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VIA EMAIL

February 8, 2022

Salihbeg Fehratbegovic
Drum Trucking, LLC
7607 Mackie Lane
Louisville, KY 40214
salihbegf@yahoo.com

**Subject: Water/Wetland Delineation Summary Report
Nash Road Property
Jefferson County, Kentucky
Redwing Project No.: 105853**

Dear Mr. Fehratbegovic:

RES Kentucky, LLC dba Redwing (Redwing) is pleased to provide Drum Trucking, LLC with this Water/Wetland Delineation Summary Report for the proposed Nash Road Property project in Louisville, Jefferson County, Kentucky. The approximately 2.3-acre site is located on the east side of Nash Road, approximately 0.2 mile north of Outer Loop (Figure 1). The goal of these services was to identify the location and extent of jurisdictional waters/wetlands and federally threatened/endangered (T/E) species habitat within the project area to assist Drum Trucking with preliminary project planning.

Jurisdictional waters present in the project area are limited to one wetland measuring 0.013 acre (Figure 2). Suitable habitat for federally-listed T/E species on-site is limited to potential summer roosting habitat for the Indiana bat (*Myotis sodalis*) and the northern long-eared bat (*Myotis septentrionalis*) in the scattered trees present along and adjacent to the property boundaries.

METHODOLOGY

The water/wetland delineation included in-house and field components. In-house research involved review of USGS topographic quadrangle maps, aerial photography, the Jefferson County soil survey, and Federal Emergency Management Agency (FEMA) floodplain mapping. Following review of these materials, Redwing conducted a field visit on January 28, 2022 to identify the location and extent of jurisdictional waters/wetlands in the project area. During the field visit, the presence of streams was evaluated based on ordinary high-water mark, defined bed and bank features, and flow

regimes. Potential wetland areas were investigated using the Routine On-Site Determination Method as defined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountain Piedmont Region – Version 2.0* (April 2012). This technique uses a multi-parameter approach that requires positive evidence of three criteria: wetland hydrology, hydric soils, and hydrophytic vegetation. Please note that this delineation has not been verified by the USACE, who holds final authority over determinations of the location and extent of jurisdictional waters/wetlands.

The field assessment was also used to approximate the presence of suitable habitat for T/E species known to occur in Jefferson County, including the Indiana bat, northern long-eared bat, gray bat (*Myotis grisescens*). Potential impacts to T/E species must be addressed in any federal permitting process.

RESULTS

Habitat on the 2.3-acre site consists primarily of well-maintained open field with scattered trees and shrubs present along the property boundaries (Figure 2). Based on the delineation, jurisdictional waters present on the site are limited to one small scrub-shrub wetland measuring 0.013 acre, located in a drainage feature along the eastern property boundary. One fully channelized, concrete drainage ditch running along the northern project boundary is considered a non-jurisdictional feature. The water/wetland features delineated on-site are depicted on Figure 2 and summarized in the following table.

Feature	Area (acres)	Status
Wetland 1	0.013	Jurisdictional
Jurisdictional Wetland Total	0.013	--

Wetland 1 is considered a jurisdictional water by the USACE because it exhibits a surface connection to downstream waters via its location in the FEMA 100-year floodplain of Southern Ditch. No additional water/wetland features were observed on site.

Portions of the scattered trees around the property boundary (approximately 0.2 acre) are considered suitable summer roosting habitat for the federally endangered Indiana bat and the federally threatened northern long-eared bat. No suitable habitat for the federally endangered gray bat was observed on-site.

DISCUSSION

Jurisdictional waters of the U.S., including wetlands, are defined by 33 CFR Part 328.3 and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the USACE. Many water/wetland impacts are also regulated by the Kentucky Division of Water (KDOW) – Water Quality Certification (WQC) Section. Current permitting thresholds for wetland impacts are as follows:

- Avoidance of the jurisdictional wetland features would require no permits from, or coordination with, the USACE or KDOW. A formal Jurisdictional Determination (JD) can be obtained from the USACE, if desired.
- Impacts to less than 0.5 acre of wetland can be authorized under the federal Nationwide Permit (NWP) program with the USACE
- Impacts to greater than 0.5 acre of wetland require an Individual Section 404 Permit from the USACE
- Impacts to greater than 0.5 acre of wetland require an Individual Section 401 WQC from the KDOW.
- Impacts to less than 0.5 acre of wetland meet the conditions of a General WQC and do not require coordination with the KDOW.
- Impacts to 0.1 acre or more of jurisdictional wetlands will require compensatory mitigation. Wetland mitigation must be provided at a ratio of 2:1. If required, mitigation credits can be purchased from either a private mitigation bank or the Kentucky In-Lieu Fee program, which requires a 20% markup to cover temporal losses. The Kentucky In-Lieu Fee program currently charges \$61,500 per wetland credit.

