

**Exhibit A**  
**Scope of Services**  
**Mechanical Integrity Testing of Deep Injection Wells IW-1, IW-2, IW-3, and IW-4**  
**ESSD Project No. XXX**  
**City of Hollywood**  
**Department of Public Utilities**

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**Project Description**

This proposal presents the scope of services for professional services for the preparation mechanical integrity testing plans and technical specifications to allow mechanical integrity testing of deep injection wells IW-1, IW-2, IW-3, and IW-4 at the City of Hollywood Southern Regional Wastewater Treatment Plant (SRWWTP).

As specified in Rule 62-528, Florida Administrative Code (FAC), deep injection wells must demonstrate both internal and external mechanical integrity every 5 years. Mechanical integrity testing (MIT) for all the deep injection well a the SRWWTP and net MITS are shown in the table below:

Well Name	Last MIT Date	Next MIT Due Date
IW-1	August 21, 2022	August 20, 2027
IW-2	August 31, 2022	August 30, 2027
IW-3	April 26, 2021	April 25, 2026
IW-4	September 7, 2021	September 6, 2026

MIT of each injection well will consist of performance of a video survey, pressure testing, temperature logging and performance of a radioactive tracer survey (RTS). An RTS is conducted by ejecting a radioactive tracer at the base of the well casing under low-rate injection conditions and monitoring its movement with gamma ray detectors. The Florida Department of Environmental Protection (FDEP) requires that a MIT Plan providing testing procedures be submitted to, and approved by, the Underground Injection Control (UIC) program of the FDEP. Additionally, it will be necessary for the City to hire a well testing Contractor to perform the actual MIT of the wells. A set of Technical Specifications detailing the testing procedures will be required for the City to solicit competitive bids from potential testing Contractors.

In order to conduct the work outlined above, the city of Hollywood (City) has requested Brown and Caldwell (Consultant) to prepare this Proposal to provide the professional services described herein. These services are listed in Tasks 1 through 4 below.

This project consists of the following Tasks:

- 1) Project administration and Kick-off activities
- 2) Preparation of a MIT plan for IW-1, IW-2, IW-3, and IW-4 for submittal to, and approval by, the FDEP.

- 3) Preparation of Technical Specifications for bidding purposes.
- 4) Pre-Bid meeting at the SRWWTP with the City and prospective bidders.
- 5) Bidding Services through the bidding process ending with a Letter of Recommendation of Award.

## **Scope of Services**

The Scope of Services to be provided by Consultant includes the following tasks:

### **Task 1 – Project Administration and Kickoff Activities**

In Task 1, Consultant will establish the project's goals and objectives and sustain project activities required.

#### **Subtask 1.1 – Project Administration and Coordination**

Consultant's project manager will be the City's point of contact during the execution of the work. The City will appoint a project manager to be Consultant's point of contact during the execution of the work and will provide direction to Consultant. The City's project manager will coordinate involvement of City operations, maintenance, administrative, and engineering staff as needed. Consultant's project manager will manage the work of Consultant's internal staff to provide City staff with efficient and responsive service throughout the course of work on this Project.

Consultant will provide a monthly progress report to the City and perform administrative activities throughout the duration of the project.

#### **Subtask 1.2 – Kickoff Meeting**

Consultant will attend and conduct a kickoff meeting for the project. During the meeting, the Consultant will present the agenda and conduct the meeting.

Consultant will prepare minutes for distribution to the meeting attendees.

#### **Deliverables:**

The following deliverables will be provided under this task:

- Monthly status reports and invoices.
- Kickoff agenda, presentation, and preparation of minutes.

### **Task 2 – MIT Plans Preparation**

In Task 2, the Consultant will start with the preparation of needed deliverables.

**Subtask 2.1** – Prepare draft MIT plan for deep injection wells IW-1, IW-2, IW-3, and IW-4 for submittal to the City and for review and comment. The MIT plan shall include provisions for conducting a video survey of the wells, casing pressure testing at a minimum test pressure of 150 psi, video and high-resolution temperature logging, and performance of a RTS at IW-1, IW-2, IW-3, and IW-4. Finalize the MIT plan based on review comments and submit the plan to the FDEP.

Respond to MIT plan requests for information (RFI) from the FDEP. This task includes response to an unlimited number of RFIs concerning the MIT plan.

**Deliverables:**

The following deliverables will be provided under this task:

- Preparation of DRAFT Plans to be submitted to the City.
- Preparation of Review Plans to be submitted to FDEP.

### **Task 3 – Technical Specifications and Bid Form Preparation**

In Task 2, the Consultant will continue with the preparation of needed deliverables.

**Subtask 3.1** – Prepare draft Technical Specifications (technical specifications and bid form) for the MIT work for submittal to the City for review comments. Finalize the Technical Specifications and submit them to the City.

The consultant will prepare an engineer's opinion of probable construction cost (EOPCC) during this effort for bidding purposes.

**Deliverables:**

The following deliverables will be provided under this task:

- Preparation of DRAFT technical specifications to be submitted to the City.
- Preparation of Final technical specifications to be submitted to the City.
- Preparation of a final EOPPC for bidding purposes.

### **Task 4 – Pre-Bid Meeting**

**Subtask 4.1** – The Consultant will prepare for and participate in a pre-bid meeting at the SRWWTP with the City and potential bidders for the project.

