

ADDENDUM NO. 1

CITY OF PORTLAND, OREGON CONTRACT NO. 19385

GROUNDWATER PUMPING STATION

This Addendum No. 1 to the Agreement for Professional Services, dated April 6, 1981, City Contract No. 19385, between the City of Portland, Oregon, and STRAAM Engineers, a Division of CRS Group Engineers, Inc., hereby authorizes STRAAM Engineers to provide the described work under the conditions and for the payment stated below.

Scope of Services

The scope of services is as follows:

A. Power Sales Negotiations and FERC Permit Applications

In accordance with Article II, Section 13(a) of the subject agreement, the Engineers will perform power sales negotiations or will assist with the City's performing power sales negotiations, and the Engineers will also prepare FERC permit applications according to Tasks 26 and 17 of the Proposal. The permit application work will be that related to securing FERC forms and processing and expediting them. Engineering data necessary for permitting is included in the work to be done under Sections 1, 2, and 3 of Article II of the agreement.

B. Power Generation Design and Construction Services

In accordance with Article III, Section 4(a) the Engineers will provide design and construction services related to a pumping station installation with hydroelectric generating capability included sufficient to provide a complete and working facility. These services include preparing and furnishing additional plans and specifications, providing general engineering services during construction and field staking, and providing an operation and maintenance manual and operator training. All of the above are beyond those services agreed and authorized to be provided for a single purpose pumping station.

C. Well Field Power Studies and Design

1. East Well Field Power Distribution Study

This study will include contacting Portland General Electric Company to provide cost of service information based upon projected usage at each well. Costs to provide a City-owned underground distribution system supplied from a single point of service at the groundwater pumping station, or from other

centralized points will also be determined and cost of service evaluated based upon the same well pump usage. Costs for direct burial and for a conduit and manhole system will be estimated. The costs will include cable capacity to serve the West Well Field, but not include costs for distribution within the West Well Field.

- 2. If the comparative study results in a recommendation that the City install the distribution system and the City accepts the recommendation, then if requested by the City, the following services will be provided.

The scope of services includes:

- (a) Construction plans and specification preparation for high voltage switchgear, cable terminations, and protection at the groundwater pumping station.
(b) Construction plans and specification to be included with the City's documents for the groundwater collection system. These will cover underground high voltage distribution facilities from the groundwater pumping station to the secondary terminals of each well pump station padmount transformer, including high voltage underground cable, dead front switching units, padmount transformers and related miscellaneous equipment.
(c) Advisory supervision during construction.
(d) Preparation of operation and maintenance manuals and training of City personnel.

D. East Well Field Well System Electrical Design

The well system electrical design will include: service entrance (whether from P.G.E. or a City-owned distribution system), pump motor controls including necessary enclosures and their appurtenances, six telemetered quantities or remote indication points per pump, station power failure and entry alarms and spares, lighting, heating, and a closed circuit telephone.

This will be based on a standard design applicable to all 16 stations containing one pump, regardless of horsepower. The services include design, drawings, and specifications to be included with the City's other construction documents as well as shop drawing review, construction services, preparation of operation and maintenance manual materials, and training of City personnel.

E. Discharge Structure Studies and Design

- 1. Hydropower Discharge Structure into Columbia River at Marine Drive and Northeast 158th Street is the project subject to this section of the Scope. The intent of this section is to provide the necessary design and construction engineering services required for a complete and operable structure which will receive water from the 66-inch diameter bulkhead on the groundwater collection main at N.E. 158th and Marine Drive and deliver water to the Columbia River.

2. The scope of services includes:

- (a) Design studies including power generation-related hydraulics, foundation analysis, water quality protection, flooding avoidance, and economic analysis of the most beneficial design, including inverted syphon or gravity flow structures with a point or dispersed discharge mechanism.
- (b) Coordination with Drainage District No. 1, Pacific Power & Light Company, Portland General Electric Company, Multnomah County, Oregon Department of Fish and Wildlife, and the U.S. Coast Guard.
- (c) Field surveys including hydrography.
- (d) Permit application preparation necessary to construct and operate the designed facility to discharge water to the Columbia River.
- (e) Construction plans and specifications preparation, contract awards.
- (f) Advisory supervision during construction.

F. Surge Tank Design

1. Surge tanks to be located at Lusted Hill on Conduits 2, 3, and 4 are the projects subject to this section of the Scope. The intent of this section is to provide the design and other necessary additional services, including preparing and submitting applications for all necessary permits and licenses, for construction of complete and working surge tanks on Conduits 2, 3 and 4 to meet the City's surge mitigation requirements, to be specified by the Engineers, for the City's groundwater pumping station.