Because impacts to on-site jurisdictional water/wetland features would total less than 0.5 acre (Wetland 1 totals 0.013 acre), the project can be authorized under a NWP 39 with the USACE and no coordination with the KDOW would be required. NWPs typically take three to six months to receive. In addition, because impacts to Wetland 1 would be less than 0.1 acre, no compensatory mitigation would be required.

THREATENED/ENDANGERED SPECIES

Under the Section 404 permitting process, the USACE determines if consultation with the U.S. Fish and Wildlife Service (USFWS) is required to address potential impacts to T/E species. The major T/E species issue of concern at this site is the clearing of the suitable Indiana and northern long-eared bat summer habitat. Based on maps released by the USFWS, the project is located in a "Potential" Habitat Zone for the Indiana and northern long-eared bat. Under the 404 permitting process, impacts

to this habitat may require consultation with the USFWS. Consultation generally results in a combination of seasonal tree clearing restrictions, presence/absence surveys, and/or mitigation through payments into the Imperiled Bat Conservation Fund (IBCF). Current rates for tree clearing in a "Potential" Habitat Zone are \$2,000/acre in the unoccupied period (October 15 through March 31), \$4,000/acre for clearing in the occupied period (April 1 to October 14, excluding June/July), and \$8,000/acre for clearing during the non-volant period (June 1 through July 31).

CULTURAL HISTORIC AND ARCHAEOLOGICAL RESOURCES


Under the Section 404 permitting process, the USACE determines if consultation with the State Historic Preservation Office (SHPO) is required to address potential impacts to significant archaeological/historic features. We are not aware of any archaeological features or studies that have been done on the site. We can obtain a quote for these surveys, if required.

CONCLUSION


Based on Redwing's delineation, jurisdictional waters present in the project area are limited to one wetland measuring 0.013 acre (Figure 2). If Wetland 1 can be avoided, no permits from, or coordination with, the USACE or KDOW is required. If impacts to Wetland 1 cannot be avoided, the project can be authorized under a NWP 39 with the USACE and no coordination with the KDOW or compensatory mitigation would be required.

We appreciate the opportunity to assist you on this important project. Please call Ron Thomas at (502) 625-3009 with any questions on this report or the overall project.

Sincerely,


J. Anthony Evans
Ecologist II

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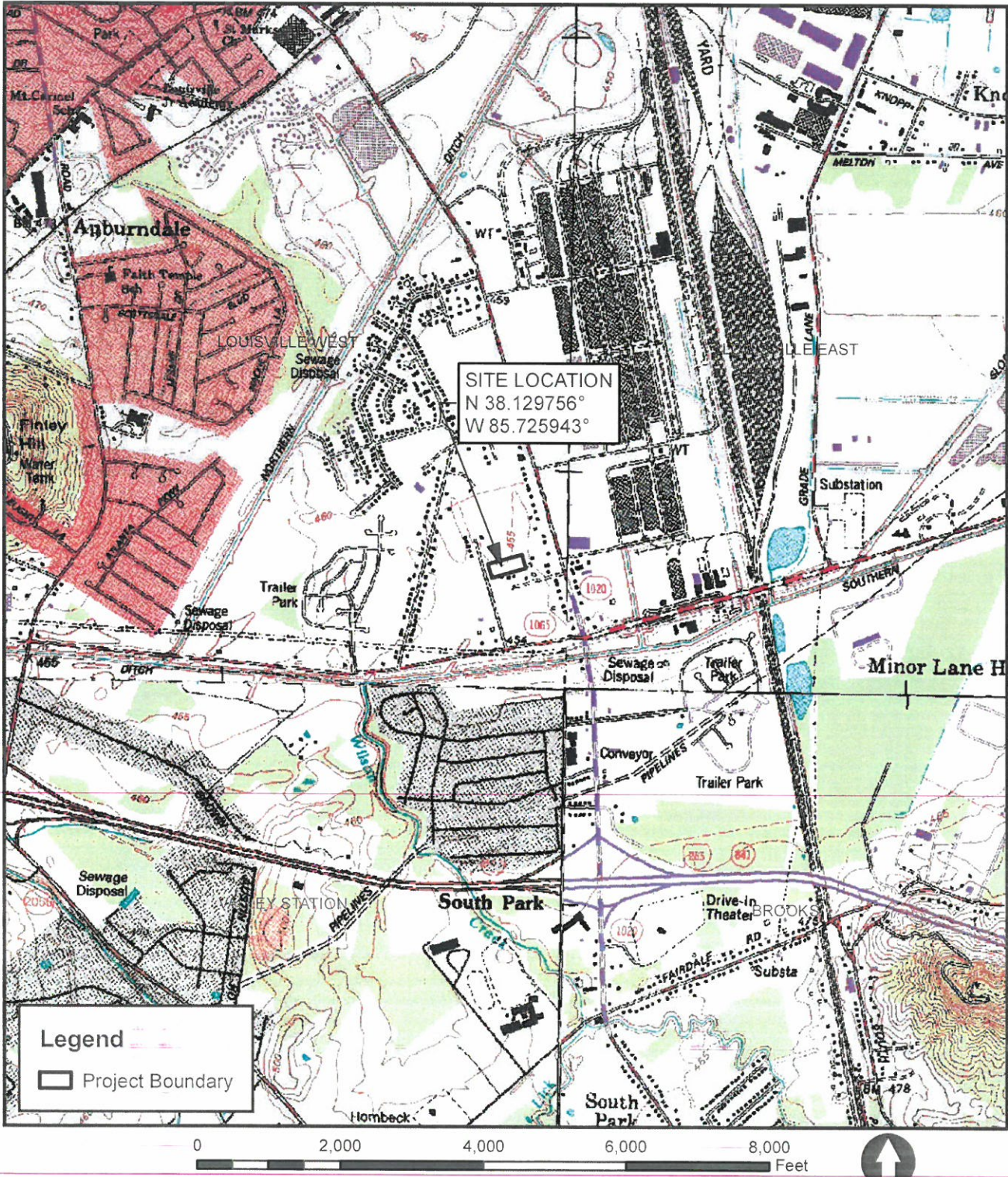

