

Sent via Email to [tfleming@coopercity.gov](mailto:tfleming@coopercity.gov)

January 24, 2024

Tim Fleming  
Acting Public Works Director  
City of Cooper City  
9070 SW 51st Street  
Cooper City, FL 33328

Dear Mr. Fleming:

It is our understanding that the City of Cooper City has requested a task work order proposal from The Corradino Group, Inc. for the completion of a traffic operational analysis and preparation of design plans and permitting for the construction of a roundabout at the Hiatus Road and NE Lake Boulevard intersection in the City of Cooper City.

The Corradino Group appreciates this opportunity to submit this task work order proposal to the City of Cooper City. We look forward to providing the best Consultant Services possible to the City of Cooper City. These services will be provided per the existing Professional Civil Engineering Continuing Services Agreement dated 06/08/2021.

Sincerely,



Joseph M. Corradino, AICP  
President  
The Corradino Group, Inc.

## CONSULTING SERVICE AUTHORIZATION

### Statement of Work (SOW)

CITY P.O. NO. \_\_\_\_\_

CITY EXPENSE CODE \_\_\_\_\_

**TITLE: Hiatus Road and NE Lake Blvd Roundabout Improvements**

#### **I. PROJECT DESCRIPTION:**

A traffic study was completed for the City at the intersection of Hiatus Rd. and NE Lake Blvd. in May 2016; the results of the traffic study indicated that:

- the subject intersection did not meet MUTCD traffic signal vehicular warrants 1A or 1B for a new traffic signal.
- the 85<sup>th</sup> percentile speed from 2016 traffic counts along Hiatus Road between Sheridan Street and Stirling Road was between 7 to 10 miles per hour over the posted speed limit of 40 MPH
- there were nine (9) documented crashes for the most recent three-year review period and 8 out of the 9 crashes were right-angle crashes.

Due to the excessive speeds observed along Hiatus Road and the number of right-angle crashes, the 2016 study recommended that the city evaluate ways to reduce the 85<sup>th</sup> percentile speed along Hiatus Road.

The Consultant will prepare a traffic operational analysis along with engineering design and permitting services for the installation of a new roundabout at the Hiatus Road and NE Lake Blvd intersection. The design plans will be based on the conceptual design concept prepared by The Corradino Group, Inc. dated 09/14/2022 (**See Exhibit One**). The Corradino Group, Inc. along with its subconsultants will provide these services as outlined in the below detailed scope of services.

#### **II. SCOPE OF SERVICES:**

##### **TASK 1. Traffic Analysis**

##### **1a) Data Collection**

Manual turning movement counts will be collected during the morning (6:00 to 9:00 AM) and afternoon (4:00 to 7:00 PM) peak hours at the intersection of Hiatus Road and NE Lake Blvd. during a normal weekday while school is in session.

**Lump Sum fee of \$ 800.00**

**1b) Traffic Operational Analysis/Technical Memorandum**

The consultant will complete a traffic operational analysis for the existing two-way stop-controlled operations at the subject intersection along with the proposed single lane roundabout based on assumed buildout year (2028) and future traffic conditions (2045) for AM and PM peak hours utilizing Synchro software. The memorandum will include a review of the most recent five-years of documented crashes for the subject intersection based on information available in Signal Four Analytics.

The traffic study memorandum will be submitted to Broward County Traffic Engineering Division (BCTED) for review and approval. This TASK includes up to one revision of the traffic study memorandum based on one set of comprehensive comments received from the City and BCTED.

**Lump Sum fee of \$ 14,448.00**

**1c) Project Management**

Consultant will provide overall project and client management services during each identified phases of the project. This includes project coordination meetings, project status client meetings, management of subconsultants and project deliverables. This phase includes attendance to up to 2 public meetings. Any additional meetings will require an additional service agreement for the City's review and approval.

**Lump Sum fee of \$ 12,240.00**

**TASK 2. Design Services**

**2a) Existing Conditions- Topographic Survey**

Our subconsultant MILLER LEGG shall be responsible for the preparation of a Topographic Survey of the corridor limits which is on Hiatus Road north and south of NE Lake Boulevard and on NE Lake Boulevard east and west of Hiatus Road. Survey shall show above-ground improvements: including evidence of utilities, sanitary and storm sewer structure rims, elevations, and traffic signs. Topographic elevations will be measured at 50-foot intervals within road rights-of-way. Survey will depict lot lines, abbreviated legal descriptions (Lot, Block, Plat Book and Page) and the existing easements per plat of record. Any other easements by instrument will be plotted on the survey if provided to this surveyor.

The surveying services will include the following:

- a. Survey shall show the platted Right of Way lines and the pertinent parcel boundary lines
- b. Above ground improvements such as buildings, roadways, pavement, sidewalks, traffic striping, walls, fences, surface utilities.
- c. Elevations shall be shown relative to NAVD 1988 datum.
- d. Survey shall be referenced to the Florida State Plane Coordinate System (NAD83/11).
- e. Elevations shall be shown at an interval of approximately 50 feet, including intermediate changes in grade.

