

EXHIBIT "A"
AGREEMENT FOR ENGINEERING SERVICES
BETWEEN THE CITY OF PORTLAND
AND L.R. SQUIER ASSOCIATES, INC.
FOR STORMWATER DETENTION SITE STUDY

THIS AGREEMENT, made and entered into on the _____ day of _____, 1982, by and between the CITY OF PORTLAND, hereinafter referred to as "Owner", "you", "your", or "City" and L.R. Squier Associates, an Oregon Corporation authorized to provide consulting engineering services in Oregon, hereinafter referred to as "Engineer", "we", "us", "our", or other first person pronoun.

WITNESSETH:

WHEREAS, Owner has determined it needs to investigate thirty-three proposed stormwater detention sites, all located in southwest Portland (refer, Attachment A). Existing roadway fills would be utilized to temporarily pond stormwater run-off. The stored water would be slowly released in such a manner as to reduce peak flows downstream. To accomplish this, most of the existing culverts through the embankment fills would be modified as follows: the discharge capacity at 23 sites would be reduced; three sites would require culvert replacement. Culverts would be added at two sites. Four sites would require culvert inlet improvement. One site would have no culvert change.

WHEREAS, Owner has decided to engage a geotechnical engineering consultant to perform the engineering services associated with the project, and to accomplish the following study goals:

1. Assess stability of existing roadway fills and natural slopes in the reservoir rim as a result of water detention. Assess impact of ponded water on private property, including structures along the reservoir rim.
2. Recommend stabilization measures where required.
3. Recommend culvert installation methods.
4. Recommend methods of improving culvert inlet to help prevent clogging.

Engineer has available and offers to provide personnel and facilities necessary to accomplish the study goals within the required time.

NOW, THEREFORE, Owner and Engineer Agree as Follows:

I. Scope of Engineering Services

We agree to perform those services which are described as follows:

A. Planned Engineering Services

We agree to perform those planned tasks described in Attachment "B" entitled, "Scope of Engineering Services for Stormwater Detention Site Study", dated _____.

B. Additional Engineering Services

Additional engineering work related to the project, but not covered in Attachment "B" may be needed during performance of this agreement. If additional work is deemed desirable, it is intended that such work be classified as Additional Engineering Services.

II. Authorization, Progress and Completion

We will not proceed with any work described in Attachment "B", Scope of Engineering Services, until we receive written notice to proceed from you. The notice to proceed will be sent to us after we submit the signed contract and certificate of insurance to your City Auditor and these documents have been approved as to form by your City Attorney, and signed by your Commissioner in charge.

The notice to proceed shall set forth an authorized date of commencement. The work schedule presented on Attachment "C" shows that Phase I studies would begin with an investigation of four detention sites for a Fanno Creek tributary, designated DS-14 through DS-17. After completion of the Phase I work items, as identified on the standardized forms (refer, Attachment "D") we would review our preliminary findings with the City Bureau Staff for the purpose of confirming our approach to work and, also, that the information obtained satisfies Bureau requirements. At this conference, changes could be worked out to our approach, if necessary, and the investigation continued to completion to the satisfaction of the Bureau.

We anticipate that the Phase I investigation would be completed and ready for Bureau review/conference twelve weeks after the date of commencement. For the Phase II investigations, we have scheduled six weeks, with an additional two weeks designated as a time for Bureau review/consultation, followed by a time for finalization of the report. We presently anticipate that we can complete the Phase I and Phase II investigations (Planned Engineering Services) on or about August 16, 1982, provided the commencement date is close to April 1, 1982.

For Additional Engineering Services the authorization by your City Engineer shall be in writing and shall include the work to be done, and a mutually acceptable basis for compensation, cost ceiling, and schedule for commencing and completing the work.

III. Compensation and Payment

You agree to pay, and we agree to accept, compensation for Planned Engineering Services and Additional Engineering Services in accordance with the schedules in Attachment "E". Cost ceilings for Additional Engineering Services shall be mutually agreed upon and set forth in the written authorization for additional services.

Payment for services enumerated in Attachment "B", Scope of Engineering Services shall be as follows. We will submit one invoice to you for approval each month. The invoice shall be for the value of all work done during the billing period. Payment shall be made on the invoice 30 days after the date of receipt.

An account will become delinquent thirty days after the date of receipt. A late charge will be added to delinquent accounts at the rate of one and one-half percent (1½%) for each 30 days delinquent.

