

# **COUNCIL OF TEXAS ARCHEOLOGISTS GUIDELINES FOR CULTURAL RESOURCE MANAGEMENT REPORTS TABLE OF CONTENTS**

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## **COUNCIL OF TEXAS ARCHEOLOGISTS GUIDELINES FOR CULTURAL RESOURCE MANAGEMENT REPORTS**

### 1. Introduction

These Report Guidelines were developed in response to two overriding concerns: project magnitude and project type. Two categories of reports based on project magnitude have been devised: Short Reports and Full Reports. Short Reports are to be used on small projects, even when negative declaration may have resulted. Their purpose is to provide a minimal level of reporting so that basic information can always be communicated to the profession. Full Reports are recommended for projects of sufficient duration or complexity such that detailed reporting of background information and produced data is warranted.

The second concern in developing the guidelines was that they should also be sensitive to different project types. Projects vary greatly in scope, and report requirements need to be tailored to these differences. Five classes of reports were formulated—Overview, Reconnaissance Survey, Intensive Survey, Testing, and Mitigation—and specific report topics for each class are suggested in the following sections.

In some cases, however, legal requirements or management or research needs may justify a report structure that deviates from these guidelines. Alternate report format and content, when agreed to

by the archeologist, the regulatory agency involved, and the sponsor, is then warranted. These guidelines are intended to cover the majority of projects, but not to discourage creative and imaginative reporting.

Only two matters in reporting involve essential ethical considerations. First, the obligation to report and disseminate the results of a project is paramount. Any legal requirements or specific requests that are written into a contract by the sponsor and that are not in conflict with pertinent local, state, or federal laws supersede any recommendations made herein. Where confidentiality is required by the sponsor, and the archeologists and regulatory agencies concur, a report may be withheld from public circulation for a specified period of time, not to exceed five years. This proviso does not preclude use of the report by professional archeologists for research purposes during this five year period. All reports, regardless of confidentiality, must be furnished to the CTA Microfilm Archive and/or to the State Library when distribution restraints are lifted.

Second, falsification or misrepresentation of data cannot be condoned. Copyright laws must be obeyed. Observance of the rules of good scholarship and professional courtesy will help to ensure that copyright laws are not violated. The following rules apply:

**Text:** Permission must be obtained for quoting or reprinting portions of text that constitute complete entities; that is, an entire section or chapter of a work, an entire article, or any significant portion of a poem or song. Quotation of lengthy portions of any text should be avoided; paraphrasing, with appropriate citation and reference to the source, is preferable.

**Illustrative material:** Permission must be obtained to reproduce figures, photographs, drawings, tables, charts, maps, or other illustrative material, whether originals or prints and regardless of size. Laws governing rights to reproduce such materials are strict. Permission to reprint text does not necessarily include permission to reproduce illustrative material; therefore, as a safeguard, permission to reproduce such items should be acquired separately even where the source is the same. Your request for permission should indicate whether you intend to adapt or revise the material in any way.

Credit for permission granted must be given as stipulated by the grantor; if there is no formal stipulation, a citation of the work preceded by "Reprinted, with permission, from..." will suffice. All material that is directly quoted, regardless of length or copyright requirements, should be referenced. Good scholarship and professional ethics dictate that material paraphrased from any source also be referenced. See Performance Guidelines 3.2 for further discussion of identifying sources of information.

## 2. Classes of Cultural Resource Management (CRM) Reports

Two factors have guided the development of guidelines for CRM reporting. The first is the type of activity: reconnaissance survey, intensive survey, mitigation, or other project type. Each requires a different set of report needs. The second factor is the magnitude of the project. Short-term projects, particularly those lasting only a few days, often do not warrant the degree of reporting that a much longer-term project needs.

## 2.1 Classes of CRM Investigations

Five classes of investigations have been defined: Overview, Reconnaissance Survey, Intensive Survey, Testing, and Mitigation. These classes are used despite other possibilities (cf. McGimsey and Davis 1977:73-77).

