



August 9, 2024

Ms. Darlin Perez, PE
Chief of Engineering
City of Doral
8401 NW 53rd Terrace
Doral, FL 33166

Re: Project Name – NW 50th Street and NW 112th Avenue Signalization (Work Order 01)

Dear Ms. Perez

EXP US Services Inc. (“Consultant”) proposes to provide the services identified below for the project entitled “NW 50th Street and NW 112th Avenue Signalization” (Work Order No. 01), pursuant to the Continuing Professional Services Agreement with the City of Doral (“City”) for 2023-08, General Engineering and Architectural Services, dated June 3rd, 2024.

I. General

The Corradino Group was assigned by the City of Doral to complete a traffic signal warrant analysis at the intersection of NW 112th Avenue and NW 50th Street in the City of Doral, Florida. The study recommended that a full traffic signal be considered for installation at this location. The scope of services for this work order addresses this recommendation.

The design professional services associated with this work order includes roadway, signing and pavement markings, signalization, permitting, surveying, and geotechnical services.

The applicable criteria for this project are based on the latest edition of the Signalization Design Manual (Miami Dade County Traffic Signals and Signs Division), Miami Dade County Traffic Control Equipment Standards and Specifications (TCESS), FDOT Design Manual, Miami Dade County Standards, FDOT Traffic Engineering Manual, Manual on Traffic Control Devices (MUTCD), National Electric (NEC), and Americans with Disabilities Act (ADA) Standards.

Task 1 – Pre-Design Services – Data Collection (Survey + Geotechnical)

Task 1a

- Geotechnical investigation including (4) Standard Penetration Test Borings at all 4 quadrants. One per quadrant. (Pacifica Engineering).

- As a contingency, (2) Standard Penetration Test Borings where needed as dictated by the Engineer of Record and the City.

Task 1b

- Topographic Survey (Longitude)
- Right of way/ easements and clear definitions of public and private lands (Longitude).
- As a contingency, (5) SUE test holes where needed as dictated by the Engineer of Record and the City. (Longitude)

See attached subconsultant scope of services for more details.

Task 2 - Plans Production – 60% Submittal

- (60% Submittal) – Conduct a site visit and field investigation including photo documentation.
- (60% Submittal) - Collect, analyze, and coordinate utility data including reviewing utility work schedules for relocations and developing conflict information. Perform utility coordination.
- (60% Submittal) - Establish a master design file for the horizontal and vertical geometry, utilities (including conflict location identification and adjustments). Includes efforts required to include required information in accordance with Miami Dade TSS, DTPW, and MUTCD standards.
- (60% Submittal) – Signing and Pavement Markings – Establish the plan sheet files for signing and pavement markings.
- (60% Submittal) – Signalization – Establish the plan sheet files for signalization.
- (60% Submittal) - Determine and validate roadway pay items and quantities.
- (60% Submittal) - Provide an Engineer’s Estimate
- (60% Submittal) - Quality Control and Peer Review – Perform quality control and peer review of contract documents.

Deliverables for this Task will include:

- 60% Construction Contract Plans shall include;
 - 1) Key Sheet
 - 2) Signature Sheet
 - 3) Summary of Quantities (Roadway, Signing and Pavement Markings, Signalization)
 - 4) Mast Arm Tabulation (Preliminary)
 - 5) General Notes
 - 6) Device Data Sheet (Preliminary)
 - 7) Roadway Plan Sheet
 - 8) Signing and Pavement Markings Plan Sheet
 - 9) Signalization Plan Sheet
 - 10) Service Point Details
 - 11) Mast Arm Assemblies Data Table
 - 12) Report of Core Borings

- Plans Package (11"x17")
- 60% Engineer's Construction Estimate

Task 2a - Submittal to Miami Dade DTPW/TSS and response to agencies

Task 3 - Plans Production – 90% Submittal

- (90% Submittal) – Incorporate comments from previous submittal and finalize Construction Plans
 - (90% Submittal) – Calculation of Quantities - Determine and validate roadway pay items and quantities.
 - (90% Submittal) - Construction Cost Estimate - Provide an Engineer's Estimate.
 - (90% Submittal) – Complete Utility Coordination – Coordinate with utility owners for facilities within project limits.
 - (90% Submittal) - Quality Control and Peer Review – Perform quality control and peer review of contract documents.
-
- Contract Plans shall include;
 - Key Sheet
 - Signature Sheet
 - Summary of Quantities (Roadway, Signing and Pavement Markings, Signalization)
 - Mast Arm Tabulation
 - General Notes
 - Device Data Sheet
 - Roadway Plan Sheet
 - Signing and Pavement Markings Plan Sheet
 - Signalization Plan Sheet
 - Service Point Details
 - Mast Arm Assemblies Data Table (Structures)
 - Report of Core Borings

Deliverables for this Task will include:

- 90% Construction Plans Package (11"x17")
- 90% Engineer's Construction Estimate

Task 3a – Submittal to Miami Dade DTPW/TSS and response to agencies

Task 4 – 100% Construction Plans Production

- Incorporate comments from previous submittal and finalize Construction Plans Production..
- Permitting – EXP will obtain permits from Miami Dade County DPTW.

