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Environmental and Permitting Services

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March 5, 2021

James C. Nugent, P.E.
Donald W. McIntosh Associates, Inc.
2200 Park Avenue North
Winter Park, Florida 32789

Proj: Fontana Lakes Project Site – Osceola County, Florida
Sections 27, 28, 33, & 34, Township 26 South, Range 30 East
(BTC File #494-25)
Re: Environmental Assessment/Site Constraints Analysis
Conceptual ERP Modification
Permit No. 49-100503-P/Appl. No. 180510-569

Dear Mr. Nugent:

The purpose of this document is to provide the South Florida Water Management District (SFWMD) with the environmental information associated with the 677.34-acre Fontana Lakes project site. This site is located on the north side of Friar's Cove Road, on the west side of the Florida Turnpike, and along the northern shoreline of the Friar's Cove portion of Lake Tohopekaliga as identified on the USGS Topographic Map; within Sections 27, 28, 33, & 34, Township 26 South, Range 30 East in Osceola County, Florida (Figures 1, 2 & 3). Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the Fontana Lakes project site in June of 2014, and more recently November 2017. The environmental assessment included the following elements:

- **Review of soil types mapped within the site boundaries;**
- **Evaluation of land use types/vegetative communities present;**
- **Field review for occurrence of protected flora and fauna; and,**
- **An overview of potential development constraints.**

SOILS

According to the Soil Survey of Osceola County, Florida, prepared by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), eleven (11) soil types exist within the subject property (Figure 4). These soil types include the following:

Orlando: Main Office
3025 East South Street
Orlando, FL 32803

Vero Beach Office
4445 N A1A
Suite 221
Vero Beach, FL 32963

Jacksonville Office
1157 Beach Boulevard
Jacksonville Beach, FL 32250

Tampa Office
6011 Benjamin Road
Suite 101 B
Tampa, FL 33634

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Aquatic & Land
Management Operations
3825 Rouse Road
Orlando, FL 32817

407.894.5969
877.894.5969
407.894.5970 fax

- **Adamsville Variant fine sand, 0 to 5 percent slopes (#2)**
- **Basinger fine sand (#5)**
- **Basinger fine sand, depressional (#6)**
- **Delray loamy fine sand (#10)**
- **Immokalee fine sand (#16)**
- **Myakka fine sand (#22)**
- **Narcoossee fine sand (#24)**
- **Ona fine sand (#27)**
- **Placid fine sand, depressional (#32)**
- **Samsula muck (#40)**
- **Smyrna fine sand (#42)**

The following presents a brief description of each of the soil types mapped for the subject property:

Adamsville Variant fine sand, 0 to 5 percent slopes (#2) is a nearly level to gently sloping, poorly drained sandy soil overlying muck. Typically the surface layer of this soil type consists of dark gray fine sand about 5 inches thick. This soil has a water table at a depth of 20 to 40 inches for 2 to 6 months in most years and between depths of 40 to 60 inches for more than 6 months in most years. During extended dry periods, the water table recedes below a depth pf 60 inches. The permeability of this soil type is rapid.

Basinger fine sand (#5) is a nearly level, poorly drained soil found in low, broad flats and sloughs in the flatwoods. The surface layer of this soil type generally consists of black fine sand about 4 inches thick over 3 inches of dark gray fine sand that contains gray mottles. The water table for this soil type is at a depth of less than 10 inches for 2 to 6 months in most years and a depth of 10 to 30 inches during the dry season in most years. Permeability of this soil type is very rapid throughout.

Basinger fine sand, depressional (#6) is a nearly level, poorly drained soil found in shallow depressions and poorly defined drainageways in the flatwoods. The surface layer of this soil type generally consists of black fine sand about 4 inches thick over 3 inches of dark gray fine sand that contains gray mottles. Water stands on the surface for 6 to 12 months during most years. Permeability of this soil type is very rapid throughout.

Delray loamy fine sand (#10) is a nearly level, very poorly drained soil found on depressions in the flatwoods. The surface layer of this soil type generally consists of about 14 inches of black loamy fine sand. Water stands on the surface of this soil type for 2 to 6 months in most years and is within a depth of 10 inches for 6 to 9 months in most years. Permeability of this soil type is

rapid in the surface and subsurface layers, moderate to moderately rapid in the subsoil and substratum.

Immokalee fine sand (#16) is a nearly level, poorly drained soil found on broad flatwoods areas. The surface layer of this soil type generally consists of very dark gray fine sand about 7 inches thick. The water table for this soil type is at a depth of less than 10 inches for 2 months in most years and within a depth of 10 to 40 inches for 8 months or more in most years. Permeability of this soil type is rapid in the surface and subsurface layers, moderate or moderately rapid in the subsoil, and rapid below.

Myakka fine sand (#22) is a nearly level, poorly drained soil found in broad areas in the flatwoods. Slopes of this soil type range from 0 to 2 percent. The surface layer of this soil type generally consists of very dark gray sand about 7 inches thick. The water table for this soil type is at a depth of less than 10 inches for 1 to 4 months in most years and a depth of more than 40 inches during very dry seasons. Permeability of this soil type is rapid in the surface and subsurface layers, moderate to moderately rapid in the subsoil, and rapid in the substratum.

Narcoossee fine sand (#24) is a nearly level, moderately well drained soil found on low ridges and knolls in the flatwoods. Slopes of this soil type are convex and range from 0 to 2 percent. The surface layer of this soil type generally consists of very dark gray fine sand about 5 inches thick. The water table for this soil type is at a depth of 24 to 40 inches for 4 to 6 months in most years. It recedes to a depth of more than 60 inches during extended dry periods. Permeability of this soil type is rapid in the surface and subsurface layers, moderately rapid in the subsoil and rapid in the substratum.

Ona fine sand (#27) is a nearly level, poorly drained soil found in broad, flat areas in the flatwoods, between swamps and marshes or in long, narrow bands bordering depressions and drainageways. Slopes of this soil type are less than 2 percent. The surface layer of this soil type generally consists of black fine sand about 6 inches thick. The water table for this soil type is at a depth of 10 inches for periods of 1 to 2 months and at a depth of 10 to 40 inches for periods of 4 to 6 months during most years. Permeability of this soil type is rapid in the surface layer, moderate in the subsoil, and rapid in the substratum.

Placid fine sand, depressional (#32) is a nearly level, very poorly drained soil found in low, wet depressions and swamps in the flatwoods. Slopes of this soil type are less than 2 percent. The surface layer of this soil type generally consists of fine sand about 24 inches thick. The upper 14 inches is black and contains pockets of light gray, and the lower 10 inches is very dark gray and also contains pockets of light gray. Water stands on the surface of this soil type for 6 to 9 months or more in most years. Permeability of this soil type is rapid throughout.

Samsula muck (#40) is a nearly level, very poorly drained soil found in freshwater marshes and swamps. Slopes of this soil type are 0 to 1 percent. The surface layer of this soil type generally consists of muck about 22 inches thick. The upper 8 inches is dark reddish brown, and the lower 14 inches is black. This soil type has a water table at or above the surface except during extended dry periods. Permeability of this soil type is rapid throughout.

Smyrna fine sand (#42) is a nearly level, poorly drained soil found in broad flat areas in the flatwoods. Slopes of this soil type range from 0 to 2 percent. The surface layer of this soil type is 7 inches of fine sand. The upper 4 inches is black, and the lower 3 inches is dark gray. The water table for this soil type is at a depth of less than 10 inches for 1 to 4 and between 10 and 40 inches for more than 6 months in most years. Permeability of this soil type is rapid in the surface and subsurface layers, moderate to moderately rapid in the upper subsoil, rapid in the next layer, and moderate to moderately rapid in the lower subsoil.

The Florida Association of Environmental Soil Scientists (FAESS) considers the main component of Basinger fine sand (#5), Basinger fine sand, depressional (#6), Delray loamy fine sand (#10), Placid fine sand, depressional (#32), and Samsula muck (#40) to be hydric. Additionally, the FAESS also considers certain inclusions present within Immokalee fine sand (#16), Myakka fine sand (#22), Ona fine sand (#27), and Smyrna fine sand (#42) to be hydric. This information can be found in the Hydric Soils of Florida Handbook, Third Edition, March 2000.

LAND USE TYPES/VEGETATIVE COMMUNITIES

The Fontana Lakes project site currently supports eleven (11) land use types/vegetative communities. These land use types/vegetative communities were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 2004) (Figure 5). The on-site upland land use types/vegetative communities are classified as Improved Pastures (211), Abandoned Citrus Groves (224), Live Oak (427), and Mixed Hardwoods (438). The on-site wetland/surface water land use types/vegetative communities are classified as Streams and Waterways (510), Lakes larger than 500 acres (521), Reservoirs less than 10 acres (534), Exotic Wetland Hardwoods (619), Wetland Forested Mixed (630), Vegetated Non-Forested Wetlands (640), and Freshwater Marshes (641). The following provides a brief description of the on-site land use types/vegetative communities:

Uplands:

211 Improved Pastures

The majority of the site consists of improved pasture that is currently being utilized by both cattle and horses. This area contains fences, gates, stables, and associated auxiliary buildings. This land use/vegetative community would be classified as Improved Pastures (211), per the FLUCFCS. This pasture community consists of a mixture of bahiagrass *(Paspalum notatum)*, carpet grass *(Axonopus fissifolius)*, dog fennel *(Eupatorium capillifolium)*, tropical soda apple *(Solanum viarum)*, common ragweed *(Ambrosia artemisiifolia)*, common sow thistle *(Sonchus oleraceus)*, Virginia pepperweed *(Lepidium virginicum)*, Indian hemp *(Sida rhombifolia)*, wax murtle *(Myrica cerifera)*, flat sedge *(Cyperus odoratus)*, Mexican clover *(Richardia brasiliensis)*, caesarweed (*Urena lobata*), lantana *(Lantana camara)*, muscadine vine *(Vitis rotundifolia)*, lyre-leaved sage *(Salvia lyrata)*, blackberry *(Rubus pensilvanicus)*, Florida pusley *(Richardia scabra)*, and beggar ticks *(Bidens alba)*; with widely scattered slash pine *(Pinus elliottii)*, cabbage palm *(Sabal palmetto)*, live oak *(Quercus virginiana)*, laurel oak *(Quercus laurifolia)*, Chinese tallow (*Sapium sebiferum*), longleaf pine (*Pinus palustris*), camphortree *(Cinnamomum camphora)*, and Brazilian pepper *(Schinus terebinthifolia)*.

224 Abandoned Citrus Groves

An area of abandoned citrus groves is present within the north-central portion of the project site. This land use/vegetative community would be classified as Abandoned Citrus Groves (224), per the FLUCFCS. Vegetative species present within this area include remnant citrus trees (*Citrus* sp.), American pokeweed (*Phytolacca americana*), American beautyberry (*Callicarpa americana*), caesarweed (*Urena lobata*), dog fennel (*Eupatorium capillifolium*), Virginia creeper (*Parthenocissus quinquefolia*), common ragweed (*Ambrosia artemisiifolia*), Mexican clover (*Richardia brasiliensis*), lantana (*Lantana camara*), Florida crabgrass (*Digitaria floridana*), blackberry (*Rubus pensilvanicus*), natal grass (*Melinis repens*), muscadine grape (*Vitis rotundifolia*), guineagrass (*Panicum maximum*), and begger ticks (*Bidens alba*).

427 Live Oak

Two (2) areas of a live oak (*Quercus virginiana*) dominated forest community exist within the central portion of the site. This land use/vegetative community would be classified as Live Oak (427), per the FLUCFCS. Other vegetative species present include laurel oak (*Quercus laurifolia*), dog fennel (*Eupatorium capillifolium*), common ragweed (*Ambrosia artemisiifolia*), blackberry (*Rubus pensilvanicus*), tropical soda apple (*Solanum viarum*), common sow thistle (*Sonchus oleraceus*), bahia grass (*Paspalum notatum*), greenbrier (*Smilax* sp.), caesarweed

(*Urena lobata*), lantana (*Lantana camara*), beggar ticks (*Bidens alba*), and eastern bracken fern (*Pteridium aquilinum*).

438 Mixed Hardwoods

A small portion of mixed hardwoods is present in the northwest corner of the site. This land use/vegetative community would be classified as Mixed Hardwoods (438), per the FLUCFCS. Vegetative species identified within this community include a canopy of Chinese tallow (*Sapium sebiferum*), common persimon (*Diospyros virginiana*), laurel oak (*Quercus laurifolia*), black cherry (*Prunus Serotina*), and camphor tree (*Cinnamomum camphora*), with widely scattered live oak (Quercus virginiana), red maple (Acer rubrum), cabbage palm (*Sabal palmetto*), and dahoon holly (Ilex cassine); with a subcanopy of groundsel tree (*Baccharis halimifolia*), American beautyberry (*Callicarpa americana*), and an understory of muscadine grape (*Vitis rotundifolia*), Virginia creeper (*Parthenocissus quinquefolia*), lantana (*Lantana camara*), broomsedge (Andropogon sp.), coinwort (*Centella asiatica*), dog fennel (*Eupatorium capillifolium*), caesarweed (*Urena lobata*), tropical soda apple (*Solanum viarum*), blackberry (*Rubus pensilvanicus*), common ragweed (*Ambrosia artemisiifolia*), and St. John's wort (*Hypericum* sp.).

Wetlands/Surface Waters:

510 Streams and Waterways

The Gator Bay Slough Canal and several ditches/swales exist throughout the property. These land uses/vegetative communities would be classified as Streams and Waterways (510), per the FLUCFCS. The Gator Bay Slough Canal is located in the northwest corner of the site and extends from the western boundary to the northern boundary, continuing off-site to the northeast. A second large canal is present along the western boundary of the site, but lies outside of the property boundaries. Vegetative species present within the canal, ditches, and swales includes pickerelweed (*Pontederia cordata*), alligator weed (*Alternanthera philoxeroides*), spatterdock (*Nuphar advena*), soft rush (*Juncus effusus*), smartweed (*Polygonum punctatum*), spikerush (*Eleocharis* sp.), marsh pennywort (*Hydrocotyle umbellata*), watergrass (*Luziola* sp.), lemon bacopa (*Bacopa caroliniana*), and torpedo grass (*Panicum repens*); with some wax myrtle (*Myrica cerifera*) and Brazilian pepper (*Schinus terebinthifolia*) present along the top of bank.

521 Lakes larger than 500 acres

Within the southwest corner of the site is the northern shoreline of the Friar's Cove portion of Lake Tohopekaliga. This land use/vegetative community would be classified as Lakes larger than 500 acres (521), per the FLUCFCS. Only a small portion of the shoreline of this 18,800+

acre lake falls within the site. Some of the vegetative species observed along the lake shoreline include pickerelweed (*Pontederia cordata*), arrowhead (*Sagittaria lancifolia*), cuban bulrush (*Oxycaryum cubense*), cattail (*Typha latifolia*), soft rush (*Juncus effusus*), smartweed (*Polygonum punctatum*), marsh pennywort (*Hydrocotyle umbellata*), watergrass (*Luziola* sp.), coinwort (*Centella asiatica*), spikerush (*Eleocharis* sp.), torpedo grass (*Panicum repens*), and maidencane *(Panicum hemitomon*).

534 Reservoirs less than 10 acres

Two (2) small cattle ponds exist within the central portion of the project site. This land use/vegetative community would be classified as Reservoirs less than 10 acres (534), per the FLUCFCS. Vegetation present around the littorial zone of the ponds include soft rush *(Juncus effusus*), dotted smartweed (*Polygonum punctatum*), spikerush (*Eleocharis* sp.), marsh pennywort (*Hydrocotyle umbellata*), watergrass (*Luziola* sp.), lemon bacopa (*Bacopa caroliniana*), torpedo grass (*Panicum repens*). The ponds have an open water center with fragrant water-lilies (*Nymphaea odorata*) and spatter-dock (*Nuphar* sp.). Scattered wax myrtle (*Myrica cerifera*), and Brazilian pepper (*Schinus terebinthifolia*) are present along the top of bank.

619 Exotic Wetland Hardwoods

A small area of a mostly exotic wetland hardwoods community is present in the northwest corner of the site. This land use/vegetative community would be classified as Exotic Wetland Hardwoods (619), per the FLUCFCS. Vegetation observed within this community consists of mostly Chinese tallow (*Sapium sebiferum*), wax myrtle (*Myrica cerifera*), with some widely scattered red maple (*Acer rubrum*), dahoon holly (*Ilex cassine*), cypress (*Taxodium* sp.), goundsel tree (*Baccharis halimifolia*), and common persimmon (*Diospyros virginiana*). Ground cover species present include blackberry (*Rubus pensilvanicus*), St. John's wort (*Hypericum* sp.), broomsedge (*Andropogon* sp.), royal fern (*Osmunda regalis*), cinnamon fern (*Osmunda cinnamomea*), and coinwort (*Centella asiatica*).

630 Wetland Forested Mixed

One (1) small portion of a mixed forested wetland community exists in the northeast corner of the site. This land use/vegetative community would be classified as Wetland Forested Mixed (630), per the FLUCFCS. Vegetative species observed within this community include a canopy of scattered cypress (*Taxodium* sp.), black gum (*Nyssa sylvatica*), and Chinese tallow (*Sapium sebiferum*), with an understory of soft rush (*Juncus effusus*), blackberry (*Rubus pensilvanicus*), bahia grass (*Paspalum notatum*), and shield fern (*Thelypteris* sp.).

640 Vegetated Non-Forested Wetlands

Several vegetated non-forested wetlands exist throughout the site. These land uses/vegetative communities would be classified as Vegetated Non-Forested Wetland (640), per the FLUCFCS. Vegetative species observed within these wetlands include spikerush (*Eleocharis* sp.), marsh pennywort (*Hydrocotyle umbellata*), watergrass (*Luziola* sp.), dotted smartweed (*Polygonum punctatum*), blackberry (*Rubus pensilvanicus*), muscadine vine (*Vitis rotundifolia*), tropical soda apple (*Solanum viarum*), rattlebox (*Sesbania punicea*), carpet grass (*Axonopus* sp.), nutsedge (*Cyperus* sp.), and dog fennel (*Eupatorium capillifolium*); with scattered Chinese tallow (*Sapium sebiferum*) and wax myrtle (*Myrica cerifera*). The overall species composition varies slightly from wetland to wetland.

641 Freshwater Marshes

A number of shallow freshwater marshes are present throughout the site. These land uses/vegetative communities would be classified as Freshwater Marshes (641), per the FLUCFCS. Existing vegetation observed within these marshes includes a groundcover of carpet grass (*Axonopus* sp.), blackberry (*Rubus pensilvanicus*), alligator weed (*Alternanthera philoxeroides*), soft rush (*Juncus effusus*), coinwort (*Centella asiatica*), pickerelweed (*Pontederia cordata*), spikerush (*Eleocharis* sp.), marsh pennywort (*Hydrocotyle umbellata*), and shield fern (*Thelypteris kunthii*); with a subcanopy of Brazilian pepper (*Schinus terebinthifolia*) and Carolina willow (*Salix caroliniana*); and a widely scattered canopy of loblolly bay (*Gordonia lasianthus*), red bay (*Persea borbonia*), Chinese tallow (*Sapium sebiferum*), black gum (*Nyssa sylvatica*), camphor trees (*Cinnamomum camphora*), and red maple (*Acer rubrum*). The overall species composition varies slightly from wetland to wetland.

PROTECTED SPECIES

Utilizing methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001); Measuring and Monitoring Biological Diversity Standard Methods for Mammals (Wilson, et al., 1996); Wildlife Methodology Guidelines (1988); and Florida Fish and Wildlife Conservation Commission's (FFWCC) Gopher Tortoise Permitting Guidelines (April 2008 - revised January 2017), an assessment for "listed" floral and faunal species occurring within the subject property boundaries was conducted June 4, 5, & 6, 2014 and November 8 & 9, 2017. The survey covered approximately 100% of the subject property's developable area, included both direct observations and indirect evidence, such as tracks, burrows, tree markings and vocalizations that indicated the presence of species observed. The assessment focused on species that are "listed" by the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (May 2017) that have the potential to occur in Osceola County (Table 1).

No plant species listed by either The Florida Department of Agriculture (FDA) or U.S. Fish and Wildlife Service (USFWS) was identified on the project site during the assessment conducted. However, two (2) fern species were identified that are listed as "commercially exploited" by the Florida Department of Agriculture and Consumer Services (FDACS). The harvesting of these species, royal fern (*Osmunda regalis*) and cinnamon fern (*Osmunda cinnamomea*), for commercial gain, is not allowed. However, the listing of these species poses no restrictions towards the development of the subject site. The following is a list of those wildlife species identified during the evaluation of the site:

Reptiles and Amphibians
American alligator (*Alligator mississippiensis*)
brown anole (*Norops sagrei*)
eastern racer (*Coluber constrictor*)
eastern river cooter (*Pseudemys concinna*)
Florida leopard frog (*Lithobates sphenocephalus sphenocephalus*)
gopher tortoise (*Gopherus polyphemus*)
green tree frog (*Hyla cinerea*)
red-bellied slider (*Pseudemys nelsoni*)
southern toad (*Anaxyrus terrestris*)

Birds
American Crow (*Corvus caurinus*)
Anhinga (*Anhinga anhinga*)
Black-necked Stilt (*Himantopus mexicanus*)
Black Vulture (*Coragyps atratus*)
Common Gallinule (*Gallinula galeata*)
Carolina Wren (*Thryothorus ludovicianus*)
Cattle Egret (*Bubulcus ibis*)
Eastern Meadowlark (*Sturnella magna*)
Florida Sandhill Crane (*Antigone canadensis pratensis*)
Great Blue Heron (*Ardea herodias*)
Green Heron (*Butorides virescens*)
Killdeer (*Charadrius vociferus*)
Limpkin (*Aramus guarauna*)
Little Blue Heron (*Egretta caerulea*)
Mourning Dove (*Zenaida macroura*)
Northern Cardinal (*Cardinalis cardinalis*)
Northern Mockingbird (*Mimus polyglottos*)
Red-bellied Woodpecker *(Melanerpes carolinus*)
Red-shouldered Hawk (*Buteo lineatus*)

Birds (cont.)
Red-tailed Hawk (*Buteo jamaicensis*)
Roseate Spoonbill (*Platalea ajaja*)
Snowy Egret (*Egretta thula*)
Swallow-tailed Kite (*Elanoides forficatus*)
Tufted Titmouse (*Baeolophus bicolor*)
White Ibis (*Eudocimus albus*)
Wild Turkey (*Meleagris gallopavo*)
Wood Stork (*Mycteria americana*)

Mammals
eastern cottontail (*Sylvilagus floridanus*)
eastern gray squirrel (*Sciurus carolinensis*)
nine-banded armadillo (*Dasypus novemcinctus*)
northern raccoon (*Procyon lotor*)
Sherman's fox squirrel (*Sciurus niger shermani*)
Virginia opossum (*Didelphis virginiana*)
white-tailed deer (*Odocoileus virginianus*)
wild boar (*Sus scrofa*)

Seven (7) of the above wildlife species, gopher tortoise (*Gopherus polyphemus*), Little Blue Heron (*Egretta caerulea*), Roseate Spoonbill (*Platalea ajaja*), American alligator (*Alligator mississippiensis*), Florida Sandhill Crane (*Grus canadensis pratensis*), Wood Stork (*Mycteria americana*), and Sherman's fox squirrel (*Sciurus niger shermani*) were identified in the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (May 2017). The following provides a brief description of these species as they relate to the property.

Gopher Tortoise (Gopherus polyphemus)
State Listed as "Threatened"

Numerous gopher tortoise burrows *(Gopherus polyphemus)* have been identified within the on-site upland Abandoned Citrus Groves area. Currently the gopher tortoise is classified as a "Category 2 Candidate Species" by the U.S. Fish and Wildlife Service (USFWS), and as of September 2007, is now classified as "Threatened" by FFWCC, and as "Threatened" by FCREPA. The basis of the "Threatened" classification by the FFWCC for the gopher tortoise is due to habitat loss and destruction of burrows. Gopher tortoises are commonly found in areas with well-drained soils associated with xeric pine-oak hammock, scrub, pine flatwoods, pastures and abandoned citrus groves. Several other protected species known to occur Osceola County have a possibility of occurring in this area, as they are gopher tortoise commensal species. These

species include the eastern indigo snake (*Drymarchon couperi*), Florida mouse (*Podomys floridanus*), and the gopher frog (*Lithobates capito*). However, none of these species were observed during the survey conducted.

The subject property was surveyed for the existence of gopher tortoises through the use of pedestrian and vehicle transects. The survey covered approximately 100% of the suitable habitat present within the subject property boundaries.

The FFWCC provides three (3) options for developers that have gopher tortoises on their property. These options include: 1) avoidance (i.e., 25-foot buffer around burrow), 2) preservation of habitat, and 3) off-site relocation. As such, resolution of the gopher tortoise issue will need to be permitted through FFWCC prior to any construction activities.

Florida Sandhill Crane (Antigone canadensis pratensis)
State Listed as "Threatened" by FFWCC

Several adult Cranes were observed foraging throughout the site. The Florida Sandhill Crane is a subspecies of Sandhill Crane that occurs exclusively and is resident to Florida (Stys 1997). Of the six (6) subspecies of Sandhill Crane, the Greater Sandhill Crane *(Grus canadensis tabida)* is the only other subspecies of Sandhill Crane that occurs regularly in Florida (Stys 1997). This subspecies is a winter migrant, arriving in Florida during late fall (October/November) and leaving in late February (Stys 1997). Since the Florida Sandhill Crane and Greater Sandhill Crane cannot be distinguished from one another in the field, Stys (1997) recommends conducting surveys between May and September to validate the presence of this protected species. Due to the time of year the recent survey was conducted (November), it cannot be assumed that the observed cranes were the State listed subspecies.

Although several adult Cranes were observed foraging throughout the site, no nests were identified within or in close proximity to the subject site. If nesting does occur, FFWCC typically requires a 400-foot buffer around nests in order to prevent nest disturbance and potential nest abandonment. Since cranes do not re-use the same nest year after year this 400-foot buffer is only temporary during the nesting season (i.e., anytime from January through June). Since no nests were observed on-site or nearby, there will be no development constraints unless a nest is found. An aerial nest survey is highly recommended prior to the site's construction activities commencement in order to more accurately determine the presence/absence of on-site Sandhill Crane nests as their nests are difficult to see from ground surveys.

Little Blue Heron (Egretta caerulea) & Roseate Spoonbill (Platalea ajaja)
State Listed as "Threatened" by FFWCC

For the purposes of this report, the Little Blue Heron and the Roseate Spoonbill, species of 'wading bird,' have been consolidated into one (1) group. Both species are listed in the state of Florida as "Threatened" due to historically aggressive hunting practices and habitat loss. Currently, the majority of wading bird habitat tends to be federally protected wetlands under the 'Clean Water Act' and the Florida's 'Wetland Resource Permitting Program.'

The Little Blue Heron and Roseate Spoonbill were observed foraging within the east-west ditch near the southern property boundary close to Friar's Cove at the time of the survey. These species are listed as colonial nesting birds. There is no protection requirement for these species unless they are observed nesting on the site. There were no birds observed nesting during the investigation conducted. As such, it does not appear that these species would be adversely affected by development of the property.

Sherman's Fox Squirrel (Sciurus niger shermani)
State Listed as "Species of Special Concern"

The Sherman's fox squirrel is classified as a "Species of Special Concern" by the FFWCC. There are three subspecies of fox squirrel in Florida. Only one, *Sciurus niger shermani*, occurs in central Florida. The fox squirrel's primary habitat is the longleaf pine, turkey oak, live oak, sandhill and flatwoods communities. Nesting is done in cavities of trees and also in nests constructed of leaves. Two Sherman's fox squirrels were observed within the Live Oak community near the north central portion of the site. No specific evidence of nesting was noted. Typically, a management plan for this species focuses on the preservation of as many of the existing live oaks and longleaf pines on the site as possible. As such, it will depend on the site plan, but it does not appear that this species would be adversely affected by development of the property. However, it is recommended to preserve the existing tree canopy if possible.

Bald Eagle (Haliaeetus leucocephalus)
State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)

In August of 2007, the US Fish and Wildlife Service (USFWS) removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle

Protection Act, the Migratory Bird Treaty Act, and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (*Haliaeetus Leuchocephalus*).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. Under FFWCC's new management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. A FFWCC Eagle permit is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest during the nesting season, October 1 through May 15 or when eagles are present at the nest.

In addition to the on-site evaluation for "listed" species, BTC conducted a review for any FFWCC recorded Bald Eagle nests on or within the vicinity of the project site. This review revealed that there are five (5) Bald Eagle nests (OS-072, OS-095, OS-136, OS-148, and OS-160), through the 2015-2016 nesting season, within one (1.0) mile of the Fontana Lakes project site. Nest OS-072 is located approximately 2,200-feet to the east of the site; Nest OS-095 is located approximately 4,255-ft to the north of the site; Nest OS-136 is located approximately 4,300-ft to the west of the site; Nest OS-148 is located approximately 5,100-ft to the northeast of the site; and Nest OS-160 is located approximately 4,230-ft to the south of the site. Thus, the Fontana Lakes project site lies outside the 660-foot protection buffer of the subject nests, and therefore the nests, at their current locations, would not impose limitations on developing the subject site. As such, no developmental constraints are anticipated with respect to Bald Eagle nests.

SITE PLAN ANALYSIS

The extent of the wetlands/surface waters existing within the Fontana Lakes project site have been delineated by BTC in accordance with local, state, and federal guidelines. A Formal Determination of Wetlands and Surface Water (FWD) was issued on June 2, 2016 via Application No. 140507-7. This South Florida Water Management District (SFWMD) determination was conducted by BTC and approved the field delineated and surveyed wetland and surface water limits within the subject site. At this time the wetland limits have only been reviewed and approved by the SFWMD. Permitting through Osceola County, the SFWMD, and the US Army Corps of Engineers (USACOE) would be required to develop the project site. The site resides in the Lake Tohopekaliga drainage basin.

