



**STONEFIELD**  
engineering & design

# ENVIRONMENTAL IMPACT STATEMENT

**ENCLAVE AT MILLINGTON  
BLOCK 12301, LOT 1 & BLOCK 10100, LOT 7.01  
50 DIVISION AVENUE  
MILLINGTON, TOWNSHIP OF LONG HILL  
MORRIS COUNTY, NEW JERSEY**

**PREPARED FOR:**

**PRISM MILLINGTON, LLC**

**PREPARED BY:**

**STONEFIELD ENGINEERING & DESIGN, LLC**

OCTOBER 25, 2019

T-17298

**CHARLES D. OLIVO, PE**  
**NEW JERSEY PROFESSIONAL ENGINEER LICENSE # 46719**



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## **1.0 SITE DESCRIPTION**

Prism Capital Partners is proposing the construction of a mixed-use multi-family and commercial development. The subject property is designated Block 12301, Lot 1 & Block 10100, Lot 7.01, commonly known as 50 Division Avenue. The subject property is located within the Millington, Township of Long Hill, MU-O Zone and is bounded by an NJ Transit Railroad to the north, Division Avenue to the east, Stone House Road to the south, and the Passaic River to the west. The total project area is 518,322 SF (11.90 acres). Project Figures can be found in Appendix A of this Report.

The subject property was previously occupied by an unknown industrial use. Under existing conditions, the site contains two one-story buildings, a two-story building, and a three-story building, all of which will be demolished. In addition, existing parking areas and various existing features (fences, walls, etc.) will be razed in order to accommodate the proposed development. The proposed development includes the construction of fourteen 10-unit multi-family residences, an 1,800 SF community building, a 4,992 SF retail building, and supporting improvements inclusive of parking facilities, landscaping, utilities, site lighting, and stormwater management measures.

This Environmental Impact Statement has been prepared per the Township of Long Hill requirements to investigate the existing conditions of the property, evaluate the potential impacts of the proposed redevelopment, and discuss the measures to mitigate environmental impacts, if any.

## **2.0 INVENTORY OF EXISTING ENVIRONMENTAL CONDITIONS**

### **2.1 SOILS**

The site is underlain by the following soil classifications, based upon the County Soil Survey (Appendix B), the Geotechnical Report, and the site survey:

**TABLE I: ON-SITE SOIL GROUPS**

<b>Soil Unit Code</b>	<b>Soil Description</b>	<b>Approximate Project Coverage</b>	<b>Hydrologic Soil Group</b>
PeoC	Penn Channery Silt Loam, 8% to 15% Slopes	9.5%	B
USPENB	Urban Land-Penn Complex, 0% to 8% Slopes	87.5%	C
WATER	Passaic River	3.0%	N/A

\***USPENB** does not have a pre-determined hydraulic soil group due to high variability in the historic fill material utilized. As such, these soils are analyzed as **HSG B** under pre-existing conditions and **HSG D** under post-development conditions.

## 2.2 SURFACE AND GROUNDWATER

The high point of the subject site is at the northeast corner of the site abutting River Road and Division Avenue. River Road drains northwest towards current parking areas of adjacent lots, Division Avenue drains south towards Stone House Road and combines with the run-off of Stone House Road ultimately discharging into the Passaic River. On-site topography slopes toward low points within the site, collected by a stormwater system, and discharged to the Passaic River. Grades on the subject site average between 0% and 3.43% within the areas surrounding the buildings. However, steeper slopes are seen in the northern and southwestern corners of the subject site.

## 2.3 SURFACE AND SUBSURFACE GEOLOGY

Per review of NJDEP Geoweb mapping, the site is underlain by Towaco Formation sandstone, siltstone, and silty mudstone. Per the County Soil Survey (Appendix B), the depth to densic material is greater than 80 inches. There is no evidence onsite of bedrock within 2 feet of the surface.

## 2.4 TREES AND FLORA

Under existing conditions, the western portion of the site is the only pervious area other than street trees along Division Avenue and River Road. Most of this section pervious area, an New Jersey Department of Environmental Protection Restricted Area, is covered with grass and the edges of this area are wooded.

## 2.5 WILDLIFE OR THREATENED & ENDANGERED SPECIES

Per the NJDEP's Natural Heritage Database (NHD), there are endangered or threatened fauna, flora, and habitats on-site. The species recorded on-site are summarized in the following table:

**TABLE II: RARE WILDLIFE SPECIES OR WILDLIFE HABITAT ON-SITE**

<i>Scientific Name</i>	<i>Common Name</i>	<i>Federal Protection</i>	<i>State Protection</i>	<i>Global Rank</i>	<i>State Rank</i>
Haliaeetus leucocephalus	Bald Eagle	NA	State Endangered	G5	S1B,S2N
Ardea herodias	Great Blue Heron	NA	Special Concern	G5	S3B,S4N
Myotis sodalis	Indiana Bat	Federally Listed Endangered	State Endangered	G2	S1

A search for species within a one mile radius of the site detected ecological records as summarized in the following table:

**TABLE III: RARE WILDLIFE SPECIES OR WILDLIFE HABITAT WITHIN A ONE MILE RADIUS OF THE SITE**

<i>Scientific Name</i>	<i>Common Name</i>	<i>Federal Protection</i>	<i>State Protection</i>	<i>Global Rank</i>	<i>State Rank</i>
Haliaeetus leucocephalus	Bald Eagle	NA	State Endangered	G5	S1B,S2N
Strix varia	Barred Owl	NA	State Threatened	G5	S2B,S2N
Toxostoma rufum	Brown Thrasher	NA	Special Concern	G5	S3B,S4N
Ardea herodias	Great Blue Heron	NA	Special Concern	G5	S3B,S4N
Buteo lineatus	Red-shouldered Hawk	NA	State Endangered	G5	S1B,S3N
Catharus fuscescens	Veery	NA	Special Concern	G5	S3B,S4N
Myotis sodalis	Indiana Bat	Federally Listed Endangered	State Endangered	G2	S1
Myotis septentrionalis	Northern Myotis	Federally Listed Threatened	NA	G1G2	S1
Glyptemys muhlenbergii	Bog Turtle	Federally Listed	Threatened State Endangered	G3	S1
Terrapene carolina carolina	Eastern Box Turtle	NA	Special Concern	G5T5	S3
Glyptemys insculpta	Wood Turtle	NA	State Threatened	G3	S2
Eptesicus fuscus	Big Brown Bat	NA	NA	G5	S3