IV. Liability and Insurance

A. General Liability

We shall assume responsibility for all risks in connection with the work and waive all claim against you for loss or damage arising out of the performance of the work and agree to indemnify, save harmless, and defend you from and against all costs and losses and all claims for damages or injuries to property or persons that may be sustained by anyone on account of our performance and that of our agents, employees, or subcontractors for work agreed to. Such hold harmless and indemnity shall be limited to that covered by our comprehensive general liability insurance and not otherwise.

We shall carry public liability and property damage insurance which will protect us and you from any and all claims for damage or personal injury including death, which may arise from operations under this contract including all operations of subcontractors. Such insurance shall provide coverage for not less than the following:

For Personal Injury:	\$100,000. for one claimant \$300,000. from one occurrence
For Property Damage:	\$300,000. from one occurrence

In lieu of the foregoing, a single limit public liability policy for personal injury and property damage will be accepted in the sum of \$300,000.

Such insurance shall be without prejudice to coverage otherwise existing, and shall name as additional insured you and all other governmental bodies with jurisdiction in the area involved in this project, their officers and employees, and shall further provide that this policy shall not be terminated or be cancelled prior to the completion of this contract without thirty (30) days written notice by certified mail to your Auditor (which notice shall be subject to the approval of your City Attorney); said notice to commence to run from the date notice is actually received at the said office.

Notwithstanding the naming of additional insured, the said policy shall protect each insured in the same manner as though a separate policy had been issued to each; but nothing herein shall operate to increase the insurer's liability as set forth elsewhere in the policy beyond the amount or amounts for which the insurer would have been liable if only one person or interest had been named as insured.

A certificate evidencing such insurance together with the proper endorsement shall be filed with your City Auditor and shall be subject to the approval of your City Attorney as to the adequacy of protection.

B. Profession Liability and Limitation Thereof

This paragraph relates only to Profession Liability and not General Liability. In performing our professional services, we will use that degree of care and skill ordinarily exercised under similar circumstances by members of our profession in this locale and no other warranty, either expressed or implied, is made in connection with our rendering of professional services. Should we or any of our agents or employees be found to have been negligent in the performance of professional services from which you sustain damages, you will agree to limit liability and costs of defense to an aggregate amount not to exceed \$50,000. or our fee (as computed under Article III, Compensation and Payment), whichever amount is greater.

5. General Conditions For Services

The Engineer and Owner agree that services shall be performed in accordance with the General Conditions set forth herein.

A. Equal Employment Opportunity

We agree to perform our services in compliance with Chapter 3.100 of the Code of the City of Portland, including certification as an EEO affirmative action employer by the Contract Compliance Division of the Bureau of Financial Affairs.

B. Worker's Compensation

We are protected by Worker's Compensation Insurance (and/or Employer's Liability Insurance) as required by the applicable Oregon statute.

C. Subcontracts

We shall be entitled, to the extent determined appropriate by us, to subcontract portions of the work to be performed under this project which do not involve professional engineering services.

Subcontracts for professional engineering services for work on this project shall not be made without prior written approval from you. This agreement shall constitute the approval for a subcontract for the services of the following professional engineering firm.

<u>Subconsultant</u>	<u>Description of Work</u>	<u>Compensation</u>
Bolyvong Tanovan (Robert E. Meyer Consultants, Inc.)	Hydraulic/Inlet Design	As per Article III

We shall require subcontractors and/or subconsultants to perform services in compliance with Chapter 3.100 of the Code of the City of Portland.

D. Samples

All samples of soil and rock will be discarded 30 days after submission of our final report unless you advise us to deliver the samples to you, charges collect, or to store them for an agreed storage charge.

E. Ownership of Documents

Drawings, specifications, reports, programs, manuals or other documents produced under this agreement shall be the property of the owner.

F. Other Provisions

Neither party shall hold the other responsible for damages or delay in performance caused by acts of God, strikes, lockouts, accidents or other events beyond the control of the other or the other's employees and agents.

It is understood that we have not been retained or compensated to provide design and construction review services relating to the safety precautions of any contractor or subcontractor who may work on the project arising out of this study.

Any opinion of construction costs prepared by us represents our judgment as design professionals and is supplied for your general guidance. Since we have no control over the cost of labor and material, or over competitive bidding or market conditions, we do not guarantee the accuracy of our opinion as compared to contractor bids or actual cost to the owner.

VI. Integration

This agreement represents the entire understanding of Owner and Engineer as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This agreement may not be modified or altered except by mutual agreement in writing signed by both parties.

