

S.B. I-335 over E. B. K-4 & I-70 #7

Station 2050+17, 155L4 = Sta. 439+36, 64 L4 & S.B. I-335

KANSAS DEPARTMENT OF TRANSPORTATION



|                                       |                               |                                |
|---------------------------------------|-------------------------------|--------------------------------|
| 1. ROUTE-COUNTY NO. 004-089           | 7. SOUNDING NO. 1             | 2. SHEET 1 OF 2                |
| 2. BRIDGE STA. 449+80.43<br>W.B. I-70 | 8. PROJECT NO. K-6252-01      | 3. BRIDGE NO. 335-89-25.14     |
| 3. DESCRIPTION S.B. I-335 Pier #1     | 9. HOLE STA. 2050+17, 155L4   | 4. HOLE STA. 2050+17, 155L4    |
| 4. GEOLOGIST R. Ryan                  | 10. VERTICLE SCALE 1"=5'      | 5. DATE 8/14/96                |
| 5. DRILLER Bergman                    | 11. RIG CME 55                | 6. ELEVATION TOP OF HOLE 987.6 |
| 6. GROUND WATER ELEV. —               | 12. TOTAL DEPTH OF HOLE 31'0" | 7. ELEVATION TOP OF ROCK 985.8 |

see Note

| BIT TYPE & NO. | GEOLOGIC NAME          | STRATIGRAPHIC COLUMN | DEPTH | ELEVATION | CLASSIFICATION OF MATERIALS DESCRIPTION AND REMARKS                     | UNCONFINED COMPRESSION | STANDARD PENETRATION OR CASING DRIVE |       |       |
|----------------|------------------------|----------------------|-------|-----------|---|------------------------|--------------------------------------|-------|-------|
|                |                        |                      |       |           |   |                        | REMARKS                              | ELEV. |       |
|                |                        |                      | 0°    | 987.6     |   |                        |                                      |       |       |
|                | Mantle                 |                      | 18    | 985.8     | Clay, gray-brown. to Rust-brown   |                        |                                      |       |       |
|                | Curzon Mbr.            |                      | 3°    | 985       | Limestone, weathered, brown   |                        |                                      |       |       |
|                | Iowa Point Mbr.        |                      | 47    | 982.9     | shale, weathered, olive-brown   | 193.50                 | 1-R-1                                | 983.8 |       |
|                | Hartford Mbr.          |                      |       | 980       | Limestone, weathered, orange-brown grading to gray-brown. Thick bedded. | 198.75                 | 1-R-2                                | 979.8 |       |
|                | Diamond<br>Calhoun Fm. |                      | 10°   | 977.6     | shale, gray, clayey   | 3.68                   | 1-R-3                                | 976.6 |       |
|                |                        |                      | 127   | 975       |   |                        |                                      |       | 974.9 |
|                |                        |                      | 184   | 970       | 969.2   | sandstone, shaly, gray | 116.18                               | 1-R-5 | 968.6 |
|                |                        |                      | 403   | 965       | 965.7   |                        |                                      |       |       |
|                |                        |                      |       | 31°       | 956   |                        | 19.28                                | 1-R-7 | 956.6 |
|                |                        |                      |       | 955       |   |                        |                                      |       |       |

Date 14-Aug-96

Project No. 004-089 K-6252-01

Location S.B. I-335 Pier #1

**Core 1**

1.9 - 2.1  
985.7 - 985.5  
Cut 0.2  
Recov. 0.2  
RQD= 100%  
Short core. Core stuck in barrel.