### 2.1.1 Overview

Quoting from McGimsey and Davis (1977:74):

Overview reports normally are provided for general management programs on some kind of regional bases. Presented information reflects current knowledge of the nature, distribution, and significance of cultural resources within the study area.

### 2.1.2 Reconnaissance Survey

Quoting from 36 CFR Part 66, Proposed:

Reconnaissance survey is designed to provide a general impression of an area's historic [and prehistoric] properties and their values, and involves small-scale field work relative to the overall size of the area being studied. Although reconnaissance survey will seldom if ever provide sufficient data to insure identification of all historic [and prehistoric] properties in an area, it should make it possible to identify obvious or well-known properties, to check the existence and condition of properties tentatively identified or predicted from background research, to identify areas where certain kinds of properties are obviously lacking, and to indicate where certain kinds of properties are likely to occur, thus making possible a more informed and efficient intensive survey at a later stage in planning.... Reconnaissance survey will not ordinarily provide sufficient data to insure identification of all...properties under the jurisdiction or control or subject to impact by a[n]...agency.

### 2.1.3 Intensive Survey

Again, quoting from 36 CFR Part 66, Proposed:

An intensive survey is a systematic, detailed field inspection done by or under the supervision of professional architectural historians, historians, archeologists, and/or other appropriate specialists.... It is preceded by adequate background research.... Systematic subsurface testing is conducted if necessary to locate or obtain full descriptive and evaluative data. Documentary data necessary to the evaluation of specific properties are compiled and analyzed. A systematic effort is made to identify all properties within the area of concern that might qualify for the National Register, and to record sufficient information to permit their evaluation.

### 2.1.4 Testing

Testing is defined as sufficient field investigation at specific sites located by survey to determine their scientific importance and to assess the need for mitigative measures. In the case of historic sites and structures, testing may also include research as well as physical investigation.

### 2.1.5 Mitigation

According to McGimsey and Davis (1977:71), mitigation is defined as “...the alleviation of adverse impact by taking action to avoid, protect, or investigate scientifically the resources.” The exact nature of mitigation will depend on which alternative(s) for mitigation are chosen by the project sponsor.

## 2.2 Magnitude of CRM Investigations

Project magnitude is expressed in terms of total project duration in person-weeks, including all project phases. This measure allows projects of different schedule lengths and staffing requirements to be compared. Moreover, it is not sensitive to different pricing policies as a simple cost comparison would be. At a gross level, project magnitude has been divided into two parts: less than one person-week (Short Report) and greater than one person-week (Full Report).

A conservative approach has been taken in defining the report types necessary for different project magnitudes. Nonetheless, it is the ethical responsibility of the professional to report any information, in adequate detail, that may be important either to the project sponsor for purposes of cultural resource management planning or to fellow archeologists, historians, architects, or other professionals involved. Regardless of the scope of work to be covered by a report, it is advisable that all publications be part of a numbered series.

## 3. Short Report Content

The Short Report represents the minimum acceptable level of detail in cultural resource reporting, even for very small projects with negative results. The overall objective of the Short Report is to ensure an adequate reporting of the location and character of all investigations performed in the state of Texas. A copy of every Short Report should be submitted, at the least, to the State Library, as well as to the Texas Archeological Research Laboratory and the Texas Historical Commission in Austin to permit the recording of the area investigated on their reference set of U.S. Geological Survey topographic maps.

The suggested categories of content of a Short Report are outlined below. Portions of the material presented therein have been adapted from McGimsey and Davis (1977:76).

### 3.1 Definition of Study Area

The area investigated should be described, and a map included (preferably derived from the USGS 1:24000 scale topographic series) on which the study area is clearly demarcated. If the study area was investigated by means of a representative sample rather than complete coverage, the sampled areas should be described and/or illustrated. Inclusion of exact location of sites is not necessary. In several public laws and implementing regulations (PL 94-458, Section 11; PL 96-95, Section 9;

and PL 96-515, Section 304), provisions have been made to protect cultural resources by withholding locational data. Any specific locational information, while necessary for the federal archeologist, the Texas Historical Commission, and the state site files, may be reproduced totally separately from the report and in limited quantity so that distribution may be restricted.