## 2.6 PUBLIC INFRASTRUCTURE

Per the project description, the subject site is abutted by River Road, Division Avenue, Stone House Road and an NJ Transit Railroad. The site is currently serviced by a gas line which connects to the gas main along River Road, a water line which connects to the water main along River Road, overhead electric wires along Stone House Road, and a sanitary line which connects to the sanitary main along Stone House Road. Gas and electric are under the jurisdiction of PSE&G, water service is under the jurisdiction of American Water, and sanitary service is under the jurisdiction of the Long Hill Township Department of Public Works.

## **2.7 SCENIC OR HISTORIC FEATURES**

Under existing conditions, there are no portions of the site which would be considered to have unique, scenic and/or historic qualities as the subject site was occupied by industrial buildings and a large amount of impervious coverage.

Per NJDEP GeoWeb Mapping, the subject site abuts the Solomon Boyle House to the northwest, sits across River Road from the Millington Railroad Station, and across Division Avenue from Runyon Feed Mill. All three of the aforementioned properties are listed in New Jersey Historic Sites Inventory, Morris County Cultural Resources Survey: Long Hill Township.

## **2.8 SEWERAGE FACILITIES**

Please refer to the Public Infrastructure section of this report for information regarding sewerage facilities and other utility services.

## **2.9 WATER SUPPLY**

Please refer to the Public Infrastructure section of this report for information regarding water supply and other utility services.

## **2.10 SOLID WASTE DISPOSAL**

Solid waste disposal within Millington, Township of Long Hill is under the jurisdiction of the Long Hill Township Department of Public Works. Under existing conditions, the vacant industrial buildings are not currently producing solid waste.

## **2.11 TRAFFIC**

Under existing conditions, the property receives no traffic due to its lack of occupancy. The surrounding roadway network, including Long Hill Road, Division Avenue, Stonehouse Road and Commerce Street, has been studied and found to be operating at acceptable levels of service.

## **2.12 NOISE**

A study on the existing noise levels has not been performed for this site. There is minimal noise generated by the property due to the lack of occupancy. The source of any peripheral noise is most likely adjacent vehicle

traffic and/or NJ Transit Railroad trains. These levels are most likely not indicative of the noise conditions during the site's active industrial use.

### **2.13 MONITORING WELLS**

There are five (5) monitoring wells currently existing on the site.

## **3.0 ENVIRONMENTAL IMPACT ASSESSMENT**

### **3.1 SOIL**

The hydrologic soil group of the underlying soils onsite has been taken into consideration for the design of the stormwater facilities onsite. There is no impact to the underlying soils anticipated as a result of the proposed development.

### **3.2 FLOODING AND/OR FLOOD PLAINS**

There are no flood plains located on-site. Therefore, the proposed development is not expected to have any effect on existing flooding and/or flood plains.

### **3.3 SURFACE AND GROUNDWATER**

The proposed development has been graded to maintain the existing drainage pattern. The high point of the subject site is to remain at the northeast corner of the site abutting River Road and Division Avenue. The drainage patterns of River Road, Division Avenue, and Stone House Road will not be affected by the proposed development. On-site topography slopes toward low points within the site, collected by a stormwater system, and discharged to the Passaic River. Grades on the subject site average between 0% and 40.0% within the areas surrounding the buildings. However, steeper slopes are seen in the northern and southwestern corners of the subject site.

### **3.4 VEGETATION**

Vegetation and treed areas located in the NJDEP Restricted Area are to remain undisturbed throughout construction. Street trees along Division Avenue and River Road shall remain and be protected throughout construction.

The proposed development will be attractively landscaped with trees, ground cover, and shrubs, and includes buffer areas in accordance with Township requirements. A more formalized landscape will be put in place in comparison to the existing impervious coverage and lack of vegetation.

### **3.5 WILDLIFE OR THREATENED & ENDANGERED SPECIES**

Although natural habitats of special concern are documented on-site per the NHD Report, the proposed development occurs largely outside of these areas. As a result, native habitats will be minimally affected by the proposed development.

### **3.6 AIR QUALITY**

Air quality on the developed site will likely be similar to that of the surrounding residential area. Air quality on-site is likely enhanced with respect to the previous use because an industrial use commonly presents a greater likelihood for environmental contaminants than a residential or mixed-use site. Proposed landscaping on-site positively impacts the air quality under post-development conditions. The potential negative air quality impacts due to proposed uses on-site would be a result of increased traffic flow to the site.

### **3.7 OPEN SPACES**

The proposed development plan creates a comprehensive landscaping layout that emphasizes open space and community patio areas. Three community patio areas have been proposed in areas that will promote use and are surrounded by aesthetically pleasing landscaping such as ornamental trees, shade trees, shrubbery, and ground cover.

### **3.8 CRITICAL AREAS**

The proposed development avoids the Passaic River's special flood hazard area on the western limits of the site, in addition, no portion of the development falls within the NJDEP Restricted Area. The portions of the site categorized as steep slope critical areas will be mitigated as part of the proposed grading plan.

### **3.9 SCENIC VALUE**

The proposed development seeks to improve on-site scenic values through aesthetic landscaping and architectural design. In contrast, under existing conditions, the site lacks landscaping and is occupied by outdated industrial buildings.