- f. Location of underground utilities is based on site observation only. Consultant cannot guarantee that all utilities will be located.
- g. The survey deliverables will consist of the following:
  - i. Six certified hard copies of the Topographic Survey Map and Report.
  - ii. Electronic files of same.

**Lump Sum fee of \$ 8,000.00**

**2b) Sketch of Descriptions for R/W Acquisition**

Review the Ownership and Encumbrance report for each parcel. Prepare a Sketch and Description for Right-of-Way acquisitions of the NE quadrant and NE Lakes Drive area, (Embassy Lakes Master Association) and two Sketch and Description for the SW quadrant area of the roundabout (addresses 3713 & 3715 Starboard Ave.) as shown on attached **EXHIBIT ONE**. The boundaries of the desired Right-of-Way acquisition will be determined by the design engineer.

**Lump Sum fee of \$ 6,000.00**

**2c) Subsurface Utility Engineering (SUE)- Utility Designation Services**

Our subconsultant, MILLER LEGG shall provide utility designation and mapping services along Hiatus Road right-of-way to clear area of the proposed roundabout improvements. APWA standards are used for marking. A subsurface ground penetrating radar (GPR) unit will be used in addition to electromagnetic induction (EM) to perform/verify horizontal locations of any detectable utility. A GPR unit can assist in identifying nonmetallic utilities and other structures that are unidentifiable using traditional electromagnetic techniques. Factors such as soil moisture clay content, and variations in the dielectric constants of materials control the effectiveness of the GPR method. Additionally, passive VLF signals can be detected on other metallic utilities that are typically long in length are well grounded electrically.

Designating underground utilities is not an exact science. Therefore, Consultant expresses no guarantees that using one or any of the available technologies for identifying utilities/structures will identify all utilities/structures and/or meet the objective of each individual Project. Client understands that limitations within the available technology, the complexity of site conditions and circumstances beyond the control of Consultant may limit the performance/results of Consultant's services.

The services provided by Consultant shall be performed in accordance with generally accepted professional practices as related to the nature of services performed. Consultant cannot guarantee that all utilities within any given survey area will be identified due to inherent limitations within technology and existing site conditions. Utility location is being provided to prevent or reduce the likelihood of damage during excavation and/or provide design information. Consultant shall collect designated utility markings in the field and plot them on the topographic survey map.

**Not to exceed fee of \$ 3,500.00**

## 2d) Geotechnical Engineering

Our subconsultant GEOSOL, Inc. shall be responsible for providing Field Exploration and Laboratory Testing Programs and Geotechnical Engineering Evaluation and Reporting services for the Hiatus Road and NE Lake Blvd Roundabout Improvements.

### a. Field Exploration and Laboratory Testing Program

- Perform site reconnaissance, locate and coordinate for existing utilities that may interfere with the drilling operations.
- Collect a total of two (2) pavement cores from the existing roadway to determine the pavement thickness and composition along the project alignment.
- Perform a total of three (3) SPT borings to depths of 15 feet below grades at the site of the proposed above-referenced improvements.
- Perform two (2) borehole percolation testing at depths of 15 feet below existing grades for use in drainage evaluations and design. The testing will be performed in accordance with the South Florida Water Management District's Usual Open-Hole testing procedures.
- Backfill the boreholes using cement grout mix.
- Visually examine all recovered soil/rock samples and asphalt pavement specimen in the laboratory. A geotechnical engineer will examine all recovered soil and rock samples. The laboratory testing will include natural moisture content, grain-size analysis, percent passing #200 sieve, and organic content determination. The tests will be conducted in accordance with applicable ASTM and FDOT standards.

### b. Geotechnical Engineering Evaluation and Reporting

Using the results of the field exploration, we will assess the geotechnical engineering impact of the subsurface conditions on the planned roundabout construction and provide recommendations for drainage design and related construction. A geotechnical engineering report of our findings and recommendations will be prepared and submitted at the conclusion of the study. The report will be prepared, signed and sealed by a professional engineer registered in the State of Florida. The report will specifically contain the following information:

- A plan of the site showing the location of the test location.
- A brief review of our test procedures and the results of the testing conducted.
- Estimated subsurface profiles as necessary to illustrate subsurface conditions including standard penetration resistance test data and groundwater levels.
- A review of surface features and site conditions that could affect construction and site preparation.
- General evaluation of the site considering the proposed project and estimated subsurface conditions.
- Recommendations for site preparation and construction of compacted fills or backfills.
- Results of laboratory testing.