Based on the SFWMD Formal Determination and the site plan provided by Donald W. McIntosh Associates, Inc. (DWMA) for the Fontana Lake project site, the total area of wetlands/surface waters that exist within the limits of the subject project is approximately 115.20 acres (W-1 =

0.49 acres, W-2 = 0.86 acres, W-3 = 11.43 acres, W-4 = 1.75 acres, W-5 = 1.10 acres, W-6 = 1.66 acres, W-7 = 0.89 acres, W-8 = 1.45 acres, W-9 = 0.68 acres, W-10 = 0.84 acres, W-11 = 6.47 acres, W-12 = 2.38 acres, W-13 = 4.83 acres, W-14 = 24.13 acres, W-15 = 5.12 acres, W-16 = 15.77 acres, SW-1 = 0.38 acres, SW-2 = 0.37 acres, and Ditches (1-17) = 34.60 acres). These acres are based upon the above referenced SFWMD FWD.

As authorized by the SFWMD Conceptual ERP (Permit No. 49-100503-P / Appl. No. 180510-569), a total of 65.27 acres of direct wetland and/or other surface water impacts and 1.39 acres of secondary impacts were approved in association with the development of the subject project. It should be noted that of these 65.27 acres of direct wetland/surface water impact, mitigation was only required for a total of 39.58 acres. Mitigation to offset these impacts was to be in the form of the purchase of 23.70 UMAM credits from an approved mitigation bank.

Following the issuance of Fontana Lakes Conceptual ERP referenced above, it was determined that the project as designed and as provided within the previously approved construction plans was inconsistent with Osceola County's approved Conceptual Master Plan. More specifically, it was found that the project's main connector roadway that extends west from the project's western boundary over the WPA Canal was incorrectly located based on the approved Osceola County Conceptual Master Plan. Per the SFWMD's Conceptual ERP's approved plans, this connector roadway was located to the south of Wetland 10 (W-10). However, per the County's Conceptual Master Plan, this connector roadway was to have been located further to the north, extending through W-10; connecting to the existing future right-of-way (per Osceola County Property Appraisers Map) within the Whaley Farms, LLC property to the west.

In order to bring the Conceptual ERP Plans into alignment with Osceola County's Conceptual Master Plan, the District's Conceptual ERP was modified to include those unavoidable impacts to W-10 in association with the western connector roadway. Based on these required wetland impacts (W10) and the required surface water impacts associated with the adjacent stormwater treatment pond's reconfiguration, the SFWMD Conceptual ERP was modified to authorize a total of 66.96 acres of direct wetland/surface water impacts. This includes the previously authorized 65.27 acres of direct wetland/surface water impact plus the additionally required 0.84 acres of direct wetland impact to W-10 and an additional 0.85 acres of direct surface water impact to D17. In order to offset these 66.96 acres of direct wetland/surface water impacts, as well as a total of 1.39 acres of secondary wetland/surface water impacts, a total of 24.12 mitigation credits (UMAM) are to be purchased from an approved mitigation bank. On March 8, 2019, the SFWMD issued Conceptual ERP / Modification (Permit No. 49-100503-P / Appl. No. 190110-1099).

As part of this application, it is being requested that the District's Conceptual ERP (Appl. No. 190110-1099) be modified to incorporate additionally required wetland/surface water impacts associated with the project's compensatory storage ponds redesign as well as mass grading/layout changes associated with the project's access road and parking for a future marina. *It should be noted that per discussions with District staff, the marina and its associated docking facility, boat slips, and boat ramps/companion docks have not been included within this modification. Once the Conceptual ERP's modification associated with this application has been issued, a construction application for the marina and associated structures will be submitted to SFWMD.*

To allow for the above modifications, an additional 0.913 acres of direct wetland/surface water impact (W-16 = 0.223 ac; D-16 = 0.69 ac) and an additional 0.42 acres of secondary wetland impact (W-16) will be required.

Based on these required wetland/surface water impacts associated with the project's redesign per above, it is being requested that the Conceptual ERP be modified to authorize a total of 67.873 acres of direct wetland/surface water impacts. This includes the previously authorized 66.96 acres of direct wetland/surface water impact plus the additionally required 0.223 acres of direct wetland impact to W-16 and an additional 0.69 acres of direct surface water impact to D-16.

As outlined in the attached/revised UMAM Worksheet Summary these 0.223 acres of direct wetland/surface impact to W-16 (no mitigation will be required for the 0.69 acres of surface water impacts to D-16) and the 0.42 acres of secondary impact to W-16 account for a total of 0.18 units of functional loss (FL). In order to offset this 0.18 FL, a total of 0.18 units of functional gain (FG) will be provided via the purchase of mitigation credits (UMAM) from an approved mitigation bank.

Therefore, in total, the project's 67.873 acres of direct/secondary wetland/surface water impacts will be offset via the purchase of 24.30 mitigation credits (UMAM) from an approved mitigation bank.

Development of the site and construction activities are proposed to commence upon the receipt of all requisite local, State and/or Federal permits.

Secondary Impacts

The Basis of Review contains a four-part criterion that addresses additional impacts that may be caused by a project: (a) impacts to wetland functions that may result from the intended use of a project; (b) impacts to the upland nesting habitat of listed species that are aquatic or wetland dependent; (c) impacts to significant historical and archaeological resources that are closely

linked and causally related to any proposed dredging or filling of wetland or other surface waters; and (d) wetland impacts that may be caused by future phases of the project or activities that are closely linked and causally related to the project.

According to Section 10.2.7(a), A.H., secondary impacts to habitat functions of wetlands will not be considered adverse provided a 25-foot, average, 15-foot minimum width upland buffer is maintained. As depicted on the submitted construction plans, a 15-foot minimum/25-foot average undisturbed upland buffer will be provided landward of the post-development wetlands/surface waters (W-11, W-14, and W-15) and off-site wetlands. Thus, no secondary impacts are anticipated to these areas. However, in those portions of the post-development wetlands where a secondary buffer as referenced above cannot be provided (W-4, W-11, W-14, and W-16), mitigation for the potential secondary impacts has been provided. As stated previously within this report, a total of 1.81 acres of secondary impact will be required.

No nesting or denning by listed aquatic or wetland dependent fish or wildlife species was observed within the project site.

Based on the above provided information, it is believed that the applicant has demonstrated that the proposed project will have no unacceptable adverse secondary impacts to wetlands and water quality.

Cumulative Impacts

As the project's proposed mitigation consists of the purchase of mitigation credits (UMAM) within the same drainage basin as the project's wetland impacts (Lake Tohopekaliga) it is believed that the project will have no unacceptable adverse cumulative impacts to wetlands, water quality, or upland habitat for aquatic and wetland dependent fish or wildlife listed as endangered, threatened, or species of special concern.

Mitigation

Mitigation to offset the functional losses incurred via the project's 40.643 acres of direct wetland impact that require mitigation and 1.81 acres of secondary impact consists of the purchase of off-site mitigation (functional gain) from an approved mitigation bank within the same drainage basin (Lake Tohopekaliga) as the project site. (Final mitigation will be discussed with and approved by District staff).

As detailed in the attached UMAM Summary, the project's 40.643 acres of direct wetland/surface water impact and 1.81 acres of secondary impact account for a total of 24.30 units of funtional loss (FL). As specified above, to offset these losses, a total of 24.30 units of functional gain (FG) will be purchased from an approved off-site mitigation bank within the same drainage basin (Lake Tohopekaliga) as the project site. As such, the purchase of 24.30 FG via UMAM mitigation credits offsets the 24.30 FL.

Please find attached/modified Tables 1-3, Section C, UMAM Worksheet Summary, and UMAM Parts I & II to reflect these changes.

Erosion & Sediment Control

The applicant will implement and maintain erosion and sediment control measures both prior to and during the proposed project. This practice will insure that no adverse water quality impacts to receiving waters and adjacent lands will occur during the proposed work. Control measures will retain sediment on-site and prevent potential violations of State standards. Practices incorporated will be in accordance with Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management. Details of the erosion and sediment control measures are included on the plans provided by Donald W. McIntosh Associates, Inc.

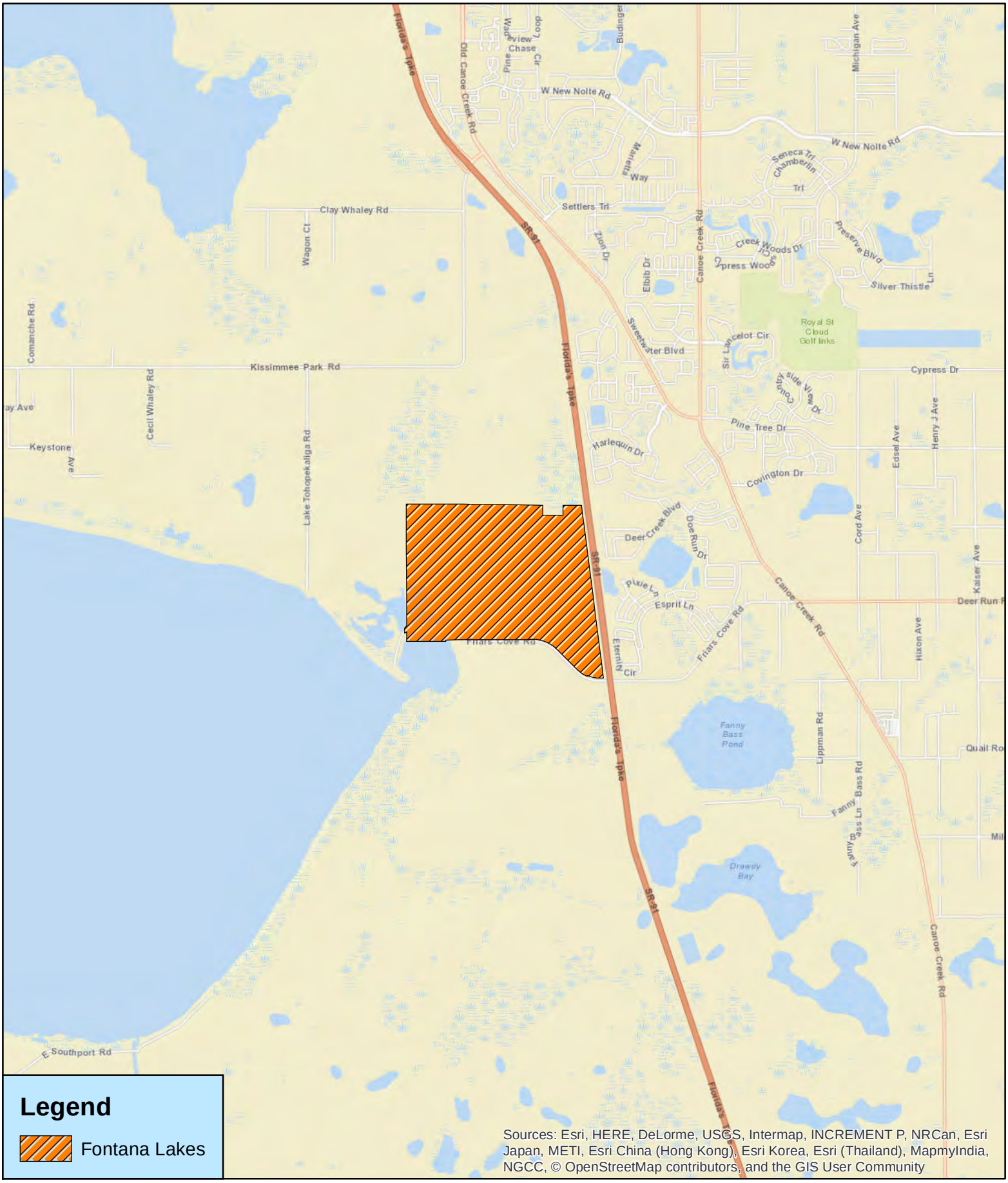
The environmental limitations described in this document are based on observations and technical information available on the date of the on-site evaluation. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and/or on-site review by the pertinent regulatory agencies. The wildlife surveys conducted within the subject property boundaries do not preclude the potential for any listed species, as noted on Table 1 (attached), currently or in the future. Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

Stephen Butler
Project Manager

John Miklos
President

Attachments



Legend

Fontana Lakes

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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Fontana Lakes
Osceola County, Florida
Figure 1
Location Map

N
W E
S

0 0.4 0.8
Miles

Project #: 494-25
Produced By: JDH
Date: 10/18/2017

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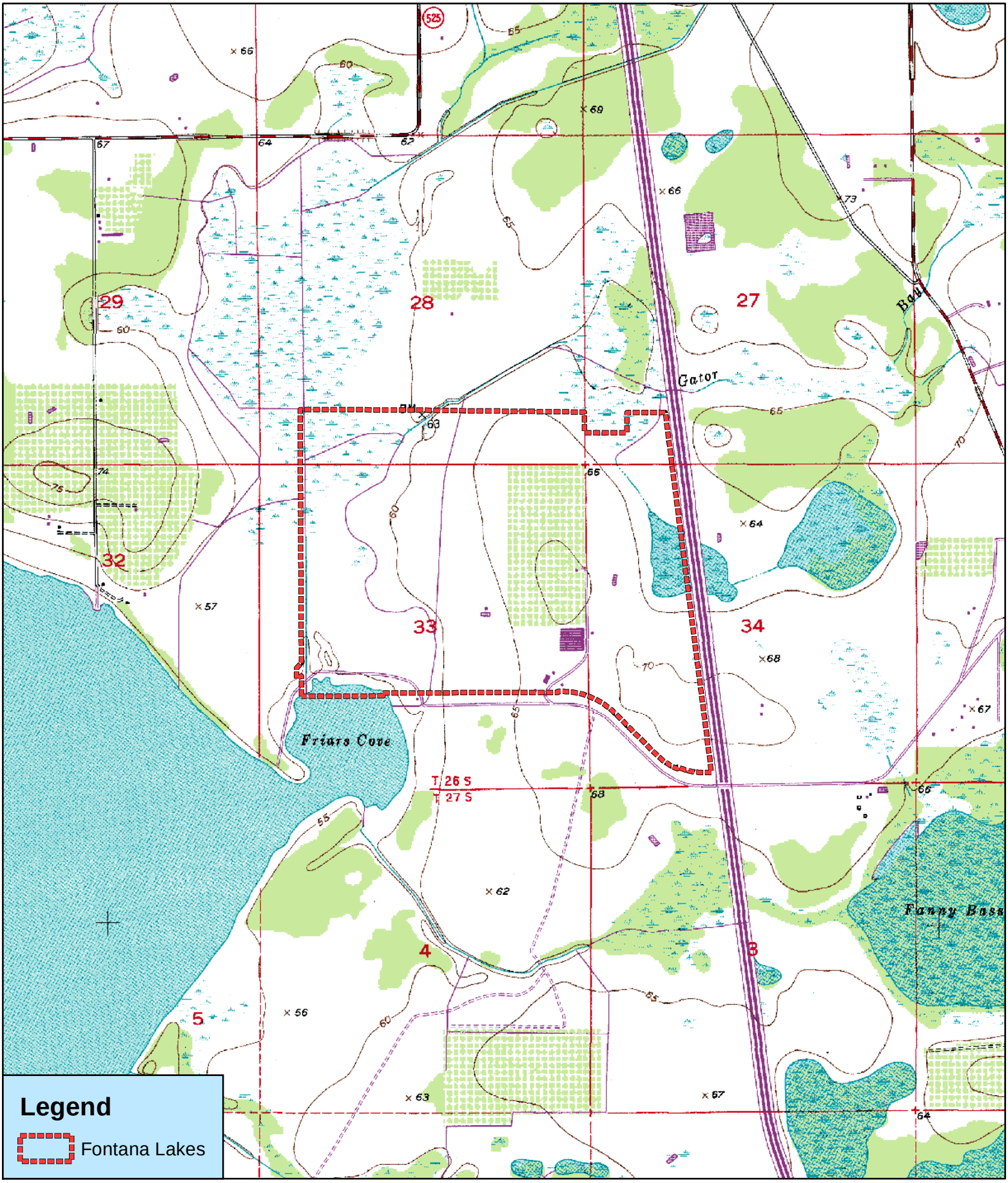
Fontana Lakes
Osceola County, Florida
Figure 2
2017 Aerial Photograph

N
W E
S

0 500 1,000
Feet

Project #: 494-25
Produced By: JDH
Date: 11/27/2017



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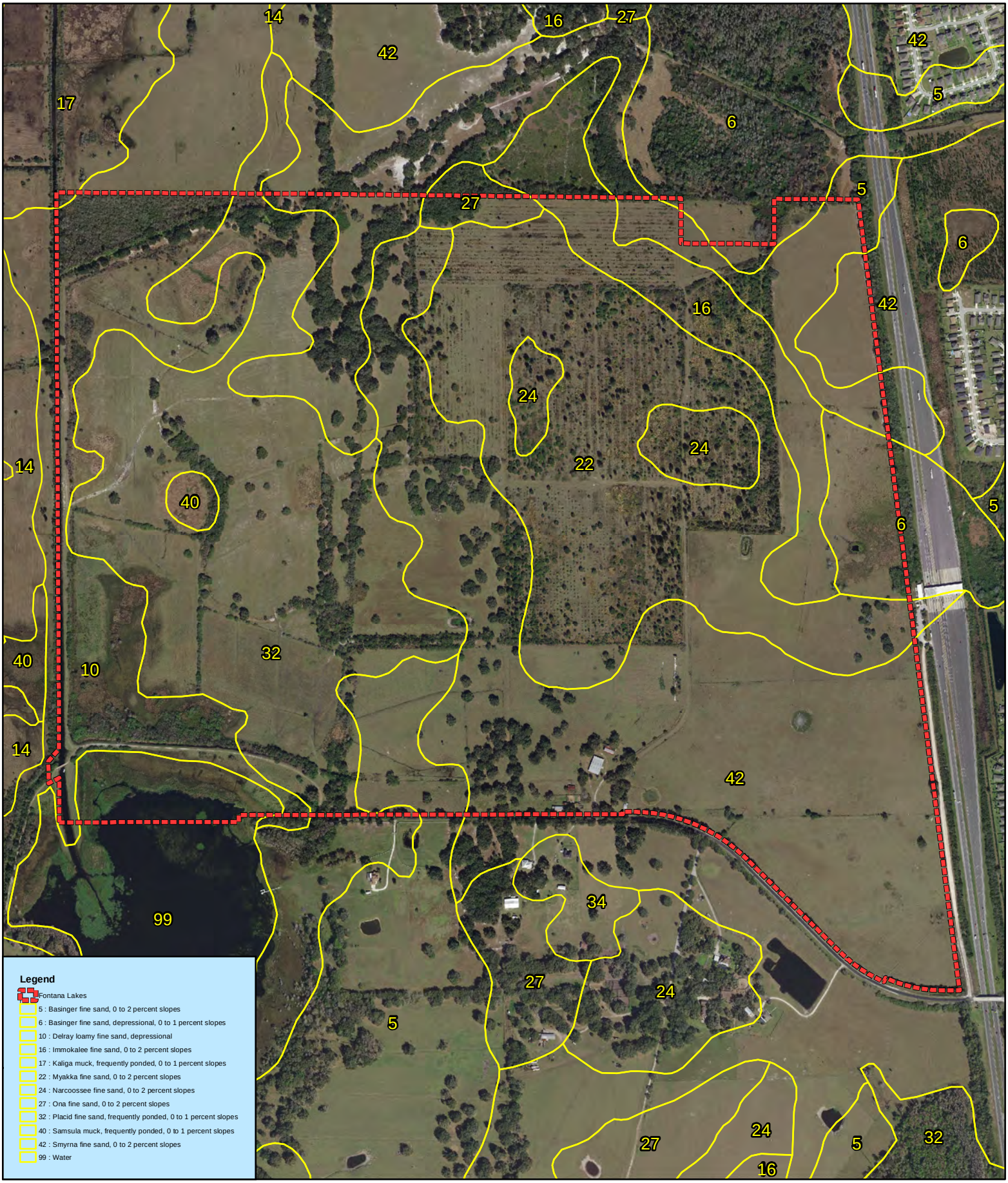
Fontana Lakes
Osceola County, Florida
Figure 3
USGS Topographic Map

N
W E
S

0 1,000 2,000
Feet

Project #: 494-25
Produced By: JDH
Date: 10/18/2017



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Fontana Lakes
Osceola County, Florida
Figure 4
USDA - NRCS Soils Map

N
W E
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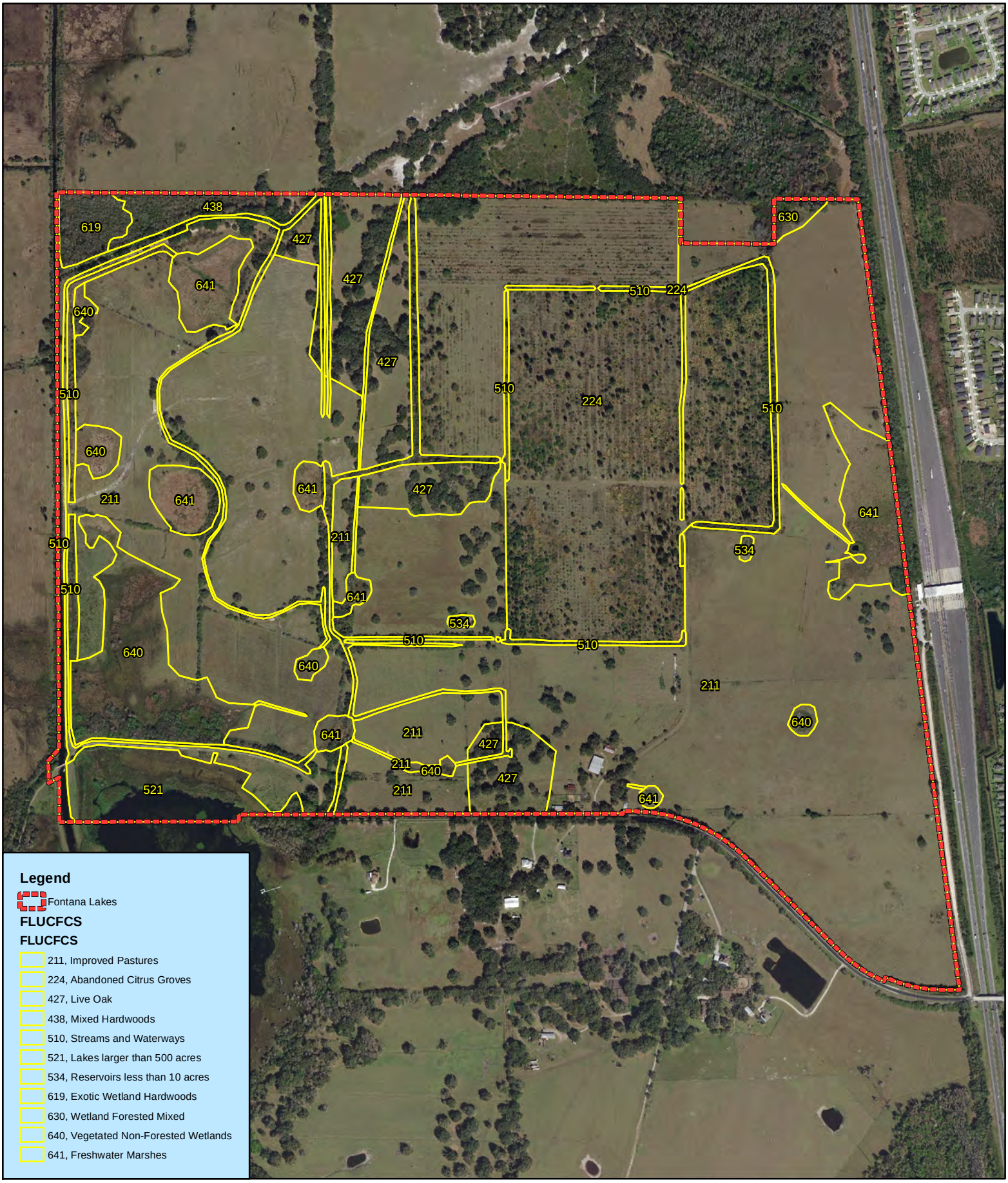
0 500 1,000
Feet

Project #: 494-25
Produced By: JDH
Date: 11/27/2017



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Fontana Lakes
Osceola County, Florida
Figure 5
FLUCFCS Map

N
W E
S

0 500 1,000
Feet

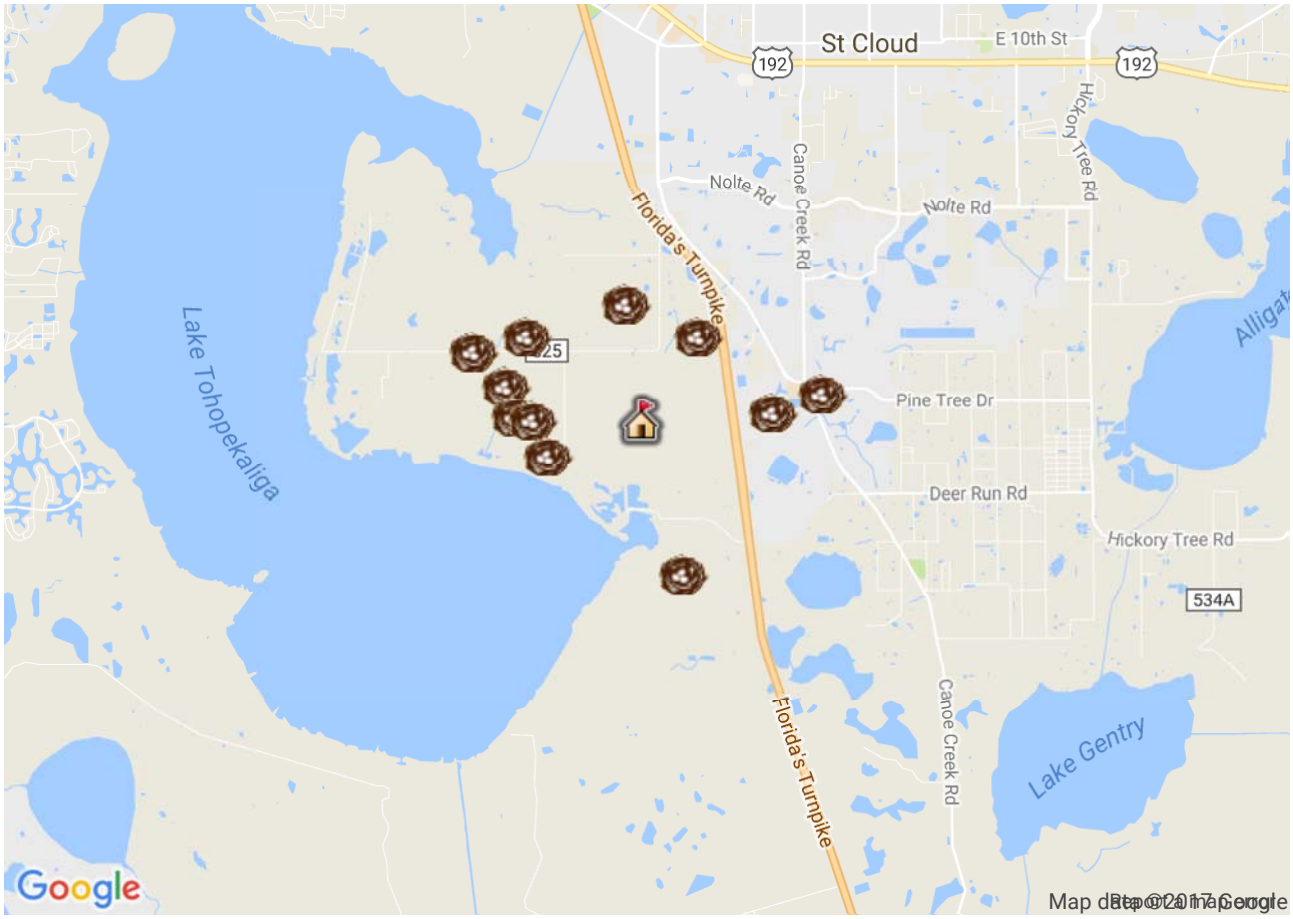
Project #: 494-25
Produced By: JDH
Date: 11/27/2017

This report was generated using the bald eagle nest locator at https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx on 10/18/2017 1:45:13 PM.

