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November 19, 2021

SENT VIA EMAIL
(DMealy@TownofPalmBeach.com)

Dean Mealy, II
Purchasing Manager
Town of Palm Beach
360 S. County Road
Palm Beach, FL 33480

Subject: **COUNTY ROAD DRAINAGE IMPROVEMENTS**
CMA Proposal: P21.431.02

Dear Mr. Mealy:

Chen Moore and Associates (CMA) is pleased to submit the attached Agreement for Professional Services and Scope to provide professional assistance with the engineering design of drainage improvements on North County Road from Wells Road to Miraflores Drive. The focus of the drainage improvements will be to eliminate flooding on the pedestrian trail on the west side of the corridor and to improve the medians to mitigate the damage caused to the existing turf by automotive traffic.

I. SCOPE OF SERVICES

The Scope of Services is comprised of the following tasks:

- Task 1 – Data Collection, Field Services and Conceptual Design
- Task 2 – Contract Documents (60% Design)
- Task 3 – Contract Documents (90% Design)
- Task 4 – Town Coordination: Landmarks Preservation Commission
- Task 5 – Contract Documents (100% Design)
- Task 6 – Construction Manager At Risk (CMAR) Coordination

Below is a description of the services included with each of these essential tasks:

Task 1 – Data Collection, Field Services and Conceptual Design

The Consultant will review the available topographic survey of the project area to determine the existing conditions, grades, and inverts and pipe size data on the adjacent drainage infrastructure. The topography and grades will be based on a survey procured by the Town in 2012 by the survey company, Betsy Lindsey whereas the pipe invert and size data will be based on a survey procured by the Town in 2016 by the survey company, Brown & Phillips. A site visit by CMA staff will verify the features identified in the existing surveys. CMA will supplement the existing survey with a detailed tree specific survey and arborists assessment by an ISA Certified Arborist.

The Arborist's Assessment will identify and assess the condition of each tree, specify each tree's critical root zone, and recommend tree protection measures to be required in the plan. CMA will also coordinate with the Town's tree consultant (King Tree Service) to provide an assessment of the existing trees and their health for use in plan preparation. Additional field work will include a geotechnical investigation with three soil borings along the corridor to investigate the depth of the water table as well as the prevalence of organic material and rock. The geotechnical investigation will also include a test of hydraulic conductivity to inform the potential for using exfiltration trenches and a test for the Limerock Bearing Ratio (LBR) of the existing material to inform preferred restoration methods.

CMA will also perform an investigation of existing utilities utilizing Sunshine One Call and a review of available record drawings. Once the data collection and preliminary field investigation is complete, CMA will develop a final base map of the existing conditions including detailed information regarding the vegetation and underground utilities. Utilizing the final base map, CMA will prepare a conceptual plan for modifications to the corridor to address the drainage issues. Potential improvements identified on the conceptual plan include the following:

- Adjusting the grades along the pedestrian path,
- Installing yard drains in the pervious area along the pedestrian path,
- Modifying the limits of the median to accommodate various vehicle turning radii,
- Incorporating curbing along the median perimeter,
- Considering options for stabilizing the turf within the median to be more resilient to traffic,
- Reconfiguring the existing drainage system by adding stormwater infrastructure,
- Considering options for subsurface storage or promoting infiltration, and
- Recommended modifications to existing landscape to improve sight lines for vehicles waiting at intersections from adjacent streets.

The conceptual plan documents will also include up to ten (10) locations for utility test holes where potential conflicts may occur with the proposed stormwater infrastructure. Once completed, the results of the field investigations and the conceptual plan will be submitted to the Town for staff review. CMA will meet with Town staff to review comments on the conceptual plan and discuss potential configurations for the design plans. After receiving input from Town Staff, CMA will initiate utility location field services to perform the test holes for existing utilities.

Task 2 – Contract Documents (60% Design)

Based on the collected field data and comments from Town Staff on the conceptual plan, CMA will prepare 60% construction plans for the proposed improvements. In addition to civil and stormwater design elements, the 60% contract documents will include detailed Tree and Root Protection Plans and specifications informed by a Registered Landscape Architect. Considering the existing corridor does not contain shrubs, hedges or flowering plants, it is assumed the landscape designs will focus on maintaining the existing aesthetic and there will be no additional plantings proposed beyond sod/turf and typical restoration. The construction plans submitted will include the following sheets.

1. 60% Cover and Drawing Index (1 sheet)
2. 60% General Notes & Summary of Quantities (2 sheets)
3. 60% Key Sheet (1 sheet)
4. 60% Grading and Drainage Plans (5 sheets at 1"=20' scale)
5. 60% Tree Disposition and Protection Plans (5 sheets at 1"=20' scale)
6. 60% Existing Tree Inventory Tables (2 sheets)
7. 60% Stormwater Details (2 sheets)
8. 60% Roadway Details (1 sheet)
9. 60% Landscape Specifications, Notes and Details (3 sheets)

The submittal will also include a draft outline of technical specifications, an opinion of probable construction cost, an estimated construction schedule and the draft Arborist's Report. As part of the 60% submittal a draft outline of information relevant to presentation to the Landmarks Preservation Commission will be prepared and provided to Town staff for review. King Tree Service will provide input on the 60% contract documents based on field coordination.

