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## PVN OP 011 Excavation Report

Edward M. Schortman  
*Kenyon College*

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## Operation 11

Operation 11 is situated on level terrain near the middle of La Sierra's densely settled North Cluster. It is surrounded by Op.54 on the north, Op. 53 on the east, Op. 20 on the south, and Op. 13 on the west. Overall, Op.11 covers ca. 500m<sup>2</sup> and consists of six surface-visible buildings, five of which are set atop a low earthen platform. All of the edifices situated on the aforementioned platform were excavated in 1988, resulting in the clearing of about 125m<sup>2</sup>, the work being directed by a crew composed of M. Dall, R. Goebbel, S. Kane, H. Mahan, J. Miller, P. Reed, D. Schafer, and P. Whooley.

### Structure 97

Structure 97 occupies the northwest corner of the building cluster encompassed by Op. 11. It is located approximately 2.3m west of Str. 101 and 1.35m north of Str.98. Digging here concentrated on clearing the platform that forms the building's core as well as uncovering segments of the terraces that bound the edifice on the east, south, and west; the northern flank beyond the platform was not exposed. Fully 24m<sup>2</sup> was revealed in the course of excavations conducted here within Subop. 11A and 11C, digging reaching a maximum depth of 0.75m outside well-preserved architecture and 0.73m in construction fill. This work revealed one major building episode with at least one period of renovation. The investigations were conducted under the direction, primarily, of M. Dall, S. Kane, H. Mahan, J. Miller, P. Reed, and P. Whooley during the 1988 field season.

### Time Spans

<u>Time Span</u>	<u>Construction Phase</u>	<u>Units</u>	<u>Strata</u>	<u>Features</u>	<u>Date(s)</u>
1	-	-	S.2, 3	F.2	LCLII
2	Str. 97-1 <sup>st</sup>	U.1-5, 9-14, 18, 20	-	-	LCLII, III
3	Str. 97-1 <sup>st</sup>	U.6-8, 15-17, 19, 21	-	-	LCLIII, II
4	-	-	S.1, 2	F.1	

### Time Span 1

The first activity attested to in the environs of Str. 97 was the possible construction of a 0.5m-wide stone wall (F.2) located 0.23m south of Str. 97's south basal facing (U.18). This entity was only revealed to a height of 0.12m, F.2's base lying beyond our excavation limits. Feature 2 was fashioned of unmodified river cobbles and was not sufficiently exposed to infer its

orientation or function. It seems likely that F.2 served as the foundation for a surface-level building but this, and, in fact, the feature's cultural origins, could not be definitely established.

Overlying F.2 by 0.01m is a fine-textured, brown soil containing relatively few stones (S.3). Stratum 3 was only found south of U.18 where it extends from a point 0.2m south of that wall for 1.23m further in that direction. Over this distance S.3 rises 0.2m, reaching a maximum exposed thickness of 0.2m; its base was not encountered in our work.

At least 0.2m of S.2, a moderately coarse-textured, brown soil was laid down west of Str. 97. This is the portion of S.2 that underlies architecture associated with the building's western flank. As will be described in T.S. 4, S.2 continued to be deposited following Str. 97's abandonment, eventually blanketing the construction's lower units. There was no evidence of a clear stratigraphic break within S.2 marking pre-construction and post-abandonment episodes of deposition, the line being approximately drawn based on the vertical positions of intact basal architecture and fallen debris (F.1). The base of S.2 was not revealed in our excavations and we cannot say how, if at all, it relates to S.3 which was not found west of Str. 97. Digging was not pursued deeply enough east and north of the building to reveal if S.2 continues below architecture on these sides, though such a supposition is likely.

### Time Span 2

The earliest clear construction associated with Str. 97 is the core platform bounded by U.1-4. These walls define the platform's summit on all sides and are 0.28-0.65m wide. The east, south and north walls (U.1, 4, and 3, respectively) are 0.28-0.32m across and probably doubled as platform facings and support for perishable superstructure walls. Unit 2, the western facing, is roughly twice the width of its counterparts (0.65m across) and may well have served as both wall support and bench or shelf. Units 1-4 were exposed to heights of 0.34-0.4m though they continue beyond our excavation limits behind and below at least immediately flanking construction. It is likely that the platform defined by these constructions was the core around which the terraces described below were built and onto which they were anchored. The summit bounded by U.1-4 was floored with a layer of flat-laid cobbles (U.20), encompasses 3.3m<sup>2</sup>, and contained no built-in furniture.

Structure 97 was ascended on the west by an estimated two stone-faced, stone-filled terraces (U.5 and 9). The former lies 1.77m west of U.2 and was exposed to a depth of 0.3m (its full height was obscured by later construction added to the west). The U.5 terrace runs for 0.56m to the east where it is succeeded by U.9. The latter rises 0.2m above its predecessor and is 1.2m across, terminating at U.2 on the east. Unit 2 appears to run down behind (east of), and thus predate, U.9. The upper part of the densely packed unit of cobbles and small stones set in a brown earth matrix that comprise the fill of U.5 and 9 apparently served as the terrace surfaces in both cases.

Two terraces also ascend Str. 97-1st on the east. Here, the basal riser is a mere 0.14m high (U.12) and gives way to a surface 0.93m wide paved with cut blocks and schist slabs (U.13). Unit 13, in turn, abuts the next ascending riser, U.11 which stands 0.7m tall above the stone surface. Unit 11 is backed on the west by a stone pavement (U.14), the entire U.11/14 terrace measuring 0.9m across. Both U.11 and 12 step 0.2-0.3m out to the east over the 3m they were exposed running north-south. In the case of U.11 the outset is 2m north of its southern-most exposed terminus, roughly in line with the core platform's northeast corner. On U.12 the step-out occurs 0.5m north of its exposed southern end, about equal with said platform's southeast corner.

Structure 97's south flank is mounted by at least one stone-faced terrace (U.10). Unit 10 is minimally 0.38m high (the base was not identified) and ranges from 0.46-0.9m wide. The variations in width are accounted for by the changes in direction taken by the southern terrace; it runs close, and roughly parallel, to U.4 at 87 degrees for an estimated 2.75m from its inferred corner with U.9 on the west after which U.10 splays out to the south at an orientation of 106 degrees for the remaining 1.6m it was exposed in this direction. Unit 10's terrace surface is primarily made of earth and a shallow probe dug against the southern core platform wall, U.4, revealed that this construction continued down behind the southern terrace. Fronting U.10 on the south are the remains of what may be a basal terrace (U.18). This poorly preserved stone-faced construction was exposed to a height of 0.36m and defines a terrace estimated to be 0.6m wide. Unit 10 rises 0.1m above the earthen terrace tread of U.18 and extends, minimally, 0.28m below that surface which backs the putative southern facing.

Overall, Str. 97-1st was, by the conclusion of TS.2, a stone-faced platform that measured, at its maximum, 6.48m east-west by at least 3.88m north-south (investigations on the north did not proceed far enough to reveal if any terraces graced this side of the edifice) and was aligned very roughly 357-7 degrees. The building's centerpiece was a platform covering 2.4x2.7m (measured across the center) that stood an estimated 0.58m, 0.68m, and 0.46m high on the east, west, and south, respectively and supported a featureless, stone-floored superstructure encompassing 3.3m<sup>2</sup>. Most likely the tops of the walls bordering this space supported perishable upper constructions, the western example being sufficiently wide (0.65m across) to have also been used as a bench or shelf. Two stone-faced terraces bound Str. 97 on its three exposed sides; the situation on the north is unclear. These surfaces are 0.46-1.2m wide and may have provided access to the building from the east, south, and west.

All units comprising Str. 97 at this time were fashioned primarily of unworked river cobbles set in a brown earth matrix. Where these stones were employed in platform and terrace facings there was a strong tendency to orient their naturally flatter faces outwards. Some faced blocks were incorporated as a minority component in U.5 and 11 whereas U.12 and its backing floor (U.13) are fashioned almost exclusively of masonry and schist slabs. Small chinking stones are incorporated in most of the walls dating to TS. 2; they usually fill in the gaps between the

larger rocks. An exception is U.3, the northern facing of the core platform, where un-coursed small stones (none larger than 0.15m on their longest dimension; most less than 0.1m) comprise most of the wall and support a single surviving course of larger cobbles.