VIII. Termination

This agreement may be terminated by either party by seven (7) days written notice in event of substantial failure to perform in accordance with the terms of the agreement by the other party through no fault of the terminating party. If this agreement is terminated we shall be paid for services performed to the termination notice date, including reimbursable expenses due, plus termination expenses. Termination expenses are defined as 15% of our total fee for services earned to the time of termination to account for our costs of rescheduling adjustments, reassignment of personnel, and related costs incurred due to termination. Total fee paid plus termination expenses shall not exceed the cost ceiling as set forth in this agreement or modified by authorizations for Additional Engineering Services.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in triplicate the date and year first above written, pursuant to Ordinance No. _____.

CITY OF PORTLAND
MEMORANDUM AS TO FORM

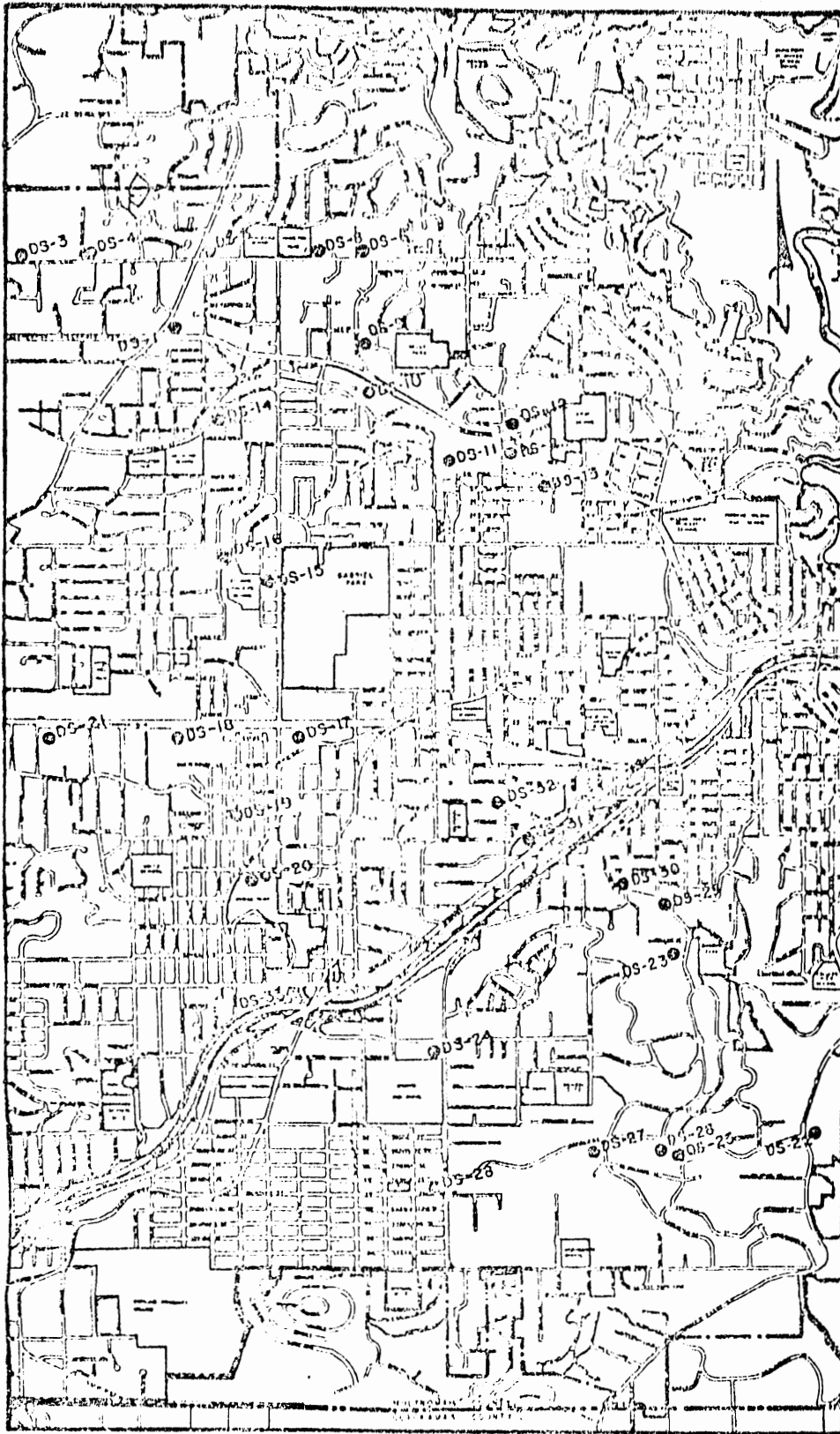
Approved as to form: *P. Thomas*
CITY ATTORNEY
City Attorney

by: _____
Commissioner of Public Works

Approved _____
City Engineer

L.R. SQUIER ASSOCIATES, INC.

