

A Guide to Recording Archaeological Deposits

Montpelier Archaeology Department

The Montpelier Foundation

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INTRODUCTION

Archaeological excavations are by their very nature destructive—the process of excavation removes deposits and artifacts from their original context and thereby destroys any relational information between them. Unless this information is rigorously and exhaustively recorded at the time of excavation, archaeologists would be doing little more than “pot hunting.” It is through the contextualized study of artifacts and the deposits within which they are buried that we are able to understand what has been waggishly termed the “Five W’s of Archaeology:”

W_{hat} ...function does the site have or the artifact serve?

W_{here} ... was the site or artifact in the landscape and how does that spatially and temporally relate to other sites?

W_{hen} ... was the site occupied or abandoned, or when was the artifact deposited? What was the chronology of the site and how does that improve our understanding of past human lifeways?

W_{ho} ... occupied the site or deposited the artifact? What was their cultural affiliation?

H_{ow} ... was the site formed? Is it similar or dissimilar to other sites of a similar function, and if so why?

The information presented in this document represents the means of recording archaeological deposits—stratum and features—in a rigorous and consistent detail that is used at James Madison’s Montpelier. It is not designed for the casual reader or participants in the Archaeology Expeditions or Archaeology Excursions. Student participants to the various field schools are, however, expected to be familiar with this document and the terms therein.

Similar methods of recordation are used throughout the world—this document in particular draws from the techniques employed by the Museum of London (UK)—and thus familiarization with terminology would of help to individuals wishing to pursue a career in archaeology. Please remember, however, that they are guidelines, or a resource for the archaeologist to provide them with the tools for describing archaeological deposits. Experience, ultimately, will determine when an archaeologist deviates from the standard terms described within this document.

It is also important to note that this is a lengthy document—you need not memorize the document, nor will they be tested on the terms or methods.

Contained in this document are a number of distinct sections:

- **Recording Archaeology Layers & Fills.** Each stratum whether a layer or fill of a feature is uniquely identified and recorded on this sheet. This section contains the standardized language that a field program participant should become familiar with to help them become an active part of the research team.
- **Recording Archaeological Features.** Features are recorded as a composite of not only the layers (fills) within them, but also the characteristics (size, shape, slope of sides, etc.) that define them and allow interpretation of function and construction or excavation methods. This section details the specific protocols for recording a feature.
- **Completing the Unit Matrix.** The Unit Matrix Form, on the other hand, records the temporal relations between the excavated strata, which is distinct from the physical relations prepared on each Stratigraphy Sheet.
- **Example Field Documents.** The final section provides a single example of each of the Field Forms that an archaeologist at Montpelier is required to fill out as it pertains to excavation (i.e. it does not include the inventory form). For students of one of the Montpelier Archaeology Field Schools, there is also a sample field journal entry.



Field school students! You will need to print out a copy of this document for reference in the field. We have designed it to be printed on both sides of the paper to reduce the cost of printing.



*The information presented in this document is considered to be the **minimum level of detail required** for recording archaeological stratum. Anything less than this is unacceptable, and as such you will be using this document every single day in the field.*

RECORDING LAYERS & FILLS

The “Stratigraphy Sheet,” also called a ‘strat sheet’ or sometimes ‘strat card,’ is along with other field records such as the unit summary, feature summary, and unit matrix, amongst the most important documents that an archaeological will complete in their day-to-day work. To become an active member of the research team requires that you become familiar with the terminology and protocols involved so that you can expediently excavate the unit and record all the pertinent details.

Each of the following headings describes a component on the stratigraphy sheet that must be filled in. If an entry is not relevant to the stratum being excavated, please enter “N/a” rather than leaving it blank.

Each of the data types included on the Stratigraphy Sheet are discussed in detail below.



*It is important, when filling out a Stratigraphy Sheet — or any type of field record — to do so in appropriately-sized and neatly-printed letters. These have to be read by someone other than you, so make them **legible**.*

SITE NUMBER

The site reference number takes the generic format of “SC CC n,” where SC is the State Code assigned alphabetically by state, CC the County Code, and n the site number assigned by the state. Site codes at Montpelier currently include:

44OR-219 Mount Pleasant
44OR-249 The Montpelier mansion and immediate grounds
44OR-333 The Tobacco Barn Quarter ← *The current dig site*

PROJECT NAME

An identified site can encompass numerous smaller sites, which are usually referred to as “projects.” Thus we have “South Yard,” “Dolley’s Midden,” or “North Kitchen” are all distinct projects within the given site. Always check with the field director as to the name of the current project. It is possible that within the same period of time separate projects within a given site may be worked upon—make sure that you have the correct project name for the one that you are working on.

DATE

Two dates are mentioned on the stratigraphy sheet: opening and closing, respectively referring to when the stratum is first excavated and when it is finished and all paperwork for that stratum finalized.

Dates can be entered in one of two forms: American (MM/DD/YY, e.g. 04/01/09), or Generic (DD/Mon/YY, e.g. 1/Apr/09).

UNIT, STRATUM AND FEATURE

Excavation units are identified by “MT” followed by an arbitrary designation, though in Montpelier’s case this is a sequential number given out by the field director. The unit number is followed by a period, and then the stratum that is being recorded, e.g. MT1045.C or MT1015.Ø.

Individual stratum are recorded starting with Ø, or the organic layer, and then alphabetically (A, B, C...Y, Z, AA, AB...). The symbol “Ø+” is often used to represent “overburden,” or if a number of layers of known chronology/origin are removed as a single stratum to uncover the historical deposits.

Features receive a separate number as determined by your supervisor.

DATUM

A datum is used to record the depth of a stratum or feature beneath a known point, usually either the unit nail or the unit string. As this information is recorded absolutely in terms of the Montpelier grid system it is then possible to determine the absolute height in relation to such features as the mansion, local topography, etc.

Datum

The Datum field records how the depth of the archaeological deposits that are recorded. Heavily underline the appropriate option, e.g. “Unit String” if measurements are taken from the unit string, or “Line Level” if a separate datum is used. If a non-standard method is used, please note in the “Other” field.

String Height

String height is recorded as “ o’/o’ ” for measurements taken from the unit string. If a separate datum is used, please note the level string height about the datum (usually a unit nail). Please record the opening and closing height even if they are exactly the same value.

Datum Location

The location of a datum if one is used. Usually this is the north-east nail of the unit.



*Double check your location. Remember that northing increases as you move north and decreases as you move south. Similarly, the easting increases as you move east and decreases as you move west. See the **Archaeology Field Guide**.*

LOCATION

Location records the horizontal position of the unit using a Cartesian system of northing (y) and easting (x), and is taken from the north-east corner of the unit, e.g. MT1298 has a location of N362.5 E562.5.

EXCAVATION TYPE

Circle whether the stratum was excavated Stratigraphically or by Arbitrary Layers.

ELEVATIONS

Elevations taken from the String, Line Level etc., as determined in Datum, should be recorded here. These should be in feet and tenths-of-feet, e.g. 1.21' (not feet and inches). Elevations are recorded on the rear of the sheet and should be taken when a stratum or feature is *opened*, and when it is *closed*.

STRATIGRAPHIC DESCRIPTION



*The stratigraphic description is **vital** to the integrity of the archaeological record. Please ensure that you follow the guidelines to the letter unless directed otherwise by your supervisor.*

The Stratigraphic Definition is the most detailed section of the stratigraphy sheet and is comprised of a number of discrete categories. By carefully recording these categories it is possible to reconstruct the process of excavation even after it has been completed. A stratum is generally recorded before excavation. If during excavation the excavator(s) observe a change that does not constitute a new stratum, then these observations should also be recorded.



