# Buffalo-Amherst-Tonawanda Corridor Transit Expansion

**ERIE COUNTY, NEW YORK**

## Phase 1B Archaeological Investigation

*SHPO Project Review Number: 19PR01900*

**Prepared for:**

Federal Transit Administration and Niagara Frontier Transportation Authority

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**OCTOBER 2025**

## Management Summary

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|---|---|
| **SHPO Project Review Number**: | 19PR01900 |
| **Involved Agencies**: | Federal Transit Administration<br>Niagara Frontier Transportation Authority |
| **Phase of Survey**: | Phase 1B Archaeological Investigation |
| **Location Information** | |
| *Location*: | Amherst, Buffalo, and Tonawanda, New York |
| *Minor Civil Division*: | 02902, 02940, and 02923 |
| *County*: | Erie County |
| **Survey Area** | |
| *Length*: | Approximately 3 miles |
| *Width*: | Approximately 50 feet |
| *Area*: | Approximately 15 acres |
| **USGS 7.5 Minute Quadrangle Map**: | Amherst, Buffalo and Tonawanda |
| **Archaeological Survey Overview** | |
| *Number & Interval of Shovel Tests*: | 164 STPs excavated at a variable interval (6 to 70 feet) |
| Number & Size of Units: | n/a |
| Width of Plowed Strips: | n/a |
| **Results of Archaeological Survey** | |
| *Precontact Sites Identified*: | 0 |
| *Historic Sites Identified*: | 0 |
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| **Date of Report**: | October 2025 |

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# Chapter 1: Introduction and Project Background

## A. INTRODUCTION

The Federal Transit Administration (FTA), as lead Federal agency, and the Niagara Frontier Transit Metro System, Inc. (Metro), as the local Project Sponsor and joint lead agency, are preparing an Environmental Impact Statement (EIS) to evaluate potential benefits and impacts of expanding high-capacity transit in Buffalo, NY to Amherst and Tonawanda, NY (the Project) (see **Figure 1**). The purpose of the Project is to connect established and emerging activity centers along the existing Metro Rail line in Buffalo with existing and emerging activity centers in Amherst and Tonawanda to provide a fast, reliable, safe, and convenient transit ride. The Project would serve existing Metro riders, attract new transit patrons, improve regional connections between Buffalo, Amherst, and Tonawanda, and support redevelopment and other economic development opportunities. Additionally, the Project would improve livability by increasing mobility and accessibility in communities throughout the region.

As described in detail below, Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. 300101 et seq.) and its implementing regulations (36 C.F.R. Part 800) require Federal agencies, in consultation with stakeholders, to take into account the potential effects of their actions on historic properties within "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties [the Area of Potential Effect or APE], if such properties exist" (36 CFR § 800.16[d]). Historic properties consist of National Register-listed or eligible buildings, structures, sites, objects, or districts and include historic resources and archaeological resources ("cultural resources"). In accordance with Section 106 of NHPA, a Phase 1A Archaeological Documentary Study ("Phase 1A Study") was prepared in 2023 for the New York State Historic Preservation Office (SHPO) to assist in the identification of potential archaeological resources that could be affected by the Project. The results of the Phase 1A Study and subsequent investigations are summarized below. This report presents the results of a Phase 1B Archaeological Investigation, which was a collaboration between WSP, USA (which completed the fieldwork) and AKRF, Inc. (which completed artifact analysis and report preparation).

## B. REGULATORY CONTEXT

Pursuant to Section 106 of the NHPA, archaeological resources are defined as precontact and historic period sites listed in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 requires the lead federal agency, in consultation with the State Historic Preservation Officer (SHPO), to develop the Area of Potential Effects (APE), identify historic properties in the APE, and assess the proposed project's effects on historic properties in the APE. Section 106 regulations require that the lead federal agency consult with the SHPO, consulting parties, and the public during planning and development of the proposed project. The federal Advisory Council on Historic Preservation may participate in the consultation or may leave such involvement to the SHPO and other consulting parties who have a demonstrated interest in the undertaking. These agencies, groups, and individuals may participate in developing a Memorandum of Agreement or Programmatic Agreement to avoid, minimize, or mitigate adverse effects as applicable.

As part of the Section 106 process, agency officials apply the NRHP Criteria for Evaluation. A property is eligible for the NRHP if it is significant under one or more of the following criteria defined in 36 CFR § 60.4 as:

> *the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:*

*A: Are associated with events that have made a significant contribution to the broad patterns of our history; or*

*B: Are associated with the lives of persons significant in our past; or*

*C: Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or*

*D: Have yielded, or may be likely to yield, information important in prehistory or history.*

Criterion D applies primarily to archaeological resources. According to guidance found in the NRHP Bulletin "How to Apply the National Register Criteria for Evaluation,"[1] different aspects of integrity may be more or less relevant depending on why a specific historic property was listed in or determined eligible for listing in the NRHP.

## C. AREA OF POTENTIAL EFFECTS

As defined at 36 C.F.R. § 800.16(d), the APE is "the geographic area or areas which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."

For archaeological resources, the APE is limited to areas subject to ground disturbance (see **Figures 1** through **4**). This disturbance could consist of excavation, construction, or ground surface compaction that could occur through the staging of construction materials or the movement of heavy machinery. The APE was submitted to SHPO on April 8, 2020 as part of the Historic Resources Report (NFTA 2020) and then again in August 2022 with a detailed series of maps indicating the locations and expected depths of disturbance (included as **Appendix A** in the Phase 1A Study).

## D. PROJECT DESCRIPTION

The Project is an extension of high-capacity transit from its current terminus, at University Station on the University at Buffalo (UB) South Campus, an additional seven miles, through the UB North Campus to Interstate 990 (I 990) (**Figure 1**). Though the Locally Preferred Alternative for the Project is for the extension to run on an additional 7 miles of LRT, the EIS also considers the effects of a Bus Rapid Transit (BRT) alternative. Both the LRT and BRT alternatives would occur within the same Project corridor, but the LRT would require construction of tracks and other features, including tunnel work, while the BRT would use the existing roadways and not require tunneling.

### BUILD ALTERNATIVES

The LRT Build Alternative would be primarily at-grade, except for a 0.8-mile underground segment from the existing Metro Rail University Station to Niagara Falls Boulevard and a 0.3-mile underground segment at the intersection of Maple Road and Sweet Home Road (**Figure 2**). Ten stations are proposed, two with park & ride facilities, and an overnight storage and light maintenance facility located near the end of the line. The trackway would be configured with two tracks: one for northbound service and one for southbound service. **Figure 2** presents the LRT Build Alternative alignment, including the underground (tunnel) and at-grade alignment, portal locations, ten stations, two park & ride facilities, and the light maintenance/storage facility. The LRT Build Alternative would generally be within existing roadway right-of-way, except for portions along Niagara Falls Boulevard and Maple Road and north of I-990, where there is insufficient right-of-way width.

The BRT Build Alternative would provide transit service north from the existing Metro Rail University Station for approximately seven miles along the same at-grade alignment as the LRT Build Alternative except for the underground portion from University Station along Kenmore Avenue and onto Niagara Falls Boulevard and the grade separation at the intersection of Maple and Sweet Home Roads (**Figure 3**). The BRT Build

[1] National Park Service. National Register Bulletin. How to Apply the National Register Criteria for Evaluation. https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf. Accessed September 22, 2025.

Alternative would have the same number of stations in the same locations; however, a transfer would be required between the existing Metro Rail operations at University Station to the BRT service. A new BRT vehicle storage and maintenance facility would also be required at the end of the line just north of the I-990 station.

### GROUND DISTURBING IMPACTS: LRT BUILD ALTERNATIVE

Construction activities for the LRT Build Alternative would include dedicated median running light-rail tracks, tunnel and emergency exit stair shafts, ventilation shafts, overhead contact system, vehicle power substations, signal bungalows, traffic signal and safety systems, platforms, and ancillary facilities. The tunnel along Kenmore Avenue will be constructed through mined excavation and cut and cover tunneling methods. The underground segment at the intersection of Maple Road and Sweet Home Road will be constructed through cut and cover methods. Widening of roadway facilities to account for median running light-rail tracks, along with relocation of underground utilities and storm drainage would also occur along the corridor. Construction would also include temporary works to maintain vehicular and pedestrian traffic. The Phase 1A Study includes detailed information and mapping on ground disturbing impacts associated with this alternative.

### GROUND DISTURBING IMPACTS: BRT BUILD ALTERNATIVE

Construction of the BRT Build Alternative would include dedicated running BRT travel lanes, traffic signal priority, platforms, and ancillary facilities. Widening of roadway facilities to account for median running BRT lanes, along with relocation of underground utilities and storm drainage would also occur along the corridor. Construction would also include temporary works to maintain vehicular and pedestrian traffic. The Phase 1A Study includes detailed information and mapping on ground disturbing impacts associated with this alternative.

