SERVICES AGREEMENT

THIS AGREEMENT made and entered into the day and year set forth below by and between THE CITY OF FORT COLLINS, COLORADO, a Municipal Corporation, hereinafter referred to as the "City" and Cope Construction, hereinafter referred to as "Service Provider".

WITNESSETH:

In consideration of the mutual covenants and obligations herein expressed, it is agreed by and between the parties hereto as follows:

1. Scope of Services. The Service Provider agrees to provide services in accordance with the scope of services attached hereto as Exhibit "A", consisting of twenty nine (29) pages and incorporated herein by this reference.

2. Contract Period. This Agreement shall be substantially complete by March 16, 2007, with final completion by March 23, 2007 unless sooner terminated as herein provided.

3. Delay. If either party is prevented in whole or in part from performing its obligations by unforeseeable causes beyond its reasonable control and without its fault or negligence, then the party so prevented shall be excused from whatever performance is prevented by such cause. To the extent that the performance is actually prevented, the Service Provider must provide written notice to the City of such condition within fifteen (15) days from the onset of such condition.

4. Early Termination by City/Notice. Notwithstanding the time periods contained herein, the City may terminate this Agreement at any time without cause by providing written notice of termination to the Service Provider. Such notice shall be delivered at least fifteen (15) days prior to the termination date contained in said notice unless otherwise agreed in writing by the parties. All notices provided under this Agreement shall be effective when mailed, postage prepaid and sent to the following addresses:

City:	Service Provider:
City of Fort Collins, Purchasing PO Box 580 Fort Collins, CO 80522	Cope Construction PO Box 389 La Porte, CO 80535

In the event of early termination by the City, the Service Provider shall be paid for services rendered to the date of termination, subject only to the satisfactory performance of the Service Provider's obligations under this Agreement. Such payment shall be the Service Provider's sole right and remedy for such termination.

5. Contract Sum. The City shall pay the Service provider for the performance of this Contract, subject to additions and deletions provided herein, Thirty Nine Thousand Nine Hundred Seventy Five Dollars ($39,975).

6. City Representative. The City will designate, prior to commencement of the work, its representative who shall make, within the scope of his or her authority, all necessary and proper decisions with reference to the services provided under this agreement. All requests concerning this agreement shall be directed to the City Representative.

7. Independent Service provider. The services to be performed by Service Provider are those of an independent service provider and not of an employee of the City of Fort Collins. The City shall not be responsible for withholding any portion of Service Provider's compensation hereunder for the payment of FICA, Workmen's Compensation or other taxes or benefits or for any other purpose.

8. Personal Services. It is understood that the City enters into the Agreement based on the special abilities of the Service Provider and that this Agreement shall be considered as an agreement for personal services. Accordingly, the Service Provider shall neither assign any responsibilities nor delegate any duties arising under the Agreement without the prior written consent of the City.

9. Acceptance Not Waiver. The City's approval or acceptance of, or payment for any of the services shall not be construed to operate as a waiver of any rights or benefits provided to the City under this Agreement or cause of action arising out of performance of this Agreement.

10. Warranty.

(a) Service Provider warrants that all work performed hereunder shall be performed with the highest degree of competence and care in accordance with accepted standards for work of a similar nature.

(b) Unless otherwise provided in the Agreement, all materials and equipment incorporated into any work shall be new and, where not specified, of the most suitable grade of their respective kinds for their intended use, and all workmanship shall be acceptable to City.

(c) Service Provider warrants all equipment, materials, labor and other work, provided under this Agreement, except City-furnished materials, equipment and labor, against defects and nonconformances in design, materials and workmanship/workwomanship for a period beginning with the start of the work and ending twelve (12) months from and after final acceptance under the Agreement, regardless whether the same were furnished or performed by Service Provider or by any of its subcontractors of any tier. Upon receipt of written notice from City of any such defect or nonconformances, the affected item or part thereof shall be redesigned, repaired or replaced by Service Provider in a manner and at a time acceptable to City.

11. Default. Each and every term and condition hereof shall be deemed to be a material element of this Agreement. In the event either party should fail or refuse to perform according to the terms of this agreement, such party may be declared in default thereof.

12. Remedies. In the event a party has been declared in default, such defaulting party shall be allowed a period of ten (10) days within which to cure said default. In the event the default remains uncorrected, the party declaring default may elect to (a) terminate the Agreement and seek damages; (b) treat the Agreement as continuing and require specific performance; or (c) avail himself of any other remedy at law or equity. If the non-defaulting party commences legal or equitable actions against the defaulting party, the defaulting party shall be liable to the non-defaulting party for the non-defaulting party's reasonable attorney fees and

costs incurred because of the default.

13. Binding Effect. This writing, together with the exhibits hereto, constitutes the entire agreement between the parties and shall be binding upon said parties, their officers, employees, agents and assigns and shall inure to the benefit of the respective survivors, heirs, personal representatives, successors and assigns of said parties.

14. Indemnity/Insurance. a. The Service Provider agrees to indemnify and save harmless the City, its officers, agents and employees against and from any and all actions, suits, claims, demands or liability of any character whatsoever brought or asserted for injuries to or death of any person or persons, or damages to property arising out of, result from or occurring in connection with the performance of any service hereunder.

b. The Service Provider shall take all necessary precautions in performing the work hereunder to prevent injury to persons and property.

c. Without limiting any of the Service Provider's obligations hereunder, the Service Provider shall provide and maintain insurance coverage naming the City as an additional insured under this Agreement of the type and with the limits specified within Exhibit B, consisting of one (1) page, attached hereto and incorporated herein by this reference. The Service Provider before commencing services hereunder, shall deliver to the City's Director of Purchasing and Risk Management, P. O. Box 580 Fort Collins, Colorado 80522 one copy of a certificate evidencing the insurance coverage required from an insurance company acceptable to the City.

15. Entire Agreement. This Agreement, along with all Exhibits and other documents incorporated herein, shall constitute the entire Agreement of the parties. Covenants or representations not contained in this Agreement shall not be binding on the parties.

16. Law/Severability. The laws of the State of Colorado shall govern the construction interpretation, execution and enforcement of this Agreement. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such

holding shall not invalidate or render unenforceable any other provision of this Agreement.

17. Prohibition Against Employing Illegal Aliens. This paragraph shall apply to all Contractors whose performance of work under this Agreement does not involve the delivery of a specific end product other than reports that are merely incidental to the performance of said work. Pursuant to Section 8-17.5-101, C.R.S., *et. seq*., Contractor represents and agrees that:

A. As of the date of this Agreement:

1. Contractor does not knowingly employ or contract with an illegal alien; and

2. Contractor has participated or attempted to participate in the basic pilot employment verification program created in Public Law 208, 104th Congress, as amended, and expanded in Public Law 156, 108th Congress, as amended, administered by the United States Department of Homeland Security (the "Basic Pilot Program") in order to verify that Contractor does not employ any illegal aliens.

B. Contractor shall not knowingly employ or contract with an illegal alien to perform works under this Agreement or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

C. Contractor shall continue to apply to participate in the Basic Pilot Program and shall in writing verify same every three (3) calendar months thereafter, until Contractor is accepted or the public contract for services has been completed, whichever is earlier. The requirements of this section shall not be required or effective if the Basic Pilot Program is discontinued.

D. Contractor is prohibited from using Basic Pilot Program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

E. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall:

1. Notify such subcontractor and the City within three days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

2. Terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to this section the subcontractor does not cease employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that

the subcontractor has not knowingly employed or contracted with an illegal alien.

F. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment (the "Department") made in the course of an investigation that the Department undertakes or is undertaking pursuant to the authority established in Subsection 8-17.5-102 (5), C.R.S.

G. If Contractor violates any provision of this Agreement pertaining to the duties imposed by Subsection 8-17.5-102, C.R.S. the City may terminate this Agreement. If this Agreement is so terminated, Contractor shall be liable for actual and consequential damages to the City arising out of Contractor's violation of Subsection 8-17.5-102, C.R.S.

H. The City will notify the Office of the Secretary of State if Contractor violates this provision of this Agreement and the City terminates the Agreement for such breach.