### Time Span 3

The next phase is marked by the extension of Str. 97-1st a total of 1.72m to the west through the construction of three low, stone-faced terraces (U.6-8) that buried U.5. Each member of this triad was very poorly preserved, the two western-most examples (U.6, 7) only being recognized through examination of the trench section. Unit 6 stands a reconstructed 0.2m high and runs 0.23m to the east where it is succeeded by U.7. The latter rises 0.18m above its predecessor and gives way 0.4m to the east to U.8. Unit 8 is 0.22m tall and is 1.66m wide, ending at U.9 which still stands 0.2m above the U.8 terrace and measures 1.2m across. Unit 5, the western basal terrace of Str. 97-1<sup>st</sup> during TS. 2, was completely covered by construction dating to this interval. The fill of U.6, 7, and 8 consists of medium to small cobbles set in a moderately coarse-textured brown soil. One consequence of these additions was to create a set of two low, stone risers (U.6 and 7) that give easy access to an equal number of very broad terraces (1.2m and 1.66m across) on Str. 97-1<sup>st</sup>'s west side. Though the building could certainly have been ascended from this flank during TS. 2, the construction of U.6 and 7 may well have formalized this access pattern.

There are hints that the summit was filled up to the tops of its bordering walls (U.1-4) and capped with an earth floor at least parts of which were burnt. This construction, all glossed as U.21, is suggested by the recovery of fragments of burnt earth resting on fill at a level roughly equal to the top of U.2, the western summit wall/bench. If this was the case, the addition of U.21 would have raised Str. 97-1<sup>st</sup>'s total height by an estimated 0.28m. Presumably, U.1-4 continued to support perishable walls that delimited the newly elevated superstructure though whether the 0.65m-wide U.2 still served as a bench/shelf remains uncertain.

The nature of those modifications made to Str. 97-1<sup>st</sup>'s east and south sides is unclear as is their timing. Because there is no clear reason for segregating these renovations within their own time spans they are included here with the understanding that they may pertain to a later episode in Str. 97-1<sup>st</sup>'s use-life. On the east, the 0.9m between the U.1 summit wall and U.11 terrace was blanketed with a level of densely packed stones set in a moderately coarse-textured dark gray to black soil (U.15). Unit 15 rests directly on the earlier terrace floor (U.14) and covers it by 0.23m; U.1 continues to project 0.12m above this newly added fill while U.11 marks the eastern limit of U.15. Most of U.15 consists of small rocks (0.1m or less on their longest dimension) though at least one sizable cut block was found resting atop the fill next to U.1 near the latter's center-line. Whether more such stones had once capped U.15 is unknown. Unit 11, the second ascending terrace on the east, was also now fronted by a densely packed combination of small to medium-sized cobbles set in a moderately coarse-textured brown earth (U.16). Unit

16 sits atop the U.13 floor, burying it by 0.36m and extends approximately 0.6m to the east stopping 0.33m shy (west of) U.12's east edge. Unit 16 does not have a formal eastern margin, though the considerable amounts of fallen architectural debris recorded extending 0.76m further to the east may be the remnants of such a facing. With the addition of U.16, Str. 97-1<sup>st</sup> was now ascended by three eastern terraces; U.12, 0.14m high by 0.33m wide, U.16, 0.36m high by 0.6m wide, and U.11, projecting an estimated 0.27m above U.16 and running back 0.9m to the core platform's eastern summit wall, U.1. As was the case on the west, renovations on the east resulted in the creation of what look to be two steps leading up to a fairly wide (0.9m across) terrace.

On the south the addition of U.19 completely covered U.18, the basal terrace on this side, and may have blanketed the next ascending riser, U.10, as well. Unit 19 is a deposit composed of very densely packed small stones (0.12m or less along their greatest dimension) surmounted by a level of large cobbles (up to 0.22x0.3m in size). Included with the diminutive rocks are a great number of pottery fragments all set in a moderately coarse-textured brown soil. Unit 19 directly overlies S.3 described in TS.1 and is at least 0.64m deep where it covers U.18's south face (the unit's base was not revealed in excavation here). The aforementioned fill completely blankets U.18 and extends minimally 1.95m to the south where it exits our excavations. Though U.18 rises high enough to cover U.10, it stops 0.18m north of that construction. It may be that U.10 still functioned as terrace facing during TS. 3, though it does not appear to have stood tall enough to project above U.19. More likely, U.10, like U.18, was covered now, though it may have been blanketed by a moderately coarse-textured brown soil rather than the rocks found overlying U.18 immediately to the south. If the latter situation pertains, then Str. 97-1<sup>st</sup>'s southern core wall (U.4) would have risen above a mixed stone-and-earth surface. No formal edges of U.18 were recorded though one such facing may lie south of our excavation limits.

By the conclusion of TS. 3 Str. 97-1<sup>st</sup> stood 0.96m high on the west, 0.88m on the east, and 0.27m above newly added fill on the south. The building's orientation remained unchanged though it now measured 8.2m east west. The north-south basal dimensions are not clear. Not only can we still not tell if the edifice was ascended by a terrace on the north but the architectural significance of the U.19 fill is uncertain. If that deposit was introduced to raise the level of the plaza in this area, then Str. 97-1<sup>st</sup>'s north-south width would have been restricted to the dimensions of the core platform (2.7m). On the other hand, should Unit 19 be the fill of a terrace that extends south of said core structure, then Str. 97-1<sup>st</sup> would encompass at least 5.08m north-south. We are inclined to favor the second interpretation as there is no sign of in-filling on the east side of the platform suggesting that, if the plaza bounded by Strs. 97, 98, and 101 was raised now it was only done in segments, one of which was the area lying immediately south of Str. 97-1<sup>st</sup>. Such selective raising of surfaces would, in any case, have the effect of creating a terrace on the platform's south side. Steps on the east and west flanks apparently formalized access to Str. 97-1<sup>st</sup>'s summit *via* the one and two broad terraces, respectively, found on these flanks. The

single superstructure room still encompassed 2.4x2.7m, its newly elevated earthen floor having been burnt over at least portions of it. No built-in furniture was recorded within this space and it is possible that the bench/shelf that formerly bordered the enclosure on the west was no longer in use.

Construction units dating to this span are generally fashioned of unmodified cobbles packed round with chinking stones. A few isolated pieces of faced masonry were found mixed with these cobbles in U.6-8 and at least one cut block was incorporated into the surface of U.15, the elevated floor bordering the core platform on the east. All stones are bound together using a brown earth mortar. Overall, additions made during TS. 3 are casually constructed and most had deteriorated to a considerable degree before they were uncovered.

#### Time Span 4

After Str. 97-1<sup>st</sup>'s abandonment the building was covered by two soil levels, S. 1 and 2. Stratum 2 is a moderately coarse-textured, brown soil that accumulated to a maximum depth of 0.6m east of and over most basal architecture. Stratum 1 overlies the aforementioned earth level by 0.06-0.29m and is distinguished from S.2 by its dark gray to black color resulting from a high organic content. Stratum 1 covers all but the tallest 0.15m of standing architecture. Collapsed architectural debris (F.1) was identified most clearly off Str. 97-1<sup>st</sup>'s east and west sides where it extended 1.1m and 1.64m away from final-phase architecture, respectively. Feature 1 was especially dense on the edifice's east side; it was not clearly recognized to the south where such fall was difficult to distinguish from the U.19 fill.

#### Structure 98

Structure 98 is on the west side of the Op. 11 group sandwiched between Str. 99, 0.6m to the south, and Str. 97, 1.35m to the north. Digging here within Subop. 11D, E, and F uncovered ca. 50m<sup>2</sup> in the course of clearing: Str. 98's east and south walls; a 1m-wide swath across its center running east-west; a staircase providing access to the Op. 11 main patio (Str. 98-Sub5); two stone blocks situated within that space (Str. 98-Sub1 and 98-Sub2); as well as two enigmatic constructions lying off Str. 98's west flank (Str. 98-Sub3 and 98-Sub4). Excavations were pursued to maximum depths of 0.77m and 0.8m below modern ground surface outside and within construction, respectively, resulting in the exposure of at least two major construction phases. The first of these, Str. 98-2<sup>nd</sup>, was erected atop S. 5 described under Str. 99, its lower 0.36m having been covered by the deposition of F.2 (see Str. 99 for descriptions of these deposits and their antecedents). This would place Str. 98-2<sup>nd</sup>'s construction in TS.5 of Str. 99, predating the raising of Str. 99-1<sup>st</sup> but post-dating the burning associated with Str. 99-2<sup>nd</sup>. Digging in and around Str. 98 was overseen by M. Dall, R. Goebbel, S. Kane, H. Mahan, and D. Schafer during the 1988 field season.