### **3.10 SCHOOLS**

Based on the Rutgers Center for Real Estate White Paper “School-Age Children in Rental Units in New Jersey” published July 2018, the number of school-aged children per 100 units for market rate two-bedroom apartments in low-rise buildings range from 28.2 to 126.4 depending on the average household income range. The number of school-aged children per 100 units for market rate three-bedroom apartments in low-rise buildings range from 61.8 to 137.9 depending on the average household income range. For the proposed 140-unit development this would result in 44.2 to 178.6 school-aged children.

### **3.11 COMMUNITY FACILITIES AND SERVICES**

The proposed development has received confirmation from all utility providers except the Long Hill Township Department of Public Works (sanitary), that service connections will be feasible and will not overload the existing utility systems. In addition to utility providers, township emergency services are not expected to be negatively impacted by this development.

### **3.12 MONITORING WELLS**

One (1) monitoring well is proposed to be recapped on the site as it is located in an area to be repaved. Four (4) monitoring wells shall remain and be protected throughout construction.

## **4.0 ALTERNATIVE ANALYSIS**

### **4.1 NO BUILD**

Under existing conditions, the site is currently unoccupied industrial buildings. In the no build condition, the site would remain as-is. The lot is considered under-utilized for the space and zone and property owner would continue to pay taxes on an unused lot.

## **5.0 LICENSES, PERMITS, AND APPROVALS REQUIRED**

The following licenses, permits, and approvals are anticipated in conjunction with this application:

- Township of Long Hill
  - Preliminary & Final Major Site Plan Approval
  - Local Sanitary & Water Connection Permitting
  - Building Permit

- Morris County Planning Board
  - County Exemption
- Morris County Soil Conservation District
  - Soil Erosion and Sediment Control Plan Certification
- New Jersey Department of Environmental Protection (NJDEP)
  - NJDEP Treatment Works Approval
  - NJDEP Water Main (BWSE) Approval
  - NJPDES General Permit for Construction Activities (5G3)

At the time of this Statement, all approvals are still pending.

## **6.0 STEPS TO MINIMIZE ENVIRONMENTAL IMPACTS**

The development of the project and site plan design enhances the property and minimizes environmental damage by completing the following:

- Proposes minimal tree clearing efforts.
- Proposes landscape vegetation to enhance site aesthetics and provide necessary buffering.
- Utilizes LED lighting with proper shielding to mitigate energy consumption and light flooding.
- Meets township parking requirements and shows no decrease in level of service.
- Proposes proper stormwater management practices to capture and discharge run-off.
- Implementation of soil erosion and sediment control measures during construction.