**Core 6**

21.0 - 26.0  
966.6 - 961.6  
Cut 5.0  
Recov. 4.9  
RQD= 98%

**Core 2**

2.1 - 6.0  
985.5 - 981.6  
Cut 3.9  
Recov. 2.4  
RQD= 42%

**Core 7**

26.0 - 31.0  
961.6 - 956.6  
Cut 5.0  
Recov. 4.8  
RQD= 100%

**Core 3**

6.0 - 11.0  
981.6 - 976.6  
Cut 5.0  
Recov. 5.0  
RQD= 100%

**Core 4**

11.0 - 16.0  
976.6 - 971.6  
Cut 5.0  
Recov. 5.0  
RQD= 86%

**Core 5**

16.0 - 21.0  
971.6 - 966.6  
Cut 5.0  
Recov. 4.9  
RQD= 92%

KANSAS DEPARTMENT OF TRANSPORTATION

Report of sample of Geology Cores

Laboratory No. 96-3611

Date Rep'td. August 21, 1996

Date Rec'd. August 15, 1996

Specification No. AASHTO T 208-92

Quantity - - -

Source of material Project

Sample from Project

Submitted by R. Ryan, Lawrence Geology Office

Identification marks Tags with samples

Project or POV 004-089 K-6252-01, Shawnee County, District 1

Type of construction New Bridge, Bridge SB I-335 Pier #1

T.H.E. = 987.60

TEST RESULTS

| Sample No. | Station | Dist.ft. BL | Depth ft. | Description              | Qu. t.s.f. | Sample p.c.f. by Dry Wt. | Moisture (% of Dry Wt.) |
|------------|---------|-------------|-----------|--------------------------|------------|--------------------------|-------------------------|
| S#1-R-1    | 2050+17 | 155'        | LT 33-38  | LS, ORG-BRN              | 193.500    | 135.7                    | 9.1                     |
| S#1-R-2    | "       | "           | 73-78     | LS, LT-GRY-BRN           | 198.752    | 146.7                    | 6.2                     |
| S#1-R-3    | "       | "           | 106-110   | SH, GRY, Clayey          | 3.682      | 120.7                    | 15.1                    |
| S#1-R-4    | "       | "           | 145-149   | SH, DRK-GRY w/SS LAM     | 36.711     | 128.8                    | 10.6                    |
| S#1-R-5    | "       | "           | 184-190   | SS, GRY, w/SH LAM Lime   | 116.175    | 125.6                    | 11.7                    |
| S#1-R-6    | "       | "           | 231-237   | SH, Dk-GRY, w/Few SS LAM | 13.043     | 127.9                    | 11.1                    |
| S#1-R-7    | "       | "           | 305-310   | SHale, Blue-Gray         | 19.284     | 134.8                    | 9.5                     |

cc: L.S. Ingram  
G.R. Koontz  
D. Thompson  
R. Henthorne  
J.J. Brennan  
Soil Section  
File

Reported by *James J. Brennan*

Title James J. Brennan, Soils Engineer

KANSAS DEPARTMENT OF TRANSPORTATION  
 INFORMATION SHEET FOR SOIL SAMPLES

Submitted by R. RYAN Address LAWRENCE REGIONAL GEOLOGY <sup>OFFICE</sup> Date 8-15-96  
 Engineer in Charge GN CLARK GEOTECH ENG Sampled by BOB BERGMAN  
 Project No. 004-089-K-6252-01(SBI335) County SHAWNEE  
 Type of Constr. BRIDGE Check whether: Active \_\_\_\_\_ Prelim. X Research \_\_\_\_\_

| SAMPLE NUMBER | STATION | DIST. &   | DEPTH                            | TESTS REQUIRED         | REMARKS                |
|---------------|---------|-----------|----------------------------------|------------------------|------------------------|
| S# 1-R-1      | 2050+17 | 155' LT B | 3 <sup>3</sup> -3 <sup>8</sup>   | UNCONFINED COMPRESSION | LS, ORG-BRN            |
| S# 1-R-2      |         |           | 7 <sup>3</sup> -7 <sup>8</sup>   |                        | LS, LT GRY-BRN         |
| S# 1-R-3      |         |           | 10 <sup>6</sup> -11 <sup>0</sup> |                        | SH, GRY, CLAYEY        |
| S# 1-R-4      |         |           | 14 <sup>5</sup> -14 <sup>9</sup> |                        | SH, DRX GRY W/SS LAM   |
| S# 1-R-5      |         |           | 18 <sup>4</sup> -19 <sup>0</sup> |                        | SS, GRY W/SH LAM Lim   |
| S# 1-R-6      |         |           | 23 <sup>1</sup> -23 <sup>7</sup> |                        | SH, DRX GRY, W/FEW SSL |
| S# 1-R-7      | Y       | Y         | 30 <sup>5</sup> -31 <sup>0</sup> | Y                      | SH, BLU-GRY            |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |
|               |         |           |                                  |                        |                        |

