



CONSULTING SERVICE AUTHORIZATION

Statement of Work (SOW)

TITLE: Elkcam Roadway Elevation Improvements Project

I. PROJECT DESCRIPTION:

Corradino will provide engineering, design, and permitting services for the Elkcam Roadway Elevation Improvements project. Due to the aftermath of Hurricane Ian the interconnected lakes within the Lake Theresa watershed reached record levels and caused Elkcam Boulevard to be completely inundated at two (2) locations. Generally, between Providence Boulevard and Howland Boulevard, the high-water levels for Dupont Lake and Angela Lake caused the heavily traveled major east/west road to be closed for several months. These road closures impacted homeowners going to and from work, impacted local businesses, and, more importantly, affected the response time for police, fire, and EMTs. The general project limits are Elkcam Boulevard between Howland Boulevard and Van Orman Drive in the City of Deltona, Florida as depicted in Attachment One.

Corradino will provide these services as outlined in the detailed scope of services below.

II. SCOPE OF SERVICES:

The task work order proposal will include the following tasks:

Task 1- Project Management, Meetings and General Coordination: \$79,695.00

Task 2- Roadway and Drainage Design and Permitting Services: \$393,070.00

Task 3- Geotechnical Engineering Services: \$65,792.75

Task 4- Environmental Services: \$72,139.00

Task 5- Surveying and Mapping Services: \$165,854.79

TASK 1: Project Management, Meetings, and General Coordination

The Consultant will provide general project management activities, including contract management and coordination with agency stakeholders, as well as up to eighteen (18) virtual meetings with city staff and/or key agency stakeholders to discuss the progress of the design services for the Elkcam Roadway Elevation Improvements Project.

Lump Sum fee of \$79,695.00 (Task 1)



TASK 2: Roadway and Drainage Design and Permitting Services

Corradino will provide roadway and drainage design, as well as permitting services, for the specific improvements defined for the Elkcam Boulevard Improvements between Howland Boulevard and Van Orman Drive in the City of Deltona, Florida. The proposed improvements will include the removal and replacement of the existing 48-inch RCP cross culvert with an upgraded 54-inch RCP Equalizer Culvert as well as to existing quadruplets 48-inch CMP to be removed and replaced with quadruplets 54-inch RCP equalizer culverts. The proposed roadway improvements include the elevation of the roadway profile of Elkcam Boulevard from Holland Boulevard to Van Orman Drive a a minimum of 3 feet above the published Base Flood (100-year) Elevation (27 ft, NAVD). The elevation of both segments of Elkcam Boulevard from Van Orman Drive to Montecito Avenue and from Stacey Circle to Delaware Road, 3 feet above the published Base Flood (100-year) elevation, will address impacts to surface waters, address floodplain impacts, adjust existing utilities, and upgrade existing culverts. The improvements will also include guardrails, curb and gutter, curb inlets, and storm pipes. The water quality treatment will be accomplished by a combined proposed storm sewer/exfiltration system.

The Corradino Group, Inc. will prepare the Production Plan Phase submittals for the Elkcam Roadway Elevation Improvements Project. The plan submittals shall include the following:

- Typical Section Package
- Pavement Design Package
- Roadway Plans including:
 - Plan and profile sheets
 - Cross sections
 - Drainage plans
 - Drainage structure sheets
 - Temporary Traffic Control plans
 - Miscellaneous details
 - Stormwater Pollution Prevention Plan (SWPPP)
- Specifications: Client to provide front documents. Corradino will reference FDOT Specs.
- Contract Documents- Construction documents will be created to implement the approved design. Construction documents will also include Design Variations Report, Drainage Report, cost estimates, details notes, and specifications necessary to complete construction.
- The Conceptual Design Phase (30%) plan submittal package shall include the following:
Conceptual Design (30%) Plans- The roadway and drainage design services shall include the preparation of a key sheet, a horizontal control sheet, typical section and plans that depict the limits of the Elkcam Boulevard Improvements.