#### Time Spans



<u>Time Span</u>	<u>Construction Phase</u>	<u>Units</u>	<u>Strata</u>	<u>Features</u>	<u>Date(s)</u>
1	-	-	S.2	-	MPrecl, LCLI
2	Str. 98-2nd	U.1-5	-	-	LCLII, III
	Str. 98-Sub1	U.1	-	-	
	Str. 98-Sub2	U.1	-	-	
	Str. 98-Sub3	U.1	-	-	
	Str. 98-Sub4	U.1	-	-	
	Str. 98-Sub5	U.1-2	-	-	
3	Str. 98-1 <sup>st</sup>	U.6-8	-	-	LCLIII, II
4	Str. 98-1 <sup>st</sup>	U.9			LCLIII, II
5	-	-	S.1, 2	F.1	

### Time Span 1

The earliest period attested to in the environs of Str. 98 (aside from the deposits chronicled in the deep probe dug between this building and Str. 99 to the south—see Str. 99) involved the initial deposition of a moderately fine-textured light brown soil (S.2) which accumulated to a depth of at least 0.3m beneath TS. 2 architecture. The base of S.2 was not revealed nor was there a clear break between the intervals when S.2 was laid down before TS.2 and after the group was abandoned when deposition of this layer resumed (TS.5). Consequently, this dividing line is inferred based on the disposition of TS.2 architecture and debris fallen from buildings after they were no longer being maintained (F.1). The recovery of artifacts from lower S.2 indicates a human presence in the area during TS. 1, though it is unclear whether this material gradually accumulated or resulted from its relatively rapid deposition as fill.

### Time Span 2

The five sub-structures unearthed while clearing in the vicinity of Str. 98 are included here because their stratigraphic positions indicate that they were all exposed and in use during the occupation of Str. 98. Since the latter edifice assumed its basic dimensions and form now, we tentatively include Str. 98-Sub1/5 within this interval. It is important to bear in mind, however, that Str. 98 continued to be renovated for two additional time spans and the surrounding sub-structures may have been raised at any point during these periods.

Structure 98-2<sup>nd</sup> appears to have been a surface-level building bounded on the two most thoroughly exposed sides (east and south) by stone foundations that stand 0.32m (U.1) and 0.36m high (U.2 above F.2 in the Str. 99 sequence), respectively. Units 1 and 2 are 0.69 and 0.78m wide, respectively; broader than is usually the case for footings designed primarily to support perishable upper walls. It may be that these foundations doubled as wall supports and benches bordering the main, earthen-floored room on at least two sides. Abutting U.2, the southern basal wall, 2.2m west of its southeast corner with U.1, is a 0.25m-high stone wall (U.3) that projects 0.6m to the south. Unit 3 was traced for 2.35m further to the west where excavations terminated prior to its presumed intersection with U.5 at Str. 98-2<sup>nd</sup>'s southwest corner.

The room defined above covers 4.04m east-west by an estimated 2.1m north-south (8.5m<sup>2</sup>) and is bounded on the west by a 0.6m-high by 1m-wide stone wall (U.5). Unit 5 is fronted on the east for 0.77m by a stone pavement (U.4) set even with the reconstructed level of the room's otherwise earthen floor. Unit 4 is 0.2m thick. On the west, U.5 steps out 0.14m to the west at its base. The west wall is unusually broad and tall by the standards of Naco valley surface-level structures and certainly towers over its contemporaries within Str. 98-2<sup>nd</sup>. It is much more substantial than needed to support the sorts of wattle-and-daub constructions typically raised atop stone foundations in the basin in all time periods. It seems, instead, that those raising Str. 98-2<sup>nd</sup> may have fashioned the west wall primarily, perhaps exclusively, of rocks. The effect would have been to make Str. 98-2<sup>nd</sup> something of a stage, U.5 serving as a solid stone backdrop when viewed from the eastern stairs (Str.98-Sub5).

Overall, Str.98-2<sup>nd</sup> is a surface-level construction that measures 3.55x5.75m (without U.3, 4.15x5.75m including that construction) and is aligned roughly 10 degrees. The room defined by Str. 98-2<sup>nd</sup>'s perimeter walls encompasses 8.5m<sup>2</sup> and is bounded on the east and south by broad footings that may have doubled as benches. Most of this space is surfaced with earth save on the west where a 0.77m-wide stone pavement fronts the 0.6m-tall by 1m-thick western wall. The architectural significance of the latter is unclear; it might well be the case that the west side of Str. 98-2<sup>nd</sup> was bordered not by a *bajareque* upper wall but by one primarily fashioned of stone. Such an unusual arrangement is largely unprecedented in the Naco valley during any period and may have been intended to frame in a dramatic way those events staged within Str. 98-2<sup>nd</sup> and viewed from the plaza lying to the east.

Lying 1.32m east of Str. 98-2<sup>nd</sup> is Str. 98-Sub1, an irregularly shaped stone block standing 0.56m high and measuring 1.35m east-west by 1.5m north-south (maximally; all included in U.1). This construction is oriented approximately 273 degrees (south basal line). A similar construction, Str. 98-Sub2, is 0.55m north of Str. 98-Sub1 and has a rectangular shape. Structure 98-Sub2 encompasses 0.5x0.7m, is 0.3m high, and aligned ca. 273 degrees (all glossed as U.1). Both Str. 98-Sub1 and 98-Sub2 are made of tightly packed, unmodified stones bound by walls fashioned of the same material. These units are not parts of the same construction and

were seemingly intended as free-standing entities set in a rough north-south line. It may be that Str. 101-Sub1, exposed 3.45m north of Str. 98-Sub2, was part of the same line as it, too, is a distinct stone-block. Str. 101-Sub1 is, however, shorter than its southern counterparts, standing only 0.14m high.

Leading up to the aforementioned stone blocks from the east is a staircase (Str. 98-Sub5) composed of two stone risers backed, in the case of the basal example (U.1), by an earth tread. Unit 1 stands a reconstructed 0.4m high, is 1m wide, and runs for 4m at an angle of ca. 7 degrees. This lower step runs back 1.2m west from its southwest corner to join the next ascending riser (U.2). On the north, U.1 was traced for 2m westward before all traces of it were lost. It did not clearly join U.2 here, the latter stopping 1.75m shy (south) of U.1's north edge. Unit 2 rises 0.2m above U.1's tread, and extends 1.9m at an orientation of roughly 17 degrees. This second step was followed for 0.3m and 1m westward from its north and south termini, respectively, before it petered out. In general, U.1 and 2 are not well preserved and it may be that the staircase was never formally defined at its endpoints or that all such evidence has disappeared. In any event, the Str. 98-Sub5 stairs led directly to the earthen patio containing Str. 98-Sub1 and 98-Sub2. Anyone ascending these steps would have seen Str. 98-Sub1 and -Sub2, and the activities conducted around them, framed by Str. 98-2<sup>nd</sup> and its large west wall.

Lying 1.5m southwest of Str. 98-2<sup>nd</sup>'s estimated southwest corner is Str. 98-Sub3. This construction is unprecedented in the Naco valley architectural corpus. It consists of an oval stone wall standing 0.2m high, measuring 0.2-0.38m across, and enclosing a lozenge-shaped relatively open space covering 0.2-0.3m across (the enclosing wall is all termed U.1). Large quantities of burnt daub were found within said open space and in Str. 98-Sub3's immediate vicinity. Some of the *bajareque* fragments were charred gray to black. There is no sign that this construction was part of a larger edifice. Instead, it was apparently a foundation for a free-standing wattle-and-daub wall of some size oriented approximately 106 degrees.

Lying 0.5m north of Str. 98-Sub3 is a 0.48m-high wall that defined the southern limit of a structure that extends north beyond excavation limits (Str. 98-Sub4). Its one exposed element, U.1, abuts Str. 98-2<sup>nd</sup>'s U.5 on the east from whence it extends 1.87m west at an angle of ca. 110 degrees. At this point, U.1 changes direction, projecting 0.38m to the south before resuming its northwesterly trajectory for at least 1.04m before it exits our excavations. Unit 1 is backed on the north by a deposit of densely packed cobbles set in a brown earth matrix, though no clear summit surface was noted. In general, Str. 98-Sub4 was apparently a 0.48m-high stone-faced and -filled platform that covered at least 2.91m east-west, and was oriented ca. 110 degrees. This edifice points to the possible existence of a warren of diminutive constructions extending west from, and built up against, Str. 98-2<sup>nd</sup>. The role of a large, free-standing *bajareque* wall within the putative building complex remains unknown.

Taking all of the above evidence of construction together, Str. 98-2<sup>nd</sup>, along with Str. 100 to the southeast and Str. 101 to the northeast, defined an earthen patio encompassing 5m east-west by 7.3m north-south (37m<sup>2</sup>) and reached by ascending a stone staircase on the east. This open area contained two free-standing stone blocks set in a rough north-south line about half-way between the steps and Str. 98-2<sup>nd</sup>. The latter's unusual construction, principally its massive back (west) wall, suggests that it served a central role in framing the activities performed within the patio, especially those centered on the central stone blocks. Structure 98-2<sup>nd</sup>'s open east face would have facilitated passage between its relatively large interior room and the patio, encouraging the mixing of behaviors enacted in both arenas.