Search Entered: Within 2 miles of latitude 28.1868254833333 and longitude -81.3208281666667; All Search Results

11 record(s) were found; 11 record(s) are shown

Bald Eagle Nest Map:



Bald Eagle Nest Data Search Results:

Results per page: All

Nest ID	County	Latitude	Longitude	Township	Range	Section	Gaz Page	Last Known Active	Last Surveyed	Act 12	Act 13	Act 14	Act 15	Act 16	Dist. (Mi)
OS003	Osceola	28 12.39	81 19.41	26S	30E	21	86	1993	2015	-	*	*	-	*	1.37
OS047	Osceola	28 11.37	81 20.55	26S	30E	30	86	2012	2015	Y	*	*	-	*	1.33
OS072	Osceola	28 11.40	81 17.89	26S	30E	27	86	2001	2015	-	*	*	-	*	1.39
OS094	Osceola	28 11.32	81 20.37	26S	30E	29	86	2009	2015	-	*	*	-	*	1.14
OS095	Osceola	28 12.09	81 18.64	26S	30E	28	86	2012	2015	Y	*	*	N	*	1.18
OS136	Osceola	28 10.99	81 20.19	26S	30E	32	86	1998	2015	-	*	*	-	*	0.99
OS148	Osceola	28 11.58	81 17.37	26S	30E	26	86	2016	2016	Y	*	*	Y	Y	1.94
OS149	Osceola	28 11.95	81 20.97	26S	30E	30	86	2015	2015	Y	*	*	Y	*	1.96

OS160	Osceola	28 09.93	81 18.81	27S	30E	04	86	2012	2015	Y	*	*	N	*	1.54
OS178	Osceola	28 12.09	81 20.43	26S	30E	29	86	2015	2015	Y	*	*	Y	*	1.57
OS192	Osceola	28 11.64	81 20.64	26S	30E	30	86	2015	2015	Y	*	*	Y	*	1.49

"Y" denotes an active nest
"N" denotes an inactive nest
"-" denotes an unobserved nest
"U" denotes a nest that was visited but status was undetermined
"*" denotes a nest that was not surveyed

Table 1:	Potentially Occurring Listed Wildlife and Plant Species in Osceola County, Florida		
Scientific Name	**Common Name**	**Federal Status**	**State Status**
REPTILES			
Alligator mississippiensis	American alligator	SAT	FT(S/A)
Drymarchon corais couperi	eastern indigo snake	LT	FT
Gopherus polyphemus	gopher tortoise	C	ST
Pituophis melanoleucus mugitus	Florida Pine Snake	N	ST
Eumeces egregius lividus	blue-tailed mole skink	LT	FT
Plestiodon reynoldsi	sand skink	LT	FT
BIRDS			
Ammodramus savannarum floridanus	Florida grasshopper sparrow	LE	FE
Aphelocoma coerulescens	Florida scrub-jay	LT	FT
Athene cunicularia floridana	burrowing owl	N	ST
Caracara cheriway	Crested Caracara	LT	FT
Egretta caerulea	little blue heron	N	ST
Egretta tricolor	tricolored heron	N	ST
Falco sparverius paulus	southeastern American kestrel	N	ST
Grus americana	whooping crane	LE, XN	FXN
Grus canadensis pratensis	Florida sandhill crane	N	ST
Haliaeetus leucocephalus	bald eagle	N	**
Mycteria americana	wood stork	LT	FT
Pandion haliaetus	osprey	N	SSC*
Picoides borealis	red-cockaded woodpecker	LE	FE
Rostrhamus sociabilis plumbeus	Everglade snail kite	LE	N
MAMMALS			
Eumops floridanus	Florida bonneted bat	LE	FE
Puma concolor coryi	Florida panther	LE	FE
Sciurus niger shermani	Sherman's fox squirrel	N	SSC
VASCULAR PLANTS			
Andropogon arctatus	Pine-woods Bluestem	N	T
Bonamia grandiflora	Florida bonamia	LT	E
Calopogon multiflorus	Many-flowered Grass-pink	N	T
Carex chapmanii	Chapman's Sedge	N	T
Chionanthus pygmaeus	pygmy fringe tree	LE	E
Conradina grandiflora	large-flowered rosemary	N	T
Eriogonum longifolium var *gnaphalifolium*	scrub buckwheat	LT	E
Lechea cernua	nodding pinweed	N	T
Lupinus westianus var *aridorum*	scrub lupine	LE	E
Najas filifolia	narrowleaf naiad	N	T
Nemastylis floridana	Celestial Lily	N	E
Nolina atopocarpa	Florida beargrass	N	T
Nolina brittoniana	Britton's beargrass	LE	E
Ophioglossum palmatum	hand fern	N	E
Panicum abscissum	cutthroat grass	N	E
Paronychia chartacea ssp *chartacea*	paper-like nailwort	LT	E
Pecluma ptilodon	Swamp Plume Polypody	N	E
Polygala lewtonii	Lewton's polygala	LE	E
Polygonella myriophylla	Small's jointweed	LE	E
Prunus geniculata	scrub plum	LE	E
Pteroglossaspis ecristata	Giant Orchid	N	T
Warea amplexifolia	clasping warea	LE	E

FEDERAL LEGAL STATUS

LE-Endangered: species in danger of extinction throughout all or a significant portion of its range.
LT-Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.
SAT-Endangered due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
C-Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

XN-Non-essential experimental population.
N-Not currently listed, nor currently being considered for listing as Endangered or Threatened.

STATE LEGAL STATUS - ANIMALS

FE- Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service
FT- Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service
FXN- Federal listed as an experimental population in Florida
FT(S/A)- Federal Threatened due to similarity of appearance
ST- State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

SSC-Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)

N-Not currently listed, nor currently being considered for listing.

*** State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)*

STATE LEGAL STATUS - PLANTS

E-Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.
T-Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.
N-Not currently listed, nor currently being considered for listing.

SECTION C: SUPPLEMENTAL INFORMATION FOR WORKS OR OTHER ACTIVITIES IN, ON, OR OVER WETLANDS AND/OR OTHER SURFACE WATERS

(Note: This section is not required if all the proposed activities are covered in Section B.)

Instructions: This section is for ERP applications that do not involve activities associated with an individual single-family residence, duplex, triplex or quadruplex. For those activities, please use Section B. This form is to be completed if the proposed work or activity will occur in, on, over, or within 25 feet of a wetland or other surface water. The supplemental information required by this section is in addition to the information required by Section A of the ERP application.

PART 1: WETLAND OR OTHER SURFACE WATER IMPACT SUMMARY

1. Describe the basic purpose of the project or activity: **Construction of a stormwater management system to service a mixed use development, known as Fontana Lakes.**

2. Total area of work (dredging, filling, construction, alteration, or removal) in, on, or over wetlands or other surface waters: sq. ft.; **67.873 ac** ac.

3. Total volume of material in wetlands or other surface waters:
   a. to be dredged: cubic yards,
   b. to be filled: cubic yards.

4. Identify the seasonal high water level (SHWL) and wetland normal pool elevations for each wetland or surface water within the project site. For tidal wetlands and/or surface waters provide the elevation of mean high and mean low water. Include an aerial photograph showing the location of each sampling location, dates, datum, and methods used to determine these elevations. **TBD**

5. Name of waterbody(ies) (if applicable & if known) in which work will occur? **Friars Cove**

6. Is the activity proposed in an Outstanding Florida Water or Aquatic Preserve?
   ☐ yes, name: ☒ no ☐ I don't know

7. Has there ever been a formal or informal wetland determination for the project site? If yes, provide the identifying number and/ or a copy of the jurisdictional map. **Yes, 140507-7**

8. Provide a map(s) of the project area and vicinity delineating USDA/NRCS soil types. **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

9. Provide recent aerials, legible for photointerpretation (no photocopies) with a scale of 1" = 400 ft, or more detailed, with project boundaries and wetland boundaries delineated on the aerial. **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

10. Provide existing and proposed maps indicating vegetative community types based on Florida Land Use and Cover Classification System (FLUCCS) (FDOT 1999). For vegetated areas dominated by exotic vegetation, use the FLUCCS code representative of the native community type that was present prior to exotic infestation. **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

11. Provide existing and proposed maps indicating vegetative community types based on the Florida Natural Areas Inventory Guide to the Natural Communities of Florida. **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

12. Impact Summary Tables (located at the end of this section):

    a. For all projects, complete Table 1, 2 and 3 as applicable. **SEE ATTACHED TABLES**

    b. For shoreline stabilization projects, provide the information requested in Table 4. **NA**

13. Adjacent property owners. The following information is required only for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit and/or authorization to use state owned submerged lands and is not necessary when applying solely for an Environmental Resource Permit. If the activity is located on state owned submerged lands and requires a lease or easement, provide a list of names and addresses from the latest county tax assessment roll of all property owners located within a 500 ft. radius of the proposed lease or easement boundary in mailing label format, or you may elect to send notice to those persons by certified mail, with the return-receipt card addressed to the DEP or water management district, as applicable, in accordance with subsection 18-21.005(3), F.A.C., and Section 253.115, F.S. For projects that need a federal dredge and fill permit, please provide the names, addresses and zip codes of property owners whose property directly adjoins the project (excluding applicant). Attach additional sheets if necessary.

1.	2.
3.	4.
5.	6.

PART 2: ENVIRONMENTAL CONSIDERATIONS

Note: for many questions, a state rule/Applicant's Handbook Volume I (AH I) section is cited to assist the applicant in addressing these questions. However, additional Federal criteria may apply.

1. Elimination or Reduction of Impacts (Avoidance and Minimization). Describe measures taken to eliminate or reduce impacts to wetlands and other surface waters (*Refer to AH I Section 10.2.1*). **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

2. Fish, Wildlife, Listed Species and their Habitats. Provide results of any wildlife assessments that have been conducted on the project site and provide any comments pertaining to the project from the Florida Fish and Wildlife Conservation Commission and/or the U.S. Fish and Wildlife Service (*Refer to AH I Section 10.2.2*). **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

3. Water quantity impacts to wetlands and other surface waters (*Refer to AH I Section 10.2.2.4 and AH II*).

    a. Does the activity include a proposed stormwater water management system with a control elevation different than the wetland normal pool elevation(s) of existing or proposed created wetlands or other surface waters? **NO**

    b. If yes to (a), provide documentation (e.g. drawdown assessment or other methods) that shows the proposed surface water management system will not change the hydroperiod of the existing or created wetland or other surface water.

4. Public Interest Test. Please describe how the proposed activity will ***not be contrary*** to the public interest, OR if such an activity significantly degrades or is located within an Outstanding Florida Water (OFW), that the regulated activity will be ***clearly in*** the public interest (*Refer to AH I Section 10.2.3*).

    a. Please describe how the project will be designed to avoid adverse affects to public health, safety, or the welfare or the property of others. **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

    b. Please describe how the project will be designed to avoid adverse affects to the conservation of fish and wildlife, including endangered or threatened species, or their habitats. **ALL REQUIRED STATE & FEDERAL WILDLIFE PERMITS TO BE OBTAINED AS APPLICABLE**

    c. Please describe how the project will be designed to avoid adverse affects to navigation or the flow of water or cause harmful erosion or shoaling. **NA**

    d. Please describe how the project will be designed to avoid adverse affects to the fishing or recreational values or marine productivity in the vicinity of the activity. **NA**

    e. Will the project be of a temporary or permanent nature? **PERMANENT**

    f. Please describe how the project will be designed to avoid adverse impacts to significant historical and archaeological resources, under the provisions of section 267.061, F.S. **NA**

    g. Please describe how the project will be designed to avoid adverse affects to the current condition and relative value of functions being performed by areas affected by the proposed regulated activity. **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

5. Water Quality. Provide a description of how water quality will be maintained in wetlands and other surface waters that will be preserved or will remain undisturbed, both on and offsite. Please address both short-term (such as during construction) and long-term water quality considerations (*Refer to AH I Section 10.2.4*). **SEE SUBMITTED STORMWATER PLANS**

6. Class II Waters; Waters approved for shellfish harvesting *(Refer to AH I Section 10.2.5)*.

    a. Will the project occur in Class II that are NOT approved for shellfish harvesting? If yes, please provide a plan or procedure detailing the measures to be taken to meet the requirements of *AH I Section 10.2.5(a)*. **NO**

b. Is the project located adjacent to or in close proximity to Class II waters? If yes, please provide a plan or procedure detailing the measures to be taken to meet the requirements of *AH I Section 10.2.5(b)*. **NO**

c. Is the project located in Class II or Class III waters that are classified as “approved”, “restricted”, “conditionally approved”, or “conditionally restricted”? If yes, demonstrate that the project meets the requirements of *AH I Section 10.2.5(c)*. **NO**

7. Vertical seawalls. Are vertical seawalls proposed in an estuary or lagoon as part of the project? If yes, please describe how the project meets the requirements of *AH I Section 10.2.6*. **NO**

8. Secondary Impacts (*AH I Section 10.2.7*).

a. Will an upland buffer, with a minimum width of 15' and an average width of 25', be provided between the proposed activities and existing wetlands or wetlands to be preserved, enhanced, restored, or created? Provide the location and dimension of all buffers on the plans. If not, demonstrate that secondary impacts will not occur or how they will be offset. **SEE ATTACHED**

b. If listed species are present or may be present then coordination with wildlife agencies is needed. Have you coordinated with the FFWCC and/or USFWS? If so, please provide correspondence from the wildlife agencies indicating concurrence with the species management plan(s). **NA**

c. What measures will be taken to avoid impacts to wetland-dependent wildlife and/or listed species that use uplands for nesting or denning? **NO WETLAND-DEPENDENT LISTED SPECIES**

d. Describe whether there are any other relevant activities that are very closely linked and causally related to any proposed dredging or filling in wetlands or other surface waters that have the potential to cause impacts to significant historical and archaeological resources. **NONE**

e. Are there additional future phases or extensions of the proposed activities that are not shown? If yes, please describe. **NA**

9. Cumulative Impacts. Is the proposed mitigation located within the same drainage basin (*Refer to AH I Figures 10.2.8.1 – 10.2.8.5)* as the proposed wetland impacts? **YES** If not, please submit a Cumulative Impact Evaluation in accordance with *AH I Section 10.2.8*.

10. Mitigation Plan (*Refer to AH I Section 10.3*).

a. If a mitigation bank is proposed to offset wetland/other surface water impacts, provide:

i. the name of the bank: **TBD**. A letter of reservation from the banker will be required once the application has been evaluated.
ii. If the mitigation bank was assessed using UMAM, provide UMAM worksheets for impact area(s). If the bank was assessed using a method other than UMAM, then prepare the impact assessment using the same method. **SEE ATTACHED ENVIRONMENTAL ASSESSMENT/SITE CONSTRAINTS ANALYSIS REPORT**

b. If mitigation is proposed to offset wetland/other surface water impacts, please provide a mitigation plan that includes, at a minimum, the following:

i. ☐ Proposed mitigation narrative:
   (1) ☐ Describe the current and proposed condition for each type of mitigation component (restoration, enhancement, creation, preservation), including:
      (a) ☐ Describe current and proposed vegetation
      (b) ☐ Describe current and proposed hydrologic conditions for the proposed mitigation.
      (c) ☐ Describe the soil types from NRCS maps and confirm if actual soil conditions appear to match.
   (2) ☐ Provide details of the proposed construction/mitigation activities including phasing and timing, as appropriate.
   (3) ☐ Identify measures that will be implemented during and after construction to avoid adverse impacts related to the proposed activities.
   (4) ☐ A mitigation implementation and monitoring schedule with dates.
   (5) ☐ Identify the success criteria.
   (6) ☐ Describe the anticipated site conditions in and around the mitigation area after the mitigation plan is successfully implemented.
   (7) ☐ Provide a comparison of current fish and wildlife habitat to expected habitat after the mitigation plan is successfully implemented.

ii. ☐ Provide a Management Plan that includes, as appropriate, aspects of operation and maintenance, including water management practices, vegetation establishment, exotic and nuisance species control, fire management, and control of access.

iii. ☐ Maps:
   (1) ☐ Soil map (include soil names/codes, hydrologic soil groups and hydric soil types).
   (2) ☐ Topographic map of the mitigation area and adjacent contributing and receiving areas.
   (3) ☐ Hydrologic features map of the mitigation area and adjacent contributing and receiving areas.
   (4) ☐ Vegetative communities map (using FLUCCS or other appropriate classification system).
   (5) ☐ For all maps, indentify source.

iv. Provide the necessary supporting information for the application of sections 62-345.400 - .600 (Uniform Mitigation Assessment Method (UMAM)). To meet this requirement, submittal of UMAM worksheets is acceptable for impact and mitigation areas. **SEE ATTACHED**

v. If onsite and/or offsite applicant-responsible mitigation is proposed, submit a draft Conservation Easement document or other form of restrictive covenant that provides for protection of the mitigation area in perpetuity. Standard forms, as described in subsection 62-330.301(6), F.A.C., are available from the Agency or on its website.

vi. If onsite and/or offsite applicant-responsible mitigation is proposed, submit a cost estimate for completing the mitigation, including monitoring and maintenance.

vii. If onsite and/or offsite applicant-responsible mitigation is proposed and the proposed mitigation exceeds $25,000, please provide a draft financial assurance document. **N/A**

viii. Identify the entity responsible for monitoring, maintenance and long-term stewardship of the mitigation area (i.e. the landowner or homeowner association, not the consultant or contractor that will do the work). **N/A**

PART 3: PLANS

PLANS: The information listed in the checklist below represent the typical information required on the submitted project plans. The Plans checklists in each application section are cumulative unless otherwise noted. Separate plans for each application section are not required.

1. ☒ Include the following on the construction plans and cross sections:

   a. ☒ An Existing Conditions sheet showing the entire project and wetland/other surface water boundaries. Include the following: Acreage and type (herbaceous, forested or other surface water) of each wetland/other surface water.
   b. ☒ A Proposed Conditions sheet showing the entire project and wetland/other surface water boundaries with construction plan overlay.
   c. ☒ A Proposed Wetland Impact sheet that include the following:
      i. ☒ Acreage and type (herbaceous, forested or other surface water) of each wetland/other surface water to be impacted.
      ii. ☒ Proposed upland buffers with dimensions.
      iii. ☐ Identify the seasonal high water and wetland normal pool elevations on the plans.
      iv. ☐ Separately identify WMD/FDEP and USACE wetland/other surface water impacts if different.
   d. ☐ Include wetland boundaries on all construction plan sheets.

2. ☐ If onsite and/or offsite applicant-responsible mitigation is proposed, submit mitigation permit plans and cross sections including, at a minimum:

   a. ☐ existing conditions plan sheet identifying upland and wetland communities and acreage of each, topography, drainage patterns, and location of cross-section detail.
   b. ☐ proposed conditions plan sheet identifying proposed improvements by type (restoration, enhancement, creation, preservation), acreage of each, topography, drainage patterns, and location of cross-section detail.
   c. ☐ monitoring plan sheet including proposed improvements, monitoring transects, photostations, and mitigation signage (if applicable).
   d. ☐ cross-section and/or profile detail(s) sheet(s) including representative section of each type of mitigation component. Include existing and proposed conditions and representative elevations.
   e. ☐ planting schedule, plant species including common and scientific names divided into three sections (canopy, shrub, herbaceous) by mitigation component, quantity, spacing, size, and elevation range.

TABLE 1 - PROJECT WETLAND (WL) AND OTHER SURFACE WATER (SW) AND IMPACT SUMMARY

SEE ATTACHED TABLES WITHIN EA-ERP SUBMITTAL PACKAGE

WL & SW ID	UMAM ASSESSMENT AREA NAME(S)	WL & SW TYPE	WL & SW SIZE (acres)	WL & SW NOT IMPACTED (acres)	TEMPORARY WL & SW IMPACTS		PERMANENT WL & SW IMPACTS		MITIGATION ID
					IMPACT SIZE (acres)	IMPACT TYPE	IMPACT SIZE (acres)	IMPACT TYPE	
PROJECT TOTALS:									

Comments:

Codes (multiple entries per cell not allowed):

- Wetland & Surface Water ID: Include ID on submitted wetland and surface water impact maps
- Wetland Type: from an established wetland classification system

- Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

TABLE 2 - PROJECT ON-SITE MITIGATION SUMMARY **SEE ATTACHED TABLES WITHIN EA-ERP SUBMITTAL PACKAGE**

MITIGATION ID	UMAM ASSESSMENT AREA NAME(S)	TARGET TYPE	CREATION	RESTORATION	ENHANCEMENT	WETLAND PRESERVE	UPLAND PRESERVE	OTHER
			AREA (acres)	AREA (acres)	AREA (acres)	AREA (acres)	AREA (acres)	AREA (acres)
PROJECT TOTALS								

COMMENTS:

Codes (multiple entries per cell not allowed):

- Target Type or Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

TABLE 3 - PROJECT OFF-SITE MITIGATION SUMMARY **SEE ATTACHED TABLES WITHIN EA-ERP SUBMITTAL PACKAGE**

MITIGATION ID	UMAM ASSESSMENT AREA NAME(S)	TARGET TYPE	CREATION	RESTORATION	ENHANCEMENT	WETLAND PRESERVE	UPLAND PRESERVE	OTHER
			AREA (acres)	AREA (acres)	AREA (acres)	AREA (acres)	AREA (acres)	AREA (acres)
PROJECT TOTALS								

COMMENTS:

Codes (multiple entries per cell not allowed):

- Target Type or Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

TABLE 4 - SHORELINE STABILIZATION

Stabilization	Linear Ft. New	Linear Ft. Replaced	Linear Ft. Repaired	Linear Ft. Removed	Slope H: V:	Toe Width (Ft.)
Natural Vegetation (living shoreline)					**N/A**	**N/A**
Rip Rap + Vegetation						
Rip Rap						
Seawall + Rip Rap						
Vertical Seawall						
Other Shoreline Stabilization Type						

Size of Rip Rap _____

Type of Rip Rap _____

TABLE 1. PROJECT WETLAND (WL) AND OTHER SURFACE WATER (SW) SUMMARY

WL & SW ID	WL & SW TYPE	WL & SW SIZE (acres)	WL & SW NOT IMPACTED (acres)	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION ID
				WL & SW TYPE	IMPACT SIZE	IMPACT CODE	WL & SW TYPE	IMPACT SIZE (acres)	IMPACT CODE	
W-1	**641**	**0.49**	**0.00**				**641**	**0.49**	**F**	**NR**
W-2	**640**	**0.86**	**0.00**				**640**	**0.86**	**F**	**M1**
W-3	**641**	**11.43**	**0.00**				**641**	**11.43**	**D/F**	**M1**
W-4	**630**	**1.75**	**0.00**				**630**	**1.75**	**F**	**M1**
W-5	**641**	**1.10**	**0.00**				**641**	**1.10**	**F**	**M1**
W-6	**641**	**1.66**	**0.00**				**641**	**1.66**	**D/F**	**M1**
W-7	**640**	**0.89**	**0.00**				**640**	**0.89**	**D/F**	**M1**
W-8	**641**	**1.45**	**0.00**				**641**	**1.45**	**F**	**M1**
W-9	**640**	**0.68**	**0.00**				**640**	**0.68**	**F**	**M1**
W-10	**640**	**0.84**	**0.00**				**640**	**0.84**	**D/F**	**M1**
W-11	**641**	**6.47**	**6.39**				**641**	**0.08**	**F**	**N/A**
W-12	**640**	**2.38**	**0.00**				**640**	**2.38**	**D/F**	**M1**
W-13	**641**	**4.83**	**0.00**				**641**	**4.83**	**D/F**	**M1**
W-14	**641**	**24.13**	**11.66**				**641**	**12.47**	**D/F**	**M1**
W-15	**619**	**5.12**	**5.12**							**N/A**
PROJECT TOTALS										

Comments: FLUCFCS - Florida Land Use, Cover and Forms Classification System

CODES (multiple entries per cell not allowed):
Wetland Type: from an established wetland classification system (see Section E, 111b.)
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Reviewer: _____

TABLE 1. PROJECT WETLAND (WL) AND OTHER SURFACE WATER (SW) SUMMARY

WL & SW ID	WL & SW TYPE	WL & SW SIZE (acres)	WL & SW NOT IMPACTED (acres)	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION ID
				WL & SW TYPE	IMPACT SIZE	IMPACT CODE	WL & SW TYPE	IMPACT SIZE (acres)	IMPACT CODE	
W-16	**521**	**15.77**	**15.547**				**521**	**0.223**	**D/F**	**M1**
SW-1	**534**	**0.38**	**0.00**				**534**	**0.38**	**D/F**	**NR**
SW-2	**534**	**0.37**	**0.00**				**534**	**0.37**	**D/F**	**NR**
D-1	**510**	**0.22**	**0.00**				**510**	**0.22**	**D/F**	**NR**
D-2	**510**	**0.06**	**0.00**				**510**	**0.06**	**D/F**	**NR**
D-3	**510**	**3.15**	**0.00**				**510**	**3.15**	**D/F**	**NR**
D-4	**510**	**0.18**	**0.00**				**510**	**0.18**	**D/F**	**NR**
D-5	**510**	**0.12**	**0.00**				**510**	**0.12**	**D/F**	**NR**
D-6	**510**	**1.30**	**0.00**				**510**	**1.30**	**D/F**	**NR**
D-7	**510**	**0.38**	**0.00**				**510**	**0.38**	**D/F**	**NR**
D-8	**510**	**1.04**	**0.00**				**510**	**1.04**	**D/F**	**NR**
D-9	**510**	**1.05**	**0.00**				**510**	**1.05**	**D/F**	**NR**
D-10	**510**	**0.02**	**0.00**				**510**	**0.02**	**D/F**	**NR**
D-11	**510**	**0.47**	**0.00**				**510**	**0.47**	**D/F**	**NR**
D-12	**510**	**0.19**	**0.00**				**510**	**0.19**	**D/F**	**NR**
PROJECT TOTALS										

Comments: FLUCFCS - Florida Land Use, Cover and Forms Classification System

CODES (multiple entries per cell not allowed):
Wetland Type: from an established wetland classification system (see Section E, 111b.)
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Reviewer: _____

TABLE 1. PROJECT WETLAND (WL) AND OTHER SURFACE WATER (SW) SUMMARY

WL & SW ID	WL & SW TYPE	WL & SW SIZE (acres)	WL & SW NOT IMPACTED (acres)	TEMPORARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION ID
				WL & SW TYPE	IMPACT SIZE	IMPACT CODE	WL & SW TYPE	IMPACT SIZE (acres)	IMPACT CODE	
D-13	**510**	**8.44**	**0.00**				**510**	**8.44**	**D/F**	**NR**
D-14	**510**	**0.16**	**0.00**				**510**	**0.16**	**D/F**	**NR**
D-15	**510**	**12.14**	**7.90**				**510**	**4.24**	**D/F**	**NR**
D-16	**510**	**3.08**	**0.71**				**510**	**2.37**	**D/F**	**NR**
D-17	**510**	**2.60**	**0.00**				**510**	**2.60**	**D/F**	**NR**
PROJECT TOTALS		**115.20**	**47.327**					**67.873**		

Comments: FLUCFCS - Florida Land Use, Cover and Forms Classification System

115.20

CODES (multiple entries per cell not allowed):
Wetland Type: from an established wetland classification system (see Section E, 111b.)
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Reviewer: _____

TABLE 2: PROJECT ON-SITE MITIGATION SUMMARY

MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVATION		UPLAND PRESERVATION		OTHER	
	AREA	TARGET TYPE	AREA (acres)	TARGET TYPE	AREA	TARGET TYPE	AREA (acres)	TYPE	AREA	TARGET	AREA	TARGET
PROJECT TOTALS:	0		0		0		0		0		0	

Comments:

CODES (multiple entries per cell not allowed):
Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Reviewer: _____

TABLE 3: PROJECT OFF-SITE MITIGATION SUMMARY

MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		WETLAND PRESERVATION		UPLAND PRESERVATION		OTHER	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TYPE	AREA	TARGET	AREA	TARGET
M1											24.3	CR*
PROJECT TOTALS:	0		0		0		0		0		24.3	

Comments: (*) TO BE PURCHASED FROM AN APPROVED MITIGATION BANK.

CODES (multiple entries per cell not allowed):
Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Reviewer: _____

Project: Fontana				Date: 03/05/21									
	Habitat Type	Location Landscape		Water Environment		Community Structure		Acres	UMAM Delta	Functional Units Lost	Total Impact Acres (D/S)	Wetland Preserve Provided	Upland Preserve Provided
		before	after	before	after	before	after				42.453	0	0
W-2	640	7	0	3	0	3	0	0.86	0.43	0.373			
W-3	641	7	0	6	0	6	0	11.43	0.63	7.239			
W-4	630	7	0	3	0	3	0	1.75	0.43	0.758	**Total Functional Units Lost**		**Total Functional Units Gained**
W-5	641	7	0	5	0	5	0	1.10	0.57	0.623			
W-6	641	7	0	5	0	5	0	1.66	0.57	0.941			
W-7	640	7	0	3	0	4	0	0.89	0.47	0.415			
W-8	641	7	0	3	0	4	0	1.45	0.47	0.677	**24.30**		**0.00**
W-9	640	7	0	3	0	4	0	0.68	0.47	0.317			
W-10	641	7	0	4	0	4	0	0.84	0.50	0.420			
W-11	641	7	0	7	0	7	0	0.08	0.70	0.056			
W-12	640	7	0	5	0	5	0	2.38	0.57	1.349			
W-13	641	7	0	7	0	7	0	4.83	0.70	3.381			
W-14	641	7	0	5	0	6	0	12.47	0.60	7.482			
W-16	521	7	0	7	0	6	0	0.223	0.67	0.149			
W-4 (sec)	630	7	6	3	3	3	2	0.44	0.07	0.029			
W-11 (sec)	641	7	6	7	7	7	6	0.15	0.07	0.010			
W-14 (sec)	641	7	6	5	5	6	5	0.80	0.07	0.054			
W-16 (sec)	521	7	6	7	7	6	5	0.42	0.07	0.028			
										24.30			

Mitigation:	Habitat Type							Time Lag	Risk Factor	Preservation Adjustment Factor	Relative Functional Gain	Acres Provided	Functional Units Gained
Wetland Preservation		w/o CE	w/ CE	w/o CE	w/ CE	w/o CE	w/CE						
													0.000
Enhancement		before	after	before	after	before	after						
													0.00
Uplands		w/o CE	w/ CE	w/o CE	w/ CE	w/o CE	w/ CE						

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-2

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
640	Vegetated Non-Forested Wetlands	Impact	0.86

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Small isolated non-forested wetland system. This system is located in the southern portion of the property and is surrounded by improved pasture. The Florida Turnpike is approximatley 0.2 miles east of this system.

Assessment area (AA) description

A small mostly undisturbed non-forested wetland system dominated by native species with scattered nuisance and exotic species throughout. Observed vegetation includes smartweed, tropical soda apple, and dogfennel.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/21/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-2
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is surrounded by improved pasture to the north, south, east, and west. The Florida Turnpike is located approximatley 0.2 miles east of the AA.
.500 (6)(b) Water Environment (n/a for uplands)	3	0	AA's hydrology barely sufficient to maintain community. Evidence of altered hydrologic regime. No direct hydrologic connection to on or off-site wetlands or lakes.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	3	0	AA contains historic species appropriate for this type of system, however currently dominated bynon- native species. Scattered N/E species were observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.433333333	0.00

Delta = [with current]
-0.4333

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.373

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-3

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Freshwater Marsh	Impact	11.43

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Freshwater marsh wetland system (isolated) located in the southeast quadrant of the property and is adjacent to the Florida Turnpike. A ditch connects to the SW portion of this system. It is surrounded by improved pasture to the north, south, and west.