CITY OF FORT COLLINS, COLORADO
a municipal corporation

By:_____
James B. O'Neill II, CPPO, FNIGP
Director of Purchasing and Risk Management

Date:_____

Cope Construction

By:_____

_____
PRINT NAME

_____
CORPORATE PRESIDENT OR VICE PRESIDENT

Date:_____

ATTEST: (Corporate Seal)

_____
CORPORATE SECRETARY

EXHIBIT A

SCOPE OF WORK

A. The Contractor shall mobilize to the area within ten (10) working days after receiving notice to proceed by the Project Manager or as approved by the Project Manager. Mutually acceptable milestones indicating working days shall be determined by the City and the Contractor. Any extensions of the time limits set forth above must be agreed upon in writing by the parties hereto.

B. The Contractor shall be responsible for obtaining the building permit and all fees required.

C. The Contractor shall be responsible for obtaining stamped engineered drawings for the footings. The City will provide the soils report.

D. The Contractor shall be responsible for receiving and unloading shelter materials.

E. The Contractor shall be responsible for installing new 1" conduit from the restroom building to the shelter at Buckingham Park. The city electrician will pull wires and hook up the outlets and lights. Work must be coordinated with them. There will be no electrical at Legacy Park shelter.

F. Contractor will be responsible for the removal and disposal of old shelters. Please recycle as much of the old shelters as possible.

G. The Contractor shall be solely responsible for cleaning the job site and leaving it in a safe condition at the end of each working day and at work completion.

H. The City may order changes within the scope of the work without invalidating this agreement. If such changes alter the amount due under the contract documents or the time required for the performance of the work, such alteration shall be approved by the parties in writing in the form of a change order.

I. The Contractor shall also provide a schedule for the completion of all unit work items (listed on below) covered by the contract. The schedule shall indicate the anticipated percentage completion of each unit work item for each week for the duration of the work.

UNIT WORK ITEMS:

A. Order materials.
B. Removal of old shelters.
C. Installation of new shelters.
D. Clean up site.

SPECIFICATIONS:
Suppliers: Poligon Shelters – ONLY POLIGON SHELTERS WILL BE ACCEPTED
Models: one (1) – SQR 16-MR
one (1) – SQR 24-MR

- Shall include Engineering for shelter building by State Registered Engineer.
- Freight
- Poligon 24 gauge Multi-Rib Metal Roof
- Cutouts for (1) electrical outlet box and for (1) conduit for light (to be installed by others) Location to be coordinated with owner.
- Reinforced Roof Trim
- Eight Directional Shot Blast Steel Preparation
- Factory Applied Powder Coat Finish
- GMAW Certified Welding
- Anchor Bolts and all necessary Hardware
- Designed to Conform to IBC with 30 PSF snow load and 100 MPH wind load

Colors to be specified by owner.

GENERAL ELECTRICAL

General Requirements

A. Codes and Regulations: Comply with all applicable state and local codes, regulations and ordinances and the latest applicable requirements of the National Electrical Code as interpreted by the local inspection authority who shall have final jurisdiction.

B. Examination of Premises: Examine the premises prior to bidding and become fully familiar with existing conditions.

Materials

2.0 GENERAL

A. All materials and equipment shall be manufactured, tested and installed in accordance with the following:

1. National Electrical Code (NEC).
2. Underwriters' Laboratory (UL).
3. National Electrical Manufacturer's Association (NEMA).
4. American National Standards Institute (ANSI).
5. Illuminating Engineering Society (1ES).

B. The Contractor shall submit proof, if requested by the Project Manager, that the materials, equipment or devices that he installs under this contract meet the requirements of the Underwriters' Laboratories, Inc. in regard to fire and casualty hazards.

C. All electrical material shall display a UL label.

2.1 RACEWAYS - ACCEPTABLE CLASSES

A. Description of System.

1. Provide raceways as required below for raceway systems.
2. Conduit sizes not noted on Drawings shall be in accordance with NEC requirements for the quantities and size of wire installed therein.
3. Where nonmetallic raceways are utilized, size as required to conform with the grounding conductor considered as an insulated additional conductor.
4. Where metallic raceways are used, they must establish positive low-resistance paths to ground and effectively isolate conductors so that any short-circuit arcs will be confined.
5. Reference Section 16450, Grounding.

B. Acceptable Classes.

1. Electrical Metallic Tubing (EMT).
   a. Install 2" and smaller for all exposed branch circuit wiring.
   b. Fittings.
      1) Compression connectors.
   c. Comply with Underwriters' Laboratories Standard UL 797 and USA Standards Institute C80-3.
2. Poly-Vinyl Chloride (PVC) Plastic Conduit.
   a. Provide in the following locations.
      1) In or below slabs on grade.
      2) In earth or gravel.
   b. Schedule 80 Heavy Wall, 90 degrees Celsius, UL listed for above ground and underground uses.
   c. Conform to NEMA TC-2 and UL-651 standards.
   d. UL listed in conformity with Article 347 of the Nation Electric Code.
   e. 1-1/2" and larger shall conform to NEMA Publications No. TC-1-1965.

3. Surface Metal Wireway.
   a. Provide surface metal wireway of a dimension permitting the number of conductors and splices installed. NEMA 1 enclosure.
   b. The raceway shall meet all NEW Article 352A requirements and shall be UL listed.
   c. Provide with appropriate boxes and fittings by same manufacturer.

2.2 WIRES AND CABLES

A. Description of System.

1. Provide a complete system of conductors in raceway systems with minimum wire size to be No. 12, unless shown otherwise on Drawings.
2. Unless otherwise indicated, wire sizes noted on Drawings are to be extended for the entire length of a circuit including taps and risers.
3. 120-volt branch circuits shall be No. 10 or larger where the distance to the first outlet exceeds 75 feet.

B. Conductor Material.

1. Copper conductors shall be high conductivity tin coated annealed copper in accordance with ASTM B-33.
   a. Use copper conductors for all wiring.

C. Insulation.
1. THHN Cu conductors - Use for all branch circuit conductors installed in conduit.
a. UL Type THHN, suitable for operation at 600 volts in wet or dry locations at conductor temperatures not to exceed 75° C.

b. Poly-vinyl chloride insulation that is UL defined as heat, abrasion, moisture and oil resistant.

2.3 JUNCTION BOXES
A. General Requirements.
1. Provide all covers of same gauge metal and include screws.

B. Concealed Junction Boxes.
1. Provide code gauge sheet metal boxes located and sized as required with suitable covers and trims.
a. Make of material resistant to corrosion or suitably protected, both internally and externally, by galvanizing.
b. Boxes installed in damp or wet locations shall be UL approved for the purpose.
c. Comply with UL Standard 50.
d. Metal boxes to meet NEC construction specifications.

C. Exposed Junction Boxes.
1. Boxes exposed or surface mounted shall be die-cast or permanent-mold cast aluminum body with threaded external hub and cast over.

2.4 WIRE CONNECTORS AND DEVICES

A. Description of System.
1. Provide wire connectors, crimp terminals, splice connectors, mechanical lugs, compression lugs, pin connectors, split bolt connectors and associated insulating devices for a complete wiring connection system suitable for specified cables furnished.
2. Connectors shall be in accordance with NEC, state and local requirements for size and color installed therein.
3. Connectors and devices shall be installed in accordance with manufacturers and U.L. standard requirements for tightening torques. Use proper torquing tools to achieve accurate values.

CTL | THOMPSON INCORPORATED

SOILS AND FOUNDATION INVESTIGATION
PICNIC SHELTER
BUCKINGHAM PARK
FORT COLLINS, COLORADO

Prepared For:

The City of Fort Collins
Parks Department
413 South Bryan Avenue
Fort Collins, Colorado 80521

Attention: Ms. Eileen Scholl

CTL|T Project No. FC03844-125-A

July 14, 2006

4001 Automation Way | Unit 201 | Fort Collins, Colorado 80525

Telephone: 970-206-9455 Fax: 970-206-9441

TABLE OF CONTENTS

SCOPE

This report presents the results of our soils and foundation investigation for the proposed new picnic shelter at Buckingham Park in Fort Collins, Colorado (Figure 1). The purpose of this investigation was to evaluate the subsurface conditions and provide foundation recommendations for the proposed shelter.