West of the above complex a series of constructions was erected against Str. 98-2<sup>nd</sup>, including at least one low stone-faced platform and a free-standing wattle-and-daub wall set on a stone foundation. It may be that the latter was erected in an effort to screen the behaviors performed in the area lying to the north from general view, thus linking them formally to whatever occurred in the Op. 11 building group that Str. 98-Sub4 adjoined.

The construction units assigned to TS.2 were made primarily of unmodified river cobbles set in a brown earth mortar and frequently bounded by chinking stones. Cut blocks were found incorporated as minority components in Str. 98-Sub4, Unit 1 and Str. 98-Sub5, Unit 1. In general, efforts were made to orient the naturally flatter faces of all the stones outward to create vertical faces that approximated plumb.

### Time Span 3

Structure 98-2<sup>nd</sup>'s ample interior room was now filled in and the surface-level edifice was transformed into a platform. This renovation involved the introduction of U.6-8. Unit 8 is a fill largely composed of a moderately fine-textured, light brown soil virtually indistinguishable from S.2. It is set in behind (west of) U.1, what had been Str. 98-2<sup>nd</sup>'s eastern foundation, and is 0.27m thick. Unit 8 fills in the space for 0.74m west of U.1 up to the top of that construction, converting the footing into a basal facing. Rising 0.31m above U.8 is a poorly preserved stone facing that serves as a step-up to the platform's earthen-floored summit. Unit 8 is backed on the west by a fill (U.7) composed of the same moderately fine-textured, light brown earth seen in U.8. Unlike the latter unit, however, Unit 7 contains sizable quantities of small to large cobbles, contained on the west by U.5. The addition of U.7 buried U.5 completely. There are no signs of superstructure architecture atop Str. 98-1<sup>st</sup> though whether this was because the summit was left open or all such exposed construction was obliterated by post-abandonment processes cannot be determined.

By the close of TS. 3 Str. 98-1<sup>st</sup> was a platform standing 0.6m high and fronted on the east by a 0.29-high stone-faced, earth-filled terrace that is 1.42m wide. The building retained its earlier basal dimensions and orientation. Structure 98-1<sup>st</sup>'s summit measured 3.3 by 2.1m (7m<sup>2</sup>)

and may have been left open though this interpretation remains tentative. The platform possibly continued to serve as a backdrop for activities conducted around Str. 98-Sub1 and 98-Sub2, though now it would have been the building's two eastern risers that served as the framing device.

#### Time Span 4

The flat-laid disposition of the stones within the light brown, moderately fine-textured soil overlying U.8 suggests that they are part of a fill unit (U.9) introduced to cover that eastern terrace. If so they likely buried the earlier step-up, probably reaching to the top of U.6, though at least the upper portions of U.9 seem to have eroded off to the east. There are slight hints, in the form of stones found fallen off U.1, that this facing may have been increased in height now to retain the U.9 fill. It is clearer that at least 0.22m was added to U.2 during TS.4, probably as part of an effort to contain U.9. The much-deteriorated state of the U.1 addition may account for the eroded appearance of U.9 itself.

Structure 98-1<sup>st</sup> retained its alignment, basal dimensions, and height from TS. 3. Now, however, the summit was expanded 1.42m eastward, covering the terrace that heretofore had provided access to the summit. The latter space now encompassed 9.9m<sup>2</sup> and may still have been left open. The sub-structures described under TS. 2 were probably still in use at this time.

#### Time Span 5

Following abandonment, Str. 98-1<sup>st</sup> and its surrounding sub-structures were blanketed by the resumed deposition of S.2 (see TS. 1 for a description of this layer). As much as 0.6m of this soil was deposited now, covering the lower portions of all exposed architecture. Stratum 2, in turn, is capped by 0.07-0.14m of a moderately fine-textured, brown soil relatively rich in organic material (S.1). Stratum 1 buries all but the very highest portions of surviving construction. Debris fallen from final-phase architecture (F.1) was noted in the vicinities of all exposed constructions; far less near the eastern stairs (Str. 98-Sub5) than in the environs of Str. 98-1<sup>st</sup> itself. Tumbled stone was particularly dense west of the platform where it covered Str. 98-Sub3 and 98-Sub4.

#### Structure 99

Structure 99 is on the southwest corner of the Op. 11 group, 1.5m west of Str. 100 and 0.6m south of Str. 98. Excavations here within Subop. 11E uncovered all of the platform's north facing, roughly one-third and one-tenth of its east and west basal walls, respectively, and about half of the southern facing. Investigations of the summit were limited to a 1m-wide trench cut north-south across the approximate center of Str. 99. A total of ca. 15m<sup>2</sup> was cleared in the course of this work, digging being carried down to maximum depths of 0.92m below modern ground surface south, and outside, construction and 2.32m north of final-phase architecture into

and through a dense concentration of cultural material underlying all visible buildings in Op. 11. Two major building phases were identified in the course of this digging though only a partial glimpse of the earlier edifice could be discerned. Research here was overseen by H. Mahan, D. Schafer, and R. Goebbel over the course of the 1988 field season.

Time Span

<u>Time Span</u>	<u>Construction Phase</u>	<u>Units</u>	<u>Strata</u>	<u>Features</u>	<u>Date(s)</u>
1	-	-	S.8, 9	-	
2	-	-	S.7	-	
3	-	-	S.6, 9, 10	-	
4	Str. 99-2nd	U.1, 2	S.3, 4, 9, 11, 12	-	LCLII?
5	-	-	S.5	-	
6	-	-	-	F.2	LCLII, III
7	-	-	S.2	-	LCLII, III
8	Str. 99-1 <sup>st</sup>	U.3-10	-	-	LCLIII, II
9	-	-	S.1, 2	F.1	

Time Span 1

The first period of activity attested to in the environs of Str. 99 is the deposition of S.8, a fine-textured, hard-compacted, dark brown soil containing small (1mm or less in diameter) pebbles but no artifacts. Stratum 8 was exposed in the deep probe sunk off the north face of Str. 99-1<sup>st</sup> and is at least 0.4m thick; its base lies beyond excavation limits. This apparently sterile earth level was capped by a series of discontinuous layers, averaging 0.3m thick, of very fine-textured dark gray ash (all ash layers in the deep Subp. 11E test are glossed as S.9). These deposits are the first clear hints of human activity here.

Time Span 2

This interval is defined by the introduction of S.7, a moderately fine-textured brown soil stained red by the inclusion of sizable amounts of small chunks of burnt daub within it. Stratum

7, which also contains other artifacts, particularly pottery sherds, is 0.05-0.1m thick and rests directly atop the ash levels (S.9) that, in turn, seal S.8. There is no doubting the cultural origin of S.7; the concentration of *bajareque* here strongly suggests the existence of perishable constructions in the immediate vicinity.

### Time Span 3

Stratum 7 is buried under 0.3-0.36m of fine-textured, relatively soft-compacted, yellowish tan soil containing some carbon flecks along with artifacts (S.6). Interspersed within S.6 are several lenses of very fine-textured, soft-compacted gray to dark gray ash which are 0.02-0.08m thick by 0.45-1.05m long (all referred to as S.9). In addition, a 0.07m-thick layer of hard-compacted, pebble-rich, reddish-brown soil was found insinuated with S.6, about half-way up from its base (S.10). These complex inter-layerings suggest that not only did occupation continue here unabated but it involved heating of something(s), the jettisoning of debris from those fires periodically interrupting the deposition of S.6.

### Time Span 4

Stratum 11, which covers S.6 by 0.21-0.34m, is distinguished from its predecessor by the dense concentrations of pottery vessel fragments, along with pieces of *bajareque*, within it. Fragments of burnt daub are particularly concentrated in a 0.08m-thick level (S.12) exposed for 0.44m at the top of S.11. Several thin ash deposits (S.9) are also embedded within S.11, mostly towards its interface with overlying S.5.

Lying 4.8m south of the deep Subop. 11E probe in which evidence for TS. 1-4 was found are materials (S.3 and 4) that may be related to those represented by S. 9, 11, and 12. Stratum 4 is a fine-textured, hard-compacted, brown soil stained red by the numerous pieces of *bajareque* that it contains. This layer was found underlying U.1 of Str. 99-2<sup>nd</sup> and slopes down 0.16m over the 0.68m it was exposed running north-to-south. Stratum 4 may reappear 0.82m further to the south where a very similar reddish-brown earth was encountered just above the base of excavation. If this is the case, then S.4 has an undulating upper surface, first dropping 0.16m and then rising 0.15m at 1.12m south of its exposed nadir point. Stratum 4 is at least 0.1m thick; its base lies beyond our excavation limits.

