

SECTION 4.0 PHASE II ARCHAEOLOGICAL SURVEY AT THE HOWELL SCHOOL ROAD PREHISTORIC 2 SITE

4.1 Results

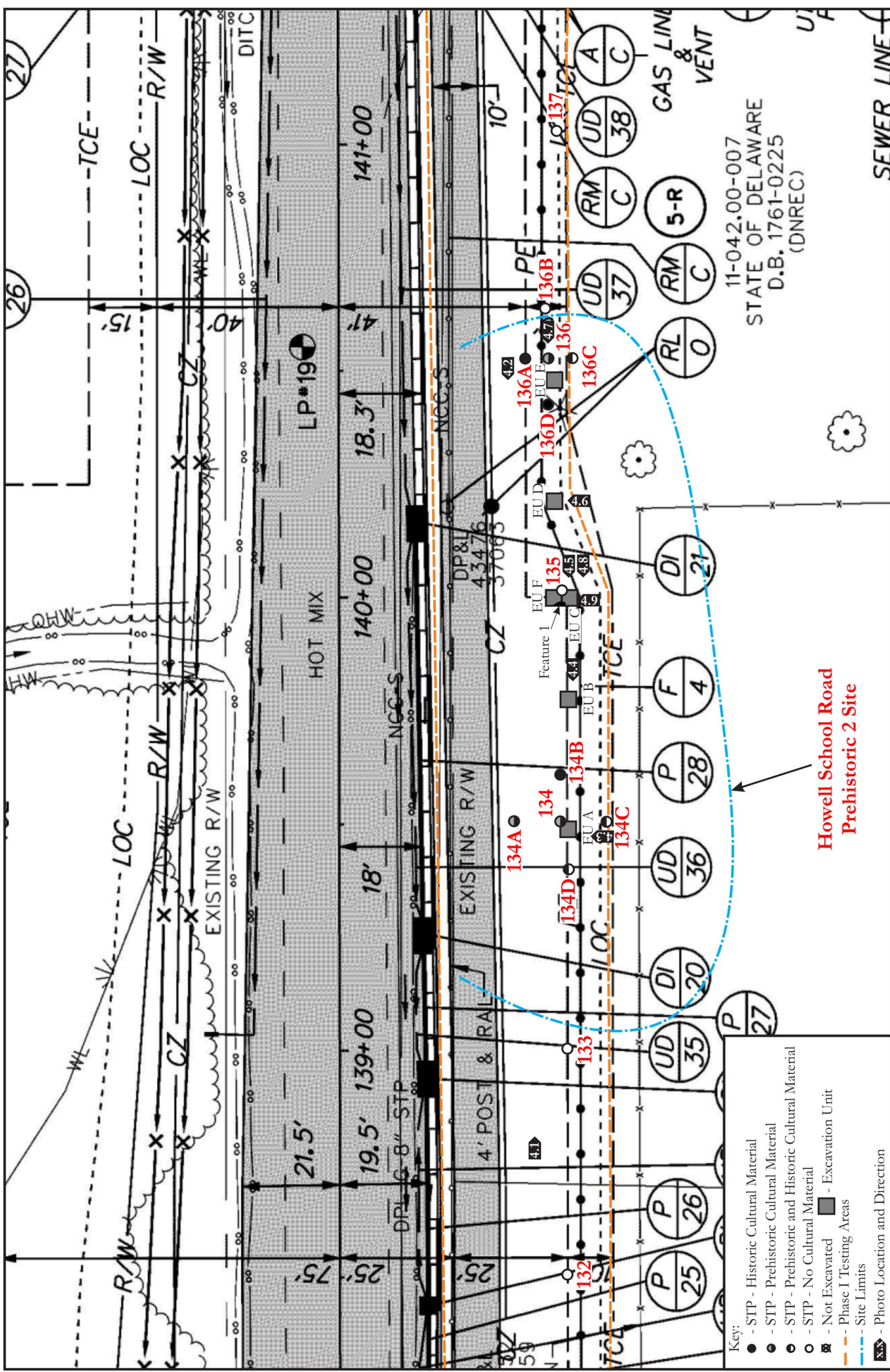
The purpose of the Phase II archaeological survey was to delineate artifact distribution patterns, gain additional information regarding the cultural association and time period of site occupation, determine if the site has the integrity (i.e., intact features or artifact concentrations from subsoil context) to be a significant prehistoric resource that can provide substantial information about the prehistoric occupants of the site and ultimately determine if the site is eligible for listing on the National Register of Historic Places.

The Howell School Road Prehistoric 2 site (CRS # N04347/7NC-F-165) is located on the north slope of a knoll overlooking wetlands associated with tributaries of St. Georges Creek (see Figure 4.1; Plates 4.1-4.2). Archaeological testing was conducted within the site from May 21-25, 2012.

Five EUs (A-E) were completed as part of the original scope of work. In accordance with DelDOT's research design, a systematic sampling strategy was employed for the Phase II survey. Five one-meter square EUs (A, B, C, D and E) were positioned at 7.5-meter intervals between STPs 134 and 136 (see Figure 4.1). A sixth EU (F) was completed after consultation with DelDOT due to the discovery of a potential feature in EU C (see discussion below).

Excavation Unit A was positioned adjacent to STP 134 where a quartz flake fragment was recovered in Phase I testing (see Figure 4.1). The soil profile of EU A consisted of a 28 centimeter thick brown (10YR 4/3) sandy loam Ap horizon underlain by a yellowish brown (10YR 5/6) sandy loam subsoil (B horizon) (Figure 4.2; Plate 4.3). The Ap horizon was excavated as a single level (Level 1) and contained quartz, chert, and jasper debitage in mixed contexts with ten modern bottle glass, nails, brick, and coal fragments, which were noted on field forms (see Appendix D). The B horizon was excavated in two successive 10 centimeter levels, neither of which contained cultural materials. The total depth of EU A was 60 centimeters.

Excavation Unit B was positioned 7.5 meters east of EU A (see Figure 4.1). The soil profile of EU B consisted of a 14 centimeter thick brown (10YR 4/3) sandy loam Ap1 horizon underlain by a 22 centimeter thick mottled brown (10YR 4/3) and yellowish brown (10YR 5/6) silty sand Ap2 horizon. At 47 centimeters below datum the soil profile transitioned into a 30 centimeter thick yellowish brown (10YR 5/6) loose sand upper subsoil (B1 horizon) underlain by a mottled yellowish



Key:

- - STP - Historic Cultural Material
- - STP - Prehistoric Cultural Material
- - STP - Prehistoric and Historic Cultural Material
- - STP - No Cultural Material
- - Not Excavated
- - Excavation Unit
- - Phase I Testing Areas
- - Site Limits
- 📍 - Photo Location and Direction

**Howell School Road
Prehistoric 2 Site**

11-042.00-007
STATE OF DELAWARE
D.B. 1761-0225
(DNREC)

SEWER LINE

0 Meters 4
0 Feet 20

N
W E S

Figure 4.1:

Howell School Road Prehistoric 2 Site Map showing excavation units and photo locations.



