# Archaeological Excavations at the Lauren Site, 9PM1414

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Lamar Institute Publication 121 Lamar Institute 2006

### **Abstract**

The Lauren site is located in northwestern Putnam County, Georgia, and represents the remains of Late Lamar farmstead. Located and tested in 2004, major excavations were undertaken there in the summer of 2006 by the University of Georgia's archaeology field school. This work located a probable rectangular structure and an adjacent daub processing pit filled with trash. Artifacts from the site were limited in quantity since the majority of the soil from the site was not screened. The work shows that, compared to other nearby excavated farmsteads, the Lauren site has a somewhat distinctive layout.

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## **Background and Acknowledgements**

The Lauren site (9PM1414) is located in northwestern Putnam County, Georgia, near many other small late Mississippian farmsteads (Figure 1). It is located on an east-west trending ridge 1 kilometer southeast of the junction of

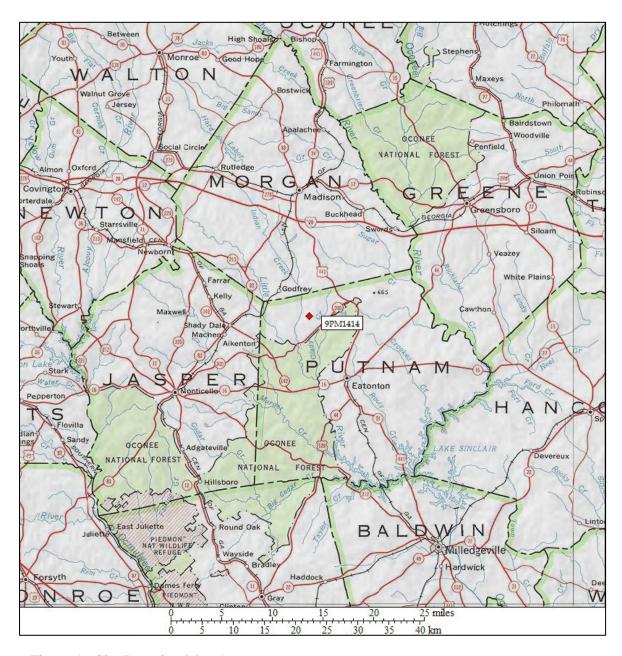


Figure 1. Site Location Map 1.

two small streams in the Piedmont uplands (Figure 2). This also places it on a long northeast-southwest trending ridge summit at an elevation of 176 meters above sea level. The exact UTM coordinates of the site are 3699694 North and 272126 East (Zone 17, NAD 1927). It is located in an open mature hardwood forest. The streams eventually form part of Big Indian Creek, a tributary of Little River that eventually forms a major branch of the Oconee River.

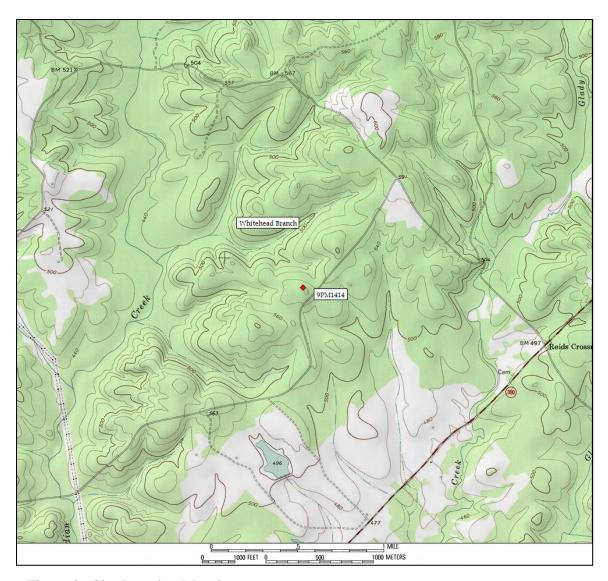


Figure 2. Site Location Map 2.

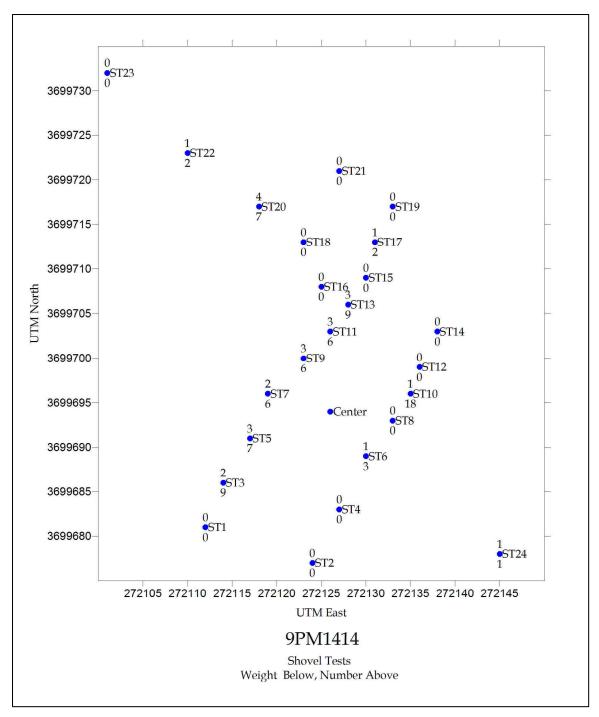


Figure 3. Shovel Tests From 2004.

The site was first located in the summer of 2004 as part of a survey in this area looking explicitly for Late Mississippian Lamar period farmsteads, a site



Figure 4. 2004 Excavation Unit.

type know to be common locally. The exact date of its discovery was July 13, when a few sherds were noticed in an adjacent logging road. At that time a recent fire trench had been plowed through the edge of the site as part of controlled burning of the undergrowth in the forest. This site is on land owned and managed by the University of Georgia's B. F. Grant Forest, a part of the Warnell School of Forestry from that University. The fire trench is shown as the pink line of Figure 8 below. We eventually saw an older fire trench at the site, represented as the blue line on the same figure. The site was named after Lauren

Cohen, my field assistant for the summer 2004 UGA Archaeology Field School.

At the time the site was first located, I had no real intentions of conducting more extensive excavations there. The specific goals of the project were to locate such a site, and perhaps eventually excavate one or more to help understand small farmsteads in the area. This work was part of a larger goal of understanding the late Mississippian occupation of the Little River Valley, mostly to the southwest of the Lauren site. In 2004, the fire trench yielded surface sherds that quickly suggested one area as the center of the sherd distribution. We proceeded to place 24 shovel tests around this location at random points. The exact locations of these impromptu shovel tests were recorded using a GPS unit. Figure 3 shows a map of the shovel test sherd data for the 24 tests. They collectively suggested one area of highest density for sherds near Shovel Test 13. I made the decision to place a single excavation unit there, primarily designed to recover a larger sample of pottery sherds. Thus, a single 3 by 3 meter unit, oriented 30 degrees west of north, was excavated at the site in 2004 (Figure 4). No further work was conducted at the Lauren site in 2004.

The summer of 2005 was spent conducting successful excavations at the Monroe site, 9PM1428, 1 kilometer northeast of the Lauren site (Williams 2006). This was another Lamar farmstead that was heavily excavated. Having successfully completed that project (with some minor additional work in 2006), I decided that the Lauren site would be a good candidate for addition excavations.

Thus, in the summer of 2006, major work was undertaken at this site. These excavations, along with the 2004 work, are presented in this report.

