SBS 260s/360s **Professor Mendoza**

Archaeology of a California Mission

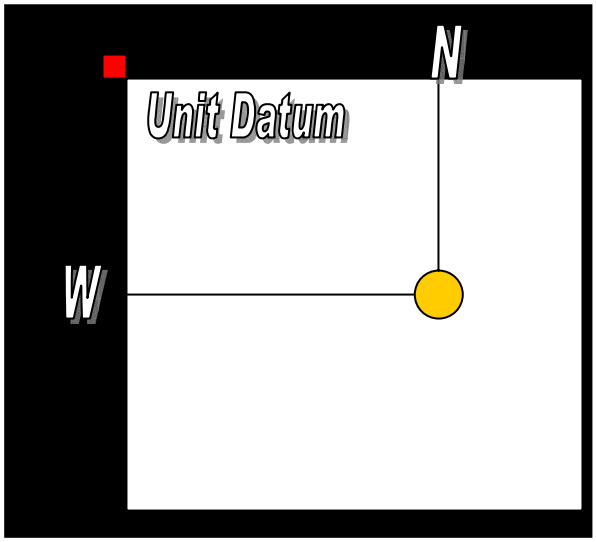
Field Excavation Procedures

Directions: Read and fully consider each of the following procedures as they will constitute the required procedures for the archaeology field portion of the investigations here undertaken. When field procedures are not properly adhered to we face the prospect of losing valuable data and observations critical to the analytical and interpretive dimensions of the archaeological enterprise. Procedures that have been so compromised pose the risk of invalidating the prime objectives and purposes of archaeological study and interpretation. So, please consider and learn those procedures noted below so that your field excavation team will not be compromised at the stage of data recovery and documentation.

Excavation Procedures

We will undertake all excavation procedures on the basis of arbitrary, as opposed to natural or cultural, strata or levels of analysis. In other words, we will excavate by unit levels predefined on the basis of 10-centimeter increments or levels. All depth measures will be taken via the use of a line level strung to that corner of the unit most closely identified with the northwest, or northernmost, orientation of the unit. That corner of the unit will constitute the Unit Datum, or that point from which all unit "depth" measures should be taken or anchored. When anchoring the string to your line level to the datum stake, please be sure that the string is tied off at that portion of the datum stake closest to the surface in which the stake was situated.

In Situ Measures: When preparing In Situ specimen or features measures, the West measure noted on the Specimen Catalog Card will require you to use the stringed perimeter line on the West side of the unit as the point from which to measure the specimen or feature under consideration. That portion of the specimen or feature nearest, or most directly oriented to the West balk wall profile, will be the point to which, or from which, the measure of the distance from the West wall is taken. Repeat this procedure for the north wall, taking into consideration that the north wall string line, and northernmost portion of the specimen or featured being mapped is the point to, or from which, measurements are taken. Again, depth is taken by way of a line level anchored to the northwestern, or northernmost, unit stake or datum. The actual measure is taken by metric tape from the bubble-leveled horizontal line level to the top of the specimen or feature being measured.



Unit diagram with red icon signifying unit datum, and yellow icon signifying specimen to be measured. Measures from North and West balk walls, respectively.

Where specific excavation procedures are concerned, you should take care in all instances to minimize damage to In Situ or intact specimens and features. You should at no time remove or disturb specimens that are observed In Situ. All diagnostic specimens should be pedestalled in place, and should remain so until such time that any related or underlying features and or specimens have in turn been pedestalled and mapped. A proper pedestal will permit the specimen or feature to remain intact without compromising or permitting the specimen to be dislodged. Excavation progress should permit specimen and feature pedestals to remain intact while progress is made in reaching the Unit's objective level and or levels. Excavation, in this instance, will require the use of trowels for scraping and dislodging soils from the unit floor. **Caution:** Hand picks or mattocks may in turn be required for dislodging more compact soils, although the use of mattocks while working in close quarters with other students is discouraged as the likelihood of injuring your unit partner(s) is increased with such tools in close quarters.