Plate 4.1:

Overview of the Howell School Road Prehistoric 2 Site.

Photo view: East

Photographer: Sharon D. White

Date: May 22, 2012



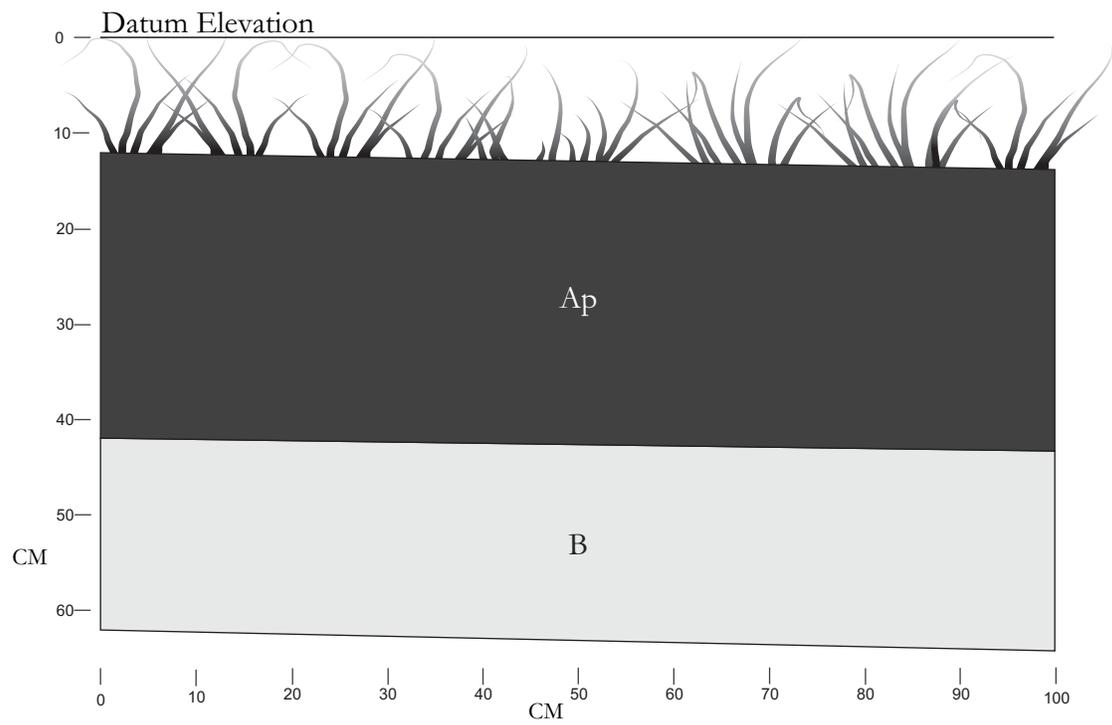
Plate 4.2:

Overview of the Howell School Road Prehistoric 2 Site.

Photo view: West

Photographer: Sharon D. White

Date: May 22, 2012



Key:

Ap: 10YR 4/3 (Brown) sandy loam

B: 10YR 5/6 (Yellowish Brown) loamy sand



Figure 4.2:

Excavation Unit A, North Wall Profile.

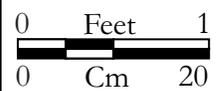




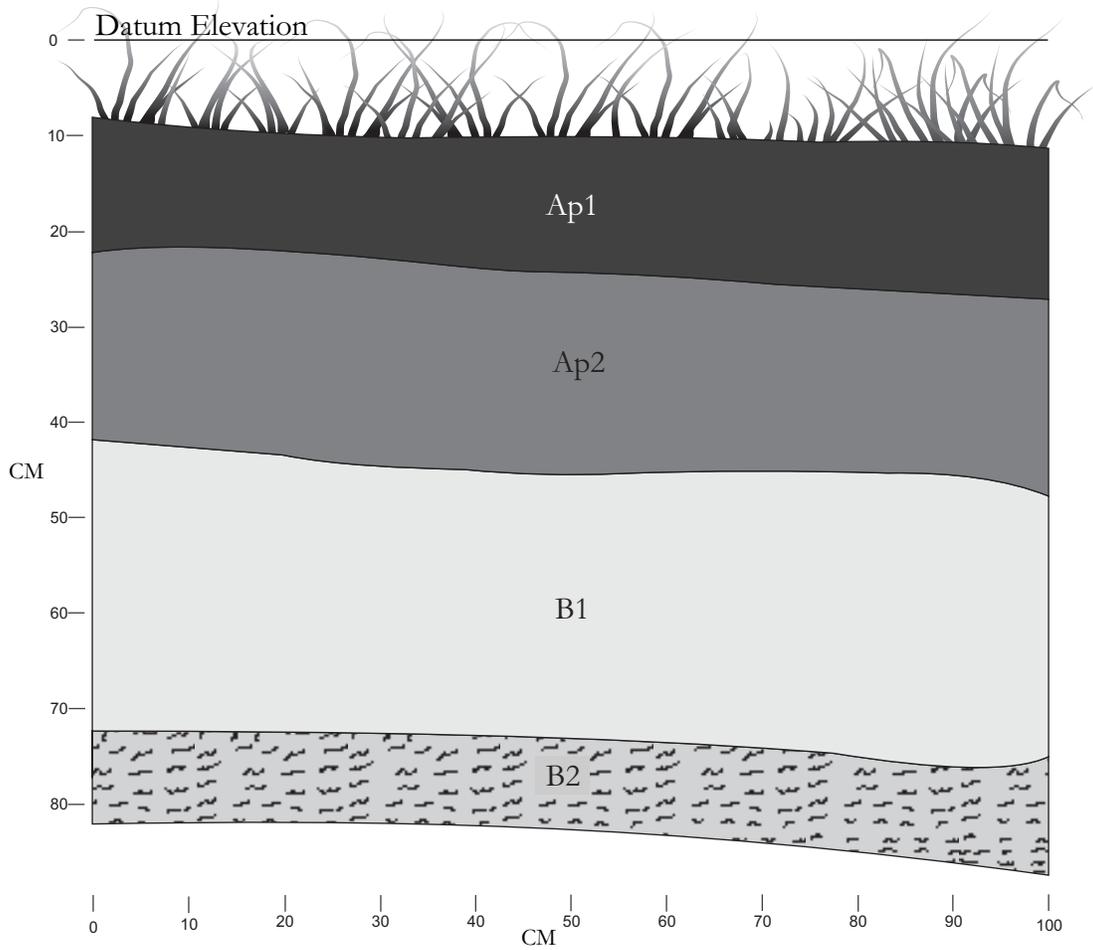
Plate 4.3:

Excavation Unit A, north wall profile.
Photo view: North
Photographer: Adrienne Jarczewski
Date: May 23, 2012

brown (10YR 5/6 and 10YR 5/8) gravelly medium sand lower subsoil (B2 horizon) (Figure 4.3; Plate 4.4). The Ap1 horizon was excavated as a single level (Level 1) and contained quartz and jasper debitage, one piece of FCR as well two modern bottle glass and brick fragments, which were noted on field forms. The Ap2 horizon was excavated as a single level (Level 1) and contained jasper, chert, and quartz debitage and five pieces of FCR, as well as one wire nail, which was noted on field forms. Prehistoric artifacts continued downward in the profile into the B1 horizon and were recovered in two successive 10 centimeter levels. In the B1 horizon, Level 3 contained two pieces of FCR, and Level 4 contained one piece of quartz debitage. Level 5 did not contain cultural material. A diffuse boundary between the B1 horizon and the lighter colored B2 horizon was encountered at 77 centimeters below datum and excavated as a single level (Level 6), which did not contain cultural material. The total depth of EU B was 87 centimeters.

Excavation Unit C was positioned adjacent to STP 135, which did not contain prehistoric cultural materials (see Figure 4.1). The soil profile of EU C consisted of a 30 centimeter thick brown (10YR 4/3) sandy loam Ap1 horizon underlain by a 14 centimeter thick mottled brown (10YR 4/3) and yellowish brown (10YR 5/6) silty sand Ap2 horizon. At 54 centimeters below datum the soil profile transitioned into a light yellowish brown (10YR 6/4) sandy loam subsoil (B horizon) (Figure 4.4; Plate 4.5). The Ap1 horizon was excavated as a single natural level (Level 1) and contained one corner-notched quartz projectile point fragment, jasper, chert, quartz and quartzite debitage and three pieces of FCR in mixed contexts with nine modern nails, wire fragments and earthenware, which were noted on field forms. Prehistoric artifacts continued downward in the profile into the Ap2 horizon, which was excavated in a single natural level (Level 2). The Ap2 horizon contained one piece of chert debitage in mixed contexts with four modern glass and nail fragments, which were noted on field forms. A diffuse boundary between the Ap2 horizon and the lighter colored B horizon was encountered at 64 centimeters below datum. The B horizon was excavated in two successive 10 centimeter levels, neither of which contained cultural materials. The total depth of EU C was 74 centimeters. One cultural feature (Feature 1) was identified in the northwest corner of EU C at a depth of 55 centimeters below datum. Excavation Unit F was opened to further explore this feature.

Excavation Unit D was positioned 7.5 meters east of EU C (see Figure 4.1). The soil profile of EU D consisted of a 35 centimeter thick dark yellowish brown (10YR 4/4) sandy silt loam Ap1 horizon underlain by a nine centimeter thick brown (10YR 4/3) sandy loam Ap2 horizon (Figure 4.5; Plate 4.6). The Ap1 horizon was excavated as a single natural level (Level 1) and contained jasper, chert, quartz, and quartzite debitage and three pieces of FCR in mixed contexts with nine modern glass, nail, plastic, and brick fragments, which were noted on field forms. No prehistoric artifacts were recovered in the Ap2 horizon, which was excavated in a single natural level (Level 2). At 55



Key:

Ap1: 10YR 4/3 (Brown) sandy loam

Ap2: 10YR 4/3 (Brown) m/w 10YR 5/6 (Yellowish Brown) silty sand

B1: 10YR 5/6 (Yellowish Brown) silty sand

B2: 10YR 5/8 (Yellowish Brown) m/w 10YR 5/6 (Yellowish Brown) medium sand



Figure 4.3:

Excavation Unit B, West Wall Profile.

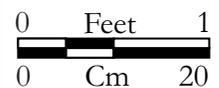




Plate 4.4:

Excavation Unit B, west wall profile.
Photo view: West
Photographer: Adrienne Jarczewski
Date: May 22, 2012