For the work in 2004, the UGA summer archaeology field school students involved in the initial survey and shovel testing included Andrea Adams, Will Avery, John Blair, Jim Blythe, Shawn Brunner, Jeff Evans, Josh Jones, Noell Lamberth, Marc Mitrano, Tom Oxnard, and Ben Storey. James Fitzgerald, a former student, acted as cook and additional field assistant. Lauren Cohen, as stated before, was my main field assistant. I thank all these people for their



Figure 5. 2006 Field Crew.

excellent efforts.

For the work in 2006, the crew consisted of Sam Benson, Eric Berg, Becky Blystone, Blake Coleman, Inger Coxe, Lauren Doak, Stuart Garth, Kelli Guest, Hannah Morris, Richard Moss, Candace Rutledge, and Eric Soderstrum (Figure 5). My Field Assistant for the work was John Turck, but addition valuable aid was provided by students Ellen Burlingame, Viki Dekle, and Peter VanDyck, Jr. I thank all these people for their contributions.

The excavation on the B. F. Grant Forest land was authorized by Mike Hunter and Dustin Thompson of the Warnell School of Forestry. The backhoe operations were conducted by Frank Mohone, also of the B. F. Grant staff. I thank each of these people for their important contributions and support for this project. Finally, I thank my archaeology colleague Jared Wood for reading and editing this report.

## **Topographic Mapping**

The Lauren site is almost flat and is located very near the summit of a broad ridge top. We implemented a grid aligned with magnetic north for excavating the site. This was based upon our relocation of the four stakes that defined Excavation Unit 1 from 2004. That 3 by 3 meter unit had been backfilled at that time, but the stakes were left in place. We arbitrarily defined the southwestern corner stake of this unit as point 500 North, 500 East in our new grid. Unfortunately the old square was placed at an angle from magnetic north, so none of the other stakes were evenly aligned with the new grid. A grid of stakes was placed at 6 meter intervals over much of the site as referenced to this point. The point 500 North, 500 east was assigned an arbitrary elevation of 100.00 meters.

Elevations were generally made at 6 meter intervals over the center area of the site, and at random closer intervals near the center. The exact locations of all 74 elevation points are shown in Figure 6. The actual elevation data with locations are presented in Appendix 3. Figure 7 shows a contour map of the data presented in 5 centimeter contour intervals. A few observations are in order. First, the elevation variation over the site was about 60 centimeters total. The highest area is on the east, and the site gently slopes to the west. I should add that, having spent several weeks in this area, it feels almost flat, and I was surprised when I saw this contour map. The slope was no handicap to Indians

who lived at the site. The contours in Figure 7 are smooth and gentle except for a single area-right in the center of the map presented. In this location, there is a curious curved variation in the elevation. This caught my attention and eventually help direct the location of our first excavations in 2006. Figure 8 shows the same contour map with the location of all current hardwood trees represented as green dots of approximately correct size, and the two fire trenches discussed earlier.

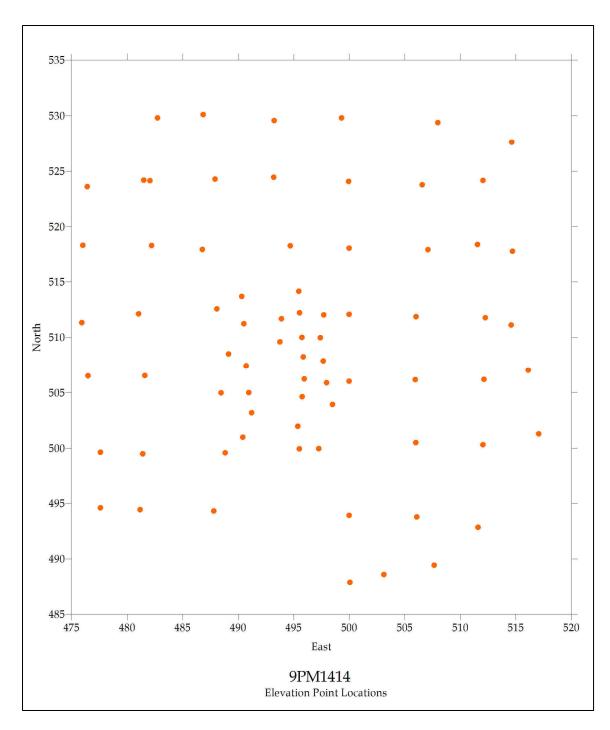


Figure 6. Elevation Point Locations

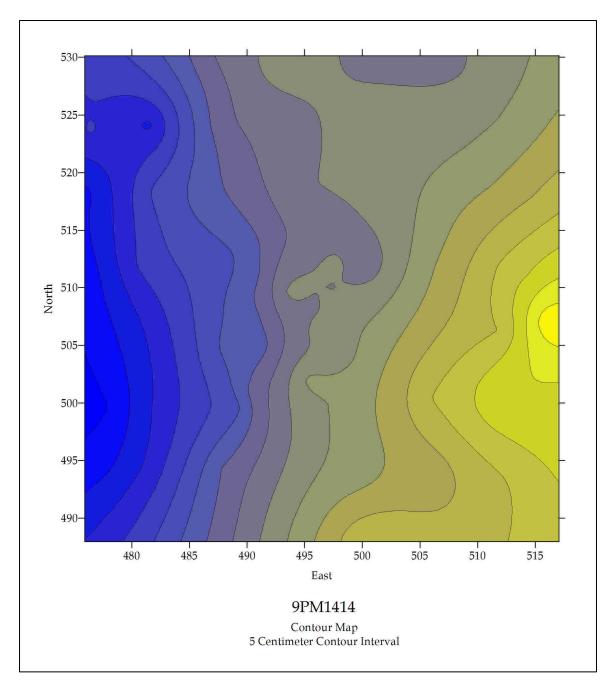


Figure 7. Site Contour Map.

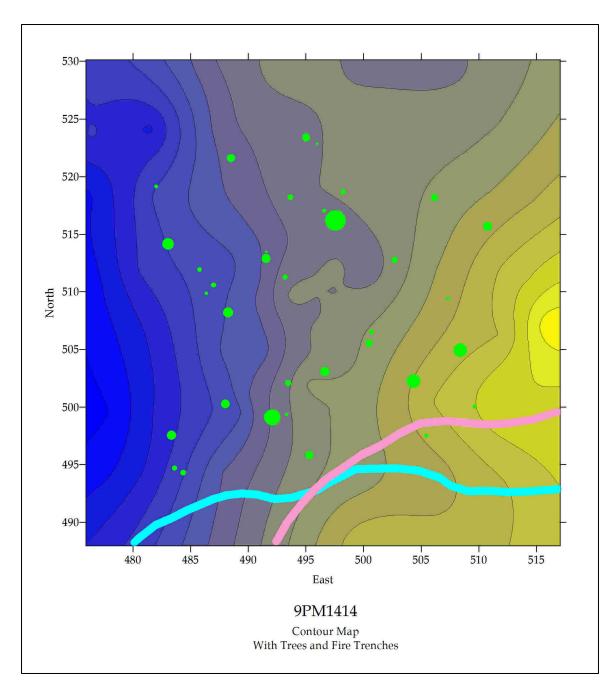


Figure 8. Contour Map with Trees and Fire Trenches.