This report was prepared from data developed during our field exploration, laboratory testing, engineering analysis and experience with similar conditions. This report sends our opinions, conclusions and recommendations for geotechnical criteria for design and construction of foundations, a slab-on-grade floor, and drainage precautions for the proposed picnic shelter. A summary of our conclusions and recommendations follows.

SUMMARY OF CONCLUSIONS

1. The borings penetrated 17½ feet of sandy gravel with a 2 foot thick layer of sandy clay near the surface. Claystone underlies the gravels at 17½ feet. Ground water was encountered at 9½ feet or greater.

2. In our opinion, the shelters can be founded with a thickened edge slab on the natural soils or engineered fill.

3. Surface drainage should be designed, constructed and maintained to provide rapid runoff of surface water away from the proposed picnic shelter. Conservative irrigation practices should be followed to avoid excessive wetting.

SITE CONDITIONS

Buckingham Park is located at the northwest corner of Lincoln Avenue and First Street in northeast Fort Collins, Colorado. The existing picnic shelter is to be demolished and replaced with the new shelter. The building site is relatively flat. Ground cover in the area consisted of mature grass and trees.

PROPOSED CONSTRUCTION

The site included in this investigation is planned for a picnic shelter. We understand that the picnic shelter will be a steel framed canopy over a thickened edge slab-on-grade foundation. Foundation loads are expected to be column loads with very low deadload. If final designs are different from our assumptions, we should be advised so we can review our criteria.

INVESTIGATION

The field investigation for the proposed picnic shelter included drilling one exploratory boring. The boring was drilled to a depth of 18 feet using a truck-mounted drill with 4-inch diameter, continuous-flight augers. Drilling was observed by our field representative who logged and sampled the soils. The location of the boring is shown on Figure 1 and graphic log of the boring, including results of field penetration resistance tests are shown on Figure 2.

Soil samples obtained during drilling were returned to our laboratory and visually examined by the engineering geologist for this project. Laboratory testing included natural moisture content and gradation. The results of the laboratory tests are presented on Figure 3 and summarized in Table 1.

SUBSURFACE CONDITIONS

Our borings penetrated 17½ feet of medium dense to very dense, sandy gravel with a 2 foot thick layer of loose sandy clay at 2 feet. Claystone underlies the gravels at 17½ feet. Ground water was encountered at 9½ feet during drilling and at 10½ feet when checked several days later.

UTILITIES

We do not anticipate any utility installations requiring more than a shallow trench excavation. If utility trenches greater than 3 feet deep are required for this project, our office should be contacted to provide appropriate recommendations. For the typical shallow trench excavations, sides will need to be sloped or braced. We believe the soils penetrated by our borings are Type C as described in the Occupational Safety and Health Administration (OSHA) standards governing excavations published by the Department of Labor. The publication indicates a minimum slope of 1-1/2:1 (horizontal:vertical) for Type C soils above ground water level. Soils removed from an excavation should not be stockpiled at the edge of the excavation. We recommend the excavated soils be placed a distance from the edge of the top of the excavation equal to at least the depth of the excavation. OSHA regulations require bracing and/or slopes for excavations greater than 20 feet tall to be designed by a Registered Professional Engineer.

Utility trenches should be backfilled using materials and criteria discussed in the FOUNDATION section of this report.

FOUNDATION

The existing shelter foundations, floor, buried piping should be removed from under the new building. The excavations resulting from removal of the existing shelter should be backfilled with densely compacted, engineered fill.

We believe the proposed picnic shelter foundation can consist of a thickened edge slab foundation bearing on the natural, undisturbed soil or well-compacted fill. Any excavations made during the removal of the existing shelter should be filled and well compacted. We recommend the following geotechnical criteria for the design of footings. We would be pleased to send geotechnical design criteria for the other alternatives considered if required.

1. Foundations should bear on the undisturbed natural soil or densely compacted engineered fill and be designed for a maximum soil bearing pressure of 2,000 psf. Where soils are loosened during excavation or in the footing forming process, or if any loose or soft soils are encountered at the footing level, the soils should be removed or compacted. Engineered fill should be constructed with the onsite sand or similar offsite sand. Imported fill soils should be non-expansive, placed in 8-inch maximum loose lifts at 2 percent below optimum moisture to 1 percent above optimum moisture content and be compacted to at least 95 percent of maximum dry density (ASTM D698).

2. Thickened edges should have a minimum width of 12 inches. Foundations for isolated columns should have minimum dimensions of 16 inches by 16 inches. Larger sizes may be required depending upon the loads and structural system used. The structural engineer should consider uplift resistance when sizing the footings.

3. If the owner deems the risk of frost heave to be unacceptable, the soil below exterior footings should be protected from freezing. Normally, 3 feet of cover over footings is assumed in the area for protection from freezing.

4. The completed foundation excavation should be observed by a representative of our firm prior to placing the forms to verify the subsurface conditions are those we anticipated from our borings and that demolition activities did not adversely alter the subsurface conditions. Engineered fill and backfill should be tested for compaction. Each one-foot lift of compacted fill should be tested and approved prior to placement of the footing forms. The owner's representative should notify the testing agency at least 3 days in advance to prepare moisture/density relationship tests (ASTM D698) and schedule compaction testing.

CONCRETE SLAB-ON-GRADE FLOORS AND EXTERIOR FLATWORK

The onsite soils or similar non-expansive (maximum liquid limit of 30 and maximum plasticity index of 15) offsite soils free of organic matter and other deleterious materials can be used to construct the engineered fill under the floor.

We suggest the following recommendations for the slab-on-grade construction:

1. Utilities that pass through the slab should be isolated from the slab.

2. A 4-inch thick layer of free-draining, reasonably well-graded sand and gravel or gravel can be provided under the slab to prevent capillary rise.

3. Frequent control joints should be provided in the slab to reduce problems associated with shrinkage. The American Concrete Institute (ACI) recommendations should be followed.

4. Exterior concrete flatwork should be separated from any nearby buildings. The slab should be reinforced. Movement of exterior slabs should not be transmitted to any nearby foundations. Frequent control joints should be provided according to the recommendations of the ACI.

SURFACE DRAINAGE

Wetting of foundation soils always may cause some degree of volume change in soils and should be prevented during and after construction. The risk of wetting the foundation soils can be reduced by planned and maintained surface grading. We recommend the following precautions be observed during construction, and that they be maintained at all times after completion of the addition:

1. The ground surface surrounding the exterior of the structure should be sloped to drain away from the structure in all directions.

2. Backfill around foundations should be on-site soils placed in thin lifts, moisture conditioned to 2 percent below to 2 percent above optimum moisture content and compacted to at least 90 percent of maximum dry density (ASTM D 698). All backfill that supports pavement or sidewalks should be compacted to at least 95 percent of maximum dry density (ASTM D 698).

3. Roof downspouts and drains should discharge well beyond the limits of all backfill. We recommend providing splash blocks at all downspout locations. Concrete swales can be used to convey concentrated water flows through paved areas to drains and gutters.

LIMITATIONS

One boring was drilled during this investigation to obtain a reasonably accurate picture of foundation soil conditions. Variations in the subsurface conditions not indicated by our boring are possible. A representative of our firm

should observe the foundation excavations where spread footings are recommended to confirm the exposed materials are as anticipated from our borings.

We believe this investigation was conducted with that level of skill and care ordinarily used by geotechnical engineers practicing in this area at this time. No warranty, express or implied, is made. If we can be of further service in discussing the contents of this report or in the analysis of the influence of subsoil conditions on design of the structures, please call.

CTL | THOMPSON, INC.

Reviewed By:

Robin Dornfest. PG
Project Engineering Geologist

R.B. "Chip" Leadbetter, III, PE
Project Engineer

Young, Becky

From: Klein, Judy
Sent: Friday, July 14, 2006 8:14 AM
To: Young, Becky
Subject: FW: Engineering Meeting - 7/7/06 - 7:30 am

Becky – This is a copy of the Engineering Mtg Memo I send out each Wed. a.m.