# **APPENDIX A PROJECT FIGURES**

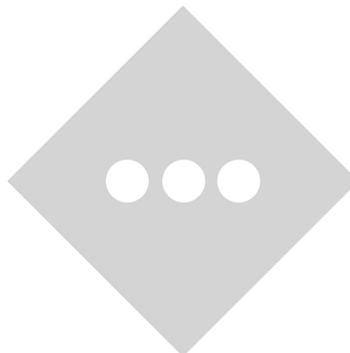
**INVENTORY**

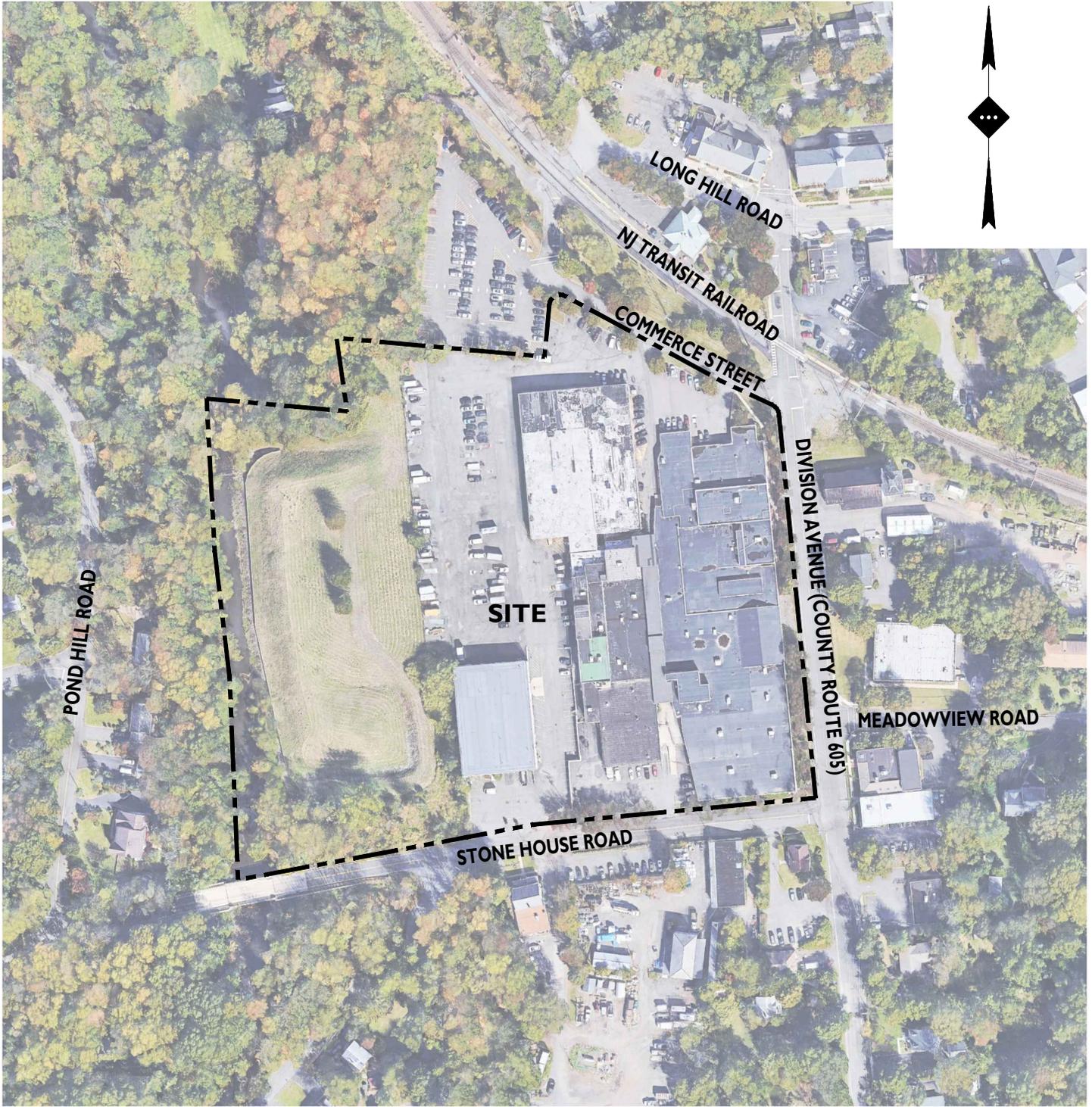
**AERIAL MAP**

**TAX AND ZONING MAP**

**USGS LOCATION MAP**

**FEMA MAP**





GRAPHIC SCALE IN FEET

1" = 200'

# AERIAL MAP

SOURCE: GOOGLE EARTH PRO, DATED 2018

## ENCLAVE AT MILLINGTON PROPOSED MIXED USE MULTI-FAMILY AND COMMERCIAL DEVELOPMENT

BLOCK 12301, LOT 1 & BLOCK 10100, LOT 7.01  
DIVISION AVENUE & STONE HOUSE ROAD  
MILLINGTON, TOWNSHIP OF LONG HILL  
MORRIS COUNTY, NEW JERSEY

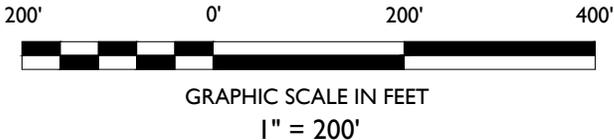
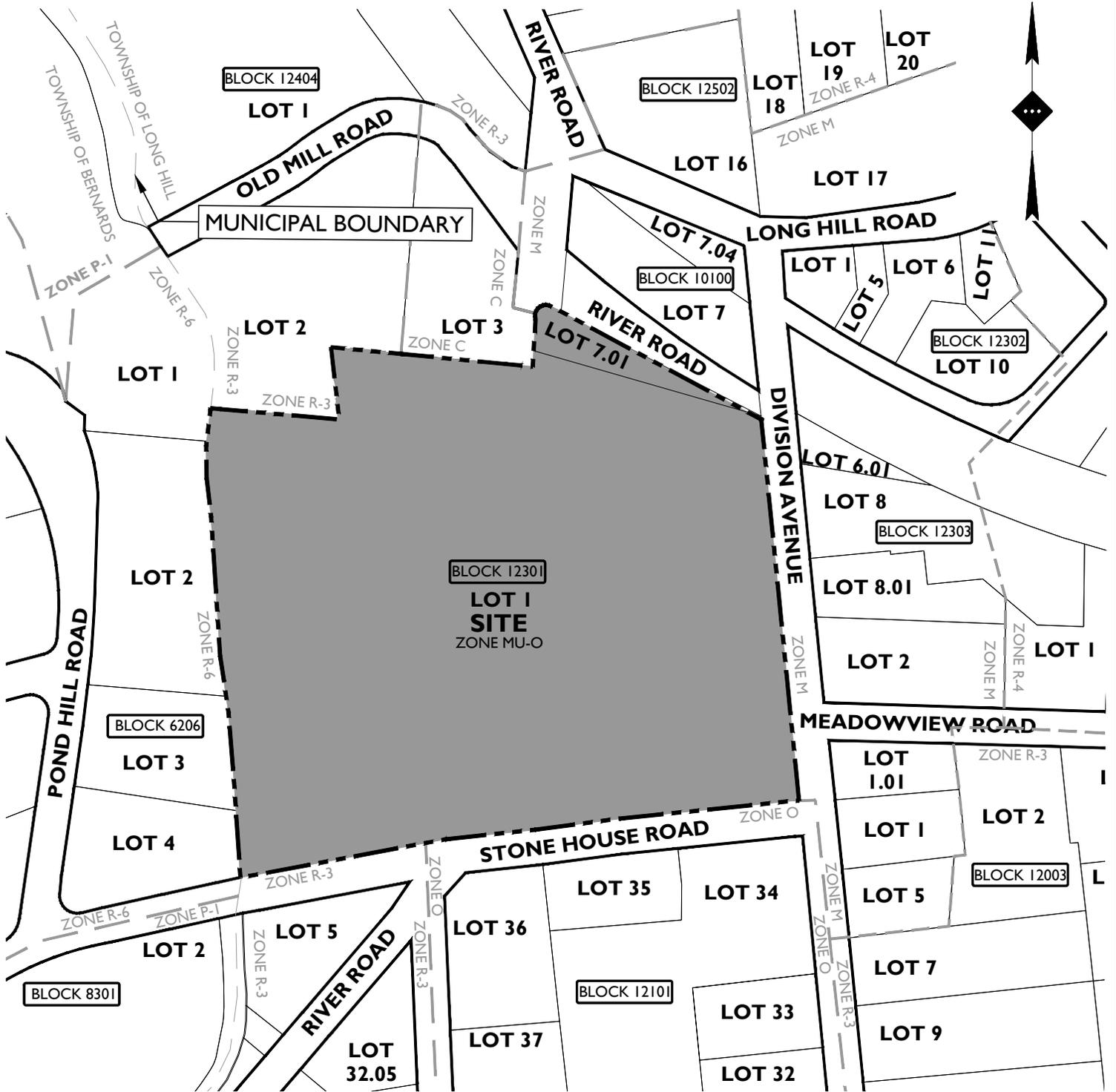
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<b>CHECKED BY:</b>	SMO
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<b>SCALE:</b>	1" = 200'
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# TAX AND ZONING MAP