- Deliverables for this task will include:
- Digitally Signed and Sealed Construction Plans (11"x17")
- Final Engineer's Construction Estimate
- Digital copies of Approved Permit Package

I. Schedule of Work – Time for Performance

Consultant will submit the deliverable and perform the Services as stated in the table below:

Schedule of Deliverables			
Task, Sub-Task or Activity ID #	Major Task, Sub-Task Activity, or Deliverable	Duration (specify weeks or calendar days)	Delivery (Cumulative weeks or calendar days)
1	Pre-Design Services- Data Collection (Survey+Geotechnical)		
1a	Geotechnical	30 days	30 days from NTP
1b	Survey	30 days	30 Days from NTP
2	Plans Production – 60% Submittal	120 days	120 Days from NTP
2a	Submittal to Miami Dade DTPW/TSS and response to agencies	60 days	180 Days from NTP
3	Plans Production – 90% Submittal	60 days	240 Days from NTP
3a	Submittal to Miami Dade DTPW/TSS and response to agencies	60 days	300 Days from NTP
4	Plans Production – 100% Submittal	30 days	330 Days from NTP

II. Compensation

Consultant shall perform the Work detailed in this Proposal for a total not to exceed ninety five thousand three hundred eighty three and 11/100 dollars. The Consultant will be paid based on an hourly not to exceed. The City shall not be liable for any fee, cost, expense or reimbursable expense or other compensation beyond this amount unless approved in a supplemental Work Order. The fee may include an allowance for Reimbursable Expenses required in connection with the Work, in an amount not to exceed that stated in the table below. Reimbursable Expenses will be used and compensated for in accordance with the Agreement and must conform to the limitations of Florida Statutes § 112.061. The following is a summary of the



method and amount of compensation to be paid for each Task or Activity as identified in Section IV above.

Schedule of Deliverables			
Task, Sub-Task or Activity ID #	Major Task, Sub-Task Activity, or Deliverable	Fee Amount	Fee Basis
1	Pre-Design Services – Data Collection		
1a	Subconsultant - Geotechnical	\$11,572.85	
1b	Subconsultant - Survey	\$14,490.61	
2, 2a	Plans Production – 60% Submittal	\$41,425.00	
3, 3a	Plans Production – 90% Submittal	\$20,711.65	
4, 4a	Plans Production – 100% Submittal	\$7,184.00	
	Subtotal – Professional Fees	\$95,384.11	
	Principal’s Fee	\$0.00	
	Allowance for Reimbursable Expenses	\$0.00	
	TOTAL	\$95,384.11	

III. Exclusions from Basic Services

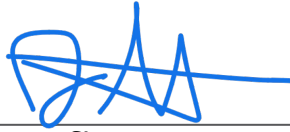
The following services are not included in the Basic Services to be performed under this Work Order:

- See attached subconsultant proposals for specific exclusions.

IV. Additional Services

The City may include an allowance account under the approved Work Order for Additional Services that may be requested by the City, which will be used at the sole discretion of the City.

EXP US Services, Inc



Signature

Jose Santiago/Municipal Senior Manager

Name/Title

08/09/24

Date

City of Doral *

Dept. Approval: _____
Signature

Name/Title

Procurement: _____
Signature

Name/Title

City Manager: _____
Signature

Name/Title

Work Order No.: _____
(Assigned by the City upon approval, if applicable)

*The City may at its sole discretion approve this Work Order Proposal by signing below of the City may issue a separate Work Order for the Services.



Consultant Fee Proposal Worksheet

Consultant Name: EXP US Services Inc.
 Contract No.:
 Date: 8/9/2024
 Work Order No:

Project: NW 50th Street and NW 112th Ave Mast Arms
 Project No.: Description: Signalization

STAFF CLASSIFICATION

Job Classification Assigned Staff Approved Rate	Project Manager Jose Santiago Rate: \$257.80		Senior Engineer Roxana Matamoros Rate: \$238.40		Project Engineer Elias Diaz Rate: \$199.85		CADD Technician Maria Ballester Rate: \$142.40		Rate:		Rate:		Rate:		Staff Hours	Salary	Average
	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Man hours	Cost/ Task	Task	Cost By Task	Rate Per Task
1																	
2 Plans Production - 60% Submittal	10	\$2,578	28	\$6,675	94	\$18,786	94	\$13,386							226	\$41,425	\$183.30
3 Plans Production - 90% Submittal	5	\$1,289	14	\$3,338	47	\$9,393	47	\$6,693							113	\$20,712	\$183.30
4 Plans Production - 100% Submittal	2	\$516	5	\$1,192	16	\$3,198	16	\$2,278							39	\$7,184	\$184.19
5																	
6																	
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27																	
Total Staff Hours	17		47		157		157								378		
Total Staff Cost		\$4,382.60		\$11,204.80		\$31,376.45		\$22,356.80								\$69,320.65	\$183.39