J

Judy L. Klein
Administrative Assistant
CTL | THOMPSON, INC.
4001 Automation Way
Suite 201
Fort Collins, CO 80525
970-206-9455
970-206-9441 FAX
www.ctlt.com

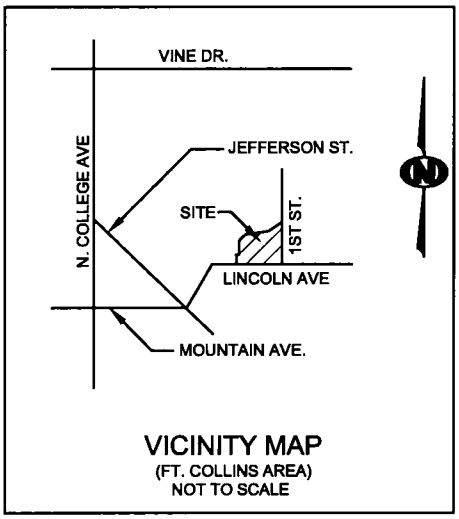
From: Klein, Judy
Sent: Wednesday, July 05, 2006 1:29 PM
To: Finley, Tom; Hofmann, Chad; Leadbetter, Chip; Diewald, Gary; Perko, Howard; Dornfest, Robin; Bernhardt, Eric; Micolichek, Jennifer
Subject: Engineering Meeting - 7/7/06 - 7:30 am

Reminder: There will be an engineering meeting this Friday at 7:30 a.m. in Howard's office.

Thanks!

Judy L. Klein
Administrative Assistant
CTL | THOMPSON, INC.
4001 Automation Way
Suite 201
Fort Collins, CO 80525
970-206-9455
970-206-9441 FAX
www.ctlt.com

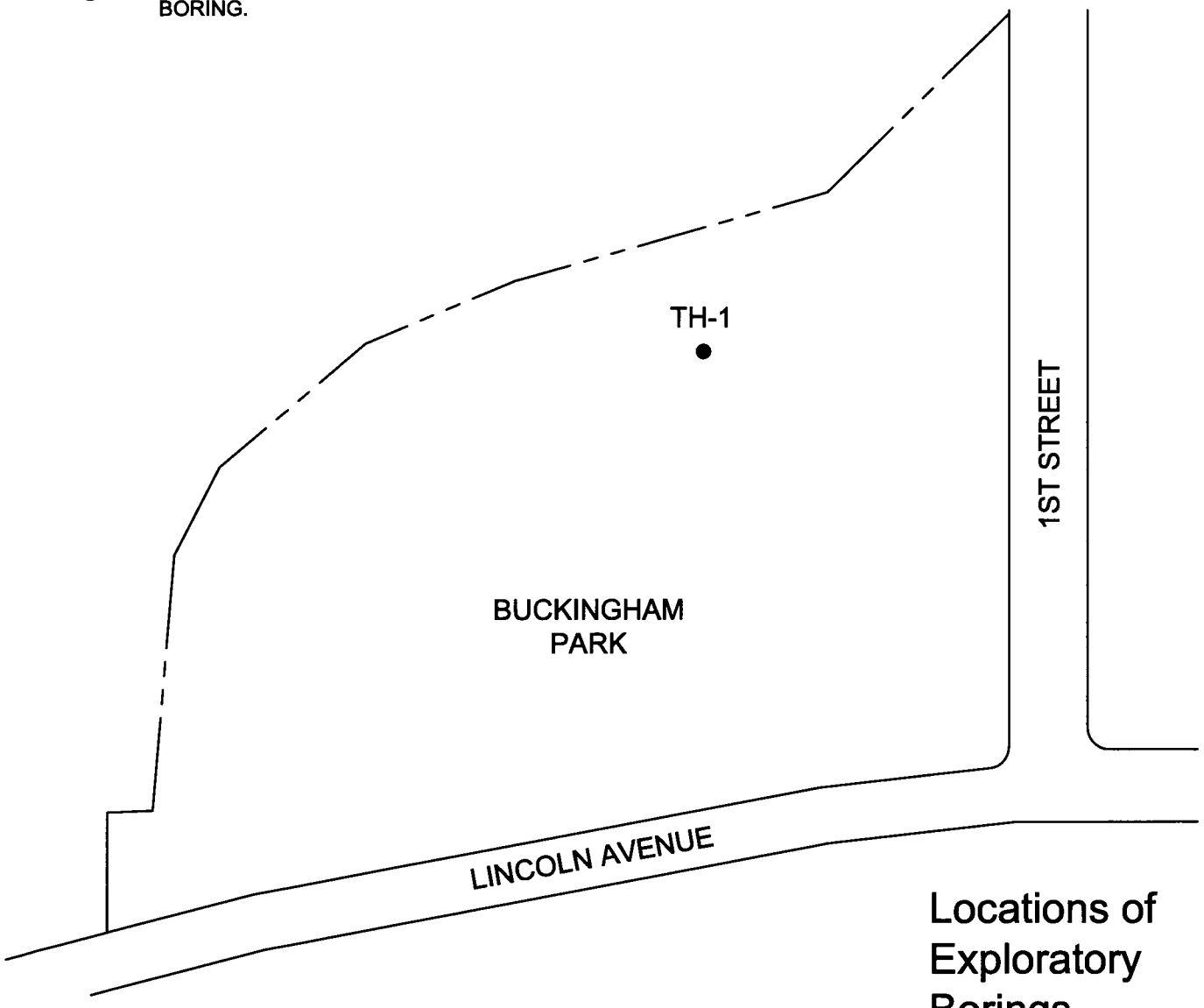
APPROX. SCALE: 1"= 100'



VICINITY MAP
(FT. COLLINS AREA)
NOT TO SCALE

LEGEND:

TH-1 ● INDICATES APPROXIMATE LOCATION OF EXPLORATORY BORING.

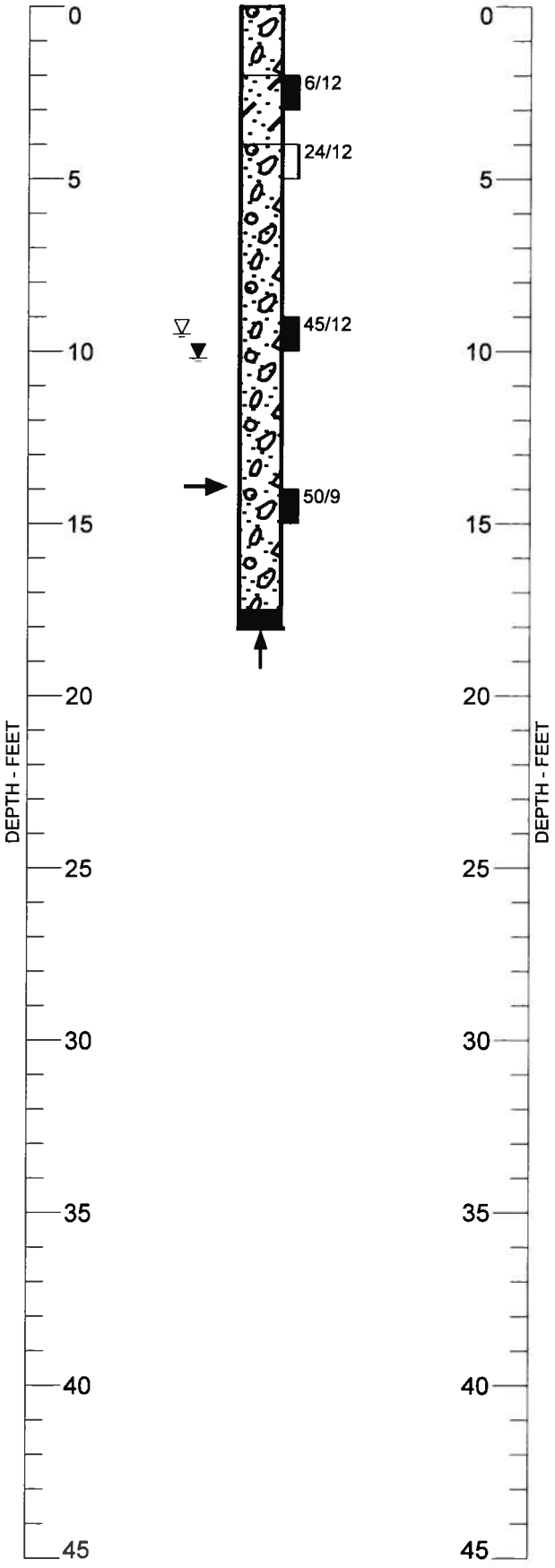


Locations of Exploratory Borings

CITY OF FORT COLLINS
SHELTER AT BUCKINGHAM PARK
CTL | T PROJECT NO. FC03844-125-A

FIGURE 1

TH-1



LEGEND:

GRAVEL, SANDY, SLIGHTLY MOIST TO WET, MEDIUM DENSE TO DENSE, BROWN, GRAY (GP, GP-GM)

SAND, CLAYEY, SLIGHTLY MOIST, LOOSE, DARK BROWN (SC)

CLAYSTONE, MOIST, DARK BROWN

DRIVE SAMPLE. THE SYMBOL 24/12 INDICATES 24 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE A 2.5-INCH O.D. SAMPLER 12 INCHES.