- Conceptual Design (30%) Plans- The roadway design services shall evaluate the topographic survey (included as part of Task 5), preliminary subsurface utility exploration layout (GPR included as part of Task 5), and the Geotechnical Report to establish the base plan to be used for the future 60%, 90% and 100% Production Design Plan Phase submittals.
- 30% Deliverables shall include the following:
 - Three (3) PDF sets of Conceptual Design Phase (30%) plans (11" X 17") and permit exhibits at 1" = 40' scale.
 - 30% Opinion of Probable Cost Estimate
 - Written responses to City of Deltona and Agency Stakeholder comments
- The Production Design/Permit Phase (60%) plan submittal package shall include the following:
 - Production Design/Permit (60%) Plans- These services shall include modifications or revisions to the Conceptual Design Phase (30%) plans as a result of City of Deltona and Agency Stakeholder review and comment during the 30% Conceptual Design plans submittal.
 - 60% Deliverables shall include the following:
 - Three (3) PDF sets of Permit Phase (60%) construction plans (11" X 17") and permit exhibits at 1" = 40' scale.
 - 60% Opinion of Probable Cost Estimate
 - Written responses to City of Deltona and Agency Stakeholder comments
- The Production Phase (90%) Pre-Bid plan submittal package shall include the following:
 - Pre-Bid (90%) Plans- These services shall include modifications or revisions to the Production/Permit Phase (60%) plans as a result of City of Deltona and Agency Stakeholder review and comment during the 60% Conceptual Design plans submittal.
 - 90% Deliverables shall include the following:
 - Three (3) PDF sets of Pre-Bid Phase (90%) construction plans (11"x17") at 1"= 40' scale.
 - Written responses to City of Deltona and Agency Stakeholder comments
 - Quantity Take-off list. City of Deltona shall furnish a template MS Excel Bid Form spreadsheet.
 - 90% Opinion of Probable Cost Estimate
 - Specifications (FDOT)



- The Construction Phase (100%) plan submittal package shall include the following:
 - Construction (100%) Plans- These services shall include modifications or revisions to all Plans based on City of Deltona and Agency Stakeholder review of the 90% Pre-bid plans.
 - 100% Deliverables shall include the following:
 - Three (3) PDF sets of signed and sealed Construction Phase (100%) construction plans (11"x17")
 - Digital version of Design Plan files with P.E.CAD Seal in MicroStation
 - Written responses to City of Deltona and Agency Stakeholder comments
 - Final Quantity Take-off list- Bid Package
 - Letter of Quality Control;
 - One (1) set of signed and sealed conformed construction plans (11" x 17") reflecting any addenda or changes in the plans after the Bid Phase submittal.
 - Final Specifications (FDOT)

Lump Sum fee of \$393,070.00 (Task 2)

TASK 3: Geotechnical Engineering Services

Our subconsultant, Arehna Engineering, Inc. (AREHNA), will provide Geotechnical Engineering services for the proposed design work along Elkcam Boulevard between Howland Boulevard and Van Orman Drive in the City of Deltona, Florida.

The purpose of the AREHNA geotechnical study is to obtain information on the general subsurface soil conditions at the project site. The subsurface materials encountered will then be evaluated with respect to the available project characteristics. In this regard, engineering assessments for the following items will be formulated:

- Identification of the existing groundwater levels and estimated normal seasonal high groundwater fluctuations.
- General location and description of potentially deleterious materials encountered in the borings which may have an impact on the proposed construction.
- General geotechnical recommendations for the proposed construction.
- Hydraulic conductivity based on Constant Head, Usual Condition, Open Hole exfiltration/percolation tests.

AREHNA will provide the following services:

- Site reconnaissance and stake boring locations.
- Request utility location services from Sunshine811.



- Obtain City of Deltona ROW/MOT permits to perform the requested services within the existing roadway, if required.
- Provide Maintenance of Traffic in accordance with Florida Department of Transportation (FDOT) Standard Indices, as needed.
- Perform a total of 58 Standard Penetration Test (SPT) borings at the project site. Samples will be collected, and Standard Penetration Test resistances measured continuously for the top ten feet and at approximate intervals of five feet, thereafter. SPT borings will be performed as follows:
 - 55 SPT borings will be performed to a depth of 10 feet below the existing ground surface every 100 LF along Elkcam Boulevard
 - Three SPT boring will be performed to a depth of 15 feet below existing ground surface within the drainage areas.
- Perform three Constant Head, Usual Condition, Open Hole exfiltration/percolation test at two depth intervals: from 0 to 10 feet and from 0 to 15 feet.
- Visually classify and stratify soil samples in the laboratory and conduct a laboratory testing program as needed to verify soil classifications.
- Report the results of the field exploration and engineering analysis. The results of the subsurface exploration will be presented in a written report signed and sealed by a professional engineer specializing in geotechnical engineering.

