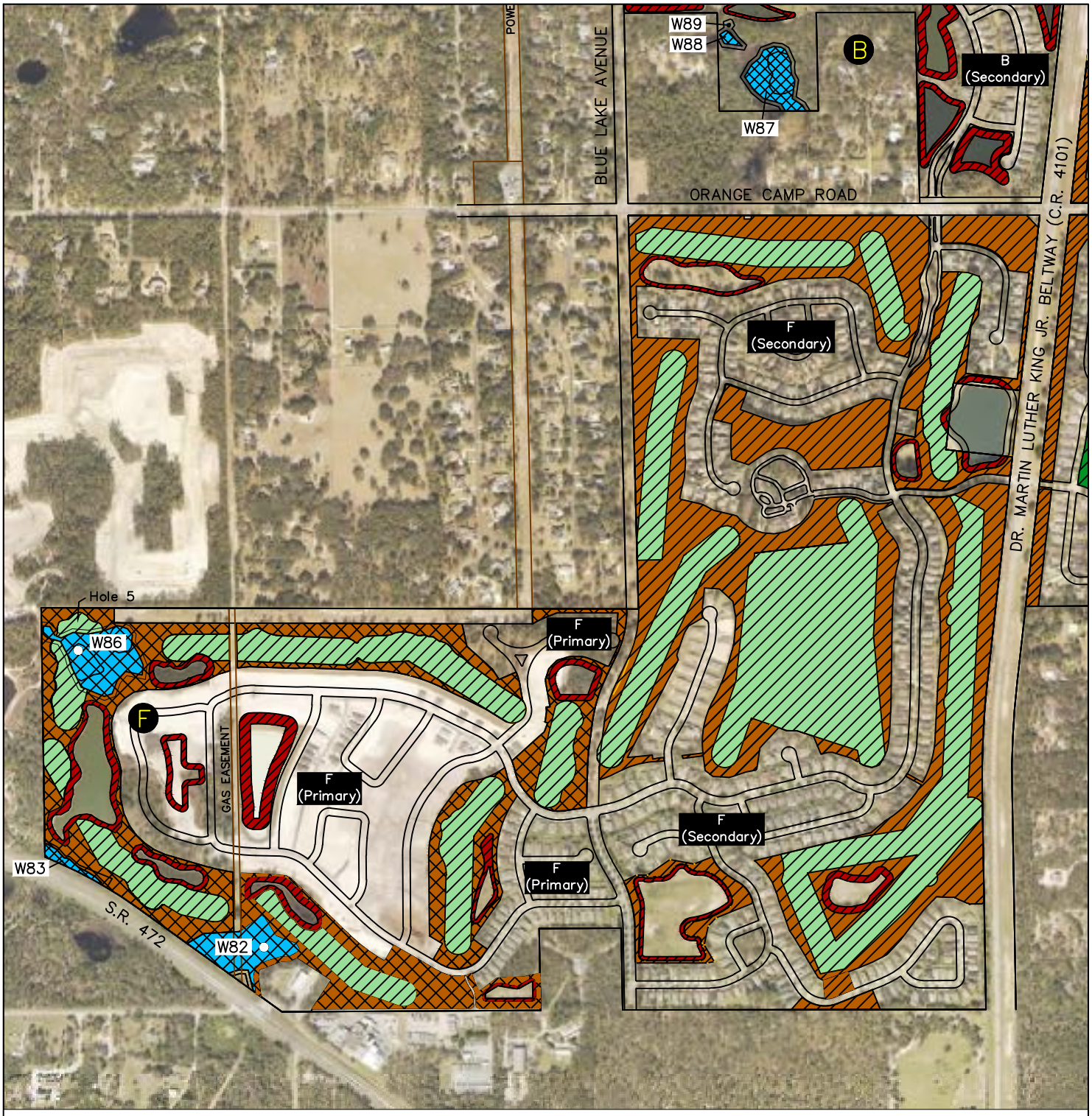


0 475 950

GRAPHIC SCALE
1 INCH = 950 FEET

NOTE:
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# VICTORIA PARK

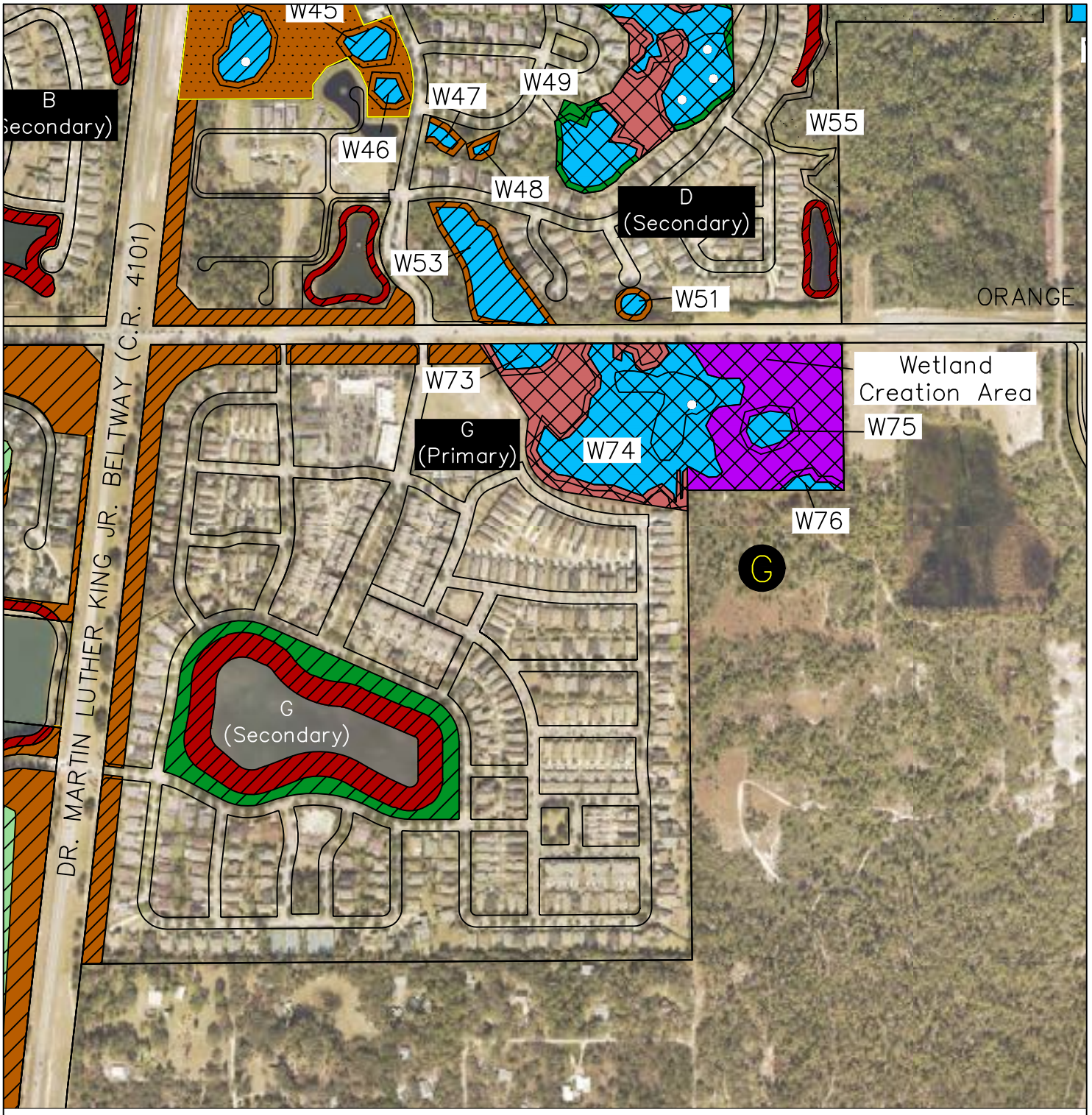
DELAND, FLORIDA

FOR: KOLTER HOMES

SANDHILL CRANE MAP

Southwest Quadrant

V:\PROJECTS\2009\09-00268 VICTORIA PARK\DRAWINGS\SHC HABITAT ACREAGE\DRAWINGS\SHC_MAP2.DWG




0 300 600

GRAPHIC SCALE
1 INCH = 600 FEET

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# VICTORIA PARK

DELAND, FLORIDA

FOR: KOLTER HOMES

SANDHILL CRANE MAP

Southeast Quadrant

# Victoria Park Florida Sandhill Crane Monitoring Report 2022

## Exhibit 3

## Photographs

## Color Key:

O = Observed active nests
O = Other viable nests with no observed SHC utilization
O = Observed chicks