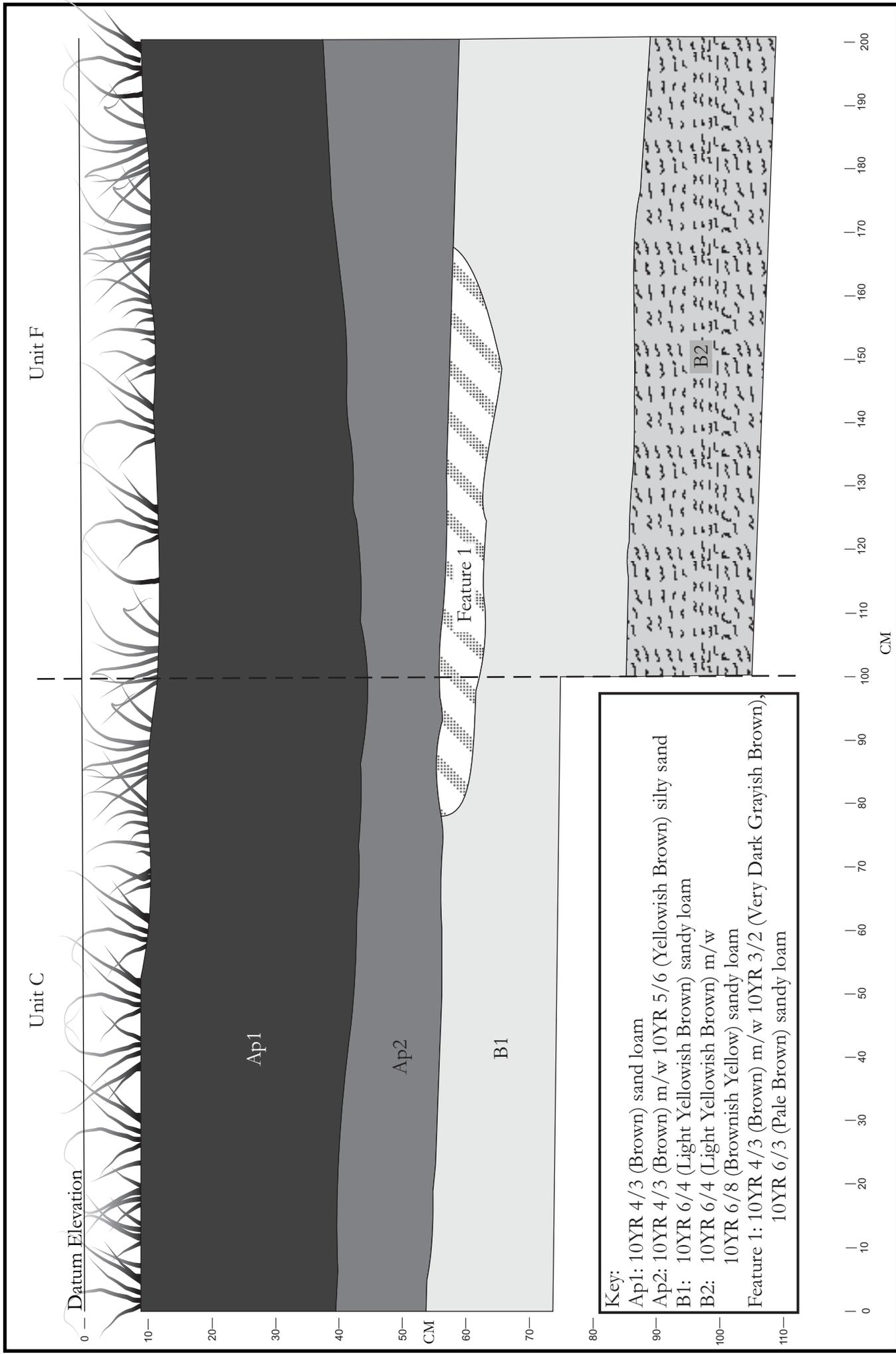


Figure 4.4:
Excavation Units C and F, West Wall Profile.



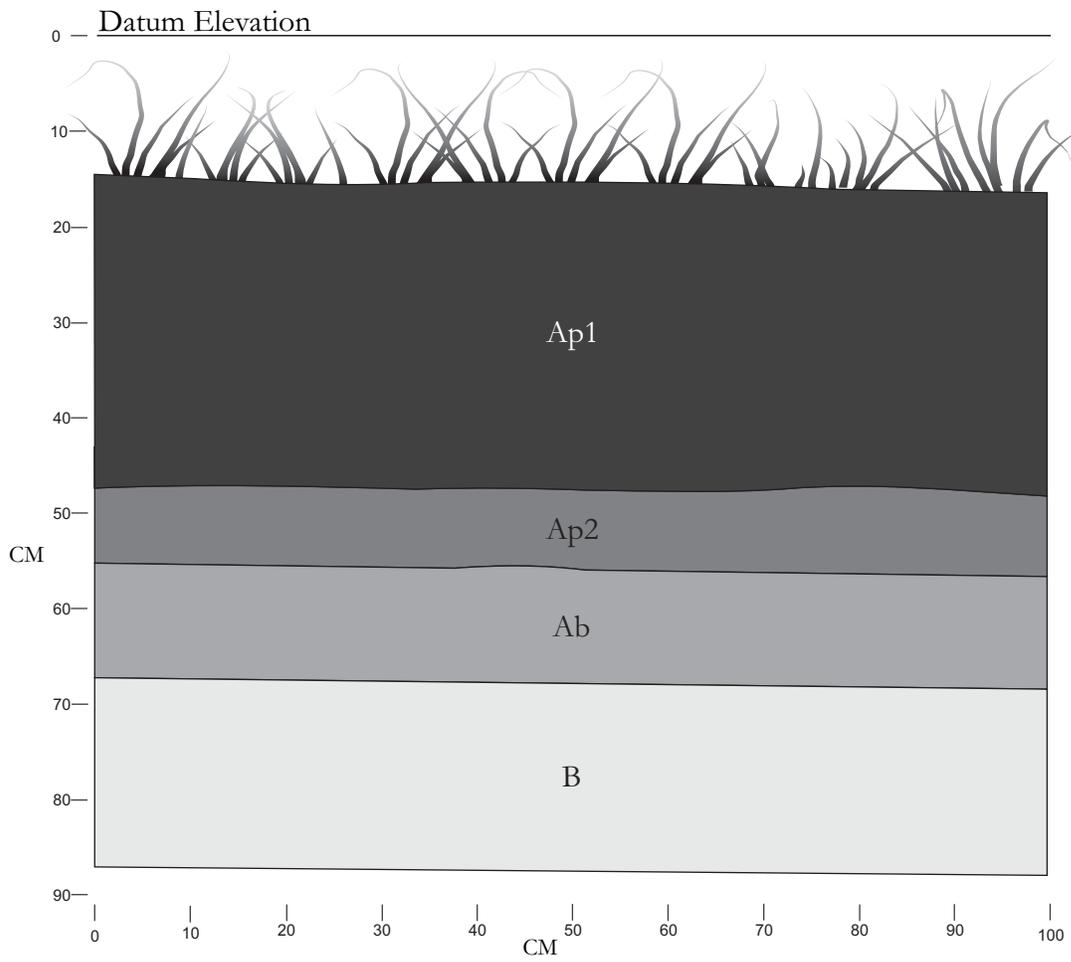
Plate 4.5:

Excavation Units C and F, west wall profile.
Photo view: West
Photographer: Adrienne Jarczewski
Date: May 24, 2012

centimeters below datum, the Ap2 horizon transitioned into a six centimeter thick very dark gray (10YR 3/1) medium sand Ab horizon excavated as a single level (Level 4) and did not contain cultural material. The Ab horizon was underlain by a mottled light brownish gray (10YR 6/2), brownish yellow (10YR 6/6) and light bluish gray (Gley 2 10B 8/1) gravelly sand that was excavated in two successive 10 centimeter levels, neither of which contained cultural materials (Figure 4.5; Plate 4.6). The total depth of EU D was 81 centimeters.

Excavation Unit E was positioned between STP 136D and STP 136 from which a concentration of debitage (n=3) had been recovered. The soil profile of EU E consisted of a 30 centimeter thick brown (10YR 4/3) loamy sand Ap1 horizon, with abundant small and medium roots underlain by a 17 centimeter thick dark grayish brown (10YR 4/2) loamy sand Ap2 horizon. The Ap1 horizon contained 29 modern glass, brick, coal, and nail fragments, which were noted on field forms. The Ap2 horizon contained one piece of jasper debitage and one piece of FCR. At 59 centimeters below datum, the Ap2 horizon transitioned diffusely into a light grey (2.5Y 7/1) gravelly loamy sand subsoil (B horizon) that was excavated in two successive 10 centimeter levels, neither of which contained cultural materials (Figure 4.6; Plate 4.7). The total depth of EU E was 79 centimeters.