#### **Shovel Tests**

In order to formally determine the distribution of artifacts over the Lauren site, a series of shovel tests were excavated at the beginning of the 2006 season of excavation. We placed these at 3 meter intervals over all of the area that was gridded with stakes. Shovel tests were dug just to the west of the stakes (placed at 6 meter intervals) and at the halfway points between them. All shovel tests were ca. 30 centimeters in diameters and taken to sterile red clay, usually at 30 centimeters depth. All the fill from each test was screened through 1/4 inch mesh hardware cloth to recover artifacts. Figure 9 shows the tests being made and the nature of the mature hardwood forest at the site. Figure 10 shows the locations of the 150 shovel tests made at the Lauren site. The only artifacts recovered from the shovel tests were pottery sherds. The number and weight of sherds recovered from all of the shovel tests, as well as their exact locations are presented in Appendix 2. The total number of sherds thus recovered was a modest 195, while the total weight of these was 703 grams.

Figure 11 shows a density map of the sherds using the number of sherds from each shovel test. While the sherds are distributed over all the area tested, there is a clear concentration in the south-central part of the site. Examination of the distribution of sherds by weight shows an even more interesting pattern (Figure 12). While the same major area of sherd density is visible, there is a clearer pattern that emerges. This is of a generally round pattern with a lower

density area in the center--sort of a doughnut shape. The diameter of the outside of the circular area is about 20 meters, and the interior area is about 5 to 7 meters across. This pattern immediately suggested to me the possible location of a house with work and cooking areas in the surrounding yard like the nearby Monroe site (Williams 2006). The recognition of this pattern immediately determined where larger scale excavations should be initiated.



Figure 9. General View of Site and Shovel Testing.

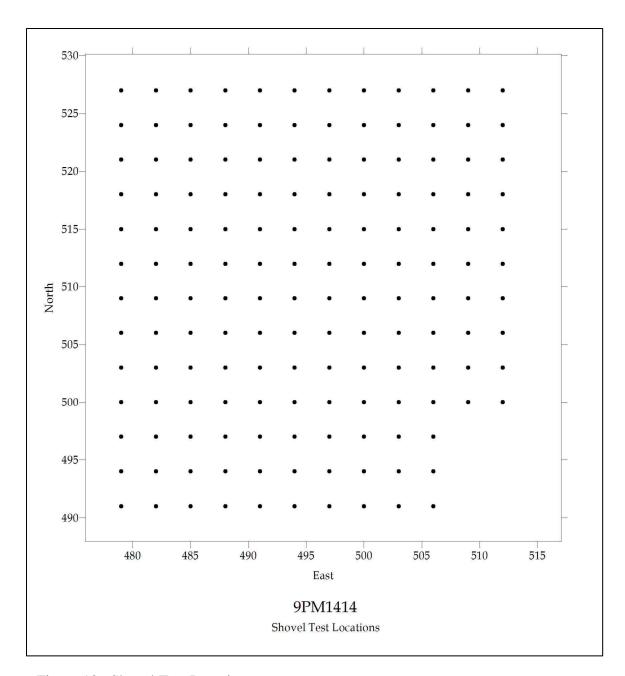


Figure 10. Shovel Test Locations.

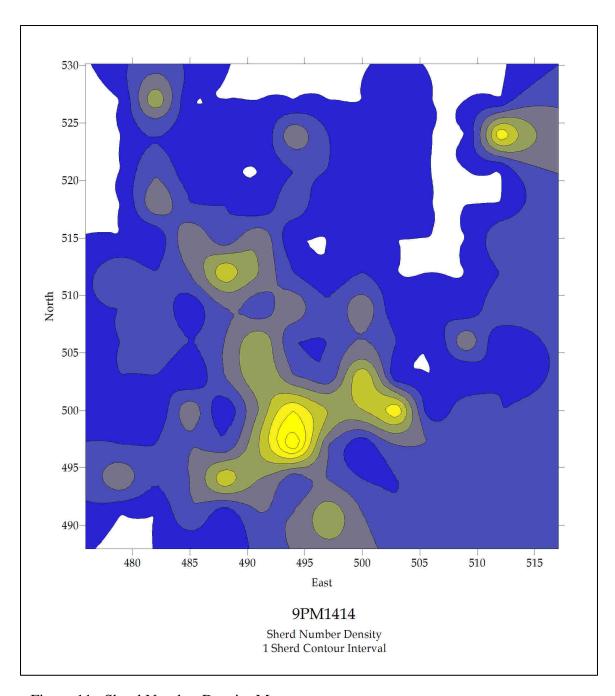


Figure 11. Sherd Number Density Map.

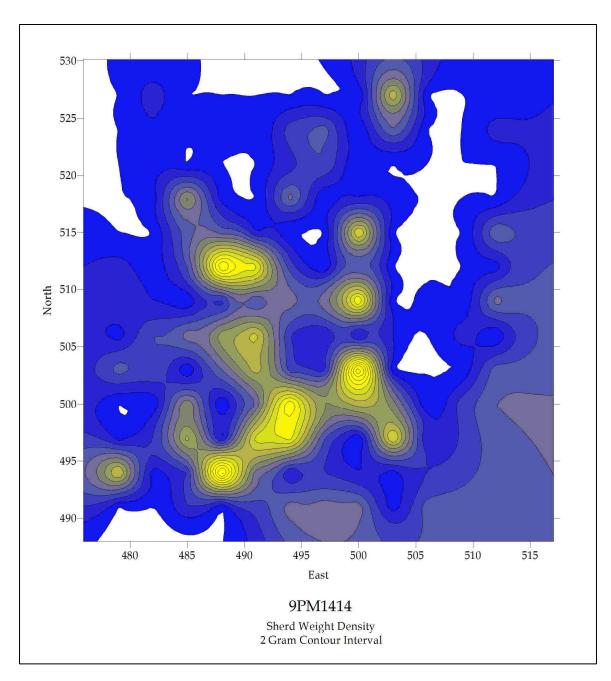


Figure 12. Sherd Weight Density Map.

#### **Excavations**

Several considerations were at play in deciding how to excavate the Lauren site. First, the amount of time and labor available did not permit the entire area of the suspected house to be excavated and screened in traditional manner by hand. Instead, it was anticipated that some mechanical assistance would be necessary. This is, actually, the way the vast majority of Lamar farmsteads excavated to date in the Oconee Valley have been done. The only Lamar site completely excavated by hand has been the nearby Monroe site (Williams 2006). We had already excavated and screened a single 3 by 3 meter excavation unit in 2004. This unit, as it turned out, was in the higher density area southeast of the center of the round area just discussed based upon the shovel tests.