BY *L. Radley Squier*
L. Radley Squier, President



LEGEND:

● = DETENTION SITE LOCATIONS

STORM WATER DETENTION SITES
ATTACHMENT - "A"

ATTACHMENT "B"
SCOPE OF ENGINEERING SERVICES FOR
STORMWATER DETENTION SITE STUDY
MARCH __, 1982

The engineering services to be performed in accordance with Exhibit "A" of this agreement are limited to those tasks described below.

The geotechnical investigation, addressing the project goals detailed in Exhibit "A", would be accomplished in two phases. Phase I is typified by the study of available information and visual reconnaissances/inspections. Where questionable, potentially unfavorable site conditions are encountered, a second phase, Phase II investigation, would be undertaken to obtain more detailed information for analyses and evaluation. A summary outline of work items for Phase I and Phase II investigations is presented in Table I. The two phases are described in detail following Table I.

TABLE I: OUTLINE OF INVESTIGATIONS

- A. Phase I Investigations
 - 1. Map Geology of Basins
 - 2. Reconnaissance/Identify Geologic Hazards
 - a) Detention "reservoir" rim
 - b) Road embankment
 - 3. Examination of Culvert and Inlet Area
 - 4. Photography
 - a) Critical structures/features
 - b) Detention "reservoir" rim slopes
 - c) Road embankment
 - 5. Surveys by Bureau Staff
 - a) Locate new structures
 - b) Slope profiles in critical areas
 - 6. Research of Available Information/Interviews
 - a) Local residents
 - b) Bureau of Maintenance
 - c) Bureau of Streets and Structures
 - d) Multnomah County - Public Works
 - 7. Prepare Preliminary Report
- B. Review Phase I Results With Bureau Staff
- C. Phase II Investigations
 - 1. Additional Survey(s), as necessary, by Bureau Staff
 - a) Topographical
 - b) Profile

2. Subsurface Explorations
 - a) Borings selection of methods will
 - b) Hand auger holes be based on site access and
 - c) Backhoe test pits investigation requirements
 3. Laboratory Tests
 4. Engineering Studies
 - a) Stability Analyses
 - i) evaluate stability of road fills/natural rim slopes
 - ii) design stabilization measures, as required
 - b) Evaluate/recommend methods to install new culverts
(sites: DS-1, DS-4, DS-25, DS-26 and DS-32)
 - c) Develop innovative culvert and inlets to prevent plugging (conceptual),
including the impact of inlet maintenance and scheduling
 5. Prepare Report
- D. Review Phase II Results With Bureau Staff
- E. Finalize/Submit Phase I and Phase II Reports