### 3.2 Management Summary

The context within which the work was performed should be stated, including the identity of the sponsor; the purpose of the sponsor in funding the investigation; the identity of the institution responsible for the performance of the project; the identities of the personnel employed in the project, and their respective roles; the person-hours invested in the project; and the dates on which the investigation occurred.

### 3.3 Research Design

The objectives, theoretical orientation (if relevant) and methods of the project should be described. In particular, the techniques of data collection employed and the sources of information utilized should be specified. If sampling was used for an assessment of the resource, the percentage of the study area sampled should be quantified and justified as to its predictive adequacy.

### 3.4 Results

A statement of the results of the investigation must be made. Emphasis is to be placed on descriptive detail, and the minimum acceptable unit of provenience is the individual site or structure. If sites or structures have been recorded for the first time or are being updated for cultural resource management purposes, the following information should be provided for each as a minimum: site designations, site location (including Universal Transverse Mercator grid coordinates and a map plotting capable of correlation with the USGS 1:24000 scale topographic series; it may be necessary to provide the site location details under separate cover to the sponsor and to appropriate curatorial and research institutions); history of investigation, including publication references for each previously recorded site; site area, depth of the cultural deposit (if ascertainable); topographic position; environmental setting; description and quantification of any associated artifacts, relevant nonartifactual materials (burned rock, faunal remains, etc.), and cultural or relevant noncultural features; estimated number of components, and the inferred cultural affiliation of each; functional interpretation of each component; and present site condition. The assumptions and criteria underlying any chronological or functional interpretations must be clearly stated. Any factors beyond the control of the investigator(s) which may have adversely affected the results should be noted, particularly if the results were negative.

### 3.5 Recommendations

The responses recommended to the sponsoring agency should be specified. In particular, if the results of the investigation were negative but it seems likely that the cultural resource assessment was rendered inaccurate by factors beyond the control of the professional involved, a suggestion

for monitoring by trained, objective personnel of the land-altering activity envisioned by the sponsor should be considered.

### 3.6 References Cited

All work cited, either directly or indirectly, must be included in this section. See Performance Guidelines 3.2 for referencing sources of information, CTA Handbook of Style for suggested format, and Report Guidelines 1 for copyright citations.

## 4. Full Report Content

A Full Report should meet, in appropriate sections, all minimum requirements stipulated for the Short Report. Certain elements of editorial policy and content that are universal to all Full Reports can be profitably isolated. Section 4.1 presents guidelines for issues of an editorial nature that are likely to affect report content in a significant manner. Sections 4.2 and 4.3 deal specifically with the elements of Full Report content. Section 4.2 presents those content constituents common to all Full Reports. Outlines for reports of specific project types are suggested in Section 4.3, with elaborations of those categories on content unique to each.

It should be noted at this juncture that the guidelines presented in Section 4 deal only with elements of substantive content. Report sections of a more organizational nature (e.g., Table of Contents, List of Figures, etc.) are addressed separately by the Committee in the CTA Handbook of Style.

### 4.1 Guidelines for Full Report Preparation

As noted in the preceding introduction, the following guidelines are not intended to comprise an exhaustive list of editorial principles. Rather, the issues addressed herein are those deemed most critical to a useful and judicious presentation of the substantive content of a Full Report.

#### 4.1.1 Avoidance of Jargon

To the greatest extent possible, cultural resource reports should be written in standard English. Excessive use of specialized, technical terminology can restrict intelligibility to a small circle of readers sharing the specific background and interest of the author. Technical terms employed in a report should be defined either at the time of initial use in the report or in a separate glossary.

