Illinois Department of Transportation

Memorandum

To:	Fawad Aqueel	Attn:	Dan Wilgreen Farhan Tariq
From:	Stephen Jones	By:	Giancarlo Gierbolini
Subject:	Roadway Geotechnical Report*		
Date:	June 20, 2025		

*Route:	FAP 345 (United States Route 20 – US 20)
Location:	at Oak Avenue and Bartlett Road
Section:	2021-133-N
County:	Cook
Contract:	62P51

Attached is the condensed Roadway Geotechnical Report prepared by the District One Geotechnical Section for the above referenced project. The report provides geotechnical soil information obtained during the field investigation, as well as recommendations for the proposed improvements.

Please note that this report contains information regarding the condition of the subgrade soil encountered below the proposed pavement as well as recommendations for the proposed aggregate subgrade treatment supporting the pavement.

If you have any questions regarding this report, please contact Robert Claussen, P.E. at (847)705-4735 or Giancarlo Gierbolini, P.E. at (847) 705-4003.

Cc: IDOT Soil Inspector

CONDENSED ROADWAY GEOTECHNICAL REPORT

Date: June 20, 2025
Route: FAP 345 (United States Route 20 – US 20)
Location: at Oak Avenue and Bartlett Road
Section: 2021-133-N
County: Cook
Contract: 62P51

LOCATION OF IMPROVEMENT

The proposed project will include roadway improvements on United States Route 20 (US 20), Lake Street, at the crossings with Oak Avenue and Bartlett Road. The project is located in the Villages of Bartlett and Streamwood in Cook County. A project location map has been attached at the end of this report for reference.

DESCRIPTION OF PROJECT

The proposed improvements to US 20 will begin on the west side at Station 490+23, just west of the crossing with Old Lake Street, and will end on the east side at Station 524+00, just east of the crossing with Club Tree Drive. The overall improvement length is 3,377 feet. The improvements will consist of resurfacing the existing roadway, replacing the existing aggregate shoulders with widened HMA shoulders, and new traffic signal mast arm structures.

PAVEMENT DESIGN

Based on the design plans, the proposed improvements will consist of resurfacing the existing Hot Mix Asphalt (HMA) pavement and constructing new full depth widened pavement and paved shoulders. The proposed pavement areas will consist of the following sections:

Resurfacing pavement

- 1 ¾ inches of HMA surface course pavement.
- ¾ inches of HMA binder course pavement.

Widening pavement

- 1 ¾ inches of HMA surface course pavement.
- ¾ inches of HMA binder course pavement.
- 10 ¾ inches of HMA binder course pavement.
- 12 inches of Aggregate Subbase Improvement.

Paved shoulders

- 1 ¾ inches of HMA surface course pavement.
- 6 ¼ inches of HMA binder course pavement.
- 12 inches of Aggregate Subbase Improvement.

SURROUNDING LAND USE

The existing land use within the vicinity of the project primarily consists of undeveloped agricultural land along the south side of the project area, with a developed commercial lot at the east end. The land use on the north side of the project area consists of a mix of developed commercial, business, and residential properties. The surrounding land area is fairly flat, with a majority of the grade change due to stormwater management and landscaping.

It is our understanding that the proposed paved shoulder improvements will include only limited earthwork as needed to tie proposed edge of pavement grade to the existing aggregate shoulders and grass embankment. The roadway pavement will be milled and resurfaced, and the profile elevations will remain essentially the same as the existing roadway. The existing and proposed storm water drainage within the project limits primarily consists of open ditch drainage.

PEDOLOGICAL SETTING

According to the U.S. Department of Agriculture Soil Survey, Natural Resources Conservation Service (Web Soil Survey http://websoilsurvey.nrcs.usda.gov) for Cook County, the native, near surface pedological soil types within the project limits primarily consist of those listed below. The Pedological Map included at the end of this report shows the various soil types in relation to the project limits. It should be noted that the near surface water depths indicated for each soil type to not represent the long term water table.

Ashkum silty clay loam, 0 to 2 percent slopes (232A) – This poorly drained material is found in end moraines and ground moraines at the toe of slope. The parent material consists of a clayey

colluvium over till. The typical near surface soil profile consists of silty clay loam from 0 to 12 inches below existing ground. From 12 to 29 inches, the material consists of silty clay. From 29 to 60 inches, the material consists of silty clay loam. The near surface water may be encountered as high as 0 and 12 inches below the ground surface. Ponding is frequent; however, flooding does not typically occur. All areas are prime farmland if they are drained.

Beecher silt loam, 0 to 2 percent slopes (298A) – This somewhat poorly drained material is found in ground moraines and end moraines at the footslope and summit. The parent material consists of a thin mantle of loess or other silty materials over till. The typical near surface soil profile consists of silt loam and silty clay loam from 0 to 60 inches below existing ground. The near surface water may be encountered as high as 6 to 24 inches below the ground surface. Flooding and ponding do not typically occur, and all areas are prime farmland if drained.

Ozaukee silt loam, 4 to 6 percent slopes eroded (530C2) – This moderately well drained material is found in end moraines and ground moraines at the shoulder and backslope. The parent material consists of a thin mantle of loess over silty and clayey till. The typical near surface soil profile consists of silt loam from 0 to 7 inches below existing ground. From 7 to 26 inches, the material consists of silty clay. From 26 to 60 inches, the material consists of silty clay loam. The near surface water may be encountered as high as 24 and 42 inches below the ground surface. Flooding and ponding do not typically occur, and all areas are prime farmland.

Orthents clayey, undulating (805B) – This moderately well drained material is found in lake plains and ground moraines at the backslope and summit. The parent material consists of earthy fill. The typical near surface soil profile consists silty clay from 0 to 60 inches below existing ground. The near surface water may be encountered as high as 24 to 42 inches below the ground surface. Flooding and ponding do not typically occur and this land is not considered prime farmland.

GEOLOGICAL SETTING

According to the map titled SURFICIAL GEOLOGY OF THE CHICAGO REGION by H.B. Willman and Jerry A. Lineback (1970), the project is primarily located within the Roselle Moraine, which is part of the Wadsworth Member of the Henry Formation. The near surface geology for this area consists of mostly gray clayey and silty clayey till with low pebble, cobble, and boulders, and local areas of sandy to gravelly till in the outer moraines. The soils encountered in the borings completed in the field at the project site and described in the boring logs included in this report, are in general agreement with this description. Soil descriptions specific to this site can be found in the Subsurface Conditions section of this report.