We had available through the courtesy of the BF Grant Forest, a backhoe and operator for clearing the site. Before initiating this work, however, I decided we needed to excavate and screen several squares by hand. This work was designed to recover a larger sample of artifacts and to see if some features could be located before the machine work commenced. To this end, we excavated a series of six 1 by 2 meter units end to end to form a trench 1 meter wide by 12 meters long (Figures 13-15). The grid coordinates for the trench were from 500-512 North and 494-495 East, and the individual excavation units were numbered from south to north. This specific area was chosen to transect the central low

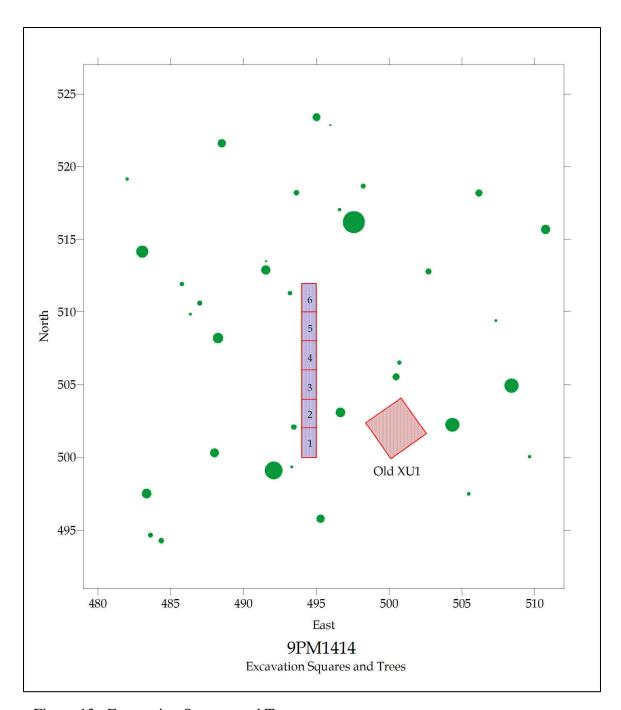


Figure 13. Excavation Squares and Trees.

density area from north to south, slightly to the west of center. This was the area suspected of having a structure of some sort, and the specific location was chosen to avoid trees with as long a trench through the heart of the area as possible.



Figure 14. Crew Excavating Trench.

The average depth of the squares was 20 centimeters to sterile soil, and they were excavated in two levels. Examination of these levels across the six squares showed no difference in sherds by level and no evidence of stratigraphic development, thus the data have been combined for presentation here. There were two apparent post molds located in the southern portion of the trench, and a large rock was located in the northern end of the trench (See Figure 15). No other features were found. The artifacts recovered from the excavation are discussed later in this report.

The rock located in the trench was left in place and we began to notice that a number of other large rocks were present on the surface on the site. I had

noticed a similar presence of large rocks on the surface at the Little River mound site (9MG46) (Williams 2003). In hopes that the rocks might be placed in some meaningful pattern around the site, we mapped the location of all the large rocks visible on the surface. This map is presented in Figure 16. They seem to form an arc around the northern and eastern part of the center of the site. Further discussion of this pattern will be presented later in this report.



Figure 15. Completed Trench, Looking South.

While the results from excavating the trench were positive, time still did not permit us to excavate the rest of the site. Thus we called in the backhoe, and began removing soil to the west of the trench (Figure 17). A steel plate was

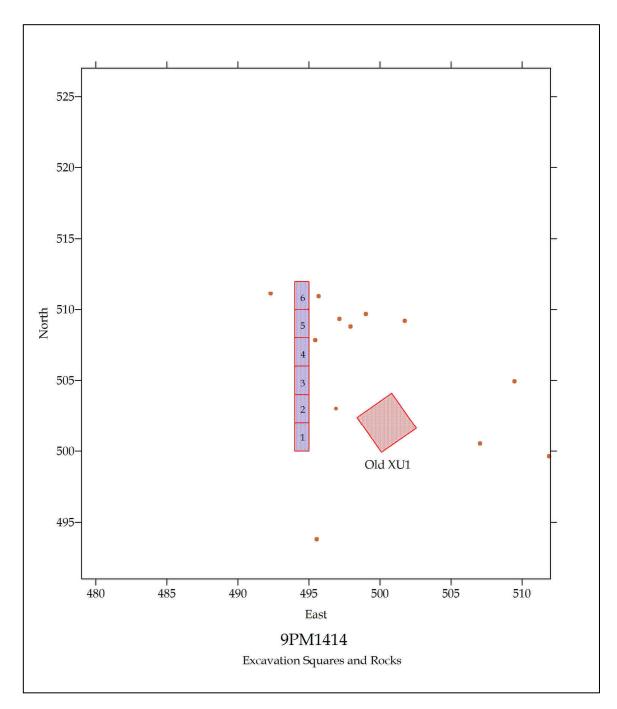


Figure 16. Excavation Squares and Rocks.

welded over the teeth of the blade to prevent gouging of the soil to excessive depths. The crew worked hard to remove the back dirt created by the machine in wheelbarrows to a safe distance to the north. Working carefully, the operator cleared a rounded area about 10 meters north-south by 6 meters east-west in a morning. Despite care and attention by the operator, the floor was not as even as we had hoped. The crew spent about another 2 hours cleaning the area with flat shovels and removing the loose earth to the back dirt pile. While no post molds were apparent in the cleared area, a single feature was located near the center of the area (Figures 18 and 19). This turned out to be a very shallow feature, 103 centimeters east-west by 80 centimeters north-south. This sort of feature, with dark brown to black midden soil with much ash and charcoal, and a few artifacts, is known from similar sites throughout the Oconee Valley. The accepted explanation for these features is the source of red clay for making daub for putting on the walls of a wattle-daub structure. After their initial use, these holes were quickly filled with garbage by the people living at the farmstead.

After the initial day's use of the machine, it occurred to me that the full crew might be able to excavate more of the site by hand, without screening, as fast as could be done with the backhoe. We reasoned that the cleanup time should be reduced considerably, also. Thus, on June 30 we initiated unscreened hand excavations to the east of the trench formed by Squares 1-6. It quickly became apparent that this method was better than using the machine, and all of the remaining excavations at the Lauren site were carried out in this manner.

Almost all of the new hand excavations were carried out to the east of the trench defined by Squares 1-6. The final area excavated in 2006 was 8 by 14 meters in size and was located from 498-512 North and 495-503 East in the grid system of the site. A small amount of additional hand excavation was conducted to the west where the backhoe work was conducted, but I decided to minimize additional work there in favor of the area to the east. This left the western area in the odd circular pattern created by the backhoe as shown in Figure 21. Although this is admittedly a bit unorthodox, it did permit more excavation time on the structure likely located to the east of the excavation trench.

The area excavated was troweled several times to discover post molds (Figure 20). This was made difficult by the presence of several living trees and a number of relatively recent tree stumps. Several additional rocks were located, left in place, and mapped. Ultimately only seven post molds were located in the area carefully troweled in and to the east of the trench. These are mapped in Figure 23. The data for these is presented here in Table 1.

Post Mold	North	East	Diameter (Cm)	Depth (Cm)
1	503.07	499.46	30	37
2	505.27	499.64	26	49
3	506.28	497.47	27	15
4	506.67	496.57	23	27
5	507.75	494.75	35	55
6	506.40	494.40	20	30
7	505.26	494.72	20	43

Table 1. Post Mold Data

By themselves these posts do not form a clear structure pattern. As part of our work, however, an odd trench was located is the southwestern part of the area excavated. The location and angle of this trench strongly suggested that it might be associated somehow with the post molds. As shown in Figure 24, this may define a generally rectangular structure of some sort. We excavated this odd "wall trench", however, and saw no evidence of individual posts in its bottom. The fill was of a dark brown humus-like soil that did have a few sherds of Lamar pottery included. The width of the trench was about 20 centimeters and its depth below the level of the sterile red clay was 15 centimeters. There was relatively little variation in the width and depth of the feature throughout its length, and the ends were relatively abrupt. A large tree near the center of the trench did make its definition difficult in that area (Figure 22). I do not know of any similar construction style for Lamar period houses, and thus admit that this pattern is suspicious at best. The size of the rectangular pattern suggested would be approximately 7 meters northwest-southeast in size by 4.5 meters in the northeast-southwest direction. In all this, it must be remembered that Feature 1 was immediately adjacent to and outside the probable structure--This is the exact pattern seen in many other Lamar sites in the larger Oconee Valley.