#### 4.1.2 Continuity of Project Execution

Reports should at least be co-authored by the individual(s) directly responsible for the data collection and analysis. The various phases of the project should, if at all possible, follow one upon the other without excessive interruption. It is undesirable for an individual to be responsible for several projects at once, alternating from one to another.

#### 4.1.3 Acknowledgement of Contributors

Authors of a report and/or of individual sections within a report should be identified. Any research, analysis, or writing contribution to a report, including previously performed research, whether published or unpublished, should be clearly identified and acknowledged. Failure to do so will be considered plagiarism. Institutions lending materials, either collections or documenting records (photographs, maps, etc.) should also be acknowledged.

#### 4.1.4 Editorial Responsibility

It is the responsibility of the author to ensure that the report is well written and logically organized. The author must be certain that all data presentations are accurate, that bibliographic citations are proper and complete, and that all internal references to report chapters, tables, and illustrations are accurately correlated. The responsibility of the editor is to double-check accuracy in these areas, and to provide advice to the author on style and syntax. Authors should not expect editors to rewrite reports. It is in fact preferable that any substantive revisions to the manuscript be made by the author, with the advice and supervision of the editor. Under all circumstances, the manuscript should be edited while the author is still available for consultation.

#### 4.1.5 Manuscript Review

It is highly desirable to submit an early draft of the report to one or more appropriate individuals outside the author's institution for an objective peer review. An appropriate individual is a researcher of established experience and competence in a geographic area and/or theoretical sphere encompassed by the project. The reviewer is obligated to offer constructive criticism to the author and to minimize destructive comments to third parties.

In the preparation of the final draft of a report, the manuscript should be reviewed by separate individuals for style and technical content. It is useful to engage two individuals in the process of in-house technical review, enlisting one person intimately familiar with the details of the project and another who is entirely unacquainted with those particulars. The manuscript should then be typed and proofread for errors in transcription by two individuals not previously involved in the preparation of the report.

If the author must perform most of these roles due to constrictions of time or finances, an effort should be made to have the manuscript reviewed by at least one other individual. If even this is not possible, the author should set the manuscript aside for a few days, and then reread it.

Federal agencies have specific draft review procedures. An important consideration, in addition to those of style and technical content, is compliance with contract requirements.

#### 4.1.6 Use of Statistics

If statistical tests have been utilized, the author should explain the choice of a particular test, its basic assumptions, the suitability of the data for its application, and the type of result expected. Statistical formulae utilized and the statistical data that generated the results should be provided, probably in an appendix.

#### 4.1.7 Relevance of Illustrations

The relationship of illustrations to the report in which they are included should be made clear. Artifact or cultural feature illustrations, even when considered as representatives of specific analytical categories, should at a minimum indicate the provenience of each specimen or subject. The caption may include additional information regarding the illustrated material that is not mentioned in the text; for any illustration derived from another source, appropriate citation of the source should be included.

#### 4.1.8 Provision of Site Locations

In general, specific site locations should not be published. If maps or descriptions providing specific site locations are to be included, the distribution and audience of the report should be considered. If it seems likely that vandalism of cultural sites and structures will result from the general dissemination of such information, the site locations should be presented under separate cover and distributed only to the sponsor and to appropriate curatorial and research institutions. All map plottings of site and structure locations provided to such institutions should be capable of correlation with the USGS 1:24000 scale topographic series, and all locational descriptions should include Universal Transverse Mercator grid coordinates (Edwards 1969).

In several public laws and implementing regulations (PL 94-458, Section 11; PL 96-95, Section 9; PL 96-515, Section 304; and the Texas Natural Resources Code, Section 191.004), provisions have been made to protect cultural resources by withholding locational data. Any specific locational information, while necessary for the federal archeologist, the Texas Historical Commission, and the state site files, may be reproduced totally separately from the report and in limited quantity so that distribution may be restricted.