Field Equipment

All participants are responsible for retrieving, and replacing, any and all field equipment used on any given day. When replacing tools and equipment please be sure that you have properly replaced said equipment in such a fashion that it remains organized and easy to locate. Students will be expected to return all equipment to the proper tool box or storage area at the end of each field day. The basic field tool kit is as follows:

- Trowel (One per Participant)
- Metric Tape Measure (One per Unit)
- Line Level (One per Unit)
- Protective Gloves (One Pair per Participant)
- Lab & Field Journal (One per Participant)
- Permanent Marker (One per Unit)
- Rapidograph or Automatic Pencil / Pen (One per Participant)
- Dust Pan (One per Unit)
- Wisk Brooms (Two per Unit)
- Buckets (Two Labeled Buckets per Unit)
- Hand Pick and or Mattock (Two per Unit)
- Shovel (One per Unit)

Unit Excavations

Unit excavations will be undertaken with all or a combination of the following tools depending on soil type and or consistency: shovel, trowel, pick, Wisk broom, dust pan, and a dental pick. It is important to maintain complete control of unit and specimen contexts while undertaking excavations. In order to maximize the proper contextual and chronological controls, you are required to maintain vertical (as opposed to sloped) sidewalls and or balk walls, and at the same time, carefully remove any and all soils in one-level increments of 10-centimeters per arbitrary (unit level) strata. During the course of excavations please be aware of any changes in soil color, moisture, texture, consistency, and type. If you observe distinctive changes in soil color or pattern, please report these to the Project Archaeologist, or your assigned Crew Chief. Also, be prepared to conduct a Munsell soils (color chart) reading of the affected soils.

All excavations should proceed in an orderly fashion, and precautions should be taken to avoid injury due to the haphazard placement of tools about the unit excavation. In other words, all un-necessary or under-utilized tools should be stored away from the edge of the unit excavation area. Excavation tools in current use should be placed within easy reach of the excavator(s) responsible for said tools. When not in use the line level should be stowed over the datum stake so as to avoid entanglement with equipment. Excavate the

unit surface by proceeding in one-quarter unit increments (circa 50 cm x 50 cm area coverage). Working only one-quarter of the unit at a time will insure that you are able to approximate the locations of specimens inadvertently dislodged from their in-situ contexts. Proceed to dislodge and scrape soils away from the floor of the balk walls and toward the center of the unit area for collection. Do not overshoot the guidelines or base of the balk wall in the course of scraping or excavating soils within the guideline areas of the unit. Use your trowel, wisk broom, and dustpan to collect soils to be deposited into the nearest available (ID tagged) soils bucket.

In Situ, or in place, exposure of any and all specimens should be the primary goal of all excavators. Generally, if you encounter fist size or larger specimens (stones, bones, tile), please pedestal said item by working away soils around the base of the specimen while permitting said item to remain firmly anchored within its original context. Upon completing the first one-quarter portion of the unit area, please proceed to repeat the procedure so noted in that section as well. Once one half of the unit has been excavated, carefully work the base of the side or balk walls completely so that they exhibit a true vertical or perpendicular orientation with respect to the base of the unit and perimeter string line. Much of this effort will require working the unit from atop the balk wall area for each side of the unit so excavated. Repeat this procedure for each balk wall (north, west, south, and east) until such time that it is apparent that the walls are vertical and relevant or discernable stratigraphy is clearly visible.

If you initially encountered, but then circumvented, an in situ specimen within the unit level, please revisit the specimen in question after soils have been cleared from the unit or the bottom of the objective level has been reached. Proceed to carefully remove all soils immediately above, and around, the specimen in question. Do not dismantle the pedestal atop which the specimen lies until the specimen has been measured and mapped, and it is clear that no specific relationship or important contextual information might identify a significant relationship to any other specimen or feature located within the unit area excavation. At this point, it may be determined that it is appropriate to either remove or work about the pedestalled specimen until the next objective level has been reached. If noticeable soil changes may be discerned within your unit excavation, please consult with the Project Archaeologist or a Crew Chief for further consultation on how and when to proceed.