SOURCES: TOWNSHIP OF LONG HILL, NEW JERSEY - TAX MAP SHEETS 20-25 AND BERNARDS TOWNSHIP, NEW JERSEY - TAX MAP SHEETS 62 & 83. TOWNSHIP OF LONG HILL ZONING MAP, BERNARDS TOWNSHIP ZONING MAP

## ENCLAVE AT MILLINGTON PROPOSED MIXED USE MULTI-FAMILY AND COMMERCIAL DEVELOPMENT

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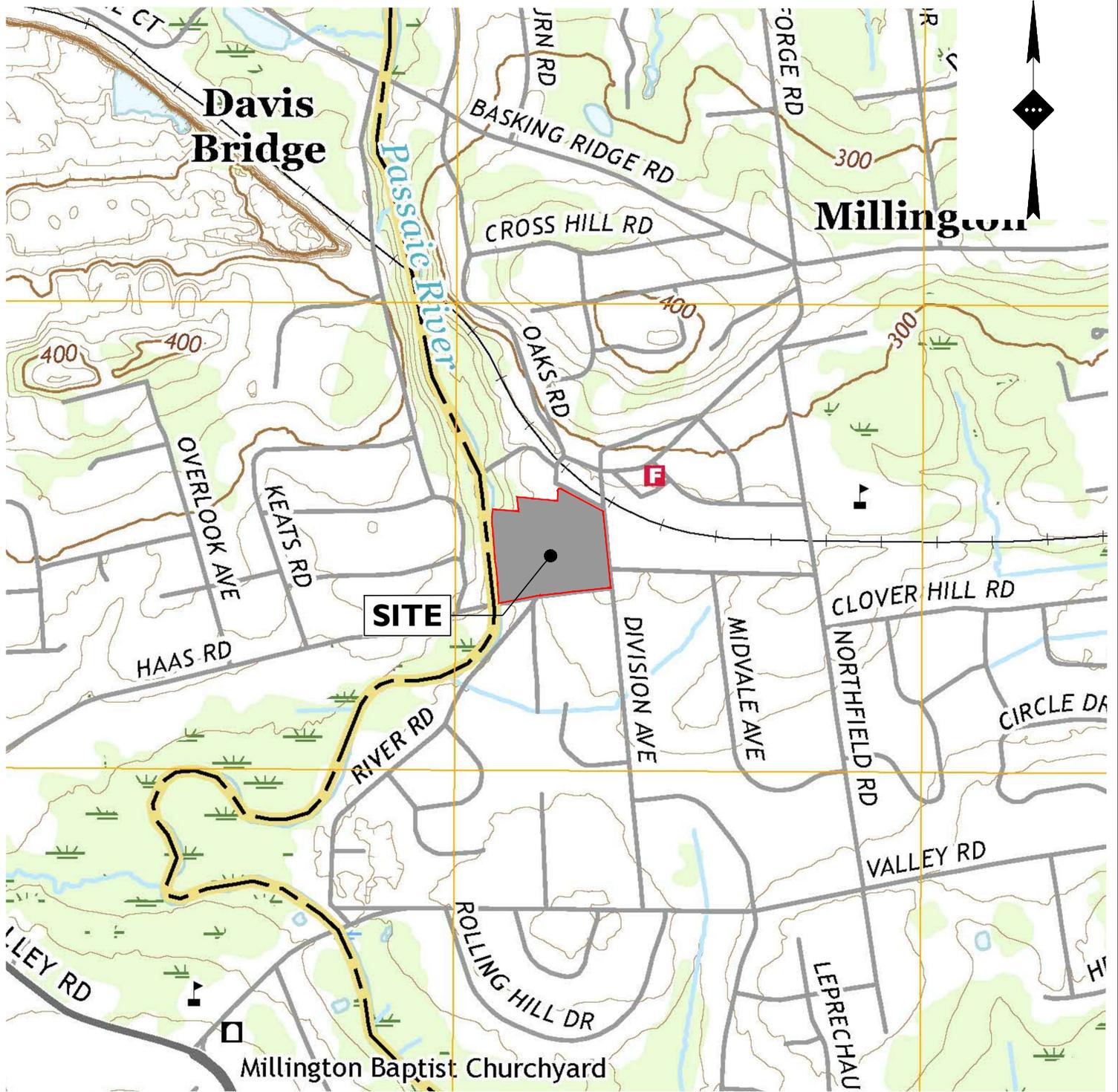
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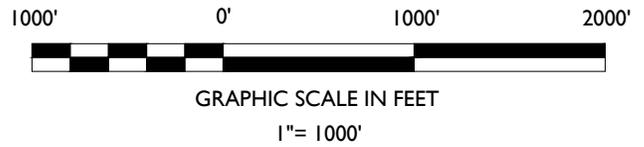
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# USGS QUADRANGLE MAP



SOURCE: UNITED STATES GEOLOGICAL SURVEY QUADRANGLE MAP, BERNARDSVILLE, NEW JERSEY, 7.5 MINUTE SERIES, 2016.