STORMWATER POLLUTION PREVENTION PLAN SITE DESCRIPTION

We understand that this project may be subject to statewide general NPDES storm water permit for the construction site activities and that a Storm Water Pollution Prevention Plan (SWPPP) would be required. In order to complete the SWPPP (Form BDE 2342) a description of the project site must be provided, including the existing soil types and their erosion potential in addition to identifying the locations of any highly erodible soils. The erosion properties for the soil type present within the vicinity of the project limits are presented in Table 1 below. The erosion factors (K factors) are used to evaluate the erosion potential of the soils, with the soils being more susceptible to sheet and rill erosion as values increase. The K factor for the soils within the project limit ranged from **0.20 to 0.32**. The Erosion Hazard Rating of each soil type is based on soil erosion factor (K), slope of the ground surface, and content of rock fragments, and represents the potential for surface erosion. The soils within the project limits have soil erosion rating of **Slight to Moderate**. The NRCS Soil Erosion Factor (K) Map included at the end of this report shows the soil areas and the applicable K factor in relation to the project limits.

Table 1: Soil Erosion Properties

Soil Name	Slope (%)	K Factor	Erosion Hazard Rating	Hydric Rating
Ashkum silty clay loam (232A)	0 to 2	0.20	Slight	Yes
Beecher silt loam (298A)	0 to 2	0.32	Slight	No
Ozaukee silt loam (530C2)	4 to 6	0.28	Moderate	No
Orthents clayey (805B)	undulating	0.32	Moderate	No

PAVEMENT CONDITION SURVEY

It is our understanding that the proposed improvements will include resurfacing the existing roadway through lanes and new full depth HMA pavement widening and shoulders. The general condition of the pavement within the project limits was observed at the time the field exploration was completed.

The existing roadway primarily consists of HMA pavement with aggregate shoulders, and open ditch drainage on both sides. The overall condition of the existing pavement within the project limits is considered fair. The pavement exhibited a moderate amount of longitudinal cracking and minor transverse cracking. The pavement also exhibited minor amounts of alligator cracking in isolated areas and minor rutting at the intersections.

CLIMATOLOGICAL DATA

The field investigation for this project was completed in June and July of 2023. The monthly temperature and precipitation data for the months of the investigation and the month prior to the investigation are provided in the table below. The month prior to the investigation as well as the month during which the investigation was completed, experienced precipitation levels that were close to the recorded average values. Based on this, it is anticipated that the moisture levels of the near surface soils and the depth of static water encountered during construction will be similar to the encountered during the geotechnical investigation.

Table 2: Climate Conditions

Month	Precipitation (in.)		Temperature °F	
	Total	Departure from Normal	Average Temp.	Departure from Normal
May 2023	0.7	-3.8	62.4	1.8
June 2023	2.4	-1.7	70.8	0.2
July 2023	7.7	4.0	75.7	0.3

The recording station for climatological data is located at O'Hare International Airport, which is approximately 39 miles north of the project site.

DRILLING AND SAMPLING

The subsurface exploration was completed in June and July 2023 and consisted of 10 soil borings. Six borings were drilled to a depth of 11.5 feet below the ground surface, and four soil

borings were drilled for proposed traffic signal structures to a depth of 41.5 feet. The soil borings were completed using a truck mounted, Mobil B-57 drill rig with 3 ¼ inch I.D. hollow stem augers, and extended to a maximum depth of approximately 11.5 feet below the existing ground surface.

Soils were collected in the borings with the use of a split barrel sampler, in accordance with AASHTO 206-09 (2013) "Penetration Test and Split-Barrel Sampling of Soils." In the split barrel sampling procedure, a split spoon sampler having a 2-inch outside diameter, an inside diameter of 1 $^{3}/_{8}$ inches, and a. length of 1.5 feet is driven into the soil. This sampler is advanced by driving it with a 140-pound weight, falling freely from a height of 30 inches with the Standard Penetration Resistance being recorded as a number of blows required to advance the sampling spoon a depth of 12 inches after an initial driving of 6 inches used to seat the sampler.

Soil samples were collected at 2.5 foot intervals to a depth of 30 feet, and at 5 foot intervals thereafter to boring termination depth. The soils encountered were inspected, visually classified and logged. The unconfined compressive strength of cohesive soil samples was tested in the field using a RIMAC compression tester and were verified using a calibrated hand penetrometer. Representative soil samples were collected from each sample interval and returned to the laboratory for further testing. The locations of the soil borings in relation to the existing and proposed conditions are shown in the Soil Boring Location Plan at the end of this report.

SUBSURFACE CONDITIONS

The majority of the soil borings were located on the existing aggregate shoulders or HMA pavement and one boring completed in the grass area adjacent to the existing roadway. The near surface materials primarily consisted of 12 inches of crushed aggregate, or approximately 13.5 inches of HMA pavement. The boring completed in the grass area encountered 24 inches of topsoil. The soil profile below the near surface materials predominantly consisted of layers of stiff to hard clay, silty clay for the full depth of the soil borings with occasional layers of loam, sand, and gravel.

The Roadway Analysis and Recommendations section below provides information regarding the evaluation of the subgrade soils and determining if undercuts are warranted. Care should be taken when evaluating the exposed subgrade soils to determine the suitability of the soils present at this depth. The soil boring logs have been included at the end of this report and can be referenced for information at specific locations.

Water was only encountered in boring SB-10, in a granular soil layer. The remainder of the borings encountered primarily cohesive soils and did not encounter water while drilling or after drilling was completed. Water moves slowly through cohesive soils and long term observations in cased borings or piezometers would be necessary to more accurately evaluate groundwater conditions. In general, it should be noted that the groundwater level may fluctuate based on seasonal precipitation, evaporation, surface run-off and other factors.

ROADWAY GEOTECHNICAL ANALYSIS AND RECOMMENDATIONS

Subgrade Support Rating and Illinois Bearing Ratio

Mechanistic pavement design procedures require that the subgrade soils be assigned a Subgrade Support Rating (SSR) based on the particle size distribution as depicted on the SSR chart. The subgrade soils encountered during the field exploration were primarily cohesive and have an SSR of rating Fair to Poor. Based on this, we recommend that an **SSR of poor** be used for the design of the proposed pavement section when using mechanistic design procedures. AASHTO design procedures require that the subgrade soils be assigned an Illinois Bearing Ratio (IBR). This value can be determined by means of physical testing or by using an assumed value based on the soil type. Based on the soils encountered, we recommend using an assumed **IBR value of 3** for the design of the proposed pavement when using AASHTO design procedures.

Roadway Subgrade

The proposed pavement section should be supported on 12 inches of improved subgrade consisting of AGGREGATE SUBGRADE IMPROVEMENT (SQ YD) in accordance with the Bureau of Design and Environment (BDE) Aggregate Subgrade Improvement Special Provision (April 1, 2022). The combination of the soils encountered at the proposed subgrade elevation and the 12 inch aggregate subgrade layer should provide suitable support for the proposed pavement structure.