Treat the Stratigraphy Sheet as a dynamic record. Not only will you likely record each artifact as you find it, but correct the descriptions if you find that inclusions are more common than originally thought.

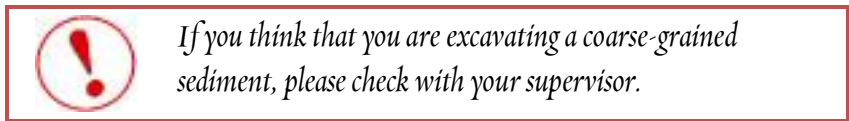
Each of the fields should contain appropriate text. If there is nothing to record, please ensure to use “N/a”—this will indicate that the field was considered and was determined to be not relevant to the stratum in question.

(1) Relationship

The Relationship of a stratum records its chronological position with respect to previous strata. Use the language “Underlying *a*,” where *a* refers to the unit designation for the overlying stratum. If the stratum is the first to be excavated, write “First Layer,” or in the case of a unit excavated in a previous year write “First Layer since *date*,” where *date* refers to that year.

(2) Compaction

The compaction of the deposit is one of the first things to be noticed when excavating the stratum, such as when one stratum is more difficult to excavate than another. At Montpelier, soils are almost always *fine-grained sediments*.



TYPE	TERM	DEFINITION
Fine-Grained Sediments	Stiff	Cannot be molded with fingers.
	Firm	Molded only by strong finger pressure.
	Soft	Easily molded with fingers.
	Very soft	Exudes between fingers when squeezed.
	Friable	Non-plastic, crumbles in fingers.
Coarse-Grained Sediments	Indurated	Broken only with sharp pick blow, even when soaked.
	Strongly cemented	Cannot be broken with hands.
	Weakly cemented	Pick removes sediments in lumps, which can be broken with hands.
	Compact	Requires mattock for excavation.
	Loose	Can be excavated with hoe or trowel.
	Hard	Brittle or tough.

Where appropriate, use one of the following qualifiers: moderately or very (e.g., moderately compact, very loose).

(3) Color

This is determined using a Munsell Soil Colors book. Take a small sample of the deposit in question onto your trowel. The sample should be of average moisture, neither too dry nor too wet. Each page has squared elliptical holes underneath each color chip. Simply place

the moistened sample behind the page and compare it to the color chips on that page. If none match then try another page. Soil colors are recorded in the following format: Color (page, row/column), e.g. “Reddish brown (7.5YR 3/4)” refers to the 7.5YR page, and the chip at row 3, column 4.

If the stratum is noted as being ‘mottled’, or composed of materials with one or more distinct colors, then estimate the relative contribution of each (see Figure 1, below) and determine their color individually as above.

(4) Texture

Soil texture is described using the four soil terms (adjectives). Each term can be used singly or in combination:

Clay / Clayey	Sand / Sandy
Silt / Silty	Loam / Loamy

The texture of loam is created through equal parts of sand, silt, and clay. Staff archaeologists will indicate the best means of determining soil texture. If in doubt, ask. Please do not use “loam” because you are uncertain of the consistency.

(5) Inclusions

An inclusion is any material other than soil present within the deposit. Inclusions are defined by their frequency (percentage contribution to the deposit) and defining characteristics. For example: “1-10% charred wood flecks, 10-20% medium to large rounded greenstone pebbles, and 20-30% large brick fragments.”

(5.1) Frequency of Inclusion

Frequency of inclusions—architectural material, ceramics etc.—are described by their relative contribution to the matrix (composition) of a given stratum.

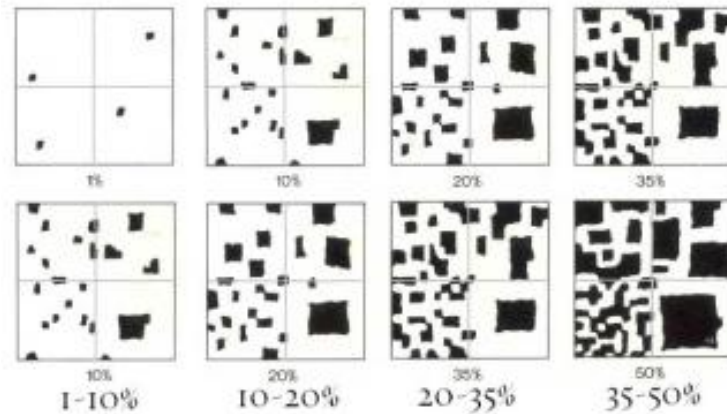
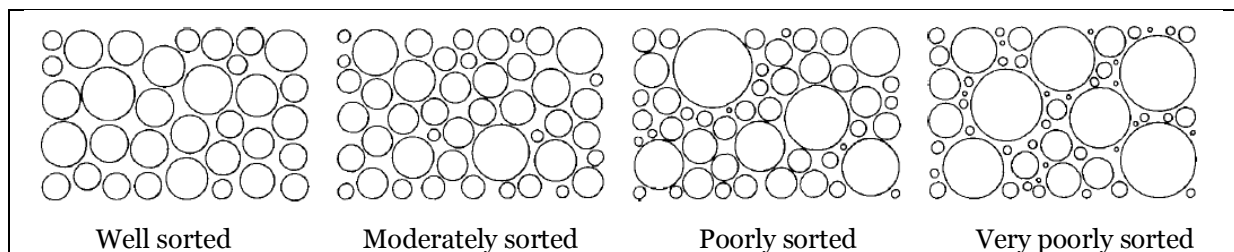


Figure 1: Percentage contributions of a given inclusion.

To estimate the percentage, see the chart, above (Figure 1). The figure is arranged into columns by percentage range, with the upper row representing the lowest boundary for a given range (e.g., 1% out of the “1-10%” category), and the lower row the highest boundary (e.g., 10% of the “1-10%” category). Each square is divided into quadrants, with the lowest left quadrant showing what the percentage range might look like with small inclusions, moving clockwise to the bottom right where large inclusions are illustrated.

The “1-10%” category can be further broken down into occasional (1-2%), moderate (3-7%), and frequent (8-10%) as it is more difficult to judge these proportions, but in each case the percentage should be recorded as a number in addition to this descriptor.

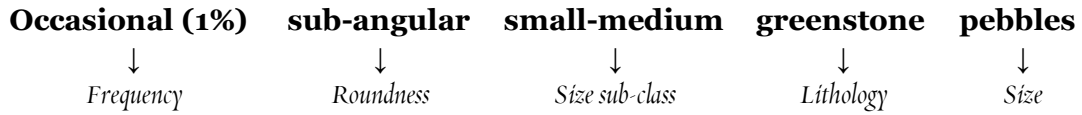
In the cases when there are a large number of different size of rocks in the unit, describe the range that you’re seeing and the *degree of sorting* (see chart below). For example, the stone inclusions might be described as “25% small quartz and greenstone pebbles to medium cobbles, poorly sorted.”



(5.2) Describing Stone Inclusions

This is a measure of the size, shape and lithology (if identifiable) of stones present within the deposit. Size of the component stones is determined in the Gradient Size table, below. Lithology is determined if possible, though at Montpelier it is usually either greenstone (GS) or quartz (QT).