Total % of Work by Position 4.5% 12.4% 41.5% 41.5%

Note: Fee for the Principal(s) of the firm are not to be included above as the multiplier is not applicable to their hours. The fee is to be shown below and entered as a separ:

Estimate of Principal's Fee _____ Total hours _____ / hour = \$ _____ -
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Notes:

1. This sheet is to be used by Prime Consultant to calculate the Grand Total Fee and one is to be used for each Subconsultant
2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden
3. Where applicable the basis for work activity descriptions shall be the FICE/FDOT Standard Scope and Staff Hour Estimation Handbook.
4. Enter the multiplier value in the field after the word "multiplier" Maximum of 2 decimal points.

1 - SUBTOTAL ESTIMATED FEE: multiplier 1.00
 Subconsultant: Longitude Surveyors
 Subconsultant: Pacifica Engineering
 Subconsultant:
 Subconsultant:
 Principal's Fee
2 - SUBTOTAL ESTIMATED FEE:
 Geotechnical Field/Lab Testing:
 Survey Fee (or Survey Crew Fee):
 Other Misc. Fee: Enter Fee Description
3 - SUBTOTAL ESTIMATED FEE:
 Additional Services (Allowance)
 Reimbursables (Allowance)
GRAND TOTAL ESTIMATED FEE:

\$69,320.65
\$14,490.61
\$11,572.85
\$ -
\$95,384.11
\$95,384.11
\$95,384.11

Friday, August 02, 2024

Mr. Jose Santiago, PE, ENV SP
Municipal Senior Manager
jose.santiago@exp.com



201 Alhambra Circle, Suite 800
Coral Gables, FL 33134
305.216.3790

RE: Surveying and Mapping services for 'RFQ No. 2023-08 - WO #1' Northwest 50 Street and Northwest 112 Avenue intersection, located in Doral, FL 33178.

Dear Mr. Santiago,

Pursuant to your request regarding a fee estimate for Surveying and Mapping services for the above-referenced project, LONGITUDE SURVEYORS, LLC (LS) is pleased to submit the following proposal for your consideration.

A. SCOPE OF WORK:

➤ **TASK 1 – Topographic Survey:**

- LS will show rights-of-way computing field evidence, plats, deeds, and other documentation relative to the project. Lot lines and ownership lines, inclusive of locations, bearings, and dimensions, within the survey limits will be shown graphically.
- LS will show any easements, covenants, restrictions, etc. that can be found on plats, deeds, and other public records relative to the project. However, without a Title Commitment or Title Search there is no guarantee that easements, covenants, restrictions, etc. will be shown on the survey.
- LS will establish horizontal and vertical control within the limits of the survey.
- The survey will be geo-referenced to the Florida State Plane Coordinate System based on the North American Datum of 1983/2011 (NAD83/11).
- Elevations will be referenced to the National Geodetic Vertical Datum of 1929 (NGVD29).
- LS will collect significant aboveground improvements including but not limited to; pavement, edge of pavement lines, sidewalks, curb and gutters, guardrails, fences, bollards, signs, catch basins, utility poles, overhead wires, utility boxes, and any other significant above-ground improvements and utilities within the survey limits.
- LS will locate trees and palms having a three (3) inch diameter or greater at breast height (DBH) or being twelve (12) feet in height or greater. Tree identification and/or a tree table will not be provided.
- Elevations will be collected equivalent to a twenty-five (25) foot grid throughout the survey limits. Additional elevations will be collected sufficient to identify grade changes and features of interest within the survey limits.
- LS will collect existing drainage and sanitary structures and will show rim elevation, structure bottom elevation, pipe size, pipe material, pipe direction, direction of water flow, and inverts. *Please Note: LS requests that the Client reaches out to the corresponding city/department of where the survey is to be performed, to ensure that the structures are properly cleaned out. Alternatively, Client may provide contact for the city/department for LS to reach out directly to have them cleaned before commencement of any work.*
- A Digital Terrain Model (DTM) of the resulting survey will be provided.

➤ **TASK 2 – Subsurface Utility Engineering (SUE) Quality Level “A” Soft-Digs:**

- LS will perform subsurface exploration at Soft-Dig/Verified Vertical Elevation and Horizontal Locations (VVH).
- LS will mark five (5) Soft-Dig locations with white paint (whiteline) for the utilities.
- LS will coordinate dig ticket(s) with Sunshine 811 as needed.
- LS will use surface detection equipment such as Electromagnetic Locator and Ground Penetrating Radar (GPR) and will perform Quality Level "B" SUE Designation services according to the American Society of Civil Engineers' (ASCE) standards at five (5) different locations.
- LS will provide Quality Level “A” SUE Soft-Dig services at five (5) locations, which includes the horizontal position and elevation of the top of the utility. LS will attempt to provide the bottom of utility, size, type of material, and direction.