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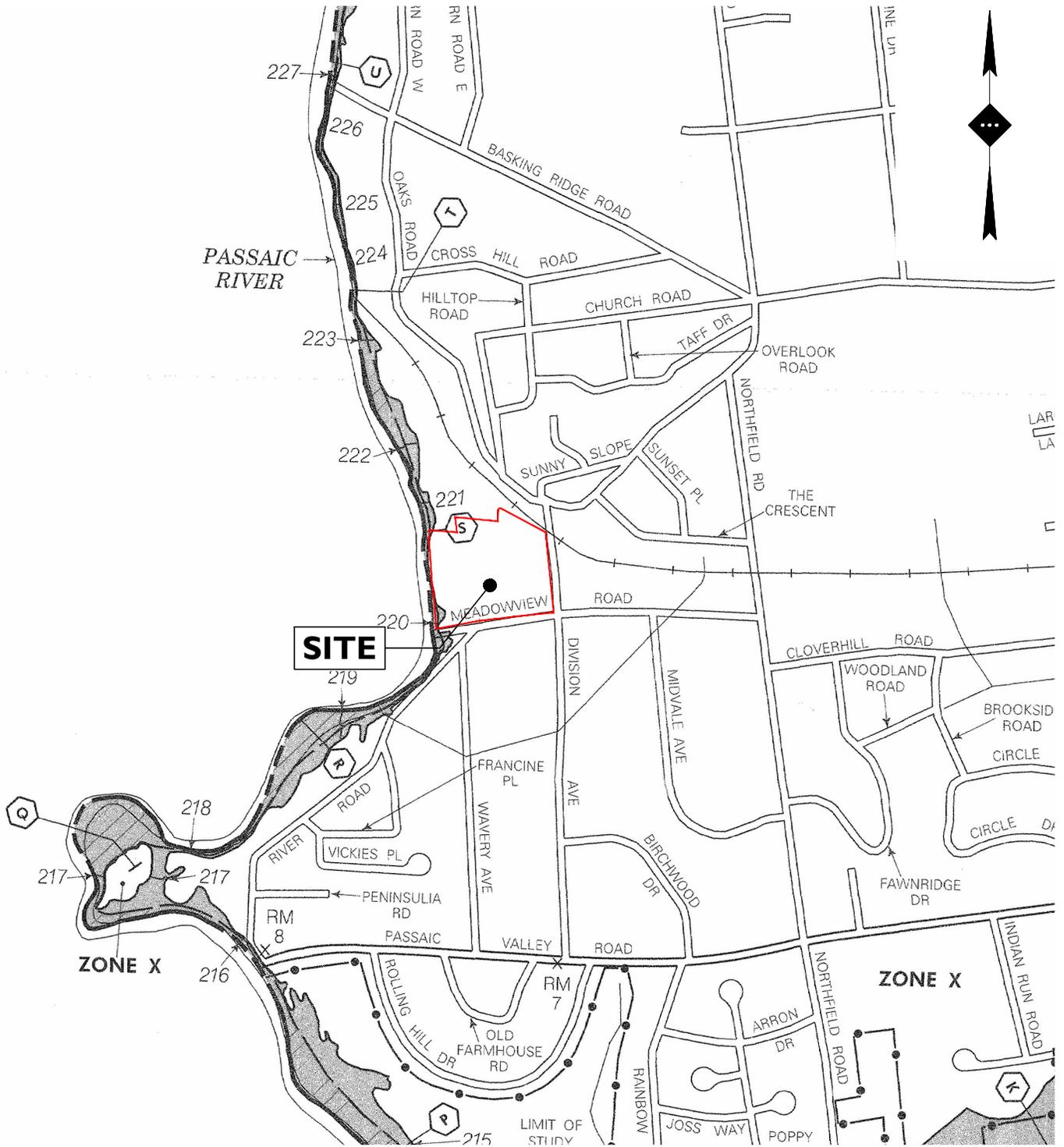


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# EFFECTIVE FEMA FLOOD INSURANCE RATE MAP



GRAPHIC SCALE IN FEET

1" = 1000'

SOURCE: FLOOD INSURANCE RATE MAP, MORRIS COUNTY, NEW JERSEY, MAP NUMBER 3403560005B, DATED SEPTEMBER 21, 2001.

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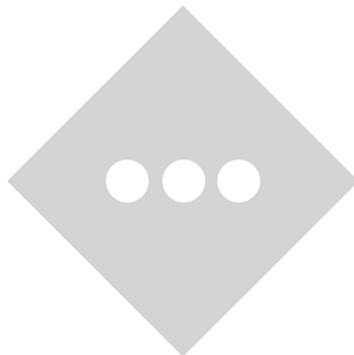


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**APPENDIX B**  
**NRCS COUNTY SOIL SURVEY**





United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Morris County, New Jersey**



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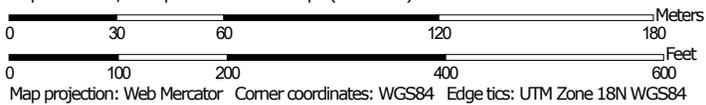
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# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)

**Soils**

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

**Water Features**

 Streams and Canals

**Transportation**

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Morris County, New Jersey  
 Survey Area Data: Version 13, Sep 13, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Feb 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PeoC	Penn channery silt loam, 8 to 15 percent slopes	1.1	9.3%
USPENB	Urban land-Penn complex, 0 to 8 percent slopes	10.7	88.7%
WATER	Water	0.2	2.0%
<b>Totals for Area of Interest</b>		<b>12.1</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

## Custom Soil Resource Report

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Morris County, New Jersey

### PeoC—Penn channery silt loam, 8 to 15 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2tt83

*Elevation:* 250 to 800 feet

*Mean annual precipitation:* 38 to 53 inches

*Mean annual air temperature:* 43 to 57 degrees F

*Frost-free period:* 170 to 240 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Penn and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Penn

##### Setting

*Landform:* Hills

*Landform position (two-dimensional):* Shoulder, backslope, summit

*Landform position (three-dimensional):* Interfluve, side slope

*Down-slope shape:* Convex

*Across-slope shape:* Linear

*Parent material:* Residuum weathered from shale and siltstone

##### Typical profile

*Ap - 0 to 10 inches:* channery silt loam

*Bt1 - 10 to 15 inches:* channery silt loam

*Bt2 - 15 to 19 inches:* channery silt loam

*Bt3 - 19 to 22 inches:* channery loam

*C - 22 to 28 inches:* very channery loam

*R - 28 to 38 inches:* bedrock

##### Properties and qualities

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* 20 to 40 inches to lithic bedrock

