QUESTIONNAIRE ON SUBJECT AREAS OF AUTHORS
AND REVIEWERS

Check one: □ Author □ Reviewer

Name: ___________________________ Title: ___________________________
Mailing Address: ___________________________ Tel: ___________________________
Fax: ___________ E Mail: ___________________________

To facilitate timely and fair reviews of papers submitted to GTJ, (a) authors of manuscripts submitted for publication are asked to circle the subject areas most applicable to their respective manuscripts, and (b) prospective reviewers are asked to circle the subject areas in which they have the greatest current competence to provide informed technical evaluations of manuscripts submitted to GTJ for publication. Thank you.

Howard Pincus
Technical Editor

1. FIELD EXPLORATION

1.1 Reconnaissance
1.2 Mapping and GIS
1.3 Remote Sensing
1.4 Geophysical Methods
1.5 Geochemical Methods
1.6 Geobotanical Methods
1.7 Borehole Logging
1.8 Drilling Operations
1.9 Sampling Soil
1.10 Sampling Rock
1.11 Sample Transport and Storage
1.12 Ground Water Monitoring
1.13 Surface Water Monitoring
1.14 Other ___________

2. FIELD (IN SITU) TESTING

2.1 Calcareous Soils
2.2 Marine and Lacustrine Sediments
2.3 Admixtures
2.4 Hydrocarbon-Bearing Soils
2.5 Hazardous Materials
2.6 Pollutants
2.7 Jointed Rock
2.8 Tailings, Backfill, Talus
2.9 Penetration Testing
2.10 Moisture, Density
2.11 In Situ Stresses
2.12 Transmissivity, Storativity
2.13 Physicochemical Testing
2.14 Stress-Strain, Strength
2.15 Load-Deformation
2.16 Seismic Methods, Acoustic Emission
2.17 Other ___________

3. TESTING AND MONITORING SOIL AND ROCK STRUCTURES

3.1 Embankments
3.2 Rock for Erosion Control
3.3 Dams
3.4 Tunnels and Shafts
3.5 Marine Structures
3.6 Waste Impoundments
3.7 Pavement Systems
3.8 Drainage Aids
3.9 Natural Slopes
3.10 Fill
3.11 Retaining Structures
3.12 Liners
3.13 Geotextile Structures
3.14 Mechanically Modified Soil and Rock
3.15 Chemically Modified Soil and Rock
3.16 Biologically Modified Soil and Rock
3.17 Admixtures
3.18 Erosion Tests
3.19 Subsidence and Collapse
3.20 Piles and Foundations
3.21 Other ___________

4. LABORATORY TESTING—SOIL

4.1 Classification, Identification, Nomenclature
4.2 Sampling and Specimen Preparation,
Transportation, and Storage

© 1995 by the American Society for Testing and Materials

www.astm.org
4.3 Grain Size, Specific Gravity, Density
4.4 Physicochemical Properties
4.5 Permeability, Void Ratio, Water Content
4.6 Consolidation, Swelling, Collapse
4.7 Shrinkage, Creep
4.8 Compaction Tests
4.9 Stress-Strain, Strength
4.10 Liquefaction Tests
4.11 Cyclic and Dynamic Tests
4.12 Thermal Property Tests
4.13 Microscopic Analysis
4.14 Other

5. LABORATORY TESTING—ROCK AND DIMENSION STONE
5.1 Classification, Identification, Nomenclature
5.2 Specimen Preparation
5.3 Texture, Fabric, Specific Gravity, Density
5.4 Permeability, Void Ratio, Pore-Size Distribution, Water Content
5.5 Stress-Strain, Strength
5.6 Creep
5.7 Fracture-toughness
5.8 Shear Strength, Sliding Friction
5.9 Seismic and Acoustic Tests
5.10 Cyclic and Dynamic Tests
5.11 Electrical and Magnetic Properties
5.12 Thermal Properties
5.13 Microscopic Analysis
5.14 Other