Excavation Unit F was positioned adjacent to the north wall of EU C where a possible prehistoric feature had been identified in the northwest corner of EU C. The soil profile of EU F consisted of a 34 centimeter thick brown (10YR 4/3) sandy loam Ap1 horizon underlain by a 10 centimeter thick mottled brown (10YR 4/3) and yellowish brown (10YR 5/6) silty sand Ap2 horizon. At 56 centimeters below datum, the Ap2 horizon transitioned into a 30 centimeter thick light yellowish brown (10YR 6/4) sandy loam upper subsoil (B1 horizon) that was underlain by a mottled light yellowish brown (10YR 6/4) and olive yellow (10YR 6/8) sandy loam lower subsoil (B2 horizon) (see Figure 4.4; Plate 4.5). The Ap1 horizon was excavated as a single level (Level 1) and contained jasper, chert and quartz debitage in mixed contexts with five modern bottle glass and nail fragments, which were noted on field forms. Prehistoric artifacts continued downward in the profile into the Ap2 horizon, where chert and jasper debitage was recovered in a single natural level (Level 2) in mixed contexts with seven metal and slag fragments, which were noted on field forms. In the B1 horizon, Level 3 contained one piece of jasper debitage, Level 4 contained two pieces of jasper debitage, and Level 5 contained five pieces of jasper debitage. A diffuse boundary between the B1 horizon and the lighter colored B2 horizon was encountered at 86 centimeters below datum and excavated in two successive 10 centimeter levels, neither of which contained cultural materials. The total depth of EU F was 106 cm.



Key:

Ap1: 10YR 4/4 (Dark Yellowish Brown) sandy silt loam

Ap2: 10YR 4/3 (Brown) sandy loam

Ab: 10YR 3/1 (Very Dark Gray) medium sand

B: 10YR 6/2 (Light Brownish Gray) m/w 10YR 6/6 (Brownish Yellow),
Gley 10B 8/1 (Light Bluish Gray) sand w/ pebbles



Figure 4.5:

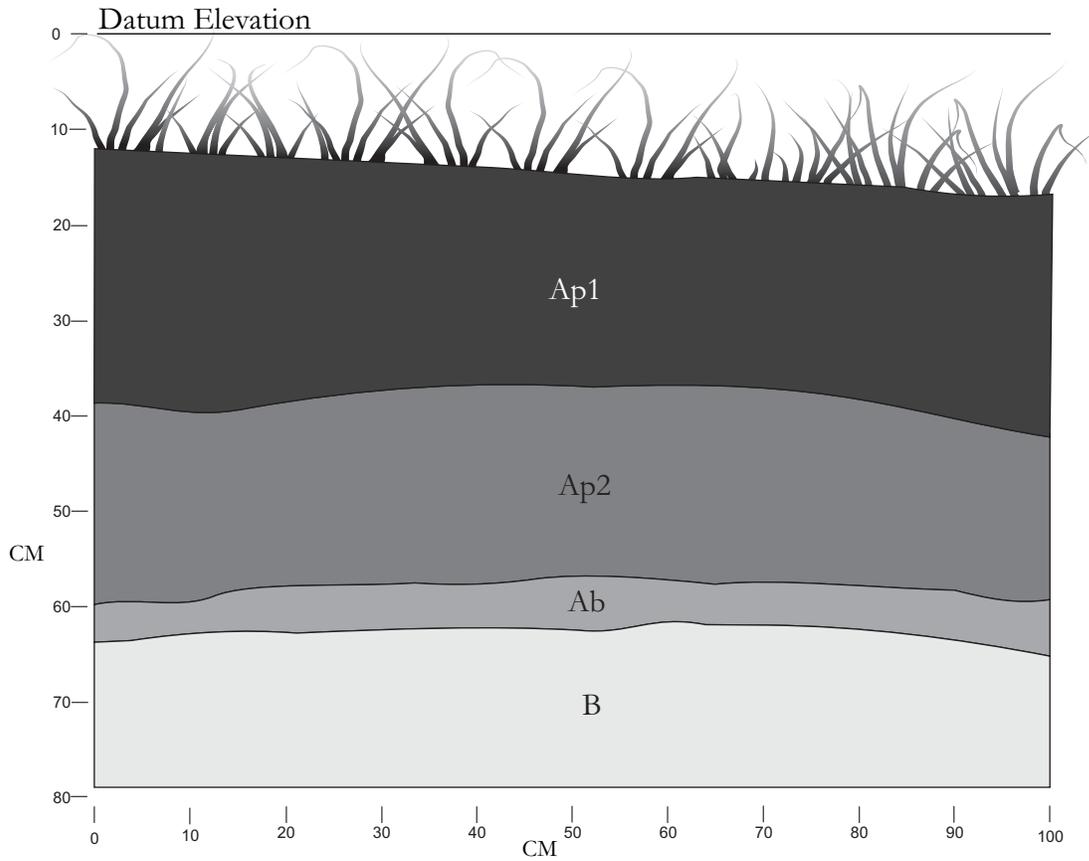
Excavation Unit D, North Wall Profile.





Plate 4.6:

Excavation Unit D, north wall profile.
Photo view: North
Photographer: Adrienne Jarczewski
Date: May 23, 2012



Key:

Ap1: 10YR 4/3 (Brown) loamy sand

Ap2: 10YR 4/2 (Dark Grayish Brown) loamy sand

Ab: Transition 10YR 4/2 (Dark Grayish Brown) & 2.5Y 7/1 (Light Gray) loamy sand

B: 2.5Y 7/1 (Light Gray) loamy sand



Figure 4.6:
Excavation Unit E, West Wall Profile.





Plate 4.7:

Excavation Unit E, west wall profile.
Photo view: West
Photographer: Adrienne Jarczewski
Date: May 22, 2012

Excavation Unit F contained the northern portion of Feature 1, a roughly circular stain first identified in the northwest corner of EU C at 55 centimeters below datum. In consultation with DelDOT, completion of EU C was suspended and excavation of EU F was initiated to expose the northern portion of Feature 1 (Plate 4.8). Combined, EUs C and F exposed an estimated two-thirds of the roughly oval-shaped, shallow basin feature, which extended into the west walls of EUs C and F (Figure 4.7; Plate 4.9). The soil matrix of Feature 1 was described as a mottled brown (10YR 4/3), very dark grayish brown (10YR 3/2) and pale brown (10YR 6/3) sandy loam with charcoal flecking. Excavation of Feature 1 documented a truncated, plow damaged feature that extended five to six centimeters into the subsoil within which a large ant’s nest was located. Plow scars transverse to the long axis of Feature 1 were documented in the feature. Overall, the exposed dimensions of Feature 1 were approximately 100 centimeters by 40 centimeters. The cubic volume of Feature 1 could not be determined due to its truncated vertical extent and lack of complete exposure. While a moderate amount of charcoal was contained within the feature matrix and sampled, no artifacts were recovered from the feature. Feature 1 is a cultural feature of unknown function.