- LS will locate the Soft-Dig horizontal positions referenced to the Horizontal Datum 1983/2011 and ground elevations referenced to the National Geodetic Vertical Datum of 1929 (NGVD29).
- LS will prepare the Verified Vertical Elevation and Horizontal Location (VVH) report for each Soft-Dig.

B. SURVEY LIMITS:

The Northwest 50 Street and Northwest 112 Avenue intersection is located in Doral, FL 33178. The survey's limits will extend approximately one hundred fifty (150) feet in either direction from the center of the intersection, spanning the entire width of the public right-of-way, as per the attached 'Exhibit A'. Approximate location of digs as per the attached 'Exhibit B', including an additional dig for the location of 'Mast Arm 1'.

C. DELIVERABLES:

Soft-dig locations will be designated by the number corresponding to the Vacuum Excavation Reports for each Soft-Dig, along with all pertinent information. LS will provide a digitally signed and sealed PDF and a Civil 3D CAD file of the resulting survey. Signed and sealed hard copies can be provided upon request.

D. COST AND TIME:

The total professional fee to complete **TASK 1** described herein shall be a lump sum of **\$8,490.61**. LS estimates that it will take fifteen (15) business days from the date of Notice to Proceed (NTP) to complete these tasks.

The total professional fee to complete **TASK 2** described herein shall be a lump sum of **\$1,200.00/per test hole**.

Notice to Proceed (NTP) is considered effective twenty-four (24) hours after this proposal agreement has been executed and returned to the undersigned. **The fee for TASK 2 includes Maintenance of Traffic (MOT), application or permit fees associated with the services.**

I agree that by signing below "I APPROVE AND ACCEPT" this proposal as a legal binding contract.

By: _____
(Authorized Signature)

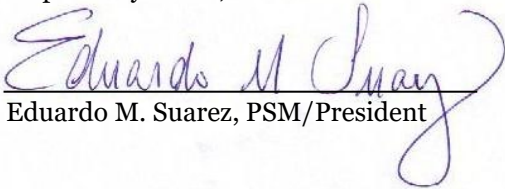
Date: _____

(Typed or printed name)

Title: _____

On behalf of the firm, I thank you for the opportunity to present this proposal. We look forward to utilizing our best professional efforts on your behalf on this very important project.

Respectfully Yours,


Eduardo M. Suarez, PSM/President



LONGITUDE SURVEYORS

Client Information: City of Doral
EXP

Estimate Prepared By: Giovanni Cueto

Project Area: RFQ No. 2023-08 - WO #1 - City of Doral - NW 50 St and NW 112 Ave

Job Description	Position	Rate/Hour	Hours	Total Cost
Overall Management	Senior Surveyor and Mapper	\$202.62	1	\$202.62
Prepare Job	Survey Technician	\$116.24	2	\$232.48
Horizontal & Vertical Control	Survey Field Crew Party of Two	\$212.15	9	\$1,909.35
Horizontal & Vertical Control Process	Survey Technician	\$116.24	2	\$232.48
Horizontal & Vertical Control Compute	Surveyor and Mapper	\$165.92	8	\$1,327.36
Topographic Survey	Survey Field Crew Party of Two	\$212.15	8	\$1,697.20
Topographic Survey Process	Survey Technician	\$116.24	1	\$116.24
Topographic Survey Drafting	Survey Technician	\$116.24	8	\$929.92
Digital Terrain Model (DTM)	Survey Technician	\$116.24	9	\$1,046.16
QA/QC	Surveyor and Mapper	\$165.92	2	\$331.84
QA/QC Edits/Drafting	Survey Technician	\$116.24	4	\$464.96
Quality Level "A" Soft-Digs	VAC	\$1,200.00	per hole	
			Total	\$8,490.61