### CHANGES IN PROJECT SINCE PHASE 1A STUDY

Since preparation of the Phase 1A Study in 2023, there have been two significant Project changes:

1. The shaft and staging area originally proposed for the parking lot at the north end of UB South Campus near Main Street for the LRT Build Alternative has been eliminated. Instead, the tunnel will be extended through mechanical tunnel excavation from its current underground terminus northeastward beneath campus and Kenmore Avenue to approximately Kenmore Avenue and Capen Boulevard. Extending from this location under Kenmore Avenue and Niagara Falls Boulevard to approximately Niagara Falls Boulevard and Princeton Avenue will be constructed through cut and cover methods within the existing street bed.

2. Current Project plans provide additional detail regarding the replacement of sidewalks on both sides of Niagara Falls Boulevard. In some locations the new sidewalk will align closely with the existing sidewalk. In other locations, the new sidewalk will be located up to approximately 40 feet beyond the current outer sidewalk edge, into the yard areas of residences or the parking lots in front of commercial operations. The following table provides a summary of the extent of these impacts from south to north along the approximately one-mile-long residential portion of Niagara Falls Boulevard (see **Table 1**). Sidewalks will also be shifted along the remainder of Niagara Falls Boulevard, but this portion is lined with intensive commercial development and has no archaeological potential.

**Table 1**

**Extent of Impacts to Lawns Along Residential Portion of Niagara Falls Boulevard**

| Portion of Niagara Falls Blvd | Impacts Beyond Current Outer Sidewalk Edge | |
|---|---|---|
| | West Side | East Side |
| Princeton Avenue to Cambridge Blvd | Minimal | Minimal to 20 feet |
| Ford Ave/Cambridge Blvd to Chalmers/Oxford Ave | Minimal to 10 feet | Minimal to 20 feet |
| Chalmers/Oxford Ave to Decatur Rd/Yale Ave | Minimal to 40 feet (in commercial areas) | Minimal to 20 feet |
| Decatur Rd/Yale Ave to Longmeadow Road | 20 to 40 feet | Minimal to 20 feet |
| Longmeadow Road to Moore/Betina Ave | Minimal to 20 feet | Minimal to 10 feet |

# E. PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

## PHASE 1A STUDY

AKRF prepared a Phase 1A Study to provide a general assessment of the potential for the Project to affect archaeological resources. Research primarily focused on the results of previously conducted archaeological investigations within the APE vicinity, previously identified archaeological sites, and included a generalized assessment of previous disturbance. The Phase 1A Study identified four general areas of archaeological potential along the Project alignment that are sensitive for the presence of precontact and/or historic period resources (AKRF 2023): each of the UB Campuses, Niagara Falls Boulevard, and John James Audubon Parkway. The Study recommended supplemental background research and fieldwork in portions of the Project alignment identified as having archaeological sensitivity that have not been previously disturbed. SHPO subsequently requested preparation of a Phase 1B Archaeological Work Plan ("Work Plan"), which was reviewed and approved in June 2024.

## SUPPLEMENTAL RESEARCH

Following the preparation of the Phase 1A Study, WSP, USA (WSP) completed three studies that provided substantive additional information regarding previous disturbance and ground cover along the Project corridor: a geotechnical survey including soil borings (McMahon & Mann Consulting Engineering and Geology, P.C. 2023); a survey of subsurface utilities (Fisher Associates 2024); and a topographical survey. AKRF systematically reviewed the results of these surveys for each area of archaeological potential. AKRF also reviewed aerial photographs and historical maps to develop a more specific understanding of archaeological potential of the previously identified areas of sensitive areas. This research also assessed the archaeological potential of Kenmore Avenue, which was not previously included within the APE. AKRF summarized the results of this research in a Supplemental Research Report (AKRF March 2025).

Based on the results of this supplemental research, the portions of the Project alignment that were considered sensitive for the presence of precontact and historic period archaeological resources were refined through SHPO coordination. The review of the additional information suggested that intensive modern development such as road construction and the installation of utilities along the Project alignment likely disturbed or destroyed most of the original ground surface. This was the case for much of the UB Campus South, Kenmore Avenue, Niagara Falls Boulevard, Maple Road, Sweet Home Road, much of UB Campus North, and John James Audubon Parkway. The Supplemental Research report concluded with the following recommendations for Phase 1B testing (from south to north):

- **UB South Campus**: UB South Campus contains areas of archaeological sensitivity—including locations associated with the Erie County Poorhouse Burial Ground (USN 02940.024949) that are sensitive for human remains; however, due to Project design changes, no areas of archaeological sensitivity will be affected by the Project on the UB South Campus and no further research is recommended.
- **Niagara Falls Boulevard**: The relocation of the sidewalks and utility connections from individual residences by the Project will impact yard areas for a distance of 10 to 40 feet beyond the outer edge of the existing sidewalks. For those limited portions of the residential area along Niagara Falls Boulevard where sidewalk reconstruction will impact at least 10 feet of yard areas (from east to west) not previously disturbed by utility construction, subsurface testing is recommended to determine the presence or absence of archaeological resources. Approximately 600 feet of yard areas meeting these criteria will be impacted along the east side of Niagara Falls Boulevard and approximately 340 feet of yard areas will be impacted on the west side (see **Figure 5**).
- **UB North Campus**: The previous archaeological investigation of the UB North Campus (Montague 2012) identified dozens of archaeological sites, including three—UB196 and UB260, unidentified precontact sites; and UB2039, a 20th-century foundation known as "Dickson's Nightmare" —within the Project alignment. In addition, five Map-Documented Structures (MDS) were identified within the Project alignment: two located at the campus's west entrance and three located within the grass-covered fields south of the Jacobs Management Center. The 2012 assessment concluded that certain grassy areas and minimally to moderately disturbed areas such as sidewalks and parking lots within

the UB North Campus have moderate or high archaeological potential for both precontact and historic period resources, depending on the extent of previous ground surface disturbance.

- **John James Audubon Parkway**: Numerous precontact sites have been identified across the broad area of creeks crossed by the John James Audubon Parkway. In this area, elevated well-drained landforms adjacent to the creeks were previously identified as archaeologically sensitive (KTA Preservation Specialists/Archaeological Survey 2011). Such landforms would have been attractive locations for habitation, hunting and resource gathering, and various food processing activities during the precontact period and may have been left intact beneath fill layers deposited during development of this roadway. However, geotechnical borings identified substantial fill layers (10 to 30 feet below grade) within the Project APE. Therefore no additional research is recommended.

# Chapter 2: Methodology

## A. FIELDWORK

Fieldwork consisted of a site walkover and subsurface testing and was completed by WSP under the direction of a qualified 36 CFR 61 archaeologist. The objective of the walkover was to make observations regarding previous ground surface disturbance, such as underground infrastructure and paved areas, and to identify and lay out shovel test pit locations. These observations were documented through digital photography. Subsurface testing in the form of shovel test pits was completed to determine the presence or absence of archaeological resources in specific areas of moderate to high archaeological potential as described in **Chapter 1, "Introduction and Project Background"** and depicted on **Figure 4** (indicated as "Subsurface Testing Areas"). The proposed methodology for the archaeological testing was outlined in an Archaeological Work Plan prepared by AKRF in April 2024. All archaeological analysis was completed in accordance with all applicable state and federal laws and guidance under the direction of a qualified 36 CFR 61 archaeologist and in compliance with relevant OSHA regulations. The technical report follows the guidelines established by the National Park Service in the Recovery of Scientific, Prehistoric, Historic, and Archaeological Data (36 CFR Part 66, Appendix A); by SHPO, issued in 2005; and by the New York Archaeological Council (NYAC), which were issued in 1994 and adopted by SHPO in 1995.

Subsurface testing was only completed on grass-covered areas—specifically the yards of residences fronting Niagara Falls Boulevard and open fields and roadsides on the UB North Campus—and consisted of hand excavated shovel test pits having a diameter of 15 to 20 inches. All test pits were excavated to the depth of sterile subsoil, when possible (many test pits were only partially excavated due to the presence of obstructions such as asphalt or compact gravel). Excavated soils were hand-screened through quarter-inch hardware cloth, and all cultural materials remaining in the screen were bagged and labeled by testing unit, soil stratum, and level. Modern artifacts such as plastic packaging materials and corroded metal were noted and discarded. The count and type of recovered cultural materials were noted on standardized field forms. Soil profiles, including depths of soil horizons, Munsell colors, and textures, were also recorded for each test pit on the profile forms. No features or structural remains were identified and as such, measured profiles and plans were not needed. Digital images were taken to record representative soil profiles and the general Project area. No test pits were left open overnight and all test pits were filled in and restored to their original surface contour. The location of each completed test pit was documented using recorded GPS coordinates.

## B. ARTIFACT PROCESSING AND ANALYSIS

The only artifacts collected by WSP through subsurface testing consisted of a small number of precontact period lithic artifacts. This small assemblage was cleaned and photographed by WSP and analyzed by AKRF. Analysis consisted of visual analysis and tentatively identified before being transferred to AKRF's office laboratory for analysis and preparation of an artifact catalogue (included as Appendix B). Analysis included the identification, when possible, of the artifact's class, type, and function; identification of the source material; and recording basic metrical information. Following completion of project responsibilities, the assemblage will be temporarily curated until identification of a long-term repository or disposal, as directed by NFTA.