Artifact Analysis

In total, 126 prehistoric artifacts were recovered from the Phase II excavations at the Howell School Road Prehistoric 2 site. These artifacts were unequally distributed across the site with higher frequencies of prehistoric material in the western half of the site area (Table 4.1). Recent artifacts were also recovered in mixed contexts with the prehistoric artifact assemblage, all from the Ap horizons. Prehistoric artifacts exhibited a steady decline from west to east as distance from the nearby Lums Pond site (7NC-F-18/CRS # N-3778) increased. The highest artifact counts occurred in EUs proximate to a low knoll that bordered the limit of disturbance (LOD) on the south. The Howell School Road Prehistoric 2 site most likely extends beyond the LOD onto this knoll.

Table 4.1: Prehistoric Artifact Frequencies by Excavation Unit at the Howell School Road Prehistoric 2 site.

Excavation Unit	Total Count	% Total
A	33	26.2
B	31	24.6
C	28	22.2
D	6	4.8
E	2	1.6
F	26	20.6
Total	126	100.00%



Plate 4.8:

Feature 1 plan view.

Photo view: East

Photographer: Adrienne Jarczewski

Date: May 24, 2012

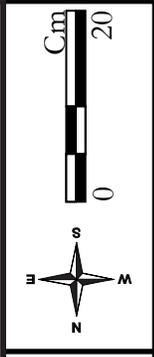
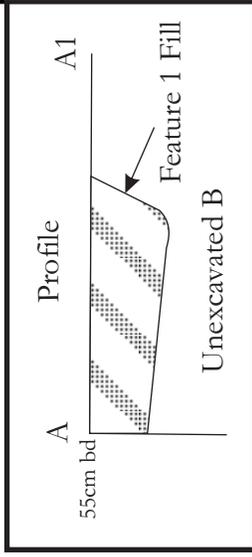
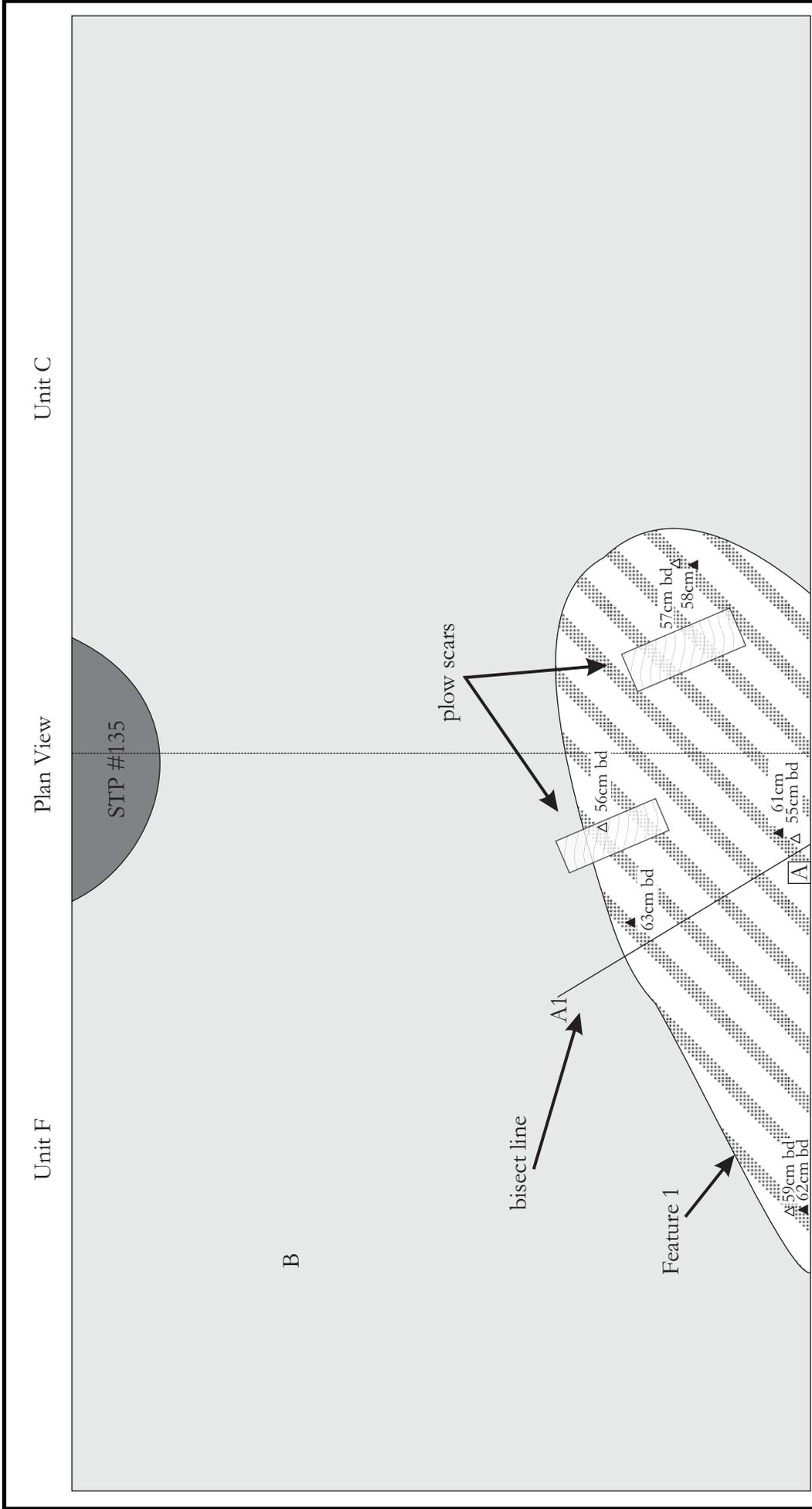


Figure 4.7:
Feature 1 Plan View and Profile.

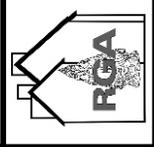




Plate 4.9:

Feature 1 profile.
Photo view: North
Photographer: Adrienne Jarczewski
Date: May 24, 2012

Overall, the vertical distribution of prehistoric materials demonstrates an inverse correlation between artifact density and depth below ground surface (Table 4.2). The overwhelming majority of materials was recovered from the upper plowzone (Ap1 horizon), which contained more than two-thirds of the prehistoric artifact assemblage in mixed contexts with modern materials interpreted as roadside discards or as discards associated with the construction of a split rail fence within the LOD. Artifact counts declined markedly in the lower plowzone (Ap2 horizon). A buried A horizon was encountered in one EU (D), but no cultural materials were recovered from this stratum. Only two EUs (B and F) contained artifacts recovered in subsoil contexts, which totaled 8.7 percent of prehistoric artifact assemblage.

Table 4.2: Prehistoric Artifact Frequencies by Soil Horizon at the Howell School Road Prehistoric 2 site.