Recording stone inclusions requires you use the following format:



The roundness of the stone inclusions should be compared against the following chart:

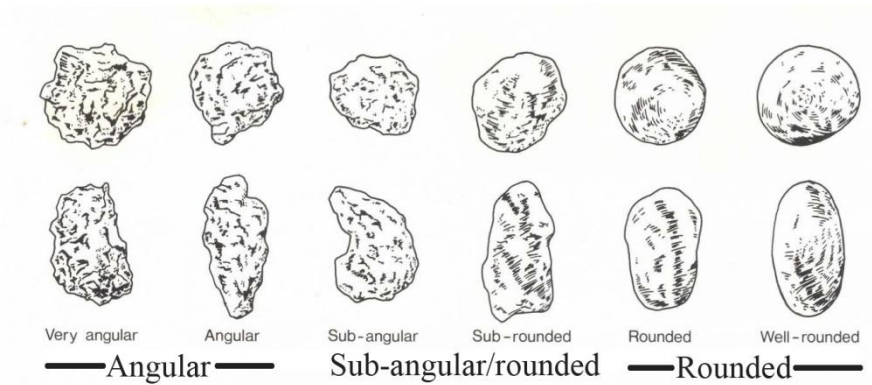


Figure 2: Degree of roundness chart.

Given the difficulty of determining the shape of rocks when un-excavated in the archaeological stratum if there is any confusion then use one of the following terms:

Roundness	Description	Example
Angular	No distinct rounded edges.	Quartz is commonly angular.
Sub-angular / Sub-rounded	May have some rounded edges, but may also have angular characteristics.	
Rounded	Smooth surfaces with no observable angular components.	River pebbles/cobbles.

In the historical context of Montpelier, the shape of the rocks found within a stratum can have great bearing upon the interpretation of that stratum and, as such, if there is any doubt please ask to see examples of each rock type or ask a staff archaeologist.

To determine the size characteristics of the inclusion, see the following table:

CLASS	APPROXIMATION	SUB-CLASS	SIZE ANALOGY
Sand	Smaller than peppercorns	Fine	Powdered sugar
		Medium	↓
		Coarse	Granulated sugar
Pebbles	Smaller than a tennis ball	Small	Dime
		Medium	Quarter
		Large	Golf ball
Cobbles	Smaller than a basketball	Small	Tennis ball
		Medium	Soft ball
		Large	Bowling ball
Boulder	Larger than a basketball	*	*

If the stone inclusion is larger than “basketball” please use the term “boulder,” and then list maximum measurements of the stone.

(5.3) Size of Non-Stone Inclusions

The size of stone inclusions is determined by the table, above, but for non-stone inclusions such as bone fragments, charred wood size etc. please consult the table, below.

SIZE	DESCRIPTION
Flecks	The size of a small bead.
Small	The size of a ball-bearing.
Medium	The size of soft-ball.
Large	The size of a basketball.

(6) Thickness

After you have excavated a deposit and taken the closing elevations, estimate the thickness of the deposit from those measurements and record it in this section of the stratigraphic matrix. It is most likely that the thickness will be recorded as a range, e.g., 0.2-0.35’.

(7) Tools

There is a space at the bottom of the stratigraphic description for recording the tool used in excavation. Simply circle or underline the tool that you use. If you use a non-standard tool, write this down in one of the blank boxes.

2” RCG	Red Cobble Grate – Used to separate out 2”+ cobbles
Dry ¼”	Dry-screening – Used to screen all excavated soil.
Dry ½”	Dry-screening – Used when there are substantial quantities of brick.
Tr.	Trowel
Sh.	Shovel
Matt.	Mattock/pick

(8) Conditions

The environmental and weather conditions are significant in the interpretation of archaeological stratigraphy in that they may influence differences in soil color, composition, etc. If the soil is parched due to constant exposure, or waterlogged from continued rain, then this should be mentioned.



It may seem strange to record the conditions of excavation (and excavators), but it can seriously impact upon the quality of the excavation and the records generated.

(9) Next Stratum/Strata

Just as Relationship determines the stratigraphic relationship between the excavated stratum and previous strata, Next Stratum records the underlying deposits. It is, however, based upon the *physical* relationships, such that if for example you remove stratum A and you come down to two deposits, B and C, you will record both of these strata in this section. Similarly, if multiple features are noted cut into the surface of the next stratum, they and that surface will be noted here.



*This section records the **physical relationships**, or what the stratum physically touches. The stratigraphic matrix on the Stratigraphy Sheet and the Unit Matrix form record the **chronological relationships**.*

(10) Transition

The transition refers to the boundary between the shape and clarity of the boundary between the excavated stratum and the underlying strata. Recording this therefore requires three bits of data: shape, clarity, and reason for changing stratum. For shape and clarity please use the following standard terms:

SUBJECT	TERM	DESCRIPTION
Distance	Arbitrary	Layer change is the product of excavation by arbitrary layer
	Sharp	Change occurs over a distance of < 0.02' ("peels back").
	Clear	Change occurs over a distance of <0.1'.
	Diffuse	Change occurs over a distance of >0.1'.
Shape	Smooth	The boundary surface is a plane with few irregularities.
	Wave	The boundary surface has broad, shallow, and regular pockets.
	Irregular	The boundary surface has pockets that are deeper than they are wide.
	Broken	The boundary surface is interrupted by a cut such as a feature.

It is also vital to record the *reason* that you changed to a new stratum by describing how the new strata differed from the stratum being excavated. Remember to include changes in color, texture, and inclusions in your description for the change. For example: “Became browner and more clayey, with artifacts increasing from an occasional nail to more frequent nails, ceramics, and window glass and high concentrations of charred wood.”

(11) Other

If there is any significant information that is not included in any of the other categories, above, then include it in the “Other” category. For example, if recovered faunal bone has clear indications of butchery (i.e. cut marks, appropriate fracture patterns, etc.) then this could be mentioned here.



Remember, the Stratigraphy Sheet is a dynamic document and the descriptions of inclusions etc. will likely change over the course of excavating a stratum. If it does, record it in the Other section to provide a “narrative” of this change.

INTERPRETATION AND DISCUSSION

The sections *Your Interpretation* and *Discussion* are often left blank, especially by individuals that are new to archaeological excavation. They are, however, an important part of the process of archaeological interpretation and excavation. If you do not have an interpretation for a stratum or feature, then ask a supervisor. Remember that you can also go back and change your interpretations as you unearth more information.

Your Interpretation

Each stratum should be associated with an interpretation as to the nature of the stratum. This might be ‘posthole,’ ‘landscape fill,’ ‘brick wall,’ or any number of other possibilities appropriate to the stratum in question.

Your Discussion

While the stratigraphic description offers up a detailed description of the excavated stratum there is little space for the excavators thoughts to be developed. Use this section to explain or discussion anything that informs your interpretation and why you made it.

STRATIGRAPHIC MATRIX

The Stratigraphic Description, above, records the *Relationship* and *Next Stratum* (overlying and underlying strata) based upon its *physical* relationship, i.e., what strata physically overlay or underlay the strata. This section records the *chronological relationships*, or which deposit is older and which is younger.

In the central box, place the current stratum that is being excavated/recorded. You will note that there are several boxes above and below this box. Record the overlying stratum/feature (or strata/features) in the boxes above, and the underlying stratum/feature (strata/features) in the boxes below.

Commonly the stratigraphic matrix is simple, with one stratum coming down to a single stratum, such as the sod (Ø) coming down to the topsoil (A)—the physical relationship is also the chronological relationship. When a stratum comes down to multiple strata, however, you must determine which is the chronologically youngest—it is this next youngest stratum that will be entered.

