

Facial Approximation

1 Scope

This document describes the procedures for producing facial approximations as performed as a joint procedure between a forensic anthropologist and visual information specialist (VIS) within the Trace Evidence Unit (TEU).

2 Equipment/Materials/Reagents

- Computer hardware that has storage, processing, and display capabilities that can handle uncompressed data
- Computer software (e.g., Adobe Photoshop and Adobe Illustrator)
- Transparency overlay
- Light table
- Miscellaneous drawing supplies including pencils, erasers, and drawing paper
- Resin
- Modeling clay
- Sculpting tools
- Personal protective equipment (e.g., lab coat, gloves, eye protection)

3 Standards and Controls

Not applicable.

4 Sampling or Sample Selection

Not applicable.

5 Procedure

Facial approximations are performed as a joint procedure between a forensic anthropologist and VIS.

5.1 Anthropological Examination

Facial approximation from skeletal remains will only be performed after an anthropological examination(s) has been conducted. This examination may take place within the FBI Laboratory, or prior to submission (in which case the evidence must be accompanied by an anthropological report). The evidence will be photographed by the forensic anthropologist prior

to being routed to the VIS. If an anthropological examination(s) is conducted within the FBI Laboratory, the Forensic Anthropological Examination Procedure and other appropriate procedures, will be followed.

5.2 Facial Approximation

5.2.1 The VIS will record the items of evidence received in the Case Record Communication Log.

5.2.2 At the discretion of the VIS and based on the nature and quality of the submitted evidence, the facial approximation may be either two-dimensional (e.g., drawing), three-dimensional (e.g., sculpting), or computer-generated.

5.2.3 Facial approximations will be based upon information provided with the evidence submission and in the anthropological report.

5.2.4 The facial approximation will be completed using the original evidence as a reference. In most cases the evidence will consist of a skull, though photos or computed tomography (CT) scans may be used on a case-by-case basis and at the discretion of the forensic anthropologist and VIS.

5.2.5 The VIS will coordinate with appropriate laboratory units to generate any required templates for the approximation (e.g., photographs for 2D or printed replica for 3D), and to records the completed approximation (e.g., photographs or printed replica of sculpture) as needed.

5.3 Consultation between Anthropologist and VIS

Following the completion of the approximation and prior to the release of the facial approximation to the contributor, the forensic anthropologist will provide consultation to the VIS to confirm consistency of the approximation with skeletal features. .

5.4 Records

5.4.1 Case Notes

The case notes for the anthropological examination will contain records appropriate to any anthropological examinations conducted (e.g., biological profile, trauma analysis). The case notes will also include the anthropological assessment of features to be considered by the VIS.

5.4.2 Reports

The FBI *Laboratory Report* (7-1, 7-1 LIMS) will include a summary of features to be considered by the VIS. For example: “*Features observed that should be considered for the facial approximation include a large, projecting nose, robust chin, moderately pronounced and V-shaped supraorbital ridge...*”

5.4.3 A *Laboratory Report* will be issued by the VIS summarizing the work completed, including a statement regarding the distribution of the work product. For example: “A *three-dimensional clay sculpture facial approximation was completed, and images can be found on the enclosed CD.*”

5.4.4 Approximations and/or associated media/files (e.g., photographs, electronic files) will be retained/recorded in the VIS’s case file where applicable. If a positive identification is effected (i.e., DNA, dental records), photographs of the identified individual, when available, will be added to the case file.

6 Calculations

Not applicable.

7 Measurement Uncertainty

Not applicable.

8 Limitations

8.1 The conclusions that can be reached from anthropological examinations are dependent on the condition and completeness of the remains, and the availability and quality of antemortem data.

8.2 The production of facial approximations is for investigative purposes and is not a means of identification.

9 Safety

9.1 While working with physical evidence, laboratory personnel will wear at least the minimum appropriate protective attire (e.g., laboratory coat, safety glasses, protective gloves).

9.2 Universal precautions will be followed.

9.3 Exposure to biological and radiological hazards may be associated with the examination techniques performed. Safety procedures related to specific instruments or equipment (e.g., wafering saws, radiography units) will be followed. Refer to the FBI Laboratory Safety Manual for guidance.

10 References

- FBI Laboratory Safety Manual (current version)
- Forensic Anthropological Examinations, Trace Evidence Procedures Manual (current version)
- Scientific Working Group for Forensic Anthropology guidelines for Facial Approximation (current version).
- Neville, Wesley. *Composite Protocol*, Florence County Sheriff's Office Forensic Art Protocol Manual.

Rev. #	Issue Date	History
0	06/29/12	Original issue.
1	09/17/14	Updates to document to reflect LD reorganization in which forensic artists performing facial approximation are no longer in the Forensic Imaging Unit but in the Trace Evidence Unit. Procedures previously housed in FIU were merged into this document. Deleted section 4 and renumbered remaining sections. Changed title of newly numbered section 7. Updated references.
2	02/07/18	Updated title to reflect change from unit-specific. Updated Section 1, Scope and Section 2. Changed forensic artist to visual information specialist throughout. Added 'or Sample Selection' to Section 4 header. Moved language in former Section 5.4.3 to Section 5.2.1. In Section 5.2.4, added option to use photos or CT scans at discretion of forensic anthropologist and VIS. Updated wording in Section 5.3 for clarity. Section 5.4 header changed to 'Records' and added FBI Laboratory Report instead of report to Sections 5.4.2 and 5.4.3. Section 5.4.4, provided examples of how identification can be made. Removed Section 8.3. Updated references in Section 10.

Approval

Redacted - Signatures on File

Trace Evidence Unit
 Chief

Date: 02/06/2018

Anthropology Technical
 Leader

Date: 02/06/2018

QA Approval

Quality Manager

Date: 02/06/2018