DRIVE SAMPLE. THE SYMBOL 6/12 INDICATES 6 BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES WERE REQUIRED TO DRIVE A 2.0-INCH O.D. SAMPLER 12 INCHES.

WATER LEVEL MEASURED AT TIME OF DRILLING.

WATER LEVEL MEASURED SEVERAL DAYS AFTER DRILLING.

PRACTICAL DRILL REFUSAL.

INDICATES DEPTH WHERE HOLE CAVED.

NOTES:

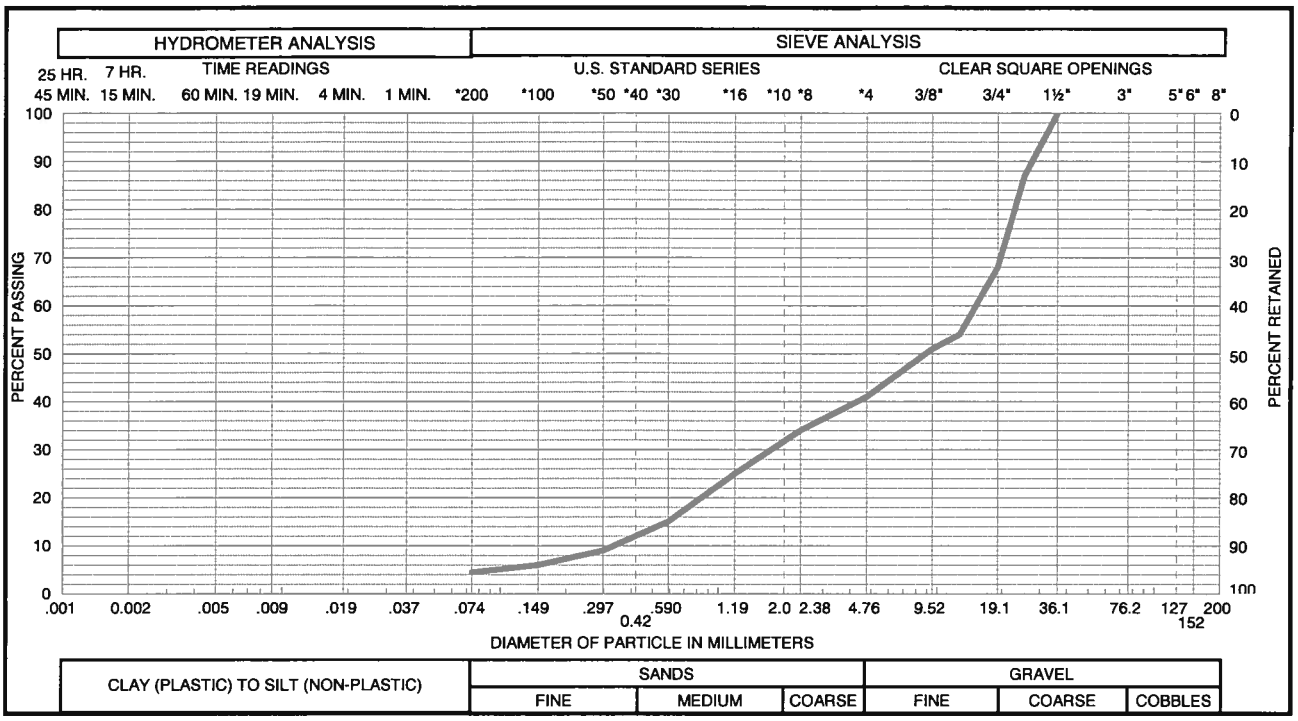
1. THIS BORING WAS DRILLED ON JULY 7, 2006 USING 4-INCH DIAMETER CONTINUOUS-FLIGHT AUGER AND A TRUCK-MOUNTED DRILL RIG.
2. THESE LOGS ARE SUBJECT TO THE EXPLANATIONS, LIMITATIONS AND CONCLUSIONS IN THIS REPORT.