6. LABORATORY TESTING—GEOSYNTHETICS
6.1 Classification, Identification, Nomenclature
6.2 Specimen Preparation
6.3 Mechanical Properties
6.4 Chemical Properties
6.5 Endurance Properties
6.6 Permeability and Filtration
6.7 Other

7. LABORATORY TESTING—ROAD AND PAVING MATERIALS
7.1 Classification, Identification, Nomenclature
7.2 Specimen Preparation
7.3 Mechanical Properties, Rheology
7.4 Chemical Properties
7.5 Durability Properties
7.6 Specific Gravity and Density
7.7 Analyses of Mixtures
7.8 Other

8. LABORATORY-MODEL TESTING
8.1 Soil-Rock-Structure Interaction
8.2 Soil and Rock Reinforcement
8.3 Grouts and Admixtures
8.4 Geotextiles
8.5 Fluid Flow through Soil and Rock
8.6 Simulated Soil and Rock
8.7 Centrifuge Tests
8.8 Other

9. MISCELLANEOUS
9.1 Quality Control, Quality Assurance
9.2 Equipment Calibration and Traceability
9.3 Proficiency Testing
9.4 Ruggedness in Testing
9.5 Interlaboratory Testing; Repeatability and Reproducibility
9.6 Error Propagation
9.7 Automated Control of Testing
9.8 Data Acquisition, Reduction and Management
9.9 Probabilistic Methods
9.10 Numerical Modelling
9.11 Laboratory Accreditation
9.12 Education and Training
9.13 Terminology, Definitions, and Notation
9.14 Other
9.15 Other

SUMMARY OF NUMBERS CHECKED: __________

COMMENTS:

__________________________________________________________________________

Please send completed form to:
Ms. Kathy G. Dernoga, Manager, Acquisitions and Review
ASTM Publications
1916 Race Street
Philadelphia, PA 19103-1187
or FAX 1 215 299 5511
ASTM Task Group on Data Automation
Questionnaire for Geotechnical Laboratories

1. Name ____________________________ Position ____________________________
Company __________________________
Address ____________________________
Type of Organization: University ______ Government ______ Consulting ______ Industry ______
List testing or standards organizations in which you participate ____________________________

2. With regard to the general laboratory: Number of staff devoted to lab ___ Floor area in sq. ft. ___
Which do you have on staff? ___ Machinist ___ Mechanical engineer ___ Electronic specialist ___ Instrumentation Specialist ___ Software engineer
Which of the following do you have? ___ Temperature Control ___ Dust Control ___ Emergency Power

3a. Please complete the following table for soil tests performed in your facility:

<table>
<thead>
<tr>
<th>Soil Tests</th>
<th>Gradation (D412)</th>
<th>Limits (D413)</th>
<th>Consolidation (D2439)</th>
<th>UC (D2146)</th>
<th>UU (Q) (D2610)</th>
<th>CU (R) (D4785)</th>
<th>CD (S) (D4785)</th>
<th>Direct Shear (D3580, D3581)</th>
<th>Permeability (D3434, D3434)</th>
<th>Other*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tests per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check if you automatically record data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check if you use computer for data reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check if you use computer for graphs or tables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated cost savings per test from automation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* describe other test ____________________________