If you have not encountered a stratigraphic (Harris) matrix before, please consult your supervisor on this section.

SAMPLE ONLY

If the stratum was recovered solely as samples, e.g. H2O-WS (window screen water sample), then write “Yes” in this section. Otherwise write “N/A” or put a line through this section.

FEATURE ASSOCIATION

If the stratum is a fill of a feature, or is associated in some way with a feature, place the feature number in this section.

ADDITIONAL RECORDS

Include any additional photographs or records that may have been generated for the excavation of this stratum, e.g., “092-0716 — Oblique photograph to show feature in relationship to mansion.”

Additional Photographs

Opening, Closing, and In Progress photographs are recorded in another section of the Stratigraphy Sheet. There are, however, occasions when additional photos are taken in a given stratum or feature. If this is the case record the nature of the photograph here, e.g., “Detail of conserve item 13467.”

FINDS

There are two methods for filling in the finds section. Please check which of the following is the most appropriate for the excavation methodology/site:

1. Those artifact categories that were present in the stratum may be recorded with a check mark. If you feel that an artifact category was particularly abundant, put multiple checks in the box.

- Count the number of artifacts in a given category and enter it into the appropriate box.

If a find is not covered by one of these boxes, or is of particular significance, then record it in the “Other” field.



If you find yourself wanting to put three or more check marks in the Finds boxes, the chances are they should be included as part of the stratigraphic description and it should be brought to the attention of your supervisor.

PHOTOGRAPHS AND RECORDS CHECK

This section deals with the photographic record as well as those individuals who were involved in excavating and recording the stratum.

Photographs

Several types of photograph are commonly taken:

- **Opening.** Describes a photograph that is taken before the excavation of a stratum.
- **In Progress.** Certain stratum may require a photograph taken during the process of excavation.
- **Detail.** Usually taken of an artifact or feature, this is a close-up shot of the deposit in question.
- **Closing.** Once excavation of a stratum is completed, a closing photograph might be required. Usually the Opening photograph of the next stratum is considered to be the Closing photograph of the previous stratum.

The digital camera generates a unique code for each photograph taken, which is given in the top right of the rear screen in the format “123-45678.” Please record the photograph numbers for each photograph type taken.

At the far right of the Photograph field is a section whereby the excavator can record which direction was being faced when a photograph was taken. For example, if the photographer is on the south side of the unit and facing north, then the “N” should be heavily underlined.

If you take any specific photographs—artifact shots, profile shots, etc.—then note these down in the *Additional Records* section.

Excavated By

The initials of all individuals who were involved in the excavation of the stratum should be recorded here, with each name being represented by three letters for the first, middle and

surnames of the excavators. If an individual does not have a middle name it is common to insert the initial 'X' as a substitute.

Recorded By

The initials of all individuals who were involved in the recording of the stratum should be recorded here, with the same protocols as above.

Checked & Date

Each stratigraphic sheet should be checked by a member of the archaeological staff or the site supervisor. They will initial and date this section following the protocols above. Please ensure that the records are as complete as possible before having them checked.

Checked Interpretation

This section is to be filled in by the project director and should otherwise be left blank.

ENVIRONMENTAL SAMPLES

Record the inventory numbers of any samples taken, artifacts recovered, etc., in this section. When taking water-screen (H₂O) samples ensure that the soil volume (in gallons) is recorded next to the inventory number.

Always record the volume of soil that is removed from an archaeological context, whether it is dry-screened or otherwise. This provides valuable baseline data for comparative analysis of grit fractions, artifact densities, and so forth.

Please see the Montpelier *Field Guide* for more information upon the reasoning behind sampling and the specific processes involved in each.

DRAWING

Graph paper is included on the back of the stratigraphy sheet to facilitate the scale drawings that must be included. Ensure that all drawing protocols are observed and, at the very least, a north arrow, key, unit coordinates and scale are included. Also, if drawing a plan, ensure that the subject stratum is 'hashed' with oblique lines to focus attention on that stratum.



*Draw a schematic sketch for **every** level. Include annotations to clarify the meaning of the drawing—what makes sense to you now might not make sense to an archaeologist in 20 years.*

OTHER COMMENTS

This section is for any additional comments that might result from the Stratigraphic Description, Interpretation and Discussion, and Checked Interpretation. If you need additional space then please ensure that the “Please Turn Over” (PTO) section of the appropriate form element is circled.



*As with the Pirate’s Code, these are **guidelines** to recording archaeological strata. There are always going to be exceptions and more complex scenarios, e.g., recovery of human remains, recording masonry, coffin furniture, or whatever.*

RECORDING FEATURES

Archaeological features, as described herein, are vertically intrusive elements into a layer such as a post hole, pipe trench, barbeque pit, structural foundation, borrow pit, trash pit etc. A feature is comprised of two elements: (1) one or more *fills*; and (2) the *cut* of the feature, or the “container” for the fill(s).

The previous section, *Recording Layers & Fills* (p3) details how one should go about recording and otherwise detailing a component fill of a feature. The cut of the feature, or the shape and characteristics of the feature originally created by human agency, are recorded with the terminology in the following sections.



Recording features uses the same Stratigraphy Sheet. Note the shaded areas to the left and right of the Stratigraphic Description. Scribble out the terminology that you're not using (i.e., the left terminology if you're recording a feature).

DISCUSSION OF FEATURE SHAPE AND SIZE

Describing the shape, size and nature of a feature follows a similar process to recording a layer or fill. More so than with layers and fills, the standardized terminology might not be sufficient to describe each and every feature. Once again it should be used as a *guideline* or standard to which exception can be made if necessary.

(1) SHAPE IN PLAN

Describe the plan shape at the identified top of the cut using one of the following standardized terms: square; circular; sub-circular; oval; sub-rectangular; or linear. If linear the cut should be described as “straight and parallel” or “curving and irregular.”

If the shape in plan is irregular, describe the corners etc. in reference to the cardinal directions of the site grid, e.g., “northern side is straight, while the remaining sides are curving and irregular with rounded corners.”

(2) CORNERS

The corners of a feature that is not circular (see above), should be described as “square” or “rounded.”

(3) Dimensions/Depth

Record the longest side of the feature in question, and in each case referring to the site grid. If the depth can be measured, then record this here. E.g. “N-S 0.5’, E-W 0.2’, depth 0.4’.”

(4) Break of Slope—Top

Describe the degree at which the top of the feature breaks into the side either as “Sharp,” “Gradual,” or “Not Perceptible.”

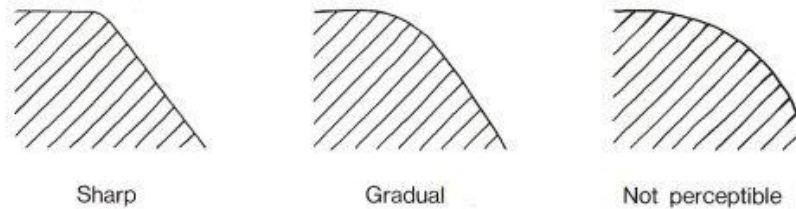


Figure 3: Break of slope noted at the top of a feature.

(5) Sides

Describe the sides in terms of their Smoothness, Shape, and, with a post- or stake-hole, the Type.