Lump Sum fee of \$65,792.75 (Task 3)

TASK 4: Environmental Services

Our subconsultant, AECOM, will provide professional environmental services for the Elkcam Boulevard between Howland Boulevard and Van Orman Drive in the City of Deltona, Florida

Wetland and Surface Water Jurisdictional Determination- AECOM will compile readily available GIS data for the subject property to determine the location of potential wetland and other surface water areas prior to commencing fieldwork. Research will include publicly available information on mapped wetlands, soils, water resources, and topography. Sources will include, but are not limited to, Southwest Florida Water Management District (SWFWMD) land use mapping, US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping, US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) mapped soils, US Geological Survey (USGS) topographic quadrangle maps, the USGS National Hydrography Dataset (NHD), and the Federal Emergency Management Agency (FEMA) floodplain mapping.



AECOM will survey the subject property for jurisdictional Waters of the United States (WOUS), including wetlands, in accordance with the US Army Corps of Engineers (USACE) Atlantic and the 2008 Coastal Plain Regional Supplement to the 1987 USACE Wetland Delineation Manual and Chapter 62-340 of Florida's Administrative Code (FAC). AECOM will identify habitat types, vegetated wetlands, waterbodies, and other regulated special aquatic sites encountered. The boundaries of jurisdictional wetlands within the subject property will be demarcated using high visibility flagging: glo-pink flagging labeled "Wetland Boundary" for wetlands. AECOM will classify the resource according to the USFWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al 1979).

Wetland boundaries and data collection points will be field located with consecutively numbered flags and the location of each wetland flag will be captured using a handheld Global Positioning System (GPS) data collector with sub-meter accuracy. Field data will be used to develop a wetlands and surface water boundary map and estimate of wetland and surface waters located on the subject property. The results of Task 1.1 will be provided in an environmental narrative to support permitting.

AECOM will identify the Seasonal High Water Level (SHWL) and Normal Pool (NP) elevations for each wetland or surface water within the project area. A minimum of three SHWL and NP elevations will be field located per wetland system and the locations will be captured using handheld GPS data collectors. SHWL and NP elevations will be marked with nails, flagged with surveyor tape, and given a unique identifying label (e.g., SHW1-1, SHW1-2, NP1-1, NP1-2...). Seasonal high water means the elevation to which the ground and surface water can be expected to rise in a normal wet season. The SHWL will be established in each wetland or surface water based on relation to the biological or physical indicators (e.g., elevated lichen lines, aquatic moss and liverwort zones, and water-stained areas of trees, rocks and other objects). The NP elevations will be established in each wetland or surface water based on biological or physical indicators of sustained inundation, such as:

- The elevation of the root crown of mature specimens of fetterbush (*Lyonia lucida*) on cypress trees or hummocks.
- The inflection points on the buttress of cypress trees (*Taxodium* spp.).
- The lower limit of epiphytic bryophytes (i.e., moss collars) growing on cypress trees.

AECOM will provide the project surveyor (to be contracted by others) digital files of the SHWL and NP locations.



Protected Species Investigations- AECOM will perform background research prior to commencing fieldwork: sources will include the USFWS GIS data layers associated with critical habitat and/or consultation areas and the USFWS Information, Planning, and Consultation System (IPaC) and listed species databases managed by the Florida Fish and Wildlife Conservation Commission (FWC) and the Florida National Areas Inventory (FNAI). Concurrent with the field activities for the jurisdictional wetland delineation task, to the greatest extent practicable, AECOM will conduct a reconnaissance level listed flora and fauna species survey for the subject property. AECOM will record all sightings, sign, call, tracks, scat, nest, cavities, burrow, and probable habitat of wildlife observed. AECOM will identify the occurrence and relative abundance of species considered Endangered, Threatened, or listed as a Species of Special Concern by the USFWS under 50CFR11-12 or the FWC under Chapter 68A-27, F.A.C. Observations of listed wildlife shall be located using a handheld GPS with sub-meter accuracy and their locations marked on aerial photographs. Any species occurrences and suitable habitat will be shown on a protected species map and included in the environmental narrative to support state and federal permitting.