Figure 25 shows the location of the rocks located and mapped near the probable structure. These averaged about 25 centimeters in diameter and were of local igneous materials. They clearly form a pattern along the northeastern side of the structure. I do not understand their function. Do they represent some

part of the structure itself? Are they part of the yard furniture? None of the rocks seem to have been used as grinding stones. If there were a great many other such rocks across the site, it would be easy to ignore them, but their limited distribution and general alignments with the structure clearly support the idea that they were placed by and used by the people who lived at the site during the Lamar period.



Figure 17. Backhoe Excavations.



Figure 18. Feature 1.

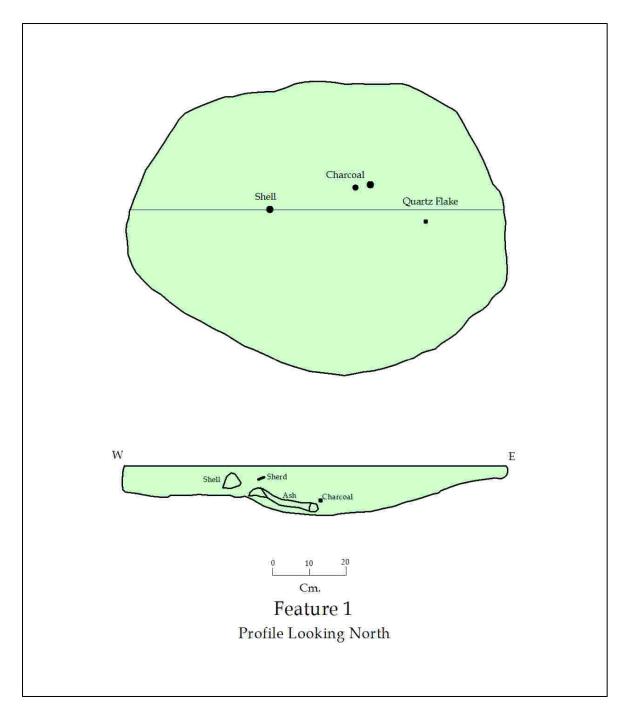


Figure 19. Feature 1 Drawing.



Figure 20. Troweling Block, Looking Southeast.

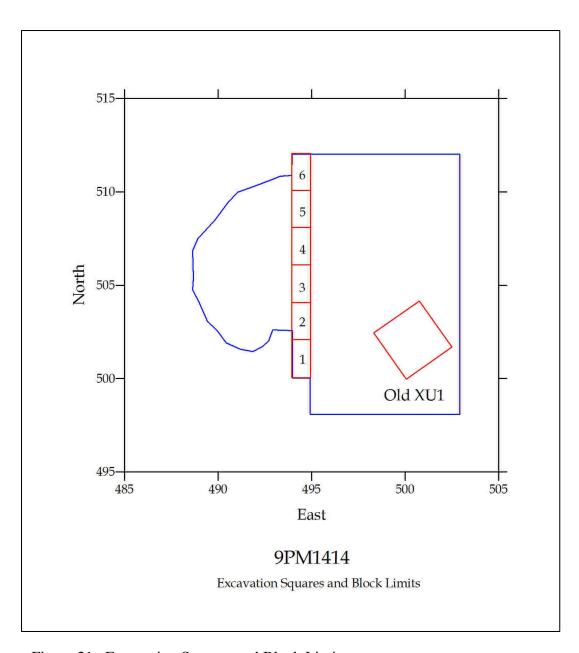


Figure 21. Excavation Squares and Block Limits.



Figure 22. Structure Area, Looking Northwest.

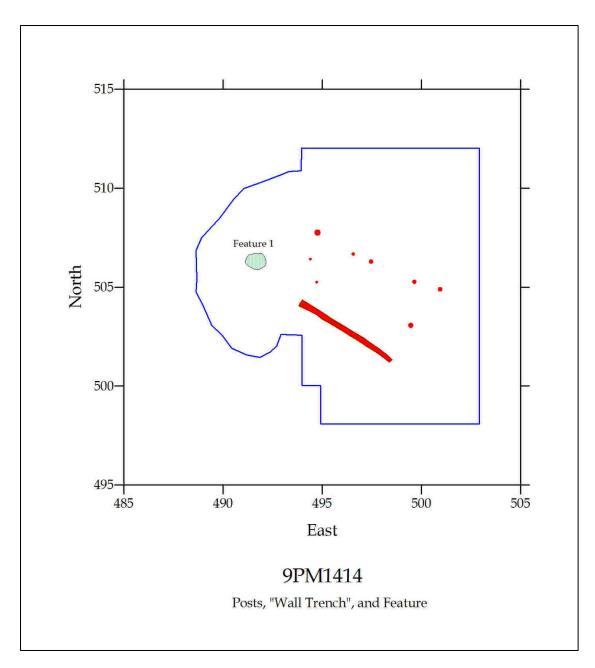


Figure 23. Posts, "Wall Trench", and Feature.

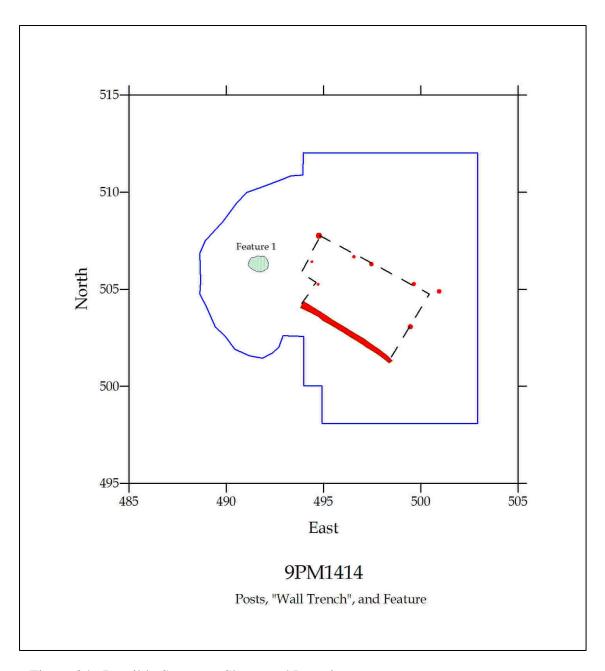


Figure 24. Possible Structure Shape and Location.

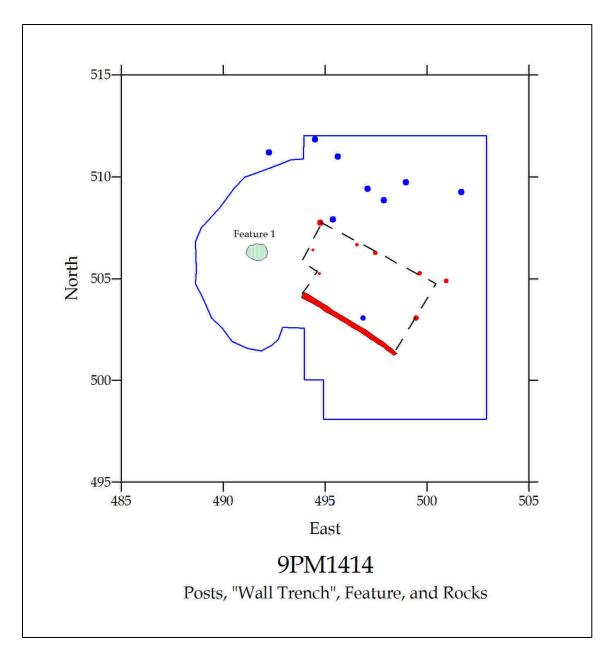


Figure 25. Structure Location and Rocks.

