



This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 12, 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Jacksonville District, SAJ-2017-02544-RGH (LAKEWOOD RANCH STEWARDSHIP DISTRICT / MANATEE)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Florida County/parish/borough: Manatee City: Lakewood Ranch
Center coordinates of site (lat/long in degree decimal format): Lat. 27.442932° N, Long. 82.371157° W.
Universal Transverse Mercator:

Name of nearest waterbody: Braden River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Name of watershed or Hydrologic Unit Code (HUC): 03100202 - Manatee; 031002020201 - Upper Braden River

[X] Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

[] Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

[X] Office (Desk) Determination. Date: June 4, 2018

[X] Field Determination. Date(s): June 5, 2018

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

[] Waters subject to the ebb and flow of the tide.

[] Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): 1

- [] TNWs, including territorial seas
[] Wetlands adjacent to TNWs
[X] Relatively permanent waters2 (RPWs) that flow directly or indirectly into TNWs
[X] Non-RPWs that flow directly or indirectly into TNWs
[X] Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
[] Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
[X] Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
[] Impoundments of jurisdictional waters
[] Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or 1.82 acres.
Wetlands: 0.48 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

[] Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

1 Boxes checked below shall be supported by completing the appropriate sections in Section III below.

2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 30,321 acres

Drainage area: Pick List

Average annual rainfall: 54 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through Pick List tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.

Project waters are Pick List river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

Project waters are Pick List aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW⁵: Wetland WL-12 (headwaters of Braden River) flows through a modified waterway to mainstem of Braden River to Manatee River (TNW) .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain: Mill Creek is manipulated in areas near the headwaters (Wetland NE-WL-11) before it connects to natural stream channel bounded by floodplain wetland.

Tributary properties with respect to top of bank (estimate):

Average width: 15 feet
Average depth: 3 feet
Average side slopes: **3:1**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain: Shell Hash.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Manipulated areas are subject to sloughing, but are maintained.

Presence of run/riffle/pool complexes. Explain: None.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-2 %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **11-20**

Describe flow regime: Typically Groundwater and surface water runoff.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics:

Subsurface flow: **Unknown**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water is generally clear, slow moving until rain events.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

Identify specific pollutants, if known: Assessed in 2002, listed as polluted for Bacteria and Other Microbes, however significant agricultural fields are adjacent to this waterbody so it is highly likely that, nutrients, herbicides, and pesticides are also within this waterbody.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width): 50-500 feet.
- Wetland fringe. Characteristics: Typically forested slough wetlands.
- Habitat for:
 - Federally Listed species. Explain findings: Possible Wood Stork SFH exists in these modified tributaries.
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings: Observed Swallow-tail kites foraging along tributary and wetland margins.
 - Aquatic/wildlife diversity. Explain findings: Tributaries and adjacent wetlands provide greatly needed greenways for wildlife.

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: 0.48 acres

Wetland type. Explain: Palustrine Forested.

Wetland quality. Explain: Mature and highly functional.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain:

Surface flow is: **Overland sheetflow**

Characteristics: Wetlands typically flow via direct connection or sheet flow.

Subsurface flow: **Unknown**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **15-20** river miles from TNW.

Project waters are **10-15** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters**.

Estimate approximate location of wetland as within the **2-year or less** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Clear to tanic.

Identify specific pollutants, if known: Assessed in 2002, listed as polluted for Bacteria and Other Microbes, however significant agricultural fields are adjacent to this waterbody so it is highly likely that, nutrients, herbicides, and pesticides are also within this waterbody.

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: Palustrine Forested / 80%.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings: Swallow-tail kites observed foraging edges of wetlands.
 - Aquatic/wildlife diversity. Explain findings: Wetlands serve as greenways for wildlife movement.

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **1**

Approximately (0.48) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
NE-WL-40 Y	0.4		
NE-WL-12 Y	0.08		

Summarize overall biological, chemical and physical functions being performed: Storage of flood waters; reduction of downstream peak discharges and volumes; recharge of aquifers; maintenance of seasonal/baseflows; maintenance of groundwater supplies; removal of sediments and nutrients; provision of breeding grounds and wildlife habitat (e.g. feeding/foraging, nesting, spawning, rearing of young); supports diverse community of benthic invertebrates, a major food source for vertebrates.

Physical: The wetlands perform important flow maintenance functions including storage of flood waters and a release of these waters into the tributary in a more even and consistent manner. Therefore, the wetlands directly affect the duration, frequency, and volume of flow in the tributary and the downstream navigable water. The wetlands reduce local flooding. Storage of surface waters provides groundwater recharge that contributes to baseflow in the tributary that is vital to sustain aquatic life in downstream waters.

Chemical: The wetlands improve water quality by removing sediment and nutrients that would otherwise reach downstream waters and have a negative effect on aquatic resources.

Biological: The wetlands are of utmost importance biologically since the majority of other non-wetland areas in the watershed have been altered for agriculture, residential, or other purposes. These wetlands have a high abundance and diversity of species due to their transitional location between terrestrial and aquatic systems. Productivity in downstream waters can depend on the exchange of nutrients within the floodplains. Watersheds dominated by riparian wetlands export a large amount of carbon that is essential to downstream ecosystems. Particulate carbon is important for shredders and filter-feeders while dissolved carbon is important for microorganisms within these systems. .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

- Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Field observations of OSW 1, OSW 1A, OSW 1B, OSW 8, OSW 9, OSW 10, OSW 11, OSW 12, OSW 14, and OSW AA6/AA7 confirm these are deep ditches which carry flow at least seasonally and are relatively permanent.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: 1.82 acres.

Identify type(s) of waters: **Manipulated waterways/agricultural ditches.**

3. **Non-RPWs⁸ that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.

Identify type(s) of waters:

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Several of the ditches were excavated through the wetlands.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.48** acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

⁸See Footnote # 3.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in “*SWANCC*,” the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).
- Waters do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the “Significant Nexus” standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- Office concurs with data sheets/delineation report.
- Office does not concur with data sheets/delineation report.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
 - or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Riparian Wetlands

Physical: The wetlands perform important flow maintenance functions including storage of flood waters^{1, 2} and a release of these waters into the tributary in a more even and consistent manner². Therefore, the wetlands directly affect the duration, frequency, and volume of flow in the tributary and the downstream navigable water². The wetlands reduce local flooding¹. Storage of surface waters provides groundwater recharge that contributes to baseflow in the tributary that is vital to sustain aquatic life in downstream waters¹.

Chemical: The wetlands improve water quality by removing sediment and nutrients that would otherwise reach downstream waters and have a negative effect on aquatic resources^{1, 2}.

Biological: The wetlands are of utmost importance biologically since the majority of other non-wetland areas in the watershed have been altered for agriculture, residential, or other purposes¹. These wetlands have a high abundance and diversity of species due to their transitional location between terrestrial and aquatic systems¹. Productivity in downstream waters can depend on the exchange of nutrients within the floodplains¹. Watersheds dominated by riparian wetlands export a large amount of carbon that is essential to downstream ecosystems¹. Particulate carbon is important for shredders and filter-feeders while dissolved carbon is important for microorganisms within these systems¹.

¹The Clean Water Act Jurisdictional Handbook, Second Edition. 2012. Environmental Law Institute, Washington, DC, 126 pp.

²Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States. 2007. US Department of the Army and US Environmental Protection Agency. 12 pp.

See Chart to Support Findings.

Uihlein Road & Rangeland Parkway Improvements (SAJ-2017-02544)

WOUS OSW IMPACTS

Impact Activity Area (AA) #	Impact Acres (AC)	Impact Area (SF)	Cut Volume (CYD)	Fill Volume (CYD)	Status	Mitigation	Credits
OSW-AA1	0.12	5,379	62	1,739	RPW	None	
OSW-AA2	0.12	5,384	0	613	RPW	None	
OSW-AA3	0.01	460	4	13	RPW	None	
OSW-AA4	0.13	5,607	23	373	Non-JD		
OSW-AA5	0.01	241	11	4	Non-JD		
OSW-AA6	0.02	821	0	34	Non-JD		
OSW-AA7	0.02	759	56	4	Non-JD		
OSW-AA8	0.31	13503			Non-JD		
OSW-AA9	0.11	4792			Non-JD		
TOTAL	0.43	18,651	156	2,780			

WOUS WETLAND IMPACTS

Impact Activity Area (AA) #	Impact Acres (AC)	Impact Area (SF)	Cut Volume (CYD)	Fill Volume (CYD)	Status	Mitigation	Credits
NE-WL-35 (AA6/AA	0.23	10,234	399	1030	WL Directly A	Long Swamp	0.14
Total	0.23	10,234	399	1030			0.14

Watershed
Braden River
Mill Creek
Mill Creek
Braden River
Braden River

Watershed
Mill Creek

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Uihlein Road/Rangeland Parkway City/County: Bradenton/Manatee Sampling Date: 10/2017
 Applicant/Owner: Lakewood Ranch Stewardship District State: FL Sampling Point: UP-W40
 Investigator(s): E Co Consultants - J. Griffith Section, Township, Range: S:11, 12, & 14 T:35S, R:19E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): LRRU MLRA 155 Lat: 27.443034° Long: -82.371167° Datum: _____
 Soil Map Unit Name: Myakka-Myakka, wet, fine sands, 0-2% slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:
 Please refer to the ACOE Data Form Location Map provided as an Attachment.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
---	--

<p>Field Observations:</p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UP-W40

Tree Stratum (Plot size: _____)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Pinus elliottii</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 8 20% of total cover: 3

Sapling Stratum (Plot size: _____)

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

_____ = Total Cover
50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: _____)

1. <u>Schinus terebinthifolius</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 5 20% of total cover: 2

Herb Stratum (Plot size: 30' diameter)

1. <u>Paspalum notatum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>
2. <u>Bidens alba</u>	<u>10</u>	<u>N</u>	<u>UPL</u>
3. <u>Eupatorium capillifolium</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 40 20% of total cover: 16

Woody Vine Stratum (Plot size: _____)

1. <u>Vitis rotundifolia</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 15 20% of total cover: 6

Remarks: (If observed, list morphological adaptations below)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: .5 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species <u>25</u>	x 3 = <u>75</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals: <u>105</u> (A)	<u>405</u> (B)

Prevalence Index = B/A = 3.86

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
- Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: UP-W40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 5/1	100					Sandy	Fill Material -Shell
10-14	10YR 6/1	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A, B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: **The soils are disturbed from adjacent road impacts (Fill).**

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Uihlein Road/Rangeland Parkway City/County: Bradenton/Manatee Sampling Date: 10/2017
 Applicant/Owner: Lakewood Ranch Stewardship District State: FL Sampling Point: WET-W40
 Investigator(s): E Co Consultants - J. Griffith Section, Township, Range: S:11, 12, & 14 T:35S, R:19E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): LRRU MLRA 155 Lat: 27.443045° Long: -82.371209° Datum: _____
 Soil Map Unit Name: Myakka-Myakka, wet, fine sands, 0-2% slopes NWI classification: PFO1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Please refer to the ACOE Data Form Location Map provided as an Attachment.	

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<p>Field Observations:</p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9"</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Standing water observed in creek.	

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WET-W40

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Quercus laurifolia</i>	50	Y	FACW
2. <i>Pinus elliotii</i>	15	Y	FACW
3. <i>Salix caroliniana</i>	5	N	OBL
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 35 20% of total cover: 14

Sapling Stratum (Plot size: _____)

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

_____ = Total Cover
50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30')

1. <i>Schinus terebinthifolius</i>	10	Y	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 5 20% of total cover: 2

Herb Stratum (Plot size: 30')

1. <i>Ihelypters interrupta</i>	15	Y	FACW
2. <i>Ludwigia peruviana</i>	20	Y	OBL
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 18 20% of total cover: 7

Woody Vine Stratum (Plot size: _____)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: _____ 20% of total cover: _____

Remarks: (If observed, list morphological adaptations below)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Column Totals:	Multiply by:	Column Totals:
OBL species <u>25</u>	<u>115</u> (A)	x 1 =	<u>25</u> (B)
FACW species <u>80</u>		x 2 =	<u>160</u>
FAC species <u>10</u>		x 3 =	<u>30</u>
FACU species _____		x 4 =	_____
UPL species _____		x 5 =	_____

Prevalence Index = B/A = 1.87

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4"	10YR 3/1	60	10YR 5/6	5	C	M	Sandy	Faint redox conc's.
	10YR 5/1							
5-12"	10YR 6/1	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A, B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Uihlein Road/Rangeland Parkway City/County: Bradenton/Manatee Sampling Date: 10/2017
 Applicant/Owner: Lakewood Ranch Stewardship District State: FL Sampling Point: UP-W35
 Investigator(s): E Co Consultants - J.Griffith Section, Township, Range: S:11, 12, & 14 T:35S, R:19E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): LRRU MLRA 155 Lat: 27.452646° Long: -82.371117° Datum: _____
 Soil Map Unit Name: Myakka-Myakka, wet, fine sands, 0-2% slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			

Remarks:
 Please refer to the ACOE Data Form Location Map provided as an Attachment.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<p>Secondary Indicators (minimum of two required)</p> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<p>Field Observations:</p> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UP-W35

Tree Stratum (Plot size: 30)

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Pinus elliottii</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 5 20% of total cover: 2

Sapling Stratum (Plot size: _____)

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

_____ = Total Cover
50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30)

1. <u>Schinus terebinthifolius</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 8 20% of total cover: 3

Herb Stratum (Plot size: 30')

1. <u>Serenoa repens</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>
2. <u>Eupatorium capillifolium</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>
3. <u>Sporobolus indica</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 25 20% of total cover: 10

Woody Vine Stratum (Plot size: 30)

1. <u>Vitis rotundifolia</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 8 20% of total cover: 3

Remarks: (If observed, list morphological adaptations below)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u>	(A)
Total Number of Dominant Species Across All Strata:	<u>6</u>	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>.5</u>	(A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	_____
FACW species <u>10</u>	x 2 =	<u>20</u>
FAC species <u>30</u>	x 3 =	<u>90</u>
FACU species <u>50</u>	x 4 =	<u>200</u>
UPL species	x 5 =	_____
Column Totals: <u>80</u>	(A)	<u>310</u> (B)
Prevalence Index = B/A = <u>3.88</u>		

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: UP-W35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 5/1	100						Fill Material
9-14	10YR 6/1	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A, B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: **The soils are disturbed from adjacent road impacts (Fill).**

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Uihlein Road/Rangeland Parkway City/County: Bradenton/Manatee Sampling Date: 10/2017
 Applicant/Owner: Lakewood Ranch Stewardship District State: FL Sampling Point: WET-W35
 Investigator(s): E Co Consultants - J.Griffith Section, Township, Range: S:11, 12, & 14 T:35S, R:19E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): LRRU MLRA 155 Lat: 27.452654° Long: -82.371186° Datum: _____
 Soil Map Unit Name: Myakka-Myakka, wet, fine sands, 0-2% slopes NWI classification: PFO1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: Please refer to the ACOE Data Form Location Map provided as an Attachment.					

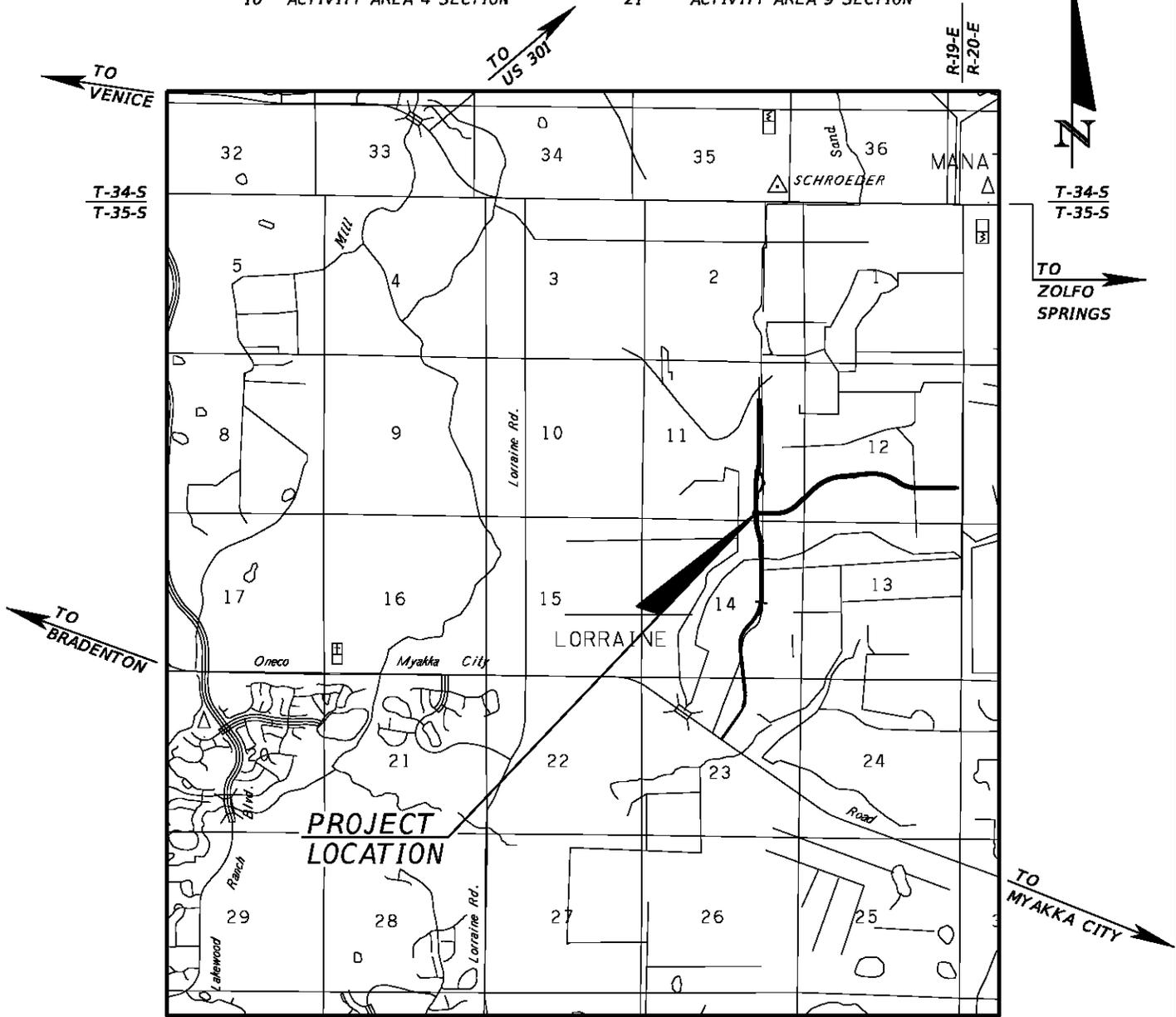
HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____		
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: Standing water observed.			

LOCATION MAP AND SHEET INDEX

INDEX

1	LOCATION MAP AND SHEET INDEX	11	ACTIVITY AREA 5 PLAN
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3	ACTIVITY AREA 1 PLAN	13	ACTIVITY AREA 6 PLAN
4	ACTIVITY AREA 1 SECTION	14-15	ACTIVITY AREA 6 SECTIONS
5	ACTIVITY AREA 2 PLAN	16	ACTIVITY AREA 7 PLAN
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10	ACTIVITY AREA 4 SECTION	21	ACTIVITY AREA 9 SECTION



**PROJECT
LOCATION**

K:\SAR_Roadway\148251002 - Uihlein Road Improvements\148251002_Construction\Exhibits_ACOE\KEYSACOE01.dgn
7/18/2018
steven.hart

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

REVISIONS

DEAN PAQUET, P.E.
FL CERT. NO: 59916

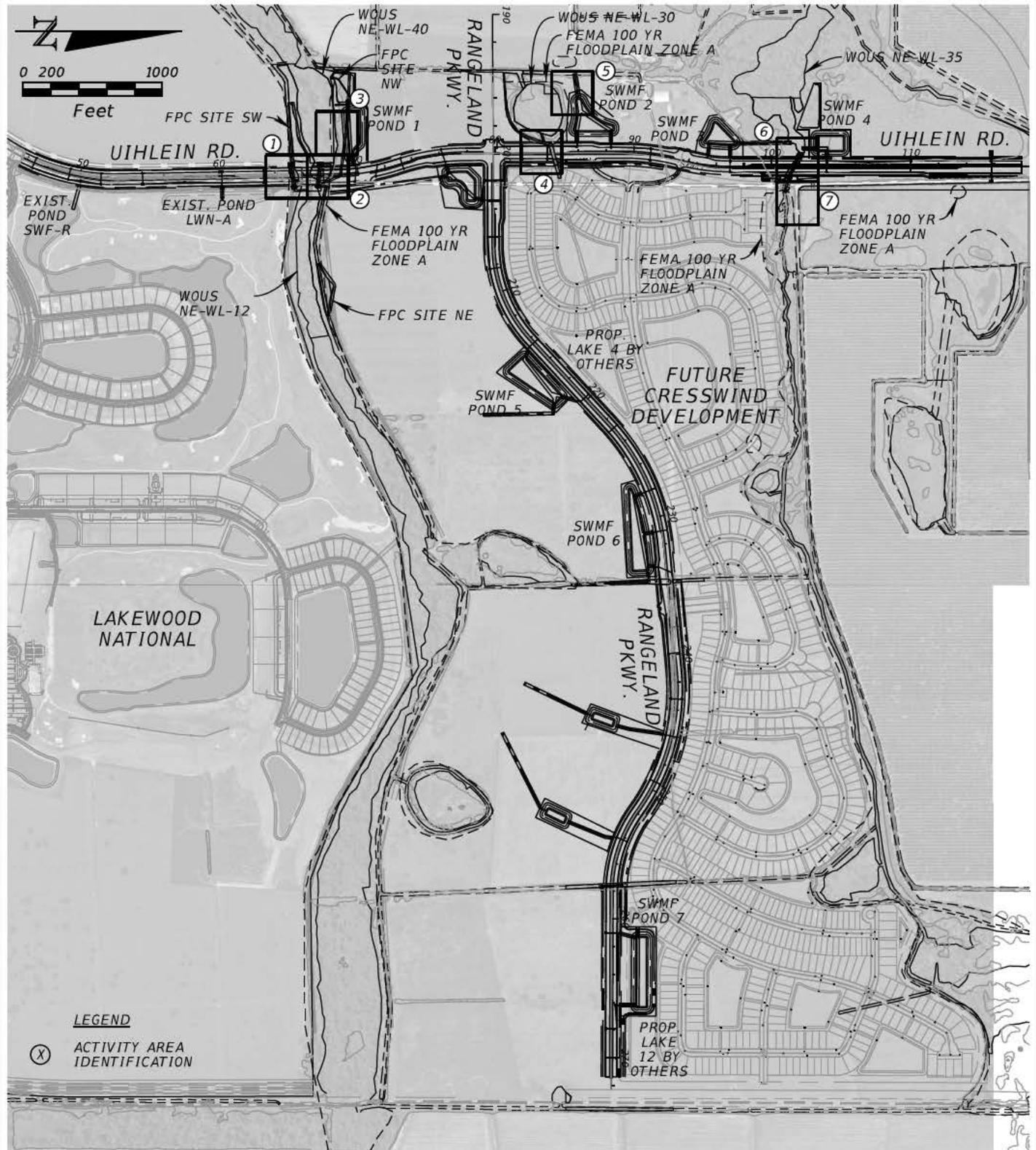
DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

DRAWING 1 OF 21

MASTER SITE PLAN



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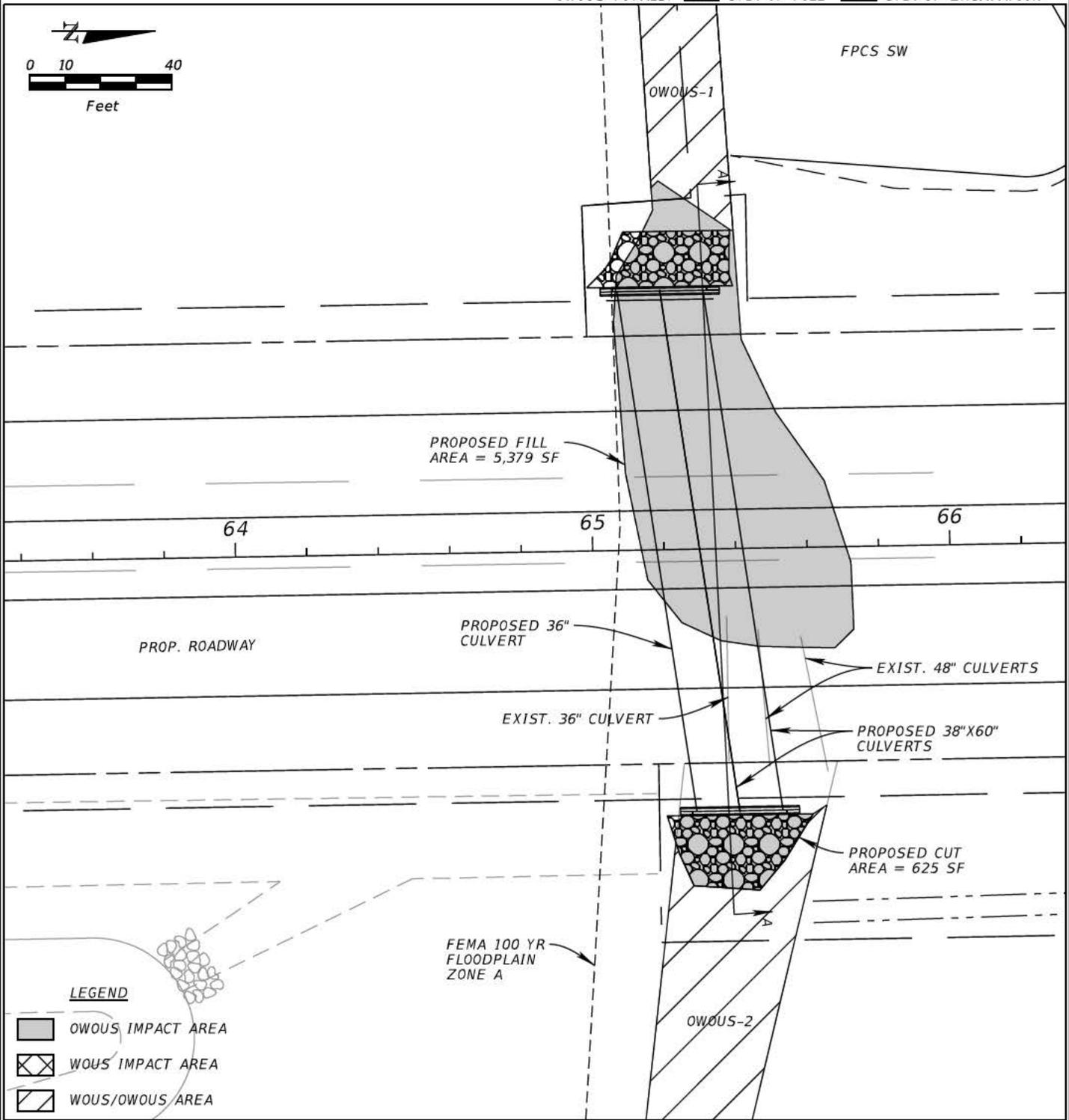
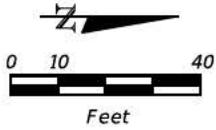
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FL CERT. NO: 59916

MANATEE COUNTY, FLORIDA

DRAWING 2 OF 21

ACTIVITY AREA 1

WOUS TOTALS: 0 CYD. OF FILL 0 CYD. OF EXCAVATION
 OWOUS TOTALS: 1735 CYD. OF FILL 41 CYD. OF EXCAVATION



LEGEND

- OWOUS IMPACT AREA
- WOUS IMPACT AREA
- WOUS/OWOUS AREA

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 LAKEWOOD RANCH STEWARDSHIP DISTRICT

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 KIMLEY-HORN AND ASSOCIATES, INC.

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 FL CERT. NO: 59916

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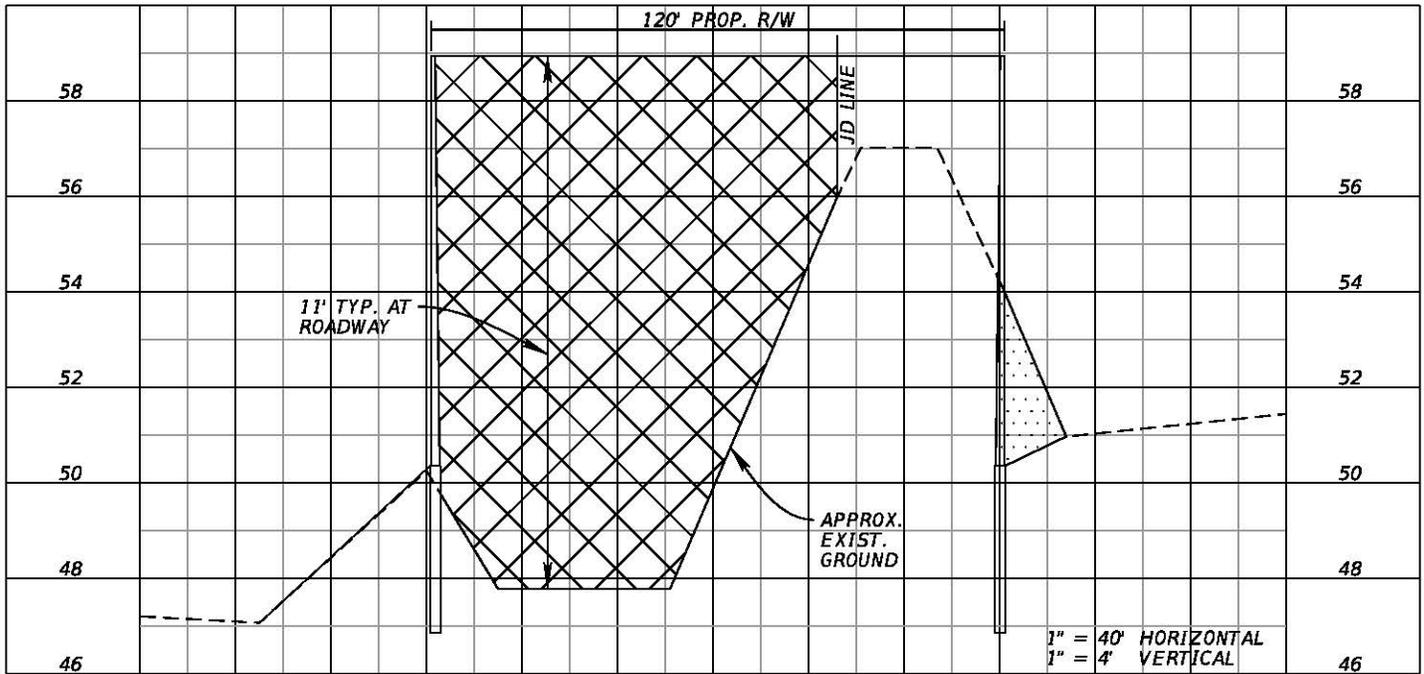
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 FOR

**UIHLEIN ROAD & RANGELAND
 PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

DRAWING 3 OF 21

ACTIVITY AREA 1



SECTION A-A

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

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DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

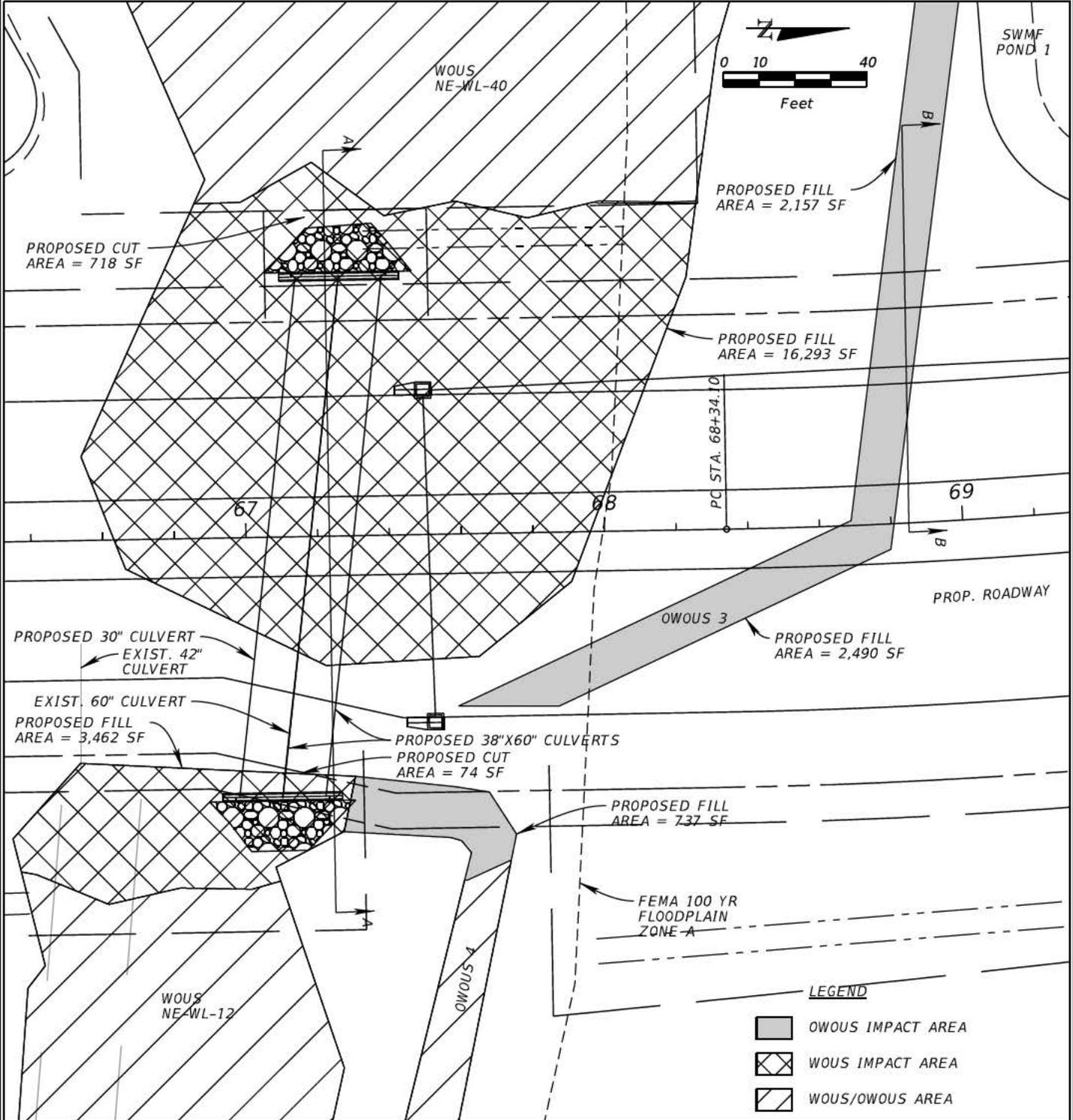
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ACTIVITY AREA 2