4. Please complete the following table for rock tests performed in your facility:

<table>
<thead>
<tr>
<th>Rock Tests</th>
<th>Strength (D2664, D2936, D2948, D3967)</th>
<th>Elastic Modulus (D2840, D3148, D5407)</th>
<th>Permeability (D4335)</th>
<th>Creep (D4341, D4605, D4406)</th>
<th>Sonic (D3845)</th>
<th>Thermal (D4335, D4611, D4612, D5334, D5335)</th>
<th>Other* (D4444, D5240, D5312, D5313)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tests per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check if you automatically record data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check if you use computer for data reduction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check if you use computer for graphs or tables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated cost savings per test from automation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* describe other test ____________________________
5. If you have a data acquisition system, please answer the following questions (use a separate copy for each system)
   Type ______ Number of Input Channels ______
   Maximum Number of Readings per second you use ______
   Total Cost of hardware, excluding sensors ______
   Total cost of sensors ______ How are data stored? ______
   Number of tests you monitor at once ______
   Describe what you use the system for ______
   Does the system control the test ______ Describe how ______
   How much time required to train a new user ______
   Frequency of breakdown ______ Describe reliability ______
   Did supplier offer service contract ______ Did you take it ______
   Cost of service contract as percent of original system purchase price ______
   Describe experience with service ______
   Is system rugged ______ Give examples ______
   Has system been cost effective ______ Give example ______
   Are you considering additional equipment ______ If yes please answer #7.
   How do you charge your clients for use of the system ______
   Would you buy the same system again ______ Why ______

6. If your data acquisition system uses software to collect and reduce data, please answer the following:
   Function of software: ______ collect data ______ sort data for test from master data file ______
   reduce data ______ plot results ______ show real-time graphs of test ______
   control test ______ place data in master data base ______ perform statistical and/or engineering evaluations of data ______
   Programming language used ______ Operating system used ______
   How much time to train new user ______ Who corrects deficiencies ______
   Can you modify software ______ Is software flexible enough for your needs ______
   Describe software problems you have had ______
   Would you buy same system again ______ Why ______
   Is your software available to others ______

7. If you have no data acquisition equipment or are considering expansion of your present system
   Do you plan further automation in the near future ______ Why ______
   Which tests do you plan to automate ______
   Which parts will you automate ______ collect data ______ reduce data after test ______ plot results for report ______ provide real-time graphs as test runs ______
   control test ______ other ______
   Will you ______ purchase software ______ develop software in-house ______
   What information is most helpful in selecting a new system (please rank by importance with 1 as highest) ______
   manufacturer's literature ______ specs ______ example results ______ reliability of system ______
   experience of another with system ______ other ______ (specify ______)

8. Does your company use data acquisition equipment in field applications ______ Describe ______

9. What standards would be helpful to you in regard to using your data acquisition equipment ______

10. Please comment on your experiences with data acquisition systems, positive and negative ______

Thank you for your time and help. Please mail the completed questionnaire to: D18.95 Data Automation Survey, c/o Bob Morgan, ASTM, 1916 Race Street, Philadelphia, PA 19103-1187. Phone any questions to Dr. Marr at (508) 635-0012.
Additional Information for Authors

The Geotechnical Testing Journal (GTJ) is a quarterly publication sponsored by ASTM technical committee D-18 on Soil and Rock, with support from D-35 on Geosynthetics, D-4 on Road and Paving Materials, and D-34 on Waste Management. Each published paper and technical note has been peer-reviewed. Papers and technical notes are open to brief written comments in the Discussion section of the Journal, which also includes authors’ written responses.

The Technical Editor may consider a paper submitted to the Journal as a Technical Note if: it gives a reasonably brief description of ongoing studies with or without providing interim, tentative data, and/or conclusions; it reports phenomena observed in the course of research requiring further study; it provides mathematical procedures for facilitating reduction and analysis of data; or it reports promising new materials prior to undertaking extensive research to determine their properties.

The decision as to whether a manuscript is published as a paper or a technical note resides with the Technical Editor.

The guidelines below describe our manuscript selection, peer review, revision, and publication processes. Following these guidelines will ensure expeditious handling of submitted material.

Submission

The name, mailing address, position, affiliation, and telephone and fax number of each author must be supplied in a cover letter. The submitting author is to provide the names, affiliations, addresses, and telephone numbers of five to six individuals who are qualified to review impartially the paper and the research leading to it, and who are not employed at the same institution or company as any of the authors. While these names may or may not be used for the review, we will add them to our pool of potential reviewers. Also, a statement is to be included that the paper has not been published and is not under consideration for publication elsewhere. All permissions for previously published material used in the paper must be submitted in writing at this time.