CHARACTERISTIC	TERM	DESCRIPTION
Smooth	Smooth	The side(s) are smooth with few if any irregularities or breaks.
	Irregular	The side(s) are primarily irregular with many breaks to the surfaces.
Shape	Vertical	The side(s) are vertical with no indication of tending inwards or outwards.
	Convex	The side(s) curve away from the center of the feature, creating an undercut.
	Concave	The side(s) curve towards the center of the feature.
	Stepped	The side(s) curve (state type) down to a point and then step out clearly to form a second break of slope.
Post/stake-hole Type	Tapered	The sides gradually taper to a point.
	Vertical	The sides show no indication of a tapered or curving surface.

When dealing with post- or stake-holes, recording whether it is tapered or vertical can give indications about the techniques of placement, e.g. whether they were driven into the ground or whether they were set.

Were possible, state the gradient of the slope in the format “X in Y,” where X is the horizontal distance from the top of the feature to the base, and Y the depth of the feature.

(6) Break of Slope—Base

As with the break of slope (top), describe the break of slope at the base of the feature as “Sharp,” “Gradual,” or “Not Perceptible.”

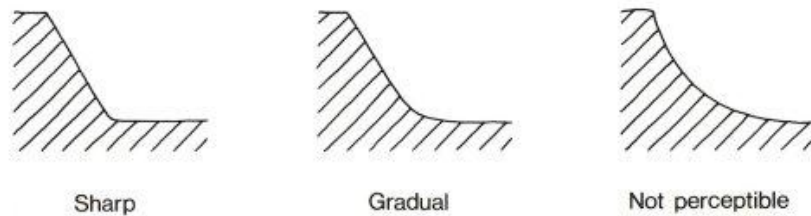


Figure 4: Break of slope at the base of a feature.

(7) Base

The base of the feature should be described as “Flat,” “Concave,” “Sloping” (give the direction of the slope relative to the grid), “Pointed,” “Tapered” (Blunt or Sharp), or “Uneven.”

Some example bases are given, below:

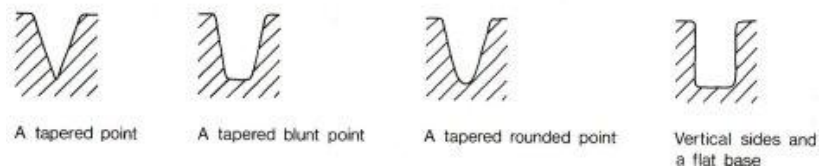


Figure 5: Example of base shapes.

(8) Orientation

If the feature is linear (including rectilinear and oval) note the orientation to the grid or the cardinal directions, e.g. N-S, NW-SE, etc. When recording post- or stake-holes whose base is offset relative to the top (i.e. sloping) record this, e.g. “Top is NE of base.”

(9) Inclination of Axis

If recording an angled post- or stake-hole, recording the inclination of the axis as a gradient in the form “X in Y.” To calculate this, measure the depth of the feature (Y), then double this value and measure down from the ruler with a plumb bob—the distance from the tip of the plumb bob to the center of the feature is X. E.g. if the feature is 0.35’ deep, this would be doubled to 0.7’ and a plumb bob used to measure directly down, providing a distance of 0.4’—this is recorded as “0.35’ in 0.4’.”

(10) Truncation

If the cut has been truncated in some fashion, such as by being intersected by another feature (e.g. a builders trench), then state this and which feature truncates which. This should also be indicated on the Harris Matrix.

(11) Fills within Feature

If the feature contained several distinct layers, i.e. F1.A, F1.B, etc., then record these here. This includes any linings, such as with the decayed wooden remains of a coffin, and the charred remains of post holes.



Remember to go back to the Stratigraphy Sheet that describes the fill(s) of a feature and add the feature number (e.g., MT 1860. B. F1004).

(12) Drawings

On the back of the stratigraphy sheet, sketch a profile of the feature showing how all the fills relate to each other. This is in addition to any other profiles or drawings that your supervisor may ask you to draw.

(13) Draw Profile














On the back of the stratigraphy sheet, sketch a profile of the feature showing how all the fills relate to each other. This is in addition to any other profiles that your supervisor may ask you to draw.

DRAWING PROTOCOLS

Protocols and practices for the drawing of archaeological deposits vary from project to project, and site director to site director. The following section includes the standard protocols for recording archaeological features and deposits at James Madison's Montpelier. It is separated into three sections: (1) standardized notation used for all archaeological drawings; and standardized approaches to recording (2) plan views, and (3) profiles (sections and elevations).

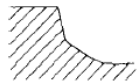
STANDARDIZED NOTATION

The following symbols are common to both plan views and profiles. If in doubt how to record something, please create a key/legend and annotate your drawing in such a way as to clearly define what you're seeing in the unit for someone digitizing or trying to understand the drawing a year or more after when you drew it.

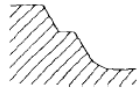
	Edge of context (solid line).
	Probable edge of context (dashed line).
	Internal edge of excavation (dash-dot).
	Truncation of context by later feature (dash-double dot), e.g. StP.
	Area to be excavated (back of stratigraphy sheet).
	Unexcavated deposits (profiles).
	Datum (invert for profile nail).
	Unit nail or other nail (include coordinate).
	Reference level (profiles) <i>or</i> spot height on plan view.
	Notation for edge and extent of slope (<i>c.f.</i> features, below).
	Deposit.
	Feature.
	Sample.



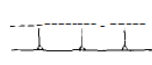
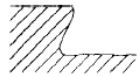
Feature cut with a vertical edge.



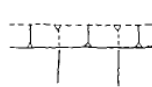
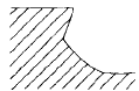
Cut with a conspicuous change of slope.



Cut with a stepped profile.



Cut with an undercut (convex).



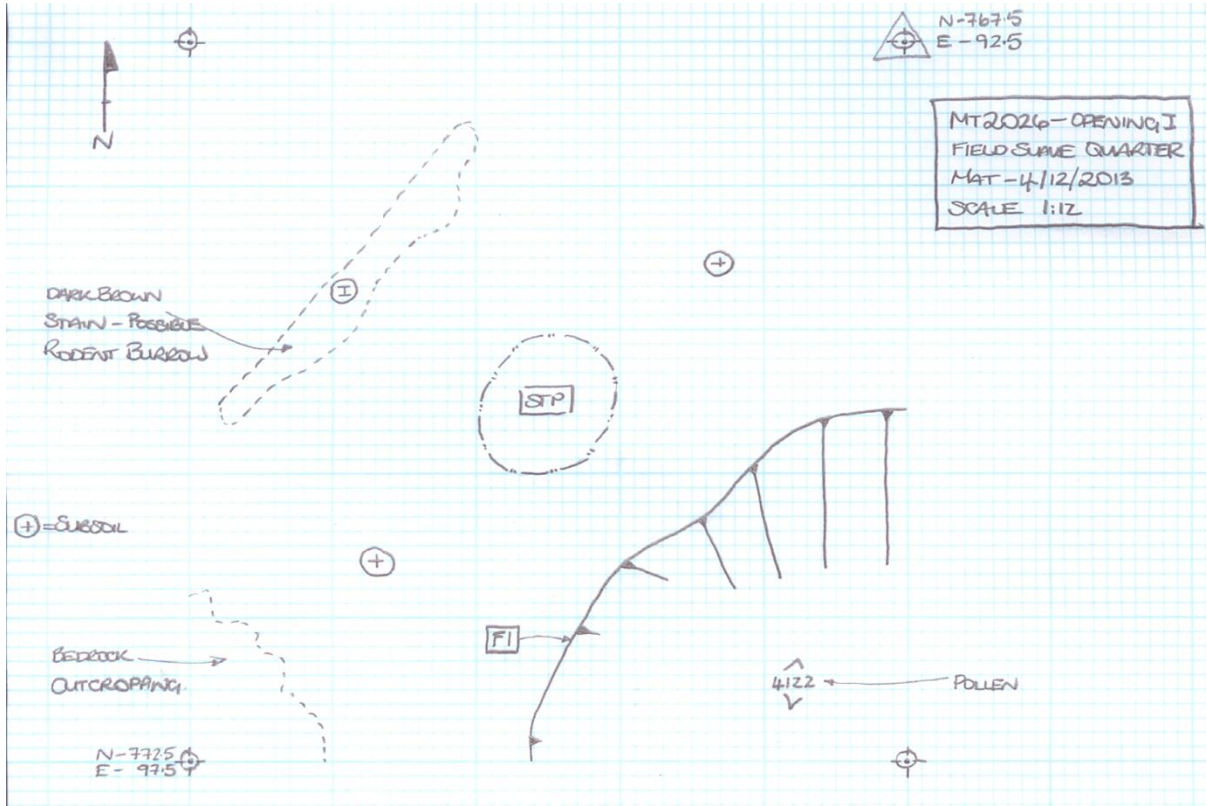
Cut with convex overhang and return to concave slope.