Assessment area (AA) description

A small mostly undisturbed freshwater marsh wetland system dominated by native species. It consists mostly of typical marsh vegetation but also has a wet prairie component around its periphery. The forested component of this system consists of loblolly bay, swamp bay, and camphor tree, with scattered blackgum throughout. Groundcover species include scattered beautyberry, tropical soda apple, Virginia chain fern, and Brazilian pepper. The herbaceous component of this system consists of little blue maidencane, spikerush, alligatorweed, pickerel weed, common sedges, carpetgrass, horned beakrush, smartweed, maidencane, rattlebox, and beakrush, with scattered salt bush and primrose willow throughout. The perimeter of this area consists of scattered blackgum.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-3
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA adjacent to improved pasture to the north, south, and west. The Florida Turnpike runs adjacent to AA's eastern boundary . A ditch connects to the SW portion of the system.
.500 (6)(b) Water Environment (n/a for uplands)	6	0	AA's hydrology sufficient to maintain community. Strong evidence of hydrologic regime.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	6	0	AA contains historic species appropriate for this type of system, and is dominated by native species. Scattered N/E species were observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.633333333	0.00

Delta = [with current]
-0.6333

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	7.239

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-4

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
630	Mixed Forested Wetland	Impact	1.75

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Mixed forested wetland system that is located along the northeast property boundary. This system is surrounded by improved pasture to the south and east. The system is a part of a larger forested wetland system that extends off-site to the north and west.

Assessment area (AA) description

An undisturbed mixed forested wetland system dominated by native species. The system is contiguous with an off-site forested wetland system that extends north and west of the property boundary. The most landward component of this system is a shrubby mixture of mesic and faculative-wet flora that transitions into an obligate and faculative-wet dominated canopy. The canopy of this system consists of scattered cypress, and its groundcover consists of dogfennel, blackberry, caesarweed, and chalky bluestem, with scattered camphor tree and Virginia chain fern throughout. Incorporated into agricultural operation

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-4
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is contiguous with off-site forested wetland system located north and west of the property boundary. AA is surrounded by improved pasture to the south and east. The Florida Turnpike is approximately 0.1 miles east of the AA.
.500 (6)(b) Water Environment (n/a for uplands)	3	0	AA's hydrology barely sufficient to maintain community. Evidence of altered hydrologic regime. No direct hydrologic connection to on or off-site wetlands or lakes.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	3	0	AA contains historic species appropriate for this type of system, however due to agricultural operations, transitional and opportunistic species invading.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.433333333	0.00

Delta = [with current]
-0.4333

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.758

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-5

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Freshwater Marsh	Impact	1.10

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Freshwater marsh wetland system located near the center of the property that is hydrologically connected to Lake Toho via extensive ditch system. This system is surrounded by improved pasture to the north, south, east, and west.

Assessment area (AA) description

A small disturbed freshwater marsh wetland system dominated by native species. This system is hydrologically connected to on-site wetlands (W-6 and W-8) to the northwest and southwest . Its hydrologic regime has been adversely impacted by drainage ditches. Typical marsh vegitation dominates the interior of this system but transistions into a wet prairie component around its periphery. The perimeter of this system consists of scattered cypress and Chinese tallowtree. Vegetation observed within this system includes common sedges, rattlebox, smartweed, goldenrod, and maidencane, with scattered pickerel weed throughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-5
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located near the center of the property and is surrounded by improved pasture. The AA is connected to ditches to the north and west. AA is hyrdologically connected to on-site wetlands (W-6 and W-8).
.500 (6)(b) Water Environment (n/a for uplands)	5	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditches. Direct hydrologic connection to on-site wetlands (W-6 and W-8) via a ditch. Hydrologically connected to Lake Toho via extensive ditch system
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	5	0	AA contains historic species appropriate for this type of system, and is dominated by native species. Scattered N/E species were observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.566666667	0.00

Delta = [with current]
-0.5667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.623

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-6

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Freshwater Marsh	Impact	1.66

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Freshwater marsh wetland system located near the center of the property that is hydrologically connected to Lake Toho via extensive ditch system. This system is surrounded by improved pasture to the north, south, and west. A ditch is located along the systems easternmost extent.

Assessment area (AA) description

A small disturbed freshwater marsh wetland system dominated by native species. The system is hydrologically connected to on-site wetlands (W-5 and W-8) to the south . Its hydrologic regime has been adversely impacted by drainge ditch. Typical marsh vegitation dominates the interior of this system but transistions into a wet prairie component around its periphery. Observed vegetation includes common sedges, smartweed, maidencane, and meadowbeauty, with scattered saltbush throughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-6
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located near the center of the property and is surrounded by improved pasture to the north, south, and west. A ditch is located along its eastern boundary. The AA is hyrdologically connected to on-site wetlands (W-5 and W-8).
.500 (6)(b) Water Environment (n/a for uplands)	5	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditches. Direct hydrologic connection to on-site wetlands (W-5 and W-8) via a ditch. Hydrologically connected to Lake Toho via extensive ditch system.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	5	0	AA contains historic species appropriate for this type of system, is dominated by native species with N/E species observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.566666667	0.00

Delta = [with current]
-0.5667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.941

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-7

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
640	Vegetated Non-Forested Wetland	Impact	0.89

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Small vegetated non-forested wetland system located southwest of W-5. A ditch connects to the northern boundary of this system and it is surrounded by improved pasture. The ditch system itslef outfalls directly into the property's surounding canal system, eventually discharging to Lake Toho.

Assessment area (AA) description

A small mostly disturbed vegetated non-forested wetland system dominated by native species. Its hydrologic regime has been adversely impacted by ditch system. Observed vegetation includes carpetgrass, watergrass, common sedges, and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-7
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located southwest of W-5 and is surrounded by improved pasture. A ditch is located along the northern boundary of this system.
.500 (6)(b) Water Environment (n/a for uplands)	3	0	AA's hydrology sufficient to maintain community. However, its hydrologic regime has been adversely impacted by ditches which drain the system. Hydrologically connected to Lake Toho via extensive ditch system.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	4	0	AA contains historic species appropriate for this type of system, however dominated bynon-native species with N/E species observed.

Score = sum of above scores/30 (if uplands, divide by 20)		
w/o pres or current	with	
0.466666667	0.00	

Delta = [with current]
-0.4667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.415

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-8

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Freshwater Marsh	Impact	1.45

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Freshwater marsh wetland system located south of W-5. This system is hydrologically connected to Lake Toho via extensive ditch system.

Assessment area (AA) description

A small disturbed freshwater marsh wetland system dominated by native species. This system is hydrologically connected to on-site wetlands (W-5, W-6, and W-9) to the northwest, southwest, and southeast . Its hydrologic regime has been adversely impacted by ditch systems. This system is dominated by typical marsh vegitation. Observed vegetation includes common sedges, smartweed, carpetgrass, and beakrush, with scattered Chinese tallowtree and flatsedge along the perimeter.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-8
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located south of W-7 and is surrounded by improved pasture. The AA is connected to ditches to the north and south. The AA is hyrdologically connected to on-site wetlands (W-5, W-6, and W-9).
.500 (6)(b) Water Environment (n/a for uplands)	3	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditches. Direct hydrologic connection to on-site wetlands (W-5, W-6, and W-9) via ditch system. Also hydrologically connected to Lake Toho via extensive ditch system.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	4	0	AA contains historic species appropriate for this type of system, however dominated bynon-native species with N/E species observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.466666667	0.00

Delta = [with current]
-0.4667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.677

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-9

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
640	Vegetated Non-Forested Wetlands	Impact	0.68

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Small vegetated non-forested wetland system located along the southern property boundary. This system is hydrologically connected to Lake Toho via extensive ditch system.

Assessment area (AA) description

A small mostly disturbed vegetated non-forested wetland system dominated by native species. This system is hydrologically connected to an on-site wetland (W-8) to the west-northwest . Its hydrologic regime has been adversely impacted by ditch system. Observed vegetation includes common sedges, flatsedge, smartweed, carpetgrass, beakrush, and black bindweed, with scattered Chinese tallowtree throughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-9
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located southwest of W-8 and is surrounded by improved pasture. Ditches are located along the eastern and western boundary of this system. The AA is hyrdologically connected to an on-site wetland (W-8).
.500 (6)(b) Water Environment (n/a for uplands)	3	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditch systems. Direct hydrologic connection to W-8 via a ditch. Also hydrologically connected to Lake Toho via extensive ditch system.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	4	0	AA contains historic species appropriate for this type of system, however dominated bynon-native species with N/E species observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.466666667	0.00

Delta = [with current]
-0.4667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.317

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-10

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Vegetated Non-Forested Wetland	Impact	0.84

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

An herbaceous wetland system adjacent to the western property boundary. This system is hydrologically connected to Lake Toho via extensive ditch system.

Assessment area (AA) description

A disturbed herbaceous wetland system dominated by native species and opportunistic/transitional species. This system is hydrologically connected to on-site wetlands (W-11 and W-12) by a ditch system. Its hydrologic regime has been adversely impacted by ditch system. Observed vegetation includes common sedges, smartweed, maidencane, and meadowbeauty, with scattered Chinese tallow and saltbush throughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-10
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located along the western boundary and is surrounded by improved pasture. A ditch is located along its western boundary. The AA is hyrdologically connected to on-site wetlands (W-11 and W-12).
.500 (6)(b) Water Environment (n/a for uplands)	4	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditch system. Direct hydrologic connection to on-site wetlands (W-11and W-12) via a ditch. Hydrologically connected to Lake Toho via extensive ditch system. This ditch system significantly affects this wetland in an adverse manner via draining actions.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	4	0	AA contains historic species appropriate for this type of system, such as typical native species. However, a larger perentage of scattered N/E species were observed and portions this system are incorporated into the maintenance operations/agricultural grazing.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.5	0.00

Delta = [with current]
-0.5000

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.420

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-11

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Freshwater Marshes	Impact	0.08

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

A freshwater marsh wetland system located in the northwest quadrant of the property. This system is hydrologically connected to Lake Toho via extensive ditch system. It is surrounded by improved pasture.

Assessment area (AA) description

A small mostly disturbed freshwater marsh wetland system dominated by native species. This system is hydrologically connected to on-site wetlands (W-10 and W-12) by a ditch system. Its hydrologic regime has been adversely impacted by ditch system. Observed vegetation includes watergrass, maidencane, pickerel weed, smartweed, rattlebox, common sedges, spikerush, and Virginia chain fern, with a scattered canopy of wax myrtle, Chinese tallowtree, and black gum.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.). In particular, this system supports potential Sandhill Crane habitat.	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-11
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located in the northwest quadrant of the property and is surrounded by improved pasture. A ditch is located along the northern boundary of this system. The AA is hyrdologically connected to on-site wetlands (W-10 and W-12).
.500 (6)(b) Water Environment (n/a for uplands)	7	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditch system. Direct hydrologic connection to on-site wetlands (W-10 and W-12) via a ditch. Hydrologically connected to Lake Toho via extensive ditch system.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	7	0	AA contains historic species appropriate for this type of system, is dominated by native species as minimal N/E species observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.7	0.00

Delta = [with current]
-0.7000

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.056

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-12

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
640	Vegetated Non-Forested Wetland	Impact	2.38

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

A vegetated non-forested wetland system adjacent to the western property boundary. This system is hydrologically connected to Lake Toho via extensive ditch system.

Assessment area (AA) description

A disturbed vegetated non-forested wetland system dominated by native species. This system is hydrologically connected to on-site wetlands (W-10 and W-11) by a ditch system. Its hydrologic regime has been adversely impacted by ditch system. Observed vegetation includes common sedges, maidencane, pickerel weed, duckpotato, torpedograss, watergrass, and smartweed.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-12
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located along the western boundary and is surrounded by improved pasture. A ditch is located along its western boundary. The AA is hyrdologically connected to on-site wetlands (W-10 and W-11).
.500 (6)(b) Water Environment (n/a for uplands)	5	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditch system. Direct hydrologic connection to on-site wetlands (W-10 and W-11) via a ditch. Hydrologically connected to Lake Toho via extensive ditch system.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	5	0	AA contains historic species appropriate for this type of system, and is dominated by native species. Scattered N/E species were observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.566666667	0.00

Delta = [with current]
-0.5667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	1.349

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-13

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Fresh Water Marsh	Impact	4.83

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

An isolated fresh water marsh system located near the western property boundary. A ditch is located along the wetland's eastern boundary. This system is surrounded by improved pasture.

Assessment area (AA) description

An isolated freshwater marsh wetland system dominated by native species. Although there is a ditch along the wetland's eastern boundary, its impact to the wetland is not as evident when compared to the other systems on-site. Vegetation within the wetland consists of typical marsh flora which transitions into the adjacent pasture grass dominated uplands. Observed vegetation includes common sedges, smartweed, pickerel weed, duckpotato, beakrush, watergrass, spikerush, rattlebox, and buttonbush, with a perimeter of wax myrtle.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.). In particular, this system supports potential Sandhill Crane habitat.	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-13
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located near the western boundary and is surrounded by improved pasture. A ditch is located along the wetland's eastern boundary.
.500 (6)(b) Water Environment (n/a for uplands)	7	0	AA's hydrology sufficient to maintain community. Strong evidence of hydrologic regime. No direct hydrologic connection to on or off-site wetlands or lakes (isolated).
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	7	0	AA contains historic species appropriate for this type of system, is dominated by native species as no N/E species observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.7	0.00

Delta = [with current]
-0.7000

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	3.381

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-14

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
640	Vegetated Non-Forested Wetland	Impact	12.47

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

A vegetated non-forested wetland system located along the southern and western boundary. Historically, it appears this wetland was contiguous to Friar's Cove but it has sense been seperated via the construction of Friar's Cove Road. This system is hydrologically connected to Lake Toho via underground pipping.

Assessment area (AA) description

A large vegetated non-forested wetland system dominated by native species. It consists of a large wet prairie component around its periphery to the north but transistions from that mesic characteristic to obligate and faculative-wet vegetation to the south. Observed vegetation includes common sedges, beakrush, small riveted beakrush, knot root, maidencane, pickerel weed, meadow beautyberry, and chalky bluestem, with scattered primrose willow and rattlebox thoughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-14
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located along the southern and western boundary and is surrounded by improved pasture to the north, east, and west. Friar's Cove Road is adjacent to this system and runs directly parallel to its southern boundary. Ditches are located along the wetland's southern and eastern boundary.
.500 (6)(b) Water Environment (n/a for uplands)	5	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditch systems and roadways. Hydrologically connected to Lake Toho via underground pipping.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	6	0	AA contains historic species appropriate for this type of system, and is dominated by native species. Scattered N/E species were observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.6	0.00

Delta = [with current]
-0.6000

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	7.482

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-16

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
521	Friars Cove shorline	Impact	0.223

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

A vegetated non-forested wetland system associated with the shoreline of Friars Cove/Lake Toho, located south of and adjacent to Friar's Cove Road.

Assessment area (AA) description

An aquatic wetland system with emergent vegetation dominated by native species, but containing nuisance/exotic species as well. Observed vegetation includes pickerelweed, arrowhead, cuban bulrush, cattail, soft rush, smartweed, marsh pennywort, watergrass, coinwort, spikerush, torpedo grass, and maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
Associated with the shorline of Firar's Cove, AA located along its northern edge. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include reptiles (moccasin, brown/green anoles, southern leopard frog, etc.) and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology, water quality, and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-16
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	0	AA is located along the shoreline of Friars Cove and is surrounded by improved pasture to the north and east. Friar's Cove Road is adjacent to this system to the north and runs directly parallel to its northern shoreline. Numerous discharges of surface water/ditches associated with the overall project's improved pastures outfall into the AA.
.500 (6)(b) Water Environment (n/a for uplands)	7	0	AA's hydrology sufficient to maintain community. Its hydrologic regime has been adversely impacted by ditch systems and roadways. Hydrologically connected to Lake Toho via underground pipping.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	6	0	AA contains historic species appropriate for this type of system, and is dominated by native species. Scattered N/E species were observed.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.666666667	0.00

Delta = [with current]
-0.6667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.149

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-4 (sec)

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
630	Mixed Forested Wetland	Impact	0.44

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

Mixed forested wetland system that is located along the northeast property boundary. This system is surrounded by improved pasture to the south and east. The system is a part of a larger forested wetland system that extends off-site to the north and west.

Assessment area (AA) description

An undisturbed mixed forested wetland system dominated by native species. The system is contiguous with an off-site forested wetland system that extends north and west of the property boundary. The most landward component of this system is a shrubby mixture of mesic and faculative-wet flora that transitions into an obligate and faculative-wet dominated canopy. The canopy of this system consists of scattered cypress, and its groundcover consists of dogfennel, blackberry, caesarweed, and chalky bluestem, with scattered camphor tree and Virginia chain fern throughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-4 (sec)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	6	Minimal adverse impact to AA based on adjacent development.
.500 (6)(b) Water Environment (n/a for uplands)	3	3	No changes to AA based on adjacent development.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	3	2	Minimal adverse impact to AA based on adjacent development.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.433333333	0.37

Delta = [with current]
-0.0667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.029

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-11 (sec)

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
641	Freshwater Marshes	Impact	0.15

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

A freshwater marsh wetland system located in the northwest quadrant of the property. This system is hydrologically connected to Lake Toho via extensive ditch system. It is surrounded by improved pasture.

Assessment area (AA) description

A small mostly disturbed freshwater marsh wetland system dominated by native species. This system is hydrologically connected to on-site wetlands (W-10 and W-12) by a ditch system. Its hydrologic regime has been adversely impacted by ditch system. Observed vegetation includes watergrass, maidencane, pickerel weed, smartweed, rattlebox, common sedges, spikerush, and Virginia chain fern, with a scattered canopy of wax myrtle, Chinese tallowtree, and black gum.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.). In particular, this system supports potential Sandhill Crane habitat.	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-11 (sec)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Mrogan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	6	Minimal adverse impact to AA based on adjacent development.
.500 (6)(b) Water Environment (n/a for uplands)	7	7	No changes to AA based on adjacent development.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	7	6	Minimal adverse impact to AA based on adjacent development.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.7	0.63

Delta = [with current]
-0.0667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.010

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-14 (sec)

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
640	Vegetated Non-Forested Wetland	Impact	0.80

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

A vegetated non-forested wetland system located along the southern and western boundary. Historically, it appears this wetland was contiguous to Friar's Cove but it has sense been seperated via the construction of Friar's Cove Road. This system is hydrologically connected to Lake Toho via underground pipping.

Assessment area (AA) description

A large vegetated non-forested wetland system dominated by native species. It consists of a large wet prairie component around its periphery to the north but transistions from that mesic characteristic to obligate and faculative-wet vegetation to the south. Observed vegetation includes common sedges, beakrush, small riveted beakrush, knot root, maidencane, pickerel weed, meadow beautyberry, and chalky bluestem, with scattered primrose willow and rattlebox thoughout.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
A portion of Firar's Cove is located in the southwest corner. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include small to large-sized mammals (opossum, squirrels, deer, etc); reptiles (black racer, rattlesnake, moccasin, brown/green anoles, southern leopard frog, etc.); and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-14 (sec)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	6	Minimal adverse impact to AA based on adjacent development.
.500 (6)(b) Water Environment (n/a for uplands)	5	5	No changes to AA based on adjacent development.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Minimal adverse impact to AA based on adjacent development.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.6	0.53

Delta = [with current]
-0.0667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.054

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

PART I - QUALITATIVE DESCRIPTION
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-16 (sec)

FLUCCs Code	Further classification (optional)	Impact or Mitigation Site	Assessment Area Size (acres)
521	Friars Cove shorline	Impact	0.420

Basin/Watershed Name/Number	Affected Waterbody (class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
Lake Tohopekaliga	N/A	N/A

Geographic relationship to and hydrologic connection with wetlands, other surface waters, uplands

A vegetated non-forested wetland system associated with the shoreline of Friars Cove/Lake Toho, located south of and adjacent to Friar's Cove Road.

Assessment area (AA) description

An aquatic wetland system with emergent vegetation dominated by native species, but containing nuisance/exotic species as well. Observed vegetation includes pickerelweed, arrowhead, cuban bulrush, cattail, soft rush, smartweed, marsh pennywort, watergrass, coinwort, spikerush, torpedo grass, and maidencane.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape)
Associated with the shorline of Firar's Cove, AA located along its northern edge. This cove is a part of the large Lake Tohopekaliga system.	Wetland ecosystem is common.

Functions	Mitigation for previous permit/other historic use
Functions provided include suitable wildlife habitat (foraging, nesting, protection, etc.) for some species, particularly aquatic & wetland dependent species; provides some water quality and storage.	None

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found	Anticipated Utilization by Listed Species (List species, their legal classification (E,T, SSC), type of use, and intensity of use of the assessment area)
Based on location, anticipated wildlife to include reptiles (moccasin, brown/green anoles, southern leopard frog, etc.) and assorted avian species (wading birds, raptor, songbird, etc.)	Wading birds (E,T,SSC), raptors (T,SSC), reptiles (T), mammals (SSC)

Observed Evidence of Wildlife Utilization
(List species directly observed, or other signs such as tracks, droppings, casings nests, etc.):

brown anole, black racer, green anole, leopard frog,cricket frog, oak toad, armadillo, raccoon, Red-tailed Hawk, Mourning Dove, Mockingbird, Quail, Sandhill Crane, Carolina Wren, Wood stork, white eye vireo grey squirrel, deer, oldfield rat, etc.

Additional relevant factors:

Cattle grazing and drainage improvements have adversely altered hydrology, water quality, and vegetative components of wetland system.

Assessment conducted by:	Assessment date(s):
Morgan Clark	9/6/2017

PART II - Quantification of Assessment Area (impact or mitigation)
(See Section 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
Fontana	180510-569	W-16 (sec)
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Morgan Clark	9/6/2017

Scoring Guidance
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed

Optimal (10)	Moderate (7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

	w/o pres or current	with	
.500 (6)(a) Location and Landscape Support	7	6	Minimal adverse impact to AA based on adjacent development.
.500 (6)(b) Water Environment (n/a for uplands)	7	7	No changes to AA based on adjacent development.
.500 (6)(c) Community structure 1. Vegetation and/or 2. Benthic Community	6	5	Minimal adverse impact to AA based on adjacent development.

Score = sum of above scores/30 (if uplands, divide by 20)	w/o pres or current	with
	0.666666667	0.60

Delta = [with current]
-0.0667

If preservation as mitigation,	
Preservation adjustment factor =	
Adjusted mitigation delta =	

If mitigation	
Time lag (t-factor) =	
Risk factor =	

For impact assessment areas	
FL = delta x acres =	0.028

For mitigation assessment areas	
RFG = delta/(t-factor x risk) =	

W & SW ID	ACRES	FLUCCS SYMBOL	FLUCCS NAME
D1	0.22	510	Streams & Waterways
D2	0.06	510	Streams & Waterways
D3	3.15	510	Streams & Waterways
D4	0.18	510	Streams & Waterways
D5	0.12	510	Streams & Waterways
D6	1.30	510	Streams & Waterways
D7	0.38	510	Streams & Waterways
D8	1.04	510	Streams & Waterways
D9	1.05	510	Streams & Waterways
D10	0.02	510	Streams & Waterways
D11	0.47	510	Streams & Waterways
D12	0.19	510	Streams & Waterways
D13	8.44	510	Streams & Waterways
D14	0.16	510	Streams & Waterways
D15	12.14	510	Streams & Waterways
D16	3.08	510	Streams & Waterways
D17	2.60	510	Streams & Waterways
SW1	0.38	534	Reservoirs, less than 10 acres
SW2	0.37	534	Reservoirs, less than 10 acres
W1	0.49	641	Freshwater Marsh
W2	0.86	640	Vegetated Non-Forested Wetlands
W3	11.43	641	Freshwater Marsh
W4	1.75	630	Wetland Forested Mixed
W5	1.10	641	Freshwater Marsh
W6	1.66	641	Freshwater Marsh
W7	0.89	640	Vegetated Non-Forested Wetlands
W8	1.45	641	Freshwater Marsh
W9	0.68	640	Vegetated Non-Forested Wetlands
W10	0.84	640	Vegetated Non-Forested Wetlands
W11	6.47	641	Freshwater Marsh
W12	2.38	640	Vegetated Non-Forested Wetlands
W13	4.83	641	Freshwater Marsh
W14	24.13	640	Vegetated Non-Forested Wetlands
W15	5.12	619	Exotic Wetland Hardwoods
W16	15.77	521	Lakes, larger than 500 acres

SPECIFIC PURPOSE SURVEY

DESCRIPTION:

LOTS 121 AND 122 AND THAT PORTION OF LOTS 119 AND 123, LYING WESTERLY OF FLORIDA'S TURNPIKE, THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 27, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK B, PAGE 14; AND LOTS 113 THROUGH 119 AND LOTS 122 THROUGH 128, THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 28, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK B, PAGE 15; AND LOTS 1 THROUGH 5, LOTS 8 THROUGH 17, LOTS 20 THROUGH 29, LOTS 32 THROUGH 41, LOTS 44 THROUGH 55, LOTS 58 THROUGH 71, LOTS 74 THROUGH 80 AND A PORTION OF LOTS 72 AND 73, THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 33, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK B, PAGE 17; AND LOTS 7 THROUGH 10, LOTS 23 THROUGH 26, LOTS 39 THROUGH 42, LOTS 55 THROUGH 58, LOTS 71 THROUGH 74, LOTS 87 THROUGH 90 AND THAT PORTION OF LOTS 6, 11, 22, 27, 38, 43, 54, 59, 70, 75, 86, 91, 102, 107, 118, 123 AND 124, LYING WESTERLY OF FLORIDA'S TURNPIKE, THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 34, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK B, PAGE 18, ALL BEING OF THE PUBLIC RECORDS OF OSCEOLA COUNTY, FLORIDA; AND THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 33, TOWNSHIP 26 SOUTH, RANGE 30 EAST; AND THAT PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 34, TOWNSHIP 26 SOUTH, RANGE 30 EAST, LYING NORTHEASTERLY OF FRIAR'S COVE ROAD; LESS RIGHT-OF-WAY FOR FRIAR'S COVE ROAD AND LESS RIGHT-OF-WAY AS SHOWN ON THE AFORESAID PLATS OF THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION; ALL LYING IN SECTIONS 27, 28, 33 AND 34, TOWNSHIP 26 SOUTH, RANGE 30 EAST, OSCEOLA COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHWEST CORNER OF SAID LOT 119 OF SAID THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 28; THENCE RUN S 89°41'20" E, ALONG THE NORTH LINE OF SAID LOT 119 AND THE EASTERLY EXTENSION THEREOF, A DISTANCE OF 1980.71 FEET TO A POINT ON THE WEST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION 28; THENCE RUN S 89°19'13" E, A DISTANCE OF 17.50 FEET TO THE NORTHWEST CORNER OF SAID LOT 116; THENCE CONTINUE S 89°19'13" E, ALONG THE NORTH LINE OF SAID LOT 116 AND THE EASTERLY EXTENSION THEREOF, A DISTANCE OF 2597.77 FEET TO A POINT ON THE EAST LINE OF SAID LOT 113; THENCE RUN S 00°05'51" W, ALONG SAID EAST LINE, A DISTANCE OF 332.65 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 113; THENCE RUN S 89°16'02" E, ALONG THE EASTERLY EXTENSION OF THE SOUTH LINE OF SAID LOT 113, A DISTANCE OF 20.00 FEET TO A POINT ON THE WEST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 27; THENCE RUN S 89°37'55" E, A DISTANCE OF 20.00 FEET TO THE NORTHWEST CORNER OF SAID LOT 121 OF SAID THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 27; THENCE CONTINUE S 89°37'55" E, ALONG THE NORTH LINE OF SAID LOT 121, A DISTANCE OF 645.86 FEET TO A POINT ON THE WEST LINE OF SAID LOT 119 OF SAID THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 27; THENCE RUN N 00°02'59" E, ALONG SAID WEST LINE, A DISTANCE OF 332.37 FEET TO A POINT ON THE NORTH LINE OF SAID LOT 119; THENCE RUN S 89°36'23" E, ALONG SAID NORTH LINE, A DISTANCE OF 618.45 FEET TO A POINT ON THE WESTERLY LIMITED ACCESS RIGHT-OF-WAY LINE OF FLORIDA'S TURNPIKE; THENCE RUN S 07°19'00" E, ALONG SAID WESTERLY LIMITED ACCESS RIGHT-OF-WAY LINE, A DISTANCE OF 5868.32 FEET TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY LINE OF FRIAR'S COVE ROAD, AS SHOWN AND DESCRIBED ON FLORIDA STATE TURNPIKE AUTHORITY RIGHT OF WAY MAP STATION 4389+39.07 TO STATION 4443+03.50, OSCEOLA COUNTY, FLORIDA; THENCE NORTHWESTERLY, ALONG SAID NORTHEASTERLY RIGHT-OF-WAY LINE, THE FOLLOWING COURSES AND DISTANCES; RUN S 89°59'03" W, A DISTANCE OF 113.53 FEET TO A POINT OF CURVATURE OF A CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1070.92 FEET AND A CENTRAL ANGLE OF 23°44'04"; THENCE RUN NORTHWESTERLY, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 443.62 FEET TO A POINT; THENCE RUN S 23°43'07" W, A DISTANCE OF 30.00 FEET TO A POINT ON A NON-TANGENT CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1100.92 FEET AND A CENTRAL ANGLE OF 21°15'56"; THENCE ON A CHORD BEARING OF N 55°38'55" W, RUN 408.61 FEET ALONG THE ARC OF SAID CURVE TO THE POINT OF TANGENCY THEREOF; THENCE RUN N 45°00'57" W, A DISTANCE OF 951.16 FEET TO A POINT OF CURVATURE OF A CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 1190.92 FEET AND A CENTRAL ANGLE OF 45°00'00"; THENCE RUN NORTHWESTERLY, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 935.35 FEET TO THE POINT OF TANGENCY THEREOF; THENCE RUN S 89°59'03" W, A DISTANCE OF 73.53 FEET; THENCE RUN S 00°00'57" E, A DISTANCE OF 16.46 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID FRIAR'S COVE ROAD, AS DESCRIBED AND RECORDED IN DEED BOOK 163, PAGE 407, PUBLIC RECORDS OF OSCEOLA COUNTY, FLORIDA; THENCE RUN S 89°51'04" W, ALONG SAID NORTH RIGHT-OF-WAY LINE, A DISTANCE OF 2826.17 FEET TO A POINT ON THE EAST LINE OF LOT 75, THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 33; THENCE RUN S 00°17'28" E, ALONG SAID EAST LINE, A DISTANCE OF 50.00 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 75; THENCE RUN S 89°51'04" W, ALONG THE SOUTH LINE OF SAID LOT 75 AND THE WESTERLY EXTENSION THEREOF, A DISTANCE OF 1319.79 FEET TO A POINT ON THE WEST LINE OF SAID LOT 74; THENCE RUN N 00°16'57" W, ALONG THE WEST LINE OF SAID LOT 74, A DISTANCE OF 327.03 FEET; THENCE RUN S 63°05'39" W, A DISTANCE OF 88.16 FEET; THENCE RUN N 00°16'57" W, A DISTANCE OF 162.82 FEET; THENCE RUN N 41°03'55" E, A DISTANCE OF 119.30 FEET TO A POINT ON THE WEST LINE OF SAID LOT 71, THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 33; THENCE RUN N 00°16'57" W, ALONG THE WEST LINE OF SAID LOT 71 AND THE NORTHERLY EXTENSION THEREOF, A DISTANCE OF 784.23 FEET TO A POINT ON THE SOUTH LINE OF THE NORTHWEST 1/4 OF SAID SECTION 33; THENCE RUN N 00°19'18" W, A DISTANCE OF 17.50 FEET TO THE SOUTHWEST CORNER OF SAID LOT 44; THENCE CONTINUE N 00°19'18" W, ALONG THE WEST LINE OF SAID LOT 44 AND THE NORTHERLY EXTENSION THEREOF, A DISTANCE OF 2632.86 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 28; THENCE RUN N 00°02'46" E, A DISTANCE OF 20.00 FEET TO THE SOUTHWEST CORNER OF SAID LOT 122, THE SEMINOLE LAND AND INVESTMENT COMPANY'S (INCORPORATED) SUBDIVISION OF SECTION 28; THENCE CONTINUE N 00°02'46" E, ALONG THE WEST LINE OF SAID LOT 122 AND THE NORTHERLY EXTENSION THEREOF, A DISTANCE OF 641.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 677.34 ACRES, MORE OR LESS.