- Hydraulic conductivity (k) values derived based on results of percolation testing.
- Anticipation of groundwater levels and methods for handling it during construction.
- Construction considerations.
- Four (4) copies signed and sealed geotechnical-engineering reports.

**Lump Sum fee of \$ 9,927.00**

**2e) Roadway, Pavement Marking and Signage Design and Permitting Services**

The Corradino Group will provide roadway design services including pavement marking and signage plans for the installation of a roundabout at the Hiatus Road and NE Lake Blvd intersection. The design plans will be limited to 500 LF north of the intersection, 500 LF south of the intersection, 300 LF west of the intersection and approximately 150 LF to the east or up to the existing Guardhouse location (as depicted in the Conceptual Design Plans dated 09/14/2022).

The Roadway, Pavement Marking and Signage Design and Permitting Services shall include the following design elements:

- a. Prepare roadway and signing and pavement marking plan sheets for the proposed roundabout improvements per Broward County standards.
- b. Modify existing drainage system to accommodate proposed roundabout improvements. Drainage Permitting will be limited to SFWMD and Central Broward Water Control District.
- c. Prepare Traffic Control Plan notes and typical sections for the proposed roundabout improvements.
- d. Modify Cooper City Master Set of Specifications for the proposed roundabout improvements.
- e. Design Plans will be prepared for one initial 60% Design Phase submittal for City of Cooper City and Key Government Agency Stakeholder Review. One Field Review will be completed to review the project corridor prior to commencing with the 60% Design Phase.
- f. Design Plans will be prepared for one subsequent 100% Design Phase submittal addressing one set of comprehensive design review comments of the 60% Design Phase set from the City of Cooper City and Key Government Agency Stakeholders.
- g. A Final Set of Design Plans will be prepared for one Signed and Sealed Bid Plan submittal addressing any final revisions per Cooper City of the 100% Design Phase submittal.
- h. Attendance at up to five (5) miscellaneous coordination meetings with the City of Cooper City and Key Government Agency Stakeholders including one kickoff meeting.
- i. One Opinion of Probable Cost will be prepared based on the approved Final Design Plans.

- j. All plans and designs furnished by the Consultant are to be prepared with English Units. The current editions, including updates, at the time this agreement is executed, of the following manuals and guidelines shall be used as resources and reference materials in the performance of the Consultant's work:
- i. Florida Greenbook Design Standards, current edition.
  - ii. Manual of Uniform Minimum Standards for Design, Construction, and Maintenance of Streets and Highways, Florida Department of Transportation (FDOT), current edition.
  - iii. South Florida Water Management District (SFWMD), Environmental Resource Permit Applicants Handbook, current edition.
  - iv. AASHTO Roadside Design Guide, current edition.
  - v. FDOT Roadway Plan Preparation Manual.
  - vi. FDOT Roadway and Traffic Design Standards, current edition.
  - vii. FDOT Standard Specifications for Road and Bridge Construction, current edition.
  - viii. FDOT Basis of Estimates Handbook, current edition.
  - ix. MUTCD, current edition.
  - x. FDOT Structures Design Guidelines, current edition.
  - xi. Americans with Disabilities Act (ADA) Compliance, current edition.

**Lump Sum fee of \$ 78,800.00**

## **2f) Tree Disposition Services**

Our subconsultant Miller Legg shall be responsible for providing tree disposition services for the area included in **Exhibit One** of this proposal.

### **a. General**

- This scope includes assessment of tree resources on the site as regulated by Cooper City.
- Consultant cannot guarantee that Cooper City will accept the initial tree recommendations without additional comments.
- The following scope and fees are based on an estimate of a tree assessment of approximately 80 on site based on the provided site plan.
- Tree inventory will be displayed on an exhibit. Boundary, topographic or specific purpose survey is not included in this scope.
- Landscape Architecture services are included in this scope of services as optional.
- Hardscape, site amenities, signage, electrical for irrigation and lighting designs are not included.
- Landscape Architecture services are only limited to the proposed Project limits shown in Exhibit B. If additional landscape improvements are required beyond the Project limits, they will be provided as an additional service.