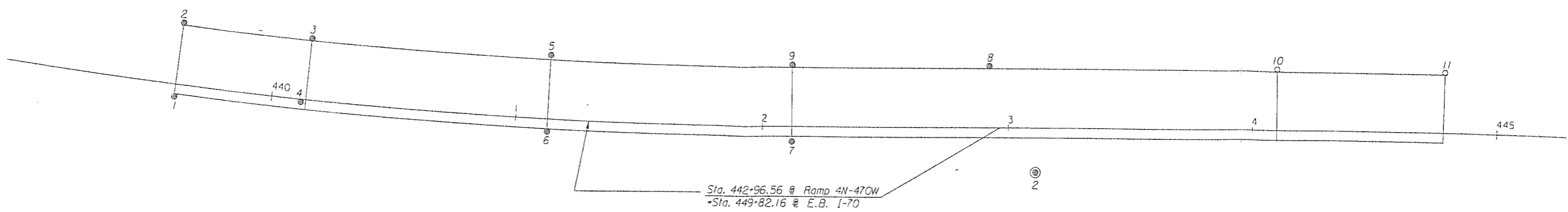
LABORATORY RECORD

Date received 8-15-96 Laboratory No. 96-3611-SOILS

Remarks: SBI-335, PIER# 1, TOP HOLE EL 987.60

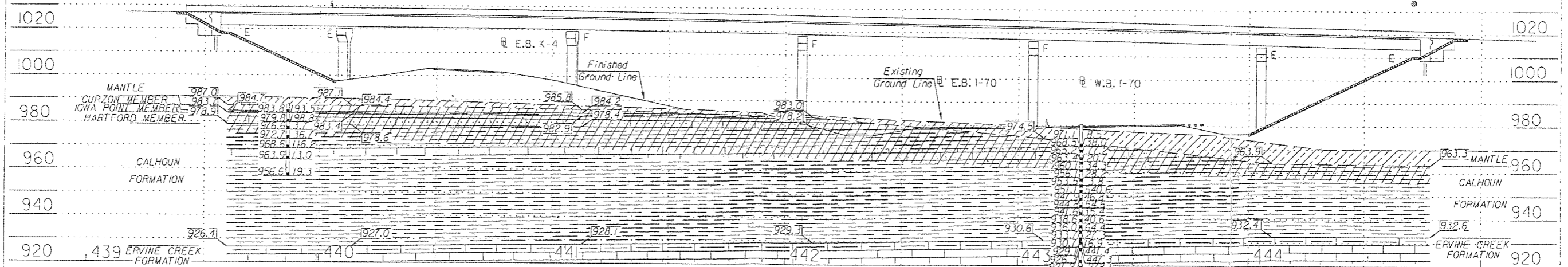
NOTE - One copy of this form completely filled out must accompany each sample or group of samples submitted to the Materials & Research Center, 2300 Van Buren, Topeka, Kansas 66611.

|                     |        |                |      |           |              |
|---------------------|--------|----------------|------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE  | PROJECT NO.    | YEAR | SHEET NO. | TOTAL SHEETS |
| 7                   | KANSAS | 4-89 K-6252-01 | 19   |           |              |



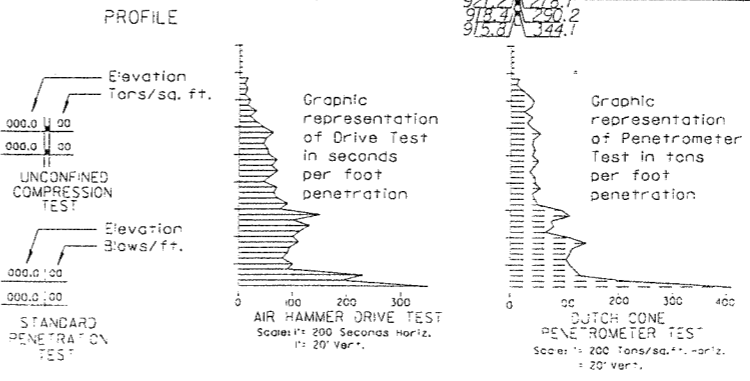
|      |    |      |    |      |    |
|------|----|------|----|------|----|
| DATE | BY | DATE | BY | DATE | BY |
|      |    |      |    |      |    |

Drawn By: RJ CROW MRC 291-3861  
 DGN File: us7/geotech/6252514.dgn  
 Plotted: \$\$\$\$\$\$TIME\$\$ View: plot



| STANDARD GEOLOGIC SYMBOLS |  |  |  |
|---------------------------|--|--|--|
|                           |  |  |  |
|                           |  |  |  |
|                           |  |  |  |
|                           |  |  |  |
|                           |  |  |  |
|                           |  |  |  |

| SOUNDINGS |   |
|-----------|---|
|           | 000.0 Elevation interpolated or from adjacent soundings |
|           | 000.0 Actual sounding elevation                         |
|           | 000.0 Drive started                                     |
|           | 000.0 Refusal   |
|           |   |
|           |   |
|           |   |
|           |   |



NOTE: The soundings shown on these plans are taken from notes in the field and represent the best information available. The logs of these soundings are in the files of the Kansas Department of Transportation and are available at their offices at Topeka, Kansas for inspection by interested and qualified bidders.