### 4.2 Elements of Content Common to All Full Reports

The following categories of content should appear in any Full Report, preferably as separate sections. In some cases, a specific content category will subsume one or more of the individual categories described below. Many of the guidelines presented in Sections 4.2 and 4.3 have been adapted from McGimsey and Davis (1977:73-76).

Each archeological property or historic structure should be addressed in terms of criteria for site or structure significance, National Register eligibility, level and type of project impact, and potential to yield information relevant to the pertinent research problems. Cost estimates are generally not appropriate, but in those instances where it would appear that an adverse affect must be negated, mitigation measures should be proposed.

#### 4.2.1 Abstract

An abstract aimed at academic readers should be provided in which the following information is summarized: the location of the study area; the general nature of the investigations performed (survey, testing, etc.); the basic character of the data recovered; the interpretive conclusions of

the study; and the recommendations for cultural resource management and/or future archeological, architectural, or other appropriate research.

#### 4.2.2 Management Summary

If the cultural resource report will be used by the sponsor as a resource in planning and decision making, it is highly desirable to provide a concise summary of that information most relevant to the sponsor's immediate requirements. A management summary should include the identities of the contracting parties; the management objectives of the sponsor that stimulated initiation of the research; an abstract of the scope of the work; any limitations encountered in fulfilling the scope of work; a summary of the results of the research and their significance; and the cultural resource management recommendations of the archeologist and other involved professionals.

#### 4.2.3 Introduction

The management summary and introduction will be identical to a certain extent, in that much of the information presented in the former should also appear in the latter; however, the introduction should be directed to a different audience. The introduction should address not only the sponsor, but a more general readership, including other researchers. Its function is not to abstract information of a specialized nature, but to provide a more generalized orientation to and summary of the purpose and content of the report.

The following information should be included in the introduction: the location and boundaries of the study area (a supplementary map is necessary); the cultural and geographical context of the study area; a summary of the nature of the project; the identity of the sponsor, the purpose of the sponsor in initiating the investigation, and the projected impact of the sponsor's proposed activity on the study area; the identity of the institution or organization responsible for the execution of the project; a brief summary of the research design; the identities of the personnel directly responsible for the data collection, analysis, and report preparation; the dates between which each phase of the project occurred, and an estimate of the person-days invested in each; a summary of any difficulties encountered during the course of the project that adversely affected its results; the repository of the records and artifacts deriving from the project, and a summary of the organization and content of the succeeding sections of the report.

#### 4.2.4 Environmental Background

A description of the natural environment of the study area should be provided, incorporating relevant information pertaining to the local climate, hydrology, geomorphology, surface geology, soils, vegetation, and fauna. It is certainly useful to acquaint the reader with the general character of the environment, but this body of information must serve as more than a tour guide to the area. The emphasis here is on the word "relevant;" this study should tie in directly with the research design and cultural significance.

It is also important that the author attempt to assess the chronological depth of the present environment. A reconstruction of paleoclimates and paleoenvironments, with a characterization

of the microenvironments and natural resources available for human exploitation, if possible, is highly desirable.

If the pertinent information has been adequately presented in a recent publication, it is sufficient to cite that document and summarize its findings, concentrating on the points of greatest archeological significance.

#### 4.2.5 Research Design

The research design of the project should be clearly set forth. In particular, this should include a statement of the cultural resource management and archeological research objectives of the project; a summary of the archeological and anthropological theory governing its research perspective; a description of the methods of data recovery and analysis used; and a justification of those procedures in terms of the stated aims and theoretical base of the study. Any limitations encountered during the course of the project causing an amendment or partial frustration of the research design should be noted. The data sources exploited by the study should be identified, especially where published literature and/or the files and collections of curatorial institutions have played a significant role.

#### 4.2.6 Previous Investigations and Archeological Background

All report classes should include in them a discussion of the history of scientific investigations in the area (Previous Investigations). The format for reporting on prehistoric and historic sites and structures should also include overviews of the cultural history of the region regardless of the scope of the project (Archeological Background). If minimal work has been done in the area of immediate concern to the investigations being reported, the region discussed by these sections should be extended.