SURVEYORS NOTES:

1. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

2. LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS OF WAY, EASEMENTS, OWNERSHIP, OR OTHER INSTRUMENTS OF RECORD, BY THIS FIRM.

3. REVISIONS DO NOT CONSTITUTE A RE-CERTIFICATION OF THE EXISTING FIELD CONDITIONS OF THIS SURVEY.

4. BEARINGS SHOWN HEREON ARE BASED ON THE WESTERLY LIMITED ACCESS RIGHT OF WAY LINE OF THE FLORIDA TURNPIKE AS BEING S07°19'00"E (ASSUMED).

5. THE DESCRIPTION SHOWN HEREON WAS SUPPLIED BY THE CLIENT.

6. UNDERGROUND IMPROVEMENTS AND INSTALLATIONS HAVE NOT BEEN LOCATED.

7. THIS IS NOT A BOUNDARY SURVEY. THE SPECIFIC PURPOSE OF THIS SURVEY IS SHOW WETLAND LOCATIONS RELATED TO THE BOUNDARY AS FLAGGED BY BIO-TECH CONSULTING, INC.

8. NO INTERIOR IMPROVEMENTS HAVE BEEN LOCATED UNLESS OTHERWISE INDICATED.

9. THE ELEVATIONS SHOWN HEREON ARE BASED ON NATION GEODETIC SURVEY DATUM PER BENCH MARK NUMBER C 514, ELEVATION = 87.65 AND D 514, ELEVATION = 57.22 (NAVD 1988)

10. THE ELECTRONIC FILE FOR THIS PROJECT IS THE PROPERTY OF BISHMAN SURVEYING AND MAPPING, INC. AND IS NOT THE PROPERTY OF THE CLIENT.

Line Table W-1

Line #	Direction	Length
L1	S30°28'54"E	41.61'
L2	S63°51'15"E	37.90'
L3	N89°52'14"E	46.46'
L4	N56°49'54"E	40.14'
L5	N35°31'24"E	39.33'
L6	N16°41'57"E	39.40'
L7	N35°56'42"E	71.20'
L8	N55°03'25"W	24.54'
L9	N87°25'37"W	46.22'
L10	S51°43'42"W	80.42'
L11	S01°41'43"E	63.25'

Line Table W-2

Line #	Direction	Length
L12	N59°18'52"E	61.98'
L13	S86°40'49"E	62.12'
L14	S58°52'57"E	38.32'
L15	S12°20'13"E	103.44'
L16	S25°41'14"W	66.50'
L17	S40°47'49"W	60.90'
L18	S87°54'25"W	59.64'
L19	N66°06'25"W	32.40'
L20	N47°34'00"W	51.07'
L21	N33°43'09"W	42.03'
L22	N22°04'49"E	128.12'

Line Table W-3

Line #	Direction	Length
L23	S76°36'26"W	51.39'
L24	N61°07'13"W	75.23'
L25	N22°13'28"W	55.01'
L26	S82°43'04"W	156.35'
L27	N83°08'35"W	102.87'
L28	S42°26'30"W	61.72'
L29	S48°32'44"W	100.13'
L30	N78°36'31"W	62.12'
L31	N22°44'10"W	59.42'
L32	N05°47'06"E	66.48'
L33	N70°35'27"E	77.53'
L34	N01°56'35"E	120.01'
L35	S87°25'00"W	100.02'
L36	N79°48'43"E	99.84'
L37	N74°07'16"E	90.16'
L38	S49°11'36"E	69.65'
L39	N86°58'53"E	36.61'
L40	N29°43'35"E	38.63'
L41	N30°42'08"W	27.98'
L42	N84°04'55"W	34.25'
L43	S79°08'49"W	46.27'
L44	N62°16'42"W	33.01'
L45	N85°46'46"W	28.56'
L46	N47°37'37"E	24.07'
L47	N17°36'18"E	48.33'
L48	N34°35'52"E	14.76'
L49	N82°41'40"E	25.95'
L50	N31°03'36"W	149.26'
L51	N05°26'03"E	81.17'
L52	N20°53'32"W	112.18'
L53	N14°05'06"E	192.55'
L54	N22°13'46"E	83.97'
L55	N27°49'24"W	255.40'
L56	N20°53'43"W	214.61'
L57	N64°09'11"E	57.31'
L58	S49°58'26"E	298.51'
L59	S71°50'43"E	68.58'
L60	S62°55'48"E	158.22'

Line Table W-4

Line #	Direction	Length
L61	S89°37'55"E	9.41'
L62	N46°37'29"E	82.16'
L63	N63°17'21"E	159.92'
L64	N43°57'01"E	233.66'
L65	N34°39'26"E	47.25'

Line Table W-5

Line #	Direction	Length
L66	N60°43'55"E	22.26'
L67	S81°53'13"E	34.78'
L68	N57°41'15"E	58.40'
L69	N30°54'27"E	51.79'
L70	N17°13'53"E	33.74'
L71	N08°07'31"W	70.79'
L72	N75°01'02"W	100.22'
L73	N30°29'19"W	37.40'
L74	S88°16'58"W	24.87'
L75	S53°18'30"W	27.98'
L76	S24°01'45"W	41.58'
L77	S03°41'41"E	91.49'
L78	S34°19'32"W	61.60'
L79	N76°00'51"W	73.63'
L80	S02°13'03"E	118.06'
L81	N87°01'55"E	70.21'
L82	N64°43'20"E	62.03'
L83	N17°14'47"E	56.97'

Line Table W-6

Line #	Direction	Length
L84	N26°06'07"W	33.69'
L85	S57°56'23"W	70.50'
L86	S66°34'29"W	32.50'
L87	N74°21'47"W	67.18'
L88	N22°52'43"W	131.65'
L89	N03°32'17"E	93.90'
L90	N04°11'01"E	71.95'
L91	N34°01'49"E	57.70'
L92	N56°45'23"E	38.34'
L93	S82°25'18"E	90.38'
L94	S54°29'17"E	48.39'
L95	N25°07'25"E	35.61'
L96	S05°45'44"E	103.16'
L97	S01°48'25"E	113.57'
L98	S19°37'25"E	11.36'
L99	S11°09'01"W	42.00'
L100	S06°17'58"W	78.27'

Line Table W-7

Line #	Direction	Length
L101	S39°42'07"E	24.57'
L102	S18°59'26"E	57.45'
L103	S18°56'04"W	71.45'
L104	S52°56'38"W	106.08'
L105	S21°34'19"W	44.58'
L106	N84°56'08"W	96.40'
L107	N25°26'04"W	62.40'
L108	N01°30'02"E	38.80'
L109	N13°31'08"E	53.93'
L110	N68°59'05"E	85.07'
L111	N43°20'11"E	54.93'
L112	N76°30'20"E	84.27'
L113	N76°30'20"E	84.27'

Line Table W-8

Line #	Direction	Length
L114	S57°50'01"W	89.75'
L115	S21°49'26"W	72.06'
L116	S02°08'46"E	108.79'
L117	S16°42'07"E	31.40'
L118	S39°38'06"E	21.89'
L119	N76°24'40"E	57.39'
L120	S75°54'05"E	38.95'
L121	N66°15'41"E	85.14'
L122	N52°54'42"E	41.53'
L123	N62°14'37"E	51.00'
L124	N17°10'42"E	72.85'
L125	N11°47'41"W	94.03'
L126	N68°27'31"W	58.81'
L127	S80°09'28"W	54.80'
L128	N82°06'10"W	68.31'

Line Table W-9

Line #	Direction	Length
L129	S61°09'49"W	66.35'
L130	S08°15'54"E	36.74'
L131	S88°00'37"W	114.80'
L132	N67°07'40"W	62.85'
L133	S88°03'14"W	102.86'
L134	S05°00'14"E	56.00'
L135	S69°00'09"E	52.14'
L136	N79°35'43"E	55.86'
L137	S88°24'19"E	55.16'
L138	S80°54'05"E	136.18'
L139	S71°14'24"E	40.81'
L140	S87°49'06"E	26.69'
L141	N20°20'40"E	83.20'
L142	N29°51'40"W	23.67'
L143	N43°49'59"W	75.51'

Line Table W-10

Line #	Direction	Length
L144	N29°01'43"E	26.98'
L145	N82°31'04"E	45.88'
L146	N39°40'37"E	68.99'
L147	N57°57'16"W	78.16'
L148	N38°35'25"E	72.68'
L149	N85°37'33"E	83.46'
L150	N13°48'26"E	37.23'
L151	N44°29'49"W	93.96'
L152	N61°00'27"W	38.39'
L153	N00°54'53"W	105.31'

Line Table W-11

Line #	Direction	Length
L154	S57°12'37"W	103.77'
L155	S60°48'12"W	174.45'
L156	N73°45'33"W	68.38'
L157	S81°24'46"W	84.81'
L158	S47°51'56"W	47.26'
L159	S08°53'40"W	92.94'
L160	S08°39'51"W	82.11'
L161	S40°16'33"E	97.10'
L162	S09°44'28"E	117.29'
L163	S03°38'43"W	80.60'
L164	S29°31'35"E	112.82'
L165	S85°48'07"E	63.07'
L166	N66°00'33"E	112.56'
L167	N76°17'25"E	38.43'
L168	S78°50'18"E	81.28'
L169	S23°06'59"E	22.00'
L170	N62°46'03"E	74.65'
L171	N52°53'02"W	71.00'
L172	N13°29'15"E	99.49'
L173	N22°36'39"E	103.57'
L174	N04°18'46"E	80.93'
L175	N00°05'46"W	77.60'
L176	N26°45'48"E	105.85'
L177	N36°26'34"E	99.36'
L178	N84°35'27"W	58.78'
L179	N18°53'19"W	96.30'
L180	N69°30'22"W	61.07'

Line Table W-12

Line #	Direction	Length
L181	N75°47'37"E	57.66'
L182	S68°21'39"E	41.11'
L183	S18°00'18"E	56.82'
L184	S24°03'11"E	46.02'
L185	N79°34'04"E	62.58'
L186	N68°31'25"E	65.70'
L187	N39°33'15"E	94.21'
L188	N09°31'56"E	114.18'
L189	N03°19'17"E	92.96'
L190	N52°34'59"W	90.02'
L191	N77°56'34"W	97.06'
L192	N83°36'51"W	104.81'
L193	S54°47'35"W	75.34'

Line Table W-13

Line #	Direction	Length
L194	S79°48'09"E	85.63'
L195	S88°06'30"E	57.41'
L196	N89°22'11"E	114.47'
L197	N60°36'21"E	66.45'
L198	N00°45'00"E	113.20'
L199	N03°30'13"W	84.65'
L200	N28°49'41"W	105.35'
L201	N34°51'53"W	104.90'
L202	N41°51'23"W	65.85'
L203	N14°59'09"E	20.21'
L204	N72°03'16"W	104.01'
L205	N85°07'42"W	60.45'
L206	S80°23'15"W	59.78'
L207	S67°20'28"W	36.93'
L208	S53°28'25"W	65.47'
L209	S21°16'57"W	65.77'
L210	S27°29'16"W	52.46'
L211	S09°43'53"W	83.15'
L212	S09°23'06"E	79.30'
L213	S23°39'16"E	56.44'
L214	S43°51'14"E	66.81'
L215	S48°34'51"E	92.89'
L216	S83°37'49"E	54.94'

Line Table W-14

Line #	Direction	Length
L217	N76°20'04"E	92.20'
L218	N62°26'39"E	108.02'
L219	N04°19'17"E	171.73'
L220	N01°36'36"E	188.65'
L221	N03°49'05"W	92.43'
L222	N28°05'10"W	70.17'
L223	N52°04'17"W	51.38'
L224	N55°36'09"E	76.07'
L225	N53°57'59"E	93.66'
L226	N22°57'24"E	74.73'
L227	N32°11'58"W	102.99'
L228	N55°06'42"W	85.90'
L229	S27°47'09"W	101.99'
L230	N84°49'07"W	27.59'
L231	N84°49'07"W	27.59'
L232	N01°04'15"E	59.39'
L233	N29°30'30"W	103.51'
L234	N03°29'05"E	41.97'
L235	N76°40'48"E	54.20'
L236	S80°35'12"E	58.19'
L237	N58°18'31"E	21.07'
L238	S75°32'59"E	74.91'
L239	S42°36'35"E	154.13'
L240	S13°31'26"W	103.82'
L241	S55°29'35"E	88.91'
L242	S62°49'40"E	202.08'
L243	S64°03'03"E	234.70'
L244	S40°26'43"W	71.68'
L245	S66°31'22"W	108.95'
L246	S05°08'48"E	136.97'
L247	S14°46'06"E	148.59'
L248	S02°25'24"E	247.47'
L249	S44°40'42"E	113.87'
L250	S75°40'21"E	135.97'
L251	N72°14'49"E	73.08'
L252	S25°21'37"E	164.86'
L253	S66°19'24"E	103.41'
L254	S86°12'52"E	192.92'
L255	S18°35'56"W	176.55'
L256	S80°35'37"W	133.63'
L257	S31°49'45"W	84.91'
L258	S03°35'19"E	34.37'

Line Table W-15

Line #	Direction	Length
L259	S49°58'32"E	81.13'
L260	S76°42'42"E	53.70'
L261	S16°30'58"W	57.44'
L262	S58°26'26"E	70.55'
L263	S08°11'54"E	59.08'
L264	S38°22'24"W	54.89'
L265	S08°21'25"W	49.28'
L266	S59°06'38"W	39.66'
L267	S83°37'19"W	56.19'
L268	S57°36'52"W	32.36'
L269	S23°22'11"W	38.42'
L270	S08°58'46"W	48.23'

Line Table W-16

Line #	Direction	Length
L271	N43°09'21"W	54.29'
L272	N06°39'32"W	173.11'
L273	N03°47'56"W	213.10'
L274	N58°07'30"E	64.58'
L275	N30°12'07"E	53.76'
L276	N48°18'55"E	67.18'
L277	N81°13'55"E	105.82'
L278	S86°22'23"E	135.93'
L279	S86°09'40"E	453.92'
L280	S31°08'42"E	46.66'
L281	S74°54'19"E	219.96'
L282	N16°05'28"E	82.10'
L283	S85°45'27"E	31.94'
L284	S22°28'04"W	74.53'
L285	S76°40'29"E	150.65'
L286	S68°50'29"E	132.91'
L287	S31°49'44"W	119.77'
L288	S55°27'49"E	95.08'
L289	S46°08'31"E	120.06'
L290	S43°04'10"E	65.55'
L291	N83°03'07"E	72.59'
L292	N41°38'36"E	60.86'
L293	N30°27'29"E	87.89'
L294	N58°50'31"E	39.25'
L295	S27°29'17"E	52.00'
L296	S16°36'53"E	58.07'
L297	S08°59'01"E	62.58'

Line Table SW-1

Line #	Direction	Length
L298	S76°26'54"W	37.33'
L299	N64°32'51"W	41.41'
L300	N04°43'06"W	57.68'
L301	N10°50'25"E	105.20'
L302	N53°31'24"E	17.30'
L303	S86°45'11"E	52.83'
L304	S57°48'18"E	25.98'
L305	S04°10'12"W	123.73'
L306	S27°45'01"W	45.10'

Line Table SW-2

Line #	Direction	Length
L307	S15°07'53"W	39.40'
L308	S23°02'38"E	40.35'
L309	S87°19'48"E	80.27'
L310	N85°57'29"E	94.81'
L311	N24°05'04"E	37.01'
L312	N17°00'11"W	47.53'
L313	N89°15'51"W	55.12'
L314	S83°00'19"W	94.51'

SECTION 27,28,33,34
TOWNSHIP 26 SOUTH
RANGE 30 EAST

SHEET 1 OF 2

BISHMAN
Surveying & Mapping, Inc.
CERTIFICATE OF AUTHORIZATION LB 7274
32 W. PLANT STREET Phone No. 407.905.8877
WINTER GARDEN, FL 34787 Fax No. 407.905.8875

ARON D. BISHMAN, P.S.M. FLORIDA REGISTRATION NO. 5668

REVISIONS:

JOB NUMBER: 14057.000

SURVEY DATE: 2/16/15
FIELD BY: B.MILLER
FIELD BOOK: 1501
PAGES: 39
FIELD FILE: 14057.M.F
DRAWING FILE: 15047 Bndy with Wetlands

SPECIFIC PURPOSE SURVEY

SHEET 2 OF 2

SECTION 27,28,33,34
TOWNSHIP 26 SOUTH
RANGE 30 EAST

BISHMAN Surveying & Mapping, Inc.
CERTIFICATE OF AUTHORIZATION LB 7274
32 W. PLANT STREET Phone No. 407.905.8877
WINTER GARDEN, FL 34787 Fax No. 407.905.8875

JOB NUMBER: 14057.000
DRAWING FILE: 14057 Bndy with Wetlands.dwg

GRAPHIC SCALE

300 0 150 300 600 1200

(IN FEET)
1 inch = 300 ft.

LEGEND:

R	RADIUS	℄	CENTERLINE
Δ	CENTRAL ANGLE	LB	LICENSED BUSINESS
L	LENGTH	PSM	PROFESSIONAL SURVEYOR & MAPPER
CH	CHORD	CMP	CORRUGATED METAL PIPE
CB	CHORD BEARING	HDPE	HIGH DENSITY POLYETHYLENE PIPE
POB	POINT OF BEGINNING	INV=69.73	INVERT ELEVATION
POC	POINT OF COMMENCEMENT	+ 68.51	EXISTING GROUND ELEVATION
O.R.	OFFICIAL RECORDS BOOK	60	EXISTING GROUND CONTOUR
PG.	PAGE		SITE BENCH MARK (AS INDICATED)
TYP.	TYPICAL		
W-1	WETLAND FLAG NUMBER OR WETLAND DELINEATION		

NO.	DATE	REVISIONS
3	2/22/21	REVISED W-14 & W-16 IMPACTS
2	11/5/18	REVISED PER COUNTY COMMENTS
1	6/28/18	REVISED PER SFWMD COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE 1"=1000'
DRAWN BY ACC
CHECKED BY JCN
JOB NUMBER 13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
KEYMAP

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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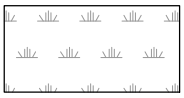
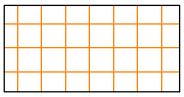
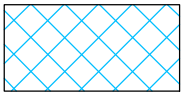
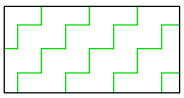
LEGEND

14 EXISTING WETLAND NUMBER

 EXISTING WETLANDS

 FILL IMPACTS TO WETLANDS

 DREDGE IMPACTS TO WETLANDS

 SECONDARY WETLAND IMPACTS

LABELS

WI = WETLAND IMPACT
WS = SECONDARY WETLAND IMPACT
(F) = IMPACTS DUE TO FILL IMPROVEMENTS
(D) = IMPACTS DUE TO DREDGE IMPROVEMENT

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE NTS
DRAWN BY ACC
CHECKED BY JCN
JOB NUMBER 13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
LEGEND

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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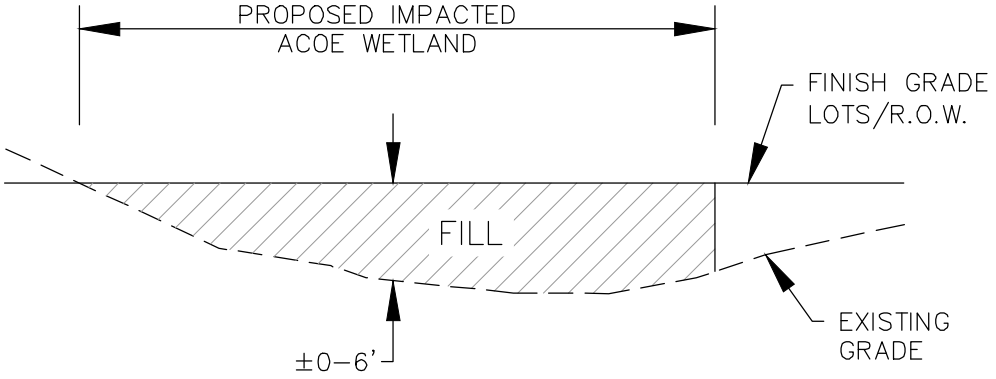
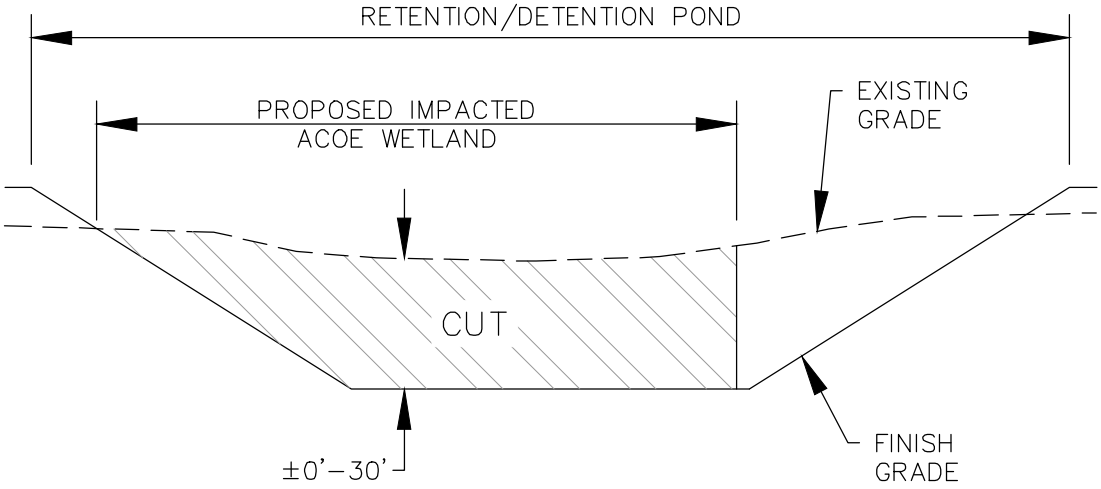


TYPICAL SECTION – FILL IMPACT
PROPOSED IMPACTED ACOE WETLAND



TYPICAL SECTION – CUT IMPACT
PROPOSED IMPACTED ACOE WETLAND

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE	NTS
DRAWN BY	ACC
CHECKED BY	JCN
JOB NUMBER	13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SECTIONS

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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WETLAND IMPACTS DUE TO FILL IMPROVEMENTS		
DESCRIPTION	AREA (SF)	AREA (AC)
WI-1	21,428	0.49
WI-2	37,298	0.86
WI-3A	488,744	11.21
WI-4A	76,207	1.75
WI-5	47,824	1.10
WI-6	72,501	1.66
WI-7A	33,508	0.77
WI-8	63,330	1.45
WI-9	29,826	0.68
WI-10A	19,052	0.44
WI-11A	3,265	0.07
WI-11B	108	0.01
WI-12A	23,531	0.54
WI-13A	7,111	0.17
WI-13B	7,549	0.17
WI-14A	7,717	0.18
WI-14B	1,061	0.02
WI-14D	175,246	4.03
WI-16A	7,125	0.16
WI-16B	183	0.004
WI-16C	1,943	0.0500
WI-16D	385	0.0090
TOTAL	1,124,942	25.82

WETLAND IMPACTS DUE TO DREDGE IMPROVEMENTS		
DESCRIPTION	AREA (SF)	AREA (AC)
WI-3B	9,767	0.22
WI-7B	5,258	0.12
WI-10B	17,503	0.40
WI-12B	80,274	1.84
WI-13C	195,639	4.49
WI-14C	357,250	8.20
WI-14E	1,838	0.04
TOTAL	667,529	15.31

SECONDARY WETLAND IMPACTS		
DESCRIPTION	AREA (SF)	AREA (AC)
WS-4B	19,099	0.44
WS-11C	2,583	0.06
WS-11D	1,860	0.04
WS-11E	2,197	0.05
WS-14E	34,969	0.80
WS-16E	18,298	0.42
TOTAL	79,006	1.81

PRESERVED WETLANDS		
DESCRIPTION	AREA (SF)	AREA (AC)
11	278,539	6.39
14	508,022	11.66
15	222,709	5.12
16	677,374	15.55
TOTAL	1,686,644	38.72

NO.	DATE	REVISIONS
3	2/22/21	REVISED W-14 & W-16 IMPACTS
2	11/5/18	REVISED PER COUNTY COMMENTS
1	6/28/18	REVISED PER SFWMD COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE: NTS
DRAWN BY: ACC
CHECKED BY: JCN
JOB NUMBER: 13189

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
TABLES

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE	1"=200'
DRAWN BY	ACC
CHECKED BY	JCN
JOB NUMBER	13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 1 OF 8

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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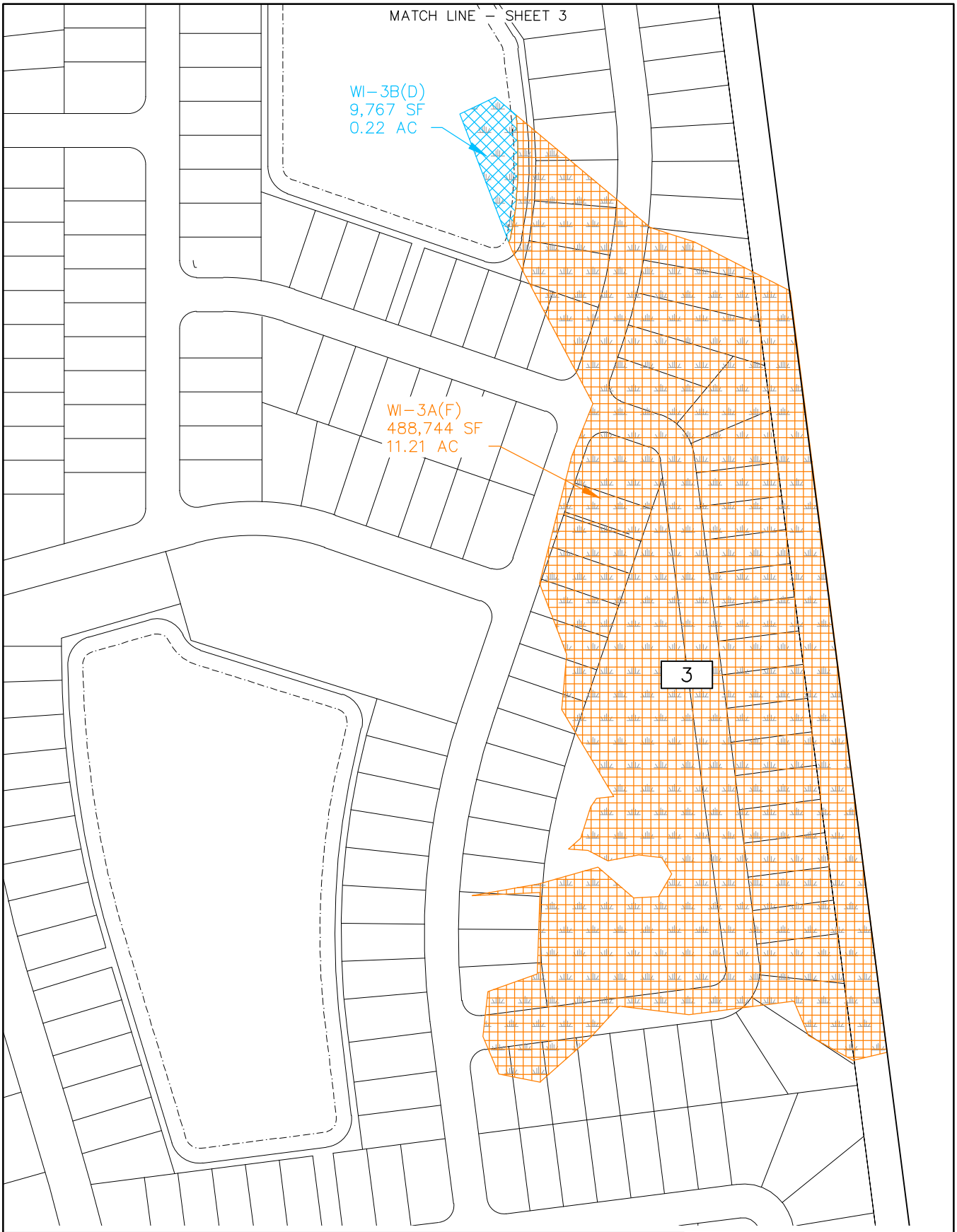