Ronald L. Thomas
Senior Project Manager

cc: Kathy Linares - Mindel Scott & Associates, Inc.

Attachments: Figures

FIGURES

Source: USGS 7.5-minute Topographic Map - Louisville West, Louisville East, Valley Station, and Brooks, Kentucky Quadrangles.



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NASH ROAD PROPERTY
JEFFERSON COUNTY, KENTUCKY



SITE LOCATION MAP

REVISED DATE: 01-28-22 | DRAWN BY: JAE
Received February 14, 2022

Planning & Design

FIGURE 1

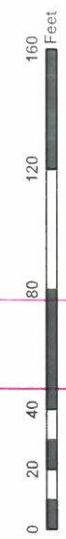
21-ZONE-0164

Source: Aerial - (NAIP-FSA) from kygisserver.ky.gov ArcGIS services (2018).



Legend

- Approximate Project Boundary
- Ditch
- Wetland (0.013 acres)
- Wetland Determination Data Point



NOTE: JURISDICTIONAL WETLAND BOUNDARIES WERE DETERMINED BY THE U.S. ARMY CORPS OF ENGINEERS ON JANUARY 29, 2021. THESE BOUNDARIES WERE FIELD VERIFIED BY THE U.S. ARMY CORPS OF ENGINEERS ON JUNE 22, 2021. USE OF THIS MAP IS FOR PRELIMINARY PLANNING PURPOSES ONLY.



Received February 14, 2022

REVISD DATE: 02-07-22 | DRAWN BY: JAE

NASH ROAD PROPERTY
JEFFERSON COUNTY, KENTUCKY



WATERWETLAND
LOCATION MAP

FIGURE 2
ZI-ZONE-0104



March 31, 2022

Attention: Mr. Salihbeg Fehratbegovic
8912 Talon Ridge Drive
Louisville, Kentucky 40229

C/O: Mindel Scott
5151 Jefferson Boulevard
Louisville, Kentucky 40219

Reference: Pavement Evaluation Letter
Drum Trucking – Nash Road Pavement Evaluation
8315 Nash Road
Louisville, Jefferson County, Kentucky 40214
ECS Project No. 61-2707

Dear Mr. Fehratbegovic:

ECS Southeast, LLP (ECS) has completed the pavement evaluation for the above-referenced project. Our services were performed in general accordance with ECS Proposal No. 61-P2658, dated March 18, 2022. It is our understanding that the existing asphalt pavement along Nash Road in Louisville, Jefferson County, Kentucky could experience an increase in traffic loading from semi-tractor trailers due to new construction along Nash Road. The existing pavement section is unknown. Therefore, the suitability of the existing pavement for an increase to 12 semi-tractor trailers loaded and unloaded daily was evaluated.