CITY OF FORT COLLINS
SHELTER AT BUCKINGHAM PARK
CTL | T PROJECT NO. FC03844-125-A

Summary Log of Exploratory Boring

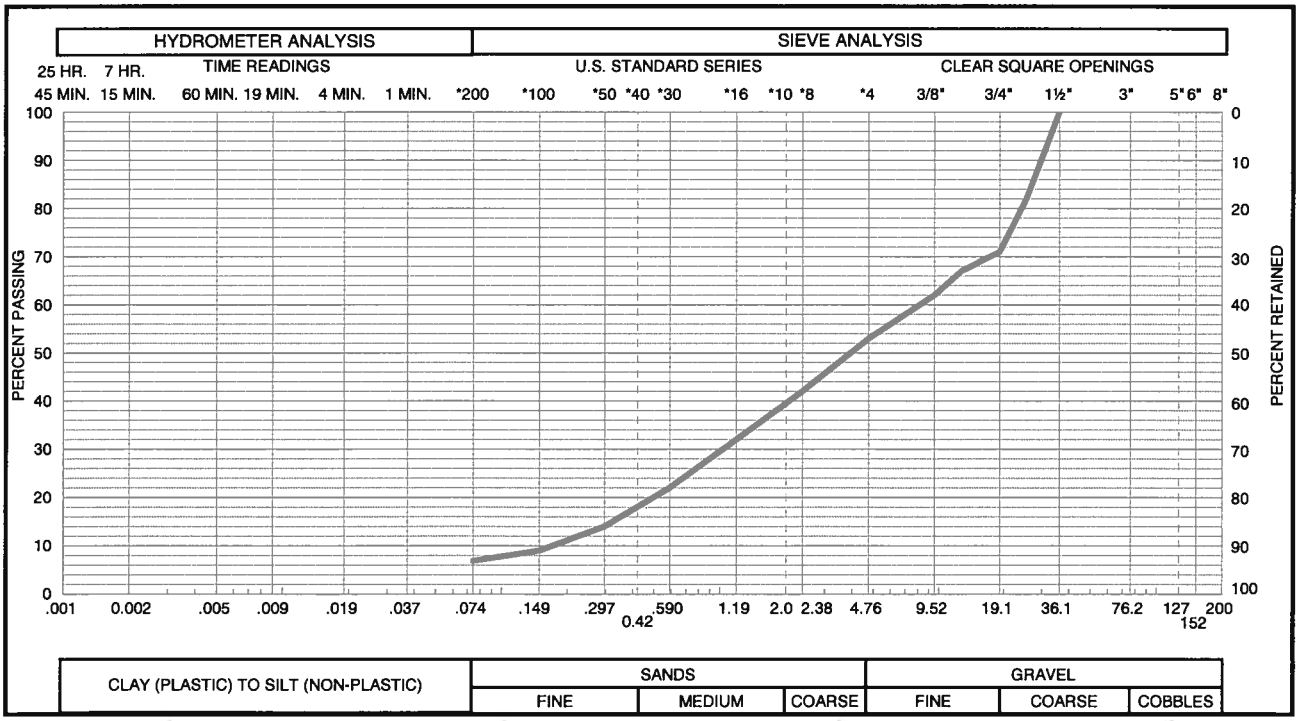
FIGURE 2

ONE LOG BY DEPTH WITH LEGEND FC03844-125.GPJ CTLMAIN.GDT 7/11/06



Sample of GRAVEL, SANDY (GP)
From TH - 1 AT 4 FEET

GRAVEL 59 % SAND 36 %
SILT & CLAY 5 % LIQUID LIMIT - %
PLASTICITY INDEX - %



Sample of GRAVEL, CLEAN TO SILTY (GP-GM)
From TH - 1 AT 9 FEET

GRAVEL 47 % SAND 46 %
SILT & CLAY 7 % LIQUID LIMIT - %
PLASTICITY INDEX - %

Gradation Test Results

PROJECT NO. FC03844-125-A

FIGURE 3

TABLE I

SUMMARY OF LABORATORY TEST RESULTS

LOT	BLOCK	DEPTH (FEET)	NATURAL MOISTURE (%)	NATURAL DRY DENSITY (PCF)	SWELL TEST DATA			ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (PSF)	SOLUBLE SULFATES (%)	PASSING NO. 200 SIEVE (%)	SOIL TYPE
					SWELL (%)	APPLIED PRESSURE (PSF)	SWELL PRESSURE (PSF)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)				
TH	1	2	22.1						NP			43	SAND, CLAYEY (SC)
TH	1	4	2.3									5	GRAVEL, SANDY (GP)
TH	1	9	3.8									7	GRAVEL, CLEAN TO SILTY (GP-GM)

CTL | THOMPSON INCORPORATED

SOILS AND FOUNDATION INVESTIGATION
PICNIC SHELTER
LEGACY PARK
FORT COLLINS, COLORADO

Prepared For:

The City of Fort Collins
Parks Department
413 South Bryan Avenue
Fort Collins, Colorado 80521

Attention: Ms. Eileen Scholl

CTL|T Project No. FC03844-125-B

July 15, 2006

4001 Automation Way | Unit 201 | Fort Collins, Colorado 80525

Telephone: 970-206-9455 Fax: 970-206-9441

TABLE OF CONTENTS

SCOPE

This report presents the results of our soils and foundation investigation for the proposed new picnic shelter at Legacy Park in Fort Collins, Colorado (Figure 1). The purpose of this investigation was to evaluate the subsurface conditions and provide foundation recommendations for the proposed shelter.

This report was prepared from data developed during our field exploration, laboratory testing, engineering analysis and experience with similar conditions. This report contains our opinions, conclusions and recommendations for geotechnical criteria for design and construction of foundations, a slab-on-grade floor, and drainage precautions for the proposed picnic shelter. A summary of our conclusions and recommendations follows.

SUMMARY OF CONCLUSIONS

1. The borings penetrated 12 feet of sandy gravel. Ground water was not encountered during drilling.

2. In our opinion, the shelters can be founded with a thickened edge slab on the natural soils or engineered fill.

3. Surface drainage should be designed, constructed and maintained to provide rapid runoff of surface water away from the proposed picnic shelter. Conservative irrigation practices should be followed to avoid excessive wetting.

SITE CONDITIONS

Legacy Park is located along the Cache la Poudre River on Woodlawn Drive, northwest of the intersection of Vine Drive and North College Avenue in northeast Fort Collins, Colorado. The existing picnic shelter is to be demolished and replaced with the new shelter. The building site is relatively flat. Ground cover in the area consisted of natural weed, grass and trees.

PROPOSED CONSTRUCTION

The site included in this investigation is planned for a picnic shelter. We understand that the picnic shelter will be a steel framed canopy over a thickened edge slab-on-grade foundation. Foundation loads are expected to be column loads with very low deadload. If final designs are different from our assumptions, we should be advised so we can review our criteria.

INVESTIGATION

The field investigation for the proposed picnic shelter included drilling one exploratory boring. The boring was drilled to a depth of 12 feet using a truck-mounted drill with 4-inch diameter, continuous-flight augers. Drilling was observed by our field representative who logged and sampled the soils. The location of the boring is shown on Figure 1 and graphic log of the boring is shown on Figure 2.

Bulk soil samples obtained during drilling were returned to our laboratory and visually examined by the engineering geologist for this project. Laboratory testing included natural moisture content and gradation. The results of the laboratory tests are presented on Figure 3 and summarized in Table 1.

SUBSURFACE CONDITIONS

Our borings penetrated 12 feet of medium dense to very dense, sandy gravels. Ground water was not encountered during drilling.

UTILITIES

We do not anticipate any utility installations requiring more than a shallow trench excavation. If utility trenches greater than 3 feet deep are required for this project, our office should be contacted to provide appropriate recommendations. For the typical shallow trench excavations, sides will need to be sloped or braced. We believe the soils penetrated by our borings are Type C as described in the

Occupational Safety and Health Administration (OSHA) standards governing excavations published by the Department of Labor. The publication indicates a minimum slope of 1-1/2:1 (horizontal:vertical) for Type C soils above ground water level. Soils removed from an excavation should not be stockpiled at the edge of the excavation. We recommend the excavated soils be placed a distance from the edge of the top of the excavation equal to at least the depth of the excavation. OSHA regulations require bracing and/or slopes for excavations greater than 20 feet tall to be designed by a Registered Professional Engineer.

Utility trenches should be backfilled using materials and criteria discussed in the FOUNDATION section of this report.

FOUNDATION

The existing shelter foundations, floor, buried piping should be removed from under the new building. The excavations resulting from removal of the existing shelter should be backfilled with densely compacted, engineered fill.

We believe the proposed picnic shelter foundation can consist of a thickened edge slab foundation bearing on the natural, undisturbed soil or well-compacted fill. Any excavations made during the removal of the existing shelter should be filled and well compacted. We recommend the following geotechnical criteria for the design of footings. We would be pleased to send geotechnical design criteria for the other alternatives considered if required.

1. Foundations should bear on the undisturbed natural soil or densely compacted engineered fill and be designed for a maximum soil bearing pressure of 2,000 psf. Where soils are loosened during excavation or in the footing forming process, or if any loose or soft soils are encountered at the footing level, the soils should be removed or compacted. Engineered fill should be constructed with the onsite sand or similar offsite sand. Imported fill soils should be non-expansive, placed in 8-inch maximum loose lifts at 2 percent below optimum moisture to 1 percent above optimum moisture content and be compacted to at least 95 percent of maximum dry density (ASTM D698).

2. Thickened edges should have a minimum width of 12 inches. Foundations for isolated columns should have minimum dimensions of 16 inches by 16 inches. Larger sizes may be required depending upon the loads and structural system used. The structural engineer should consider uplift resistance when sizing the footings.

3. If the owner deems the risk of frost heave to be unacceptable, the soil below exterior footings should be protected from freezing. Normally, 3 feet of cover over footings is assumed in the area for protection from freezing.

4. The completed foundation excavation should be observed by a representative of our firm prior to placing the forms to verify the subsurface conditions are those we anticipated from our borings and that demolition activities did not adversely alter the subsurface conditions. Engineered fill and backfill should be tested for compaction. Each one-foot lift of compacted fill should be tested and approved prior to placement of the footing forms. The owner's representative should notify the testing agency at least 3 days in advance to prepare moisture/density relationship tests (ASTM D698) and schedule compaction testing.

CONCRETE SLAB-ON-GRADE FLOORS AND EXTERIOR FLATWORK

The onsite soils or similar non-expansive (maximum liquid limit of 30 and maximum plasticity index of 15) offsite soils free of organic matter and other deleterious materials can be used to construct the engineered fill under the floor.

We suggest the following recommendations for the slab-on-grade construction:

1. Utilities that pass through the slab should be isolated from the slab.

2. A 4-inch thick layer of free-draining, reasonably well-graded sand and gravel or gravel can be provided under the slab to prevent capillary rise.

3. Frequent control joints should be provided in the slab to reduce problems associated with shrinkage. The American Concrete Institute (ACI) recommendations should be followed.

4. Exterior concrete flatwork should be separated from any nearby buildings. The slab should be reinforced. Movement of exterior slabs should not be transmitted to any nearby foundations. Frequent control joints should be provided according to the recommendations of the ACI.