Based on the soil exploration, the soils present at the subgrade level are suitable for supported in the proposed roadway pavement and aggregate subgrade and no undercuts are recommended at this time. The actual need for any undercuts should be determined in the field at the time of construction by the geotechnical engineer or soils inspector. We recommend including a plan quantity of AGGREGATE SUBGRADE IMPROVEMENT (CU YD) equal 25% of the planned full depth pavement area, assuming a thickness of 12 inches. All potentially unstable soils should be tested with a cone penetrometer and treated in accordance with Article 301.04 of the Standard Specifications for Road and Bridge Construction (SSRBC) adopted January 1, 2022 and the undercut guidelines in the IDOT Subgrade Stability Manual. If unsuitable soils are encountered in the field during construction, it is recommended that the soil

be removed and replaced with material meeting the BDE Aggregate Subgrade Improvement Special Provision. Any Aggregate Subgrade Improvement material not needed for undercut replacement at the time of construction should be deleted from the contract with no extra compensation to the contractor.

Based on the above recommendation, there will be a need for two separate Aggregate Subgrade Improvement line items in the Schedule of Quantities (SOQ) included in the design plans:

- AGGREGATE SUBGRADE IMPROVEMENT 12" (SQ YD) – This will be used for the 12 inch aggregate subgrade improvement below new pavement sections and widening pavement sections.

- AGGREGATE SUBGRADE IMPROVEMENT (CU YD) – This will be used in locations where there are undercuts (below the 12 inch improved subgrade layer) where poor soils were removed.

Both of these line items reference back to the Bureau of Design and Environment (BDE) Aggregate Subgrade Improvement Special Provision (April 1, 2022).

We also recommend placing geotextile fabric at the base of all undercut areas where low strength subgrade soils are encountered. We recommend including a plan quantity of GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (SQ YD) equal to 25% of the proposed full depth pavement area. The 12 inches of improved subgrade is not considered an undercut, and we do not recommend using geotextile fabric at the base of the proposed 12 inch improved subgrade layer unless it is determined to be necessary to achieve stability by the Geotechnical Engineer or soils inspector at the time of construction. Geotextile Fabric should meet the requirements of Article 210, Fabric for Ground Stabilization, of the SSRBC. Any material not needed at time of construction should be deleted from the contract with no extra compensation to the contractor.

Settlement Potential

Based on the proposed plans, it appears that the proposed grades will be close to the existing grades. Based on the limited grade change and the material encountered in the soil borings, settlement of the soils underlying is estimated to be less than one inch.

Underdrains

To provide drainage for the proposed pavement in widening areas, we recommend installing longitudinal pipe underdrains below the pavement for the roadways. Underdrains should also be installed in low areas and at the base of any undercuts. The underdrains should tie into the

storm water drainage system and should be installed per Article 601 in the IDOT Standard Specifications and consist of Type 2 underdrains (Adopted January 1, 2022).

STRUCTURES – GEOTECHNICAL ANALYSIS AND RECOMMENDATIONS

Traffic Signal Foundations

Based on the information provided by the Bureau of Design, the proposed improvements will include the construction of new cantilever mast arm traffic signals at the crossings of US 20 at Oak Avenue and US 20 at Bartlett Road. In general, the traffic signals consist of cantilever mast arms of variable design length, supported on a pole, which is in turn supported on a drilled shaft foundation. The diameter and depth of the drilled shaft are determined by the overall dimensions of the pole and mast arm.

The District One Standard Traffic Signal Design Details (TS-05) or Standard 878001-10 provide a chart with the dimensions for the drilled shaft foundation supporting single mast arm traffic signals. The standard foundation details require that the soils present along the foundation shaft be mostly cohesive in nature with unconfined compressive strengths of 1.0 ton per square foot (tsf) or greater. The soils encountered during the exploration meet the requirements to use the standard details for the design of the foundations.

The drilled shaft construction should be completed in accordance with Section 516, Drilled Shafts, in the IDOT Standard Specifications for Road and Bridge Construction (adopted January 1, 2022). The contractor should review the attached boring logs, evaluate the soil conditions and depths, and determine the means and methods necessary for construction. The contractor should also be prepared to use wet-method drilling, temporary casing, or a combination to facilitate shaft construction based on soils encountered at the time of construction.

CONSTRUCTION CONSIDERATIONS

This section provides the recommendations pertaining to the construction of the proposed improvements. It is recommended that work meet the requirements set forth in the IDOT Standard Specifications for Road and Bridge Construction (SSRBC) adopted January 1, 2022.

Site Preparation and Earthwork

All topsoil and any vegetation shall be removed from areas of proposed widening. In areas where topsoil will be removed to facilitate construction, we recommend using a topsoil stripping depth of 6 inches to determine contract quantities. Topsoil that is stripped should be stockpiled and reused once all roadway construction is completed. The pay item for this is TOPSOIL EXCAVATION AND PLACEMENT (CU YD). All earthwork shall be in accordance with Sections

204 and 205 of the IDOT SSRBC (Adopted January 1, 2022). District One currently uses a shrinkage factor of 15 percent.

Excavation Adjacent to Existing Embankment

All of the excavation and trenching operations should meet the requirements of IDOT and OSHA. The need for trench boxes, temporary earth retention, or bracing needed to install the proposed utility improvements should be evaluated prior to commencing earth work should be coordinated with the resident engineer.

Groundwater Management

Water was only encountered in one of the borings during the field exploration. Based on plans provided by the design team, it is not anticipated that groundwater related issues will be encountered during construction of the near surface roadway improvements; however, the contractor should anticipate that the water may be perched (trapped) in fill materials and any granular deposits encountered. Water should not be permitted to collect in excavations during or after construction and any water encountered should be removed to maintain dry, stable excavations. Water that is permitted to collect in excavations can soften the subgrade and bearing soils, which may result in the need to over excavate.