Phase I Investigations

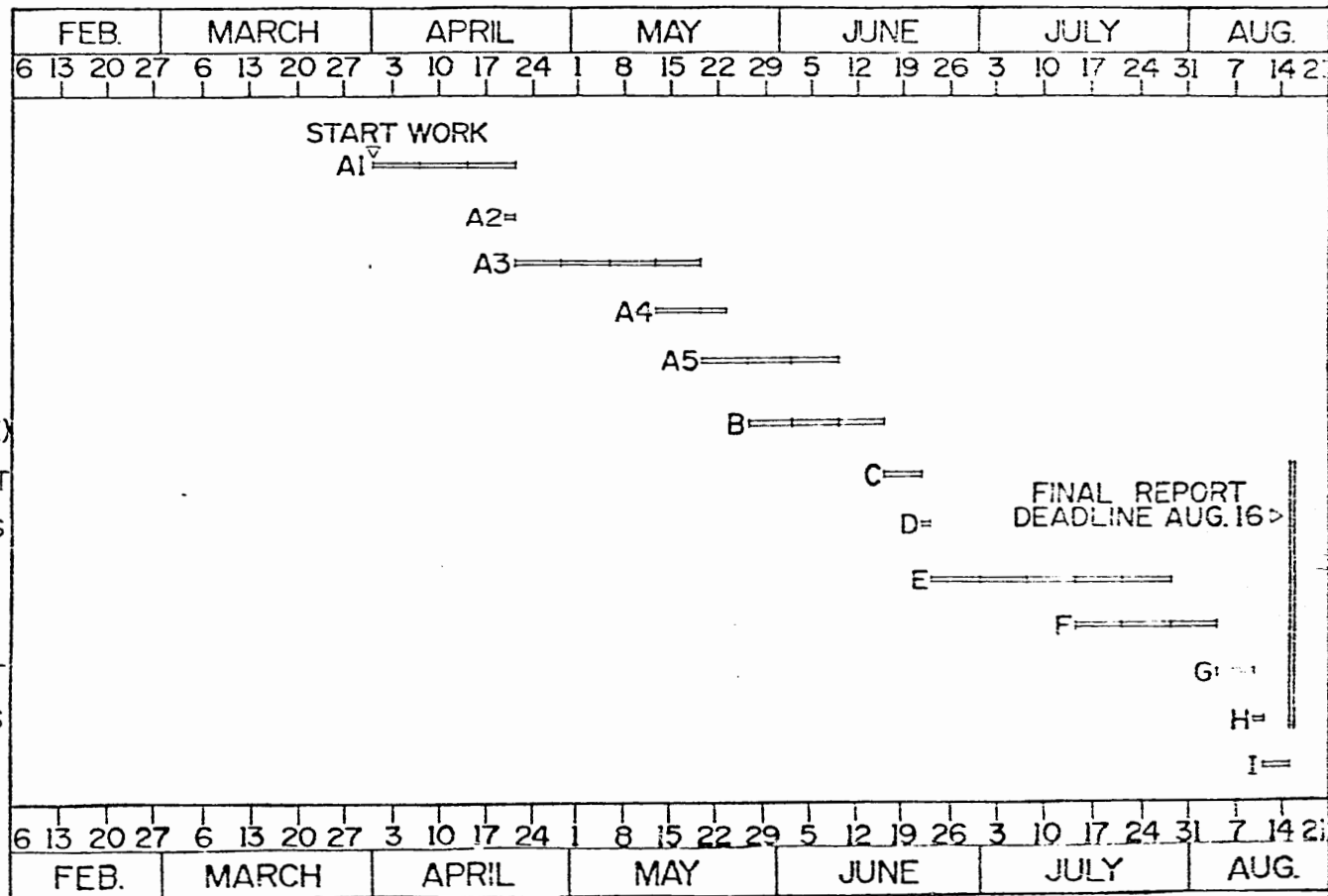
The Phase I investigations would consist of visual reconnaissances of each detention site to: 1) map the pertinent geology of the basins; 2) identify geologic hazards in connection with both the road embankment and the stormwater detention area; and 3) examine the existing culvert and respective inlet area. Available information would be researched concerning historic water levels and natural ground/embankment performance. The Phase I work would include surveys made to locate structures/features not currently identified on Bureau maps, and to provide ground surface profiles in critical areas. We would photograph critical features for a permanent record.

The information gathered in Phase I would be placed on standard forms consisting of three 11 x 17-inch pages, with the evaluation of the embankment on Sheet 1, the evaluation of the detention "reservoir" rim on Sheet 2, and a presentation of select photographs illustrating critical features on Sheet 3, refer, Attachment "D". The completed forms combined with our experience in the evaluation of water detention-type structures and the stability of natural slopes will allow us to designate those detention sites that should be subjected to more detailed investigation in Phase II. The investigation of most of the sites would conclude with the Phase I investigation. However, at least the five (5) detention sites requiring additional or replacement culverts would be included for more detailed Phase II investigations.

Phase II Investigations

Phase II investigations would be performed at sites selected during Phase I for further evaluation. Included in this phase would be borings made at those sites proposed for replacement of existing culverts or requiring additional culverts. Elsewhere, subsurface conditions may be explored using backhoe test pits, hand auger holes and similar. Laboratory testing would generally consist of moisture content determinations, with shear strength testing performed as required for stability analyses. Possibly more detailed topographic information would be obtained by field survey, for critical slopes, slumps, and man-made fill observed during Phase I. Also,

surveys may be required near structures potentially impacted by ponded water, and similar. Office work would consist of engineering studies that would include stability analyses of critical slopes and for stabilization measures (as required); and an assessment of subsurface conditions at those sites requiring new culvert construction to evaluate/recommend the appropriate type of culvert installation technique. We would consider and recommend the best culvert inlet design to minimize plugging. All work would be summarized and presented in Phase I and Phase II reports, which collectively would constitute a Final Report. Ten copies of the Final Report plus a set of originals (including reproducibles of all figures) will be submitted to the City upon completion.