SURFACE DRAINAGE

Wetting of foundation soils always may cause some degree of volume change in soils and should be prevented during and after construction. The risk of wetting the foundation soils can be reduced by planned and maintained surface grading. We recommend the following precautions be observed during construction, and that they be maintained at all times after completion of the addition:

1. The ground surface surrounding the exterior of the structure should be sloped to drain away from the structure in all directions.

2. Backfill around foundations should be on-site soils placed in thin lifts, moisture conditioned to 2 percent below to 2 percent above optimum moisture content and compacted to at least 90 percent of maximum dry density (ASTM D 698). All backfill that supports pavement or sidewalks should be compacted to at least 95 percent of maximum dry density (ASTM D 698).

3. Roof downspouts and drains should discharge well beyond the limits of all backfill. We recommend providing splash blocks at all downspout locations. Concrete swales can be used to convey concentrated water flows through paved areas to drains and gutters.

LIMITATIONS

One boring was drilled during this investigation to obtain a reasonably accurate picture of foundation soil conditions. Variations in the subsurface conditions not indicated by our boring are possible. A representative of our firm should observe the foundation excavations where spread footings are recommended to confirm the exposed materials are as anticipated from our borings.

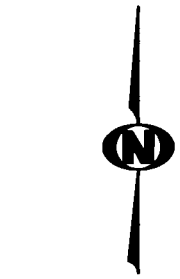
We believe this investigation was conducted with that level of skill and care ordinarily used by geotechnical engineers practicing in this area at this time. No warranty, express or implied, is made. If we can be of further service in discussing the contents of this report or in the analysis of the influence of subsoil conditions on design of the structures, please call.

CTL | THOMPSON, INC.

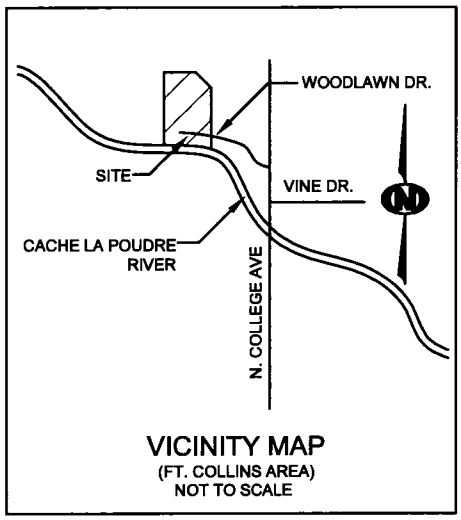
Reviewed By:

Robin Dornfest. PG
Project Engineering Geologist

R.B. "Chip" Leadbetter, III, PE
Project Engineer



APPROX. SCALE: 1"= 100'



VICINITY MAP
(FT. COLLINS AREA)
NOT TO SCALE

LEGACY PARK

TH-1

WOODLAWN DR.

CACHE LA POUDRE RIVER

LEGEND:

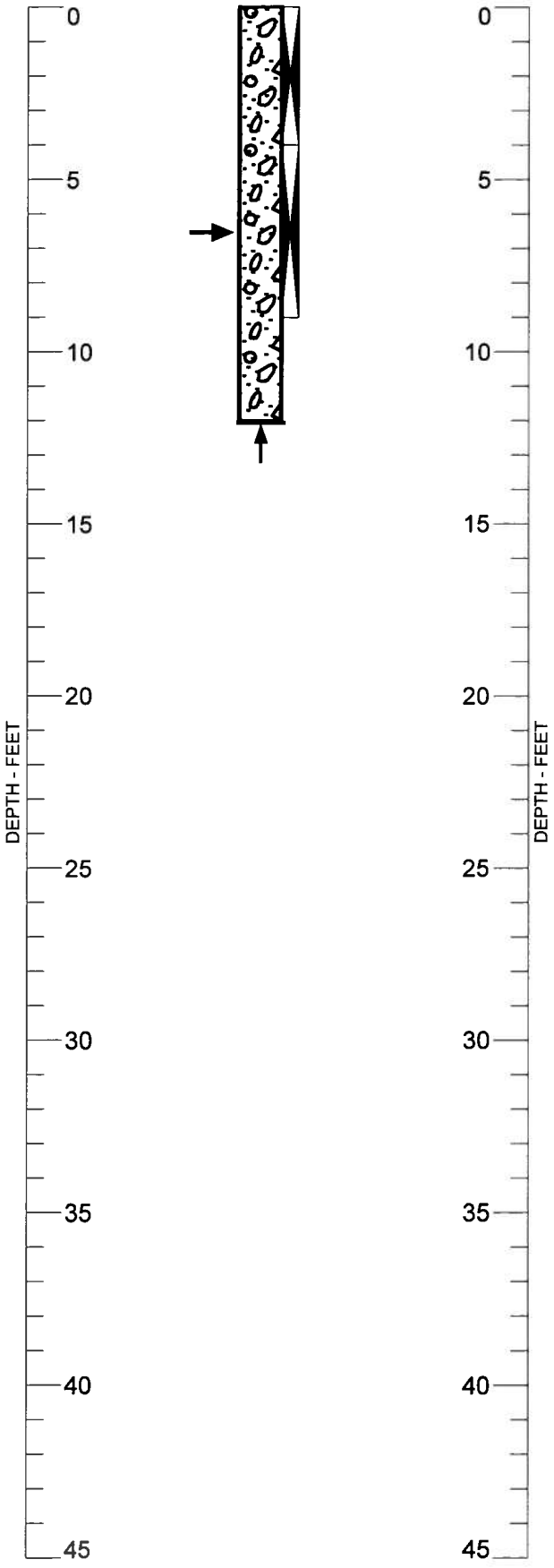
TH-1 ● INDICATES APPROXIMATE LOCATION OF EXPLORATORY BORING.

Locations of Exploratory Borings

CITY OF FORT COLLINS
SHELTER AT LEGACY PARK
CTL | T PROJECT NO. FC03844-125-B

FIGURE 1

TH-1



LEGEND:

GRAVEL, SANDY, WITH COBBLES, SLIGHTLY MOIST TO MOIST, DARK BROWN, GREY (GP-GM, GW-GM)

BULK SAMPLE FROM AUGER CUTTINGS.

PRACTICAL DRILL REFUSAL.

INDICATES DEPTH WHERE HOLE CAVED.

NOTES:

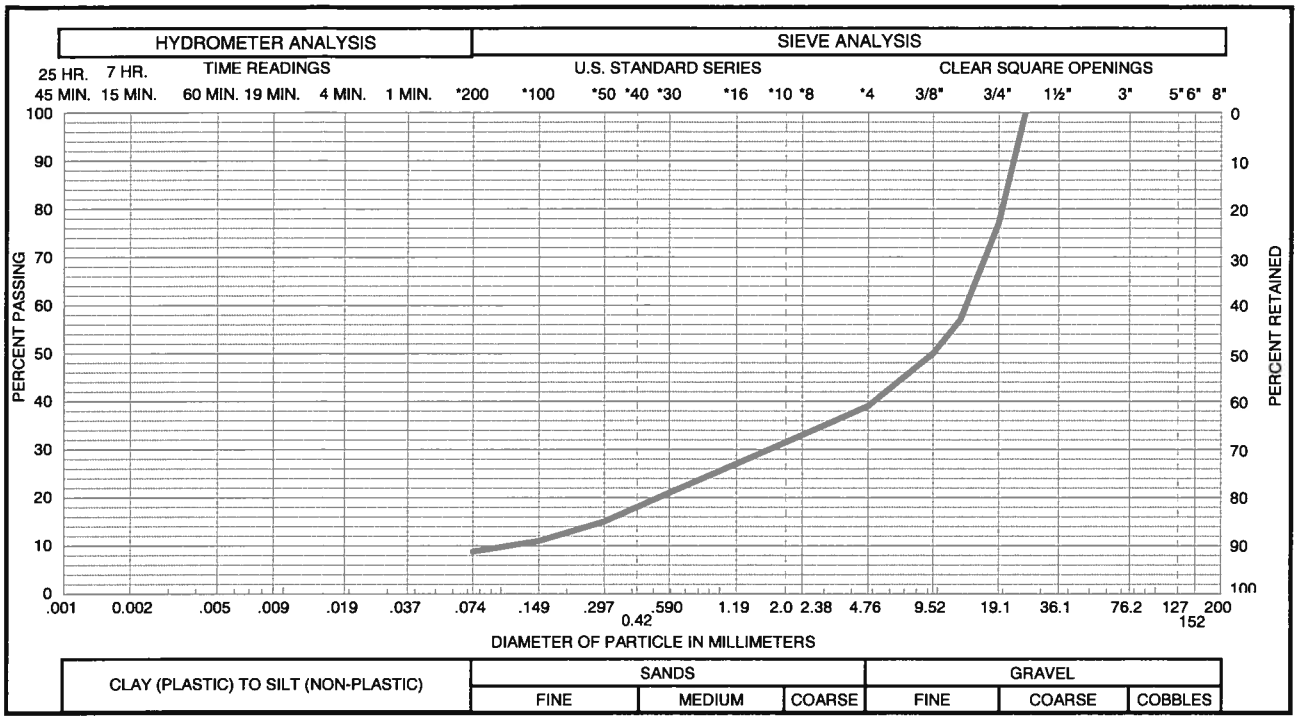
1. THE BORINGS WERE DRILLED ON JULY 5 AND JULY 7, 2006 USING 4-INCH DIAMETER CONTINUOUS-FLIGHT AUGER AND A TRUCK-MOUNTED DRILL RIG.
2. THESE LOGS ARE SUBJECT TO THE EXPLANATIONS, LIMITATIONS AND CONCLUSIONS IN THIS REPORT.