WOUS TOTALS: 3113 CYD. OF FILL 16 CYD. OF EXCAVATION
 OWOUS TOTALS: 609 CYD. OF FILL 0 CYD. OF EXCAVATION



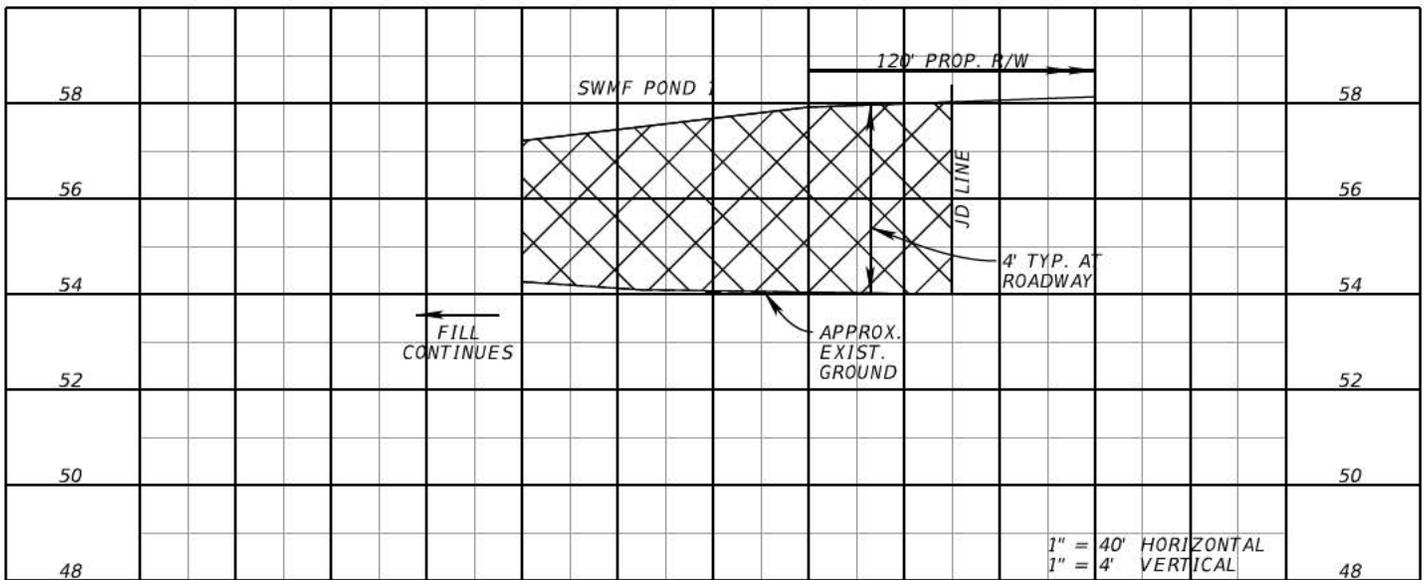
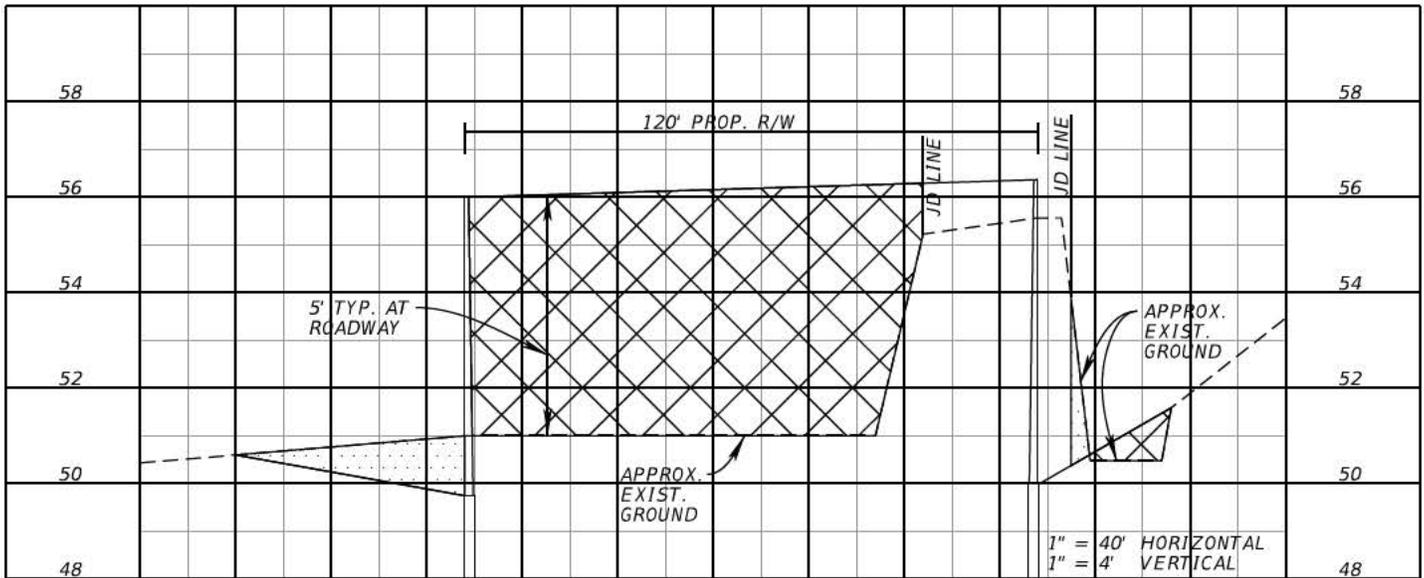
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 LAKEWOOD RANCH STEWARDSHIP DISTRICT
 PREPARED BY:
 KIMLEY-HORN AND ASSOCIATES, INC.
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 FOR
**UIHLEIN ROAD & RANGELAND
 PARKWAY IMPROVEMENTS**
 MANATEE COUNTY, FLORIDA
 DRAWING 5 OF 21

ACTIVITY AREA 2



LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
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FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

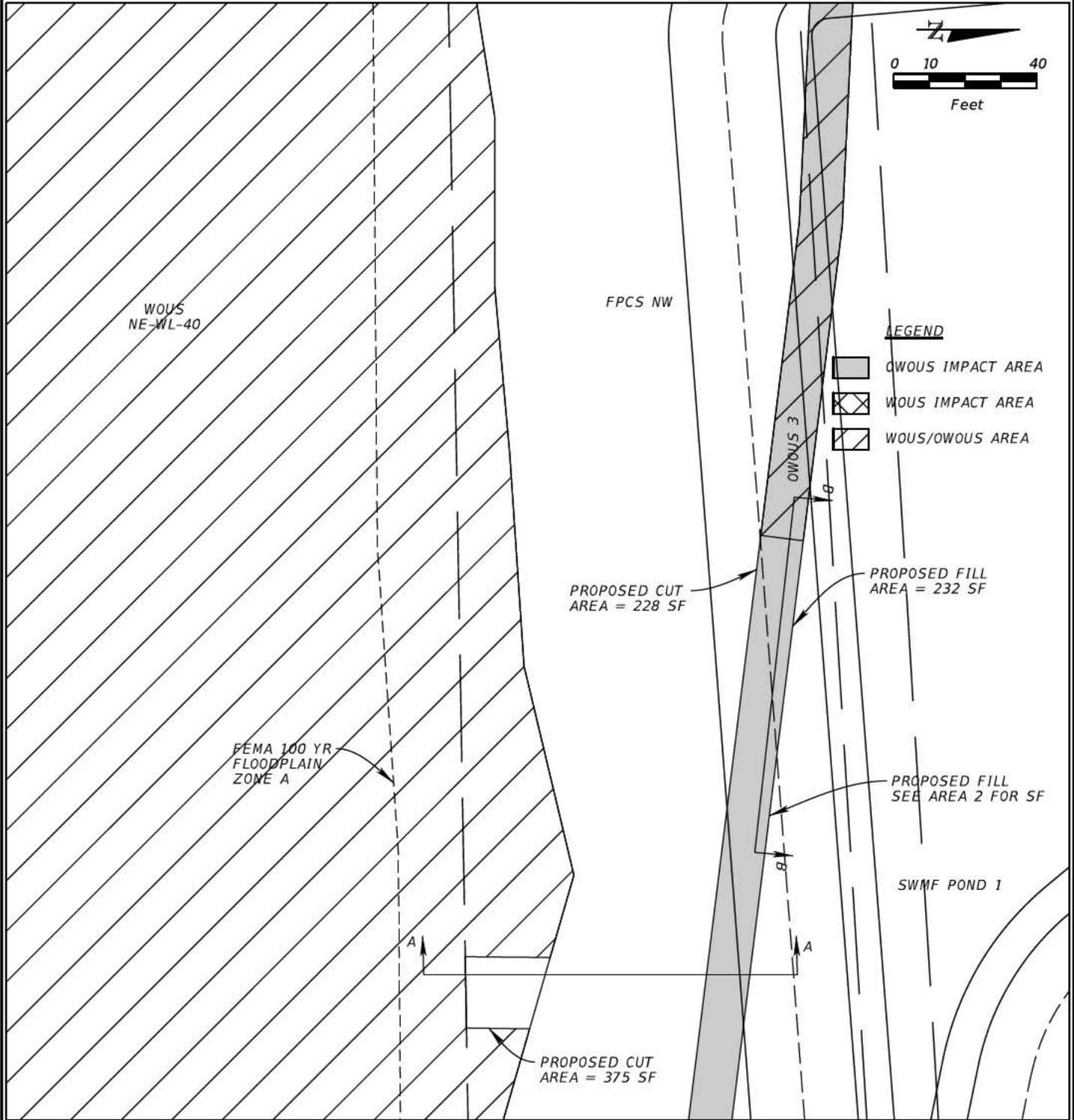
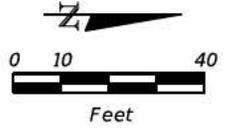
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ACTIVITY AREA 3

WOUS TOTALS: 0 CYD. OF FILL 28 CYD. OF EXCAVATION
 OWOUS TOTALS: 9 CYD. OF FILL 4 CYD. OF EXCAVATION



- LEGEND**
- OWOUS IMPACT AREA
 - WOUS IMPACT AREA
 - WOUS/OWOUS AREA

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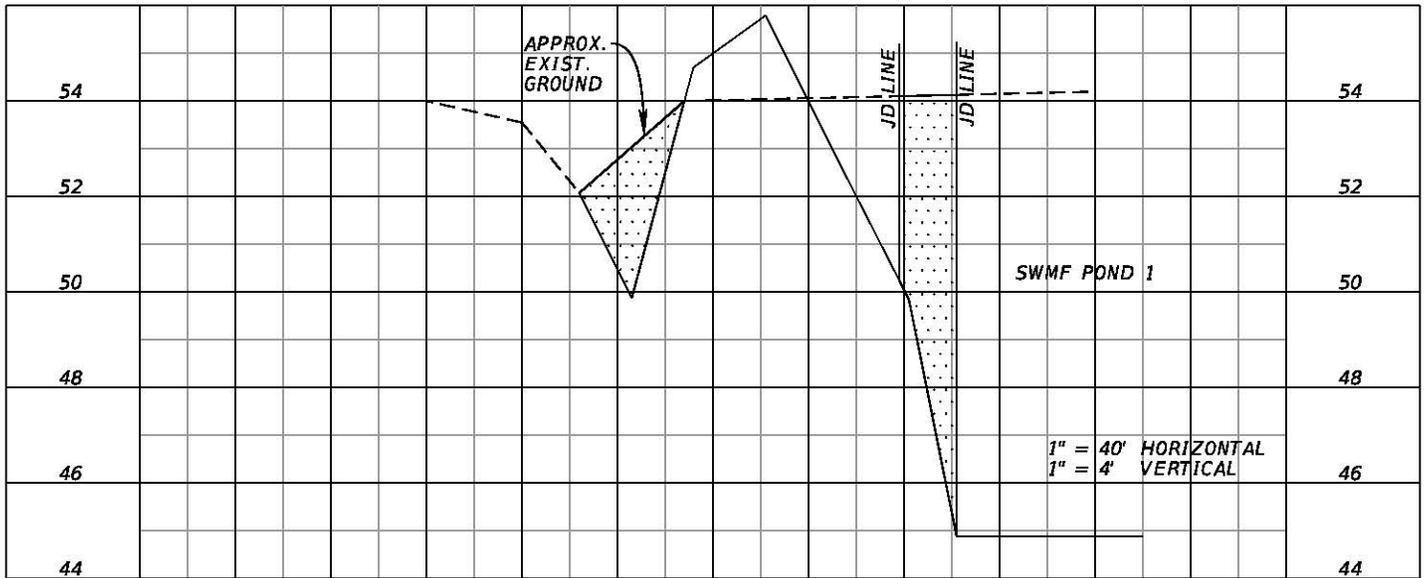
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FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

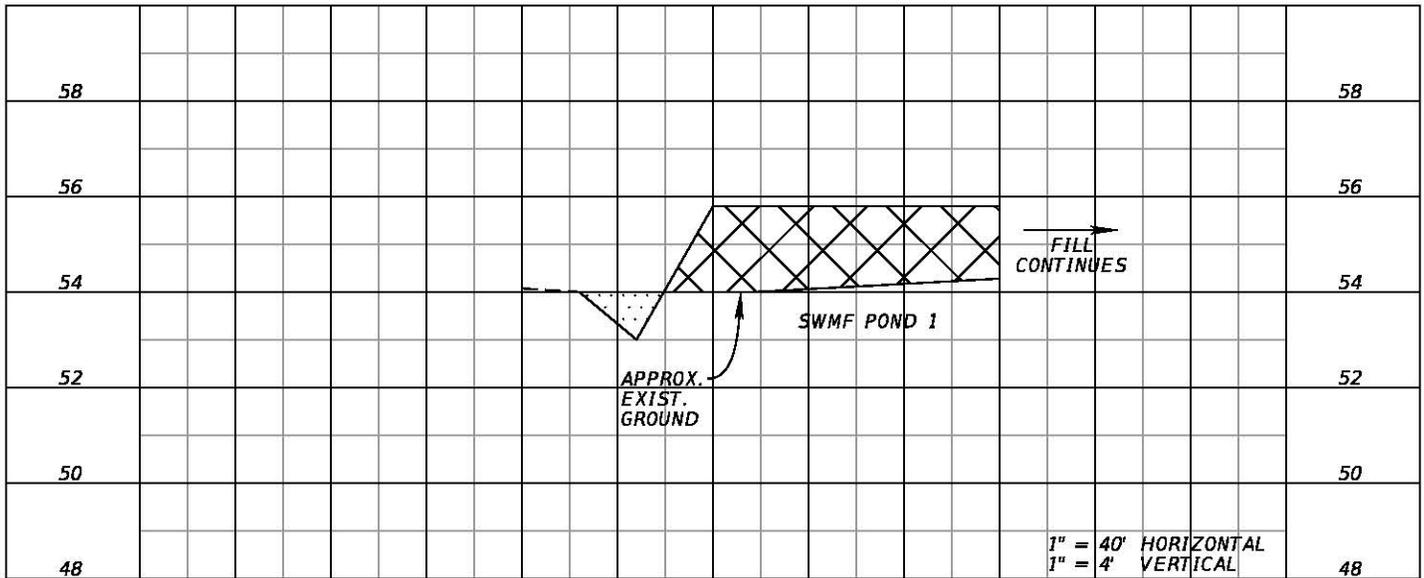
MANATEE COUNTY, FLORIDA

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 FL CERT. NO: 59916

ACTIVITY AREA 3



SECTION A-A



SECTION B-B

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
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DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

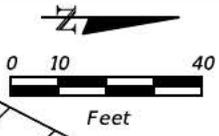
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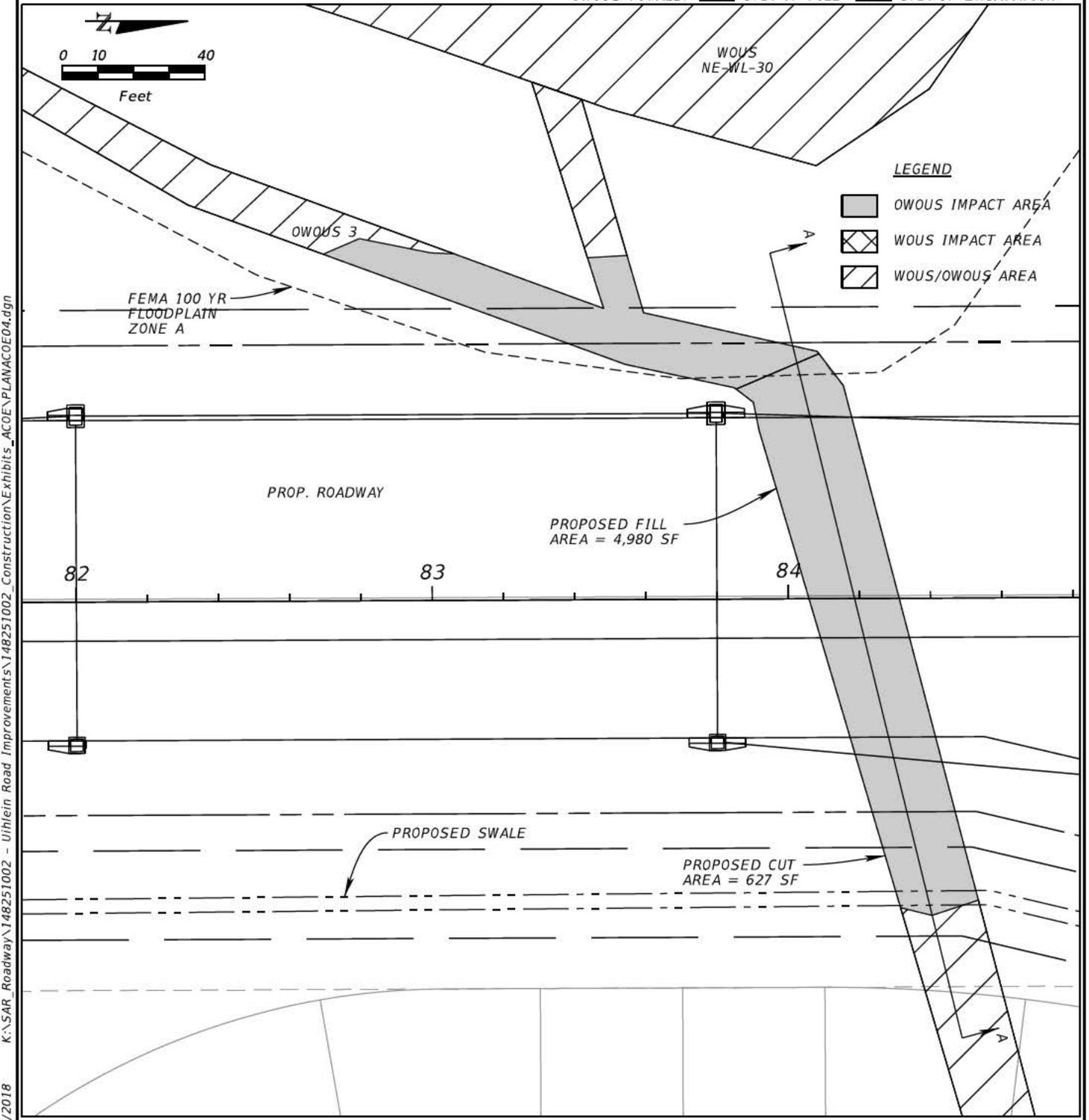
ACTIVITY AREA 4

WOUS TOTALS: 0 CYD. OF FILL 0 CYD. OF EXCAVATION
 OWOUS TOTALS: 369 CYD. OF FILL 23 CYD. OF EXCAVATION



LEGEND

- OWOUS IMPACT AREA
- WOUS IMPACT AREA
- WOUS/OWOUS AREA



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 FL CERT. NO: 59916

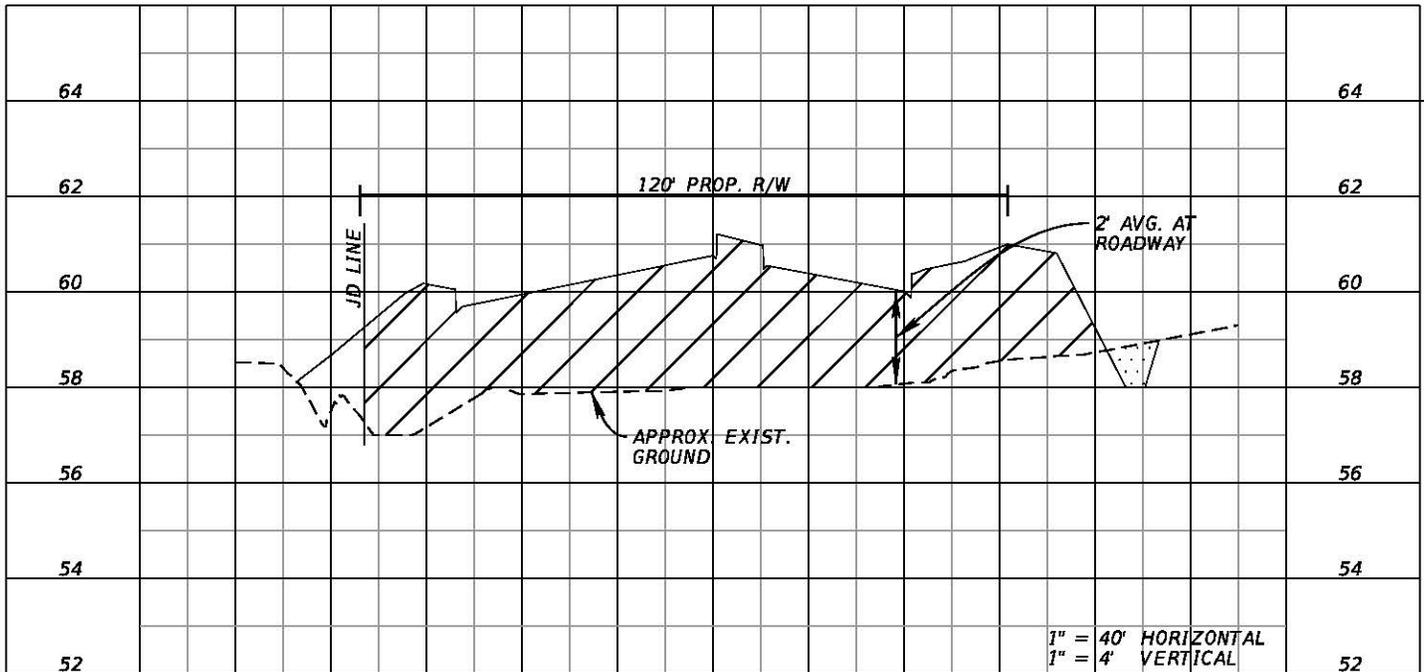
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 FOR
UIHLEIN ROAD & RANGELAND
 PARKWAY IMPROVEMENTS

 MANATEE COUNTY, FLORIDA

 DRAWING 9 OF 21

ACTIVITY AREA 4



SECTION A-A

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

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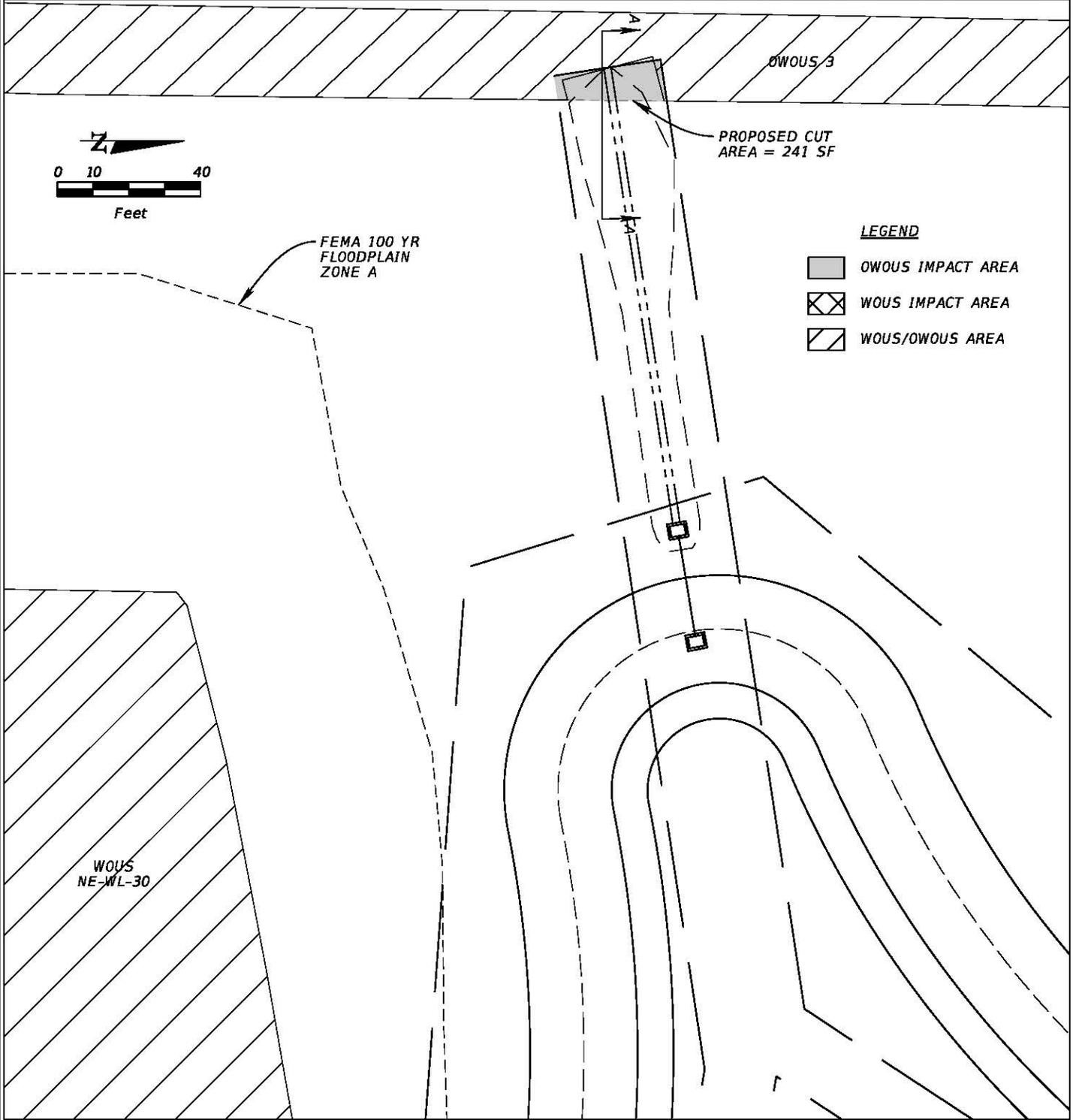
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FL CERT. NO: 59916

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ACTIVITY AREA 5

WOUS TOTALS: 0 CYD. OF FILL 0 CYD. OF EXCAVATION
 OWOUS TOTALS: 0 . OF FILL 11 CYD. OF EXCAVATION



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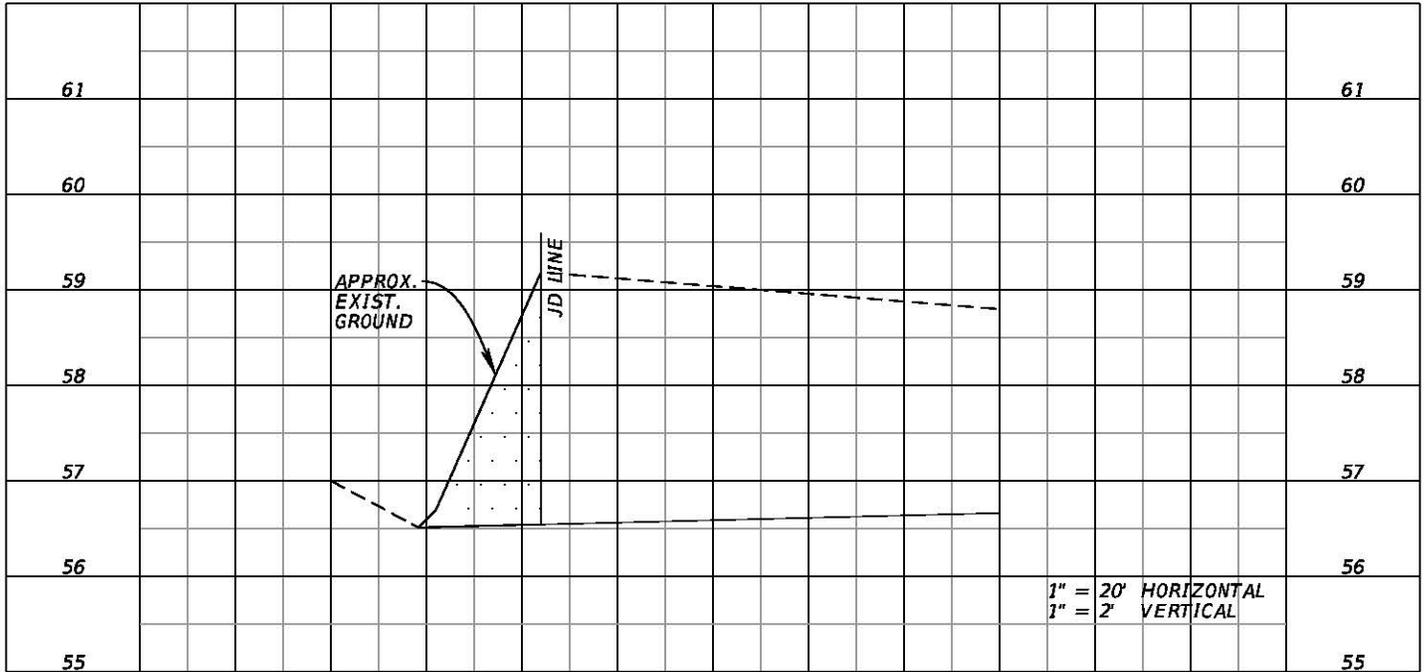
APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
 PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

REVISIONS

DEAN PAQUET, P.E.
FL CERT. NO: 59916

DREDGE AND FILL APPLICATION
FOR
**UIHLEIN ROAD & RANGELAND
 PARKWAY IMPROVEMENTS**
 MANATEE COUNTY, FLORIDA

ACTIVITY AREA 5



SECTION A-A

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

REVISIONS

DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

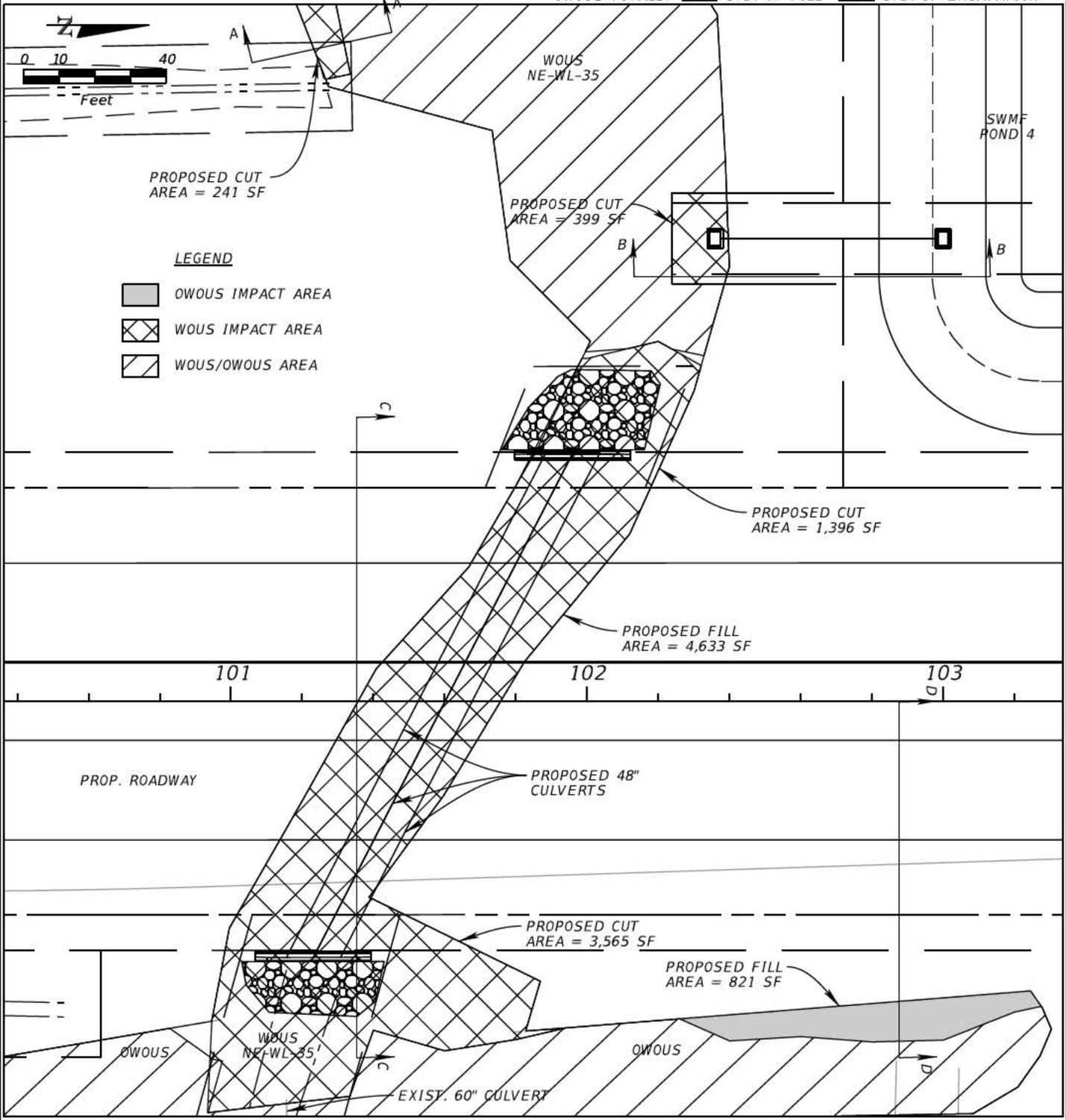
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FL CERT. NO: 59916

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ACTIVITY AREA 6

WOUS TOTALS: 1030 CYD. OF FILL 399 CYD. OF EXCAVATION
 OWOUS TOTALS: 30 CYD. OF FILL 0 CYD. OF EXCAVATION



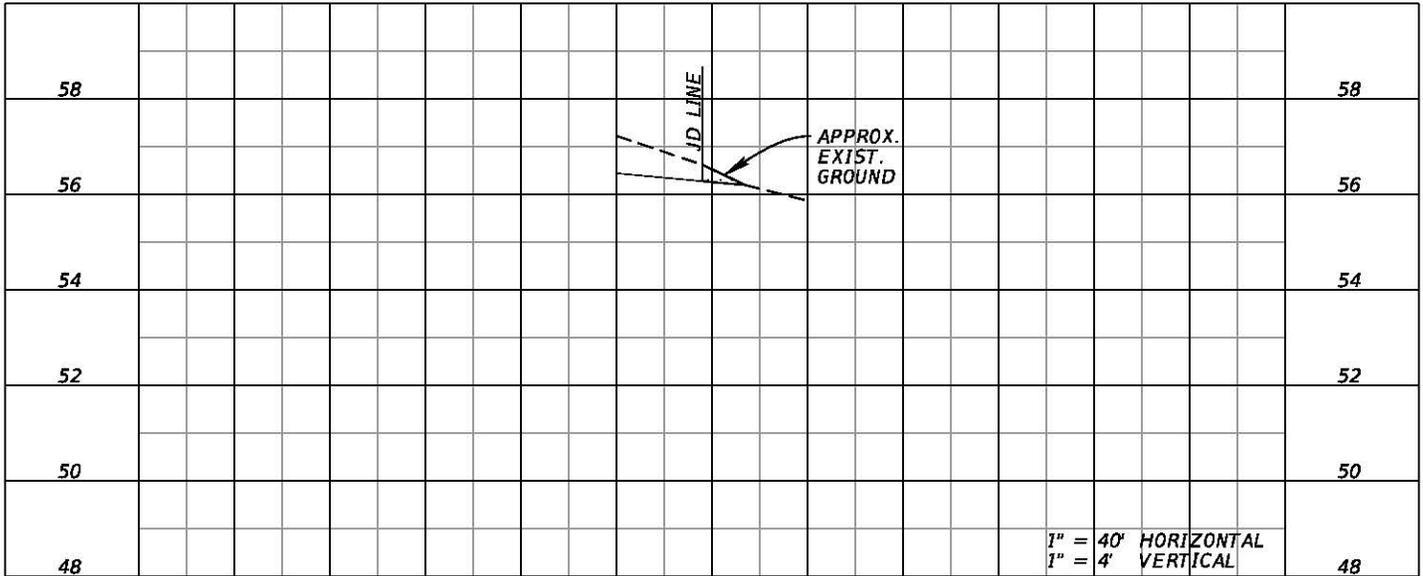
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APPLICATION BY:
 LAKEWOOD RANCH STEWARDSHIP DISTRICT
 PREPARED BY:
 KIMLEY-HORN AND ASSOCIATES, INC.
 DEAN PAQUET, P.E.
 FL CERT. NO: 59916