Capping the northern-most exposed portion of S.4 is a fine-textured, soft-compacted, gray ash containing some *bajareque* pieces (S.3). Stratum 3 is 0.09-0.11m thick and slopes down over S.4 away from U.1, dropping 0.15m across 1.16m north-to-south.

Sunk 0.07m into S.3 is U.1. This construction, projecting 0.07m south of Str. 99-1<sup>st</sup>'s south basal terrace (U.3), rises a scant 0.07m above U.3 and extends for an undetermined distance north under Str 99-1<sup>st</sup>. Fully 0.08m separates U.1 from the aforementioned U.3. Unit 1 is made using a mix of cobbles and masonry blocks.

Unit 1 was traced 0.85m to the east where it terminated in a square stone feature (U.2) measuring 0.88m across east-west and at least 0.58m north-south (its north limit was not exposed). Unit 1 stops at U.2's northwest corner and does not run behind it on the north. Unit 2's cobble walls are 0.2-0.3m thick on the east and west, it is apparently open on the north and is sealed on the south by a single large, flat-laid stone at least 0.2m wide. The hole thus defined measures 0.45x0.51m and was filled largely with dirt when uncovered.

Units 1 and 2 are clearly interrelated but their functions remain uncertain. The diminutive character of U.1 and 2 suggests that they were not parts of platform facings but are components of a surface-level construction. Further, the association of both units with S.3 implies that, whatever activities took place in and around Str. 99-2<sup>nd</sup>, they generated considerable quantities of ash and some burnt daub. The stone cube that is U.2 may have been a support for a wooden post and roof support or a vent for a small oven. Unfortunately, limited clearing of these units associated with Str. 99-2<sup>nd</sup> did not locate U.2's north edge, the west margin of U.1, or any other part of this early construction. Given its stratigraphic position with respect to S.3 and its location on roughly the same level as the ash and *bajareque* lenses capping S.11, it appears that Str. 99-2<sup>nd</sup> was erected near the end of TS. 4 and may have been the source of some of the burnt debris noted earlier.

The bulk of Str. 99-1<sup>st</sup> lies between S.3, 4, and Str. 99-2<sup>nd</sup> on the south and S.9, 11, and 12 on the north and we were not able to link these entities by cutting through final-phase architecture. Nevertheless, extant evidence suggests that all of these units and strata probably resulted from the same activities involving burning.

#### Summary of Time Spans 2-4

The deposits grouped with TS.2-4 represent an enduring set of activities involving burning including the periodic charring of daub. The frequency of pottery vessel fragments, associated especially with TS.4, implies that at least some of this firing involved ceramic containers, though whether as vessels used in cooking or as products fashioned in nearby ovens or kilns is uncertain. Based on the ash and *bajareque* concentrations directly associated with Str. 99-2<sup>nd</sup> and the localization of ash and burnt daub primarily in the deep test's south and east walls, it is likely that the aforementioned burning was located southeast of the central probe under Str. 99-1<sup>st</sup>. In fact, Str. 99-2<sup>nd</sup> may be on the southern edge of this area of controlled conflagration.

#### Time Span 5

Fully 0.38-0.46m of S.5, a moderately fine-textured, light brown soil with numerous small (1mm in diameter or less) pebbles as well as pottery fragments, overlies S. 11. This earth layer was found only in the deep probe dug north of Str. 99-1<sup>st</sup> and, unlike its antecedents, S.5



had no ash or *bajareque* lenses. A few fragments of burnt daub were recovered within S.5 but they were scattered and not concentrated in distinct deposits.

### Time Span 6

Blanketing S.5 by 0.38m is F.2. Feature 2 is identical to S.5 in all ways save for the extremely dense concentration of ceramics mixed with large pieces of human bones including one complete skull. As with S.5, there are no ash or *bajareque* lenses within F.2 nor was it identified in excavations south of Str. 99-1<sup>st</sup>.

### Summary of Time Spans 5 and 6

Stratum 5 and F.2 differ from the soil levels deposited earlier in what they lack, i.e., clear signs of intense burning localized within distinct lenses, and what they contain, large quantities of artifacts and, in the case of F.2, human bone in quantity. It appears that these two very similar deposits were introduced as fill intended to raise the central portion of the Op. 11 group approximately 0.8m. It was into F.2 that Str. 99-1<sup>st</sup>'s north basal terrace facing (U.6) was sunk up to 0.18m. Unit 6's base is set at a point 0.42m higher than its southern counterpart, U.3, strongly suggesting that Str. 99-1<sup>st</sup> was built over a pronounced south-to-north ascent made up, in part, of the materials deposited during TS.5 and 6. One effect of introducing this fill was to seal all evidence of the earlier burning that dominated TS.2-4. It should be noted that very little time may have elapsed between TS. 5 and 6. The slight differences in the composition of S.5 and F.2 and their inferred use as fill imply that they were probably introduced in close succession as part of a concerted effort to raise at least this portion of the area occupied by the Op. 11 group.

### Time Span 7

During this interval an estimated 0.12m of moderately coarse-textured, hard-compacted, brown soil (S.2) was recorded at least in the area immediately south of, and underlying, Str. 99-1<sup>st</sup>'s southern basal terrace (U.3). Stratum 2 covers U.1 and 2 of Str. 99-2<sup>nd</sup> but does not reappear in the deep probe dug north of Str. 99-1<sup>st</sup>. There is nothing distinctive about this segment of S.2 that suggests it was introduced as fill; S.2 could just as easily have been laid down by natural processes that resumed after Str. 99-1<sup>st</sup> was abandoned (see TS.9). Based on extant evidence, we cannot relate the deposition of this lower portion of S.2 to the events chronicled in TS.5 and 6. The different natures of S.2, S.5, and F.2 imply that they result from distinct causes though such variation need not preclude their contemporaneity. For the moment, therefore, lower S.2 is placed in a later period than S.5 and F.2 with the acknowledgement that such a temporal division may be more chimerical than real.

### Time Span 8

Structure 99-1<sup>st</sup> is a platform bounded on all sides by stone facings (U.3, 6, 8, and 9). The southern flank is ascended by two stone-faced terraces; U.3, the basal example, stands 0.28m high and runs back 0.13m to the north where it gives way to U.10. The latter rises 0.24m where it gives way to a 1.09m-wide terrace surface that is paved with stones (included in U.10). The final step-up to the summit on this side (U.4) was poorly preserved, its location and dimensions being inferred from remnants identified in the axial section. Based on this evidence, U.4 is estimated to have stood 0.54m high and to have been backed on the north by a fill composed of a moderately dense packing of medium to small cobbles set in a brown earth matrix (U.5).

Structure 99-1<sup>st</sup>'s north side is defined by a 0.16m-high (measured above the top of F.5) stone-faced terrace (U.6) that extends 0.32m back to the south where it gives way to U.7. Unit 7 stands 0.32m above U.6's terrace tread and provides access to the disrupted summit surface delimited by U.4 on the south. All-in-all, said summit measures 3.02m north-south and lacked any obvious built-in furniture within the 1m-wide swath we cut across its approximate center. Given the limited amount of the summit that was exposed and the jumbled state in which it was found, the existence of additional superstructure architecture cannot be precluded.

The limited portions of Str. 99-1<sup>st</sup>'s east and west basal facings (U.8 and 9, respectively) that were exposed stand an estimated 0.2m high and may well have been terraces analogous to U.3 and 6 on the south and north. Unfortunately, digging here did not progress far enough to identify any step-ups to the summit that may have risen above them.

As noted earlier, the base of Str. 99-1<sup>st</sup>'s north facing (U.6) is 0.42m higher than its counterpart (U.3) on the south, strongly indicating that the building was erected over a south-to-north rise resulting from the deposition of the artifact-rich fill deposited on the north during TS.6 and 7. Hence, the platform's height varies from 1.08m on the south to 0.48m on the north (as measured above the top of F.2 into which U.6 was sunk 0.18m).

Overall, Str. 99-1<sup>st</sup> is a stone-faced platform that stands 1.08m tall on the south and 0.48m high on the north, measures 4.35x4.56m, and is oriented roughly 271-279 degrees. Three risers ascend the building's south flank whereas two mount its north face providing access to a summit that covers 3.02m north-south by an estimated 3.6m east-west (ca. 10.9m<sup>2</sup>). No built-in furniture was recorded within this area though poor preservation and limited clearing mean that the former existence of such features cannot be ruled out.