SJRWMD Environmental Resource Permit (ERP)- Because of potential permanent wetland impacts associated with the construction of new embankments, AECOM has based the level of effort upon the premise that the proposed project would be processed as a SJRWMD Individual Permit. AECOM will conduct one pre-application meeting with SJRWMD staff having the responsibility for the review of the proposed activities. It is assumed that the submerged lands associated with Dupont Lake and/or Angela Lake will require fill due to the establishment of an embankment. It appears that the City of Deltona retained ownership rights to these lakes and sovereign submerged land authorization will not be required.

AECOM ecologists will conduct a site review with the SJRWMD to review the landward extent of wetlands and waterbodies delineated on the site, if requested. AECOM will provide responses to one Request for Additional Information and has set aside a budget of 10 hours to do so and resubmit to SJRWMD.

USACE Standard Permit- AECOM assumes that the project will require greater than 0.5 acre of unavoidable impact to wetlands/jurisdictional waters which will require a Standard Permit. Consultation with the United States Fish and Wildlife Service (USFWS) will be required to demonstrate compliance with the Endangered Species Act will be required. Consultation with the State Historic Preservation Office (SHPO) will also be required to demonstrate compliance with Section 106 of the National Historic Preservation Act. Both consultations are required to secure a USACE Standard Permit.



AECOM anticipates the following will also be needed to support the digital submission of an USACE Standard Permit:

- USACE ENG 4345
- Environmental Narrative including results of all threatened and endangered species surveys
- Impact drawings that include cut and fill cross sectional details and cubic feet of fill
- Wetland Determination Data Forms for the Atlantic and Gulf Coastal Plain Region
- UMAM data forms
- Mitigation proposal
- Supporting tables and maps

Bat Acoustical Survey- The project is within the confines of habitat suitable for occupation by the tricolored bat (*Perimyotis subflavus*, hereinafter referred to as TCB) which is proposed for listing as endangered under the Endangered Species Act (ESA) due to the widespread impact of the deadly white-nose syndrome. Currently, the United States Fish and Wildlife Service (USFWS) 2024 Revisions to the Florida bonneted bat (*Eumops floridanus*, herein after referred to as FBB) consultation guidelines are used to guide acoustical surveys for the TCB.

AECOM will coordinate with the USFWS to discuss the survey plan and confirm the number of valid nights (acoustic recording meeting temperature, wind, and precipitation requirements as outlined in the 2024 FBB consultation guidelines) needed for a valid survey. Coordination will occur prior to initiating survey activities.

The purpose of the acoustic survey is to determine if the TCB is likely to be actively roosting or using the site. Surveys are conducted with an acoustic recorder that records potential bat calls at night, when bats are active. For a night of survey to be valid certain parameters must not be exceeded. The acoustic survey must be conducted with:

- temperatures above 60 degrees Fahrenheit.
- precipitation, including rain and/or fog, that does not exceed 30 minutes or continues intermittently during the survey period.
- sustained wind speeds that are not greater than 9 miles/hour (4 meters/second; 3 on Beaufort scale) for 30 minutes or more during the survey period (USFWS 2024)

In accordance with the USFWS guidelines, we have developed an approach to creating a valid study within the project corridor for an estimated 18 nights with 2 detectors. The number of detector nights will be validated and confirmed with the USFWS prior.

AECOM will process acoustical data using the Kaleidoscope software to identify bat recordings. AECOM will review all bat calls identified as TCB. Upon completion of the survey, AECOM will provide a technical memorandum documenting survey methods, weather conditions, and results.



Natural Resource Deliverables

Draft and Final Permitting Narratives to support the ERP and USACE Standard Permit applications.