SUBSURFACE SUMMARY

On March 15, 2022, twelve (12) pavement cores were advanced along approximately 1200 feet of Nash Road. The approximate locations are shown on the attached Pavement Coring Location Diagram. The approximate locations were established onsite by ECS, spaced approximately 75 to 100 feet, and positioned in alternating left and right lanes of the road. A four (4) inch core barrel was extended to the underlying granular base. A combination of hand augering and a concrete hammer drill bit (18 inch long) was extended below the asphalt to confirm a minimum of 8 inches of crushed stone granular base. The results at each location are summarized below.

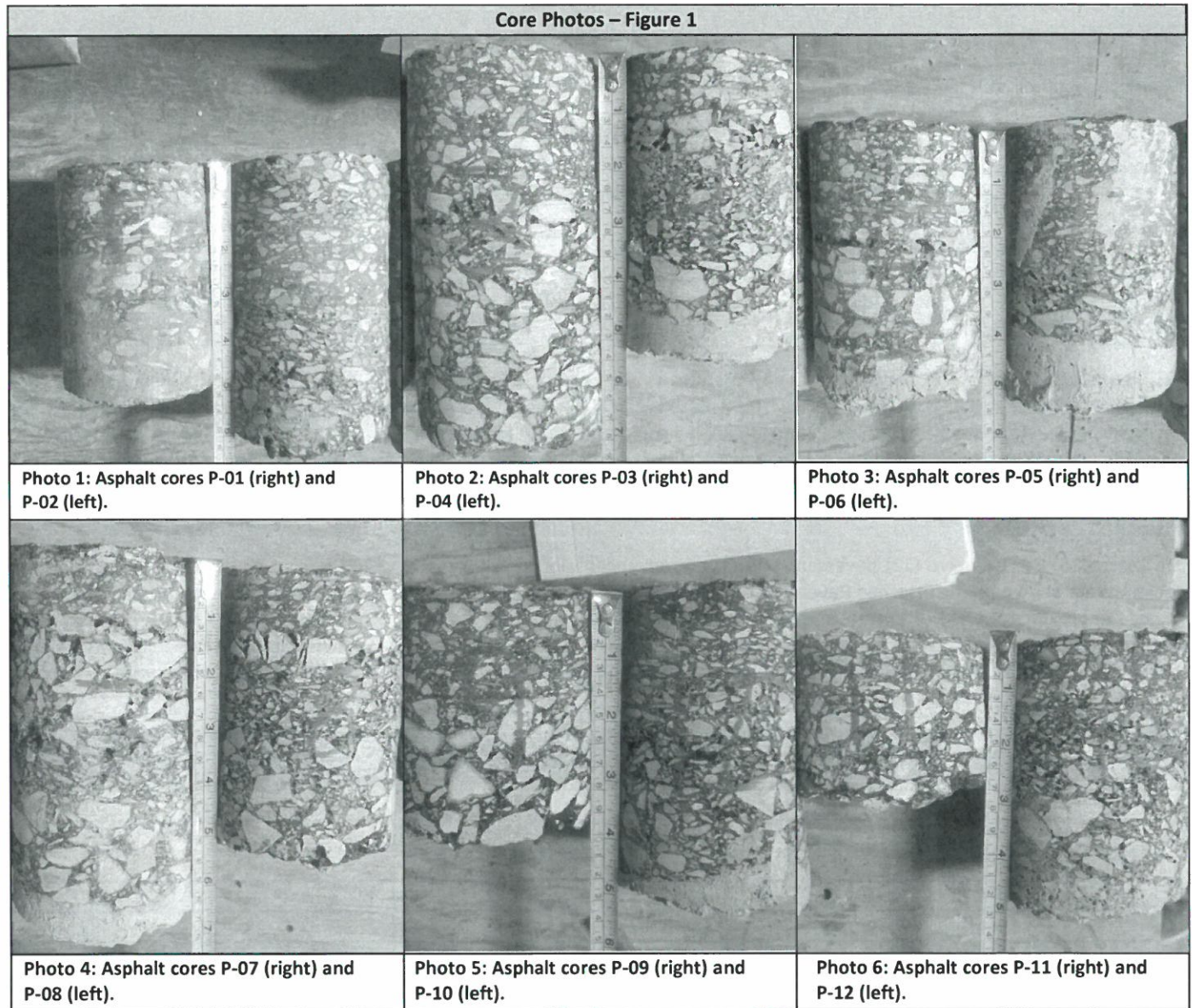
Table with 3 columns: LOCATION, TOTAL ASPHALT THICKNESS (in), GRANULAR BASE (in). Rows P-01 to P-12.

