TETRA TECH

March 13, 2020

Ms. Albiona Balliu
Sr Project Manager
City of Key West
1300 White Street
Key West, Florida 33040

SUBJECT: Proposal for a Voluntary Source Removal
College Road Affordable Housing Project
Stock Island, Key West, Florida, 33040

1.0 INTRODUCTION

Tetra Tech, Inc. (Tt) is pleased to present this proposal to the City of Key West (City) to prepare a Voluntary Source Removal for the College Road Affordable Housing project. The purpose of this scope is to outline the remedial measures necessary to remove the documented source of organochlorine pesticide soil contamination identified by Tt in the Preliminary Site Assessment Report dated March 2, 2020, Tt suggested on-site remedy includes excavation of soils that exceed Residential Direct Exposure and Leachability Based Soil Cleanup Target Levels (SCTLs) established under Chapter 62-777, F.A.C. Table II.

In this Preliminary Site Assessment, Tetra Tech recommended the removal of the documented organochlorine pesticide impacted soils in the former chemical storage and washdown area. The majority of the organochlorine pesticide impacted soils were encountered in the 1 to 2-foot depth interval with smaller spot locations that will require excavation to the 3-foot depth interval. Estimates indicate about 6,000 sf (1000 tons / 500 cy) of organochlorine pesticide impacted soils would need to be removed from the source area. Currently, there is an FDEP approved Voluntary Source Removal for petroleum impacted soils that is scheduled to be implemented in the middle of March of 2020. It would be beneficial to the City to implement the organochlorine pesticide source removal immediately after the petroleum source removal is complete to meet the projected time schedule proposed by the City for the College Road Affordable Housing project.

It is our understanding that the subject property is proposed for redevelopment under the Florida Housing Authority under the College Road Affordable Housing Project. Based on the review of the conceptual site plan, the proposed development will consist of (3) raised three story multi-family residential structures with a total of 104 units. The conceptual plans included proposed:

drainage, landscape, paved travel ways, parking, elevations, floor plans and various other pre-design components.

This proposal was prepared at the request of the City in prior discussions. Tt recommends the following scope of work for the Organochlorine Pesticide Voluntary Source Removal (VSR).

2.0 VOLUNTARY SOURCE REMOVAL

2.1 Health and Safety Plan

Tetra Tech will prepare and employ an updated Site-Specific Health and Safety Plan (HASP) for the activities conducted at the subject site which complies with the Occupational Safety and Health Administration (OSHA) guidelines specified in 29 CFR 1910.120. The HASP will include information concerning: suspected contaminants to be encountered; effects of the suspected contaminants on humans; site history; a map of restricted site safety boundaries; required detection and protective equipment; personnel site authorization; decontamination procedures; severe weather procedures; visual and written directions for hospital emergencies; and other essential health and safety information. Dust, from the soil excavation will be monitored and corrective action measures will be in place before excavation activities begin (e.g., water for dust suppression). Additionally, the HASP will include specific information related to the excavation, backfill, grading, and restoration activities.

2.2 Permits

Tetra Tech has researched the City of Key West regulations to determine applicable permit requirements for this project. As needed, agency approvals or permits will be applied for and obtained prior to construction. Costs for permits are to be included in the contractor bids. It will be the responsibility of the contractor to obtain all necessary permits.

This subsection identifies standard permits, as generally required, to implement the specified remedy. In conjunction with each permit is an estimate of the lead-time required under normal conditions to obtain the permit.

Permit Type	Responsible Agency	Normal Lead Time
Well abandonment / Installation	SFWMD	2 weeks

2.3 Underground Utilities

Any surface, overhead, or underground structure impediments are to be identified following mobilization. Per the Underground Facility Damage and Prevention and Safety Act, Sections 556.101 – 556.111, F.S., prior to implementation of the planned excavation, the Sunshine One Call service will be contacted to perform a locate of the primary underground utilities (e.g., electric, telephone, water, sewer, gas) that service the subject properties. Underground work shall comply with Sections 553.60-553.64. F.S. A temporary water line exists within the limits of the excavation on its southwest side. It is anticipated that this line will need to be shut off and moved to an area outside of the footprint of the excavation presumably to the north along the property border adjacent to the fence line.

2.4 Well Abandonment

Prior to excavation, the following monitoring wells: MW-8, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, and MW-20 will need to be abandoned after pre-construction gauging is performed by Tetra Tech. The abandonment will be conducted by a licensed well driller and consist of filling the wells from bottom to top with cement grout in accordance with Rule 62-532.500(4), F.A.C. The driller will be responsible for obtaining well abandonment permits, as necessary.