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE	1"=200'
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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 2 OF 8

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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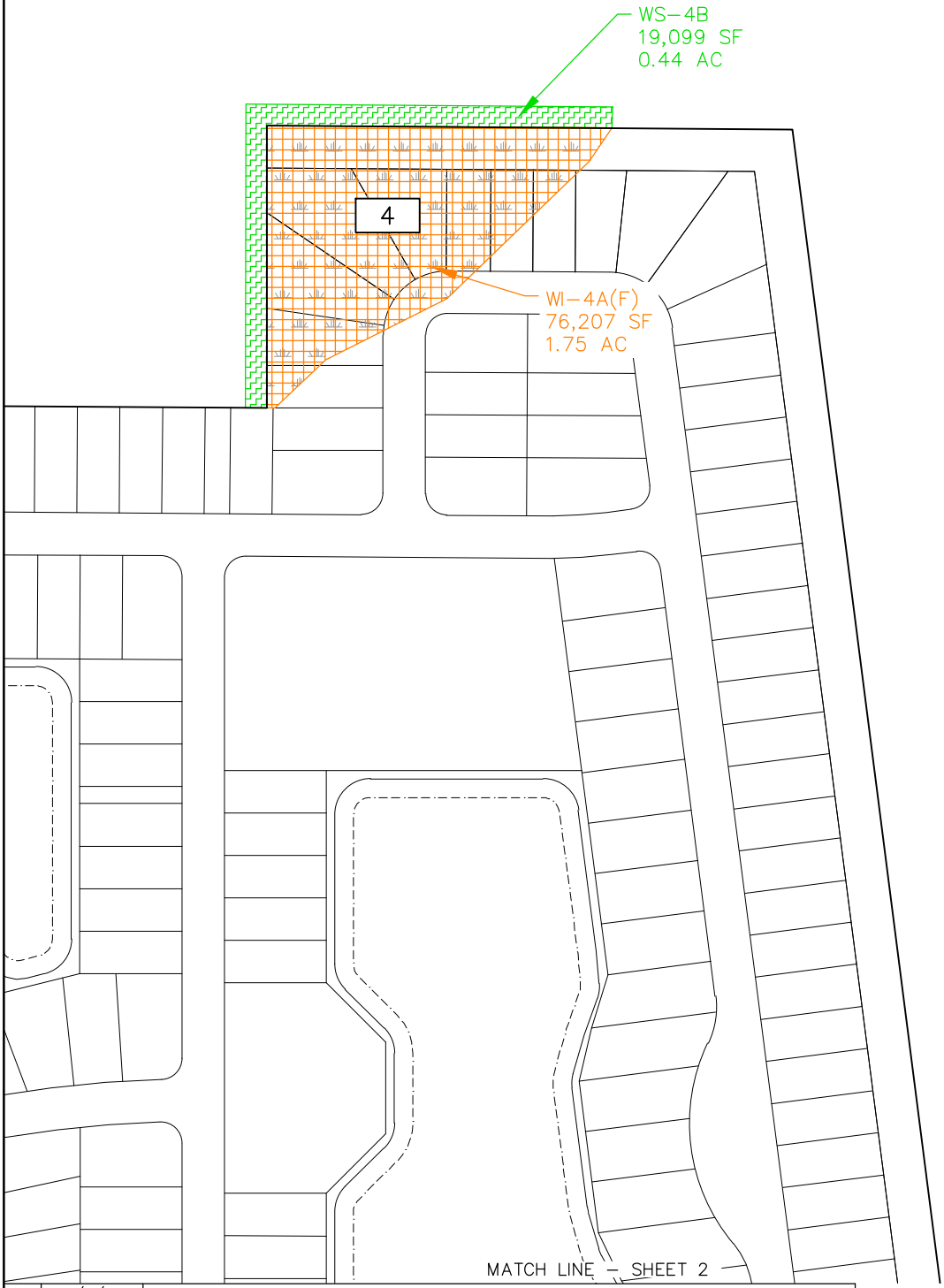

NO.	DATE	REVISIONS
1	6/5/18	REVISED SECONDARY IMPACTS PER SFWMD COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE 1"=200'
DRAWN BY ACC
CHECKED BY JCN
JOB NUMBER 13189

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 3 OF 8

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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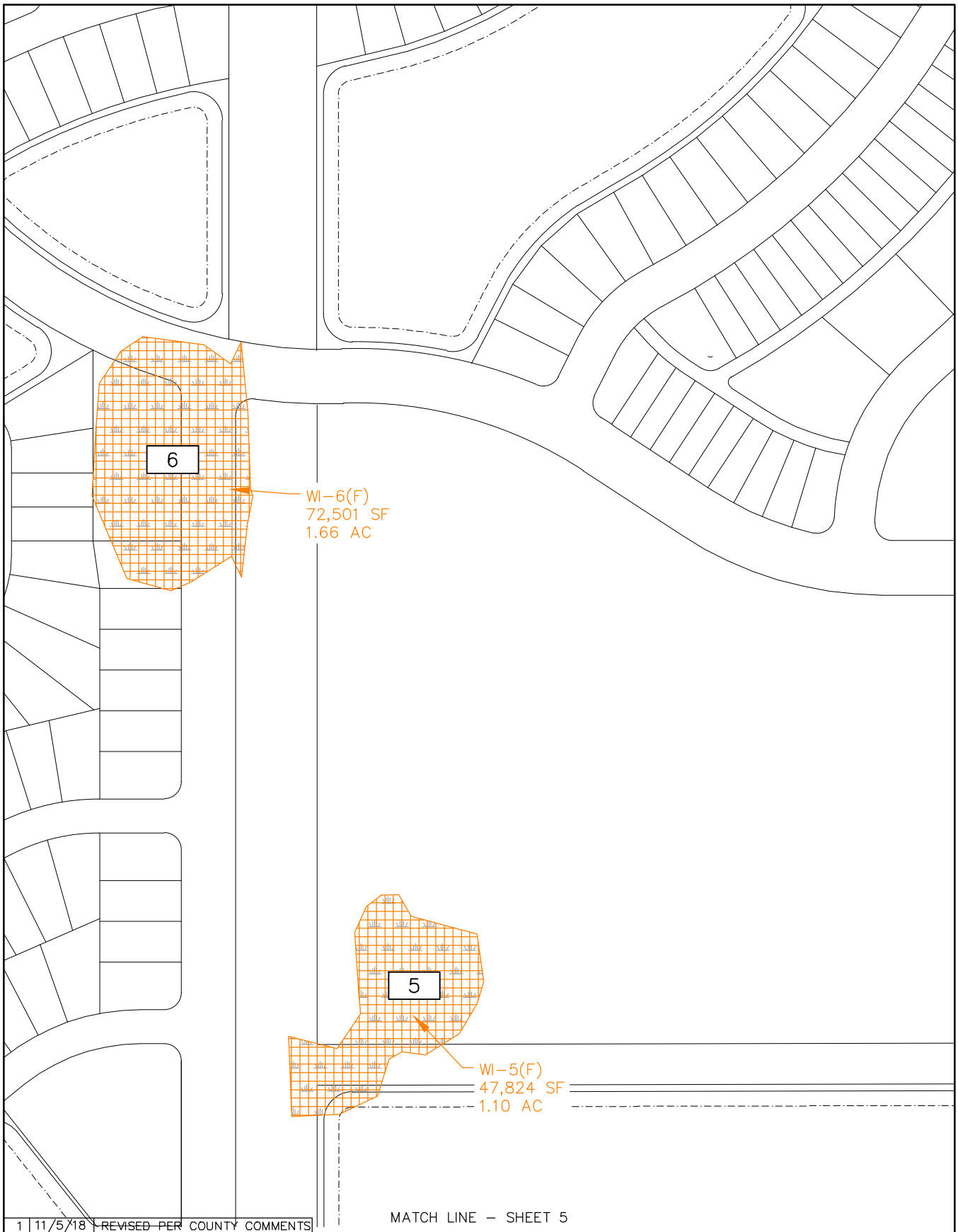

1	11/5/18	REVISED PER COUNTY COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE	1"=200'
DRAWN BY	ACC
CHECKED BY	JCN
JOB NUMBER	13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 4 OF 8

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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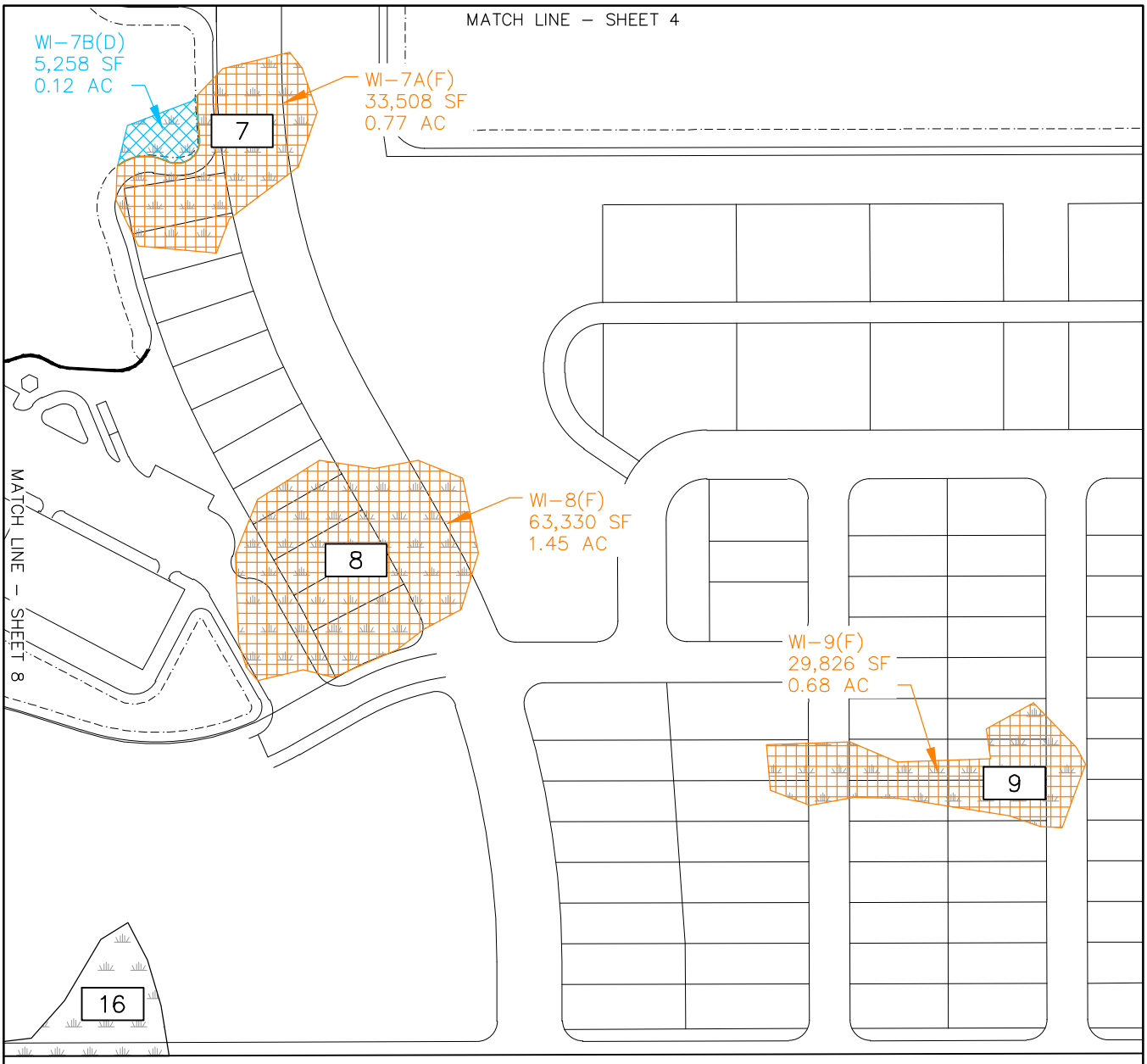

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE	1"=200'
DRAWN BY	ACC
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JOB NUMBER	13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 5 OF 8

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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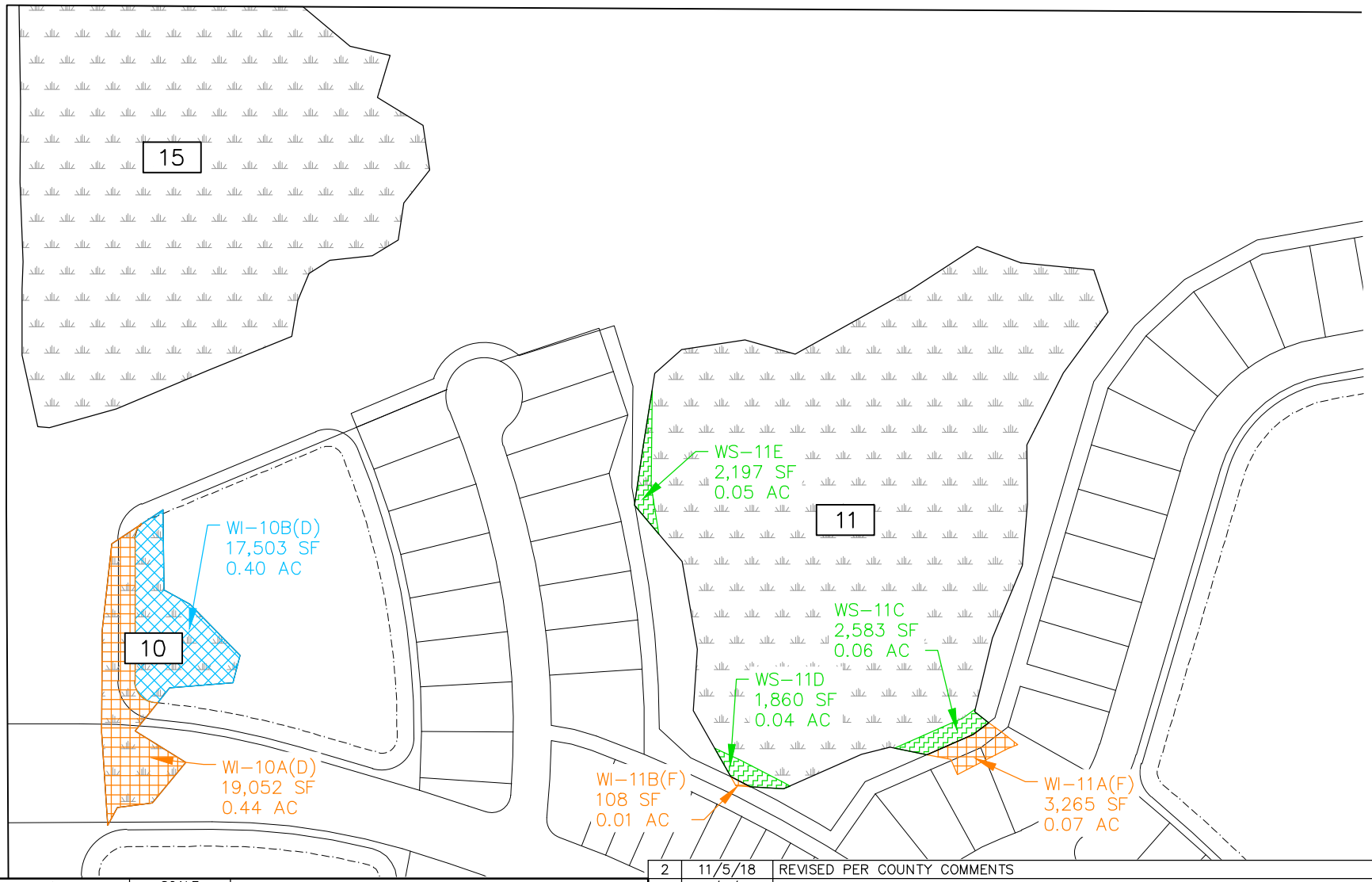

NO.	DATE	REVISIONS
2	11/5/18	REVISED PER COUNTY COMMENTS
1	6/5/18	REVISED SECONDARY IMPACTS PER SFWMD COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE 1"=200'
DRAWN BY ACC
CHECKED BY JCN
JOB NUMBER 13189

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 6 OF 8

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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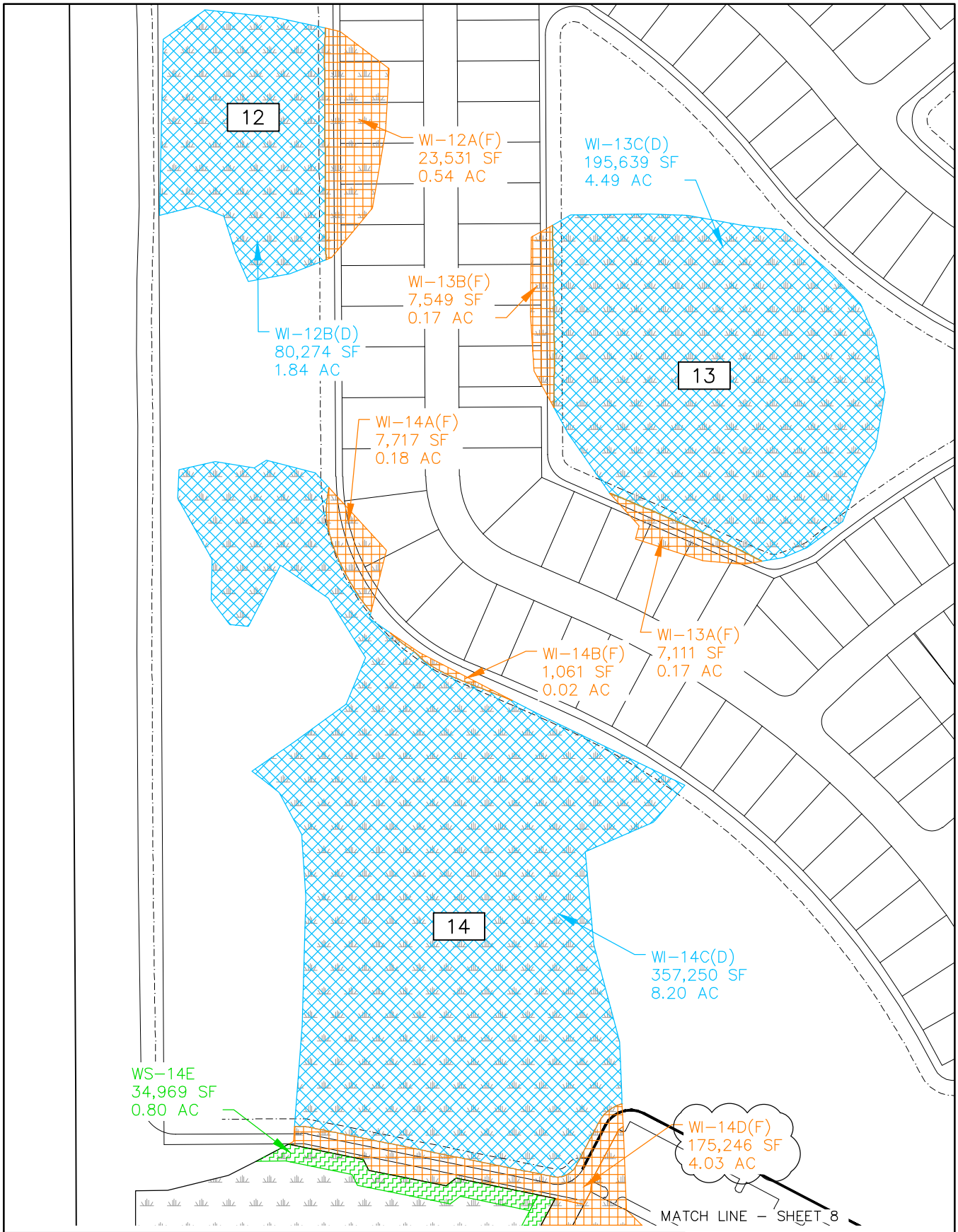

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE	1"=200'
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CHECKED BY	JCN
JOB NUMBER	13189

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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 7 OF 8

NO.	DATE	REVISIONS
1	2/22/21	W-14 & W-16 IMPACTS

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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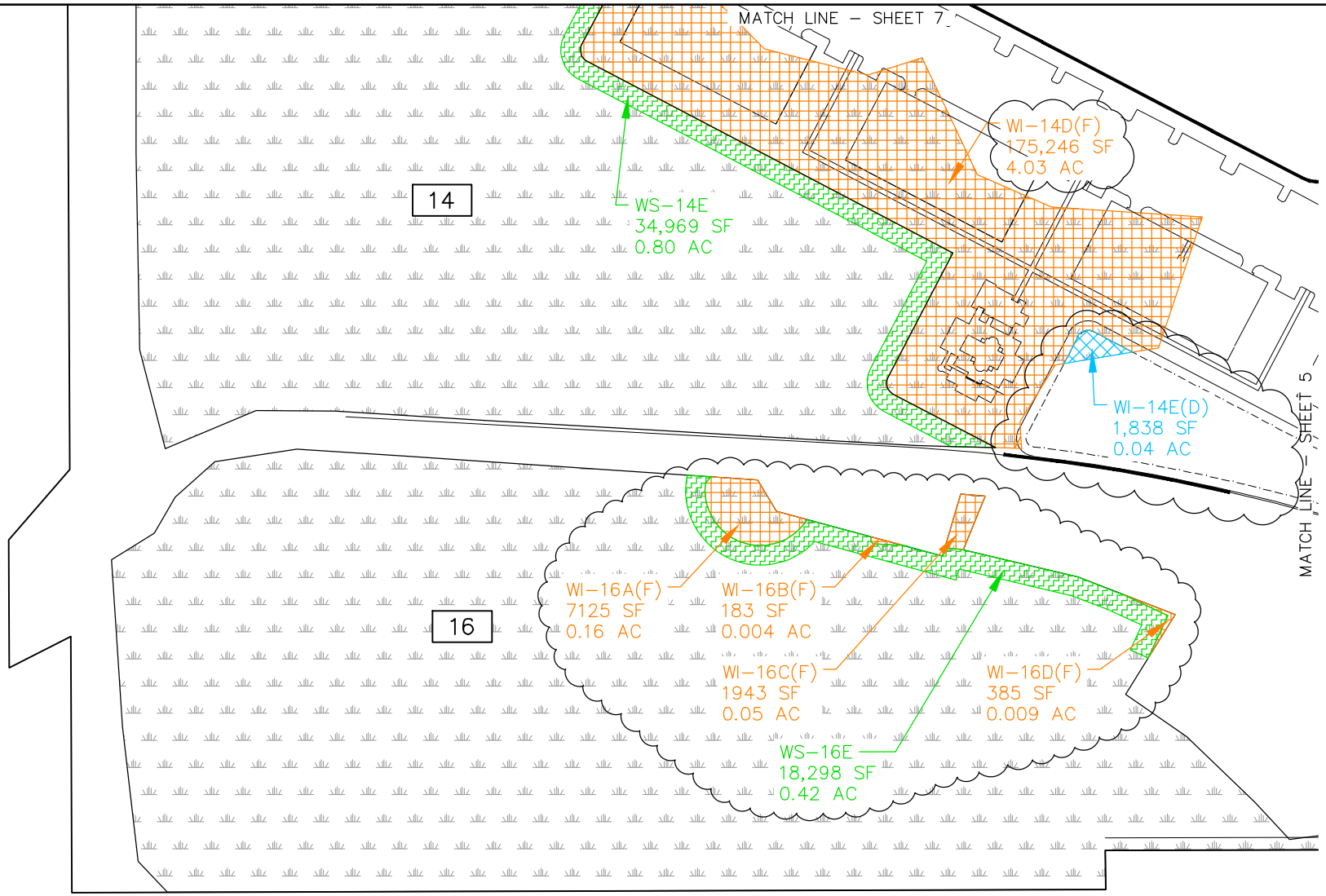

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
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SCALE	1"=200'
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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
WETLAND IMPACTS
SHEET 8 OF 8

NO.	DATE	REVISIONS
2	2/22/21	REVISED W–14 & W–16 IMPACTS
1	6/28/18	REVISED PER SFWMD COMMENTS

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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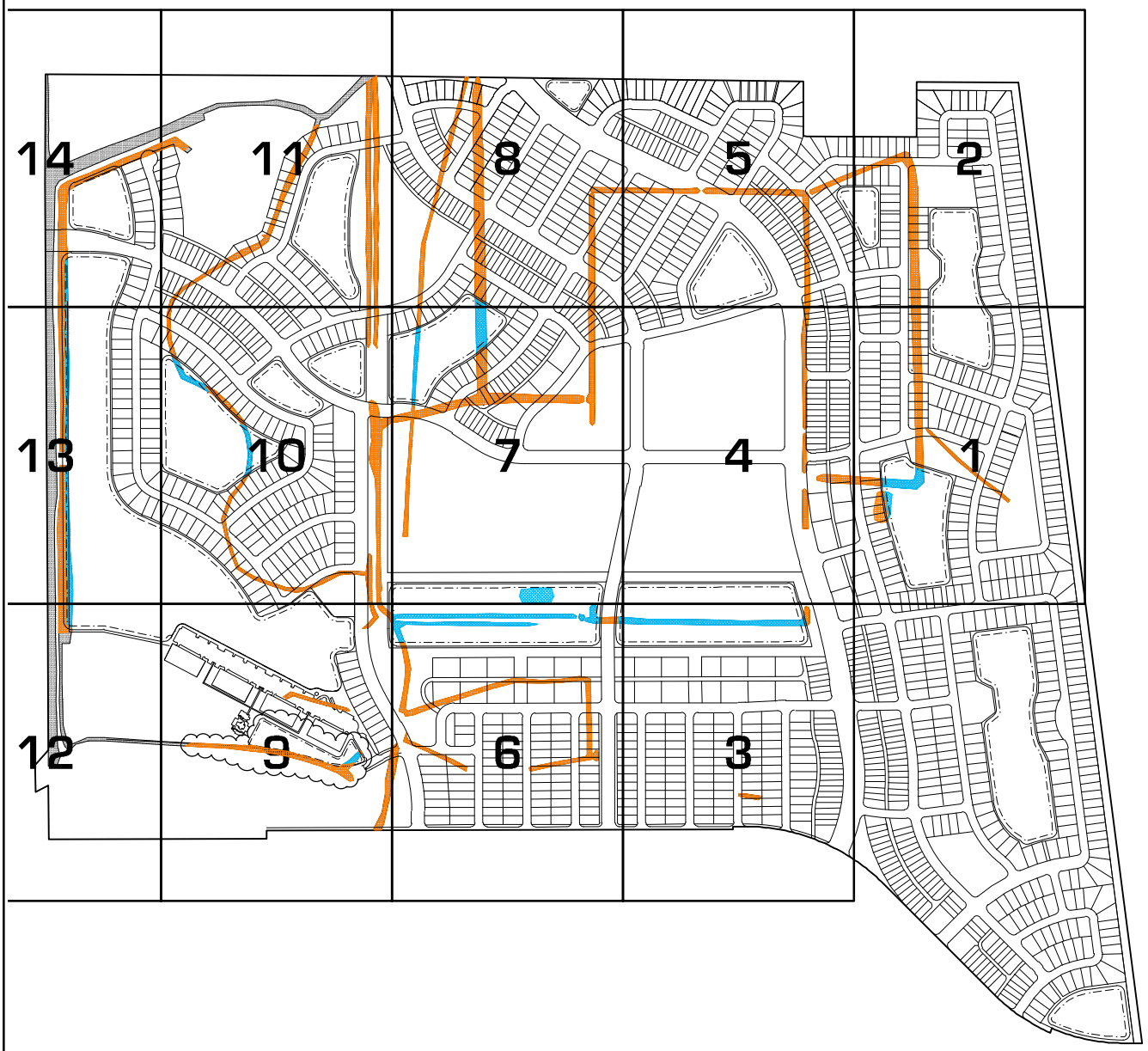

NO.	DATE	REVISIONS
3	2/22/21	REVISED D18 IMPACTS
2	11/5/18	REVISED PER COUNTY COMMENTS
1	6/28/18	REVISED PER SFWMD COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE 1"=1000'
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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
KEYMAP

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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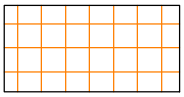
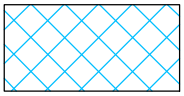
LEGEND

1	EXISTING SURFACE WATER NUMBER*
	EXISTING SURFACE WATERS
	FILL IMPACTS TO SURFACE WATERS
	DREDGE IMPACTS TO SURFACE WATERS

LABELS

SWI = SURFACE WATER IMPACT
(F) = IMPACTS DUE TO FILL IMPROVEMENTS
(D) = IMPACTS DUE TO DREDGE IMPROVEMENT

*NOTE: SURFACE WATERS WITHOUT A NUMBER DESIGNATION ARE DITCHES OR CANALS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE NTS
DRAWN BY ACC
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JOB NUMBER 13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
LEGEND