# Chapter 3: Results of Survey

As described previously, the fieldwork for this Phase 1B Archaeological Investigation was completed by archaeologists from WSP between July 28 and August 2, 2025, under the direction of Nicholas Smith. Artifact analysis and reporting were completed by AKRF using the documentation, photographs, and GPS mapping provided by the field archaeologists from WSP.

## A. RESULTS OF FIELDWORK

### RESULTS OF WALKOVER

*NIAGARA FALLS BOULEVARD*

The Niagara Falls Boulevard portion of the APE extends approximately 2.3 miles from Kenmore Avenue to the south to Maple Road to the north. It is characterized by a mixture of residential and commercial development. The portion of the area identified for subsurface testing is exclusively residential and extends from Princeton Avenue northward to Longmeadow Road, a distance of approximately 4,000 feet. Niagara Falls Boulevard is lined with sidewalks extending approximately ten feet from the road curb on both sides. Residences have lawns extending from 20 to 50 feet from the outer edge of the sidewalks (see **Photographs 1** and **2**). Each residence has a 10- to 20-foot-wide driveway and most have walkways leading from the front door to the driveway and/or road. The 50- to 60-foot-wide road has four travel lanes and central turning lanes. It is lined with streetlights and there are several intersections with traffic lights. Fire hydrants line the eastern edge of the sidewalk along the west side of the road. An extensive network of utilities (e.g., electrical, communication, gas, sewer, and water lines) is present beneath Niagara Falls Boulevard, its adjacent sidewalks, and connections extending across the residential lawns.

*UB NORTH CAMPUS*

The Project winds through UB North Campus a distance of approximately 6,000 feet, from its western entrance at Rench Road, through the Hochstetter Parking Lot, across the fields south of the Jacobs Management Center, up Lee Road, and along John James Audubon Parkway past Lake LaSalle. The campus is characterized by large buildings, paved roads and walkways, parking lots, grassy medians, and large grass-covered fields (see **Photographs 3** through **5**).

A variety of utilities are present along the Project alignment through the UB Campus North. At the western campus entrance at Rensch Road there are traffic, water, and gas lines along the road edge and grassy median. The gas and electric lines continue along Rensch Road and there are numerous electric lines beneath the roadway at the intersection to the east of the entrance. Several stormwater lines are also present beneath Rensch Road.

Three 12- to 24-inch-diameter metal water lines, an 8-inch diameter tile sanitary line, and a 24-inch diameter stormwater line extend east west along the Project alignment through the fields south of the Jacobs Management Center. These lines are all located within an approximately 35-foot-wide corridor that would have likely been significantly disturbed during construction and maintenance. Background research also identified a variety of other ground surface disturbances (AKRF 2023; 2025).

### RESULTS OF SUBSURFACE TESTING

Subsurface testing consisted of the excavation of 159 shovel test pits (104 along the front lawns lining Niagara Falls Boulevard and 55 along the grassy medians and fields along the Project's alignment through UB North Campus) (see **Figures 5** and **6**). A total of 7 test pits originally planned along Niagara Falls

Boulevard were not excavated due to a request by the property owner or the presence of utility lines. The complete record of excavation is included as **Appendix A**.

*NIAGARA FALLS BOULEVARD*

A total of 104 test pits were excavated along the front yards lining Niagara Falls Boulevard and within a small area southeast of the intersection of Kettering Drive and Decatur Road (see **Figure 5**). A small number of additional test pits had been planned but were not excavated due to the wishes of property owners and the presence of subsurface utilities including oil and gas pipelines. Due to the presence of roadways, driveways, and paved walkways, these pits were excavated at a variable interval, ranging from 30 to over 70 feet. An array of two additional test pits was excavated at a closer interval of 3 to 6 feet adjacent to two separate test pits that encountered precontact artifacts (STP 9 and STP 20). Many test pits were not excavated to sterile subsoil due to the presence of asphalt, compact gravel, or other obstructions.

Of the 104 test pits, 101 contained no cultural material dating to either the precontact or historic periods. Excavation of these test pits encountered one or two soil layers (Stratum I and II). Stratum I was documented between 1 and 15 inches below ground surface and consisted of a brown or grayish brown (10YR3/2; 10YR4/2; 10YR4/3; 10YR5/2; and 10YR5/3) silty loam with gravel inclusions ranging between 5 and 50 percent. In some of these pits, Stratum I contained modern refuse (e.g., asphalt, plastic, metal, slag, and glass) that was discarded in the field. In 43 of these pits, excavation beyond the first stratum was prevented due to the presence of dense gravel, asphalt, rock, or tree roots.

Within 57 of these pits, a second soil layer identified as Stratum II was observed that appeared to be sterile subsoil. The opening depth of this stratum ranged from 3 and 32 inches below the ground surface. Soils in Stratum II were variable and were identified as brown (10YR5/3) mottled with yellowish brown (10YR5/4) silt loam or dark yellowish brown (10YR3/4 or 10YR3/6) mottled with yellowish brown clay or clay loam. In a smaller number of these pits, Stratum II was observed to include clays of various color, including reddish brown (5YR4/3), strong brown (7.5YR5/8), and yellowish red (5YR4/6). Other pits included a second stratum described as pale brown (10YR6/3) silty clay loam; gray (10YR5/1) sand; or light yellowish brown (10YR6/4) or dark gray (10YR4/1) silt loam. In two pits (STPs NF-59 and NF-62), a third soil stratum was identified at depths of 14 to 15 inches below the ground surface. In both locations, Stratum III contained yellowish red (5YR4/6) clay similar to that seen in Stratum II in some of the other pits. The majority of the test pits were terminated at the depth of Stratum II/III; however, in 12 testing locations, further excavation was prevented due to the presence of dense compact gravel, rock, or cement that prevented further excavation.

As stated above, two of the test pits excavated along Niagara Falls Boulevard contained precontact period archaeological resources: NF-9 and NF-20 (see **Figure 6**). Two additional test pits were opened in the vicinity of each of these testing locations, one of which (STP 9 R3 South) also contained a precontact artifact as described below. All of the precontact artifacts were recovered from soil layers identified as fill or disturbed.

*Radial Test Pits Surrounding STP NF-9*

STP NF-9 was situated at the southeast corner of Niagara Falls Boulevard and Longmeadow Road. Excavation of this pit encountered Stratum I at 0 to 7 inches below ground surface, which consisted of grayish brown (10YR5/2) silty loam with 15 percent gravel, and Stratum II at 7 to 11 inches below ground surface, which consisted of dark yellowish brown (10YR3/6) clay mottled with yellowish brown (10YR5/4) clay. Plastic refuse was observed within Stratum I that was discarded in the field. Three precontact artifacts—a tool and two flakes—were recovered from Stratum I, although the tool was later determined to be a naturally broken rock.

The field team excavated two radial test pits to the south of STP NF-3. STP NF-9-R1S was excavated approximately 3 feet to the south of STP NF-9. The same soil profile was observed, with Stratum I extending to a depth of 8 inches and Stratum II extending to a depth of 14 inches below the ground surface. No cultural material was observed within this pit. STP NF-9R3S was excavated approximately 10 feet south of NF-9. The same soil profile was observed, with Stratum I extending to a depth of 10 inches and Stratum II extending to 15 inches below the ground surface. A single precontact period flake was recovered from recovered from Stratum I.

*Radial Test Pits Surrounding STP NF-20*

A total of four precontact artifacts were recovered from STP NF-20, which was excavated northeast of the intersection of Niagara Falls Boulevard and Yale Avenue. Within this pit, Stratum I (0 to 7 inches below ground surface) contained grayish brown (10YR5/2) silty loam with 15 percent gravel and Stratum II (7 to 12 inches below ground surface) included dark yellowish brown (10YR3/6) clay mottled with yellowish brown (10YR5/4) clay. This soil profile is similar to STPs NF-9 and NF-9R3S. STPs NF-20R1S and NF-20R3S were excavated approximately 3 and 10 feet south of STP NF-20, respectively. The soil profile in these STPs was different from that seen in STP NF-20. Stratum I in both radial test pits included brown (10YR4/3) silty loam with 5 percent gravel to depths of 8 to 15 inches below the ground surface. Stratum II was identified as reddish brown (5YR4/3) clay that extended to depths of 15 to 21 inches below the ground surface. No precontact period artifacts were recovered from either test pit.

*UB NORTH CAMPUS*

A total of 55 test pits were excavated within the grassy fields and road medians of UB North Campus (see **Figure 6**). All test pits excavated in this portion of the APE were culturally sterile. Many test pits were not excavated to sterile subsoil due to the presence of asphalt, compact gravel, or other obstructions.

The soil profile observed in this area was similar to that of the Niagara Falls Boulevard portion of the APE. Stratum I was observed in all pits extending to depths ranging from 2 to 11 inches. Soils in the first stratum included grayish brown, dark grayish brown and brown (10YR4/2, 10YR4/3, 10YR5/2) silty loam, some with 15 to 20 percent gravel inclusions. Modern refuse was observed in the first stratum of many of these test pits (e.g., glass, drainpipe fragments, plastic, cement, brick, and a 1963 penny), which was discarded in the field. In 11 of these pits, Stratum I was terminated at impasses caused by the presence of rock, asphalt, or compact gravel. Stratum II in the remaining pits extended to depths ranging from 9 and 18 inches below ground surface. This stratum was identified either as dark yellowish brown (10YR4/4) silty loam or clay deposits that were either reddish brown (5YR4/3) or light reddish brown (2.5YR7/4) mottled with light yellowish brown (10YR6/4) deposits. No gravel or impasses were observed within the second stratum.