2.5 Erosion and Sediment Pollution Control

Based on the relatively small footprint of the planned excavation and governing regulations, a SWPPP and coverage under the General NPDES Permit for Construction Activities may not be required. However, the following Erosion and Sediment Pollution Control measures, at a minimum, will be undertaken by Tetra Tech as Best Management Practices (BMPs):

- Installation of silt fences around the limits of excavation and any soil staging areas.
- Routine inspection and maintenance of silt fences.

Removal and disposal of soil erosion and sediment pollution control measures will be performed at the completion of site activities.

2.6 Site Preparation, Soil Excavation, Transportation, & Disposal

2.6.1 Site Preparation

The City will be responsible for removing any equipment, vehicles, or other items from the excavation and staging areas. In addition, we understand there are several trees that are proposed to be preserved and transplanted due to historical and or environmental value.

2.6.2 Soil Excavation

The excavation area will be white-lined during mobilization activities. Exclusion zones will be installed around the work area using barricades and temporary fencing. Barricades will be placed, in addition to industry-typical bright orange plastic mesh, to keep pedestrians and vehicular traffic out of the construction and buffer zones. This is a commercial area and the noise during construction activities is not anticipated to be a concern.

Due to the contaminant concentrations in the soils, methods of dust control suppression will be utilized (e.g., water truck or onsite source). A dust monitor will be utilized to collect readings and monitor potential exposure to workers or pedestrians during excavation activities and mobilization/demobilization. Air monitoring and dust control will be in effect with established action levels. Mitigation for dust control will require the use of water trucks or similar type equipment.

2.6.3 Implementation

The recommended on-site remedy includes removal and disposal of contaminated soils from the site. The soil will be excavated down to a maximum depth of 3 feet bls within (*[1]VSRP Drawings CR-04 an CR-05[1]). Caution will be exercised for excavation activities to avoid damage to existing underground items (e.g., monitor wells, etc.). It is anticipated that a portion of the excavation will be done at the water table interface. When encountered, saturated soils will be staged adjacent to the excavation and allowed to gravity drain back into the excavated area.

2.6.4 Transportation and Disposal

The on-site remedy is anticipated to generate approximately 1,000 tons of organochlorine pesticide contaminated soil for transportation to an approved landfill facility permitted to accept contaminated soil. Excavated soil will be direct loaded into dump trucks and it will be transported as non-hazardous solid waste to the approved landfill for disposal. If possible, staging areas will be set up for clean fill and excavated soils to allow for expedited loading and unloading of haul trucks. The final weighing will be performed at the disposal facility. The transportation and disposal will be paid according to these weight tickets. The contractor is responsible for ensuring that contaminated material is not deposited along the truck hauling route. In the event that material is spilled, the contractor must take prompt action to remove the material from the impacted surface.

2.6.5 Site Restoration

This section identifies activities that will be associated with restoring the affected areas. In general, restoration will be to original lines and grades. All areas disturbed by the excavation activities will be restored/stabilized using permanent stabilization activities. It is anticipated that portions of the excavation area will be in future pavement or building structure areas. Therefore, vegetation and or seeding replacement is not anticipated. If requested by the City, previously vegetated areas within the limits of the excavation and the immediate surrounding area will be prepped, seeded (with Bahia grass seed) and/or mulched as needed following the completion of the excavation and backfilling activities. No surface water or subsurface water flow patterns will be changed.

2.6.6 Placement of Backfill

Once the required depth is achieved, the excavation will be backfilled with the use of clean imported fill in maximum lifts of 12" followed by vibratory compaction to achieve a finished grade to the existing ground surface. If the bottom of the excavation contains moist or saturated soils, these areas will be backfilled with #57 stone to achieve adequate separation from the water table. The clean fill will be obtained certified clean through due diligence with analysis of natural borrow material, located near the site. Prior to bringing the backfill on-site, one soil sample will have been taken from the off-site source of clean backfill, tested using expedited laboratory analysis, data reviewed, and source of fill approved as specified on *VSRP Drawing CR-05[1]. Compaction will be achieved as specified on *Drawing CR-04[1]. Compaction tests will be performed at a rate of one test per lift and results should be within an acceptable range. Sieve analysis shall be performed at a testing frequency of 1 test per 300 yd3.

2.6.7 Monitoring Well Replacement/Installation

Replacement monitoring wells, for those removed prior to implementing remedial measures, will be installed following site restoration. Wells will be replaced in the approximate location and installed using similar construction to the existing wells, if applicable. Based on the College Road Affordable Housing conceptual site plan, it may be necessary to shift well locations to not interfere with planned development and the future structure locations. The wells will be used to continue monitoring groundwater conditions following completion of the excavation. The driller will be responsible for obtaining appropriate installation permits, as necessary. See replacement monitoring well details on *VSR Drawing CR-041. Tetra Tech will subcontract and oversee the monitoring well replacement activities.[1]

2.6.8 Demobilization

Once the site is restored, demobilization will occur. The excavation equipment will be decontaminated before leaving the site. Additionally, Tetra Tech will retain a surveyor to

document the limits of excavation, the locations of sidewall samples, and the replacement monitoring wells.