CMA will submit three (3) sets of the 60% draft construction contract documents (11" x 17" plan size) and one (1) electronic set (including PDF and CAD files) for review and comment by the Town. Once the review is complete, CMA will meet with Town staff to review the comments and discuss any necessary modifications or revisions.

Task 3 – Contract Documents (90% Design)

Based on comments from Town Staff on the 60% contract documents, CMA will prepare 90% construction plans and specifications for the proposed improvements. The construction plans submitted will include the following sheets.

1. 90% Cover and Drawing Index (1 sheet)
2. 90% General Notes & Summary of Quantities (2 sheets)
3. 90% Key Sheet (1 sheet)
4. 90% Grading and Drainage Plans (5 sheets at 1"=20' scale)
5. 90% Landscape and Tree Protection Plans (5 sheets at 1"=20' scale)
6. 90% Stormwater Details (2 sheets)
7. 90% Roadway Details (1 sheet)
8. 90% Landscape and Tree Protection Details (1 sheet)

The submittal will include detailed technical specifications with additional requirements for tree protection, an opinion of probable construction cost, an estimated construction schedule and the Final Arborist's Report. CMA will submit three (3) sets of the 90% draft construction contract (11" x 17" plan size) documents and one (1) electronic set (including PDF and CAD files) for review and comment by the Town.

Task 4 – Town Coordination: Landmarks Preservation Commission

The 90% plans will also be submitted for review by the Landmarks Preservation Commission. For the purposes of this effort, it is assumed that a maximum of two meetings will be held the Commission. Prior to the meetings, a notice will be provided to all residents within 250-feet of the project (roughly 70 homes). Renderings of the corridor and the proposed improvements will be prepared by CMA to be presented along with the technical plans. Renderings will include colorized plan views in addition to two (2) three-dimensional model views. CMA will provide support, meeting attendance and presentations as necessary. King Tree Service will provide support as needed with information specific to the health of the individual trees as it relates to the historic canopy for the Landmarks Preservation Commission.

Once all reviews are completed, CMA will meet with Town staff to review the comments and discuss any necessary modifications or revisions.

Task 5 – Contract Documents (100% Design)

Based on comments from Town Staff and stakeholders on the 90% contract documents, CMA will prepare 100% construction plans and specifications for the proposed improvements. The construction plans submitted will include the following sheets.

1. 100% Cover and Drawing Index
2. 100% General Notes & Summary of Quantities
3. 100% Survey Control Plan
4. 100% Grading and Drainage Plans (5 sheets at 1"=20' scale)
5. 100% Landscape and Tree Protection Plans (5 sheets at 1"=20' scale)
6. 100% Stormwater Details (2 sheets)
7. 100% Roadway Details (1 sheet)
8. 100% Landscape and Tree Protection Details (1 sheet)

CMA will prepare a final Estimated Construction Schedule and Engineer's Opinion of Probable Construction Costs and the Final Arborist's Report. The submittal will include the final Contract Documents with technical specifications and Bid Forms. CMA will submit one (1) set of reproducible construction contract documents (11" x 17" plan size) and one (1) electronic set (including PDF and CAD files).

Task 6 – Construction Manager At Risk (CMAR) Coordination

Considering that the construction of the drainage improvements will be performed by the undergrounding CMAR, this project offers the opportunity to work with the selected Contractor during the design process and in advance of final design. CMA will provide a copy of the draft submittal at 60% and 90% for review by the CMAR Team and will review comments and make revisions as necessary to the submittals that follow.

II. SCHEDULE

The proposed schedule below assumes Notice to Proceed (NTP) will be issued on January 1, 2022.

Task	Description	Weeks from NTP	Date
1	Data Collection, Field Services and Conceptual Design	6	2/12/2022
2	60% Design	12	3/26/2022
3	90% Design	18	5/7/2022
4	Town Coordination: Landmarks Preservation	26	7/2/2022
5	100% Design	30	7/30/2022
6	CMAR Coordination	30	7/30/2022
-	Subconsultant Field Services	12	7/2/2022

III. EXCLUSIONS

The services outlined below are not included as part of the scope of work, although additional service agreements can be executed to assist the TOWN with these services if necessary:

1. Procuring field survey of topographic or stormwater features.
2. Designing the replacement or modification of existing water or sewer utilities.
3. No design of irrigation system modification is required.
4. No additional landscape beyond sod
5. Permitting for agencies external to the Town of Palm Beach.
6. Engineering services during construction or construction administration.
7. Bid and award services (it is assumed the project will be performed concurrently with the "Utility Undergrounding Project" for this location and will use the same "Construction Manager At Risk" contractors)
8. Construction administration will not be included in this authorization

IV. COMPENSATION

CMA will be compensated for the services described on an hourly basis in an amount of **\$152,236.18** per attached Exhibit A.

Should you have any questions, I can be reached via email at bwhitfield@chenmoore.com.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "B. Whitfield", with a stylized flourish at the end.

Brent Whitfield, PE
Director of Water Resources
Chen Moore and Associates

Attachments:

Exhibit A: Detailed Fee Estimate