Artifact Notation

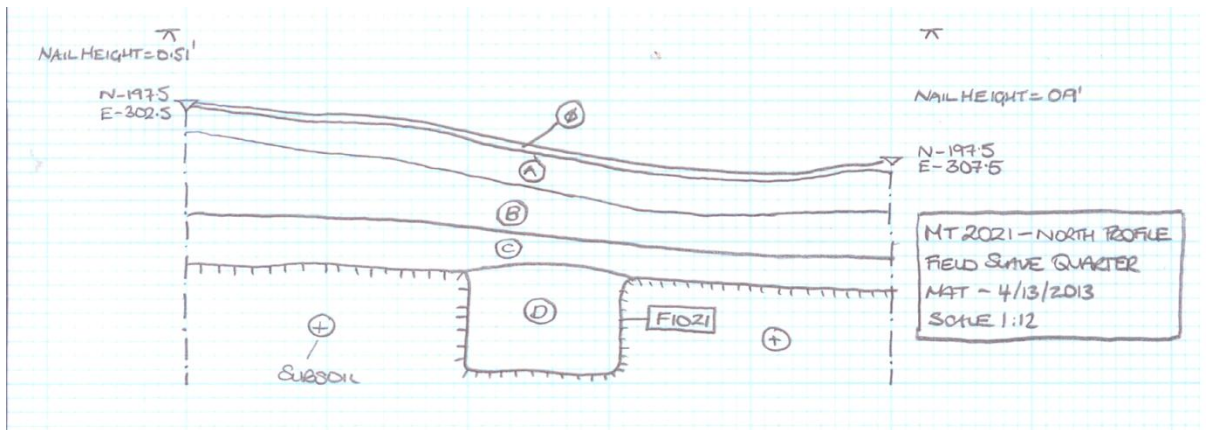
The following symbols are generally only recorded on the back of the stratigraphy sheet and artifact plots, though can be used on plan views/profiles as directed by the field supervisor.

ARTIFACT	SIZE TO PLOT	PLOT SYMBOL
Brick	>1"	●
Stone	>2"	O
Mortar	>1/2"	m
Ceramic	>1/4"	c
Glass	>1/4"	g
Bone	>1/4"	B
Nails	>1/4"	T
Shell	>1/4"	S
Charred wood	>1/4"	#
Ash	Concentrations	^
Other	Note on legend	

PLAN VIEWS



PROFILES



STRATIGRAPHIC MATRICES

The matrix on the *Stratigraphy Sheet* provides a shortened version of the *Unit Matrix* form, detailing only the overlying and underlying deposits specific to a given stratum or feature. The *Unit Matrix* form offers a record of the chronological relationships for all features and strata within a unit.

The following text provides an example of producing a chronological (or temporal) matrix, otherwise known as a Harris Matrix. While the text derives from Wikipedia, the example is actually consistent with what one might expect to find at a Montpelier structure with a prepared foundation trench, e.g., the mansion, smoke houses of the South Yard etc.

SOIL INTERPRETATIONS

The following profile (section) is annotated with numbers representing the different interpretations of the strata within our hypothetical excavation unit.

- | | |
|---|---|
| 1. A horizontal layer. | 7. Fill of shallow cut/feature #8. |
| 2. Masonry wall remnant. | 8. Shallow pit/feature cut #8. |
| 3. Backfill of the wall, probably the same as #1. | 9. A horizontal layer. |
| 4. A horizontal layer, probably the same as #1. | 10. A horizontal layer, probably the same as #9. |
| 5. Construction/cut feature for the wall #2. | 11. Natural sterile ground formed before human occupation of the site. |
| 6. A clay floor abutting wall #2. | 12. Trample in the base of cut/feature #5 formed by workmen's boots while constructing the structure wall #2 and with which floor #6 is associated. |

UNIT PROFILE

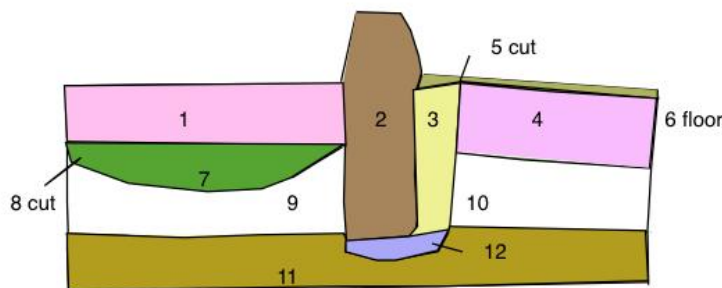


Figure 6: Hypothetical profile section of a unit.

The order in which these strata formed, or their temporal relationship, would be defined by the matrix presented in figure 7.

The later a context's formation is, the higher it is in the matrix, and conversely the earlier it is, the lower. Relationships between contexts are recorded in the sequence of formation, so even though wall 2 is physically higher than other contexts in section, its position in the matrix is immediately under backfill 3 and below floor 6. This is because the formation of the backfill and floor happened later. Also note the matrix splits into two parts below the construction cut 5. This is because the relationships across the section have been destroyed by the cutting of construction cut 5 and even if it is likely that layers 1 and 4 are probably the same deposit the information can not be guaranteed if the only information we had was this section. However the position of cut 5 and natural layer 11 "ties" the matrix together above and below the split in the matrix.

INTERPRETATION

Starting at the bottom, the order of events in this section is revealed by the matrix as follows: Natural ground formation 11 was followed by the laying down of layers 9 and 10 which "probably" occurred as the same event. Then a shallow pit 8 was cut and then back filled with 7. This pit feature in turn was "sealed" by the laying down of layer 1 which is probably the same event as layer 4. Following this a major change in land use occurs as construction cut 5 is dug and immediately followed by people trampling the surface 12 working in the construction cut 5 who then build wall 2 after which they backfill excess space between the wall 2 and cut 5 with backfill 3.