3.0 POST-EXCAVATION MONITORING

3.1 Soil Sampling

Confirmatory samples will be collected from each of the 4 sidewalls and excavation bottom for the purposes of achieving Residential SCTLs. The limits of excavation identified in Drawings *VSRP CR-03 and CR-04 [1] will be used to accurately and clearly identify the areas of concern in the field. A completion report will be prepared following completion of field work. This report will document the actions taken, waste manifests, weight tickets, before-and-after photographs, and record drawings.

3.2 Post Excavation Groundwater Monitoring

After the completion of the excavation and reinstallation of the monitoring well network a post excavation monitoring program is required by the FDEP. The newly installed monitor well network will be quarterly monitored for a minimum period of one year following the post excavation activities. A post active Remediation Monitoring Groundwater Plan is included as Attachment A. Costs to account for this have been included with this submittal. However, if future corrective actions deem this to be not required, this task and associated costs will be omitted from the scope of work.

4.0 OFFSITE ASSESSMENT

4.1 Background

Tetra Tech recently submitted a Draft Preliminary Site Assessment Report to the City. The recommendations suggested the city secure offsite access for the adjacent FKAA properties to define potential offsite groundwater and soil impacts to complete the site assessment for organochlorinated pesticides.

4.2 Constituents of Interest

Based on available data, this site appears to have been an active Mosquito Control facility intermittently operating for the past 60 years (~1959 – 2019). The constituents of interest (COIs) for this facility are the organochlorine pesticides.

- 4,4-DDT
- 4,4-DDD
- 4,4-DDE
- Aldrin
- Dieldrin
- Toxaphene
- Alpha BHC

4.3 Media Specific Assessment

This section presents the field program, which will be used to assess former Mosquito Control facility (offsite). A site assessment will be performed to determine the horizontal and vertical

extent of the COIs at the site. The activities described in this section comprise the field activities and include the following:

- The advancement of (15) soil borings for the collection of soil samples to the north and east of the former Mosquito Control chemical storage area and documented exceedances. The soils will be analyzed for EPA Method 8081 for Organochlorine Pesticides.
- The installation of up to (8) monitoring wells. The well installation method will be via direct-push. The wells will be installed with 1" outer diameter PVC casing. For estimating purposes, we will assume water-table monitoring wells. It will be necessary to pre-drill locations with solid stem augers to penetrate any indurated lenses.
- Collection of groundwater samples from newly installed monitoring wells for EPA Method 8081 for Organochlorine Pesticides.
- The containerization and characterization of investigative derived wastes, i.e., soil cuttings, purge waters, and personal protective equipment (PPE).

Field investigation activities will be conducted in accordance with the FDEP Standard Operating Procedures (SOPs)(FDEP 2017). SOPs will be adhered to in the collection of samples, duplicates, and equipment blanks. The laboratory analyses will be performed by a National Environmental Laboratory Accreditation Conference (NELAC) certified laboratory.

Please note this is anticipated scope of work and cost for the offsite delineation of currently documented soil and groundwater exceedances. It is possible that Tetra Tech may uncover additional areas of concern during the elements of this study. If warranted, these potential additional areas of concern will be identified to the City and addressed with additional scope and costing as needed. This proposal does not include scope or pricing for any offsite remediation or corrective actions that may be warranted in the future as identified within the efforts of this additional study.

4.4 Utility Clearance

Tetra Tech or its contractor will contact the Sunshine State One-Call Center in order to locate on-site utilities. Care will be taken to avoid overhead power lines. Prior to advancing a direct-push boring the first four feet of the boring will be hand cleared to verify the absence of underground utilities.

4.5 Soil and Groundwater Sampling

A direct-push/ auger rig will be used during the site assessment to assess potential soil and groundwater contamination on the adjacent properties. Direct-push sampling will be conducted at various locations across the adjacent properties. Proposed boring and well locations are shown on the attached Figure 1. These locations will be revised as necessary in the field (to avoid utility conflicts), and with the City's concurrence.

Additional monitor wells will be installed with the direct-push rig on the adjacent properties in the areas of the documented pesticide exceedances.

4.6 Reporting

The deliverable for this project will be an addendum to the Site Assessment Report (SA). An outline is shown below:

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Certification

1.0 Introduction

2.0 Site Description and History

- 2.1 Site Location, Land Use, and Utilities
- 2.2 Topography and Drainage
- 2.3 Potable Water Supply Wells
- 2.4 Operational History
- 2.5 Previous Investigations

3.0 Geology and Hydrogeology

4.0 Site Characterization

5.0 QA/QC Laboratory Data Review

6.0 Conclusion

7.0 Recommendations

References

Tables

Figures

Appendices

The text of the report will be formatted in Microsoft Word with the tables in Microsoft Excel. Individual site figures, in AutoCAD, depicting the relative location of each sampling point will be prepared along with a groundwater flow map and a summation of analytical detections above standards. A hard copy and an electronic copy of the report will be submitted to the FDEP.