2. The scope of services includes:

- (a) Field surveys for topography.
- (b) Construction plans and specifications preparation, contract awards for the surge tanks.
- (c) Advisory supervision during construction.
- (d) Resident inspection during construction.

G. Electrical Service Facility Design

1. The electrical service facility at the groundwater pumping station site is the project subject to this section of the Scope. The facility will include: 115 kv switches, 115 kv trans-rupsters, 115/4.16 kv power transformer, metal clad switchgear, metering, and other items mentioned in the preliminary design report as relating to the facilities for alternating current between the 115 kv transmission line and the distribution feeders. It is the intent of this section to provide the design and other necessary additional services, including preparing and submitting applications for all necessary permits and licenses, for construction of a complete and working electrical service facility for adequate service to the City's groundwater pumping station and water well system.

2. The scope of services includes:

- (a) Construction plans and specifications preparation, contract awards for the electrical service facility.
- (b) Advisory supervision during construction.
- (c) Preparation of materials for the operation and maintenance manual and training of City personnel.
- (d) Resident inspection during construction.

General

- a. The foregoing services are a supplement to Article II, Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, and 13 of the Agreement.
- b. The time of completion for the services covered by this Addendum No. 1 is:

<u>Item</u>	<u>Time</u>
A. Power Sales Negotiations and FERC Permit Applications	Indeterminate
B. Power Generation Design and Construction Services	January 1, 1984; this voids Art. II, Sec. 16(b)
C. Power Distribution System	
1. Study	February 8, 1982
2. Distribution System Design Documents	March 15, 1982
D. East Well Field Well System Electrical Design Documents	March 15, 1982
E. Discharge Structure completion shall be such that structure is complete and operable on...	October 1, 1983
F. Surge Tanks Completion shall be such that structures are complete and operable on...	October 1, 1983
G. Electrical Service Facility Completion shall be such that installation is complete and operable on...	October 1, 1983

Remuneration

For the professional services above, remuneration will be the following sums in addition to those named in the "Pumping Station" column on page 11 of the subject agreement:

Special Service for Power Sales Negotiations and FERC Permit

The type and extent of these special services cannot be determined at this time. However, the Engineers agree to assist the City and perform these special services as the City may request, all in order to accomplish the objective of providing the facilities desired. The Engineer will be remunerated under Section 4.a.(3) of Article III. The upper limit of these services are based on payroll costs plus expenses as defined in Section 4.a.(3) of Article III with a provisional cost limit of \$60,500. When 50 percent and again when 75 percent of the \$60,500 provisional cost limit are incurred, the Engineer will notify the Client and advise him of the estimated cost to complete this Special Service. The Client and the Engineer will agree on the amount of remaining services to be performed and a mutually agreeable cost limit will be set for the balance of these Special Services.

Phase II, Design and Construction

Lump Sum Fees

Phase II Design for Power Generation	\$ 65,000*
Well Field Power Studies	3,900
Well Field Power Distribution Design	14,500
E. Well Field System Electrical Design	9,200
Discharge Structure, Including Studies	36,600
Electrical Service Facilities	24,400
Surge Tanks	<u>7,000</u>
Total Lump Sum	\$160,600

(*This is the difference of lump sums shown on page 11 of the subject agreement)

Phase III, Construction

(a) General Engineering Services and Field Staking

Power Generation Facilities	\$ 26,100*
Well Field Power Distribution System	3,600
E. Well Field System Electrical Installations	4,400
Discharge Structure	4,900
Electrical Service Facilities	3,800
Surge Tanks	<u>2,600</u>
Estimated Cost	45,400
Fixed Fee	<u>6,800</u>
Maximum Cost Plus-Fixed-Fee	52,200

(*This is the difference of estimated costs shown on page 11 of the subject agreement)

(b) Operation and Maintenance Manual and Training

Power Generation Facilities	\$ 11,200*
Well Field Power Distribution System	2,500
E. Well Field System Electrical Installations	2,600
Electrical Service Facilities	<u>3,000</u>
Estimated Cost	19,300
Fixed Fee	<u>3,100</u>
Maximum Cost Plus-Fixed-Fee	22,400

(*This is the difference of estimated costs shown on page 11 of the subject agreement)

(c) Resident Inspection*

Discharge Structure	\$ 31,400
Surge Tanks	9,400
Electrical Service Facilities	<u>9,400</u>
Estimated Cost	50,200
Fixed Fee	<u>7,400</u>
Maximum Cost Plus-Fixed-Fee	\$ 57,600

(*This estimate is based on 32 man-weeks total on-site construction inspection.)

IN WITNESS WHEREOF, the parties hereto have caused this Addendum No. 1 to Agreement dated April 6, 1981, to be executed in duplicate by their respectively authorized officers or representatives.