Excavation crews and each team member will share each and every responsibility required of the unit excavation. This means that each project participant should have cycled their efforts through hands-on participation in excavation and specimens processing, sieving or screening, mapping, note taking, equipment setup and take down, and related tasks. In sum, at the end of each field day, you should have participated in more than one or more tasks pertaining to the excavation process. The collection and sifting of soils should be an ongoing task, and all unit team members should have partaken of this task on a weekly basis. Please avoid permitting loose soils from obscuring your view of the unit floor or objective level. This is readily accomplished on an ongoing basis by sweeping loose soils from the unit floor or objective with a wisk broom and dustpan. All soils are then placed into a clearly labeled bucket, which should never be filled beyond the midway point, and said soils are then taken over to the screening area for sifting or sieving through 1/8” and 1/4” hardware cloth or screen.

Dry Screening

This project will make use of 2’x3’ sifting screens or sieves that are equipped to rock on a two-legged framework. When filling the screens from the buckets, please be sure that you have the 1/8” top box firmly in place before proceeding to pour the contents of your bucket into the sifting screen. Before pouring soils into the sifting screen, be sure that you have a firm hold on the handles of the screen box, and do not fill the screen too full as this may make the shaker box unstable. You should always be accompanied by a team mate or other project participant prepared to pour the materials for you once you have a firm handle on the handled of the shaker screen and or sieve.

Where no one else is available to assist you, you should set the shaker screen on the ground, and pour the materials into that portion of the screen closest to the handle end of the shaker box. Anchor the legs and gradually and carefully lift the screen until you are ready to proceed with sifting those soils poured therein. In order to sift materials poured into the top screen, you should proceed to rock the sifting stand and screen back and forth until all loose soil have fallen through the mesh.

Sort through what remains of materials, specimens, soils, and clay left in the screen after the initial sifting. Discard modern vegetation and rootlets. Collect any and all materials and specimens both known to be associated with the period under study, and those not known to be associated. All specimens will be cleaned, sorted, dried, weighed, and recorded by the end of the field day. Please remember that each and every member of your unit excavation team is responsible for assuring that this task is completed efficiently and effectively. All specimens and unit related identification information should be affixed or associated with the specimens at all times. Upon collecting any and all specimens retrieved from the shaker screens, place these into a clearly marked container, or atop a clearly marked specimens tray, and proceed to the lab processing area for final processing, and where pertinent, wireless specimens data entry.

REMEMBER: ALL MATERAILS MUST BE FULLY PROCESSED BEFORE YOU LEAVE THE SITE FOR THE DAY**.** ALL GROUP MEMBERS ARE RESPONSIBLE FOR ASSURING THAT ALL PROCESSING IS COMPLETED BEFORE THE LAST CREW MEMBER HAS DEPARTED FOR THE DAY.

Safety

You should take care at all times to avoid accidentally striking your unit partner, or partners, with tools or related equipment that you may be using for the excavation of the unit. Other safety considerations should include the following:

- Orient the sharpened or pointed end of tools point-side downward at all times when not in use.
- Keep tools and other project materials out of traffic areas.
- Be particularly cautious when using picks or mattocks.
- Avoid placing hands or legs in areas where excavation tools are being used.
- Please take care to stow your belongings out of traffic areas.
- Avoid wearing chains and other suspended jewelry while at work with tools.
- Please do your part to maintain civility and decorum while on the Mission grounds.
- When lifting heavier than normal materials or tools, take care to use your legs and not your back to affect the lift.

Please keep in mind that we are guests of the Diocese of Monterey and the Carmel Mission, and as such, please act accordingly. The Mission has a constant stream of tourists, as well as fourth grade classes, who may stop by and ask questions of you about the project and your participation, so please be courteous. In addition, there are times when religious services coincide with our work at the project site. At other times, such services may include weddings and funerals that require an additional measure of quiet and civility. When entering the church, please do so with the utmost respect and reverence for our host's concerns. Finally, where media interviews are concerned, please refer any and all questions regarding project origins and objectives to the Project Archaeologist and or Crew Chief. You should in addition be prepared to respond to questions about your specific contributions to the project.

Adapted from a significantly expanded earlier document originally prepared by Michelle St. Clair under the supervision of Ruben G. Mendoza, Ph.D., Principal Investigator/Project Archaeologist, CSUMB, February 14, 2003. Revised and expanded by Ruben G. Mendoza on February 14, 2005.