ATTACHMENT C
WORK SCHEDULE

163072

EVALUATION OF EMBANKMENT

DS-

	CONDITION			REMARKS
	HIGH	MOD.	LOW	
A PAVEMENT				
1 Cracking/surface irregularities				
2 Erosion at shoulder				
B ROAD EMBANKMENT				
1 Settlement				
2 Lateral Movement				
3 Erosion				
4 Stability				
a. Upstream slope				
b. Downstream slope				
C CULVERT				
1 Structural Deterioration				
2 Improper Functioning				
3 Debris Problem				
4 Siltation				

PLAN-EMBANKMENT

MAX. SECTION-EMBANKMENT

CRITICAL FEATURES

PROPOSED CULVERT:
 Design Pondered Water Level _____
 Detention Time _____

EXISTING CULVERT: Type and Size _____
 Estimated Maximum Historic Water Level _____

SUMMARY OF CRITICAL FEATURES OBSERVED: _____

RECOMMENDATION: PHASE II STUDIES -- YES NO

ATTACHMENT D

EVALUATION OF DETENTION "RESERVOIR" RIM

DS-

HAZARD REMARKS

HIGH MOD LOW

A R/W SLOPE STABILITY
1. Non-critical Area (Note 1)

- Creep
- Incipient slump
- Existing slumps(s)
- Erosion

2. Critical Area (Note 1)

- Creep
- Incipient slump
- Existing slumps(s)
- Erosion

3. Potential hazard on private property/structures

4. Steep slopes (Note 2)

B SPRING ACTIVITY

C DEBRIS IN RESERVOIR

OTHER CRITICAL FEATURES:

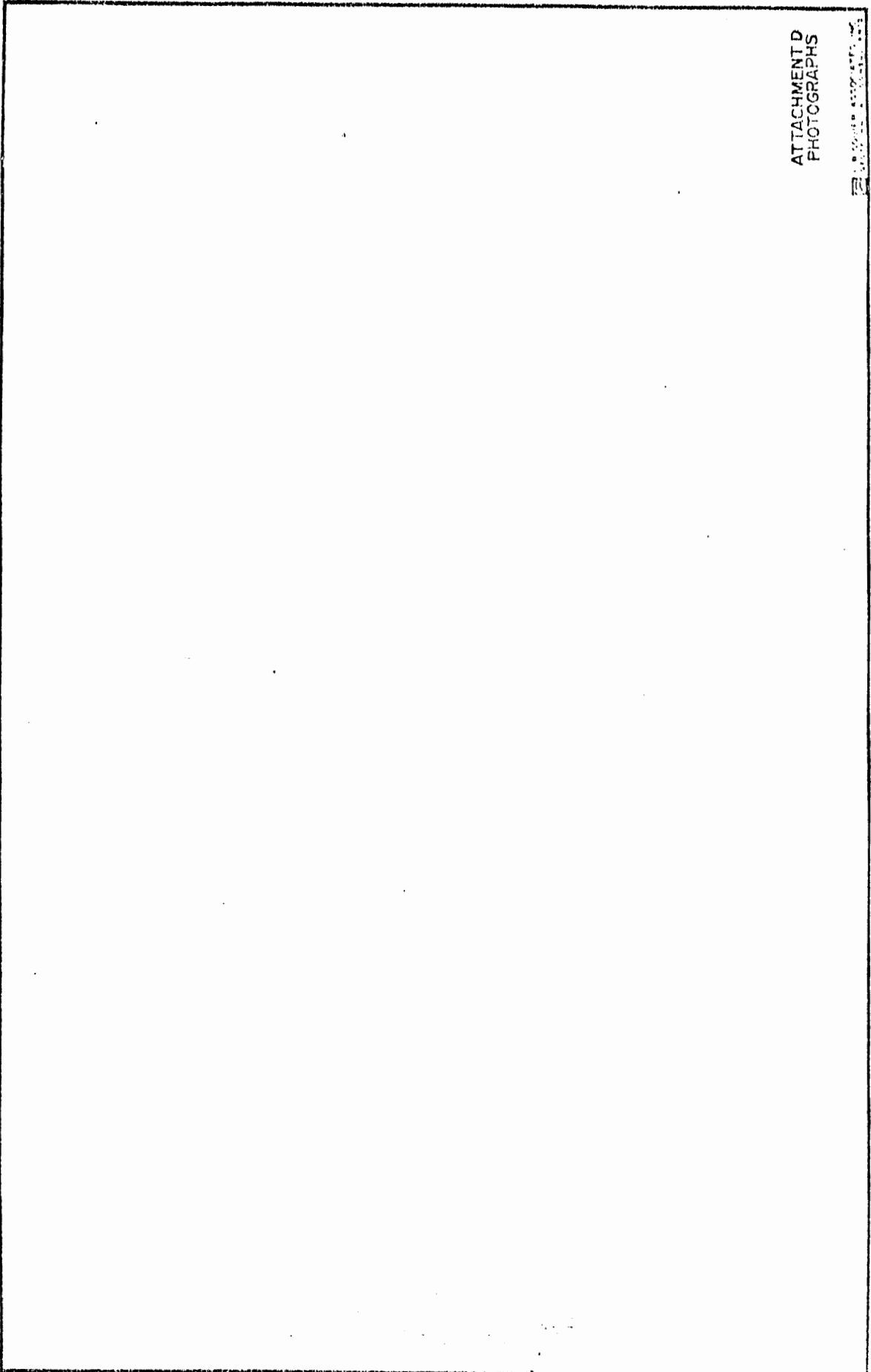
Describe

PLAN

ATTACHMENT D

CROSS SECTION(S)