The submitting author must also affirm that all those listed as co-authors have agreed (a) to be listed and (b) to submit the manuscript to ASTM for publication.

Five copies of the manuscript with clear copies of each figure are required. Original art work and computer disks should accompany the final revision.

Manuscript Instructions*

Word Processing Instructions

The hard-copy text can be produced on any letter-quality printer. Text is to be printed double-spaced with left and right margins of 1 in. (25.4 mm) using left justification. New paragraphs are to be indented five spaces, and end-of-line returns are not to be used.

The revised manuscript is to be sent on a 5⅛ in. (133 mm) or 3⅛ in. (89 mm) disk preferably in WordPerfect 5.1, with the corresponding hard copies. ASTM can convert from other word-processing packages as well.

Abstract and Keywords

An abstract of 100–150 words and a list of 5–10 keywords that can be used to index the manuscript are required.

Trademarks

Commercialism is to be avoided by using generic terms whenever possible. Trademarks and trade names are to be capitalized if their use is unavoidable.

SI Units

Society policy requires the use of SI units in all publications (including figures and tables). If in.-lb units must be used to describe materials and present test results, SI equivalents must follow in parentheses (See ASTM Standard for Metric Practice E380 for further information on SI units.)

Figures

Each figure is to be simple and uncluttered. All illustrations are to be placed together at the end of the manuscript with a separate sheet of figure captions. Consecutive Arabic (not Roman) numerals are required. The size of type in illustrations must be large enough to be legible after reduction. All lettering, lines, symbols, and other marks must be drawn in black India ink on white paper. Computer graphics must be produced by a laser printer. Photographs must be high-contrast black and white. SCALE MARKERS MUST BE SHOWN ON ALL PHOTOMICROGRAPHS AND ALL FIGURES THAT ARE REPRESENTATIONS OF EQUIPMENT OR SPECIMENS.

Tables

All tables are to be placed together at the end of the manuscript preceding the illustrations. Tables are to be numbered in Arabic and are cited in numerical order in the text. It is better to use several small simple tables than one large, complex table.

References

References shall be cited in the text by author’s last name and date of publication. References shall be listed together at the end of the text in alphabetical order by author’s last name. They must contain enough information to allow a reader to consult the cited material with reasonable effort.

Copyright

ASTM requires that the submitting author shall return our "Paper Submittal Form" with the revised paper assigning copyright to ASTM. For U.S. government employees whose manuscript has

© 1995 by the American Society for Testing and Materials
been prepared as part of their official duties, it is understood that copyright in the United States is not transferrable.

**Manuscript Review**

Each new manuscript is sent to the Technical Editor for consideration. If the Technical Editor finds that the manuscript fits the scope of the journal, will be of interest to the readership, and is well written, the paper is processed for peer review.

Three or more reviewers, selected by the Technical Editor, review each paper for technical content, originality, logical conclusions, sound data, reproducibility of results, and clarity of presentation; two or more reviewers provide reviews of each technical note. Their comments are compiled and evaluated. The reviewers' anonymous comments and any other comments from the Technical Editor or his designee are then returned to the author for revision.

The author must submit five copies of the revised manuscript with an annotated (highlighted) version of the paper indicating clearly where each revision has been made and identifying the reviewer's comment to which the revision is responding. Changes in the text including all MANDATORY reviewers' comments must be addressed explicitly on the "Authors' Response Form" provided during revision, as well as any explanation why a change was not made.

The Technical Editor will evaluate all revised manuscripts and make the final decision regarding publication in the Journal. The Editor may (1) accept the revised manuscript for publication, (2) require further revision or explanation, or (3) reject the revised manuscript. A revised manuscript may be sent for re-evaluation to a reviewer who has found major flaws in the original manuscript.