5.0 PROJECT SCHEDULE, FEE, AND LIMITATIONS

Tt is prepared to begin implementation of this project immediately upon receipt of authorization to proceed from the City. After receipt of authorization to proceed from the City, the Construction Completion Report will be submitted to the City within 20 business days of completion of field activities which includes time allotted for laboratory turn-around.

For this proposal, we have assumed that one electronic and one hard copy of the report will be prepared and submitted to the City.

Tt proposes to perform the scope of work described herein on lump sum basis in accordance with the terms and conditions of our current MSA with the City. The proposed cost to complete the VSR is **$437,402.** A summary breakdown of our cost estimate to complete the scope of work is provided in Attachment B. For this proposal we have selected Pace Analytical Laboratories as the primary analytical laboratory. We have selected PDS as the drilling and excavation contractor.

Tt will keep the City abreast of anticipated changes, if any that may occur. We will not initiate additional work without your prior authorization. We appreciate the opportunity to submit this proposal and look forward to working with the City on this project. If you have any questions or require additional information, please feel free to contact the undersigned at your earliest convenience.

Respectfully Submitted,
Tetra Tech, Inc.

Dave Frodsham
Project Manager

Accepted By:

Key West College Rd. VSR	
CONTRACT OR PROJECT NAME	CLIENT
David Frodsham	Patti McLaughlin
By (PRINT NAME)	BY (PRINT NAME)
Project Manager	Asst. City Manager
TITLE	TITLE
3/26/20	3/24/2020
SIGNATURE DATE	SIGNATURE DATE

[1] Please note the excavation construction drawings are under review at the time of this proposal and are not included.