- NOTES
- 1. Non-critical Area - private property (undeveloped)
 - 2. Critical Area - private property (developed)
 - 3. "Steep slopes" refers to slopes steeper than 1.5H:1V



ATTACHMENT D
PHOTOGRAPHS

Sheet 3 of 3

ATTACHMENT "E"
 COMPENSATION FOR ENGINEERING SERVICES
 STORMWATER DETENTION SITE STUDY
 MARCH __, 1982

Compensation for services provided under Article I, Scope of Engineering Services (Exhibit "A"), shall be in accordance with the method described in this exhibit and the specific amounts shown herein or as may be later mutually agreed to.

Part I: Planned Engineering Services

Compensation for the Engineering Services listed in Attachment "B" shall be on a time-material basis with an agreed maximum fixed price. The firm fixed price would include professional services, reimbursable expenses and the cost of outside services as outlined below:

A. Firm Fixed Price

<u>Detention Sites</u>	<u>Agreed Fixed Price</u>
DS-1 through DS-33	\$ 67,000.00

Certain assumptions have been made in the calculation of the fixed-price fee as follows.

The City would provide all field survey services, as required, including but not limited to: 1) location surveys of new structures presently not shown on the Bureau topographic maps; 2) field surveys of critical geologic features, i.e., landslides or slumps; 3) profile mapping of steep slopes; and 4) spot elevations of maximum ponded water levels in the detention basin rims. It is important in the work schedule and the budget estimate that the surveying services provided by the City be accomplished in a timely manner.

It is anticipated that most of the site investigations would conclude with the Phase I work. For purposes of estimating Phase II costs, we have assumed the following: 1) a drilled boring at each of 5 detention sites requiring additional or replacement culverts, 2) up to 10 detention sites would require subsurface explorations/office studies to investigate/assess "critical" ground conditions, i.e., slope stability, erosion and similar.

B. Hourly Labor Cost

The hourly labor cost shall be the total number of hours worked on the job by each employee times the appropriate billing rate. These rates are as follows:

<u>Title</u>	<u>Cost per hour</u>
Staff Consultant (Principal-in-Charge)	\$60.00
Project Engineer	44.00
Staff Engineer	34.00
Project Geologist	39.00
Technical Staff	29.00
Clerical	19.50

C. Reimbursable Expenses

Expenses other than salary costs that are directly attributable to our professional services are invoiced at our cost plus 5 percent. These expenses include such items as travel expenses, long distance telephone charges, use of personal and rental cars, piezometers, and other instruments, special fees and permits, premiums for additional or special insurance where required, and similar.

D. Outside Services

Where borings and other explorations and tests are required which we cannot perform, we will engage a contractor(s) experienced in this work, and will invoice you for the contractor's services plus 10 percent.

Part 2: Additional Engineering Services

Compensation for the engineering services requested beyond the scope of services, indicated in Attachment "B" and in Part I of this exhibit, shall be an hourly labor cost, plus reimbursable expenses, plus the cost of outside services.

A. Hourly Labor Cost

The hourly labor cost shall be the total number of hours worked on the job by each employee times the appropriate billing rate. These rates are as follows:

<u>Title</u>	<u>Cost per hour</u>
Staff Consultant (Principal-in-Charge)	\$60.00
Project Engineer	44.00
Staff Engineer	34.00
Project Geologist	39.00
Technical Staff	29.00
Clerical	19.50

B. Reimbursable Expenses

Reimbursable expenses shall be invoiced as in Part I, Paragraph C. in this schedule.

C. Outside Services and Laboratory Services

Outside services shall be invoiced as in Part I, Paragraph D. in this schedule.

Any laboratory tests performed using our equipment and personnel will be billed at either (1) the charge for labor, as computed under Part 2, Paragraph A of this schedule for each man hour of laboratory testing, or (2) negotiated unit prices. The method of invoicing and the expense ceiling will be set forth in your written authorization for additional services.