Soil Horizon	Count	Frequency
Ap1	89	70.6
Ap2	26	20.6
Ab	0	0
B1	11	8.7
B2	0	0
Total	126	100.00%

Generally, the inverse relationship between artifact frequency and depth from ground surface across the site reinforces that the assemblage is primarily contained within the plowzone where post-depositional disturbance from historic agricultural activities and bioturbation comprises analysis of intra-site patterning (Table 4.3). A concentration of jasper debitage (n=8) recovered from subsoil in EU F is interpreted as related to the presence of Feature 1 and post-depositional disturbance of that feature as evident in the mottled character of the soil matrix and the presence of plow scars in the top of the feature. A smaller concentration of prehistoric materials in EU B may suggest that a second cultural feature is present nearby.

Table 4.3: Artifact Distributions by Excavation Unit and Soil Horizon at the Howell School Road Prehistoric 2 site.

Stratum	Excavation Unit						Total
	A	B	C	F	D	E	
Ap	33	14	25	11	6	0	89
Ap2	0	14	3	7	0	2	26
Ab	0	0	0	0	0	0	0
B	0	3	0	8	0	0	11
B2	0	0	0	0	0	0	0
Total	33	31	28	26	6	2	126

A limited variety of lithic materials and artifact types was recovered during Phase II excavations in proportions consistent with cultural material recovered from the nearby Lums Pond site (Petraglia et al. 1998). In total, 105 pieces of debitage, 20 pieces of FCR, and one quartz, corner-notched projectile point fragment were recovered from the Phase II excavations at the Howell School Road Prehistoric 2 site (see Figure 4.8; Table 4.4; Appendix C). One quartz corner-notched projectile point fragment was recovered from EU C and exhibited snap fractures on the stem and tip, suggestive of impact damage, and a complete morphology for the point could not be reconstructed. As a result it was not assigned to a specific type. Only one other formal tool, a quartz Teardrop projectile point dated to the Woodland I period, was recovered during Phase I survey of the site. The lack of cores, bifaces and expedient tools suggests a short-term occupation for the Howell School Road Prehistoric 2 site with site activities restricted to tool maintenance and perhaps limited tool manufacture.

Table 4.4: Prehistoric Artifact Types and Lithic Materials recovered from the Howell School Road Prehistoric 2 site.

Lithic Material	ARTIFACT TYPE			TOTAL	% TOTAL
	Projectile Point	Debitage	FCR		
Chert	0	21	0	21	15.9
DCC Jasper	0	45	0	45	35.7
Hardyston Jasper	0	7	0	7	5.6
Quartz	1	30	2	33	26.2
Quartzite	0	1	17	18	14.3
Chalcedony	0	1	0	1	0.8
Sandstone	0	0	1	1	0.8
TOTAL	1	105	20	126	
%	0.8	83.3	15.9		100.0

FCR= *Fire Cracked Rock*

A small amount of FCR was recovered across the site as dispersed deposits contained primarily within the plowzone of EUs A, B, C, D and E. The highest concentration of FCR was recovered in EU A (n=10), the lowest in EU E (n=1). As with other artifact types, the frequency of FCR declined across the site as distance from the Lums Pond site increased. In EU B, FCR extended to the greatest depth below ground surface and was recovered in the Ap1, Ap2 and B1 horizons; however, no cultural features were identified within EU B. Relatively high frequencies of FCR occurred in EUs A and B and suggest that additional cultural features may exist at the Howell School Road Prehistoric 2 site. Comparable mean FCR weights among EUs (ranging from 60.26 to 72.67 grams) were calculated across the site and do not indicate more intense activity in proximity to some EUs than others.



Figure 4.8:

Quartz Projectile Point recovered from EU C (Cat. # 52).

The debitage subassemblage from the Howell School Road Prehistoric 2 site includes both secondary pebble sources of lithic materials and primary sources related to Delaware Chalcedony Complex (DCC) rock outcrops, such as jasper outcrops at Iron Hill, located north of the site. The prehistoric artifact assemblage included comparable percentages of DCC jasper and quartz, which was probably obtained from pebble sources. Lesser percentages of chert and quartzite were present in the assemblage, but these still represented significant portions of the artifact assemblage. Debitage from a variety of lithic materials represents 83.3 percent of the artifact assemblage (see Table 4.4). An analysis of the debitage recovered during Phase II excavations indicates that DCC jasper was the most extensively utilized material at the site as reflected in the total number of specimens recovered, the number of complete flakes and the number of flake fragments (Table 4.5). Quartz and chert debitage was also substantially represented in the debitage.

Table 4.5: Prehistoric Lithic Debitage Types recovered from the Howell School Road Prehistoric 2 site.

Lithic Material	DEBITAGE TYPE			TOTAL	% TOTAL
	Complete Flakes	Flake Fragments	Angular Debris		
Chert	8	11	2	21	20.0
DCC Jasper	13	31	1	45	42.9
Hardyston Jasper	1	5	1	7	6.7
Quartz	5	21	4	30	28.6
Quartzite	0	1	0	1	1.0
Chalcedony	1	0	0	1	1.0
Sandstone	0	0	0	0	0
TOTAL	28	69	8	105	
%	26.7	65.7	7.6		100.0

The analysis of DCC jasper debitage by size range suggests that it was utilized not only more heavily than other lithic sources but also for tool manufacture. DCC jasper recovered from Phase II excavations is distributed across both small and intermediate size grades, and is the only lithic material represented in the 2.5 to 3.0 centimeter size grade (Table 4.6). While quartz debitage ranges in size up to 2.5 centimeters, debitage in this lithic category is skewed toward small size grades that indicate tool maintenance and recycling rather than core reduction or bifacial thinning. Slightly larger debitage sizes for quartz are also a reflection of the fracture characteristics and microcrystalline structure of quartz, which are less predictable than the fracture patterns of cryptocrystallines like chert, jasper and chalcedony. Chert debitage is even more dramatically skewed toward small-sized debitage with few outliers in the small to intermediate range of size grades, which may relate to the bipolar fracture and testing of pebbles for their suitability for tool manufacture (see Appendix C).

Table 4.6: Debitage Size Frequencies by Lithic Material at the Howell School Road Prehistoric 2 site.

	Debitage Size Grade						Total	Debitage %
	0 - 0.5	0.5 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 3.0		
Chert	1	16	1	3	0	0	21	20.0
DCC Jasper	0	30	4	2	7	2	45	42.9
Hardyston Jasper	0	5	2	0	0	0	7	6.7
Quartz	1	17	8	3	1	0	30	28.6
Quartzite	0	1	0	0	0	0	1	1.0
Chalcedony	0	1	0	0	0	0	1	1.0
TOTAL	2	70	15	8	8	2	105	
Debitage %	1.9	66.7	14.3	7.6	7.6	1.9		100.0

When mean debitage weights within size grades are calculated for lithic materials recovered from the Howell School Road Prehistoric 2 site, comparisons among lithic materials support interpretations of the assemblage as the byproduct of tool maintenance and recycling activities with limited tool production (Table 4.7). The smallest size grades, where the majority of debitage is represented, show little variation in mean weight. Chert is one notable exception in the 0.5 to 1.0 centimeter size grade, which reflects the presence of pebble-derived angular debris in this size grade (see Appendix C). As size grades increase, DCC jasper and quartz mean weights compare most favorably among lithic material types, which supports interpretations that tool manufacture was restricted to a few lithic materials in use on the site. Differences in mean weight within size grades are also a reflection of the size and shape of the objective piece from which flakes and angular debris were detached, such as utilization of pebbles, flake blanks, partially prepared bifaces or generalized cores. Only DCC jasper debitage includes intermediate-sized complete flakes and flake fragments that suggest tool manufacturing through generalized core reduction or bifacial thinning of partially prepared bifaces (see Appendix C).