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21-ZONE-8169

In general, the surface materials consisted of approximately 4 to 7 inches (average of approximately 5 ¼ inches) of asphalt pavement. However, approximately 2 ¾ inches of total asphalt thickness was encountered at P-11. The existing wearing base (surface asphalt) was approximately 1 to 4 inches with a binder or base (base asphalt) of approximately 1 to 6 inches. The existing asphalt was underlain by at least 8 inches of crushed stone and extended to more than 37 inches at P-01. Due to the depth of gravel and the limitations of the available equipment, the gravel base was not penetrated in any of the coring locations. The crushed typically consisted of fine to coarse grained gravel approximately ¼ to 1 ¼ inches with varying amounts of fines (sand to clay-sized material). No signs of significant distress were observed in the pavement cores. Refer to the **Core Photos - Figure 1** for photos of the cores recovered.



PAVEMENT CONDITIONS

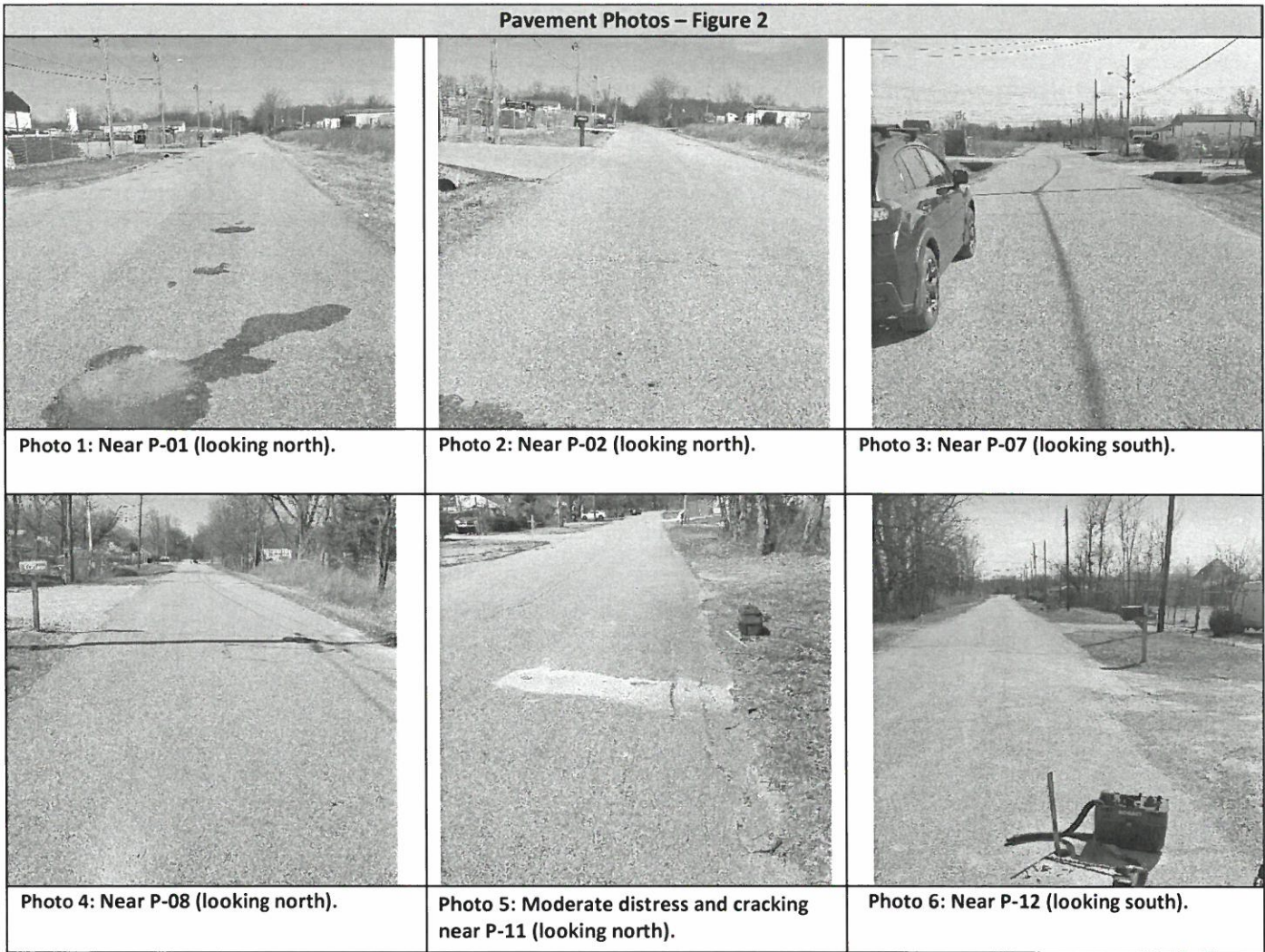
In general, isolated areas of slight transverse/longitudinal cracking, typical of in-use pavements, was observed over most areas and no significant cracks, rutting, or distress was observed over most areas evaluated. However, moderate cracking and degradation was observed in the area near P-11, specially along the east shoulder of the road. Refer to the **Pavement Photos - Figure 2** for photos of the areas cored.

