|   |              |               |                                 | PAGE _4                     | of _            | 4     |      |
|---|--------------|---------------|---------------------------------|-----------------------------|-----------------|-------|------|
| Geo Services Inc  | SO           | IL BOI        | DATE 6/20                       | DATE 6/20/2012              |                 |       |      |
| Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 805 Amberist Court, Suite 204 Naperville, Jilinbia 60565 |              |               |                                 | LOGGED BY DR                |                 |       |      |
| Naperville, Illinois 60565<br>(630) 355+2838  |              |               |                                 | GSI JOB No.                 |                 |       |      |
|   |              |               |                                 |                             |                 |       | _    |
| ROUTE <u>FAP 353 (US 30)</u>  |              |               |                                 |                             | <u>-91-046-</u> | -12   |      |
| SECTION 11-Y-A  | LOCATION _   | SEC 20 &      | 29. T 35 N. R 15 E.             | 3rd PM                      |                 |       |      |
| COUNTY Cook   | _ DRILLING M | ETHOD Holl    | ow Stem Auger/Rotar             | Y HAMMER TYPE CM            | E Automa        | tic   |      |
| STRUCT. NO  | - D E        | B U M         | Surface Water Elev.             | n/a                         | DΒ              | U     | N    |
| Station   | -   E   L    | .   c   o     | Stream Bed Elev.                | n/a                         | E L             | С     | 0    |
| BORING NO. BS-14  | -   P   C    |               | Groundwater Elevatio            |                             | POW             | S     | - 0, |
| Station <u>278+77</u> Offset 45.6' Left   | -   H   S    | S Qu T        | First Encounter Upon Completion | $\frac{Dry\ To\ 10.0}{n/a}$ | H S             | Qu    | 1    |
| Ground Surface Elev. 627.0  | (ft) (/6     | 6") (tsf) (%) | 10.0                            | <i>11/ t</i>                | (ft) (/6")      | (tsf) | (5   |
| Run 1 continued.  |              |               |                                 |                             |                 |       | Н    |
|   |              |               |                                 |                             |                 |       |      |
| Recovery=100.0%<br>RQD=93.5%  |              |               |                                 |                             | +               | -     | H    |
|   | -            |               |                                 |                             |                 |       |      |
|   | ュ            | RUN 1         |                                 |                             | $\bot$          |       | Г    |
|   | - 4          | non i         |                                 |                             | _               |       |      |
|   | -            |               |                                 |                             | -               |       | ⊢    |
|   | -125         |               |                                 |                             | _145            |       |      |
|   |              |               |                                 |                             | _               |       |      |
| <del>.</del>  | 501.0        |               | -                               |                             | _               |       |      |
| Silurian System, Niagaran Series Dolomite —<br>RUN 2 (-126.0' to -131.0')   |              |               |                                 |                             | $\pm$           |       | Г    |
| Light gray mottled gray & fine grai   | ined         |               |                                 |                             |                 |       | Т    |
| with horizontal bedding becoming porous © −130.5'. Horizontal fractures   |              |               |                                 |                             |                 |       |      |
| <b>9</b> -128.2', -129.2', -129.9', -130.   | 0' & —       | RUN 2         |                                 |                             | +               | _     | L    |
| -130.4'.  | <u>-130</u>  |               |                                 |                             | -150            |       |      |
| Recovery=100.0%   |              |               |                                 |                             |                 |       | Г    |
| RQD=93.5%   | 496.0        |               |                                 |                             | _               |       |      |
| End Of Boring ♥ -131.0'   | +            | ++            | -                               |                             | +               |       | H    |
| Hollow Stem Augers To −10.0'<br>Rotary Drilling To Completion   |              |               |                                 |                             |                 |       |      |
| CME Automatic Hammer  | $\neg$       |               |                                 |                             | $\neg$          |       |      |
| 10' Of 4.0"\sqrt{saing Used} 117' Of 3.0"\sqrt{saing Used}  |              |               |                                 |                             | -               |       |      |
| J. J.O P Gability Good  | _            | + +           | 1                               |                             |                 |       | H    |
|   | -135         | $\bot$        |                                 |                             | -155            |       | L    |
|   | $\dashv$     |               |                                 |                             | -               |       |      |
|   | $\dashv$     |               |                                 |                             | -               |       |      |
|   |              | $\top$        | 1                               |                             | 一               |       | Г    |
|   | $\neg$       | +             |                                 |                             | 1               |       | L    |
|   | $\dashv$     |               |                                 |                             |                 |       |      |
|   | $\exists$    |               |                                 |                             |                 |       |      |
|   | $\neg$       |               | 1                               |                             | $\neg$          |       | Г    |
|   | -140         |               |                                 |                             | -160            |       |      |

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer)

The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO 1206)

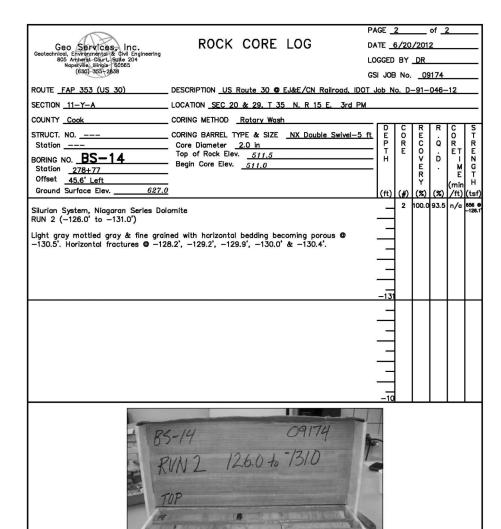
The Unit Dry Weight (pcr) is noted in italics above moist (%)