Table 4.7: Mean Debitage Weight by Size Grade and Lithic Material at the Howell School Road Prehistoric 2 site.

Mean Debitage Weight per Lithic Material								
Debitage Size Grade	DCC Jasper	Hardyston Jasper	Chert	Quartz	Chalcedony	Quartzite	Cumulative Mean Weight per Size Grade	Flake Count per Size Grade
0 - 0.5	0	0	0.05	0.04	0	0	0.05	2
0.5 - 1.0	0.3	0.31	0.73	0.45	0.12	0.52	0.40	70
1.0 - 1.5	2.53	1.92	0.36	2.58	0	0	2.33	15
1.5 - 2.0	6.88	0	5.67	7.3	0	0	6.58	8
2.0 - 2.5	11.68	0	0	0	0	0	11.68	8
2.5 - 3.0	14.77	0	0	0	0	0	14.77	2

Overall, platform and termination attributes of complete flakes indicate manufacturing techniques related to both hard hammer percussion and pressure flaking. Across all lithic materials, small size grades are more likely to exhibit pressure flaking with minimal platforms and feathered or stepped terminations (see Appendix C). Pressure flakes are typically a byproduct of tool maintenance. Intermediate size grades, which are dominated by DCC jasper, exhibit flat or cortical platforms and feathered terminations, which relate to hard hammer percussion and suggest tool manufacture.

Finally, the majority of flakes in the larger size grades exhibit cortex and a significant percentage displays heat treatment, characteristics that might be expected if tool manufacturing were activities conducted on-site (see Appendix C; Table 4.8). The highest percentages of cortex representation for debitage was observed in DCC jasper and the lowest percentage in Hardyston jasper, most likely reflecting differences in the objective piece from which flakes were detached (see Table 4.8). Low incidences of cortex suggest late stages in the tool manufacturing trajectory, whereas high rates of cortex suggest initial reduction and manufacturing stages from raw material or partially prepared objective pieces. Comparable percentages of cortex to DCC jasper observed on quartz debitage may reflect utilization of a nearby source of quartz.

Heat treatment frequencies in the assemblage are also significantly higher for DCC jasper than for most other materials (see Table 4.8). A notable exception in this attribute is Hardyston jasper, which demonstrates a slightly higher percentage of heat treatment than DCC jasper. Throughout the Middle Atlantic, heat treatment was a preferred preparation technique for jasper pebbles and nodules. As such, high frequencies of heat treatment on jasper debitage may simply reflect the proclivity of this preparation technique rather than differences in lithic manufacturing strategy or use trajectory. The significant representation of heat treated specimens within the chert debitage suggests that standardized lithic manufacturing techniques were applied to cryptocrystallines generally. Moreover, heat treated specimens occur across a broad range of size grades among DCC jasper, Hardyston jasper and chert, and on significantly more specimens than those exhibiting cortex, reinforcing the interpretation that the presence of heat treatment is not related exclusively to tool manufacturing (see Appendix C).

Overall, the presence of a limited range of platform types on complete flakes and proximal flake fragments, the limited range of size grades of the debitage recovered, and the low frequency of finished tools support an interpretation of the site as a short-term campsite where lithic tool maintenance and production and were primary activities.

Table 4.8: Debitage Surface Characteristics at the Howell School Road Prehistoric 2 site.

Lithic Material	Surface Characteristic			
	Cortex		Heat Treated	
	Count	Material %	Count	Material %
Chert	4	19.1	5	23.8
DCC Jasper	11	24.4	25	55.6
Hardyston Jasper	1	14.3	4	57.1
Quartz	7	23.3	0	0
Quartzite	0	0	0	0
Chalcedony	0	0	0	0
TOTAL	23	0	34	0
Overall Debitage %	21.9		32.4	

4.3 Interpretations and Evaluation of Significance

The Phase II archaeological survey at the Howell School Road Prehistoric 2 site recovered 126 prehistoric artifacts and identified one cultural feature. The Howell School Road Prehistoric 2 site may best be interpreted as a Woodland I camp site occupied for a brief period of time. This site possesses a moderate frequency of non-diagnostic jasper, quartz, chert and quartzitedebitage recovered primarily in plowzone contexts. In only one EU within the site boundaries (EU F) were artifacts recovered in significant quantity from subsoils. In the remainder of the EUs excavated, the low frequency of artifacts recovered in subsoil contexts suggests movement from post-depositional processes. Moreover, due to the narrow limits of disturbance in this portion of the project area, site boundaries could not be ascertained. While 20 pieces of FCR were recovered during Phase II excavations, most specimens were recovered from unit matrix in the plowzone rather than from feature contexts. Nevertheless the presence of concentrations of FCR in two EUs in the western portion of the site suggests a likelihood for the presence of additional features. Only one cultural feature, a truncated shallow basin interpreted as a hearth, was identified during Phase II investigations. This feature had been disturbed by agricultural plowing that cut through the upper centimeters of its fill and by bioturbation from a large ant's nest in its center. The compromised integrity of Feature 1 made interpretations of its function impractical.

The Howell School Road Prehistoric 2 site (7NC-F-165; CRS # N-04347) shares similarities in lithic material representation, period of occupation and site activities with the nearby Lums Pond site (7NC-F-18; CRS # N-3778), which was intensively investigated through a program of archaeological data recovery (Petraglia et al. 1998). While the Howell School Road Prehistoric 2 site contributes additional data on prehistoric occupation in the St. Georges Creek drainage, the results of the Phase I and II archaeological surveys indicates that the site's integrity has been compromised by historic agricultural activities as well as by modern road maintenance activities. The overwhelming majority of the artifact assemblage originated from the plowzone. Few artifacts were recovered in subsoil

contexts, and none in feature contexts. The Howell School Road Prehistoric 2 site (7NC-F-165; CRS # N-04347) is unlikely to contribute important new information for the understanding of land use, settlement and subsistence practices in the region. The Howell School Road Prehistoric 2 site is not recommended as eligible for inclusion on the National Register of Historic Places.