Cultural Resources Investigations

The City of Deltona proposes to raise two segments of Elkcam Boulevard for a total length of approximately 3,034 meters and a width of approximately five meters along both road shoulders, which is considered the limits of disturbance (LOD) for this project. The LOD measures approximately 7.49 acres. For the purposes of the Historic Standing Structures survey, the Area of Potential Effects (APE) includes the LOD and adjacent parcels, as well as additional areas as needed to account for potential visual, audible, or atmospheric effects the project may introduce.

AECOM will perform a Phase IB Cultural Resources Assessment Survey (CRAS) of two segments of Elkcam Boulevard in the City of Deltona, Florida following the standards described in Florida Division of Historical Research (FDHR) Module 3 (June 2003).

Phase IB Archaeological Survey- The first step will be to perform a records and literature search to identify any previously recorded cultural resources and previously conducted cultural resource investigations within a 1-mile radius of the LOD well as provide broader cultural/historical contexts for any identified sites and review NRHP eligibility. This records search will primarily be conducted online with the (FDHR) Florida Master Site File (FMSF) but may also include visits to local and university libraries for additional background information, as necessary.

Phase 1B archaeological survey fieldwork will be conducted in accordance with DHR standards as outlined in FDHR Module 3 (June 2003). The archaeological fieldwork will be confined to the 7.49-acre LOD defined as the archaeological survey area. This includes testing on both sides of Elkcam Boulevard. The archaeological survey area is presumed to be at least partially disturbed from road and utility construction. The terrain surrounding Elkcam Boulevard is composed of road shoulders, undeveloped areas, residential yard frontages, and a mixture of soil types.

Field methods will include pedestrian inspection and systematic shovel testing. Based on anticipated surface conditions and anticipated previous disturbance, shovel test pits (STPs) will be excavated at 50-m intervals within the LOD. Any identified, archaeological site boundaries will be delineated at 10-m intervals. A maximum of 71 STPs will be excavated within the archaeological survey area.



STPs will be 50 centimeters (cm) in diameter and excavated by hand with a long-handled shovel into culturally sterile subsoil, generally 1 m or less. Excavated materials will be sifted with 0.25-inch wire mesh for uniform artifact recovery. Once excavation is completed, the walls of each STP will be inspected for additional cultural materials and the presence of cultural deposits or features. Standardized data for each STP will be recorded on field forms, and will include, but not be limited to, STP location (provenience), soil strata depth and color (as referenced to the Munsell Soil Color Chart), and presence/absence of cultural materials. Details, such as site maps, artifacts and/or deposits of interest, photographic logs, and evidence of ground disturbances, will be kept in a Field Director's log book in addition to the standardized STP data forms. Upon completion of these tasks, each STP will be backfilled. Further, STPs that produce cultural materials will be marked in the field through the use of flagging tape hung over or near the location of the STP.

All prehistoric and historic artifacts retained will be bagged in sturdy Ziploc type plastic bags. Each bag will be labeled with pertinent provenience information. Each bag will be assigned a sequential Field Sample Number (FS#) and logged onto a Field Sample data log. Digital photographs will be taken during fieldwork to document the general nature of the site area and any other important features (e.g., STP profiles, nature/extent of ground disturbances). Photographs will be logged in the Field Director's logbook. Sub-meter accurate differential GPS unit(s) will be utilized to record the locations of STPs and other features identified in the field, such as foundation ruins or locations of excessive disturbance.

Phase 1B Architectural Survey- This task provides a scope for a Phase 1B Historic Standing Structure Survey that could be required for the project.

The Historic Standing Structures Survey will be conducted according to the guidelines set forth in FDHR Module 3 (June 2003). For purposes of the Historic Standing Structures Survey, the viewshed for the survey is defined as the project footprint (boundary of all parcels adjacent to project activities plus any areas containing historic standing structures from which the project will be visible. This area will be part of the APE pursuant to Section 106 of the NHPA. For each surveyed resource, a Florida Historical Structure Form will be completed, digital photographs will be taken, and the resource location will be plotted on the applicable USGS quadrangle map. Recommendations of NRHP eligibility or ineligibility, as possible, will be made in accordance with the criteria in 36 CFR 60.4.

The area began to be developed in the fourth quarter of the twentieth century. Any resources within the APE that are over 45 years old will be addressed. It is assumed that a maximum of 20 historic resources will be documented as part of the survey.