CITY OF PORTLAND

Date _____

By _____
Mayor

Date _____

By _____
Auditor

STRAAM Engineers, a Division of
CRS Group Engineers, Inc.

Date January 25, 1982

By Gilbert R. Meigs
Gilbert R. Meigs
Senior Vice President

ORDINANCE NO. 152870

An Ordinance amending Contract No. 19385 with STRAAM Engineers, to provide for additional professional services in the amount of \$353,300 for the Groundwater Development Program, Bureau of Water Works, transferring \$168,600 within the Water Fund, authorizing the drawing and delivery of warrants, providing for acceptance, and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds:

1. The Water Bureau entered into Contract No. 19385 with STRAAM Engineers, a division of CRS Group Engineers, Inc., to provide professional services for the study and design of the pumping station, and preliminary feasibility study and design of a hydroelectric power generating unit at the pumping station, for the Groundwater Development Program.
2. The preliminary design report by STRAAM Engineers finds power generation feasible and cost-effective, and recommends the development of hydroelectric power generating facilities in conjunction with the groundwater pumping station.
3. Consulting services are necessary for final design and construction services as well as power sales negotiation and FERC license applications for the hydroelectric facility.
4. Additional consulting services are necessary for Well Field Power Studies and Design, Discharge Structure Studies and Design, Surge Tank Design, and Electrical Service Facility Design for the pump station.
5. STRAAM Engineers can provide these professional services as outlined in Addendum No. 1, similar to the copy attached to the original only, marked Exhibit "A", and by this reference made a part hereof.
6. It is necessary to transfer \$168,600 within the Water Fund from Contingency, BUC #17500155, Object #710, to the Groundwater Development Program, BUC #18600374, Project 3700, Object 210, Professional Services, to provide for final design and construction services and power sales negotiations and preparation of FERC permit applications for the hydroelectric generating facility at the pump station, during FY '81-82.
7. This amendment has been recommended by the Water Bureau Administrator and approved by the Commissioner-in-Charge.

ORDINANCE No.

NOW, THEREFORE, the Council directs:


- a. Contract No. 19385 with STRAAM Engineers to provide professional services for the Groundwater Development Program is amended to provide for additional professional services as outlined in Exhibit "A".
- b. \$168,600 is transferred within the Water Fund from Contingency BUC #17500155, Object 710, to the Groundwater Development Program, BUC #18600374, Project 3700, Object 210, Professional Services.
- c. The Mayor and Auditor are hereby authorized to draw and deliver warrants payable to STRAAM Engineers, a division of CRS Group Engineers, Inc., chargeable to the 1981-82 Budget, Water Fund BUC 18600374, project 3700, object 210 when demand is presented and approved by proper authorities.
- d. This Addendum shall be in force and effect when filed with the City Auditor after its acceptance by the Contractor.

Section 2. The Council declares that an emergency exists, because a delay in authorizing this amendment may result in additional expense, and will unnecessarily deprive the City of the benefits of contract completion at an early date; therefore, this Ordinance shall be in force and effect from and after its passage by the Council.

Passed by the Council, FEB 18 1982

Mayor Ivancie
February 8, 1982
M. Walker:nk
17500155/18600374

Attest:


Auditor of the City of Portland

Calendar No. 417

ORDINANCE No. 152870

Title

An Ordinance amending Contract No. 19385 with STRAAM Engineers, to provide for additional professional services in the amount of \$353,300 for the Groundwater Development Program, Bureau of Water Works, transferring \$168,600 within the Water Fund, authorizing the drawing and delivery of warrants, providing for acceptance, and declaring an emergency.

THURSDAY

FEB 11 1982

Filed _____

GEORGE YERKOVICH
Auditor of the CITY OF PORTLAND

By *George C. Smith*
Deputy

THE COMMISSIONERS VOTED AS FOLLOWS:		
	Yeas	Nays
JORDAN	1	
LINDBERG	1	
SCHWAB		1
STRACHAN	1	
IVANCIE	1	

FOUR-FIFTHS CALENDAR	
JORDAN	
LINDBERG	
SCHWAB	
STRACHAN	
IVANCIE	

INTRODUCED BY
MAYOR IVANCIE

NOTED BY THE COMMISSIONER
Affairs
Finance and Administration FJI /SK
Safety
Utilities
Works

BUREAU APPROVAL
Bureau: WATER WORKS
Prepared By: M. Walker:nk Date: February 8, 1982
Budget Impact Review: <input type="checkbox"/> Completed <input checked="" type="checkbox"/> Not required
Bureau Head: <i>[Signature]</i> Carl Goebel, Administrator

CALENDAR	
Consent	Regular <input checked="" type="checkbox"/>

NOTED BY
City Attorney
City Auditor
City Engineer