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APR 14 2022

PLANNING & DESIGN
 SERVICES

21-CONE-0164



CONCLUSIONS AND RECOMMENDATIONS

Based on the conditions observed during the evaluation of the existing pavement, the condition of the pavement appeared to be in good condition compared to typical pavements of a similar age and usage. The existing asphalt pavements in most areas (excluding P-11) were observed to be slightly worn at the surface, but no significant cracks, rutting, or distress was observed over most areas evaluated.

The pavement sections encountered in the pavement coring appeared suitable for the volume of truck traffic (Daily Equivalent 18-kip Axle Loads of 30) based on the provided information (6 loaded and 6 unloaded additional trucks) and traffic conditions at the time of our exploration. However, based on the observed thickness and poor condition of the asphalt pavement near P-11, a 2-inch asphalt overlay should be considered in these areas.

Asphalt pavement, even when designed with an adequate structural section sometimes does not perform as desired under high demand, tight turn applications and requires additional maintenance and repairs. Sealing of the existing cracks (transverse and longitudinal) and seal coating of the asphalt pavement in all areas should be conducted. Crack sealing and seal coating should be performed every 3 to 5 years to maximize the life of the asphalt pavement. In addition, at a minimum an asphalt overlay within 2 to 3 years should be budgeted in all asphalt paved areas.

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LIMITATIONS

There are certain limitations inherent to all geotechnical explorations and reports. These limitations are discussed below. They should be fully considered prior to using any of the recommendations in this report.

Our exploration identified the subsurface conditions that existed only at the locations and times that the borings were advanced. Given the natural variable characteristics of soil and rock, conditions may vary over short distances, change with time, or be affected by natural events, such as floods or earthquakes, or by human activity, such as past land use or new construction. As such, the information generated during our report may not be representative of all conditions that may exist on the project site now or in the future. We use our professional judgment to render an opinion about the subsurface conditions that may exist in the areas of the site not specifically tested during our exploration based on our review of available field and laboratory data and our past experience with similar subsurface conditions.

This report should be reproduced in its entirety only. Portions of this report should not be separated and used by others. This report and our recommendations were prepared using the generally accepted standards of geotechnical engineers practicing in this region. No other warranty is express or implied.

CLOSING

We appreciate the opportunity to serve as your geotechnical consultants for this project. We look forward to future association with you on this and other projects.

Respectfully submitted,

ECS Southeast, LLP



William Grant Hess, P.G.
Project Geologist
ghess@ecslimited.com



Liz Blandford Newcomb, P.E.
Principal Engineer
lnewcomb@ecslimited.com

Attachments: Site Location Diagram
Pavement Coring Location Diagram

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APR 14 2022

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21-20NE-0264



SITE LOCATION DIAGRAM
DRUM TRUCKING – NASH ROAD PAVEMENT EVALUATION

8315 NASH ROAD
 LOUISVILLE, JEFFERSON COUNTY, KENTUCKY 40214

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ENGINEER FEN
SCALE AS NOTED
PROJECT NO. 61:2707
SHEET 1 OF 4
DATE 3/28/2022

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LEGEND


P-00 - Pavement Coring Location

Note: Locations are approximate.



ECS Southeast, LLP
 1762 Watterson Trail
 Louisville, Kentucky 40299
 Tel. (502) 493-7100
 Fax (502) 493-8190

Project No.: 61-2707
 Drawing No.: CLD
 Dated: 03/22/2022

Drawn By: WGH
 Checked By: FEN
 Scale: As Shown

Pavement Coring Location Diagram
 Drum Trucking - Nash Road Pavement Evaluation
 8315 Nash Road
 Louisville, Jefferson County, Kentucky 40214