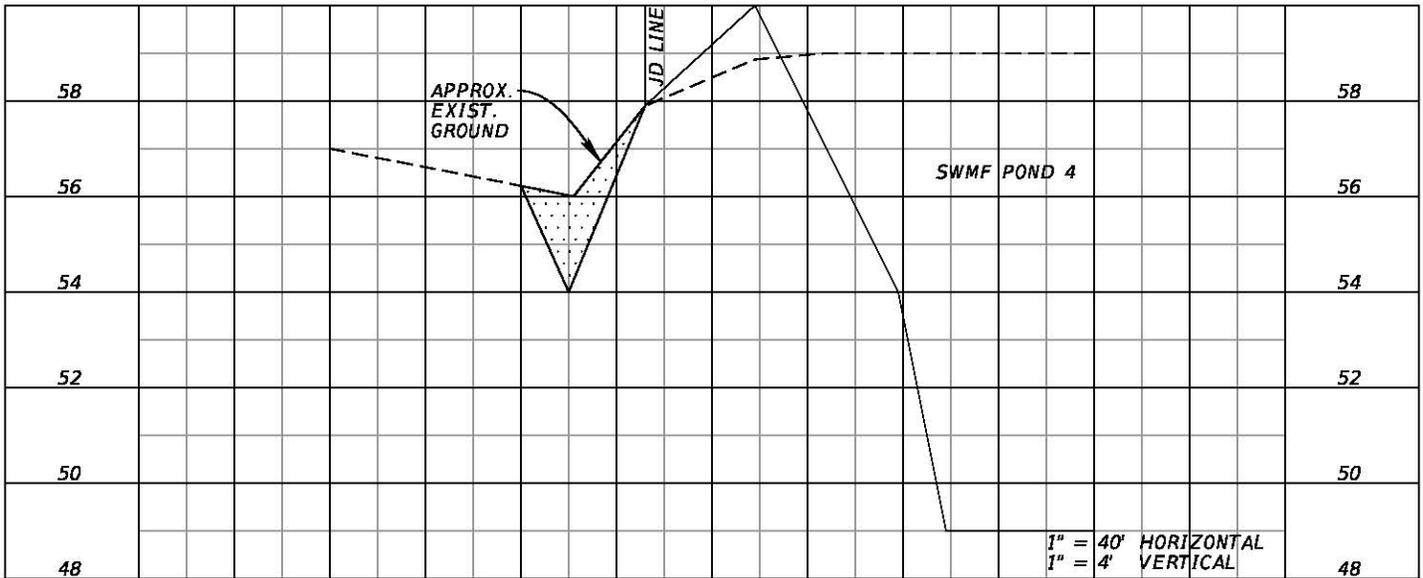
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DREDGE AND FILL APPLICATION FOR
UIHLEIN ROAD & RANGELAND PARKWAY IMPROVEMENTS
 MANATEE COUNTY, FLORIDA
 DRAWING 13 OF 21

ACTIVITY AREA 6



SECTION A-A



SECTION B-B

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

REVISIONS

DREDGE AND FILL APPLICATION
FOR

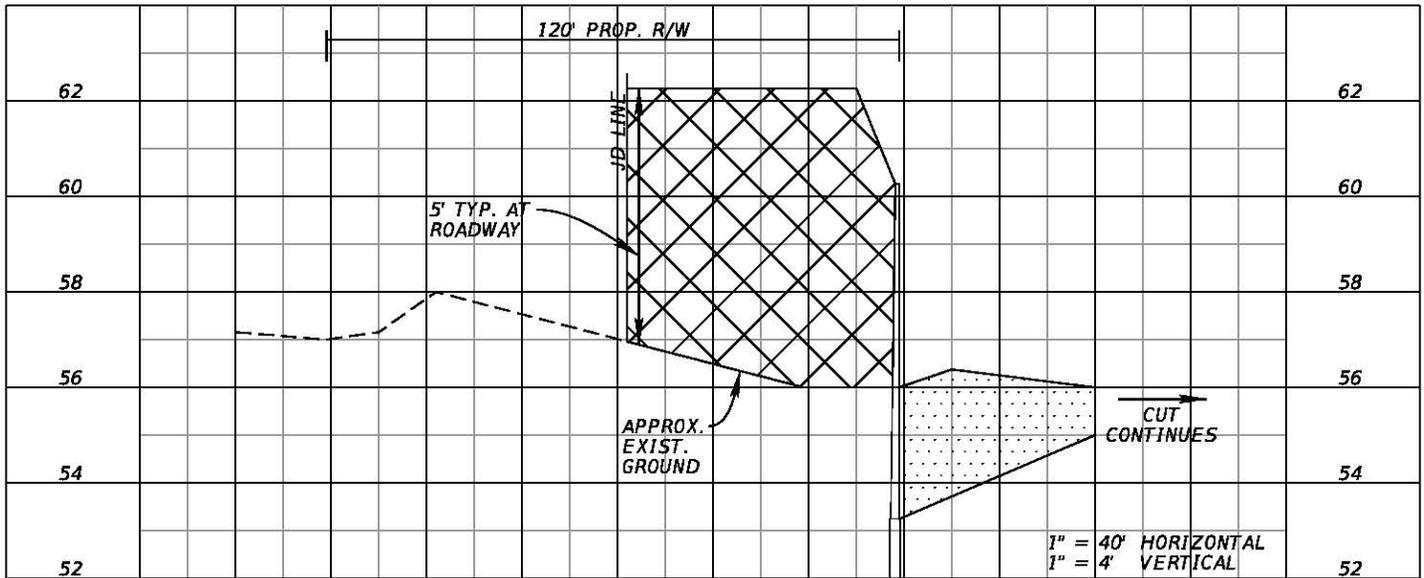
**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

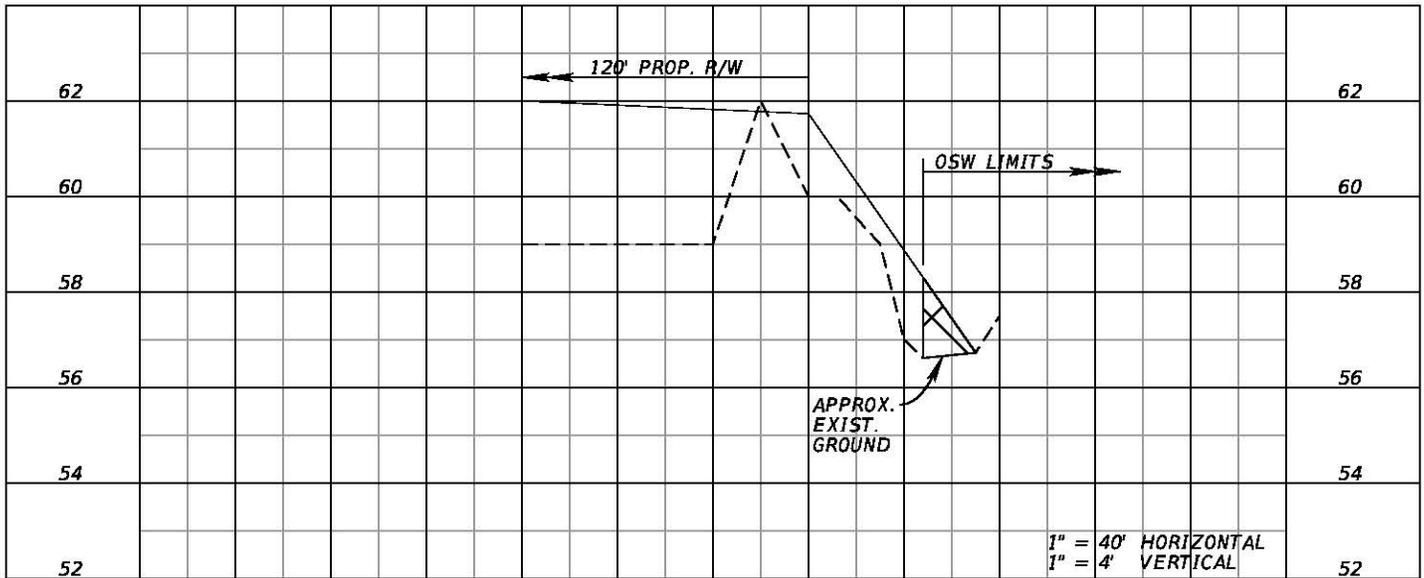
DEAN PAQUET, P.E.
FL CERT. NO: 59916

DRAWING 14 OF 21

ACTIVITY AREA 6



SECTION C-C



SECTION D-D

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

REVISIONS

DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

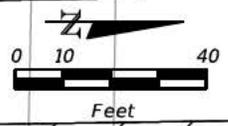
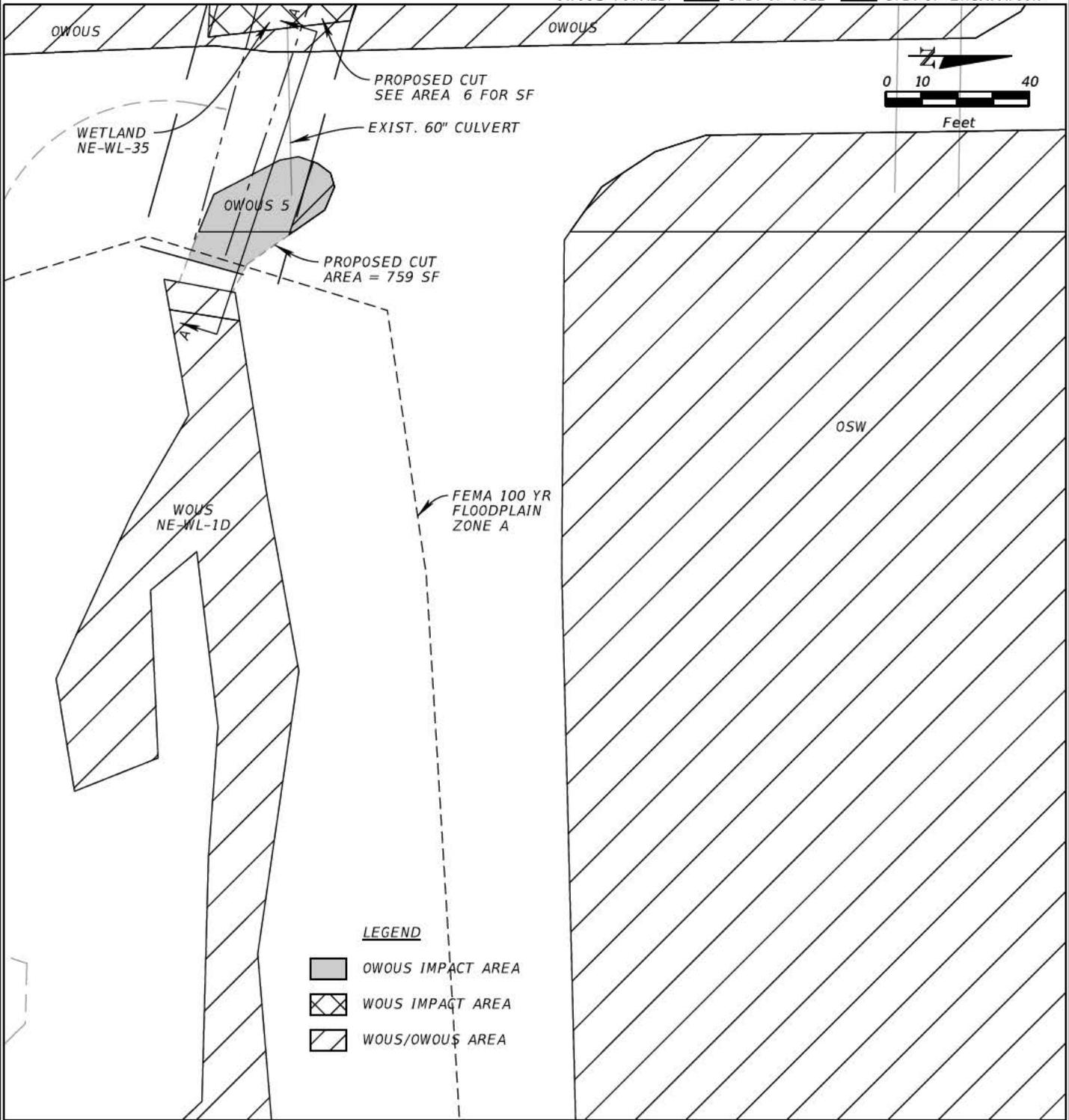
MANATEE COUNTY, FLORIDA

DEAN PAQUET, P.E.
FL CERT. NO: 59916

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ACTIVITY AREA 7

WOUS TOTALS: 0 CYD. OF FILL 0 CYD. OF EXCAVATION
 OWOUS TOTALS: 0 CYD. OF FILL 56 CYD. OF EXCAVATION



LEGEND

- OWOUS IMPACT AREA
- WOUS IMPACT AREA
- WOUS/OWOUS AREA

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APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
 PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

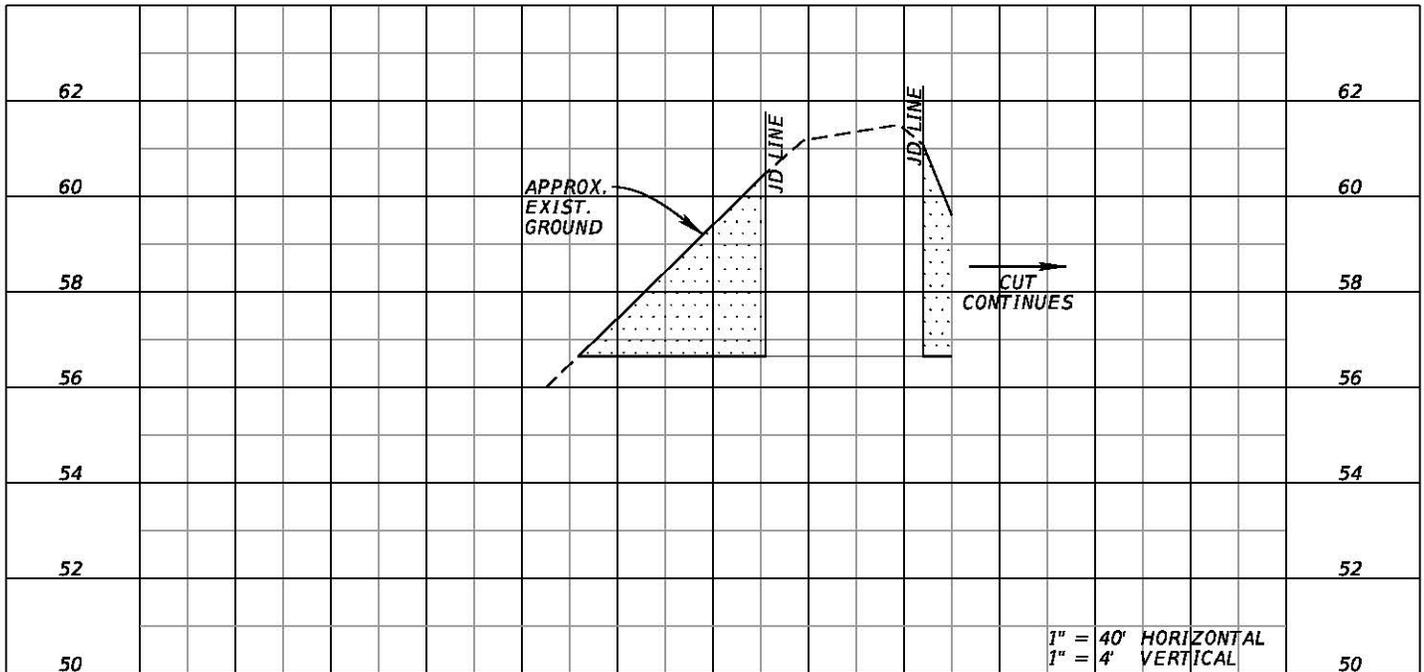
REVISIONS

DEAN PAQUET, P.E.
FL CERT. NO: 59916

DREDGE AND FILL APPLICATION
FOR
**UIHLEIN ROAD & RANGELAND
 PARKWAY IMPROVEMENTS**
 MANATEE COUNTY, FLORIDA

DRAWING 16 OF 21

ACTIVITY AREA 7



SECTION A-A

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WOUS/OWOUS AREA TO BE FILLED
- WOUS/OWOUS AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

REVISIONS

DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

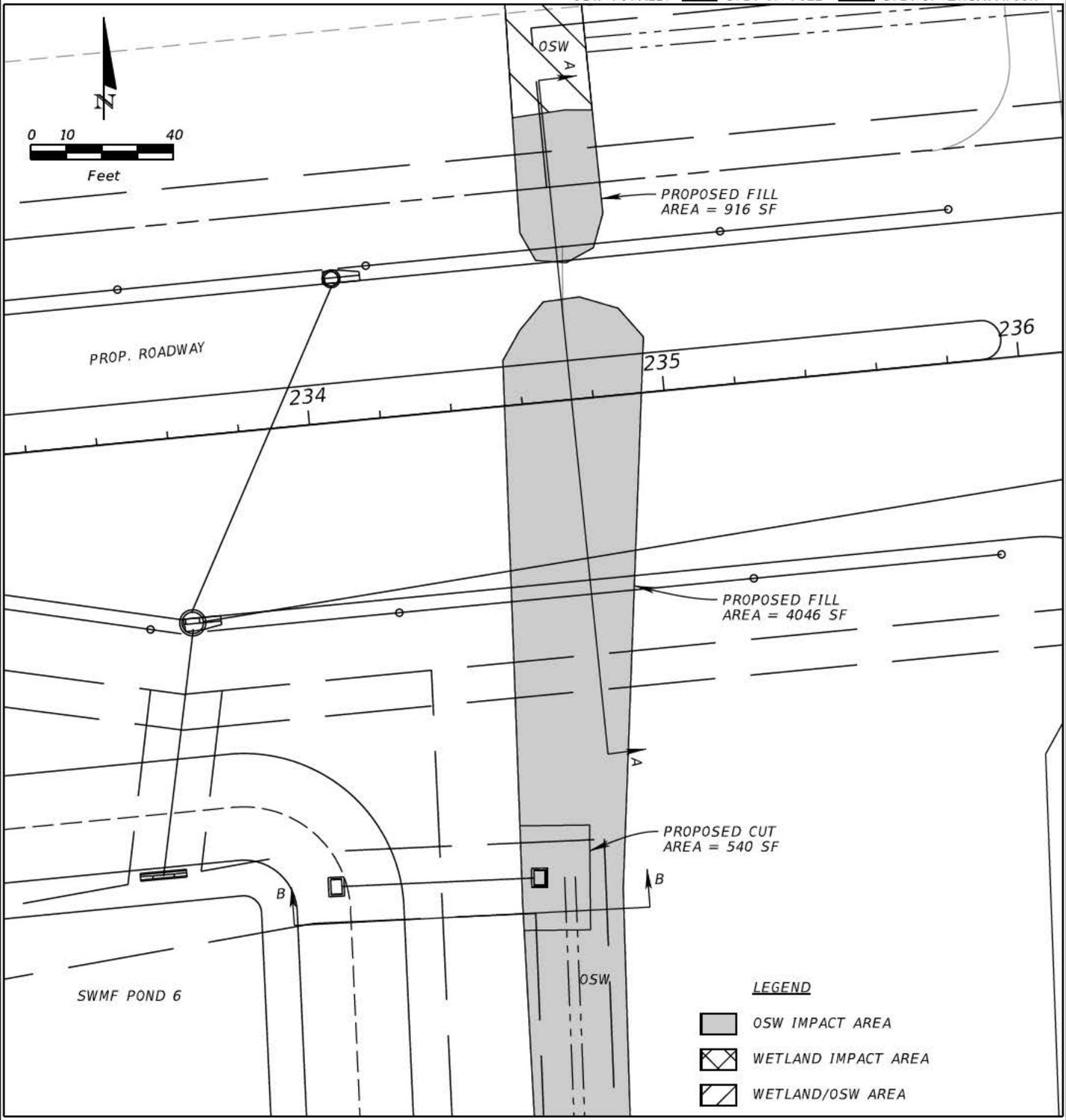
DEAN PAQUET, P.E.
FL CERT. NO: 59916

DRAWING 17 OF 21

7/18/2018 K:\SAR_Roadway\148251002 - Uihlein Road Improvements\148251002_Construction\Exhibits_ACOE\RDXSAC0E07.dgn steven.hartl

ACTIVITY AREA 8

WETLAND TOTALS: CYD. OF FILL CYD. OF EXCAVATION
 OSW TOTALS: 722 CYD. OF FILL 61 CYD. OF EXCAVATION



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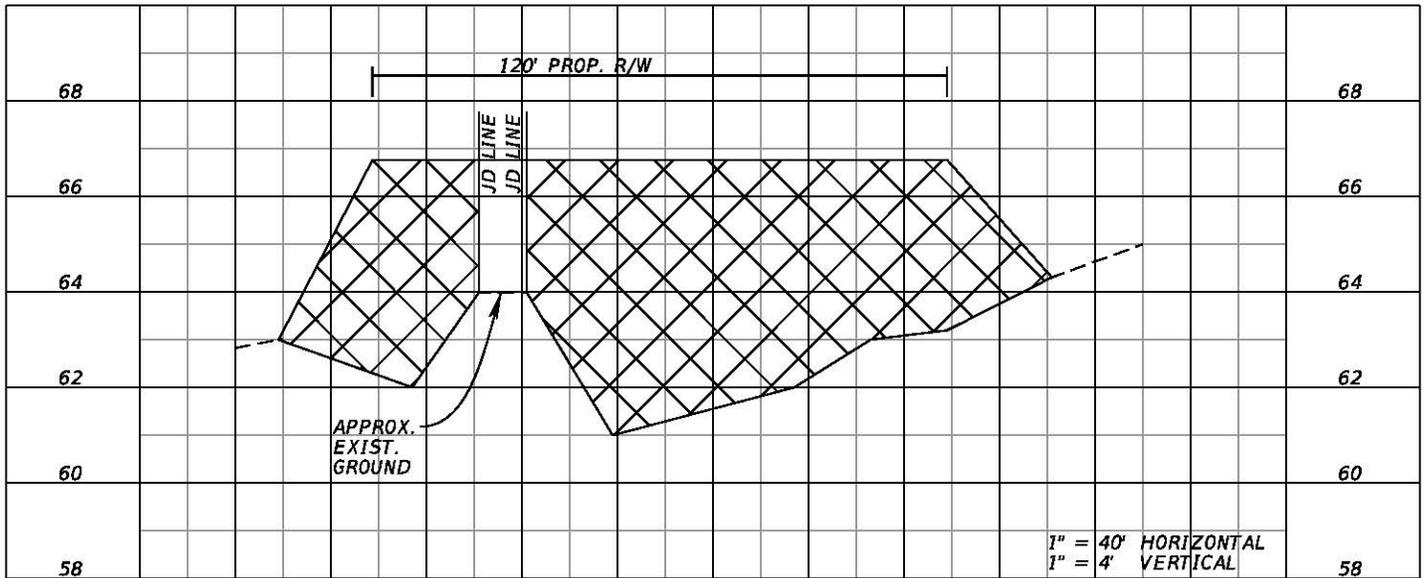
APPLICATION BY:
 LAKEWOOD RANCH STEWARDSHIP DISTRICT
 PREPARED BY:
 KIMLEY-HORN AND ASSOCIATES, INC.

 DEAN PAQUET, P.E.
 FL CERT. NO: 59916

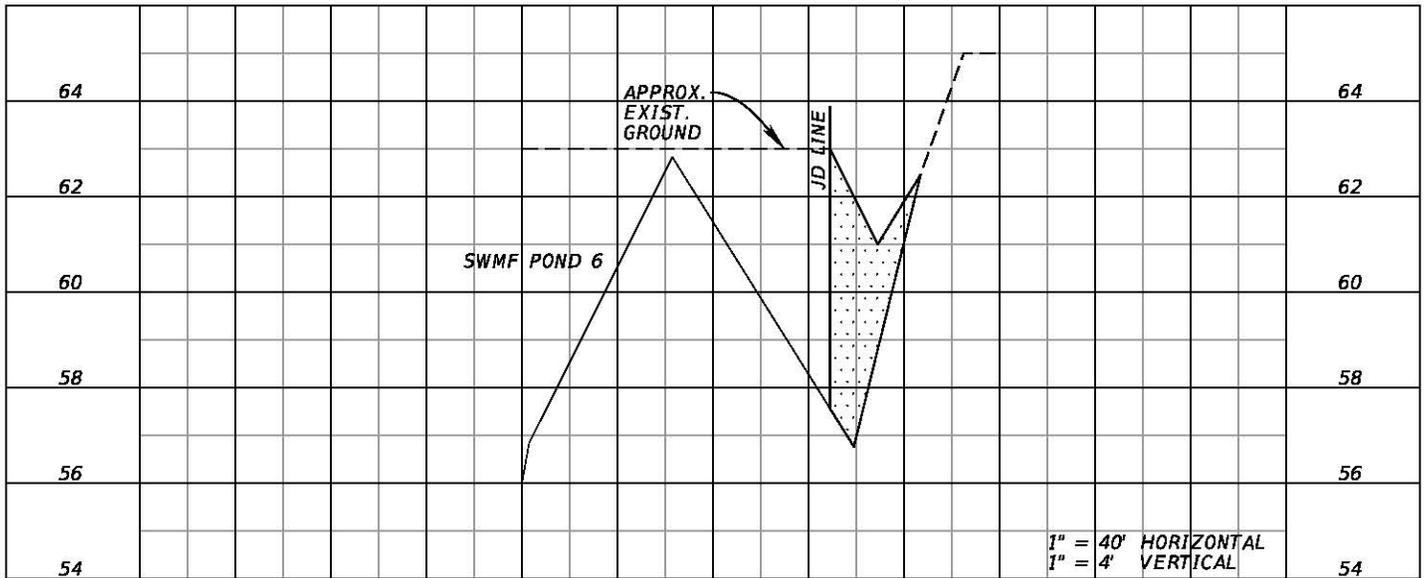
REVISIONS

DREDGE AND FILL APPLICATION
 FOR
UIHLEIN ROAD & RANGELAND
 PARKWAY IMPROVEMENTS
MANATEE COUNTY, FLORIDA
 DRAWING 18 OF 21

ACTIVITY AREA 8



SECTION A-A



SECTION B-B

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WETLAND/OSW AREA TO BE FILLED
- WETLAND/OSW AREA TO BE EXCAVATED

APPLICATION BY:
LAKEWOOD RANCH STEWARDSHIP DISTRICT
PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

REVISIONS

DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

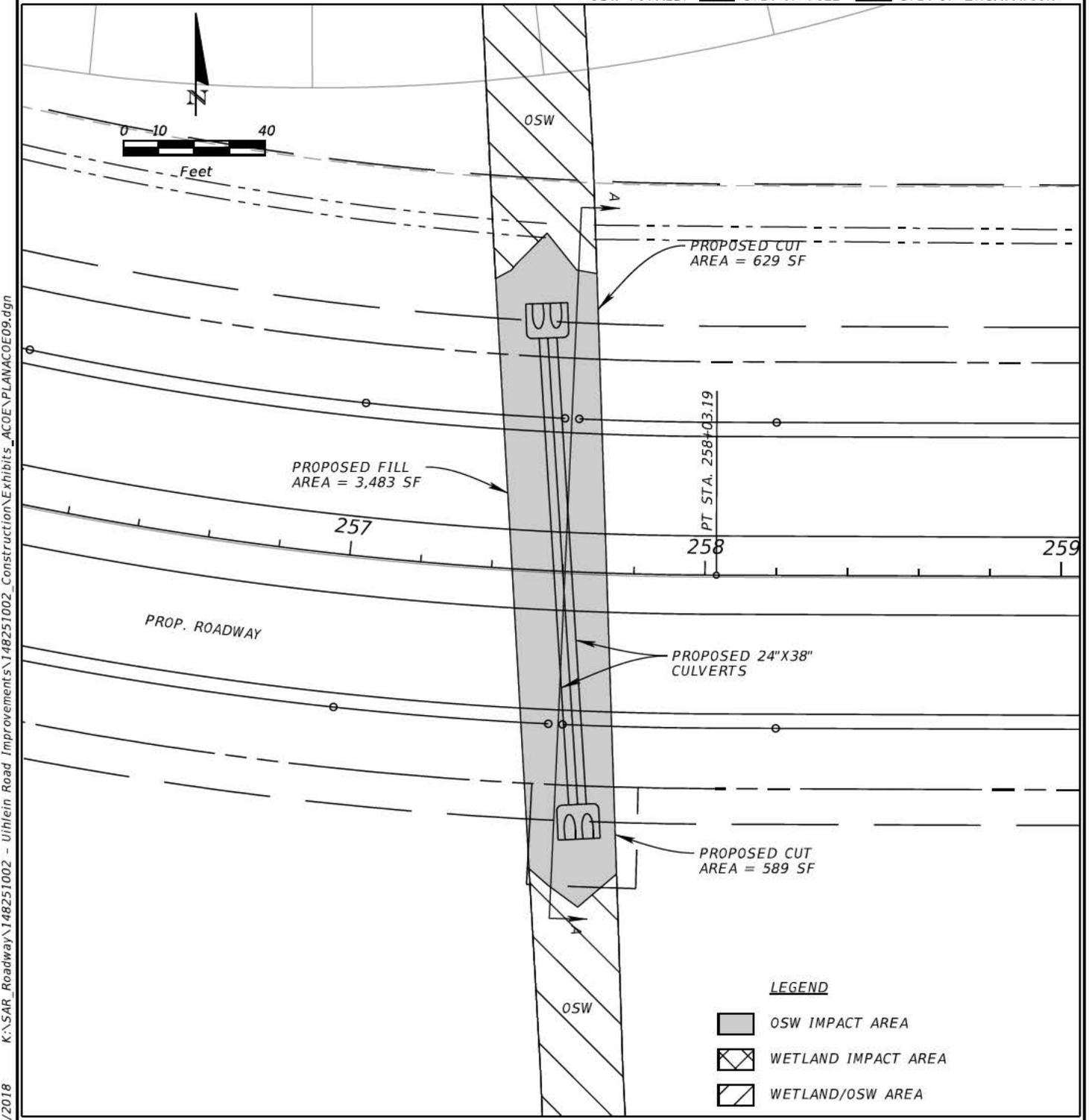
MANATEE COUNTY, FLORIDA

DEAN PAQUET, P.E.
FL CERT. NO: 59916

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ACTIVITY AREA 9

WETLAND TOTALS: _____ CYD. OF FILL _____ CYD. OF EXCAVATION
 OSW TOTALS: 594 CYD. OF FILL 49 CYD. OF EXCAVATION



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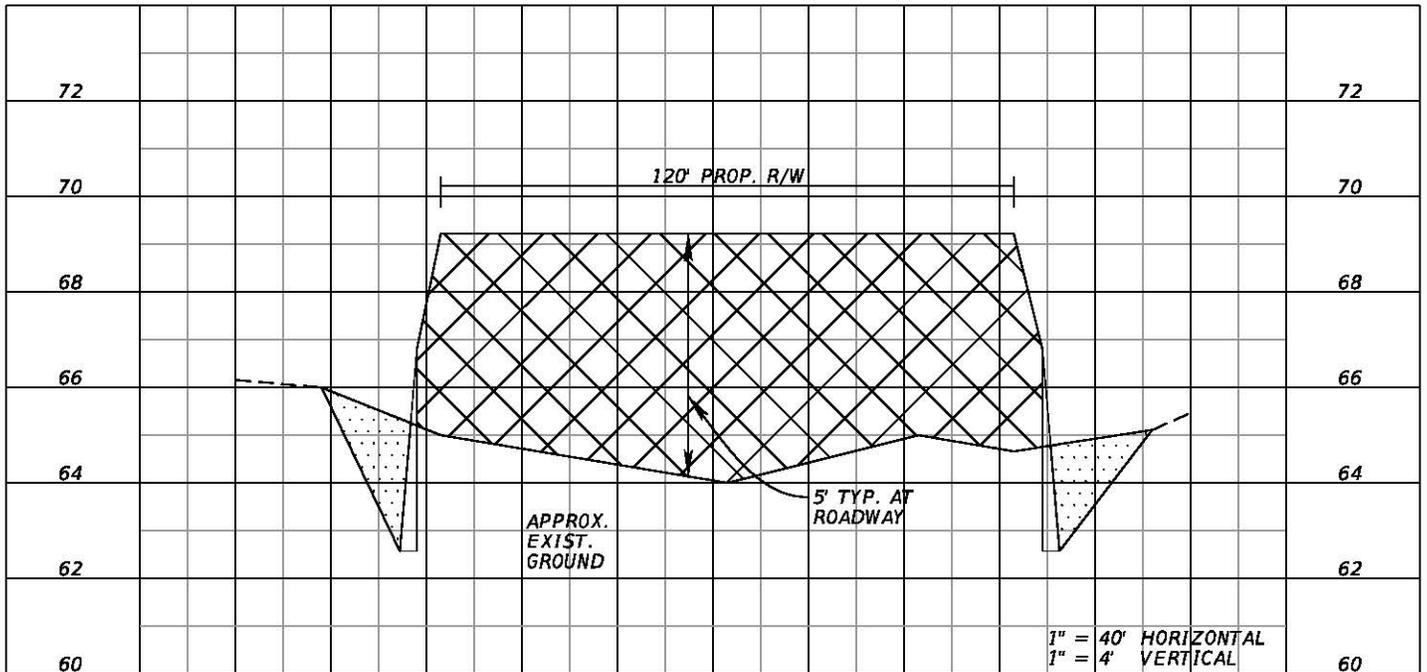
APPLICATION BY:
 LAKEWOOD RANCH STEWARDSHIP DISTRICT
 PREPARED BY:
 KIMLEY-HORN AND ASSOCIATES, INC.

 DEAN PAQUET, P.E.
 FL CERT. NO: 59916

REVISIONS

DREDGE AND FILL APPLICATION
 FOR
UIHLEIN ROAD & RANGELAND
 PARKWAY IMPROVEMENTS
MANATEE COUNTY, FLORIDA
 DRAWING 20 OF 21

ACTIVITY AREA 9



SECTION A-A

1" = 40' HORIZONTAL
1" = 4' VERTICAL

LEGEND

- EXISTING GROUND
- PROPOSED GROUND
- WETLAND/OSW AREA TO BE FILLED
- WETLAND/OSW AREA TO BE EXCAVATED

REVISIONS

DREDGE AND FILL APPLICATION
FOR

**UIHLEIN ROAD & RANGELAND
PARKWAY IMPROVEMENTS**

MANATEE COUNTY, FLORIDA

DRAWING 21 OF 21

PREPARED BY:
KIMLEY-HORN AND ASSOCIATES, INC.

DEAN PAQUET, P.E.
FL CERT. NO: 59916

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This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 12, 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Jacksonville District, SAJ-2017-02544-RGH (LAKEWOOD RANCH STEWARDSHIP DISTRICT / MANATEE)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Florida County/parish/borough: Manatee City: Lakewood Ranch
Center coordinates of site (lat/long in degree decimal format): Lat. 27.447543° N, Long. 82.361585° W.
Universal Transverse Mercator:
Name of nearest waterbody: Mill Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Name of watershed or Hydrologic Unit Code (HUC): 03100202 - Manatee; 031002020105 - Lake Manatee
[X] Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
[] Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

[X] Office (Desk) Determination. Date: June 4, 2018
[X] Field Determination. Date(s): June 5, 2018

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- [] Waters subject to the ebb and flow of the tide.
[] Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are and are not "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): 1

- [] TNWs, including territorial seas
[] Wetlands adjacent to TNWs
[X] Relatively permanent waters2 (RPWs) that flow directly or indirectly into TNWs
[X] Non-RPWs that flow directly or indirectly into TNWs
[X] Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
[] Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
[X] Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
[] Impoundments of jurisdictional waters
[] Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or 1.47 acres.
Wetlands: 0.93 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

- [] Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain:

1 Boxes checked below shall be supported by completing the appropriate sections in Section III below.

2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 22,763 acres

Drainage area: Pick List

Average annual rainfall: 54 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through Pick List tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are Pick List river miles from RPW.