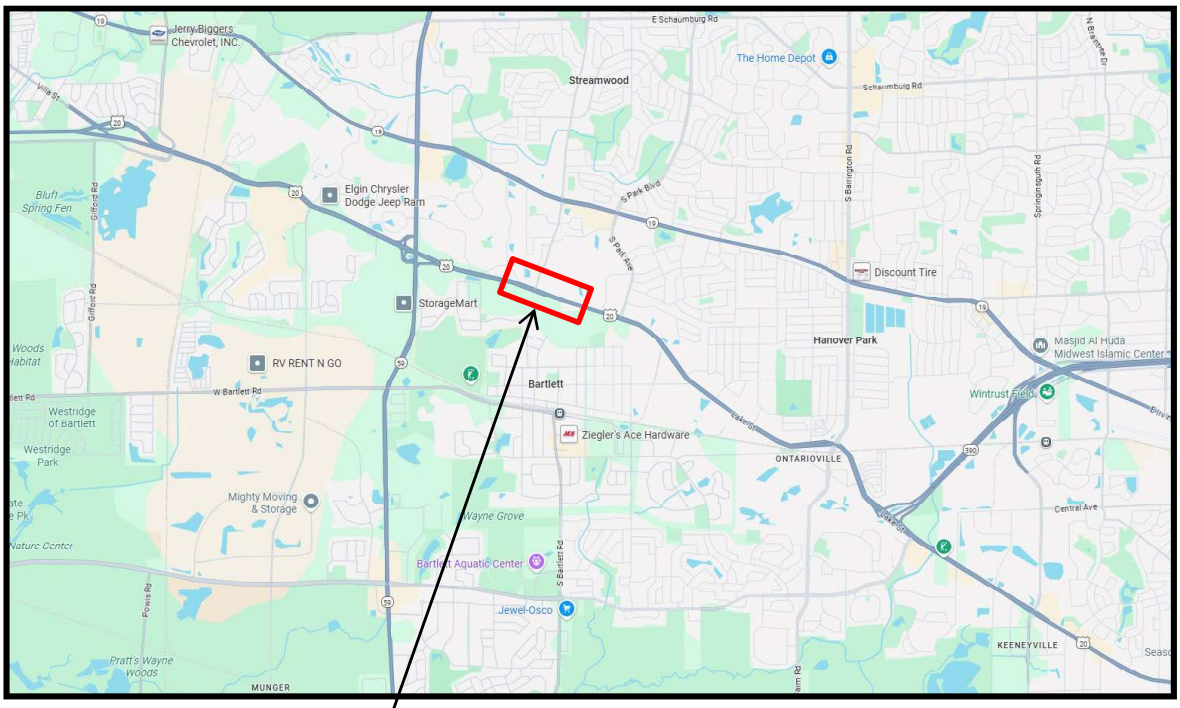
If you have any questions regarding this report, please contact either Robert J. Claussen, P.E. at (847) 705-4735 or Giancarlo Gierbolini, P.E. at (847) 705-4003.

Prepared by:
Robert J. Claussen, P.E.
Geotechnical Engineer

Attachments:

- Project Location Map
- NRCS Pedology Map
- NRCS Soil Erosion Factor (K) Map
- Soil Boring Location Plan
- Soil Boring Logs

PROJECT LOCATION MAP



PROJECT LOCATION

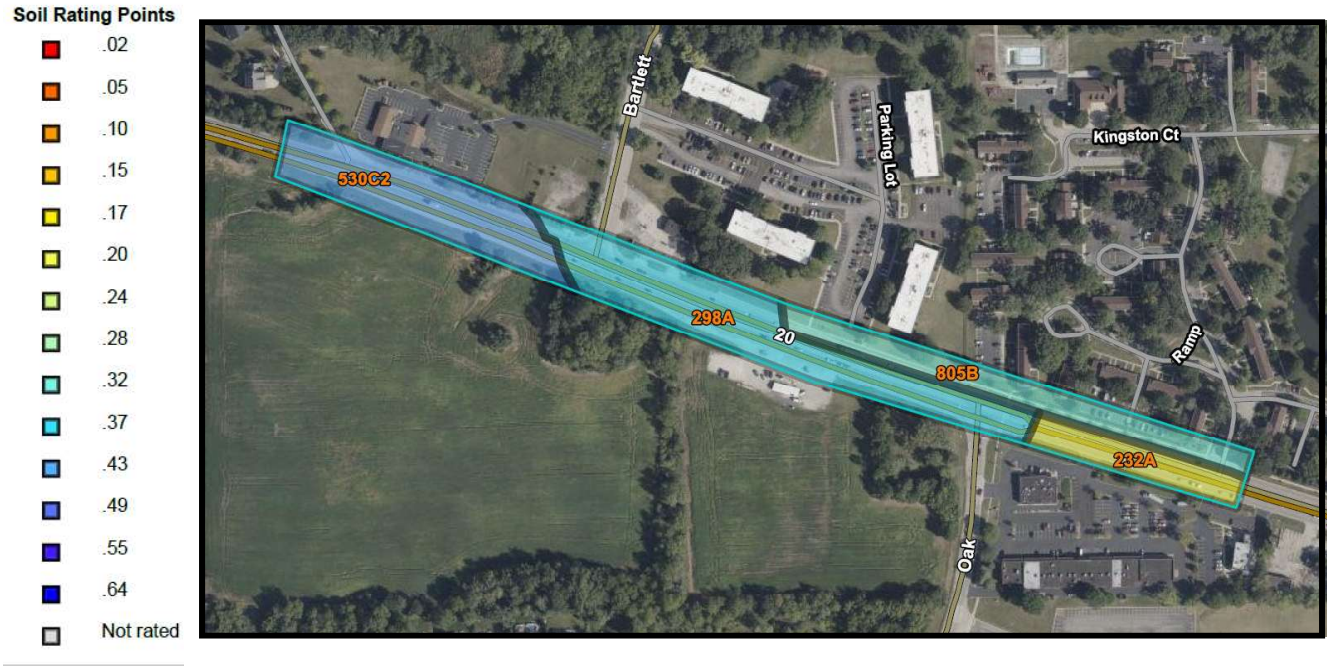
Exhibit 1 – Project Location Map
Route: FAP 345 (United States Route 20 – US 20)
Location: at Oak Avenue and Bartlett Road
Section: 2021-133-N
County: Cook
Contract: 62P51

NRCS PEDOLOGY MAP

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
232A	Ashkum silty clay loam, 0 to 2 percent slopes	0.9	11.5%
298A	Beecher silt loam, 0 to 2 percent slopes	3.1	39.3%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	2.2	28.0%
805B	Orthents, clayey, undulating	1.7	21.1%
Totals for Area of Interest		**8.0**	**100.0%**

Exhibit 2 – NRCS Pedology Map
Route: FAP 345 (United States Route 20 – US 20)
Location: at Oak Avenue and Bartlett Road
Section: 2021-133-N
County: Cook
Contract: 62P51