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APR 14 2022

PLANNING & DESIGN SERVICES

21-ZONE-0164



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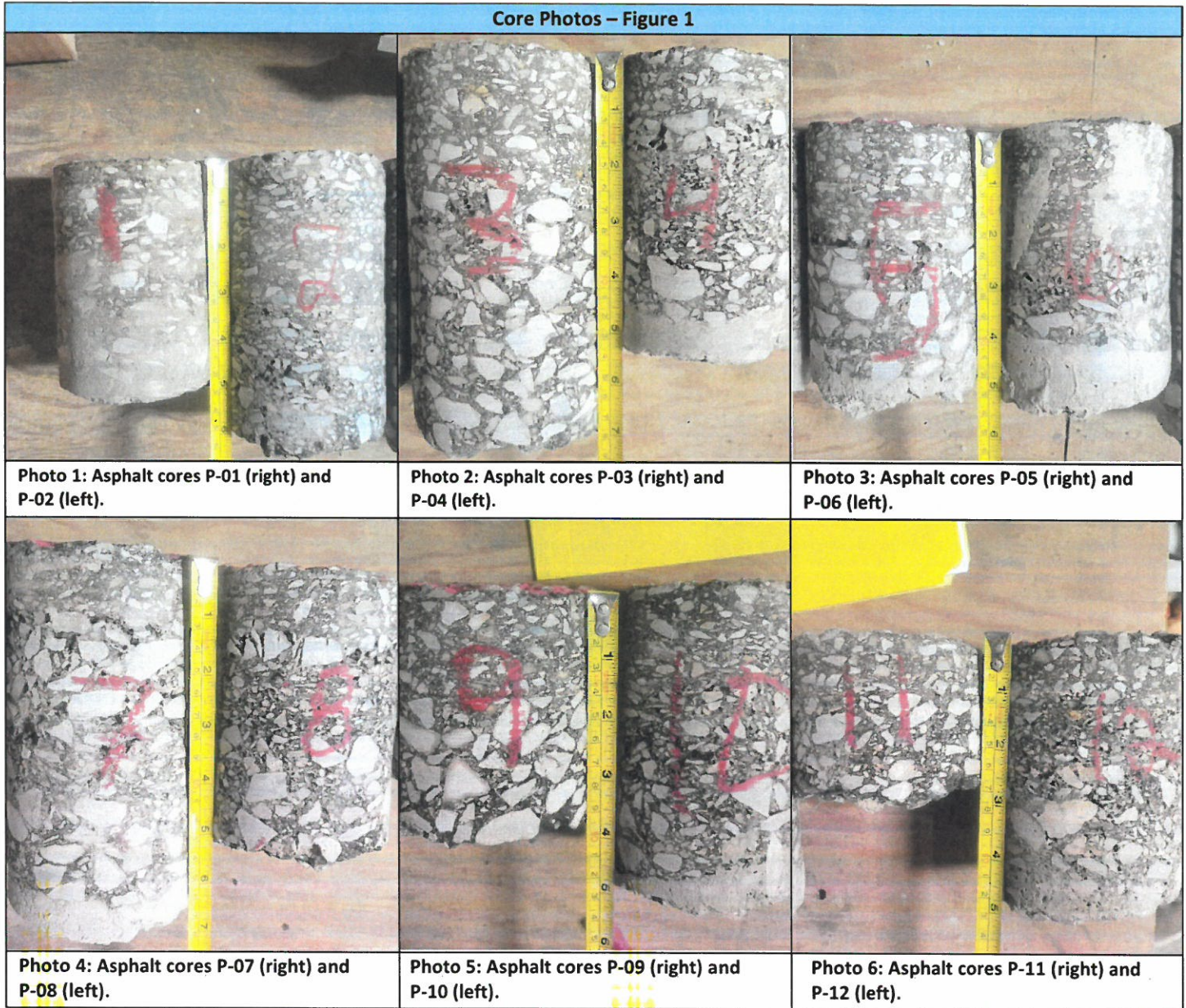
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Pavement Photos – Figure 2		
<p>Photo 1: Near P-01 (looking north).</p>	<p>Photo 2: Near P-02 (looking north).</p>	<p>Photo 3: Near P-07 (looking south).</p>
<p>Photo 4: Near P-08 (looking north).</p>	<p>Photo 5: Moderate distress and cracking near P-11 (looking north).</p>	<p>Photo 6: Near P-12 (looking south).</p>