No potentially significant archaeological resources or features were identified in the UB North Campus APE.

## B. RESULTS OF ARTIFACT ANALYSIS

Excavation recovered a small assemblage of 7 precontact artifacts from three test pits excavated along Niagara Falls Boulevard, all of which were identified as flakes (STP 9 – 2 flakes; STP 9 R3 South – 1 flake; and STP 20 – 4 flakes). A catalogue describing these artifacts has been included as **Appendix B**. All of these artifacts were recovered from soil layers identified as either fill or disturbed.

The lithic materials of 6 of these flakes was identified as Onondaga chert and the seventh was identified as either Onondaga chert or Bois Blanc chert. Onondaga chert varies in color— it ranges from light to dark gray to a mottled bluish gray and may also appear dark brown, black, or tan. Fossils and quartz inclusions may be present (Projectile Points 2008). This type of chert is found in the Onondaga Limestone Formation, which spans from the Province of Ontario, across western, central, and eastern New York, including the Hudson Valley, turning south-westward towards New Jersey and Pennsylvania (USGS n.d.). Outcrops of this formation occur across New York and Onondaga chert is commonly found as cobbles in river valleys and along the Lake Erie shore (USGS 1967, Projectile Points 2008). In the Project site region, outcroppings of this chert would have been a highly utilized resource for simple reasons of practicality: it was a high-quality, readily available material without the need for transportation across significant distances.

The source material of one of the flakes could not be firmly identified (Artifact No. 1; see **Appendix B**). This flake is of a material characteristic of Onondaga chert, though in a lighter color than is commonly seen. It is possible that this flake is Bois Blanc chert, which may appear almost white and is mainly distinguished from Onondaga chert by the types of fossils it contains (Projectile Points 2008). Bois Blanc chert is found in the Bois Blanc Formation, which underlies the Onondaga Limestone Formation and contributes to the Niagara Escarpment's geology in areas of New York and Ontario, including the location of the Project site (USGS 1967). This material would not have been as readily available as Onondaga chert, but it could possibly have been found along the shore of Lake Erie and may have possessed attributes considered desirable, such as color or fossil content.

The precontact cultural material recovered from the Project site consists of seven objects of lithic material, all classified as flakes. Flakes are a type of lithic debitage that are the product of lithic reduction processes. Three of the flakes found in the project site appear to be the result of bipolar reduction techniques (Artifact No. 3, 4, and 6; see **Appendix B**), in which the stone core is placed on a stone anvil and struck with a hammerstone. Flakes produced by these techniques are typically short and thick, with irregular fracture patterns on both the proximal and distal ends (Inizan et al 1999, Andefsky 2012). Bipolar reduction techniques are generally seen as more expedient as they allow for the quick and efficient reduction of materials. One of the flakes (Artifact No. 1, see **Appendix B**) appears to be a broken blade flake. Blade flakes were often utilized or retouched to create tools, particularly end scrapers (Ritchie 1969). However, this flake appears neither utilized nor retouched and breakage on the distal end prevents further analysis. Items No. 2 and 7 are not easily analyzed due to breakage and are therefore typed as indeterminate. Item No. 5 appears to be an early reduction flake, possessing the typically few dorsal flake scars and little remaining cortex (Inizan et al 1999, Andefsky 2012). Only two items, No. 4 and 5 display possible signs of use (see **Appendix B**). Item No. 4 appears to display usewear along the distal edge, seen on both the ventral and dorsal sides. However, this flake is characterized by irregular fracture patterns, therefore this apparent usewear may actually be the result of this uneven breakage. Artifact No. 5 appears to have a small amount of pressure flaking on the left distal ventral edge. Because this flaking is limited and the affected edge appears ultimately unused, this may be the result of later unintentional fracturing.

The relatively low quantity and variation of materials recovered, as well as their disturbed context, makes it impossible to determine the types of activities that may have occurred during the precontact period in the APE. In addition, the absence of artifacts considered diagnostically datable makes it impossible to determine when in the precontact period these activities occurred. However, these flakes are typical of toolmaking throughout the period and also indicate that food procurement and processing likely occurred to some degree within or near the APE. The relatively low quantity of recovered artifacts may suggest a short term occupation, though the disturbed context makes determination of the duration of the occupation impossible. In conclusion, this small assemblage is of low research value due to the disturbed archaeological context.

# Chapter 4: Conclusions and Recommendations

As described above, Metro is proposing to expand high-capacity transit in Buffalo, NY to Amherst and Tonawanda, from its current terminus, at University Station on the UB South Campus, an additional seven miles, through the UB North Campus to Interstate 990 (I 990). Pursuant to Section 106 of the NHPA, a Phase 1A Archaeological Documentary Study was prepared (AKRF 2023), which identified areas of precontact and historic period sensitivity within the Project APE. The extent of the area of sensitivity was later narrowed through supplemental research (AKRF 2025). The present Phase 1B Investigation was completed to advance the Section 106 process by determining the presence or absence of potentially significant archaeological resources that could be affected by the Project and involved the excavation of 159 shovel test pits (see **Appendix A** and **Figures 5** and **6**) and analysis of the small number of recovered precontact lithic artifacts (see **Appendix B**).

## A. CONCLUSIONS

This Phase 1B Archaeological Investigation involved completion of a site walkover, subsurface testing, and laboratory analysis of the small number of collected artifacts. The conclusions of investigation are summarized below.

### SITE WALKOVER

During the site walkover locations for subsurface testing were established along the approximately 4,000-foot-long residential portion of Niagara Falls Boulevard and approximately 6,000-foot-long portion of UB North Campus determined to possess archaeological potential during the previous research efforts (see **Figure 4**). These test areas consisted of the grassy front yards of residences along Niagara Falls Boulevard and grassy road margins and open fields within the UB North Campus. An extensive system of underground utilities and paved surfaces are present in these areas (AKRF 2023 and 2025).

### SUBSURFACE TESTING

The WSP field team successfully completed subsurface testing along both the Niagara Falls Boulevard and UB North Campus APEs, although a small number of planned test pits were not excavated in accordance with property owner requests or the presence of underground fuel lines. The investigation comprised the excavation of 104 test pits along Niagara Falls Boulevard and 55 across the UB North Campus. The testing interval was variable, ranging from approximately 25 feet to over 70 feet due to the presence of paved surfaces and subsurface infrastructure.

The majority of the completed shovel test pits encountered modern soil disturbance, modern refuse, and/or were obstructed before completion by a buried layer of asphalt, concrete, or compact gravel or rock. Along Niagara Falls Boulevard portion of the APE, a single precontact artifact was recovered from one of the test pits (STP 9; see **Figure 5**) and four precontact artifacts were recovered from a second test pit (STP 20; see **Figure 5**). Two additional test pits were excavated in the immediate vicinity of each of these test pits resulting in the recovery of one additional precontact artifact. As the Project will only affect a narrow area in these two locations, only 6 feet wide from east to west and constrained by paved surfaces to the north and south, no additional testing was possible. These seven precontact artifacts were identified as flakes associated with the manufacture, maintenance, or use of precontact period tools. All of these precontact artifacts were recovered from fill or disturbed soils within the upper several inches of each test pit. Due to the absence of diagnostic attributes or indications of intact features and their recovery from a disturbed archaeological context, these artifacts have no archaeological research value.

No cultural artifacts were recovered from any of the test pits excavated along the UB North Campus portion of the APE (see **Figure 6**).

## B. RECOMMENDATIONS

This Archaeological Investigation did not identify any cultural artifacts or archaeological resources meeting NR eligibility criteria. Therefore, no archaeological resources will be affected by the Project per 36 CFR 800.4 and no additional analysis of cultural resources is recommended.