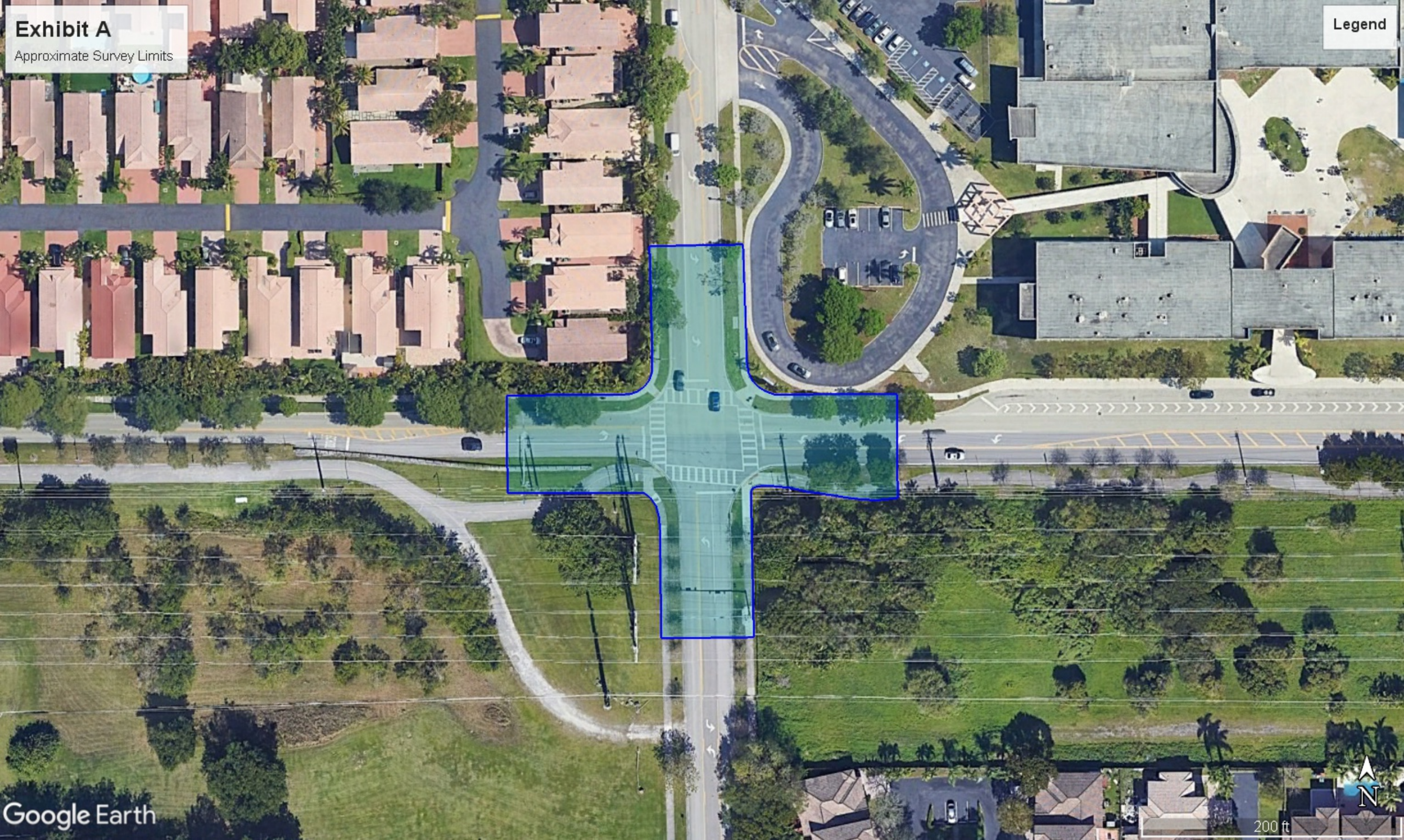


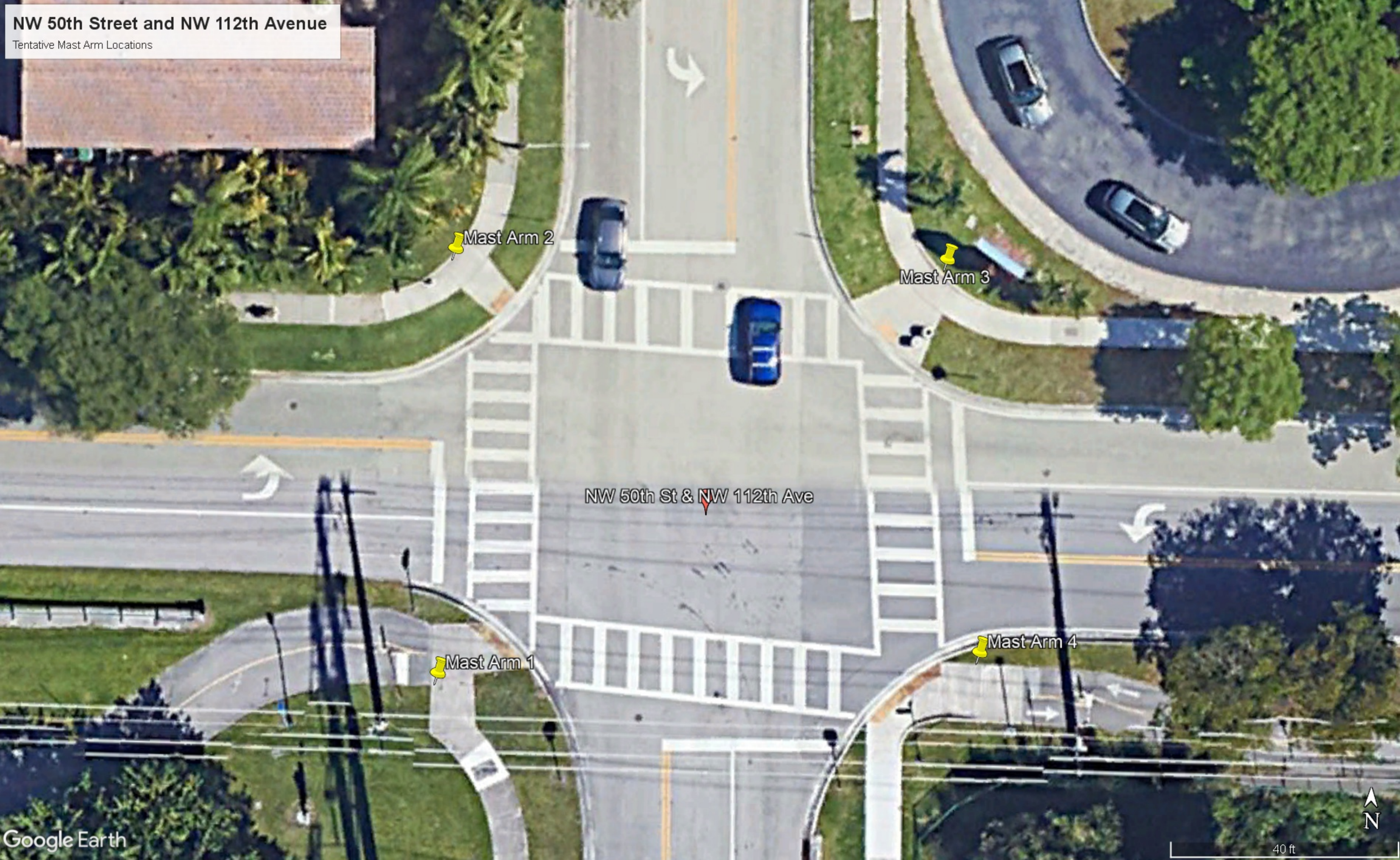
Exhibit A
Approximate Survey Limits

Legend

Google Earth

200 ft





NW 50th St & NW 112th Ave

Mast Arm 2

Mast Arm 3

Mast Arm 1

Mast Arm 4





REVISED July 30, 2024
REVISED July 9, 2024
June 26, 2024

EXP

201 Alhambra Circle
Suite 800
Coral Gables, FL, 33134

Attention: Mr. Jose Santiago, P.E., ENV SP
Email: jose.santiago@exp.com
Phone: (786) 801-6360

Re: Scope of Services for Geotechnical Engineering Services
City of Doral Signalization Improvement
Intersection of NW 50th Street and NW 112th Avenue
Doral, Florida 33178
PACIFICA Proposal No.: 610-12018578

Dear Mr. Santiago:

In accordance with your email dated June 24, 2024, **Pacifica Engineering Services, LLC (PACIFICA)**, is pleased to submit this scope of services to perform a subsurface exploration program for the above-referenced project. Included herein is our understanding of the proposed development along with the scope of services, cost estimates, and anticipated schedules.

It is understood that the proposed project, City of Doral Signalization Improvement, includes the design and construction of a new signalized intersection at NW 50th Street and NW 112th Avenue in Doral, Florida.

Based on a review of recent aerial photographs, the proposed intersections appear to have overhead powerlines and fences obstructing the boring locations. **Therefore, PACIFICA will require Maintenance of Traffic (MOT) to perform the borings in the roadway.** If any of the above information is incorrect, please notify us so we can make any necessary changes to this proposal.

As requested, PACIFICA proposes to perform the following field services:

- four (4) Standard Penetration Test (SPT) borings to a depth of 25 feet below existing grades.

If requested, PACIFICA proposes to perform the following additional field services:

- one (1) Standard Penetration Test (SPT) borings to a depth of 25 feet below existing grades.

The SPT borings will be performed with truck-mounted machinery using rotary drilling procedures. Samples of the in-place materials will be recovered with a standard split barrel driven with a 140-pound hammer falling 30 inches (the Standard Penetration Test in accordance with ASTM D1586). After completion of drilling, all boreholes will be grouted, asphalt cold patch applied not in the wheel path, where needed, and the site generally cleaned, as required.

Underground utility clearance will be required prior to the commencement of the geotechnical field exploration. Therefore, PACIFICA will contact "Sunshine One-Call" Service to obtain underground public utility clearance. PACIFICA understands that private utilities will be marked by others prior to each mobilization.

Maintenance of Traffic (MOT) will be needed to perform the geotechnical scope of work. PACIFICA will submit MOT plans with an estimated schedule in accordance with FDOT standards for **EXP** for approval prior to the start of fieldwork. PACIFICA will use FDOT Maintenance of Traffic (MOT) Plans Design Standards Index Series 600 when developing MOT plans.

After the geotechnical field exploration is completed, a geotechnical engineer will review the soil samples and select samples will be tested for physical properties such as gradation, moisture content and organic content, if deemed necessary. The results of the geotechnical exploration will be transmitted in a report which will specifically contain the information listed below:

1. a plan of the site showing the location of the soil borings;
2. logs of the exploratory borings will be provided, which furnish the results of the SPT sampling;
3. provide soil/rock recommendations for mast arm foundation design; and
4. the existence of organic soils or any other unsuitable soil conditions.