#### 4.2.7 Artifact Descriptions

Artifact descriptions appropriate to the research design and to the scope of the investigation, accompanied by appropriately scaled photographs, are encouraged. Where a major discussion of specific artifactual materials is not called for, a general discussion of artifact classes within the area should be included in appropriate sections.

In the more explicit treatments it is desirable that descriptions of artifact categories used in tabular presentations be drawn up in detail. Photographs of chronologically or culturally diagnostic artifacts are considered to be essential. Very lengthy detailed descriptions of nondiagnostic artifacts which have no specific application to the research design are not necessary. Where significant artifacts or features were not collected, they should be described in the report. Where material was collected, but not permanently curated, descriptions must minimally be included in the curated notes and reference made to these notes in the report. When artifacts and documented records are submitted for curation, the permanent repository is to be specified in the project report.

#### 4.2.8 Glossary

If nonstandard technical terms used in the report are not defined at the time of initial use in the text, it is highly desirable to include a glossary in which each such term is clearly defined.

#### 4.2.9 References Cited

All ideas and works used, whether directly quoted or not, should be cited and referenced. Those wishing to follow CTA recommendations should refer to the CTA Handbook of Style, though the format for citing references within a report may follow any accepted bibliographic style providing consistency is maintained within the document.

#### 4.3 Suggested Outlines for Different Classes of Full Reports

The following outlines are suggested for the classes of Full Reports defined in Section 2. The universal categories of content defined in Section 4.2 are listed by name in each outline. Those elements of content either unique to or following different approaches within a given Full Report class or subset of classes are elaborated upon as appropriate. The ordering of the elements of content listed in the classes below may be followed as outlined or reordered as necessary to provide a logical progression within the report.

##### 4.3.1 Overview

Abstract

Management Summary

Introduction

Environmental Background

Research Design

Previous Investigations and Archeological Background

The existing base of archeological, historical, and architectural information identified by a literature search, a records check, and (if feasible) an inspection of existing artifact collections should be summarized and reviewed. The provision of site locations and site-specific information is optional, dependent on the needs of the sponsor.

The known cultural resources should be related to the local natural environment in an effort to predict the actual character, density, and distribution of such resources throughout the study area. It is often appropriate to consider the existing data base not only within the confines of the study area, but within the larger incorporating cultural and environmental region. If little work has been done in the study area, it is imperative to assume such a broad perspective.

The predictive reliability of the existing data base must be assessed. Any specific inadequacies in that base deemed likely to undermine its predictive reliability should be noted and discussed.

### Cultural Resource Management Options and Recommendations

An assessment of the threat posed to the known and predicted cultural resources of the study area by the sponsor's envisioned activity should be made. It is important to stress to the sponsor the potential inaccuracy of the predictive assessment due to weaknesses in the data base. All of the cultural resource management options available to the sponsor should be identified and ranked in terms of priority. Emphasis should be placed on the possibilities for avoidance or protection of the resources. Specific legal requirements which may pertain to the project should be considered.

Recommendations should concentrate on more than resource management. Potential for future archeological and historical research in the study area should be assessed. Problems in need of further investigation by future researchers should be noted.

### Research Tools Available

At this early level of synthesis in the study area, it is very useful to provide a detailed listing of the available sources of archeological and historical data, independent of and more elaborate than that presented in the research design. The locations and brief assessments of the known records archives and artifact collections relating to the study area should be provided. An annotated bibliography of all published literature pertinent to the study area is highly desirable.

### Glossary

### References Cited

#### 4.3.2 Reconnaissance Survey

### Abstract

### Management Summary

### Introduction

### Environmental Background

### Research Design

### Previous Investigations and Archeological Background

The archeological, historical, and architectural data available prior to the present study should be summarized. As noted in the outline of the overview report, data from the region surrounding the study area should be included if necessary for an adequate predictive assessment of the cultural

resources. The presentation of site-specific information for previously recorded sites is again optional.