CONCLUSIONS AND RECOMMENDATIONS

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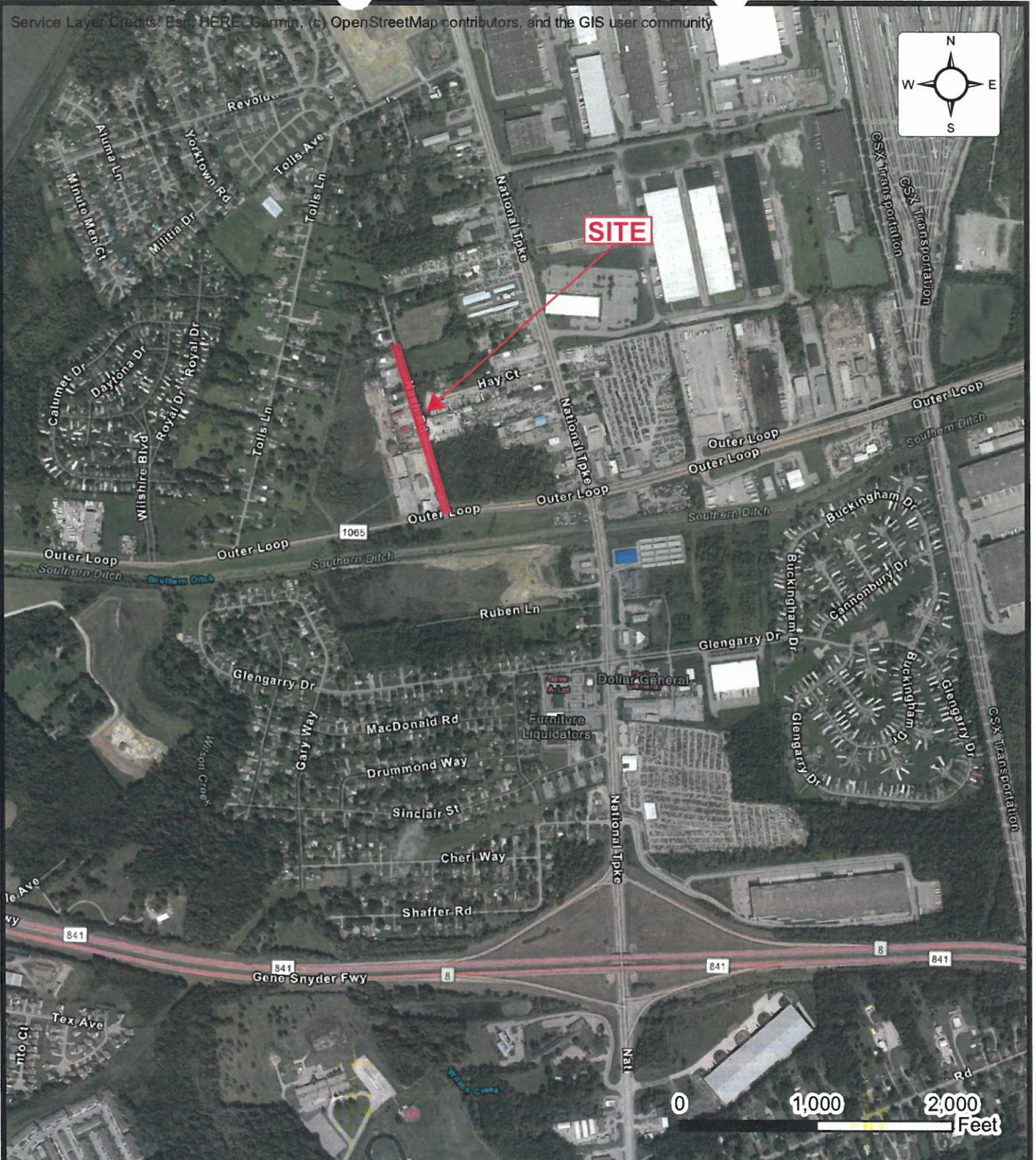


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gness@ecslimited.com



Liz Blandford Newcomb, P.E.
Principal Engineer
newcomb@ecslimited.com

Attachments: Site Location Diagram
Pavement Coring Location Diagram



SITE LOCATION DIAGRAM

DRUM TRUCKING – NASH ROAD PAVEMENT EVALUATION

8315 NASH ROAD
LOUISVILLE, JEFFERSON COUNTY, KENTUCKY 40214

ENGINEER FEN
SCALE AS NOTED
PROJECT NO. 61:2707
SHEET 1 OF 1
DATE 3/28/2022



LEGEND

⊕ P-00 - Pavement Coring Location

Note: Locations are approximate.

Proposed Site

P-12
P-11
P-10
P-09
P-08
P-07
P-06
P-05
P-04
P-03
P-02
P-01

Nash Rd

Nash Rd

Nash Rd

Linde Ln

Outer Loop

Google Earth



Graphic Scale



ECS Southeast, LLP
1762 Watterson Trail
Louisville, Kentucky 40299

Tel. (502) 493-7100
Fax (502) 493-8190

Project No.: 61-2707
Drawing No.: CLD
Dated: 03/22/2022

Drawn By: WGH
Checked By: FEN
Scale: As Shown

Pavement Coring Location Diagram
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