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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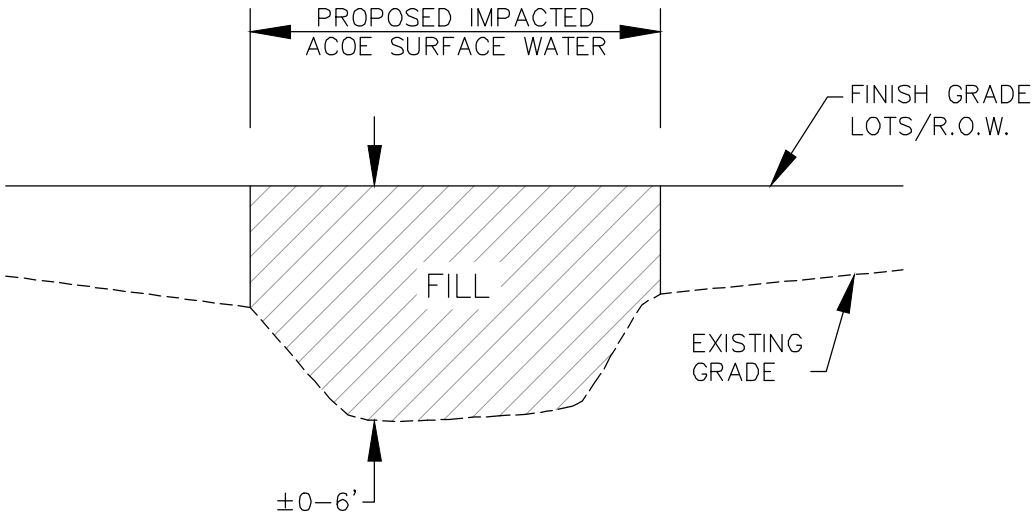
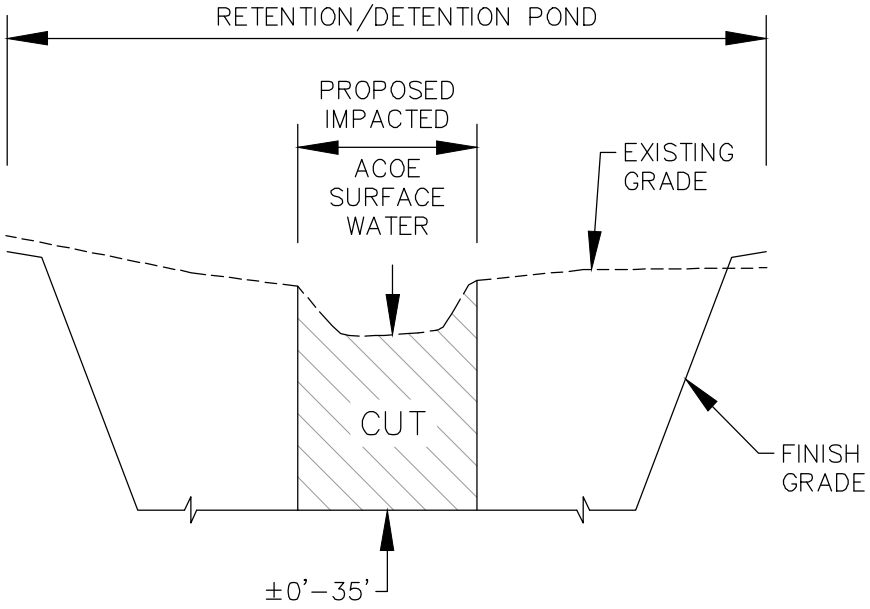


TYPICAL SECTION – FILL IMPACT
PROPOSED IMPACTED ACOE SURFACE WATER



TYPICAL SECTION – CUT IMPACT
PROPOSED IMPACTED ACOE SURFACE WATER

DONALD W. McINTOSH ASSOCIATES, INC. DONALD W. McINTOSH ASSOCIATES, INC. CERTIFICATE OF AUTHORIZATION NO. 68	SCALE NTS DRAWN BY ACC CHECKED BY JCN JOB NUMBER 13189	N	**FONTANA PROPERTY** **DREDGE & FILL PERMIT EXHIBIT** **SITE DEVELOPMENT** **SURFACE WATER IMPACTS** **SECTIONS**	JAMES C. NUGENT FLORIDA P.E. NO. 57553 DATE:_____

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SURFACE WATER IMPACTS DUE TO FILL IMPROVEMENTS			
DESCRIPTION	ID	AREA (SF)	AREA (AC)
SWI-1A	SW-1	12,896	0.30
SWI-A	D1	9,598	0.22
SWI-B	D3	105,963	2.43
SWI-D	D3	16,926	0.39
SWI-E	D2	2,731	0.06
SWI-F	D9	2,902	0.07
SWI-H	D4	7,819	0.18
SWI-I	D5	5,152	0.12
SWI-J	D6	56,681	1.30
SWI-K	D7	16,620	0.38
SWI-L	D13	60,930	1.39
SWI-M	D12	8,368	0.19
SWI-N	D11	20,509	0.47
SWI-O	D9	4,172	0.09
SWI-S	D13	135,965	3.12
SWI-T	D8	45,488	1.04
SWI-W	D13	30,354	0.69
SWI-X	D13	74,607	1.71
SWI-Y	D16	30,013	0.69
SWI-Z	D14	7,080	0.16
SWI-AA	D15	35,412	0.81
SWI-AC	D15	8,531	0.20
SWI-AE	D15	43,876	1.01
SWI-AF	D15	42,550	0.98
SWI-AG	D15	40,786	0.94
SWI-AH	D16	49,043	1.13
SWI-AJ	D17	94,760	2.19
TOTAL		969,732	22.26

SURFACE WATER IMPACTS DUE TO DREDGE IMPROVEMENTS			
DESCRIPTION	ID	AREA (SF)	AREA (AC)
SWI-1B	SW-1	3,683	0.08
SWI-2	SW-2	16,084	0.37
SWI-C	D3	14,390	0.33
SWI-G	D9	33,079	0.76
SWI-P	D9	5,572	0.13
SWI-Q	D10	932	0.02
SWI-R	D13	41,912	0.96
SWI-U	D13	16,809	0.38
SWI-V	D13	8,435	0.19
SWI-AB	D15	6,403	0.15
SWI-AD	D15	6,668	0.15
SWI-AI	D16	21,344	0.49
SWI-AK	D17	17,580	0.41
SWI-AL	D16	2,742	0.06
TOTAL		195,633	4.48

NO.	DATE	REVISIONS
3	2/22/21	REVISED D18 IMPACTS
2	11/5/18	REVISED PER COUNTY COMMENTS
1	6/28/18	REVISED PER SFWMD COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE: NTS
DRAWN BY: ACC
CHECKED BY: JCN
JOB NUMBER: 13189

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS TABLES

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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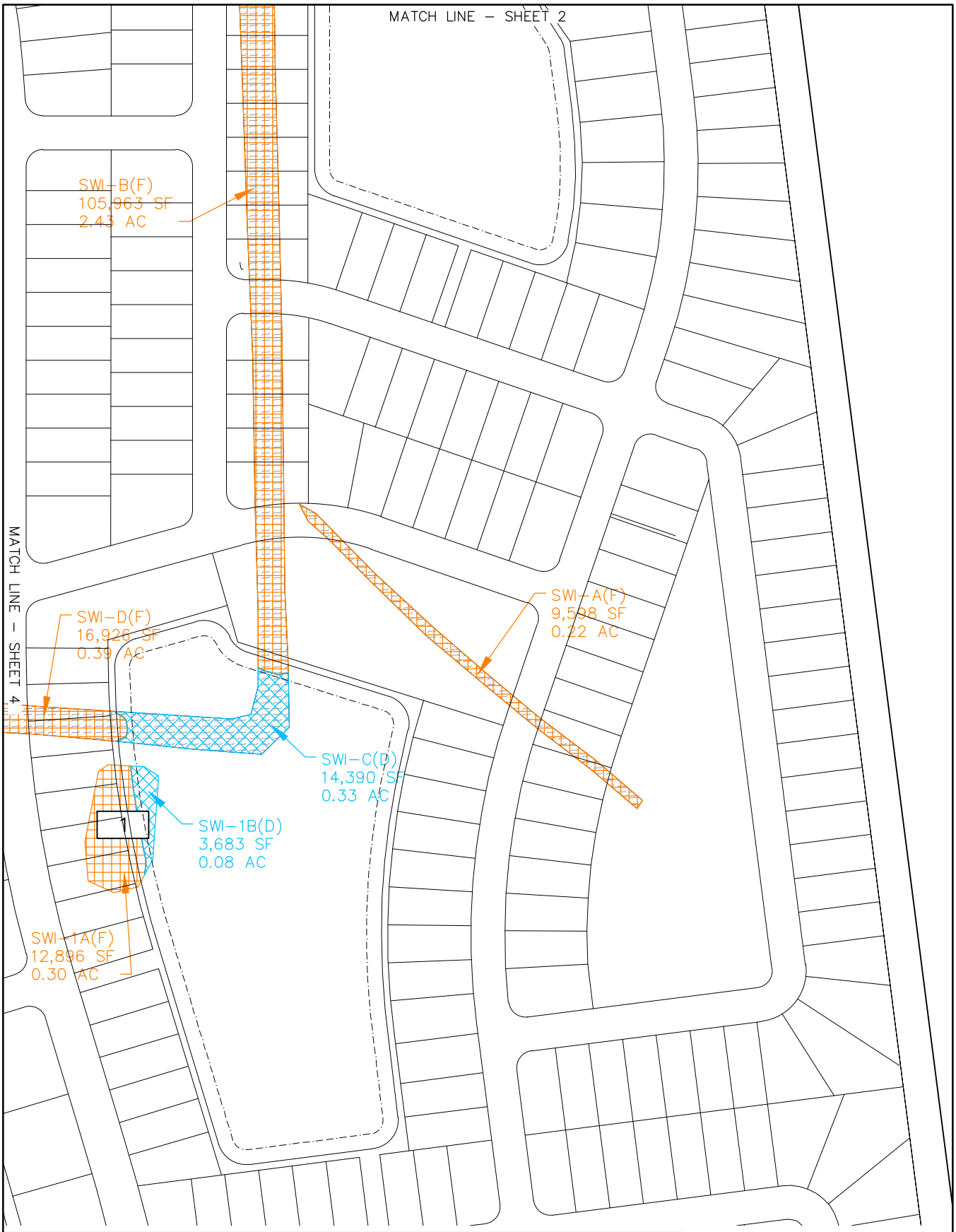

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. 68

SCALE	1"=200'
DRAWN BY	ACC
CHECKED BY	JCN
JOB NUMBER	13189

N

FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 1 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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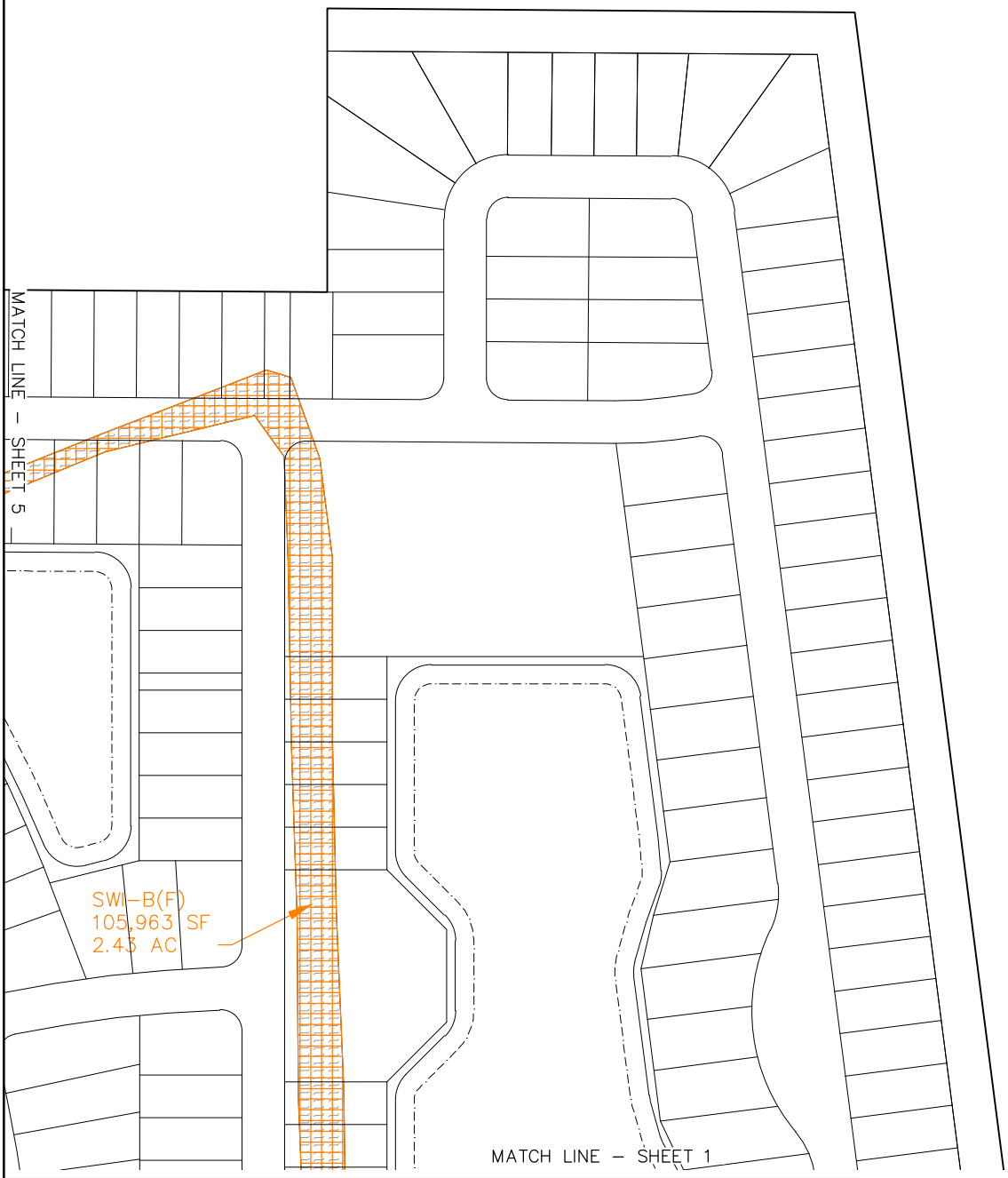

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DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 2 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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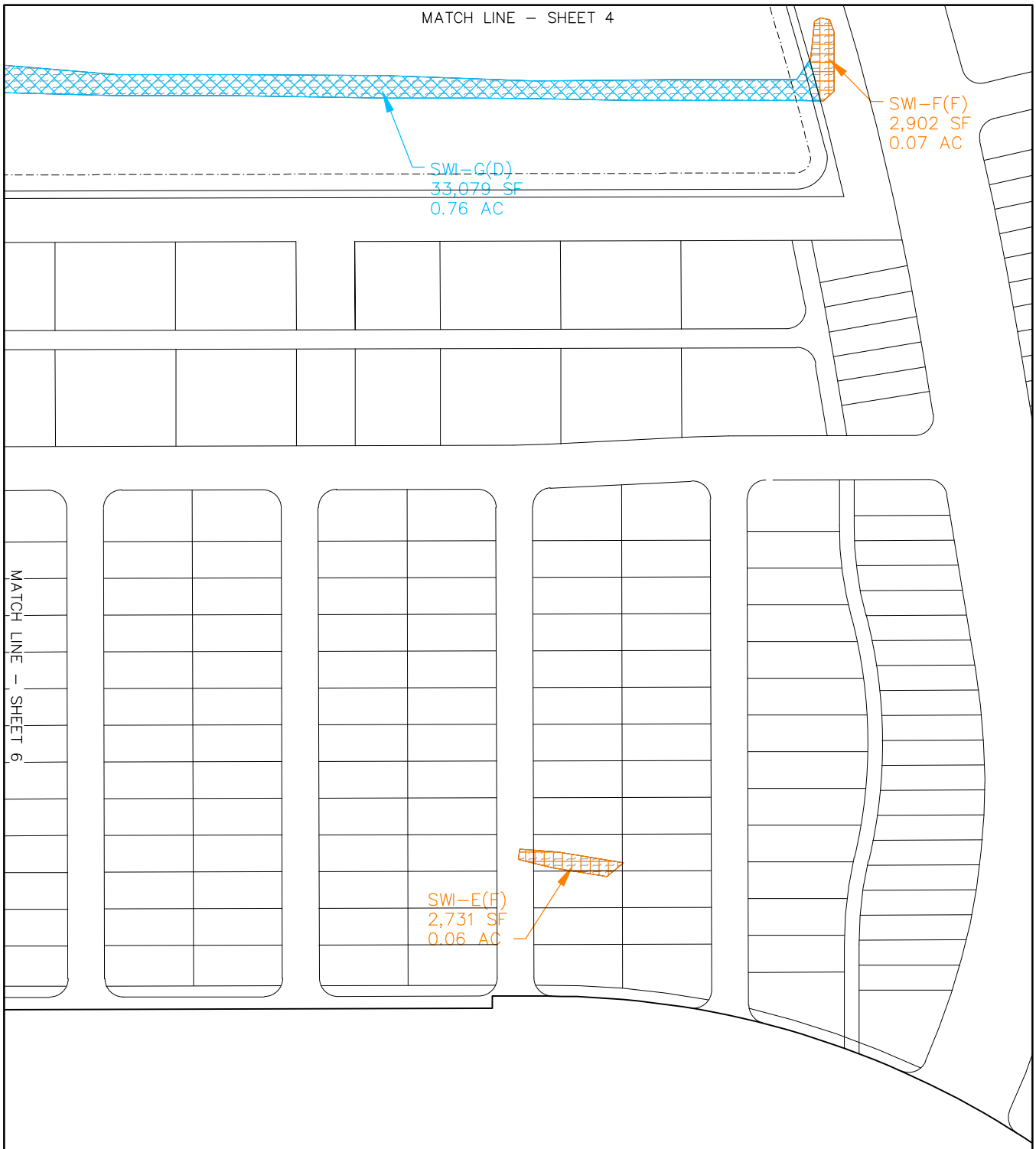

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DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 3 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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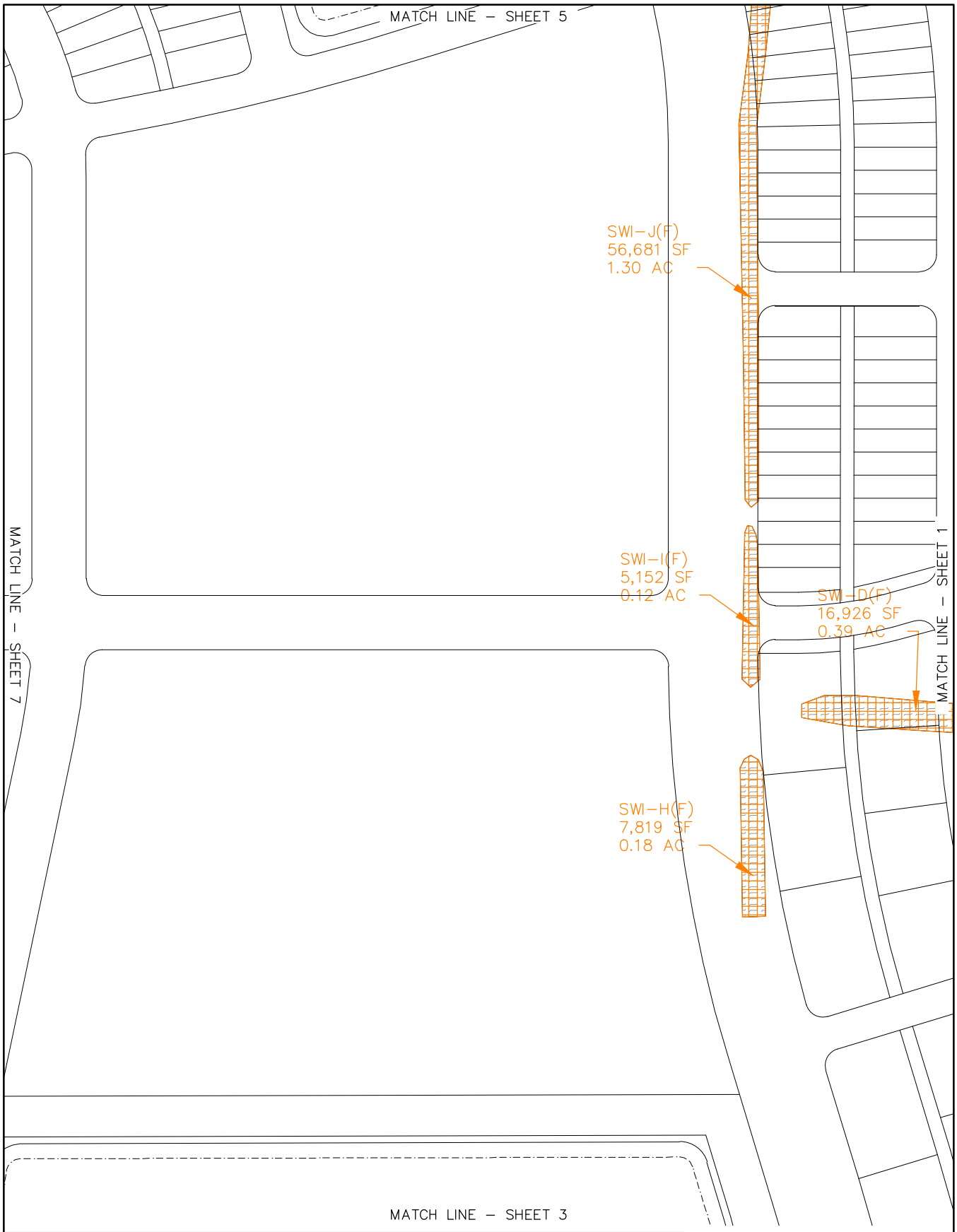

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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 4 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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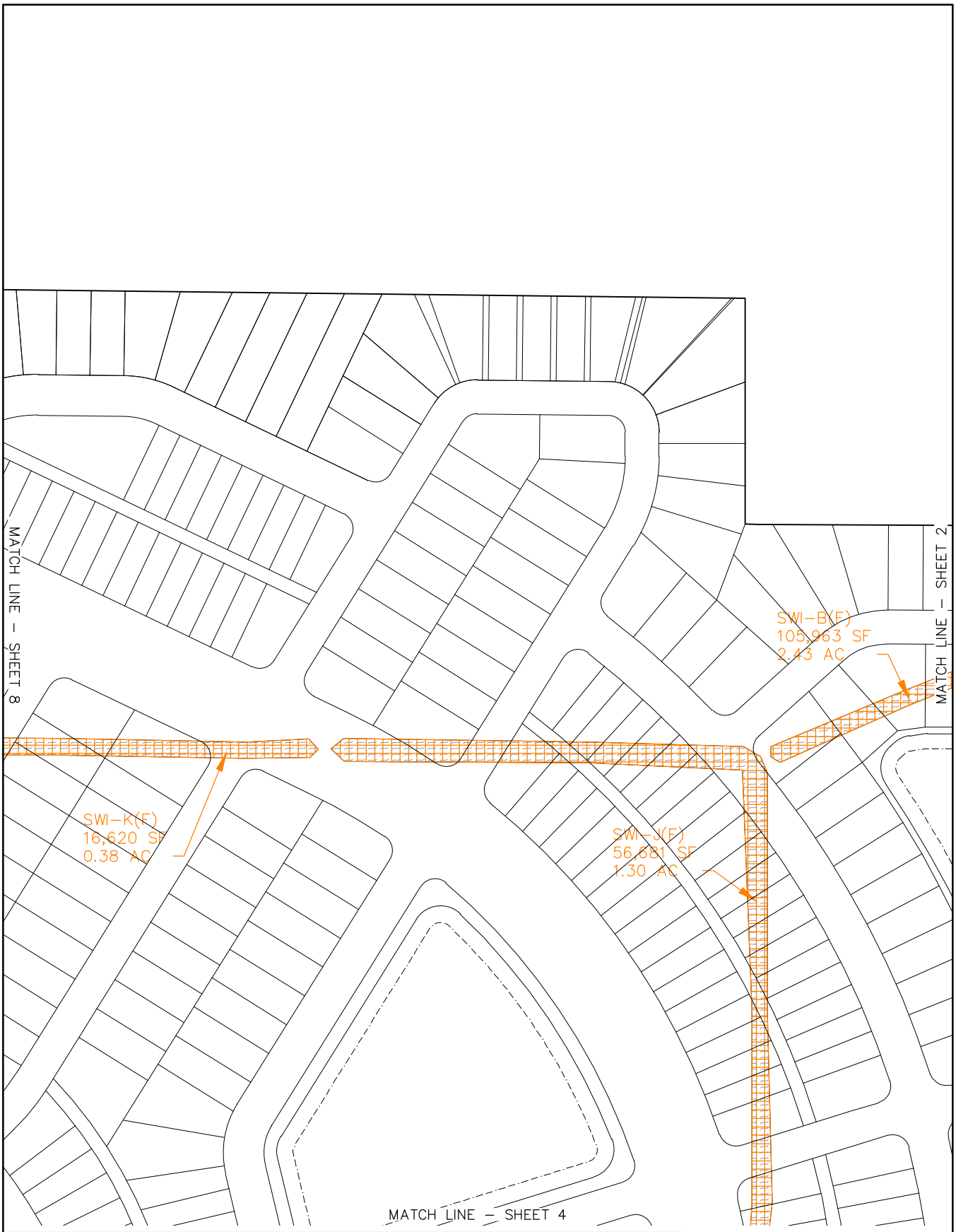

DONALD W. McINTOSH ASSOCIATES, INC.
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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 5 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
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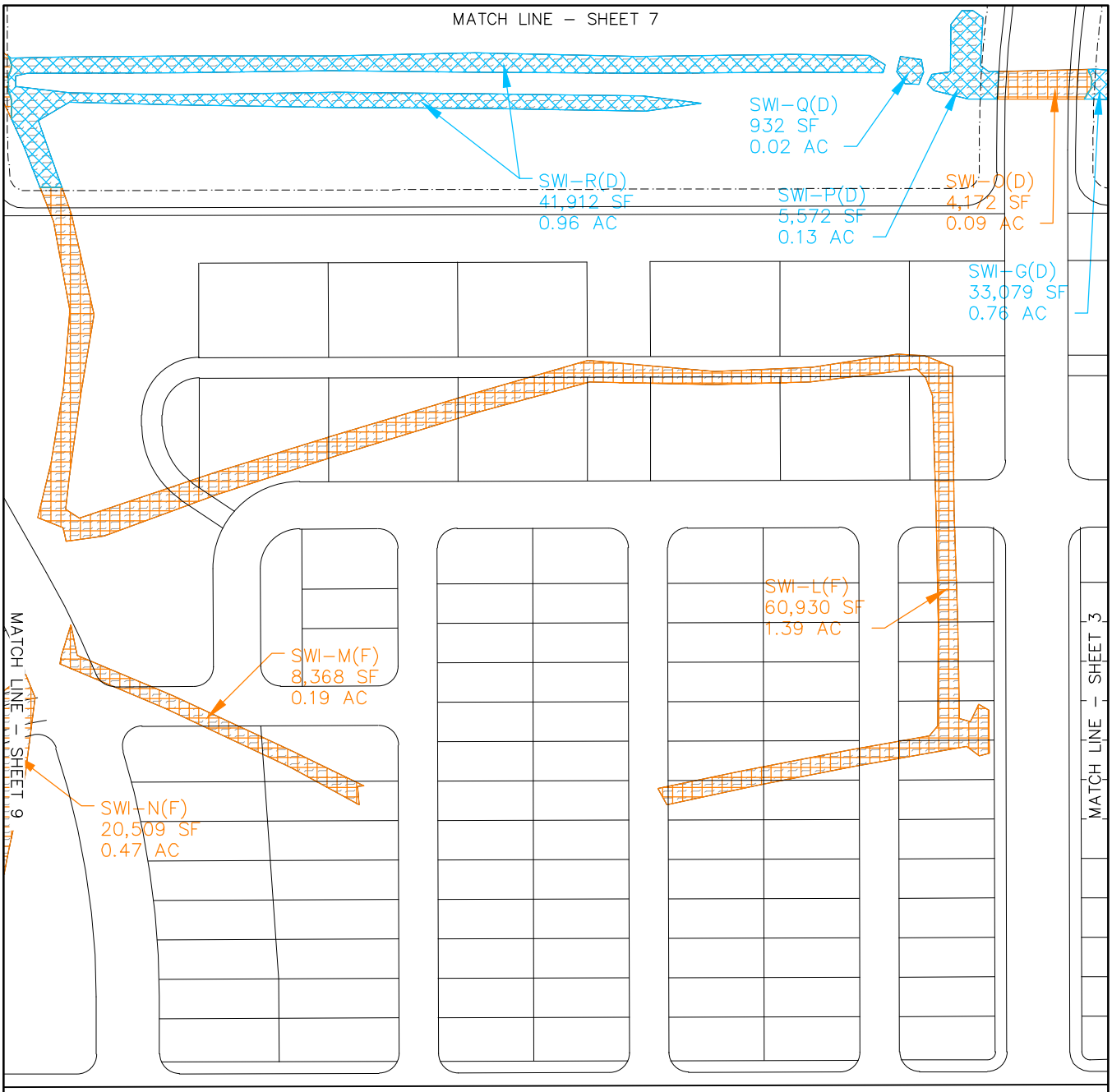