#### **Artifacts**

Because of the way this site was excavated, the number of artifacts recovered in total was not large. The sherds from the 2004 Excavation Unit 1 are listed here in Table 2. There is only a single component represented in the ceramics--the late Lamar occupation commonly called the Dyar phase (ca. A.D. 1500-1560).

2004 Excavation Unit 1	Number
Lamar Plain	138
Lamar Bold Incised	23
Lamar Medium Incised	31
Lamar Complicated Stamped	60
Lamar Fine Incised	2
Lamar Bold Incised & Punctated	1
Simple, Plain Rim	8
Simple, Bold Incised Rim	4
Simple, Medium Incised Rim	11
Simple, Fine Incised Rim	2
Folded, Plain Rim	6
Folded Pinched Rim	8
Notched Rim	1
Folded Notched, Incised & Punctated Rim	2
Total	297

Table 2. Pottery from 2004 Excavation Unit 1.

The material from the six 1 by 2 meter excavation squares that form the trench are presented in Tables 3-5. Table 3 presents the pottery. This data also shows a single component ceramic occupation, confirming that from the 2004 excavation unit. The total area of the trench (12 square meters) is only 1/3 larger than the 2004 excavation unit (9 square meters), thus the total density of sherds from the trench area is a bit less than that in the 2004 unit. This is in direct

agreement with the overall site density pattern as revealed in the shovel testing-the density of sherds in the area of the trench is a bit lower.

Square	Plain	Bold Incised	Medium Incised	Complicated Stamped	Body Totals	Simple, Plain Rim	Simple, Medium Incised Rim	Folded Pinched, Plain Rim	Folded Pinched, Stamped Rim	Flared Interior Incised Rim	Flared Rim	Rim Totals	Tobacco Pipe Fragment	Coil Fragment	Total Ceramic
1	15	0	1	9	25	0	3	2	1	0	0	6	0	1	32
2	25	2	3	14	44	1	0	3	0	0	0	4	0	0	48
3	26	3	2	9	40	0	0	1	0	0	0	1	0	0	41
4	18	0	8	20	46	1	0	5	0	1	1	8	1	0	55
5	32	1	0	8	41	0	0	2	0	0	0	2	0	0	43
6	13	0	2	5	20	1	0	0	0	0	0	1	0	0	21
Totals	129	6	16	65	216	3	3	13	1	1	1	22	1	1	240

Table 3. Sherds From Excavation Units.

Table 4 presents the lithics from the six excavation units in the trench. In virtually all Late Lamar site in the Oconee Valley there are no lithics associated with the sites. We recovered no projectile points from the Lauren site, but I believe it highly likely that the vast majority of the lithics listed in Table 4 represent an Archaic period occupation at the site. Diabase flakes often date to the Late Archaic period.

Square	Quartz Flake	Quartz Shatter	Quartz Biface	Coastal Plain Secondary Flake HT	Coastal Plain Tertiary Flake	Coastal Plain Tertiary Flake HT	Coastal Plain Shatter	Ridge/ Valley Flake	Diabase Flake	Diabase Shatter	Total Flaked Stone
1	5	13	0	0	3	0	0	0	0	1	22
2	9	9	0	1	3	3	0	0	2	0	27
3	5	11	1	0	1	0	1	0	1	0	20
4	1	6	0	0	1	0	0	1	1	0	10
5	1	4	0	0	0	0	0	0	0	0	5
6	2	8	0	0	1	0	0	1	0	0	12
Totals	23	51	1	1	9	3	1	2	4	1	96

Table 4. Lithics From Excavation Units.

Table 5 lists a variety of additional materials and data from the excavation squares forming the trench. The presence of the red pebbles is common on Late Lamar sites, and is believed to be associated with cooking activity (Williams 1995). The material identified as daub is generally in very small pieces, but their association with a structure is logical. The total weight of all sherds was 1459 grams (3.2 pounds).

		Red	Bone	Daub	Unmodified Rock	Sherds > 1/2	Sherds <1/2	Total Sherd
Square	Charcoal	Pebbles	Weight	Weight	Weight	inch	inch	Weight
1	0.0	8	0.0	92.0	594.0	163.0	27.0	190.0
2	1.0	13	0.0	224.0	945.0	217.0	29.0	246.0
3	1.0	0	0.0	141.0	561.0	209.0	58.0	267.0
4	6.0	2	0.0	108.0	850.0	325.0	54.0	379.0
5	0.0	2	0.0	88.0	177.0	219.0	34.0	253.0
6	1.0	0	1.0	70.0	593.0	106.0	18.0	124.0
Totals	9.0	25	1.0	723.0	3720.0	1239.0	220.0	1459.0

Table 5. Miscellaneous Material From Excavation Units.

### **Summary and Observations**

The Lauren site is the location of a small Late Lamar farmstead. The amount of excavation that was accomplished was limited by time constraints and the presence of several trees in this beautiful hardwood forest. The best evidence for a structure is the suggested area bounded by the eight post molds and the curious trench. The presence of Feature 1 just to the west of this area strongly suggests that the identification of Structure 1 is accurate. No interior details of the rectangular 7 by 4.5 meter structure were discovered. A curious pattern of large rocks defined the northeastern yard portion of the farmstead. The site might have an earlier Archaic period component, based upon the presence of the lithics, but this is unclear at best due to the lack of diagnostic tools. The ceramics from the site all date to the Late Lamar period, ca, A.D. 1500-1550 (Williams and Shapiro 1990). Other than the probable daub processing pit represented by Feature 1, no other features were recorded other than post molds. It seems very unlikely that this site was occupied for a long period--certainly less than 10 years, and perhaps under 5 years. The recovered artifacts, primarily sherds, were uniformly small and thus no real ceramic vessel analysis was possible. Other than the patterns revealed by the shovel testing, no patterns of artifact distribution were possible since we had to excavate the majority of the site without screening and artifact recovery.

This site did not show the same internal structure as the Monroe site, another Late Lamar farmstead 1 kilometer away (Williams 2006). That site showed a circular house with two additional small buildings in the yard, one a probable rectangular kitchen building. One possible argument to be made about the Lauren site is that the structure we located was such a kitchen structure and the main house was simply not located in the area we excavated. I do not believe this was the case however. The shovel test sherd density pattern surrounding the main house at Monroe showed a generally similar pattern to that Structure 1 at the Lauren site. That is, a lower sherd density area centered on the main house, and a higher density area of sherds surrounding it. Another difference is that the rectangular probable kitchen structure at the Monroe site was smaller--only half the floor area of the structure at the Lauren site.

If we are right about the Lauren site, then, one conclusion is that there is no single farmstead pattern for sites of the same period in the Whitehead Corner area of the Little River Valley Late Mississippian chiefdom. There are a great many more such sites in this immediate area, thus a full answer to this question of Lamar farmstead variability must await the excavation of more farmsteads in this area.