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# FIGURES

# Figure 1. Metro Rail Existing and Proposed Project

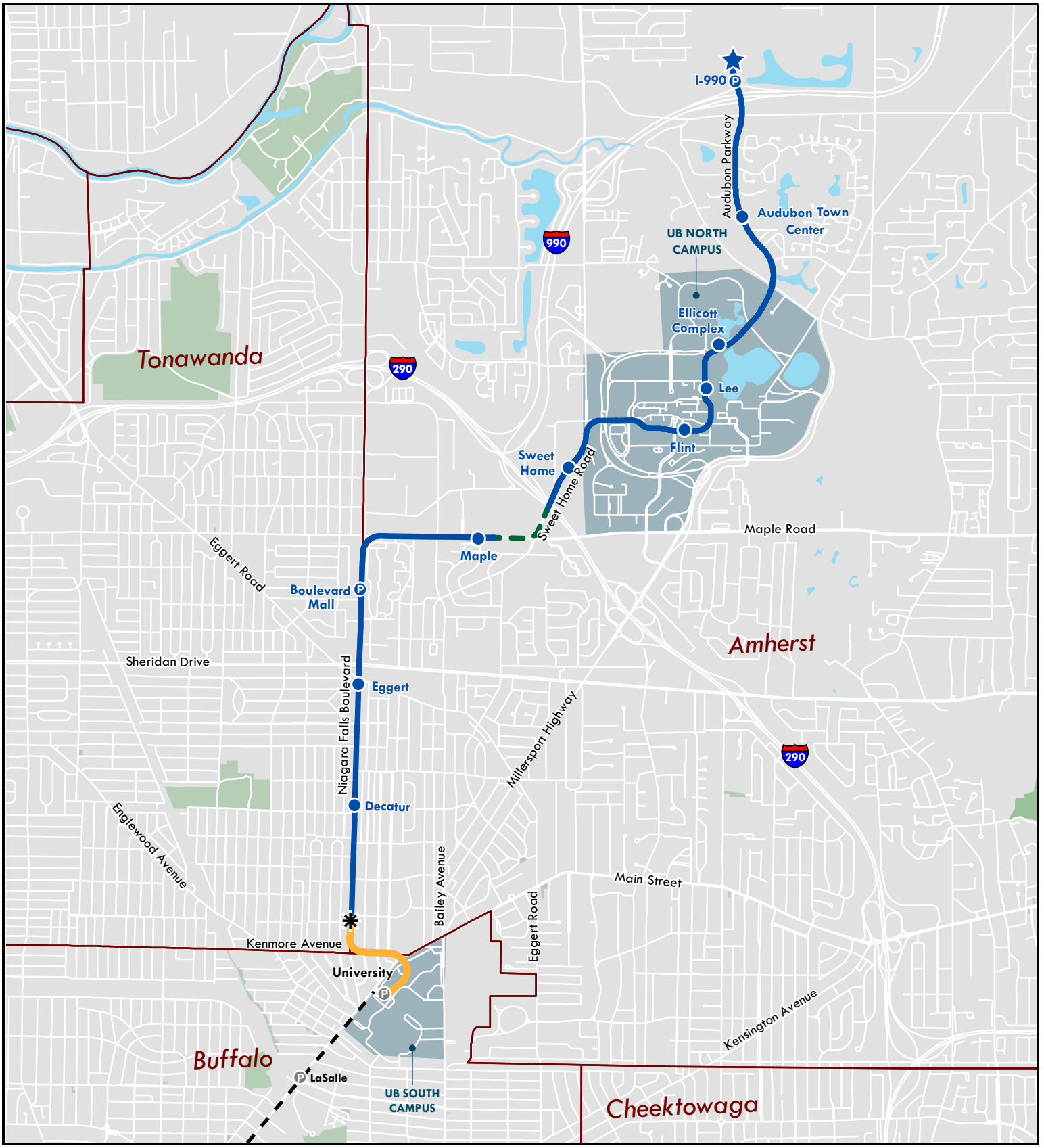

**Buffalo-Amherst-Tonawanda Corridor Transit Expansion**

- Proposed Alignment
- Proposed Station
- Proposed Storage/Light Maintenance Facility
- Proposed Station with Park & Ride
- Existing Station
- Existing Station with Park & Ride
- Existing Metro Rail Line
- City and Town Boundary

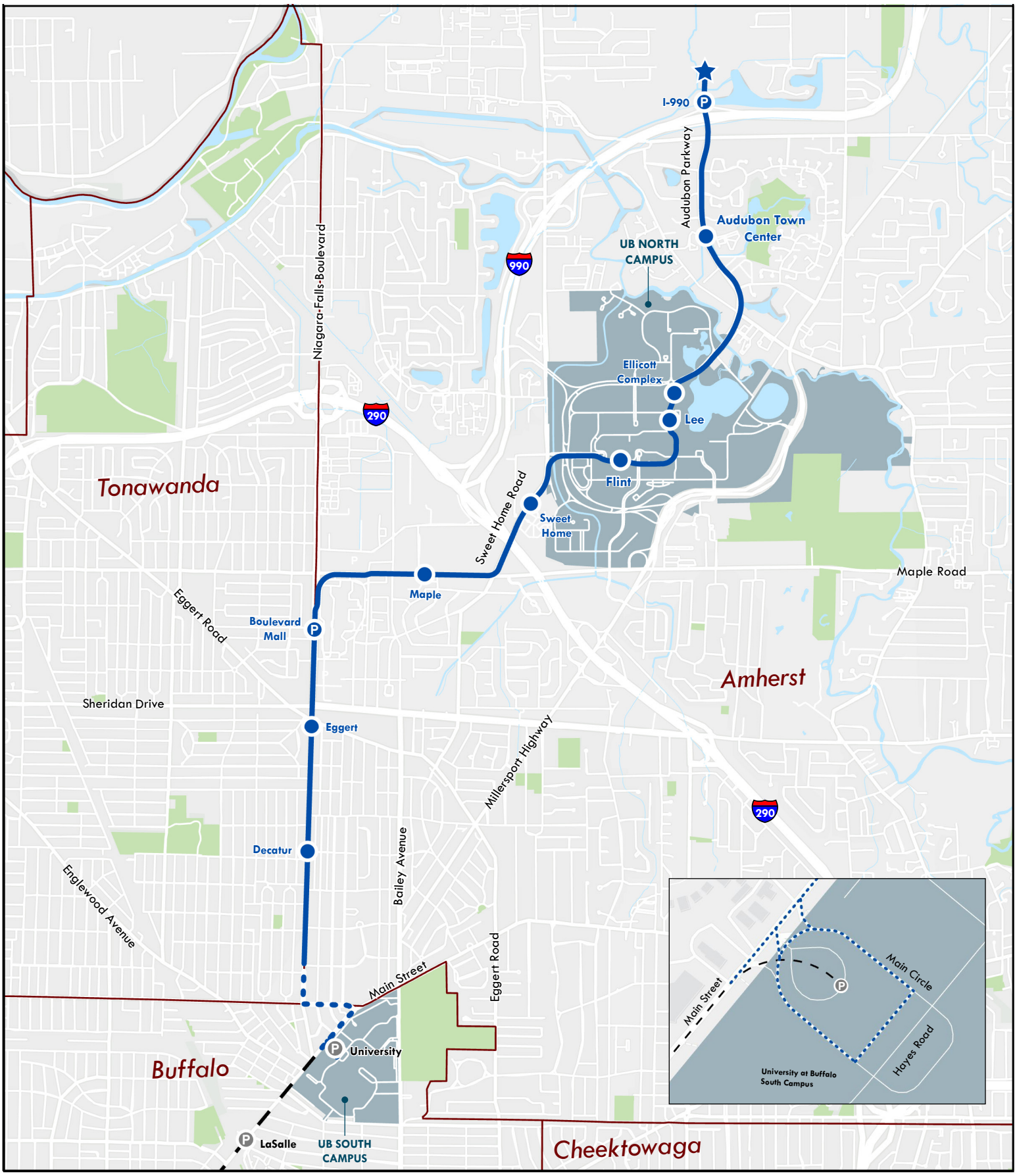
N

0 0.5 1 2 Miles

# Figure 2. LRT Build Alternative



# Figure 3. BRT Build Alternative




**Buffalo-Amherst-Tonawanda Corridor Transit Expansion**

- Dedicated busway
- Mixed-traffic
- Proposed Station
- Proposed Storage/Light Maintenance Facility
- Proposed Station with Park & Ride
- Existing Metro Rail Line
- Existing Station with Park & Ride
- City and Town Boundary