SCALE: 1" = 20' Horiz. 1" = 20' Vert.

|     |      |           |    |       |
|-----|------|-----------|----|-------|
| NO. | DATE | REVISIONS | BY | APP'D |
| 1   |      |           |    |       |
| 2   |      |           |    |       |
| 3   |      |           |    |       |

KANSAS DEPARTMENT OF TRANSPORTATION

BR. NO. 70-89-20(21252) STA. 449+80.43 ± WB -70

ENGINEERING GEOLOGY

Ramp 4N-470W over EB K-6 & -70

PROJ. NO. 4-89 K-6252-01 SHAWNEE CO.

|              |          |            |           |
|--------------|----------|------------|-----------|
| DESIGNED     | CHECKED  | QUANTITIES | TRACED    |
| REVISION CL. | SEAL CL. | QUANT. CL. | TRACE CL. |

# Kansas Department of Transportation

BUREAU OF MATERIALS AND RESEARCH

GEOTECHNICAL UNIT

GEOLOGY SECTION

TOPEKA, KANSAS

July 30 1997

Proj. No. 004-089 K-6252-01

Br. No. ~~335-89-25-14~~ 70-89-20.12(252)

S.B. ~~I-335 over E.B. K-4 and I-70~~ Ramp 4N-470W over E.B. K-4 & I-70

Sta. 449+80.43 ~~B~~ W.B. I-70

Shawnee County

MEMORANDUM TO: MR. G. DAVID COMSTOCK, P.E.  
CHIEF, BUREAU OF DESIGN

ATTENTION: MR. KEN HURST, P.E.  
ENGINEERING MANAGER, STATE BRIDGE OFFICE

SUBJECT: BRIDGE FOUNDATION GEOLOGY REPORT

Three copies of the above report are attached to this memorandum. An Engineering Geology Bridge Sheet has been drawn on the Microstation Workstation. This file has been placed on the Design file server witch under the filename 62522514.dgn. Two copies of the drill sounding logs are attached to this report.

If questions arise over the contents of this report, please do not hesitate to contact the Geology Section.