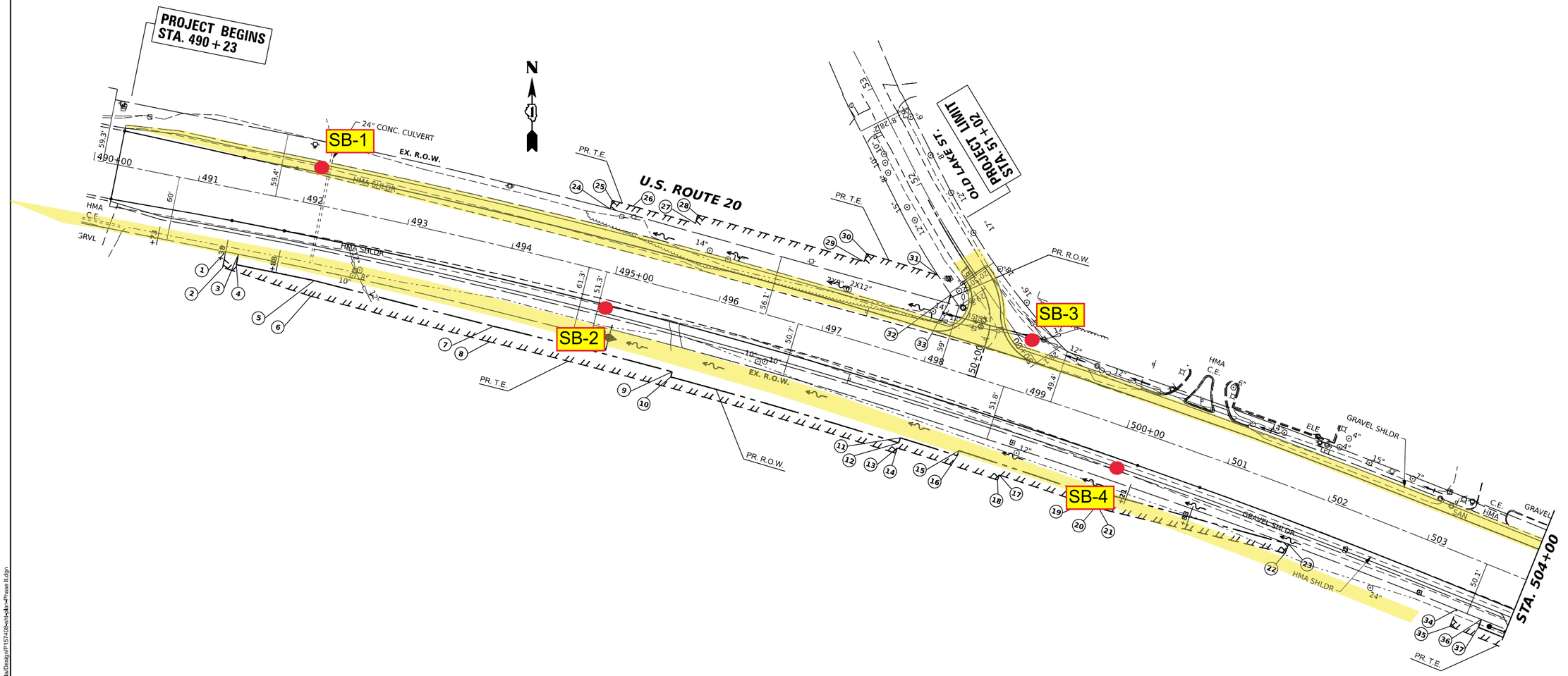
NRCS SOIL EROSION FACTOR (K) MAP



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
232A	Ashkum silty clay loam, 0 to 2 percent slopes	.20	0.9	11.5%
298A	Beecher silt loam, 0 to 2 percent slopes	.37	3.1	39.3%
530C2	Ozaukee silt loam, 4 to 6 percent slopes, eroded	.43	2.2	28.0%
805B	Orthents, clayey, undulating	.32	1.7	21.1%
Totals for Area of Interest			**8.0**	**100.0%**

Exhibit 3 – NRCS Soil Erosion Factor (K) Map
Route: FAP 345 (United States Route 20 – US 20)
Location: at Oak Avenue and Bartlett Road
Section: 2021-133-N
County: Cook
Contract: 62P51

SOIL BORING LOCATION PLAN



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3	491+50.00	59.97' RT
4	491+50.00	70.00' RT
5	492+25.00	70.00' RT
6	492+25.00	85.00' RT
7	494+00.00	75.00' RT
8	494+00.00	90.00' RT
9	495+75.00	75.00' RT
10	495+75.00	80.00' RT

POINT	STATION	OFFSET
11	498+00.00	75.00' RT
12	498+00.00	80.00' RT
13	498+00.00	85.00' RT
14	498+00.00	90.00' RT
15	498+56.68	70.00' RT
16	498+56.68	75.00' RT
17	499+00.00	80.00' RT
18	499+00.00	85.00' RT
19	500+00.00	65.00' RT
20	500+00.00	70.00' RT

POINT	STATION	OFFSET
21	500+00.00	80.00' RT
22	501+80.00	60.00' RT
23	501+80.00	50.93' RT
24	494+80.00	57.87' LT
25	494+80.00	66.03' LT
26	495+00.00	65.62' LT
27	495+60.00	64.79' LT
28	495+60.00	73.00' LT
29	497+20.00	73.00' LT
30	497+20.00	81.00' LT

POINT	STATION	OFFSET
31	497+88.54	81.00' LT
32	498+05.41	67.19' LT
33	498+05.65	58.73' LT
34	503+50.00	50.10' RT
35	503+50.00	67.00' RT
36	503+75.00	50.11' RT
37	503+75.00	58.00' RT