Archaeological Laboratory Analysis- Cultural materials recovered during the archaeological survey will be processed and identified according to the standards outlined in Florida DHR Module 3 (June 2003). Specifically, materials will be cleaned as appropriate for their material and condition, and air dried. Certain materials will be labeled as per the curation guidelines. Any artifacts requiring conservation will be removed from the collection for separate processing. Artifacts will be analyzed in terms of form, function, age, and if possible, cultural affiliation. The latest research and local typologies will be used to identify cultural materials located during this project. It is assumed that no more than 100 artifacts will be recovered that require laboratory analysis and curation. Selection of the final curatorial facility for the artifacts recovered during the survey will be made in consultation the client. Costs for curation are not included.

Phase IB CRAS Report Writing- Preparation of technical documents will begin immediately following the conclusion of fieldwork. The full technical report containing the results of all investigations conducted will be included in a technical report that meets the reporting requirements set forth in Florida Administrative Code 1A-46. A Florida Archaeological Site Survey Record form and Florida Historical Structure Form for each site or structure identified during the project will be prepared.

AECOM will provide the following deliverables:

- Draft and Final Phase 1B combined Archaeological and Historic Standing Structures CRAS
- Florida Historical Structure Forms
- Florida Archaeological Site Forms
- Florida Survey Log Sheet

Lump Sum fee of \$72,139.00 (Task 4)

TASK 5: Surveying and Mapping Services

Our subconsultant, Wantman Group, Inc. (WGI), will provide professional surveying and mapping services, including Subsurface Utility Engineering (SUE) services. This includes the development of a Specific Purpose Topographic Survey for Elkcam Boulevard between Howland Boulevard and Van Orman Drive in the City of Deltona, Florida. The surveying limits have been depicted in the Project Area Site Map in Attachment One.



Specific Purpose Topographic Survey- WGI will prepare a Specific Purpose Topographic Survey of the site. Survey will show the apparent right-of-way lines, surface improvements including, roadways, pavement, sidewalks, traffic striping, walls, fences, surface utilities, etc., within said right of way lines. Trees 4" in diameter and greater, measured at breast height, will be noted by common name. Storm and Sanitary structures will be noted with the pipe invert elevation, diameter, material, and direction. Survey will be referenced to the Florida State Plane Coordinate System (NAD83/11) and the North American Vertical Datum of 1988 (NAVD88). Elevations will be shown at an interval of approximately 50 feet, including intermediate changes in grade. The survey will adhere to the following CLIENT provided parameters:

- Survey format will be ORD 2024.
- Full survey of Elkcarn Blvd, beginning 500 feet west of Heathwood Street and ending 500 feet east of Howland Blvd (approx. 8,400 LF), including all above ground features and utilities, also including invert and structure information for any existing drainage structures including the existing culverts. Survey 200 LF along each side street intersecting the project area.
- Bathymetry soundings of the lake to either side of Elkcarn Blvd, extending out 50 feet from top of bank.
- Full DTM of ground surface in the surveyed area along Elkcarn Blvd, including bathymetry elevations.

Subsurface Utility Engineering (SUE) Services- WGI will follow ASCE Standard 38-22 – "Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data" during the field and office operations for this project. The quality levels discussed below are defined within the standard. WGI will provide professional services associated with designation, location, and mapping of existing subsurface utilities. WGI will designate all known tone able and non-tone able utilities. Gravity systems, service laterals, irrigation or overhead facilities are not included in this investigation.

- **Horizontal Designation Services-** WGI will horizontally mark any known tone able and non-tone able underground utilities that are represented on as-built plans, above ground appurtenances, and other miscellaneous utility records (to be provided by CLIENT). Conductive utilities will be marked on the surface utilizing active geophysical prospecting techniques in conjunction with electromagnetic equipment utilizing passive radio and audio frequencies. Known non-conductive utilities and/or structures will be marked on the surface utilizing Ground Penetrating Radar (GPR), above ground features, professional judgment, utility plats and/or as-builts. This task does not include identifying gravity systems, service laterals, irrigation, or overhead facilities unless specifically requested by the CLIENT and included in the scope of services.