NR-No Recovery

|   |                                     |             |  | PAGE _1     |       | of _        | 2            | _1         |
|---|-------------------------------------|-------------|--|-------------|-------|-------------|--------------|------------|
| Geo Services, Inc.  | ROCK                                | CORE        | LOG  | DATE _6     | /20/2 | 2012        |              | —I         |
| Geo Services, Inc.<br>Geotechnical, Environmental & Civil Engineering<br>805 Amherst Court, Sulte 204<br>Naperville, Illinois 60565<br>(630) 355-2838 |                                     |             |  | LOGGED      | BY _C | R           |              |            |
| (630) 355+2838  |                                     |             |  | GSI JOB     | No.   | 09174       |              | _          |
| 55.00   | DESCRIPTION _US                     | Route 30 ©  | EJ&E/CN Railroad, ID   |             |       |             | -12          | _[         |
| 1740000000  |                                     |             | 5 N. R 15 E. 3rd P   |             |       |             |              |            |
| COUNTY Cook   | CORING METHOD                       |             |  |             |       |             |              | _          |
| STRUCT. NO  |                                     |             | NX Double Swivel-1   | O ft E      | CO    | R R<br>E .  | Co           | S<br>T     |
| Station   | Core Diameter                       | 2.0 in      |  | <u> </u>    | R     | c a         | Ř<br>ET      | RE         |
| BORING NO. <b>BS-14</b>   | Top of Rock Ele<br>Begin Core Elev. |             |  | —[ Ĥ [      | - 1   | V D         | 1.           | ZG         |
| Station <u>278+77</u> Offset 45.6' Left   |                                     | 011.0       |  | -           |       | R           | E            | Т          |
| Ground Surface Elev. 627.0  |                                     |             |  | (ft)        |       | Y<br>%) (%) | (min<br>/ft) | H<br>(tsf) |
| Silurian System, Niagaran Series Dol  | omite                               |             |  |             |       | 0.0 93.5    | -            | 920 0      |
| RUN 1 (-116.0' to -126.0')  |                                     |             |  | -           |       |             | Ů            | -116.01    |
| Gray & fine grained with horizontal   |                                     |             |  | s <b>o</b>  |       |             |              |            |
| -122.2'. Horizontal fractures @ -12<br>-122.0', -122.2', -122.6', -124.0' a   | 0.2°, −120.3°, −12<br>& −124.5′.    | 0.4, -120.9 | , -121.4, -121.5,  |             |       |             |              |            |
|   |                                     |             |  | -           |       |             |              |            |
|   |                                     |             |  |             |       |             |              |            |
|   |                                     |             |  | -121        |       |             |              |            |
|   |                                     |             |  | <u>–121</u> |       |             |              |            |
|   |                                     |             |  | _           |       |             |              |            |
|   |                                     |             |  |             |       |             |              |            |
|   |                                     |             |  |             |       |             |              |            |
|   |                                     |             |  | -           |       |             |              |            |
|   |                                     |             |  |             |       |             |              |            |
|   |                                     |             |  | 100         |       |             |              |            |
|   |                                     |             |  | -126        | L     |             |              | 닉          |
| 11  | 0/14                                |             | 091711   |             |       |             |              |            |
|   | 85-19                               |             | 01119  | 1           |       |             |              |            |
| 1   | DUALL -                             | 116.0 %     | -1760'   | 4           |       |             |              |            |
|   | KUNI                                | 110.0 10    | 120.0  |             |       |             |              |            |
| 1   | 65D                                 |             |  | 1 1         |       |             |              |            |
|   | TUP                                 |             |  | 23          |       |             |              |            |
| - 7   | At a                                |             | The same of the sa |             |       |             |              |            |
| 1   | 1                                   | 14          | The state of   |             |       |             |              |            |
|   | William For K                       | -           | 4  |             |       |             |              |            |
| 1   | H                                   | 6           |  |             |       |             |              |            |
| 1000  | 12 mg                               |             |  |             |       |             |              |            |
| -   |                                     |             |  |             |       |             |              |            |
| 16.00   |                                     |             |  |             |       |             |              |            |
|   |                                     |             |  |             |       |             |              |            |

Color pictures of the cores <u>Yes</u> Cores will be stored for examination for —

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)



Color pictures of the cores <u>Yes</u> Cores will be stored for examination for <u>—</u>
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

|              | V3 Companies of Hillnois Ltd. |
|--------------|-------------------------------|
| /            | 7325 Janes Avenue             |
|              | Woodridge, IL 60517           |
|              | 630.724.9200 phone            |
| \ <b>\ \</b> | 630.724.9202 fax              |
|              | www.w3co.com                  |

| USER NAME =  | DESIGNED - EVS | REVISED |
|--------------|----------------|---------|
|              | CHECKED - WJV  | REVISED |
| PLOT SCALE = | DRAWN - EVS    | REVISED |
| PLOT DATE =  | CHECKED - WJV  | REVISED |

| STATE                        | OF ILLINOIS |  |  |  |  |
|------------------------------|-------------|--|--|--|--|
| DEPARTMENT OF TRANSPORTATION |             |  |  |  |  |

| SOIL BORING LOGS          | F.A.P.<br>RTE.            | SECTION | COUNTY  | TOTAL<br>SHEETS | SHEET<br>NO. |
|---------------------------|---------------------------|---------|---------|-----------------|--------------|
| STRUCTURE NO. 016-1279    | 353                       | 11-Y-A  | соок    | 354             | 248          |
| 31NOCIONE NO. 010-12/3    |                           |         | CONTRAC | NO.             | OR19         |
| SHEET NO. 28 OF 35 SHEETS | ILLINOIS FED. AID PROJECT |         |         |                 |              |