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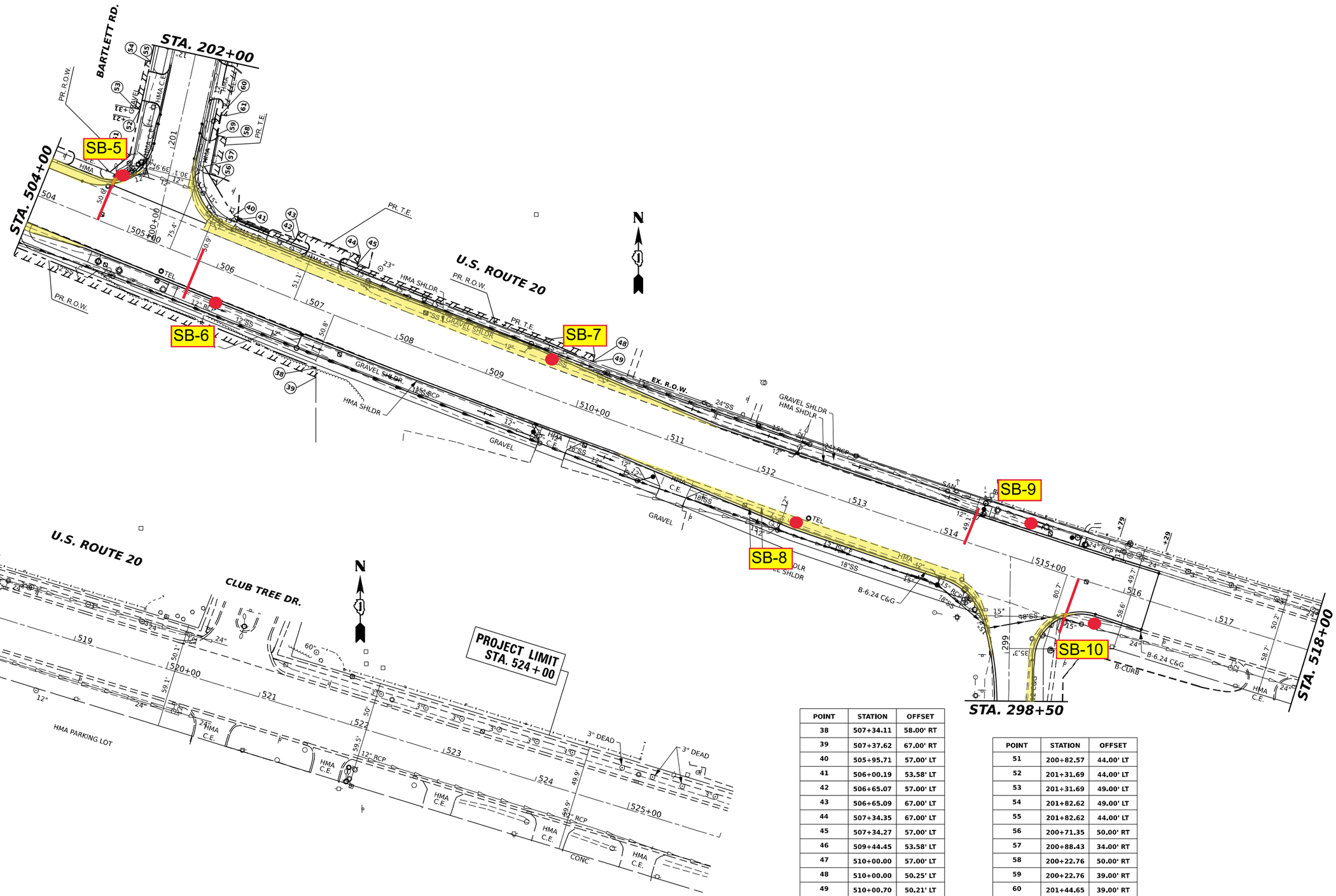
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED ROADWAY PLAN
US 20 AT OAK AVE. AND AT BARTLETT RD.

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2021-133-N	COOK	3	1
		CONTRACT NO. 62P51		
		ILLINOIS	FED. AID PROJECT	



POINT	STATION	OFFSET
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39	507+37.62	67.00' RT
40	505+95.71	57.00' LT
41	506+00.19	53.58' LT
42	506+65.07	57.00' LT
43	506+65.09	67.00' LT
44	507+34.35	67.00' LT
45	507+34.27	57.00' LT
46	509+44.45	53.58' LT
47	510+00.00	57.00' LT
48	510+00.00	50.25' LT
49	510+00.70	50.21' LT
50	504+60.10	50.62' LT

POINT	STATION	OFFSET
51	200+82.57	44.00' LT
52	201+31.69	44.00' LT
53	201+31.69	49.00' LT
54	201+82.62	49.00' LT
55	201+82.62	44.00' LT
56	200+71.35	50.00' RT
57	200+88.43	34.00' RT
58	200+22.76	50.00' RT
59	200+22.76	39.00' RT
60	201+44.65	39.00' RT
61	201+44.65	45.00' RT

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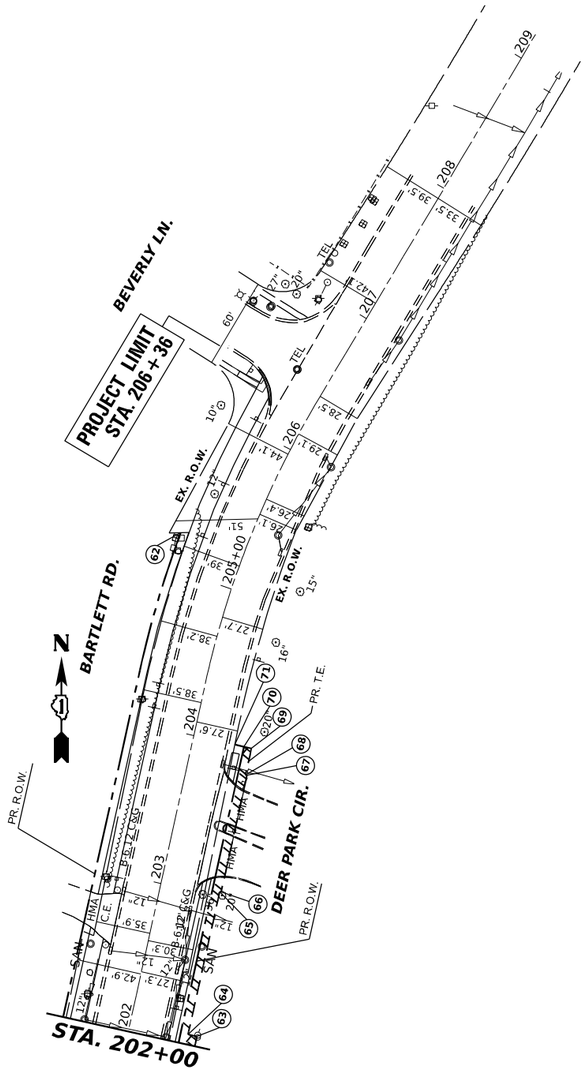
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED ROADWAY PLAN
US 20 AT OAK AVE. AND AT BARTLETT RD.

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2021-133-N	COOK	3	2
		CONTRACT NO. 62P51		
	ILLINOIS FED. AID PROJECT			