CITY OF KEY WEST (CLIENT 55111) COLLEGE RD. VSR - PESTICIDES			TASK 46.01 Site Meeting With FDEP (32) / Pre Excavation Gw Sampling (16)		TASK 46.02 Well Abandonment(6), Soil Excavation (200), and Clean Fill Soil Sampling (6), Autocadd Plan Generation (12) (Soil Remediation ONSITE)		TASK 46.03 Onsite Construction Completion Report		TASK 46.04 OFFSITE ASSESSMENT FKAA		TASK 46.05 OFFSITE ASSESSMENT REPORTING		TASK 46.06 Onsite Well Reinstallation (40), Post Quarterly Monitoring / Reporting 4Q		TOTAL	
NAME	TITLE	UNIT RATE			QTY	PRICE			QTY	PRICE	QTY	PRICE	QTY	PRICE	QTY	PRICE
TETRA TECH STAFF																
Ouellette, Shawn	Eng/Sci/Planner Staff V	$ 140.00	18.0	$ 2,520.00	232.0	$32,480	44.0	$6,160	68.0	$9,520	77.0	$10,780	96.0	$13,440	535.0	$74,900
Prodsham, David	Eng/Sci/Planner Senior Staff II	$ 175.00	9.0	$ 1,575.00	11.0	$1,925	11.0	$1,925	-		4.0	$700	-		35.0	$6,125
Boberg, Lori	Project Support Services I	$ 65.00	-	$ -	9.0	$585	4.0	$260	-		-		-		13.0	$845
Martinez Rivera, Francisco J	Eng/Sci/Planner Staff II	$ 110.00	-	$ -	13.0	$1,430	22.0	$2,420	-		22.0	$2,420	22.0	$2,420	79.0	$8,690
Mc Donald, Ana P	Project Support Services Manager	$ 172.00	-	$ -	2.0	$344	-		-		-		2.0	$344	4.0	$688
McGahee, Stuart E	Senior Principal	$ 245.00	-	$ -	-		-		-		-		-		-	
Mendoza, Michael	Eng/Sci/Planner Staff II	$ 110.00	-	$ -	-		-		-		-		-		-	
Polski, Dennis V	Eng/Sci/Planner Staff II	$ 110.00	-	$ -	-		-		-		-		-		-	
Warren, Caprice M.	Project Support Services III	$ 124.00	-	$ -	-		-		-		-		-		-	
Zuloaga, Patrick	Eng/Sci/Planner Senior Staff IV	$ 195.00	-	$ -	-		-		-		-		-		-	
McGovern, Jay	Senior Consultant I	$ 215.00	9.0	$ 1,935.00	-		9.0	$1,935	4.0	$860	2.0	$430	9.0	$1,935	33.0	$ 7,095.00
Proctor, Brian	Senior Principal	$ 245.00	$ -	$ -	1.0	$245	-		-		-		-		1.0	$ 245.00
Froelich, Tami	Eng/Sci/Planner Senior Staff IV	$ 195.00	$ -	$ -	-		-		-		-		-		-	
Endicott, Jessica	Eng/Sci/Planner Staff III	$ 120.00	$ -	$ -	-		-		-		18.0	$2,160	110.0	$13,200	128.0	$15,360
			$ -	$ -	-		-		-		-		-		-	
TOTAL LABOR COST			36.0	$ 6,030.00	268.0	$37,009	90.0	$12,700	72.0	$10,380	123.0	$16,490	239.0	$31,339	828.0	$113,948
INTERNAL SUBCONTRACTOR																
			$ -	$ -	-		-		-		-		-		-	
			$ -	$ -	-		-		-		-		-		-	
			$ -	$ -	-		-		-		-		-		-	
TOTAL INTERNAL SUBCONTRACTOR																
EXTERNAL SUBCONTRACTOR																
FKLS		$ 8,000.00	$ -	$ -	1.0	$8,760			-		-		-		1.0	$8,760
Preferred Drilling (Onsite Pesticide Excavation)		$ 213,676.35	$ -	$ -	1.0	$233,975			-		-		-		1.0	$233,975
Preferred Drilling (Well Abandonment)		$ 3,000.00	$ -	$ -	1.0	$3,285			-		-		-		1.0	$3,285
Preferred Drilling (Onsite Well Reinstall)		$ 10,500.00	$ -	$ -	-				-		-		1.0	$11,498	1.0	$11,498
Preferred Drilling (Offsite Assessment)		$ 10,500.00	$ -	$ -	-				1.0	$11,498	-		-		-	$11,498
Pace Analytical Laboratories (Onsite Quarterly Monitoring)		$ 5,000.00	1.0	$ 5,475.00					-		-		1.0	$5,475	2.0	$10,950
Pace Analytical Laboratories (Offsite Assessment Soil and GW)		$ 10,000.00	$ -	$ -	-				1.0	$10,950	-		-		-	$10,950
IDW		$ 2,500.00	$ -	$ -	-				1.0	$2,190	-		-		-	$2,190
TOTAL EXTERNAL SUBCONTRACTOR			1.0	$5,475	3.0	$246,020			3.0	$24,638			2.0	$16,973	6.0	$293,106
TRAVEL																
R/T Airfare		$ 500.00	$ -	$ -	-				-		-		-		-	
Mileage		$ 0.575	$ -	$ -	-				-		-		-		-	
Rental Car w/Fuel		$ 80.00	3.0	$ 240.00	22.0	$1,760			5.0	$400	-		16.0	$1,280	41.0	$3,680
Misc. Travel Costs (gas, parking, tolls)		$ 50.00	-	$ -	22.0	$1,100			5.0	$250	-		16.0	$800	38.0	$2,150
Lodging		$ 300.00	-	$ -	22.0	$6,600			5.0	$1,500	-		16.0	$4,800	38.0	$12,900
Per Diem		$ 67.00	-	$ -	22.0	$1,474			5.0	$335	-		16.0	$1,072	38.0	$2,881
TOTAL TRAVEL COSTS			3.0	$240	88.0	$10,934			20.0	$2,485			64.0	$7,952	155.0	$21,611
OTHER DIRECT COSTS / RENTAL EQUIPMENT/LABORATORY																
Shipping		$ 45.00	$ -	$ -	1.0	$45	$1	$45	4.0	$180	1.0	$45	4.0	$180	7.0	$495
			$ -	$ -	-				-		-		-		-	
Reproduction - B&W		$ 0.08	$ -	$ -	-				-		-		-		-	
Reproduction - Color		$ 0.42	$ 657.00	$ 275.94	-		329.0	$138	329.0	$138	329.0	$138	1,314.0	$552	2,629.0	$1,242
Misc. Equip & Supplies		$ 250.00	$ 1.00	$250	22.0	$5,500			5.0	$1,250	-		-		23.0	$7,000
TOTAL OTHER DIRECT COSTS			658.0	$526	23	$5,545	330	183.0	338	$1,568	330.0	$183	1318	$732	2,659.0	$8,737
TETRA TECH OWNED EQUIPMENT																
Boat		$ 250.00	$ -	$ -	-				-		-		-		-	
TOTAL TT EQUIPMENT																
CONTINGENCY																
GRAND TOTAL				$12,271		$299,508		$12,883		$39,071		$16,673		$56,996		$437,402

NOTES:

1. SITE INFORMATION/CONDITIONS REFERENCED FROM TERRACON CONSULTANTS, INC. TEMPLATE SITE ASSESSMENT REPORT, DATED 7/15/19 (B30C5D).
2. MONITORING WELLS MW-2, MW-3, MW-4, MW-5, MW-6, MW-8, MW-9, MW-11 AND MW-12 INSTALLED BY TERRACON. MW-13 THROUGH MW-21 INSTALLED BY TETRATECH. SOIL BORING SB-100 TO SB-133 INSTALLED BY TETRATECH. SOME BORINGS NOT SHOWN.
3. MW-2, MW-3, MW-4, MW-5, MW-6, MW-8, MW-9, MW-11 AND MW-12 AND MW-13 THROUGH MW-17 LOCATIONS WERE MEASURED BY FLORIDA KEYS LAND SURVEYING (FLKLS). NEWLY INSTALLED MW-18 THROUGH MW-21 ARE APPROXIMATE. SOIL BORINGS SB-100 THROUGH SB-120 WERE MEASURED BY FLKLS. SB-126 THROUGH SB-133 ARE APPROXIMATE.
4. FIGURE SOURCE, TETRATECH 2019 VSR PLAN.

LEGEND:

- MONITORING WELL
- DESTROYED MONITORING WELL
- SOIL BORING LOCATION
- EXISTING FENCELINE / APPROXIMATE CONSTRUCTION BOUNDARY
- LIMITS OF PETROLEUM EXCAVATION
- OVERHEAD ELECTRIC
- UTILITY POLE
- DEMOLISHED STRUCTURES
- WV TEMPORARY WATER VALVE
- ORGANOCHLORINE PESTICIDE SOIL IMPACTS
- INFERRED CONTOUR
- ORGANOCHLORINE PESTICIDE GW IMPACTS
- INFERRED CONTOUR
- PROPOSED SOIL BORING LOCATION
- PROPOSED MONITORING WELL LOCATION
- APPROXIMATE PROPERTY BOUNDARY

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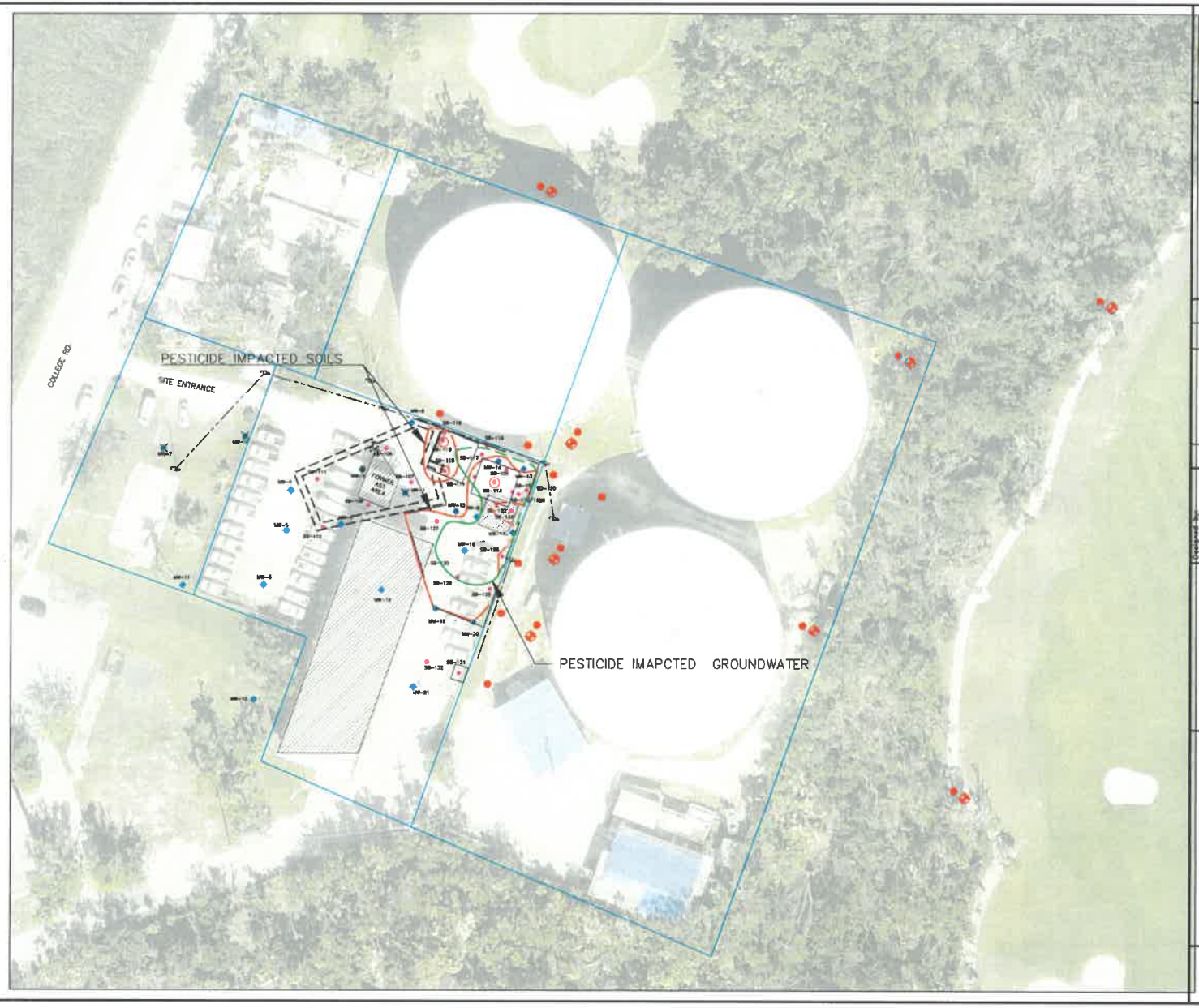