- **Location Services-** WGI will perform up to twenty (20) test holes at specific sites requested by the design engineer. Test holes will be utilized to expose utilities to minimize any potential for damage. Test holes performed will be of minimum size (usually 1' by 1'). Backfill of test holes will be performed utilizing the removed material, if suitable. Areas will be restored back as close as possible to their original condition. Installation of an identifiable above ground marker will be performed at each test hole location. Field markers will consist of a nail and disk in asphalt, or an iron rod and cap with survey stake in grassed areas. Test holes performed in the street will be patched using cold patch. The test hole number and utility will be identified on the ground or on the stake, as appropriate. A test hole summary report will be created providing coordinates, depth of cover, type, size, and material if applicable. There is a four (4) test hole minimum for location services.
- **Subsurface Utility Engineering Conditions and Understandings-** CLIENT is required by law to contract Sunshine State One Call of Florida forty-eight (48) hours in advance of any CLIENT excavation. WGI will not access confined spaces. If confined spaces need to be accessed for locating purposes, then the client will be notified, and further arrangements will be made for said access. Additional fees may be applicable. If additional MOT is required beyond the capability of WGI's standard MOT operations, WGI will notify the client. Additional requests outside the scope of services, when requested by client and/or client's representative, will be invoiced on an hourly basis. This proposal assumes site access is available and work can be performed between the hours of 7:30 AM and 5:00 PM Monday through Friday.
- **Utility Mapping-** WGI will perform surveying services to collect the surface markings completed as part of the Horizontal Designation Services and Location Services that mark the underground utilities. Survey of said markings will be based on Real-Time Kinematic (RTK) GPS observations and referenced to the Florida State Plane Coordinate System (NAD83/11) and the North American Vertical Datum of 1988 (NAVD88). Survey of Horizontal Designations will be delivered in a geo-referenced (NAD83/11) ORD file. Survey of Location Services (Test Holes) will be delivered in an ORD VVH Sheet.

Lump Sum fee of \$165,854.79 (Task 5)



The following are additional basis of scope for this task work order authorization.

- The City of Deltona was awarded a State of Florida Division of Emergency Management grant (DR-4673-124-R) as part of the Hazard Mitigation Grant Program. The scope of services is based on the scope of work defined in the grant award dated 05/20/25. A copy of the grant is included in Attachment Two. If there are changes to the project scope or project limits, an additional service will be provided for this additional work.
- The Elkcarn Roadway Elevation Improvement Project will be designed to provide protection against a 100-year storm event. This includes increasing the elevation of two road segments over a 1.1-mile span and improving the stormwater conveyance in the area. Two segments of Elkcarn Boulevard, which currently has a minimum elevation of 25 feet above sea level, shall be rebuilt at an elevation of at least three (3) feet above the base flood elevation of 27 feet above sea level. The FEMA Flood Map and Historical Flooding Exhibit are provided as Attachment Two.
- This scope of services does not include public outreach services. These services will be provided by the City of Deltona. Corradino will coordinate with the City of Deltona's Communication of Public Information Office. If Public Involvement and Outreach services are required, these services can be provided to the City of Deltona as an additional service.
- This scope of services does not include post-design services such as bidding support services, construction administration services, or construction engineering inspection services. These services, if required, will be provided as an additional service as requested by the City of Deltona.
- This scope of services does not include funds for permit fees related to the design services outlined in Tasks 2 through 5. These permit fees will be the responsibility of the City of Deltona and will be provided to Corradino at the time of permit submittal.
- The City of Deltona will provide The Corradino Group, Inc. with contact information for any related adjacent construction project that may affect the design and permitting of the Elkcarn Roadway Elevation Improvements Project.
- This scope of services is based on all deliverables that will be electronically submitted. This includes PDF submittals of 30%, 60%, 90%, and 100% Final Design construction plan sets. The final 100% design bid set will be submitted electronically as a PDF with P.E. CAD Seal in Auto-CAD version 2021.