**Pre-Nesting Activities**

**Florida sandhill cranes feeding along golf course in Site F – 1/12/2022**

**Florida sandhill cranes in open space within Site C – 1/12/2022**

**Pre-Nesting Activities**

**Victoria Park Site D stormwater pond family of sandhill cranes feeding along shoreline – 1/13/2022**

**Florida sandhill crane near nesting area in Victoria Park Wetland 9 Site E – 1/13/2022**

**Pre-Nesting Activities**

**Florida sandhill cranes feeding in Wetland 30 in Site D within preserve – 1/13/2022**

**Site D Wetland 26 Florida sandhill crane pair – 1/13/2022**

**Active Nesting**

**Florida sandhill crane nesting in Site A Wetland 107 – 3/1/2022**

**Victoria Park Site C Wetland 21 Florida sandhill crane nesting 3/1/2022**

**Active Nesting**

**Site D nesting Florida sandhill crane in Wetland 40 – 3/1/2022**

**Victoria Park Site C Wetland 17 Florida sandhill crane nesting 3/1/2022**

**Active Nesting**

**Close up of nest and eggs – 3/2/2022**

**Victoria Park Site C Wetland 17 Florida sandhill crane nesting 3/1/2022**

**Florida Sandhill Crane Colts**

**Victoria Park Site D two adult sandhill cranes with two colts – 3/31/2022**

**Two adult sandhill cranes with one newly hatched colt observed in Site F Wetland 82 – 3/31/2022**

**Florida Sandhill Crane Colts**

**Two adult cranes and two colts observed along MLK Beltway adjacent Wetland 21**

**Adult crane foraging for colt along MLK Beltway adjacent Wetland 21**

**Florida Sandhill Crane Colts**

**Sandhill crane family with colts observed – 6/10/2022**

**Victoria Park Site D two juveniles and two adults on shoreline of retention pond – 5/11/2022**

**Juvenile Florida Sandhill Cranes**

**Victoria Park Site D juvenile and adult feeding in residential area – 5/11/2022**

**Victoria Park Site D juvenile and adult feeding in residential area – 5/11/2022**

**Juvenile Florida Sandhill Cranes**

**Victoria Park Site F juvenile and adult feeding on golf course – 5/11/2022**

**Victoria Park Site F juvenile and two adults feeding on golf course – 6/10/2022**

**Aerial Assessment of Sandhill Crane Nests and Nesting Habitat**

**Victoria Park Site A Wetland 107 sandhill crane nests**

**Victoria Park Site A Wetland 112 sandhill crane nesting**

**Aerial Assessment of Sandhill Crane Nests and Nesting Habitat**

**Victoria Park Site B Wetlands 87 & 88 sandhill crane nesting habitat – no nests observed**

**Victoria Park Site B Wetland 99 sandhill crane nesting habitat – no nests observed**

**Aerial Assessment of Sandhill Crane Nests and Nesting Habitat**

**Victoria Park Site C Wetland 17 sandhill crane nest**

**Victoria Park Site C Wetland 5 sandhill crane nesting habitat – no nests observed**

**Aerial Assessment of Sandhill Crane Nests and Nesting Habitat**

**Victoria Park Site D Wetland 21 sandhill crane nest observed**

**Victoria Park Site D Wetland 26 sandhill crane nest observed**

**Aerial Assessment of Sandhill Crane Nests and Nesting Habitat**

**Victoria Park Site D Wetland 40 three sandhill crane nests observed**

**Victoria Park Site E Wetland 9 sandhill crane nest observed**

**Aerial Assessment of Sandhill Crane Nests and Nesting Habitat**

**Victoria Park Site F Wetland 82 sandhill crane nest observed**

**Victoria Park Site G Wetland 74 sandhill crane nest observed**

**Incidental Observations of Additional Species**

**River cooter (*Pseudemys concinna*)**

**Snowy egret (*Egretta thula*)**

**Incidental Observations of Additional Species**

**Osceola turkey (*Meleagris gallopavo osceola*)**

**Congregation of white ibis (*Eudocimus albus*)**

**Incidental Observations of Additional Species**

**Great egrets (*Ardea alba*)**

**Tricolored heron (*Egretta tricolor*)**

**Incidental Observations of Additional Species**

**Little blue heron (*Egretta caerulea*)**

**Florida sandhill crane in flight**