### **Task 5 - Bid-Phase Services**

**Subtask 5.1** – The Consultant shall participate in a pre-bid-site walk-down with City staff and potential bidders, assist in the preparation of addenda, assist in the technical evaluation of submitted proposals, and prepare a letter of Recommendation of Award to the City.

### **Assumptions and Limitations**

1. Reviews: City will review deliverables within a 2-week period.
2. Record Drawings and Existing Information

- a. Record drawings (As-Built) information for all existing facilities related to this work are assumed to be generally accurate, available, and readable in hard-copy and pdf form and shall be supplied to the Consultant.
  - b. Consultant will be entitled to reasonably rely upon the accuracy of the information provided by the City for performance of this work.
3. No surveying, subsurface and underground engineering, or geotechnical engineering services will be performed.
4. No civil, yard piping, landscape architecture, building architectural, components will be performed.
5. MIT of both deep injection wells will be bid as one project (i.e., the MIT of both wells will be covered in one set of Contract Documents).
6. This proposal does not include field services (observation of testing) or preparation of the MIT report for each well.
7. The Consultant will develop one EOPCC for bid development.

## **SCHEDULE**

The following table presents the proposed schedule for this Task Authorization.

Table 1. Proposed Schedule	
Activity/Task	Completion Timeline following NTP
Task 1 – Project Administration and Kickoff Activities	45 days
Task 2 – MIT Plans Preparation	60 days
Task 3 – Technical Specifications and Bid Form Preparation	80 days
Task 4 – Pre-Bid Meeting	100 days
Task 5 – Bid-Phase Services	120 days

**Exhibit B  
Compensation  
Mechanical Integrity Testing of Deep Injection Wells IW-1, IW-2, IW-3, and IW-4  
ESSD Project No. XXXXX  
City of Hollywood  
Department of Public Utilities**

Total compensation to the Consultant for the Scope of Services described in Exhibit A will be the lump sum amount of \$64,122.00.

A breakdown of Consultant's estimated fee to perform the work described in Exhibit A is presented in Exhibits B-1 through B-4 on the following pages.

## EXHIBIT B-1

### Mechanical Integrity Testing for Deep Injection Wells IW-1, IW-2, IW-3, and IW-4

Description	Amount
Direct Labor Costs	\$ 25,122
Other Direct Costs	\$ 1,000
Subcontractor's Fee	\$ 39,000
<b>Total Fee</b>	<b>\$ 65,122</b>

**EXHIBIT B-2**  
**LABOR COST ESTIMATE**  
**CITY OF HOLLYWOOD**  
**Mechanical Integrity Testing for Deep Injection Wells IW-1, IW-2, IW-3, and IW-4**

	CSM/PDO Vice President	PM/Sr. Eng  PM	Support Engineer III	Office Support Project Analyst III	Labor Hours	Labor Cost
Billing Labor Rate	\$359.07	\$309.57	\$220.80	\$139.76		
TASKS						
TASK NO. 1 - Project Administration and Kickoff Activities						
1.1 Project Administration and Coordination	2	10	16	4		
1.2 Kickoff Meeting	4	4	8	2		
Hour Subtotal	6	14	24	6	50	
Labor Cost Subtotal	\$2,154	\$4,334	\$5,299	\$839		\$12,626
TASK NO. 2 - MIT Plans Preparation						
2.1 MIT Plans Preparation	4	12	32	2		
Hour Subtotal	4	12	32	2	50	
Labor Cost Subtotal	\$1,436	\$3,715	\$7,066	\$280		\$12,496
TASK NO. 3 - Technical Specifications and Bid Form Preparation						
3.1 Technical Specifications and Bid Form Preparation	10	24	50	4		
Hour Subtotal	10	24	50	4	88	
Labor Cost Subtotal	\$3,591	\$7,430	\$11,040	\$559		\$22,619
TASK NO. 4 - Pre-Bid Meeting						
4.1 Pre-Bid Meeting	2	8	8	0		
Hour Subtotal	2	8	8	0	18	
Labor Cost Subtotal	\$718	\$2,477	\$1,766	\$0		\$4,961
TASK NO. 5 - Bid-Phase Services						
5.1 Bid-Phase Services	6	12	24	10		
Hour Subtotal	6	12	24	10	52	
Labor Cost Subtotal	\$2,154	\$3,715	\$5,299	\$1,398		\$12,566
TOTALS						
Total Labor Hours	28	70	138	22	258	
Total Labor Cost	\$10,054	\$21,670	\$30,470	\$3,075	\$65,269	\$25,122
TOTAL						\$25,122



**EXHIBIT B-3**

**OTHER DIRECT COSTS SUMMARY**

**Mechanical Integrity Testing for Deep Injection Wells IW-1, IW-2, IW-3, and IW-4  
DESIGN PHASE**

		UNIT	NO. OF UNITS	UNIT COST	TOTAL COST
1.0	COPYING AND PRINTING/TRAVEL				\$1,000
			SUBTOTAL OTHER DIRECT COSTS		\$1,000
2.0	SUBCONTRACTS				
	MCNABB HYDROGEOLOGIC CONSULTING	LS			\$39,000
			SUBTOTAL OTHER DIRECT COSTS		\$39,000
		TOTAL ODCS AND SUBCONTRACTS			\$40,000