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## Williams, Mark, and Gary Shapiro

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**Appendix 1** 2004 Shovel Test Data

ST Number	UTM North	UTM East	Sherd Number	Sherd Weight	Plain	Complicated Stamped	Simple, Plain Rim	Simple Stamped
1	3699681	272112	0	0	0	0	0	0
2	3699677	272124	0	0	0	0	0	0
3	3699686	272114	2	9	1	0	0	1
4	3699683	272127	0	0	0	0	0	0
5	3699691	272117	3	7	2	0	0	0
6	3699689	272130	1	3	1	0	0	0
7	3699696	272119	2	6	2	0	0	0
8	3699693	272133	0	0	0	0	0	0
9	3699700	272123	3	6	3	0	0	0
10	3699696	272135	1	18	0	1	0	0
11	3699703	272126	3	6	2	0	1	0
12	3699699	272136	0	0	0	0	0	0
13	3699706	272128	3	9	2	1	0	0
14	3699703	272138	0	0	0	0	0	0
15	3699709	272130	0	0	0	0	0	0
16	3699708	272125	0	0	0	0	0	0
17	3699713	272131	1	2	1	0	0	0
18	3699713	272123	0	0	0	0	0	0
19	3699717	272133	0	0	0	0	0	0
20	3699717	272118	4	7	4	1	0	0
21	3699721	272127	0	0	0	0	0	0
22	3699723	272110	1	2	1	0	0	0
23	3699732	272101	0	0	0	0	0	0
24	3699678	272145	1	1	1	0	0	0
Totals			25	76	20	3	1	1

**Appendix 2** 2006 Shovel Test Data

			C1 1	C1 1
ST	North	East	Sherd Number	Sherd Weight
1	491	479	0	0
2	491	482	0	0
3			2	4
4	491	485		
-	491	488	0	0
5	491	491	2	5
6	491	494	2	9
7	491	497	4	9
8	491	500	2	9
9	491	503	1	1
10	491	506	2	7
11	494	479	3	17
12	494	482	1	1
13	494	485	2	4
14	494	488	5	30
15	494	491	3	9
16	494	494	1	2
17	494	497	2	4
18	494	500	1	2
19	494	503	1	1
20	494	506	1	4
21	497	479	1	1
22	497	482	1	4
23	497	485	2	15
24	497	488	1	1
25	497	491	4	19
26	497	494	8	21
27	497	497	2	6
28	497	500	0	0
29	497	503	2	19
30	497	506	2	2
31	500	479	0	0
32	500	482	0	0
33	500	485	3	12
34	500	488	0	0
35	500	491	3	8
36	500	494	6	24
37	500	497	4	12
38	500	500	4	15
39	500	503	6	11
40	500	506	0	0

			Cl J	Chand
ST	North	East	Sherd Number	Sherd Weight
41	500	509	2	5
42	500	512	1	8
43	503	479	1	7
44	503	482	1	6
45		485	0	0
	503 503			
46		488	2	8 15
47	503	491 494	4	
48	503		2 1	5 3
49	503	497		
50	503	500	5	31
51	503	503	0	0
52	503	506	0	0
53	503	509	0	0
54	503	512	1	7
55	506	479	1	1
56	506	482	2	6
57	506	485	1	9
58	506	488	2	13
59	506	491	4	17
60	506	494	1	4
61	506	497	1	2
62	506	500	2	1
63	506	503	1	2
64	506	506	0	0
65	506	509	3	3
66	506	512	0	0
67	509	479	1	4
68	509	482	2	2
69	509	485	0	0
70	509	488	2	3
71	509	491	1	6
72	509	494	3	9
73	509	497	1	9
74	509	500	3	23
75	509	503	0	0
76	509	506	1	1
77	509	509	0	0
78	509	512	2	9
79	512	479	2	3
80	512	482	1	1

			Sherd	Sherd
ST	North	East	Number	Weight
81	512	485	2	6
82	512	488	5	27
83	512	491	3	21
84	512	494	1	5
85	512	497	0	0
86	512	500	1	6
87	512	503	0	0
88	512	506	0	0
89	512	509	0	0
90	512	512	1	1
91	515	479	0	0
92	515	482	0	0
93	515	485	3	7
94	515	488	1	7
95	515	491	3	2
96	515	494	0	0
97	515	497	0	0
98	515	500	1	19
99	515	503	0	0
100	515	506	0	0
101	515	509	0	0
102	515	512	2	8
103	518	479	0	0
104	518	482	3	1
105	518	485	1	13
106	518	488	1	1
107	518	491	0	0
108	518	494	2	9
109	518	497	0	0
110	518	500	1	2
111	518	503	1	1
112	518	506	0	0
113	518	509	0	0
114	518	512	0	0
115	521	479	0	0
116	521	482	2	1
117	521	485	0	0
118	521	488	0	0
119	521	491	0	0
120	521	494	1	3

ST         North         East         Sherd Number         Sherd Weight           121         521         497         1         6           122         521         500         0         0           123         521         503         0         0           124         521         506         0         0           125         521         509         0         0           126         521         512         0         0           127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         <		ı			
121         521         497         1         6           122         521         500         0         0           123         521         503         0         0           124         521         506         0         0           125         521         509         0         0           126         521         512         0         0           127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           138         524         512         6         3					
122         521         500         0         0           123         521         503         0         0           124         521         506         0         0           125         521         509         0         0           126         521         512         0         0           127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         527         479         0         0				Number	Weight
123         521         503         0         0           124         521         506         0         0           125         521         509         0         0           126         521         512         0         0           127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         500         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         488         0         0		521	497	1	6
124         521         506         0         0           125         521         509         0         0           126         521         512         0         0           127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         485         0         0	122	521	500	0	0
125         521         509         0         0           126         521         512         0         0           127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         488         0         0	123	521	503	0	0
126         521         512         0         0           127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         488         0         0           143         527         491         0         0	124	521	506	0	0
127         524         479         0         0           128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         488         0         0           143         527         494         0         0           144         527         494         0         0	125	521	509	0	0
128         524         482         1         2           129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         500         0         0	126	521	512	0	0
129         524         485         0         0           130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         494         0         0           144         527         494         0         0           145         527         500         0         0	127	524	479	0	0
130         524         488         1         2           131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         500         0         0           146         527         500         0         0	128	524	482	1	2
131         524         491         0         0           132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         497         0         0           146         527         500         0         0           147         527         503         1         16	129	524	485	0	0
132         524         494         3         5           133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         500         0         0           146         527         503         1         16           148         527         506         0         0           149         527         509         0         0 <td>130</td> <td>524</td> <td>488</td> <td>1</td> <td>2</td>	130	524	488	1	2
133         524         497         1         7           134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         497         0         0           146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0 <td>131</td> <td>524</td> <td>491</td> <td>0</td> <td>0</td>	131	524	491	0	0
134         524         500         0         0           135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         497         0         0           146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	132	524	494	3	5
135         524         503         1         8           136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         497         0         0           146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	133	524	497	1	7
136         524         506         0         0           137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         497         0         0           146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	134	524	500	0	0
137         524         509         0         0           138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         497         0         0           146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	135	524	503	1	8
138         524         512         6         3           139         527         479         0         0           140         527         482         4         3           141         527         485         0         0           142         527         488         0         0           143         527         491         0         0           144         527         494         0         0           145         527         497         0         0           146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	136	524	506	0	0
139     527     479     0     0       140     527     482     4     3       141     527     485     0     0       142     527     488     0     0       143     527     491     0     0       144     527     494     0     0       145     527     497     0     0       146     527     500     0     0       147     527     503     1     16       148     527     506     0     0       149     527     509     0     0	137	524	509	0	0
140     527     482     4     3       141     527     485     0     0       142     527     488     0     0       143     527     491     0     0       144     527     494     0     0       145     527     497     0     0       146     527     500     0     0       147     527     503     1     16       148     527     506     0     0       149     527     509     0     0	138	524	512	6	3
141     527     485     0     0       142     527     488     0     0       143     527     491     0     0       144     527     494     0     0       145     527     497     0     0       146     527     500     0     0       147     527     503     1     16       148     527     506     0     0       149     527     509     0     0	139	527	479	0	0
142     527     488     0     0       143     527     491     0     0       144     527     494     0     0       145     527     497     0     0       146     527     500     0     0       147     527     503     1     16       148     527     506     0     0       149     527     509     0     0	140	527	482	4	3
143     527     491     0     0       144     527     494     0     0       145     527     497     0     0       146     527     500     0     0       147     527     503     1     16       148     527     506     0     0       149     527     509     0     0	141	527	485	0	0
144     527     494     0     0       145     527     497     0     0       146     527     500     0     0       147     527     503     1     16       148     527     506     0     0       149     527     509     0     0	142	527	488	0	0
145         527         497         0         0           146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	143	527	491	0	0
146         527         500         0         0           147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	144	527	494	0	0
147         527         503         1         16           148         527         506         0         0           149         527         509         0         0	145	527	497	0	0
148         527         506         0         0           149         527         509         0         0	146	527	500	0	0
149 527 509 0 0	147	527	503	1	16
	148	527	506	0	0
150 527 512 0 0	149	527	509	0	0
	150	527	512	0	0