LON S. INGRAM, P.E.  
CHIEF, MATERIALS AND RESEARCH



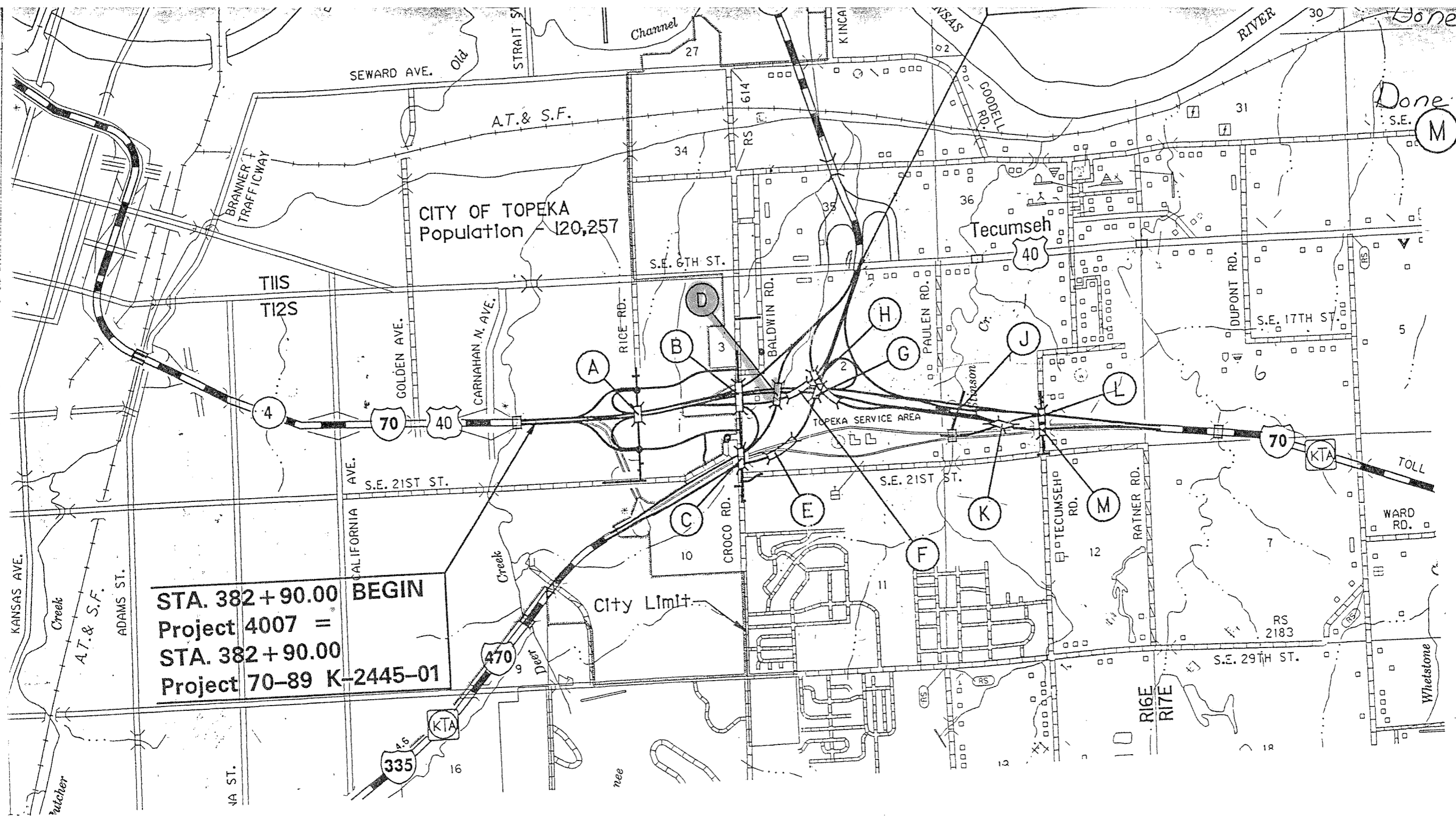
G.N. CLARK, P.E.  
GEOTECHNICAL ENGINEER

LSI:GNC:GRK:

attachments

cc:

- District 1
- Bureau of Construction and Maintenance
- Regional Geology Offices
- Project File



32'-0" Roadway

STA. 521 + 16.57  
 Tecumseh Road  
 Br. No. 70-89-2'  
 70'-125'-70' Cor  
 32'-0" Roadway

Note: (I) not u

**STA. 382 + 90.00 BEGIN**  
**Project 4007 =**  
**STA. 382 + 90.00**  
**Project 70-89 K-2445-01**

Sheets see Sheet No. 2  
 out See Sheet No.

|                         |               |             |
|-------------------------|---------------|-------------|
| GROSS LENGTH OF PROJECT | 10,936.33 FT. | 2.071 MILES |
| EXCEPTIONS              | FT.           | MILES       |
| ADDITIONS               | FT.           | MILES       |

RECOM. FOR APPROVAL-DATE

CHIEF, BUREAU OF DESIGN  
 KANSAS DEPARTMENT OF TRANSPORTATION

APPROVED - DATE

3-125-16E

2-125-16E



RICE / CROCO NORTH

4N-70W

335S-70E

Core hole  
(48+62)

Core #2

Core

Core hole here  
(450+07)

I-70

70W-4N

Core hole here  
(53+43)

Core hole here  
(442+81-74)

70W-335S

core #1  
(2050+17, 155 LT.  
= 439+36, 64 LT.)

4N-70E

N.B. I-335

S.B. I-335

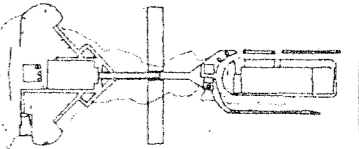
St. Street

Croco Road

Core hole here  
(65+85)

Core hole here

SERVICE AREA



Turnpike

Core hole here

St. Street

WEST

12180

12185

12190

12195

12200

12205

12210

12215

12220

12225

12230

2025

2030

2035

2040

2045

3040

3045

3050

3055

3060

EA