- Irrigation design for the Project is optional, there are existing systems on both sides of Hiatus Road and are assumed to be maintained by adjacent communities (Embassy Lakes and Rock Creek). Anticipated system to be pump and well requiring water use permit. In the event potable water is the final water source Client shall provide water service tap and meter.
  - All permit submittals and processing will be by Client or Contractor. Consultant shall provide required tree disposition plans and support for permit submittal.
  - Book format specifications are not included in this scope. If required, these can be provided as additional services.
- b. Information Provided by the Client
- A letter from the property owner granting access to the site and giving approval for Consultant to perform the services listed below.
  - Future filing and permit application fees, review fees, impact fees will be provided by Client
  - Copies of all relevant data, including correspondence, survey, utility, irrigation, plans, reports, assessments or information in Client's possession which may be beneficial to the work effort performed by Consultant.
  - As-built drawings for the existing irrigation system shall be provided by client.
- c. **Tree Inventory:** Utilizing the Client-provided topographic tree survey, Consultant shall prepare a tree inventory showing locations of trees pursuant to Cooper City code. Inventory shall show hardwood and palm trees only; Invasive exotics shall not be located. Trees located will be 2-inch caliper and larger, within the subject property boundary. The tree inventory and evaluation shall reflect the following data to meet the requests of Cooper City: tree species; common and scientific names; dbh (diameter at breast height) for dicot trees; clear trunk, grey wood, or overall heights for palms; canopy spread, and general health/ condition. Location of trees will be recorded using a differential global positioning satellite (dGPS) and displayed on map with aerial.
- d. **Tree Disposition Plans** - Utilizing the tree inventory, Consultant shall prepare tree removal/relocation construction documents for the Project. The documents will designate existing trees to be preserved, removed, or relocated as well as new trees necessary for replacement credits, if required. The documents shall include plans, details, tree credit and replacement charts, and notes for the proposed tree preservation, removal, and relocation activities meeting the minimum requirements. 60%, 90%, 100% submittals are included in this Task.

**Lump Sum fee of \$ 4,000.00**



## 2g) (Optional) Landscape Architecture Services

Due to the uncertainty for the Landscape elements within the center and splitter islands of the roundabout, this task has been added as an optional service should these LA services be needed. Our subconsultant Miller Legg shall be responsible for providing the following Landscape Architecture Design Services

- a. Conceptual Landscape Plan (Optional) – Consultant shall prepare a conceptual planting exhibit for Client review. This conceptual plan will include locating trees and shrubs/groundcover masses. One (1) revision iteration is included in this Task.
- b. Landscape Plans (Optional) – Consultant shall prepare 60% planting design level construction documents, meeting the requirements for Cooper City. The documents shall include plans, details, quantities, notes and size specifications for the installation of the proposed landscaping. 60%, 90%, 100% submittals are included in this Task.
- c. Landscape Plans (Optional) – Consultant shall prepare 60% planting design level construction documents, meeting the requirements for Cooper City. The documents shall include plans, details, quantities, notes and size specifications for the installation of the proposed landscaping. 60%, 90%, 100% submittals are included in this Task.
- d. Pump System and Water Use Permit (Optional) – Consultant shall coordinate and develop pump and water source (well or surface water) and associated SFWMD Water Use permit. Electrical is not included in this task and to be provided by Client.

**Lump Sum fee of \$ 12,000.00**

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

- Any additional traffic data collection or analysis outside of the scope listed under TASK 1 will require an additional service agreement.
- Permitting Services are limited to submittal to the City of Cooper City, Broward County Traffic Engineering Division, SFWMD and Central Broward Water Control District. Any additional permitting required will be provided as an additional service as requested by Cooper City.
- Note: This scope of services does not include street lighting, environmental services, structural engineering services, bidding assistance and construction administrative services. These services will be provided as an additional service as requested by the City of Cooper City.
- Note: This scope of services does not include ROW Acquisition services. These services if needed will be provided by the City of Cooper City.

- Note: This scope of services does not include LAP Document Submittal Support services if required by the Florida Department of Transportation. These services can be provided as an additional service as requested by the City of Cooper City.
- Note: The City of Cooper City shall provide digital aerial photographs, irrigation plans, as-built drawings, driveway drawings, sidewalk drawings, tax maps, subdivision plat maps, benchmark and right-of-way information, section corner reports, and utility information that is available related to the Hiatus Road corridor.
- Note: Public Information and Outreach are not included as part of this scope of services and will be provided by the City of Cooper City.

### III. **BUDGET:**

The Corradino Group, Inc. will provide to the City of Cooper City the basic services described in this scope of services for a lump sum budget of **\$134,250.00** plus an hourly not to exceed fee of **\$3,500.00**, and optional Task 2.g for LA Design Services of **\$12,000.00**

### IV. **ANTICIPATED SCHEDULE:**

The Corradino Group, Inc. will complete TASK 1 **within 90 days** from the issuance of a Notice to Proceed by the City of Cooper City and TASK 2 (Design and Permitting) within **12 months** after the proper Right-of-way has been secured. This time of performance is contingent on getting the required information as previously noted.

V. ACCEPTANCE OF PROPOSAL

**Hiatus Road and NE Lake Blvd Roundabout Improvements**

Approved by:

**CITY OF COOPER CITY**

Date: \_\_\_\_\_

By: \_\_\_\_\_

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Witness)

**THE CORRADINO GROUP, INC.**

Date: \_\_\_\_\_

By: \_\_\_\_\_  
**Joseph M. Corradino, President**

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Witness)

**EXHIBIT ONE**  
**CONCEPTUAL DESIGN DRAWING/LIMITS**