**Editorial Review by ASTM**

Each accepted paper is edited by the ASTM staff for style, organization, and proper English usage. The edited manuscript is returned to the author before typesetting. The typeset page proof is also sent to the author and the Technical Editor for final review prior to printing.

If ASTM does not hear from the author by the time designated for return of the edited paper and/or page proof, ASTM will proceed with the publication process.

**Book Reviews**

ASTM receives books from other publishers requesting book reviews. The books are available to potential reviewers in exchange for publishable reviews. Book reviews are screened and edited by the Technical Editor and staff without peer review.

**Testing Forum and Tips**

Anyone having interesting test tips should submit a brief description of such innovations to the Testing Forum. Such contributions are screened and edited by the Technical Editor and staff without peer review.

Howard J. Pincus, Ph.D., P.E., C.P.G.

Technical Editor
### E 380 SELECTED CONVERSION FACTORS

<table>
<thead>
<tr>
<th>To convert from</th>
<th>to</th>
<th>multiply by</th>
</tr>
</thead>
<tbody>
<tr>
<td>atmosphere (760 mm Hg)</td>
<td>pascal (Pa)</td>
<td>1.013 25 x 10²</td>
</tr>
<tr>
<td>board foot</td>
<td>cubic metre (m³)</td>
<td>2.359 737 x 10⁻³</td>
</tr>
<tr>
<td>Btu (International Table)</td>
<td>joule (J)</td>
<td>1.055 056 x 10⁶</td>
</tr>
<tr>
<td>Btu (International Table)/h</td>
<td>watt (W)</td>
<td>2.930 711 x 10⁻¹</td>
</tr>
<tr>
<td>Btu (International Table)/in.²·°F (k, thermal conductivity)</td>
<td>watt per metre kelvin [W/(m·K)]</td>
<td>5.192 204 x 10³</td>
</tr>
<tr>
<td>calorie (International Table)</td>
<td>joule (J)</td>
<td>4.186 800 x 10⁵</td>
</tr>
<tr>
<td>centipose (International Table)</td>
<td>pascal second (Pa·s)</td>
<td>1.000 000 x 10⁻³</td>
</tr>
<tr>
<td>centistokes</td>
<td>square metre per second (m²/s)</td>
<td>1.000 000 x 10⁻⁶</td>
</tr>
<tr>
<td>circular mil</td>
<td>square metre (m²)</td>
<td>5.067 075 x 10⁻¹⁰</td>
</tr>
<tr>
<td>degree Farenheit</td>
<td>degree Celsius</td>
<td>1.8C = (°F - 32)/1.8</td>
</tr>
<tr>
<td>foot</td>
<td>metre (m)</td>
<td>3.048 000 x 10⁻²</td>
</tr>
<tr>
<td>ft²</td>
<td>square metre (m²)</td>
<td>9.290 304 x 10⁻²</td>
</tr>
<tr>
<td>ft³</td>
<td>cubic metre (m³)</td>
<td>2.831 685 x 10⁻²</td>
</tr>
<tr>
<td>ft lbf</td>
<td>joule (J)</td>
<td>1.355 818</td>
</tr>
<tr>
<td>ft lbf/min</td>
<td>watt (W)</td>
<td>2.259 697 x 10⁻²</td>
</tr>
<tr>