The geotechnical engineering evaluation can begin one day after we receive authorization to proceed. PACIFICA will start the field exploration after underground utilities have been located and identified, which may take 2-4 business days. The field exploration should be completed within two business days. The written report of the subsurface exploration and engineering evaluation will be available within 7 business days following the field demobilization. We estimate that our study will be completed **within three weeks** from your notice to proceed.

Based on our general knowledge of the subsurface conditions at the site and our understanding of your requirements, PACIFICA proposes to complete the subsurface exploration and geotechnical engineering evaluation described herein for a lump sum fee of **\$9,167.85**. PACIFICA proposes to complete the additional subsurface exploration and geotechnical engineering evaluation described herein for an additional fee of **\$805.00**, if requested. Fees for GPR Services are not included in the lump sum price and will be billed at a unit price of **\$800.00 if the service is not declined**.

PACIFICA appreciates your consideration of our firm for this project. We wish to note that PACIFICA recognizes the importance of meeting scheduled deadlines, staying on budget and being responsive to your needs and those of your design team. We look forward to working with you on this project.

Respectfully submitted,

Pacifica Engineering Services

Florida Certification of Authorization License No. 32328



Marc Restrepo, E.I.
Staff Geotechnical Engineer



Reinaldo Villa, M.S., P.E.
Regional Director

Attachments: Proposed Boring Locations

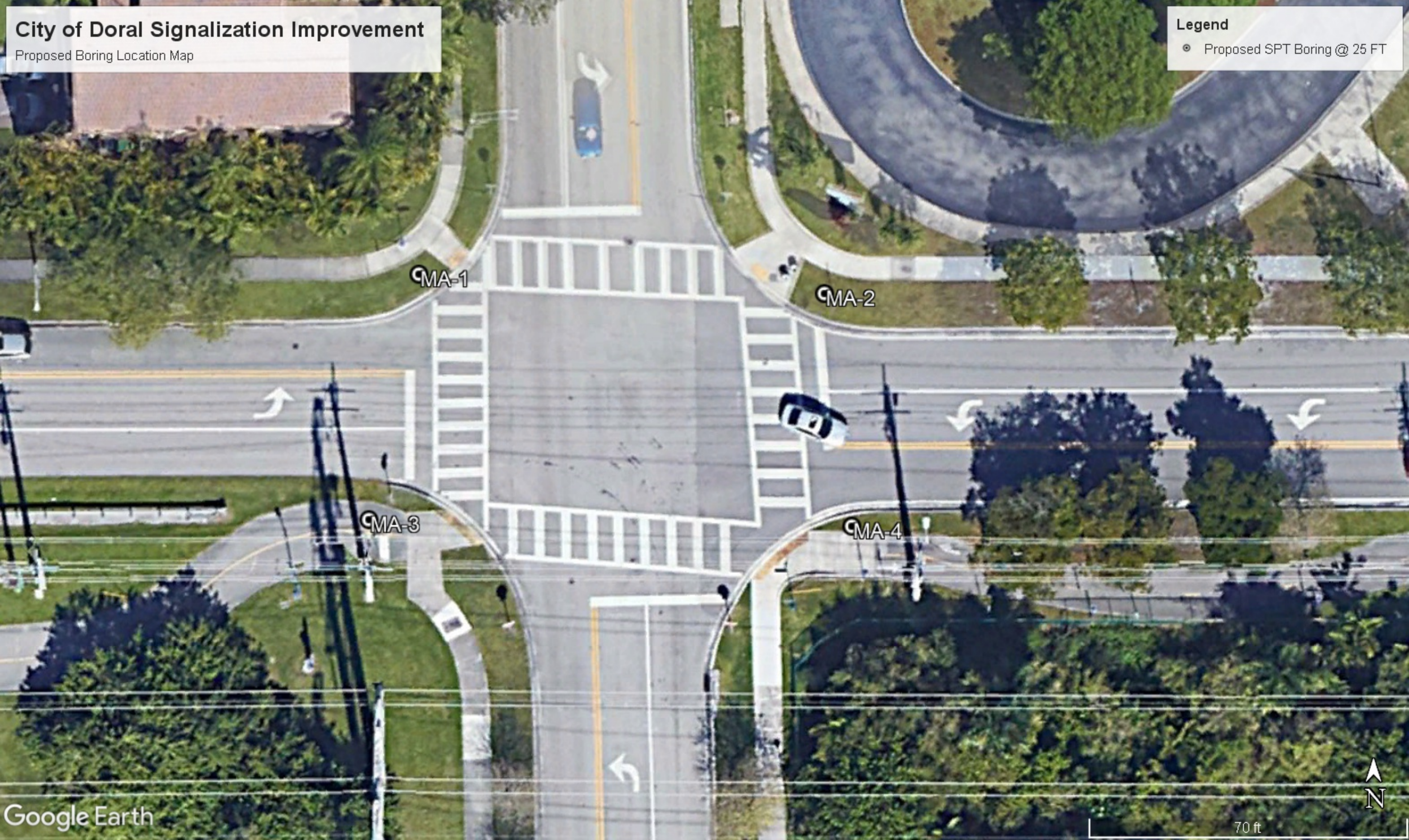


City of Doral Signalization Improvement

Proposed Boring Location Map

Legend

- Proposed SPT Boring @ 25 FT



COST BREAKDOWN

30-Jul-24

<u>DESCRIPTION</u>	<u>UNIT</u>	<u># OF UNITS</u>	<u>UNIT RATE</u>	<u>TOTAL</u>
<u>I. FIELD EXPLORATIONS</u>				
Mobilization of Drill Equipment (50-mile travel)	each	1.0	\$400.00	\$400.00
Senior Engineering Technician (Site Reconnaissance, Boring Layout and Underground Utility Clearance) (Raw Rate: \$33.33*3)	hour	4.0	\$99.99	\$399.96
Standard Penetration Tests - Truck Rig (0' - 50')	feet	100.0	\$16.00	\$1,600.00
Grout Bore Hole (0 to 50 Feet)	feet	100.0	\$6.40	\$640.00