Part 3: Additional Stormwater Detention Sites

We understand that additional stormwater detention sites may be required by you and that such sites will be investigated utilizing the Phase I/Phase II approach described in Attachment "B". The compensation for the engineering services would be on a time and materials basis, as described in Part 2 above, with a fixed price ceiling. In addition, surveys performed by the City will be required as described in Part 1.

One detention site that you are presently considering is the Kelly Creek basin, located to the east of S.E. 162nd and immediately south of S.E. Foster Road. Kelly Creek flows through two culverts in the S.E. Foster Road embankment and into Johnson Creek on the north. The Kelly Creek basin has areas of questionable stability and we anticipate performing both Phase I and Phase II investigations at the site. The price ceiling for engineering services to investigate the Kelly Creek basin is \$7,500.00, providing that the work is performed concurrently with the "Planned Engineering Services", and that the results are included together with the other 33 detention sites in the Phase I and Phase II reports. Investigation of the Kelly Creek basin will not commence without your prior authorization.

ORDINANCE No. 153072

An Ordinance authorizing a contract with L. R. Squier, Inc., a professional engineering corporation, to provide geotechnical services in connection with the Geotechnical Investigation of Stormwater Detention Sites to the Bureau of Sanitary Engineering, for a sum not to exceed \$74,500, authorizing the drawing and delivery of warrants, and declaring an emergency.

The City of Portland ordains:

Section 1. The Council finds:

1. An investigation by consulting engineering specialists is necessary to determine the stability of a number of existing roadway fills and natural slopes in the rim of the detention site as a result of this water detention, recommend stabilization measures where required, and other items as identified in the attached agreement marked Exhibit "A".
2. That proposals for professional engineering services have been received and reviewed by the Bureau Staff Committee and the Consultant Selection Committee.
3. The consultant selection process has been conducted in accordance with City Code requirements contained in Chapter 5.68.
4. The Consultant Selection Committee recommends the L. R. Squier, Inc., 4255 Oakridge Road, Lake Oswego, Oregon 97034, be retained for performance of said engineering services, and the Public Works Administrator and the Commissioner of Public Works concur with the recommendation.

NOW, THEREFORE, the Council directs:

- a. The Commissioner of Public Works and the Auditor hereby are authorized to enter into a contract with L. R. Squier, Inc. to provide the geotechnical services described in Section 1 for a total cost not to exceed \$74,500, said contract shall be in accordance with the form of agreement attached to the original only of this Ordinance, marked Exhibit "A", and by reference made a part of this Ordinance.
- b. The Mayor and the Auditor hereby are authorized to draw and deliver warrants payable to L. R. Squier, Inc., chargeable to the 1981-82 Budget; Sewage Disposal Fund, Bureau of Sanitary Engineering Division, RU 146, Object Code 210, when demand is presented, approved by the proper authorities.

ORDINANCE No.

Section 2. The Council declares that an emergency exists because a delay in proceeding with the contract may result in additional expense because more foliage will be on the slopes and therefore impede the investigation of the slopes; therefore, the Ordinance shall be in force and effect from and after its passage by the Council.

Passed by the Council, APR 7 1982

Commissioner Mike Lindberg
March 24, 1982
Dave Singleterry:es
BUC No. 14621415

Attest:


Auditor of the City of Portland

Calendar No. 923

ORDINANCE No. 153072

Title

An Ordinance authorizing a contract with L. R. Squier, Inc., a professional engineering corporation, to provide geotechnical services in connection with the Geotechnical Investigation of Stormwater Detention Sites to the Bureau of Sanitary Engineering, for a sum not to exceed \$74,500, authorizing the drawing and delivery of warrants, and declaring an emergency.

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

FOUR-FIFTHS CALENDAR	
JORDAN	
LINDBERG	
SCHWAB	
STRACHAN	
IVANCIE	

Filed APR 2 1982

GEORGE YERKOVICH
Auditor of the CITY OF PORTLAND

By *Gordon*
Deputy

INTRODUCED BY
Commissioner Mike Lindberg

NOTED BY THE COMMISSIONER
Affairs
Finance and Administration
Safety
Utilities
Works Public Works <i>ML/m</i>

BUREAU APPROVAL
Bureau: Sanitary Engineering
Prepared By: Dave Singleterry Date: 3/24/82
Budget Impact Review:
<input checked="" type="checkbox"/> Completed <input type="checkbox"/> Not required
Bureau Head: <i>Joe Nechus</i> J. P. Niehuser

CALENDAR
Consent Regular X

NOTED BY
City Attorney
City Auditor
City Engineer John M. Lang
<i>John M. Lang</i>