Project waters are 5-10 aerial (straight) miles from TNW.

Project waters are Pick List aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW⁵: Wetland NW-WL-11 (headwaters of Mill Creek) flows through a modified waterway to mainstem of Mill Creek to Manatee River (TNW) .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain: Mill Creek is manipulated in areas near the headwaters (Wetland NE-WL-11) before it connects to natural stream channel bounded by floodplain wetland.

Tributary properties with respect to top of bank (estimate):

Average width: 15 feet
Average depth: 3 feet
Average side slopes: **3:1**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Manipulated areas are subject to sloughing, but are maintained.

Presence of run/riffle/pool complexes. Explain: None.

Tributary geometry: **Meandering**

Tributary gradient (approximate average slope): 0-2 %

(c) Flow:

Tributary provides for: **Seasonal flow**

Estimate average number of flow events in review area/year: **11-20**

Describe flow regime: Typically Groundwater and surface water runoff.

Other information on duration and volume:

Surface flow is: **Confined**. Characteristics:

Subsurface flow: **Unknown**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water is generally clear, slow moving until rain events.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

Identify specific pollutants, if known: Assessed in 2002, listed as polluted for Bacteria and Other Microbes, however significant agricultural fields are adjacent to this waterbody so it is highly likely that, nutrients, herbicides, and pesticides are also within this waterbody.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width): 50-500 feet.
- Wetland fringe. Characteristics: Typically forested slough wetlands.
- Habitat for:
 - Federally Listed species. Explain findings: Possible Wood Stork SFH exists in these modified tributaries.
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings: Observed Swallow-tail kites foraging along tributary and wetland margins.
- Aquatic/wildlife diversity. Explain findings: Tributaries and adjacent wetlands provide greatly needed greenways for wildlife.

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: 0.93 acres

Wetland type. Explain: Palustrine Forested.

Wetland quality. Explain: Mature and highly functional.

Project wetlands cross or serve as state boundaries. Explain: N/A.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain:

Surface flow is: **Overland sheetflow**

Characteristics: Wetlands typically flow via direct connection or sheet flow.

Subsurface flow: **Unknown**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **5-10** river miles from TNW.

Project waters are **5-10** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters**.

Estimate approximate location of wetland as within the **50 - 100-year** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Clear to tanic.

Identify specific pollutants, if known: Assessed in 2002, listed as polluted for Bacteria and Other Microbes, however significant agricultural fields are adjacent to this waterbody so it is highly likely that, nutrients, herbicides, and pesticides are also within this waterbody.

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: Palustrine Forested / 80%.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings: Swallow-tail kites observed foraging edges of wetlands.
 - Aquatic/wildlife diversity. Explain findings: Wetlands serve as greenways for wildlife movement.

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **1**

Approximately (0.93) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
NE-WL-35 Y	0.93		

Summarize overall biological, chemical and physical functions being performed: Storage of flood waters; reduction of downstream peak discharges and volumes; recharge of aquifers; maintenance of seasonal/baseflows; maintenance of groundwater supplies; removal of sediments and nutrients; provision of breeding grounds and wildlife habitat (e.g. feeding/foraging, nesting, spawning, rearing of young); supports diverse community of benthic invertebrates, a major food source for vertebrates.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows

seasonally: Field observations of OSW 1, OSW 1A, OSW 1B, OSW 8, OSW 9, OSW 10, OSW 11, OSW 12, OSW 14, and OSW AA6/AA7 confirm these are deep ditches which carry flow at least seasonally and are relatively permanent.

Provide estimates for jurisdictional waters in the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: 1.47 acres.

Identify type(s) of waters: **Manipulated waterways/agricultural ditches.**

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

Tributary waters: linear feet width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Several of the ditches were excavated through the wetlands.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.93** acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

Demonstrate that impoundment was created from "waters of the U.S.," or

Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

which are or could be used by interstate or foreign travelers for recreational or other purposes.

from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Riparian Wetlands

Physical: The wetlands perform important flow maintenance functions including storage of flood waters^{1, 2} and a release of these waters into the tributary in a more even and consistent manner². Therefore, the wetlands directly affect the duration, frequency, and volume of flow in the tributary and the downstream navigable water². The wetlands reduce local flooding¹. Storage of surface waters provides groundwater recharge that contributes to baseflow in the tributary that is vital to sustain aquatic life in downstream waters¹.

Chemical: The wetlands improve water quality by removing sediment and nutrients that would otherwise reach downstream waters and have a negative effect on aquatic resources^{1, 2}.

Biological: The wetlands are of utmost importance biologically since the majority of other non-wetland areas in the watershed have been altered for agriculture, residential, or other purposes¹. These wetlands have a high abundance and diversity of species due to their transitional location between terrestrial and aquatic systems¹. Productivity in downstream waters can depend on the exchange of nutrients within the floodplains¹. Watersheds dominated by riparian wetlands export a large amount of carbon that is essential to downstream ecosystems¹. Particulate carbon is important for shredders and filter-feeders while dissolved carbon is important for microorganisms within these systems¹.

¹The Clean Water Act Jurisdictional Handbook, Second Edition. 2012. Environmental Law Institute, Washington, DC, 126 pp.

²Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States* & *Carabell v. United States*. 2007. US Department of the Army and US Environmental Protection Agency. 12 pp.

See Chart to Support Findings.

44th Ave East Phase V and Uihlein Road Phase III
WATERS OF THE U.S. (WoUS) IMPACTS

Impact Activity Area (AA) #	Impact Acres (AC)	Impact Area (SF)	Cut Volume (CYD)	Fill Volume (CYD)	Status	Mitigation	Credits
1WOUS-1	0.19	8,083	0	268	RPW		
1WOUS-1A	0.16	7,062	0	319	RPW		
1WOUS-1B	0.03	1,375	0	31	RPW		
1WOUS-2	0.08	3,557	0	211	Non-JD		
1WOUS-3	0.07	3,097	0	240	Non-JD		
1WOUS-4	0.09	3,785	0	317	Non-JD		
1WOUS-5	0.05	2,102	0	53	Non-JD		
1WOUS-6	0.16	7,141	0	4,265	MSSW		
1WOUS-6A	0.22	9,454	0	655	MSSW		
1WOUS-6B	0.09	3,981	0	383	MSSW		
1WOUS-7	0.49	21,530	0	5,719	MSSW		
1WOUS-7A	0.22	9,706	0	910	MSSW		
1WOUS-8	0.42	18,195	0	821	RPW		
1WOUS-9	0.1	4,421	0	356	RPW		
1WOUS-10	0.12	5,103	0	554	RPW		
1WOUS-11	0.29	12,582	0	1,484	RPW		
1WOUS-12	0.1	4,277	0	453	RPW		
1WOUS-13	0.07	2,980	0	239	MSSW		
1WOUS-14	0.06	2,625	0	38	RPW		
Total	3.01	131,056	0	17316			

WOUS WETLAND IMPACTS

Impact Activity Area (AA) #	Impact Acres (AC)	Impact Area (SF)	Cut Volume (CYD)	Fill Volume (CYD)	Status	Mitigation	Credits
NE-WL-35	0.7	30,065	0	323	WL Directly A	Long Swamp	0.33
Total	0.7	30,065	0	323			

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 44th Ave East NE Sector City/County: Bradenton/Manatee Sampling Date: 5/2017
 Applicant/Owner: Lakewood Ranch Stewardship District State: FL Sampling Point: UP-W35
 Investigator(s): E Co Consultants - J. Griffith Section, Township, Range: S:11, 12, & 14 T:35S, R:19E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): LRRU MLRA 155 Lat: 27.454716° Long: -82.378507° Datum: _____
 Soil Map Unit Name: Myakka-Myakka, wet, fine sands, 0-2% slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Please refer to the ACOE Data Form Location Map provided as an Attachment.					

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)	
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)	
Field Observations:		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: UP-W35

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus virginiana</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 15 20% of total cover: 6

Sapling Stratum (Plot size: _____)

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

_____ = Total Cover
50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Schinus terebinthifolius</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 13 20% of total cover: 5

Herb Stratum (Plot size: 30')

1. <u>Paspalum notatum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
2. <u>Eupatorium capillifolium</u>	<u>10</u>	<u>Y</u>	<u>UPL</u>
3. <u>Sporobolus indicus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 15 20% of total cover: 6

Woody Vine Stratum (Plot size: 30')

1. <u>Smilax bona-nox</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ = Total Cover
50% of total cover: 8 20% of total cover: 3

Remarks: (If observed, list morphological adaptations below)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	<u>3</u>	(A)
Total Number of Dominant Species Across All Strata:	<u>6</u>	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.50</u>	(A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>30</u>	x 1 = <u>30</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>100</u>	x 5 = <u>500</u>
Column Totals: _____ (A)	<u>310</u> (B)

Prevalence Index = B/A = 3.1

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: UP-W35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	80						
6-10	10YR 5/1	100						
10-14	10YR 7/1	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) | <input type="checkbox"/> 1 cm Muck (A9) (LRR O) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) | <input type="checkbox"/> 2 cm Muck (A10) (LRR S) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A, B) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Muck Presence (A8) (LRR U) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) | <input type="checkbox"/> Marl (F10) (LRR U) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) | |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S) | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) | |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) | |
| <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U) | | |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 44th Ave East - NE Sector City/County: Bradenton/Manatee Sampling Date: 5/2017
 Applicant/Owner: Lakewood Ranch Stewardship District State: FL Sampling Point: WET-W35
 Investigator(s): E Co Consultants - J. Griffith Section, Township, Range: S:11 T:35S, R:19E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR or MLRA): LRRU MLRA 155 Lat: 27.454916° Long: -82.378074° Datum: _____
 Soil Map Unit Name: Myakka-Myakka, wet, fine sands, 0-2% slopes NWI classification: PFO1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:
 Please refer to the ACOE Data Form Location Map provided as an Attachment.

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one is required; check all that apply)</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Water Marks (B1)</td> <td><input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<p>Secondary Indicators (minimum of two required)</p> <table style="width:100%;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B6)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
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<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
<input type="checkbox"/> Geomorphic Position (D2)																																
<input type="checkbox"/> Shallow Aquitard (D3)																																
<input type="checkbox"/> FAC-Neutral Test (D5)																																
<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																

<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____</p> <p>Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Standing water observed in creek.

VEGETATION (Five Strata) – Use scientific names of plants.

Sampling Point: WET-W35

Tree Stratum (Plot size: 30')

	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Quercus laurifolia</i>	<u>70</u>	<u>Y</u>	<u>FACW</u>
2. <i>Pinus elliotii</i>	<u>15</u>	<u>N</u>	<u>FAC</u>
3. <i>Salix caroliniana</i>	<u>5</u>	<u>N</u>	<u>OBL</u>
4. _____			
5. _____			
6. _____			

_____ = Total Cover
50% of total cover: 45 20% of total cover: 18

Sapling Stratum (Plot size: _____)

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

_____ = Total Cover
50% of total cover: _____ 20% of total cover: _____

Shrub Stratum (Plot size: 30')

1. <i>Cephalanthus occidentalis</i>	<u>10</u>	<u>Y</u>	<u>OBL</u>
2. <i>Morella cerifera</i>	<u>5</u>	<u>Y</u>	<u>FAC</u>
3. _____			
4. _____			
5. _____			
6. _____			

_____ = Total Cover
50% of total cover: 8 20% of total cover: 3

Herb Stratum (Plot size: 30')

1. <i>Ihelypters interrupta</i>	<u>40</u>	<u>Y</u>	<u>FACW</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

_____ = Total Cover
50% of total cover: 20 20% of total cover: 8

Woody Vine Stratum (Plot size: _____)

1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

_____ = Total Cover
50% of total cover: _____ 20% of total cover: _____

Remarks: (If observed, list morphological adaptations below)

Butrees on oak, stain lines on willow, and a

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species <u>15</u>	x 1 =	<u>15</u>
FACW species <u>85</u>	x 2 =	<u>170</u>
FAC species <u>20</u>	x 3 =	<u>60</u>
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: <u>120</u> (A)		<u>245</u> (B)

Prevalence Index = B/A = 2.04

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤3.0¹
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5"	10YR 2/1	100						
5-10"	10YR 3/1	100	10YR 2/1	5	C	M		Organic Nodes
10-14"	10YR 5/1	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A, B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

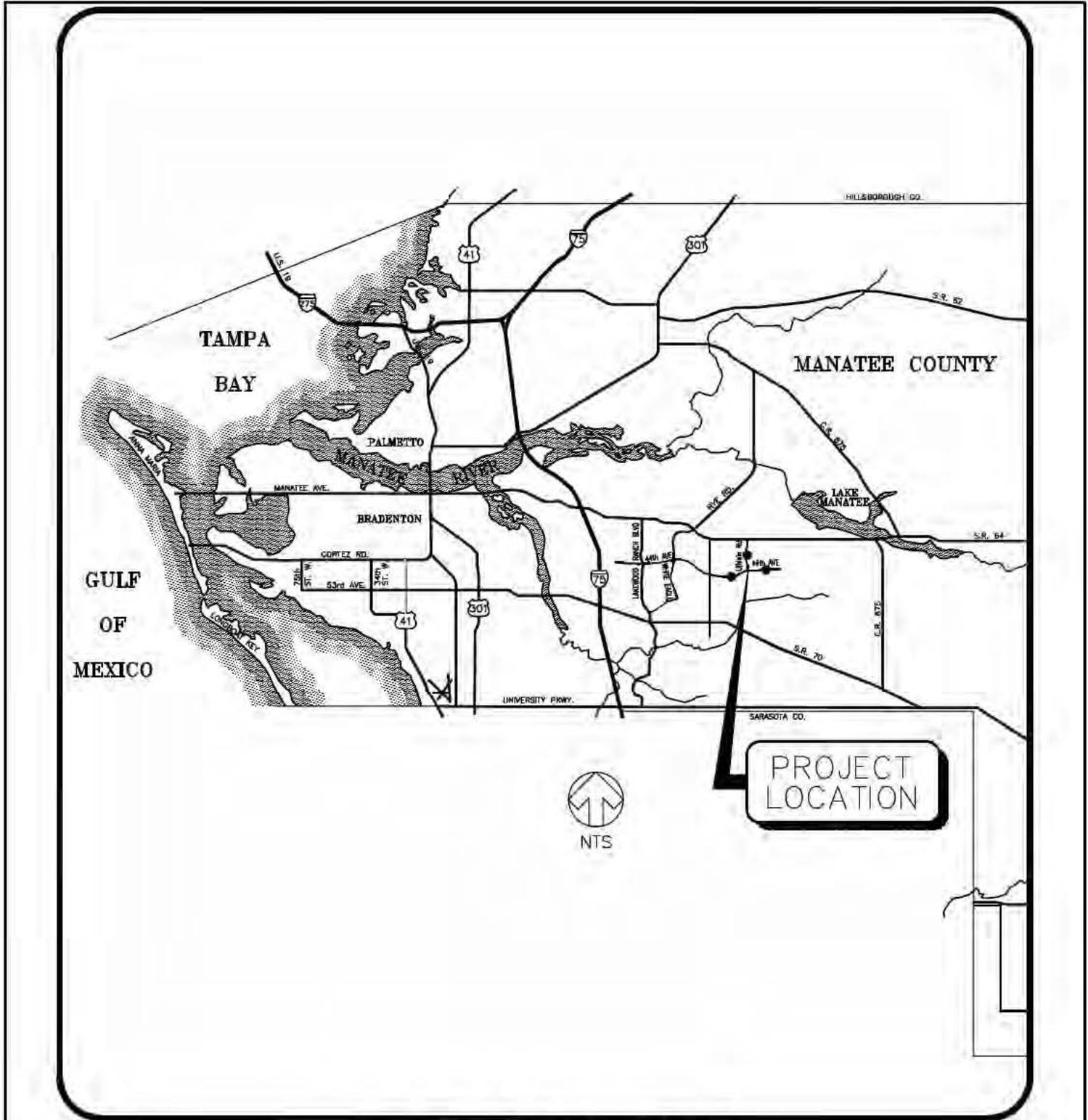
³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:



LOCATION MAP

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



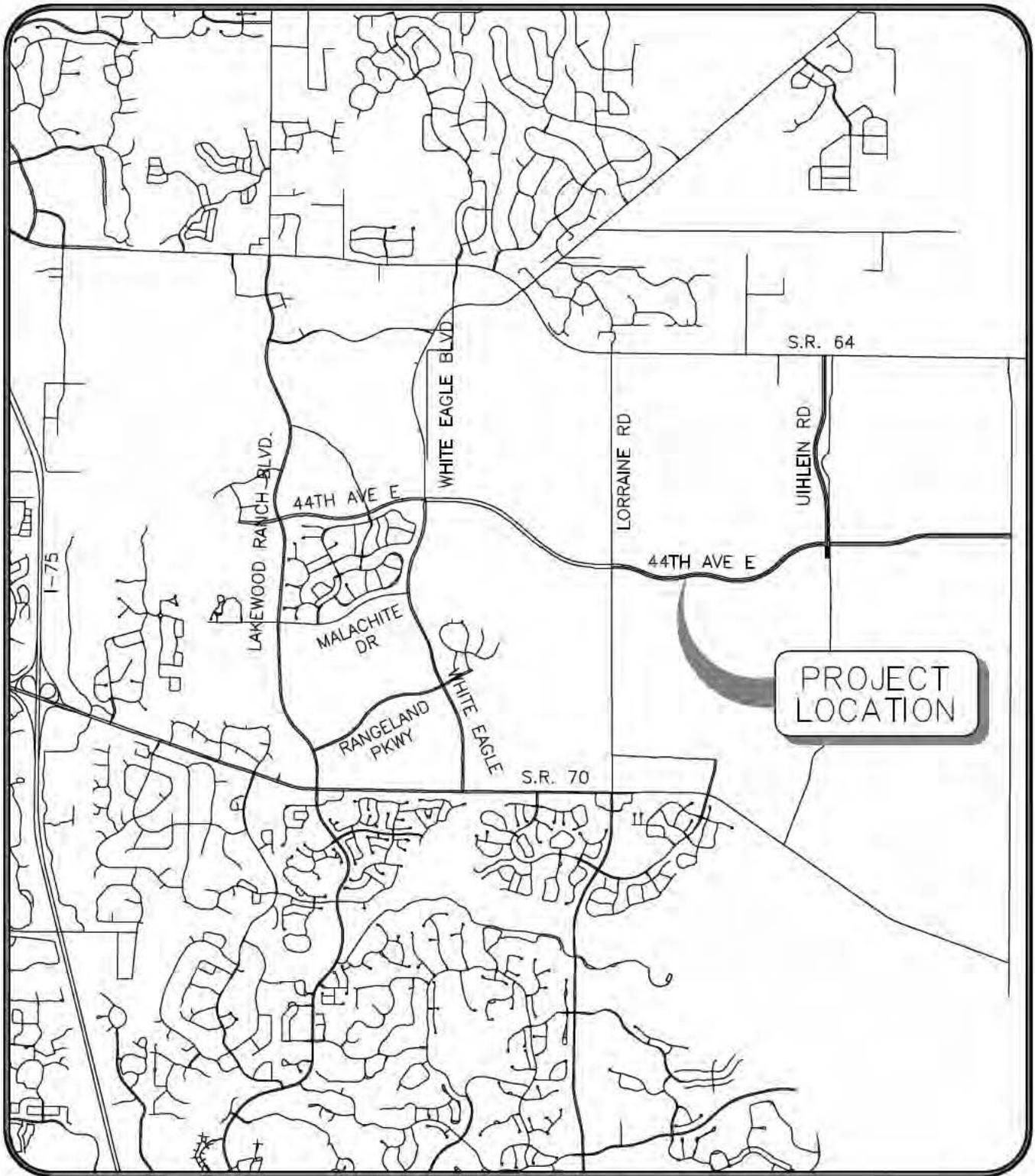
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	JSS	19E	
PROJECT NO:	215613728	INDEX NO:	215613728-02C-801EX
DRWN BY/EMP. NO:	TMG/95367	SHEET NO:	1 OF 21



SITE MAP

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



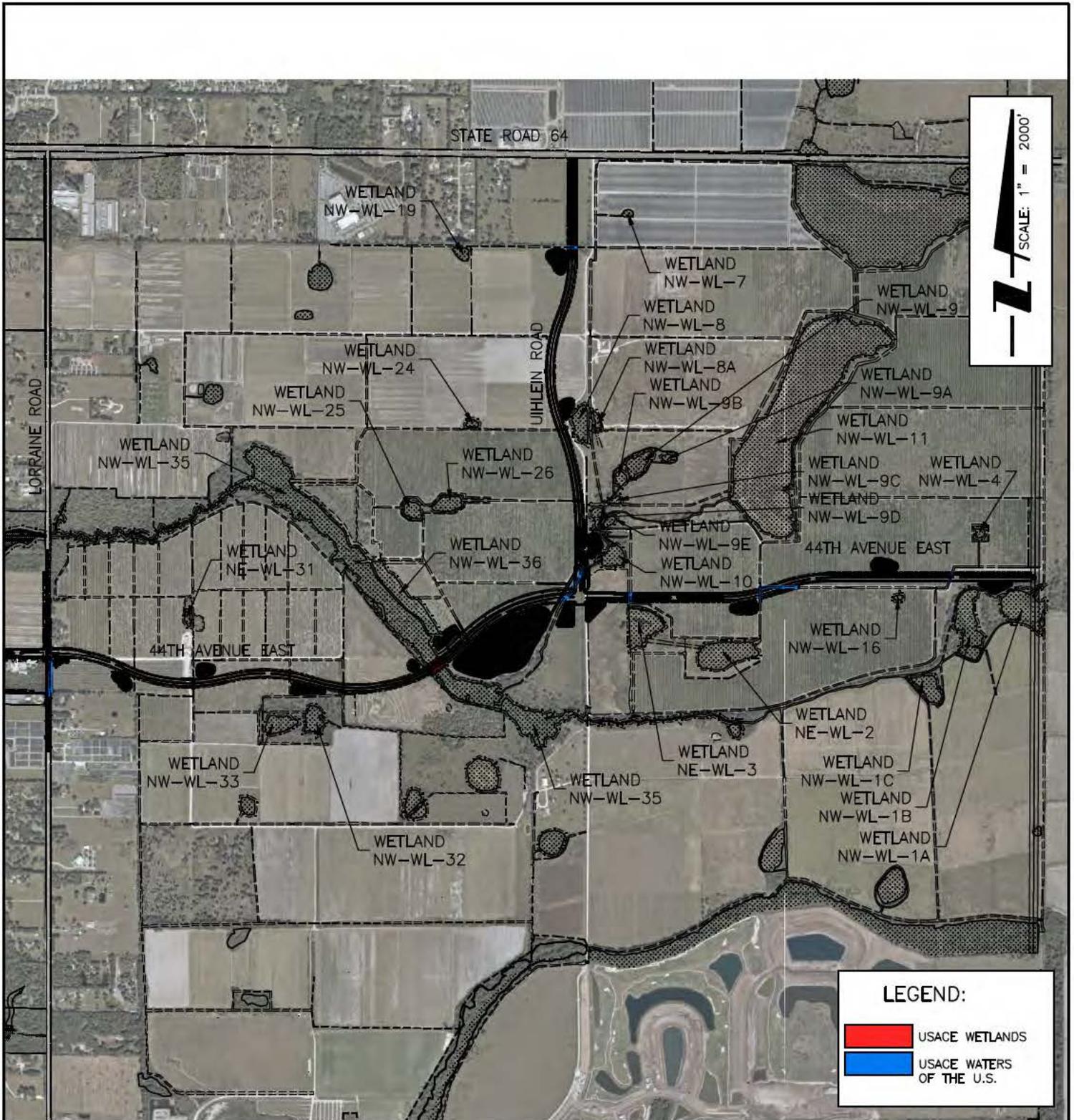
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PROJECT NO.	215613728	INDEX NO:	215613728-02C-801EX
DRWN BY/EMP NO.	TMG/95367	SHEET NO:	2 OF 21



LEGEND:

- USACE WETLANDS
- USACE WATERS OF THE U.S.

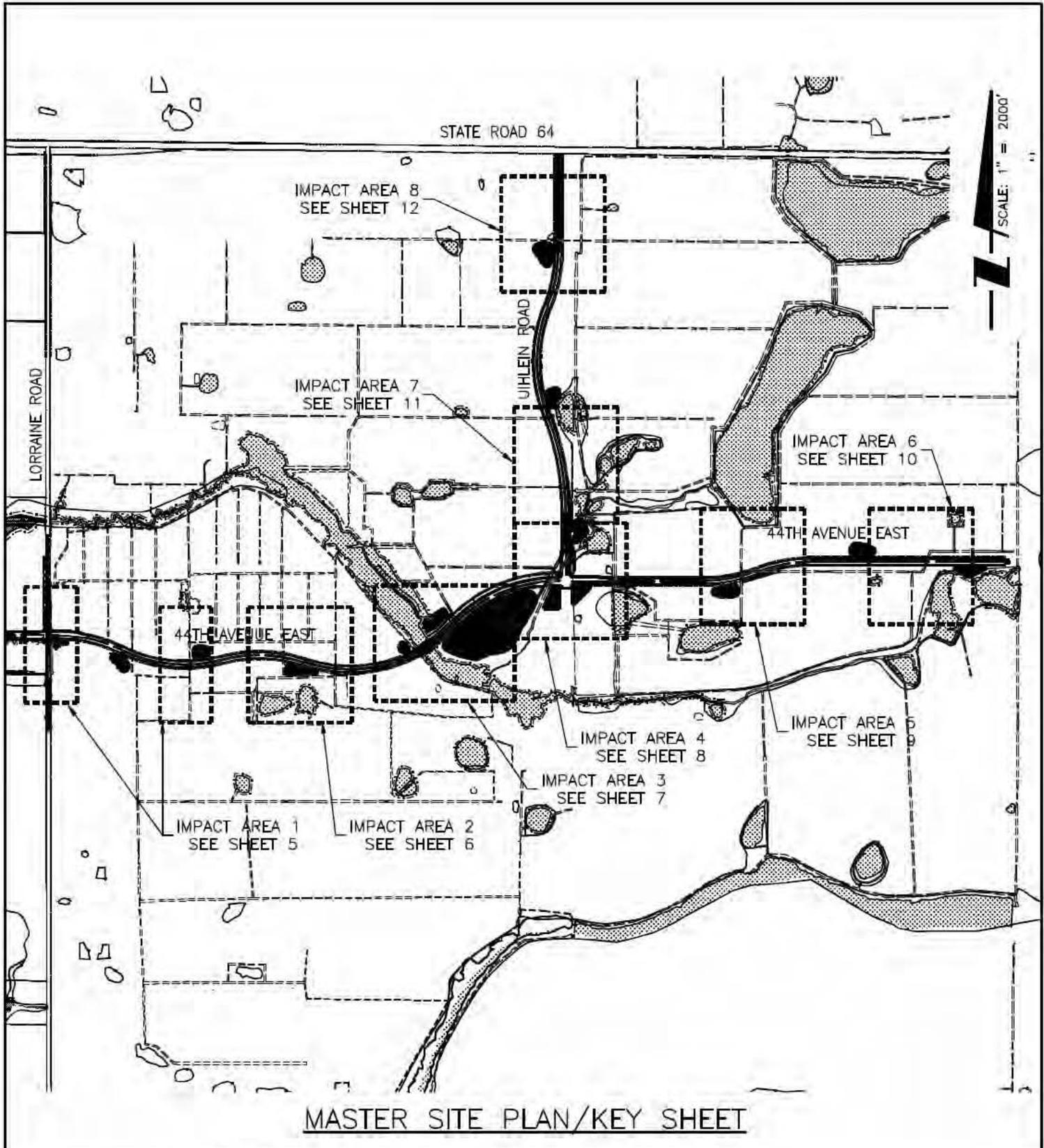
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DRWN BY/EMP NO. TMG/95367	SHEET NO: 3 of 21



MASTER SITE PLAN/KEY SHEET

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT

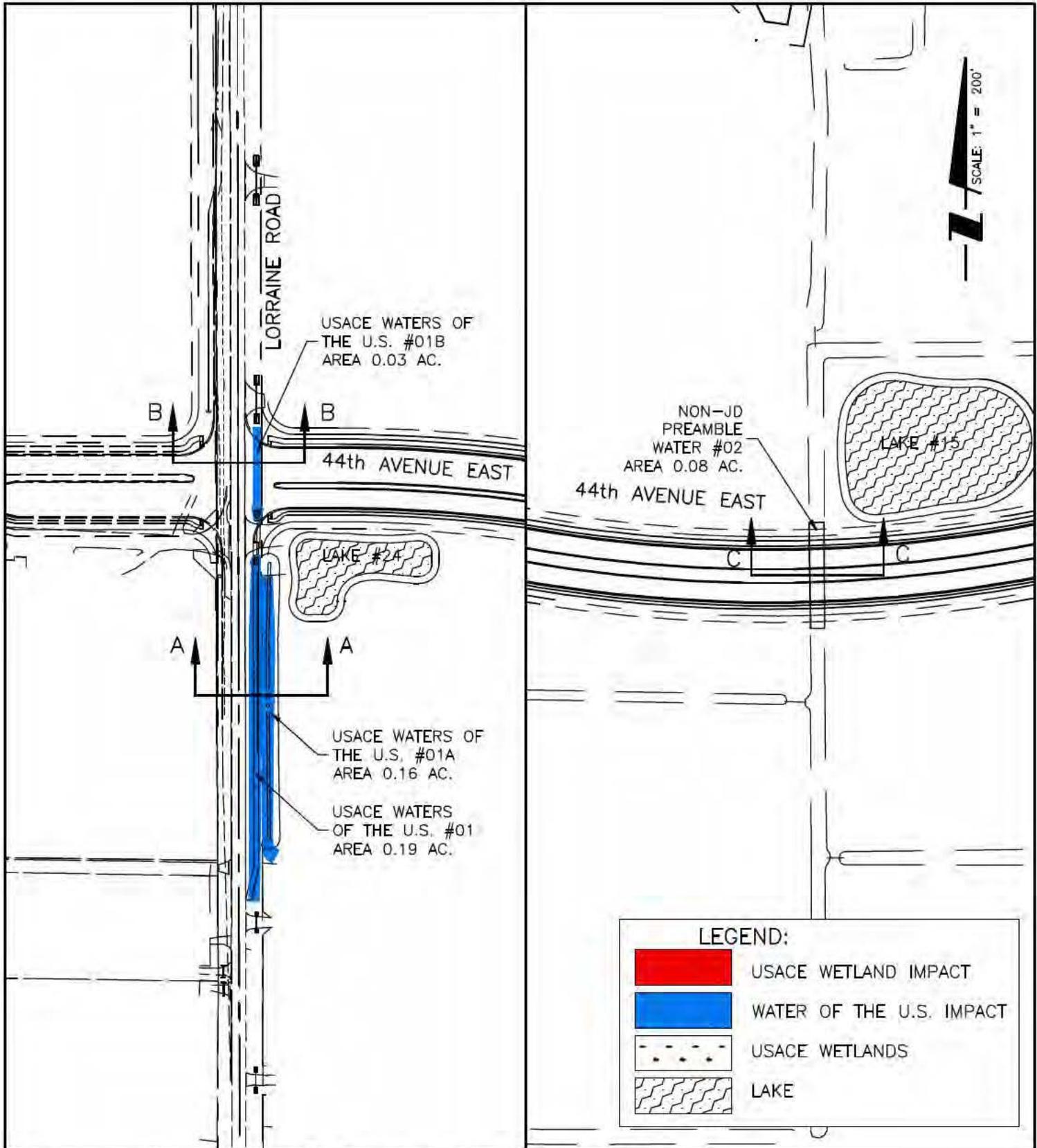


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DRWN BY/EMP NO. TMG/95367	SHEET NO: 4 OF 21	



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DRWN BY/EMP NO. TMG/95367	SHEET NO: 5 OF 21



NON-JD PREAMBLE
WATER #03
AREA 0.07 AC.

NON-JD PREAMBLE
WATER #04
AREA 0.09 AC.