<u>II. SOIL & AGGREGATE TESTING</u>				
Organic Content Test	each	0.0	\$55.00	\$0.00
Natural Sample Moisture Content	each	0.0	\$20.00	\$0.00
Grain size determination: Full grain size (8 sieves)	each	0.0	\$78.00	\$0.00
Grain size determination: Wash through (#200)	each	0.0	\$60.00	\$0.00
<u>III. ENGINEERING SERVICES (MULTIPLIER: 3)</u>				
Principal Engineer, P.E. (Raw Rate: \$66.67*3)	hour	1.0	\$200.01	\$200.01
Senior Engineer (Raw Rate: \$60.00*3)	hour	6.0	\$180.00	\$1,080.00
Engineer, P.E. (Raw Rate: 49.00*3)	hour	6.0	\$147.00	\$882.00
Drafter / CADD (Raw Rate: \$31.33*3)	hour	4.0	\$93.99	\$375.96
<u>IV. Maintenance of Traffic (MOT)</u>				
Maintenance of Traffic (MOT) including MOT Plan	day	1.0	\$1,450.00	\$1,450.00
MOT Plan and MOT Permitting	hour	2.0	\$180.00	\$360.00
Advance MOT Technician	hour	8.0	\$99.99	\$799.92
ESTIMATED GEOTECHNICAL BASIC FEE FOR SIGNALIZATION IMPROVEMENT				\$9,167.85

COST BREAKDOWN

30-Jul-24

<u>DESCRIPTION</u>	<u>UNIT</u>	<u># OF UNITS</u>	<u>UNIT RATE</u>	<u>TOTAL</u>
<u>I. FIELD EXPLORATIONS</u>				
Mobilization of Drill Equipment (50-mile travel)	each	1.0	\$400.00	\$400.00
Senior Engineering Technician (Site Reconnaissance, Boring Layout and Underground Utility Clearance) (Raw Rate: \$33.33*3)	hour	4.0	\$99.99	\$399.96
Standard Penetration Tests - Truck Rig (0' - 50')	feet	125.0	\$16.00	\$2,000.00
Grout Bore Hole (0 to 50 Feet)	feet	125.0	\$6.40	\$800.00
<u>II. SOIL & AGGREGATE TESTING</u>				
Organic Content Test	each	0.0	\$55.00	\$0.00
Natural Sample Moisture Content	each	0.0	\$20.00	\$0.00
Grain size determination: Full grain size (8 sieves)	each	0.0	\$78.00	\$0.00
Grain size determination: Wash through (#200)	each	0.0	\$60.00	\$0.00
<u>III. ENGINEERING SERVICES (MULTIPLIER: 3)</u>				
Principal Engineer, P.E. (Raw Rate: \$66.67*3)	hour	1.0	\$200.01	\$200.01
Senior Engineer (Raw Rate: \$60.00*3)	hour	6.0	\$180.00	\$1,080.00
Engineer, P.E. (Raw Rate: 49.00*3)	hour	6.0	\$147.00	\$882.00
Drafter / CADD (Raw Rate: \$31.33*3)	hour	4.0	\$93.99	\$375.96
<u>IV. Maintenance of Traffic (MOT)</u>				
Maintenance of Traffic (MOT) including MOT Plan	day	1.0	\$1,450.00	\$1,450.00
MOT Plan and MOT Permitting	hour	2.0	\$180.00	\$360.00
Advance MOT Technician	hour	8.0	\$99.99	\$799.92
ESTIMATED GEOTECHNICAL BASIC FEE FOR SIGNALIZATION IMPROVEMENT WITH CONTINGENCY BORING				\$9,972.85