POINT	STATION	OFFSET
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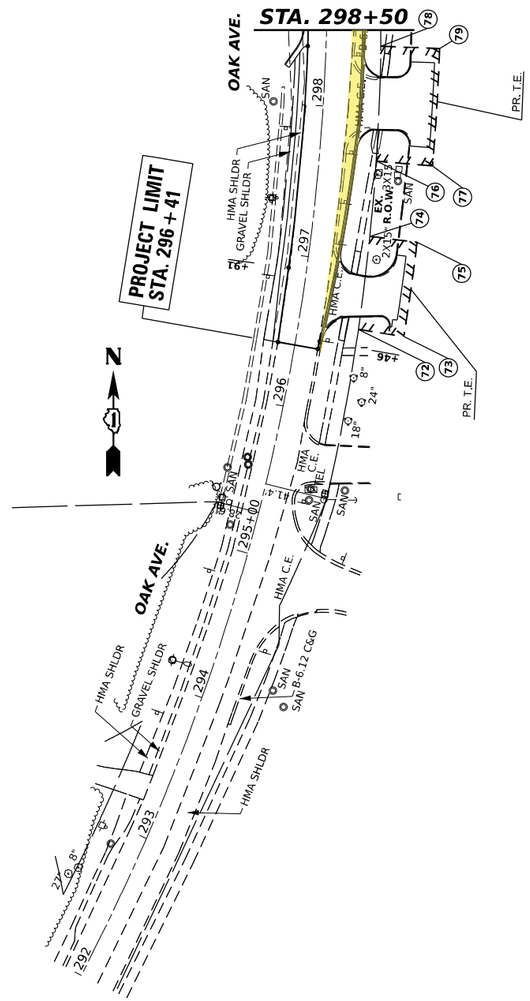
63	202+06.58	45.00' RT
64	202+06.58	39.00' RT
65	203+03.13	39.00' RT
66	203+03.13	40.00' RT
67	203+82.02	40.00' RT
68	203+82.02	39.00' RT
69	204+00.00	39.00' RT
70	204+00.00	34.00' RT
71	204+00.00	27.79' RT



POINT	STATION	OFFSET
72	296+57.83	39.66' RT
73	296+58.02	70.00' RT
74	297+18.13	38.58' RT
75	297+17.93	70.00' RT
76	297+66.60	38.21' RT
77	297+66.72	75.00' RT
78	298+40.63	36.17' RT
79	298+40.51	75.00' RT

MODEL: Default
FILE NAME: pw:\\Bidview.bentley.com:PWIDOT\Documents\IDOT Offices\District 1\Projects\P-15748-CRO\CADData\Design\P15748-Intx-Phase II.dgn

USER NAME = Farhan.Tariq	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 1/24/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING AND PROPOSED ROADWAY PLAN
US 20 AT OAK AVE. AND AT BARTLETT RD.

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	2021-133-N	COOK	3	3
		CONTRACT NO. 62P51		
	ILLINOIS	FED. AID PROJECT		

SOIL BORING LOGS

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 6/22/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-1
Station 492+37
Offset 37.0 ft LT
Ground Surface Elev. 807.25 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SANDY CLAY (2 inches) 807.08				
Stiff, Brown, Moist SILTY CLAY				
804.25		4	1.3	
Stiff, Brown, Moist, CLAY (FILL), with broken concrete		33 45	B	15
	-5	14		
		12 12		13
800.25				
Very Stiff, Brown and Gray, Moist SILTY CLAY		3		
		5 5	2.4 B	16
	-10	3		
		5 17	2.8 B	18
795.75				
End of Boring				
	-15			
	-20			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 6/27/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-2
Station 494+84
Offset 33.0 ft RT
Ground Surface Elev. 808.95 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
AGGREGATE SHOULDER (12 inches) 807.95				
Very Dense, Gray, Moist, GRAVEL (FILL)		44		9
		58 77		9
803.45	-5	7		
Stiff, Black, Very Moist, SILTY CLAY (TOPSOIL) 801.95		2 3	1.1 B	30
Stiff, Black and Gray mottled, Moist, CLAY		0		
		0 2	1.0 B	20
799.45	-10			
Very Stiff, Brown and Gray mottled, Moist, SILTY CLAY		2		
		4 6	3.4 B	17
797.45 End of Boring	-15			
	-20			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 6/22/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-3
Station 498+96
Offset 32.0 ft LT
Ground Surface Elev. 821.79 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
AGGREGATE SHOULDER (12 inches) 820.79				
Very Stiff to Hard, Brown, Moist, SILTY CLAY	5		4	
	5 7	6.4 B	20	
-5	8			
	7 6		15	
	3			
	5 8	6.7 B	19	
-10	3			
	8 11	3.5 S at 15%	22	
810.29 End of Boring				
-15				
-20				

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 2/27/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-4
Station 499+97
Offset 40.0 ft RT
Ground Surface Elev. 826.27 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
AGGREGATE SHOULDER (12 inches) 825.27				
Very Stiff to Hard, Brown, Moist, SILTY CLAY			6	
	3			
	6 8	4.0 S at 9%	8	
-5	5			
	7 10	3.4 S at 7%	15	
	5			
	8 10	4.0 B	16	
-10	4			
	8 11	5.4 S at 11%	18	
814.77 End of Boring				
-15				
-20				

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/24/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-5
Station 504+34
Offset 33.0 ft LT
Ground Surface Elev. 826.81 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				HOT MIX ASPHALT (HMA) PAVEMENT (13.5 inches) 825.68
				AGGREGATE (12 inches) 824.81
				Very Stiff to Hard, Brown, Moist, SILTY CLAY
	3			
	6 8	3.2 S at 13%	14	
-5				
	3			
	5 8	5.4 S at 15%	17	
	4			
	6 7	4.5 P	16	encountered cobble
-10				
	4			
	6 8	5.5 B	14	
	4			
	7 10	4.6 B	14	
				812.31
-15				Very Stiff, Gray, Moist, SILTY CLAY
	3			
	5 8	3.0 B	13	
	4			
	11 8	3.6 B	16	
-20				806.81

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	2			Very Stiff to Hard, Gray, Moist, CLAY
	4 7	3.9 B	19	
	2			
	5 9	3.1 B	21	
-25				
	4			
	7 8	2.3 B	20	encountered cobble
	2			
	5 10	5.8 B	21	
-30				
	2			
	5 7	3.3 B	15	
-35				
	4			791.31
	3 5	2.4 B	15	2 inch SILT seam 791.14
				Very Stiff to Hard, Gray, Moist, SILTY CLAY
-40				

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 T206)

BBS, form 137 (Rev. 8-99)

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/24/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-5
Station 504+34
Offset 33.0 ft LT
Ground Surface Elev. 826.81 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff to Hard, Gray, Moist, SILTY CLAY *(continued)* 785.31		3		
		7	5.6	14
		9	B	
End of Boring				
	-45			
	-50			
	-55			
	-60			

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 T206)

BBS, form 137 (Rev. 8-99)