DRAFT

TETRA TECH INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400
FAX: (772) 781-3411
CERTIFICATE OF AUTHORIZATION NO. 2429

Drawn By: SO
Checked By: JM
Date: 1/29/20
Design file no: College Rd 1.1.0.dgn
Scale: AS SHOWN

COLLEGE ROAD APARTMENTS
PROPOSED OFFSITE LOCATIONS
KEY WEST, MONROE COUNTY, FLORIDA

Figure
1

TETRA TECH

March 13, 2020

Ms. Albi Balliu
City of Key West
1300 White Street
Key West, Florida 33040

SUBJECT: PROPOSAL FOR POST ACTIVE REMEDIATION GROUNDWATER MONITORING (ORGANOCHLORINE PESTICIDE IMPACTS) CITY OF KEY WEST COLLEGE ROAD AFFORDABLE HOUSING PROJECT

1.0 INTRODUCTION

Tetra Tech, Inc. (Tt) is pleased to present this proposal to the City of Key West (City) to provide Post Active Remedial Action Groundwater Monitoring Plan for the Former Mosquito Control site as per the Florida Department of Environmental Protection (FDEP) regulations stipulated in Chapter 62-780.750 Florida Administrative Code.

2.0 OBJECTIVES AND SCOPE OF WORK

Task 2.1 Quarterly Post Active Remediation Monitoring for the Mosquito Control Site

A monitor well network consisting of source area, upgradient, downgradient and (5) horizontal extent monitor wells will be utilized for this monitoring. Eight (8) wells will be abandoned as part of the excavation activities and will be reinstalled at the terminus of the excavation activities. Laboratory analysis will consist of Organochlorine Pesticides by EPA Method 8081. It is anticipated, Tetra Tech will utilize existing and replacement monitoring wells to establish the required well network for this plan. Three (3) quarterly monitoring reports and (1) annual report will be prepared that includes an analysis of the data, and an appropriate recommendation in accordance with Chapter 62-780.750, Florida Administrative Code.

3.0 DELIVERABLES

Following the work outlined above Tt will prepare and submit a draft Annual Groundwater Monitor Report, signed and sealed by a Florida Professional Geologist, to City. Following receipt of City comments, Tt will submit a final Annual Groundwater Monitor Report to the FDEP.

4.0 PROJECT SCHEDULE

Tt is prepared to begin the Quarterly Post Excavation (Remediation) Groundwater Monitoring at the Former Mosquito Control site once the post excavation monitoring well network has been installed and within two weeks of receipt of a signed task order and written authorization to proceed from the City. We anticipate this will occur in May 2020 based on the projects current timeline.