44th AVENUE EAST



LEGEND:

- USACE WETLAND IMPACT
- WATER OF THE U.S. IMPACT
- USACE WETLANDS
- LAKE

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT

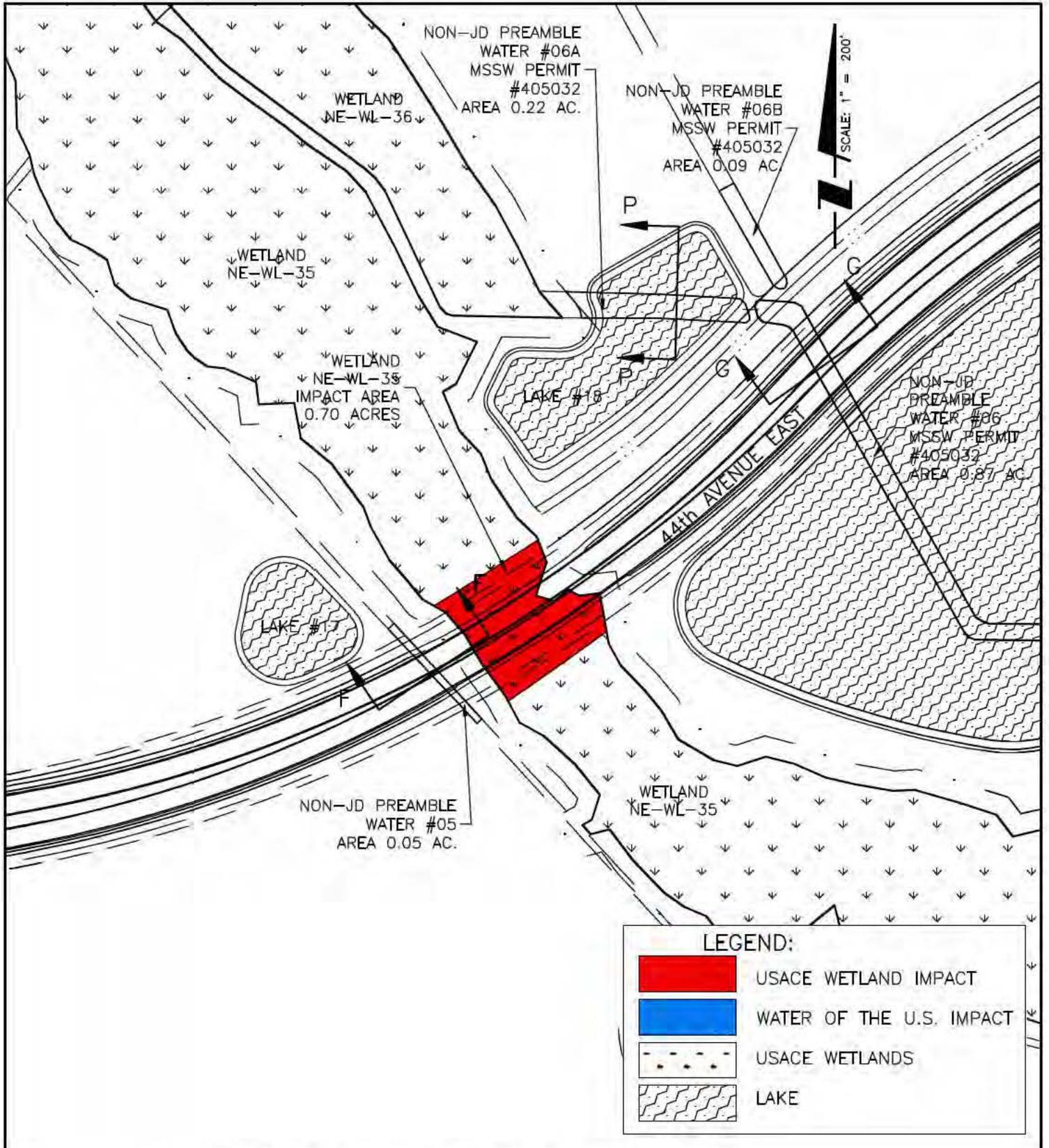


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LEGEND:

	USACE WETLAND IMPACT
	WATER OF THE U.S. IMPACT
	USACE WETLANDS
	LAKE

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



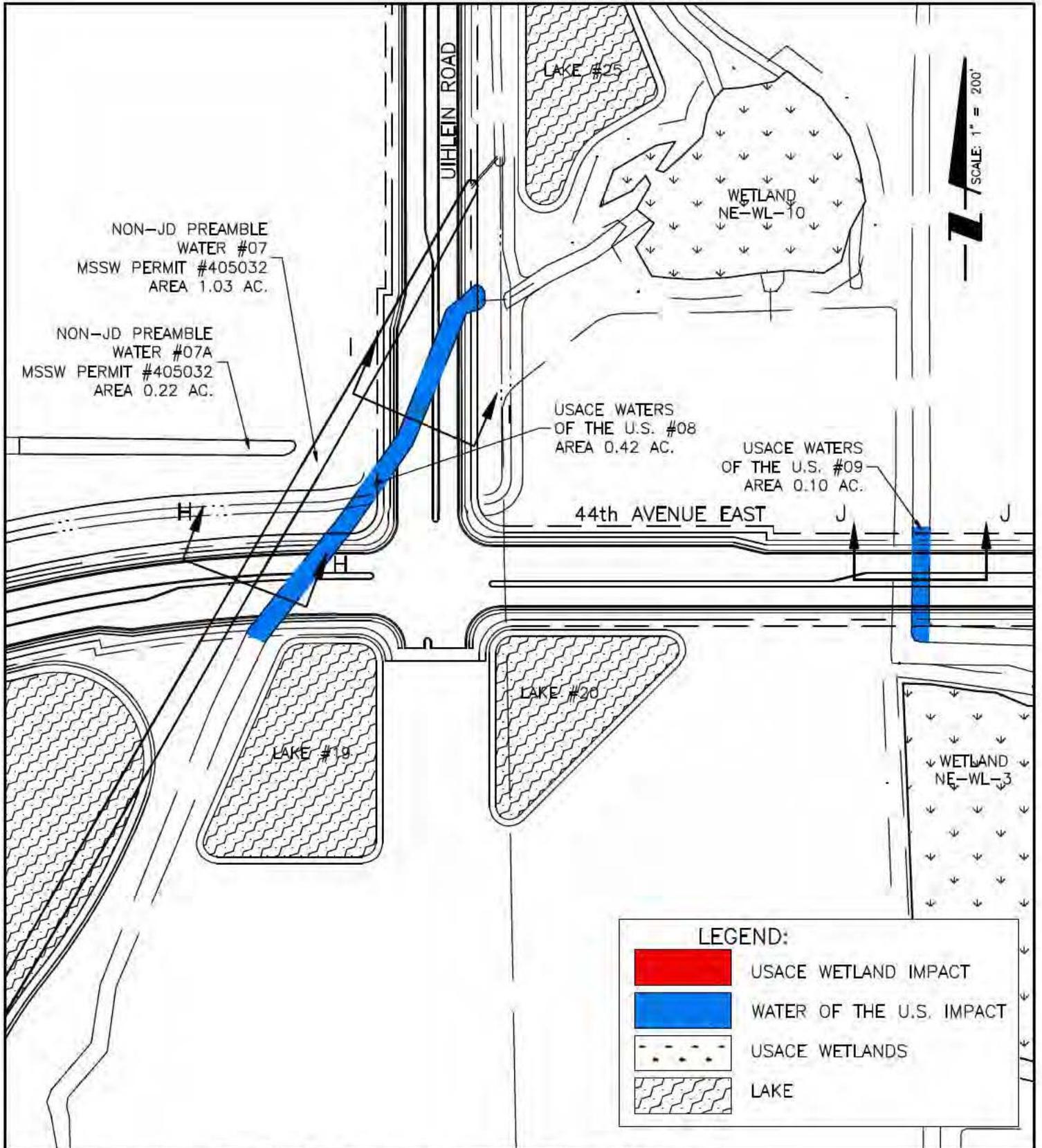
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PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



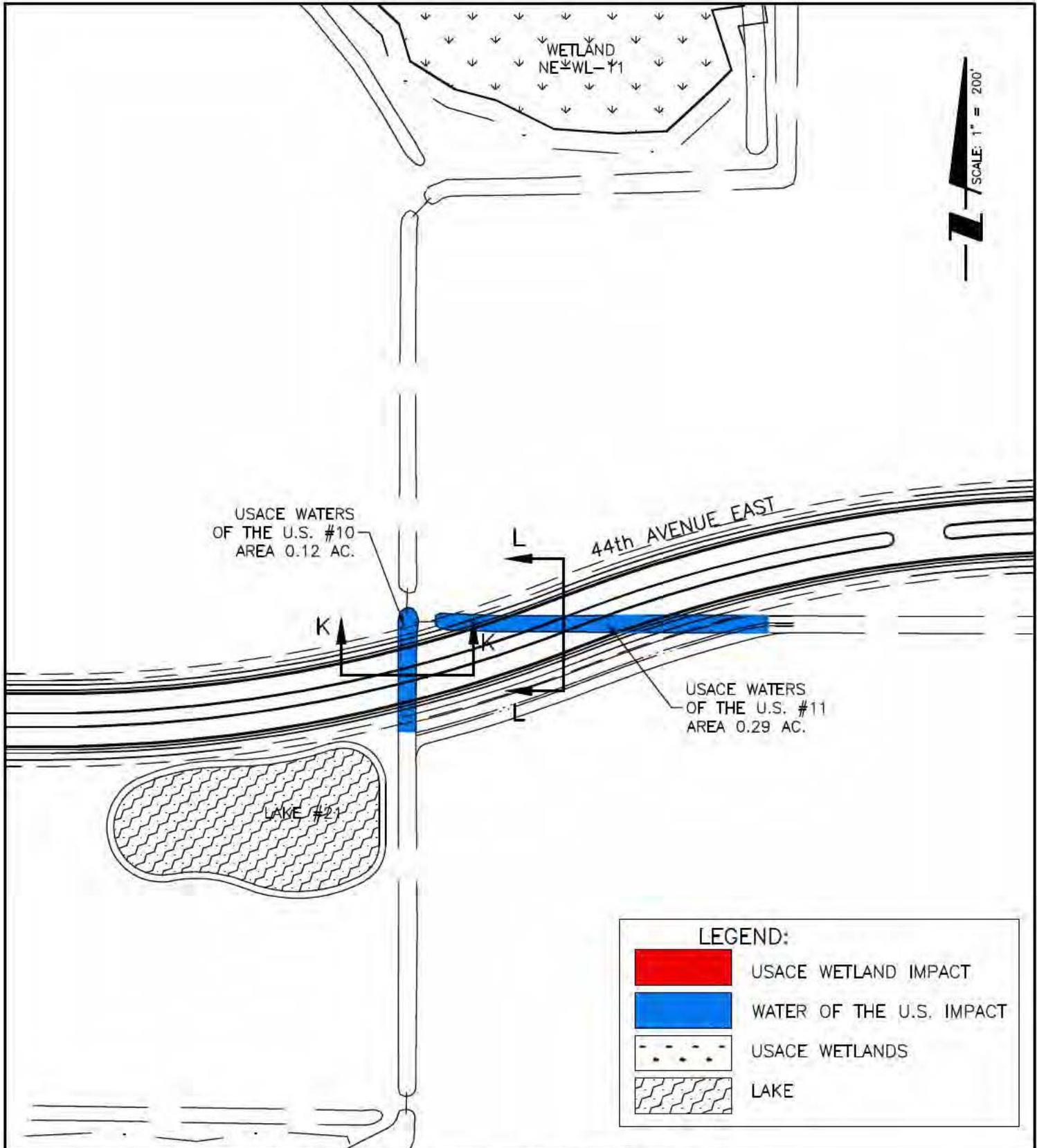
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PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

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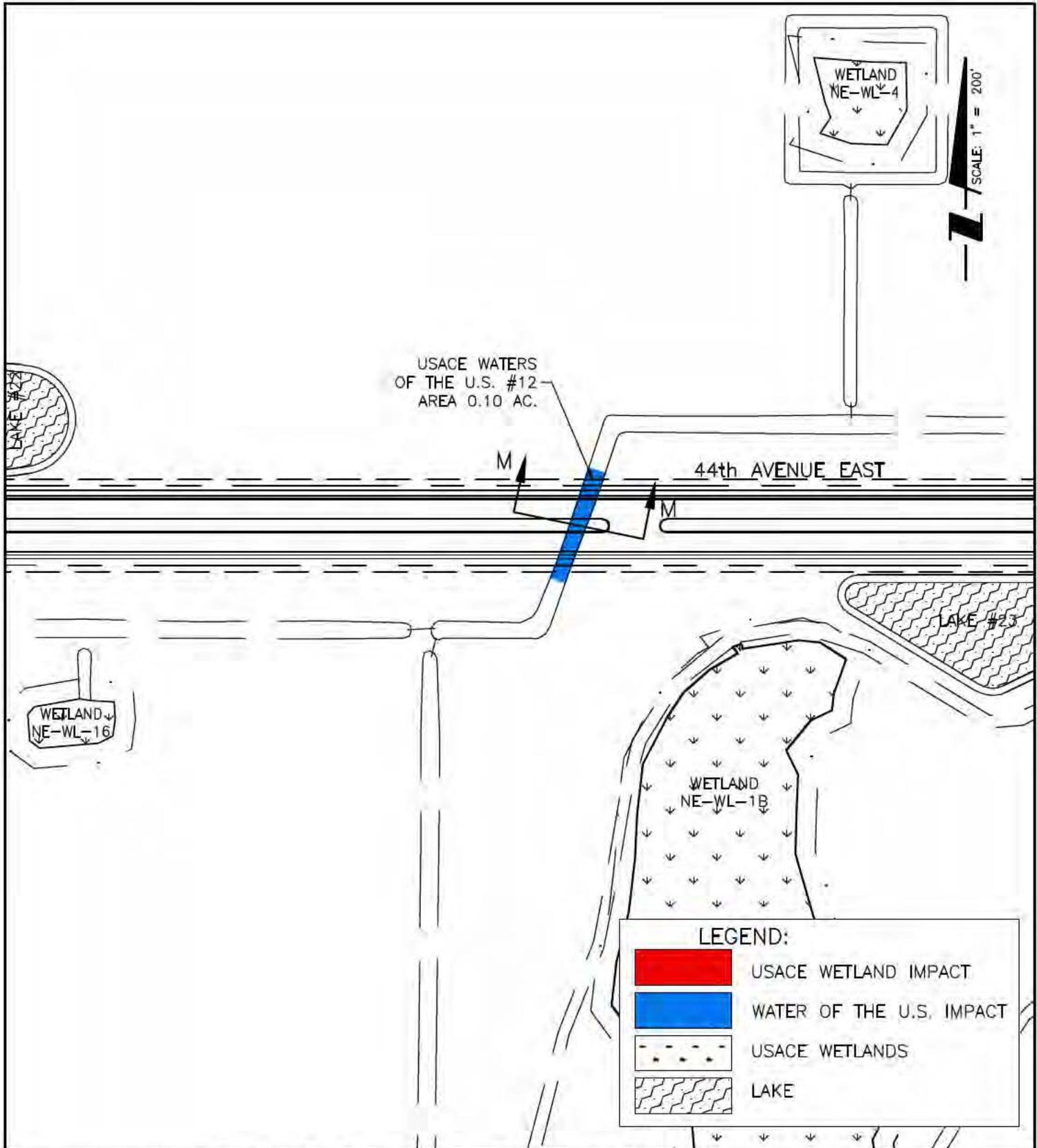
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LEGEND:

	USACE WETLAND IMPACT
	WATER OF THE U.S. IMPACT
	USACE WETLANDS
	LAKE

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



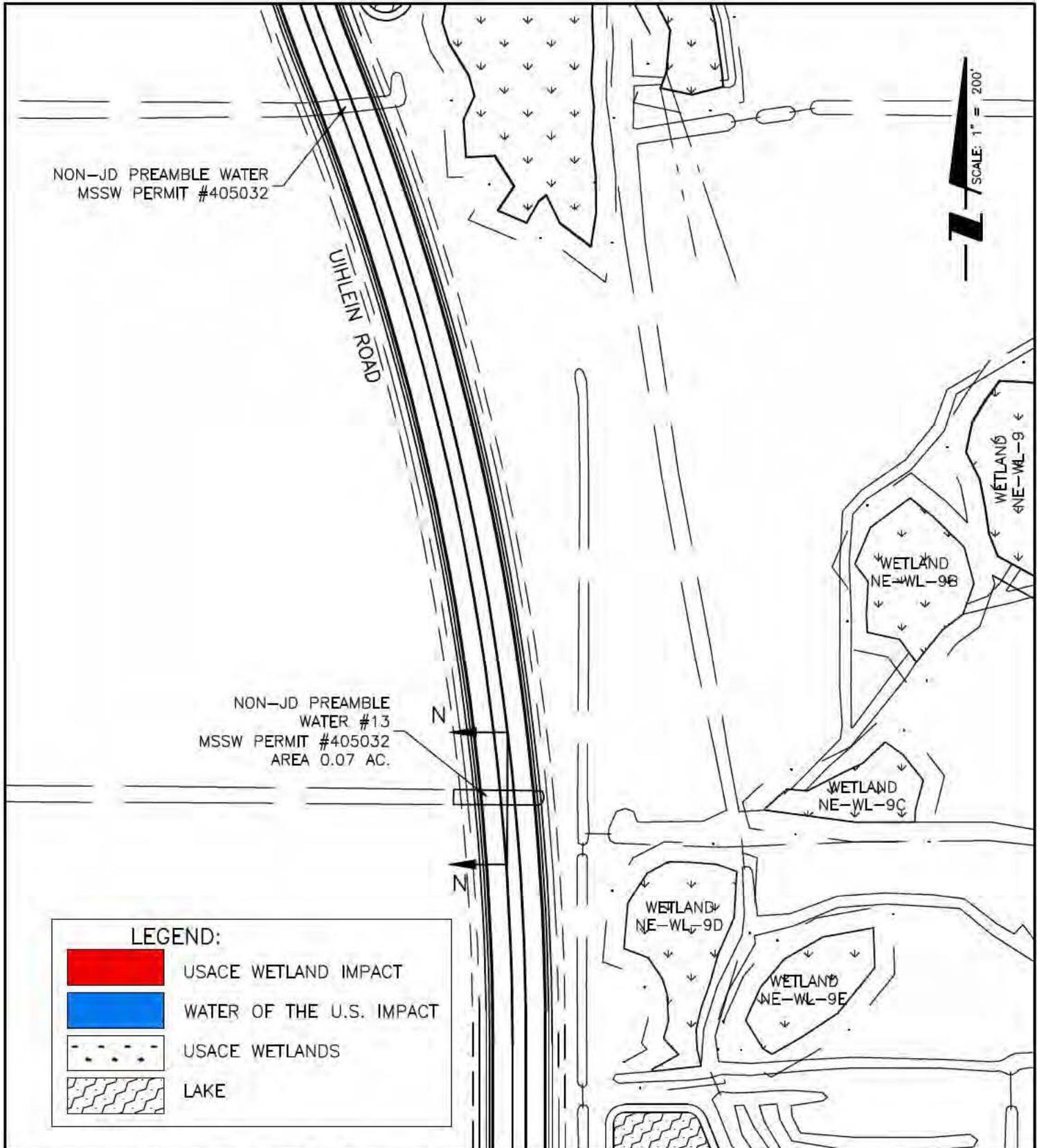
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DRWN BY/EMP NO. TMG/95367	SHEET NO: 10 OF 21



SCALE: 1" = 200'

NON-JD PREAMBLE WATER
MSSW PERMIT #405032

UIHLEIN ROAD

NON-JD PREAMBLE
WATER #13
MSSW PERMIT #405032
AREA 0.07 AC.

LEGEND:

- USACE WETLAND IMPACT
- WATER OF THE U.S. IMPACT
- USACE WETLANDS
- LAKE

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



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UIHLEIN ROAD

USACE WATERS OF THE U.S. #14 AREA 0.06 AC.



LAKE #27

LEGEND:

- USACE WETLAND IMPACT
- WATER OF THE U.S. IMPACT
- USACE WETLANDS
- LAKE

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



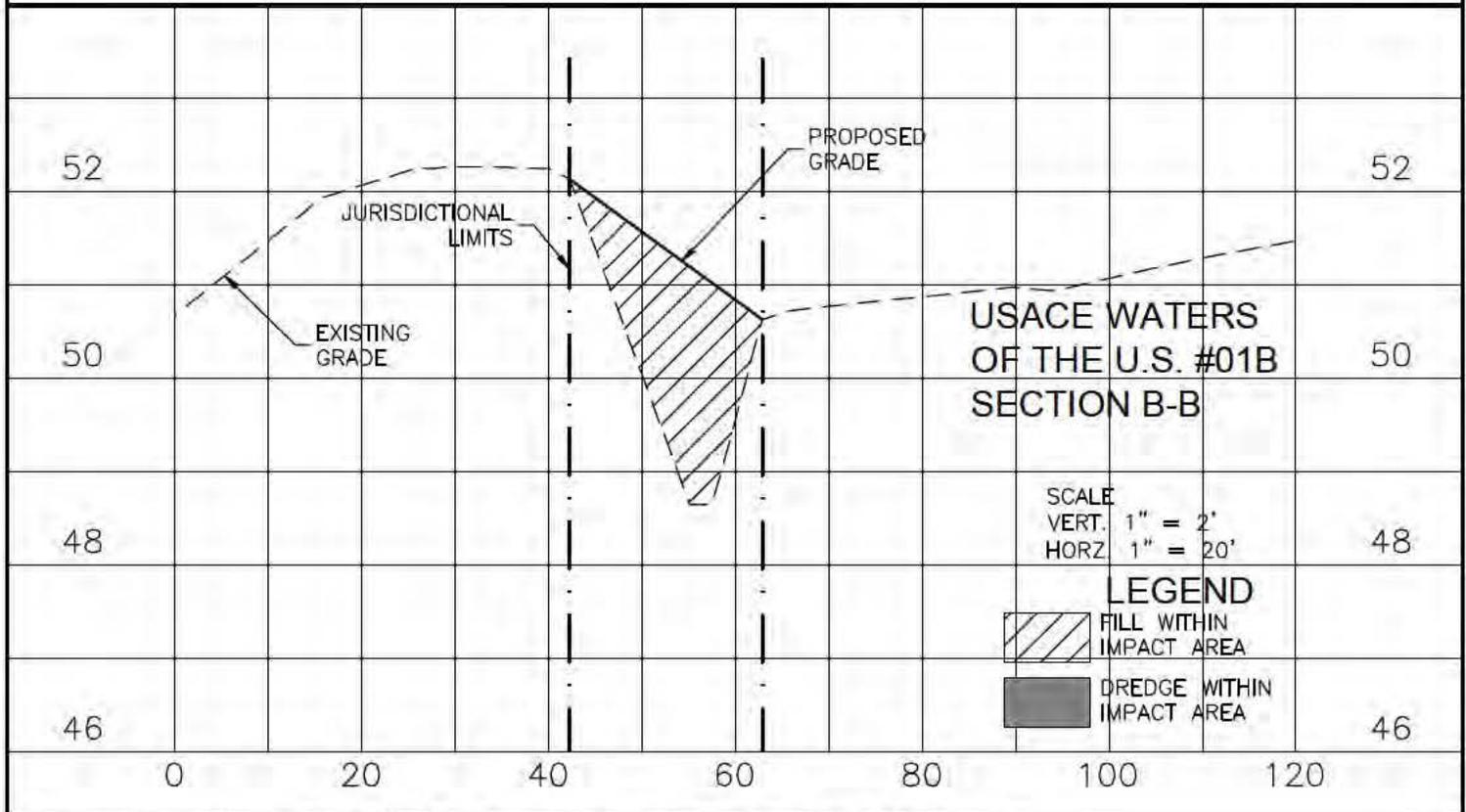
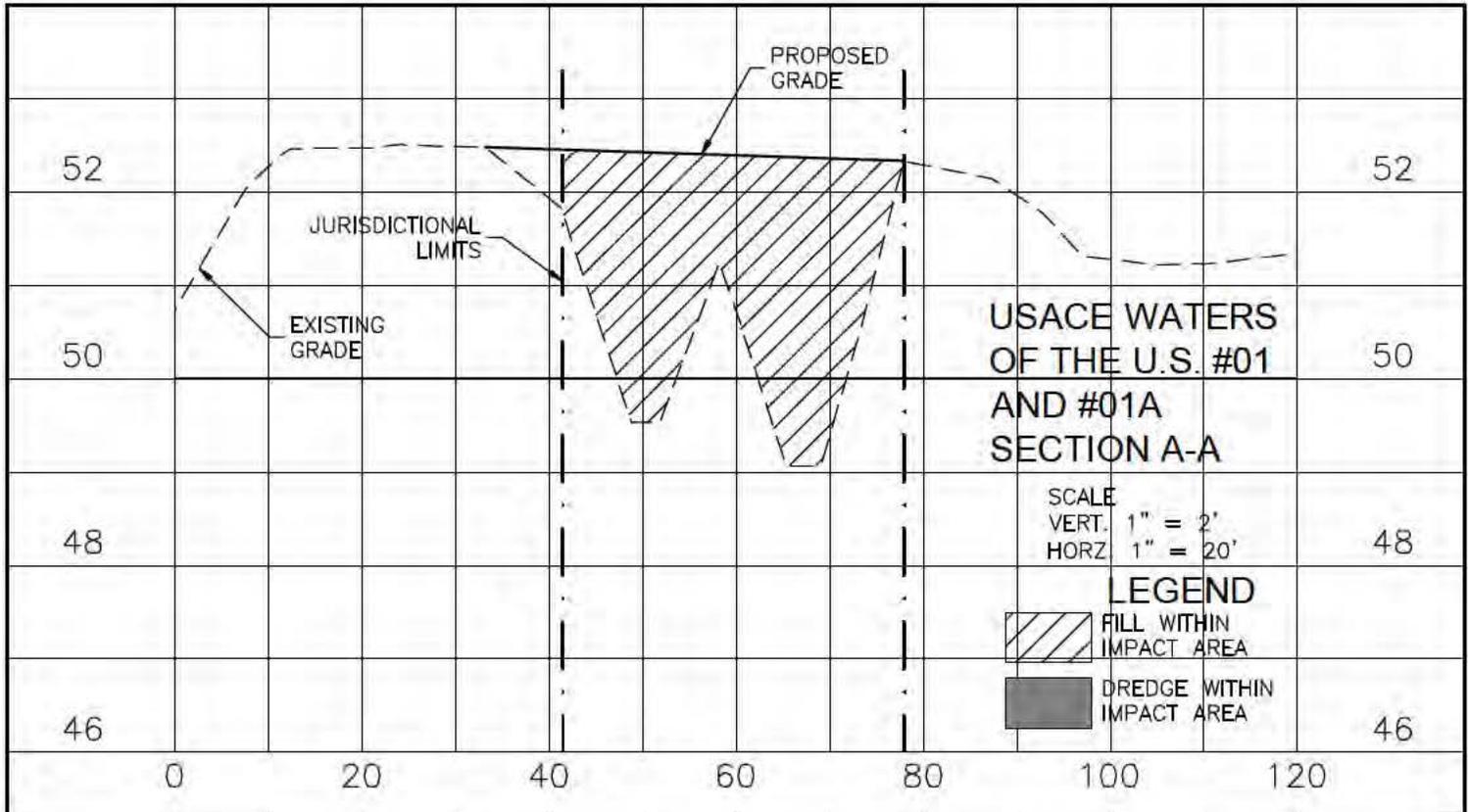
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DRWN BY/EMP NO. TMG/95367	SHEET NO: 12 OF 21



PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



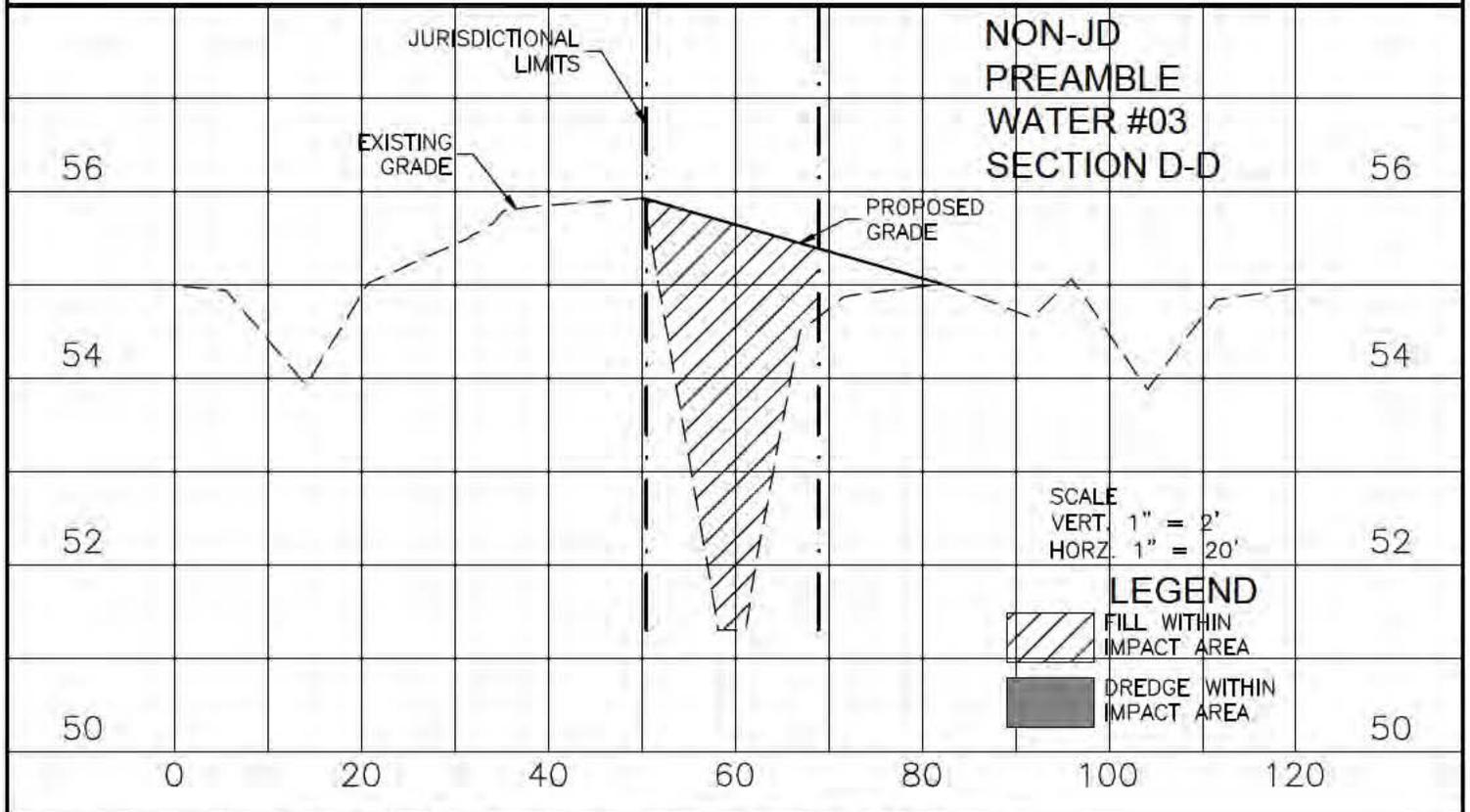
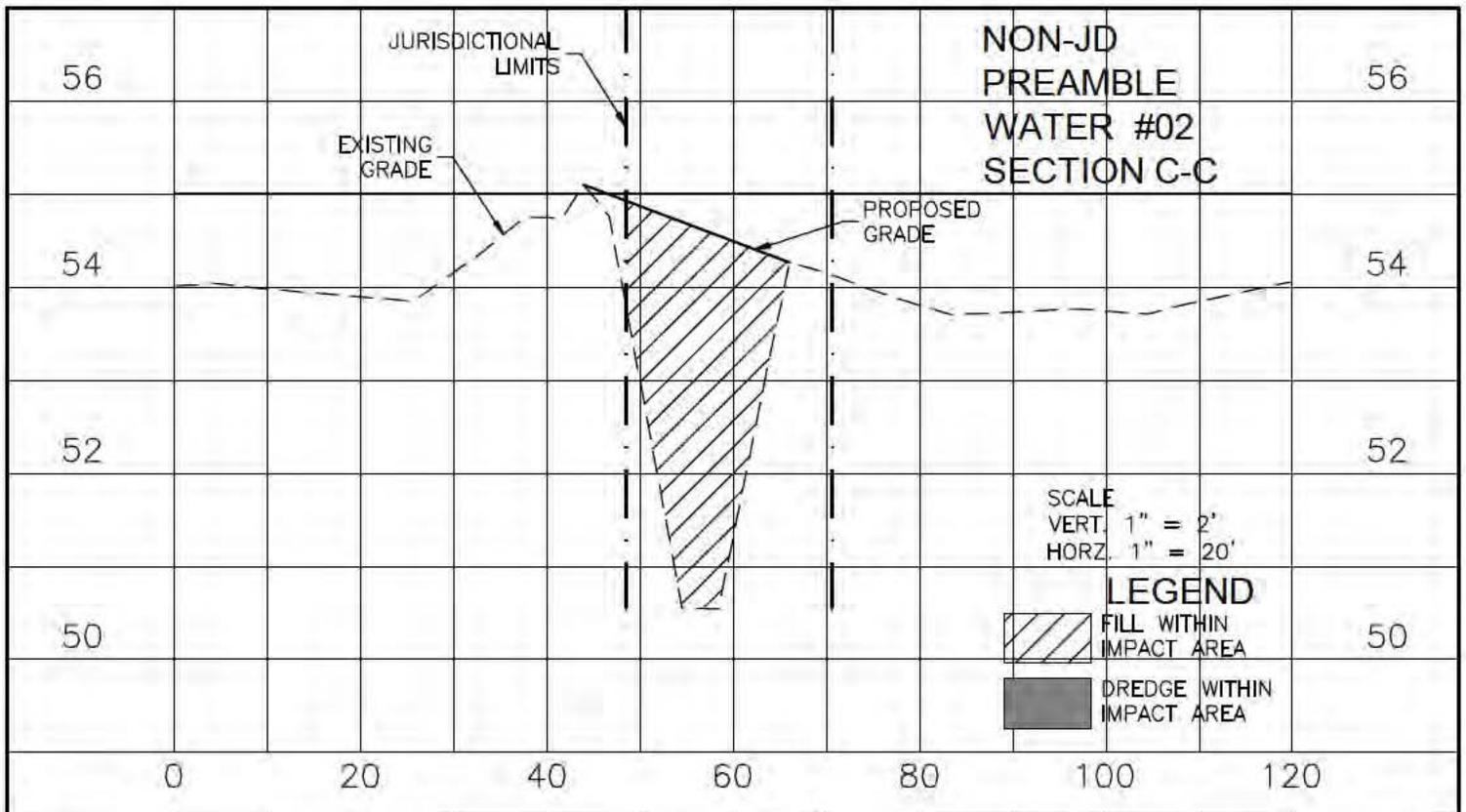
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PROJECT NO:	215613728	INDEX NO:	215613728-02C-802EX
DRWN BY/EMP NO:	TMG/95367	SHEET NO:	13 OF 21



PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



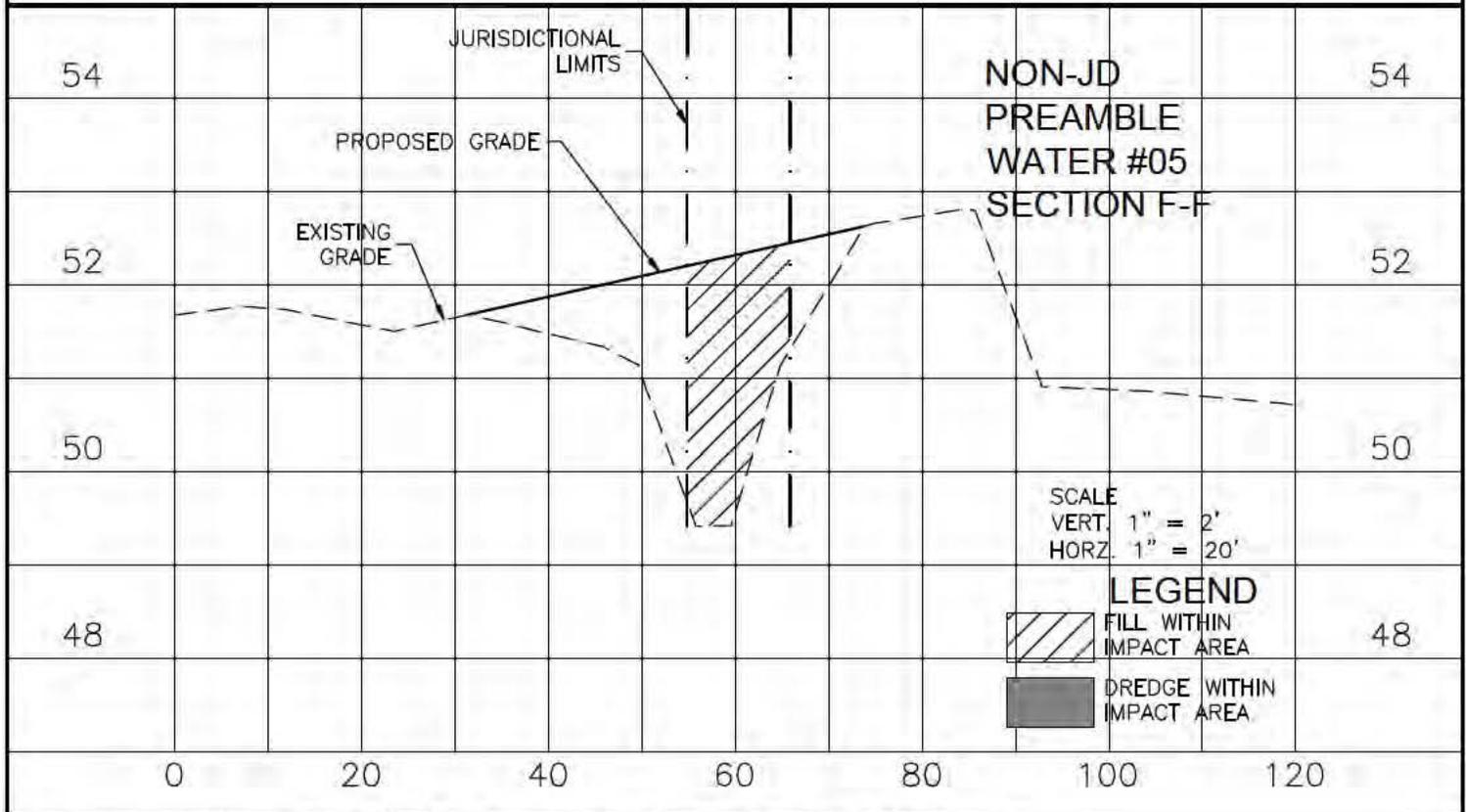
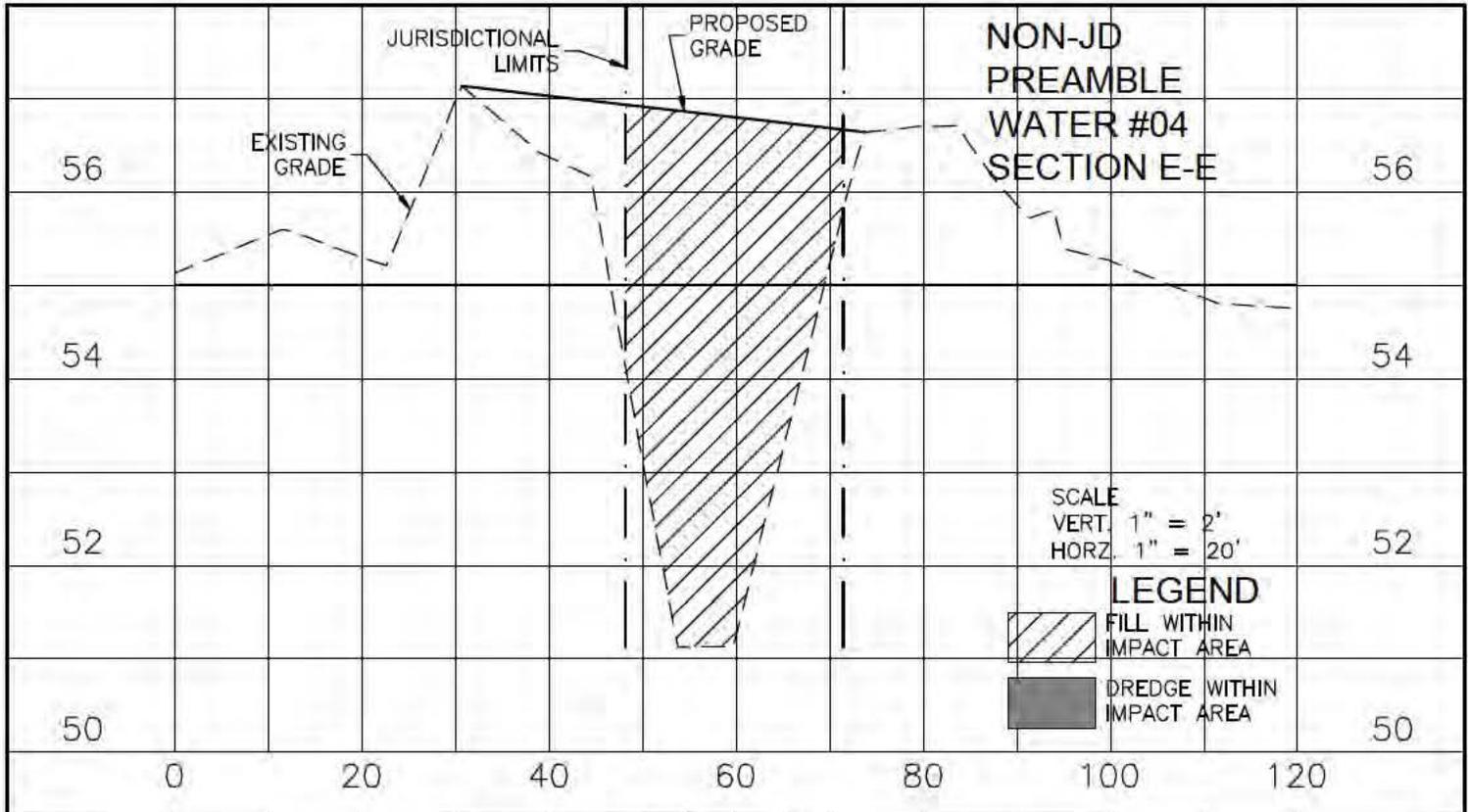
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SCALE:	AS SHOWN	DATE:	05/2017
SEC: 2/10	TWP: 11/12	RGE: 35S	REV NO:
PROJECT NO.	215613728	INDEX NO:	215613728-02C-802EX
DRWN BY/EMP NO.	TMG/95367	SHEET NO:	14 OF 21



PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



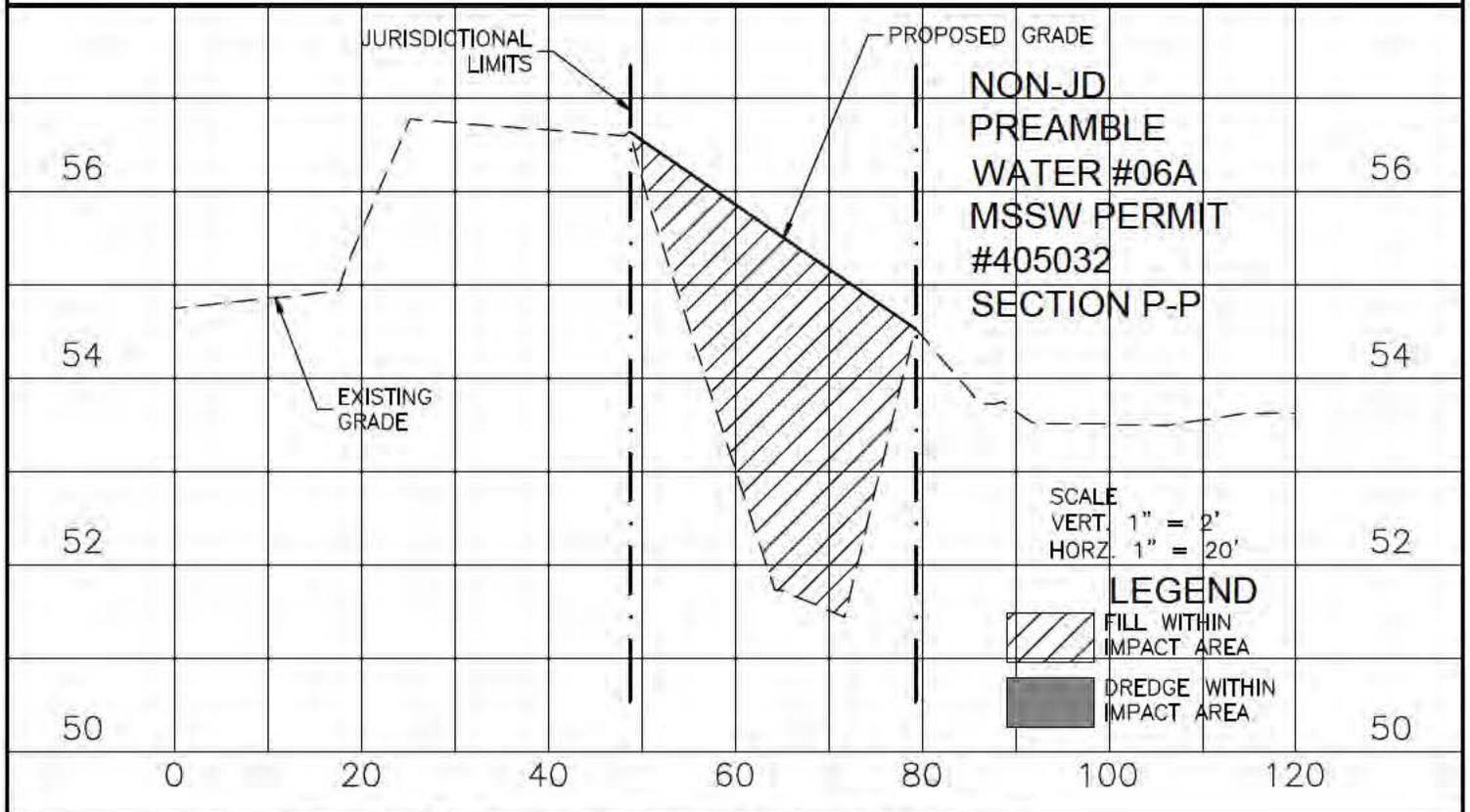
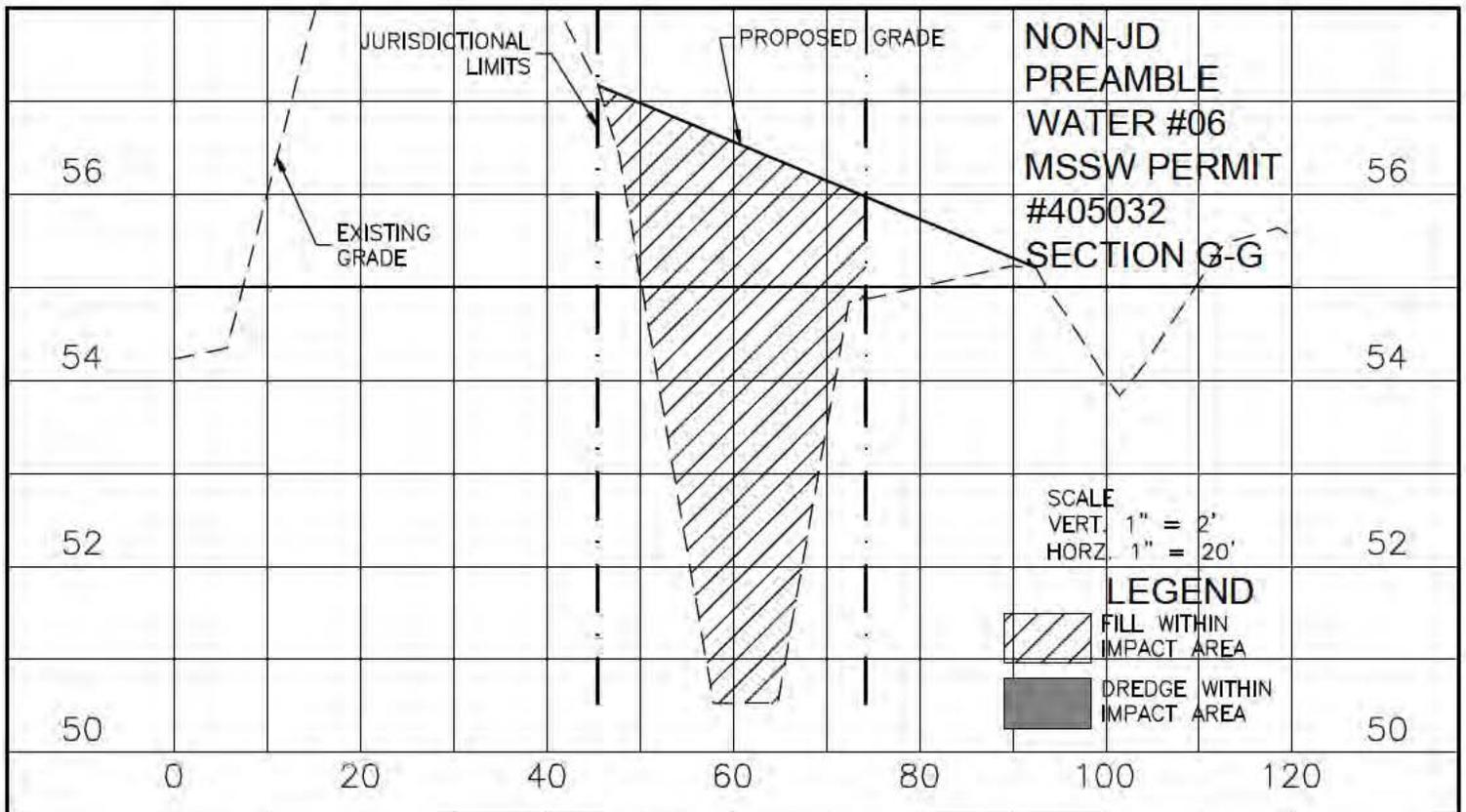
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PROJECT NO.	215613728	INDEX NO:	215613728-02C-802EX
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PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



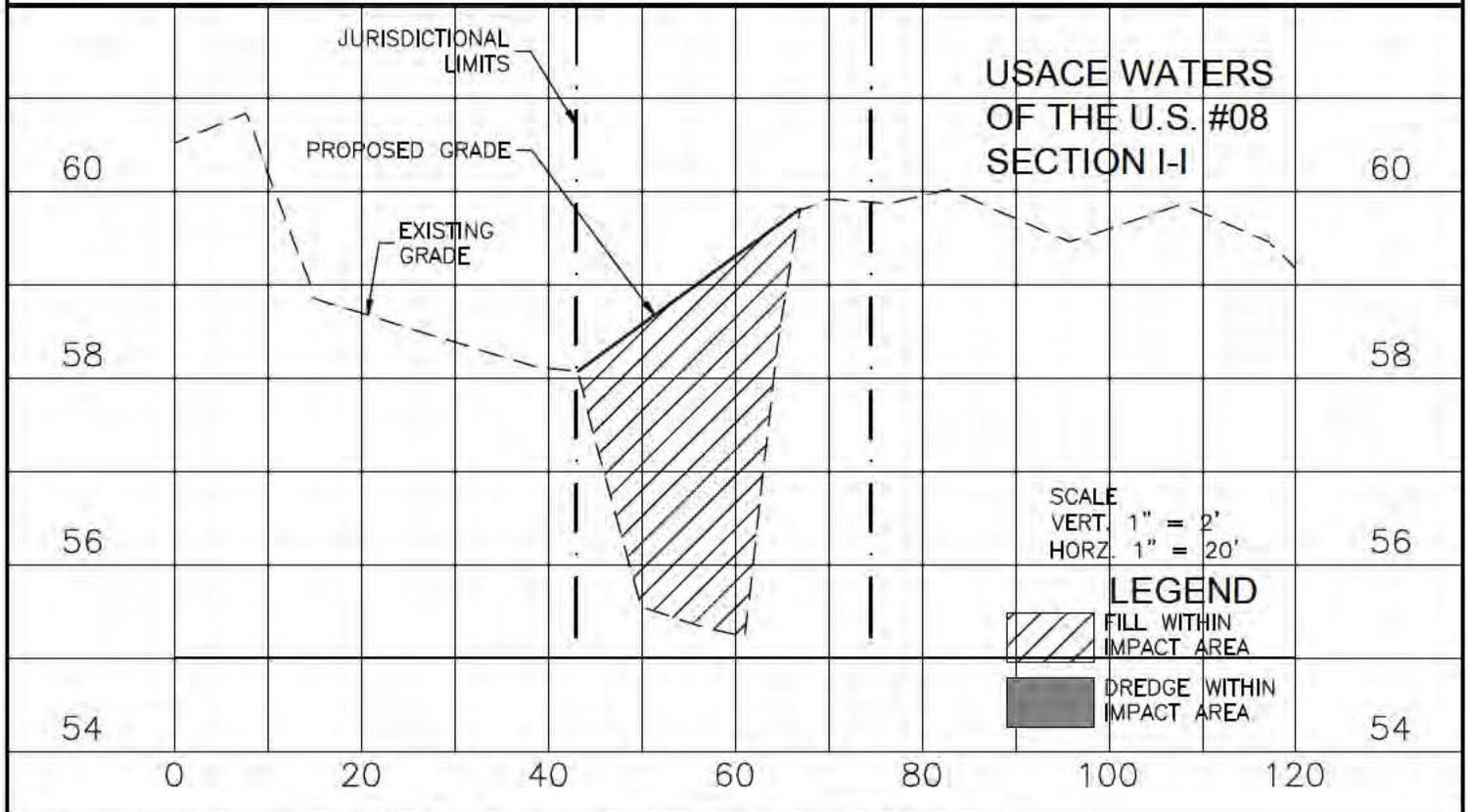
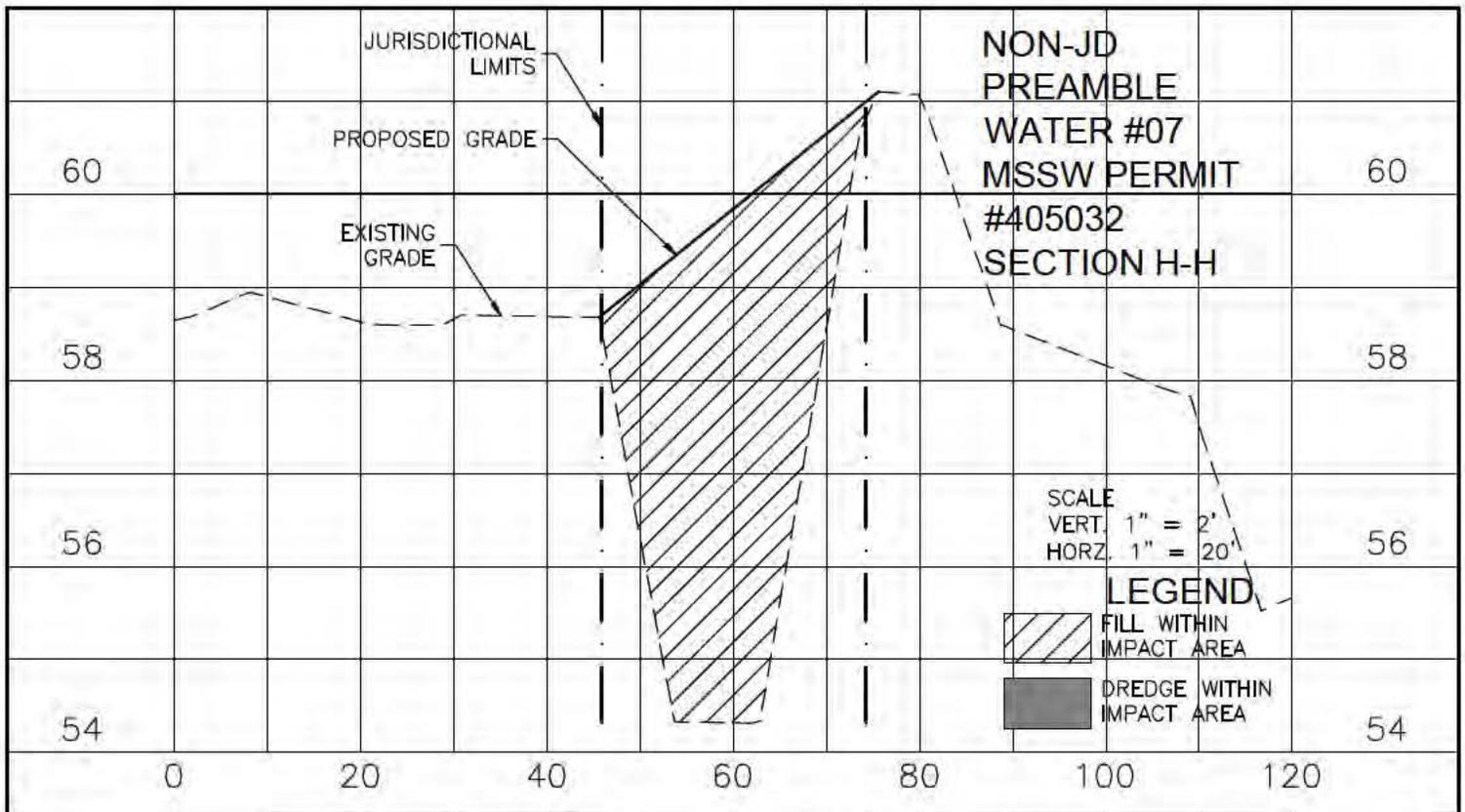
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PROJECT NO.	215613728	INDEX NO:	215613728-02C-802EX
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PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



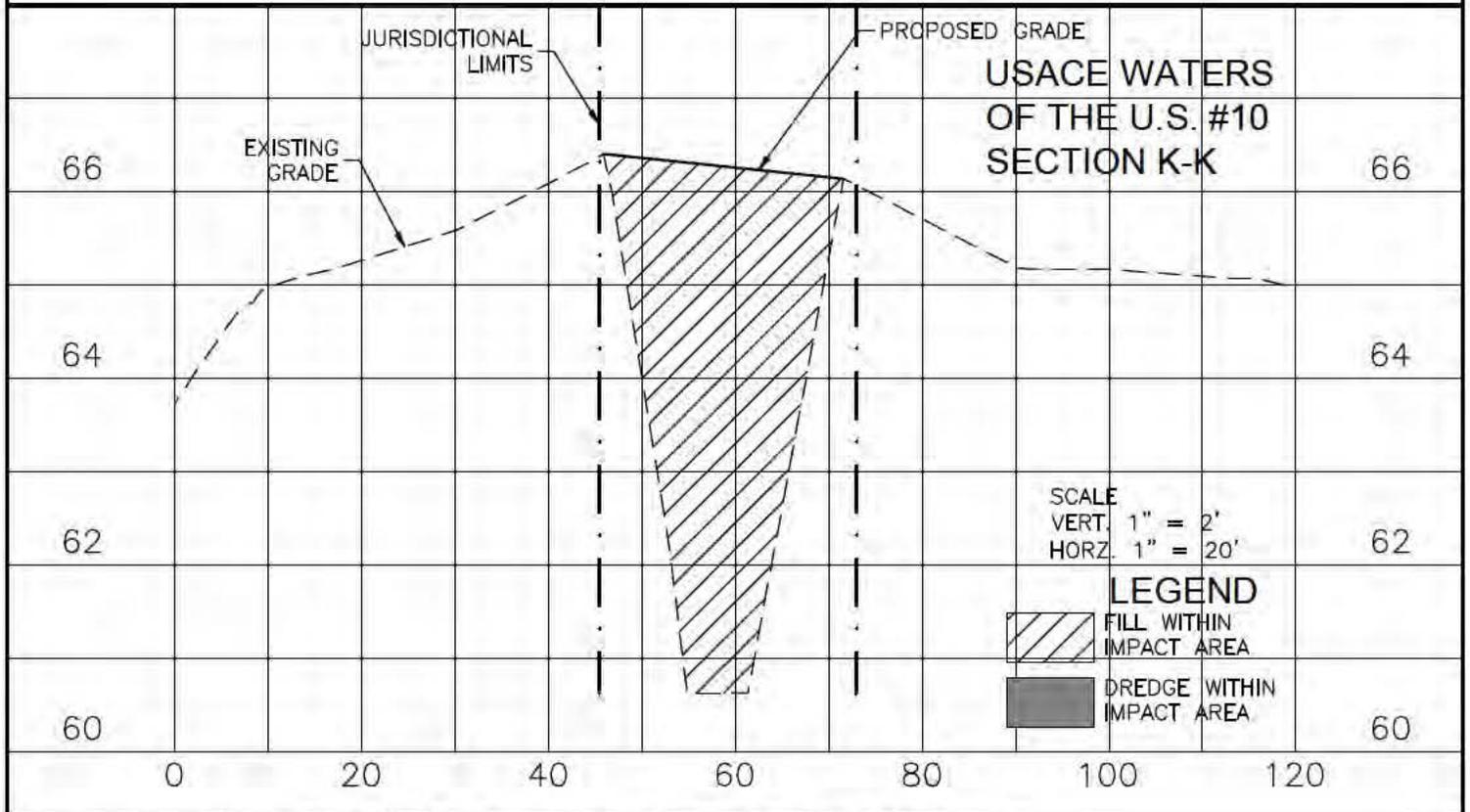
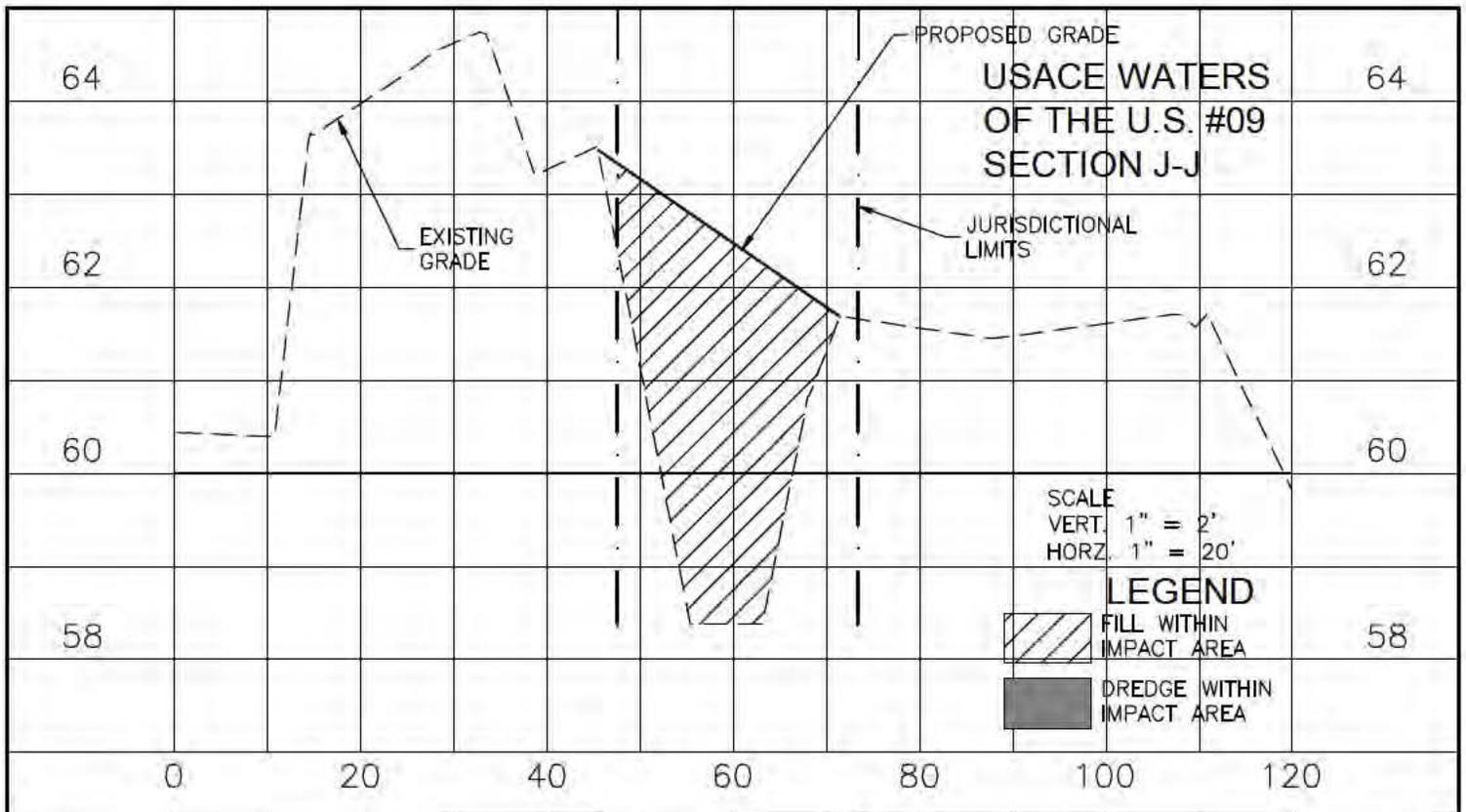
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PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



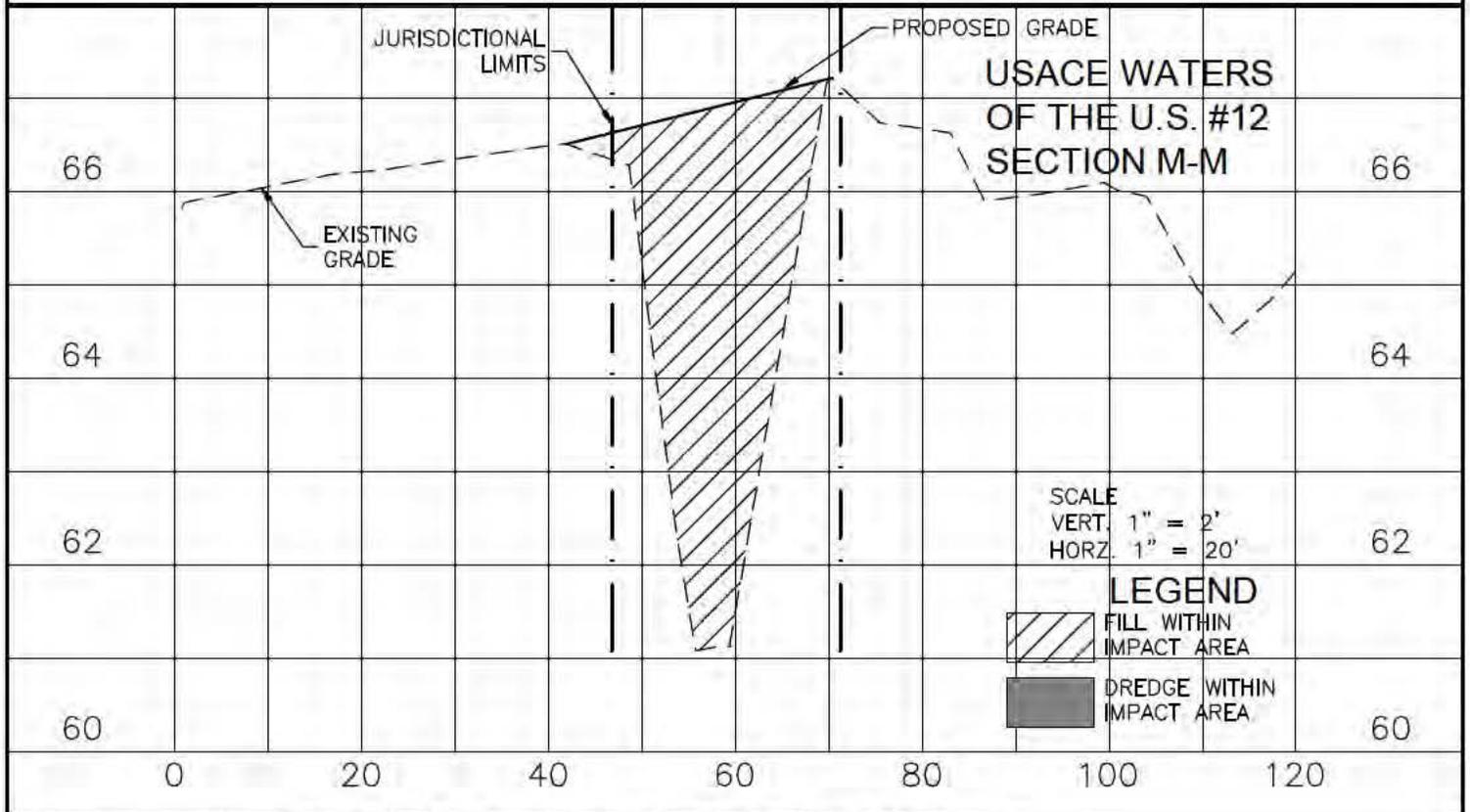
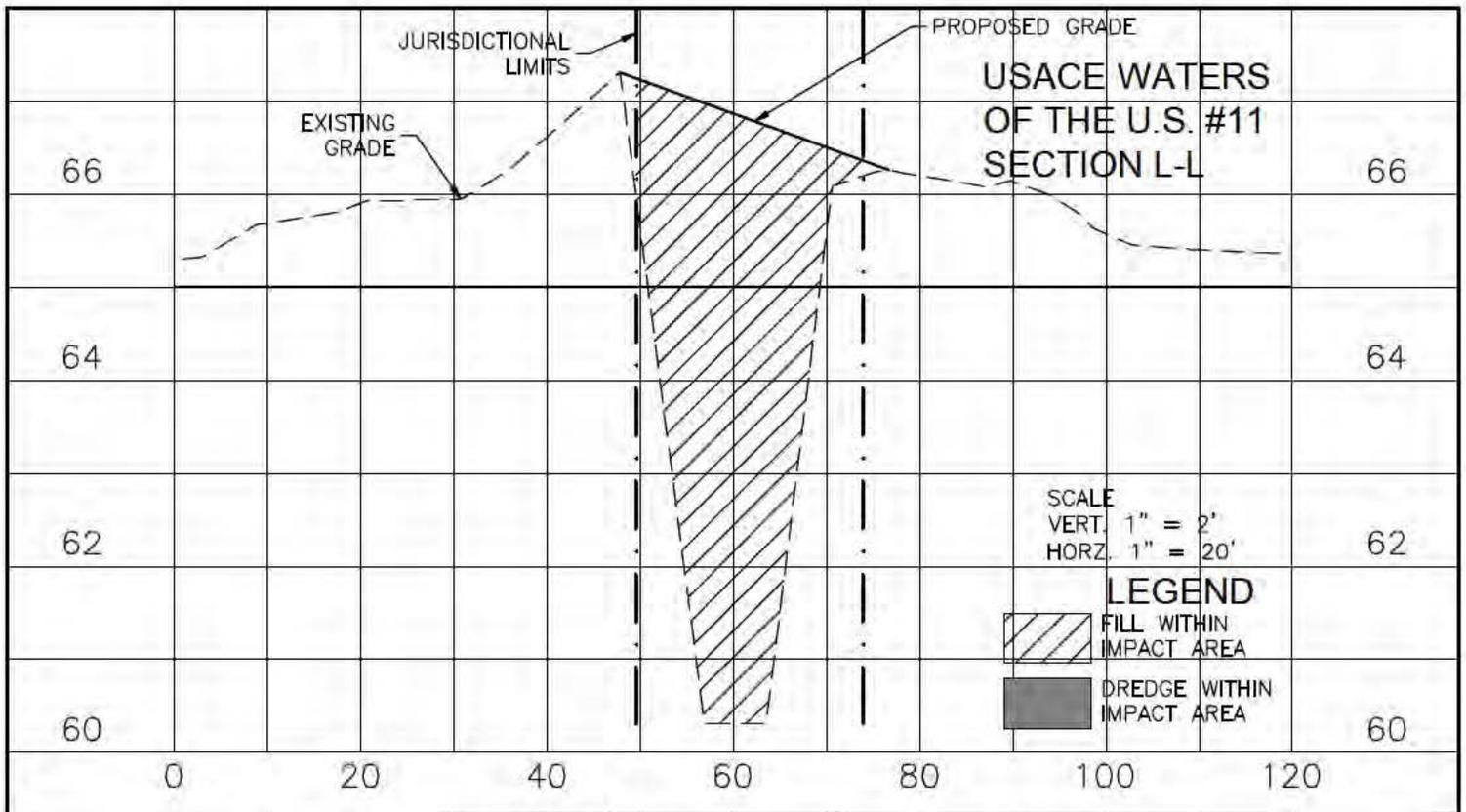
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PROJECT NO.	215613728	INDEX NO:	215613728-02C-802EX
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PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