# **Appendix 3** 2006 Elevation Data

North         East         Elevation           506.05         499.99         99.90           512.08         499.99         99.86           518.07         499.99         99.86           524.08         499.94         99.87           493.93         499.98         99.93           487.91         500.04         100.05           512.04         497.70         99.87           509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           512.22         495.52         99.84           503.69         490.31         99.73           507.44         490.71			
512.08         499.99         99.86           518.07         499.99         99.86           524.08         499.94         99.87           493.93         499.98         99.93           487.91         500.04         100.05           512.04         497.70         99.87           509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           508.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21	North	East	Elevation
518.07         499.99         99.86           524.08         499.94         99.87           493.93         499.98         99.93           487.91         500.04         100.05           512.04         497.70         99.87           509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           511.23         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89	506.05	499.99	99.90
524.08         499.94         99.87           493.93         499.98         99.93           487.91         500.04         100.05           512.04         497.70         99.87           509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           512.22         495.52         99.84           513.69         490.31         99.73           511.23         490.51         99.73           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75	512.08	499.99	99.81
493.93         499.98         99.93           487.91         500.04         100.05           512.04         497.70         99.87           509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08	518.07	499.99	99.86
487.91         500.04         100.05           512.04         497.70         99.87           509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08	524.08	499.94	99.87
512.04         497.70         99.87           509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46	493.93	499.98	99.93
509.99         497.39         99.85           507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82	487.91	500.04	100.05
507.87         497.65         99.88           505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82	512.04	497.70	99.87
505.91         497.96         99.87           503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07	509.99	497.39	99.85
503.93         498.49         99.89           499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           506.19         505.94	507.87	497.65	99.88
499.95         495.49         99.89           499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           506.19         505.94         99.99           511.87         506.00         99.95	505.91	497.96	99.87
499.98         497.24         99.90           501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           506.19         505.94         99.99           511.87         506.00         99.95	503.93	498.49	99.89
501.99         495.37         99.91           504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           499.59         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	499.95	495.49	99.89
504.63         495.76         99.86           506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	499.98	497.24	99.90
506.25         495.95         99.86           508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           499.59         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	501.99	495.37	99.91
508.25         495.84         99.84           510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           506.19         505.94         99.99           511.87         506.00         99.95	504.63	495.76	99.86
510.01         495.74         99.85           512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           506.19         505.94         99.99           511.87         506.00         99.95	506.25	495.95	99.86
512.22         495.52         99.84           514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	508.25	495.84	99.84
514.16         495.44         99.82           513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	510.01	495.74	99.85
513.69         490.31         99.73           511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           499.59         488.46         99.72           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	512.22	495.52	99.84
511.23         490.51         99.73           507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           499.59         488.46         99.72           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	514.16	495.44	99.82
507.44         490.71         99.74           505.00         490.94         99.72           503.20         491.21         99.76           500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	513.69	490.31	99.73
505.00         490.94         99.72           503.20         491.21         99.76           500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	511.23	490.51	99.73
503.20         491.21         99.76           500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	507.44	490.71	99.74
500.99         490.40         99.76           511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	505.00	490.94	99.72
511.68         493.89         99.84           509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	503.20	491.21	99.76
509.62         493.75         99.86           512.57         488.08         99.69           508.52         489.13         99.72           505.00         488.46         99.72           499.59         488.82         99.68           493.78         506.07         99.97           500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	500.99	490.40	99.76
512.57     488.08     99.69       508.52     489.13     99.72       505.00     488.46     99.72       499.59     488.82     99.68       493.78     506.07     99.97       500.50     505.99     100.05       506.19     505.94     99.99       511.87     506.00     99.95	511.68	493.89	99.84
508.52       489.13       99.72         505.00       488.46       99.72         499.59       488.82       99.68         493.78       506.07       99.97         500.50       505.99       100.05         506.19       505.94       99.99         511.87       506.00       99.95	509.62	493.75	99.86
505.00     488.46     99.72       499.59     488.82     99.68       493.78     506.07     99.97       500.50     505.99     100.05       506.19     505.94     99.99       511.87     506.00     99.95	512.57	488.08	99.69
499.59       488.82       99.68         493.78       506.07       99.97         500.50       505.99       100.05         506.19       505.94       99.99         511.87       506.00       99.95	508.52	489.13	99.72
493.78     506.07     99.97       500.50     505.99     100.05       506.19     505.94     99.99       511.87     506.00     99.95	505.00	488.46	99.72
500.50         505.99         100.05           506.19         505.94         99.99           511.87         506.00         99.95	499.59	488.82	99.68
506.19     505.94     99.99       511.87     506.00     99.95	493.78	506.07	99.97
511.87 506.00 99.95	500.50	505.99	100.05
	506.19	505.94	99.99
517.93   507.07   99.93	511.87	506.00	99.95
	517.93	507.07	99.93

North	East	Elevation
523.77	506.57	99.87
524.17	512.02	99.91
518.40	511.53	99.96
511.77	512.25	100.06
506.19	512.11	100.05
500.32	512.04	100.15
518.28	494.67	99.85
524.46	493.20	99.82
524.28	487.91	99.78
517.96	486.76	99.73
494.43	481.17	99.56
499.51	481.40	99.54
506.55	481.58	99.56
512.13	481.01	99.62
518.30	482.19	99.67
524.15	482.04	99.56
524.20	481.49	99.54
494.32	487.81	99.75
494.60	477.60	99.49
499.64	477.60	99.44
506.53	476.47	99.47
511.33	475.92	99.47
518.34	476.01	99.49
523.60	476.39	99.61
529.83	482.73	99.70
530.13	486.83	99.80
529.60	493.23	99.88
529.82	499.31	99.84
529.39	507.96	99.84
527.64	514.62	99.91
517.79	514.70	100.00
511.12	514.58	100.10
507.04	516.10	100.24
501.31	517.05	100.14
489.44	507.64	100.01
492.86	511.59	100.03
488.60	503.12	100.03