N

0 0.5 1 1.5 Miles

# Figure 4. Area of Potential Effects


**Buffalo-Amherst-Tonawanda Corridor Transit Expansion**

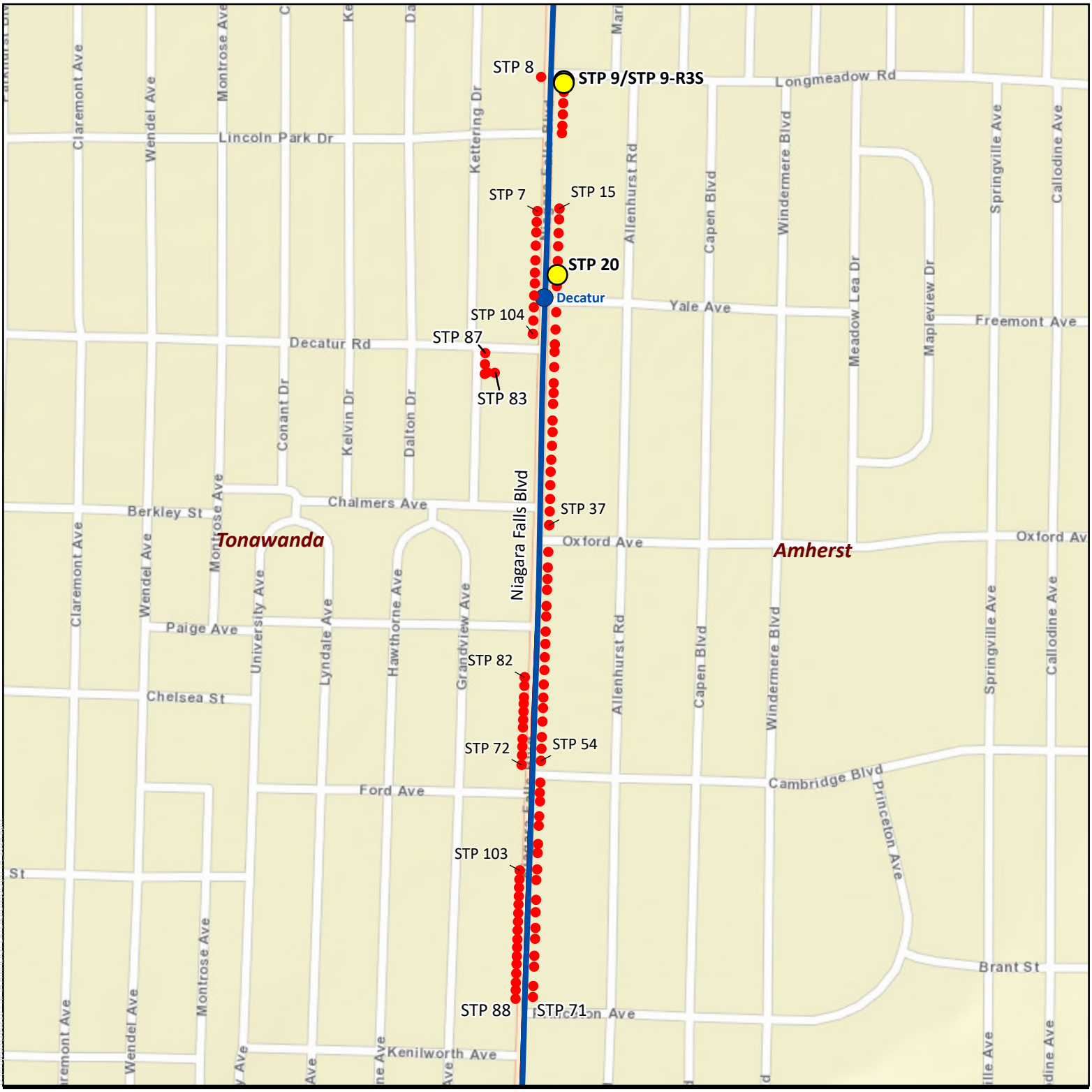
- Proposed Alignment
- Proposed Station
- Proposed Station with Park & Ride
- Subsurface Testing Areas

N

0 0.5 1

Miles

# Figure 5. Results of Survey, Niagara Falls Boulevard




**Buffalo-Amherst-Tonawanda Corridor Transit Expansion**

- Proposed Alignment
- Proposed Station
- STP
- STP Containing Precontact Artifacts

N

0 500 1,000

Feet

# Figure 6. Results of Survey, UB North Campus


**Buffalo-Amherst-Tonawanda Corridor Transit Expansion**

- Proposed Alignment
- Proposed Station
- STP
- STP selection

N

0 500 1,000

Feet

# PHOTOGRAPHS

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Facing north from Princeton Avenue showing front yard areas lining the east side of Niagara Falls Boulevard **1**

Facing north from Ford Avenue showing front yard areas lining the west side of Niagara Falls Boulevard **2**

Facing southeast from Mary Talbert Way towards Hochstetter A Lot on UB Campus North showing grassy shoulders lining the roadways **3**

Facing west across the grass covered fields south of the Jacobs Management Center on UB Campus North **4**

Facing southwest along the south side of John James Audubon Parkway north of Lake La Salle showing grass shoulders lining the roadway **5**

# APPENDIX A:
# RECORD OF EXCAVATION

akrf

## Appendix A: Record of Excavation[1]

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| NF | 1 | I | 11 | 0.36 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | No cultural material (NCM) | Discard; Asphalt |
| NF | 1 | II | 32 | 1.05 | 10YR 5/3 Brown mottled w/ 10YR 5/4 Yellowish Brown | Silt Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 2 | I | 22 | 0.72 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | Rock Impasse |
| NF | 3 | I | 9 | 0.30 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | Compact Gravel Impasse |
| NF | 4 | I | 26 | 0.85 | 10YR 4/3 Brown | Silt Loam | 15% Gravel | NCM | Rock Impasse |
| NF | 5 | I | 3 | 0.10 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 5 | II | 28 | 0.92 | 10YR 5/3 Brown mottled w/ 10YR 5/4 Yellowish Brown | Silt Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 6 | I | 21 | 0.69 | 10YR 4/3 Brown | Silt Loam | | NCM | Rock Impasse |
| NF | 7 | I | 2 | 0.07 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 7 | II | 26 | 0.85 | 10YR 5/3 Brown mottled w/ 10YR 5/4 Yellowish Brown | Silt Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 8 | I | 32 | 1.05 | 10YR 4/3 Brown | Silt Loam | 10% Gravel | NCM | Rock Impasse |
| NF | 9 | I | 17 | 0.56 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | Precontact | Fill/Disturbed; Discard-Plastic |
| NF | 9 | II | 28 | 0.92 | 10YR 3/6 Dark Yellowish Brown mottled w/ 10YR 5/4 Yellowish Brown | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 9-R1S | I | 19 | 0.62 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | Discard; Plastic |
| NF | 9-R1S | II | 35 | 1.15 | 10YR 3/6 Dark Yellowish Brown mottled w/ 10YR 5/4 Yellowish Brown | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 9-R3S | I | 24 | 0.79 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | Precontact | Fill/Disturbed, Discard; Plastic, Glass |

[1] Prepared by WSP

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| NF | 9-R3S | II | 39 | 1.28 | 10YR 3/6 Dark Yellowish Brown mottled w/ 10YR 5/4 Yellowish Brown | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 10 | I | 27 | 0.89 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Discard; Plastic |
| NF | 10 | II | 80 | 2.62 | 5YR 4/3 Reddish Brown | Clay | | NCM | Discard; Slag, Screwdriver Bottom of excavation |
| NF | 11 | I | 20 | 0.66 | 10YR 4/3 Brown | Silt Loam | 10% Gravel | NCM | Rock Impasse |
| NF | 12 | I | 31 | 1.02 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| NF | 13 | I | 11 | 0.36 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | Compact Gravel Impasse |
| NF | 14 | I | 23 | 0.75 | 10YR 4/3 Brown | Silt Loam | 10% Gravel | NCM | Rock Impasse |
| NF | 15 | I | 24 | 0.79 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | Discard; Plastic |
| NF | 15 | II | 39 | 1.28 | 10YR 3/4 Dark Yellowish Brown mottled w/ 5YR 4/6 Yellowish Red | Clay Loam | 5% Gravel | NCM | Bottom of excavation |
| NF | 16 | I | 16 | 0.52 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | Discard; Modern Glass |
| NF | 16 | II | 34 | 1.12 | 10YR 6/3 Pale brown | Silty Clay Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 17 | I | 25 | 0.82 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Root Impasse |
| NF | 18 | I | 27 | 0.89 | 10YR 4/3 Brown | Silt Loam | 5% Gravel | NCM | Rock Impasse |
| NF | 19 | I | 16 | 0.52 | 10YR 5/2 Grayish Brown | Silt Loam | 40% Gravel | NCM | Compact Gravel Impasse |
| NF | 20 | I | 18 | 0.59 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | Precontact | Fill |
| NF | 20 | II | 32 | 1.05 | 10YR 3/6 Dark Yellowish Brown mottled w/ 10YR 5/4 Yellowish Brown | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 20-1RS | I | 21 | 0.69 | 10YR 4/3 Brown | Silt Loam | 5% Gravel | NCM | |
| NF | 20-1RS | II | 36 | 1.18 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 20-3RS | I | 38 | 1.25 | 10YR 4/3 Brown | Silt Loam | 5% Gravel | NCM | Discard; Slag |
| NF | 20-3RS | II | 53 | 1.74 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 21 | I | 37 | 1.21 | 10YR 4/3 Brown | Silt Loam | 5% Gravel | NCM | |
| NF | 21 | II | 52 | 1.71 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 22 | I | 20 | 0.66 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| NF | 23 | I | 8 | 0.26 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | Discard; Modern Metal |
| NF | 23 | II | 22 | 0.72 | 10YR 6/3 Pale brown | Silty Clay Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 24 | I | 13 | 0.43 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 24 | II | 28 | 0.92 | 10YR 3/4 Dark Yellowish Brown mottled w/ 5YR 4/6 Yellowish Red | Clay Loam | 5% Gravel | NCM | Bottom of excavation |
| NF | 25 | I | 22 | 0.72 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 25 | II | 37 | 1.21 | 10YR 3/4 Dark Yellowish Brown mottled w/ 5YR 4/6 Yellowish Red | Clay Loam | 5% Gravel | NCM | Bottom of excavation |
| NF | 26 | I | 27 | 0.89 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| NF | 27 | I | 22 | 0.72 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| NF | 27 | II | 37 | 1.21 | 5YR 4/3 Reddish Brown | Clay | 20% Gravel | NCM | Bottom of excavation |
| NF | 28 | I | 10 | 0.33 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| NF | 29 | I | 28 | 0.92 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | |

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| NF | 29 | II | 43 | 1.41 | 10YR 3/4 Dark Yellowish Brown mottled w/ 5YR 4/6 Yellowish Red | Clay Loam | 5% Gravel | NCM | Bottom of excavation |
| NF | 30 | I | 10 | 0.33 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| NF | 31 | I | 13 | 0.43 | 10YR 3/3 Dark brown | Silt Loam | 15% Gravel | NCM | |
| NF | 31 | II | 33 | 1.08 | 7.5YR 5/8 Strong brown | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 32 | I | 30 | 0.98 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | Rock Impasse |
| NF | 33 | I | 20 | 0.66 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| NF | 34 | I | 23 | 0.75 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 34 | II | 38 | 1.25 | 10YR 3/4 Dark Yellowish Brown mottled w/ 5YR 4/6 Yellowish Red | Clay Loam | 5% Gravel | NCM | Bottom of excavation |
| NF | 35 | x | | | | | | | No Dig; National Fuel Request |
| NF | 36 | I | 13 | 0.43 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | Compact Gravel Impasse |
| NF | 37 | I | 5 | 0.16 | 10YR 3/3 Dark brown | Silt Loam | 15% Gravel | NCM | |
| NF | 37 | II | 27 | 0.89 | 7.5YR 5/8 Strong brown | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 38 | I | 20 | 0.66 | 10YR 5/2 Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 38 | II | 35 | 1.15 | 10YR 3/4 Dark Yellowish Brown mottled w/ 5YR 4/6 Yellowish Red | Clay Loam | 5% Gravel | NCM | Bottom of excavation |
| NF | 39 | I | 24 | 0.79 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| NF | 39 | II | 39 | 1.28 | 5YR 4/3 Reddish Brown | Clay | 20% Gravel | NCM | Bottom of excavation |
| NF | 40 | I | 21 | 0.69 | 10YR 4/3 Brown | Silt loam | 15% Gravel | NCM | Rock Impasse |
| NF | 41 | I | 26 | 0.85 | 10YR 4/3 Brown | Silt loam | 15% Gravel | NCM | Rock Impasse |
| NF | 42 | I | 24 | 0.79 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| NF | 42 | II | 40 | 1.31 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 43 | I | 28 | 0.92 | 10YR 4/3 Brown | Silt Loam | | NCM | Discard; Modern Glass |
| NF | 43 | II | 43 | 1.41 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 44 | I | 22 | 0.72 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | |
| NF | 44 | II | 37 | 1.21 | 5YR 4/6 Yellowish Red | Clay | 5% Gravel | NCM | Bottom of excavation |
| NF | 45 | I | 13 | 0.43 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 45 | II | 36 | 1.18 | 10YR 6/3 Pale brown | Silty Clay Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 46 | I | 20 | 0.66 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| NF | 46 | II | 35 | 1.15 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 47 | I | 26 | 0.85 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | Rock Impasse |
| NF | 48 | I | 29 | 0.95 | 10YR 4/3 Brown | Silt Loam | | NCM | Discard; Slag |
| NF | 48 | II | 44 | 1.44 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 49 | I | 14 | 0.46 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 49 | II | 35 | 1.15 | 10YR 6/3 Pale brown | Silty Clay Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 50 | I | 29 | 0.95 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | Compact Gravel Impasse |
| NF | 51 | I | 17 | 0.56 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| NF | 51 | II | 20 | 0.66 | 10YR 5/1 Gray | Sand | 15% Gravel | NCM | Rock Impasse |
| NF | 52 | I | 31 | 1.02 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | Rock Impasse |
| NF | 53 | I | 15 | 0.49 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 53 | II | 37 | 1.21 | 10YR 6/3 Pale brown | Silty Clay Loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 54 | I | 24 | 0.79 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | |

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| NF | 54 | II | 39 | 1.28 | 5YR 4/6 Yellowish Red | Clay | 5% Gravel | NCM | Bottom of excavation |
| NF | 55 | x | | | | | | | No Dig; Gas Pipeline |
| NF | 56 | x | | | | | | | No Dig; National Fuel Request |
| NF | 57 | I | 27 | 0.89 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| NF | 57 | II | 42 | 1.38 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 58 | I | 16 | 0.52 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | |
| NF | 58 | II | 31 | 1.02 | 5YR 4/3 Reddish Brown | Clay | 25% Gravel | NCM | Bottom of excavation |
| NF | 59 | I | 11 | 0.36 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 59 | II | 22 | 0.72 | 10YR 6/4 Light Yellowish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 59 | III | 36 | 1.18 | 5YR 5/6 Yellowish Red | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 60 | I | 8 | 0.26 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | |
| NF | 60 | II | 23 | 0.75 | 5YR 4/6 Yellowish Red | Clay | 5% Gravel | NCM | Bottom of excavation |
| NF | 61 | I | 19 | 0.62 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| NF | 61 | II | 34 | 1.12 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 62 | I | 13 | 0.43 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 62 | II | 20 | 0.66 | 10YR 6/4 Light Yellowish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 62 | III | 38 | 1.25 | 5YR 5/6 Yellowish Red | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 63 | I | 20 | 0.66 | 10YR 4/3 Brown | Silt Loam | | NCM | Compact Gravel Impasse |
| NF | 64 | I | 17 | 0.56 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | Compact Gravel Impasse |
| NF | 65 | I | 20 | 0.66 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | |
| NF | 65 | II | 35 | 1.15 | 5YR 4/6 Yellowish Red | Clay | 5% Gravel | NCM | Bottom of excavation |
| NF | 66 | I | 26 | 0.85 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| NF | 66 | II | 41 | 1.35 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 67 | I | 15 | 0.49 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | Compact Gravel Impasse |
| NF | 68 | I | 18 | 0.59 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | Rock Impasse |
| NF | 69 | I | 12 | 0.39 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 69 | II | 24 | 0.79 | 10YR 6/4 Light Yellowish Brown | Silt loam | 15% Gravel | NCM | Compact Gravel Impasse |
| NF | 70 | I | 30 | 0.98 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | |
| NF | 70 | II | 45 | 1.48 | 5YR 4/6 Yellowish Red | Clay | 5% Gravel | NCM | Bottom of excavation |
| NF | 71 | I | 23 | 0.75 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| NF | 71 | II | 38 | 1.25 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| NF | 72 | I | 5 | 0.16 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | Compact Gravel Impasse |
| NF | 73 | I | 18 | 0.59 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | Compact Gravel Impasse |
| NF | 74 | I | 28 | 0.92 | 10YR 4/3 Brown | Silt Loam | 10% Gravel | NCM | Rock Impasse |
| NF | 75 | I | 9 | 0.30 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 75 | II | 28 | 0.92 | 5YR 5/6 Yellowish Red | Clay | 15% Gravel | NCM | Bottom of excavation |
| NF | 76 | I | 21 | 0.69 | 10YR 5/2 Grayish Brown | Silt loam | 20% Gravel | NCM | |
| NF | 76 | II | 36 | 1.18 | 5YR 4/6 Yellowish Red | Clay | 5% Gravel | NCM | Bottom of excavation |
| NF | 77 | I | 14 | 0.46 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | |
| NF | 77 | II | 30 | 0.98 | 10YR 6/4 Light Yellowish Brown | Silt loam | 15% Gravel | NCM | Bottom of excavation |
| NF | 78 | I | 10 | 0.33 | 10YR 4/3 Brown | Silt Loam | 10% Gravel | NCM | Rock Impasse |
| NF | 79 | I | 10 | 0.33 | 10YR 4/3 Brown | Silt Loam | 25% Gravel | NCM | Compact Gravel Impasse |
| NF | 80 | I | 5 | 0.16 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | Compact Gravel Impasse |