### Results of Field Investigations

The new site-specific information collected by a field survey of selected portions of the study area should be presented. The format of presentation is an editorial decision, but the basic unit of provenience should be the individual site. Analysis of the newly recorded sites and structures as an undifferentiated body is not acceptable unless the information is to be provided in greater detail in a subsequent full survey report.

If this is to be the only presentation of the sites and structures recorded by the reconnaissance, the following information should be provided for each as a minimum: site and structure designations; history of investigation; site area; depth of cultural deposit (if ascertainable); topographic position; environmental setting; a description and quantification of any associated artifacts, relevant nonartifactual materials (burned rock, faunal remains, etc.), and cultural or relevant noncultural features; estimated number of components and the inferred cultural affiliation of each; functional interpretation of each component, if possible (state assumptions and criteria); present site condition; and photographic recording of all significant structural features and general measurements.

If the artifacts, associated materials, and/or features recorded or recovered by the reconnaissance are to be analyzed in a separate section of the report, site-specific provenience information should be provided therein. The statement that no further work is recommended should be avoided in all cases where that statement limits or jeopardizes possible future work on resources that may have further research potential.

### Artifact Descriptions (if material is collected)

### Synthesis and Assessment of Combined Results

The combined data resulting from the literature, archival, and field investigations should be synthesized to provide a prediction of character, density, and distribution of cultural resources likely to occur in the study area. Any inadequacies in the newly enhanced data base that render its predictive reliability questionable should be identified and assessed.

### Recommendations

The cultural resource management options available to the sponsor should be clearly outlined, ranked as to priority, and justified. Sites and structures eligible for nomination to the National Register of Historic Places should be identified. Archeological and historical research problems in need of further investigation should be noted, with suggestions as to potentially fruitful approaches to their solutions.

### Glossary

## References Cited

### 4.3.3 Intensive Survey

## Abstract

## Management Summary

## Introduction

## Environmental Background

## Research Design

## Previous Investigations and Archeological Background

A detailed history of cultural resource investigation in the region incorporating the study area should be provided. The archeological and historical problems that have been of interest to previous investigators in the region, and their successes and failures in addressing those problems, should be reviewed. A detailed discussion of the research problems in need of further study should be made, and it should be briefly noted whether the research design of the present study has addressed any of those issues.

The elements of site-specific information listed in the reconnaissance report outline should be provided for every archeological site and architectural feature recorded by the survey. Again, the format of presentation is largely an editorial decision, but the minimum unit of information provenience must be the individual site at the survey level of reporting. It is highly desirable to include any sites and structures previously recorded in the study area, so that a complete inventory of all known cultural features will be provided.

## Artifact Descriptions

## Synthesis, Evaluation, and Interpretation of Cultural Resources

The cultural resource data should be synthesized and analyzed in pursuit of the problems addressed by the research design. The significance of the recorded sites and structures should be evaluated. Any factors that were beyond the control of the archeologist, historian, architect, or any other involved professional, and that may have caused cultural resources to pass unrecorded or to have been incorrectly assessed should be discussed.

## Recommendations

At this stage, both cultural resource management and research recommendations should be quite specific. Sites and structures should be earmarked for avoidance or protection, mitigative investigation, or further assessment through testing and research, as appropriate and possible on the basis of the available information. Research problems to be pursued during testing and

mitigation should be stated and ranked in importance. The manner in which each problem can best be addressed should be briefly summarized to provide a core for subsequent research designs. It is perhaps more important at this stage of the resource management process than at any other that all recommendations be well reasoned and convincingly justified. Any quantification of estimates into labor and costs should be avoided since it is felt that such estimates may lead to errors which could adversely affect the resource. Focus should be placed on the recommendations for the resource and a very careful and detailed description of the recommended work.