DONALD W. McINTOSH ASSOCIATES, INC.
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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 6 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
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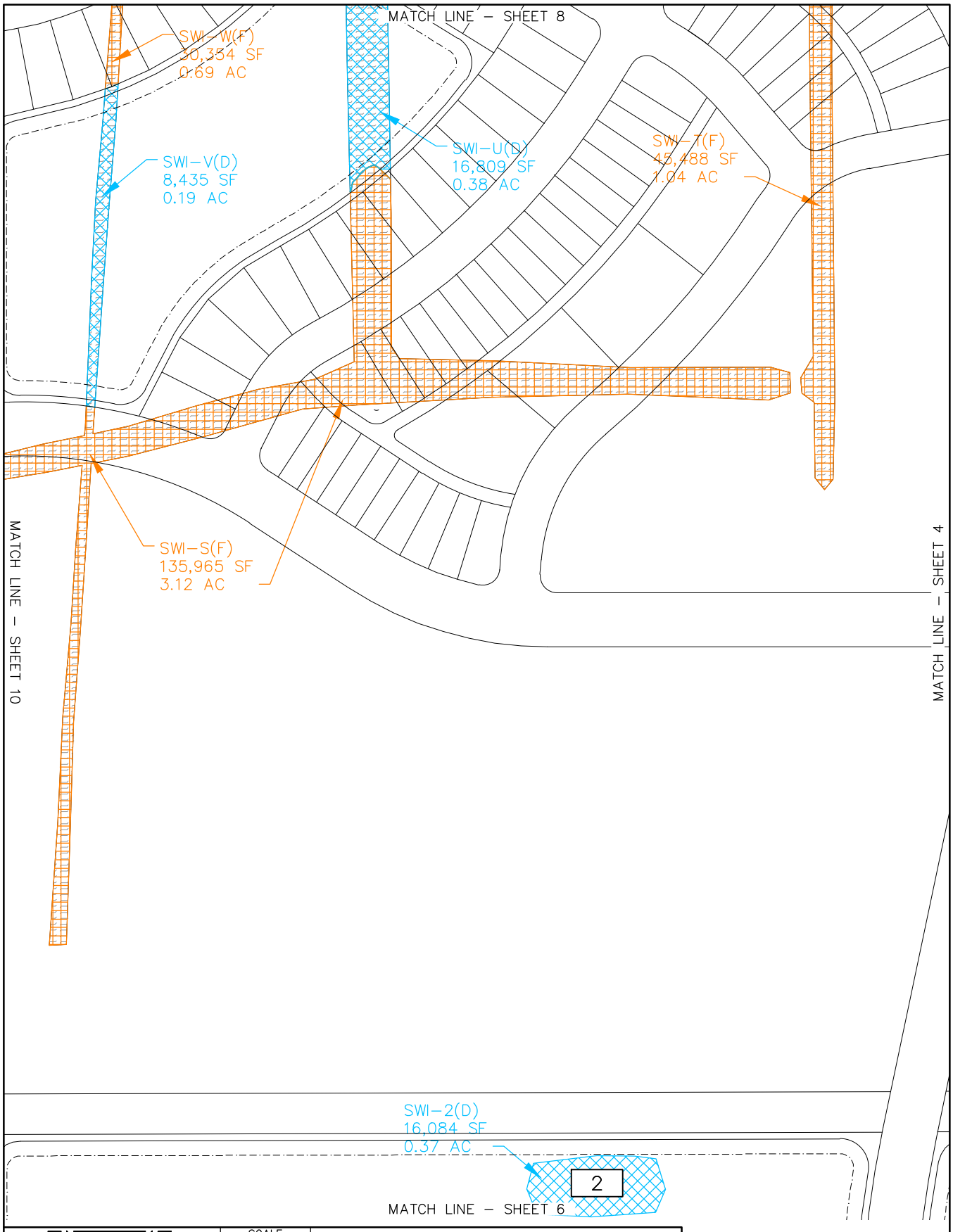

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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 7 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
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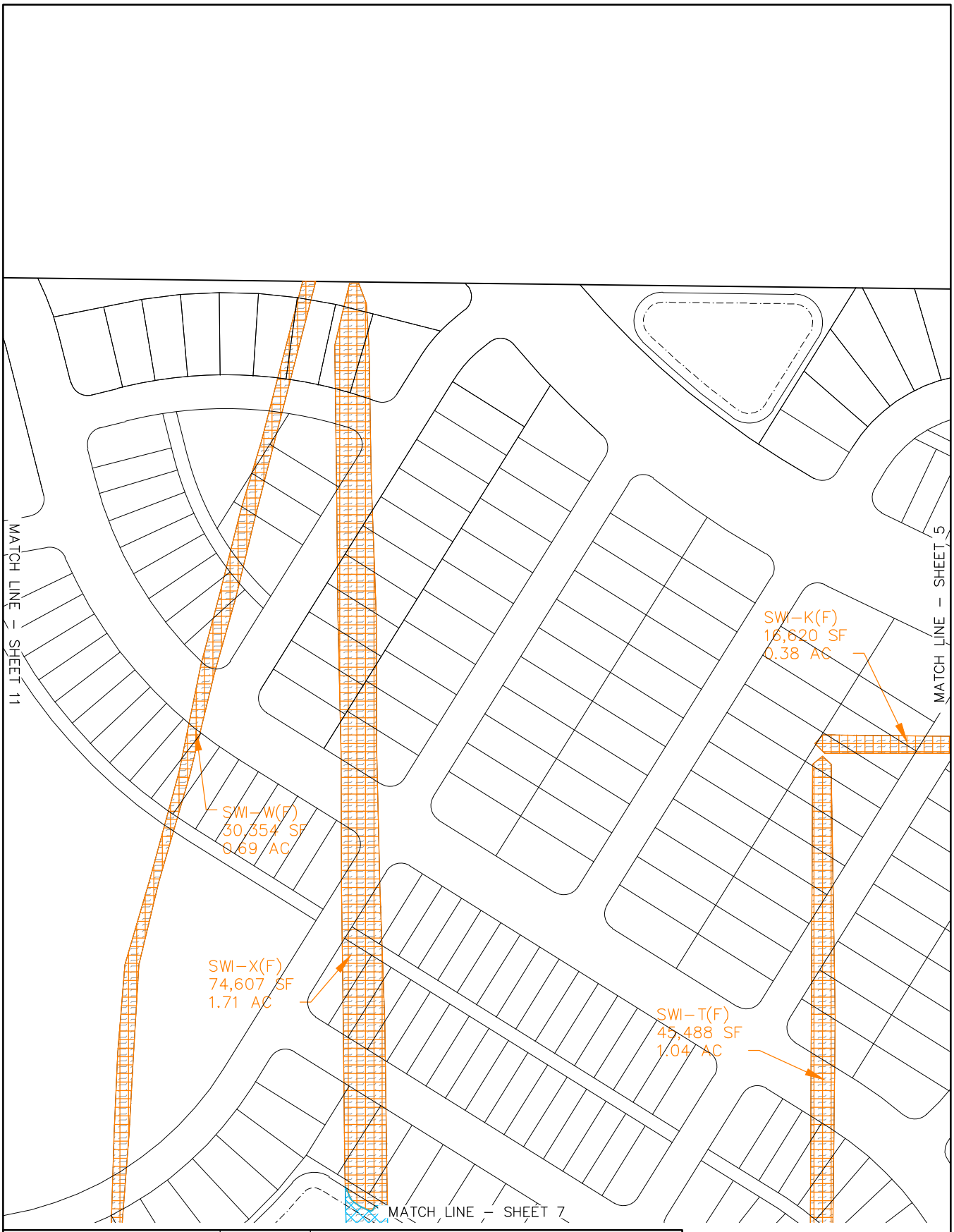

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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 8 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
DATE:_____

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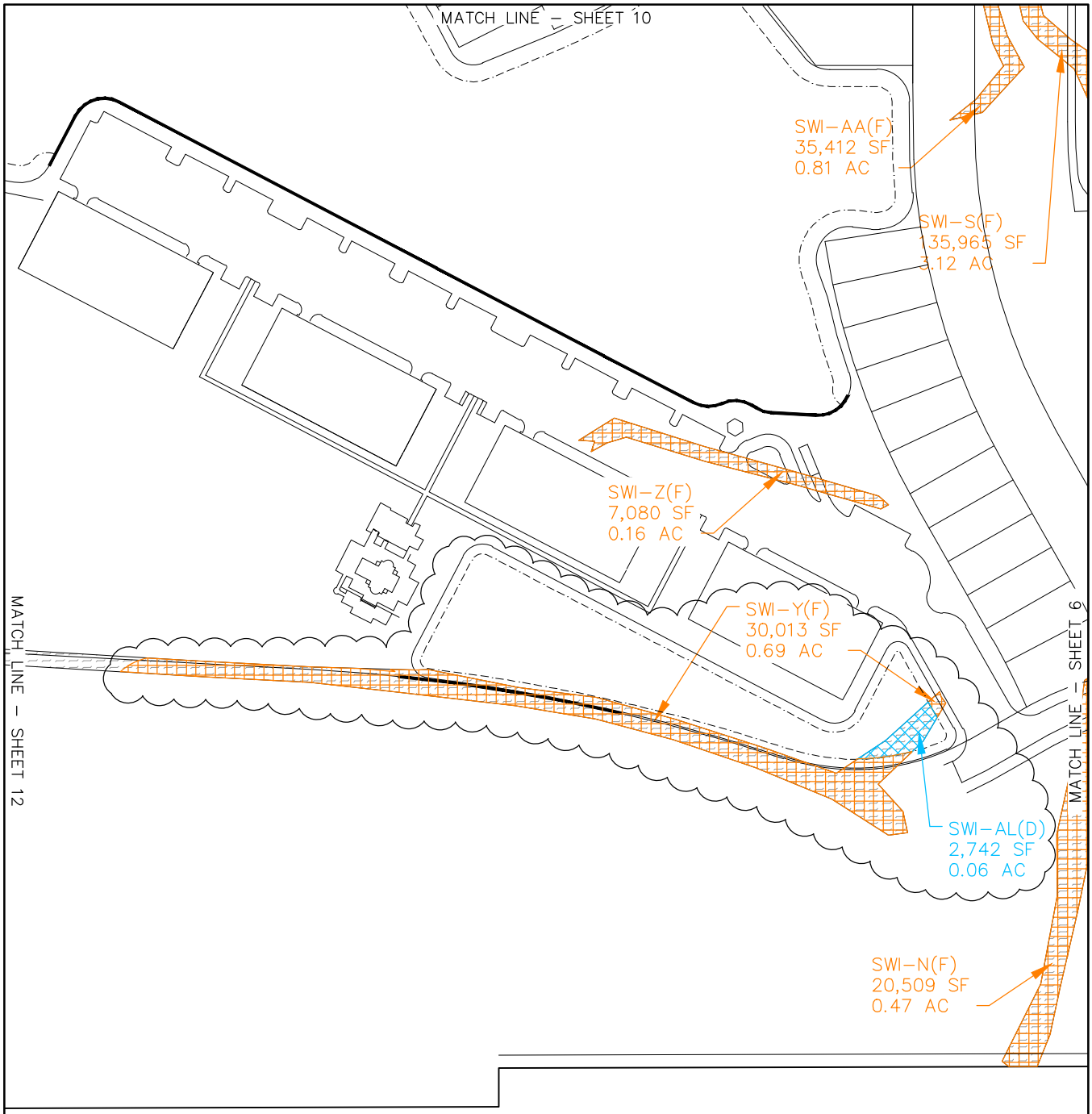

NO.	DATE	REVISIONS
2	2/22/21	REVISED D18 IMPACTS
1	6/28/18	REVISED PER SFWMD COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
DONALD W. McINTOSH ASSOCIATES, INC.
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SHEET 9 OF 14

JAMES C. NUGENT
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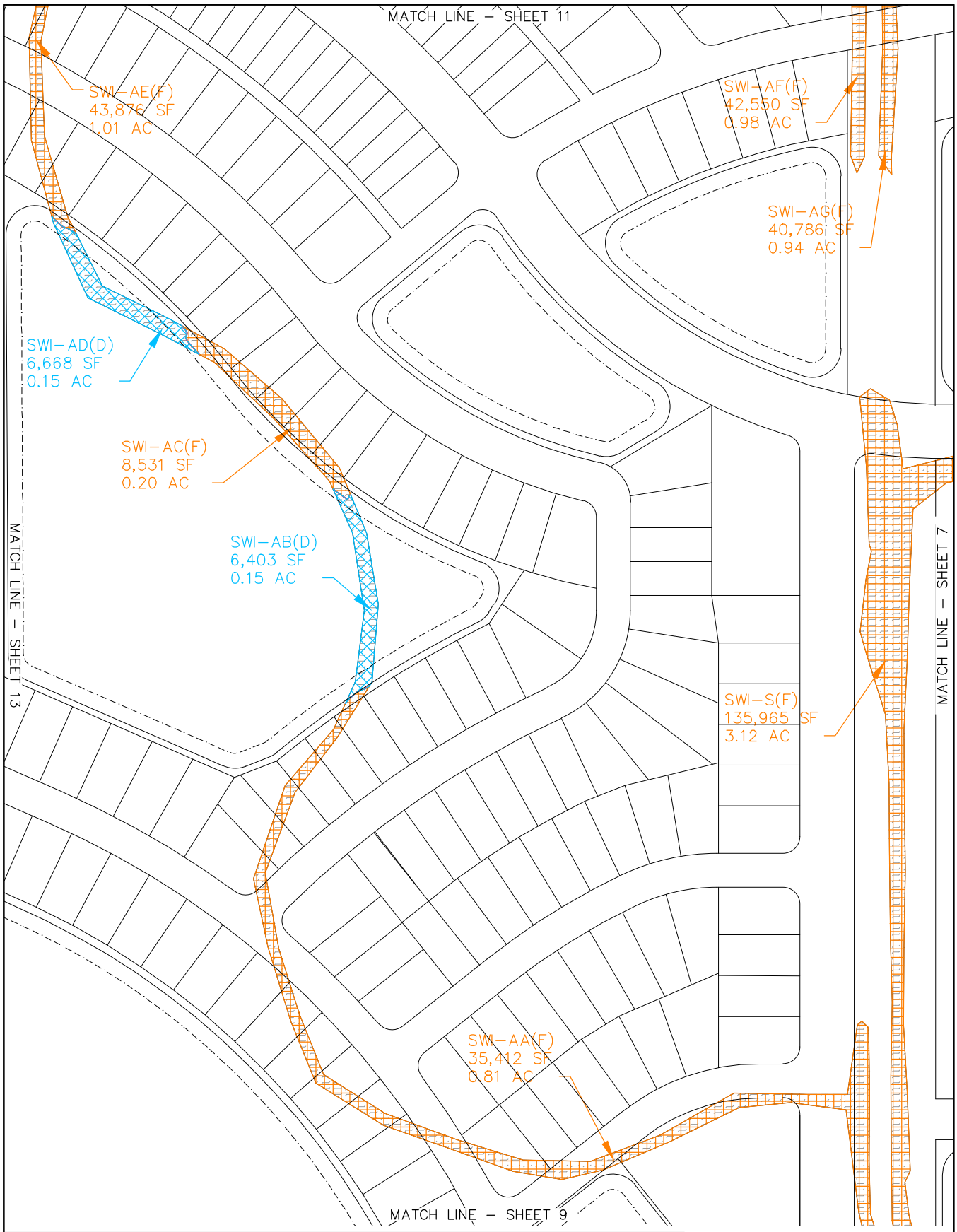

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FONTANA PROPERTY
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SURFACE WATER IMPACTS
SHEET 10 OF 14

JAMES C. NUGENT
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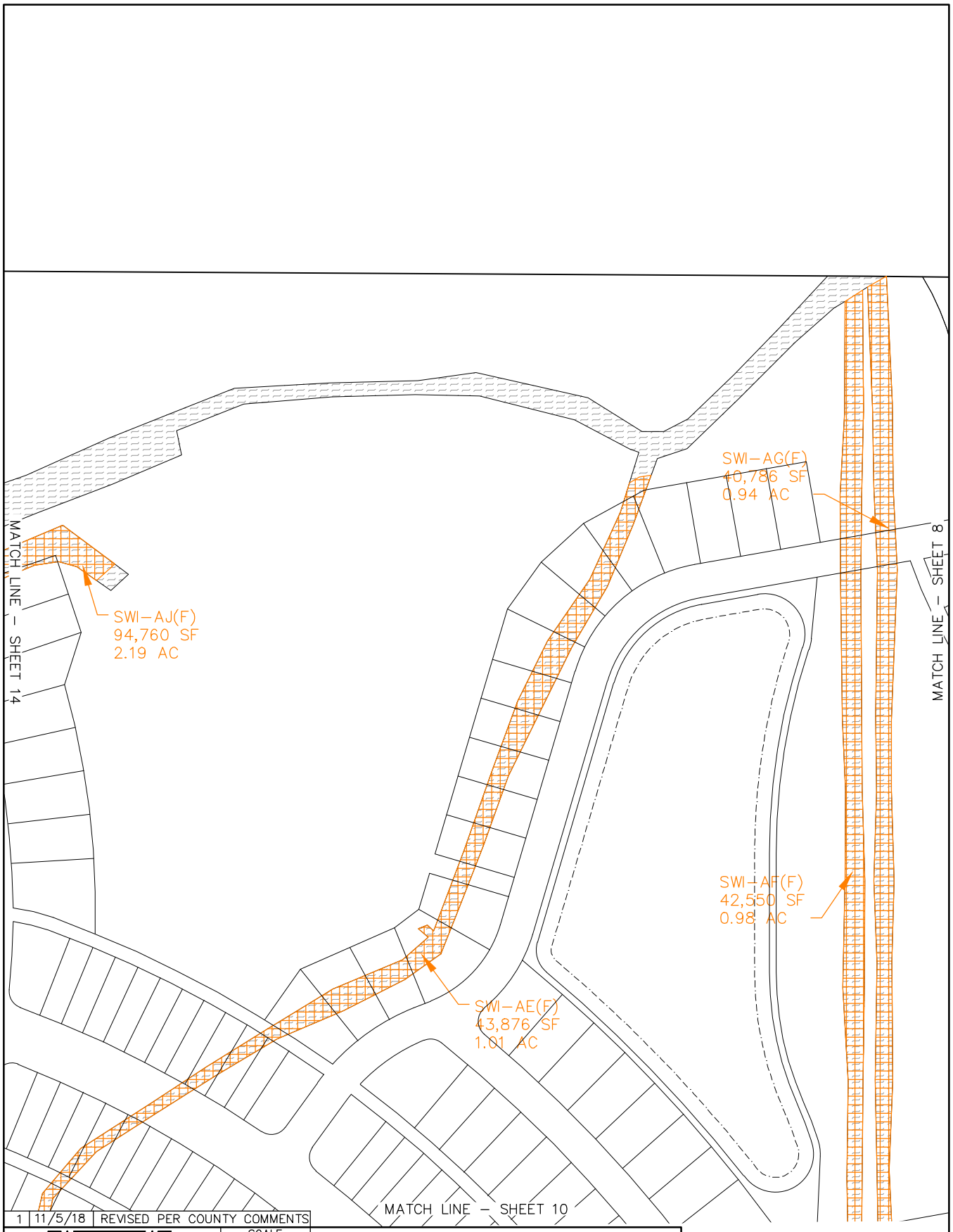

1	11/5/18	REVISED PER COUNTY COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
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SURFACE WATER IMPACTS
SHEET 11 OF 14

JAMES C. NUGENT
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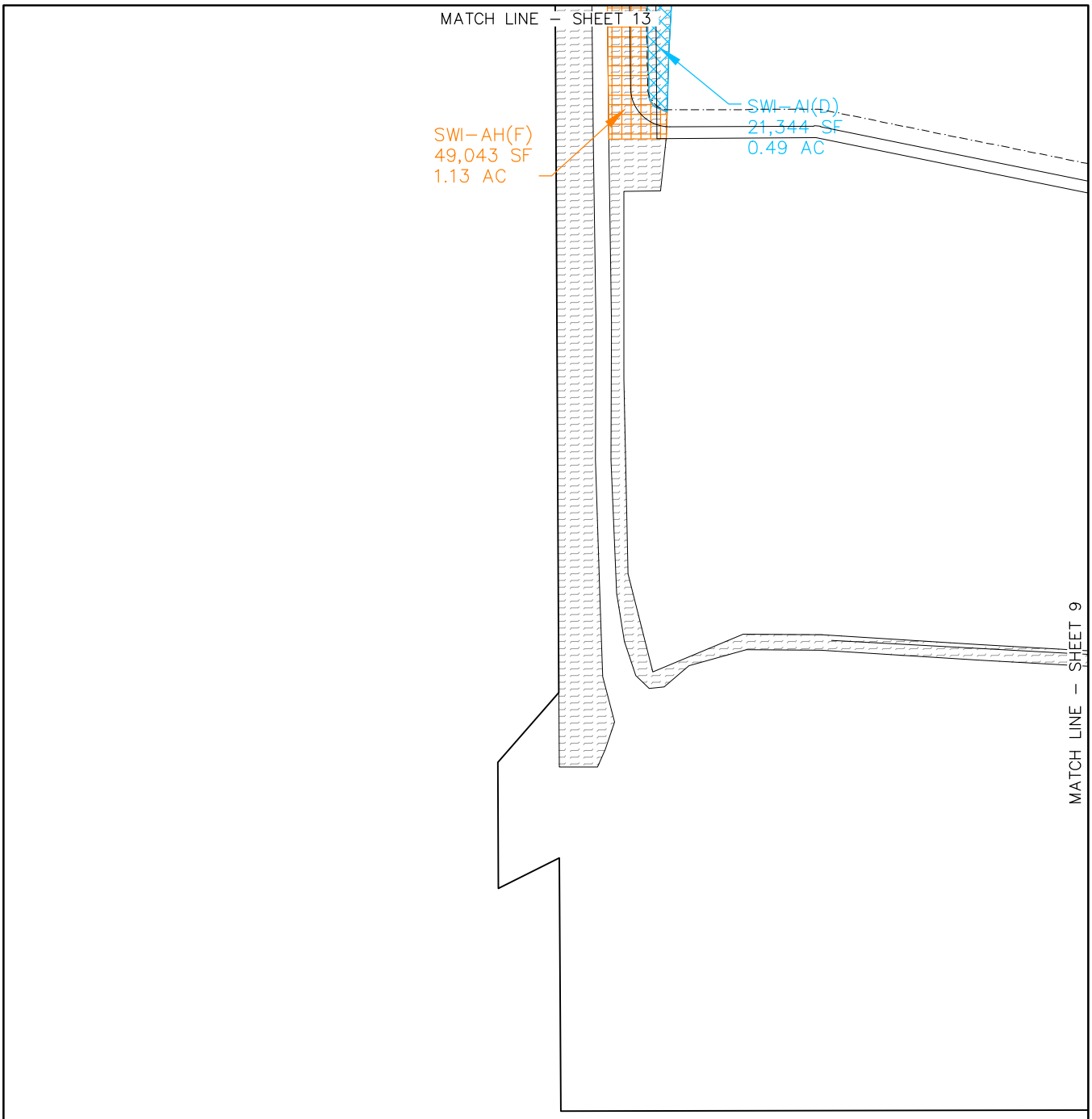

DONALD W. McINTOSH ASSOCIATES, INC.
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FONTANA PROPERTY
DREDGE & FILL PERMIT EXHIBIT
SITE DEVELOPMENT
SURFACE WATER IMPACTS
SHEET 12 OF 14

JAMES C. NUGENT
FLORIDA P.E. NO. 57553
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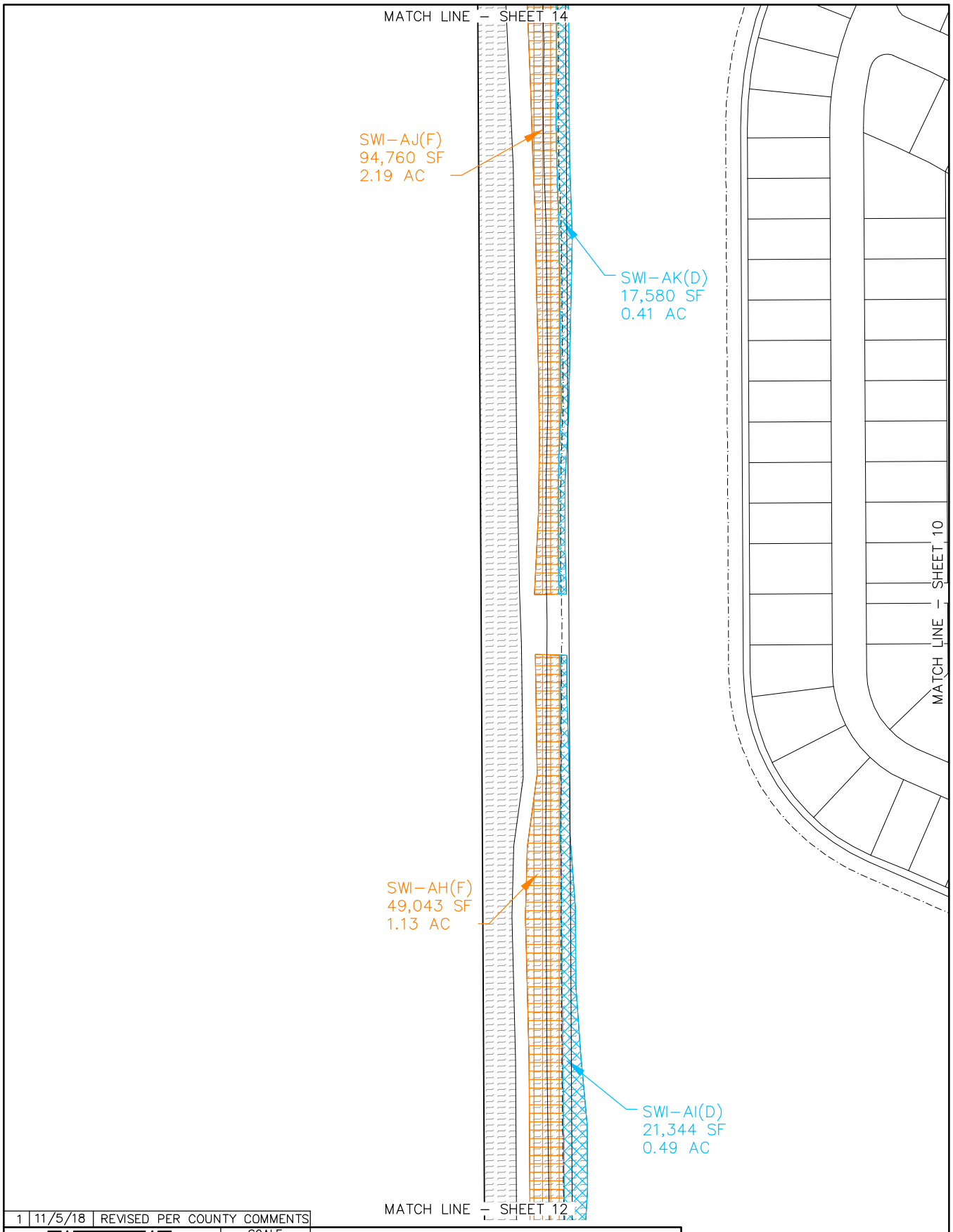

1	11/5/18	REVISED PER COUNTY COMMENTS

DONALD W. McINTOSH ASSOCIATES, INC.
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DREDGE & FILL PERMIT EXHIBIT
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SURFACE WATER IMPACTS
SHEET 13 OF 14

JAMES C. NUGENT
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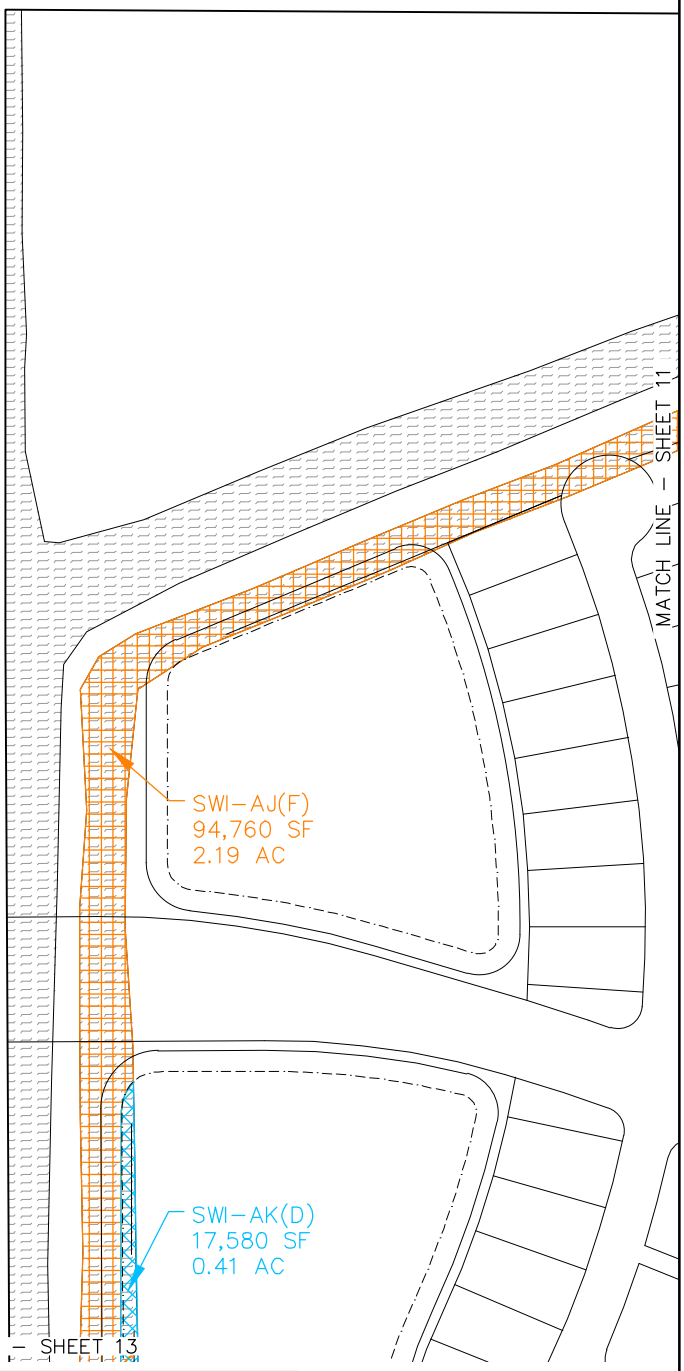

1	11/5/18	REVISED PER COUNTY COMMENTS

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SHEET 14 OF 14

JAMES C. NUGENT
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