- This scope of services does not include ROW Acquisition services. These services will be provided by the City of Deltona.
- This scope of services is based on FEMA already completing the NEPA approval process for the Elkcarn Boulevard corridor. These services, if required, will be provided as an additional service.
- The following are additional Cultural Resources Basis of Scope:
 - The project's maximum limits correspond to the project plans provided by the Client.
 - Historic chain-of-title research is not included.
 - The Phase 1B Historic Standing Structures CRAS assumes a single mobilization for one field survey effort. If access issues, project modifications or natural factors require additional mobilizations, they will be billed on a time and materials basis. If fieldwork can be coordinated to occur immediately before or after the Catalina Boulevard survey, some cost savings may be anticipated.
 - It is assumed that the Phase 1B Historic Standing Structures fieldwork will occur during the same mobilization as the Catalina Boulevard fieldwork.
 - The Phase 1B Historic Standing Structures CRAS (assumes that no more than eight above-ground historic resources will be documented.
 - The Phase 1B Archaeological CRAS assumes that no more than 71 STPs will be required to test the archaeological survey area.
 - The Phase 1B Archaeological CRAS assumes a single mobilization for one field survey effort. If access issues, project modifications or natural factors require additional mobilizations, they will be billed on a time and materials basis.
 - The Phase 1B Archaeological CRAS assumes that no more than 100 artifacts will be recovered; the estimate does not include costs for conservation or curation. Curation fees would be dependent on the actual number of artifacts recovered and the ultimate curatorial facility.
 - No specialized analyses (e.g., flotation, archaeobotany) will be conducted as part of any of the cultural resource tasks.
 - Estimate does not include costs for Phase II or Phase III archaeological investigations or for geomorphological deep testing. Should these be required, AECOM will prepare a separate scope and cost estimate.
 - Costs incurred by the discovery of human remains are not included. If human remains are encountered, all work will cease in the immediate archaeological survey area and the Client and appropriate authorities will be notified immediately to determine an appropriate course of action.



- The following are additional Natural Resources Basis of Scope:
 - One pre-application meeting to be held virtually, no travel time or expenses have been included. If issues arise that require more than one response to RAI, the scope and fee of work necessary will be provided under separate cover. Modeling or other studies, if requested by the agencies through the RAI or other coordination process, will require a supplemental agreement, if needed.
 - Submerged aquatic species surveys are not required.
 - USFWS Technical assistance will be required to address the potential to adversely affect bat species. A formal Biological Assessment (BA) that covers other species will not be required.
 - Assumes that compensatory mitigation for unavoidable wetland impacts will be provided by a permitted wetland mitigation bank.
 - Assumes that mitigation for impacts to protected species will not be required. Species-specific surveys will not be required beyond the bat acoustical study.
 - Assumes that AECOM will prepare and submit the ERP narrative detailing the ecological components of the project required in the SJRWMD ERP to Corradino to compile for agency submission. AECOM has not included SJRWMD permit processing fees.
 - Assumes that SJRWMD representatives will review the site as part of the permit application processing with one AECOM biologist and engineer and a client representative, if desired.
 - Field work can be accomplished by utilizing trucks on existing roads and trails and will not require the use of Utility Task Vehicles (UTV).
 - AECOM has estimated the level of effort to accomplish Task 1 to be four one-day mobilizations by one team comprising two biologists.
 - TCB survey must occur between March 1 and October 15.

III. **BUDGET:**

The Corradino Group, Inc. will provide the City of Deltona, the basic services described in this scope of services for a lump sum budget of **\$776,551.54**



IV. ANTICIPATED SCHEDULE

The Corradino Group, Inc. can complete the task work order scope of services within 24 months from the issuance of a Notice to Proceed by the City of Deltona. The proposed schedule for the Elkcam Roadway Elevation Improvements Project is outlined below:

- 30% Design Plans- 6 months after NTP
- 60% Design Plans – 10 months after NTP
- 90% Design Plans – 16 months after NTP
- 100% Design Plans – 20 months after NTP
- Permitting – 24 months after NTP

V. ACCEPTANCE OF PROPOSAL

Elkcam Roadway Elevation Improvements Project

Approved by:

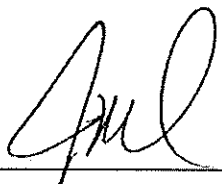
CITY OF DELTONA

Date: _____

By: _____

THE CORRADINO GROUP, INC.

Date: March 2, 2026

By:  _____

Joseph M. Corradino, President & CEO