Finally clay floor 6 is laid down to the right of wall 2 over backfill 3 indicating a probable interior surface. The nature of archaeological investigation and the subjective nature of all human experience means that a degree of interpretive activity obviously occurs during the process of excavation. The Harris matrix itself, however, serves to provide a check on observable, quantifiable, physical phenomena and relies on the excavator understanding which way in the sequence is 'up' and the ability of the excavator to excavate and record honestly, accurately and stratigraphically. The process of excavation destroys the context and requires the excavator to be able and willing to make informed (by experience and where necessary collaboration) decisions about which context(s) lay at the top of the sequence. As long as undercutting is not endemic, in practice on-site errors in judgment should become evident especially if temporary profiles are kept for stratigraphic control in areas of a site that are hard to discern. Archaeological profiles, while being useful and valuable, only ever present a slice, a caricature, of a sequence often under representing its complexity. The utility of archaeological profiles when dealing with stratigraphic complexity is limited and their use should be context sensitive rather than as a running arbiter of sequence.

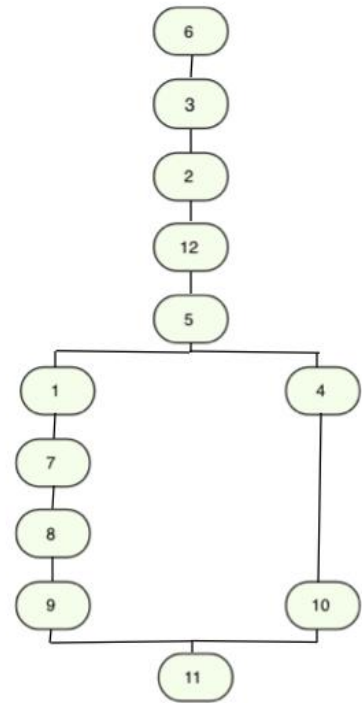


Figure 7: Strict Harris Matrix for the hypothetical unit.

FIELD JOURNAL

Your field journal is an integral part of your field experience. The journal is a chance for you to make concrete field observations, describe the progress being made in a unit, and to hone your interpretative skills. You will also use your journals to answer the questions posed for the readings (see *Archaeology Field School Syllabus*). We will collect your journals at the end of the each week to make comments and assess overall journal performance for your grade.

WHAT SHOULD BE INCLUDED IN EACH ENTRY?

1. Date and time.
2. Site name and number.
3. Partners (initials).
4. Weather conditions (cloud cover, temperature).
5. Personal information—is there anything going on that might affect your work for the day? This can factor into the quality of your work and is valid information. Don't use it as an opportunity to complain about your unit partner!
6. Work Assignment (Where are you working—i.e. Unit number, shovel test pit northing and easting).
7. State the techniques you are using to remove soil—shovel skimming, screening, samples being taken, etc). If excavation strategy changes, this is a time to record this in your notebook.
8. Excavation results/observations—Describe soils, artifacts, soil conditions (such as bioturbation—i.e. Soil disturbed by roots, work, and grubs), artifact distributions in the unit (vertical and horizontal), or the absence of artifacts.
9. Surrounding context—look around and describe the context for the excavations—are you in a road cut? What is the topography? This should be described at least once when you are starting a new unit.
10. Field Sketches: Make sketches of the site, your unit or feature, stratigraphic profile, etc. Make sure that the drawing includes a scale, a clear label for what unit and level it is showing, and a north arrow.
11. For the lab, note what the task for the day is (water-screening, power-washing, etc) what site or part of the site's materials are being processed (front yard, south fence line, etc) and any observations for the day.

WHEN TO WRITE IN YOUR JOURNAL?

You should write in your journal at the beginning of each day, describing 1-7, above. Also, write in your journal when:

- When you make any observations about the unit—a concentration of charred wood that suggests a feature, an unusual artifact, etc.

- You should write in your journal whenever a change in strategy is made. A good sign for this is when your unit supervisor decides to make a change in strata, conduct a cleaning pass to see if there are any features, etc. Always note when you change strata—especially the transition—describe why new layer assigned (soil became more clayey and red, increase in charred wood, etc).
- At the end of the day, you should record where you left off, if there is anything that needs to be completed the next day.
- You should not wait to write in your journal at the end of the day or after dinner. If you want to review it later in the evening to make additions, that is fine, but it should be something you work on throughout the field day.

When you are in the archaeology laboratory, you should continue to make observations:

- Describe the task that you are performing in terms of methodology and, more importantly, the *reason* that the task is significant in the post-excavation work flow.
- Observations relevant to the field for some example tasks may include:
 - *Water-screening (H₂O)*—Are you seeing a lot of artifacts in the sample? If so, what types of artifacts? Is there an abundance of one type of artifact over another? Are there micro-artifacts present in the sample and, if so, what? Are they beads? Eggshell? Fish-bone?
 - *Artifact Washing*—What types of artifacts are present in the assemblage from that unit? Is there an abundance of one type of artifact over another? What types of ceramic are present? Cut or wrought nails? Is there a lot of artifacts and, if so, which layer do they come from and what part of the archaeological site? What does that mean for the over-arching interpretations of the site (are we dealing with a work yard, structure that collapsed over time, alien landing spot, etc.)?
 - *Power-washing*—What types of brick and stone are you seeing? Is it all one size gradient (well sorted) or is it poorly sorted? Do you see more brick, greenstone, or quartz? Any unusual stone present, e.g., chert or limestone? What might this mean for the over-arching interpretations of the site?

CARE OF YOUR FIELD JOURNAL

You should protect your journal. If you lay it on the ground on a hot day with the sun beating down on it, you will destroy the binding in less than an hour! Likewise, if it is left outside during a rainstorm, it will dissolve. So when not using your journal, please keep it in your backpack. In the laboratory, make sure to keep the journal away from water (e.g., when artifact washing, water-screening, or using the power-washer).

→ 1 JUNE 2008 (SUNDAY) - 440R249, GARDEN ENTRANCE PROJECT

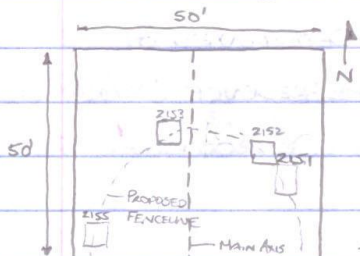


IMAGE 1: PROJECT AREA

PURPOSE OF EXCAVATION: MT 2152 (N302.5 E1002.5) WAS PLACED IN THIS AREA TO IDENTIFY THE CONTINUATION OF THE GARDEN FENCELINE IN THIS AREA. APPROXIMATELY 20' EAST OF THE MAIN AXIS, IT IS NW TO MT 2151 WITHIN WHICH

A POST HOLE AND MOUND (F881) WAS IDENTIFIED. MT 2152 IS SLIGHTLY UPSLOPE FROM MT 2151, THOUGH THE SURROUNDING LANDSCAPE IS PREDOMINANTLY FLAT.

EXCAVATION BY: MARK A. TRICKETT (MAT), BRIAN SCHNEIDER (BRS); MATTHEW REEVES (MBR) UNIT SUPERVISOR

MT 2152, 2:00PM - STRAT. Ø

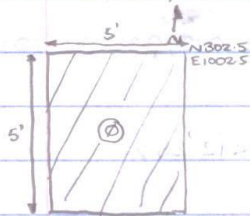


IMAGE 2: STRAT. Ø (OPENING)

WEATHER: SUNNY, HIGH 80S, 60% CLOUD

PERSONAL: WORKING ON A SWOOSH!