<td>ft/s²</td>
<td>metre per second squared (m/s²)</td>
<td>3.048 000 x 10⁻¹</td>
</tr>
<tr>
<td>gallon (U.S. liquid)</td>
<td>cubic metre (m³)</td>
<td>3.785 412 x 10⁻³</td>
</tr>
<tr>
<td>horsepower (electric)</td>
<td>watt (W)</td>
<td>7.460 000 x 10⁻¹</td>
</tr>
<tr>
<td>inch</td>
<td>metre (m)</td>
<td>2.540 000 x 10⁻²</td>
</tr>
<tr>
<td>in.²</td>
<td>square metre (m²)</td>
<td>6.451 600 x 10⁻⁴</td>
</tr>
<tr>
<td>in.³</td>
<td>cubic metre (m³)</td>
<td>1.683 706 x 10⁻⁵</td>
</tr>
<tr>
<td>inch of mercury (60°F)</td>
<td>pascal (Pa)</td>
<td>3.376 85 x 10⁻¹</td>
</tr>
<tr>
<td>inch of water (60°F)</td>
<td>pascal (Pa)</td>
<td>2.488 4 x 10²</td>
</tr>
<tr>
<td>kgf/cm²</td>
<td>pascal (Pa)</td>
<td>9.806 650 x 10⁵</td>
</tr>
<tr>
<td>kip (1000 lbf)</td>
<td>newton (N)</td>
<td>4.448 222 x 10³</td>
</tr>
<tr>
<td>kip/in.² (ksi)</td>
<td>pascal (Pa)</td>
<td>6.894 757 x 10⁶</td>
</tr>
<tr>
<td>ounce (U.S. fluid)</td>
<td>cubic metre (m³)</td>
<td>2.957 355 x 10⁻⁵</td>
</tr>
<tr>
<td>ounce-force</td>
<td>newton (N)</td>
<td>2.780 139 x 10⁻¹</td>
</tr>
<tr>
<td>ounce (avoirdupois)</td>
<td>kilogram (kg)</td>
<td>2.834 952 x 10⁻²</td>
</tr>
<tr>
<td>oz (avoirdupois)/ft²</td>
<td>kilogram per square metre (kg/m²)</td>
<td>3.051 517 x 10⁻¹</td>
</tr>
<tr>
<td>oz (avoirdupois)/yd²</td>
<td>kilogram per square yard (kg/yd²)</td>
<td>3.390 575 x 10⁻²</td>
</tr>
<tr>
<td>oz (avoirdupois)/gal (U.S. liquid)</td>
<td>cubic metre (m³)</td>
<td>7.489 152</td>
</tr>
<tr>
<td>pint (U.S. liquid)</td>
<td>newton (N)</td>
<td>4.731 765 x 10⁻⁴</td>
</tr>
<tr>
<td>pound (lb avoirdupois)</td>
<td>kilogram (kg)</td>
<td>4.448 222</td>
</tr>
<tr>
<td>pound (lb avoirdupois)/lb</td>
<td>pascal (Pa)</td>
<td>6.894 757 x 10³</td>
</tr>
<tr>
<td>lb/in.² (psi)</td>
<td>kilogram per square metre (kg/m²)</td>
<td>2.767 990 x 10⁻⁴</td>
</tr>
<tr>
<td>lb/ft²</td>
<td>kilogram per cubic metre (kg/m³)</td>
<td>1.601 846 x 10⁻⁶</td>
</tr>
<tr>
<td>lb/ft³</td>
<td>cubic metre (m³)</td>
<td>9.463 529 x 10⁻⁴</td>
</tr>
<tr>
<td>quart (U.S. liquid)</td>
<td>kilogram (kg)</td>
<td>9.071 847 x 10⁻⁶</td>
</tr>
<tr>
<td>ton (short, 2000 lbf)</td>
<td>pascal (Pa)</td>
<td>1.333 22 x 10⁻²</td>
</tr>
<tr>
<td>torr (mm Hg, 0°C)</td>
<td>joule (J)</td>
<td>3.600 000 x 10⁻⁴</td>
</tr>
<tr>
<td>W·h</td>
<td>metre (m)</td>
<td>9.144 000 x 10⁻¹</td>
</tr>
<tr>
<td>yard</td>
<td>square metre (m²)</td>
<td>8.361 274 x 10⁻¹</td>
</tr>
<tr>
<td>yd²</td>
<td>cubic metre (m³)</td>
<td>7.645 549 x 10⁻¹</td>
</tr>
</tbody>
</table>

*Exact