Glossary

References Cited

4.3.4 Testing

Abstract

Management Summary

Introduction

Environmental Background

Research Design

Previous Investigations and Archeological Background

Results of Field Investigations

The new data recovered by the testing program should be described. Whatever the format chosen for this presentation, a few general guidelines should be followed. For each site or structure which is tested, researched, measured, or otherwise investigated, a scaled map should be provided, showing the topography, limits of the site as defined by surface scatter, and locations of all investigations. The intrasite provenience of artifacts and associated materials should be provided in the greatest detail possible. Illustrations of significant horizontal or vertical patterning in intrasite artifact distributions are quite useful.

If cultural features or archeologically significant noncultural features have been identified, each should be described, following an organized format, in terms of size, shape, material composition of the fill, associated artifacts and other materials, and location within the site. Detailed plans and profiles, shown to scale, of each feature or of representative examples are desirable. If multiple features have been identified at a given site, a plan showing their locations relative to one another within the site should be provided, with reference numbers to relate feature locations to their respective descriptions.

Artifact Descriptions

## Synthesis, Evaluation, and Interpretation of Results

The data recovered from the testing should be synthesized on both an intrasite and intersite level of analysis. The improved evaluations of the significance of each site made possible by testing should be discussed. Overall effectiveness of the testing program should be assessed.

## Recommendations

A recommended research design for further work and management alternatives must be specified. Individual sites should be earmarked for avoidance, protection, or mitigative investigation. The data recovery strategy to be pursued at each site should be described in detail and should include problems to be solved, any special excavation needs anticipated in solving these problems, an estimate of person-hours needed to gain the data, how a particular site relates to a CRM project, how the site(s) will be impacted, and projected schedules as to when the sites will be impacted.

## Glossary

## References Cited

### 4.3.5 Mitigation

#### Abstract

#### Management Summary

#### Introduction

#### Environmental Background

#### Research Design

Mitigation includes not only the classic salvage investigation of threatened archeological sites and architectural resources, but also activities designed to preserve those sites and structures which need not be destroyed. Avoidance/protection measures and investigative studies are sufficiently divergent in approach to warrant some separate treatment in the report.

##### 4.3.5.1 Avoidance or Protection Measures

#### Methods

The measures employed to ensure the preservation of archeological sites and historic structures should be described, and the course of their implementation summarized.

#### Results

The short-term effectiveness of the measures should be assessed, and an attempt should be made to predict their long-term effectiveness in ensuring the survival of the designated sites and structures.

#### 4.3.5.2 Investigative Studies

##### Methods

The method of data collection and analysis should be described and related to the investigative objective set forth in the research design.

##### Results

The data recovered by the investigative studies should be described and analyzed. The general guidelines relevant to provenience and descriptive detail presented in the preceding report-class outlines also apply here. Emphasis should be placed on gaining as complete an understanding of each site or structure investigated as possible. All previous data, including collections by nonprofessionals, should be considered and included in the report.

##### Previous Investigations and Archeological Background

##### Artifact Descriptions

##### Synthesis, Evaluation, and Interpretation of Results

The results of the avoidance/protection measures and the investigative studies should each be separately synthesized and assessed. The two should then be correlated to provide an evaluation of the effectiveness of the overall strategy. A synthesis and interpretation of the investigative studies should address both their resource management effectiveness and their research-oriented conclusions.

##### Recommendations

Any measure that the sponsor can take to ensure the avoidance or protection of archeological sites and historic structures designated for preservation should be specified. The potential need for cultural resource monitoring of subsequent land-altering activity by the sponsor should be assessed. Suggestions for future archeological, historical, and architectural research in the relevant region should be made on the basis of the results and conclusions of this and all preceding phases of the project.

##### Glossary

##### References Cited

## 5. Popular Reports

Popular Reports and condensed versions of longer technical reports are produced for lay audiences. They serve to disseminate the results of a cultural resource investigation to the populace at large and can be valuable public relations tools. It is strongly recommended that, when possible, these reports be produced and distributed at nominal cost to interested individuals.