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/21/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-6
Station 506+13
Offset 39.0 ft RT
Ground Surface Elev. 823.57 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
AGGREGATE SHOULDER (12 inches) 822.57				
Stiff, Black, Moist, SILTY CLAY (TOPSOIL) 821.07				
Stiff, Brown, Moist, LOAM		2		
		2 4	1.2 B	21
818.57	-5			
Stiff to Hard, Brown, Moist, SILTY CLAY		2		
		3 4	1.8 B	17
		3		
		6 9	1.9 B	8
	-10			
		2		
		5 11	5.2 B	15
grades to Gray		5		
		8 10	4.5 B	13
809.07				
Very Stiff to Hard, Gray, Moist, SILTY CLAY	-15	3		
		6 7	4.4 B	14
encountered cobble		4		
		5 8		15
	-20			
Very Stiff to Hard, Gray, Moist, SILTY CLAY *(continued)*		3		
		6 8	5.2 B	15
801.57				
Very Stiff to Hard, Gray, Moist, CLAY encountered cobble		5		
		5 8	6.5 B	16
	-25			
		4		
encountered cobble				
		7 10	4.3 P	19
		1		
		3 5	2.9 B	23
794.07				
Stiff to Hard, Brown, Moist, SILTY CLAY	-30	3		
		7 8	4.7 S at 15%	16
	-35	4		
		6 9	3.4 B	15
	-40			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/21/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. - **Station** -

BORING NO. SB-6 **Station** 506+13 **Offset** 39.0 ft RT **Ground Surface Elev.** 823.57 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff to Hard,		3		
Brown, Moist,		10	1.7	18
SILTY CLAY *(continued)* 782.07		30	B	
End of Boring	-45			
	-50			
	-55			
	-60			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 6/22/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-7
Station 509+48
Offset 36.0 ft LT
Ground Surface Elev. 819.83 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
AGGREGATE SHOULDER (12 inches) 818.83				
Stiff, Brown and Black, Moist, SILTY CLAY 817.33				
Stiff to Hard, Brown, Moist, SILTY CLAY		2		
		2 5	1.2 B	25
	-5			
		4		
		6 8	5.6 B	16
		4		
		7 10	7.4 B	16
	-10			
		4		
		8 11	5.3 B	16
808.33				
End of Boring				
	-15			
	-20			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/21/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-8
Station 512+49
Offset 35.0 ft RT
Ground Surface Elev. 817.29 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

		DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
HOT MIX ASPHALT (HMA) PAVEMENT (13.5 inches)	816.62				
AGGREGATE (12 inches)	816.12				
Stiff to Hard, Brown, Moist, SILTY CLAY			3		
			5 5	2.6 B	13
		-5			
			3		
			5 7	3.6 S at 15%	16
			3		
			6 10	4.9 S at 15%	20
		-10			
				2.8 S at 7%	20
	805.79				
End of Boring					
		-15			
		-20			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/20/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-9
Station 514+74
Offset 34.0 ft LT
Ground Surface Elev. 814.96 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				AGGREGATE SHOULDER (12 inches)
				813.96 Black, Moist, SILTY CLAY (TOPSOIL)
				812.96 Stiff, Brown and Gray, Moist, SILTY CLAY
	2			
	2 3	1.8 B	25	
				810.46 Stiff to Very Stiff, Brown, Moist, SILTY CLAY
-5	3			
	4 5	3.6 B	15	
	2			
	3 5	3.2 B	17	
-10	3			
	6 6	3.5 B	13	
	5			
	9 11	1.9 B	16	
				799.96
-15	2			Very Stiff to Hard, Gray, Moist, SILTY CLAY
	5 7	3.6 S at 15%	12	
	2			
	5 6	4.2 B	13	
				795.46
-20				

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	2			Very Stiff to Hard, Gray, Moist, CLAY *(continued)*
	4 7	3.4 B	14	
	2			
	4 7	6.3 B	18	
-25	2			
	6 10	8.0 B	21	
	2			
	2 4	2.2 B	25	
-30	3			
	5 8	3.0 B	23	
-35	2			
	6 14	2.1 B	21	encountered cobble
-40				

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 T206)

BBS, form 137 (Rev. 8-99)

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/20/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-9
Station 514+74
Offset 34.0 ft LT
Ground Surface Elev. 814.96 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff to Hard, Gray, Moist, CLAY *(continued)*		7		
		6	1.8	15
encountered cobble	773.46	7	P	
End of Boring				
	-45			
	-50			
	-55			
	-60			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/31/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-10
Station 515+74
Offset 39.0 ft RT
Ground Surface Elev. 813.34 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter 798.3 ft ▼
Upon Completion 780.3 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
			18	Black, Moist, SILTY CLAY (TOPSOIL)
811.34				
	1			Medium Stiff, Brown, Moist, SILTY CLAY
	2 2	0.7 B	24	
808.84				
-5	0			Soft, Brown, Moist, SANDY LOAM
	0 3	0.2 B	23	
806.34				
	3			Very Stiff, Brown, Moist, SILTY CLAY
	6 3	2.9 B	14	
803.84				
-10	2			Very Stiff, Gray, Moist, SILTY CLAY
	4 5	2.2 B	13	
	2			
	5 5	4.6 B	14	
798.84				
▼-15				Gray, Fine Grain, Wet, SAND
797.84	2			
	4 6	2.9 B	12	Stiff to Very Stiff, Gray, Moist, SILTY CLAY
	2			
	2 3	2.2 B	15	
-20				

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	2			Stiff to Very Stiff, Gray, Moist, SILTY CLAY *(continued)*
	8 12	1.7 B	16	
	2			
	6 8	2.4 B	14	
788.34 -25				
	3			Medium Stiff, Gray, Moist, SILTY CLAY
	6 8	0.6 B	18	
786.34				
	3			Stiff to Very Stiff, Gray, Moist, CLAY
	6 8	1.9 B	14	
-30				
	3			
	6 8	3.8 B	18	
				encountered cobble
▽				
-35				
	4			
	5 6	2.7 S at 15%	24	
-40				

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 T206)

BBS, form 137 (Rev. 8-99)

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation District

SOIL BORING LOG

Date 7/31/23

ROUTE FAP 345 **DESCRIPTION** US 20 at Oak Ave. and Bartlett Rd. **LOGGED BY** ME

SECTION 2021-133-N **LOCATION** SE corner of, **SEC.** 27, **TWP.** 41N, **RNG.** 9E, 3rd **PM**,
Latitude 42°0'16.0452", **Longitude** -88°11'13.3836"

COUNTY Cook **DRILLING METHOD** HSA **HAMMER TYPE** Auto

STRUCT. NO. -
Station -

BORING NO. SB-10
Station 515+74
Offset 39.0 ft RT
Ground Surface Elev. 813.34 ft

Surface Water Elev. - ft
Stream Bed Elev. - ft

Groundwater Elev.:
First Encounter 798.3 ft ▼
Upon Completion 780.3 ft ▽
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff to Very Stiff, Gray, Moist, CLAY *(continued)*		3		
		3	2.7	25
771.84		6	B	
End of Boring				
	-45			
	-50			
	-55			
	-60			

SOIL BORING US 20 AT OAK AND BARTLETT.GPJ IL_DOT.GDT 6/20/25

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 T206)