5.0 PROJECT COST

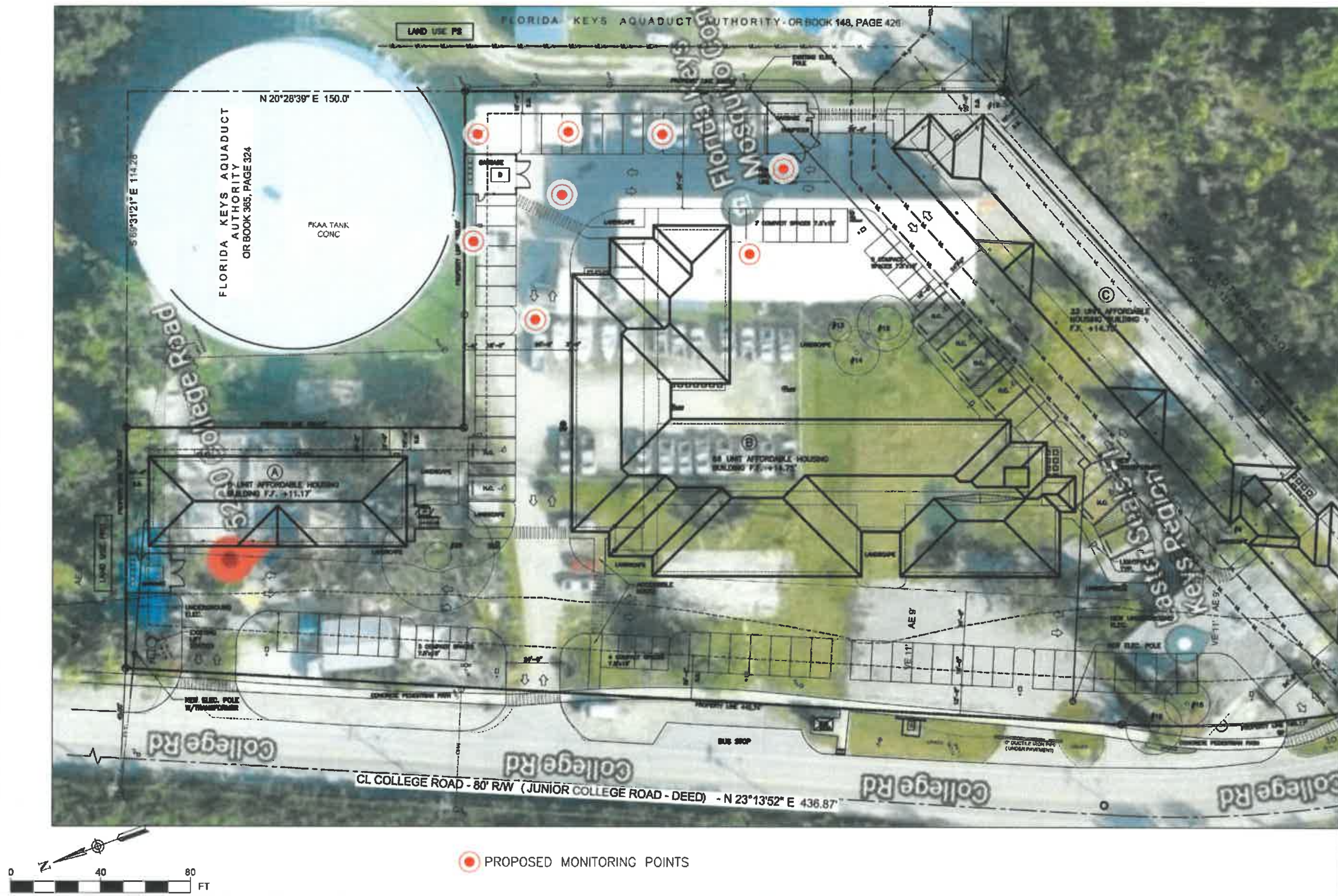
Tt proposes to perform the SOW described herein, in accordance with the attached standard terms and conditions. The time and material costs to implement the SOW for the Former Mosquito Control Site is:$56,996

We appreciate the opportunity to submit this proposal and look forward to working with the City on this project. If you have any questions or require additional information, please feel free to contact the undersigned at (772) 781-3412.

Sincerely,
Tetra Tech, Inc.

Shawn Ouellette, P.G.
Geologist

Attachment
cc: File


FLORIDA KEYS AQUADUCT AUTHORITY - OR BOOK 148, PAGE 426
LAND USE PS
N 20°28'39" E 150.0'
S 69°31'21" E 114.26
FLORIDA KEYS AQUADUCT AUTHORITY OR BOOK 365, PAGE 324
FKAA TANK CONC
5220 College Road
Florida Keys Mosquito Con
Florida Keys Region
7 COMPACT SPACES 7.5'x15'
33 UNIT AFFORDABLE HOUSING BUILDING F.F. +14.75'
58 UNIT AFFORDABLE HOUSING BUILDING F.F. +14.75'
9 UNIT AFFORDABLE HOUSING BUILDING F.F. +11.17'
BUS STOP
College Rd
CL COLLEGE ROAD - 80' R/W (JUNIOR COLLEGE ROAD - DEED) - N 23°13'52" E 436.87'
0
40
80
FT
N

PROPOSED MONITORING POINTS

COLLEGE ROAD APARTMENTS

MONITORING PLAN

PROPOSED MONITORING LOCATIONS

KEY WEST, MONROE COUNTY, FLORIDA

TETRA TECH INC.
759 SOUTH FEDERAL HWY
SUITE 314
STUART, FL 34994-2936
TEL: (772) 781-3400
FAX: (772) 781-3411
CERTIFICATE OF AUTHORIZATION
NO. 2429

Designed by:	SO
Drawn By:	FM
Checked By:	DF
Date:	3/13/2020
Scale:	AS SHOWN

Mark	Description	Date	Appr.
-			-

Sheet Reference:
CR-100