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.14 to 1.28 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* Low (about 4.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e

*Hydrologic Soil Group:* B

*Hydric soil rating:* No

## Custom Soil Resource Report

### Minor Components

#### Klinesville

*Percent of map unit:* 10 percent  
*Landform:* Hills  
*Landform position (two-dimensional):* Backslope, shoulder  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Croton

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* Yes

#### Readington

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Base slope  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

## USPENB—Urban land-Penn complex, 0 to 8 percent slopes

### Map Unit Setting

*National map unit symbol:* 13q0b  
*Elevation:* 250 to 1,300 feet  
*Mean annual precipitation:* 30 to 64 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 131 to 178 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Urban land:* 55 percent  
*Penn and similar soils:* 35 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Urban Land

#### Setting

*Landform:* Hills  
*Down-slope shape:* Linear, convex

## Custom Soil Resource Report

*Across-slope shape:* Linear

*Parent material:* Surface covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soil material

### Typical profile

*C - 0 to 60 inches:* variable

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 8s

*Hydric soil rating:* Unranked

## Description of Penn

### Setting

*Landform:* Hills

*Landform position (two-dimensional):* Backslope

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Fine-loamy residuum weathered from acid reddish shale, siltstone, and fine-grain sandstone

### Typical profile

*A - 0 to 8 inches:* channery silt loam

*BA - 8 to 14 inches:* channery silt loam

*B - 14 to 24 inches:* channery silt loam

*BC - 24 to 30 inches:* channery silt loam

*C - 30 to 36 inches:* very channery silt loam

*R - 36 to 80 inches:* weathered bedrock

### Properties and qualities

*Slope:* 0 to 6 percent

*Depth to restrictive feature:* 20 to 39 inches to lithic bedrock

*Natural drainage class:* Well drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* Low (about 5.8 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2e

*Hydrologic Soil Group:* C

*Hydric soil rating:* No

## Minor Components

### Klinesville

*Percent of map unit:* 5 percent

*Landform:* Hills

*Landform position (two-dimensional):* Shoulder

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Hydric soil rating:* No

**Reaville**

*Percent of map unit: 5 percent*

*Landform: Interfluves*

*Down-slope shape: Convex*

*Across-slope shape: Linear*

*Hydric soil rating: No*

**WATER—Water**

**Map Unit Setting**

*National map unit symbol: b0p9*

*Mean annual precipitation: 30 to 64 inches*

*Mean annual air temperature: 46 to 79 degrees F*

*Frost-free period: 131 to 178 days*

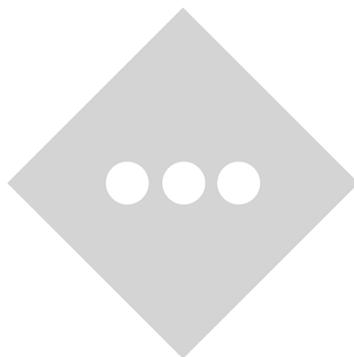
*Farmland classification: Not prime farmland*

**Map Unit Composition**

*Water: 100 percent*

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**APPENDIX C**  
**NATURAL HERITAGE DATABASE REPORT**





## State of New Jersey

MAIL CODE 501-04

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF PARKS & FORESTRY

NEW JERSEY FOREST SERVICE

OFFICE OF NATURAL LANDS MANAGEMENT

P.O. BOX 420

TRENTON, NJ 08625-0420

Tel. (609) 984-1339 Fax (609) 984-0427

PHILIP D. MURPHY

*Governor*

SHEILA Y. OLIVER

*Lt. Governor*

CATHERINE R. McCABE

*Commissioner*

August 27, 2019

Sheena Ishak  
Stonefield Engineering & Design, LLC  
92 Park Avenue  
Rutherford, NJ 07070

Re: Proposed Mixed-Use Multi-Family and Commercial Development  
Block(s) - 12301; 10100, Lot(s) - 1; 7.01  
Long Hill Township, Morris County

Dear Ms. Ishak:

Thank you for your data request regarding rare species information for the above referenced project site.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.3) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Natural Heritage Data Request Form into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for occurrences of rare wildlife species or wildlife habitat in the immediate vicinity (within ¼ mile) of the referenced site. Additionally, the Natural Heritage Database was checked for occurrences of rare plant species or ecological communities within ¼ mile of the site. Please refer to Table 2 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented within the immediate vicinity of the site. Detailed reports are provided for all categories coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

We have also checked the Landscape Project habitat mapping and Biotics Database for all occurrences of rare wildlife species or wildlife habitat within one mile of the referenced site. Please refer to Table 3 (attached) to determine if any rare wildlife species or wildlife habitat is documented within one mile of the project site. Detailed reports are provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on the project site.

For requests submitted in order to make a riparian zone width determination as part of a Flood Hazard Area Control Act (FHACA) rule application, we report records for all rare plant species and ecological communities tracked by the Natural Heritage Program that may be on, or in the immediate vicinity of, your project site. A subset of these plant species are also covered by the FHACA rules when the records are located within one mile of the project site. One mile searches for FHACA plant species will only report precisely located occurrences for those wetland plant species identified under the FHACA regulations as being critically dependent on the watercourse. Please refer to Table 3 (attached) to determine if any precisely located rare wetland plant species covered by the FHACA rules have been documented. Detailed reports are

provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on, or in the immediate vicinity of, the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1, 2 and 3 (attached) to determine if any priority sites are located on, in the immediate vicinity, or within one mile of the project site.

A list of rare plant species and ecological communities that have been documented from the county (or counties), referenced above, can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html>. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from [http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes\\_2010.pdf](http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2010.pdf).