CITY OF FORT COLLINS
SHELTER AT LEGACY PARK
CTL | T PROJECT NO. FC03844-125-B

Summary Log of Exploratory Boring

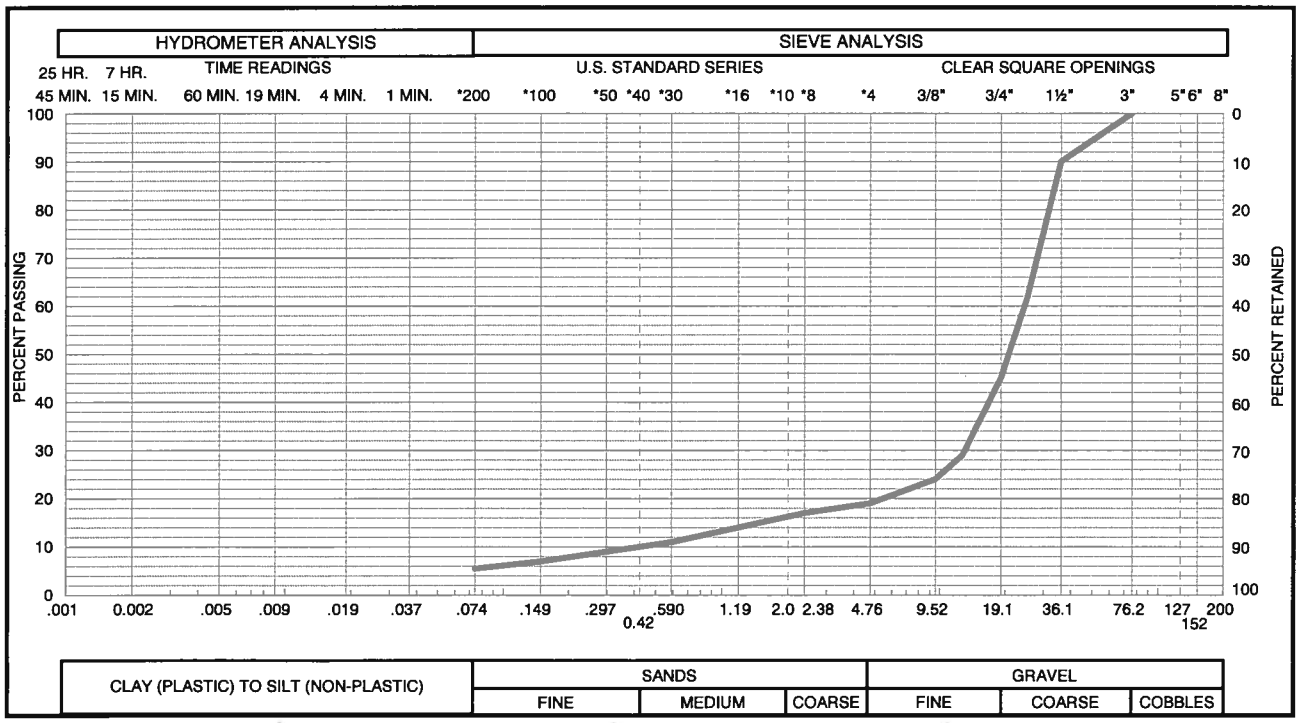
FIGURE 2

ONE LOG BY DEPTH WITH LEGEND FC03844-125.GPJ CTLMAIN.GDT 7/12/06



Sample of WELL GRADED GRAVEL, SILTY (GW-GM)
From TH - 1 AT 0-4 FEET

GRAVEL 61 % SAND 30 %
SILT & CLAY 9 % LIQUID LIMIT - %
PLASTICITY INDEX - %



Sample of GRAVEL, SILTY (GP-GM)
From TH - 1 AT 4-9 FEET

GRAVEL 81 % SAND 13 %
SILT & CLAY 6 % LIQUID LIMIT - %
PLASTICITY INDEX - %

Gradation Test Results

PROJECT NO. FC03844-125-B

FIGURE 3

TABLE I

SUMMARY OF LABORATORY TEST RESULTS

LOT	BLOCK	DEPTH (FEET)	NATURAL MOISTURE (%)	NATURAL DRY DENSITY (PCF)	SWELL TEST DATA			ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (PSF)	SOLUBLE SULFATES (%)	PASSING NO. 200 SIEVE (%)	SOIL TYPE
					SWELL (%)	APPLIED PRESSURE (PSF)	SWELL PRESSURE (PSF)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)				
TH	1	0-4	6.8									9	WELL GRADED GRAVEL, SILTY (GW-GM)
TH	1	4-9	3.5									6	GRAVEL, CLEAN TO SILTY (GP-GM)

EXHIBIT B

INSURANCE REQUIREMENTS

1. The Service Provider will provide, from insurance companies acceptable to the City, the insurance coverage designated hereinafter and pay all costs. Before commencing work under this bid, the Service Provider shall furnish the City with certificates of insurance showing the type, amount, class of operations covered, effective dates and date of expiration of policies, and containing substantially the following statement:

"The insurance evidenced by this Certificate will not be cancelled or materially altered, except after ten (10) days written notice has been received by the City of Fort Collins."

In case of the breach of any provision of the Insurance Requirements, the City, at its option, may take out and maintain, at the expense of the Service Provider, such insurance as the City may deem proper and may deduct the cost of such insurance from any monies which may be due or become due the Service Provider under this Agreement. The City, its officers, agents and employees shall be named as additional insureds on the Service Provider's general liability and automobile liability insurance policies for any claims arising out of work performed under this Agreement.

2. Insurance coverages shall be as follows:

A. Workers' Compensation & Employer's Liability. The Service Provider shall maintain during the life of this Agreement for all of the Service Provider's employees engaged in work performed under this agreement:

1. Workers' Compensation insurance with statutory limits as required by Colorado law.

2. Employer's Liability insurance with limits of $100,000 per accident, $500,000 disease aggregate, and $100,000 disease each employee.

B. Commercial General & Vehicle Liability. The Service Provider shall maintain during the life of this Agreement such commercial general liability and automobile liability insurance as will provide coverage for damage claims of personal injury, including accidental death, as well as for claims for property damage, which may arise directly or indirectly from the performance of work under this Agreement. Coverage for property damage shall be on a "broad form" basis. The amount of insurance for each coverage, Commercial General and Vehicle, shall not be less than $500,000 combined single limits for bodily injury and property damage.

In the event any work is performed by a subcontractor, the Service Provider shall be responsible for any liability directly or indirectly arising out of the work performed under this Agreement by a subcontractor, which liability is not covered by the subcontractor's insurance.