The primary material used in all construction was the river-worn cobble. In terrace facings the naturally flatter faces of these rocks were generally directed outwards. Chinking stones and clear coursing of the larger rocks were not much in evidence in any of the exposed facings. Some cut blocks were, however, incorporated with the cobbles in U.3 and 10 on Str. 99-

1<sup>st</sup>'s south flank. No comparable stones were recorded elsewhere on the platform. In all cases, a brown mud mortar was used to bind stones within terrace and summit risers.

### Time Span 9

After Str. 99-1<sup>st</sup>'s abandonment. The lower portions of construction were gradually covered by the renewed deposition of S.2, a moderately coarse-textured, hard-compacted, brown soil. Though there is no clear line demarcating the portions of S.2 laid down in TS.7 and now, it appears that as much as 0.47m of this soil was deposited after Str. 99-1<sup>st</sup> was no longer being maintained. Capping S.2 is an earth layer nearly identical to S.2 save for its high organic content and, hence, darker brown color (S.1). Stratum 1, the humus horizon, is 0.08-0.18m thick and covers all but the very highest portions of final-phase architecture. Fallen architectural debris (F.1) was found bordering all exposed terraces, but was especially dense on the north. Here F.1 mixes with materials tumbled from the adjoining Str. 98 immediately to the north, it being difficult to distinguish the sources of these many stones.

### Structure 100

Structure 100 is on the southeast corner of the Op. 11 group, 7.3m south of Str. 101 and 1.5m east of Str. 99. Investigation of this platform was limited to clearing, within Subop. 11B and 11D, the full lengths of its northern and western basal walls, slightly more than one-half of its south facing, and a 1m-wide trench cut across the building's approximate center running north-south. Fully 12.4m<sup>2</sup> were exposed in the course of this work, digging being carried to a maximum depth of 0.97m below modern ground surface outside architecture; no probes were sunk into construction fill. A single building phase was recognized in the course of this work which was directed by S. Kane, P. Reed, D. Schaefer, and P. Whooley during the 1988 field season.

### Time Spans

Time	Construction				
<u>Span</u>	<u>Phase</u>	<u>Units</u>	<u>Strata</u>	<u>Features</u>	<u>Date(s)</u>
1	-	-	S.3	-	LCLII, III; I
2	Str. 100-1 <sup>st</sup>	U.1-7	-	-	LCLII, III
3	Str. 100-1 <sup>st</sup>	U.4	-	-	LCLII, III
4	Str. 100-1 <sup>st</sup>	-	-	F.2, 3	LCLIII, II
5	-	-	S.1, 2	F.1	

## Time Span 1

The principal activity that occurred during this interval involved the deposition of a fine-textured, soft-compacted, brown soil with some included artifacts (S.3). Stratum 3 was identified underlying TS. 2 construction on Str. 100-1<sup>st</sup>'s south flank where it was exposed to a maximum thickness of 0.14m (its base was not exposed). This soil level ascends 0.05m from south-to-north over the 1.26m it was revealed in these southern excavations.

## Time Span 2

Str. 100-1<sup>st</sup>'s core platform is bounded by stone facings on at least its north (U.5), south (U.2), and west sides (U.6; the east flank was not exposed save at its northeast corner with U.5). The best preserved of these constructions is U.5 which stands to a preserved height of 0.89m though 0.18m of this wall may have been set into and below the original ground surface; U.2 and 6 are roughly 0.5m high and show more evidence of collapse, especially near Str. 100-1<sup>st</sup>'s southwest corner. It may be, however, that U.2 was never much taller than its preserved 0.5m height as what seems to be the paved summit surface, a level of closely packed cobbles (U.3), runs north from the top of that wall for 1.83m. Unit 4, which stands 0.4m above U.3 at its north edge, may well have served as the southern stone footing of a superstructure room. In fact, the axial trench in which U.4 was exposed apparently intersected the east end of a doorway that was at least 0.64m wide and was filled in during the subsequent time span. This interpretation is suggested by a marked change in construction beginning 0.36m west of the east trench wall; clear coursing of stones east of this point is replaced by less careful placement of rocks that do not continue said courses to the west. If the above interpretation is correct, then the putative summit room would have been entered through its southwest corner.

A 0.25m-high stone-faced terrace borders Str. 100-1<sup>st</sup> on the south (U.1). The U.1 terrace is 1.56m wide, its earthen surface consisting of the top of a fill composed of moderately coarse-textured, hard-compacted, brown soil (U.7). Unit 7 rides over the top of S.3 and abuts the core platform's south basal facing (U.2).

By the conclusion of TS. 2, Str. 100-1<sup>st</sup> was a stone faced platform that stood roughly 0.7m above ancient ground surface, measured 3.95x6.04m, and was oriented ca. 4 degrees. The core of the edifice was a platform covering 3.95x4.48m that was bordered on the south by a 0.25m-high by 1.56m-wide earthen-floored and -filled terrace. Though we do not know what access features might have graced Str. 100-1<sup>st</sup>'s east flank, it appears that people could have reached the platform's summit by means of the southern terrace. The stone-floored summit supported at least one summit room on its north edge. This compartment was bounded on the south by a 0.4m-high stone foundation; most likely the other sides of the enclosure were marked by the tops of the core's basal facings. Access to this room was seemingly through a 0.64m-

wide portal in its southwest corner. We estimate that this room measured 2m on a side. All walls and facings erected during TS. 2 were fashioned of unmodified cobbles set in clear horizontal courses, packed round with chinking stones, and held together by a brown earth mortar.

### Time Span 3

At this time the door in the southwest corner of the summit room was sealed using a mixture of cobbles of various sizes, but not laid in clear horizontal courses. The enclosure's interior was subsequently filled in creating an elevated space surfaced with stones (glossed as U.4) where once the room had stood. Unit 4 at this point probably served as an extensive bench standing 0.4m high on the south where it overlooked the U.1 terrace and running 3.65m back to the north. We presume that the tops of the core platform's basal walls (U.2, 5, and 6 exposed) supported perishable upper walls at this point, thus enclosing the entire summit and newly built bench. Otherwise, Str. 100-1<sup>st</sup> retained its basic form, dimensions, and orientation from TS. 2.

### Time Span 4

This interval is characterized by the construction of two casual additions on Str. 100-1<sup>st</sup>'s north side and summit. The former, F.2, is a dense packing of tightly packed small to large cobbles set in a brown earth and extending 0.89m north of U.5. This entity was casually built and not recognized during initial excavations. Based on field notes, we tentatively surmise that F.2 was coterminous with the platform's north basal facing and served as a late terrace that stood an estimated 0.38m high and rested on 0.24m of moderately coarse-textured, hard-compacted, brown soil mixed with a few stones. The latter layer (included in F.2) sat on the ground surface that was exposed during TS. 2. Whether said mix of earth and stones was purposefully introduced as fill or gradually accumulated only to be built over during TS. 3 is unclear.

Feature 3 is another dense concentration of cobbles, this time piled to a depth of as much as 0.32m over the U.3 summit pavement. As with F.2, the architectural significance of this casual construction was not initially recognized during our investigations. The addition would have required raising U.2, the southern core facing, by 0.32m to retain the F.3 fill, a possibility that is supported by the disposition of wall-fall immediately south of said facing (included in F.1). Construction of F.3 would have raised the entire summit of Str. 100-1<sup>st</sup>'s summit to roughly the same level, burying the bench dating to TS.3, and thus creating one large, apparently featureless space covering 3.95x4.48m.

Structure 100-1<sup>st</sup> retained its earlier orientation and overall height but now measured 3.95x6.93m. The building was still fronted on the south by a 0.25m-high by 1.56m-wide stone-faced terrace though it is questionable whether this step-up could still have provided access to the newly elevated southern summit. Perhaps the superstructure was now reached from the north over the 0.38m-high by 0.89m-wide stone terrace set against U.5. The space atop the building

was devoid of any built-in furniture and covered 17.7m<sup>2</sup>. As before, construction during TS. 4 mostly consisted of unworked cobbles set in a mud mortar; all pretense at coursing was, however, abandoned.

Time Span 5

After abandonment, Str. 100-1<sup>st</sup> was gradually blanketed by two very similar earth levels. The first of these, S.2, is a moderately coarse-textured, hard-compacted, brown soil that reaches a maximum thickness of 0.56m immediately north of F.2. Covering S.2 by 0.1-0.19m is S.1, a moderately coarse-textured, hard-compacted, dark brown-to-gray humus horizon. Together, S.1 and 2 cover all but the upper-most portions of construction. Fallen architectural debris (F.1) was recorded on all exposed sides of the platform, extending for up to 0.8m away from the building.