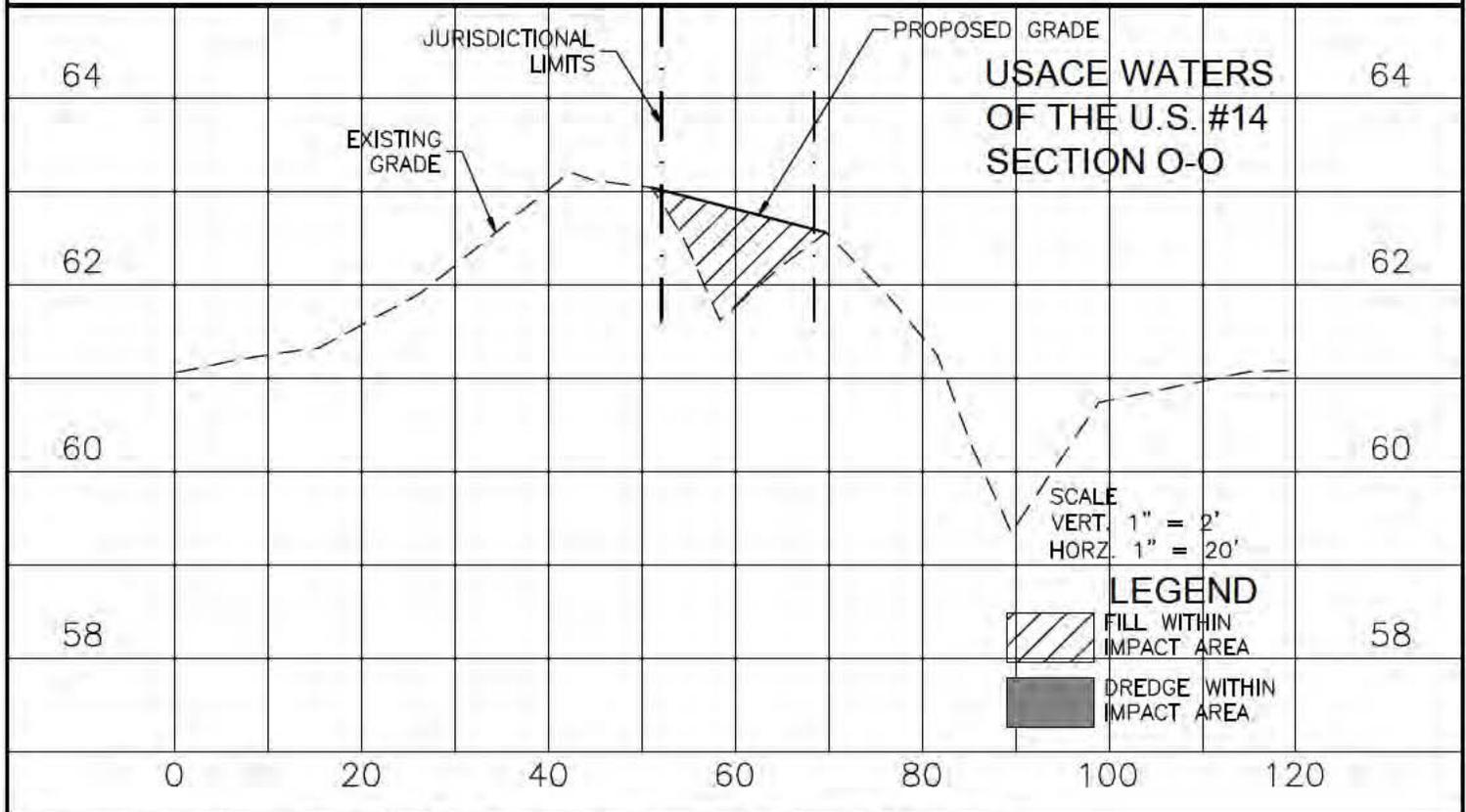
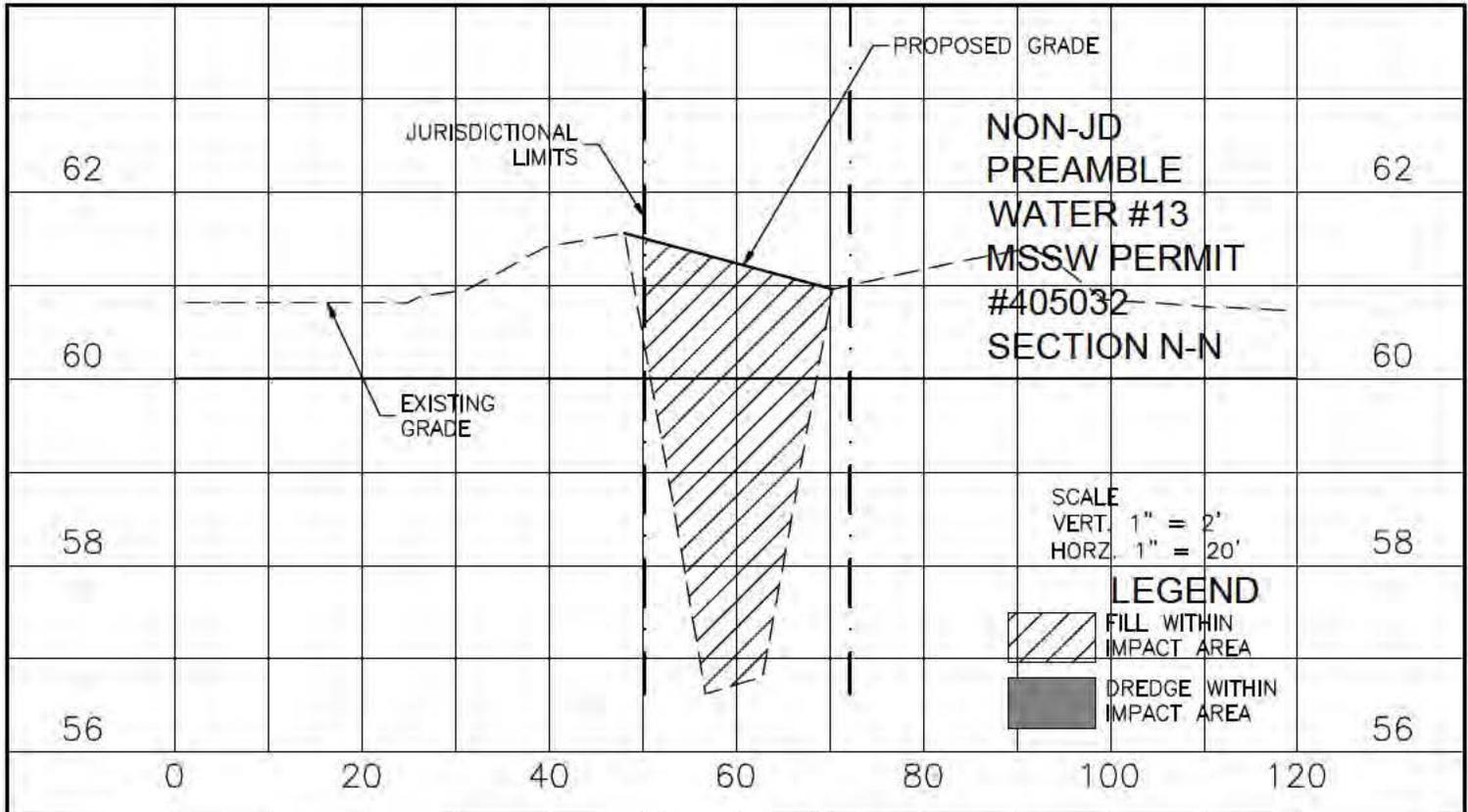
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PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



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USACE WETLAND IMPACTS			
IMPACT ID.	IMPACT AREA (S.F.)	IMPACT AREA (ACRES)	FILL VOLUMES (C.Y.)
NE-WL-35	30,065	0.70	323

WATERS OF THE U.S. IMPACTS			
IMPACT ID.	IMPACT AREA (S.F.)	IMPACT AREA (ACRES)	FILL VOLUMES (C.Y.)
WUS #01	8,083	0.19	268
WUS #01A	7,062	0.16	319
WUS #01B	1,375	0.03	31
WUS #08	18,195	0.42	821
WUS #09	4,421	0.10	356
WUS #10	5,103	0.12	554
WUS #11	12,582	0.29	1484
WUS #12	4,277	0.10	453
WUS #14	2,625	0.06	38
TOTAL	63,723	1.47	4,324

NON-JD PREAMBLE WATER IMPACTS			
IMPACT ID.	IMPACT AREA (S.F.)	IMPACT AREA (ACRES)	FILL VOLUMES (C.Y.)
WUS #02	3,557	0.08	211
WUS #03	3,097	0.07	240
WUS #04	3,785	0.09	317
WUS #05	2,102	0.05	53
WUS #06	37,927	0.87	4,265
WUS #06A	9,454	0.22	655
WUS #06B	3,981	0.09	383
WUS #07	44,978	1.03	5,719
WUS #07A	9,706	0.22	910
WUS #13	2,980	0.07	239
TOTAL	121,567	2.79	12,992

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



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PROJECT NO. 215613728	INDEX NO: 215613728-02C-802EX
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This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 12, 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Jacksonville District, SAJ-2017-02544-RGH (LAKEWOOD RANCH STEWARDSHIP DISTRICT / MANATEE)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Florida County/parish/borough: Manatee City: Lakewood Ranch
Center coordinates of site (lat/long in degree decimal format): Lat. 27.447543° N, Long. 82.361585° W.
Universal Transverse Mercator:
Name of nearest waterbody: Mill Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:
Name of watershed or Hydrologic Unit Code (HUC): 03100202 - Manatee; 031002020105 - Lake Manatee
[X] Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
[] Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

[X] Office (Desk) Determination. Date: June 4, 2018
[X] Field Determination. Date(s): June 5, 2018

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- [] Waters subject to the ebb and flow of the tide.
[] Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): 1

- [] TNWs, including territorial seas
[] Wetlands adjacent to TNWs
[X] Relatively permanent waters2 (RPWs) that flow directly or indirectly into TNWs
[] Non-RPWs that flow directly or indirectly into TNWs
[] Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
[] Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
[] Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
[] Impoundments of jurisdictional waters
[] Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or 0.06 acres.
Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

[] Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain:

1 Boxes checked below shall be supported by completing the appropriate sections in Section III below.

2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is “adjacent”:

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are “relatively permanent waters” (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: acres
Drainage area: Pick List
Average annual rainfall: 54 inches
Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

- Tributary flows directly into TNW.
 Tributary flows through Pick List tributaries before entering TNW.

Project waters are Pick List river miles from TNW.
Project waters are Pick List river miles from RPW.
Project waters are Pick List aerial (straight) miles from TNW.
Project waters are Pick List aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW⁵:

Tributary stream order, if known: .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

- Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

- Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

- | | | |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts | <input type="checkbox"/> Sands | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles | <input type="checkbox"/> Gravel | <input type="checkbox"/> Muck |
| <input type="checkbox"/> Bedrock | <input type="checkbox"/> Vegetation. Type/% cover: | |
| <input type="checkbox"/> Other. Explain: | | |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Manipulated areas are subject to sloughing, but are maintained.

Presence of run/riffle/pool complexes. Explain: None.

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

Tributary has (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Bed and banks | |
| <input type="checkbox"/> OHWM ⁶ (check all indicators that apply): | |
| <input type="checkbox"/> clear, natural line impressed on the bank | <input type="checkbox"/> the presence of litter and debris |
| <input type="checkbox"/> changes in the character of soil | <input type="checkbox"/> destruction of terrestrial vegetation |
| <input type="checkbox"/> shelving | <input type="checkbox"/> the presence of wrack line |
| <input type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting |
| <input type="checkbox"/> leaf litter disturbed or washed away | <input type="checkbox"/> scour |
| <input type="checkbox"/> sediment deposition | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining | <input type="checkbox"/> abrupt change in plant community |
| <input type="checkbox"/> other (list): | |
| <input type="checkbox"/> Discontinuous OHWM. ⁷ Explain: | |

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- | | |
|--|--|
| <input type="checkbox"/> High Tide Line indicated by: | <input type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects | <input type="checkbox"/> survey to available datum; |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings; |
| <input type="checkbox"/> physical markings/characteristics | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges | |
| <input type="checkbox"/> other (list): | |

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: Water is generally clear, slow moving until rain events.

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width): 50-500 feet.
- Wetland fringe. Characteristics: Typically forested slough wetlands.
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics: Wetlands typically flow via direct connection or sheet flow.

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Clear to tanic.

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

Riparian buffer. Characteristics (type, average width): .

Vegetation type/percent cover. Explain: .

Habitat for:

Federally Listed species. Explain findings: .

Fish/spawn areas. Explain findings: .

Other environmentally-sensitive species. Explain findings: .

Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed: Storage of flood waters; reduction of downstream peak discharges and volumes; recharge of aquifers; maintenance of seasonal/baseflows; maintenance of groundwater supplies; removal of sediments and nutrients; provision of breeding grounds and wildlife habitat (e.g. feeding/foraging, nesting, spawning, rearing of young); supports diverse community of benthic invertebrates, a major food source for vertebrates.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows

seasonally: Field observations of WOUS-14 confirm this is a deep ditch which carries flow at least seasonally and is relatively permanent.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 Other non-wetland waters: acres.
Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
 Wetlands directly abutting an RPW where tributaries typically flow “seasonally.” Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from “waters of the U.S.,” or
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

Riparian Wetlands

Physical: The wetlands perform important flow maintenance functions including storage of flood waters^{1, 2} and a release of these waters into the tributary in a more even and consistent manner². Therefore, the wetlands directly affect the duration, frequency, and volume of flow in the tributary and the downstream navigable water². The wetlands reduce local flooding¹. Storage of surface waters provides groundwater recharge that contributes to baseflow in the tributary that is vital to sustain aquatic life in downstream waters¹.

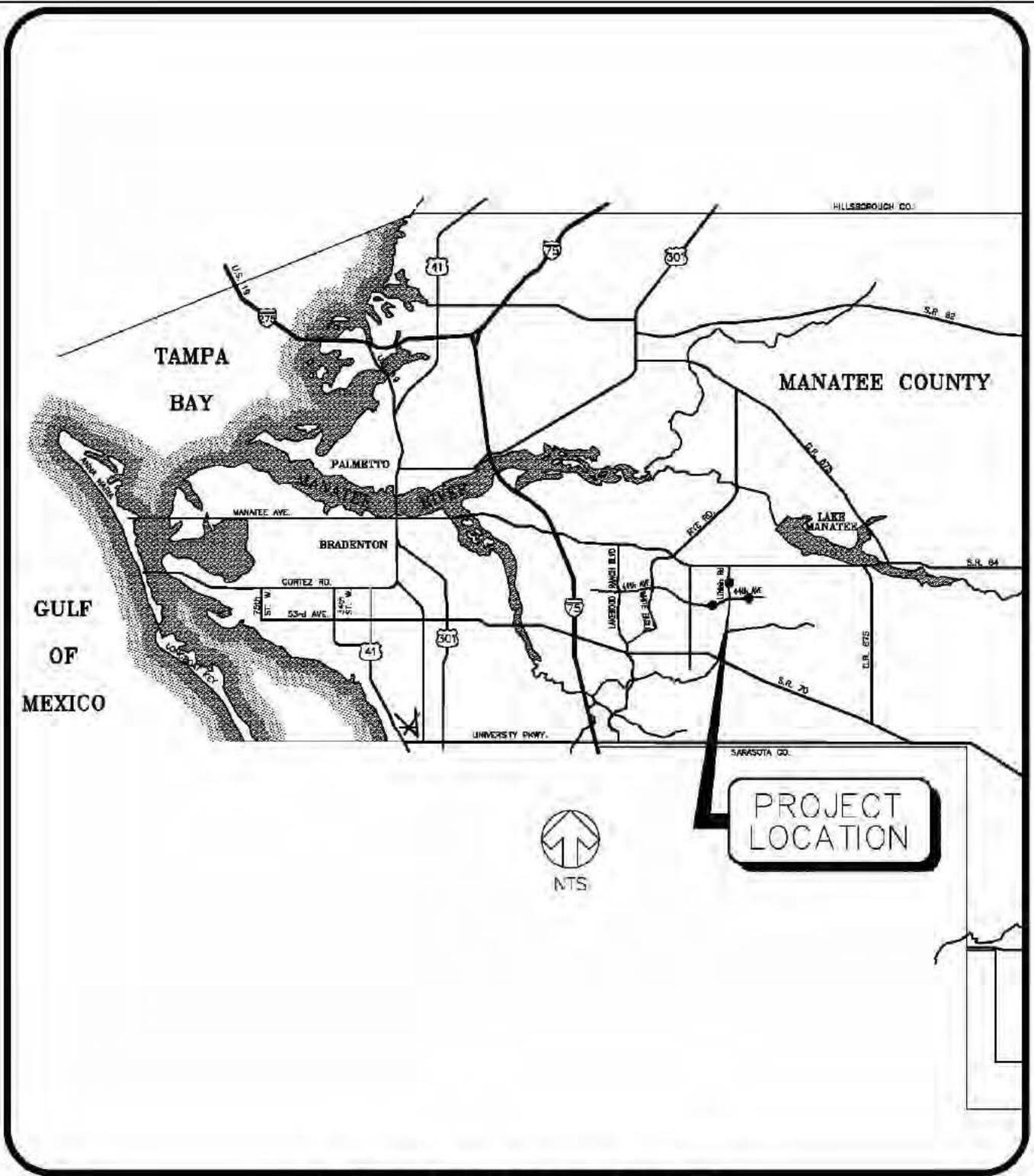
Chemical: The wetlands improve water quality by removing sediment and nutrients that would otherwise reach downstream waters and have a negative effect on aquatic resources^{1, 2}.

Biological: The wetlands are of utmost importance biologically since the majority of other non-wetland areas in the watershed have been altered for agriculture, residential, or other purposes¹. These wetlands have a high abundance and diversity of species due to their transitional location between terrestrial and aquatic systems¹. Productivity in downstream waters can depend on the exchange of nutrients within the floodplains¹. Watersheds dominated by riparian wetlands export a large amount of carbon that is essential to downstream ecosystems¹. Particulate carbon is important for shredders and filter-feeders while dissolved carbon is important for microorganisms within these systems¹.

¹The Clean Water Act Jurisdictional Handbook, Second Edition. 2012. Environmental Law Institute, Washington, DC, 126 pp.

²Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States* & *Carabell v. United States*. 2007. US Department of the Army and US Environmental Protection Agency. 12 pp.

See Chart to Support Findings.



LOCATION MAP

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



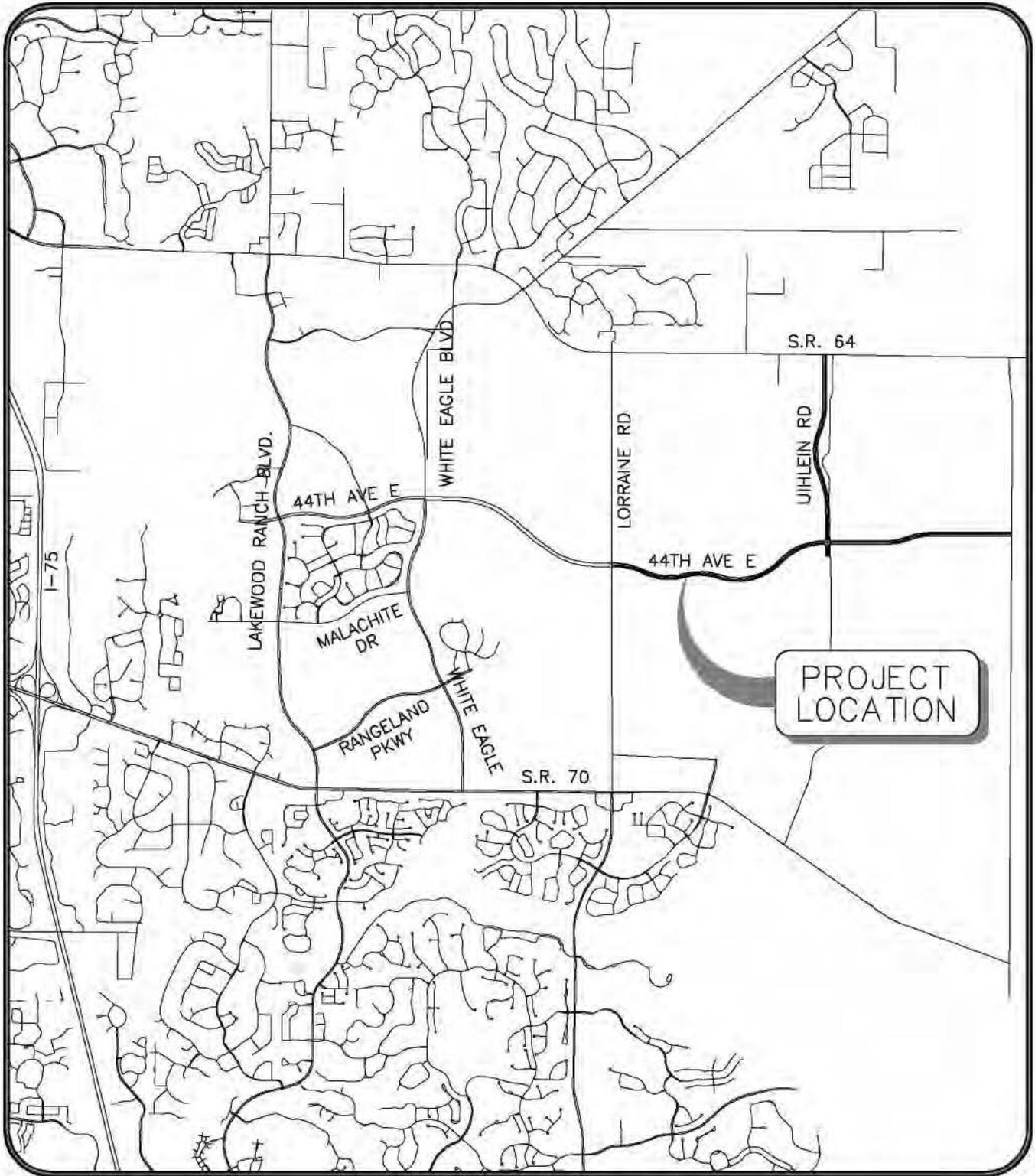
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 FLORIDA LICENSE NO. 58602

SCALE:	AS SHOWN	DATE:	05/2017
SEC: 2/10	TWP: 11/12	RCE:	REV: NG:
	35S	19E	
PROJECT NO.	215613728	INDEX NO.:	215613728-02C-801EX
DRWN BY/IMP NO.	TMG/95367	SHEET NO.:	1 of 21



SITE MAP

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



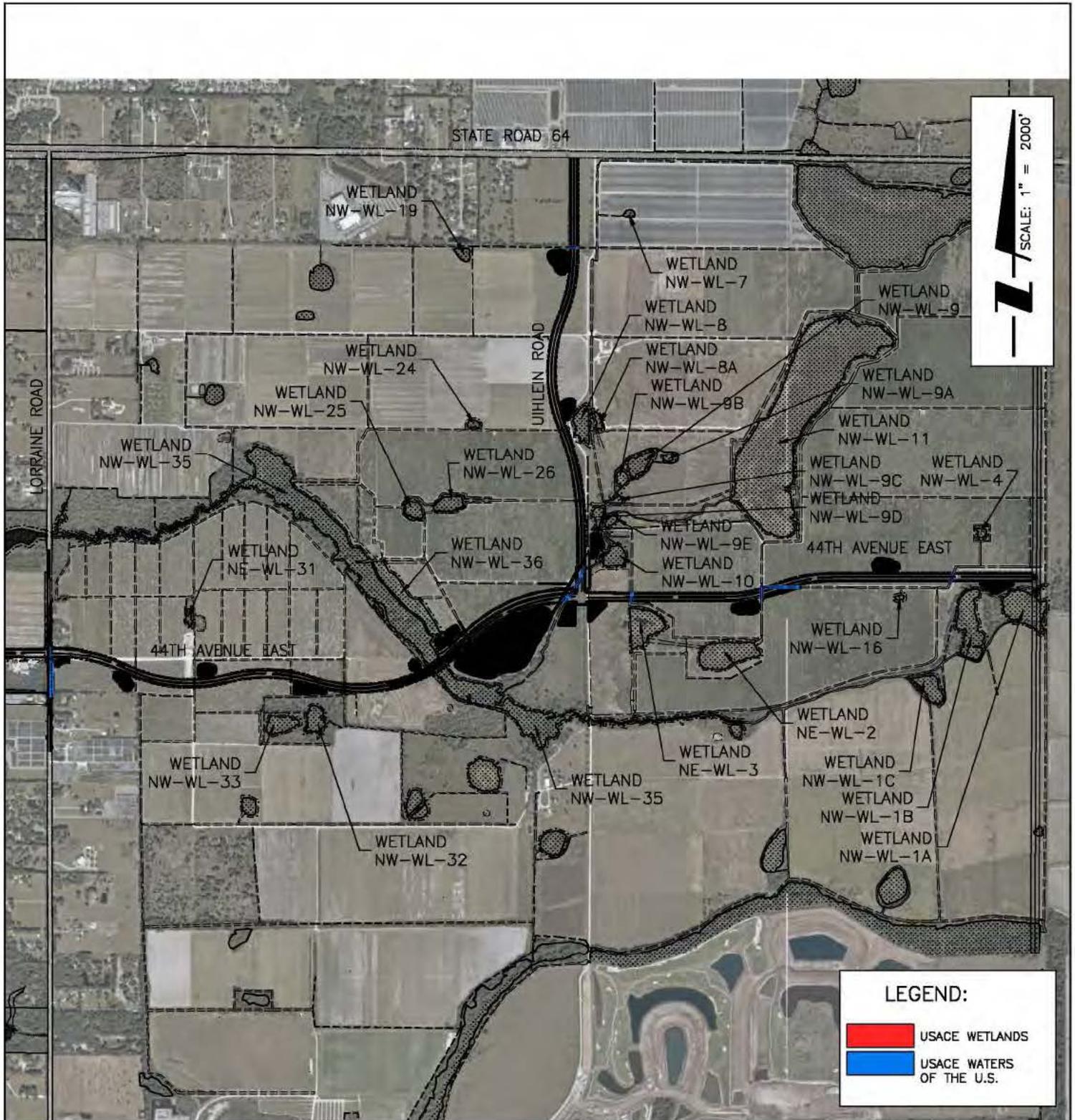
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SEC: 2/10	TWP: 35S	RCE:	19E
PROJECT NO.	215613728	INDEX NO:	215613728-02C-801EX
DRWN BY/EMP NO.	TMG/95367	SHEET NO:	2 OF 21



PROJECT: 44th AVENUE EAST PH 5 & UHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



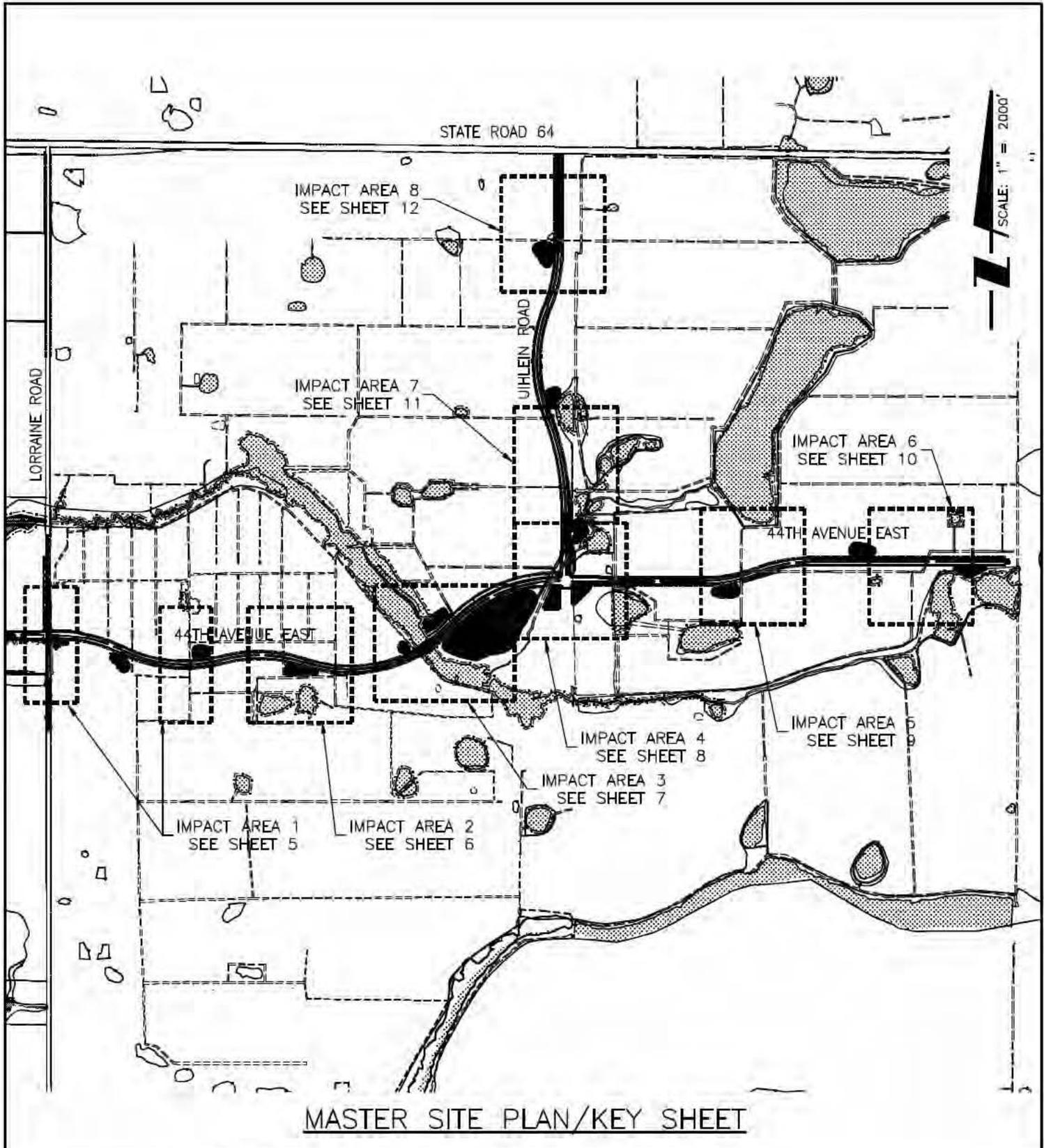
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PROJECT NO:	215613728	INDEX NO:	215613728-02C-802EX
DRWN BY/EMP NO:	TMG/95367	SHEET NO:	3 OF 21



MASTER SITE PLAN/KEY SHEET

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3
 CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



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	RGE: 35S 19E	
PROJECT NO. 215613728	INDEX NO: 215613728-02C-802EX	
DRWN BY/EMP NO. TMG/95367	SHEET NO: 4 OF 21	



UIHLEIN ROAD

USACE WATERS
OF THE U.S. #14
AREA 0.06 AC.



LEGEND:

-  USACE WETLAND IMPACT
-  WATER OF THE U.S. IMPACT
-  USACE WETLANDS
-  LAKE

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT

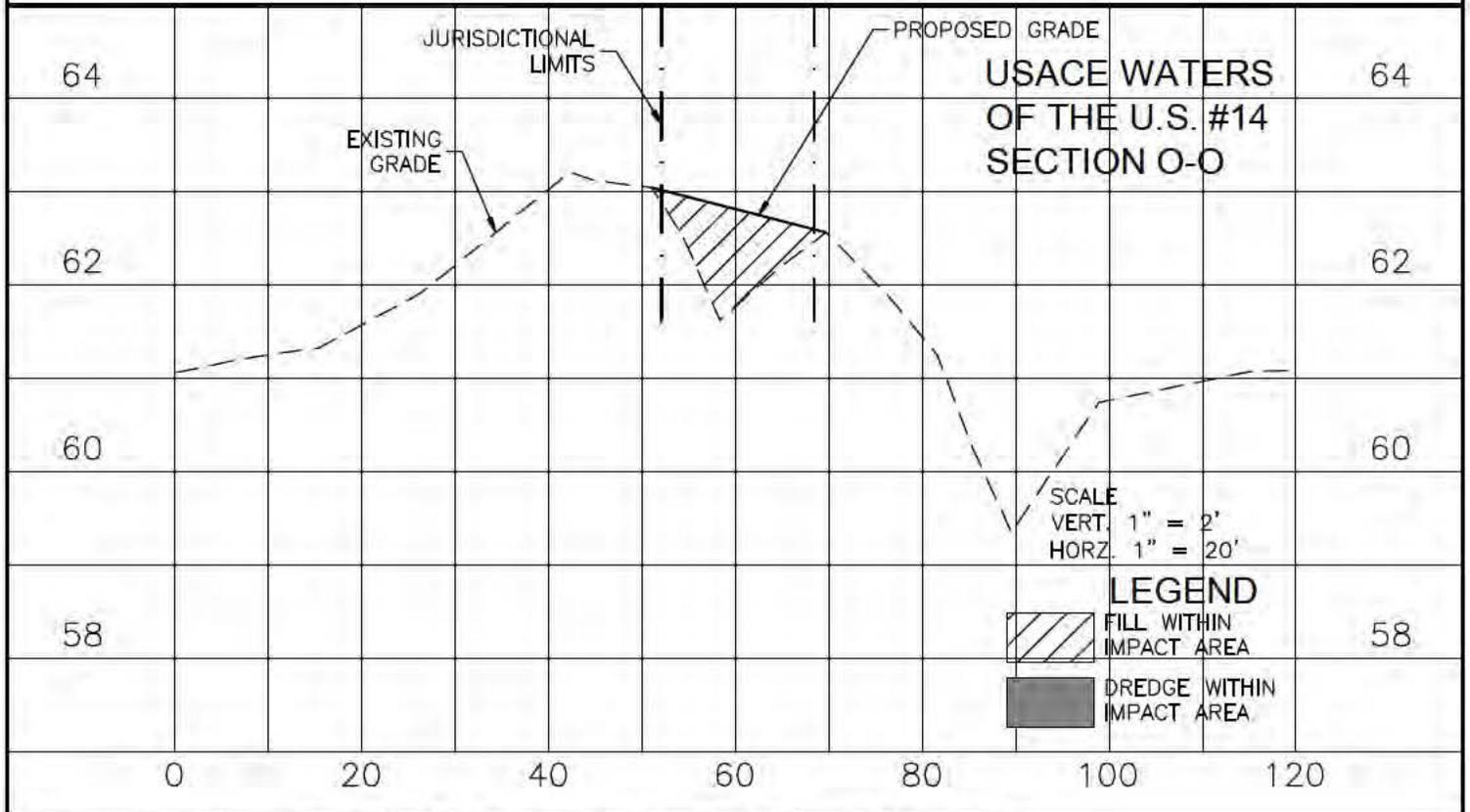
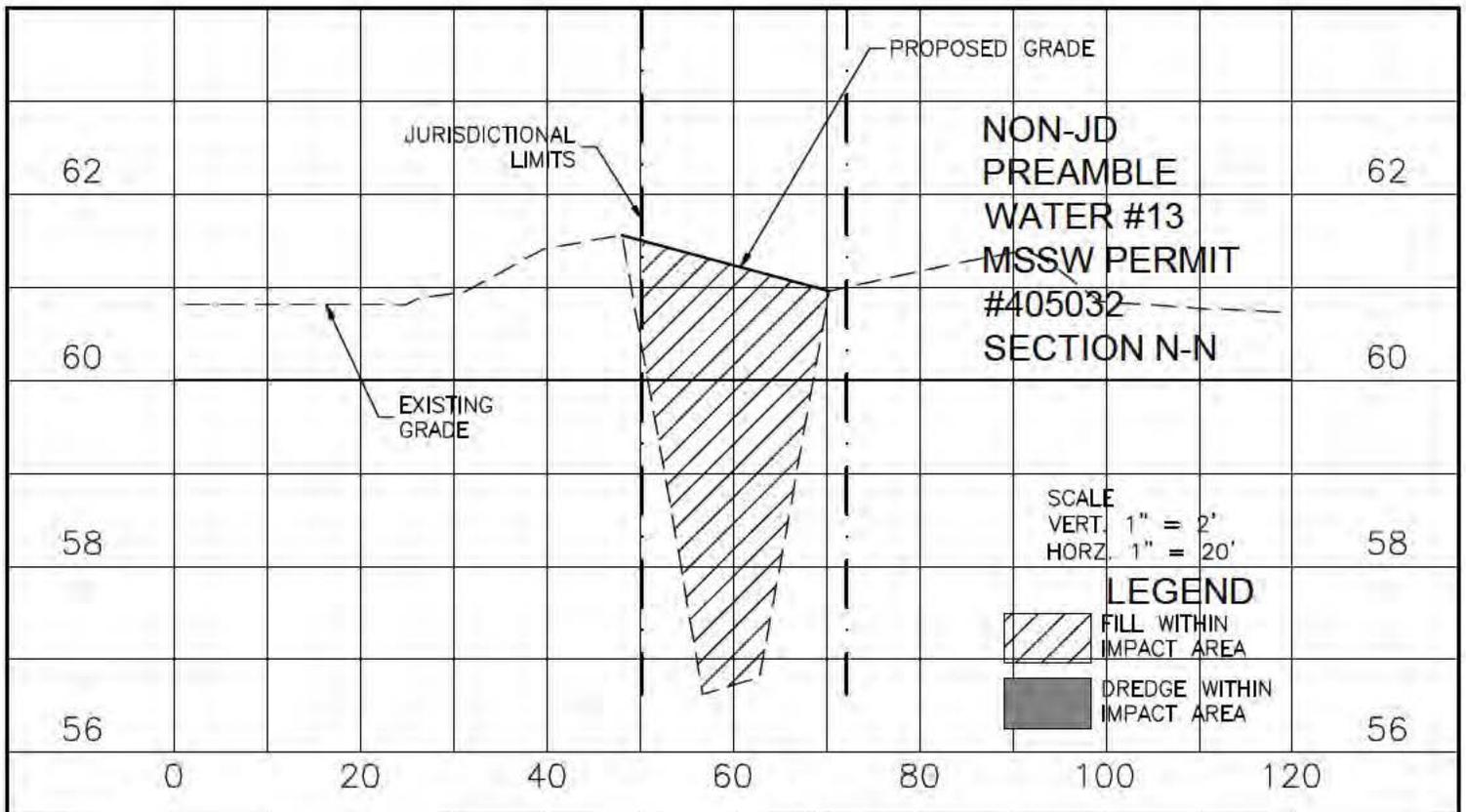


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SCALE: 1" = 200'	DATE: 05/2017
SEC: 2/10 TWP: RGE: 11/12 35S 19E	REV NO:
PROJECT NO. 215613728	INDEX NO: 215613728-02C-802EX
DRWN BY/EMP NO. TMG/95367	SHEET NO: 12 OF 21



PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



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SCALE:	AS SHOWN	DATE:	05/2017
SEC: 2/10	TWP: 11/12	RGE: 35S	REV NO:
PROJECT NO.	215613728	INDEX NO:	215613728-02C-802EX
DRWN BY/EMP NO.	TMG/95367	SHEET NO:	20 OF 21

USACE WETLAND IMPACTS			
IMPACT ID.	IMPACT AREA (S.F.)	IMPACT AREA (ACRES)	FILL VOLUMES (C.Y.)
NE-WL-35	30,065	0.70	323

WATERS OF THE U.S. IMPACTS			
IMPACT ID.	IMPACT AREA (S.F.)	IMPACT AREA (ACRES)	FILL VOLUMES (C.Y.)
WUS #01	8,083	0.19	268
WUS #01A	7,062	0.16	319
WUS #01B	1,375	0.03	31
WUS #08	18,195	0.42	821
WUS #09	4,421	0.10	356
WUS #10	5,103	0.12	554
WUS #11	12,582	0.29	1484
WUS #12	4,277	0.10	453
WUS #14	2,625	0.06	38
TOTAL	63,723	1.47	4,324

NON-JD PREAMBLE WATER IMPACTS			
IMPACT ID.	IMPACT AREA (S.F.)	IMPACT AREA (ACRES)	FILL VOLUMES (C.Y.)
WUS #02	3,557	0.08	211
WUS #03	3,097	0.07	240
WUS #04	3,785	0.09	317
WUS #05	2,102	0.05	53
WUS #06	37,927	0.87	4,265
WUS #06A	9,454	0.22	655
WUS #06B	3,981	0.09	383
WUS #07	44,978	1.03	5,719
WUS #07A	9,706	0.22	910
WUS #13	2,980	0.07	239
TOTAL	121,567	2.79	12,992

PROJECT: 44th AVENUE EAST PH 5 & UIHLEIN ROAD PH 3

CLIENT: LAKEWOOD RANCH STEWARDSHIP DISTRICT



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SCALE:	DATE: 05/2017
SEC: 2/10 TWP: RCE: 11/12 35S 19E	REV NO:
PROJECT NO. 215613728	INDEX NO: 215613728-02C-802EX
DRWN BY/EMP NO. TMG/95367	SHEET NO: 21 OF 21



This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 12, 2018

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Jacksonville District, SAJ-2017-02544-RGH (LAKEWOOD RANCH STEWARDSHIP DISTRICT / MANATEE)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Florida County/parish/borough: Manatee City: Lakewood Ranch
Center coordinates of site (lat/long in degree decimal format): Lat. 27.442932° N, Long. 82.371157° W.
Universal Transverse Mercator:
Name of nearest waterbody: Wolf Slough

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Braden River
Name of watershed or Hydrologic Unit Code (HUC): 03100202 - Manatee; 031002020201 - Upper Braden River

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination. Date: June 4, 2018
Field Determination. Date(s): June 5, 2018

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply): 1

- TNWs, including territorial seas
Wetlands adjacent to TNWs
Relatively permanent waters2 (RPWs) that flow directly or indirectly into TNWs
Non-RPWs that flow directly or indirectly into TNWs
Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
Impoundments of jurisdictional waters
Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.
Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain:

1 Boxes checked below shall be supported by completing the appropriate sections in Section III below.

2 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: acres

Drainage area: Pick List

Average annual rainfall: inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through Pick List tributaries before entering TNW.