AFTER THE UNIT WAS STRUNG UP, WE REMOVED THE SOIL LAYER (Ø) USING A SHOVEL. THE RED BROWN LOAMY

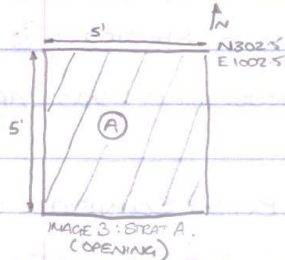
SOIL WAS NOT DRY-SCREENED. WHILE REMOVING THE SOIL WE RECOVERED 2 WIRE NAILS AS VISUAL RECOVERY <12118>. MBR NOTED THAT THESE WERE PRODUCED ca. 1850+ SUGGESTING A LATE (19 - 20) PERIOD.

THE LAYER WAS ~0.2' THICK AND DEEPER IN THE SOUTH OF THE UNIT THAN THE NORTH (OPENING ELEVATIONS 0'; CLOSING ELEVATIONS

0.15'/0.23'/0.21'/0.12' [NE/SE/SW/NW]). THE TRANSITION BETWEEN (Ø) AND THE UNDERLYING TOPSOIL (A) WAS DETERMINED BY THE REDUCTION IN ROOT MATERIAL AND THE PRESENCE OF ARTIFACTS.

ONCE THE SOO HAD BEEN REMOVED WE TROWELLED THE UNIT FOR AN OPENING PHOTO OF (A).

MT 2152, 2:45 PM. - STRAT A



FOLLOWING THE REMOVAL OF (Ø) WE REMOVED (A), THE TOPSOIL, STRATIGRAPHICALLY BY TROWEL. ALL SOIL WAS DRY-SCREENED THROUGH A 1/4" MESH. STRATUM (A) IS A REDDISH BROWN SILT LOAM WITH OCCASIONAL-MODERATE (3-8%)

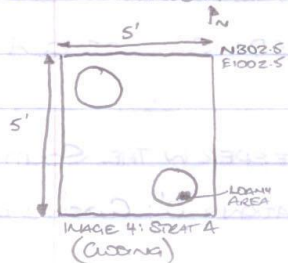
ANGULAR QUARTZ MEDIUM PEBBLES, OCCASIONAL (<10%) BRICK FLECKING, AND INFREQUENT (<<10%) SMALL FRAGMENTS OF CHARRED WOOD. OPENING ELEVATIONS WERE 0.15'/0.23'/0.21'/0.12' (NE/SE/SW/NW)

DRY-SCREEN 1/4" ARTIFACT BAG OPENED: <121257.

→ 3 JUNE 2008 (TUESDAY) - 440R2149, GARDEN ENTRANCE

WEATHER: 90s, NO CLOUDS, DIGGING UNDER E2UP.

PERSONAL: FEELING A BIT SICK FROM YESTERDAY (DAY OFF)



ON MONDAY MBR/BRS CONTINUED THE EXCAVATION OF (A). BASED UPON EXCAVATIONS IN OTHER UNITS THIS TOPSOIL SEEMS TO HAVE BEEN IMPORTED IN THE EARLY (19)

Environmental Samples

Artifact

Phytolith

Sand

Grit

Pollen

H₂O NSU

Vol.gals

	⇒	
	⇒	

Arch Mat

Random

Example

H₂O WS

Vol.gals

	⇒	
	⇒	
	⇒	

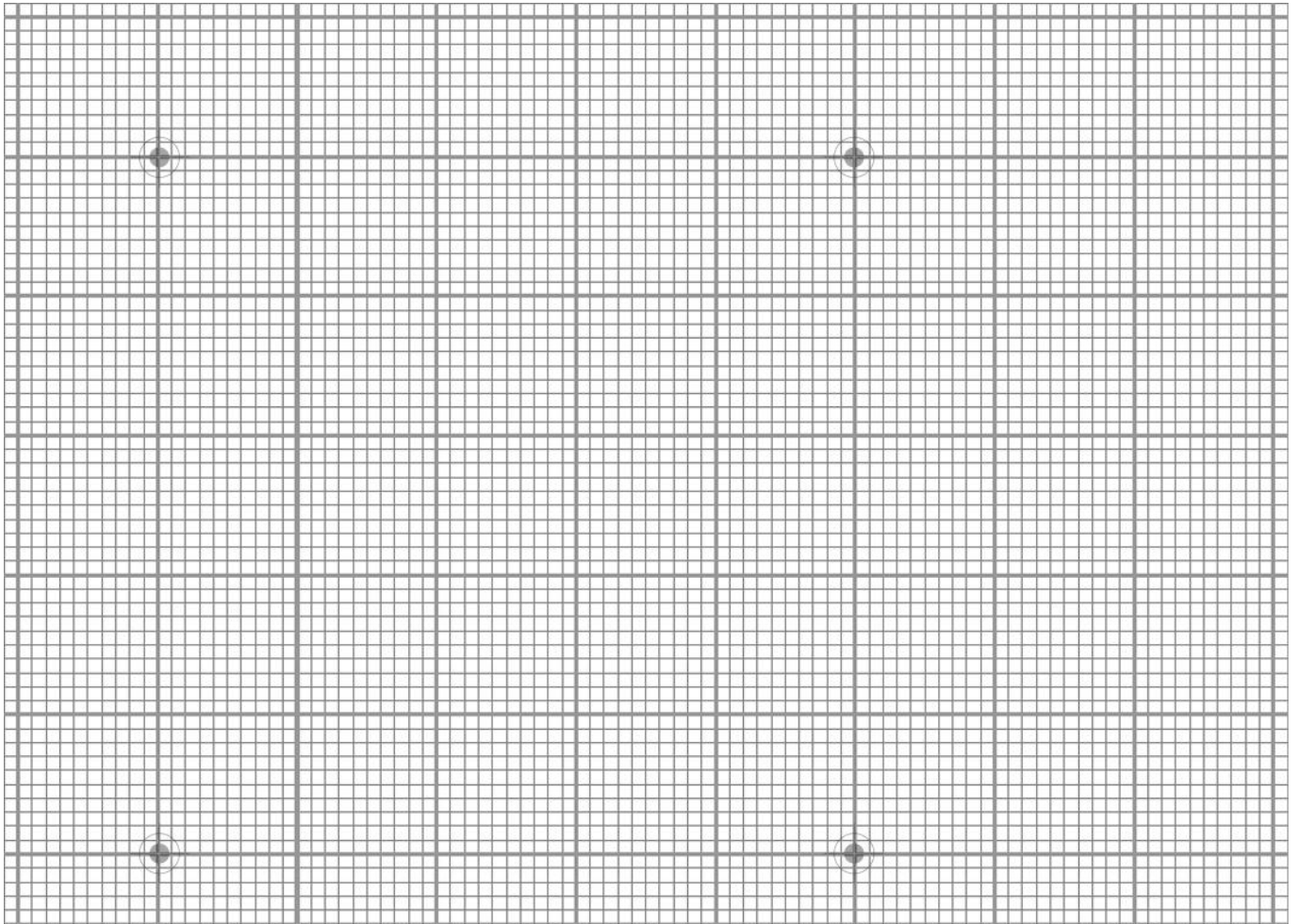
Soil Chem

Conserve

Other: _____

Curate: _____

Dry ¼" (Gals):



Please include north arrow, scale, key, appropriate dimensions/annotations, and annotate where necessary.

Other Comments:

	Open	Close
<i>Inst. Height</i>		
NE ()		
SE ()		
SW ()		
NW ()		
C ()		

--