Structure 101

Structure 101 is situated on the northeast corner of the Op. 11 group, 2.3m east of Str. 97 and 7.3m north of Str. 100. The last two edifices define the northwest and southeast corners of the group, respectively. Rather than a platform, Str. 101 consists of two rooms set in an east-west line directly on the surface of the Op. 11 platform. The eastern example overlooks a set of three reconstructed stone steps that ascend the Op. 11 platform on the east. Two constructions that were not directly related to the aforementioned rooms were found lying 0.7m west of Str. 101's westernmost enclosure (Str. 101-Sub1) and 0.27m south of that room (Str. 101-Sub2). Both of the latter edifices were partially uncovered during the course of clearing ca. 24m<sup>2</sup> on and around Str. 101, all within Subop. 11G and H. Digging was carried down to a maximum of 0.83m outside, and to an equal depth within, construction to reveal a single major construction effort and one period of significant renovations. Work here was overseen primarily by M. Dall, S. Kane, H. Mahan, and J. Miller during the course of the 1988 field season.

Time Spans

<u>Time Span</u>	<u>Construction Phase</u>	<u>Units</u>	<u>Strata</u>	<u>Features</u>	<u>Date(s)</u>
1	-	-	S.2, 3	-	LCLII, III
2	-	-	-	F.2	LCLII, III
3	Str. 101-1 <sup>st</sup>	U.1-5, 7-13, 19, 20	-	-	LCLIII, II
	Str. 101-Sub1	U.6	-	-	

	Str. 101-Sub2	U.17	-	-	
4	Str. 101-1 <sup>st</sup>	U.14, 16	-	-	LCLIII,II
5	Str. 101-1 <sup>st</sup>	U.15, 18	-	-	LCLIII, II
6	-	-	S.1, 2	F.1	

### Time Span 1

The earliest activity attested to at Str. 101 is the deposition of a coarse-to-moderately-coarse-textured, softly compacted tan soil (S.3) that was uncovered to a maximum thickness of 0.22m beneath Room 1. Stratum 3's base was not identified. Stratum 3 rises 0.06m over the 2.47m it was exposed extending north-south beneath the aforementioned enclosure. Unit 1, Room 1's eastern wall, rests directly atop S.3, thereby pointing to the latter's temporal priority. Stratum 3 was likely introduced as part of a fill deposit intended to raise the platform on which the Op. 11 structures rest. No comparable strata were recognized in deep probes sunk elsewhere within Op. 11, suggesting that S.3 may have been a distinct fill unit whose deposition was localized in this portion of the Op. 11 platform.

Stratum 2 is a moderately coarse-textured, hard-compacted, dark brown soil found lying east of, and off, the Op. 11 group platform. At least 0.18m of this stratum was found underlying U.11, the basal eastern step erected during TS. 2; the base of S.2 was not encountered. Continued deposition of this earth after Str. 101-1<sup>st</sup>'s abandonment makes it difficult to determine exactly how much of the exposed portions of S.2 were deposited in TS.1 and how much in TS.5. For present purposes, we assigned those segments of the layer that underlie TS. 2 construction to the pre-construction time span and the remainder to the post-abandonment interval.

### Time Span 2

The only evidence of activity dating to this span is F.2, a single, flat-laid rock that protrudes 0.18m east from under U.6's eastern margin. Very little of this stone was revealed though its basic size and disposition suggest that it was part of purposeful construction. The stratigraphic position of F.2, immediately underlying U.6 which is dated to TS. 3, suggests that whatever this rock was part of pre-dates activities occurring during that later period. The most that can be said at present is that F.2 signifies the presence of, most likely, modest construction efforts initiated in the Op.11 group prior to the edifices chronicled in our excavations.

### Time Span 3

Structure 101-1<sup>st</sup> consists, during this period, of two rooms, bounded by stone foundations for perishable upper walls, set in an east-west line. The western example, Room 1,

is bounded by U.1-4. Unit 1, the eastern footing, stands 0.52m high, is at least 0.5m wide (its eastern flank was not clearly identified), and runs for 1.4m north-south. The final 0.18m on the south is 0.2m lower than the top of U.1 over the remainder of its extent. There is no evidence that this section was ever taller and it looks to have been constructed this way. The two doorways leading into Room 1 border U.1 on the north and south. Units 2 and 3 delimit the western enclosure on the north and west, respectively. They are, in turn, 0.32m and 0.38m high; U.3 is 0.56m wide while its northern counterpart measures at least 0.2m across (its northern edge was not identified). The southern foundation, U.4, stands a preserved 0.26m tall and is 0.66m wide. The differences in height noted above are likely due to variations in the degree of preservation; the tallest constructions, U.1 and 2, are also the best preserved with very little fallen debris in their immediate vicinities whereas the shortest, U.4, had a considerable amount of tumbled stone lying immediately off its south flank. It is likely, therefore, the U.1-4 originally all stood about 0.4m tall and were fairly wide. Why this compartment was defined by such substantial constructions remains unclear.

The floor of Room 1 was fashioned of a moderately coarse-textured, hard-compacted, dark reddish-brown soil (U.19) that overrides S.3 by as much as 0.17m. Unit 19 was apparently introduced to raise and even out the slightly undulating surface of S.3 on which Room 1 was built.

Room 1 contained the remnants of a ca. 0.1m-high stone-faced, stone-surfaced, L-shaped bench (U.5) that was built against its west and north walls. Unit 5's south margin was obscured by a later addition (U.15). The north-south running stem of the "L" covers 2m north-south by 0.55m east-west whereas the eastward-projecting "stem" measures 1m north-south by 0.6m east-west.

As noted above, Room 1 was entered through two passages. One, in its northeast corner, is 0.7m wide while its counterpart in the southeast corner spans 0.3m. The space to which these doorways provided access covered 2.7m<sup>2</sup> including that portion covered by the bench (1m<sup>2</sup> of open floor space excluding the bench).

Room 2 lies 0.25m east of its western analogue and is bounded by four stone foundations, U.7-10. These constructions were not as well-preserved as U.1-4. We estimate that they originally stood approximately 0.55m high and measured 0.25-0.48m across. The floor of the enclosure is surfaced with cobbles the flat faces of which are directed upwards (U.20). Entrance to Room 2's interior was through a 0.9m-wide passageway in its northeast corner. No built-in furniture graced the interior space which encompassed 2m<sup>2</sup>.

Room 2 faces east over three stone-faced steps (U.11-13) that are centered on Room 2, run 3.5m north-south, and ascend 0.74m in three risers over 0.95m east-west. Unit 11, the basal riser, is the tallest and best-preserved; it stands 0.46m high and is 0.54m wide. The next



ascending riser, U.13, was very difficult to discern during excavation; it is approximately 0.19m high by 0.41m across. The final step-up to the summit, U.13, is a scant 0.09m tall and gives way to a poorly-preserved surface extending 0.74m to Room 2's eastern foundation, U.10. The treads of each step seem to have been a combination of earth and stone.

Lying 0.27m south of the approximate center of Room 1's south footing (U.4) is a stone wall (U.17). Unit 17 was revealed in the west face of an excavation designed to uncover U.4. Unit 17 was not traced to its southern end nor was its east-west width revealed. All we can say for the moment is that U.17 stands 0.5m high and seems to represent the east facing of a low platform or the footing bordering a surface-level room that is situated off the southwest corner of Room 1 but was not visible from the surface (Str. 101-Sub2). The base of U.17 is equivalent to that of U.4, suggesting that both constructions are roughly contemporary. It may be, therefore, that Rooms 1 and 2 were part of a complex of small compartments that extended to the south and west towards Str. 98, 3.4m southwest of Room 1.

By the conclusion of TS. 3, Str. 101-1<sup>st</sup> consisted of two small rooms set in an east-west line, and defined by substantial stone foundations. Together, these enclosures covered at least 15m<sup>2</sup> and were aligned ca. 269 degrees. The western compartment was entered through two doors set in its northeast and southeast corners and was largely taken up by an L-shaped, stone-faced and -surfaced bench that covered 1.7m<sup>2</sup> of the room's 2.7m<sup>2</sup>. The eastern room's interior was featureless, encompassed 2m<sup>2</sup>, and was accessed through an ample doorway in its northeast corner. This compartment looked out over a staircase consisting of three stone-faced risers that led directly to Room 2, the eastern member of the dyad. At least one more compartment bounded by stone foundations may have been built 0.27m southwest of Room 1, implying that the compartments included in Str. 101-1<sup>st</sup> were part of a larger complex of enclosures situated in Op. 11's northeast corner.