Project waters are Pick List river miles from TNW.

Project waters are Pick List river miles from RPW.

Project waters are Pick List aerial (straight) miles from TNW.

Project waters are Pick List aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: N/A.

Identify flow route to TNW⁵: .

Tributary stream order, if known: .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain: Mill Creek is manipulated in areas near the headwaters (Wetland NE-WL-11) before it connects to natural stream channel bounded by floodplain wetland.

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain: Shell Hash.

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Manipulated areas are subject to sloughing, but are maintained.

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime: Typically Groundwater and surface water runoff.

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

Identify specific pollutants, if known: Assessed in 2002, listed as polluted for Bacteria and Other Microbes, however significant agricultural fields are adjacent to this waterbody so it is highly likely that, nutrients, herbicides, and pesticides are also within this waterbody.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width): feet.
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics: Wetlands typically flow via direct connection or sheet flow.

Subsurface flow: **Pick List**. Explain findings:

- Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: .

Ecological connection. Explain: .

Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: Plaustrine Forested / 80%.
- Habitat for:
 - Federally Listed species. Explain findings: .
 - Fish/spawn areas. Explain findings: .
 - Other environmentally-sensitive species. Explain findings: .
 - Aquatic/wildlife diversity. Explain findings: .

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Field observations of OSW 1, OSW 1A, OSW 1B, OSW 2, OSW 3, OSW 4, OSW 5, OSW 5A, OSW 5B, OSB 9, OSW10, OSW11, OSW 13and OSW 14 confirm these are deep ditches which carry flow at least seasonally and are relatively permanent.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
- Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
- Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Several of the ditches were excavated through the wetlands.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.48** acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- which are or could be used for industrial purposes by industries in interstate commerce.
- Interstate isolated waters. Explain: .
- Other factors. Explain: .

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Identify water body and summarize rationale supporting determination:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
 Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name:
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
 or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:

RPWs

Physical: The wetlands perform important flow maintenance functions including storage of flood waters^{1, 2} and a release of these waters into the tributary in a more even and consistent manner². Therefore, the wetlands directly affect the duration, frequency, and volume of flow in the tributary and the downstream navigable water². The wetlands reduce local flooding¹. Storage of surface waters provides groundwater recharge that contributes to baseflow in the tributary that is vital to sustain aquatic life in downstream waters¹.

Chemical: The wetlands improve water quality by removing sediment and nutrients that would otherwise reach downstream waters and have a negative effect on aquatic resources^{1, 2}.

Biological: The wetlands are of utmost importance biologically since the majority of other non-wetland areas in the watershed have been altered for agriculture, residential, or other purposes¹. These wetlands have a high abundance and diversity of species due to their transitional location between terrestrial and aquatic systems¹. Productivity in downstream waters can depend on the exchange of nutrients within the floodplains¹. Watersheds dominated by riparian wetlands export a large amount of carbon that is essential to downstream ecosystems¹. Particulate carbon is important for shredders and filter-feeders while dissolved carbon is important for microorganisms within these systems¹.

¹The Clean Water Act Jurisdictional Handbook, Second Edition. 2012. Environmental Law Institute, Washington, DC, 126 pp.

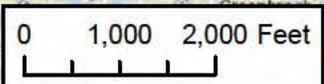
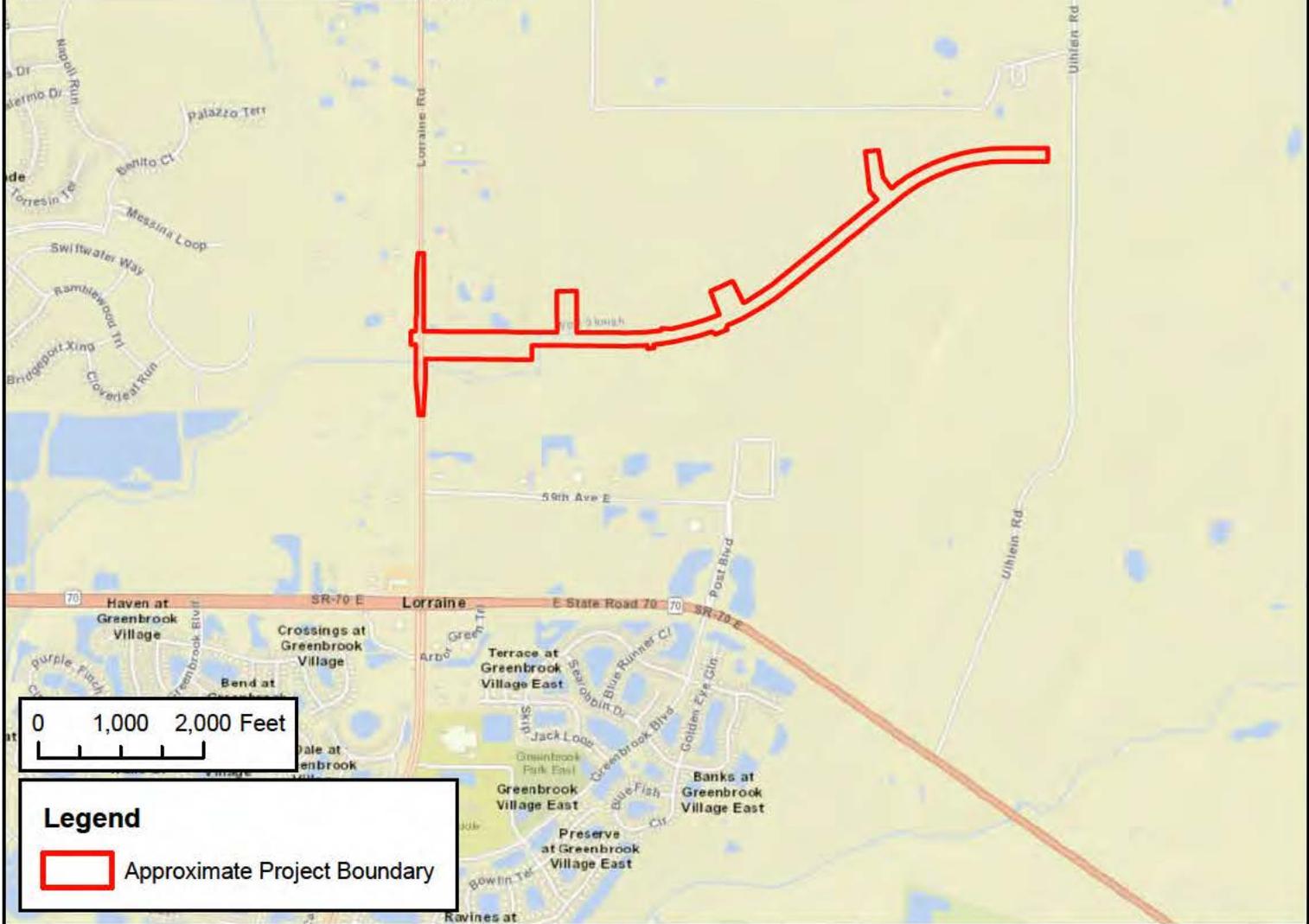
²Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States* & *Carabell v. United States*. 2007. US Department of the Army and US Environmental Protection Agency. 12 pp.

See Chart to Support Findings.

Rangeland Parkway Improvements (from Lorraine Road to Uihlein Road)

WOUS OSW IMPACTS

Impact Activity Area (AA) #	Impact Acres (AC)	Impact Area (SF)	Cut Volume (CYD)	Fill Volume (CYD)	Status	Mitigation	Credits
2WOUS-1	0.047			174	RPW	None	0
2WOUS-1A	0.295			722	RPW	None	0
2WOUS-1B	0.027			53	RPW	None	0
2WOUS-2	0.02			40	RPW	None	0
2WOUS-3	0.25			501	RPW	None	0
2WOUS-4	0.008			26	RPW	None	0
2WOUS-5	0.032			95	RPW	None	0
2WOUS-5A	0			0	RPW	None	0
2WOUS-5B	0			0	RPW	None	0
2WOUS-9	0.074			410	RPW	None	0
2WOUS-10	0.009			35	RPW	None	0
2WOUS-11	0.288			1,387	RPW	None	0
2WOUS-13	0.865			2166	RPW	None	0
2WOUS-14	0.058			114	RPW	None	0
Total	1.973			5723			



Legend

 Approximate Project Boundary

Client: LWR Development, LLC

Project: Rangeland Parkway from Lorraine Road to Uihlein Road

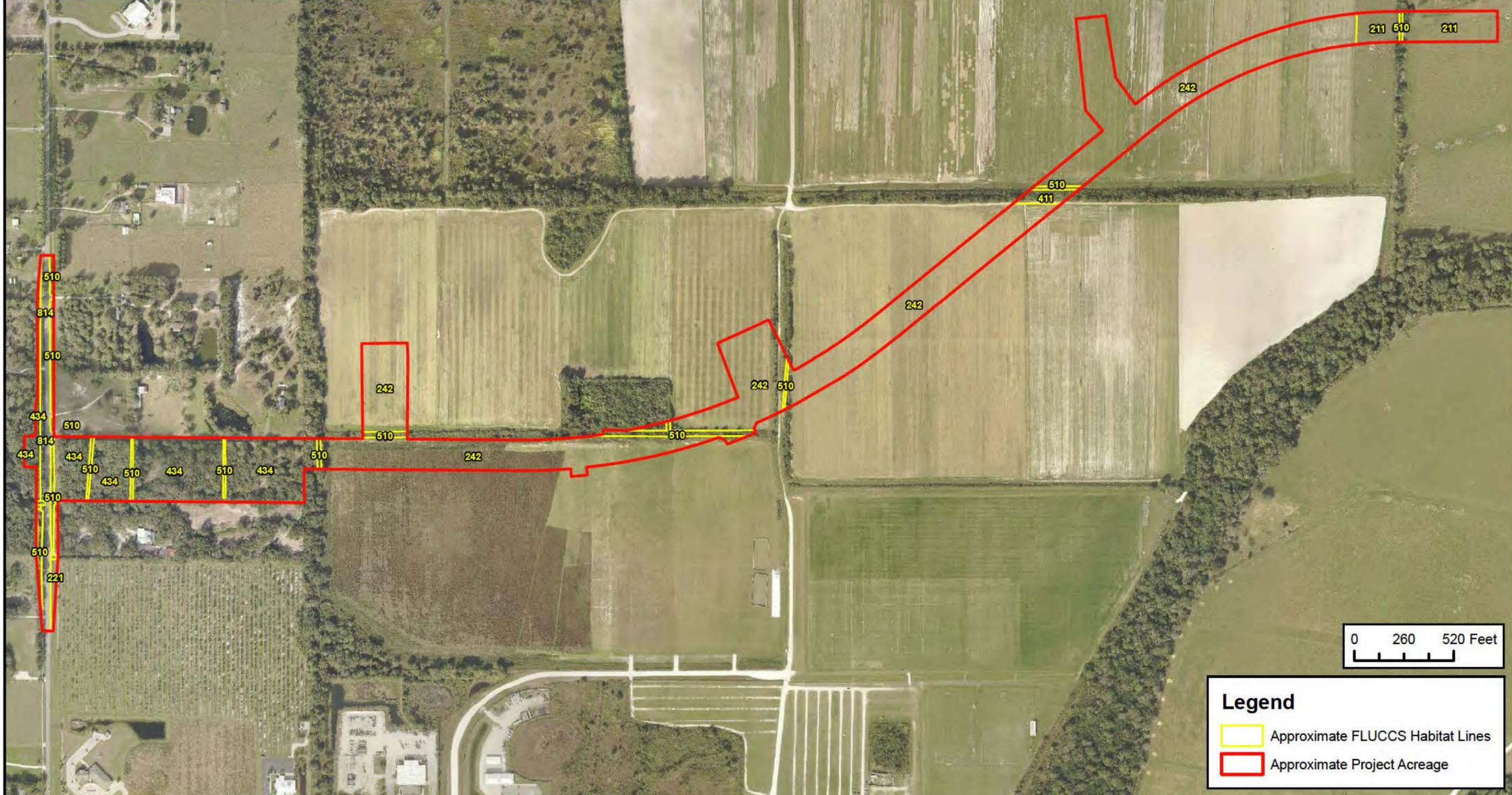
Title: Location Map



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Telephone: 941.722.0901
Fax: 941.722.4931
Website: www.ecoconsultants.net

Sec: 11,14,15 Twp: 35S Rng: 19E
Scale: 1" = 2,000'
Date Drawn: 8/9/2017
Drawn by: MJ
Source: ESRI Topo Maps
Figure 1

FLUCCS Code	Description	± Acreage
211	Improved Pastures	2.66
221	Citrus Groves	0.22
242	Sod Farms	28.37
411	Pine Flatwoods	0.43
434	Hardwood - Coniferous Mixed	11.02
510	Streams and Waterways	2.24
814	Roads and Highways	2.28
Total Project Acreage		47.22



Sec: 11,14,15 Twp: 35S Rng: 19E
 Scale: 1" = 520'
 Date Drawn: 8/18/2017
 Drawn by: MJ
 Source: Manatee County
 Sheet: 1 of 1

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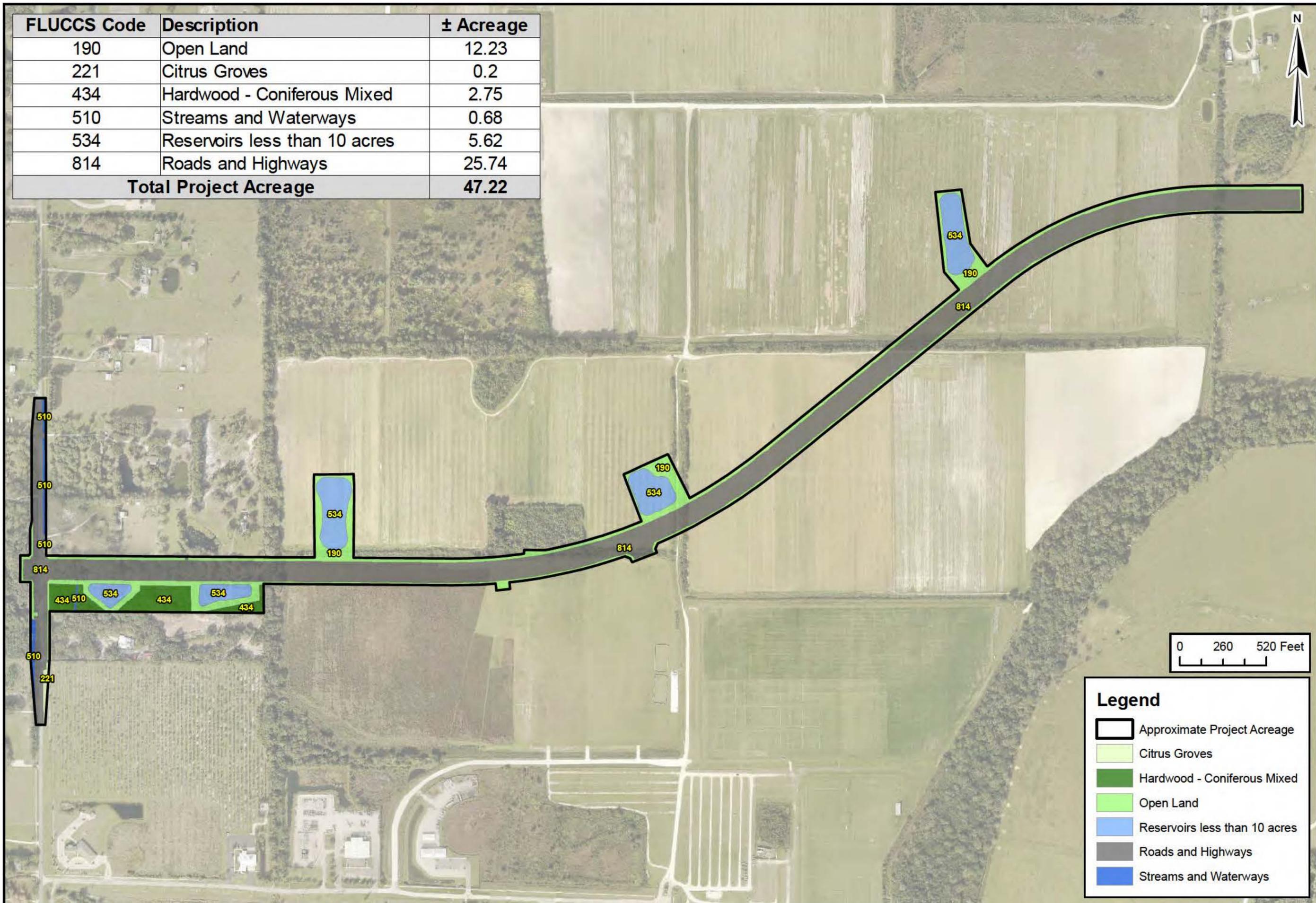


Client: LWR Development, LLC
 Project: Rangeland Parkway from
 Lorraine Road to Uihlein Road
 Title: FLUCCS Habitat Map

Legend

- Approximate FLUCCS Habitat Lines
- Approximate Project Acreage

FLUCCS Code	Description	± Acreage
190	Open Land	12.23
221	Citrus Groves	0.2
434	Hardwood - Coniferous Mixed	2.75
510	Streams and Waterways	0.68
534	Reservoirs less than 10 acres	5.62
814	Roads and Highways	25.74
Total Project Acreage		47.22



Legend

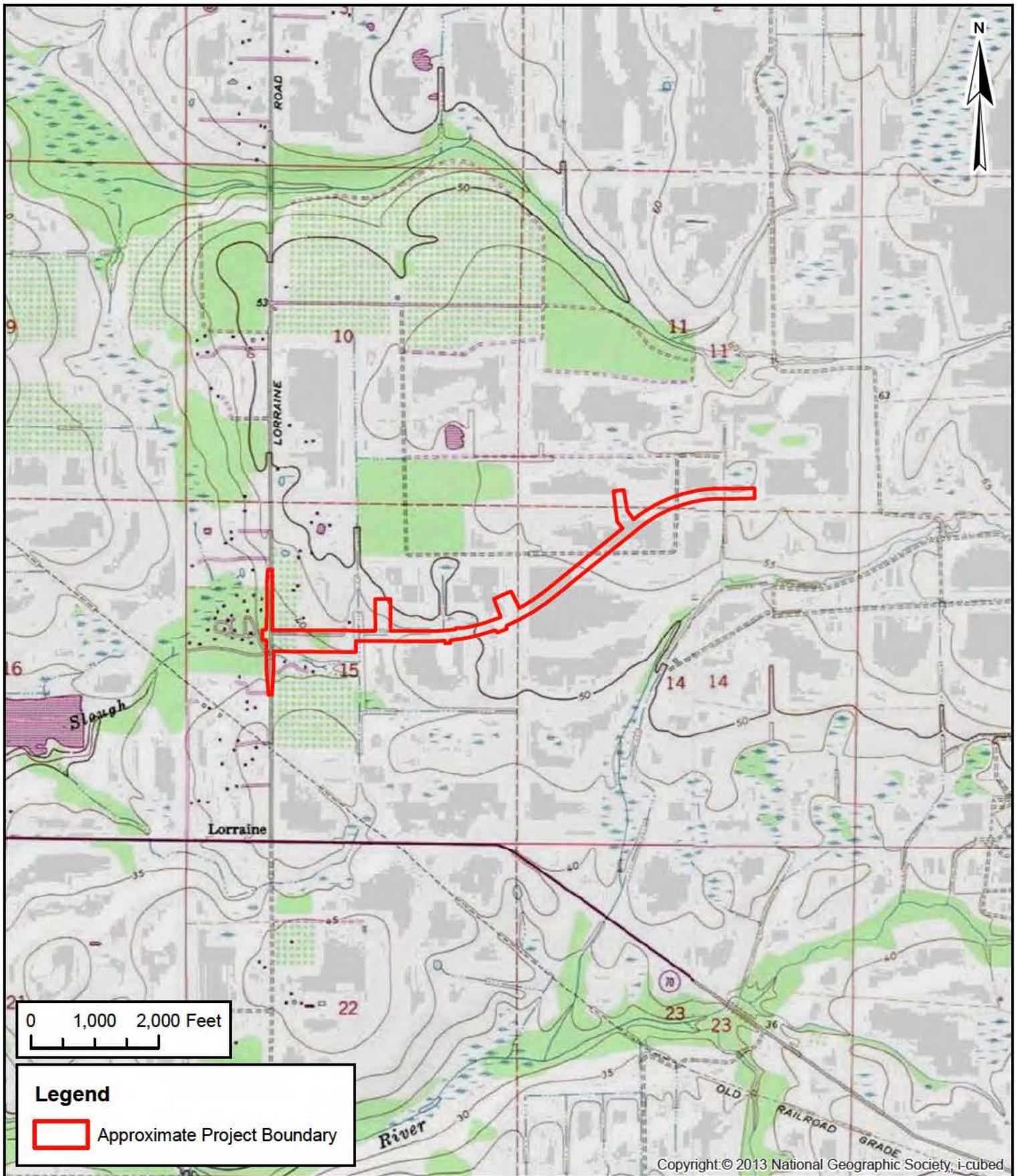
- Approximate Project Acreage
- Citrus Groves
- Hardwood - Coniferous Mixed
- Open Land
- Reservoirs less than 10 acres
- Roads and Highways
- Streams and Waterways

Sec: 11,14,15 Twp: 35S Rng: 19E
 Scale: 1" = 520'
 Date Drawn: 8/18/2017
 Drawn by: MJ
 Source: Manatee County
 Figure 3

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Client: LWR Development, LLC
 Project: Rangeland Parkway from \ Lorraine Road to Uihlein Road
 Title: Post FLUCCS Map

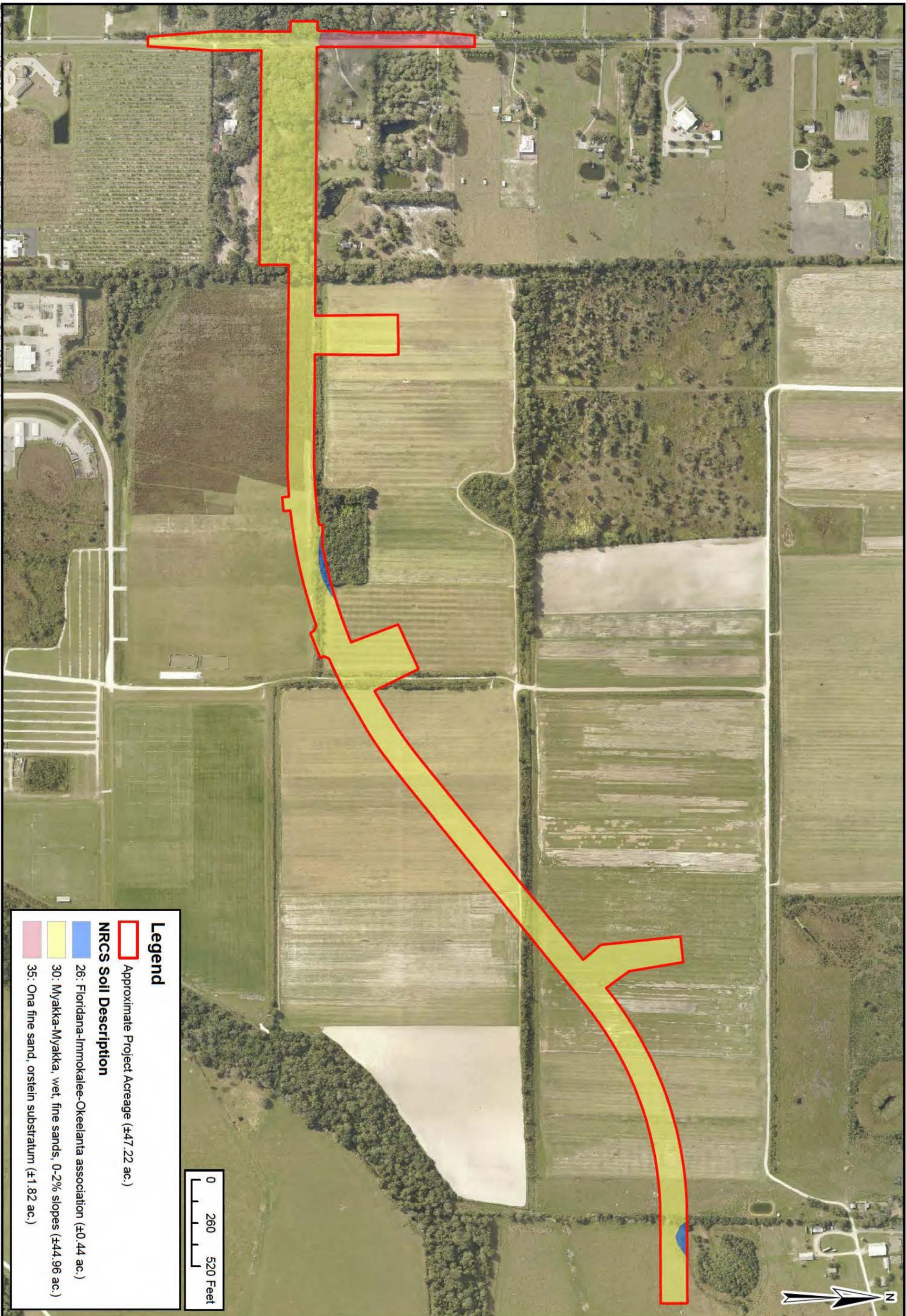


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Client: LWR Development, LLC
Project: Rangeland Parkway from Lorraine Road to Uihlein Road
Title: USGS Quad Map

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 Scale: 1" = 2,000'
 Date Drawn: 8/9/2017
 Drawn by: MJ
 Source: ESRI Topo Maps
 Figure 4

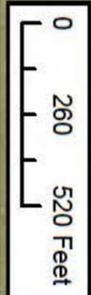


Legend

Approximate Project Acreage (± 47.22 ac.)

NRCS Soil Description

- 26: Florida-Immokalee-Okeelanta association (± 0.44 ac.)
- 30: Myakka-Myakka, wet, fine sands, 0-2% slopes (± 44.96 ac.)
- 35: Ona fine sand, orstein substratum (± 1.82 ac.)



Client: LWR Development, LLC

Project: Rangeland Parkway from \ Lorraine Road to Uihlein Road

Title: NRCS Soils Map

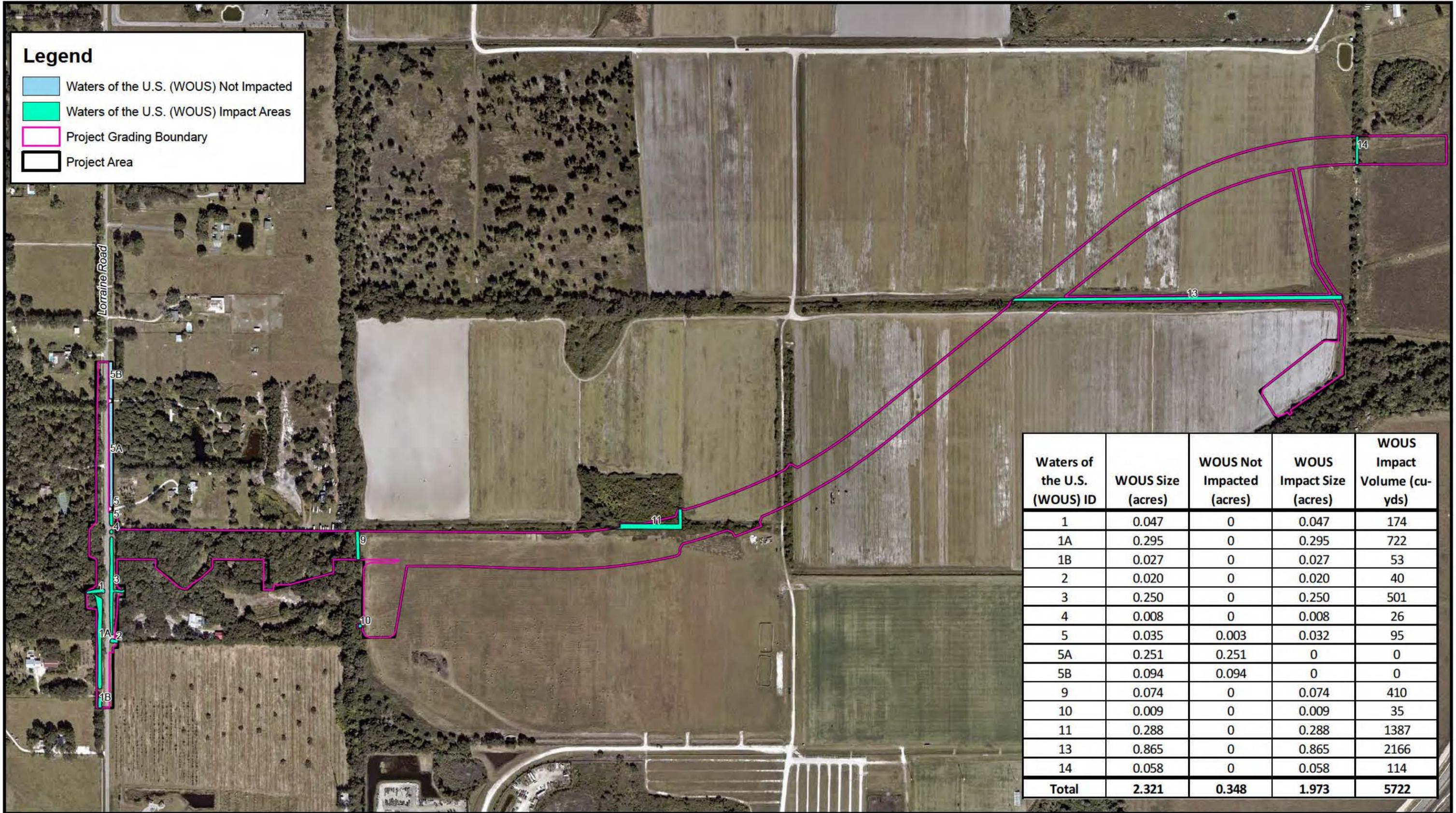


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 Scale: 1" = 520'
 Date Drawn: 8/9/2017
 Drawn by: MJ
 Source: Manatee County, NRCS
 Figure 5

Legend

- Waters of the U.S. (WOUS) Not Impacted
- Waters of the U.S. (WOUS) Impact Areas
- Project Grading Boundary
- Project Area



Waters of the U.S. (WOUS) ID	WOUS Size (acres)	WOUS Not Impacted (acres)	WOUS Impact Size (acres)	WOUS Impact Volume (cu-yds)
1	0.047	0	0.047	174
1A	0.295	0	0.295	722
1B	0.027	0	0.027	53
2	0.020	0	0.020	40
3	0.250	0	0.250	501
4	0.008	0	0.008	26
5	0.035	0.003	0.032	95
5A	0.251	0.251	0	0
5B	0.094	0.094	0	0
9	0.074	0	0.074	410
10	0.009	0	0.009	35
11	0.288	0	0.288	1387
13	0.865	0	0.865	2166
14	0.058	0	0.058	114
Total	2.321	0.348	1.973	5722



Rangeland Parkway
from Lorraine Road to Uihlein Road
 Manatee County, FL
 Waters of the U.S. (WOUS) Impacts

Data Source: LWRSD
 Image Source: LWRSD