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| NF | 81 | I | 11 | 0.36 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | Compact Gravel Impasse |
| NF | 82 | I | 5 | 0.16 | 10YR 5/2 Grayish Brown | Silt loam | 15% Gravel | NCM | Compact Gravel Impasse |
| NF | 83 | I | 2 | 0.07 | 10YR 3/2 Very Dark Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 83 | II | 9 | 0.30 | 10YR 4/1 Dark Gray | Silt Loam | 15% Gravel | NCM | Asphalt Impasse |
| NF | 84 | I | 3 | 0.10 | 10YR 3/2 Very Dark Grayish Brown | Silt Loam | 15% Gravel | NCM | |
| NF | 84 | II | 8 | 0.26 | 10YR 4/1 Dark Gray | Silt Loam | 15% Gravel | NCM | Asphalt Impasse |
| NF | 85 | I | 13 | 0.43 | 10YR 4/3 Brown | Silt Loam | 15% Gravel | NCM | Rock Impasse |
| NF | 86 | I | 9 | 0.30 | 10YR 5/3 Brown | Silt Loam | | NCM | Discard; Modern Glass |
| NF | 86 | II | 16 | 0.52 | 10YR 6/4 Light Yellowish Brown | Silt Loam | | NCM | Cement Impasse |
| NF | 87 | I | 17 | 0.56 | 10YR 3/2 Very Dark Grayish Brown | Silt Loam | 15% Gravel | NCM | Asphalt Impasse |
| NF | 88 | I | 5 | 0.16 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | |
| NF | 88 | II | 15 | 0.49 | 10YR 6/3 Pale Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 89 | I | 10 | 0.33 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 90 | I | 11 | 0.36 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 91 | I | 5 | 0.16 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 92 | I | 3 | 0.10 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | |
| NF | 92 | II | 13 | 0.43 | 10YR 6/3 Pale Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 93 | I | 6 | 0.20 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 94 | I | 7 | 0.23 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 95 | I | 4 | 0.13 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 96 | I | 2 | 0.07 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | |
| NF | 96 | II | 10 | 0.33 | 10YR 6/3 Pale Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 97 | I | 4 | 0.13 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | |
| NF | 97 | II | 12 | 0.39 | 10YR 6/3 Pale Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 98 | I | 2 | 0.07 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 99 | I | 6 | 0.20 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | |
| NF | 99 | II | 10 | 0.33 | 10YR 6/3 Pale Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 100 | I | 5 | 0.16 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | |
| NF | 100 | II | 14 | 0.46 | 10YR 6/3 Pale Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 101 | I | 6 | 0.20 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 102 | I | 3 | 0.10 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | |
| NF | 102 | II | 9 | 0.30 | 10YR 6/3 Pale Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 103 | I | 10 | 0.33 | 10YR 4/2 Dark Grayish Brown | Silt Loam | 50% Gravel | NCM | Compact Gravel Impasse |
| NF | 104 | x | No Dig; Homeowner Request | | | | | | |
| NF | 105 | x | No Dig; Homeowner Request | | | | | | |
| NF | 106 | x | No Dig; Homeowner Request | | | | | | |
| NF | 107 | x | No Dig; Homeowner Request | | | | | | |
| UBN | 1 | I | 12 | 0.39 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | |
| UBN | 1 | II | 30 | 0.98 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 2 | I | 20 | 0.66 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 2 | II | 35 | 1.15 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 3 | I | 17 | 0.56 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | Discard; Modern Glass |
| UBN | 3 | II | 38 | 1.25 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| UBN | 4 | I | 25 | 0.82 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 4 | II | 40 | 1.31 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 5 | I | 25 | 0.82 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 5 | II | 40 | 1.31 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 6 | I | 27 | 0.89 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Compact Gravel Impasse |
| UBN | 7 | I | 14 | 0.46 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | Discard; Drainpipe |
| UBN | 7 | II | 29 | 0.95 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 8 | I | 11 | 0.36 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | Compact Gravel Impasse |
| UBN | 9 | I | 13 | 0.43 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Discard; 1963 Penny |
| UBN | 9 | II | 28 | 0.92 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 10 | I | 18 | 0.59 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 10 | II | 33 | 1.08 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 11 | I | 10 | 0.33 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | |
| UBN | 11 | II | 31 | 1.02 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 12 | I | 23 | 0.75 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 12 | II | 38 | 1.25 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 13 | I | 16 | 0.52 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | |
| UBN | 13 | II | 34 | 1.12 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 14 | I | 14 | 0.46 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 14 | II | 35 | 1.15 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 15 | I | 13 | 0.43 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | |
| UBN | 15 | II | 30 | 0.98 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 16 | I | 17 | 0.56 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | |
| UBN | 16 | II | 32 | 1.05 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 17 | I | 21 | 0.69 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 17 | II | 36 | 1.18 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 18 | I | 15 | 0.49 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | Discard; Modern Brick |
| UBN | 18 | II | 26 | 0.85 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 19 | I | 19 | 0.62 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 19 | II | 35 | 1.15 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 20 | I | 19 | 0.62 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | |
| UBN | 20 | II | 34 | 1.12 | 10YR 4/4 Dark Yellowish Brown | Silt Loam | | NCM | Bottom of excavation |
| UBN | 21 | I | 14 | 0.46 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Discard; Plastic |
| UBN | 21 | II | 35 | 1.15 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 22 | I | 22 | 0.72 | 10YR 4/2 Dark Grayish Brown | Silt Loam | | NCM | Compact Gravel Impasse |
| UBN | 23 | I | 17 | 0.56 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 23 | II | 37 | 1.21 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 24 | I | 16 | 0.52 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| UBN | 24 | II | 31 | 1.02 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 25 | I | 20 | 0.66 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 25 | II | 35 | 1.15 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| UBN | 26 | I | 16 | 0.52 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 26 | II | 33 | 1.08 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 27 | I | 13 | 0.43 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 27 | II | 34 | 1.12 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 28 | I | 14 | 0.46 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 28 | II | 30 | 0.98 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 29 | I | 20 | 0.66 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 29 | II | 36 | 1.18 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 30 | I | 21 | 0.69 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| UBN | 30 | II | 38 | 1.25 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 31 | I | 15 | 0.49 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 31 | II | 30 | 0.98 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 32 | I | 18 | 0.59 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| UBN | 32 | II | 36 | 1.18 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 33 | I | 10 | 0.33 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 33 | II | 26 | 0.85 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 34 | I | 8 | 0.26 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 34 | II | 23 | 0.75 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 35 | I | 14 | 0.46 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 35 | II | 31 | 1.02 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 36 | I | 5 | 0.16 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| UBN | 36 | II | 21 | 0.69 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 37 | I | 8 | 0.26 | 10YR 4/3 Brown | Silt Loam | | NCM | Discard; Cement Chunk |
| UBN | 37 | II | 23 | 0.75 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 38 | I | 8 | 0.26 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | Discard; Plastic |
| UBN | 38 | II | 21 | 0.69 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 39 | I | 6 | 0.20 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 39 | II | 23 | 0.75 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 40 | I | 5 | 0.16 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 40 | II | 20 | 0.66 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |

| Area | STP | Stratum | Depth to Base of Stratum (cm) | Depth to Base of Stratum (ft) | Soil Color | Texture | Coarse | Artifacts | Comments |
|---|---|---|---|---|---|---|---|---|---|
| UBN | 41 | I | 5 | 0.16 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | Asphalt Impasse |
| UBN | 42 | I | 4 | 0.13 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 42 | II | 23 | 0.75 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 43 | I | 19 | 0.62 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| UBN | 44 | I | 14 | 0.46 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 44 | II | 21 | 0.69 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 45 | I | 15 | 0.49 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| UBN | 46 | I | 19 | 0.62 | 10YR 4/3 Brown | Silt Loam | 15% Gravel | NCM | Rock Impasse |
| UBN | 47 | I | 10 | 0.33 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | Rock Impasse |
| UBN | 48 | I | 5 | 0.16 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | Compact Gravel Impasse |
| UBN | 49 | I | 13 | 0.43 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 49 | II | 28 | 0.92 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 50 | I | 15 | 0.49 | 10YR 4/3 Brown | Silt Loam | 15% Gravel | NCM | Rock Impasse |
| UBN | 51 | I | 15 | 0.49 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 51 | II | 29 | 0.95 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 52 | I | 18 | 0.59 | 10YR 4/3 Brown | Silt Loam | 20% Gravel | NCM | |
| UBN | 52 | II | 33 | 1.08 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 53 | I | 22 | 0.72 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | |
| UBN | 53 | II | 37 | 1.21 | 2.5YR 7/4 Light Reddish Brown mottled w/ 10YR 6/4 Light Yellowish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 54 | I | 15 | 0.49 | 10YR 4/3 Brown | Silt Loam | | NCM | |
| UBN | 54 | II | 30 | 0.98 | 5YR 4/3 Reddish Brown | Clay | | NCM | Bottom of excavation |
| UBN | 55 | I | 24 | 0.79 | 10YR 5/2 Grayish Brown | Silt Loam | | NCM | Compact Gravel Impasse |

# APPENDIX B:
# Artifact Catalogue

# Appendix B: Artifact Catalogue

| STP | Level | Horizon | Depth (cm) | Artifact No. | Class | Type | Function | Material | Length (mm) | Width (mm) | Thickness (mm) | Weight (g) | Cultural Period | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 1 | Fill/Disturbed | 0-17 | 1 | flake | blade, possible bipolar reduction flake | lithic reduction | Onondaga or Bois Blanc chert | 26 | 16 | 6 | 2.8 | indeterminate | broken distal part; indeterminate chert type, though certainly Onondaga or Bois Blanc |
| | | | | 2 | flake | indeterminate | lithic reduction | Onondaga chert | 18 | 14 | 2 | 0.6 | indeterminate | broken proximal part |
| 9 R3 South | 1 | Fill/Disturbed | 0-24 | 3 | flake | bipolar reduction flake | lithic reduction | Onondaga chert | 15 | 10 | 4 | 0.7 | indeterminate | |
| 20 | 1 | Fill | 0-18 | 4 | flake | bipolar reduction flake | lithic reduction | Onondaga chert | 29 | 24 | 10 | 6.8 | indeterminate | possible utilization on right distal ventral and left distal dorsal edge |
| | | | | 5 | flake | early reduction flake | lithic reduction | Onondaga chert | 28 | 19 | 6 | 3 | indeterminate | broken distal part; possible utilization or retouch on left distal ventral edge |
| | | | | 6 | flake | bipolar reduction flake | lithic reduction | Onondaga chert | 23 | 20 | 4 | 2 | indeterminate | |
| | | | | 7 | flake | indeterminate | lithic reduction | Onondaga chert | 19 | 13 | 3 | 0.6 | indeterminate | broken proximal part |