Beginning May 9, 2017, the Natural Heritage Program reports for wildlife species will utilize data from Landscape Project Version 3.3. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive web application at the following URL, <https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7>, or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

For additional information regarding any Federally listed plant or animal species, please contact the U.S. Fish & Wildlife Service, New Jersey Field Office at <http://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html>.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf>.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,



Robert J. Cartica  
Administrator

c: NHP File No. 19-4007465-17385

**Table 1: On Site Data Request Search Results (6 Possible Reports)**

<b><u>Report Name</u></b>	<b><u>Included</u></b>	<b><u>Number of Pages</u></b>
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites On Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

**Rare Wildlife Species or Wildlife Habitat on the  
Project Site Based on Search of  
Landscape Project 3.3 Species Based Patches**

<b>Class</b>	<b>Common Name</b>	<b>Scientific Name</b>	<b>Feature Type</b>	<b>Rank</b>	<b>Federal Protection Status</b>	<b>State Protection Status</b>	<b>Grank</b>	<b>Srank</b>
<i>Aves</i>								
	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N
<i>Mammalia</i>								
	Indiana Bat	Myotis sodalis	Maternity Colony	5	Federally Listed Endangered	State Endangered	G2	S1
	Indiana Bat	Myotis sodalis	Roost Site	5	Federally Listed Endangered	State Endangered	G2	S1

**Table 2: Vicinity Data Request Search Results (6 possible reports)**

<b><u>Report Name</u></b>	<b><u>Included</u></b>	<b><u>Number of Pages</u></b>
1. Immediate Vicinity of the Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites within the Immediate Vicinity	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat In the Immediate Vicinity of Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat In the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

<p><b>Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches</b></p>
--

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Strank
<i>Aves</i>								
	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N
<i>Mammalia</i>								
	Indiana Bat	Myotis sodalis	Active Season Sighting	5	Federally Listed Endangered	State Endangered	G2	S1
	Indiana Bat	Myotis sodalis	Maternity Colony	5	Federally Listed Endangered	State Endangered	G2	S1
	Indiana Bat	Myotis sodalis	Roost Site	5	Federally Listed Endangered	State Endangered	G2	S1
	Northern Myotis	Myotis septentrionalis	Active Season Sighting	5	Federally Listed Threatened	NA	G1G2	S1
	Northern Myotis	Myotis septentrionalis	Roost Site	5	Federally Listed Threatened	NA	G1G2	S1
<i>Reptilia</i>								
	Wood Turtle	Glyptemys insculpta	Occupied Habitat	3	NA	State Threatened	G3	S2

**Table 3: Within 1 Mile for Riparian Zone Width Determination  
(6 possible reports)**

<b><u>Report Name</u></b>	<b><u>Included</u></b>	<b><u>Number of Pages</u></b>
1. Rare Plant Species Occurrences for Riparian Zone Width Determination (Flood Hazard Area Control Act Rule Application) - Within One Mile of the Project Site Based on Search of Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites for Riparian Zone Width Determination - Within One Mile of the Project Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	2 page(s) included
4. Vernal Pool Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

<p><b>Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination</b>  <b>Within One Mile of the Project Site</b>  <b>Based on Search of Landscape Project 3.3 Species Based Patches</b></p>
--

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
<i>Aves</i>								
	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Barred Owl	Strix varia	Breeding Sighting	3	NA	State Threatened	G5	S2B,S2N
	Barred Owl	Strix varia	Non-breeding Sighting	3	NA	State Threatened	G5	S2B,S2N
	Brown Thrasher	Toxostoma rufum	Breeding Sighting	2	NA	Special Concern	G5	S3B,S4N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Red-shouldered Hawk	Buteo lineatus	Breeding Sighting	4	NA	State Endangered	G5	S1B,S3N
	Red-shouldered Hawk	Buteo lineatus	Nest	4	NA	State Endangered	G5	S1B,S3N
	Red-shouldered Hawk	Buteo lineatus	Non-breeding Sighting	2	NA	Special Concern	G5	S1B,S3N
	Veery	Catharus fuscescens	Breeding Sighting	2	NA	Special Concern	G5	S3B,S4N
<i>Mammalia</i>								
	Indiana Bat	Myotis sodalis	Active Season Sighting	5	Federally Listed Endangered	State Endangered	G2	S1

<p><b>Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches</b></p>
--

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
	Indiana Bat	Myotis sodalis	Maternity Colony	5	Federally Listed Endangered	State Endangered	G2	S1
	Indiana Bat	Myotis sodalis	Roost Site	5	Federally Listed Endangered	State Endangered	G2	S1
	Northern Myotis	Myotis septentrionalis	Active Season Sighting	5	Federally Listed Threatened	NA	G1G2	S1
	Northern Myotis	Myotis septentrionalis	Roost Site	5	Federally Listed Threatened	NA	G1G2	S1
<i>Reptilia</i>	Bog Turtle	Glyptemys muhlenbergii	Occupied Habitat	5	Federally Listed Threatened	State Endangered	G3	S1
	Eastern Box Turtle	Terrapene carolina carolina	Occupied Habitat	2	NA	Special Concern	G5T5	S3
	Wood Turtle	Glyptemys insculpta	Occupied Habitat	3	NA	State Threatened	G3	S2

**Vernal Pool Habitat for Riparian Zone Width Determination  
Within One Mile of the Project Site  
Based on Search of Landscape Project 3.3**

<b>Vernal Pool Habitat Type</b>	<b>Vernal Pool Habitat ID</b>
Vernal habitat area	2900
Vernal habitat area	2903
Vernal habitat area	2918
Potential vernal habitat area	1936
Total number of records:	4

**Other Animal Species for Riparian Zone Width Determination  
 Within One Mile of the Project Site  
 Based on Additional Species Tracked by  
 Endangered and Nongame Species Program**

Scientific Name	Common Name	Federal Protection Status	State Protection Status	Grank	Srank
-----------------	-------------	---------------------------	-------------------------	-------	-------

*Vertebrate Animals*

Eptesicus fuscus	Big Brown Bat			G5	S3
------------------	---------------	--	--	----	----

Total number of records: 1