All stone constructions raised during TS. 3 are fashioned primarily of large to medium-size cobbles arranged in courses, packed round with chinking stones, and set in a brown earth mortar. The naturally flatter faces of these rocks are generally oriented outwards to create a relatively plum vertical face(s). A segment of a drain stone was found lying, broken across the threshold of Room 2's northeast doorway. Most likely, this rock had been used as a lintel that originally spanned the entrance.

At some time during TS. 3, Str.101-Sub1 was erected. This construction, represented solely by U.6, is a rectangle of densely packed cobbles that stands 0.14m tall (one rock high) and is bordered by clear lines of large river-worn stones the flat faces of which are directed outwards. One cut block was found incorporated into U.6's perimeter. Unit 6 covers 0.86m east-west by at least 1.53m north-south (its south edge was not revealed), and is oriented 171 degrees. As noted for TS.2, U.6 rests directly on, and partially buries, F.2 which projects 0.18m east from beneath

the construction's east side. Unit 6 may be another example of a stone block comparable to Str. 98-Sub1 and 98-Sub2 on the south with which it forms a rough line.

#### Time Span 4

During this interval Str. 101-1<sup>st</sup> retained its basic form, dimensions, and orientation. The principal modifications dating to TS.4 involve Room 1 and the eastern stairs. The northeast entry into the western enclosure was now sealed by the construction of a 0.27m-high wall (U.16) that linked U.1 on the south with U.2 on the north. Unit 16 is 0.05m shorter than the surviving portions of U.1 and 2, respectively, and was probably never much higher. Why it should have been lower than the neighboring foundations is unclear; perhaps in this way something of the old entrance was being remembered. In any case, the only unencumbered access into Room 1 was now the very narrow southeastern door, measuring 0.3m across. Otherwise, the western enclosure remained unchanged.

Further to the east, a 0.31m-high stone-faced addition (U.14) was appended onto the northeast corner of the basal step (U.11) in the eastern staircase. Unit 14 projects 0.65m east of U.11, 0.5m south of the latter's northeast corner, and then runs at least 1.05m north where it exits our excavations; U.14's north end was not found. As was the case with U.11, large quantities of artifacts mixed with fallen architectural debris were found immediately east of U.14, all of these materials probably being deposited near the end of TS. 4.

In general, Str. 101-1<sup>st</sup> was little changed by the renovations visited on the edifice during TS.4. The sealing of the northeast door into Room 1 made that compartment less accessible than it had been originally. The behavioral significance of the addition made to the U.11 step is unclear; its construction might have been intended to formalize the eastern facing of the Op. 11 group platform's northeast corner. All of the above additions were made much like their predecessors; i.e., out of cobbles packed round with chinking stones and set in a brown earth mortar.

#### Time Span 5

The only construction dating to this span is what appears to be the remnant of a low cobble wall (U.15) 0.25-0.3m wide (narrowing west-to-east) and resting atop U.3 near the southwest corner of Room 1. Unit 15 extends 1.15m at an angle of ca. 78 degrees from a point 0.2m west of U.3's west face and running over the putative southern edge of the U.5 bench. Given U.15's stratigraphic position atop U.3, it is likely that Room 1 was filled in with a mixture of moderately coarse-textured, hard-compacted, dark red-brown soil and earth at this point (that fill glossed as U.18) and a final version of Room 1 built atop the buried compartment. Unit 15, in this case, would have been part of that late enclosure's southern foundation; no signs of the other footings survived. This interpretation helps to clarify why Room 1's perimeter walls and bench were so well preserved; their burial would have enhanced their survival after abandonment.

## Time Span 6

Following abandonment, S.2 continued to accumulate over the eastern stairs (U.11-13), eventually covering all three of them by as much as 0.19m. No comparable level was identified atop the Str. 101-1<sup>st</sup>'s rooms. These constructions were covered by a moderately coarse-textured dark brown humus horizon (S.1) that was 0.13m thick. Stratum 1 also capped S.2 east of construction where it was as much as 0.23m thick. Tumbled architectural debris from Str. 101-1<sup>st</sup> (F.1) was especially prevalent overlying the eastern stairs from which it extended at least 2m further east. Mixed within this dense concentration of stones were large quantities of artifacts, especially sizable fragments from pottery vessels.

## General Relations among Architectural Sequences in Op. 11

The absence of clear stratigraphic breaks in most portions of the Op. 11 group, the lack of clear, continuous earth levels that can be traced throughout the group, and limits on where we dug below final-phase architecture make it difficult to relate the different phases of construction exposed here to each other. The clearest connections are those observed among the three buildings (Str. 100, 98, and 99) that occupy the south and southwest sides of the agglomeration. Here, the earliest attested activities are the prolonged episodes of burning identified in the deep probe sunk between Str. 98 and 99. The only architecture tentatively linked to this sequence is Str. 99-2<sup>nd</sup> and that edifice was erected at the end of this early sequence. Subsequently this portion of the group was covered with 0.38-0.46m of dirt (S.5), thus bringing firing activities here, and apparently within the group in general, to a halt. Based on the elevations of exposed architecture, it appears that Str. 100-1<sup>st</sup> and 98-2<sup>nd</sup> were erected next while the area covered by Str. 99-1<sup>st</sup> remained open. The bottoms of walls dating to this span on Str. 100-1<sup>st</sup> and 98-2<sup>nd</sup> are 0.14m and 0.23m lower than their counterparts on Str. 99-1<sup>st</sup> strongly implying that the first two buildings pre-date the last example. The eastern staircase (Str. 98-Sub5) and the two stone blocks raised in the Op. 11 patio above those steps (Str. 98-Sub1 and 98-Sub2) were probably in use now as well.

The raising of Str. 99-1<sup>st</sup> followed the deposition of sherd-rich F.2 into which that platform's north basal facing was sunk 0.18m. Structures 98-2<sup>nd</sup>, 98-Sub1/5, and 100-1<sup>st</sup> remained in use now though we cannot place their renovations within this sequence and, hence, we do not know their precise forms when Str. 99-1<sup>st</sup> was raised. The southern edge of the second ascending eastern step (Str. 98-Sub5, U.2) looks to have been buried by a moderately fine-textured, hard-compacted, brown soil prior to the putative addition of F.2 to Str. 100-1<sup>st</sup>'s north side (TS.4). This inference is based on the position of F.2's base 0.05m above the top of Str. 98-Sub5-U.2 and 0.26m south of that entity. The aforementioned earth supporting F.2 and overlying Str. 98-Sub5's U.2 must have been introduced prior to the erection of the poorly preserved addition to Str. 100-1<sup>st</sup>'s north face. That being said, examination of the eastern-facing

steps within Str. 98-Sub5 does not indicate that they were buried; instead, they probably remained exposed and in use during Str. 100-1<sup>st</sup>'s TS.4.

There is no reason to suppose that the renovations made to Str. 100-1<sup>st</sup>, 98-1<sup>st</sup>, and 99-1<sup>st</sup> were coordinated chronologically. As noted above, however, we have no strong evidence with which to order these additions temporally. All we can say with confidence is that, by the time of their abandonment, Str. 100-1<sup>st</sup>, 98-1<sup>st</sup>, and 99-1<sup>st</sup> were all stone-faced platforms that defined a patio on the west and south that contained two substantial stone blocks and was accessed over an extensive staircase on the east.

### Chronological Summary

The earliest evidence of human occupation in the environs of Op. 11 pertains to the Middle Preclassic. Materials diagnostic of this span are few in number and found mixed with more numerous later objects only in the area of Str. 98. The next period represented in the analyzed collection dates to the Early Classic (LCL I). Items diagnostic of this interval are, again, not numerous but are more widespread than are Middle Preclassic materials, being found in excavations conducted on and around Str. 98 and 100. No architecture pertaining to either phase has been clearly identified. The subsequent Late Classic (LCL II and LCLII/III) is well represented throughout the excavations. Structure 99-2<sup>nd</sup> may have been raised relatively early during this span associated with, and capping, a sequence of burning events that likely also pertain to the Late Classic. Construction within Op. 11 apparently intensified towards the end of the Late Classic, at least Str. 97-1<sup>st</sup>, 98-2<sup>nd</sup>, and 100-1<sup>st</sup> having been raised now. All of the investigated edifices were occupied by the beginning of the Terminal Classic (LCLIII) and likely continued in use well into that span. Structures 98-1<sup>st</sup>, 99-1<sup>st</sup> and 101-1<sup>st</sup> were probably raised at the cusp of the Late Classic-to-Terminal Classic transition and all of the buildings save Str. 99-1<sup>st</sup> show some signs of having been renovated throughout the latter span. There was no evidence of Early or Late Postclassic occupation of Op. 11.